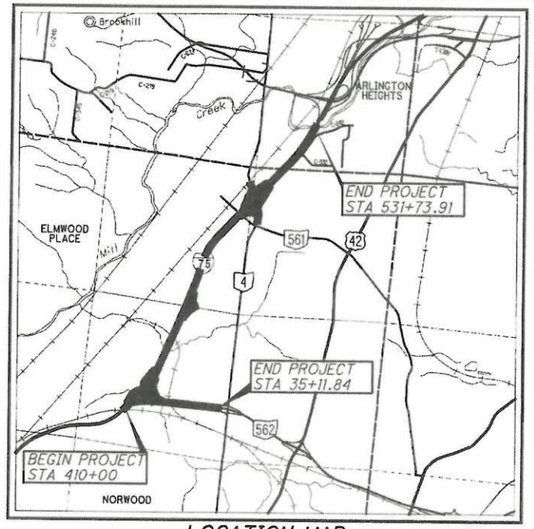
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
HAM-75-7.85
CITY OF CINCINNATI
HAMILTON COUNTY



LOCATION MAP

LATITUDE: N39°11'20" LONGITUDE: W84°28'50"

SCALE IN MILES 0 1/2 1

PORTION TO BE IMPROVED
INTERSTATE HIGHWAY
FEDERAL ROUTES
STATE ROUTES
COUNTY & TOWNSHIP ROADS
OTHER ROADS

DESIGN DESIGNATION - I.R. 75, S.R. 562 & TOWNE ST

	I.R. 75	S.R. 562	TOWNE ST
CURRENT ADT (2010)	173,800	70,700	8,340
DESIGN YEAR ADT (2030)	203,000	78,000	8,340
DESIGN HOURLY VOLUME (2030)	17,050	7,410	900
DIRECTION DISTRIBUTION	53%	53%	76%
TRUCKS (24 HOUR B&C)	14%	11%	7%
DESIGN SPEED	60	60	40
LEGAL SPEED	55	55	35
DESIGN FUNCTIONAL CLASSIFICATION	01 URBAN INTERSTATE	02 URBAN FREEWAY AND EXPRESSWAY	05 URBAN COLLECTOR
NHS PROJECT	YES	YES	NO

DESIGN EXCEPTIONS

DESIGN FEATURE	APPROVAL DATE	SHEET NUMBERS
SHOULDER WIDTH	3/2/2015	345,348,352,355
SHOULDER WIDTH	3/2/2015	353
STOPPING SIGHT DISTANCE	2/20/2013	348,358,359,365, 361,362

ADA DESIGN WAIVERS

NONE REQUIRED

ENGINEERS SEAL:	ENGINEERS SEAL:	ENGINEERS SEAL:
FOR ROADWAY: HEATH R. BRENDLINGER E-77786 REGISTERED PROFESSIONAL ENGINEER	FOR ITS/LIGHTING, TRAFFIC SIGNALS: JASON D. SMALLWOOD #E-66540 REGISTERED PROFESSIONAL ENGINEER	NOISE WALLS: 1A, 1B-1, 1B-2, 1C, 2A, 2B: JENNIFER G. MILLER E-70337 REGISTERED PROFESSIONAL ENGINEER
SIGNED: [signature] DATE: 12/15/2021	SIGNED: [signature] DATE: 12-15-2021	SIGNED: [signature] DATE: 12/22/2021

ENGINEERS SEAL:	ENGINEERS SEAL:	ENGINEERS SEAL:	ENGINEERS SEAL:
BRIDGES: HAM-562-0004, HAM-75-0791, RET WALL B, RET WALL C, RET WALL D, RET WALL M: RYAN J. ELY E-81412 PROFESSIONAL ENGINEER	BRIDGES: HAM-75-0823, HAM-75-0992, RET WALL F RET WALL G: NICHOLAS J. NATORALE E-78961 PROFESSIONAL ENGINEER	FOR RAIL PLANS, BRIDGES: HAM-562-0026, HAM-75-0834, HAM-PROSR-00.000: ERIC F DUES E-75309 REGISTERED PROFESSIONAL ENGINEER	BRIDGE: HAM-75-0857 RETAINING WALLS: S, U, V, T, Z, Y, J3, K, H, I, Ji, L: JENNIFER G. MILLER E-70337 REGISTERED PROFESSIONAL ENGINEER
SIGNED: [signature] DATE: 12/15/2021	SIGNED: [signature] DATE: 12/22/21	SIGNED: [signature] DATE: 12/21/2021	SIGNED: [signature] DATE: 12/22/2021

PROJECT DESCRIPTION

THE PROJECT CONSISTS OF COMPLETE ASPHALT PAVEMENT RECONSTRUCTION AND WIDENING OF 2.25 MILES OF I.R. 75 WITH AN ADDITIONAL NORTHBOUND AND SOUTHBOUND LANE AND 0.25 MILES OF RECONSTRUCTION AND WIDENING OF S.R. 562 IN HAMILTON COUNTY. ADDITIONAL WORK INCLUDES RECONSTRUCTION OF 11 RAMPS, 4 ROADWAY BRIDGES, 1 PEDESTRIAN BRIDGE, 3 RAIL ROAD BRIDGES AND 0.75 MILES OF RAIL ROAD RECONSTRUCTION. THIS WORK INCLUDES NOISE WALLS, RETAINING WALLS, ITS, LIGHTING, WATER WORK, STORM SEWER SYSTEMS, CULVERT REHABILITATION AND BMP STRUCTURES. THIS IS PHASE 8 OF THE MILL CREEK EXPRESSWAY PROJECT.

PROJECT EARTH DISTURBED AREA: 108.85 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 1.00 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 109.85 ACRES

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2019 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

APPROVED Tanny K Campbell
DATE 1-3-2022 DISTRICT DEPUTY DIRECTOR

APPROVED Jack MacDonald /JJ
DATE 2-28-2022 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E041(146)
PID NO. 77889
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NORFOLK SOUTHERN
HAM-75-7.85
1 2017

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig
OHIO811.org Before You Dig
OHIO811, 8-1-1, or 1-800-362-2764
(Non-members must be called directly)

PLAN PREPARED BY:
EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Fax: 614.775.4800
M C M X X V I

STANDARD CONSTRUCTION DRAWINGS

BP-2.1	7/17/15	CB-6	7/16/21	F-3.1	7/19/13	RM-4.5	7/21/17	HL-10.31	4/17/20	HL-60.21	7/20/18	MT-98.21	1/17/20	MT-104.10	10/16/15	TC-51.11	1/15/16		
BP-2.2	1/15/21	CB-8	7/16/21	F-3.3	7/19/13	RM-4.6	7/19/13	HL-20.11	1/15/21	HL-60.31	1/17/20	MT-98.22	1/17/20	MT-105.10	1/17/20	TC-51.12	1/15/16	ITS-10.10	1/15/21
BP-2.3	7/18/14			F-3.4	7/19/13	RM-5.2	1/18/19	HL-20.13	4/17/20			MT-98.28	1/17/20	MT-110.10	7/1/21/22	C-52.10	10/18/13	ITS-10.11	1/15/21
BP-2.4	7/19/13	DM-1.1	7/17/20					HL-20.21	1/15/21	MT-95.30	7/19/19	MT-98.29	1/17/20			TC-52.20	1/15/21	ITS-12.10	7/19/19
BP-3.1	1/17/20	DM-1.2	7/16/21	MGS-1.1	7/16/21	AS-1-15	7/17/15	HL-20.24	1/15/21	MT-95.31	7/19/19	MT-98.30	7/16/21	TC-12.31	7/16/21	TC-61.10	1/17/20	ITS-14.10	1/15/21
BP-4.1	7/19/13	DM-2.1	1/18/13	MGS-2.1	1/19/18	AS-2-15	1/18/19	HL-30.11	1/15/21	MT-95.32	4/19/19	MT-99.20	4/19/19	TC-15.116	7/16/21	TC-61.30	7/19/19	ITS-14.11	1/15/21
BP-5.1	7/16/21	DM-4.1	7/17/20	MGS-3.1	1/19/18	EXJ-4-87	1/19/18	HL-30.21	4/17/20	MT-95.40	1/17/20	MT-99.30	1/17/20	TC-21.11	7/16/21	TC-65.10	1/17/14	ITS-14.20	1/15/21
BP-6.1	7/19/13	DM-4.3	1/15/16	MGS-3.2	1/18/13	GSD-1-19	1/15/21	HL-30.22	1/15/21	MT-95.41	1/17/20	MT-99.60	7/15/16	TC-21.21	7/16/21	TC-65.11	7/21/17	ITS-14.50	7/16/21
BP-7.1	7/17/20	DM-4.4	1/15/16	MGS-4.2	7/19/13	NBS-1-09	1/15/21	HL-30.31	4/17/20	MT-95.45	1/17/20	MT-100.00	7/16/21	TC-21.50	4/17/20	TC-71.10	7/16/21	ITS-15.10	1/15/21
BP-9.1	1/18/19			MGS-4.3	1/18/13	PCB-91	7/17/20	HL-30.32	4/17/20	MT-95.50	7/21/17	MT-101.60	1/17/20	TC-22.20	1/17/14	TC-72.20	7/20/18	ITS-15.11	1/15/21
		I-3B	3B1, 7/16/21	MGS-5.2	7/15/16	SBR-1-20	7/17/20	HL-30.33	4/17/20	MT-95.70	1/17/20	MT-101.70	1/17/20	TC-41.10	7/19/13	TC-73.20	1/17/20	ITS-18.00	7/16/21
CB-2-2A 2B, 2C, 7/16/21		I-3C	3C1, 7/16/21	MGS-5.3	7/15/16	SBR-2-20	1/15/21	HL-30.41	4/17/20	MT-95.71	1/17/20	MT-101.75	1/17/20	TC-41.20	10/18/13	TC-74.10	7/16/21	ITS-18.10	7/16/21
CB-2-3 2-4, 7/16/21		I-3D	7/16/21	MGS-6.1	1/19/18	SICD-1-96	7/18/14	HL-40.10	7/17/20	MT-95.73	1/17/20	MT-101.80	1/17/20	TC-41.30	10/18/13	TC-81.22	7/16/21	ITS-35.11	4/16/21
CB-3	7/16/21					SICD-2-14	1/15/21	HL-40.20	7/17/20	MT-95.82	7/19/13	MT-101.90	7/17/20	TC-41.40	10/18/13	TC-83.10	1/17/20	ITS-35.12	4/16/21
CB-3A	7/16/21	MH-1	7/16/21	RM-4.1	1/17/20			HL-50.11	1/16/15	MT-97.10	4/19/19	MT-102.10	1/17/20	TC-41.41	7/19/19	TC-83.20	7/21/17	ITS-35.13	4/16/21
CB-4	7/16/21	MH-3	7/16/21	RM-4.2	4/17/20	HL-10.11	1/15/21	HL-50.21	1/15/21	MT-98.10	1/17/20	MT-102.20	4/19/19	TC-41.50	10/18/13	TC-84.20	10/18/13	ITS-36.12	4/16/21
CB-4A 5A, 8A, 7/16/21				RM-4.3	7/18/14	HL-10.12	1/20/17	HL-60.11	7/21/17	MT-98.11	1/17/20	MT-102.30	10/16/15	TC-42.10	10/18/13	TC-85.10	4/17/20	ITS-50.10	1/15/21
CB-5	7/16/21	F-1.1	7/19/13	RM-4.4	7/19/19	HL-10.13	4/17/20	HL-60.12	7/16/21	MT-98.20	4/19/19	MT-103.10	1/19/18	TC-42.20	10/18/13	TC-85.20	7/20/18	ITS-50.11	1/15/21

ITS-50.12	1/15/21	800-2019	4/15/22		
ITS-76.10	7/17/20	804	1/15/21		
MSD STANDARD DRAWINGS		809	1/15/21		
		813	10/19/18		
		821	4/20/12	NORFOLK SOUTHERN STANDARD SPECIFICATIONS FOR MATERIAL AND CONSTRUCTION (JANUARY 2019)	
49005		832	10/19/18		
49031		840	4/16/21		
49032		861	1/15/21		
49037		866	4/21/17		
49040		867	1/15/21	PUMP STATION (12/23/21)	
49048		878	4/16/21		
49058A		902	7/19/19	WATERWAY PERMIT (11/22/21)	
		904	1/15/21		
CITY OF CINCINNATI STANDARD DRAWINGS		909	10/15/21	OHIO EPA 513 PERMIT (7/7/21)	
		913	4/21/17		
ES-7	4/27/05	921	4/20/12	CROSSHOLE SONIC LOGGING (CSL) (6/11/19)	

SUPPLEMENTAL SPECIFICATIONS

SPECIAL PROVISIONS

FOR INFORMATION ONLY

Contract Proposal available @ www.contracts.dot.state.oh.us

HAM - IR 75-07.85
220257 PID - 77889
Dist 8 5/5/2022

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INDEX OF SHEETS:

TITLE SHEET	1 - 2
SCHEMATIC PLAN	3 - 5
GEOMETRIC PLAN	6 - 12
HORIZONTAL AND VERTICAL CONTROL	13
TYPICAL SECTIONS	14 - 36
GENERAL NOTES	37 - 58
MAINTENANCE OF TRAFFIC	59 - 279
GENERAL SUMMARY	280 - 298
SUBSUMMARIES AND ESTIMATE QTYS	299 - 341
PROJECT SITE PLAN	342 - 344
PLAN AND PROFILE - I.R. 75	345 - 356
PLAN AND PROFILE - RAMP M	357 - 360
PLAN AND PROFILE - RAMP N	361 - 362
PLAN AND PROFILE - RAMP J	363 - 365
PLAN AND PROFILE - RAMP K	366 - 367
PLAN AND PROFILE - RAMP A	368
PLAN AND PROFILE - RAMP B	369
PLAN AND PROFILE - RAMP C	370 - 371
PLAN AND PROFILE - RAMP D	372 - 374
PLAN AND PROFILE - RAMP E	375
PLAN AND PROFILE - S.R. 562	376 - 378
PLAN AND PROFILE - RAMP P	379 - 380
PLAN AND PROFILE - RAMP Q	381
PLAN AND PROFILE - PROSSER AVE	382
PLAN AND PROFILE - TOWNE ST	383 - 384
PLAN AND PROFILE - SUMMIT RD	385 - 387
PLAN AND PROFILE - PEDESTRIAN PATH	388
CROSS SECTION LAYOUT INDEX	389 - 394
CROSS SECTIONS - I.R. 75	395 - 640
CROSS SECTIONS - RAMP M	641 - 649
CROSS SECTIONS - RAMP N	650 - 664
CROSS SECTIONS - RAMP J	665 - 685
CROSS SECTIONS - RAMP K	686 - 703
CROSS SECTIONS - RAMP A	704 - 709
CROSS SECTIONS - RAMP B	710 - 713
CROSS SECTIONS - RAMP C	714 - 722
CROSS SECTIONS - RAMP D	723 - 735
CROSS SECTIONS - RAMP E	736 - 739
CROSS SECTIONS - S.R. 562	740 - 752
CROSS SECTIONS - RAMP P	753 - 756
CROSS SECTIONS - RAMP Q	757 - 759
CROSS SECTIONS - TOWNE ST	760 - 766
CROSS SECTIONS - CEDAR ST	767 - 768
SUPERELEVATION TABLES	769 - 788
PAVEMENT DETAILS	789 - 803
INTERSECTION DETAILS	804
DRIVE DETAILS	805 - 806
SUMMIT RD CURB RAMP DETAILS	807 - 808
DRAINAGE PLANS	809 - 820
STORM SEWER PROFILES	821 - 860
CULVERT DETAILS	861
STORMWATER DETENTION SYSTEM DETAILS	862 - 868
COMBINED SEWER RELOCATION (CSO 490)	869 - 882
PUMP STATION PLANS	883 - 933
GRADING PLANS	934 - 938
RETAINING WALLS	
SCHEMATIC PLAN	939 - 941
WALLS D, S, U, AND V	942 - 994
WALLS M, T, Z, Y, J3 AND K	995 - 1031
WALLS B, C, F, G, H, I, J1 AND L	1032 - 1076
NOISE WALLS	
SCHEMATIC PLAN	1077
NOISE WALLS 1A, 1B-1, 1B-2 AND 1C	1078 - 1086
NOISE WALLS 2A AND 2B	1087 - 1091
SANITARY SEWER PROFILES	1092 - 1095
GREATER CINCINNATI WATER WORKS	1096 - 1099
ROADSIDE BARRIER PLAN	1100 - 1111
MISCELLANEOUS DETAILS	1112 - 1113
TRAFFIC CONTROL	1114 - 1173
SIGNAL PLANS	1174 - 1184
ITS PLANS	1185 - 1228
LIGHTING PLANS	1229 - 1268
STRUCTURES (20' AND OVER)	
HAM-562-0004	1269 - 1332
HAM-75-0791	1333 - 1389
HAM-75-0823	1390 - 1444
HAM-75-0857	1445 - 1484
HAM-75-0992	1485 - 1501
RAIL BRIDGE NOTES AND DETAILS	1502 - 1514
RAIL STRUCTURES	
HAM-562-0026	1515 - 1571
HAM-75-0834	1572 - 1612
HAM-PROSR-00.000	1613 - 1647
FENCING PLAN	1648 - 1659
RIGHT OF WAY PLANS	1660 - 1711
RAIL PLANS	1712 - 1828
SOIL PROFILE PLANS	1829 - 2017

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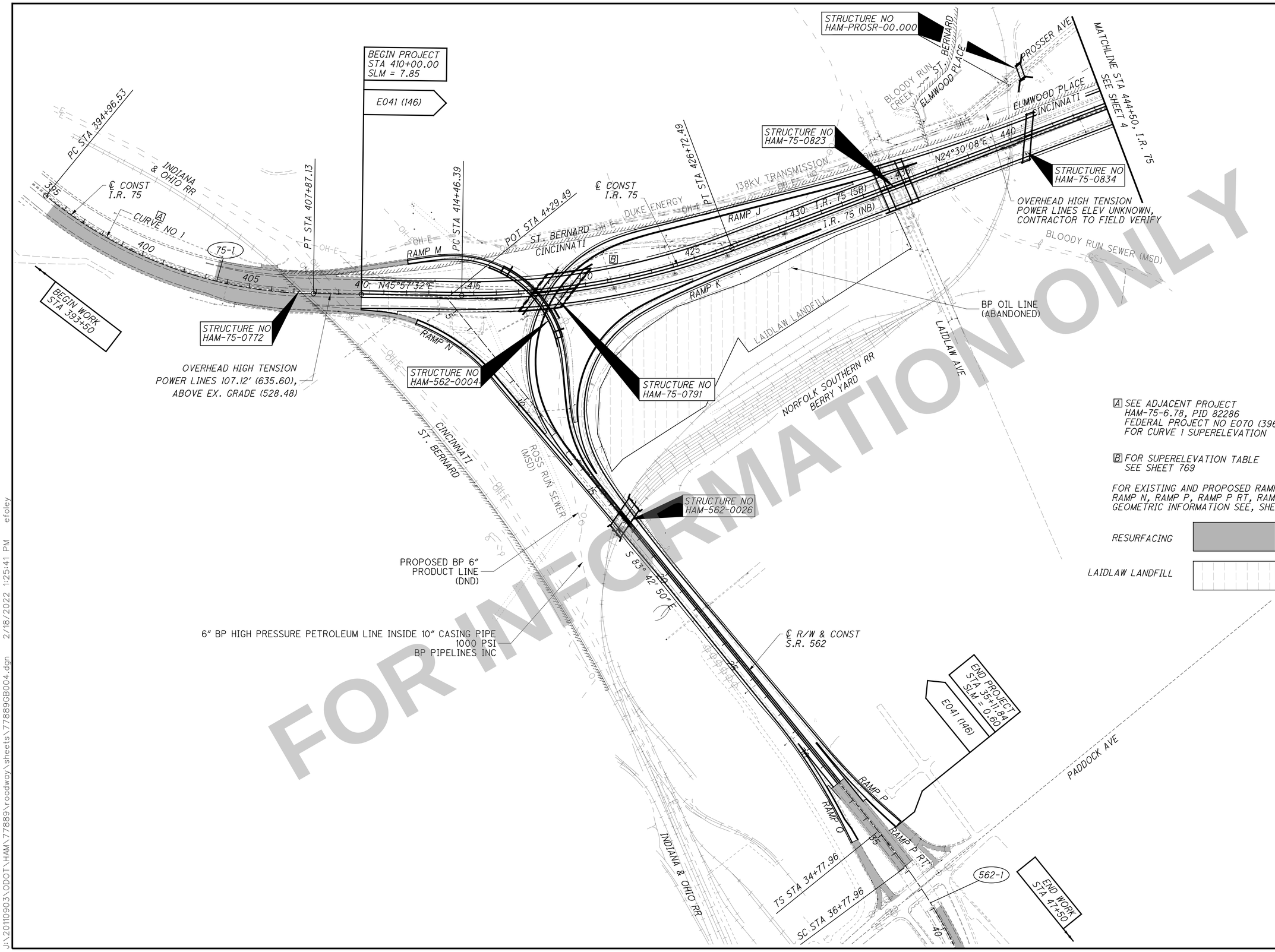
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INDEX OF SHEETS

HAM-75-7.85

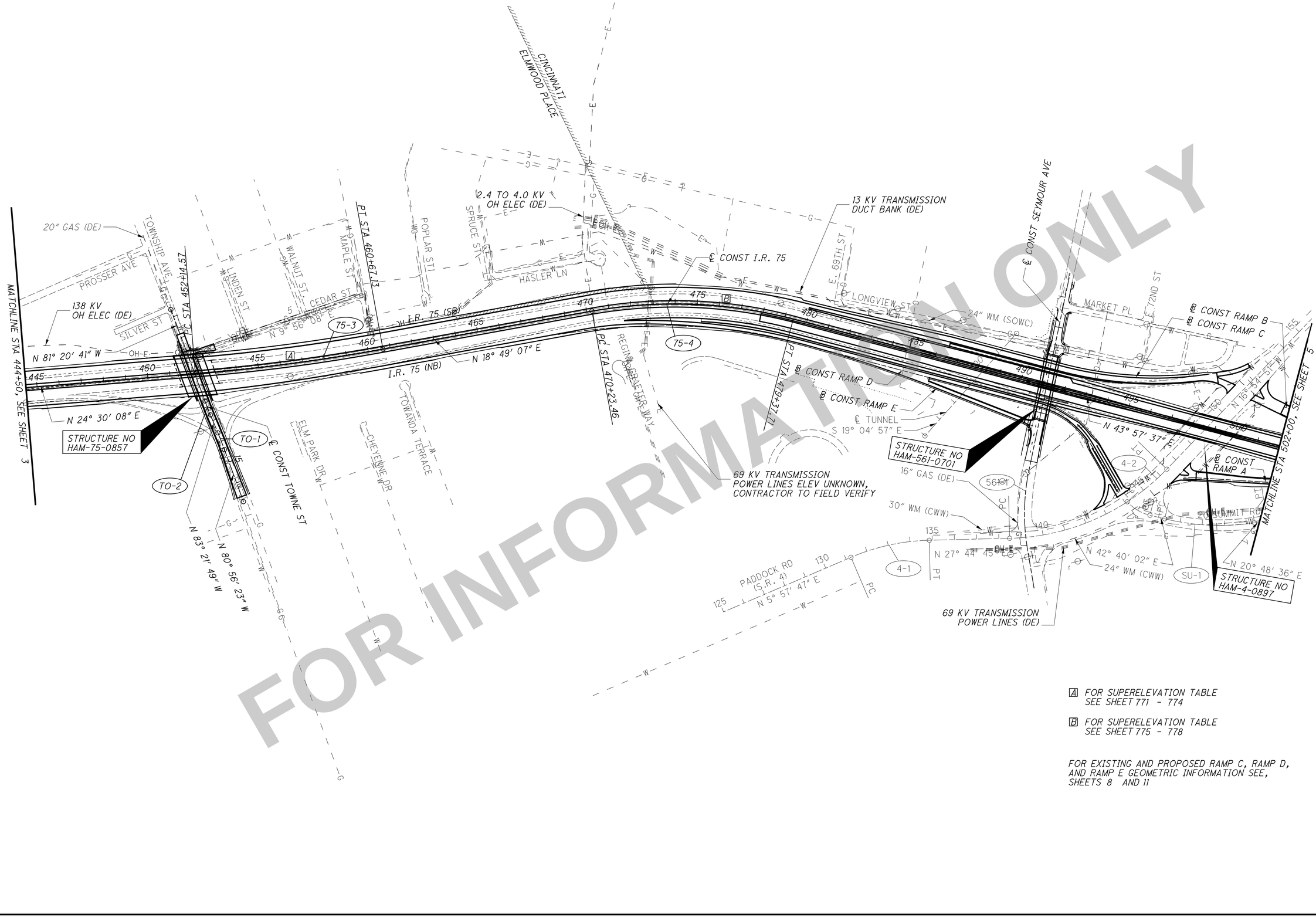
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FOR INFORMATION ONLY

[A] FOR SUPERELEVATION TABLE
SEE SHEET 771 - 774

[B] FOR SUPERELEVATION TABLE
SEE SHEET 775 - 778

FOR EXISTING AND PROPOSED RAMP C, RAMP D,
AND RAMP E GEOMETRIC INFORMATION SEE,
SHEETS 8 AND 11

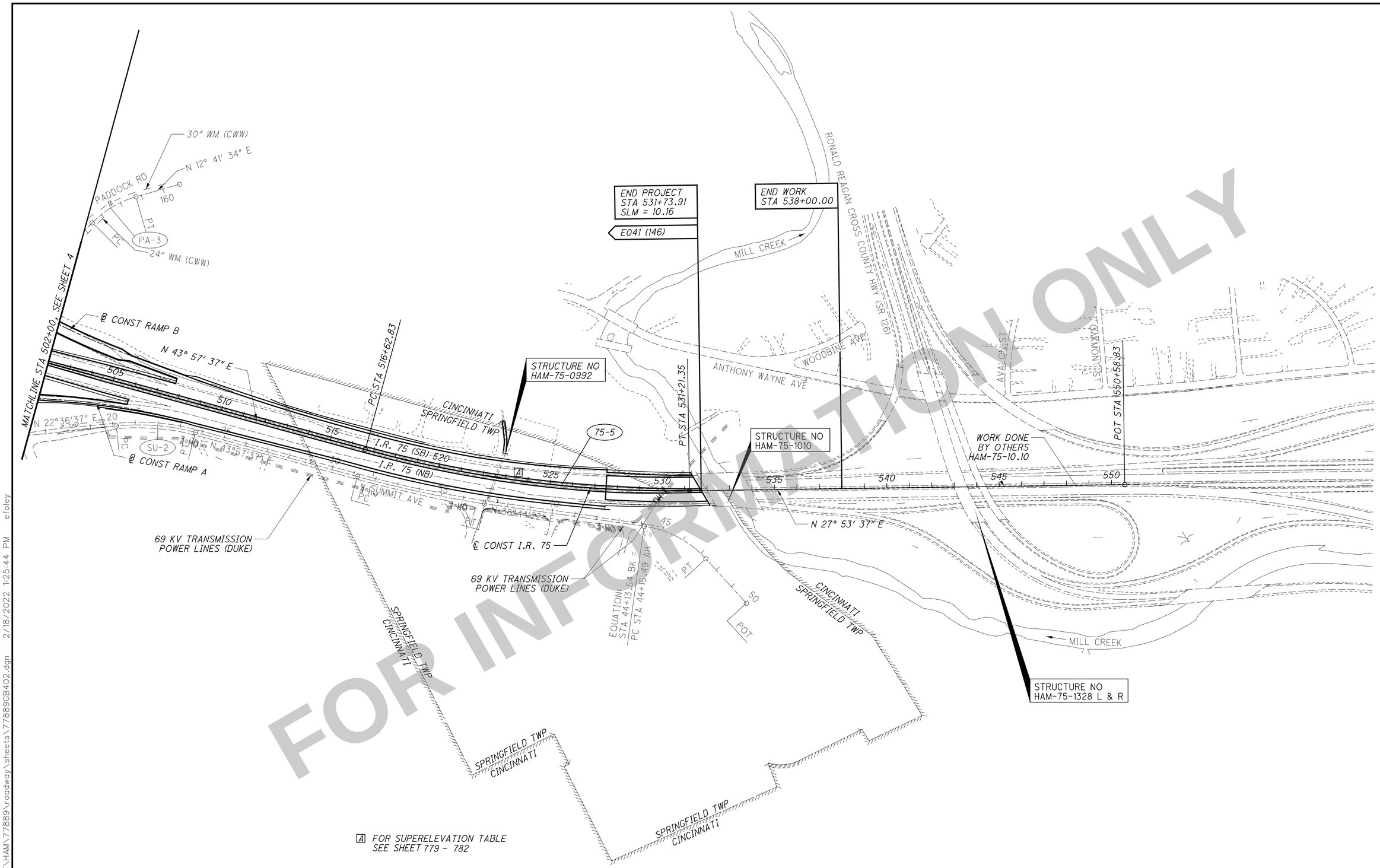
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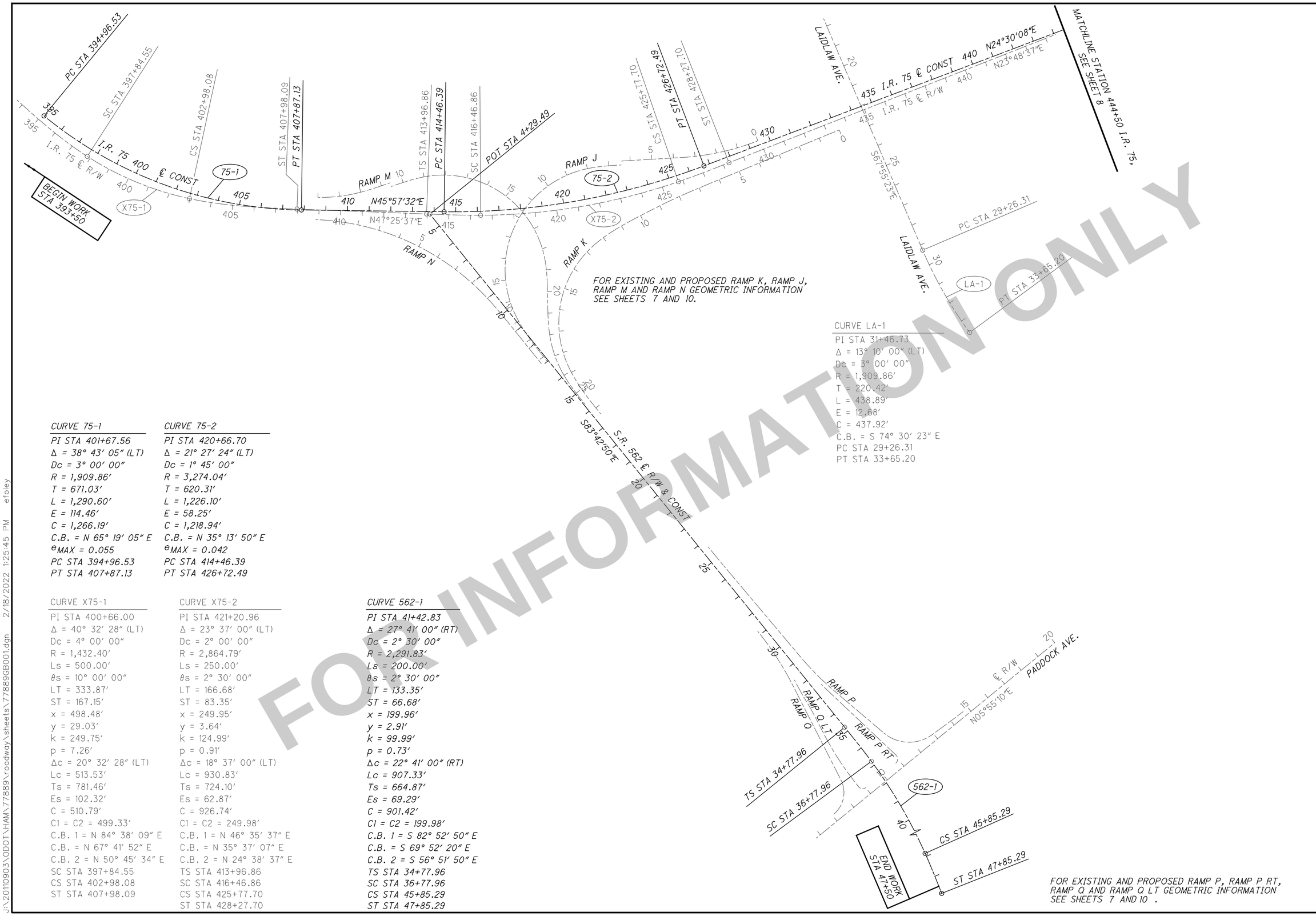
SCHEMATIC PLAN
I.R. 75

HAM-75-7.85

4
2017

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MATCHLINE STA 502+00, SEE SHEET 4
30" WM (CWW)
N 12° 41' 34" E
PADDOCK RD
160
PT
PC
PA-3
24" WM (CWW)
℄ CONST RAMP B
N 43° 57' 37" E
505
510
515
N 22°36'37" E 20
SU-2
℄ CONST RAMP A
I.R. 75 (SB) 520
I.R. 75 (NB)
SUMMIT AVE
N 36°44'22" E
PC STA 516+62.83
CINCINNATI
SPRINGFIELD TWP
STRUCTURE NO
HAM-75-0992
75-5
PT STA 531+21.35
END PROJECT
STA 531+73.91
SLM = 10.16
E041 (146)
END WORK
STA 538+00.00
RONALD REAGAN CROSS COUNTY HWY (SR 126)
MILL CREEK
ANTHONY WAYNE AVE
WOODBINE AVE
AVALON ST
CAMDEN ST
POT STA 550+58.83
WORK DONE
BY OTHERS
HAM-75-10.10
STRUCTURE NO
HAM-75-1010
520
525
530
535
540
545
550
N 27° 53' 37" E
69 KV TRANSMISSION
POWER LINES (DUKE)
℄ CONST I.R. 75
69 KV TRANSMISSION
POWER LINES (DUKE)
EQUATION
STA 44+13.54 BK =
PC STA 44+15.49 AH
PT
50
POT
SPRINGFIELD TWP
CINCINNATI
SPRINGFIELD TWP
CINCINNATI
CINCINNATI
SPRINGFIELD TWP
MILL CREEK
STRUCTURE NO
HAM-75-1328 L & R
SPRINGFIELD TWP
CINCINNATI
SPRINGFIELD TWP
CINCINNATI
A FOR SUPERELEVATION TABLE
SEE SHEET 779 - 782
FOR EXISTING AND PROPOSED RAMP A
AND RAMP B GEOMETRIC INFORMATION SEE,
SHEET 9 AND 12
FOR INFORMATION ONLY
HORIZONTAL
SCALE IN FEET
0
100
200
400
SCHEMATIC PLAN
I.R. 75
HAM-75-7.85
5
2017
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CURVE 75-1

PI STA 401+67.56
Δ = 38° 43′ 05″ (LT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 671.03′
L = 1,290.60′
E = 114.46′
C = 1,266.19′
C.B. = N 65° 19′ 05″ E
e^{MAX} = 0.055
PC STA 394+96.53
PT STA 407+87.13

CURVE 75-2

PI STA 420+66.70
Δ = 21° 27′ 24″ (LT)
Dc = 1° 45′ 00″
R = 3,274.04′
T = 620.31′
L = 1,226.10′
E = 58.25′
C = 1,218.94′
C.B. = N 35° 13′ 50″ E
e^{MAX} = 0.042
PC STA 414+46.39
PT STA 426+72.49

CURVE X75-1

PI STA 400+66.00
Δ = 40° 32′ 28″ (LT)
Dc = 4° 00′ 00″
R = 1,432.40′
Ls = 500.00′
θs = 10° 00′ 00″
LT = 333.87′
ST = 167.15′
x = 498.48′
y = 29.03′
k = 249.75′
p = 7.26′
Δc = 20° 32′ 28″ (LT)
Lc = 513.53′
Ts = 781.46′
Es = 102.32′
C = 510.79′
C1 = C2 = 499.33′
C.B. 1 = N 84° 38′ 09″ E
C.B. = N 67° 41′ 52″ E
C.B. 2 = N 50° 45′ 34″ E
SC STA 397+84.55
CS STA 402+98.08
ST STA 407+98.09

CURVE X75-2

PI STA 421+20.96
Δ = 23° 37′ 00″ (LT)
Dc = 2° 00′ 00″
R = 2,864.79′
Ls = 250.00′
θs = 2° 30′ 00″
LT = 166.68′
ST = 83.35′
x = 249.95′
y = 3.64′
k = 124.99′
p = 0.91′
Δc = 18° 37′ 00″ (LT)
Lc = 930.83′
Ts = 724.10′
Es = 62.87′
C = 926.74′
C1 = C2 = 249.98′
C.B. 1 = N 46° 35′ 37″ E
C.B. = N 35° 37′ 07″ E
C.B. 2 = N 24° 38′ 37″ E
TS STA 413+96.86
SC STA 416+46.86
CS STA 425+77.70
ST STA 428+27.70

CURVE 562-1

PI STA 41+42.83
Δ = 27° 41′ 00″ (RT)
Dc = 2° 30′ 00″
R = 2,291.83′
Ls = 200.00′
θs = 2° 30′ 00″
LT = 133.35′
ST = 66.68′
x = 199.96′
y = 2.91′
k = 99.99′
p = 0.73′
Δc = 22° 41′ 00″ (RT)
Lc = 907.33′
Ts = 664.87′
Es = 69.29′
C = 901.42′
C1 = C2 = 199.98′
C.B. 1 = S 82° 52′ 50″ E
C.B. = S 69° 52′ 20″ E
C.B. 2 = S 56° 51′ 50″ E
TS STA 34+77.96
SC STA 36+77.96
CS STA 45+85.29
ST STA 47+85.29

CURVE LA-1

PI STA 31+46.73
Δ = 13° 10′ 00″ (LT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 220.42′
L = 438.89′
E = 12.68′
C = 437.92′
C.B. = S 74° 30′ 23″ E
PC STA 29+26.31
PT STA 33+65.20

FOR INFORMATION ONLY

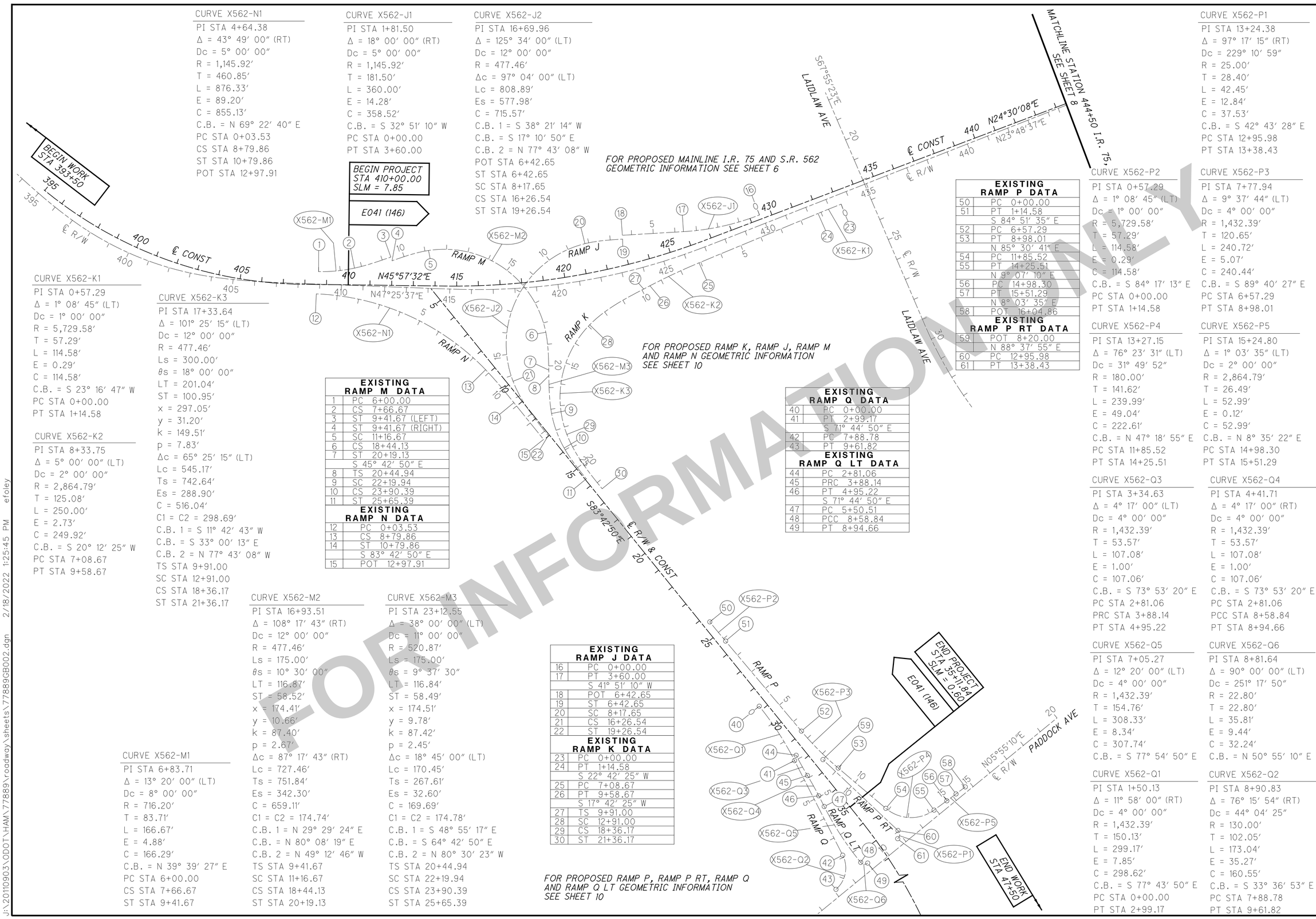
HORIZONTAL SCALE IN FEET
0 100 200 400

GEOMETRIC PLAN
MAINLINE I.R. 75 AND S.R. 562 DATA

HAM-75-7.85

6
2017

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CURVE X562-N1
PI STA 4+64.38
Δ = 43° 49′ 00″ (RT)
Dc = 5° 00′ 00″
R = 1,145.92′
T = 460.85′
L = 876.33′
E = 89.20′
C = 855.13′
C.B. = N 69° 22′ 40″ E
PC STA 0+03.53
CS STA 8+79.86
ST STA 10+79.86
POT STA 12+97.91

CURVE X562-J1
PI STA 1+81.50
Δ = 18° 00′ 00″ (RT)
Dc = 5° 00′ 00″
R = 1,145.92′
T = 181.50′
L = 360.00′
E = 14.28′
C = 358.52′
C.B. = S 32° 51′ 10″ W
PC STA 0+00.00
PT STA 3+60.00

CURVE X562-J2
PI STA 16+69.96
Δ = 125° 34′ 00″ (LT)
Dc = 12° 00′ 00″
R = 477.46′
Δc = 97° 04′ 00″ (LT)
Lc = 808.89′
Es = 577.98′
C = 715.57′
C.B. 1 = S 38° 21′ 14″ W
C.B. = S 17° 10′ 50″ E
C.B. 2 = N 77° 43′ 08″ W
POT STA 6+42.65
ST STA 6+42.65
SC STA 8+17.65
CS STA 16+26.54
ST STA 19+26.54

FOR PROPOSED MAINLINE I.R. 75 AND S.R. 562 GEOMETRIC INFORMATION SEE SHEET 6

CURVE X562-P1
PI STA 13+24.38
Δ = 97° 17′ 15″ (RT)
Dc = 229° 10′ 59″
R = 25.00′
T = 28.40′
L = 42.45′
E = 12.84′
C = 37.53′
C.B. = S 42° 43′ 28″ E
PC STA 12+95.98
PT STA 13+38.43

CURVE X562-P2
PI STA 0+57.29
Δ = 1° 08′ 45″ (LT)
Dc = 1° 00′ 00″
R = 5,729.58′
T = 57.29′
L = 114.58′
E = 0.29′
C = 114.58′
C.B. = S 84° 17′ 13″ E
PC STA 0+00.00
PT STA 1+14.58

CURVE X562-P3
PI STA 7+77.94
Δ = 9° 37′ 44″ (LT)
Dc = 4° 00′ 00″
R = 1,432.39′
T = 120.65′
L = 240.72′
E = 5.07′
C = 240.44′
C.B. = S 89° 40′ 27″ E
PC STA 6+57.29
PT STA 8+98.01

CURVE X562-P4
PI STA 13+27.15
Δ = 76° 23′ 31″ (LT)
Dc = 31° 49′ 52″
R = 180.00′
T = 141.62′
L = 239.99′
E = 49.04′
C = 222.61′
C.B. = N 47° 18′ 55″ E
PC STA 11+85.52
PT STA 14+25.51

CURVE X562-P5
PI STA 15+24.80
Δ = 1° 03′ 35″ (LT)
Dc = 2° 00′ 00″
R = 2,864.79′
T = 26.49′
L = 52.99′
E = 0.12′
C = 52.99′
C.B. = N 8° 35′ 22″ E
PC STA 14+98.30
PT STA 15+51.29

CURVE X562-Q1
PI STA 1+50.13
Δ = 11° 58′ 00″ (RT)
Dc = 4° 00′ 00″
R = 1,432.39′
T = 150.13′
L = 299.17′
E = 7.85′
C = 298.62′
C.B. = S 77° 43′ 50″ E
PC STA 0+00.00
PT STA 2+99.17

CURVE X562-Q2
PI STA 8+90.83
Δ = 76° 15′ 54″ (RT)
Dc = 44° 04′ 25″
R = 130.00′
T = 102.05′
L = 173.04′
E = 35.27′
C = 160.55′
C.B. = S 33° 36′ 53″ E
PC STA 7+88.78
PT STA 9+61.82

CURVE X562-Q3
PI STA 3+34.63
Δ = 4° 17′ 00″ (LT)
Dc = 4° 00′ 00″
R = 1,432.39′
T = 53.57′
L = 107.08′
E = 1.00′
C = 107.06′
C.B. = S 73° 53′ 20″ E
PC STA 2+81.06
PRC STA 3+88.14
PT STA 4+95.22

CURVE X562-Q4
PI STA 4+41.71
Δ = 4° 17′ 00″ (RT)
Dc = 4° 00′ 00″
R = 1,432.39′
T = 53.57′
L = 107.08′
E = 1.00′
C = 107.06′
C.B. = S 73° 53′ 20″ E
PC STA 2+81.06
PCC STA 8+58.84
PT STA 8+94.66

CURVE X562-Q5
PI STA 7+05.27
Δ = 12° 20′ 00″ (LT)
Dc = 4° 00′ 00″
R = 1,432.39′
T = 154.76′
L = 308.33′
E = 8.34′
C = 307.74′
C.B. = S 77° 54′ 50″ E

CURVE X562-Q6
PI STA 8+81.64
Δ = 90° 00′ 00″ (LT)
Dc = 251° 17′ 50″
R = 22.80′
T = 22.80′
L = 35.81′
E = 9.44′
C = 32.24′
C.B. = N 50° 55′ 10″ E

CURVE X562-K1
PI STA 0+57.29
Δ = 1° 08′ 45″ (LT)
Dc = 1° 00′ 00″
R = 5,729.58′
T = 57.29′
L = 114.58′
E = 0.29′
C = 114.58′
C.B. = S 23° 16′ 47″ W
PC STA 0+00.00
PT STA 1+14.58

CURVE X562-K2
PI STA 8+33.75
Δ = 5° 00′ 00″ (LT)
Dc = 2° 00′ 00″
R = 2,864.79′
T = 125.08′
L = 250.00′
E = 2.73′
C = 249.92′
C.B. = S 20° 12′ 25″ W
PC STA 7+08.67
PT STA 9+58.67

CURVE X562-K3
PI STA 17+33.64
Δ = 101° 25′ 15″ (LT)
Dc = 12° 00′ 00″
R = 477.46′
Ls = 300.00′
θs = 18° 00′ 00″
LT = 201.04′
ST = 100.95′
x = 297.05′
y = 31.20′
k = 149.51′
p = 7.83′
Δc = 65° 25′ 15″ (LT)
Lc = 545.17′
Ts = 742.64′
Es = 288.90′
C = 516.04′
C1 = C2 = 298.69′
C.B. 1 = S 11° 42′ 43″ W
C.B. = S 33° 00′ 13″ E
C.B. 2 = N 77° 43′ 08″ W
TS STA 9+91.00
SC STA 12+91.00
CS STA 18+36.17
ST STA 21+36.17

EXISTING RAMP M DATA

1	PC 6+00.00
2	CS 7+66.67
3	ST 9+41.67 (LEFT)
4	ST 9+41.67 (RIGHT)
5	SC 11+16.67
6	CS 18+44.13
7	ST 20+19.13
	S 45° 42′ 50″ E
8	TS 20+44.94
9	SC 22+19.94
10	CS 23+90.39
11	ST 25+65.39

EXISTING RAMP N DATA

12	PC 0+03.53
13	CS 8+79.86
14	ST 10+79.86
	S 83° 42′ 50″ E
15	POT 12+97.91

EXISTING RAMP P DATA

50	PC 0+00.00
51	PT 1+14.58
	S 84° 51′ 35″ E
52	PC 6+57.29
53	PT 8+88.01
	N 85° 30′ 41″ E
54	PC 11+85.52
55	PT 14+25.51
	N 9° 07′ 10″ E
56	PC 14+98.30
57	PT 15+51.29
	N 8° 03′ 35″ E
58	POT 16+04.86

EXISTING RAMP P RT DATA

59	POT 8+20.00
	N 88° 37′ 55″ E
60	PC 12+95.98
61	PT 13+38.43

EXISTING RAMP Q DATA

40	PC 0+00.00
41	PT 2+99.17
	S 71° 44′ 50″ E
42	PC 7+88.78
43	PT 9+61.82

EXISTING RAMP Q LT DATA

44	PC 2+81.06
45	PRC 3+88.14
46	PT 4+95.22
	S 71° 44′ 50″ E
47	PC 5+50.51
48	PCC 8+58.84
49	PT 8+94.66

EXISTING RAMP J DATA

16	PC 0+00.00
17	PT 3+60.00
	S 41° 51′ 10″ W
18	POT 6+42.65
19	ST 6+42.65
20	SC 8+17.65
21	CS 16+26.54
22	ST 19+26.54

EXISTING RAMP K DATA

23	PC 0+00.00
24	PT 1+14.58
	S 22° 42′ 25″ W
25	PC 7+08.67
26	PT 9+58.67
	S 17° 42′ 25″ W
27	TS 9+91.00
28	SC 12+91.00
29	CS 18+36.17
30	ST 21+36.17

FOR PROPOSED RAMP K, RAMP J, RAMP M AND RAMP N GEOMETRIC INFORMATION SEE SHEET 10

FOR PROPOSED RAMP P, RAMP P RT, RAMP Q AND RAMP Q LT GEOMETRIC INFORMATION SEE SHEET 10

CURVE X562-M1
PI STA 6+83.71
Δ = 13° 20′ 00″ (LT)
Dc = 8° 00′ 00″
R = 716.20′
T = 83.71′
L = 166.67′
E = 4.88′
C = 166.29′
C.B. = N 39° 39′ 27″ E
PC STA 6+00.00
CS STA 7+66.67
ST STA 9+41.67

CURVE X562-M2
PI STA 16+93.51
Δ = 108° 17′ 43″ (RT)
Dc = 12° 00′ 00″
R = 477.46′
Ls = 175.00′
θs = 10° 30′ 00″
LT = 116.87′
ST = 58.52′
x = 174.41′
y = 10.66′
k = 87.40′
p = 2.67′
Δc = 87° 17′ 43″ (RT)
Lc = 727.46′
Ts = 751.84′
Es = 342.30′
C = 659.11′
C1 = C2 = 174.74′
C.B. 1 = N 29° 29′ 24″ E
C.B. = N 80° 08′ 19″ E
C.B. 2 = N 49° 12′ 46″ W
TS STA 9+41.67
SC STA 11+16.67
CS STA 18+44.13
ST STA 20+19.13

CURVE X562-M3
PI STA 23+12.55
Δ = 38° 00′ 00″ (LT)
Dc = 11° 00′ 00″
R = 520.87′
Ls = 175.00′
θs = 9° 37′ 30″
LT = 116.84′
ST = 58.49′
x = 174.51′
y = 9.78′
k = 87.42′
p = 2.45′
Δc = 18° 45′ 00″ (LT)
Lc = 170.45′
Ts = 267.61′
Es = 32.60′
C = 169.69′
C1 = C2 = 174.78′
C.B. 1 = S 48° 55′ 17″ E
C.B. = S 64° 42′ 50″ E
C.B. 2 = N 80° 30′ 23″ W
TS STA 20+44.94
SC STA 22+19.94
CS STA 23+90.39
ST STA 25+65.39

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 100 200 400

GEOMETRIC PLAN
EXISTING RAMP BASELINE DATA

HAM-75-7.85

7
2017

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EXISTING RAMP A DATA	
1	POT 16+40.42
2	POT 26+24.67
	N 31° 55' 38" E

EXISTING RAMP B DATA	
3	16+40.42
4	22+30.97
	N 55° 14' 04" E
5	PC 16+31.79
6	PT 18+71.61
	N 55° 14' 04 E

CURVE X75-B1

PI STA 18+01.90
Δ = 104° 42' 19" (LT)
Dc = 43° 39' 34"
R = 131.23'
T = 170.12'
L = 239.82'
E = 83.62'
C = 207.82'
C.B. = S 72° 24' 46" E

EXISTING RAMP C DATA	
7	PC 10+09.09
8	PT 12+92.08
	N 20° 41' 50 E
9	PC 14+06.20
10	PT 15+54.53
	N 55° 14' 04" E
3	POT 16+40.42
9	POT 14+06.20
11	PC 15+50.87
12	PT 17+45.98
	N 16° 54' 44 W
13	POT 17+76.21

CURVE X75-C1

PI STA 11+51.02
Δ = 10° 58' 57" (LT)
Dc = 3° 52' 51"
R = 1,476.37'
T = 141.93'
L = 282.99'
E = 6.81'
C = 282.56'
C.B. = N 26° 11' 19" E

CURVE X75-C2

PI STA 14+82.70
Δ = 34° 32' 14" (RT)
Dc = 23° 17' 06"
R = 246.06'
T = 76.49'
L = 148.32'
E = 11.62'
C = 146.09'
C.B. = N 37° 57' 57" E

CURVE X75-C3

PI STA 16+52.08
Δ = 37° 36' 33" (LT)
Dc = 19° 16' 33"
R = 297.24'
T = 101.22'
L = 195.11'
E = 16.76'
C = 191.63'
C.B. = N 1° 53' 33" E

EXISTING RAMP D DATA	
14	POT 9+84.25
15	PC 10+39.45
16	PT 13+35.78
	N 89° 11' 10" E
17	PC 15+97.91
18	PT 16+40.42
	N 77° 10' 23" E
19	PC 14+50.32
20	PT 16+98.03
	S 5° 19' 11" W

CURVE X75-D1

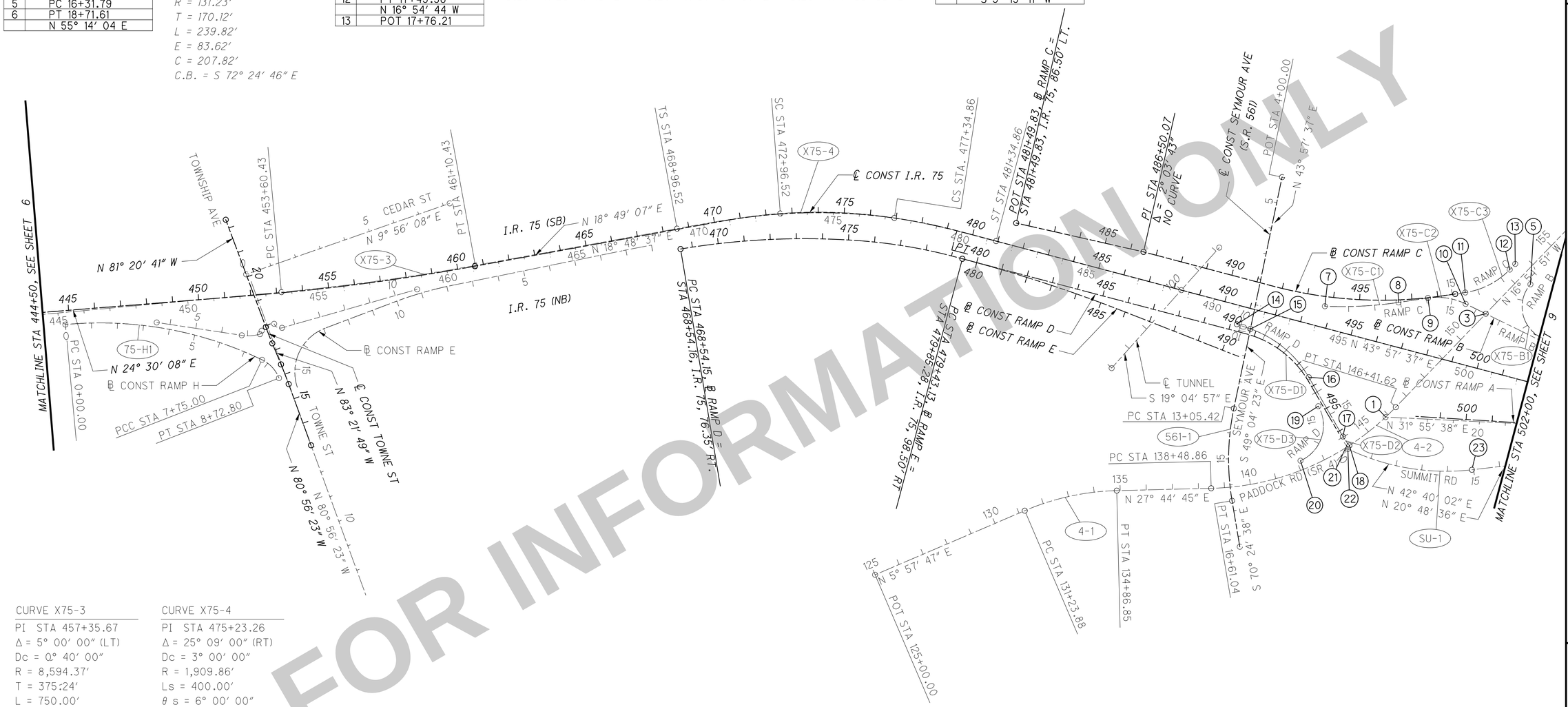
PI STA 11+94.23
Δ = 40° 50' 40" (RT)
Dc = 13° 47' 01"
R = 415.68'
T = 154.77'
L = 296.33'
E = 27.88'
C = 290.09'
C.B. = N 68° 45' 50" E

CURVE X75-D2

PI STA 16+19.24
Δ = 12° 00' 47" (LT)
Dc = 28° 15' 49"
R = 202.72'
T = 21.33'
L = 42.50'
E = 1.12'
C = 42.43'
C.B. = N 83° 10' 47" E

CURVE X75-D3

PI STA 16+14.67
Δ = 96° 08' 00" (RT)
Dc = 38° 48' 30"
R = 147.64'
T = 164.35'
L = 247.71'
E = 73.29'
C = 219.66'
C.B. = S 42° 44' 49" E



FOR INFORMATION ONLY

CURVE X75-3

PI STA 457+35.67
Δ = 5° 00' 00" (LT)
Dc = 0° 40' 00"
R = 8,594.37'
T = 375.24'
L = 750.00'
E = 8.19'
e max = 0.019
PC STA. 453+60.43
PT STA. 461+10.43

CURVE X75-4

PI STA 475+23.26
Δ = 25° 09' 00" (RT)
Dc = 3° 00' 00"
R = 1,909.86'
Ls = 400.00'
θ s = 6° 00' 00"
LT = 266.82'
ST = 133.47'
x = 399.56'
y = 13.95'
k = 199.93'
p = 3.49'
D c = 13° 09' 00" (RT)
Lc = 438.34'
Ts = 626.73'
Es = 50.52'
e max = 0.055
TS STA. 468+96.52
SC STA. 472+96.52
CS STA. 477+34.86
ST STA. 481+34.86

CURVE 4-1

PI STA 133+07.58
Δ = 21° 46' 58" (RT)
Dc = 6° 00' 05"
R = 954.72'
T = 183.70'
L = 362.97'
E = 17.51'
C = 360.79'
C.B. = N 16° 51' 16" E
e max = NC
PC STA. 131+23.88
PT STA. 134+86.85

CURVE 4-2

PI STA 142+66.61
Δ = 44° 39' 36" (LT)
Dc = 5° 38' 01"
R = 1,017.06'
T = 417.75'
L = 792.76'
E = 82.45'
C = 772.84'
C.B. = N 5° 24' 57" E
e max = NC
PC STA. 138+48.86
PT STA. 146+41.62

CL R/W SUMMIT RD DATA	
21	POT 9+95.01
	N 54°45'07" E 9.58'
22	PC 10+04.59
23	PT 14+92.82

CURVE SU-1

PI STA 12+55.32
Δ = 32°08'30" (LT)
Dc = 6°35'00"
R = 870.32'
T = 250.73'
L = 488.23'
E = 35.40'
C = 481.85'
C.B. = N 38°40'52" E

CURVE 561-1

PI STA 14+85.32
Δ = 21° 20' 15" (LT)
Dc = 6° 00' 00"
R = 954.93'
T = 179.90'
L = 355.62'
E = 16.80'
C = 353.57'
C.B. = S 59° 44' 30" E
e max = NC
PC STA. 13+05.42
PT STA. 16+61.04

CURVE 75-H1

PI STA 3+97.24	PI STA 8+26.34
D = 31° 00' 00" (RT)	Dc = 43° 06' 15" (RT)
Dc = 4° 00' 00"	Dc = 44° 04' 25"
R = 1,432.39'	R = 130.00'
T = 397.24'	T = 51.34'
L = 775.00'	L = 97.80'
E = 54.06'	E = 9.77'
C = 765.58'	C = 95.51'
C.B. = N 39° 18' 37" E	C.B. = N 76° 21' 45" E
e max =	e max =
PC Sta. 0+00.00	PCC Sta. 7+75.00
PT Sta. 7+75.00	PT Sta. 8+72.80

HORIZONTAL SCALE IN FEET
0 100 200 400

GEOMETRIC I.R. 75 PLAN AND I.R. 75 AND RAMP DATA
EXISTING MAINLINE

HAM-75-7.85

8
2017

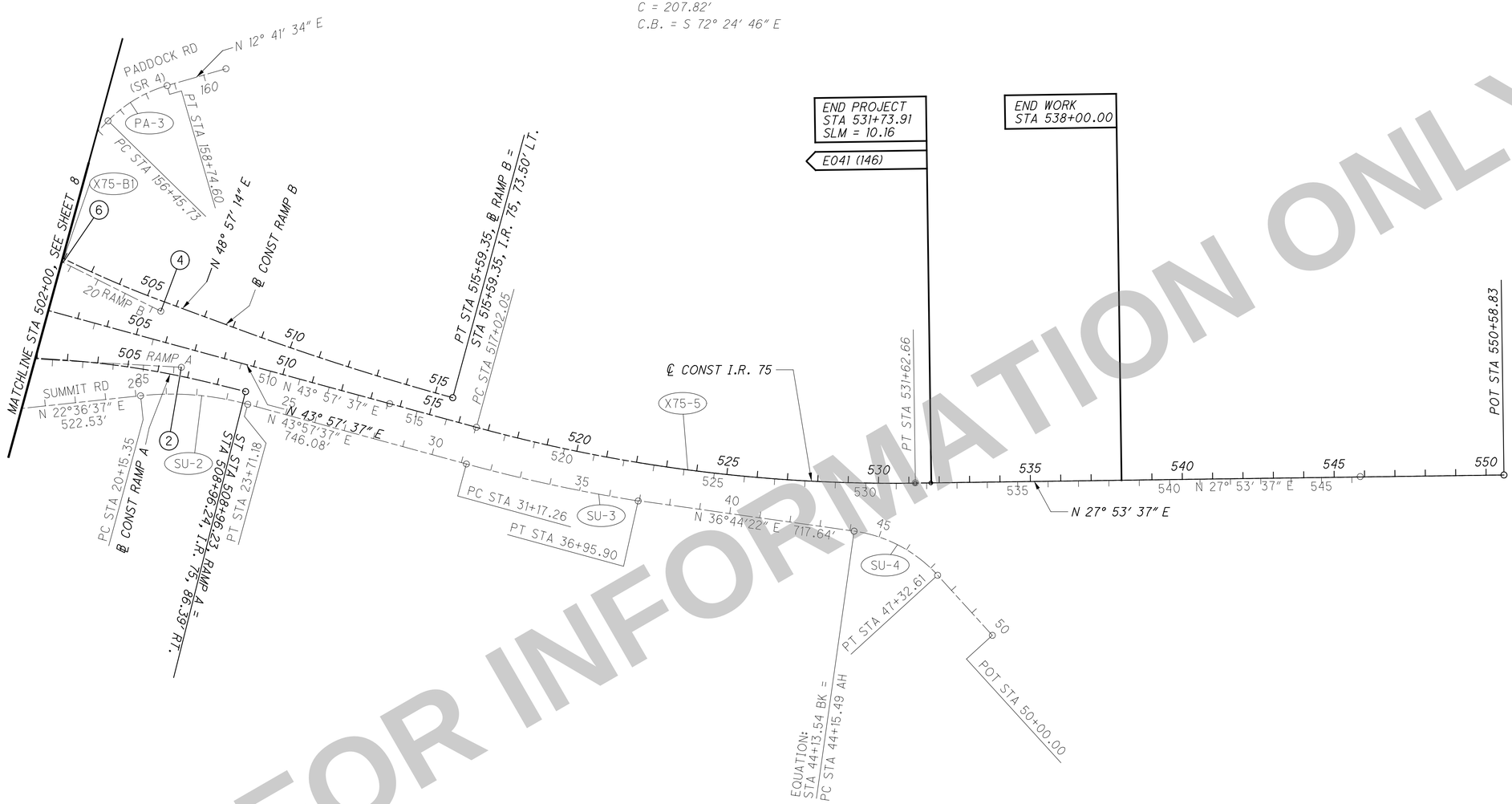
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EXISTING RAMP A DATA	
1	POT 16+40.42
2	POT 26+24.67
	N 31° 55′ 38″ E

EXISTING RAMP B DATA	
3	16+40.42
4	22+30.97
	S 55° 14′ 04″ E
5	PC 16+31.79
6	PT 18+71.61
	N 55° 14′ 04 E

CURVE X75-B1

PI STA 18+01.90
Δ = 104° 42′ 19″ (LT)
Dc = 43° 39′ 34″
R = 131.23′
T = 170.12′
L = 239.82′
E = 83.62′
C = 207.82′
C.B. = S 72° 24′ 46″ E



FOR INFORMATION ONLY

CURVE PA-3

PI STA 157+62.78
Δ = 29° 36′ 25″ (RT)
Dc = 12° 56′ 10″
R = 442.91′
T = 117.05′
L = 228.87′
E = 15.21′
C = 226.33′
C.B. = N 2° 06′ 38″ W
e_{max} = NC
PC STA. 156+45.73
PT STA. 158+74.60

CURVE SU-2

PI STA 21+95.35
Δ = 21°21′00″ (RT)
Dc = 6°00′00″
R = 954.93′
T = 180.00′
L = 355.83′
E = 16.82′
C = 353.78′
C.B. = N 33°17′07″ E

CURVE SU-3

PI STA 34+06.86
Δ = 6°12′57″ (LT)
Dc = 1°04′27″
R = 5,333.71′
T = 289.60′
L = 578.64′
E = 7.86′
C = 578.35′
C.B. = N 40°51′09″ E

CURVE SU-4

PI STA 45+80.70
Δ = 39°38′26″ (RT)
Dc = 12°30′00″
R = 458.37′
T = 165.21′
L = 317.12′
E = 28.86′
C = 310.84′
C.B. = N 56°33′35″ E

CURVE X75-5

PI STA 524+37.18
Δ = 16° 04′ 00″ (LT)
Dc = 1° 06′ 00″
R = 5,208.71′
T = 735.13′
L = 1,460.61′
E = 51.62′
C = 1,455.83′
C.B. = N 35° 55′ 37″ E
e_{max} = 0.030
PC STA. 517+02.05
PT STA. 531+62.66

HORIZONTAL SCALE IN FEET
0 100 200 400

GEOMETRIC PLAN
EXISTING MAINLINE I.R. 75 AND RAMP DATA

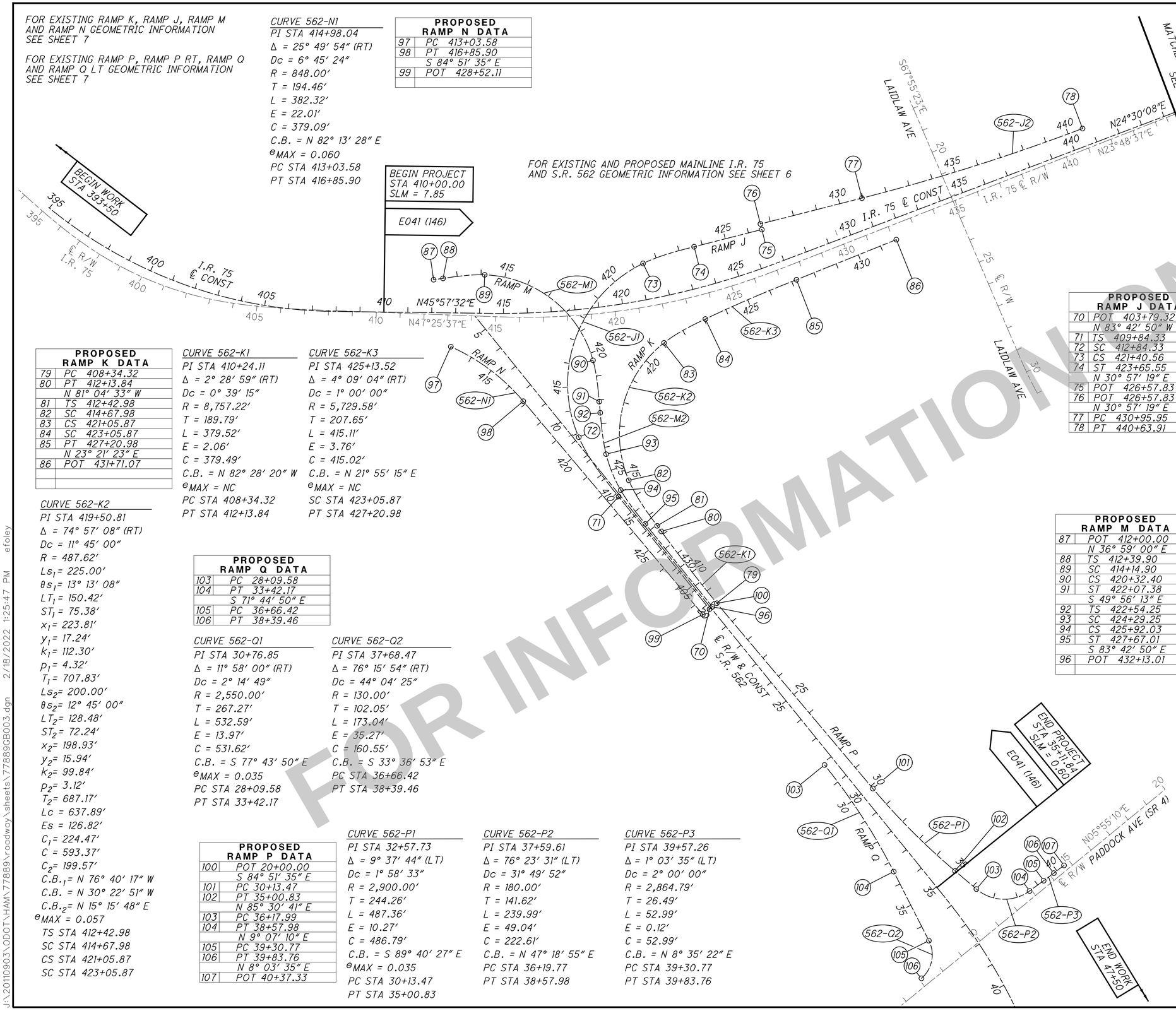
HAM-75-7.85

FOR EXISTING RAMP K, RAMP J, RAMP M AND RAMP N GEOMETRIC INFORMATION SEE SHEET 7

FOR EXISTING RAMP P, RAMP P RT, RAMP Q AND RAMP Q LT GEOMETRIC INFORMATION SEE SHEET 7

FOR EXISTING AND PROPOSED MAINLINE I.R. 75 AND S.R. 562 GEOMETRIC INFORMATION SEE SHEET 6

MATCHLINE STATION 444+50 I.R. 75, SEE SHEET 11



PROPOSED RAMP N DATA

97	PC 413+03.58
98	PT 416+85.90
	S 84° 51' 35" E
99	POT 428+52.11

CURVE 562-N1
PI STA 414+98.04
Δ = 25° 49' 54" (RT)
Dc = 6° 45' 24"
R = 848.00'
T = 194.46'
L = 382.32'
E = 22.01'
C = 379.09'
C.B. = N 82° 13' 28" E
eMAX = 0.060
PC STA 413+03.58
PT STA 416+85.90

PROPOSED RAMP J DATA

70	POT 403+79.32
	N 83° 42' 50" W
71	TS 409+84.33
72	SC 412+84.33
73	CS 421+40.56
74	ST 423+65.55
	N 30° 57' 19" E
75	POT 426+57.83 (RT)
76	POT 426+57.83 (LT)
	N 30° 57' 19" E
77	PC 430+95.95
78	PT 440+63.91

CURVE 562-J2
PI STA 435+80.44
Δ = 6° 27' 11" (LT)
Dc = 0° 40' 00"
R = 8,594.37'
T = 484.49'
L = 967.96'
E = 13.65'
C = 967.45'
C.B. = N 27° 43' 44" E
eMAX = NC
PC STA 430+95.95
PT STA 440+63.91

CURVE 562-J1
PI STA 420+13.05
Δ = 114° 40' 09" (RT)
Dc = 10° 15' 00"
R = 558.98'
Ls_1 = 300.00'
θs_1 = 15° 22' 30"
LT_1 = 200.76'
ST_1 = 100.69'
x_1 = 297.85'
y_1 = 26.70'
K_1 = 149.64'
p_1 = 6.69'
T_1 = 1028.72'
Ls_2 = 224.99'
θs_2 = 11° 31' 51"
LT_2 = 150.31'
ST_2 = 75.29'
x_2 = 224.08'
y_2 = 15.05'
K_2 = 112.34'
p_2 = 3.77'
T_2 = 933.30'
Lc = 856.23'
Es = 486.38'
C_1 = 299.04'
C = 774.94'
C_2 = 224.59'
$C.B._1$ = N 78° 35' 31" W
C.B. = N 24° 27' 26" W
$C.B._2$ = N 27° 06' 47" E
eMAX = 0.059
TS STA 409+84.33
SC STA 412+84.33
CS STA 421+40.56
ST STA 423+65.55

PROPOSED RAMP K DATA

79	PC 408+34.32
80	PT 412+13.84
	N 81° 04' 33" W
81	TS 412+42.98
82	SC 414+67.98
83	CS 421+05.87
84	SC 423+05.87
85	PT 427+20.98
	N 23° 21' 23" E
86	POT 431+71.07

CURVE 562-K1
PI STA 410+24.11
Δ = 2° 28' 59" (RT)
Dc = 0° 39' 15"
R = 8,757.22'
T = 189.79'
L = 379.52'
E = 2.06'
C = 379.49'
C.B. = N 82° 28' 20" W
eMAX = NC
PC STA 408+34.32
PT STA 412+13.84

CURVE 562-K3
PI STA 425+13.52
Δ = 4° 09' 04" (RT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 207.65'
L = 415.11'
E = 3.76'
C = 415.02'
C.B. = N 21° 55' 15" E
eMAX = NC
SC STA 423+05.87
PT STA 427+20.98

CURVE 562-K2
PI STA 419+50.81
Δ = 74° 57' 08" (RT)
Dc = 11° 45' 00"
R = 487.62'
Ls_1 = 225.00'
θs_1 = 13° 13' 08"
LT_1 = 150.42'
ST_1 = 75.38'
x_1 = 223.81'
y_1 = 17.24'
k_1 = 112.30'
p_1 = 4.32'
T_1 = 707.83'
Ls_2 = 200.00'
θs_2 = 12° 45' 00"
LT_2 = 128.48'
ST_2 = 72.24'
x_2 = 198.93'
y_2 = 15.94'
k_2 = 99.84'
p_2 = 3.12'
T_2 = 687.17'
Lc = 637.89'
Es = 126.82'
C_1 = 224.47'
C = 593.37'
C_2 = 199.57'
$C.B._1$ = N 76° 40' 17" W
C.B. = N 30° 22' 51" W
$C.B._2$ = N 15° 15' 48" E
eMAX = 0.057
TS STA 412+42.98
SC STA 414+67.98
CS STA 421+05.87
SC STA 423+05.87

PROPOSED RAMP M DATA

87	POT 412+00.00
	N 36° 59' 00" E
88	TS 412+39.90
89	SC 414+14.90
90	CS 420+32.40
91	ST 422+07.38
	S 49° 56' 13" E
92	TS 422+54.25
93	SC 424+29.25
94	CS 425+92.03
95	ST 427+67.01
	S 83° 42' 50" E
96	POT 432+13.01

CURVE 562-M1
PI STA 418+44.84
Δ = 93° 04' 47" (RT)
Dc = 11° 44' 43"
R = 487.82'
Ls_1 = 175.00'
θs_1 = 10° 16' 37"
LT_1 = 116.86'
ST_1 = 58.51'
x_1 = 174.44'
y_1 = 10.44'
k_1 = 87.41'
p_1 = 2.61'
T_1 = 604.94'
Ls_2 = 174.98'
θs_2 = 10° 16' 33"
LT_2 = 116.85'
ST_2 = 58.51'
x_2 = 174.42'
y_2 = 10.44'
k_2 = 87.40'
p_2 = 2.61'
T_2 = 604.93'
Lc = 617.50'
Es = 225.18'
C_1 = 174.75'
C = 577.09'
C_2 = 174.73'
$C.B._1$ = N 40° 24' 29" E
C.B. = N 83° 31' 25" E
$C.B._2$ = S 53° 21' 41" E
eMAX = 0.056
TS STA 412+39.90
SC STA 414+14.90
CS STA 420+32.40
ST STA 422+07.38

CURVE 562-M2
PI STA 425+16.31
Δ = 33°46'37" (LT)
Dc = 10°00'00"
R = 572.96'
Ls_1 = 175.00'
θs_1 = 8°45'00"
LT_1 = 116.81'
ST_1 = 58.46'
x_1 = 174.59'
y_1 = 8.89'
K_1 = 87.43'
p_1 = 2.23'
T_1 = 262.06'
Ls_2 = 174.98'
θs_2 = 8°44'56"
LT_2 = 116.80'
ST_2 = 58.46'
x_2 = 174.57'
y_2 = 8.89'
K_2 = 87.42'
p_2 = 2.22'
T_2 = 262.05'
Lc = 162.78'
Es = 28.15'
C_1 = 174.82'
C = 162.23'
C_2 = 174.80'
$C.B._1$ = S 52° 51' 11" E
C.B. = S 66° 49' 33" E
$C.B._2$ = S 80° 47' 53" E
eMAX = 0.059
TS STA 422+54.25
SC STA 424+29.25
CS STA 425+92.03
ST STA 427+67.01

PROPOSED RAMP Q DATA

103	PC 28+09.58
104	PT 33+42.17
	S 71° 44' 50" E
105	PC 36+66.42
106	PT 38+39.46

CURVE 562-Q1
PI STA 30+76.85
Δ = 11° 58' 00" (RT)
Dc = 2° 14' 49"
R = 2,550.00'
T = 267.27'
L = 532.59'
E = 13.97'
C = 531.62'
C.B. = S 77° 43' 50" E
eMAX = 0.035
PC STA 28+09.58
PT STA 33+42.17

CURVE 562-Q2
PI STA 37+68.47
Δ = 76° 15' 54" (RT)
Dc = 44° 04' 25"
R = 130.00'
T = 102.05'
L = 173.04'
E = 35.27'
C = 160.55'
C.B. = S 33° 36' 53" E
PC STA 36+66.42
PT STA 38+39.46

PROPOSED RAMP P DATA

100	POT 20+00.00
	S 84° 51' 35" E
101	PC 30+13.47
102	PT 35+00.83
	N 85° 30' 41" E
103	PC 36+17.99
104	PT 38+57.98
	N 9° 07' 10" E
105	PC 39+30.77
106	PT 39+83.76
	N 8° 03' 35" E
107	POT 40+37.33

CURVE 562-P1
PI STA 32+57.73
Δ = 9° 37' 44" (LT)
Dc = 1° 58' 33"
R = 2,900.00'
T = 244.26'
L = 487.36'
E = 10.27'
C = 486.79'
C.B. = S 89° 40' 27" E
eMAX = 0.035
PC STA 30+13.47
PT STA 35+00.83

CURVE 562-P2
PI STA 37+59.61
Δ = 76° 23' 31" (LT)
Dc = 31° 49' 52"
R = 180.00'
T = 141.62'
L = 239.99'
E = 49.04'
C = 222.61'
C.B. = N 47° 18' 55" E
PC STA 36+19.77
PT STA 38+57.98

CURVE 562-P3
PI STA 39+57.26
Δ = 1° 03' 35" (LT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 26.49'
L = 52.99'
E = 0.12'
C = 52.99'
C.B. = N 8° 35' 22" E
PC STA 39+30.77
PT STA 39+83.76

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HORIZONTAL SCALE IN FEET
0 100 200 400

GEOMETRIC PLAN
PROPOSED RAMP BASELINE DATA

HAM-75-7.85

10
2017

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CL CONST TOWNE ST DATA	
1	PC 15+59.60
2	PT 16+40.40
N 83°21'49" W 87.30'	
3	PC 17+27.70
4	PC 17+95.00
N 81°20'41" W 483.74'	
5	POT 22+33.74

CURVE TO-1
PI STA 16+00.01
Δ = 2° 25' 26" (LT)
Dc = 2° 59' 59"
R = 1,910.00'
T = 40.41'
L = 80.80'
E = 0.43'
C = 80.80'
C.B. = N 82° 09' 06" W
e_{max} = NC
PC STA 15+59.60
PT STA 16+40.40

CURVE TO-2
PI STA 17+61.35
Δ = 2° 01' 08" (RT)
Dc = 2° 59' 59"
R = 1,910.00'
T = 33.65'
L = 67.30'
E = 0.30'
C = 67.30'
C.B. = N 82° 21' 15" W
e_{max} = NC
PC STA 17+27.70
PT STA 17+95.00

CURVE 75-3
PI STA 456+41.20
Δ = 5° 41' 01" (LT)
Dc = 0° 40' 00"
R = 8,594.37'
T = 426.63'
L = 852.56'
E = 10.58'
C = 852.21'
C.B. = N 21° 39' 37" E
e_{max} = 0.019
PC STA 452+14.57
PT STA 460+67.13

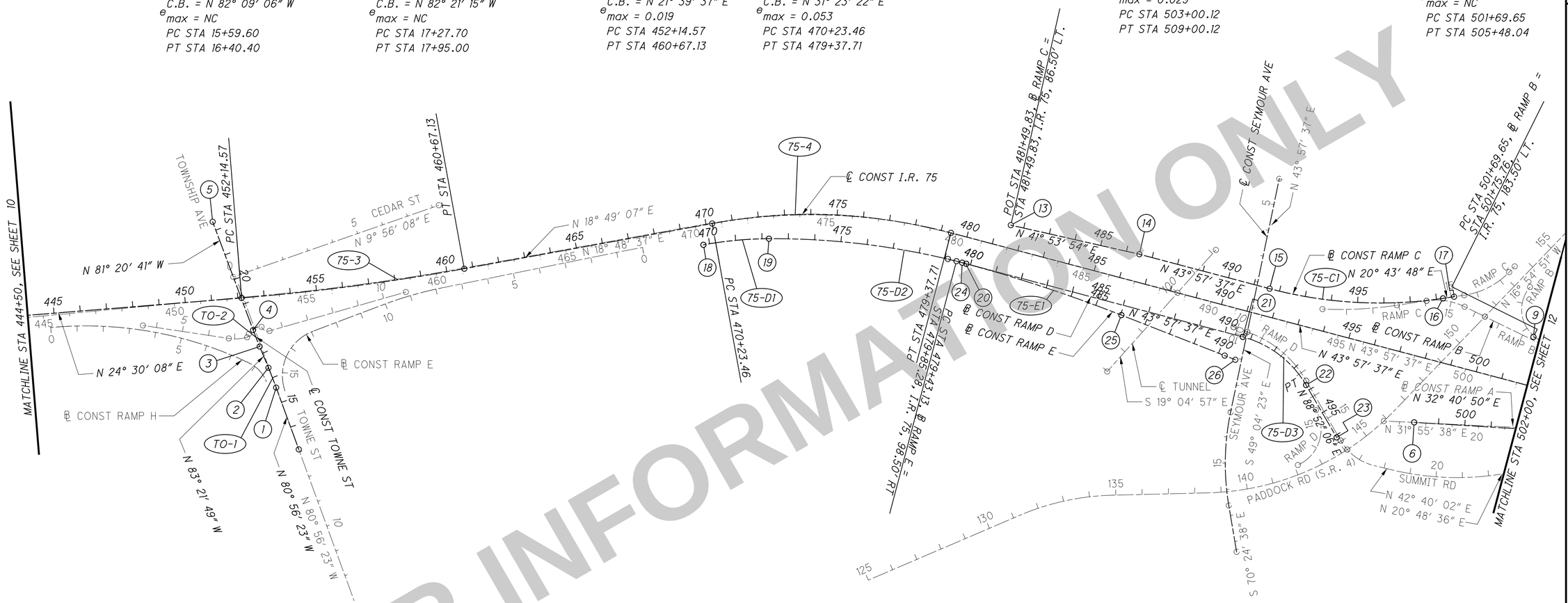
CURVE 75-4
PI STA 474+88.06
Δ = 25° 08' 30" (RT)
Dc = 2° 45' 00"
R = 2,083.48'
T = 464.60'
L = 914.25'
E = 51.17'
C = 906.93'
C.B. = N 31° 23' 22" E
e_{max} = 0.053
PC STA 470+23.46
PT STA 479+37.71

PROPOSED RAMP A DATA	
6	POT 498+07.56
N 32°40'50" E 492.56'	
7	PC 503+00.12
8	PT 509+00.12

CURVE 75-A1
P.I. Sta. 506+00.96
Δ = 10° 30' 01" (RT)
Dc = 1° 45' 00"
R = 3,273.93'
T = 300.84'
L = 600.00'
E = 13.79'
C = 599.16'
C.B. = N 37° 55' 50" E
e_{max} = 0.029
PC STA 503+00.12
PT STA 509+00.12

PROPOSED RAMP B DATA	
9	PC 501+69.65
10	PT 505+48.04
N 48°57'14" E 262.23'	
11	PC 508+10.27
12	PT 515+59.35

CURVE 75-B1
PI STA 503+59.05
D = 6° 35' 59" (LT)
Dc = 1° 44' 39"
R = 3,285.00'
T = 189.40'
L = 378.39'
E = 5.46'
C = 378.18'
C.B. = N 52° 15' 13" E
e_{max} = NC
PC STA 501+69.65
PT STA 505+48.04



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PROPOSED RAMP C DATA	
13	POT 481+49.83
N 41°53'54" E 500.24'	
14	PI 486+50.07
N 43°57'37" E 511.28'	
15	PC 491+61.35
16	PT 498+25.06
N 20°43'48" E 42.33'	
17	POT 498+67.39

CURVE 75-C1
PI STA 494+97.83
D = 23° 13' 49" (LT)
Dc = 3° 30' 00"
R = 1,637.00'
T = 336.48'
L = 663.71'
E = 34.22'
C = 659.18'
C.B. = N 32° 20' 42" E
e_{max} = 0.037
PC STA 491+61.35
PT STA 498+25.06

PROPOSED RAMP D DATA	
18	PC 469+76.37
19	PCC 472+26.37
20	PT 479+83.46
N 43°57'37" E 1085.57'	
21	PC 490+69.03
22	PT 493+78.68
N 88°52'06" E 230.01'	
23	POT 496+08.69

CURVE 75-D1
PI STA 472+01.69
D = 10° 00' 00" (RT)
Dc = 4° 00' 00"
R = 1,432.40'
T = 125.32'
L = 250.00'
E = 5.47'
C = 249.68'
C.B. = N 23° 49' 07" E
e_{max} = 0.053
PC STA 469+76.37
PT STA 472+26.37

CURVE 75-D2
PI STA 476+07.13
D = 15° 08' 30" (RT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 380.76'
L = 757.09'
E = 25.19'
C = 754.89'
C.B. = N 36° 23' 22" E
e_{max} = 0.030
PCC STA 472+26.37
PT STA 479+83.46

CURVE 75-D3
PI STA 492+32.30
D = 44° 54' 29" (RT)
Dc = 14° 30' 09"
R = 395.07'
T = 163.27'
L = 309.65'
E = 32.41'
C = 301.79'
C.B. = N 66° 24' 52" E
e_{max} = 0.053
PC STA 490+69.03
PT STA 493+78.68

PROPOSED RAMP E DATA	
24	PC 479+67.49
25	PT 486+03.92
N 50°33'00" E 464.51'	
26	POT 490+68.43

CURVE 75-E1
PI STA 482+86.03
D = 6° 21' 50" (RT)
Dc = 1° 00' 00"
R = 5,730.00'
T = 318.54'
L = 636.43'
E = 8.85'
C = 636.10'
C.B. = N 47° 22' 05" E
e_{max} = 0.016
PC STA 479+67.49
PT STA 486+03.92

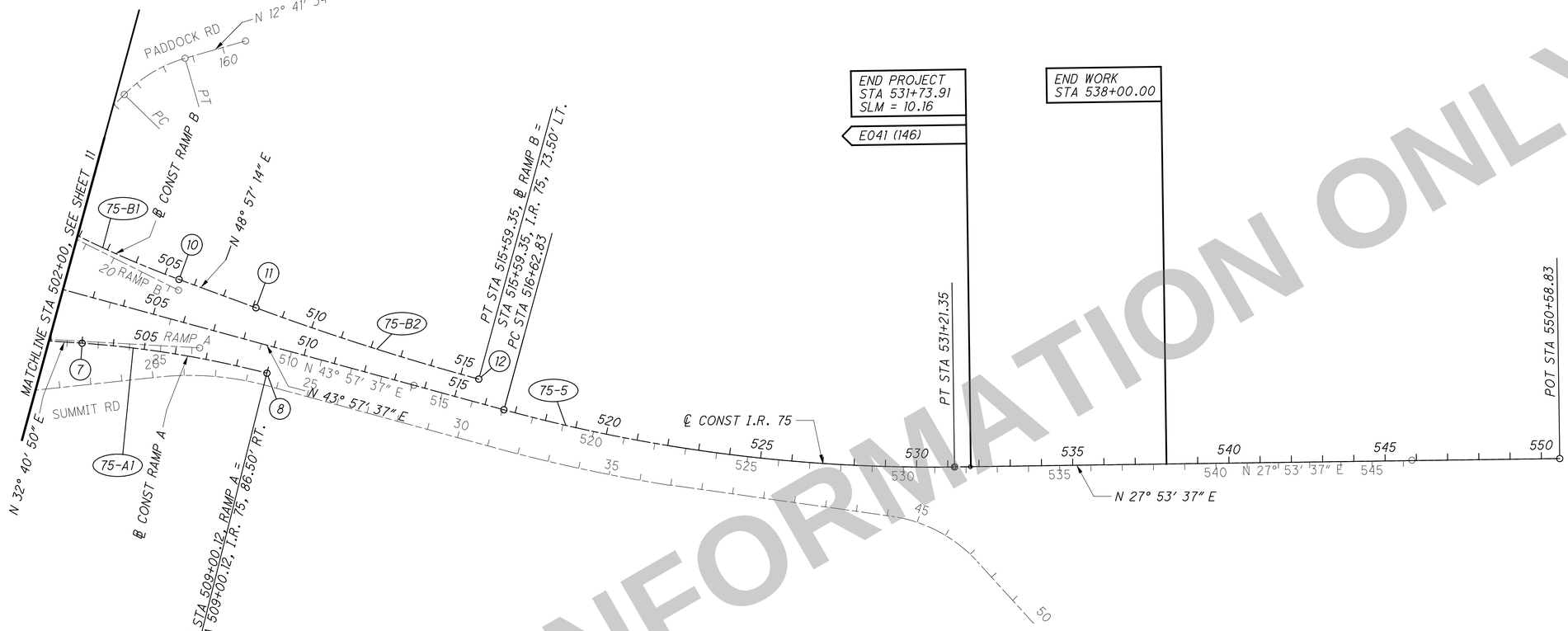
HORIZONTAL SCALE IN FEET
0 100 200 400

GEOMETRIC I.R. 75 PLAN
PROPOSED MAINLINE I.R. 75 AND RAMP DATA

HAM-75-7.85

11
2017

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CURVE 75-5
PI STA 523+96.89
Δ = 16° 02' 37" (LT)
Dc = 1° 06' 00"
R = 5,208.71'
T = 734.06'
L = 1,458.52'
E = 51.47'
C = 1,453.75'
C.B. = N 35° 56' 18" E
e_{max} = 0.030
PC STA 516+62.83
PT STA 531+21.35

PROPOSED RAMP A DATA	
6	POT 498+07.56
N 32°40'50" E 492.56'	
7	PC 503+00.12
8	PT 509+00.12

CURVE 75-A1
P.I. Sta. 506+00.96
Δ = 10° 30' 01" (RT)
Dc = 1° 45' 00"
R = 3,273.93'
T = 300.84'
L = 600.00'
E = 13.79'
C = 599.16'
C.B. = N 37° 55' 50" E
e_{max} = 0.029
PC STA 503+00.12
PT STA 509+00.12

PROPOSED RAMP B DATA	
9	PC 501+69.65
10	PT 505+48.04
N 48°57'14" E 262.23'	
11	PC 508+10.27
12	PT 515+59.35

CURVE 75-B1
PI STA 503+59.05
D = 6° 35' 59" (LT)
Dc = 1° 44' 39"
R = 3,285.00'
T = 189.40'
L = 378.39'
E = 5.46'
C = 378.18'
C.B. = N 52° 15' 13" E
e_{max} = NC
PC STA 501+69.65
PT STA 505+48.04

CURVE 75-B2
PI STA 511+85.04
D = 4° 59' 37" (LT)
Dc = 0° 40' 00"
R = 8,595.00'
T = 374.78'
L = 749.08'
E = 8.17'
C = 748.84'
C.B. = N 46° 27' 25" E
e_{max} = NC
PC STA 508+10.27
PT STA 515+59.35

HORIZONTAL SCALE IN FEET
0 100 200 400

GEOMETRIC PLAN
PROPOSED MAINLINE I.R. 75 AND RAMP DATA

HAM-75-7.85

12
2017

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VERTICAL CONTROL

BENCHMARK	ELEVATION	DESCRIPTION
SOURCE BENCHMARK NGS MONUMENT X 144	529.74	IN IVORYDALE, AT THE INTERSECTION OF MURRAY ROAD AND THE CONRAIL RAILROAD, SET VERTICALLY IN THE SOUTH FACE OF THE WEST CONCRETE PIER OF AN ABANDONED OVERPASS, 290.0 M (951.4 FT) NORTH OF THE ROAD CENTER, 12.2 M (40.0 FT) NORTH-WEST OF THE NEAR RAIL, 3.6 M (11.8 FT) WEST OF A SWITCH STAND, 0.8 M (2.6 FT) ABOVE THE GROUND SURFACE, 0.6 M (2.0 FT) WEST OF THE SOUTHEAST CORNER OF THE PIER, AND 0.4 M (1.3 FT) ABOVE THE LEVEL OF THE TRACK.
NGS MONUMENT Y 144	549.88	IN ELMWOOD PLACE, AT THE INTERSECTION OF 69TH STREET AND THE CONRAIL RAIL-ROAD, IN TOP OF AND 1.1 M (3.6 FT) NORTHWEST OF THE SOUTHEAST END OF THE SOUTHWEST CONCRETE ABUTMENT OF THE RAILROAD OVERPASS OF THE STREET, 10.4M (34.1 FT) SOUTHWEST OF THE STREET CENTER, 2.2 M (7.2 FT) SOUTHEAST OF THE NEAR RAIL, AND 0.4 M (1.3 FT) ABOVE THE LEVEL OF THE TRACK.
NGS MONUMENT Z 144	556.75	IN CARTHAGE, AT THE INTERSECTION OF THE CONRAIL RAILROAD AND PADDOCK ROAD, IN TOP OF AND 0.4 M (1.3 FT) NORTHEAST OF THE SOUTHWEST END OF A CONCRETE RETAINING WALL, 19.7 M (64.6 FT) EAST OF THE ROAD CENTER, 9.1 M (29.9 FT) NORTH-EAST OF THE EAST CORNER OF A RAILROAD OVERPASS, 2.1 M (6.9 FT) SOUTHEAST OF THE NEAR RAIL, AND 0.2 M (0.7 FT) ABOVE THE LEVEL OF THE TRACK.
BM #401	519.64	CHISELED BOX ON THE SOUTHEAST CORNER OF A CONCRETE PAD FOR A SIGNAL CONTROL BOX, LOCATED ON THE SOUTHWEST CORNER OF VINE STREET AND RAILROAD AVENUE.
BM #402	534.36	CHISELED BOX ON THE SOUTHEAST CORNER OF A RETAINING WALL, ON TOP, LOCATED ON THE NORTHWEST CORNER OF PADDOCK ROAD AND EAST ROSS AVENUE.
BM #403	585.33	CHISELED "X" ON THE SOUTHEAST BOLT OF A SIGNAL POLE BASE LOCATED ON THE NORTHWEST CORNER OF LAIDLAW AVENUE AND PADDOCK ROAD.
BM #404	523.26	CHISELED "X" ON THE NORTHWEST CORNER OF A CATCH BASIN 250 FEET +/- EAST OF THE INTERSTATE-75 OVERPASS ON THE NORTH CURB LINE OF LAIDLAW AVENUE ACROSS FROM THE INTERSECTION OF NORFOLK SOUTHERN YARD.
BM #405	521.92	CHISELED BOX ON THE NORTHWEST CORNER ON THE TOP OF A CURB ON A CURB AND GUTTER INLET, ON THE SOUTH SIDE OF MURRAY ROAD, 350 FEET +/- WEST OF THE INTERSECTION OF MURRAY ROAD AND PROSSER AVENUE NEXT TO THE ENTRANCE OF EXEL YARD.
BM #406	529.61	CHISELED BOX ON THE SOUTHWEST CORNER OF A CONCRETE PAD FOR A SIGNAL CONTROL BOX, LOCATED ON THE NORTHEAST CORNER OF VINE STREET AND MURRAY ROAD.
BM #407	529.74	CHISELED BOX ON THE SOUTHWEST CORNER OF THE TOP OF CURB TO A CURB AND GUTTER INLET ON THE SOUTH SIDE OF TOWNSHIP AVENUE, 140 FEET +/- EAST OF INTERSECTION TOWNSHIP AVENUE AND VINE STREET 2 FEET +/- EAST OF THE NORTH ENTRANCE TO UNITED DAIRY FARMERS.
BM #408	530.70	CHISELED BOX ON THE SOUTHWEST CORNER OF THE BACK OF CURB ON A CURB AND GUTTER INLET ON THE SOUTH SIDE OF TOWNSHIP AVENUE ON THE SOUTHEAST CORNER OF TOWNSHIP AVENUE AND SILVER STREET.
BM #409	564.07	CHISELED BOX ON THE SOUTHWEST CORNER OF A CONCRETE PAD FOR A WATER METER PIT ON THE SOUTH SIDE OF TOWN STREET 200 FEET +/- EAST OF THE NORTH BOUND EXIT RAMP TO TOWNE STREET ACROSS FROM 1028 TOWN STREET 12 FEET +/- SOUTH OF SIDEWALK.
BM #410	541.01	NORTH RIM OF A MANHOLE LOCATED IN THE SIDEWALK AT THE SOUTHWEST INTER-SECTION OF PADDOCK ROAD AND TOWNE STREET.
BM #411	568.65	CHISELED "X" ON THE NORTH RIM OF A STORM MANHOLE LOCATED IN THE CENTERLINE OF REGINA GRAETER WAY 150 FEET +/- WEST FROM THE CENTERLINE INTERSECTION OF PADDOCK DRIVE AND REGINA GRAETER WAY BETWEEN 2 CURB AND GUTTER INLETS.
BM #412	585.83	CHISELED BOX ON THE BACK OF CURB AT THE SOUTHWEST CORNER OF GIVAUDAN PARKING LOT, 25 FEET +/- NORTH OF CENTERLINE FROM REGINA GRAETER WAY AND 75 FEET +/- EAST OF CENTERLINE CUL-DE-SAC OF REGINA GRAETER WAY.
BM #413	569.62	CHISELED "X" ON THE SOUTHWEST BOLT OF A SIGN POLE WITH A MAST ARM 75 FEET +/- NORTH FROM THE CENTERLINE OF EAST SEYMOUR AVENUE 200 FEET +/- EAST FROM THE INTERSECTION OF EAST SEYMOUR AVENUE AND PADDOCK ROAD.
BM #414	564.64	SOUTHWEST CORNER OF A CURB AND GUTTER INLET 60 FEET +/- SOUTH FROM THE CENTERLINE OF WEST SEYMOUR AVENUE 250 FEET +/- WEST FROM THE INTER-SECTION OF PADDOCK ROAD AND WEST SEYMOUR AVENUE.
BM #415	549.37	CHISELED "X" ON THE NORTH RIM OF A WATER MANHOLE, ON THE NORTHWEST CORNER OF WEST SEYMOUR AVENUE AND LONGVIEW, 40 FEET +/- NORTH FROM THE CENTERLINE OF WEST SEYMOUR AVENUE AND 20 FEET +/- WEST FROM THE CENTER-LINE OF LONGVIEW STREET.
BM #416	533.94	CONCRETE MONUMENT WITH A BRASS DISC FOUND ON THE NORTHEAST CORNER OF VINE STREET AND WEST SEYMOUR AVENUE IN A BRICK SIDEWALK, MARKED CITY OF CINCINNATI TOPOGRAPHIC SURVEY 1912, BENCHMARK NO.15.
BM #417	529.06	CHISELED "X" ON THE NORTH RIM OF A WATER MANHOLE AT THE INTERSECTION OF VINE STREET AND 69TH STREET 45 FEET +/- EAST FROM THE CENTERLINE OF VINE STREET, IN THE WEST BOUND LANE OF 69TH STREET 7 FEET +/- SOUTH OF NORTH CURB LINE.
BM #418	524.02	CHISELED "X" ON THE NORTH RIM OF A UNION GAS AND ELECTRIC CO. MANHOLE IN THE ROADWAY ON THE NORTHEAST CORNER OF VINE STREET AND 66TH STREET 30 FEET +/- EAST FROM THE CENTERLINE OF VINE STREET AND 5 FEET +/- SOUTH OF THE NORTH CURB LINE OF 66TH STREET.
BM #419	553.98	CHISELED "X" ON THE NORTH RIM OF A SANITARY MANHOLE AND THE INTERSECTION OF 66TH STREET AND HASLER AVENUE, THE WEST MOST OF 2 SANITARY MANHOLES IN THE INTERSECTION.
BM #420	557.46	CHISELED "X" ON THE NORTH RIM OF A TELEPHONE MANHOLE AT THE NORTHEAST CORNER OF THE INTERSECTION OF SUMMIT ROAD AND THE ENTRANCE TO SUMMIT BEHAVIORAL, 60 FEET +/- EAST OF THE CENTERLINE OF SUMMIT ROAD AND 30 FEET +/- NORTH OF THE CENTERLINE OF THE ENTRANCE ROAD.
BM #421	565.44	CHISELED BOX ON THE WEST SIDE OF A CONCRETE BASE TO A SIGNAL SUPPORT POST, LOCATED IN THE ISLAND AT THE INTERSECTION OF SUMMIT ROAD AND SECTION ROAD.
BM #422	554.98	CHISELED "X" ON THE NORTH RIM OF A TELEPHONE MANHOLE IN THE SIDEWALK AT THE EAST END OF CITY CENTER DRIVE ON THE NORTH SIDE OF THE ROAD, 120 FEET +/- WEST OF THE ENTRANCE TO THE FOOTBRIDGE OVER INTERSTATE-75.
BM #423	546.71	CONCRETE MONUMENT WITH A BRASS DISK FOUND AND STAMPED "CITY OF CINCINNATI TRAVERSE STATION 2069 BENCHMARK SET 1948" ON THE WEST SIDE OF ANTHONY WAYNE AVENUE IN A CONCRETE SIDEWALK OPPOSITE CITY CENTER DRIVE, 25 FEET +/- SOUTH OF ENTRANCE TO HAMILTON COUNTY FAIR.

BENCH MARKS

POINT	TYPE	ELEVATION	NORTHING *	EASTING *
SOURCE BENCHMARK	(NGS MONUMENT X 144	529.74	436899.45	1404236.13
NGS MONUMENT Y 144		549.88	440216.54	1407194.85
NGS MONUMENT Z 144		556.75	441899.76	1408647.98
BM #401		519.64	433397.74	1402542.37
BM #402		534.36	431756.17	1407619.45
BM #403		585.33	435184.27	1408015.62
BM #404		523.26	435638.38	1405916.72
BM #405		521.92	435852.17	1405243.99
BM #406		529.61	436262.48	1403444.45
BM #407		529.74	437598.66	1404495.44
BM #408		530.70	437354.95	1406061.26
BM #409		564.07	437227.21	1406856.18
BM #410		541.01	437010.17	1408206.76
BM #411		568.65	438837.41	1408284.17
BM #412		585.83	439053.13	1407330.44
BM #413		569.62	440239.91	1409025.80
BM #414		564.64	440364.65	1408538.43
BM #415		549.37	440823.27	1408141.26
BM #416		533.94	441274.60	1407592.02
BM #417		529.06	440487.90	1406933.68
BM #418		524.02	439547.32	1406114.74
BM #419		553.98	439117.64	1406753.95
BM #420		557.46	441207.86	1409333.96
BM #421		565.44	442791.64	1410499.46
BM #422		554.98	443097.85	1410219.47
BM #423		546.71	443326.70	1409556.64

HORIZONTAL CONTROL - PRIMARY

POINT	ELEVATION	NORTHING*	EASTING*	REMARK
502	543.04	432931.60	1403155.57	5/8 IPS IN CONC W/ALUM CAP IRSW/CAP
503	559.20	432611.55	1403612.64	5/8 IPS IN CONC W/ALUM CAP IRSW/CAP
507	522.25	435915.06	1405239.17	5/8 IPS IN CONC W/ALUM CAP IRSW/CAP
530	535.56	440928.89	1408675.89	5/8 IPS IN CONC W/ALUM CAP IRSW/CAP
537	534.35	444337.58	1411412.82	5/8 IPS IN CONC W/ALUM CAP IRSW/CAP
538	544.85	444809.07	1412047.99	5/8 IPS IN CONC W/ALUM CAP IRSW/CAP

HORIZONTAL CONTROL - SECONDARY

POINT	ELEVATION	NORTHING*	EASTING*	REMARK
501	534.52	431790.14	1407660.51	IRS W/CAP
504	523.52	433489.85	1402439.33	IRS W/CAP
505	528.48	436241.70	1403290.67	IRS W/CAP
506	521.40	436085.30	1404454.95	IRS W/CAP
508	521.60	435693.66	1405777.03	IRS W/CAP
509	552.81	435319.16	1406580.83	IRS W/CAP
510	551.25	434024.21	1406396.65	MAGS W/SHINER MAGS
511	583.63	435115.23	1408003.01	MAGS W/SHINER MAGS
512	540.61	437035.44	1408277.55	IRS W/CAP
513	565.45	437201.89	1407088.23	IRS W/CAP
514	561.58	437245.60	1406808.10	IRS W/CAP
515	529.65	437421.91	1405951.11	IRS W/CAP
516	527.74	437561.56	1405042.59	IRS W/CAP
517	529.92	437602.09	1404458.49	IRS W/CAP
518	524.89	439509.16	1406086.54	IRS W/CAP
519	537.56	439306.93	1406403.06	IRS W/CAP
520	554.30	439165.95	1406736.13	IRS W/CAP
521	585.96	439000.84	1407311.34	IRS W/CAP
522	574.35	438889.87	1407894.11	IRS W/CAP
523	569.68	438798.67	1408374.64	IRS W/CAP
524	566.68	440283.45	1408951.52	IRS W/CAP
525	567.56	440318.68	1408756.84	IRS W/CAP
526	563.95	440496.42	1408502.65	IRS W/CAP
527	551.46	440775.36	1408167.30	IRS W/CAP
528	534.73	441143.50	1407664.41	IRS W/CAP
529	534.87	441388.53	1407473.46	IRS W/CAP
531	559.39	441341.71	1409403.81	IRS W/CAP
532	557.96	441986.06	1409736.65	IRS W/CAP
533	564.68	442772.93	1410471.90	IRS W/CAP
534	555.99	443065.00	1410247.20	IRS W/CAP
535	544.31	443272.35	1409768.33	IRS W/CAP
536	547.52	443314.45	1409594.27	IRS W/CAP

* ALL NORTHING AND EASTING COORDINATES ARE GROUND COORDINATES.

BASIS OF BEARINGS:

THE BEARINGS SHOWN ON THIS PLAT ARE BASED ON THE OHIO STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD83 (1995). SAID BEARINGS ORIGINATED FROM A FIELD TRAVERSE WHICH WAS TIED (REFERENCED) TO SAID COORDINATE SYSTEM BY GPS OBSERVATIONS AND OBSERVATIONS OF SELECTED NATIONAL GEODETIC SURVEY MONUMENTS 7008, 7016, 6954, AND 6937. THE PORTION OF THE CENTERLINE OF I.R. 75, HAVING A BEARING OF NORTH 43° 57' 37" EAST, IS DESIGNATED THE "BASIS OF BEARING" FOR THIS SURVEY.

BASIS OF STATIONING:

I.R. 75: THE CENTERLINE STATIONING ESTABLISHED BY WOOLPERT WAS HELD.
SEYMOUR:THE CENTERLINE STATIONING ESTABLISHED BY WOOLPERT WAS HELD.

PADDOCK: THE CENTERLINE STATIONING WAS ESTABLISHED BASED ON OHIO DEPARTMENT TRANSPORTATION RIGHT-OF-WAY PLANS "HAM-S.R. 4 - 4.000" (2000), (METRIC UNITS). HOLDING STATION 4+221.140 AND APPLYING A CONVERSION FACTOR OF 1 U.S. FOOT = (1200/3937) METERS.

SUMMIT: THE CENTERLINE STATIONING WAS ESTABLISHED BASED ON OHIO DEPARTMENT TRANSPORTATION RIGHT-OF-WAY PLANS "S.H. 987 SEC. CINCINNATI (PT) B, ARLINGTON HEIGHTS & LOCKLAND (PT)" (1947). HOLDING STATION 0+04.59 AND ADDING 1000 FEET.

VERTICAL DATUM CONVERSION TO NGVD 1929:

THE ELEVATION ESTABLISHED BY THE NATIONAL GEODETIC SURVEY, AT MONUMENT X144 IS AS FOLLOWS:
NORTH AMERICAN VERTICAL DATUM OF 1988 IS 529.74 FEET IN ELEVATION.
NATIONAL GEODETIC VERTICAL DATUM OF 1929 IS 530.32 FEET IN ELEVATION.
529.74 FEET (NAVD88) + 0.58 FEET = 530.32 FEET (NGVD 29)

PRIMARY CONTROL MONUMENTS:

PRIMARY CONTROL MONUMENTS ARE CONCRETE MONUMENTS WITH ALUMINUM DISKS CONFORMING TO THE SPECIFICATIONS OF A "TYPE A" MONUMENT AS SHOWN IN THE OHIO DEPARTMENT OF TRANSPORTATION SURVEY AND MAPPING SPECIFICATIONS OF THE OFFICE OF AERIAL ENGINEERING, DATED JULY 15, 2011.

FOR INFORMATION ONLY

CALCULATED JM CHECKED EDK

HORIZONTAL AND VERTICAL CONTROL

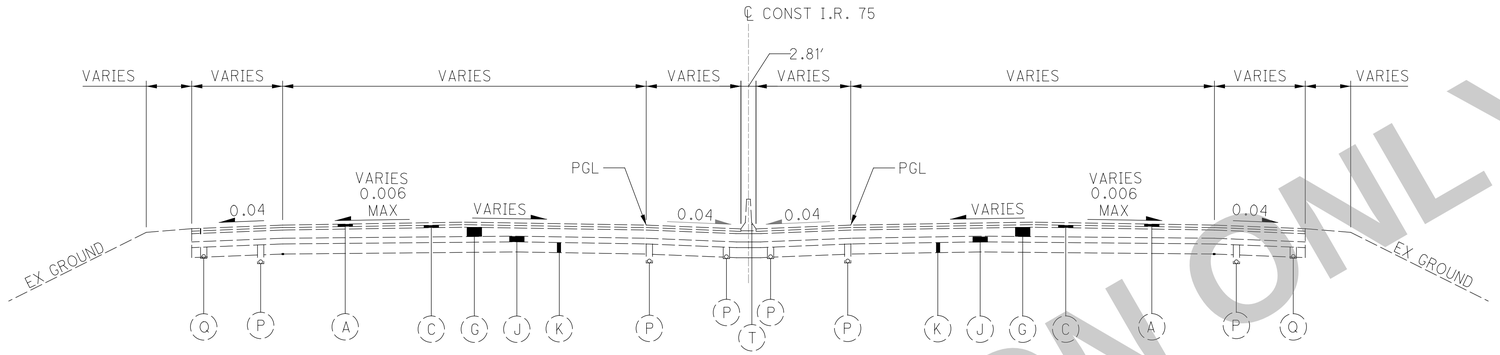
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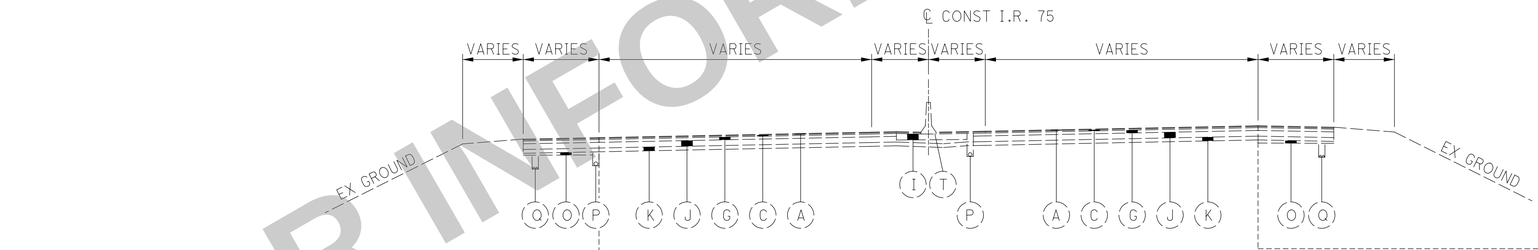
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EXISTING LEGEND

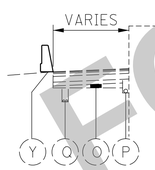
- (A) 1 ¼" ASPHALT CONCRETE SURFACE COURSE
- (B) 1 ½" ASPHALT CONCRETE SURFACE COURSE
- (C) ASPHALT CONCRETE INTERMEDIATE COURSE, VARIABLE DEPTH
- (D) 1 ¾" ASPHALT CONCRETE, INTERMEDIATE COURSE
- (E) 2" MIN. DEPTH ASPHALT CONCRETE SURFACE COURSE
- (F) 3" BITUMINOUS AGGREGATE BASE
- (G) 4 ½" BITUMINOUS AGGREGATE BASE
- (I) 9" CONCRETE PAVEMENT
- (J) 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT (HAM-4W-7.81 (1956) FILE #08C1412)
- (K) 6" AGGREGATE BASE
- (L) AGGREGATE BASE, VARIABLE DEPTH
- (M) STABILIZED CRUSHED AGGREGATE
- (N) SUBBASE
- (O) AGGREGATE BASE, VARIES 3" MIN
- (P) SHALLOW UNDERDRAIN
- (Q) CONDUIT, 713.04, (2) 4" CONDUITS
- (R) 6" PIPE UNDERDRAIN
- (S) CONCRETE BARRIER, TYPE A
- (T) 50" CONCRETE BARRIER TYPE B
- (V) 3" BITUMINOUS AGGREGATE BASE
- (W) 4" CONCRETE WALK
- (X) EXISTING CURB
- (Y) EXISTING BARRIER
- (Z) 13" ASPHALT CONCRETE BASE
- (AA) CEMENT STABILIZED SUBGRADE



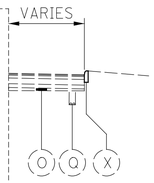
EXISTING SECTIONS - I.R. 75
STA 410+00.00 TO STA 416+52.71
(PER PID 82286)



EXISTING SUPERELEVATED SECTIONS - I.R. 75
STA 416+46.86 TO STA 428+27.70
STA 468+96.52 TO STA 481+34.86



I.R. 75 SB LANE
STA 426+57.83 TO STA 428+27.70



I.R. 75 NB LANE
STA 471+59.61 TO STA 479+87.30

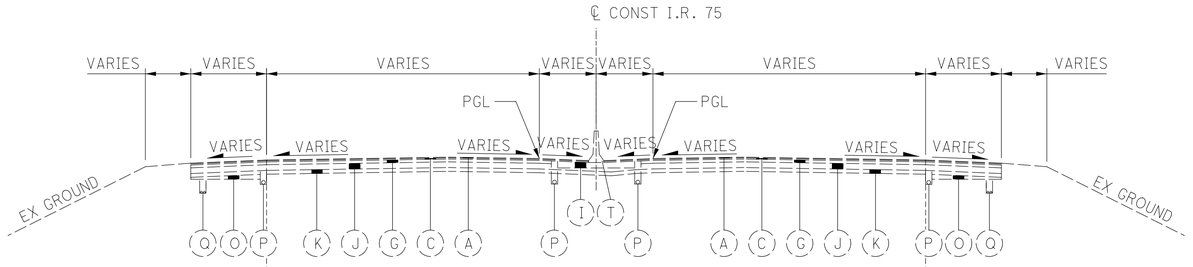
FOR INFORMATION ONLY

TYPICAL SECTIONS - EXISTING I.R. 75

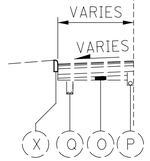
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2017

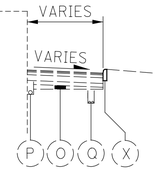
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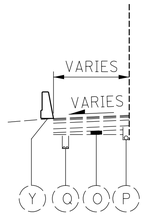
EXISTING SECTIONS - I.R. 75
STA 428+27.70 TO STA 468+96.52
STA 481+34.86 TO STA 514+01.64



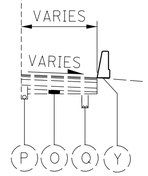
I.R. 75 SB LANE
STA 433+34.29 TO STA 433+60.24
STA 453+57.93 TO STA 463+42.62



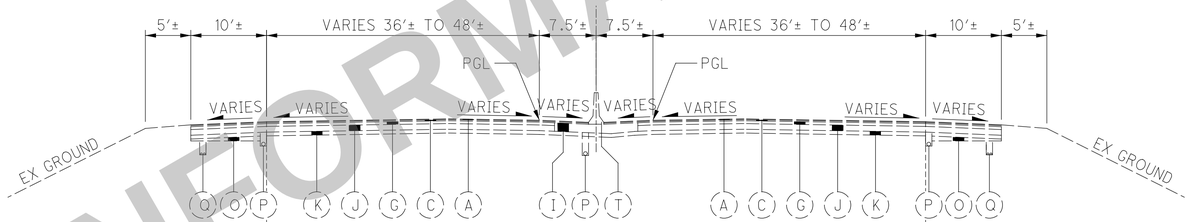
I.R. 75 NB LANE
STA 433+51.06 TO STA 433+63.92
STA 505+92.57 TO STA 514+01.64



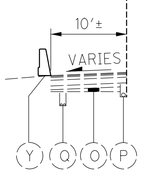
I.R. 75 SB LANE
STA 428+27.70 TO STA 429+16.84
STA 439+93.44 TO STA 440+36.55
STA 453+00.61 TO STA 453+58.12
STA 490+84.13 TO STA 491+57.99
STA 498+15.23 TO STA 500+49.41
STA 506+96.23 TO STA 507+33.85



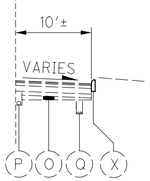
I.R. 75 NB LANE
STA 439+44.26 TO STA 447+80.01
STA 458+07.20 TO STA 467+98.20
STA 490+90.39 TO STA 492+25.78
STA 497+36.60 TO STA 499+30.90



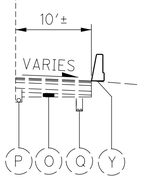
EXISTING SECTIONS - I.R. 75
STA 514+01.64 TO STA 531+73.91



I.R. 75 SB LANE
STA 525+10.28 TO STA 530+37.74



I.R. 75 NB LANE
STA 514+01.64 TO STA 526+31.32



I.R. 75 NB LANE
STA 526+31.30 TO STA 530+58.93

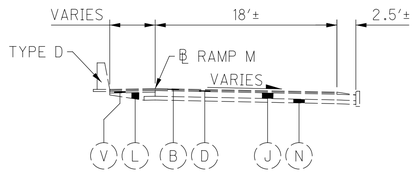
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FOR EXISTING LEGEND, SEE SHEET 14

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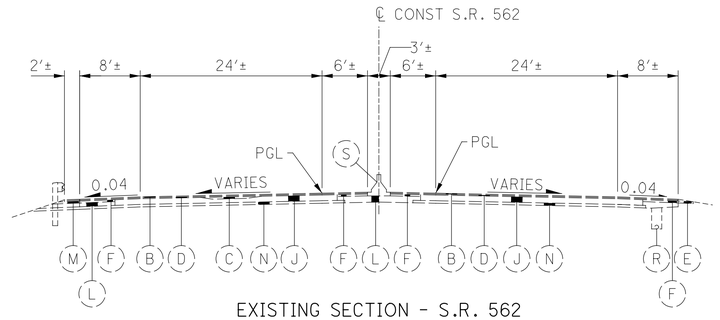
TYPICAL SECTIONS - EXISTING I.R. 75

HAM-75-7.85



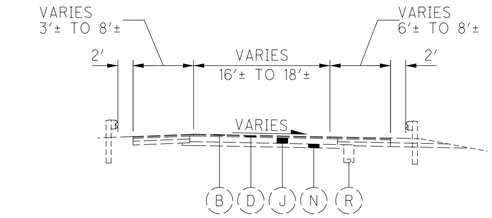
EXISTING SECTION - RAMP M

STA 7+20.00 TO STA 14+72.44
STA 17+51.44 TO STA 20+45.00



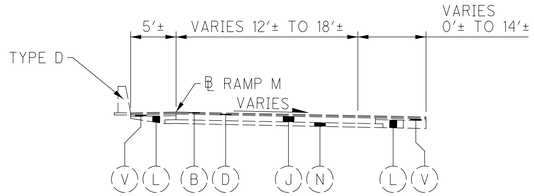
EXISTING SECTION - S.R. 562

STA 16+46.49 TO STA 35+44.45



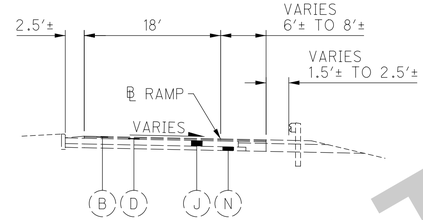
EXISTING SECTION - RAMPS C, D, E & H

RAMP C STA 10+20.00 TO STA 12+53.00
RAMP D STA 9+84.25 TO STA 11+00.00
RAMP E STA 10+04.00 TO STA 11+28.28
RAMP H STA 3+20.50 TO STA 6+54.59



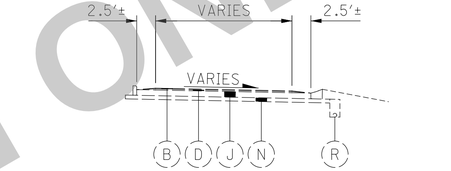
EXISTING SECTION - RAMP M

STA 21+26.37 TO STA 25+82.04



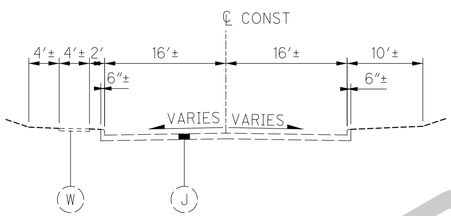
EXISTING SECTION - RAMPS K & N

RAMP K STA 8+82.84 TO STA 16+41.30
RAMP N STA 2+31.15 TO STA 15+70.62



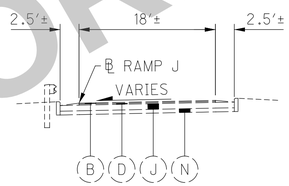
EXISTING SECTION - RAMPS A, B, C, E & H

RAMP A STA 17+77.00 TO STA 25+46.00
RAMP B STA 17+00.00 TO STA 22+30.97
RAMP C STA 12+53.00 TO STA 16+60.24
RAMP E STA 11+28.28 TO STA 14+88.15
RAMP H STA6+54.59 STA 8+72.80



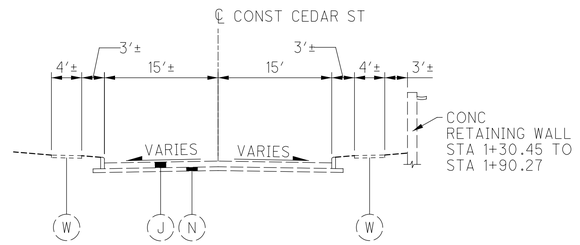
EXISTING SECTION - PROSSER AVE

PROSSER AVE STA 19+85.16 TO 22+00.00



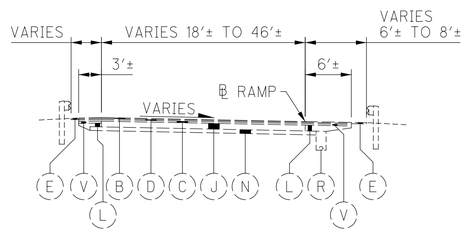
EXISTING SECTION - RAMP J

STA 2+70.00 TO STA 17+18.20



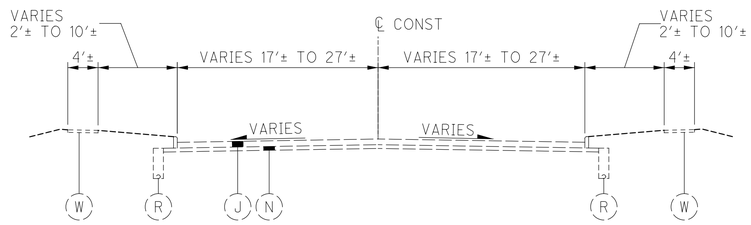
EXISTING SECTION - CEDAR ST

STA 0+00.00 TO STA 2+73.94



EXISTING SECTION - RAMPS P & Q

RAMP P STA 8+20.00 TO STA 11+85.52
RAMP Q STA 3+16.21 TO STA 7+88.78



EXISTING SECTION - TOWNSHIP AVE & TOWNE ST

TOWNE ST STA 15+50.00 TO STA 19+85.16
TOWNSHIP AVE STA 19+85.16 TO 22+00.00

FOR INFORMATION ONLY

FOR EXISTING LEGEND SHEET 14

TYPICAL SECTIONS - EXISTING S.R. 562, RAMPS, SIDE ROADS

HAM-75-7.85

16
2017

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[1] 18.5′
STA 403+40.00 TO STA 406+00.00
VARIES 18.5′ TO 19.5′
STA 406+00.00 TO STA 406+60.61
19.5′
STA 406+60.61 TO STA 407+87.13
VARIES 19.5′ TO 16′
STA 407+87.13 TO STA 410+00.00

[2] 13.5′
STA 395+50.00 TO STA 407+87.13
VARIES 13.5′ TO 14.5′
STA 407+87.13 TO STA 408+47.13
14.5′
STA 408+47.13 TO STA 410+00.00

[3] 4′
STA 395+50.00 TO STA 407+87.13
VARIES 4′ TO 1.16′
STA 407+87.13 TO STA 410+00.00

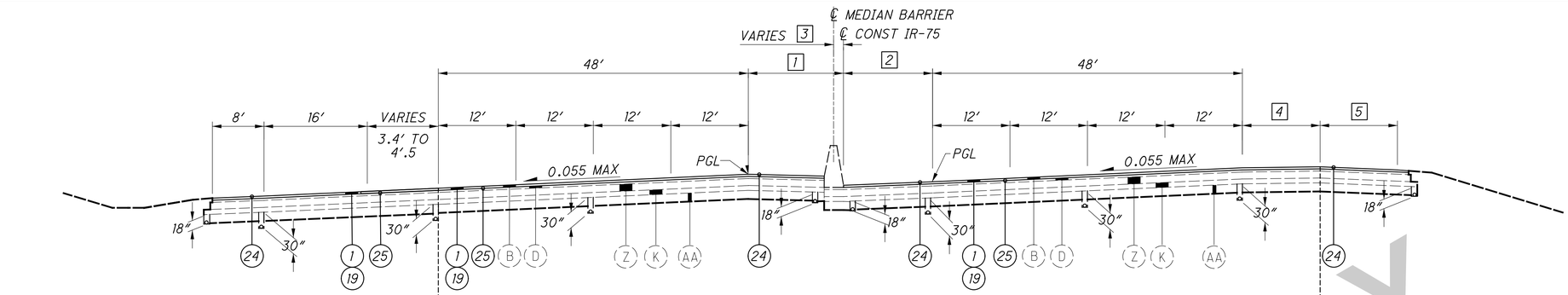
[4] 0′
STA 395+50.00 TO STA 403+21.63
VARIES 0′ TO 12′
STA 403+21.63 TO STA 404+21.63

[5] 12′
STA 395+50.00 TO STA 403+21.63
VARIES 12′ TO 8′
STA 403+21.63 TO STA 404+21.63
8′
STA 404+21.63 TO STA 404+55.82

[6] 8′
STA 404+01.04 TO STA 405+39.61
VARIES 20.21′ TO 24.58′
STA 405+39.61 TO STA 406+16.11
8′
STA 406+16.11 TO STA 406+26.34
VARIES 8′ TO 6.5′
STA 406+26.34 TO STA 406+66.36

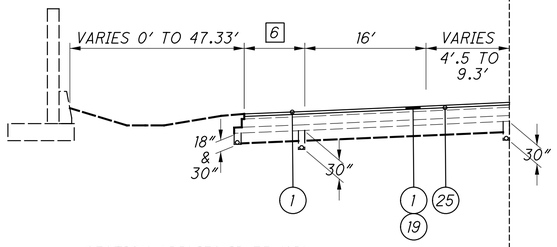
[7] VARIES 6.5′ TO 6′
STA 406+66.36 TO STA 406+78.90
6′
STA 406+78.90 TO STA 408+87.95

[8] 8′
STA 404+75.00 TO STA 405+99.99
VARIES 8′ TO 24′
STA 405+99.99 TO STA 410+00.00

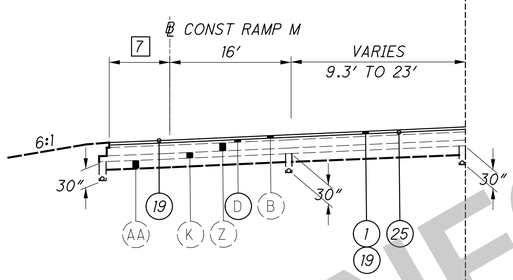


RESURFACING SECTION - I.R. 75

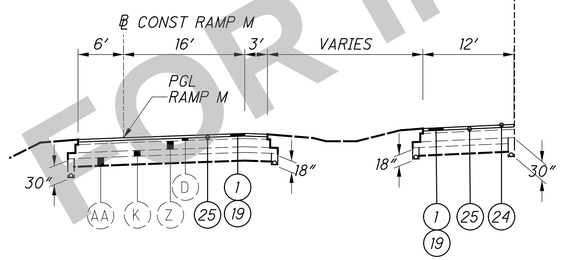
SECTION APPLIES:
STA 395+50.00 TO STA 410+00.00 (NB)
STA 403+40.00 TO STA 410+00.00 (SB)



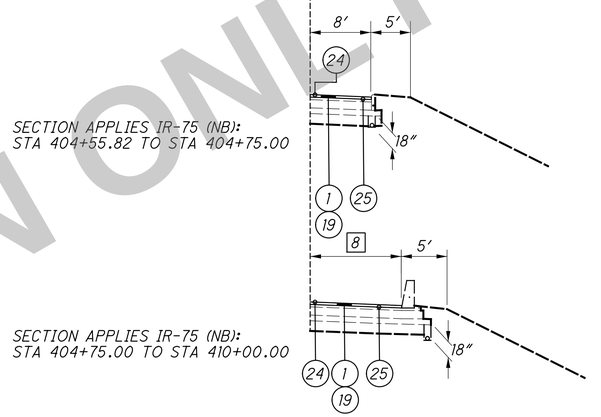
SECTION APPLIES IR-75 (SB):
STA 404+01.04 TO STA 406+66.36



SECTION APPLIES IR-75 (SB):
STA 406+66.36 TO STA 408+87.95



SECTION APPLIES IR-75 (SB):
STA 408+87.95 TO STA 410+00.00



SECTION APPLIES IR-75 (NB):
STA 404+55.82 TO STA 404+75.00

SECTION APPLIES IR-75 (NB):
STA 404+75.00 TO STA 410+00.00

LEGEND

(1) ITEM 442 - 1 ½″ ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (447), AS PER PLAN
(2) ITEM 407 - NON-TRACKING TACK COAT (@0.055 GAL/SY)
(3) ITEM 861 - 1 ¾″ ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5MM, TYPE A (446)
(4) ITEM 302 - 13″ ASPHALT CONCRETE BASE (2-6.5″ LIFTS)
(5) ITEM 304 - 6″ AGREGGATE BASE
(6) ITEM 452 - 6″ NON-REINFORCED CONCRETE PAVEMENT
(7) ITEM 605 - 6″ BASE PIPE UNDERDRAINS
(8) ITEM 204 - PROOF ROLLING
(9) ITEM 659 - SEEDING AND MULCHING
(10) ITEM 606 - GUARDRAIL, TYPE MGS
(11) ITEM 452 - 15″ NON-REINFORCED CONCRETE PAVEMENT
(12) ITEM 206 - CEMENT STABILIZED SUBGRADE, 14″ DEEP
(13) ITEM 605 - 6″ SHALLOW PIPE UNDERDRAINS
(14) ITEM 605 - 6″ UNCLASSIFIED PIPE UNDERDRAINS
(15) ITEM 526 - REINFORCED CONCRETE APPROACH SLAB (T=17″)
(16) ITEM 302 - 9″ ASPHALT CONCRETE BASE (2-4.5″ LIFTS)
(17) ITEM 609 - CURB, TYPE 6
(18) ITEM 608 - 4″ CONCRETE WALK
(19) ITEM 254 - 1 ½″ PAVEMENT PLANING, ASPHALT CONCRETE
(20) ITEM 411 - 8″ STABILIZED CRUSHED AGGREGATE
(21) ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE B1
(22) ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE C1
(23) ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D
(24) ITEM 618 - RUMBLE STRIPS (ASPHALT)
(25) ITEM 407 - NON-TRACKING TACK COAT (@0.085 GAL/SY)
(26) ITEM 609 - CURB, TYPE 4-C, AS PER PLAN
(27) ITEM 204 - SUBGRADE COMPACTION
(28) ITEM 607 - FENCE MISC.: WOOD FENCE
(28) ITEM 301 - 4 3/4″ ASPHALT CONCRETE BASE
(29) ITEM 659 - TOPSOIL
(30) ITEM 441 - 1 1/2″ ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (448), PG 64-22
(31) ITEM 408 - PRIME COAT
(32) ITEM 441 - 1.75″ ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1 (448)

NOTE:
FOR RUMBLE STRIP DETAILS SEE SHEET 36

FOR EXISTING LEGEND, SEE SHEET 14

FOR INFORMATION ONLY

TYPICAL SECTIONS - RESURFACING I.R. 75

HAM-75-7.85

17
2017

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[1] VARIES 16′ TO 13.5′
STA 410+00.00 TO STA 411+50.00
13.5′
STA 411+50.00 TO STA 412+26.87
STA 428+92.01 TO STA 433+82.10

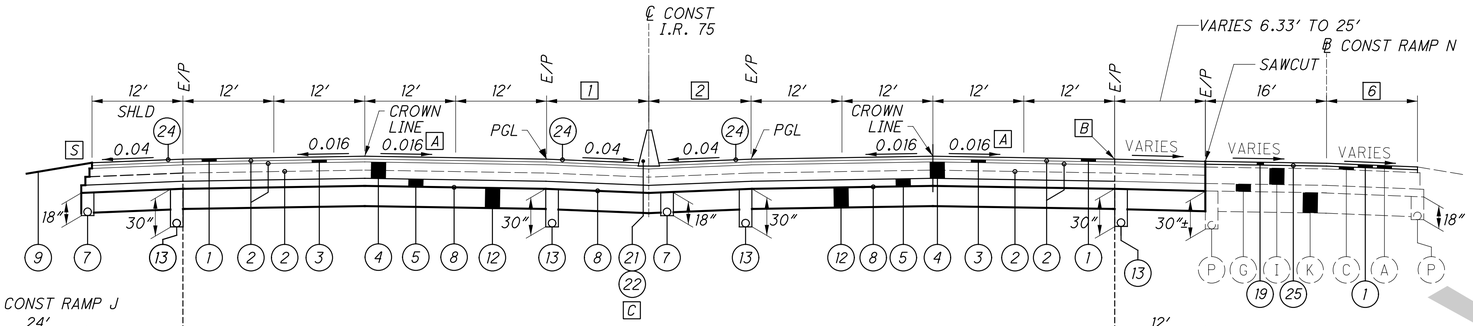
[2] VARIES 14.5′ TO 13.5′
STA 410+00.00 TO STA 411+50.00
13.5′
STA 411+50.00 TO STA 412+26.87
STA 428+92.01 TO STA 433+82.10

[3] VARIES 24′ TO 15.28′
STA 432+77.00 TO STA 433+82.10

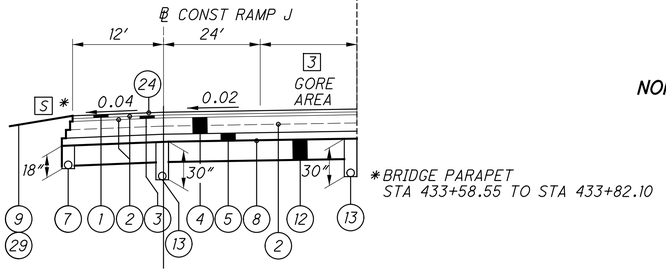
[4] VARIES 5.58′ TO 0′
STA 428+92.01 TO STA 431+70.83
0′
STA 431+70.83 TO STA 433+48.82

[5] 10′
STA 428+92.01 TO STA 430+71.07
VARIES 10′ TO 12′
430+71.07 TO 431+71.07
12′
STA 431+71.07 TO STA 433+38.82
VARIES 12′ TO 14′
STA 433+38.82 TO 433+48.82

[6] 8′
STA 410+00.00 TO STA 410+69.34
VARIES 8′ TO 6′
STA 410+69.34 TO STA 411+18.85
6′
STA 411+18.85 TO STA 411+61.42

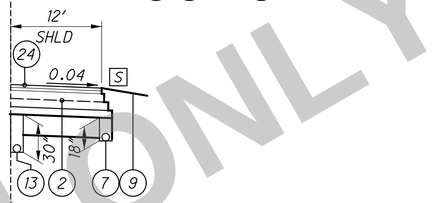


NORMAL FOUR LANE SECTION - I.R. 75
STA 410+00.00 TO STA 412+26.87
STA 428+92.01 TO STA 433+82.10

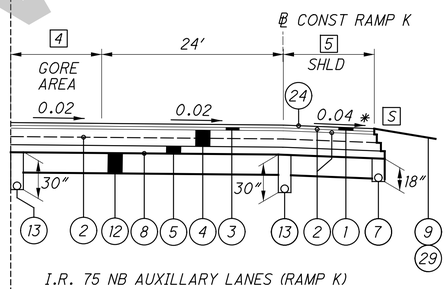


*BRIDGE PARAPET
STA 433+58.55 TO STA 433+82.10

I.R. 75 SB AUXILLARY LANE (RAMP J)
STA 432+77.00 TO STA 433+82.10

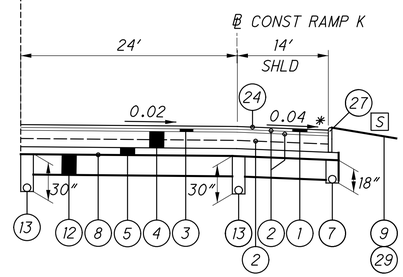


SECTION APPLIES:
STA 411+61.42 TO STA 412+26.87



BRIDGE PARAPET *
STA 435+19.11 TO STA 435+40.28

I.R. 75 NB AUXILLARY LANES (RAMP K)
STA 428+92.01 TO STA 433+48.82



BRIDGE PARAPET *
STA 433+68.03 TO STA 433+82.10

I.R. 75 NB AUXILLARY LANES (RAMP K)
STA 433+48.82 TO STA 433+82.10

[A] VARIES 0.00 TO 0.016
STA 410+00.00 TO STA 410+87.87

[B] 0.032 MAX GRADE BREAK
SEE INTERCHANGE DETAILS

[C] SINGLE SLOPE BARRIER
TYPE C1
STA 407+87.13 TO STA 411+49.93

TYPE B1
STA 411+49.93 TO STA 412+26.87
STA 428+92.01 TO STA 433+82.10

[S] SEE SHEET 32 FOR GRADING DETAILS.
SEE SHEETS 34 - 36 FOR ROADSIDE BARRIER DETAILS

FOR LEGEND, SEE SHEET 17

NOTES:
FOR PAVEMENT STEP DETAILS SEE SHEET 33
FOR RUMBLE STRIP DETAILS SEE SHEET 36

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TYPICAL SECTIONS - I.R. 75

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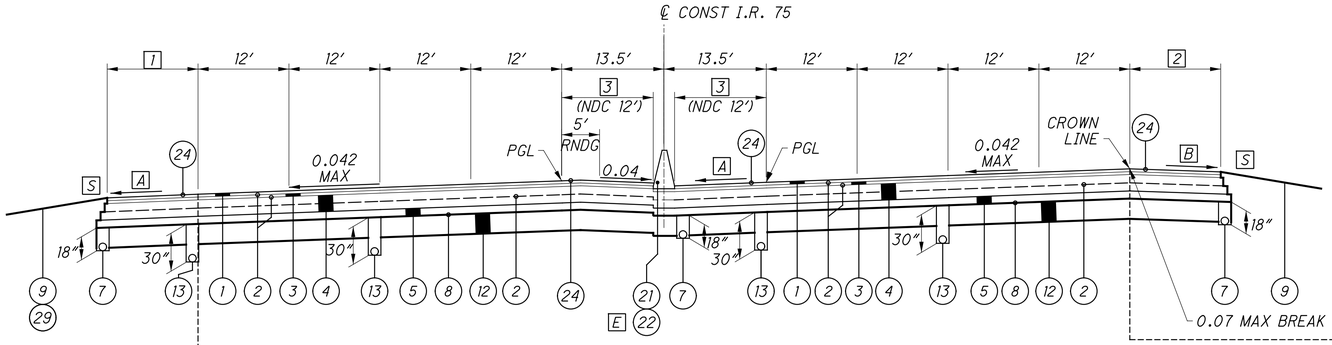
[1] 12′
STA 412+26.87 TO STA 415+00.00
VARIES 12′ TO 14′
STA 415+00.00 TO STA 415+50.00
VARIES 14′ TO 12′
STA 420+51.15 TO STA 420+61.15
12′
STA 420+61.15 TO STA 428+92.01

[2] 12′
STA 412+26.87 TO STA 416+02.82
VARIES 12′ TO 14′
STA 416+02.82 TO STA 416+46.29
12′
STA 419+52.73 TO STA 424+64.86

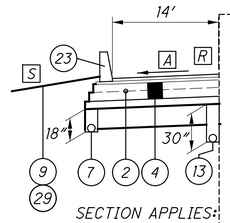
[3] 12′
STA 412+26.87 TO STA 417+12.66
VARIES 12′ TO 10.4′
STA 417+12.66 TO STA 417+52.66
10.4′
STA 417+52.66 TO STA 417+63.36

[4] 10.4′
STA 417+63.36 TO STA 417+93.36
12′
STA 419+22.73 TO STA 419+52.73

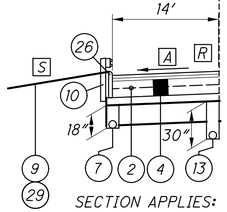
[5] VARIES 15.01′ TO 12.68′
STA 433+82.10 TO STA 434+12.10
VARIES 7.19′ TO 5.24′
STA 434+89.11 TO STA 435+19.11



SUPERELEVATED FOUR LANE SECTION – I.R. 75
STA 412+26.87 TO STA 417+63.36
STA 419+52.73 TO STA 428+92.01

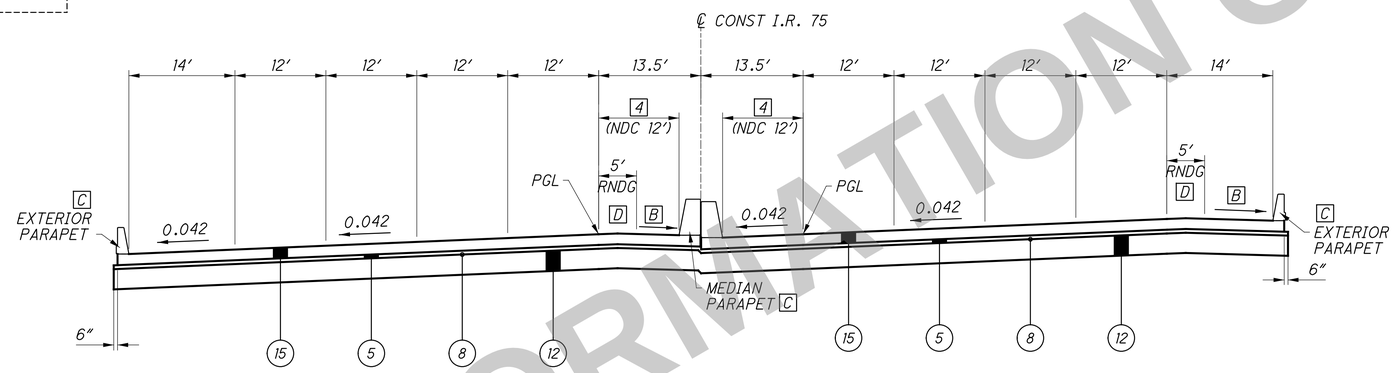


SECTION APPLIES:
STA 415+50.00 TO STA 417+63.36



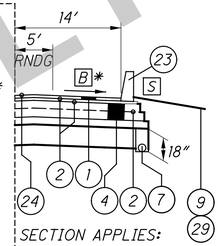
*BRIDGE PARAPET
STA 419+52.73 TO STA 420+32.57

SECTION APPLIES:
STA 419+52.73 TO STA 420+51.15

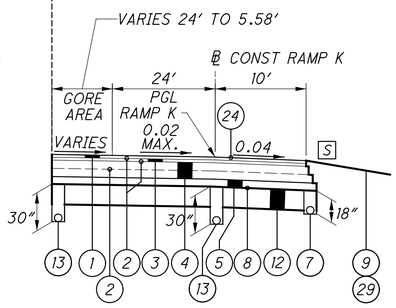


APPROACH SLAB SECTION – I.R. 75
HAM-75-0791 OVER RAMP J
STA 417+63.36 TO STA 417+93.36
STA 419+22.73 TO STA 419+52.73

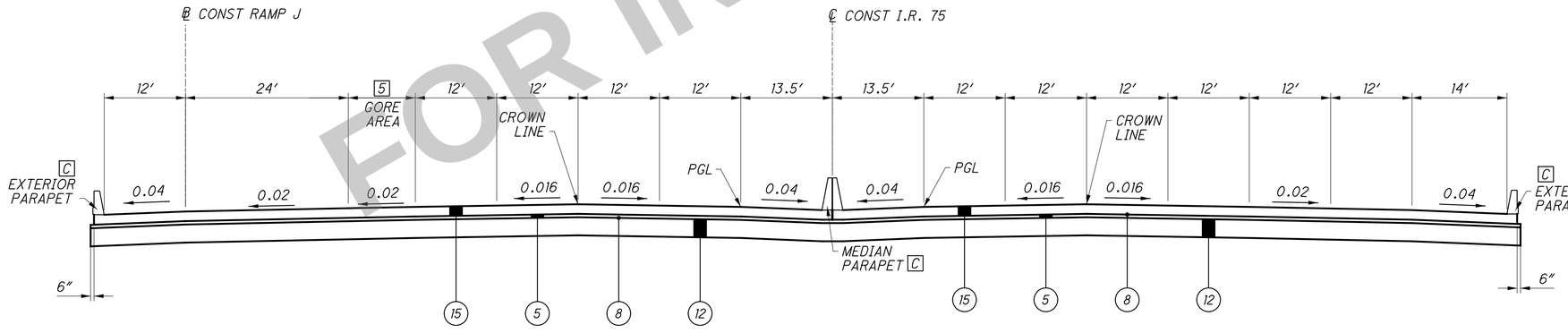
BRIDGE PARAPET *
STA 416+96.92 TO STA 417+63.36



SECTION APPLIES:
STA 416+46.29 TO STA 417+63.36



I.R. 75 NB AUXILLARY LANES (RAMP K)
STA 424+64.86 TO STA 428+92.01



APPROACH SLAB SECTION – I.R. 75
HAM-75-0823 OVER LAIDLAW AVE.
STA 433+82.10 TO STA 434+12.10
STA 434+89.11 TO STA 435+19.11

NOTES:
1. FOR PAVEMENT STEP DETAILS SEE SHEET 33
2. SEE HAM-75-0791 APPROACH SLAB SECTIONS SHEET 49/57 FOR LIMITS OF SHOULDER CROSS SLOPE TRANSITIONS.
3. FOR RUMBLE STRIP DETAILS SEE SHEET 36

[A] 0.04 OR RATE OF SUPER IF GREATER

[B] VARIES 0.04 TO 0.028 (SEE NOTE 2)

[C] PAID FOR AS PART OF APPROACH SLAB
FOR BARRIER DETAILS SEE SHEET 1333

[D] TRANSITION FROM 0.028 TO SHOULDER ROUNDING
SEE NOTE 2

[E] TYPE B1 SINGLE SLOPE BARRIER
STA 412+26.87 TO STA 414+72.74
STA 426+46.92 TO STA 428+92.01

TYPE C1 SINGLE SLOPE BARRIER
STA 414+72.74 TO STA 417+60.53
STA 419+54.31 TO STA 426+46.92

MEDIAN PARAPET
STA 417+60.53 TO STA 417+63.36
STA 419+52.73 TO STA 419+54.31

[S] SEE SHEET 32 FOR GRADING DETAILS.
SEE SHEETS 34 – 36 FOR ROADSIDE BARRIER DETAILS

FOR LEGEND, SEE SHEET 17

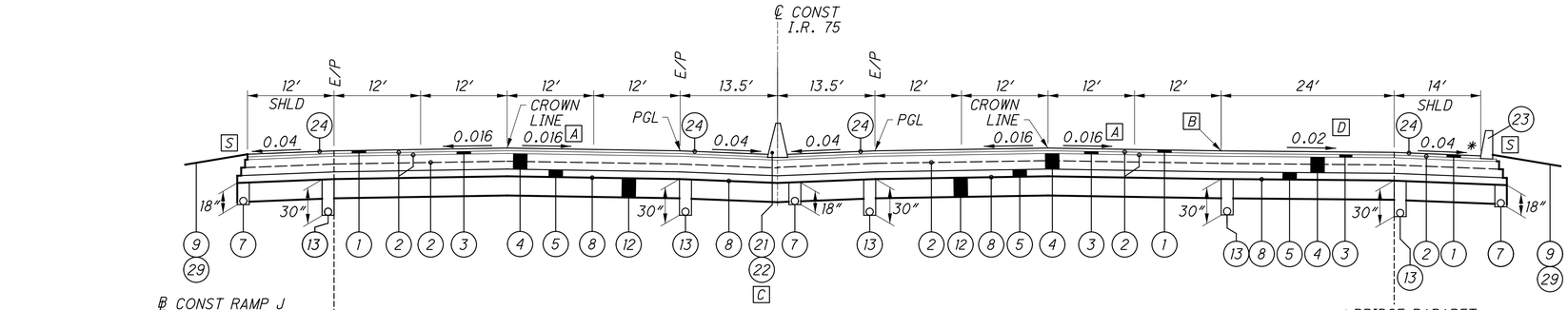
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TYPICAL SECTIONS – I.R. 75

HAM-75-7.85

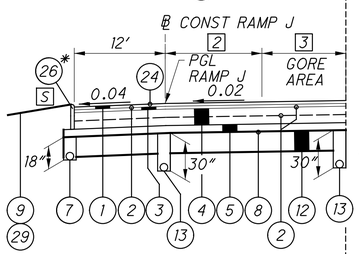
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2017

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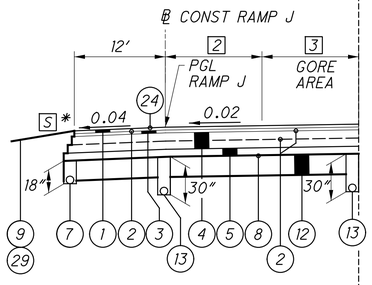
NORMAL FOUR LANE SECTION – I.R. 75

STA 435+19.11 TO STA 449+08.29



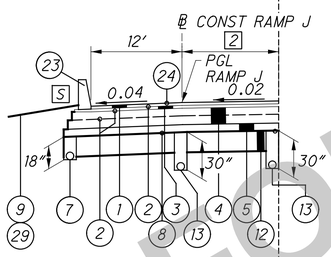
*BRIDGE PARAPET
STA 435+19.11 TO STA 435+31.32

I.R. 75 SB AUXILLARY LANE (RAMP J)
STA 435+19.11 TO STA 435+55.67

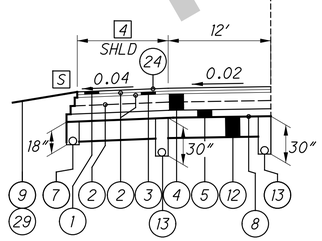


*BRIDGE PARAPET
STA 433+58.55 TO STA 433+82.10

I.R. 75 SB AUXILLARY LANE (RAMP J)
STA 435+55.67 TO STA 439+85.00

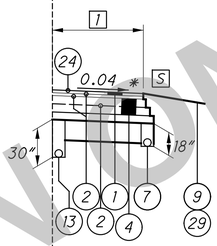


I.R. 75 SB AUXILLARY LANE (RAMP J)
STA 439+85.00 TO STA 442+03.31



I.R. 75 SB AUXILLARY LANE
STA 442+03.31 TO STA 449+08.29

*BRIDGE PARAPET
STA 435+19.11 TO STA 435+23.53



SECTION APPLIES:
STA 435+57.53 TO STA 439+00.00

SECTION APPLIES:
STA 439+00.00 TO STA 441+23.52

SECTION APPLIES:
STA 441+23.52 TO STA 449+08.29

1 14′
STA 435+57.53 TO STA 435+60.28
VARIES 14′ TO 12′
STA 435+60.28 TO STA 436+10.28
12′
STA 436+10.28 TO STA 439+00.00

2 24′
STA 435+19.11 TO STA 436+09.27
VARIES 24′ TO 12′
STA 436+09.27 TO STA 440+58.66
12′
STA 440+58.66 TO STA 442+03.31

3 VARIES 5.24′ TO 0′
STA 435+19.11 TO STA 436+09.27
0′
STA 436+09.27 TO STA 439+85.00

4 12′
STA 442+03.31 TO STA 447+94.67
VARIES 12′ TO 14′
STA 447+94.67 TO STA 448+44.67
14′
STA 448+44.67 TO STA 449+08.29

5 12′
STA 441+23.52 TO STA 445+03.91
VARIES 12′ TO 14′
STA 445+03.91 TO STA 445+13.91
14′
STA 445+13.91 TO STA 448+00.00
VARIES 14′ TO 12′
STA 448+00.00 TO STA 448+50.00
12′
STA 448+50.00 TO STA 449+08.29

A VARIES 0.00 TO 0.016
STA 410+00.00 TO STA 410+87.87

B 0.032 MAX GRADE BREAK
SEE INTERCHANGE DETAILS

C SINGLE SLOPE BARRIER
TYPE C1
STA 407+87.13 TO STA 411+49.93

TYPE B1
STA 411+49.93 TO STA 412+26.87
STA 428+92.01 TO STA 433+82.10
STA 435+19.11 TO STA 444+50.00

D PVMT CROSS SLOPE TRANSITIONS
0.02 TO 0.016
STA 448+65.55 TO STA 449+08.29

S SEE SHEET 32 FOR GRADING DETAILS.
SEE SHEETS 34 – 36 FOR ROADSIDE BARRIER DETAILS

NOTE:
FOR PAVEMENT STEP DETAILS SEE SHEET 33
FOR RUMBLE STRIP DETAILS SEE SHEET 36

FOR LEGEND, SEE SHEET 17

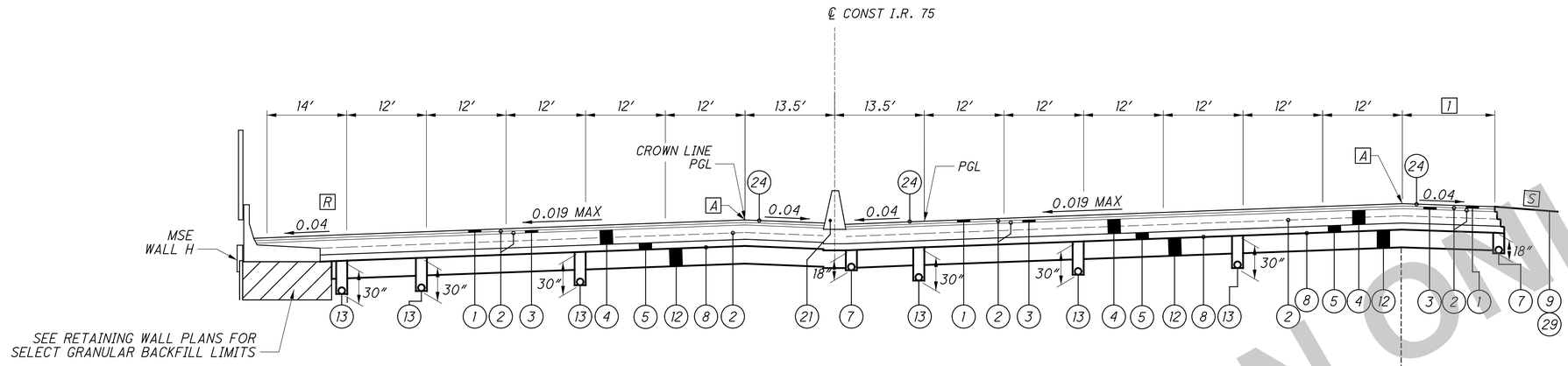
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TYPICAL SECTIONS - I.R. 75

HAM-75-7.85

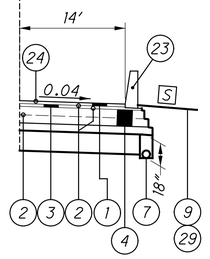
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[1] 12′
STA 449+08.29 TO STA 451+35.90
VARIES 12′ TO 14′
STA 451+35.90 TO STA 451+45.90

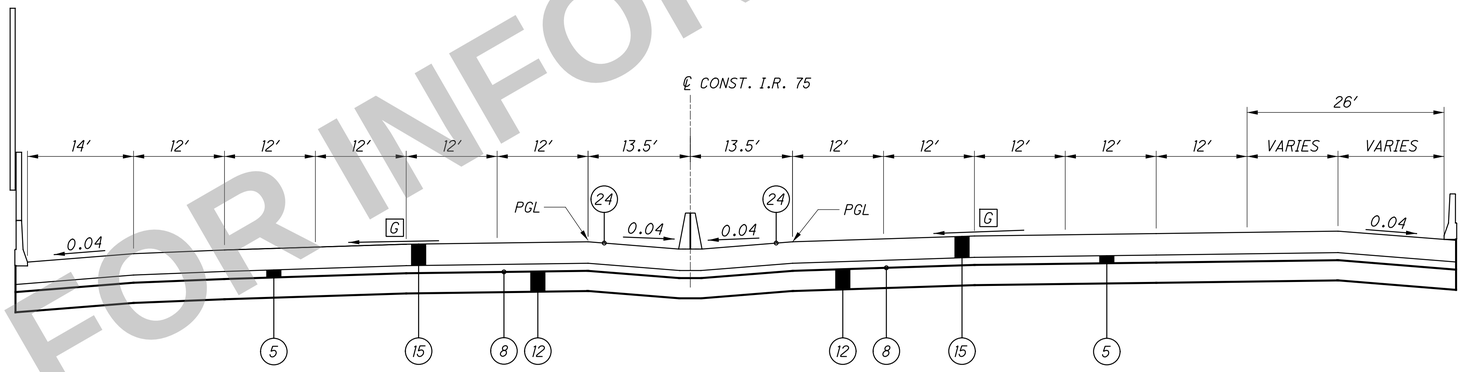


SUPERELEVATED SECTION - I.R. 75

STA 449+08.29 TO STA 451+48.21



SECTION APPLIES
STA 451+45.90 TO STA 451+48.21



APPROACH SLAB SECTION - I.R. 75
HAM-75-0857 OVER TOWNE STREET

STA 451+48.21 TO STA 451+78.21
STA 452+47.26 TO STA 452+77.26

[A] 0.07 MAX BREAK

[S] SEE SHEET 32 FOR GRADING DETAILS.
SEE SHEETS 34 - 36 FOR ROADSIDE
BARRIER DETAILS

NOTES:
FOR RUMBLE STRIP DETAILS SEE SHEET 36

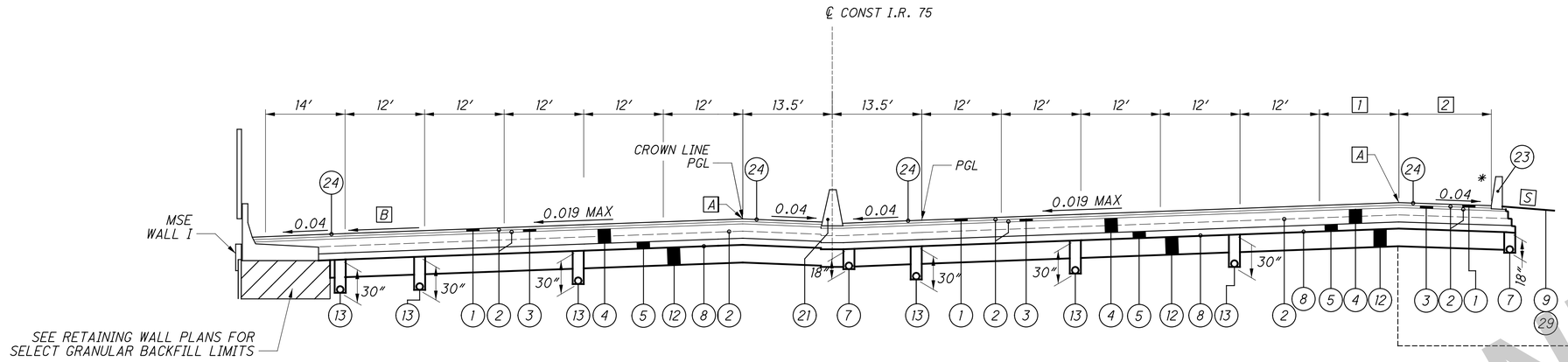
FOR LEGEND, SEE SHEET 17

FOR INFORMATION ONLY

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TYPICAL SECTIONS - I.R. 75

HAM-75-7.85



SUPERELEVATED SECTION - I.R. 75

STA 452+77.26 TO STA 463+73.42

** BRIDGE PARAPET*
STA 452+77.26 TO STA 453+04.39

[1] *VARIES 10.32′ TO 0′*
STA 452+77.26 TO STA 458+91.07
0′
STA 458+91.07 TO STA 463+73.42

[2] *VARIES 16.22′ TO 14.73′*
STA 452+77.26 TO STA 453+37.95

[3] *VARIES 14.73′ TO 12′*
STA 453+37.95 TO STA 454+09.39
12′
STA 454+09.39 TO STA 459+40.00
VARIES 12′ TO 14′
STA 459+40.00 TO STA 459+50.00

[4] *VARIES 14′ TO 12′*
STA 462+90.91 TO STA 463+40.91
12′
STA 463+40.91 TO STA 463+73.42

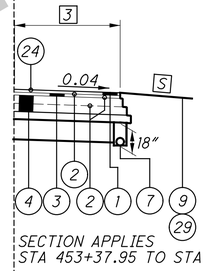
[A] *0.07 MAX BREAK*

[B] *PVMT CROSS SLOPE TRANSITIONS*
0.019 TO 0.02
STA 459+99.47 TO STA 460+10.15
PVMT CROSS SLOPE
0.02
STA 460+10.15 TO STA 463+73.42

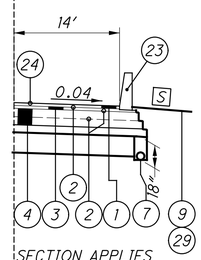
[C] *PVMT CROSS SLOPE TRANSITIONS*
0.02 TO 0.016
STA 464+65.55 TO STA 464+76.22

[D] *PVMT CROSS SLOPE TRANSITIONS*
0.016 TO 0.02
STA 463+73.42 TO STA 463+84.09

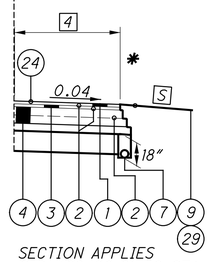
[S] *SEE SHEET 32 FOR GRADING DETAILS.*
SEE SHEETS 34 - 36 FOR ROADSIDE BARRIER DETAILS



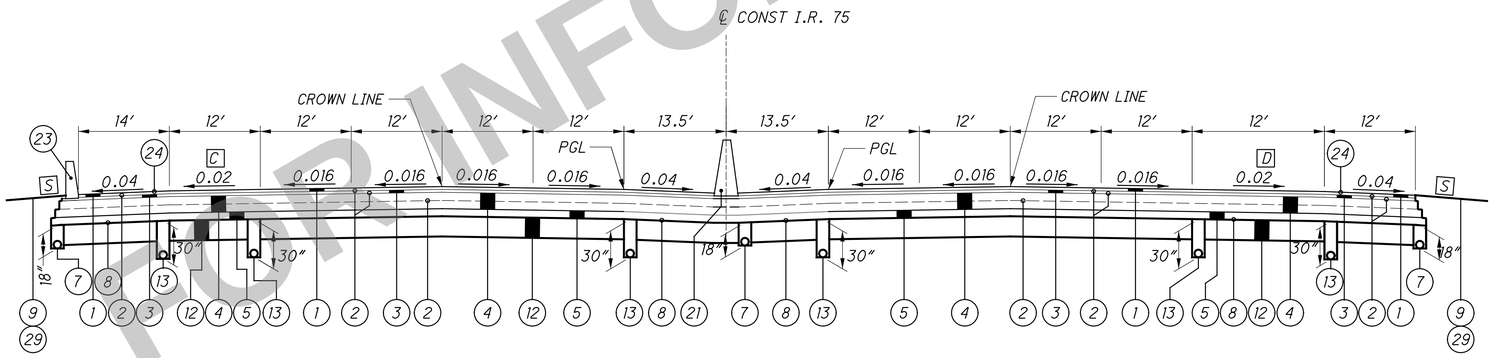
SECTION APPLIES
STA 453+37.95 TO STA 459+50.00



SECTION APPLIES
STA 459+50.00 TO STA 462+90.91



SECTION APPLIES
STA 462+90.91 TO STA 463+73.42



NORMAL SECTION - I.R. 75

STA 463+73.42 TO STA 464+76.22

FOR LEGEND, SEE SHEET 17

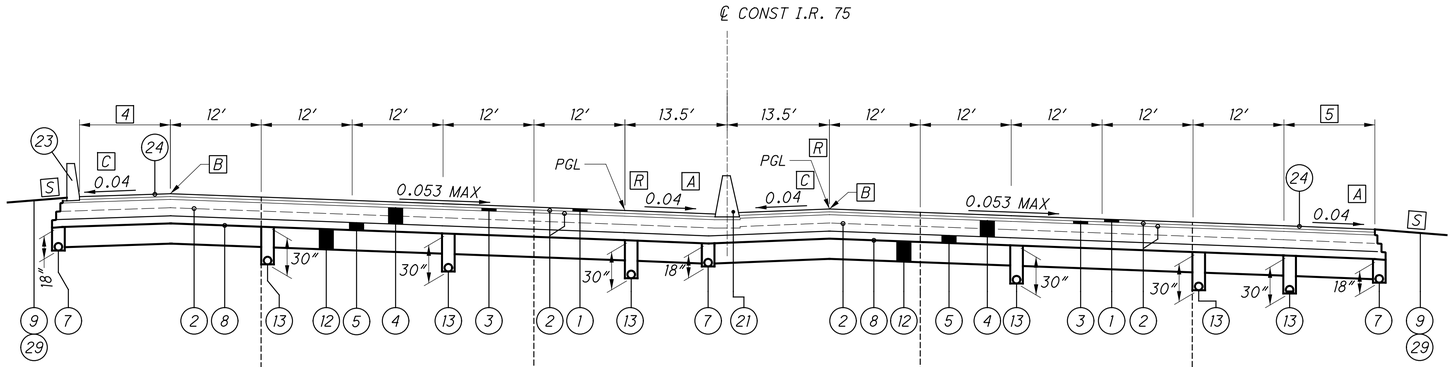
NOTES:
FOR RUMBLE STRIP DETAILS SEE SHEET 36

FOR INFORMATION ONLY

TYPICAL SECTIONS - I.R. 75

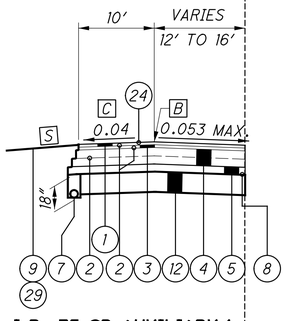
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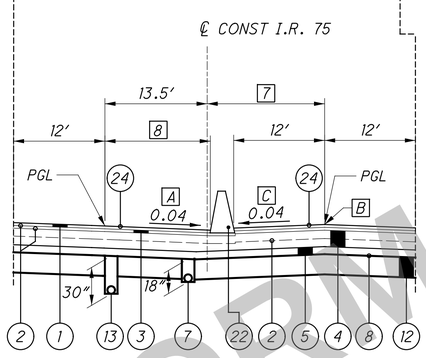
SUPERELEVATED SECTION - I.R. 75

STA 464+76.22 TO STA 484+84.95



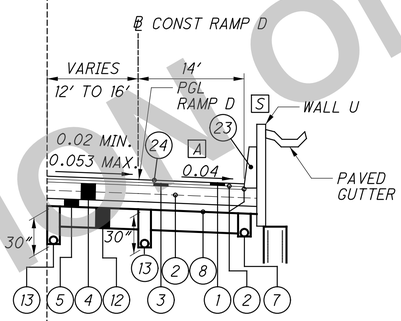
I.R. 75 SB AUXILIARY/ ACCELERATION LANE

STA 475+14.00 TO STA 477+02.40



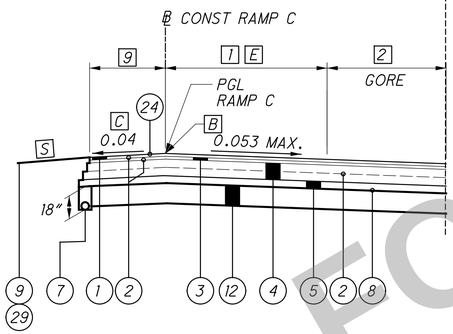
I.R. 75 SHOULDER WIDENING

STA 470+05.06 TO STA 479+56.11



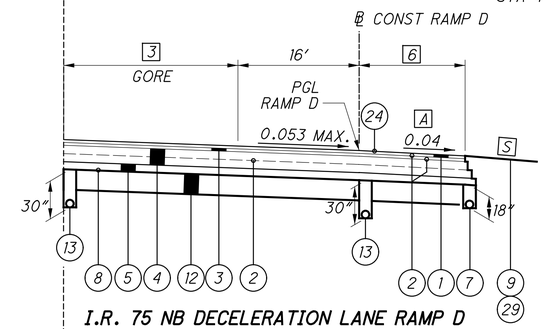
I.R. 75 NB AUXILIARY/ DECELERATION LANE

STA 469+76.37 TO STA 471+23.05



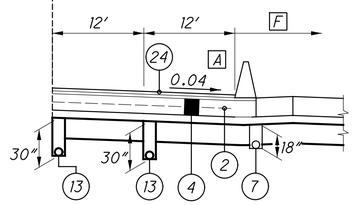
I.R. 75 SB ACCELERATION LANE RAMP C

STA 477+02.40 TO STA 484+84.95



I.R. 75 NB DECELERATION LANE RAMP D

STA 471+23.05 TO STA 475+21.64



SECTION APPLIES:
STA 475+21.64 TO STA 484+84.95

[A] 0.04 OR RATE OF SUPER IF GREATER

[B] 0.07 MAX BREAK

[C] VARIES 0.04 TO 0.01

[E] FOR CONTINUATION SEE RAMP C TYPICAL SECTION SHEET 28

[F] FOR CONTINUATION SEE RAMP D TYPICAL SECTION SHEET 29

[S] SEE SHEET 32 FOR GRADING DETAILS. SEE SHEETS 34 - 36 FOR ROADSIDE BARRIER DETAILS

[1] 16′
STA 477+02.40 TO STA 481+49.83 (RAMP C)
VARIES 16′ TO 21.36′
STA 481+49.83 (RAMP C) TO STA 484+84.95

[2] VARIES 0′ TO 9′
STA 477+02.40 TO STA 481+49.83 (RAMP C)
VARIES 9′ TO 15.71′
STA 481+49.83 (RAMP C) TO STA 484+84.95

[3] VARIES 0′ TO 20′
STA 471+23.05 TO STA 475+21.64

[4] 14′
STA 464+76.22 TO STA 474+04.00
VARIES 14′ TO 12′
STA 474+04.00 TO STA 474+14.00
VARIES 12′ TO 10′
STA 474+14.00 TO STA 475+14.00

[5] 12′
STA 464+76.22 TO STA 465+81.60
VARIES 12′ TO 14′
STA 465+81.60 TO STA 465+91.60
14′
STA 465+91.60 TO STA 469+76.37

[6] 14′
STA 471+23.05 TO STA 471+29.52

14′ TO 12′
STA 471+29.52 TO STA 471+81.42

12′
STA 471+81.42 TO STA 475+21.64

[7] VARIES 13.5′ TO 15.5′
STA 470+05.06 TO STA 474+80.58
VARIES 15.5′ TO 13.5′
STA 474+80.58 TO STA 479+56.11

[8] VARIES 12′ TO 14′
STA 470+05.06 TO STA 474+80.58
VARIES 14′ TO 12′
STA 474+80.58 TO STA 479+56.11

[9] 10′
STA 477+02.40 TO STA 477+70.00
VARIES 10′ TO 17′
STA 477+70.00 TO STA 478+75.00
17′
STA 478+75.00 TO STA 479+50.00
VARIES 17′ TO 10′
STA 479+50.00 TO STA 479+60.00
10′
STA 479+60.00 TO STA 484+84.95

NOTES:
FOR RUMBLE STRIP DETAILS SEE SHEET 36

FOR LEGEND, SEE SHEET 17

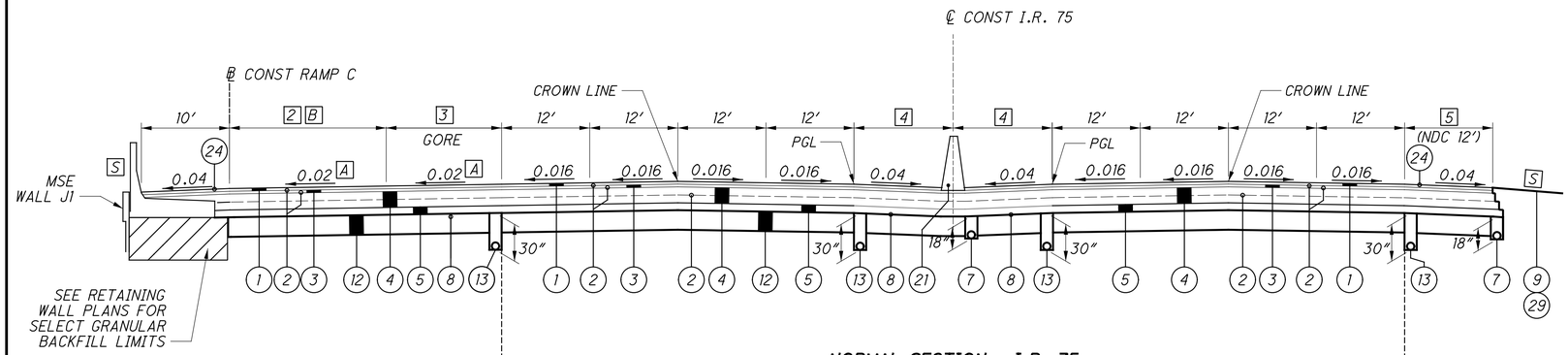
FOR INFORMATION ONLY

TYPICAL SECTIONS - I.R. 75

HAM-75-7.85

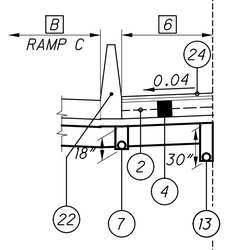
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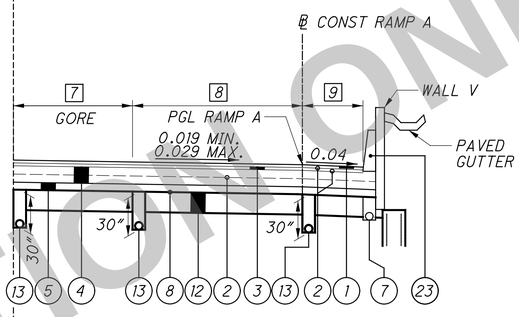


NORMAL SECTION - I.R. 75

STA 484+84.95 TO STA 512+78.83

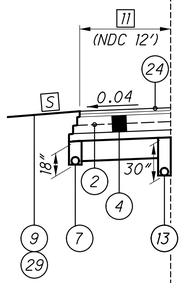


SECTION APPLIES:
STA 486+48.98 TO STA 492+80.00

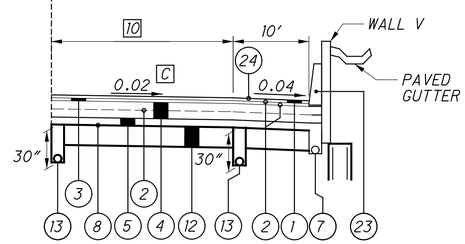


I.R 75 NB AUXILLARY LANE (RAMP A)

STA 505+87.17 TO STA 509+00.12

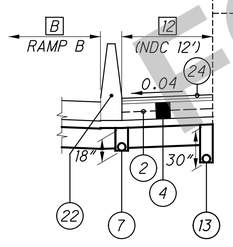


SECTION APPLIES:
STA 492+80.00 TO STA 498+20.00
STA 500+50.00 TO STA 507+71.50

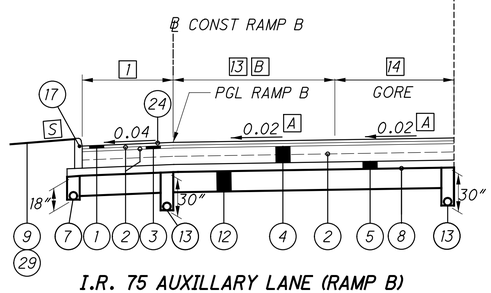


I.R. 75 NB AUXILIARY LANE

STA 509+00.12 TO STA 512+78.83



SECTION APPLIES:
STA 498+20.00 TO STA 500+50.00



I.R. 75 AUXILLARY LANE (RAMP B)

STA 507+71.50 TO STA 512+78.83

1 2′
STA 507+71.50 TO STA 508+01.16
VARIES 2′ TO 12′
STA 508+01.16 TO STA 508+49.90
12′
STA 508+49.90 TO STA 512+78.83

2 VARIES 21.36′ TO 24′
STA 484+84.95 TO STA 486+48.98

3 VARIES 15.71′ TO 19′
STA 484+84.95 TO STA 486+48.98

4 13.5′
STA 484+84.95 TO STA 492+80.00
STA 504+60.00 TO STA 512+78.83
VARIES 13.5′ TO 5.5′
STA 492+80.00 TO STA 497+60.00
5.5′
STA 497+60.00 TO STA 499+80.00
VARIES 5.5′ TO 13.5′
STA 499+80.00 TO STA 504+60.00

5 12′
STA 484+84.95 TO STA 492+80.00
VARIES 12′ TO 4′
STA 492+80.00 TO STA 497+60.00
4′
STA 497+60.00 TO 499+20.00
VARIES 4′ TO 12′
STA 499+20.00 TO STA 499+70.00
12′
STA 499+70.00 TO STA 505+87.17

6 12′
STA 486+48.98 TO STA 491+61.03
VARIES 12′ TO 16.25′
STA 491+61.03 TO STA 492+80.00

7 VARIES 24′ TO 9′
STA 505+88.85 TO STA 509+00.12

8 VARIES 20.15′ TO 16′
STA 505+88.85 TO STA 509+00.12

9 8′
STA 505+87.17 TO STA 508+50.30
VARIES 8′ TO 10′
STA 508+50.30 TO 509+00.12

10 VARIES 25′ TO 17.47′
STA 509+00.12 TO STA 512+78.83

11 12′
STA 492+80.00 TO STA 497+70.00
VARIES 12′ TO 4′
STA 497+70.00 TO STA 498+20.00
VARIES 5.16′ TO 12′
499+80.00 TO STA 504+60.00
12′
STA 504+60.00 TO STA 507+71.50

12 4′
STA 498+20.00 TO STA 499+80.00
VARIES 4′ TO 5.16′
STA 499+80.00 TO STA 500+50.00

13 24′
STA 507+71.50 TO 511+04.69
VARIES 24′ TO 16.58′
STA 511+05.75 (RAMP B) TO
STA 512+78.83 (RAMP B)

14 VARIES 24′ TO 0′
STA 507+71.50 TO STA 511+04.69

A PVMT CROSS SLOPE
0.016
STA 484+84.95 TO STA 486+48.13 (RAMP C)

B SEE RAMP B & C TYPICAL SECTION
SHEET 28

C PVMT CROSS SLOPE TRANSITIONS
0.02 TO 0.016
STA 512+68.16 TO STA 512+78.83 (RAMP A)

S SEE SHEET 32 FOR GRADING DETAILS.
SEE SHEETS 34 - 36 FOR ROADSIDE BARRIER DETAILS

NOTES:
FOR RUMBLE STRIP DETAILS SEE SHEET 36

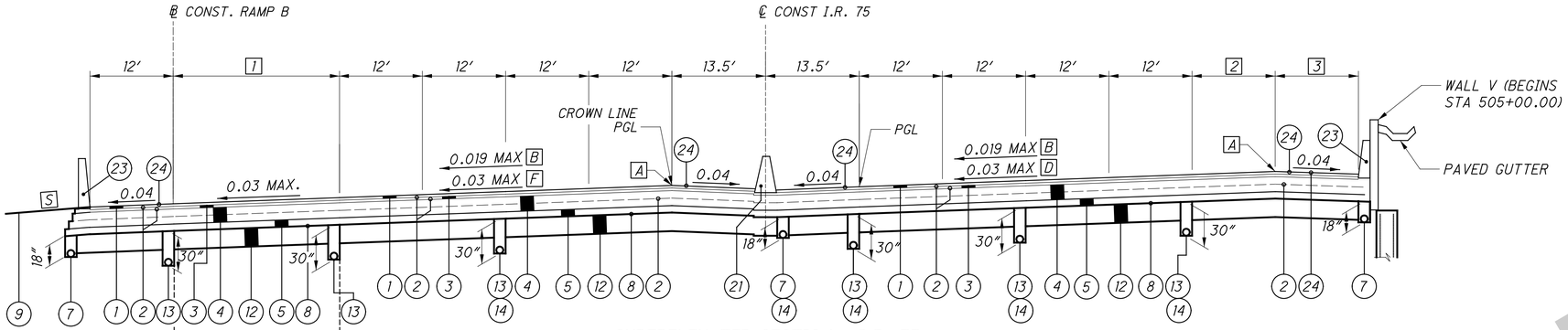
FOR LEGEND, SEE SHEET 17

FOR INFORMATION ONLY

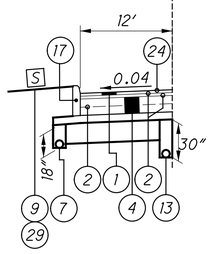
TYPICAL SECTIONS - I.R. 75

HAM-75-7.85

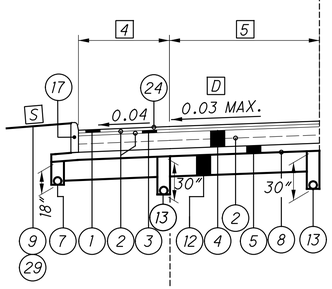
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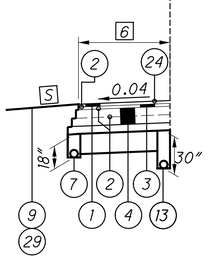
SUPERELEVATED SECTION - I.R. 75
STA 512+78.83 TO STA 527+50.00

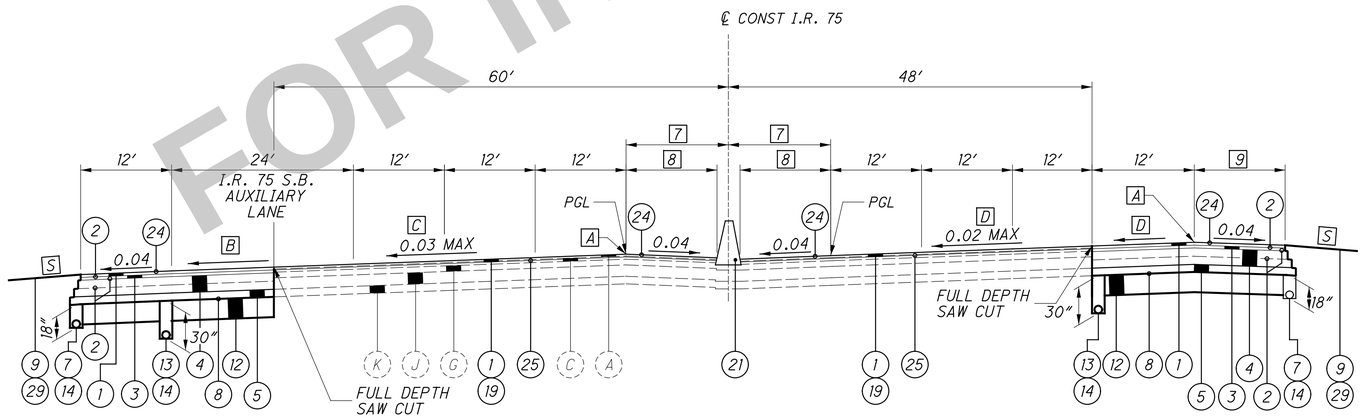


SECTION APPLIES
STA 519+30.00 TO STA 521+61.26



I.R. 75 SB AUXILIARY
STA 521+61.26 TO STA 527+50.00





WIDEDNING/RESURFACING SECTION - I.R. 75
STA 527+50.00 TO STA 532+69.19 (SB)
STA 527+50.00 TO STA 532+11.26 (NB)

FOR EXISTING LEGEND, SEE SHEET 14
FOR LEGEND, SEE SHEET 17

1 VARIES 16.58′ TO 12′
STA 512+78.83 TO STA 515+59.34
12′
STA 515+59.34 TO STA 521+61.26

2 VARIES 17.47′ TO 12′
STA 512+78.83 TO STA 523+00.00
12′
523+00.00 TO STA 524+72.45
VARIES 12′ TO 16.51′
STA 524+72.45 TO STA 527+50.00

3 10′
STA 512+78.83 TO STA 513+52.79
VARIES 10′ TO 12′
STA 513+52.79 TO STA 515+53.88
12′
STA 515+53.88 TO STA 527+50.00

4 VARIES 12′ TO 10′
STA 521+61.26 TO STA 523+00.00

5 VARIES 12′ TO 23.62′
STA 521+61.26 TO STA 527+50.00

6 VARIES 10′ TO 8′
STA 523+00.00 TO STA 523+59.55
8′
STA 523+59.55 TO STA 527+50.00

7 13.5′
STA 527+50.00 TO STA 528+00.00
VARIES 13.5′ TO 8.2′
STA 528+00.00 TO STA 531+21.35
8.2′
STA 531+21.35 TO STA 531+78.64 (NB)
STA 531+21.35 TO STA 531+69.19 (SB)

8 12′
STA 527+50.00 TO STA 528+00.00
VARIES 12′ TO 6.7′
STA 528+00.00 TO STA 531+21.35
6.7′
STA 531+21.35 TO STA 531+78.64 (NB)
STA 531+21.35 TO STA 531+69.19 (SB)

9 VARIES 14.34′ TO 5.69′
STA 527+50.00 TO STA 532+11.76 (NB)

A 0.07 MAX BREAK

B PVMT CROSS SLOPE VARIES
FROM 0.03 TO 0.0072
STA 529+00.00 TO STA 531+73.91 (I.R. 75 SB)

C PVMT CROSS SLOPE VARIES
FROM 0.03 TO 0.025
STA 530+50.00 TO STA 531+21.35 (I.R. 75 SB)

D PVMT CROSS SLOPE VARIES
FROM 0.02 TO -0.003
STA 527+50.00 TO STA 531+78.70 (I.R. 75 NB)

S SEE SHEET 32 FOR GRADING DETAILS.
SEE SHEETS 34 - 36 FOR ROADSIDE BARRIER DETAILS

NOTES:
FOR RUMBLE STRIP DETAILS SEE SHEET 36

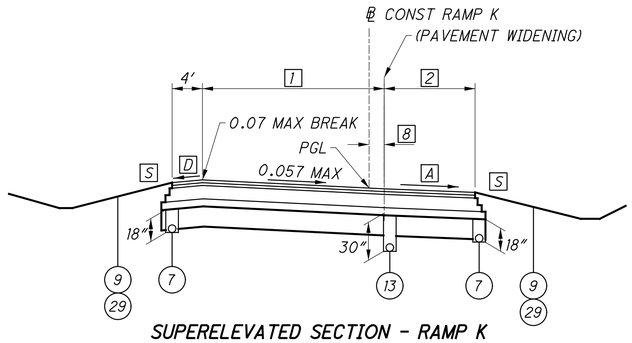
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TYPICAL SECTIONS - I.R. 75

HAM-75-7.85

25
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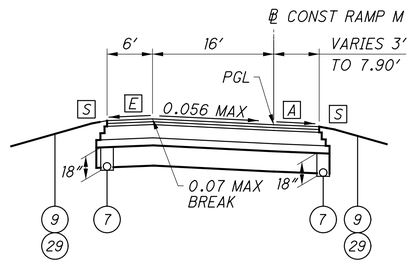
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SUPERELEVATED SECTION - RAMP K

STA 416+12.76 TO STA 423+05.87

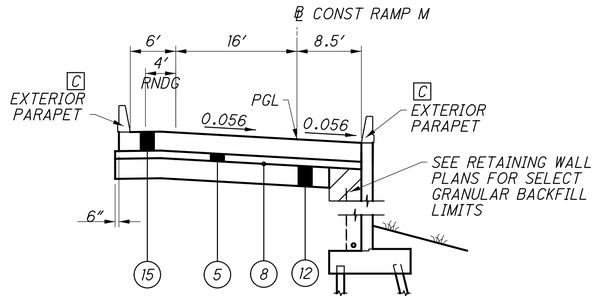
FOR PAVEMENT BUILD UP, SEE DETAIL A SHEET 27



SUPERELEVATED SECTION - RAMP M

STA 412+39.90 TO STA 413+88.11

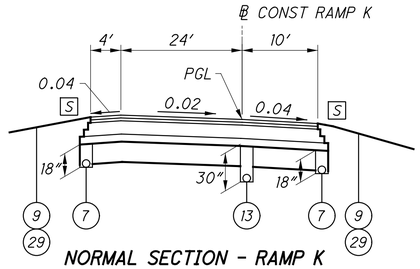
FOR PAVEMENT BUILD UP, SEE DETAIL A SHEET 27



FORWARD APPROACH SLAB SECTION - RAMP M
HAM-562-0004 OVER I.R. 75

STA 419+94.75 TO STA 420+24.75

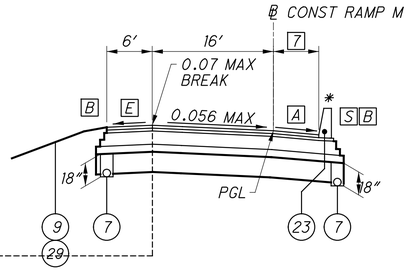
SEE RETAINING WALL PLANS FOR SELECT GRANULAR BACKFILL LIMITS



NORMAL SECTION - RAMP K

STA 423+05.87 TO STA 424+61.11

FOR PAVEMENT BUILD UP, SEE DETAIL A SHEET 27



SUPERELEVATED SECTION - RAMP M

STA 413+88.11 TO STA 416+26.45

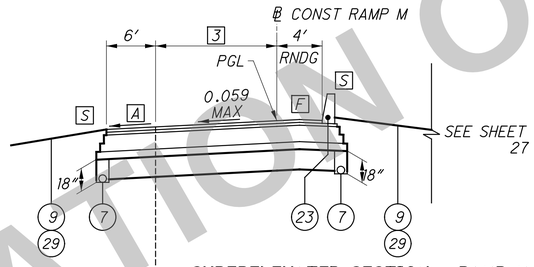
STA 420+24.75 TO STA 422+25.65

FOR PAVEMENT BUILD UP, SEE DETAIL A SHEET 27

*BRIDGE PARAPET

STA 415+68.84 TO STA 416+26.45

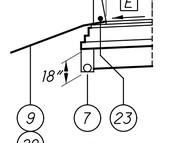
STA 420+24.75 TO STA 420+60.83



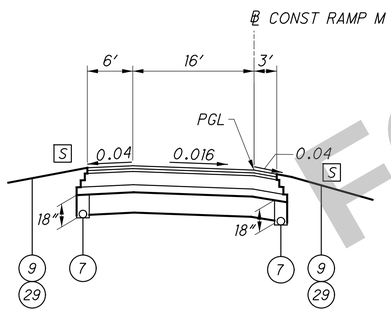
SUPERELEVATED SECTION - RAMP M

STA 422+25.65 TO STA 428+03.50

FOR PAVEMENT BUILD UP, SEE DETAIL A SHEET 27



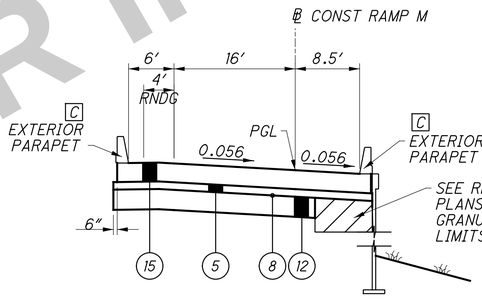
SECTION APPLIES:
STA 416+09.22 TO STA 416+26.45



NORMAL SECTION - RAMP M

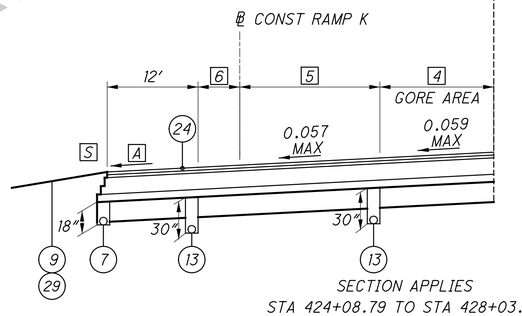
STA 412+00.00 TO STA 412+39.90

FOR PAVEMENT BUILD UP, SEE DETAIL A SHEET 27

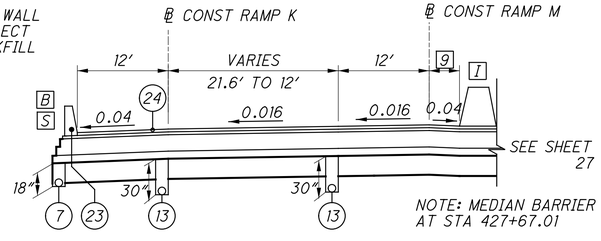


REAR APPROACH SLAB SECTION - RAMP M
HAM-562-0004 OVER I.R. 75

STA 416+26.45 TO STA 416+56.45



SECTION APPLIES
STA 424+08.79 TO STA 428+03.50
FOR PAVEMENT BUILD UP, SEE DETAIL A SHEET 27

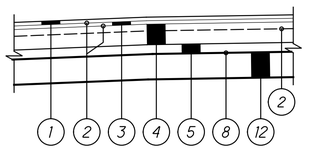


NOTE: MEDIAN BARRIER BEGINS AT STA 427+67.01

NORMAL SECTION - RAMP M

STA 428+03.50 TO STA 432+13.01

FOR PAVEMENT BUILD UP, SEE SHEET 27



DETAIL A
ASPHALT RAMP PAVEMENT BUILD UP DETAIL

TYPICAL RAMPS J, K, M & N

1 29.5′
STA 416+12.76 TO STA 421+05.87
VARIES 29.5′ TO 24′
STA 421+05.87 TO STA 423+05.87

2 VARIES 12′ TO 10′
STA 416+12.76 TO STA 416+64.40
10′
STA 416+64.40 TO STA 423+05.87

3 16′
STA 422+25.65 TO STA 426+92.80
VARIES 16′ TO 12′
STA 426+92.80 TO STA 428+03.50

4 VARIES 24′ TO 0′
STA 424+08.79 TO STA 426+92.80
0′
STA 426+92.80 TO STA 428+03.50

5 24′
STA 424+08.79 TO STA 426+92.80
VARIES 24′ TO 21.6′
STA 426+92.80 TO STA 428+03.50

6 5.5′
STA 424+08.79 TO STA 425+72.28
VARIES 5.5′ TO 0′
STA 425+72.28 TO STA 428+03.50

7 VARIES 7.90′ TO 8.5′
STA 413+88.11 TO STA 414+14.90
8.5′
STA 414+14.90 TO STA 416+26.45
VARIES 8.5′ TO 4′
STA 420+24.75 TO STA 422+07.38
4′
STA 422+07.38 TO STA 422+25.65

8 5.5′
STA 416+12.76 TO STA 421+05.87
VARIES 5.5′ TO 0′
STA 421+05.87 TO STA 423+05.87

9 4′
STA 428+03.50 TO STA 429+43.13
VARIES 4′ TO 6′
STA 429+43.13 TO STA 429+83.10
6′
STA 429+83.10 TO STA 432+13.01

A 0.04 OR RATE OF SUPER IF GREATER

B FOR SHOULDER TREATMENTS, SEE SHEET 36

C PAID FOR AS PART OF APPROACH SLAB

D VARIES 0.013 TO 0.04

E VARIES 0.014 TO 0.04

F VARIES 0.011 TO 0.04

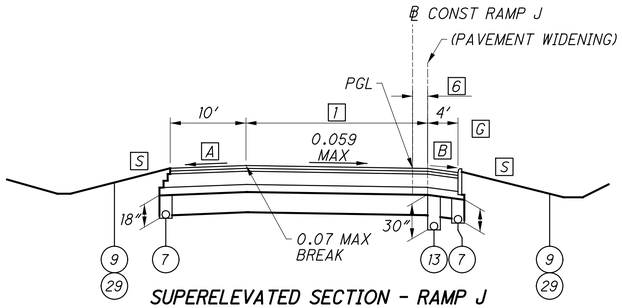
S SEE SHEET 32 FOR GRADING DETAILS. SEE SHEETS 34 - 36 FOR ROADSIDE BARRIER DETAILS

NOTE:
FOR RUMBLE STRIP DETAILS SEE SHEET 36

FOR LEGEND, SEE SHEET 17

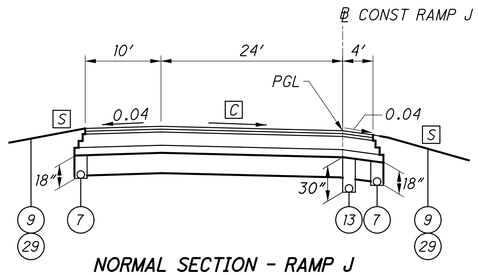
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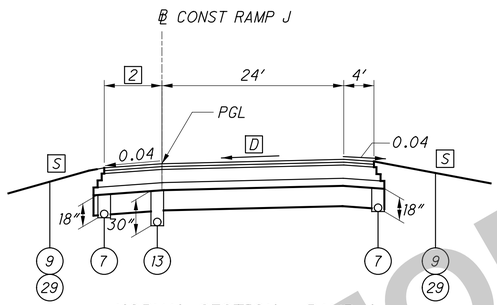
SUPERELEVATED SECTION - RAMP J

STA 412+01.35 TO STA 423+65.55
FOR PAVEMENT BUILDUP,
SEE DETAIL A THIS SHEET



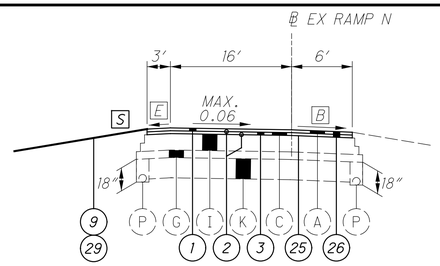
NORMAL SECTION - RAMP J

STA 423+65.55 TO STA 426+57.83
FOR PAVEMENT BUILDUP,
SEE DETAIL A THIS SHEET



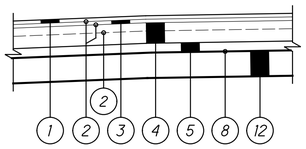
NORMAL SECTION - RAMP J

STA 426+57.83 TO STA 432+78.47
FOR PAVEMENT BUILDUP,
SEE DETAIL A THIS SHEET



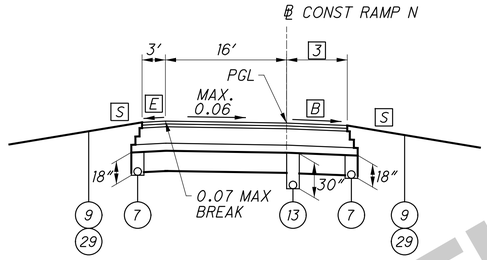
RESURFACING SECTION - RAMP N

STA 411+72.13 TO STA 412+64.37



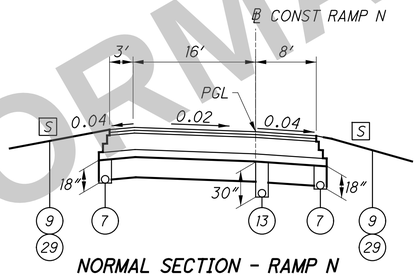
DETAIL A
ASPHALT RAMP PAVEMENT BUILD UP DETAIL

TYPICAL RAMPS J, K, M & N



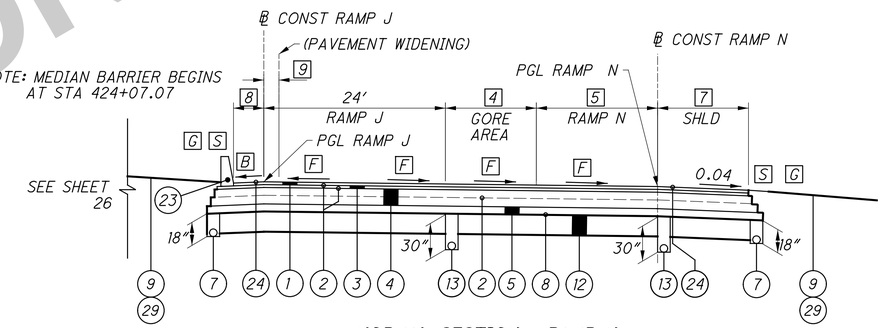
SUPERELEVATED SECTION - RAMP N

STA 412+64.37 TO STA 417+45.10
FOR PAVEMENT BUILDUP,
SEE DETAIL A THIS SHEET



NORMAL SECTION - RAMP N

STA 417+45.10 TO STA 420+25.37
FOR PAVEMENT BUILDUP,
SEE DETAIL A THIS SHEET



NORMAL SECTION - RAMP N

STA 420+25.37 TO STA 428+52.11

[1] VARIES 27.26′ TO 28.5′
STA 412+01.35 TO STA 412+84.33
28.5′
STA 412+84.33 TO STA 421+40.56
VARIES 28.5′ TO 24′
STA 421+40.56 TO STA 423+65.55

[2] 10′
STA 426+57.83 TO STA 432+28.40
VARIES 10′ TO 12′
STA 432+28.40 TO STA 432+78.47

[3] 6′
STA 412+64.37 TO STA 416+85.90
VARIES 6′ TO 8′
STA 416+85.90 TO STA 417+35.90
8′
STA 417+35.90 TO STA 417+45.10

[4] VARIES 23′ TO 0′
STA 420+25.37 TO STA 426+52.23
0′
STA 426+52.23 TO STA 428+52.11

[5] 16′
STA 420+25.37 TO STA 426+52.23
VARIES 16′ TO 12′
STA 426+52.23 TO STA 428+52.11

[6] VARIES 3.26′ TO 4.5′
STA 412+01.35 TO STA 412+84.33
4.5′
STA 412+84.33 TO STA 421+40.56
VARIES 4.5′ TO 0′
STA 421+40.56 TO STA 423+65.55

[7] 8′
STA 420+25.37 TO STA 424+67.51
VARIES 8′ TO 12′
STA 426+48.29 TO STA 428+51.87

[8] 4′
STA 420+25.37 TO STA 425+83.02
VARIES 4′ TO 6′
STA 425+83.02 TO STA 426+23.09
6′
STA 426+23.09 TO STA 428+52.11

[9] VARIES 3.26′ TO 0′
STA 420+25.37 TO STA 422+47.94
0′
STA 422+47.94 TO STA 428+52.11

[A] VARIES 0.04 TO 0.011

[B] 0.04 OR RATE OF SUPER IF GREATER

[C] VARIES 0.016 TO -0.016

[D] VARIES 0.016 TO 0.02

[E] VARIES 0.010 TO 0.04

[F] FOR SLOPE DETAILS SEE SUPERELEVATION TABLE SHEETS 783-788

[G] FOR SHOULDER TREATMENTS, SEE SHEET 36

[S] SEE SHEET 32 FOR GRADING DETAILS.
SEE SHEETS 34 - 36 FOR ROADSIDE BARRIER DETAILS

NOTE:
FOR RUMBLE STRIP DETAILS SEE SHEET 36

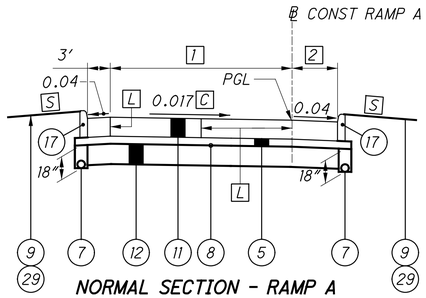
FOR LEGEND, SEE SHEET 17

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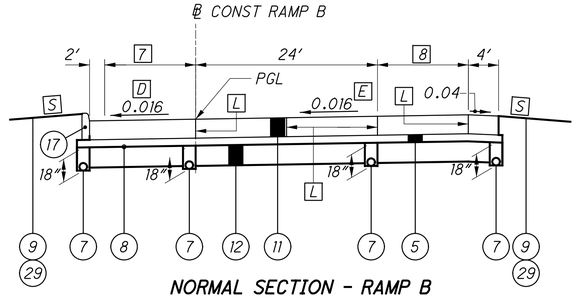
TYPICAL SECTIONS - I.R. 75 & S.R. 562 INTERCHANGE

HAM-75-7.85



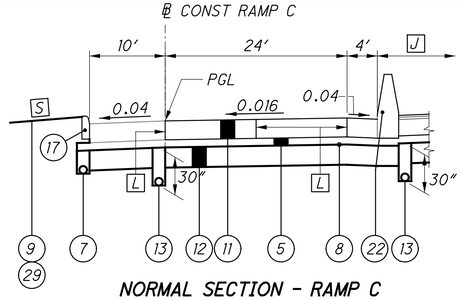
NORMAL SECTION - RAMP A

STA 498+62.58 TO STA 500+10.87



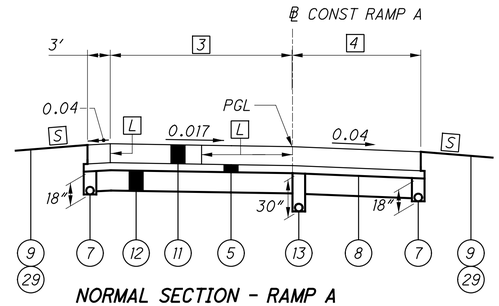
NORMAL SECTION - RAMP B

STA 501+69.65 TO STA 505+48.04



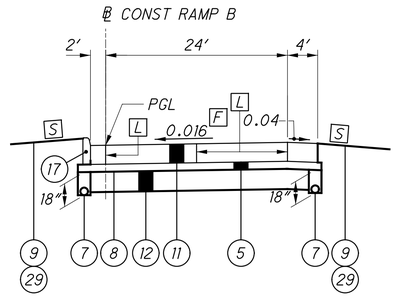
NORMAL SECTION - RAMP C

STA 486+50.07 TO STA 491+37.46



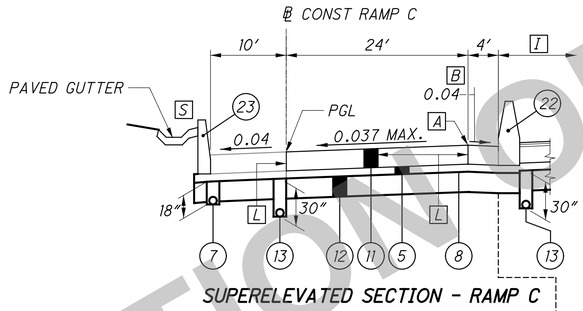
NORMAL SECTION - RAMP A

STA 500+10.87 TO STA 502+88.85



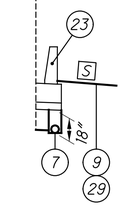
NORMAL SECTION - RAMP B

STA 505+48.04 TO STA 507+72.50

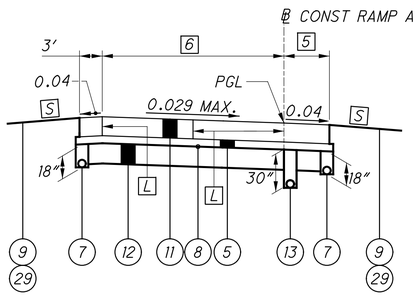


SUPERELEVATED SECTION - RAMP C

STA 491+37.46 TO STA 493+96.52

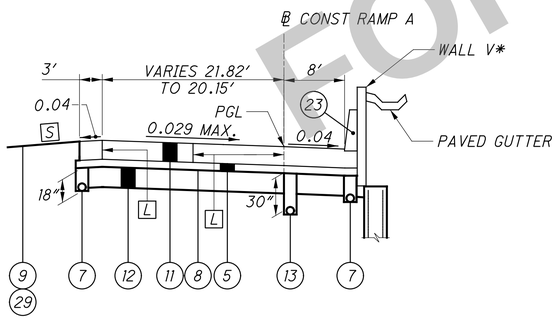


SECTION APPLIES
STA. 493+00.00 TO STA. 493+96.52



SUPERELEVATED SECTION - RAMP A

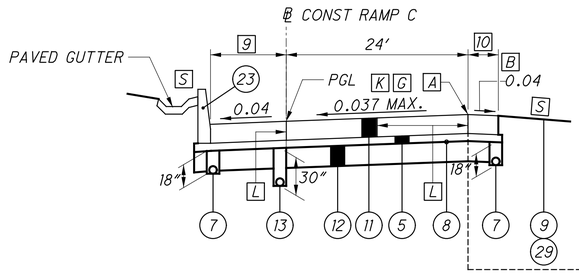
STA 502+88.85 TO STA 504+63.48



SUPERELEVATED SECTION - RAMP A

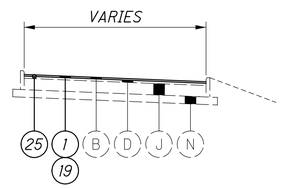
STA 503+63.48 TO STA 505+88.65
* BEGINS STA 505+00.00

FOR LEGEND, SEE SHEET 17



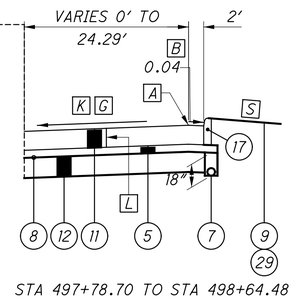
SUPERELEVATED SECTION - RAMP C

STA 493+96.52 TO STA 498+64.48



RESURFACING SECTION - RAMP A, RAMP B, RAMP C

STATIONS VARY, SEE PLAN AND PROFILE SHEETS FOR DETAILS



STA 497+78.70 TO STA 498+64.48

- [A] 0.07 MAX BREAK
- [B] VARIES 0.04 TO 0.033
- [C] PVMT. CROSS SLOPE TRANSITIONS 0.0154 TO 0.017 STA 498+62.60 TO STA 499+00.00
- [D] PVMT. CROSS SLOPE TRANSITIONS -0.021 TO -0.016 STA 501+69.65 TO STA 501+83.10
- [E] PVMT. CROSS SLOPE TRANSITIONS -0.0114 TO -0.016 STA 501+69.65 TO STA 501+83.10
- [F] PVMT. CROSS SLOPE TRANSITIONS -0.016 TO -0.020 STA 507+53.30 TO STA 507+72.50
- [G] PVMT. CROSS SLOPE VARIES, STA 497+91.06 TO STA 498+64.48
- [I] SEE I.R. 75 SB AUXILIARY TYPICAL 23 SECTION SHEETS 22, 21 AND
- [K] SEE RAMP C PAVEMENT DETAIL, SHEETS 796 AND 797
- [L] LONGITUDINAL JOINT PER SCD-BP-2.1
- [S] SEE SHEET 32 FOR GRADING DETAILS. SEE SHEETS 34 - 36 FOR ROADSIDE BARRIER DETAILS

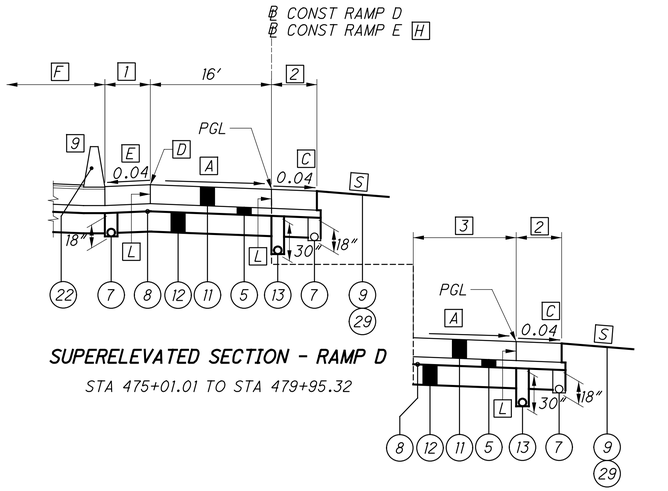
- [1] VARIES 34.76′ TO 27.99′ STA 498+62.58 TO STA 500+10.87
- [2] VARIES 5.63′ TO 6′ STA 498+62.58 TO STA 499+00.88 6′ STA 499+00.88 TO STA 500+10.87
- [3] VARIES 27.99′ TO 24′ STA 500+10.87 TO STA 500+92.44 24′ STA 500+92.44 TO STA 502+88.85
- [4] VARIES 6′ TO 17′ STA 500+10.87 TO STA 500+40.87 17′ STA 500+40.87 TO STA 501+15.87 VARIES 17′ TO 6′ STA 501+15.87 TO STA 502+80.87 6′ STA 502+80.87 TO STA 502+88.85
- [5] 6′ STA 502+88.85 TO STA 504+53.52 VARIES 6′ TO 8′ STA 504+53.52 TO STA 504+63.48
- [6] 24′ STA 502+88.85 TO STA 503+00.12 VARIES 24′ TO 21.82′ STA 503+00.12 TO STA 504+63.48
- [7] 12′ STA 501+69.65 TO STA 504+98.08 VARIES 12′ TO 0′ STA 504+98.08 TO STA 505+48.04
- [8] 12′ STA 501+69.65 TO STA 504+97.86 VARIES 12′ TO 0′ STA 504+97.86 TO STA 505+48.04
- [9] 10′ STA 493+96.52 TO STA 498+14.37 VARIES 10′ TO 2.23′ STA 498+14.37 TO STA 498+64.48
- [10] 4′ STA 493+96.52 TO STA 497+54.06 VARIES 4′ TO 2′ STA 497+54.06 TO STA 497+78.70 2′ STA 497+78.70 TO STA 498+64.48

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TYPICAL SECTIONS - PADDOCK RD. INTERCHANGE

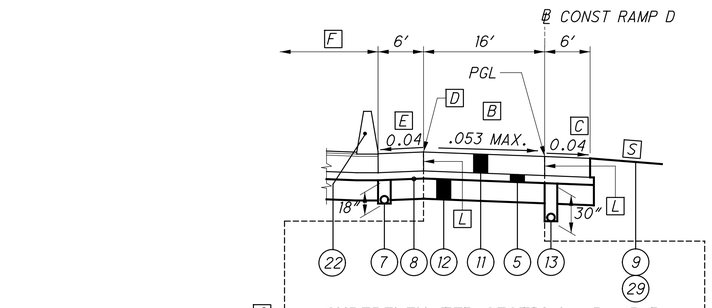
HAM-75-7.85



SUPERELEVATED SECTION - RAMP D

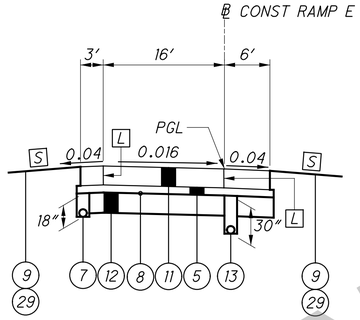
STA 475+01.01 TO STA 479+95.32

STA 479+67.49 TO STA 479+95.32



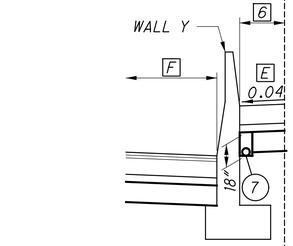
SUPERELEVATED SECTION - RAMP D

STA 490+22.34 TO STA 493+82.72

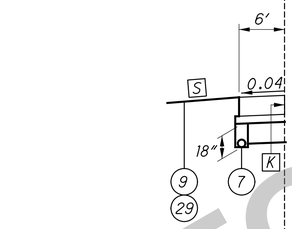


NORMAL SECTION - RAMP E

STA 485+57.37 TO STA 490+25.18

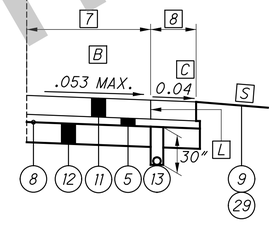


STA 490+24.62 TO STA 491+10.77

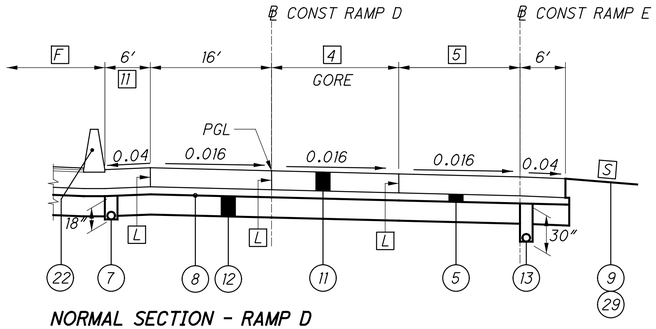


STA 491+10.77 TO STA 492+08.04

STA 492+08.04 TO STA 493+82.72

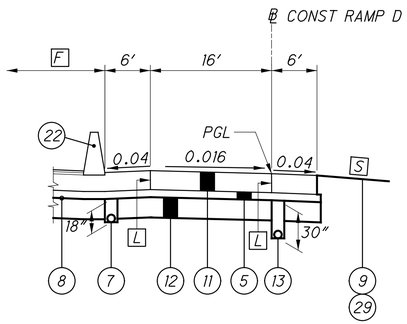


STA 492+01.35 TO STA 493+82.72



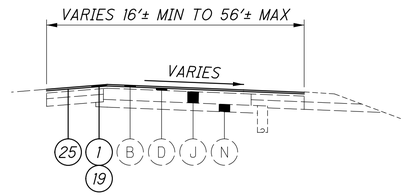
NORMAL SECTION - RAMP D

STA 479+95.32 TO STA 485+57.91



NORMAL SECTION - RAMP D

STA 485+57.91 TO STA 490+22.34



RESURFACING SECTION - RAMP D

STA 493+82.72 TO STA 144+52.51 (PADDOCK RD)
SEE PLAN AND PROFILE SHEETS FOR DETAILS

FOR LEGEND, SEE SHEET 17

1 VARIES 5′ TO 8.87′
STA 475+01.01 TO STA 477+40.69
VARIES 8.87′ TO 6′
STA 477+40.69 TO STA 479+83.46
6′
STA 479+83.46 TO STA 479+95.32

2 VARIES 12′ TO 6′
STA 475+01.01 TO STA 476+51.00
6′
STA 476+51.00 TO STA 479+95.32

3 VARIES 0.00′ TO 0.22′
STA 479+67.49 TO STA 479+95.32

4 0′
STA 479+95.32 TO STA 483+73.40
VARIES 0′ TO 16.79′
STA 483+73.40 TO STA 485+57.91

5 VARIES 0.22′ TO 16′
STA 479+95.32 TO STA 483+73.40
16′
STA 483+73.40 TO STA 485+57.91

6 6′
STA 490+24.62 TO STA 490+69.06
VARIES 6′ TO 8.34′
STA 490+69.06 TO STA 491+10.77

7 VARIES 0′ TO 2.3′
STA 492+01.35 TO STA 493+32.72
VARIES 2.3′ TO 16.4′
STA 493+32.72 TO STA 493+82.72

8 6′
STA 492+01.35 TO STA 493+73.75
VARIES 6′ TO 4.3′
STA 493+73.75 TO STA 493+82.72

9 VARIES 0′ TO 7.6′
STA 492+08.04 TO STA 492+58.04
VARIES 7.6′ TO 5.7′
STA 492+58.04 TO STA 493+32.72
VARIES 5.7′ TO 16.2′
STA 493+32.72 TO STA 492+82.72

10 6′
STA 492+08.04 TO STA 493+69.72
VARIES 6′ TO 3′
STA 493+69.72 TO STA 493+82.72

11 STA. 475+55.58 TO STA. 479+95.32

A PVMT. CROSS SLOPE TRANSITIONS
0.053 TO 0.030
STA 475+01.00 TO STA 475+89.79

PVMT. CROSS SLOPE
0.030 MAX.
STA 475+89.79 TO STA 479+53.79

PVMT. CROSS SLOPE TRANSITIONS
0.030 TO 0.016
STA 479+53.79 TO STA 479+95.32

B PVMT. CROSS SLOPE TRANSITIONS
0.016 TO 0.053
STA 490+22.34 TO STA 491+11.70

PVMT. CROSS SLOPE TRANSITIONS
0.053 TO 0.022
STA 493+07.57 TO STA 493+82.72

C 0.04 OR RATE OF SUPER IF GREATER

D 0.07 MAX BREAK

E VARIES 0.04 TO 0.017

F SEE I.R. 75 TYPICAL SECTION SHEETS 22, 21, 23 AND 25.

H ℄ RAMP E BEGINS @ STA 479+67.49

L LONGITUDINAL JOINT PER SCD-BP-2.1

S SEE SHEET 32 FOR GRADING DETAILS.
SEE SHEETS 34 - 36 FOR ROADSIDE BARRIER DETAILS

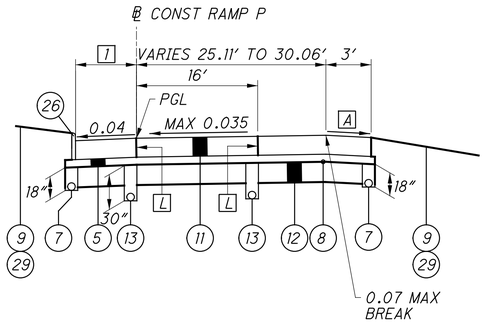
FOR INFORMATION ONLY

TYPICAL SECTIONS - PADDOCK RD. INTERCHANGE

HAM-75-7.85

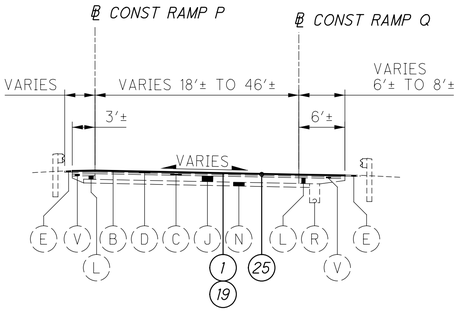
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2017

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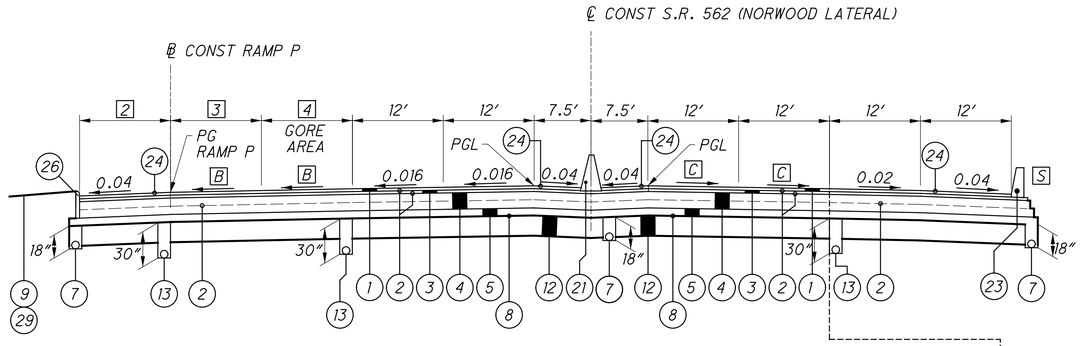
SUPERELEVATED SECTION - RAMP P

STA 33+30.18 TO STA 35+09.21



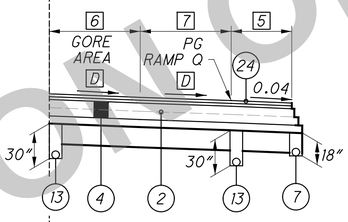
RESURFACING SECTION - RAMPS P & Q

RAMP P STA 35+09.21 TO STA 37+67.24
RAMP Q STA 34+50.00 TO STA 37+68.42
SEE PLAN AND PROFILE SHEETS FOR RESURFACING AREAS

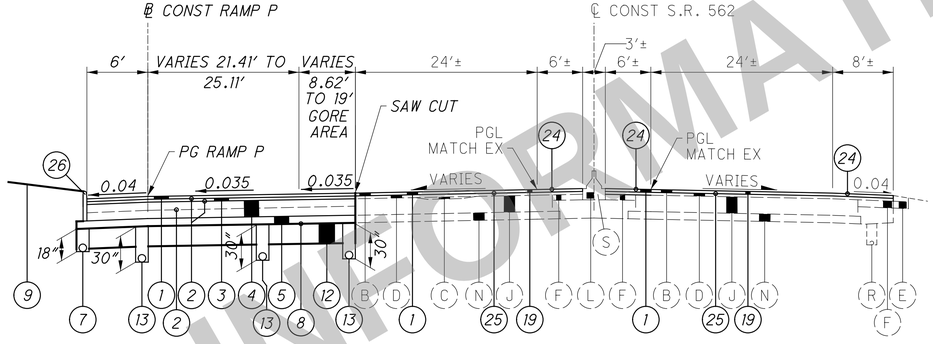


NORMAL SECTION - S.R. 562

STA 20+00.00 TO STA 32+00.00

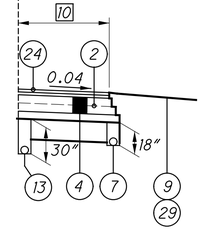


S.R. 562 EB AUXILLARY LANES (RAMP Q)
STA 24+00.00 TO STA 31+81.64
FOR PAVEMENT BUILDUP,
SEE DETAIL A SHEET 27

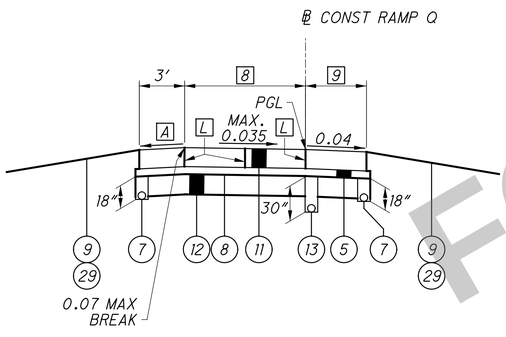


NORMAL SECTION - S.R. 562

STA 32+00.00 TO STA 33+32.56

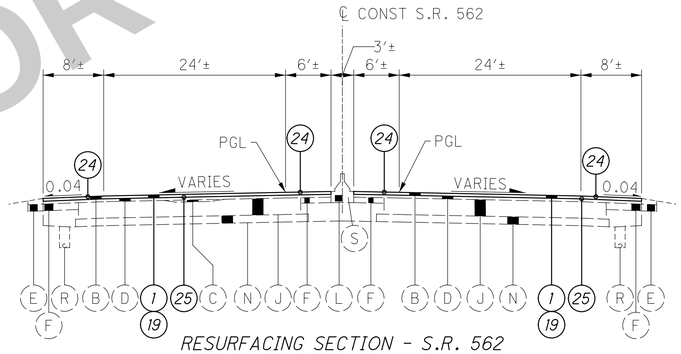


SECTION APPLIES
STA 31+81.64 TO STA 32+00.00
FOR PAVEMENT BUILDUP,
SEE DETAIL A SHEET 27



SUPERELEVATED SECTION - RAMP Q

STA 31+79.61 TO STA 34+50.00



RESURFACING SECTION - S.R. 562
STA 33+32.56 TO STA 36+71.54 (WB)
STA 35+03.63 TO STA 36+76.44 (EB)
STA 39+09.48 TO STA 47+50.00 (WB)
SEE PLAN AND PROFILE FOR RESURFACING AREAS

FOR LEGEND, SEE SHEET 17
FOR EXISTING LEGEND, SEE SHEET 14

1 6′
STA 33+30.18 TO STA 34+50.73
VARIES 6′ TO 4′
STA 34+50.73 TO STA 35+09.21

2 VARIES 12′ TO 8′
STA 20+00.00 TO STA 21+99.92
8′
STA 21+99.92 TO STA 30+13.10
VARIES 8′ TO 6′
STA 30+13.10 TO STA 30+62.78
6′
STA 30+62.78 TO STA 32+00.00

3 VARIES 0′ TO 16′
STA 20+00.00 TO STA 28+00.16
16′
STA 28+00.16 TO STA 30+13.01
VARIES 16′ TO 21.41′
STA 30+13.01 TO STA 32+00.00

4 0′
STA 20+00.00 TO STA 28+00.16
VARIES 0′ TO 8.62′
STA 28+00.16 TO STA 32+00.00

5 12′
STA 24+00.00 TO STA 27+09.58
VARIES 12′ TO 8′
STA 27+09.58 TO STA 28+09.58
8′
STA 28+09.58 TO STA 31+81.64

6 0′
STA 24+00.00 TO STA 29+52.80
VARIES 0′ TO 23.12′
STA 29+52.80 TO STA 31+81.64

7 12′
STA 24+00.00 TO STA 28+09.58
VARIES 12′ TO 16′
STA 28+09.58 TO 29+52.80
16′
STA 29+52.80 TO STA 31+81.64

8 16′
STA 31+79.61 TO STA 33+42.17
VARIES 16′ TO 24′
STA 33+42.17 TO STA 33+92.17
VARIES 24′ TO 27.36′
STA 33+92.17 TO STA 34+50.00

9 VARIES 8′ TO 6′
STA 31+79.61 TO STA 32+29.61
6′
STA 32+29.61 TO STA 34+50.00

10 VARIES 12′ TO 11.31′
STA 31+81.64 TO STA 32+00.00

A VARIES 0.035 TO 0.04

B VARIES 0.016 TO 0.035

C 0.016
STA 20+00.00 TO STA 31+56.30
VARIES 0.016 TO 0.0175
STA 31+56.30 TO STA 32+00.00

D VARIES 0.02 TO 0.035

L LONGITUDINAL JOINT PER SCD-BP-2.1

S SEE SHEET 32 FOR GRADING DETAILS.
SEE SHEETS 34 - 36 FOR ROADSIDE
BARRIER DETAILS

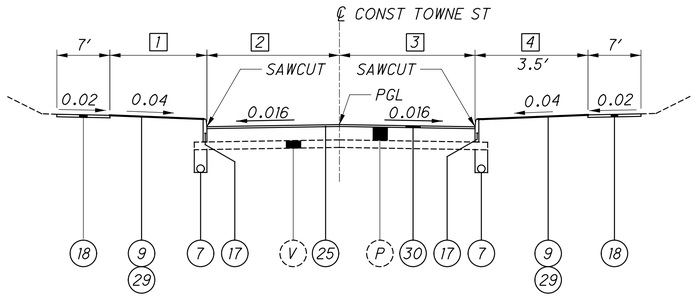
FOR INFORMATION ONLY

TYPICAL SECTIONS - S.R. 562 & RAMP P, RAMP Q INTERCHANGE

HAM-75-7.85

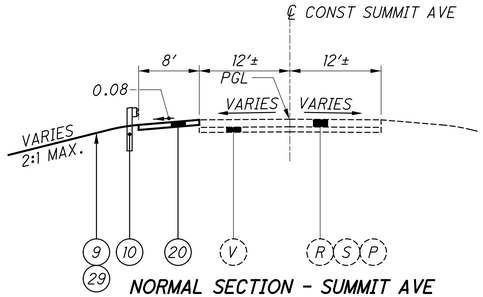
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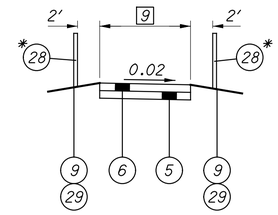
NORMAL SECTION - TOWNE ST

STA 13+34.00 TO STA 15+59.60



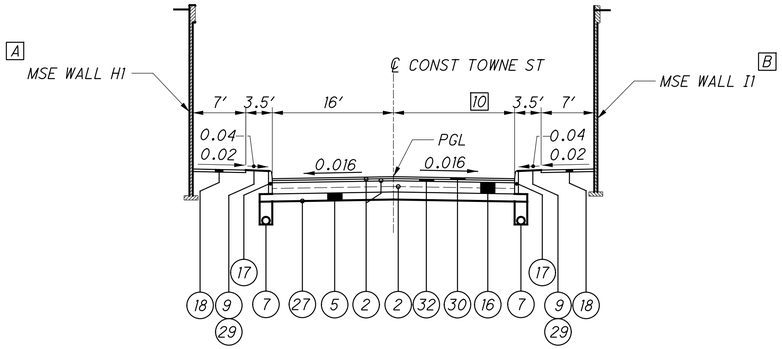
NORMAL SECTION - SUMMIT AVE

STA 21+94.90 TO STA 45+10.10



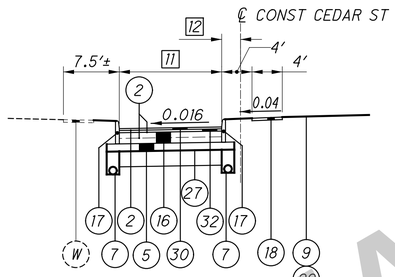
NORMAL WALK SECTION - PED BRIDGE

STA 4+98.41 TO STA 6+33.38
* LT : STA 5+17.05 TO STA 6+43.42
RT : STA 5+22.45 TO STA 6+46.11
(FENCE PER SCD RM-5.2)



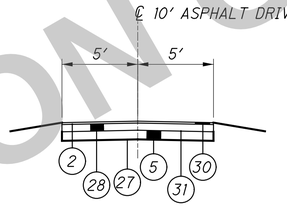
NORMAL SECTION - TOWNE ST

STA 15+59.60 TO STA 20+34.41



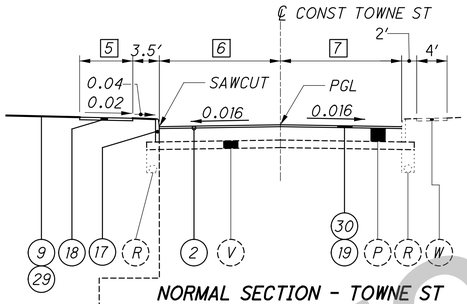
NORMAL SECTION - CEDAR ST

STA 0+26.75 TO STA 0+59.26



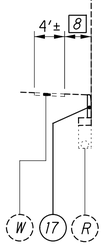
DRIVEWAY SECTION - PROSSER AVENUE

STA 7+95.79 TO 8+11.02

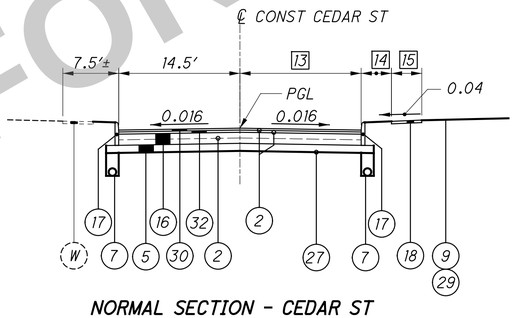


NORMAL SECTION - TOWNE ST

STA 20+34.41 TO STA 21+16.51



SECTION APPLIES
STA 20+88.51 TO STA 21+16.51



NORMAL SECTION - CEDAR ST

STA 0+59.26 TO STA 1+25.67

1 VARIES 6.85′ TO 3.5′
STA 13+34.00 TO STA 13+99.65
3.5′
STA 13+99.65 TO 15+59.60

2 VARIES 21.6± TO 16′

3 VARIES 23′± TO 16′

4 8′
STA. 13+34.00 TO STA. 15+00.00
VARIES 8′ TO 3.5′
STA 15+00.00 TO STA 15+59.60

5 7′
STA 20+34.41 TO STA 20+38.51
VARIES 7′ TO 4′±
STA 20+38.51 TO STA 20+88.51

6 16′
STA 20+34.41 TO STA 20+66.51
VARIES 16′ TO 16.4′±
STA 20+66.51 TO STA 21+16.51

7 VARIES 17.3′ TO 18′±
STA 20+34.41 TO STA 21+16.51

8 VARIES 3.5′± TO 2.7′±
STA 20+88.51 TO STA 21+16.51

9 VARIES 0′ TO 12′
STA 4+98.41 TO STA 5+04.04
12′ STA 5+04.04 TO 6+33.72

10 16′
STA.15+59.60 TO STA. 19+92.12
VARIES 16′ TO 17.3′±
STA 19+92.12 TO STA 20+34.41

11 VARIES 14.5′ TO 12′
STA 0+26.75 TO STA 0+36.40
12′
STA 0+36.40 TO STA 0+49.36
VARIES 12′ TO 14.5′
STA 0+49.36 TO STA 0+59.26

12 VARIES 0′ TO 2.5′
STA 0+26.75 TO STA 0+36.40
2.5′
STA 0+36.40 TO STA 0+49.36
VARIES 2.5′ TO 0′
STA 0+49.36 TO STA 0+59.26

13 VARIES 0′ TO 14′
STA 0+59.26 TO STA 1+14.71
14′
STA 1+14.71 TO STA 1+25.67

14 3.5′
STA. 0+59.26 TO STA. 1+14.71
VARIES 3.5′ TO 4.2±
STA. 1+14.71 TO STA. 1+25.67

15 4′
STA. 0+59.26 TO STA. 1+14.71
VARIES 3.5′ TO 4.2±
STA. 1+14.71 TO STA. 1+25.67

A MSE WALL H1
STA 17+89.70 TO STA 20+24.79

B MSE WALL I1
STA 17+72.56 TO STA 20+07.83

FOR EXISTING LEGEND, SEE SHEET 14
FOR LEGEND, SEE SHEET 17

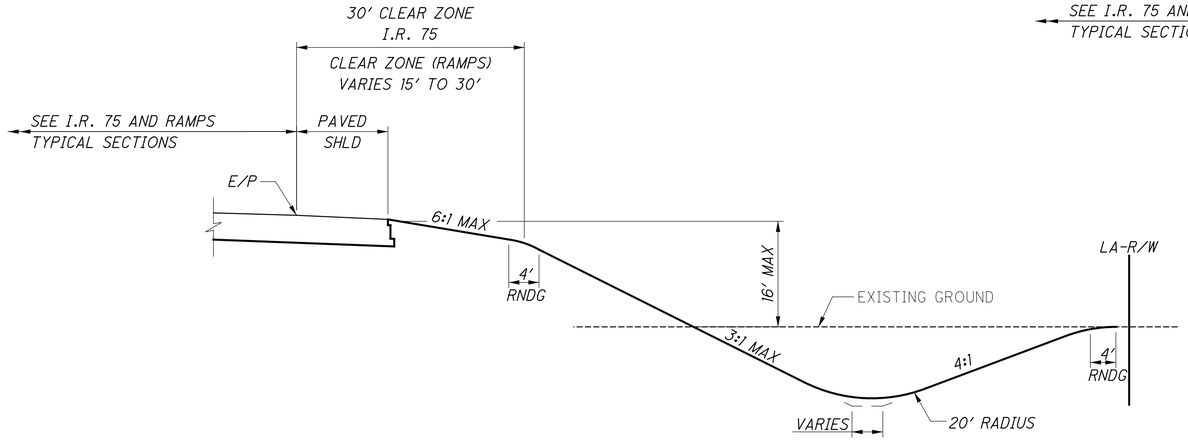
FOR INFORMATION ONLY

TYPICAL SECTIONS - TOWNE ST., CEDAR ST., SUMMIT AVE.

HAM-75-7.85

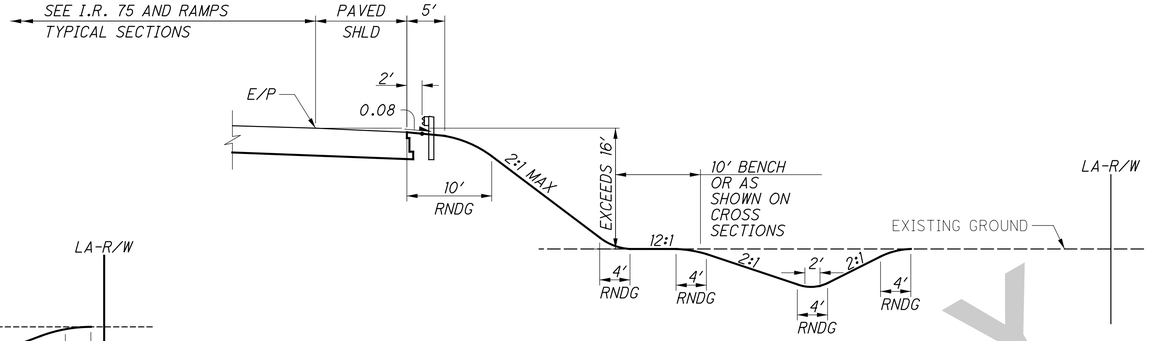
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2017

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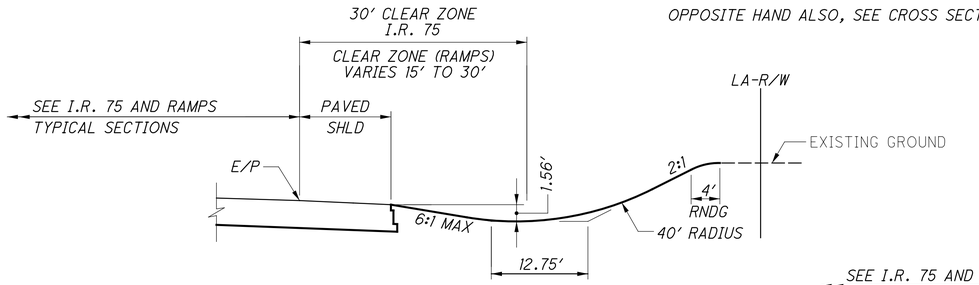
SAFETY GRADING: MEDIUM FILL SECTION

OPPOSITE HAND ALSO, SEE CROSS SECTIONS



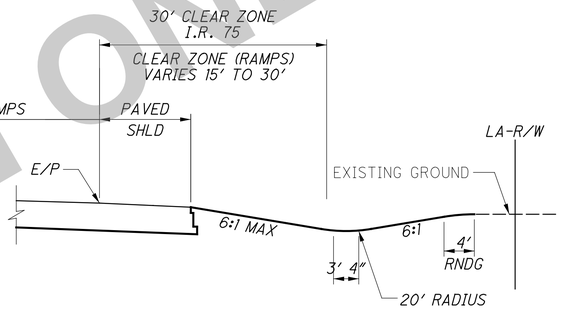
BARRIER GRADING SECTION

OPPOSITE HAND ALSO, SEE CROSS SECTIONS



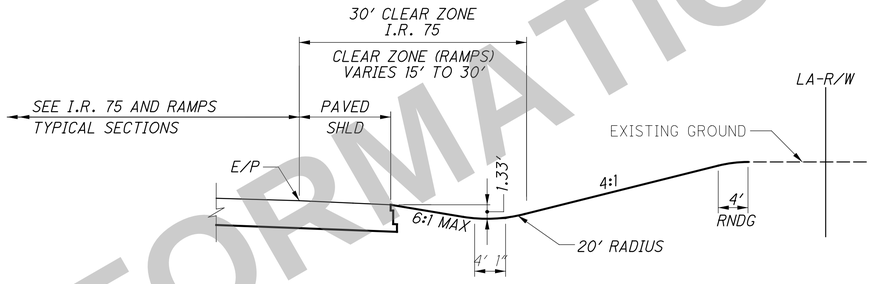
SAFETY GRADING: CUT SECTION

OPPOSITE HAND ALSO, SEE CROSS SECTIONS



SAFETY GRADING: SHALLOW CUT OR FILL SECTION

OPPOSITE HAND ALSO, SEE CROSS SECTIONS

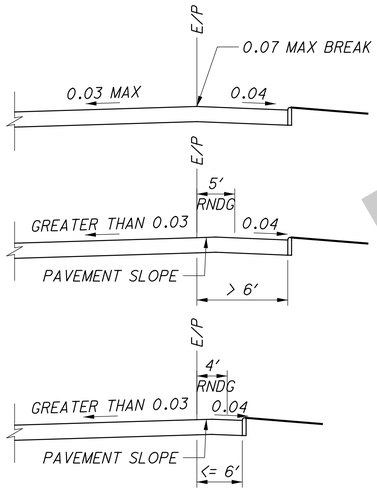


SAFETY GRADING: CUT SECTION

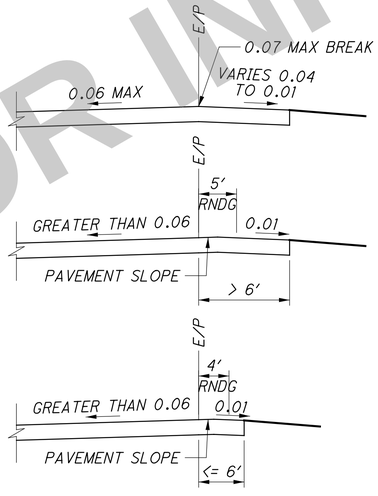
OPPOSITE HAND ALSO, SEE CROSS SECTIONS

PAVED SHOULDER CROSS SLOPES

CURBED-HIGH SIDE OF SUPERELEVATED SECTIONS



UNCURBED-HIGH SIDE OF SUPERELEVATED SECTIONS



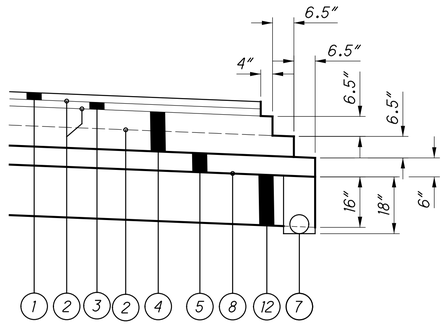
FOR INFORMATION ONLY

TYPICAL SECTIONS - ROADSIDE GRADING

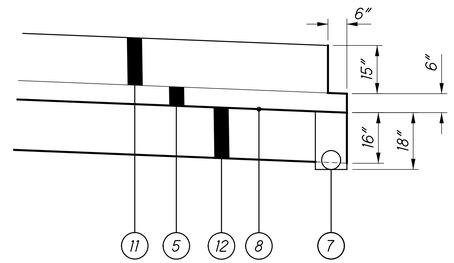
HAM-75-7.85

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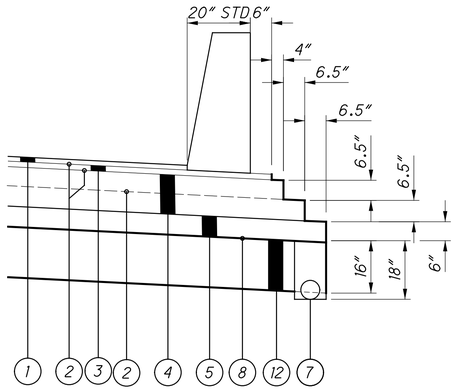
ASPHALT EDGE COURSE DETAIL



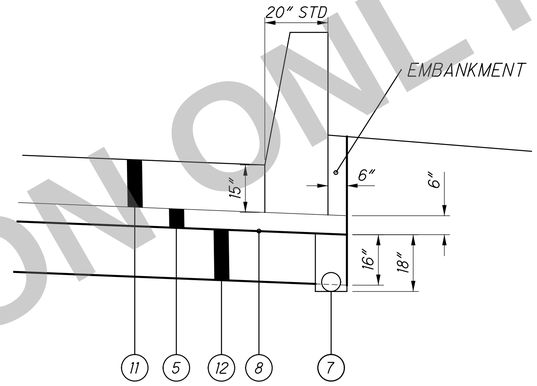
CONCRETE EDGE COURSE DETAIL



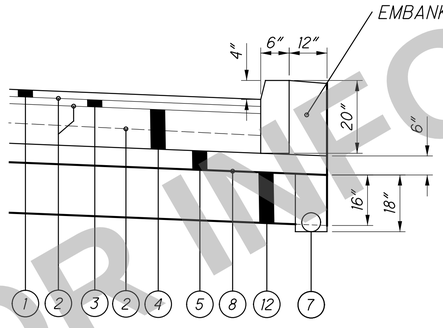
ASPHALT EDGE COURSE DETAIL
(WITH TYPE D BARRIER)



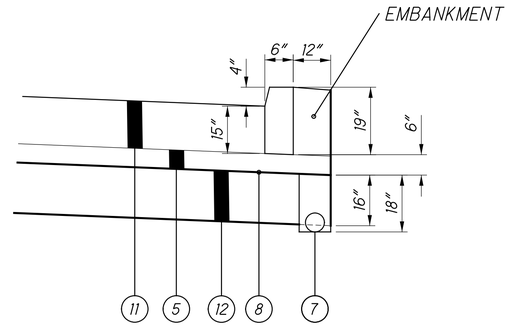
CONCRETE EDGE COURSE DETAIL
(WITH TYPE D BARRIER)



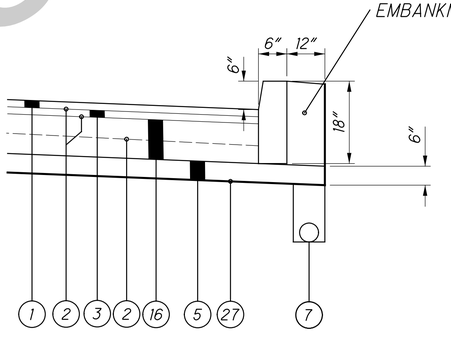
ASPHALT EDGE COURSE DETAIL
(WITH TYPE 4-C CURB, AS PER PLAN)



CONCRETE EDGE COURSE DETAIL
(WITH TYPE 4-C CURB, AS PER PLAN)



ASPHALT EDGE COURSE DETAIL
(WITH TYPE 6 CURB)



FOR LEGEND, SEE SHEET 17

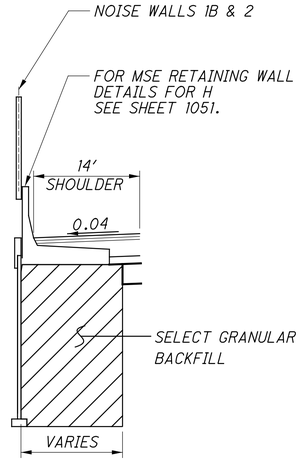
FOR INFORMATION ONLY

TYPICAL SECTIONS - PAVEMENT STEP DETAILS

HAM-75-7.85

33
2017

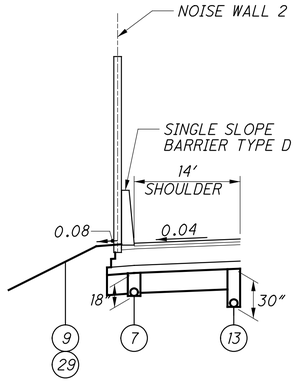
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MSE WALL H & I SECTION - I.R. 75 SB

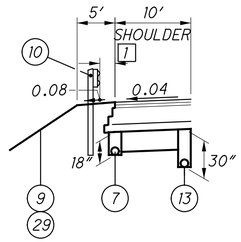
STA 448+44.67 TO STA 451+59.91
STA 452+15.54 TO STA 463+81.56

SEE RETAINING WALL PLANS FOR SELECT GRANULAR BACKFILL LIMITS



SINGLE SLOPE BARRIER TYPE D W/ NOISE WALL SECTION - I.R. 75 SB

STA 463+81.56 TO STA 474+04.00



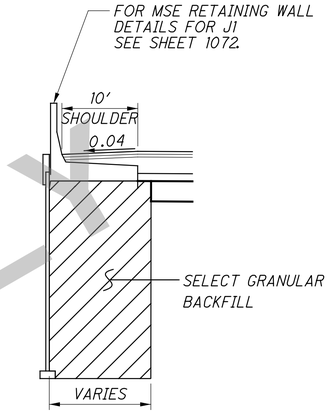
GUARD RAIL SECTION - I.R. 75 SB

STA 474+03.84 TO STA 479+28.77
STA 500+50.00 TO STA 507+71.50

1 VARIES 2.0′ TO 0.0′
STA 478+52.09 TO STA 478+75.00

0.0′
STA 500+50.00 TO STA 507+71.50

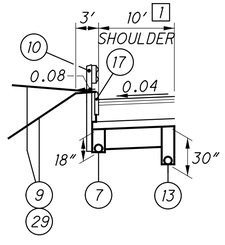
2 12.0′
STA 508+49.90 TO STA 519+30.00



MSE WALL J1 SECTION - I.R. 75 SB

STA 480+83.73 TO STA 486+00.00

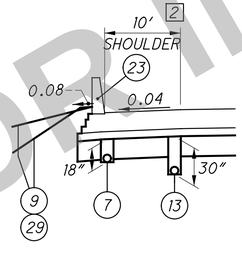
SEE RETAINING WALL PLANS FOR SELECT GRANULAR BACKFILL LIMITS



CURB SECTION - I.R. 75 SB & RAMP C

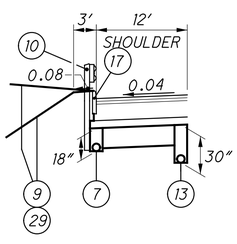
STA 486+00.00 TO STA 489+50.00 (RAMP C)
STA 497+25.00 TO STA 498+64.48 (RAMP C)

1 VARIES 10.0′ TO 2.2′±
STA 498+14.37 TO STA 498+64.48 (RAMP C)



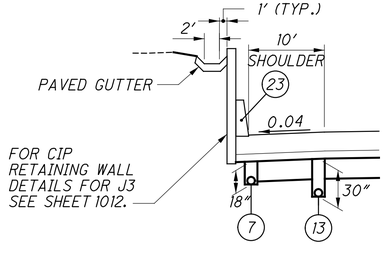
SINGLE SLOPE BARRIER TYPE D SECTION - RAMP C, B, & I.R. 75 SB

STA 479+28.77 TO STA 480+83.74 - I.R. 75 SB
STA 490+70.77 TO STA 491+72.70 - RAMP C
STA 508+50.06 TO STA 515+59.35 - RAMP B
STA 515+59.35 TO STA 519+30.00 - I.R. 75 SB



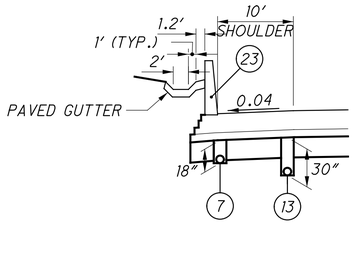
CURB SECTION - I.R. 75 SB

STA 497+10.24 TO STA 498+42.04
STA 519+30.00 TO STA 523+00.00



CIP RETAINING WALL W/ TYPE D BARRIER AND PAVED GUTTER, J3 SECTION - RAMP C

STA 489+50.00 TO STA 490+41.77
STA 496+20.00 TO STA 497+25.00

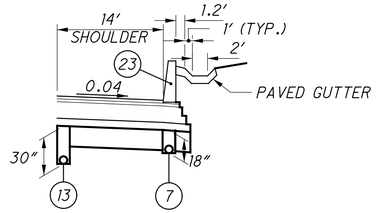


CIP BARRIER WALL AND PAVED GUTTER, K SECTION - RAMP C

STA 490+42.00 TO STA 490+70.77
STA 491+72.70 TO STA 495+60.66

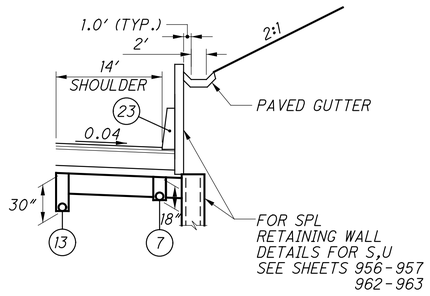
FOR INFORMATION ONLY

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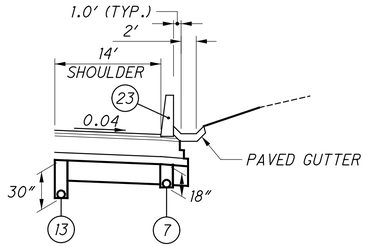
SINGLE SLOPE BARRIER
TYPE D W/ PAVED GUTTER, WALLS S & U
SECTION - I.R. 75 NB

STA 445+13.91 TO STA 445+38.00 - WALL S
STA 447+42.00 TO STA 448+00.00 - WALL S
STA 465+91.60 TO STA 466+27.00 - WALL U
STA 470+83.00 TO STA 471+00.00 - WALL U



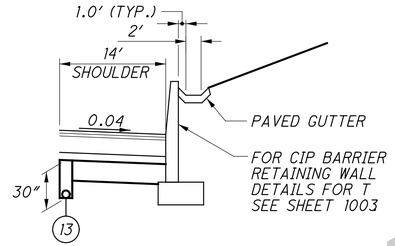
SPL RETAINING WALL
W/ PAVED GUTTER, WALLS S & U
SECTION - I.R. 75 NB

STA 445+38.00 TO STA 447+42.00 - WALL S
STA 466+27.00 TO STA 470+83.00 - WALL U



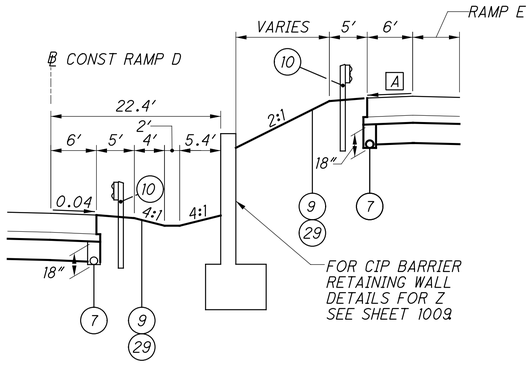
SINGLE SLOPE BARRIER
TYPE D W/ PAVED GUTTER,
WALL T SECTION - I.R. 75 NB

STA 459+50.00 TO STA 460+00.00
STA 461+90.00 TO STA 462+00.00



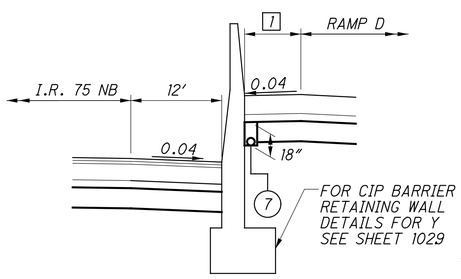
CIP BARRIER RETAINING WALL T
SECTION - I.R. 75 NB

STA 460+00.00 TO STA 461+90.00



CIP BARRIER RETAINING WALL Z
SECTION - RAMP D

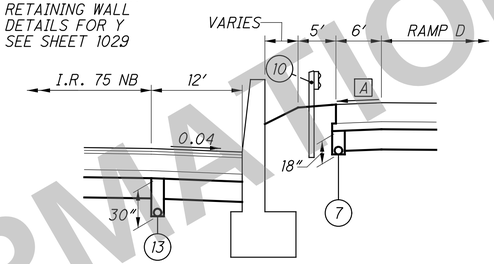
STA 487+07.00 TO STA 489+90.58



CIP BARRIER RETAINING WALL Y
SECTION - I.R. 75 NB & RAMP D

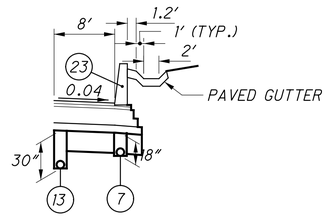
STA 490+65.00 TO STA 491+53.64

FOR CIP BARRIER
RETAINING WALL
DETAILS FOR Y
SEE SHEET 1029



CIP BARRIER RETAINING WALL Y
SECTION - I.R. 75 NB & RAMP D

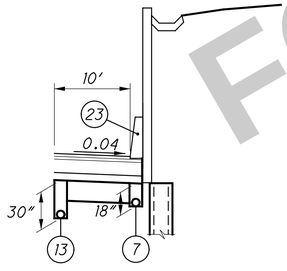
STA 491+53.64 TO STA 493+22.60



SINGLE SLOPE BARRIER
TYPE D W/ PAVED GUTTER, WALL V
SECTION - I.R. 75 NB & RAMP A

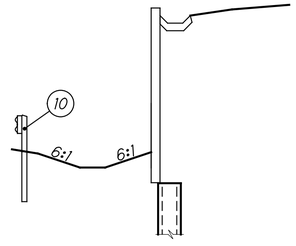
STA 504+63.48 TO STA 505+00.00 - RAMP A

FOR ASPL
RETAINING WALL
DETAILS FOR V
SEE SHEET 973.



ANCHOR SPL RETAINING WALL
W/ PAVED GUTTER, WALL V
SECTION - RAMP A & I.R. 75 NB

STA 505+00.00 TO STA 527+63.69 - RAMP A & I.R. 75 NB

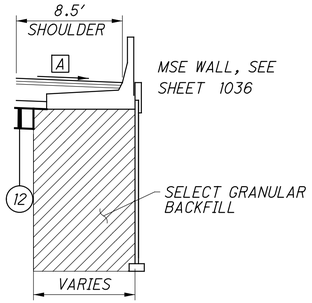


ANCHOR SPL RETAINING WALL
W/ PAVED GUTTER, WALL V
SECTION - I.R. 75 NB

STA 527+63.69 TO STA *END* - I.R. 75 NB

FOR INFORMATION ONLY

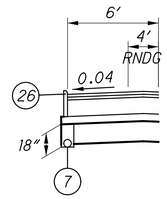
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MSE WALL SECTION - RAMP M

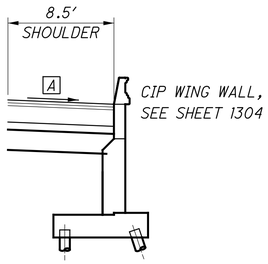
STA 415+68.84 TO STA 416+26.45

SEE RETAINING WALL PLANS FOR SELECT GRANULAR BACKFILL LIMITS



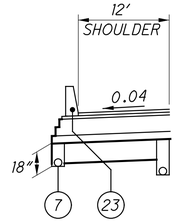
CURB SECTION - RAMP M

STA 416+07.33 TO STA 416+26.45
STA 420+24.75 TO STA 420+42.11



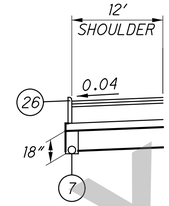
CIP WING WALL SECTION - RAMP M

STA 420+24.75 TO STA 420+60.83



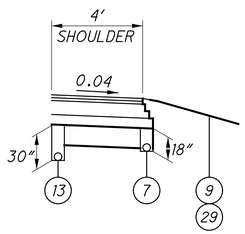
BARRIER SECTION - RAMP M

STA 427+79.14 TO STA 429+61.94



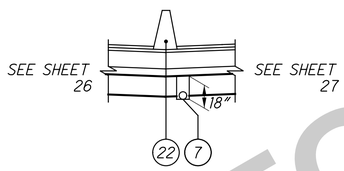
CURB SECTION - RAMP M

STA 429+61.94 TO STA 432+13.01



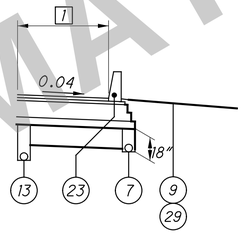
NORMAL SECTION - RAMP J

STA 421+30.00 TO STA 423+65.55



MEDIAN BARRIER DETAIL - RAMP N

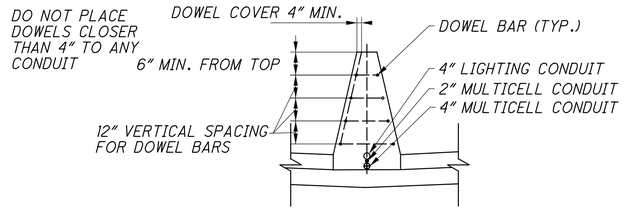
STA 425+83.12 TO STA 428+52.11



BARRIER SECTION - RAMP N

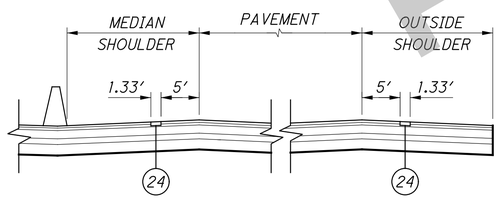
STA 424+17.89 TO STA 428+52.11

SEE CONSTRUCTION JOINTS NOTE BELOW FOR DOWELING REQUIREMENTS

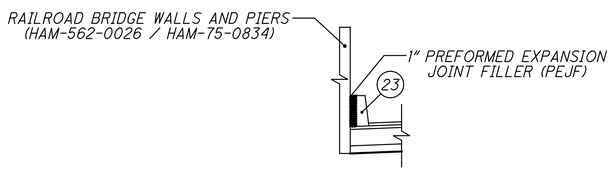


MEDIAN BARRIER CONDUIT DETAIL

CONSTRUCTION JOINTS: BARRIER RUNS WITH ABUTTING VERTICAL SURFACED AT EITHER REQUIRED OR PERMISIBLE CONSTRUCTION JOINTS ARE TO BE DOWERLED TO EACH OTHER BY USE OF 3/4' DIA. BY 18" LONG EPOXY COATED DEFORMED DOWEL BARS AS PER CMS 622.02. BARS ARE TO BE PLACED AS SHOWN. PROVIDE A 4" CLEARNACE TO BARIER SURFACES AND TO ANY RACEWAYS.



RUMBLE STRIP DETAIL



BARRIER EXPANSION JOINT DETAIL BETWEEN RAILROAD BRIDGE WALLS AND PIERS

1 SEE SHEET 27

A 0.04 OR RATE OF SUPER IF GREATER

B ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE C1, AS PER PLAN

FOR LEGEND, SEE SHEET 17

FOR INFORMATION ONLY

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UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

GAS
DUKE ENERGY (GAS)
139 EAST 4TH ST., ROOM 460A
CINCINNATI, OH 45202
OH/KYHOUSEBILL@DUKE-ENERGY.COM

OIL
BP PIPELINES (NORTH AMERICA) INC.
BLAKE PATRICK
30 SOUTH WACKER DRIVE
SUITE 900
CHICAGO, IL 60606
312-809-3155
BLAKE.PATRICK@BP.COM
BPPIPELINESROW@BP.COM

BP PIPELINES NORTH AMERICA, INC.
KIM MILLER
930 TENNESSEE AVENUE
CINCINNATI, OH 45229
513-649-6187

ELECTRIC:
DUKE ENERGY - ELECTRIC (DISTRIBUTION)
AARON WRIGHT
2010 DANA AVE
CINCINNATI, OH 45207
513-514-8211
AARON.WRIGHT@DUKE-ENERGY.COM

DUKE ELECTRIC - TRANSMISSION
TIM MEYER
139 EAST 4TH STREET, 552A
CINCINNATI, OH 45202
513-287-1266

CABLE
CHARTER COMMUNICATIONS
KENT RIEGER
10920 KENWOOD ROAD
BLUE ASH, OHIO 45242
DL-SOUTHERN-OHIO-OUTSIDE-PLANT@CHARTER.COM
513-386-5499
KENT.REIGER@CHARTER.COM

TELEPHONE
CINCINNATI BELL - AERIAL & PLACING
ROB STROCHINSKY
221 E. 4TH STREET
BLDG. 121-900
CINCINNATI, OH 45201
513-565-6014
ROBERT.STROCHINSKY@CINBELL.COM
ROADPROJECTS@CINBELL.COM

CINCINNATI BELL - UNDERGROUND STRUCTURES
BRECK COWAN
221 E. 4TH STREET
BLDG. 121-900
CINCINNATI, OH 45201
513-565-7187 - OFFICE
BRECK.COWAN@CINBELL.COM

VERIZON
ALLEN GUEST
120 RAVINE STREET
AKRON, OH 44303
330-253-8267

UTILITIES (CONT)

TELEPHONE (CONT)
SPRINT NEXTEL
STEVE HUGHES
11370 ENTERPRISE PARK DRIVE
SHARONVILLE, OH 45251
513-459-5796
STEVEN.HUGHES@SPRINT.COM

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MISC
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THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

UTILITY NOTIFICATION

THE OHIO DEPARTMENT OF TRANSPORTATION HAS UTILITY FACILITIES (HIGHWAY LIGHTING, TRAFFIC SIGNALS, ITS) WITHIN THE LIMITS OF THIS PROJECT.

IN ADDITION TO THE INFORMATION OUTLINED IN THE 4A NOTES OF THIS CONTRACT, AND EVEN THOUGH ODOT IS LISTED AS A MEMEBER OF THE OHIO UTILITIES PROTECTION

UTILITY NOTIFICATION (CONT)

SERVICES (OUPS), THE CONTRACTOR ON THIS PROJECT IS REQUIRED TO CONTACT ODOT, DISTRICT 8, TRAFFIC DEPARTMENT, AND ARTIMIS DIRECTLY SO THAT THE ODOT UTILITIES, LOCATED WITHIN THIS PROJECT, ARE MARKED. THE CONTRACTOR SHALL NOTIFY DISTRICT 8, TRAFFIC AT 513-933-6689, ARTIMIS AT 513-564-6118, AND THE PROJECT ENGINEER, FOURTEEN (14) CALENDAR DAYS IN ADVANCE OF ANY WORK, FOR THE NEED TO MARK ODOT'S OWNED UTILITIES.

THE ABOVE REQUIREMENTS ARE IN ADDITION TO SECTION 105.07 & 107.16 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND THE 4A PROPOSAL NOTE.

THE CONTRACTOR SHALL NOTIFY OTHER UTILITIES THOUGH OUPS OR DIRECTLY A MINIMUM OF FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY WORK.

THE COST FOR THE ABOVE DESCRIBED WORK IS IDENTICAL TO THE OVERALL BID PRICE OF THE PROJECT.

EXISTING OVERHEAD ELECTRIC FACILITIES

WITHIN THE CORRIDOR SEVERAL OVERHEAD ELECTRIC FACILITIES EXIST. CONTRACTOR TO EXERCISE CAUTION WHEN WORKING UNDER OR NEAR ANY ELECTRIC UTILITY.

BRITISH PETROLEUM COORDINATION

BRITICH PETROLEUM HAS ABANDONED THE EXISTING 6" LINE AT STA. 430+35 UNDER I-75 AND NEAR STA. 413+50 UNDER SR 562 WEST OF THE NORWOOD LATERAL NORFOLK SOUTHERN RAIL ROAD BRIDGE. ALONG WITH THE LINE ALONK THE EASTERN SIDE OF RAMP K.

I NEW BP PRODUCT LINE HAD BEEN INSTALLED THRU THE I-75/ SR 526 INTERCHANGE AND HAS BEEN SHOWN IN THE PLANS.

ALL CONSTRUCTION AND ANY WORK DONE NEAR THE NEW BP PIPELINE SHALL MAINTAIN A MINIMUM OF THREE (3) FEET OF COVER. AND A MINIMUM OF THREE (3) FEET OF HORIZONTAL CLEARANCES BETWEEN THE PIPELINE AND WORK PROPOSED FOR THE PROJECT. A BP OIL REPRESENTATIVE SHALL BE CONTACTED AND PRESENT DURING WORK NEAR THE PIPELINE. CONTACT INFORMATION FOR THE LOCAL BP DAMAGE PREVENTION SPECIALIST IS INCLUDED IN THE UTILITY INFORMATION WITH THE GENERAL NOTES AND THIS SECTION.

THE PIPELINES BP OPERATES TRANSPORT VARIOUS LIQUIDS AND GASSES AT HIGH PRESSURE. THERE ARE POTENTIAL HAZARDS ASSOCIATED WITH CONSTRUCTION OR EXCAVATION WORK AROUND PIPELINES. AS A RESULT OF THESE POTENTIAL HAZARDS, AND IN COMPLIANCE WITH THE REQUIREMENTS IMPOSED UPON BP AS AN INDUSTRY REGULATED BY THE U.S. DEPARTMENT OF TRANSPORTATION AND OFFICE OF PIPELINE SAFETY, THE FOLLOWING LIST OF GENERAL REQUIREMENTS FOR WORKING ON PIPELINE RIGHTS-OF-WAY HAS BEEN COMPILED.

GENERAL SAFETY REQUIREMENTS:
811 THE NATIONAL ONE-CALL NUMBER, MUST BE CONTACTED AT LEAST 48 HOURS (2 WORKING DAYS) BEFORE ANY CONSTRUCTION AND/OR EXCAVATION ACTIVITIES ARE INITIATED WITHIN THE PIPELINE RIGHT-OF-WAY SO THAT BP MAY HAVE A REPRESENTATIVE PREVENT TO ENSURE THAT THERE ARE NO CONFLICTS WITH THE PIPELINE.

THE CONTRACTOR IS RESPONSIBLE FOR CONDUCTING AN ONSITE PRECONSTRUCTION MEETING PRIOR TO THE START OF ANY WORK NEAR THE BP PIPELINE FOR EACH NEW LOCATION AS APPLICABLE. THE PURPOSE OF THE MEETING IS TO IDENTIFY AND DISCUSS THE LOCATION OF THE PIPELINE RELATIVE TO THE

BRITISH PETROLEUM COORDINATION (CONT)

WORK, SAFETY AND CONTRACT REQUIREMENTS, AND OTHER PERTINENT SITE SPECIFIC CONDITIONS. THE REQUIRED ATTENDEES ARE THE BP REPRESENTATIVE, ODOT PROJECT REPRESENTATIVE, CONTRACTOR AND SUB-CONTRACTOR REPRESENTATIVE(S), AND PERSONNEL DIRECTLY INVOLVED IN THE WORK ACTIVITIES NEAR THE PIPELINE.

TO HAVE THE PIPELINE PHYSICALLY LOCATED AND DEPTH VERIFIED, CONTACT BP5#32S LOCAL FIELD REPRESENTATIVE, MR. KIM MILLER AT 513-646-6187, TWO (2) WEEKS PRIOR.
THE CONTRACTOR IS RESPONSIBLE FOR TAKING ALL NECESSARY SAFETY PRECAUTIONS AND WILL BE HELD RESPONSIBLE FOR ANY DAMAGES CAUSED TO THE PIPELINE OR PROPERTY AS A RESULT OF THEIR WORK.

EXCAVATION SPECIFIC REQUIREMENTS:
NO EXCAVATION OR CONSTRUCTION ACTIVITY WILL BE PERMITTED IN THE VICINITY OF A PIPELINE UNTIL ALL APPROPRIATE COMMUNICATIONS HAVE BEEN MADE WITH BP'S FIELD OPERATIONS AND THE BP RIGHT-OF-WAY DEPARTMENT. IN SOME INSTANCES, EXCAVATION AND OTHER CONSTRUCTION ACTIVITIES AROUND CERTAIN PIPELINES CAN BE CONDUCTED SAFELY ONLY WHEN THE PIPELINE OPERATING PRESSURE HAS BEEN REDUCED. CONTRACTORS ARE THEREFORE CAUTIONED THAT EXCAVATION WHICH EXPOSES OR SIGNIFICANTLY REDUCES THE COVER OVER A PIPELINE MAY HAVE TO BE DELAYED UNTIL THE REDUCED OPERATING PRESSURES ARE ACHIEVED.

GENERAL CONSTRUCTION ACTIVITIES:
THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN EXCAVATING IN AREAS OF THE ABANDONED PIPELINE. THE CONTRACTOR SHALL NOT BE PERMITTED TO TRANSPORT CONSTRUCTION MATERIALS OR EQUIPMENT LONGITUDINALLY OVER THE ABANDONED PIPELINE. WHERE IT IS NECESSARY FOR CONSTRUCTION EQUIPMENT (I.E., TRACTORS, BACKHOES, DUMP TRUCKS, ETC.) OR EQUIPMENT TRANSPORTING CONSTRUCTION MATERIALS TO CROSS THE PIPELINE, THE CROSSING OF THE PIPELINE RIGHT-OF-WAY SHALL BE AT, OR AS NEAR TO, A 90 ANGLE AS IS FEASIBLE.

NO TRACK TYPE CONSTRUCTION EQUIPMENT SHALL BE PERMITTED TO PIVOT OR TURN DIRECTLY OVER THE TOP OF THE ABANDONED PIPELINE.

A SCRAPER OR PAN TYPE TRACTOR SHALL NOT BE USED FOR REMOVAL OF SOIL WITHIN TEN FEET (10') OF THE CENTERLINE OF THE ABANDONED PIPELINE. RUBBER TIRE OR SMALL TRACK TYPE EQUIPMENT IS AN ACCEPTABLE ALTERNATIVE.

A SHEEPSFOOT ROLLER SHALL NOT BE USED FOR COMPACTION PURPOSES WITHIN FIVE FEET (5') OR DIRECTLY ABOVE THE CENTERLINE OF THE ABANDONED PIPELINE.

FOR INFORMATION ONLY

CALCULATED SEA
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GENERAL NOTES

HAM-75-7.85

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GIVAUDAN FLAVORS COORDINATION

GIVAUDAN FLAVORS HAS AN EXISTING 8" GAS LINE, UTILITY TUNNEL, FIBER OPTIC LINE (OVERHEAD AT SEYMOUR AVENUE BRIDGE), AND FACILITIES LOCATED ON THE EAST AND WEST SIDE OF I-75. COORDINATION WITH GIVAUDAN THROUGH ALL PHASES OF CONSTRUCTION WILL BE REQUIRED BY THE CONTRACTOR. CONTACT INFORMATION FOR GIVAUDAN IS INCLUDED WITH IN THE UTILITIES SECTION OF THE GENERAL NOTES. SPECIFIC COORDINATION ITEMS WITH GIVAUDAN FLAVORS ARE INCLUDED PER APPLICABLE PLAN NOTES.

CONSTRUCTION NOTIFICATION

THE CONTRACTOR SHALL NOTIFY THE PROPERTY OWNER OF PARCEL 201-T, SOLVAY RARE EARTH SYSTEMS, 48 HOURS PRIOR TO ENTERING UPON OR BEGINNING WORK ON THE TEMPORARY EASEMENT. NOTIFICATION SHALL BE IN WRITING AND INDICATE THE ANTICIPATED START DATE OF THE USE OF THE TEMPORARY EASEMENT FOR ACCESS OR CONSTRUCTION. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE A COPY OF THIS WRITTEN NOTIFICATION TO THE PROJECT ENGINEER FOR PROJECT RECORDING PURPOSES AND TRACKING THE DURATION OF USE FOR THE PARCEL.

METROPOLITAN SEWER DISTRICT COORDINATION

ALL PROPOSED COMBINED SEWER AND SANITARY PIPING AND RELATED APPURTENANCES TO BE PROVIDED TO THE METROPOLITAN SEWER DISTRICT MUST BE INSTALLED AND TESTED IN ACCORDANCE WITH MSD RULES AND REGULATIONS AND STANDARD DRAWINGS. ALL MATERIALS MUST CONFORM TO MSD RULES AND REGULATIONS AND STANDARD DRAWINGS. MSD MUST BE CONTACTED FOR INSPECTION 48 HOURS PRIOR TO THE BEGINNING OF ANY MSD WORK. ALL STORMWATER CONNECTIONS TO THE COMBINED SEWER REQUIRE A STORMWATER CONNECTION PERMIT FROM MSD'S DEVELOPMENT SERVICES OFFICE. THE PERMIT IS AVAILABLE FROM THE FOLLOWING WEBSITE: http://www.msdgc.org/downloads /customer_care/permits_and_records/sewer_tap_application.pdf

ALL EXISTING SEWERS TO REMAIN IN SERVICE MUST BE VIDEO RECORDED PRE AND POST CONSTRUCTION PER THE REQUIREMENTS OF ODOT SUPPLEMENTAL SPECIFICATON 902, SECTION 902.01. ANY DAMAGE CAUSED TO THE SEWERS DURING CONSTRUCTION MUST BE REPAIRED TO THE SATISFACTION OF MSD. MSD RULES AND REGULATIONS AND STANDARD CONSTRUCTION DRAWINGS MAY BE FOUND AT THE FOLLOWING WEBSITE: http://www.msdgc.org/ABOUT_MSD/LEGAL_AND_ ORGANIZATIONAL_DOCUMENTS/INDEX.HTML

ROSS RUN SEWER CONNECTION

THE ASSOCIATED PLAN NOTE APPLIES TO THE ROSS RUN CONNECTION AT THE FOLLOWING LOCATIONS:

LOCATION 1:

STA. 414+94.93, 95.05' LT:
PLAN AND PROFILE SHEET 346
DRAINAGE PLAN SHEET 809
STORM SEWER PROFILE SHEET 822

LOCATION 2:

STA. 415+76.20, 109.98' RT:
PLAN AND PROFILE SHEET 346
DRAINAGE PLAN SHEET 809
STORM SEWER PROFILE SHEET 828

CONNECTIONS TO EXISTING MSD INFRASTRUCTURE SHALL BE MADE BY MAKING NEAT SAWCUTS OR CORES AT THE LOCATIONS SHOWN IN THE PLANS. WASTE FROM THE SAWCUT OR CORE SHALL BE REMOVED AND SHALL NOT ENTER THE SEWER. WHERE THE EDGE OF THE OPENING IS MORE THAN 6 INCHES FROM THE OUTSIDE WALL OF THE PROPOSED CONDUIT, PLACE DOWELS CONSISTING OF NO. 4 BARS A MINIMUM OF 6 INCHES DEEP INTO THE EXISTING

ROSS RUN SEWER CONNECTION (CONT)

SIDE WALL AT 6 INCHES ON CENTER AROUND THE EDGES OR CIRCUMFERENCE OF THE OPENING. EXTEND THE DOWELS INTO THE VOID SPACE TO A POINT NO GREATER THAN 2 INCHES FROM THE OUTSIDE EDGE OF THE PROPOSED CONDUIT. AFTER PLACING THE PROPOSED CONDUIT AND DOWELS INTO THE EXISTING STRUCTURE, FILL THE VOID WITH CLASS QC1 CONCRETE. ALL COSTS ASSOCIATED WITH THE PROPOSED SEWER CONNECTION TO THE ROSS RUN SEWER ARE INCLUDED PER ITEM 611 IN THE ODOT CMS.

SEE PLAN SHEETS 56 - 58 FOR THE ROSS RUN RECORD PLAN DETAILS.

RECONNECT SEWER LATERAL

THE CONTRACTOR SHALL RECONNECT ANY SEWER LATERAL DISTURBED DURING CONSTRUCTION PER MSD RULES AND REGULATIONS. THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM 611 - 8" CONDUIT, TYPE B, 706.02, JOINTS PER 706.11.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 13 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL

POSITIONING METHOD: STATIC GPS OBSERVATIONS FOR HORIZONTAL CONTROL AND DIFFERENTIAL LEVELING FOR VERTICAL CONTROL

MONUMENT TYPE: TYPE A

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: 03

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD 83 (1995)
ELLIPSOID: GRS 80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO STATE PLANE (SOUTH ZONE)
COMBINED SCALE FACTOR: 0.999916593
ORIGIN OF COORDINATE
SYSTEM: NORTHING: 0.0, EASTING 0.0

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 823.

UNITS ARE IN U.S. SURVEY FEET. USE THE FOLLOWING CONVERSION FACTOR: 1 METER = 3.280833333 U.S. SURVEY FEET.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

PROTECTION OF RIGHT-OF-WAY LANDSCAPING

PRIOR TO BEGINNING WORK, THE CONTRACTOR, THE PROJECT ENGINEER, AND A REPRESENTATIVE OF THE MAINTAINING AGENCY WILL REVIEW AND RECORD ALL LANDSCAPING ITEMS WITHIN THE RIGHT OF WAY (BOTH WITHIN AND OUTSIDE THE CONSTRUCTION LIMITS) A RECORD OF THIS REVIEW WILL BE KEPT IN THE PROJECT ENGINEER'S FILES. PRIOR TO FINAL ACCEPTANCE, A FINAL REVIEW OF LANDSCAPING ITEMS WILL BE MADE.

CONSTRICT ALL ACTIVITIES, EQUIPMENT STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS. UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR PROPOSAL, THE CONSTRUCTION LIMITS ARE IDENTIFIED AS 30 FEET FROM THE EDGE OF PAVEMENT.

SUBMIT A WRITTEN REQUEST TO THE PROJECT ENGINEER TO USE ANY AREA OUTSIDE THESE LIMITS. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA. THE REQUEST MUST BE APPROVED, IN WRITING, BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA.

ANY ITEMS DAMAGED BEYOND THE CONSTRUCTION LIMITS AS DEFINED ABOVE WILL BE REPLACED IN KIND OR AS APPROVED BY THE PROJECT ENGINEER.

FENCE LENGTHS

THE LENGTHS OF FENCE SHOWN IN THE PLANS ARE HORIZONTAL DIMENSIONS. MEASUREMENTS OF THE FINAL QUANTITIES WILL BE IN ACCORDANCE WITH ITEM 607.

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLIES TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

CLEARING AND GRUBBING

THE DEPARTMENT HAS NOT MARKED INDIVIDUAL TREES AND STUMPS FOR REMOVAL. UNLESS SPECIFICALLY DESIGNATED AS "DO NOT DISTURB" IN THE PLANS, REMOVE ALL TREES AND STUMPS WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201 CLEARING AND GRUBBING.

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXERCISE CARE TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LAP LONGITUDINAL JOINTS AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1.

ITEM 202 - REMOVAL MISC.: ABANDONED WATER LINE

THE CONTRACTOR SHALL FURNISH ALL LABOR AND EQUIPMENT NECESSARY TO REMOVE THE ABANDONED 6" WATER LINE PER ITEM 202 UNDER TOWN STREET AS SHOWN IN THE PLAN.

CONTRACTION AND/OR EXPANSION JOINTS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN CONTRACTION AND EXPANSION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. IN ALL CASES, THE PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES INCLUDING THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS IS IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2 AND THE SPECIFICATIONS.

EXISTING PLANS

THE FOLLOWING PREVIOUS CONSTRUCTION PLANS, WHICH SHOW THE ORIGINAL ALIGNMENT AND PROFILE, ARE AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 8 OFFICE IN LEBANON, OHIO:

HAM-4W-7.81 ORIGINAL CONSTRUCTION PLANS, 1956
HAM-75-4.21 ORIGINAL CONSTRUCTION PLANS, 1992
HAM-4-4.00 REDEVELOPMENT PLANS, 2000
HAM-561-7.00 REDECKING PLANS, 2004

MEDIAN AND/OR CURBING ON APPROACH SLABS

WITHIN THE LIMITS OF THE APPROACH SLAB, TRANSITION THE SHAPE OF THE MEDIAN AND/OR CURBING ON APPROACH SLABS FROM THE STANDARD SECTION ON THE APPROACHES TO THE SECTION USED ON THE BRIDGE.

PAVEMENT RESTORATION FOR PIPE INSTALLATIONS AND/OR REMOVALS

THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED FOR PAVEMENT RESTORATION FOLLOWING INSTALLATION AND/OR REMOVAL OF PIPES IN AREAS WHERE FULL-WIDTH PAVEMENT RECONSTRUCTION IS NOT BEING PERFORMED AS A PART OF THE PROJECT IMPROVEMENTS. THE ESTIMATED QUANTITIES ARE BASED ON A PAVEMENT RESTORATION WIDTH THAT INCLUDES THE TRENCH PLUS TWO FEET ON EACH SIDE OF THE TRENCH. DEEPER EXCAVATIONS MAY REQUIRE MORE RESTORATION AND ADDITIONAL MATERIALS WILL BE PROVIDED BY THE CONTRACTOR AT THE BID UNIT PRICE, AS DIRECTED BY THE ENGINEER.

LAIDLAW AVE:

ITEM 452, 9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1P - 270 SQ YD

PROSSER AVE:

ITEM 452, 9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1P - 216 SQ YD

ITEM 609, CURB, TYPE 2-A 37 FT

SUMMIT ROAD:

ITEM 452, 9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1P - 209 SY

ITEM 441, 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22 - 9 CY

ITEM 441, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448) - 15 CY

PAVEMENT RESTORATION FOR DRAINAGE STRUCTURE INSTALLATIONS

THE FOLLOWING ESTIMATED QUANTITY IS PROVIDED FOR PAVEMENT RESTORATION FOLLOWING INSTALLATION OF ITEM 611, DRAINAGE STRUCTURES IN AREAS WHERE FULL-WIDTH PAVEMENT RECONSTRUCTION IS NOT BEING PERFORMED AS A PART OF THE PROJECT IMPROVEMENTS. THE ESTIMATED QUANTITIES ARE BASED ON A PAVEMENT RESTORATION WIDTH THAT INCLUDES AN ADDITIONAL TWO FEET AROUND THE PERIMETER OF THE DRAINAGE STRUCTURE.

ITEM 452, 9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1P - 8 SQ YD

THE FOLLOWING QUANTITY IS BASED ON A 304 THICKNESS OF 8 INCHES USED TO REPAIR THE DRIVEWAY ADJACENT TO THE STRUCTURE ON LAIDLAW IMPACTED BY THE RELOCATION OF THE 60" COMBINED SEWER PIPE IDENTIFIED IN THE PLANS.

ITEM 304, AGGREGATE BASE - 12 CU YD

ADDITIONAL MATERIALS, IF NEEDED, WILL BE PROVIDED BY THE CONTRACTOR AT THE BID UNIT PRICE, AS DIRECTED BY THE ENGINEER.

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GENERAL NOTES

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ITEM SPECIAL - FILL AND PLUG EXISTING CONDUIT, VARIES

THIS ITEM SHALL CONSIST OF THE CONSTRUCTION OF BULK-HEADS IN EXISTING CONDUITS AND FILLING THE AREA THUS SEALED OFF WITH ITEM 613, SAND OR OTHER MATERIAL APPROVED BY THE ENGINEER.

BULKHEADS SHALL BE LOCATED AT THE LIMITS OF THE AREA TO BE FILLED AS INDICATED ON THE PLANS. THE BULKHEADS SHALL CONSIST OF BRICK OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 12 INCHES.

THE FILL MATERIAL SHALL BE PUMPED INTO PLACE, OR PLACED BY OTHER MEANS APPROVED BY THE ENGINEER, SO THAT, AFTER SETTLEMENT, AT LEAST 90 PERCENT OF THE CROSS-SECTIONAL AREA OF THE CONDUIT, FOR ITS ENTIRE LENGTH, SHALL BE FILLED. THE LENGTH OF FILLED AND PLUGGED CONDUIT TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF FEET (MEASURED ALONG THE CENTERLINE OF EACH CONDUIT FROM OUTER FACE TO OUTER FACE OF BULKHEADS) FILLED AND PLUGGED AS DESCRIBED ABOVE.

IN LIEU OF FILLING AND PLUGGING THE EXISTING CONDUIT, THE PIPE MAY BE REMOVED. THE LENGTH, MEASURED AS PROVIDED ABOVE, SHALL BE PAID FOR AT THE CONTRACT PRICE PER FOOT FOR, ITEM SPECIAL, FILL AND PLUG EXISTING CONDUIT.

UNRECORDED STORM WATER DRAINAGE

FURNISH A CONTINUANCE FOR ALL UNRECORDED STORM WATER DRAINAGE, SUCH AS ROOF DRAINS, FOOTER DRAINS, OR YARD DRAINS, DISTURBED BY THE WORK. FURNISH EITHER AN OPEN CONTINUANCE OR AN UNOBSTRUCTED CONTINUANCE BY CONNECT-ING A CONDUIT THROUGH THE CURB OR INTO A DRAINAGE STRUCTURE. THE LOCATION, TYPE, SIZE AND GRADE OF THE NEEDED CONDUIT TO REPLACE OR EXTEND AN EXISTING DRAIN WILL BE DETERMINED BY THE ENGINEER. ALL SUCH CONTINUANCE REQUIRES A RIGHT OF WAY USE PERMIT.

THE FOLLOWING CONDUIT TYPES MAY BE USED: 707.33, 707.41 NON-PERFORATED, 707.42, 707.43, 707.45, 707.46, 707.47, 707.51, 707.52 SDR35.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE:

611, 6" CONDUIT, TYPE B	100 FT.
611, 6" CONDUIT, TYPE C	100 FT.
611, 6" CONDUIT, TYPE E	100 FT.
611, 6" CONDUIT, TYPE F	100 FT.

UNRECORDED ACTIVE SANITARY SEWER CONNECTIONS

FURNISH A CONTINUANCE FOR ALL UNRECORDED ACTIVE SANITARY SEWER CONNECTIONS SUCH AS SANITARY, WASTEWATER, CURTAIN/ GRADIENT DRAINS, AND FOUNDATION FLOOR DRAINS DISTURBED BY THE WORK. FURNISH AN UNOBSTRUCTED CONTINUANCE OF THE UNRECORDED ACTIVE SANITARY SEWER CONNECTIONS TO THE SATISFACTION OF THE ENGINEER. ALL SUCH CONTINUANCE REQUIRES A RIGHT OF WAY USE PERMIT. ALL SANITARY AND SANITARY WASTEWATER CONTINUANCE MAY ALSO REQUIRE A NPDES PERMIT FROM THE OHIO ENVIRONMENTAL PROTECTION AGENCY. REPORT ALL CONTINUANCE TO THE LOCAL HEALTH DEPARTMENT.

THE FOLLOWING CONDUIT TYPES MAY BE USED: 707.42, 707.43, 707.44, 707.45, 707.46, 707.47, 707.51, 707.52 SDR35, 706.01, 706.02, OR 706.08 WITH JOINTS AS PER 706.11 OR 706.12.

UNRECORDED ACTIVE SANITARY SEWER CONNECTIONS (CONT)

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE:

611, 8" CONDUIT, TYPE B	100 FT.
611, 8" CONDUIT, TYPE C	100 FT.

MANHOLES, CATCH BASINS AND INLETS REMOVED OR ABANDONED

ALL CASTINGS SHALL BE CAREFULLY REMOVED AND STORED WITHIN THE RIGHT OF WAY FOR SALVAGE BY STATE FORCES.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 202 ITEM.

ITEM SPECIAL - MISCELLANEOUS METAL

EXISTING CASTINGS MAY PROVE TO BE UNSUITABLE FOR REUSE, AS DETERMINED BY THE ENGINEER. IT SHALL BE THE CON-TRACTOR'S RESPONSIBILITY TO PROVIDE THE CASTINGS OF THE REQUIRED TYPE, SIZE AND STRENGTH (HEAVY OR LIGHT DUTY) FOR THE PARTICULAR STRUCTURE IN QUESTION. ALL MATERIAL SHALL MEET ITEM 611 OF THE SPECIFICATIONS AND SHALL HAVE THE PRIOR APPROVAL OF THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

SPECIAL, MISCELLANEOUS METAL 1000 POUNDS

THE CONTRACTOR IS CAUTIONED TO USE EXTREME CARE IN THE REMOVAL, STORAGE AND REPLACEMENT OF ALL EXISTING CASTINGS. CASTINGS DAMAGED BY THE NEGLIGENCE OF THE CONTRACTOR, AS DETERMINED BY THE ENGINEER, SHALL BE REPLACED WITH THE PROPER NEW CASTINGS AT THE EXPENSE OF THE CONTRACTOR.

EXISTING UNDERDRAINS

ALL EXISTING UNDERDRAINS NOT REMOVED DURING PROPOSED CONSTRUCTION SHALL BE PROVIDED WITH A POSITIVE OUTLET. ALL MATERIALS, LABOR, AND INCIDENTALS NECESSARY TO PROVIDE AN OUTLET FOR THE EXISTING UNDERDRAIN SHALL BE INCLUDED IN THE FOLLOWING BID ITEMS. CONTINGENCY QUANTITIES HAVE BEEN ESTIMATED BELOW TO BE USED AS DIRECTED BY THE ENGINEER:

611, PRECAST REINFORCED OUTLET	5 EACH
611, 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET	200 FT
601, TIED CONCRETE BLOCK MAT, TYPE 1 UNDERLAYMENT	10 SY

PROPOSED UNDERDRAINS

UNDERDRAIN OULET CONNECTIONS AND TRANSVERSE UNDERDRAINS MAY EXTEND ACROSS ADJOINING CONSTRUCTION PHASES. IN THESE SITUATIONS THE CONTRACTOR SHALL PROVIDE AND INSTALL TEMPORARY PLUGS OR CAPS AT THE LIMITS OF THE UNDERDRAIN CONSTRUCTION OF THE SUBSEQUENT PHASE. THE TEMPORARY CAP SHALL BE REMOVED, THE EXISTING OUTLET SHALL BE INSPECTED FOR CLEANLINESS, CLEANED IF NECESSARY, AND THE UNDERDRAIN OR OUTLET CONSTRUCTION COMPLETED OR CONTINUED TO THE NEXT STAGE LIMIT. ALL MATERIAL, LABOR ANO INCIDENTALS NECESSARY TO PROVIDE, TO THE SATISFACTION OF THE ENGINEER, THE TEMPORARY CAPPING AND PIPE CLEANOUT BETWEEN EACH PHASE SHALL BE INCLUDED IN ITEM 611 - CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS OR ITEM 605 - SHALLOW PIPE UNDERDRAIN, BY SIZE AND TYPE.

ALL MATERIAL, LABOR AND INCIDENTALS, INCLUDING BENDS AND BRANCHES NECESSARY TO PROVIDE THE CONSTRUCTION OF THE PROPOSED UNDERDRAIN SHALL BE INCLUDED IN ITEM 611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS.

UNDERDRAIN CONNECTIONS

ALL EXISTING UNDERDRAINS SHALL BE CONNECTED INTO THE PROPOSED UNDERDRAINS AS SHOWN IN UNDERDRAIN PLAN AND DETAILS. SECTIONS OF EXISTING UNDERDRAIN DESIGNATED TO BE REMOVED SHALL BE CONSIDERED TO BE INCIDENTAL TO THE EXCAVATION. ALL MATERIAL, LABOR AND INCIDENTALS, INCLUDING BENDS AND BRANCHES NECESSARY TO PROVIDE THE CONNECTION OF THE EXISTING UNDERDRAINS SHALL BE INCLUDED IN ITEM 611 - 6" CONDUIT, TYPE F.

ITEM SPECIAL - PIPE CLEANOUT

THIS WORK CONSISTS OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING DRAINAGE CONDUITS SPECIFIED IN THE PLANS. DISPOSE OF ALL MATERIAL PER 105.16 AND 105.17. CLEAN OUT TO THE APPROVAL OF THE ENGINEER. CLEANOUT OF THE PIPE IS PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL, PIPE CLEANOUT. THIS PRICE INCLUDES THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUT.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM SPECIAL, PIPE CLEANOUT, 24" AND UNDER	100 FT.
ITEM SPECIAL, PIPE CLEANOUT, 27" TO 48"	100 FT.
ITEM SPECIAL, PIPE CLEANOUT, OVER 48"	100 FT.

POST CONSTRUCTION STORM WATER TREATMENT

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMPS) FOR POST CONSTRUCTION STORM WATER TREATMENT.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

BENCHING OF FOUNDATION SLOPES

ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATIONS IN CERTAIN AREAS AS SHOWN BELOW, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. BENCH ALL OTHER SLOPED EMBANKMENT AREAS AS SET FORTH IN SECTION 203.05 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS). NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER THE PROVISIONS OF SECTION 203.05 NOT INDICATED IN THE PLANS.

SHEET	BENCHING
428	243 CY
430	241 CY
475	28 CY
523	172 CY
527	141 CY
529	56 CY
693	344 CY
694	518 CY
695	378 CY
696	481 CY
697	519 CY
698	481 CY
699	390 CY
700	319 CY
701	290 CY
702	320 CY
703	42 CY

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS WORK.

ITEM 203 - EXCAVATION	4963 CY
ITEM 203 - EMBANKMENT	4963 CY

ITEM SPECIAL - TEMPORARY DRAINAGE PUMP

THIS WORK WILL BE THE INSTALLATION AND MAINTENANCE OF A TEMPORARY DRAINAGE PUMP FOR DRAINAGE STRUCTURE 620 AT STATION 500+28 LT. THE CONTRACTOR SHALL PROVDE ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO PUMP 5.40 CFS OF FLOW FROM STRUCTURE 620 TO STRUCTURE 603 (STATION 496+64 LT). THE PUMP SHALL BE OPERATIONAL FROM THE INSTALLATION OF STRUCTURE 620 UNTILL THE FINAL CONNECTION CAN BE MADE TO STRUCTURE 606 (STATION 499+50 CL).

THE PAYMENT OF ALL WORK ASSOCIATED WITH THE TEMPORARY PUMP SHALL BE INCLUDED IN THE FOLLOWING ITEM.

ITEM SPECIAL - TEMPORARY DRAINAGE PUMP - 12 MNTH

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CALCULATED SEA CHECKED DLR

GENERAL NOTES

HAM-75-7.85

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ITEM 611 DRAINAGE STRUCTURE, MISC.: CHECK VALVE FOR 36" CONDUIT

PROVIDE AND INSTALL AN INLINE CHECK VALVE SUCH AS THE TIDEFLEX CHECKMATE OR APPROVED EQUAL AT THE LOCATIONS SHOWN IN THE PLANS. THE INTERNAL DIAMETER OF THE CHECK VALVE PROVIDED SHALL BE THE MAXIMUM SIZE AVAILABLE FROM INDUSTRY FOR THE SPECIFIC CONDUIT IN WHICH IT IS BEING INSTALLED. THE CHECK VALVE SHALL PREVENT ALL COMBINED SEWER BACKFLOW FROM PASSING THROUGH IT AND BE AN ALL RUBBER OR NEOPRENE LOW-HEADLOSS CHECK SLEEVE WITH NO MECHANICAL PARTS AND SHALL OPERATE ON DIFFERENTIAL PRESSURE AS A PASSIVE DEVICE. THE VALVE SHALL OPEN WITH AS LITTLE AS ONE INCH OF HEAD PRESSURE AND BE SELF DRAINING. THE VALVE SHALL HAVE A MINIMUM 25 YEAR SERVICE LIFE. INSTALL THE CHECK VALVE PER THE MANUFACTURE'S RECOMMENDATIONS.

INCLUDE ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED FOR INSTALLATION IN THE UNIT PRICE BID FOR 611, DRAINAGE STRUCTURE, MISC.: CHECK VALVE FOR 36" CONDUIT.

ITEM 611 DRAINAGE STRUCTURE, MISC.: CHECK VALVE FOR 54" CONDUIT

PROVIDE AND INSTALL AN INLINE CHECK VALVE SUCH AS THE TIDEFLEX CHECKMATE OR APPROVED EQUAL AT THE LOCATIONS SHOWN IN THE PLANS. THE INTERNAL DIAMETER OF THE CHECK VALVE PROVIDED SHALL BE THE MAXIMUM SIZE AVAILABLE FROM INDUSTRY FOR THE SPECIFIC CONDUIT IN WHICH IT IS BEING INSTALLED. THE CHECK VALVE SHALL PREVENT ALL COMBINED SEWER BACKFLOW FROM PASSING THROUGH IT AND BE AN ALL RUBBER OR NEOPRENE LOW-HEADLOSS CHECK SLEEVE WITH NO MECHANICAL PARTS AND SHALL OPERATE ON DIFFERENTIAL PRESSURE AS A PASSIVE DEVICE. THE VALVE SHALL OPEN WITH AS LITTLE AS ONE INCH OF HEAD PRESSURE AND BE SELF DRAINING. THE VALVE SHALL HAVE A MINIMUM 25 YEAR SERVICE LIFE. INSTALL THE CHECK VALVE PER THE MANUFACTURE'S RECOMMENDATIONS.

INCLUDE ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED FOR INSTALLATION IN THE UNIT PRICE BID FOR 611, DRAINAGE STRUCTURE, MISC.: CHECK VALVE FOR 54" CONDUIT.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

ITEM 690E98400 SPECIAL-MISC.: STORMWATER DETENTION SYSTEM

PROVIDE AN UNDERGROUND DETENTION SYSTEMS MEETING THE REQUIREMENTS AS OUTLINED IN THIS NOTE AND LOCATED WITHIN THE FOOTPRINT PROVIDED ON SHEETS 862-864.

MATERIAL REQUIREMENTS: PROVIDE A SYSTEM CONSISTING OF A COMBINATION OF DRAINAGE CONDUITS AND STRUCTURES. CONDUIT MATERIALS SHALL BE LIMITED TO 706.02, 706.05, 707.04, 707.42 AND STRUCTURES PER 611.10. DRAINAGE STRUCTURES SHALL MEET CMS 611. ONLY A CLOSED SYSTEM WITH THE ENTIRE REQUIRED STORAGE VOLUME BEING HELD WITHIN THE CONDUITS AND STRUCTURES WILL BE ALLOWED. ALL JOINTS AND STRUCTURE CONNECTIONS SHALL BE ADEQUATELY SEALED TO PREVENT INFILTRATION OR EXFILTRATION OF WATER.

SYSTEM ACCESS: PROVIDE A MINIMUM OF TWO MANHOLE ACCESS POINTS ON EACH RUN OF CONDUIT THAT IS USED TO PROVIDE THE STORAGE VOLUME. ACCESS POINTS ARE NOT REQUIRED ON SHORT RUNS OF SMALL CONDUITS USED TO CONNECT THE LARGER SYSTEM. LOCATE AT LEAST ONE ACCESS POINT INTO THE SYSTEM AT THE POINT FURTHEST AWAY FROM THE OUTLET STRUCTURE. PROVIDE MANHOLE RISERS AT THE ACCESS POINTS MEETING THE REQUIREMENTS OF STANDARD CONSTRUCTION DRAWING MH-1.2 AND PROVIDE A MINIMUM OPENING DIAMETER OF 30 INCHES FOR FRAMES AND COVERS.

OUTLET CONTROL STRUCTURE: CONTROL THE RELEASE RATE USING A PASSIVE SYSTEM CONSISTING OF WEIR WALLS OR THE OUTLET CONDUIT SIZE OR A COMBINATION OF THE TWO. PROVIDE A MINIMUM ORIFICE OR CONDUIT SIZE OF 15 INCHES. A MANHOLE ACCESS POINT SHALL BE LOCATED IMMEDIATELY ABOVE THE OUTLET CONTROL DEVICE(S) TO ALLOW FOR MAINTENANCE AND CLEANING.

HYDRAULIC REQUIREMENTS (STORMWATER DETENTION SYSTEM 1):
REQUIRED STORAGE VOLUME: 28,480 CUBIC FEET
MAXIMUM RELEASE RATE: 27.23 CUBIC FEET PER SECOND
PROVIDE A MINIMUM SLOPE OF 0.25 PERCENT ALONG THE SYSTEM INVERT TO ENSURE POSITIVE DRAINAGE FROM ALL POINTS IN THE SYSTEM TO THE OUTLET STRUCTURE.

HYDRAULIC REQUIREMENTS (STORMWATER DETENTION SYSTEM 2):
REQUIRED STORAGE VOLUME: 10,230 CUBIC FEET
MAXIMUM RELEASE RATE: 12.9 CUBIC FEET PER SECOND
PROVIDE A MINIMUM SLOPE OF 0.25 PERCENT ALONG THE SYSTEM INVERT TO ENSURE POSITIVE DRAINAGE FROM ALL POINTS IN THE SYSTEM TO THE OUTLET STRUCTURE.

HYDRAULIC REQUIREMENTS (STORMWATER DETENTION SYSTEM 3):
REQUIRED STORAGE VOLUME: 35,070 CUBIC FEET
MAXIMUM RELEASE RATE: 16.6 CUBIC FEET PER SECOND
PROVIDE A MINIMUM SLOPE OF 0.25 PERCENT ALONG THE SYSTEM INVERT TO ENSURE POSITIVE DRAINAGE FROM ALL POINTS IN THE SYSTEM TO THE OUTLET STRUCTURE.

HYDRAULIC REQUIREMENTS (STORMWATER DETENTION SYSTEM 6):
REQUIRED STORAGE VOLUME: 121,461 CUBIC FEET
MAXIMUM RELEASE RATE: 64.61 CUBIC FEET PER SECOND (GOVERNED BY PUMP STATION)
BOTTOM ELEVATION: 516 FEET
TOP ELEVATION: 529 FEET
DISTRIBUTE STORAGE VOLUME EVENLY ACROSS ALL ELEVATIONS BETWEEN BOTTOM ELEVATION AND TOP ELEVATION

ADDITIONAL REQUIREMENTS FOR SYSTEM 6:
1. PROVIDE LARGE ACCESS HATCH (MINIMUM 105" X 155") AND CHAMBER TO ACCOMMODATE SKID STEER FOR MAINTENANCE OF STORAGE SYSTEM. ACCESS HATCH SHALL BE LOCATED IMMEDIATELY NEAR PUMP STATION SITE PAVEMENT.

ITEM 690E98400 SPECIAL-MISC.: STORMWATER DETENTION SYSTEM (CONT)

2. PROVIDE ADEQUATE VENTILATION AND ACCESS INSIDE ALL AREAS OF STORAGE SYSTEM FOR OPERATION OF MAINTENANCE VEHICLE.
3. OUTLET CONTROL STRUCTURE IS NOT REQUIRED. THE PUMP STATION ACTS AS THE OUTLET.
4.PAVED ACCESS DRIVE IS PAID FOR UNDER SEPARATE ITEMS AND NOT INCLUDED IN STORMWATER DETENTION SYSTEM 6 ITEM.

ACCESS DRIVE: INCLUDE IN THE PRICE BID FOR THE STORMWATER DETENTION SYSTEM A 10 FOOT-WIDE ACCESS DRIVE FROM THE MAINLINE SHOULDER TO THE ACCESS POINT FURTHEST FROM THE OUTLET STRUCTURE CONSISTING OF 8 INCHES OF 410 TRAFFIC COMPACTED SURFACE, TYPE A.

SUBMITTAL REQUIREMENTS: PROVIDE ALL OF THE FOLLOWING DOCUMENTATION PRIOR TO SHIPPING ANY MATERIALS TO THE PROJECT. ALLOW A MINIMUM OF FOUR WEEKS FOR APPROVAL.

A.
HYDRAULIC CALCULATIONS: PROVIDE TWO SETS OF HYDRAULIC CALCULATIONS STAMPED AND SIGNED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER. SHOW THAT THE MINIMUM STORAGE VOLUME IS BEING PROVIDED AND THAT THE ALLOWABLE RELEASE RATE IS NOT BEING EXCEEDED.
B.
MAINTENANCE PROCEDURES: PROVIDE RECOMMENDED ROUTINE CLEANING/MAINTENANCE PROCEDURES FROM THE SYSTEM MANUFACTURER ADDRESSING HOW THE SYSTEM IS ACCESSED, ESTIMATED NUMBER OF LABORERS, EQUIPMENT NEEDED, AND HOW DEBRIS AND SEDIMENTS ARE TO BE REMOVED.

C.
SHOP DRAWINGS: ENSURE THE SHOP DRAWINGS INCLUDE THE FOLLOWING:
1. ALL MATERIAL SPECIFICATIONS.
2. THE MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES.
3. PLAN VIEW OF DETENTION SYSTEM, ADDITIONAL MANHOLES, AND THE CONDUIT CONNECTIONS TO THE MANHOLES. INCLUDE THE DELINEATED FOOTPRINT AS SHOWN IN THE PLANS ALONG WITH THE STORM SEWER AND THE PROVIDED MANHOLE WITH DIVERSION LABELED BY OTHERS. LABEL THE STATION AND OFFSET AT ALL ENDS OF CONDUIT RUNS, ACCESS POINTS AND STRUCTURES UTILIZING THE PROJECT ALIGNMENT STATIONING.
4. ELEVATION VIEWS SHOWING ELEVATION LABELS (CORRELATED TO THE PROJECT PLAN DATUM) OF THE DETENTION SYSTEM, ADDITIONAL MANHOLES, AND THE CONDUIT CONNECTIONS TO THE MANHOLES.
5. ALL DIMENSIONS. MANHOLE DIMENSIONS SHOWN IN THE SHOP DRAWINGS THAT DIFFER FROM THE MANHOLE DIMENSIONS IN THE PLANS REQUIRE APPROVAL FROM THE DISTRICT ENGINEERING OFFICE.

D.
STRUCTURAL CALCULATIONS: PROVIDE TWO SETS OF HYDRAULIC CALCULATIONS STAMPED AND SIGNED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER. SHOW THAT THE SYSTEM IS DESIGNED TO HANDLE HS-20 VEHICLE LOADING AND ALL APPLICABLE CONSTRUCTION LOADS. SHOW THAT THE SYSTEM IS DESIGNED TO RESIST BUOYANCY UNDER POTENTIAL GROUNDWATER CONDITIONS.

METHOD OF MEASUREMENT: THE DEPARTMENT WILL MEASURE STORMWATER DETENTION SYSTEM BY THE NUMBER OF EACH IN PLACE (INCLUDING ALL MANHOLES, ACCESS POINTS, OUTLET CONTROL STRUCTURE, CONDUITS), COMPLETED AND ACCEPTED.

A SINGLE MANHOLE IS PROVIDED IN THE PLANS ALONG THE TRUNK

ITEM 690E98400 SPECIAL-MISC.: STORMWATER DETENTION SYSTEM (CONT)

STORM SEWER FROM WHICH WATER WILL BE DIRECTED INTO THE DETENTION SYSTEM. AN ADDITIONAL MANHOLE IS PROVIDED ALONG THE TRUNK SEWER TO RECEIVE THE WATER DISCHARGING FROM THE DETENTION SYSTEM. MINOR ADJUSTMENTS TO THE CONDUIT INVERT ELEVATIONS OF THESE MANHOLES WILL BE ALLOWED IF SUPPORTED BY THE SUBMITTED HYDRAULIC CALCULATIONS

THE FOLLOWING ITEMS HAVE BEEN CARRIED TO THE GENERAL SUMMARY AND IS CONSIDERED COMPENSATION IN FULL FOR ALL ITEMS LISTED ABOVE.

ITEM 690 - STORM WATER DETENTION SYSTEM 1, LUMP SUM
ITEM 690 - STORM WATER DETENTION SYSTEM 2, LUMP SUM
ITEM 690 - STORM WATER DETENTION SYSTEM 3, LUMP SUM
ITEM 690 - STORM WATER DETENTION SYSTEM 6, LUMP SUM

ITEM 503, COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN

THE UNIT PRICE BID FOR PIPE AND CONDUIT SHALL INCLUDE THE WORK OF MAKING ALL NECESSARY EXCAVATIONS FOR THE CONSTRUCTION OF ALL CONTRACT WORK; OF FURNISHING, PLACING AND USE OF SHEETING, SHORING AND SHEET PILING NECESSARY IN EXCAVATING FOR AND PROTECTING THE WORK AREA AND WORKERS. SHEETING AND SHORING SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE DETAILED DESIGN PLANS OF ALL METHODS OF INSTALLATION AND MAINTAINING DURING THE ENTIRE DURATION OF THE PROJECT. THE CONTRACTOR'S PLANS AND DETAILS SHALL BE APPROVED BY A LICENSED ENGINEER FROM THE STATE OF OHIO. PLANS AND DETAILS MUST BE SUBMITTED TO THE ENGINEER 30 BUSINESS DAYS PRIOR TO ANY WORK STARTED IN ACCORDANCE WITH CMS 501.05. THIS PAY ITEM SHALL APPLY TO THE FOUR (4) DETENTION SYSTEMS AS PROVIDED IN THE GENERAL SUMMARY.

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, STORMWATER DETENTION SYSTEM 1
ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, STORMWATER DETENTION SYSTEM 2
ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, STORMWATER DETENTION SYSTEM 3
ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, STORMWATER DETENTION SYSTEM 6

DEWATERING

THE CONTRACTOR HAS THE TOTAL RESPONSIBILITY FOR MAINTAINING THE SITE IN DEWATERED CONDITION THROUGHOUT THE CONSTRUCTION PERIOD AS NECESSARY TO BUILD THE PROPOSED INFRASTRUCTURE. PREVENT SUBSURFACE WATER FROM FLOWING INTO EXCAVATIONS AND FROM FLOODING ADJACENT AREAS. REMOVE WATER FROM THE EXCAVATION AS FAST AS IT COLLECTS. USE WELL POINTS, SUMPS, PUMPING, COFFERDAMS, OR OTHER ACCEPTABLE METHODS TO PERMIT CONSTRUCTION UNDER DRY CONDITIONS. MAINTAIN DRY CONDITIONS UNTIL FRESH CONCRETE HAS REACHED SUFFICIENT STRENGTH TO WITHSTAND EARTH AND HYDROSTATIC LOADS. MAINTAIN THE GROUND WATER LEVEL AT A MINIMUMN OF 18 INCHES BELOW THE BOTTOM OF THE EXCAVATION TO PROVIDE A STABLE SLOPE AND SURFACE FOR CONSTRUCTION OPERATIONS, A STABLE SUBGRADE FOR THE PERMANENT WORK, AND TO PREVENT DAMAGE TO THE WORK DURING ALL STAGES OF CONSTRUCTION. OBTAIN THE ENGINEER'S CONCURRENCE BEFORE SHUTTING DOWN THE DEWATERING SYSTEM FOR ANY REASON. DISPOSE OF ALL WATER REMOVED FROM THE EXCAVATION IN SUCH A MANNER AS NOT TO ENDANGER PUBLIC HEALTH, PROPERTY, OR ANY PORTION OF THE WORK UNDER CONSTRUCTION OR COMPLETED. DISPOSE OF WATER IN SUCH A MANNER AS TO CAUSE NO INCONVEINENCE TO THE OWNER OR OTHERS INVOLVED IN WORK AROUND THE SITE. PUMP INTAKES SHOULD WITHDRAW WATER FROM THE SURFACE OF THE TRENCH OR WORK AREA IN ORDER NOT TO

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DEWATERING (CONT)

RE-SUSPEND OR CONTNUALLY MIX WATER. CONVEY WATER AWAY FROM THE CONSTRUCTION SITE IN A CLOSED CONDUIT. DISCHARGED WATER SHALL NOT FLOW OVER DISTURBED AREAS RESULTING IN CONTAMINATED DISCHARGES. DO NOT USE TRENCH EXCAVATIONS AS TEMPORARY DRAINAGE DITCHES. OBTAIN PERMITS AS REQUIRED BY STATE, LOCAL, AND FEDERAL AGENCIES WHERE APPLICABLE.

ALL COSTS ASSOCIATED WITH DEWATERING SHALL BE INCLUDED IN THE VARIOUS BID ITEMS TO BE COMPLETED.

ITEM 611 - CONDUIT BORED OR JACKED

WHERE IT IS SPECIFIED THAT A CONDUIT BE INSTALLED BY THE METHOD OF BORING OR JACKING, NO TRENCH EXCAVATION SHALL BE CLOSER THAN 6 FEET TO THE (EDGE OF PAVEMENT) (NEAREST RAIL). PROVIDE A 0.50 INCH UNGALVANIZED CASING PIPE CONFORMING TO 748.06 THAT HAS JOINTS WITH A CIRCUMFERENCIAL FULLY PENETRATING B-U4B WELD THAT IS PERFORMED BY AN ODOT APPROVED FIELD WELDER. THE INSTALLED CASING PIPE IS THE STORM WATER CONVEYANCE CARRIER UNLESS OTHERWISE SPECIFIED IN THE PLANS. HYDROSTATIC TESTING IS NOT REQUIRED FOR THE CASING PIPE.

ITEM 204 - PROOF ROLLING

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING.

ITEM 204 - PROOF ROLLING 158 HOUR.

CHEMICALLY STABILIZED SUBGRADE

THE ROADWAY SUBGRADE SHALL BE CEMENT STABILIZED AT THE LOCATIONS DESIGNATED IN THE TYPICAL SECTIONS. ALL CEMENT STABILIZATION SHALL BE 14" DEEP AND SHALL BE CONSTRUCTED PER THE REQUIREMENTS STATED IN CMS SPECIFICATION ITEM 206.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE USE TO COMPLETE THE WORK NOTED ABOVE (FOR ESTIMATING CEMENT, A SPREAD RATE OF 5 PERCENT PER A SOIL DRY UNIT WEIGHT OF 115 POUNDS PER CUBIC FOOT WAS USED.):

206, CEMENT 8864 TONS

206, CEMENT STABILIZED SUBGRADE, 14" DEEP 286,983 SQ YD

206, CURING COAT 286,983 SQ YD

206, MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS LUMP

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, SOIL ANALYSIS TEST	2 EACH
659, TOPSOIL	16,485 CU. YD.
659, SEEDING AND MULCHING	145,184 SQ. YD.
659, REPAIR SEEDING AND MULCHING	7,426 SQ. YD
659, INTER-SEEDING	7,426 SQ. YD.
659, COMMERCIAL FERTILIZER	33.41 TON
659, LIME	30.69 ACRES
659, WATER	843 M. GAL.
659, MOWING	335 M. SQ. FT.

ITEM 607 - FENCE, TYPE CLT, AS PER PLAN

THE PROPOSED FENCE ALONG LONGVIEW AVENUE (A PRIVATE ACCESS ROAD), ADJACENT TO THE GIVAUDAN FLAVORS FACILITY SHALL INCLUDE ALL NECESSARY TOOLS, LABOR, MATERIALS, AND INCIDENTALS NECESSARY TO INSTALL THE CHAIN LINK FENCE WITH BARBED WIRE AS INDICATED ON THE FENCING PLAN. THE MATERIALS AND SPECIFICATIONS INCLUDED IN THE FOLLOWING NOTE ARE NECESSARY TO ENSURE THE PROPOSED FENCE MEETS FDA REQUIREMENTS FOR SAFETY AND SECURITY FOR FOOD PROCESSING FACILITIES.

THE EXISTING FACILITY MUST REMAIN SECURED AT ALL TIMES PER FDA REGULATIONS. THE CONTRACTOR SHALL COORDINATE WITH GIVAUDAN FLAVORS TO DISCUSS THE TEMPORARY FENCE THAT WILL BE REQUIRED DURING CONSTRUCTION, WHICH WILL REMAIN IN PLACE UNTIL THE PROPOSED FENCE IS INSTALLED. A SUGGESTED LOCATION OF THE TEMPORARY FENCE IS SHOWN IN THE FENCING PLAN, BUT SHALL BE CONFIRMED WITH GIVAUDAN PRIOR TO INSTALLATION. ALL COSTS ASSOCIATED WITH COORDINATING, PLACING AND REMOVING OF THE TEMPORARY FENCE SHALL BE INCLUDED WITHIN THIS PAY ITEM. THE CONTRACTOR WILL COORDINATE WITH GIVAUDAN REGARDING ACCESS FOR TEMPORARY FENCE INSTALLATION AS WELL AS REPLACEMENT OF THE EXISTING SIDEWALK AND CONCRETE TRUCK TURNING AREA FOLLOWING THE REMOVAL OF THE TEMPORARY FENCE. THE REMOVAL AND REPLACEMENT OF THE SIDEWALK AND TRUCK TURNING AREA ARE PAID FOR UNDER SEPERATE PAY ITEMS.

PRIOR TO REMOVING THE EXISTING FENCE AND INSTALLING THE NEW SYSTEM, THE CONTRACTOR SHALL NOTIFY GIVAUDAN FLAVORS IN WRITING A MINIMUM OF 30 DAYS IN ADVANCE PER THE CONTACT INFORMATION BELOW:

SUMMARY

1.01 QUALITY ASSURANCE

A. INSTALLER QUALIFICATIONS: INSTALLER SHALL BE FENCE MANUFACTURER OR AUTHORIZED DEALER/DISTRIBUTOR OR INSTALLER CERTIFIED BY MANUFACTURER, WITH NO LESS THAN FIVE (5) YEARS' EXPERIENCE IN INSTALLATION SIMILAR TO THAT REQUIRED.

1.02 DELIVERY, HANDLING AND STORAGE

A. PACKAGE MATERIALS IN MANUFACTURER'S SUITABLE CONTAINERS
TO PREVENT DAMAGE DURING TRANSIT, HANDLING AND STORAGE.

1. UNWRAPPED MATERIAL SHALL BE ROLLED, BUNDLED, BOUND OR OTHERWISE FASHIONED TO AVOID DISPLACEMENT AND DAMAGE.

B. STORE MATERIAL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTION, OFF THE GROUND, IN A DRY LOCATION UNTIL READY FOR INSTALLATION.

1. STORE IN A MANNER THAT DOES NOT DISTORT, BEND, CRUSH OR OTHERWISE DEFORM FRAMING MEMBERS OR FABRIC.

PRODUCTS

2.01 STEEL FABRIC

A. FABRIC: NO. 9 GAGE (0.148" ± 0.005") SIZE STEEL WIRES, 2" MESH, BY 8'-0" WIDE WITH TOP AND BOTTOM SALVAGES TWISTED AND BARBED.

1. FABRIC FINISH: GALVANIZED, ASTM A-392, CLASS I, WITH NOT LESS THAN 1.2 OUNCE ZINC PER SQUARE FOOT OF SURFACE.

ITEM 607 - FENCE, TYPE CLT, AS PER PLAN (CONT)

2.02 FRAMING AND ACCESSORIES

A. STEEL FRAMEWORK, GENERAL: GALVANIZED STEEL, ASTM A-120 OR A-123, WITH NOT LESS THAN 1.8 OUNCE ZINC PER SQUARE FOOT OF SURFACE.

1. FITTINGS AND ACCESSORIES: GALVANIZED, ASTM A-153, WITH ZINC WEIGHTS PER TABLE I.

B. END, CORNER AND PULL POSTS: MINIMUM SIZES AND WEIGHTS AS FOLLOWS:

1. UP TO 6' FABRIC HEIGHT, 2.375" OD STEEL PIPE, 3.65 POUNDS PER LIN. FOOT OR 3.5" BY 3.5" ROLL-FORMED SECTIONS, 4.85 POUNDS PER LIN. FOOT.

2. OVER 6' FABRIC HEIGHT, 2.875" OD STEEL PIPE, 5.79 POUNDS PER LIN. FOOT OR 3.5" BY 3.5" ROLL-FORMED SECTIONS, 4.85 POUNDS PER LIN. FOOT.

C. LINE POSTS: SPACE 10' O.C. MAXIMUM, UNLESS OTHERWISE INDICATED, OF FOLLOWING MINIMUM SIZES AND WEIGHTS.

1. UP TO 6' FABRIC HEIGHT, 1.90" OD STEEL PIPE, 2.70 POUNDS PER LIN. FOOT OR 1.875" BY 1.625" C-SECTIONS, 2.28 POUNDS PER LIN. FOOT.

2. OVER 6' FABRIC HEIGHT, 2.875" OD STEEL PIPE, 5.79 POUNDS PER LIN. FOOT OR 3.5" BY 3.5" ROLL-FORMED SECTIONS, 4.85 POUNDS PER LIN. FOOT.

D. GATE POSTS: FURNISH POSTS FOR SUPPORTING SINGLE GATE LEAF, OR ONE LEAF OF A DOUBLE GATE INSTALLATION, FOR NOMINAL GATE WIDTHS AS FOLLOWS:

LEAF WIDTH	GATE POST	LBS/LIN FEET
UP TO 6'	3⅛"X3⅛" ROLL-FORMED SECTION OR 2.875" OD PIPE	4.85 5.79
OVER 6' TO 13'	4.00" OD PIPE	9.11
OVER 13' TO 18'	6.625" OD PIPE	18.97
OVER 18'	8.625" OD PIPE	28.55

E. TENSION WIRE: 7 GAGE, COATED COIL SPRING WIRE, METAL AND FINISH TO MATCH FABRIC.

1. LOCATE AT BOTTOM OF FABRIC.

F. WIRE TIES: 11 GAGE GALVANIZED STEEL OR 11 GAGE ALUMINUM WIRE, TO MATCH FABRIC CORE MATERIAL.

G. POST BRACE ASSEMBLY: MANUFACTURER'S STANDARD ADJUSTABLE BRACE AT END AND GATEPOSTS AND AT BOTH SIDES OF CORNER AND PULL POSTS, WITH HORIZONTAL BRACE LOCATED AT MID-HEIGHT OF FABRIC. USE SAME MATERIAL AS TOP RAIL FOR BRACE, AND TRUSS TO LINE POSTS WITH 0.375" DIAMETER ROD AND ADJUSTABLE TIGHTENER.

H METALLIC COATED STEEL BARBED WIRE: COMPLY WITH ASTM A121, DESIGN NUMBER 12-4-5-14R, DOUBLE 12-1/2 GAUGE TWISTED STRAND WIRE, WITH 4 POINT 14 GAUGE ROUND BARBS SPACED 5 INCHES ON CENTER. MATCH COATING TYPE TO THAT OF THE CHAIN LINK FABRIC.

1. PROVIDE 3 BARBED WIRE STRANDS

I. BARBED WIRE ARMS: IN COMPLIANCE WITH ASTM F626, PRESSED STEEL GALVANIZED AFTER FABRICATION, MINIMUM ZINC COATING OF 1.20 OZ. / SQ FT, CAPABLE OF SUPPORTING A VERTICAL 250 LB LOAD. TYPE I - THREE STRAND 45 DEGREE ARM.

ITEM 606 - IMPACT ATTENUATOR, TYPE 2 (UNIDIRECTIONAL OR BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY ONE OF THE TYPE 2 IMPACT ATTENUATORS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE 2 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE 2 [UNIDIRECTIONAL OR BIDIRECTIONAL)], EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED TRANSITIONS, HARDWARE, REFLECTIVE SHEETING AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE E, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A W-BEAM, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

FOR INFORMATION ONLY

CALCULATED SEA CHECKED DLR

GENERAL NOTES

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ENVIRONMENTAL, CONTAMINATED SOILS

ON RULE 13 SITE #16 - LAIDLAW LANDFILL (PARCEL ID 118-0003 0004-00 WITH THE HAMILTON COUNTY AUDITOR; CURRENT STREET ADDRESS 925 LAIDLAW AVENUE, CINCINNATI, OHIO 45237) THE SOIL EXCAVATION FOR THE ROADWAY AND STRUCTURES SHALL BE DISPOSED OF AND CONSIDERED CONTAMINATED.

THE CONTRACTOR SHALL PROPERLY TRANSPORT AND DISPOSE OF THE EXCAVATED MATERIAL IN A LICENSED (BY THE LOCAL HEALTH DEPARTMENT) AND PERMITTED (BY THE OHIO ENVIRONMENTAL PROTECTION AGENCY) SOLID WASTE FACILITY. IF REQUIRED BY THE DISPOSAL FACILITY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUCTING ANY ADDITIONAL SAMPLING AND ANALYSIS OF THE EXCAVATED MATERIAL.

IF EXCAVATIONS WITHIN THE AFOREMENTIONED LIMITS REQUIRE DEWATERING FOR CONSTRUCTION PURPOSES, THE CONTRACTOR SHALL DEWATER, CONTAINERIZE, AND SUBSEQUENTLY DISPOSE OF WATERS BY METHODS APPROVED BY THE ENGINEER. ALL WATER CONTAINERIZED BY THE CONTRACTOR BETWEEN THESE LIMITS SHALL BE SUBJECT TO TESTING BY AN INSPECTOR PROVIDED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. THE INSPECTOR SELECTED BY THE CONTRACTOR, MUST BE EMPLOYED BY AN ODOT PREQUALIFIED CONSULTANT IN ENVIRONMENTAL SITE ASSESSMENT (ESA) REMEDIATION DESIGN. A LIST OF THESE ODOT PREQUALIFIED CONSULTANTS AVAILABLE FOR USE BUY THE CONTRACTOR CAN BE FOUND AT THE FOLLOWING WEB ADDRESS:

HTTP://WWW.DOT.STATE.OH.US/DIVISIONS/ENGINEERING/CONSULTANT/CONSULTANT/PREQUAL-ENVIRON.PDF

THE INSPECTOR WILL CLASSIFY THE WATER AS EITHER NON REGULATED OR REGULATED. THE METHOD FOR DISPOSING OF THE NON-REGULATED WATER SHALL BE APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF THE REGULATED WATER IN ACCORDANCE WITH RECOMMENDATIONS MADE BY THE ODOT PREQUALIFIED INSPECTOR AND APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND/OR AUTHORIZATIONS NEEDED TO PROPERLY HANDLE, STORE, TEST, TRANSPORT, AND DISPOSE OF WATER IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.

THE CONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PROPERLY DEVELOP A SSHP, EXCAVATE, STORE, TEST (FOR DISPOSAL TRANSPORT) AND DISPOSE OF CONTAMINATED MATERIALS, INCLUDING ANY REQUIRED APPROVALS OR FEES WITHIN THE LIMITS DEFINED ABOVE. PAYMENT FOR THIS WORK SHALL BE MADE AT THE CONTRACT PRICES BID PER CUBIC YARD. APPLICABLE PERMITS FOR DISPOSAL OF CONTAMINATED SOIL AND WATER SHALL BE SUBMITTED TO THE DISTRICT REGULATED WASTE PROJECT ENGINEER (RWPE) FOR SIGNATURE.

AN ESTIMATED EXCAVATION QUANTITY OF 73 CY HS BEEN ESTIMATED FOR STRUCTURE HAM-75-0823. SEE CROSS SECTIONS FOR ADDITIONAL CONTAMINATED SOIL EXCAVATION QUANTITIES (SUMMARY PROVIDED ON SHEET 316. RULE 13 USES A CONVERSION FACTOR OF 1 CY = 1.55 TONS. LAND FILL WEIGHT TICKETS CAN BE CONVERTED TO CUBIC YARDS FOR PAYMENT.

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM 203 - EXCAVATION, AS PER PLAN - 73 CY

690E65020 ITEM SPECIAL - WORK INVOLVING WATER - 10,000 GALLONS

690E65022 ITEM SPECIAL - WORK INVOLVING NON-REGULATED WATER 15,000 GALLONS

690E98400 ITEM SPECIAL - CONTAMINATED MATERIAL INSPECTION AND TESTING - LUMP SUM

ENVIRONMENTAL COMMITMENTS

NOTIFICATION OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM THE SPCIAL HUALING PERMIST SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NO LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARNACE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION OF TRAFFIC RESTRICTIONS TIME TABLE

ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & IPO
RAMP & ROAD CLOSURES	* 2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	* 12 HOURS	4 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	* 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WEEKS	5 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

ANY UNFORSEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRINGTRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECTENGINEER USING THE NOTIFICATION TIME TABLE.

EARTH DISTURBANCE

NO VEGETATION SHALL BE REMOVED/DAMAGED OUTSIDE OF THE PHYSICAL WORK LIMITS. THE CONTRACTOR WILL BE REQUIRED TO NOTIFY THE ENGINEER IF THE VEGETATION OUTSIDE OF THE WORK LIMITS WILL BE IMPACTED PRIOR TO COMMENCING WORK.

THREATENED & ENDANGERED SPECIES

THE PROJECT LIES WITHIN THE RANGE OF THE INDIANA BAT (ENDANGERED) AND NORTHERN LONG-EARED BAT (THREATENED). AS SUCH, ANY UNAVOIDABLE TREE REMOVAL SHALL OCCUR AFTER SEPTEMBER 30 AND BEFORE APRIL 1 TO AVOID DIRECT IMPACTS TO THESE SPECIES.

PRIOR TO BRIDGE DEMOLITION ACTIVITIES, THE UNDERSIDE OF THE BRIDGES SHALL BE CAREFULLY EXAMINED FOR THE PRESENCE OF BATS, ESPECIALLY FROM APRIL 1 TO SEPTEMBER 30. IF ANY BATS ARE FOUND ROOSTING ON THE UNDERSIDE OF THE BRIDGE, THE USFWS, ODOT OFFICE OF ENVIRONMENTAL SERVICES AND ODOT DISTRICT 8 ENVIRONMENTAL SECTION SHALL BE CONTACTED TO PROVIDE THIS INFORMATION.

ENVIRONMENTAL COMMITMENTS (CONT)

ENDANGERED BAT HABITAT REMOVAL

THE PROJECT IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT AND NORTHERN LONG-EARED BAT. NO TREES SHALL BE REMOVED UNDER THIS PROJECT FROM APRIL 1 THROUGH SEPTEMBER 30. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER 1 THROUGH MARCH 31. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO THESE SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT. FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

PARKS AND RECREATIONAL AREAS

ELMWOOD PLACE MEMORIAL PARK - THE EXISTING BALLFIELD FENCE WILL BE EXTENDED AND CONNECTED TO THE PROPOSED IR75 RETAINING WALL TO BE CONSTRUCTED IMMEDIATELY ADJACENT TO THE PARK. AS SUCH, COORDINATION WITH THE VILLAGE OF ELMWOOD PLACE WILL BE REQUIRED A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO BEGINNING WORK IN THIS AREA.

HAZARDOUS MATERIALS

FORMER LAIDLAW AVENUE LANDFILL - AS PER THE OCTOBER 1, 2013 RULE 3745-27-13 (RULE 13) AUTHORIZATION GRANTED BY THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA), ALL WORK TO BE CONDUCTED IN THE VICINITY OF THE FORMER LAIDLAW AVENUE LANDFILL MUST BE CONDUCTED IN COMPLIANCE WITH CONDITIONS OUTLINED IN THE RUL3 13 AUTHORIZATION. SEE SPECIAL PROVISIONS PACKAGE.

HIRE A LICENSED ASBESTOS HAZARD EVALUATION SPECIALIST TO DETERMINE IF REGULATED ASBESTOS IS PRESENT ON THE FOLLOWING STRUCTURES: SFN 3113779, SFN 3110036, SFN 3110087, SFN 3110176, SFN 3110133, SFN 3113817, SFN 3110141 AND THE HAM-75-00.00 NORFOLK SOUTHER RAILROAD OVER PROSSER AVE. THE SPECIALIST WILL DETERMINE IF REGULATED ASBESTOS IS PRESENT IN EXCESS OF THE ALLOWABLE REGULATORY LIMITS AND REQUIRES ABATEMENT. THE HAZARD EVALUATION SPECIALIST SHALL PREPARE AN ASBESTOS INSPECTION REPORT CONTAINING THE QUANTITIES AND LOCATIONS OF ASBESTOS CONTAINING MATERIALS. SUBMIT A COMPLETED NOTIFICATION OF DEMOLITION AND RENOVATION FORM (NDRF), APPLICABLE FEES, AND THE ASBESTOS INSPECTION REPORT TO THE OEPA AT LEAST 10 DAYS PRIOR TO ANY DEMOLITION ACTIVITY, RENOVATION ACTIVITY, OR BOTH.

ALL MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK WILL BE PAID FOR UNDER ITEM SPECIAL 690E71000 - ASBESTOS ABATEMENT, VARIOUS STRUCTURES - LUMP SUM

PERMITS

THE CONTRACTOR MUST ENSURE THAT A NOTICE OF INTENT (NOI) IS SUBMITTED TO THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) A MINIMUM OF TWENTY-ONE (21) DAYS PRIOR TO CONSTRUCTION FOR COVERAGE UNDER THE NPDES CONSTRUCTION STORMWATER GENERAL PERMIT. AS REQUIRED BY THE PERMIT, A STORMWATER POLLUTION PREVENTION PLAN MUST BE DEVELOPED AND IMPLEMENTED PRIOR TO PROJECT CONSTRUCTION IN ACCORDANCE WITH ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS.

ITEM SPECIAL PUMP STATION BUILDING AND CONTROLS, CONT.

PAYMENT FOR THIS ITEM SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT AND PERMITTING NECESSARY FOR CONSTRUCTING THE NEW PUMP STATION BUILDING, PUMP STATION CONTROLS, ELECTRICAL SERVICE AND BACKUP GENERATOR AS DETAILED IN THE PLANS, DETAILS, NOTES AND SPECIFICATIONS.
THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITTING NECESSARY FOR CONSTRUCTION.

ALL WORK SHALL BE INCLUDED IN THE LUMP SUM ITEM SPECIAL PUMP STATION BUILDING AND CONTROLS.

ITEM SPECIAL STORMWATER PUMP STATION STRUCTURE

PAYMENT FOR THIS ITEM SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT NECESSARY FOR CONSTRUCTING THE UNDERGROUND PUMP STATION INCLUDING ALL CONCRETE, REINFORCING, PUMPS, PIPING AND APPUTENANCES AS DETAILED IN THE PLANS, DETAILS, NOTES AND SPECIFICATIONS.

ALL WORK SHALL BE INCLUDED IN THE LUMP SUM ITEM SPECIAL STORMWATER PUMP STATION STRUCTURE.

ITEM SPECIAL PRESSURE RELEASE VALVE AND STRUCTURE

PAYMENT FOR THIS ITEM SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT NECESSARY FOR CONSTRUCTING THE PRESSURE RELEASE VALVE AND STRUCTURE AS DETAILED IN THE PLANS, DETAILS, NOTES AND SPECIFICATIONS.

ALL WORK SHALL BE INCLUDED IN THE LUMP SUM ITEM SPECIAL PRESSURE RELEASE VALVE AND STRUCTURE

FIELD OFFICE, TYPE C AS PER PLAN

IN ADDITION, TO THE REQUIREMENTS OF ITEM 619, THE CONTRACTOR SHALL CO-LOCATE WITH DEPARTMENT STAFF FOR THE DURATION OF THE PROJECT. THE CONTRACTOR SHALL ALSO PROVIDE/LEASE A SUITABLE FIELD OFFICE WITH A MINIMUM OF 2000 SF OF USABLE OFFICE SPACE. OFFICE TO INCLUDE A SEPARATE MINIMUM 12'X36' CONFERENCE ROOM, AND EIGHT (8) SEPARATE OFFICES WITH SHELVING UNITS. FURTHER ITEMS ARE AS FOLLOWED:

1) FURNITURE:
   - ELEVEN (11) SETS OF DESKS, OFFICE CHAIRS, AND FOUR DRAWER FILE CABINETS
   - TWO (2) LOCKABLE FILE CABINETS
   - TEN (10) 2'X8' COLLAPSIBLE TABLES
2) - TWENTY (20) FOLDING CHAIRS
   COPY MACHINE WITH SCAN/PRINT/FAX/INTERNET HOOKUP CAPABILITIES. THE COPIER WILL PRINT 25PPM AND CAPABLE OF PRINTING SHEETS 8.5"X11", 8.5"X14", AND 11"X17". COPIER PAPER
3) SUPPLIES AND MAINTENANCE TO BE INCLUDED.
   CONTRACTOR TO PROVIDE INTERNET SERVICES WITH A MINIMUM SPEED OF 100 MBPS. THE CONTRACTOR SHALL SUPPLY THE PROJECT WITH THE IP ADDRESS SO THAT ODOT CAN ATTACH AN ODOT OWNED HUB. ODOT'S OWNED HUB WILL PROVIDE THE STAFF
4) WITH A WIRELESS ROUTER AND ODOT FIREWALL.
5) ONE (1) SEPARATE WATER COOLER AND SERVICE.
   FIELD OFFICE SHALL INCLUDE A SECURE PARKING AREA NOT LESS THAN 4000 SF CAPABLE OF SUPPLYING 20 EA ALL WEATHER PARKING SPOTS. "ALL WEATHER" SHALL BE DEFINED AS A HARD SMOOTH SURFACE THAT WILL ALLOW FOR SNOW REMOVAL. GRAVEL SURFACE IS NOT ACCEPTABLE. PARKING AREA TO BE SURROUNDED BY A 6' HIGH SECURITY FENCE WITH A LOCKABLE GATE INCLUDING
6) KEYS AND ILLUMINATED BY SECURITY LIGHTING.
7) SNOW REMOVAL SHALL BE REQUIRED FOR PARKING AREA.
8) BI-WEEKLY CLEANING SERVICE.
9) DUMPSTER WITH NECESSARY SERVICE.
   FIVE (5) EACH TELEPHONES.

THE CONTRACTOR SHALL OBTAIN APPROVAL OF THE PROPOSED FACILITY FROM THE ENGINEER PRIOR TO USE. THE FACILITY SHALL BE AVAILABLE FOR ODOT USE NOT MORE THAN 30 DAYS FROM THE AWARD OF CONTRACT.

FOR INFORMATION ONLY

CALCULATED SEA CHECKED DLR

GENERAL NOTES

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ITEM 202 - REMOVAL MISC.: BILLBOARD

THIS ITEM INCLUDE THE REMOVAL AND DISPOSAL OF EXISTING BILLBOARDS AT THE INDICATED LOCATION IN THE PLANS. ALL APPLICABLE CMS SPECIFICATIONS SHALL APPLY TO THE PERFORMANCE OF THIS WORK. A QUANTITY HAS BEEN SUPPLIED IN THE GENERAL SUMMARY TO PROVIDE FOR THE COMPLETION OF THIS ITEM.

ITEM 202 - PORTIONS OF STRUCTURES REMOVED, AS PER PLAN

THIS ITEM INCLUDES THE REMOVAL AND/OR ABANDONMENT OF THE EXISTING UTILITY TUNNEL LOCATED NEAR STA. 488+25 (MAINLINE I-75). THE CONTRACTOR SHALL CONTACT GIVAUDAN FLAVORS CORPORATION IN WRITING, PER THE CONTACT INFORMATION INCLUDED IN THE PLANS, A MINIMUM OF 30 DAYS PRIOR TO BEGINNING WORK ON THE TUNNEL. GIVAUDAN WILL PROVIDE WRITTEN CONCURRENCE TO THE CONTRACTOR THAT ALL OF THE EXISTING UTILITIES WITHIN THE TUNNEL ARE ABANDONED, ARE NO LONGER OPERATING, AND ARE CLEAR TO BE REMOVED BY THE CONTRACTOR. ONCE THE UTILITY CLEARANCE IS PROVIDED TO THE CONTRACTOR, THE TUNNEL WORK CAN COMMENCE. DURING THE TUNNEL REMOVAL AND/OR ABANDONMENT, THE CONTRACTOR SHALL BULKHEAD THE REMAINING TUNNEL PER THE STATION/OFFSET LOCATIONS PROVIDED IN THE PLANS (SEE SHEET 353 AND 1113).

THE BULKHEAD INSTALLATION SHALL PROVIDE A PERMANENT SEAL USING CAST IN PLACE CONCRETE OR CONCRETE BLOCK AND MORTAR JOINTS. ALL PORTIONS OF THE TUNNEL BETWEEN THE BULKHEADS AND WITHIN THE LA R/W THAT ARE NOT REMOVED IN THEIR ENTIRETY, SHALL BE FILLED WITH A LOW STRENGTH MORTAR MIX IN ACCORDANCE WITH SECTION 613. ALL APPLICABLE CMS SPECIFICATIONS SHALL APPLY TO THE PERFORMANCE OF THIS WORK. ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PERFORM THE WORK ARE INCLUDED IN THIS PAY ITEM PER THE GENERAL SUMMARY.

ITEM 203 - EXCAVATION AS PER PLAN, ADDITIONAL EXCAVATION (CIN. 1119)

ADDITIONAL EXCAVATION SHALL BE IN ACCORDANCE WITH GREATER CINCINNATI WATER WORKS SPECIFICATION 1119.

ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM SHALL BE INCLUDED IN CONTRACT PRICE FOR THIS WORK.

ITEM 203 - EXCAVATION AS PER PLAN, EXPLORATORY EXCAVATION (CIN. 1120)

EXPLORATORY EXCAVATION SHALL BE IN ACCORDANCE WITH GREATER CINCINNATI WATER WORKS SPECIFICATION 1120.

ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM SHALL BE INCLUDED IN CONTRACT PRICE FOR THIS WORK.

ITEM 602 - CONCRETE MASONRY AS PER PLAN, CONCRETE, CLASS C (CIN. 1110)

CONCRETE MASONRY SHALL BE IN ACCORDANCE WITH GREATER CINCINNATI WATER WORKS SPECIFICATION 1110.

ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM SHALL BE INCLUDED IN CONTRACT PRICE FOR THIS WORK.

ITEM 625 - MEDIAN LIGHT POLE FOUNDATION, 10' DEEP, AS PER PLAN

THE LOW MAST LIGHT FOUNDATION AT SR 526 STA. 15+57.60 WILL BE CONSTRUCTED INSIDE THE 7.0' WIDE CONCRETE BARRIER, SINGLE SLOPE, TYPE C1, AS PER PLAN

THE LOW MAST LIGHT POLE FOUNDATION AT STA 461+80.70 WILL BE CONSTRUCTED INSIDE THE 40' BARRIER TRANSITION FOR THE OVERHEAD SIGN AT STA 462+25.00

ITEM 202 - REMOVAL MISC.: DRAINAGE STRUCTURE ABANDONED, AS PER PLAN

THIS ITEM INCLUDES THE REMOVAL OF PREVIOUSLY ABANDONED DRAINAGE STRUCTURES AS IDENTIFIED ON THE RECORD PLANS WITHIN THE CORRIDOR THAT MAY BE ENCOUNTERED DURING CONSTRUCTION. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE:

ITEM 202 - REMOVAL MISC.: DRAINAGE STRUCTURE ABANDONED, AS PER PLAN 56 EACH

ALL MATERIALS, LABOR, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM SHALL BE INCLUDED IN CONTRACT PRICE FOR THIS WORK.

ITEM 202 - REMOVAL MISC.: DRAINAGE PIPE ABANDONED, 24" AND UNDER, AS PER PLAN

THIS ITEM INCLUDES THE REMOVAL OF PREVIOUSLY ABANDONED DRAINAGE CONDUIT AS IDENTIFIED ON THE RECORD PLANS WITHIN THE CORRIDOR THAT MAY BE ENCOUNTERED DURING CONSTRUCTION. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE:

ITEM 202 - REMOVAL MISC.: DRAINAGE PIPE ABANDONED, 24" AND UNDER, AS PER PLAN 1,824 FT

ALL MATERIALS, LABOR, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM SHALL BE INCLUDED IN CONTRACT PRICE FOR THIS WORK.

ITEM 202 - REMOVAL MISC.: BUILDING DEMOLISHED, AS PER PLAN

THIS WORK SHALL CONSIST OF REMOVING ENTIRELY AND DISPOSING OF THE BUILDINGS INIDCATED AND BACKFILLING THE RESULTING HOLES AND PITS. THIS WORK SHALL CONFORM TO ODOT ITEM 202 AND SHALL INCLUDE REMOVAL AND DISPOSAL OF ALL FEATURES WITHIN THE CONSTRUCTION LIMITS NOT SEPERATELY ITEMIZED IN THIS PLAN. WORK INCLUDES BUT IS NOT LIMITED TO THE DEMOLITION, REMOVAL, AND DISPOSAL OF PAVEMENT, SIDEWALK, ELECTRICAL SERVICES, MEHCANICAL SYSTEMS, SIGNAGE, CONDIUTS, PIPING ETC WHETHER DIRECTLY OR INDIRECTLY ATTACHED TO THE BUILDINGS. THE ITEM SHALL ALSO INCLUDE ALL REQUIRED EPA PERMITTING FOR THE BUILDING DEMOLITION.

SHOULD THE PRINCIPAL CONTRACTOR IDENTIFY ANY SUSPECTED ASBESTOS CONTAINING MATERIALS, FLUORESCENT LIGHT BULBS, SUSPECT PCB LIGHT BALLASTS, CHLOROFLUOROCARBONS (CFCS), ETC. DURING THE DEMOLITION PROCESS, THE PRINCIPAL CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CITY. IT SHALL BE THE CITY'S RESPONSIBILITY TO HAVE THE SUSPSECT MATERIAL(S) TESTED AND PROPERLY REMOVED IF SAID SUSPECT MATERIAL(S) ARE FOUND TO BE HAZARDOUS.

202E56001 BUILDING DEMOLOSHED, AS PER PLAN - PARCEL # 560-0062-0261-00

ITEM SPECIAL - CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION

ALL CONCRETE SHALL BE TESTED. ALL TESTING, INSPECTION AND QUALITY CONTROL FOR CONCRETE, NOT INCLUDED UNDER QC/QA PAT ITEMS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE A CONCRETE TESTING CONSULTANT WITH PREVIOUS EXPERIENCE AND FAMILIARITY IN ODOT PROCEDURES, CONCRETE TESTING REQUIREMENTS AND CONCRETE TESTING DOCUMENTATION. AT LEAST 30 DAYS PRIOR TO CONCRETE PLACEMENT, SUBMIT TO THE ENGINEER FOR APPROVAL, THE PROPOSED CONCRETE TESTING CONSULTANT ALONG WITH THE RESUMES OF THE PROPOSED TESTING PERSONNEL.

TESTING CONCRETE FOR STRUCTURES AND PORTLAND CEMENT CONCRETE PAVEMENT SHALL BE PERFORMED AS OUTLINE IN CMS SPECIFICATIONS 455 RESPECTIVELY.

THROUGH THE CONTRACTOR, THE CONSULTANT SHALL BE RESPONSIBLE FOR ENSURING THAT ALL CONCRETE PLACED IS IN ACCORDANCE WITH THE SPECIFICATIONS. SUCH WORK SHALL BE IN ACCORDANCE WITH THE APPLICABLE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND THE ODOT CONSTRUCTION INSPECTION MANUAL OF PROCEDURES FOR CONCRETE. THE CONCRETE CONSULTANT SHALL PROVIDE THE NECESSARY TRAINED TECHNICIAN(S), ALL EQUIPMENT, AND SHALL FURNISH THE PROJECT ENGINEER WITH TWO (2) COPIES OF ALL TEST RESULTS WITHIN 24 HOURS AFTER COMPLETION OF CONCRETE PLACEMENT.

THE TECHNICIAN SHALL BE ACI LEVEL 1 VERIFIED AND WILL BE REQUIRED TO DEMONSTRATE HIS/HER COMPETENCE AND EXPERIENCE LEVEL TO THE ENGINEER PRIOR TO BEGINNING WORK. THE ENGINEER WILL ORDER THE CONTRACTOR TO REPLACE ANY TECHNICIAN THAT IS NOT VERSED IN THE REQUIRED TESTING PROCEDURE.

THE TECHNICIAN SHALL VERBALLY NOTIFY THE ODOT PROJECT ENGINEER OF ANY FAILING TEST AND SHALL SUBMIT FOLLOW-UP WRITTEN NOTIFICATION TO THE PROJECT ENGINEER OF THE REMEDIAL ACTION(S) TAKEN. TESTS SHALL BE TAKEN AS SPECIFIED WITHIN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, CONCRETE MANUAL OR APPROPRIATE SUPPLEMENTAL SPECIFICATION AS LISTED IN THE PROPOSAL GOVERNING THE PROJECT. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO MAKE IMMEDIATE CORRECTIONS OR ADJUSTMENTS TO THE CONCRETE MIX VIA DIRECT COMMUNICATION WITH THE CONCRETE SUPPLIER'S PLANT PERSONNEL TO MAINTAIN UNINTERRUPTED COMPLIANCE WITH THE SPECIFICATIONS UPON NOTIFICATION OF CONCRETE MIX NON-COMPLIANCE BY THE CONSULTANT TECHNICIAN. THE PROJECT ENGINEER MAY REQUIRE MORE FREQUENT TESTING AS CONDITIONS WARRANT.

UPON COMPLETION OF DAILY CONCRETE PLACEMENT(S), THE CONCRETE CONSULTANT SHALL PROVIDE THE PROJECT ENGINEER WITH DAILY TEST REPORTS, TW-45'S, INSPECTORS DAILY REPORT AND SUPPORTING DOCUMENTATION FOR EACH ITEM OF CONCRETE WORK PERFORMED SEPARATED BY MIX DESIGN. SUBSEQUENTLY, UPON COMPLETION OF AN ENTIRE CONCRETE SPECIFICATION ITEM, THE CONCRETE CONSULTANT SHALL ALSO PROVIDE THE PROJECT ENGINEER WITH TWO (2) COPIES OF AN ADDITIONAL INSPECTION REPORT BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, WHICH CONTAINS THE TESTING-RESULTS SUMMARY FOR EACH ITEM BY CONTRACT REFERENCE NUMBER AND THE CONSULTANT'S CONCLUSIONS RELATIVE TO SPECIFICATION COMPLIANCE FOR ALL CONCRETE-TESTING WORK.

THE ODOT PROJECT ENGINEER RESERVES THE RIGHT TO MAKE UNANNOUNCED QUALITY-CONTROL TESTS TO VERIFY PROCEDURES USED AND RESULTS BEING OBTAINED BY THE CONTRACTOR.

ITEM SPECIAL - CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION (CONT)

THE CONCRETE TECHNICIAN SHALL WORK UNDER THE DIRECTION OF A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, WHO WILL MONITOR THE CONCRETE TEST RESULTS. THE FINAL INSPECTION REPORTS FOR EACH COMPLETED ITEM SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, CERTIFYING THAT ALL CONCRETE TESTS PROVIDED BY THE CONTRACTOR MET APPLICABLE CONTRACT REQUIREMENTS. A FINAL REPORT ISSUED BY THE CONSULTING FIRM SHALL CONTAIN A CERTIFIED STATEMENT OF COMPLIANCE WITH ODOT SPECIFICATION AND ANY OTHER CONCLUSIONS REGARDING THE CONCRETE MATERIALS INCORPORATED INTO THE PROJECT. SUCH STATEMENT SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, AND, THE CONCRETE CONSULTANT SHALL BE REQUIRED TO ATTEND MONTHLY PROGRESS MEETINGS AS REQUIRED BY THE PROJECT ENGINEER.

ADDITIONALLY, THE CONTRACTOR SHALL BE REQUIRED TO KEEP A POSTED LIST OF BEAM AND CYLINDER IDENTIFICATION NUMBERS FOR THE PURPOSE OF IDENTIFYING THE CORRESPONDING PLACEMENT LOCATION AND CONCRETE SPECIFICATION ITEM.

PAYMENT SHALL BE BID AS LUMP SUM FOR ITEM SPECIAL MISC.: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION. THE ITEM WILL BE PAID FOR AS FOLLOWS:

UPON APPROVAL OF CONSULTANT.....20%
PROGRESSIVE EQUIVALENT PAYMENTS.....50%
UPON SUBMISSION OF FINAL REPORT.....30%

THE TECHNICIAN SHALL HAVE FULL EFFECT AND AUTHORITY OF AN ODOT PROJECT INSPECTOR IN DETERMINING ACCEPTABILITY OF MATERIAL AND CONCRETE PLACEMENT PRACTICES.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM SPECIAL-CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, TYPE A (447), AS PER PLAN

THIS NOTE ONLY PERTAINS TO JOINTS ON I-75. GREAT CARE SHALL BE TAKEN TO MAINTAIN THE EXISTING PAVEMENT CROSS-SLOPE (CROWN), INTERSECTION CROSS-SLOPES (CROWN), AS WELL AS ALL LONGITUDINAL SLOPES DURING THE PAVING OPERATIONS.

LOCATE LONGITUDINAL JOINTS IN THE SURFACE COURSE SUBJECT TO THE FOLLOWING REQUIREMENTS:

PLACE THE MAINLINE PAVEMENT SURFACE COURSE WITH A SINGLE COLD LONGITUDINAL JOINT LOCATED BETWEEN LANES 2 AND 3 (LANE 1 IS THE EXISTING LEFT LANE WITH NUMBERING INCREASING FROM LEFT TO RIGHT IN THE DIRECTION OF TRAVEL). A COLD LONGITUDINAL JOINT IS PERMITTED BETWEEN THE SHOULDER AND MAINLINE PAVEMENT. NO OTHER COLD JOINTS ARE PERMITTED IN THE SURFACE COURSE OF MAINLINE PAVEMENT.

ITEM 202 - PAVEMENT REMOVED, AS PER PLAN

THIS WORK SHALL BE THE REMOVAL OF THE EXISTING CONCRETE BASE. THE ASPHALT REMOVAL IS PAID FOR UNDER A SEPERATE ITEM.

FOR INFORMATION ONLY

CALCULATED SEA CHECKED DLR

GENERAL NOTES

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ELECTRONIC TICKETING

PURPOSE:
PROVIDE ELECTRONIC MATERIAL TICKETS IN AN ELECTRONIC FORMAT DIRECTLY RECORDED FROM THE MATERIAL LOADING SOURCE.

PROVIDE ELECTRONIC MATERIAL TICKETS FOR THE FOLLOWING MATERIALS:

- AGGREGATE
- ASPHALT CONCRETE
- PORTLAND CONCRETE

THIS NOTE IN NO WAY SUPERSEDES ANY OTHER COMMERCIAL REGULATIONS OR ANY OTHER LEGAL REQUIREMENTS REGULATING THE TRANSPORTATION OF COMMERCIAL MATERIALS.

REQUIREMENTS:
AT THE PRE-CONSTRUCTION MEETING, SUBMIT AN ELECTRONIC TICKETING PLAN TO THE ENGINEER DESCRIBING THE PROPOSED ELECTRONIC TICKET DELIVERY METHOD. THE ELECTRONIC MATERIAL TICKET SHALL CONTAIN INFORMATION AS REQUIRED PER THE APPLICABLE MATERIAL SPECIFICATION FOR WEIGHT MEASUREMENT AND OTHER MATERIAL CHARACTERISTICS; PROVIDE AN EXAMPLE(S) OR A MOCK-UP OF THE PROPOSED ELECTRONIC TICKET TO SHOW THE DETAILS ON WHAT IS TO BE TRANSMITTED TO THE DEPARTMENT. NAMING OF THE ELECTRONIC MATERIAL TICKET FILES SHALL BE DISTINCT SUCH THAT THE TICKET S REPRESENTED MATERIAL IS EASILY DETERMINED; INCLUDE THE PROPOSED NAMING CONVENTION. DELIVERY MAY BE THROUGH A PRODUCER WEBSITE UPLOAD ACCESSIBLE TO THE ENGINEER, ODOT PROJECT SPECIFIC SHAREPOINT DOCUMENTATION SITE UPLOAD, OR ANOTHER SECURE ELECTRONIC TRANSMITTAL MEANS. EMAILING OF A TICKET TO AN ODOT CONTACT IS ACCEPTABLE BUT IS NOT PREFERRED. THE ELECTRONIC TICKETING PLAN SHALL IDENTIFY A CONTINGENCY METHOD FOR MANUALLY CAPTURING AND DELIVERING TICKET INFORMATION IF ELECTRONIC TRANSMISSION IS TEMPORARILY UNAVAILABLE. AN ELECTRONIC TICKETING PLAN WHICH INCLUDES SOLELY THE USE OF DIGITAL PHOTOS OF PAPER TICKETS IS NOT ACCEPTABLE.

THE DEPARTMENT RECOGNIZES THAT VARIOUS DIGITAL TICKETING SYSTEMS MAY BE COMMERCIALLY AVAILABLE AND USED TO ACCOMMODATE INDIVIDUAL CONTRACTORS AND MATERIAL SUPPLIER CAPABILITIES. THE CONTRACTOR MAY PROVIDE A DIGITAL TICKETING SYSTEM GIVING SECURE ACCESS TO ORGANIZED DIGITAL DATA. IF UTILIZED, THE DIGITAL TICKETING SYSTEM MAY ALSO BE ACCESSIBLE BY REAL-TIME MONITORING WITH A MOBILE COMMUNICATION DEVICE SUCH AS A TABLET, SMARTPHONE, ETC. THROUGH MOBILE DEVICE APPLICATIONS (MOBILE APP) IF ACCEPTABLE TO THE DEPARTMENT. IF A DIGITAL TICKETING SYSTEM REQUIRES A MOBILE APP, THE MOBILE APP SHALL BE AT NO COST TO THE DEPARTMENT. THE DIGITAL DATA MUST BE ABLE TO BE EXPORTED IN A FORMAT USABLE BY THE ENGINEER UPON REQUEST (I.E. MICROSOFT WORD, MICROSOFT EXCEL, PDF FORMATS).

DELIVER EACH ELECTRONIC MATERIAL TICKET TO THE ENGINEER PRIOR TO THE PLACEMENT OF MATERIAL, BUT NOT PRIOR TO THE LOADING OF MATERIAL AT THE SOURCE.

PROVIDE THE ENGINEER A DAILY MATERIAL SUMMARY REPORT BY THE END OF THE DAY S HAULING ACTIVITIES, OR AT A TIME AS APPROVED BY THE ENGINEER. THE DAILY MATERIAL SUMMARY REPORT INCLUDES SUMMARY INFORMATION LISTED FOR EACH MATERIAL AS OUTLINED IN THE RESPECTIVE MATERIAL SPECIFICATION.

PAYMENT:
COSTS FOR THE ELECTRONIC TICKETING SHALL BE INCIDENTAL TO THE PROJECT.

NON-WORK PERIODS FOR MULTI-YEAR CONTRACTS

INDENTIFY THE ENTIRE MONTH OF EACH NOVEMBER OF THE ORIGINAL CONTRACT PERIOD AS A NON-WORK PERIOD IN THE CPM CALENDARS. THIS NON-WORK PERIOD WILL BE MADE AVAILABLE FOR USE AS AN OPPORTUNITY TO MITIGATE CRITICAL DELAYS. THE CONTRACTOR WILL BE PERMITTED TO CONTINUE WORK DURING THIS NON-WORK PERIOD BUT MUST GIVE PRECEDENCE TO PERFORMING WORK THAT MITIGATES ANY EXISTING PROJECT DELAY. MITIGATE CRITICAL DELAYS IN THE FOLLOWING ORDER:

1) EXCUSABLE, COMPENSABLE DELAYS
2) NON-EXCUSABLE DELAYS
3) EXCUSABLE, NON-COMPENSABLE DELAYS

THE DEPARTMENT WILL COMPENSATE THE CONTRACTOR FOR ADDITIONAL COSTS INCURRED DUE TO COLD WEATHER WORK RESULTING FROM THE MITIGATION OF AN EXCUSABLE, COMPENSABLE DELAY OR DEPARTMENT DIRECTED MITIGATION OF AN EXCUSABLE, NON-COMPENSABLE DELAY.

COMPENSATION FOR THESE ADDITIONAL COLD WEATHER WORK COSTS WILL BE COMPUTED PER C&MS 109.05A, B, C &E. PROVIDE NOTICE PER C&MS 108.02.F FOR ADDITIONAL COSTS, OTHER THAN COLD WEATHER WORK IMPACTS THAT ARE A DIRECT RESULT OF MITIGATING EXCUSABLE, COMPENSABLE OR DEPARTMENT DIRECTED EXCUSABLE, NON-COMPENSABLE DELAYS DURING THIS TIME PERIOD. MITIGATION OF ANY DELAY, WHETHER CAUSED BY THE DEPARTMENT, CONTRACTOR, THIRD-PARTY OR AN INTERVENING EVENT, IS A SHARED CONTRACT AND LEGAL REQUIREMENT. EXECUTE REASONABLE MITIGATION EFFORTS IN A TIMELY MANNER.

BY THE FOLLOWING DECEMBER 10TH, DETERMINE THE EFFECT OF MITIGATION OF ANY DELAY DURING THE MONTH OF NOVEMBER BY PERFORMING A TIME IMPACT ANALYSIS PER PN 107. A CHANGE ORDER WILL THEN BE WRITTEN TO MODIFY THE FINAL COMPLETION DATE AND ANY INTERIM COMPLETION DATES, IF WARRANTED.

ITEM 624 - MOBILIZATION, AS PER PLAN

ODOT 2019 CONSTRUITON AND MATERIAL SPECIFICATION SECTION 624.02, TABLE 624.02-1 SHALL BE DELETED AND REPLACED WITH THE FOLLOWING TABLE.

Total Contract Amount		Maximun Total of Partial Payments
More Than ($)	Up to, inclusive ($)	($)
0	50,000	0
50,000	100,000	2,000
100,000	200,000	4,000
200,000	500,000	10,000
500,000	1,000,000	20,000
1,000,000	2,000,000	40,000
2,000,000	5,000,000	100,000
5,000,000	10,000,000	200,000
10,000,000	20,000,000	400,000
20,000,000	40,000,000	800,000
40,000,000	60,000,000	1,200,000
60,000,000	80,000,000	1,600,000
80,000,000	100,000,000	2,000,000
100,000,000	120,000,000	2,400,000
120,000,000	140,000,000	2,800,000
140,000,000	160,000,000	3,200,000
160,000,000	180,000,000	3,600,000
180,000,000	200,000,000	4,000,000
200,000,000	220,000,000	4,400,000
220,000,000	240,000,000	4,800,000
240,000,000	260,000,000	5,200,000
260,000,000	280,000,000	5,600,000
280,000,000	300,000,000	6,000,000
300,000,000	320,000,000	6,400,000

DRAINAGE ALTERNATES

FOR CLARITY, DRAINAGE ALTERNATE 1 IS DEPICTED ON SHEETS 814, 815 AND 818 AND DRAINAGE ALTERNATE 2 IS DEPICTED ON SHEETS 814A, 815A AND 818A. CONDUIT SIZES SHOWN ON THE RESPECTIVE DRAINAGE ALTERNATE SHEETS CORRESPOND TO THE DRAINAGE ALTERNATES SHOWN IN THE GENERAL SUMMARY.

ALTERNATE PIPE SIZES ARE SHOWN AND LABELED ON THE STORM SEWER PROFILES SHEETS 850, 858 AND 859.

ITEM 607 - GATE, TYPE CLT, AS PER PLAN

THIS WORK IS THE INSTALLATION OF A DOUBLE SWING GATE WITH CENTER LATCH AND LOCKING MECHANISM. THE GATE SHALL BE 6 FEET IN HEIGHT WITH THREE STRAND BARBED WIRE.

SPECIAL - TEMPORARY 600 KW GENERATOR

THIS WORK SHALL CONSIST OF PROVIDING A TEMPORARY 600 KW GENERATOR FOR THE PUMP STATION CONTROL BUILDING FROM THE TIME THE BUILDING IS OPERATIONAL UNTIL THE PERMANENT GENERATOR CAN BE INSTALLED. THE ITEM INCLUDES CONNECTION TO PUMP STATION BUILDING, MAINTENANCE, EQUIPMENT, LABOR AND FUEL NECESSARY FOR OPERATION. THE CONTRACTOR SHALL OPERATE THE GENERATOR 15 MINUTES EACH WEEK TO VERIFY OPERATION IN CASE OF EMERGENCY USE

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CALCULATED SEA
CHECKED DLR

GENERAL NOTES

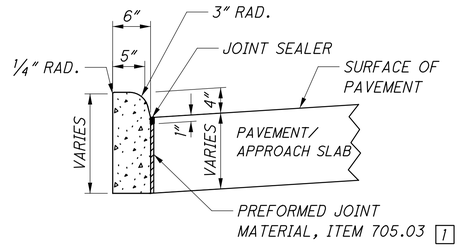
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ITEM 609 - CURB, TYPE 4-C, AS PER PLAN

CONSTRUCT AS PER STANDARD CONSTRUCTION DRAWING BP-5.1, EXCEPT THAT THE 16" HEIGHT OF CURB SHALL BE ADJUSTED. SO THAT THE BOTTOM OF CURB RESTS ON TOP OF THE AGGREGATE BASE COURSE AS SHOWN IN THE TYPICAL SECTIONS.



LEGEND

[1] EXPANSION JOINT MATERIAL AND JOINT SEALER ARE NOT REQUIRED FOR THE PORTION OF THE CURB THAT IS ADJACENT TO A FLEXIBLE PAVEMENT TYPE. BOTH MATERIALS ARE REQUIRED, AS DETAILED, FOR THE FULL HEIGHT OF RIGID PAVEMENT AND CONCRETE BASES.

FOR VARIABLE DIMENSIONS, SEE SHEET 33

ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE B1, AS PER PLAN
ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE C1, AS PER PLAN

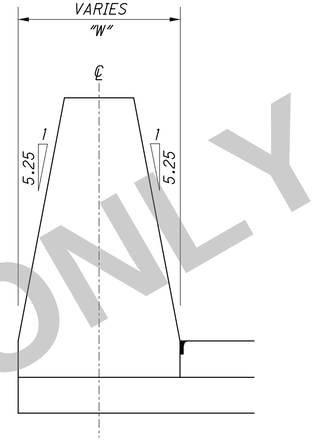
THE ITEMS LISTED ABOVE SHALL BE CONSTRUCTED PER ITEM 622 AND RM-4.3 AND RM-4.5 EXCEPT WITH THE DIMENSIONS AND ADDITIONAL DETAILS SHOWN BELOW. ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PERFORM THE WORK DETAILED BELOW SHALL BE INCLUDED IN THE THIS PAY ITEM PER THE GENERAL SUMMARY.

CONCRETE BARRIER, SINGLE SLOPE, TYPE B1, AS PER PLAN

ALIGNMENT	STATION FROM	STATION TO	SIDE	DIMENSION "W" (FT) BEGIN/END
IR-75	465+30.00	465+70.00	CL	2.8 / 5.0
IR-75	465+70.00	466+05.00	CL	5.0 / 5.0
IR-75	466+05.00	466+45.00	CL	5.0 / 2.8

CONCRETE BARRIER, SINGLE SLOPE, TYPE C1, AS PER PLAN

ALIGNMENT	STATION FROM	STATION TO	SIDE	DIMENSION "W" (FT) BEGIN/END
SR 562	15+54.00	17+30.12	CL	7.0 /
SR 562	17+30.12	17+70.09	CL	7.0 / 2.8



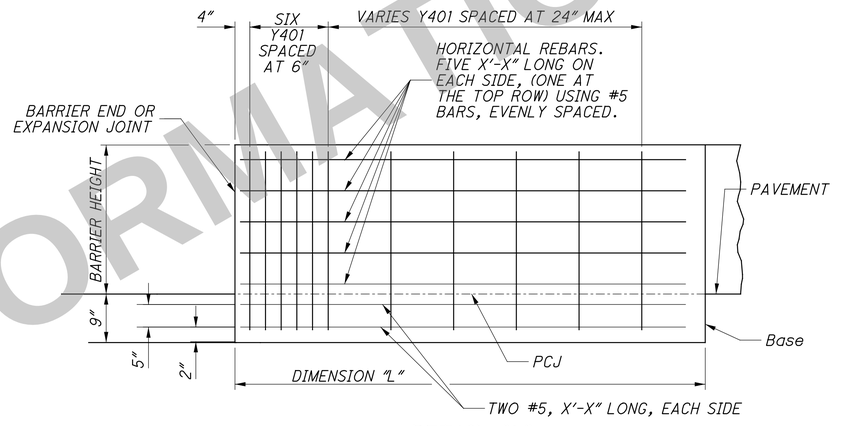
ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1, AS PER PLAN
ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1, AS PER PLAN
ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN

THE ITEMS LISTED ABOVE SHALL BE CONSTRUCTED PER ITEM 622 AND RM-4.3 AND RM-4.5 EXCEPT WITH THE DIMENSIONS AND ADDITIONAL DETAILS SHOWN BELOW. ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PERFORM THE WORK DETAILED BELOW SHALL BE INCLUDED IN THE THIS PAY ITEM PER THE GENERAL SUMMARY.

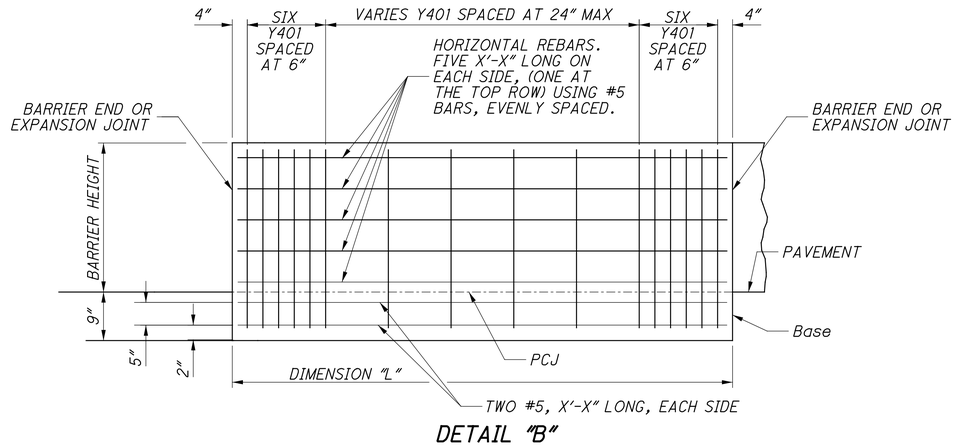
CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1, C1, D, AS PER PLAN

ALIGNMENT	TYPE	STATION FROM	STATION TO	SIDE	DIMENSION "L" (FT)	DIMENSION "W" (FT) BEGIN/END	SEE DETAIL
IR-75	C1	419+54.31	419+69.3	CL	15.0	3.58 / 2.81	A
IR-75	D	416+79.53	416+96.92	RT	17.8	1.67 / 1.67	B
IR-75	B1	427+85.00	427+91.72	CL	6.7	2.81 / 2.81	A
IR-75	B1	433+75.00	433+82.10	CL	7.1	2.81 / 3.50	B
IR-75	B1	435+19.11	435+34.11	CL	15.0	3.50 / 2.81	A
IR-75	B1	439+15.00	439+25.00	CL	10.0	2.81 / 2.81	A
IR-75	B1	440+13.79	440+17.78	CL	4.0	2.81 / 2.81	B
IR-75	B1	441+42.28	441+55.00	CL	12.7 *	2.81 / 2.81	B
IR-75	B1	461+60.00	461+80.00	CL	20.0 *	2.81 / 2.81	B
IR-75	D	463+81.60	463+90.00	CL	8.4	1.67 / 1.67	B
IR-75	B1	489+18.45	489+40.00	CL	21.5	2.81 / 2.81	B
IR-75	B1	492+10.00	492+27.50	CL	17.5	2.81 / 2.81	B
IR-75	B1	493+17.50	493+40.00	CL	22.5	2.81 / 2.81	B
RAMP A	D	504+77.14	504+90.00	RT	12.9	1.67 / 1.67	A
IR-75	B1	514+10.00	514+25.00	CL	15.0	2.81 / 2.81	B
IR-75	B1	531+25.00	531+40.00	CL	15.0 *	2.81 / 2.81	B
SR 562	C1	17+70.09	17+80.00	CL	9.9 *	2.81 / 2.81	A
RAMP N	D	424+51.96	424+61.18	RT	9.4	1.67 / 1.67	A

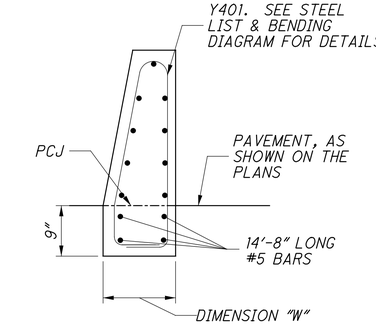
* HAS LIGHT POLE IN END ANCHORAGE



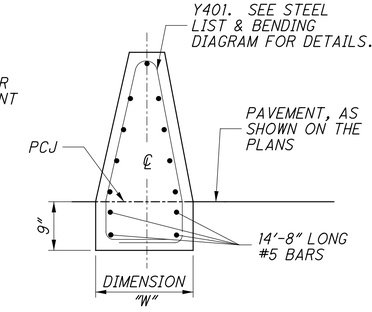
DETAIL "A"



DETAIL "B"



SECTION
(APPLIES TO ALL TYPE D END ANCHORAGES)



SECTION
(APPLIES TO ALL TYPE B1 AND C1 END ANCHORAGES)

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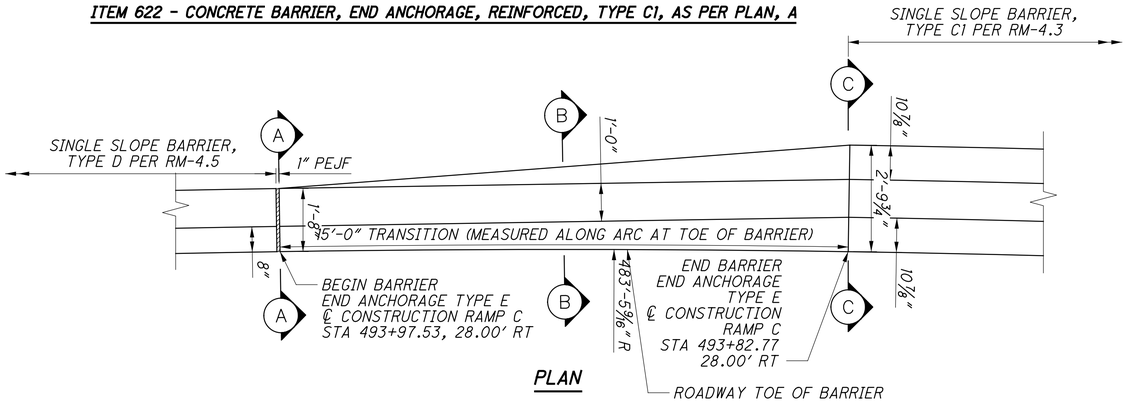
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GENERAL NOTES

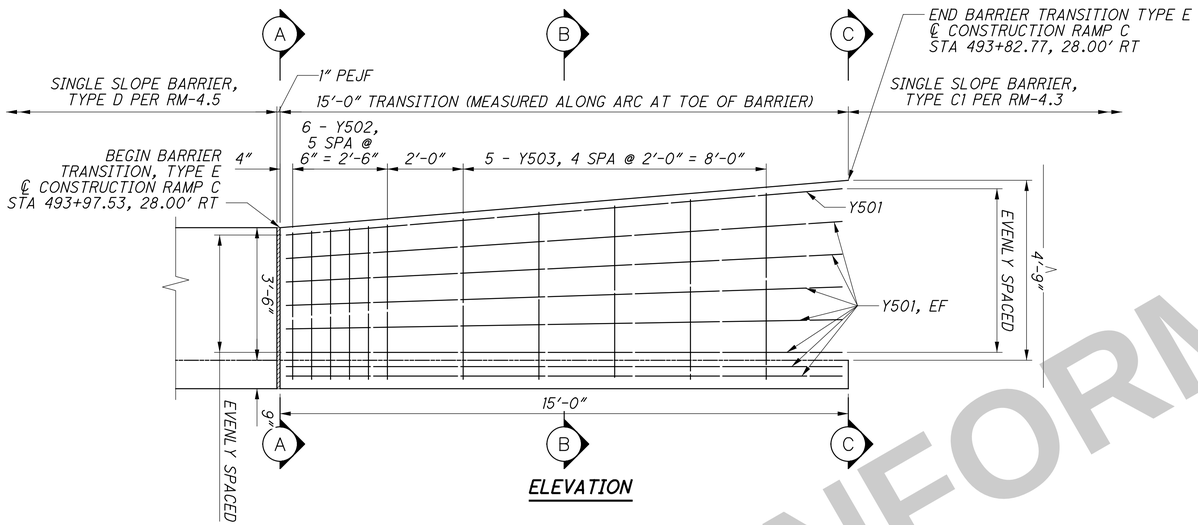
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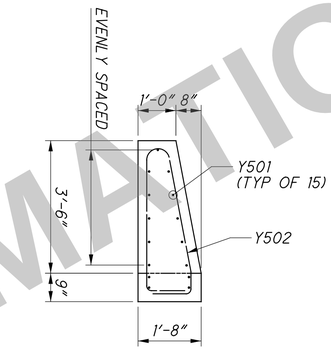
ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1, AS PER PLAN, A



PLAN

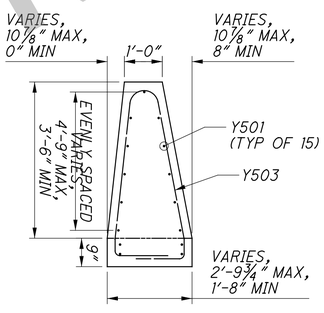


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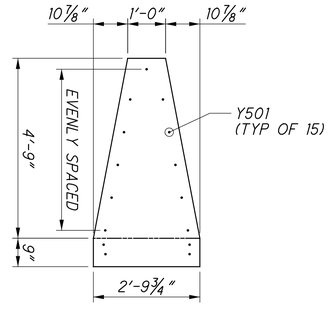


SECTION A-A

(SECTION AT ℄ CONSTRUCTION RAMP J STA 275+39.32)



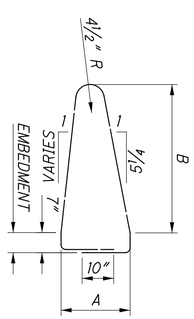
SECTION B-B



SECTION C-C

(SECTION AT ℄ CONSTRUCTION RAMP J STA 275+24.51)

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC (A)	INC (B)
BARRIER END ANCHORAGE, TYPE D TO TYPE C1 BARRIER												
Y501	15	14'-8"	229	STR								
Y502	6	10'-0" TO 10'-7"	64	1	1'-3" TO 1'-5"	3'-3½" TO 3'-5½"					0'-0⅜" (+)	0'-0⅜" (+)
Y503	5	11'-1" TO 13'-1"	63	1	1'-6¾" TO 2'-2¼"	3'-7½" TO 4'-4"					0'-1⅞" (+)	0'-2⅛" (+)



TYPE-1

NOTES

1. MATERIALS ARE SAME FOR THOSE SHOWN ON RM-4.3 AND RM-4.5, EXCEPT THAT CAST-IN-PLACE IS THE ONLY ACCEPTABLE METHOD. EDGES MAY BE CHAMFERED OR RADIUSED AS SHOWN ON THOSE DRAWINGS.
2. ALL LABOR, MATERIALS, AND INCIDENTALS NECESSARY TO CONSTRUCT THE BARRIER END ANCHORAGE PER THE DETAILS ON THIS SHEET SHALL BE INCLUDED FOR PAYMENT WITH ITEM 622 - CONCRETE BARRIER END ANCHORAGE, REINFORCED, TYPE C1, AS PER PLAN C.
3. PROVIDE 2" CLEAR COVER UNLESS NOTED OTHERWISE.

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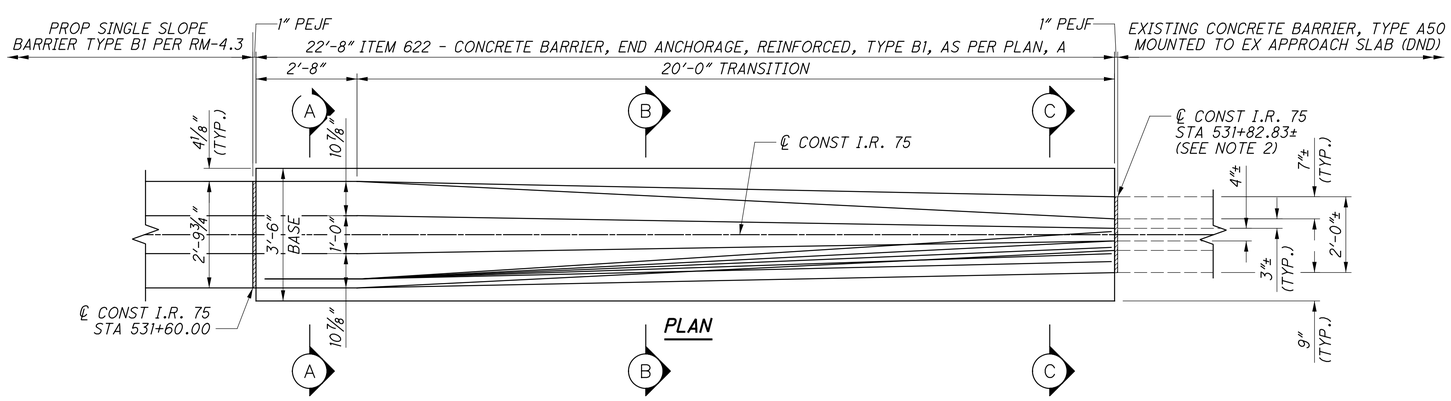
GENERAL NOTES

HAM-75-7.85

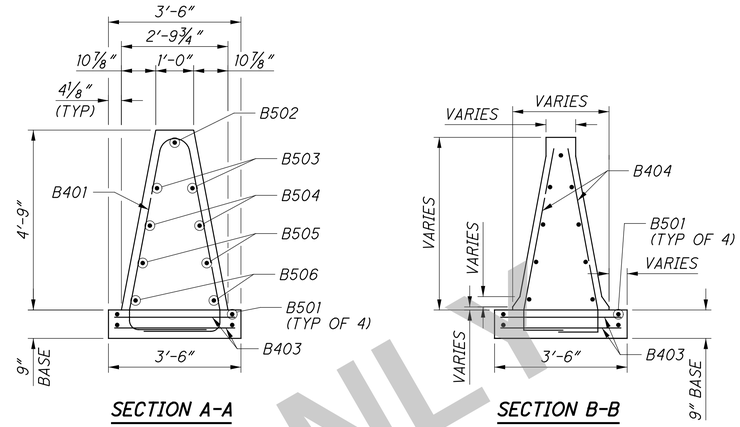
45
2017

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ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1, AS PER PLAN, A

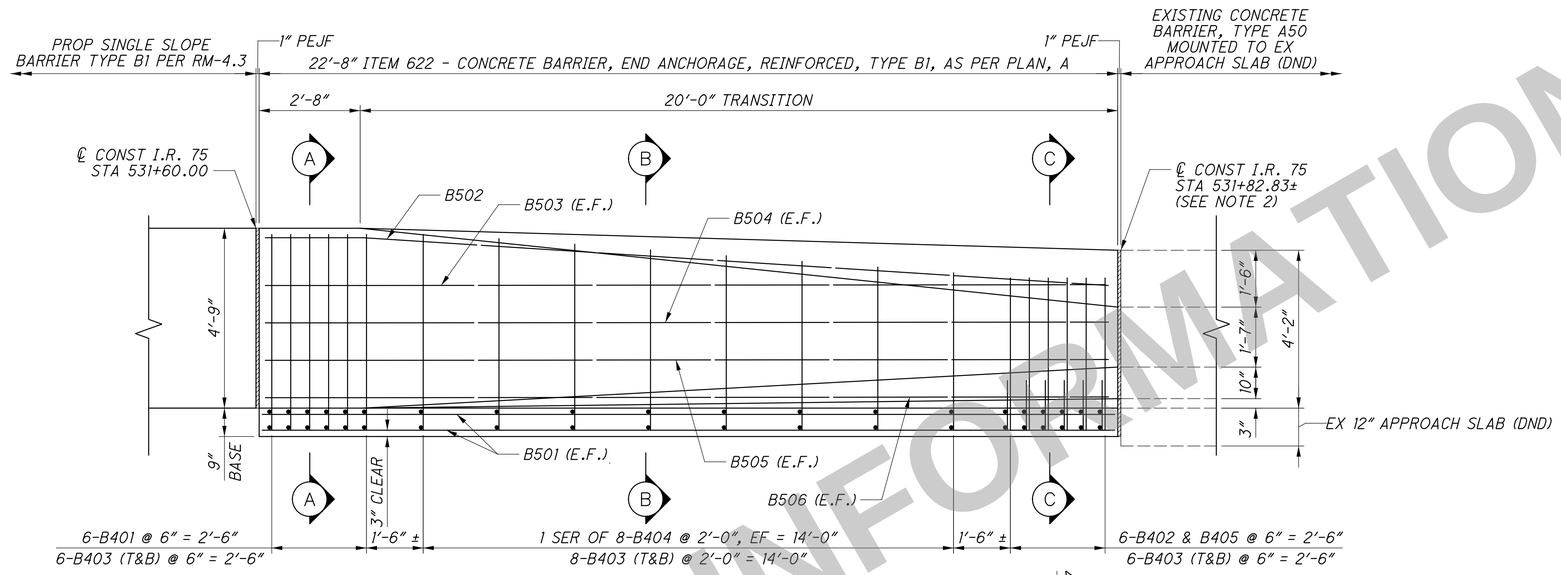


PLAN

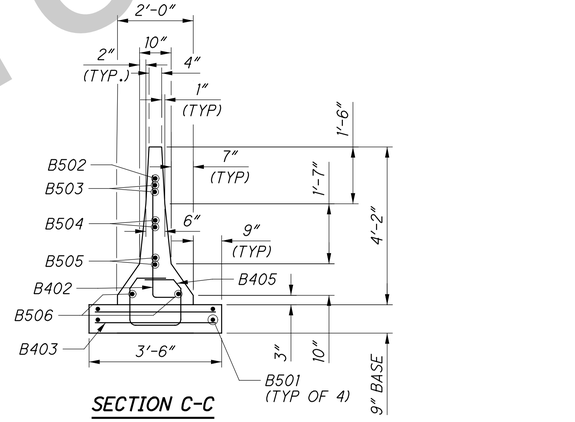


SECTION A-A

SECTION B-B

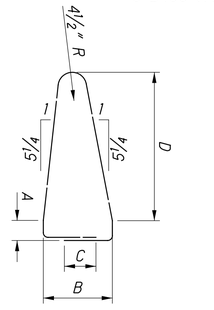


ELEVATION

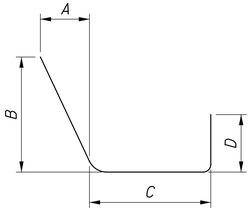


SECTION C-C

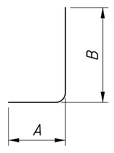
MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
BARRIER TRANSITION - FOR INFORMATION ONLY											
B401	6	14'-2"	57	34	0'-7"	2'-5"	1'-0"	4'-7"		0'-5"	
B402	6	3'-11"	16	1	3'-4"	0'-8"					
B403	40	3'-2"	85	STR							
	2 SR	5'-0"			3'-6"	0'-4"					A = 1 3/4"
B404	OF	TO	60	10	TO	TO	0'-7"	1'-0 1/2"			B = 1"
	8	6'-1"			4'-6"	11"					
B405	6	4'-7"	18	99	1'-4"	0'-11 1/2"	0'-3"	0'-2 1/4"			
B501	4	22'-4"	93	STR							
B502	1	22'-4"	23	19	2'-6"	19'-10"	1'-3"				
B503	2	22'-4"	47	19	2'-6"	19'-10"	0'-5 1/2"				
B504	2	22'-4"	47	19	2'-6"	19'-10"	0'-8"				
B505	2	22'-4"	47	19	2'-6"	19'-10"	0'-10"				
B506	2	22'-4"	47	19	2'-6"	19'-10"	1'-0"				
SUB-TOTAL			540								



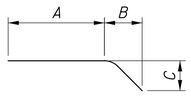
TYPE-34



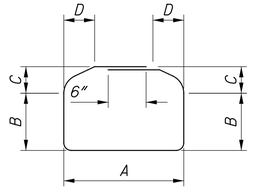
TYPE-10



TYPE-1



TYPE-19



TYPE-99

LEGEND

T&B = TOP AND BOTTOM
EF = EACH FACE
TYP = TYPICAL
DND = DO NOT DISTURB

NOTES

1. FOR ADDITIONAL BARRIER TRANSITION DETAILS SEE SHEET 1112. BARRIER TRANSITION TO BE PAID WITH ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1, AS PER PLAN, A.
2. THE NORTH END OF THE BARRIER TRANSITION SHALL REPLACE THE EXISTING I-3A BARRIER MEDIAN INLET AND WILL ABUT THE EXISTING BARRIER JOINT ON THE REAR (SOUTH) APPROACH SLAB.
3. PROVIDE 2" CLEAR COVER UNLESS NOTED OTHERWISE.

FOR INFORMATION ONLY

CALCULATED BDE CHECKED RJE

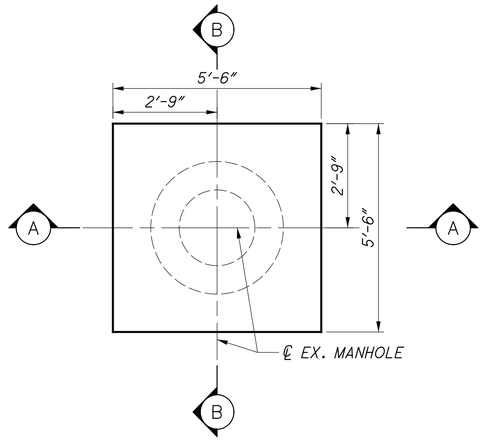
GENERAL NOTES

HAM-75-7.85

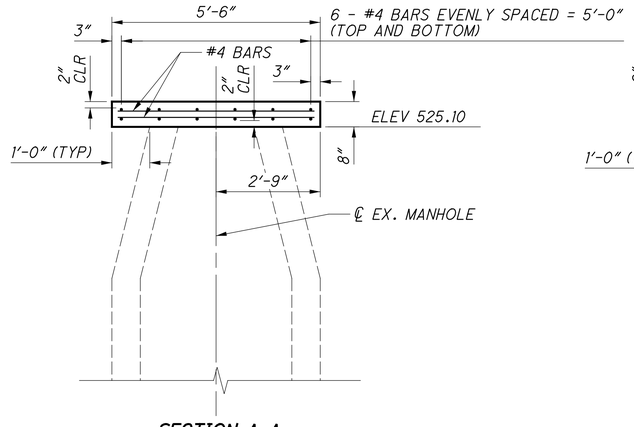
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ITEM 202 - MANHOLE ABANDONED, AS PER PLAN

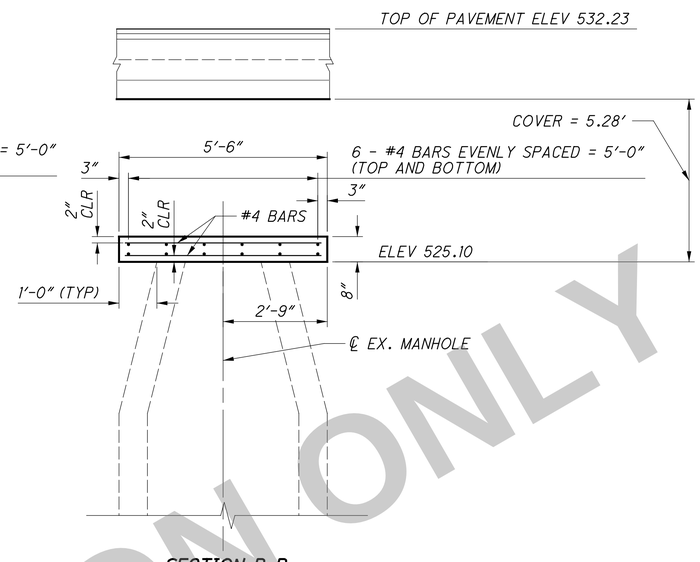
THE FOLLOWING DETAILS ARE PROVIDED FOR THE STRUCTURES LISTED BELOW. ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PERFORM THE WORK DETAILED BELOW SHALL BE INCLUDED IN THE THIS PAY ITEM PER THE GENERAL SUMMARY.



PLAN



SECTION A-A



SECTION B-B

CAP FOR EXISTING MANHOLE @ STA 419+02.25, 20.23' LT (℄ CONST RAMP N)

FOR INFORMATION ONLY

LEGEND

- PORTIONS OF EXISTING DRAINAGE STRUCTURES TO BE REMOVED

DESIGN DATA

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI

REINFORCING STEEL - ASTM A615 OR A996 GRADE 60, MINIMUM YIELD STRENGTH 60,000 PSI.

CALCULATED RJE CHECKED RSH

GENERAL NOTES

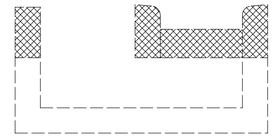
HAM-75-7.85

47
2017

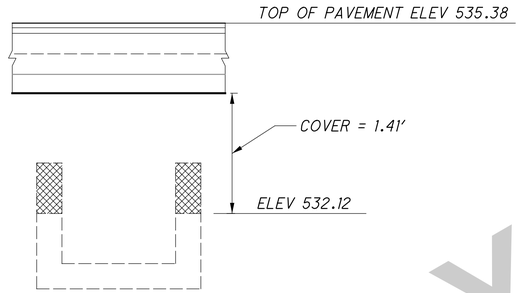
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ITEM 202 - INLET ABANDONED, AS PER PLAN

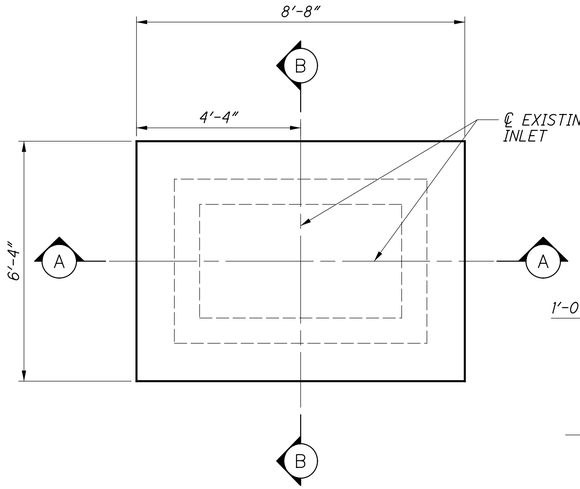
THE FOLLOWING DETAILS ARE PROVIDED FOR THE STRUCTURES LISTED BELOW. ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PERFORM THE WORK DETAILED BELOW SHALL BE INCLUDED IN THE THIS PAY ITEM PER THE GENERAL SUMMARY.



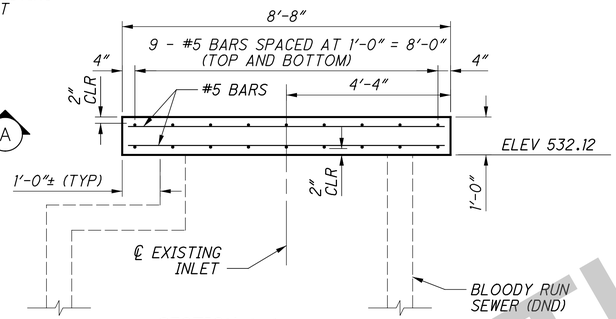
SECTION C-C (REMOVAL DETAILS)



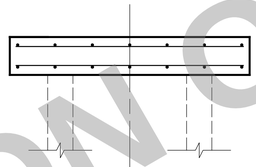
SECTION D-D (REMOVAL DETAILS)



PLAN

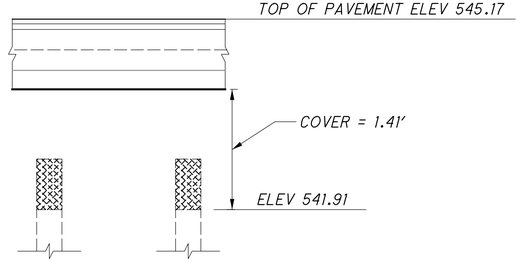


SECTION A-A

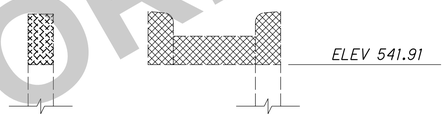


SECTION B-B

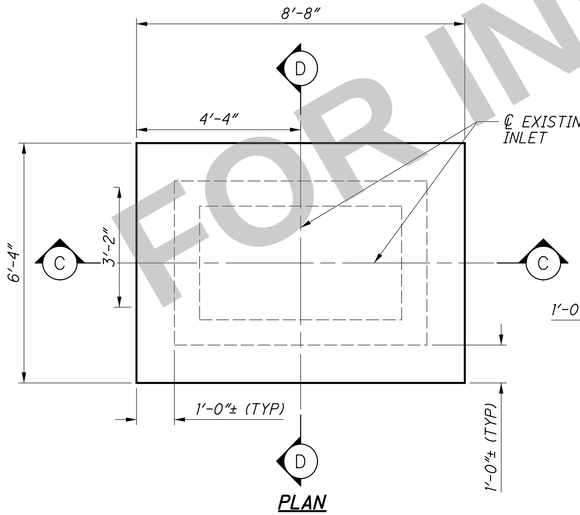
CAP FOR EXISTING MANHOLE @ STA 419+02.25, 20.23' LT (℄ CONST RAMP N)



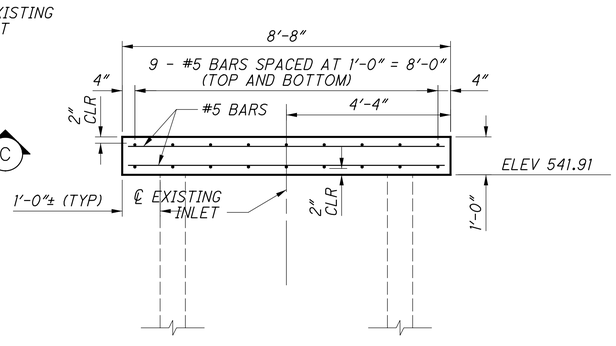
SECTION D-D (REMOVAL DETAILS)



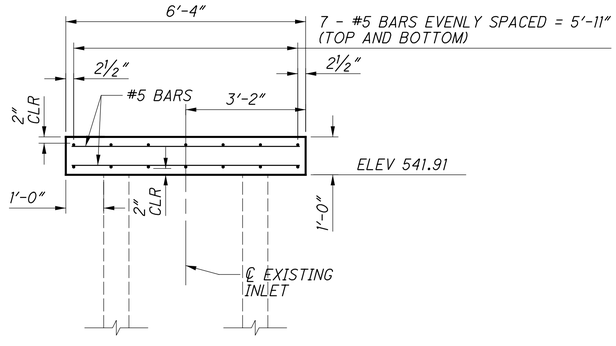
SECTION C-C (REMOVAL DETAILS)



PLAN



SECTION C-C



SECTION D-D

LEGEND

- PORTIONS OF EXISTING DRAINAGE STRUCTURES TO BE REMOVED

CAP FOR EXISTING INLET @ STA 481+14.54, 0.71' LT (℄ CONST I.R. 75)

DESIGN DATA

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI

REINFORCING STEEL - ASTM A615 OR A996 GRADE 60, MINIMUM YIELD STRENGTH 60,000 PSI.

FOR INFORMATION ONLY

CALCULATED RJE CHECKED RSH

GENERAL NOTES

HAM-75-7.85

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ITEM 611 - INLET NO.3 FOR SINGLE SLOPE BARRIER, TYPE B1, AS PER PLAN, A

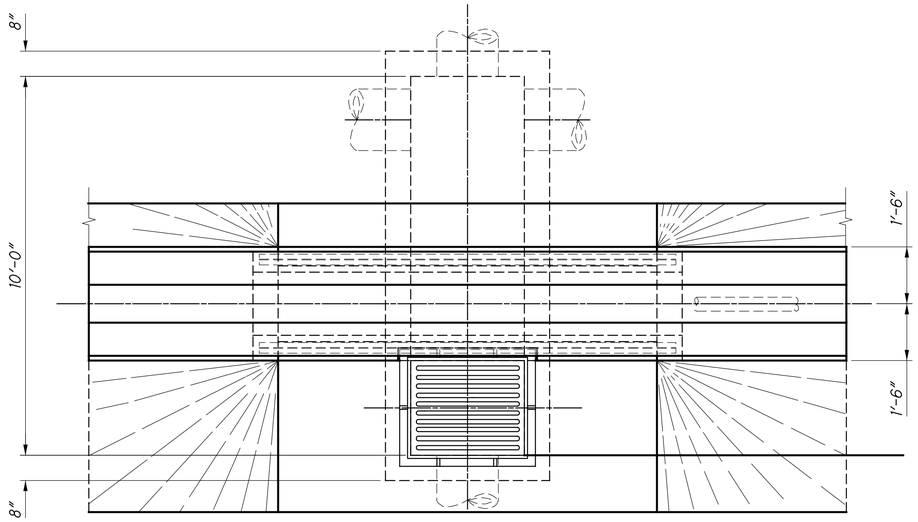
THE FOLLOWING DETAILS ARE PROVIDED FOR THE STRUCTURES LISTED BELOW. ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PERFORM THE WORK DETAILED BELOW SHALL BE INCLUDED IN THE THIS PAY ITEM PER THE GENERAL SUMMARY.

STR. NO.	STATION	SIDE	STR. NO.	STATION	SIDE
47	22+45	RT	302	480+69	LT
48	26+30	RT	607	502+00	LT
34	440+04	RT	622	505+00	LT
116	416+00	RT	725	527+00	RT
118	444+50	RT			
113	464+00	RT			
114	465+80	RT			
132	459+50	LT			
131	460+48	LT			
133	461+50	RT			

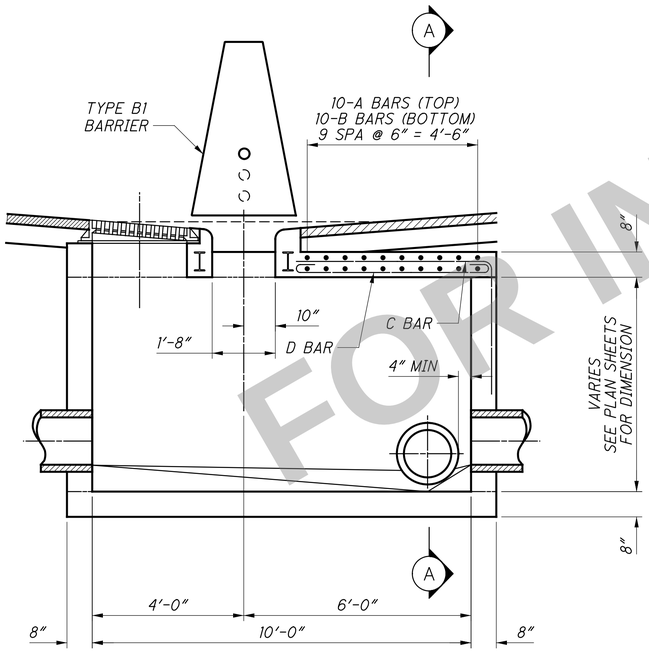
THIS DETAIL APPLIES TO INLETS AT THE FOLLOWING LOCATIONS: SEE TABLE ABOVE

INLET REINFORCING LIST

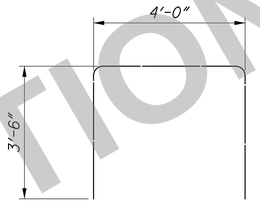
BAR A			BAR B			BAR C			BAR D		
NUMBER	SIZE	LENGTH	NUMBER	SIZE	LENGTH	NUMBER	SIZE	LENGTH	NUMBER	SIZE	LENGTH
10	#6	10'-10"	10	#6	5'-4"	8	#6	8'-1"	8	#6	6'-0"



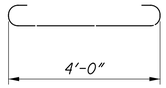
PLAN



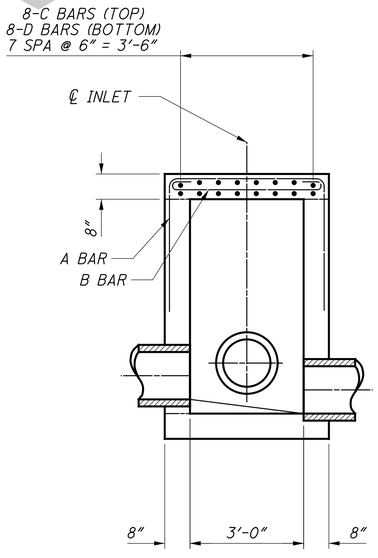
SECTION D-D



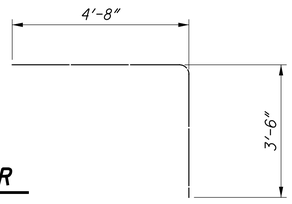
A BAR



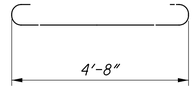
B BAR



SECTION A-A



C BAR



D BAR

NOTES

1. FOR ADDITIONAL DETAILS, DIMENSIONS AND REINFORCING, SEE STANDARD CONSTRUCTION DRAWING I-2.1.
2. ROTATE BARS AS NECESSARY TO MAINTAIN REQUIRED MINIMUM CONCRETE COVER.

FOR INFORMATION ONLY

CALCULATED RJE CHECKED RSH

GENERAL NOTES

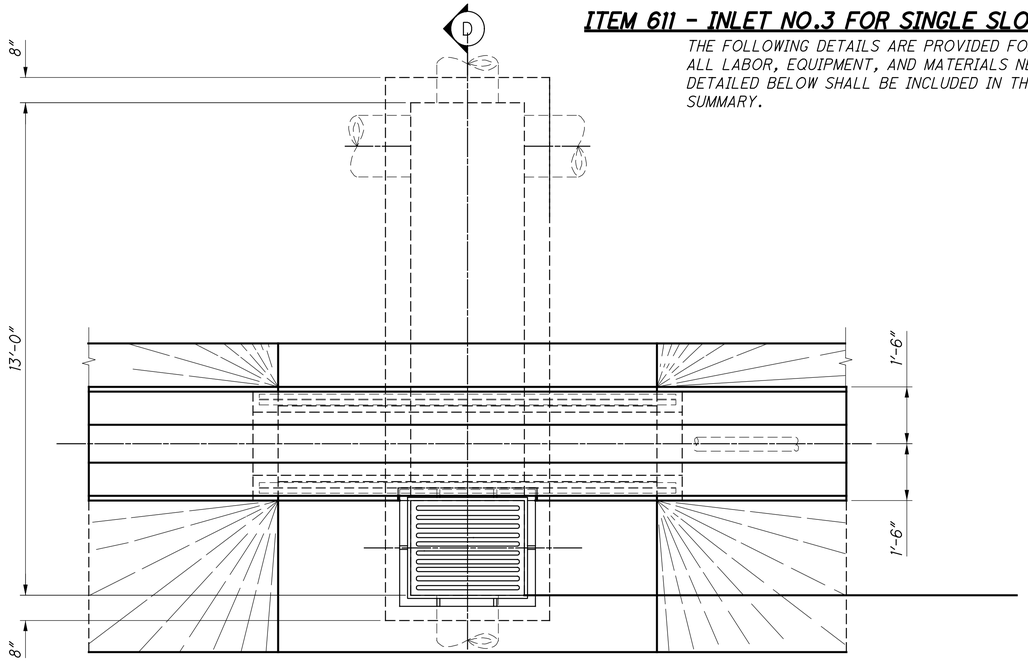
HAM-75-7.85

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ITEM 611 - INLET NO.3 FOR SINGLE SLOPE BARRIER, TYPE B1, AS PER PLAN, B

THE FOLLOWING DETAILS ARE PROVIDED FOR THE STRUCTURES LISTED BELOW. ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PERFORM THE WORK DETAILED BELOW SHALL BE INCLUDED IN THE THIS PAY ITEM PER THE GENERAL SUMMARY.

STR. NO.	STATION	SIDE
729	517+00	RT
732	514+00	RT
736	511+00	RT

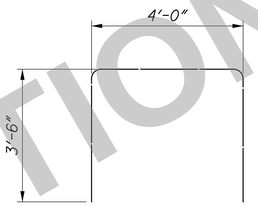


PLAN

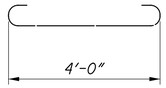
THIS DETAIL APPLIES TO INLETS AT THE FOLLOWING LOCATIONS: SEE TABLE ABOVE

INLET REINFORCING LIST

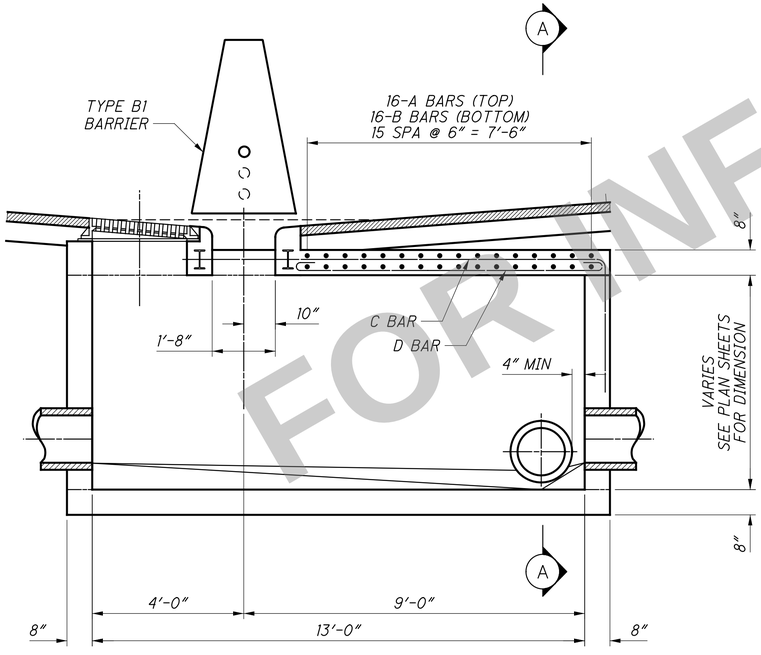
BAR A			BAR B			BAR C			BAR D		
NUMBER	SIZE	LENGTH	NUMBER	SIZE	LENGTH	NUMBER	SIZE	LENGTH	NUMBER	SIZE	LENGTH
22	#6	10'-8"	22	#6	5'-4"	8	#6	14'-5"	8	#6	12'-5"



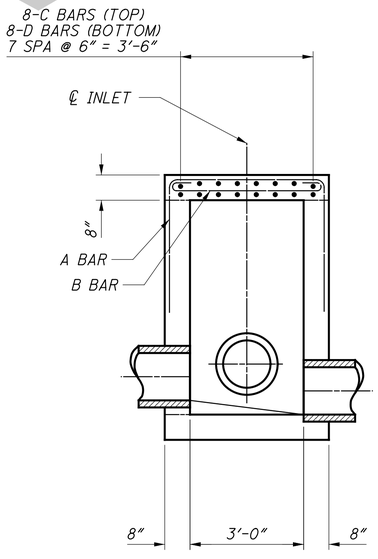
A BAR



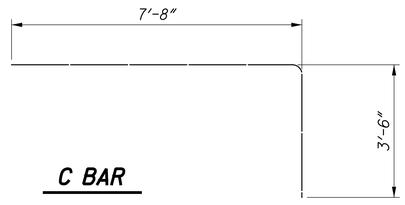
B BAR



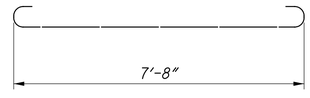
SECTION D-D



SECTION A-A



C BAR



D BAR

NOTES

1. FOR ADDITIONAL DETAILS, DIMENSIONS AND REINFORCING, SEE STANDARD CONSTRUCTION DRAWING I-3B.
2. ROTATE BARS AS NECESSARY TO MAINTAIN REQUIRED MINIMUM CONCRETE COVER.

FOR INFORMATION ONLY

CALCULATED RJE CHECKED RSH

GENERAL NOTES

HAM-75-7.85

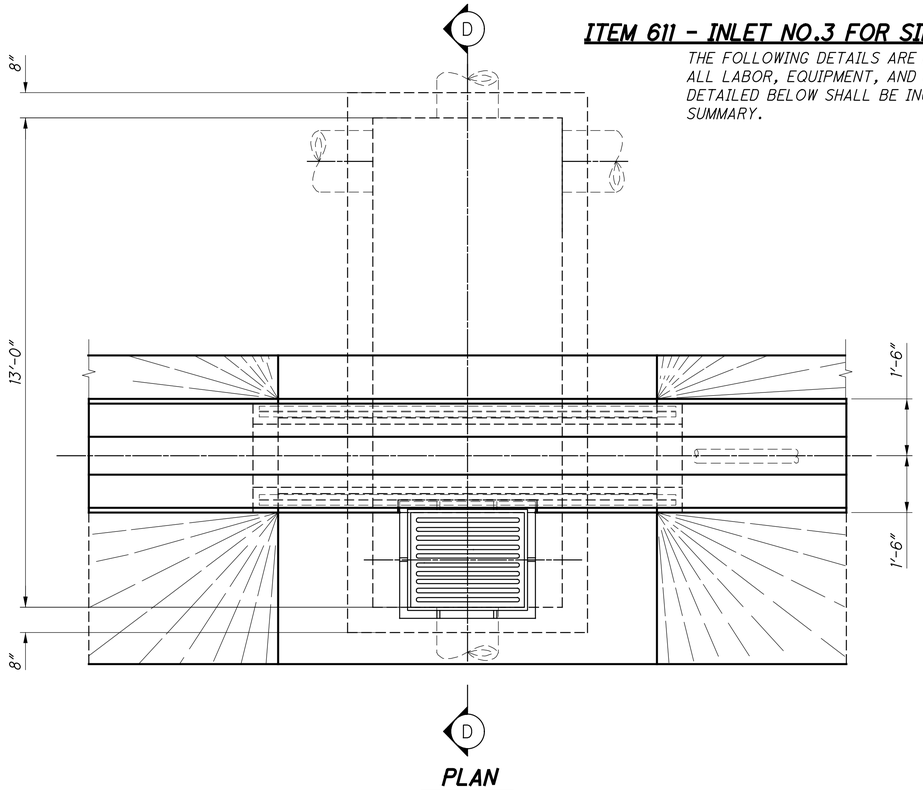
50 2017

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ITEM 611 - INLET NO.3 FOR SINGLE SLOPE BARRIER, TYPE B1, AS PER PLAN, C

THE FOLLOWING DETAILS ARE PROVIDED FOR THE STRUCTURES LISTED BELOW. ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PERFORM THE WORK DETAILED BELOW SHALL BE INCLUDED IN THE THIS PAY ITEM PER THE GENERAL SUMMARY.

STR. NO.	STATION	SIDE
728	520+00	RT
738	508+00	RT

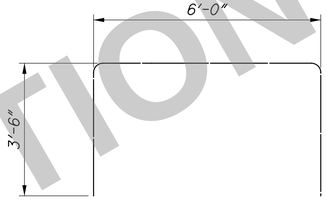


PLAN

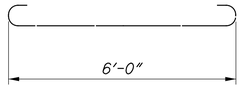
THIS DETAIL APPLIES TO INLETS AT THE FOLLOWING LOCATIONS: SEE TABLE ABOVE

INLET REINFORCING LIST

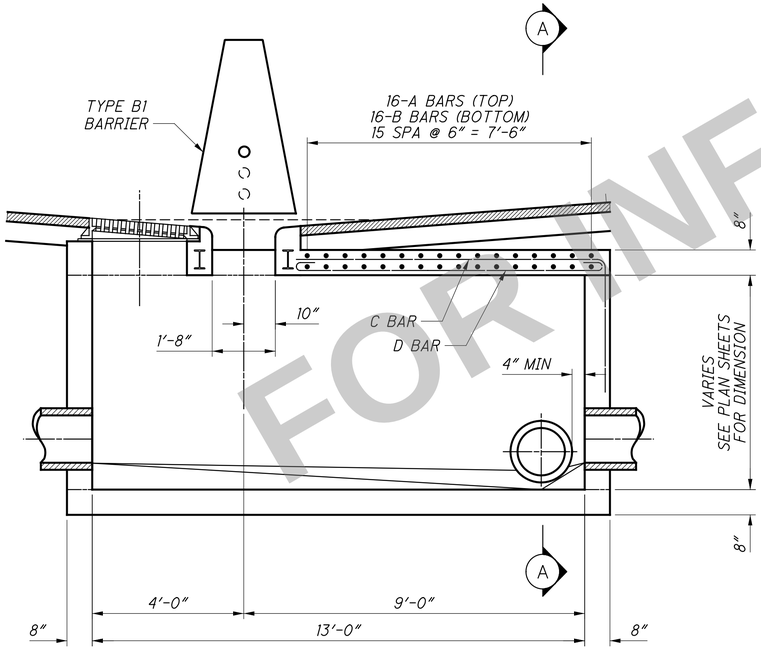
BAR A			BAR B			BAR C			BAR D		
NUMBER	SIZE	LENGTH	NUMBER	SIZE	LENGTH	NUMBER	SIZE	LENGTH	NUMBER	SIZE	LENGTH
16	#6	9'-4"	16	#6	7'-3"	12	#6	11'-0"	12	#6	9'-0"



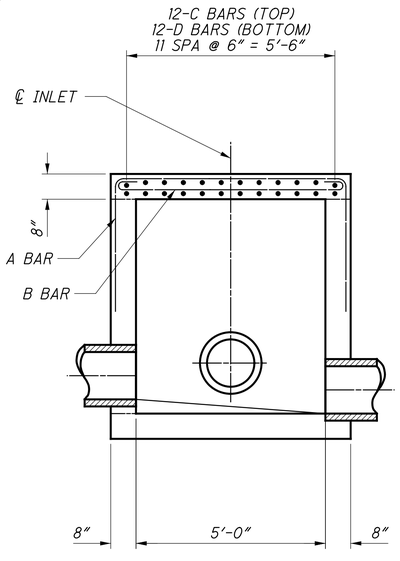
A BAR



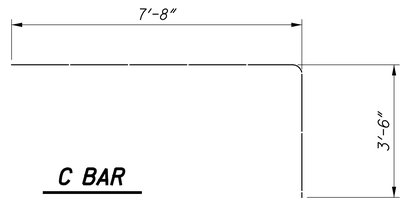
B BAR



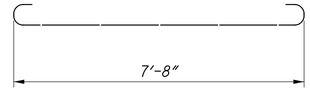
SECTION D-D



SECTION A-A



C BAR



D BAR

NOTES

1. FOR ADDITIONAL DETAILS, DIMENSIONS AND REINFORCING, SEE STANDARD CONSTRUCTION DRAWING I-3B.
2. ROTATE BARS AS NECESSARY TO MAINTAIN REQUIRED MINIMUM CONCRETE COVER.

FOR INFORMATION ONLY

CALCULATED RJE CHECKED RSH

GENERAL NOTES

HAM-75-7.85

51
2017

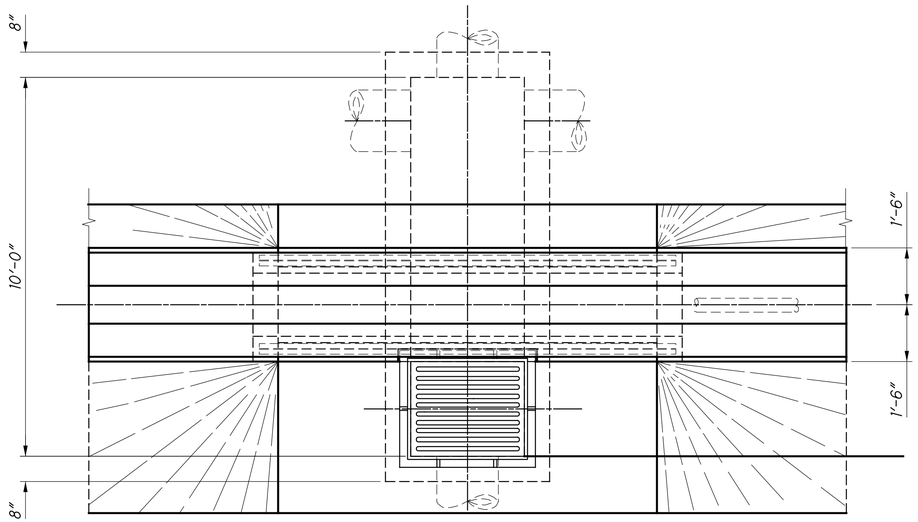
PLOTTED BY efoley 2/18/2022 1:26:09 PM J:\20110903\ODOT\HAM\77889\roadway\sheets\77889GN008.dgn

ITEM 611 - INLET NO.3 FOR SINGLE SLOPE BARRIER, TYPE C1, AS PER PLAN, A

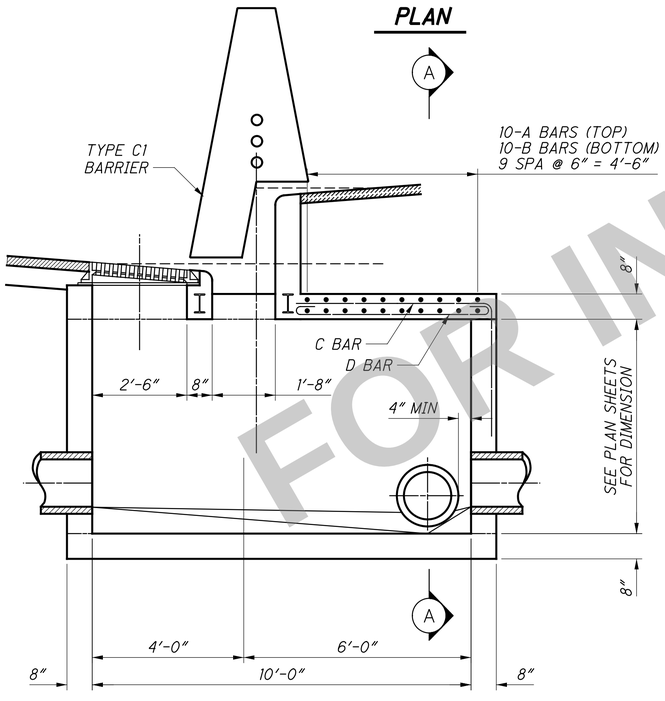
THE FOLLOWING DETAILS ARE PROVIDED FOR THE STRUCTURES LISTED BELOW. ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PERFORM THE WORK DETAILED BELOW SHALL BE INCLUDED IN THE THIS PAY ITEM PER THE GENERAL SUMMARY.

STR. NO.	STATION	SIDE
303	478+50	LT

FOR INFORMATION ONLY



PLAN

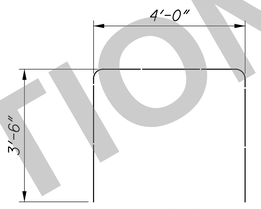


SECTION D-D

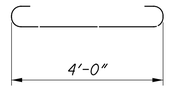
THIS DETAIL APPLIES TO INLETS AT THE FOLLOWING LOCATIONS: SEE TABLE ABOVE

INLET REINFORCING LIST

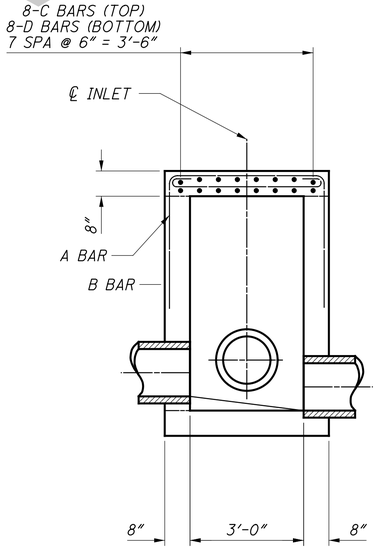
BAR A			BAR B			BAR C			BAR D		
NUMBER	SIZE	LENGTH	NUMBER	SIZE	LENGTH	NUMBER	SIZE	LENGTH	NUMBER	SIZE	LENGTH
10	#6	10'-8"	10	#6	5'-4"	8	#6	8'-0"	8	#6	6'-0"



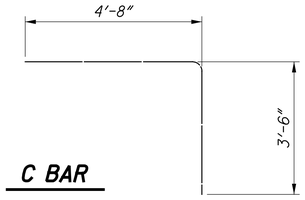
A BAR



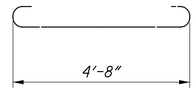
B BAR



SECTION A-A



C BAR



D BAR

NOTES

1. FOR ADDITIONAL DETAILS, DIMENSIONS AND REINFORCING, SEE STANDARD CONSTRUCTION DRAWING I-3C.
2. ROTATE BARS AS NECESSARY TO MAINTAIN REQUIRED MINIMUM CONCRETE COVER.

CALCULATED RJE CHECKED RSH

GENERAL NOTES

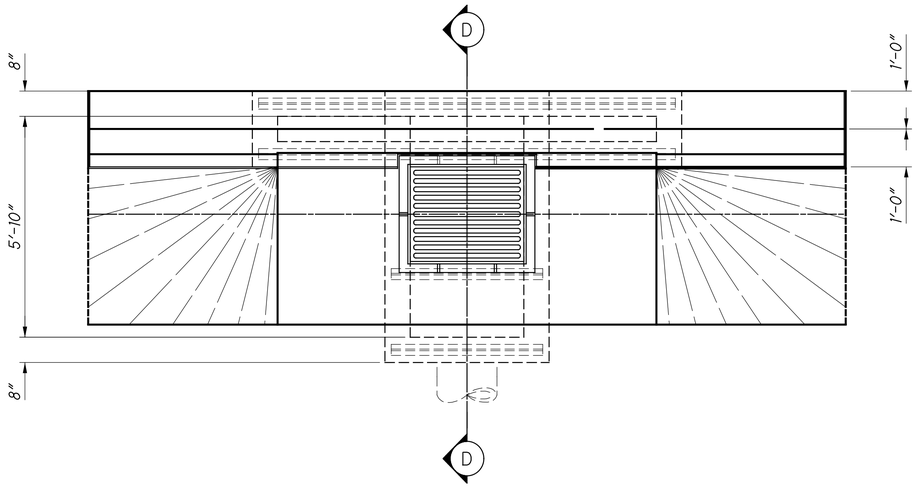
HAM-75-7.85

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ITEM 611 - INLET NO.3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN, A

THE FOLLOWING DETAILS ARE PROVIDED FOR THE STRUCTURES LISTED BELOW. ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PERFORM THE WORK DETAILED BELOW SHALL BE INCLUDED IN THE THIS PAY ITEM PER THE GENERAL SUMMARY.

STR. NO.	STATION	SIDE
610	505+00	RT
708	517+90	LT
709	514+85	LT
710	511+84	LT

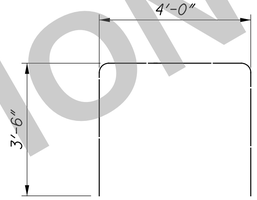


PLAN

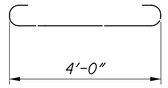
THIS DETAIL APPLIES TO INLETS AT THE FOLLOWING LOCATIONS: SEE TABLE ABOVE

INLET REINFORCING LIST

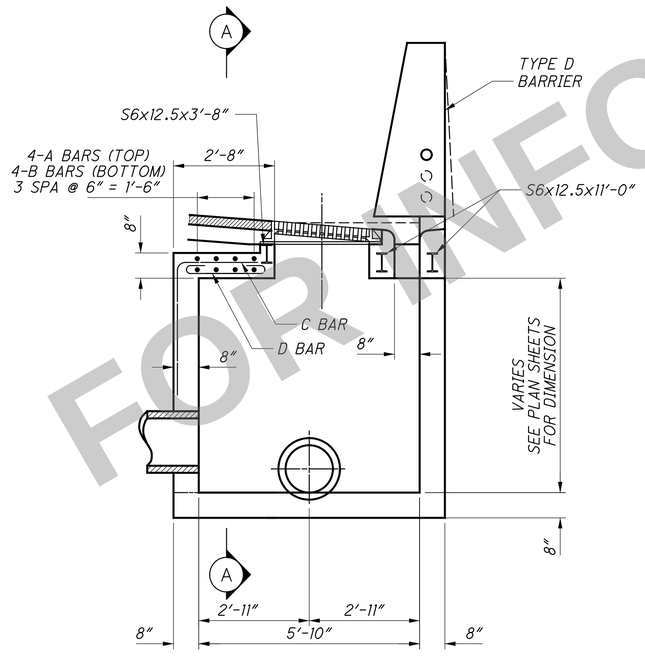
BAR A			BAR B			BAR C			BAR D		
NUMBER	SIZE	LENGTH	NUMBER	SIZE	LENGTH	NUMBER	SIZE	LENGTH	NUMBER	SIZE	LENGTH
4	#6	12'-8"	4	#6	5'-4"	12	#6	5'-5"	12	#6	3'-7"



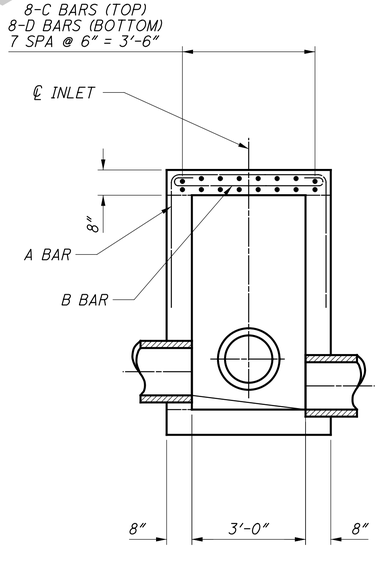
A BAR



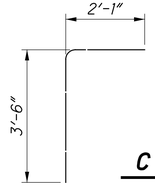
B BAR



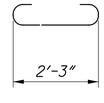
SECTION D-D



SECTION A-A



C BAR



D BAR

NOTES

1. FOR ADDITIONAL DETAILS, DIMENSIONS AND REINFORCING, SEE STANDARD CONSTRUCTION DRAWING I-3D.
2. ROTATE BARS AS NECESSARY TO MAINTAIN REQUIRED MINIMUM CONCRETE COVER.

FOR INFORMATION ONLY

CALCULATED RJE CHECKED RSH

GENERAL NOTES

HAM-75-7.85

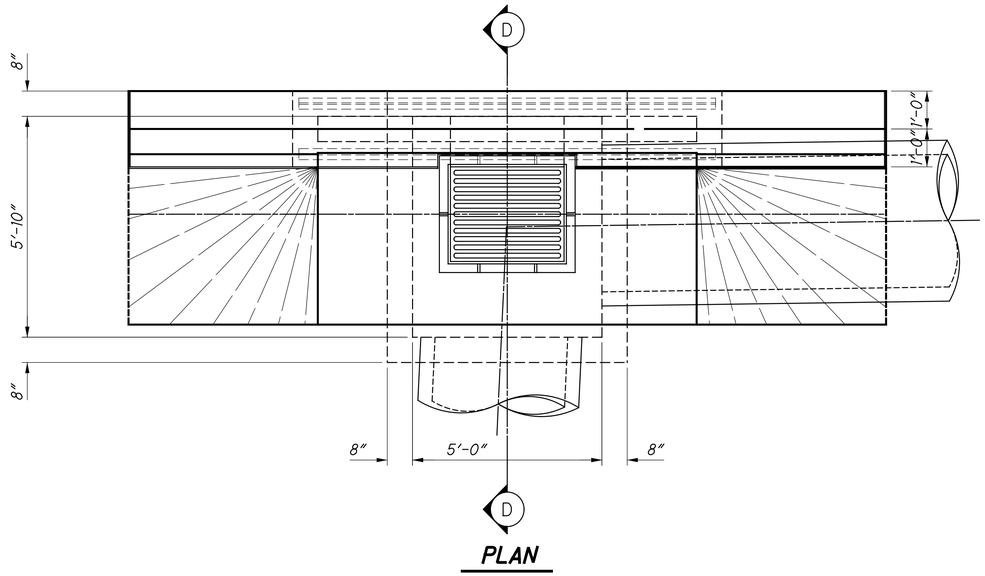
53
2017

PLOTTED BY efoley 2/18/2022 1:26:10 PM J:\20110903\ODOT\HAM\77889\roadway\sheets\77889GN009.dgn

ITEM 611 - INLET NO.3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN, B

THE FOLLOWING DETAILS ARE PROVIDED FOR THE STRUCTURES LISTED BELOW. ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PERFORM THE WORK DETAILED BELOW SHALL BE INCLUDED IN THE THIS PAY ITEM PER THE GENERAL SUMMARY.

STR. NO.	STATION	SIDE
739	508+00	RT

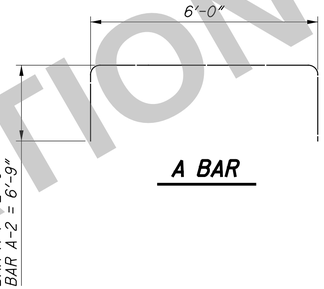


PLAN

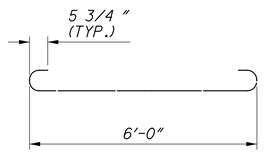
THIS DETAIL APPLIES TO INLETS AT THE FOLLOWING LOCATIONS: SEE TABLE ABOVE

INLET REINFORCING LIST

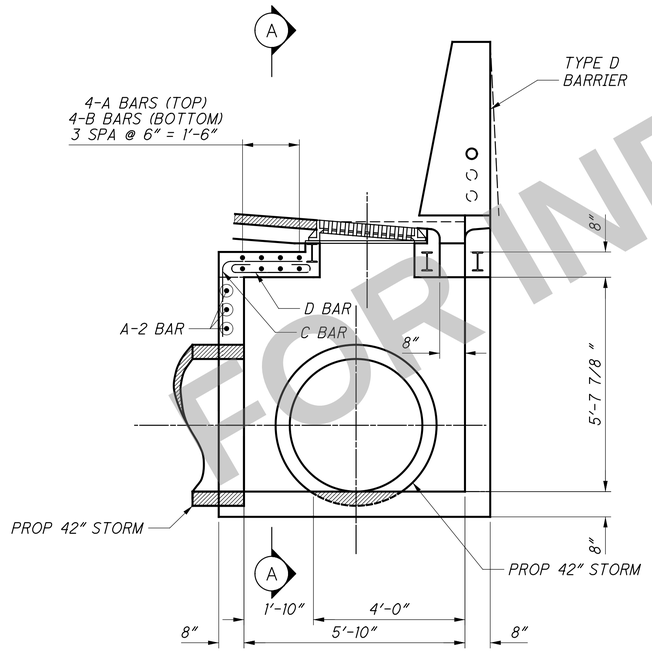
BAR A-1			BAR A-2			BAR B			BAR C			BAR D		
NUMBER	SIZE	LENGTH	NUMBER	SIZE	LENGTH	NUMBER	SIZE	LENGTH	NUMBER	SIZE	LENGTH	NUMBER	SIZE	LENGTH
4	#6	9'-8"	4	#6	19'-2"	4	#6	7'-4"	12	#6	3'-10"	12	#6	3'-7"



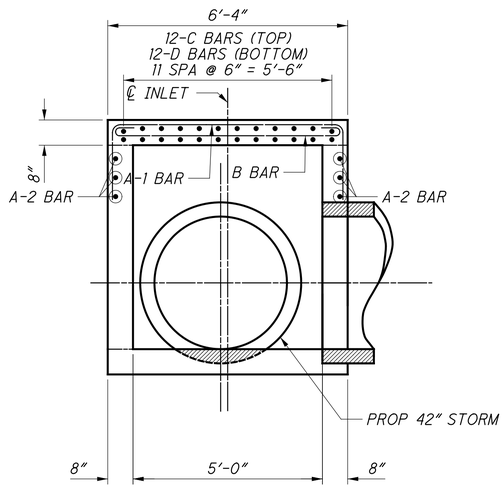
A BAR



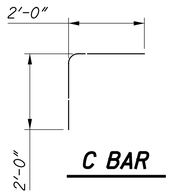
B BAR



SECTION D-D



SECTION A-A



C BAR



D BAR

NOTES

1. FOR ADDITIONAL DETAILS, DIMENSIONS AND REINFORCING, SEE STANDARD CONSTRUCTION DRAWING I-3D.
2. ROTATE BARS AS NECESSARY TO MAINTAIN REQUIRED MINIMUM CONCRETE COVER.

FOR INFORMATION ONLY

CALCULATED RJE CHECKED RSH

GENERAL NOTES

HAM-75-7.85

54
2017

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ITEM 611 - INLET NO.3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN, C

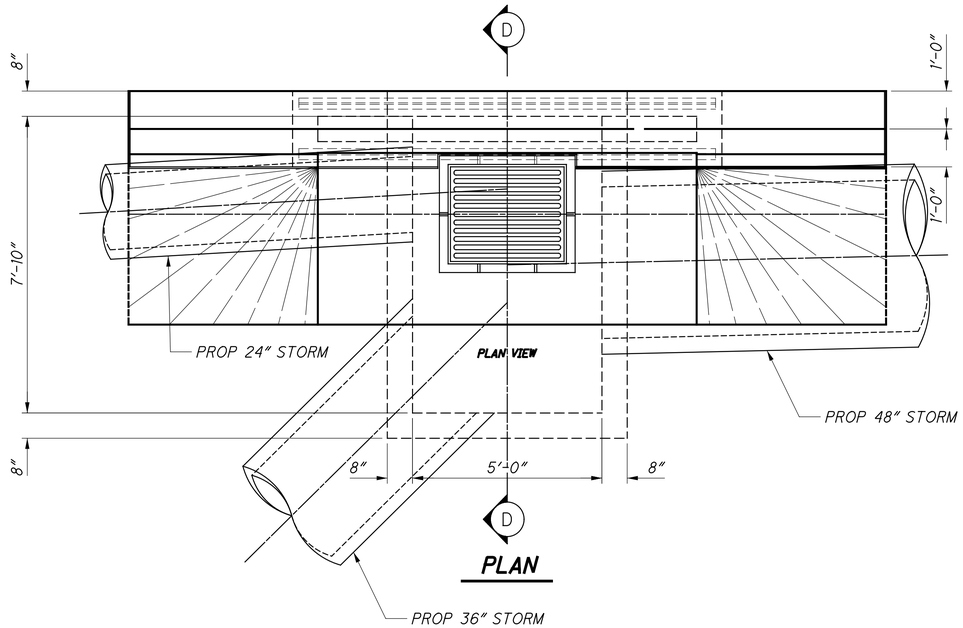
THE FOLLOWING DETAILS ARE PROVIDED FOR THE STRUCTURES LISTED BELOW. ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PERFORM THE WORK DETAILED BELOW SHALL BE INCLUDED IN THE THIS PAY ITEM PER THE GENERAL SUMMARY.

STR. NO.	STATION	SIDE
711	509+00	LT

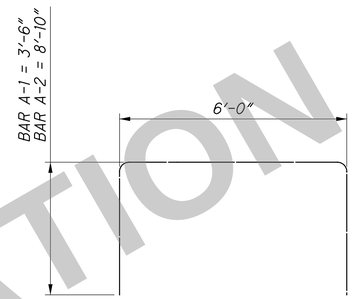
THIS DETAIL APPLIES TO INLETS AT THE FOLLOWING LOCATIONS: SEE TABLE ABOVE

INLET REINFORCING LIST

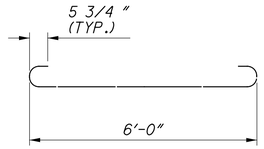
BAR A-1			BAR A-2			BAR B			BAR C			BAR D		
NUMBER	SIZE	LENGTH	NUMBER	SIZE	LENGTH	NUMBER	SIZE	LENGTH	NUMBER	SIZE	LENGTH	NUMBER	SIZE	LENGTH
4	#6	12'-8"	3	#6	23'-4"	4	#6	7'-4"	12	#6	4'-8"	12	#6	5'-8"



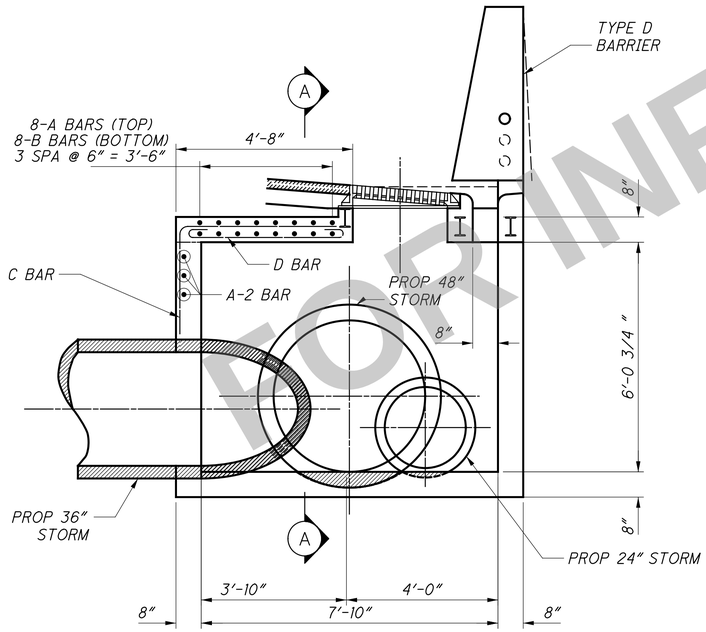
PLAN



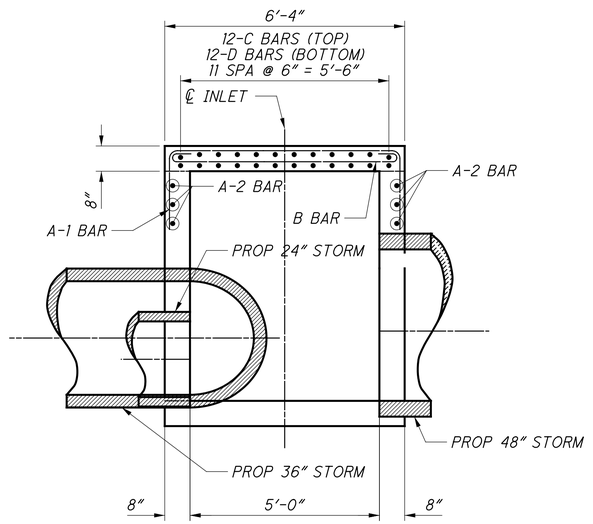
A BAR



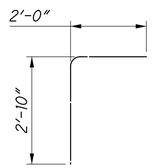
B BAR



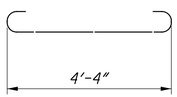
SECTION D-D



SECTION A-A



C BAR



D BAR

NOTES

1. FOR ADDITIONAL DETAILS, DIMENSIONS AND REINFORCING, SEE STANDARD CONSTRUCTION DRAWING I-3D.
2. ROTATE BARS AS NECESSARY TO MAINTAIN REQUIRED MINIMUM CONCRETE COVER.

FOR INFORMATION ONLY

CALCULATED RJE CHECKED RSH

GENERAL NOTES

HAM-75-7.85

55
2017

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ROSS RUN SEWER PLANS PROVIDED TO FACILITATE PROPOSED DRAIANGE CONNECTION

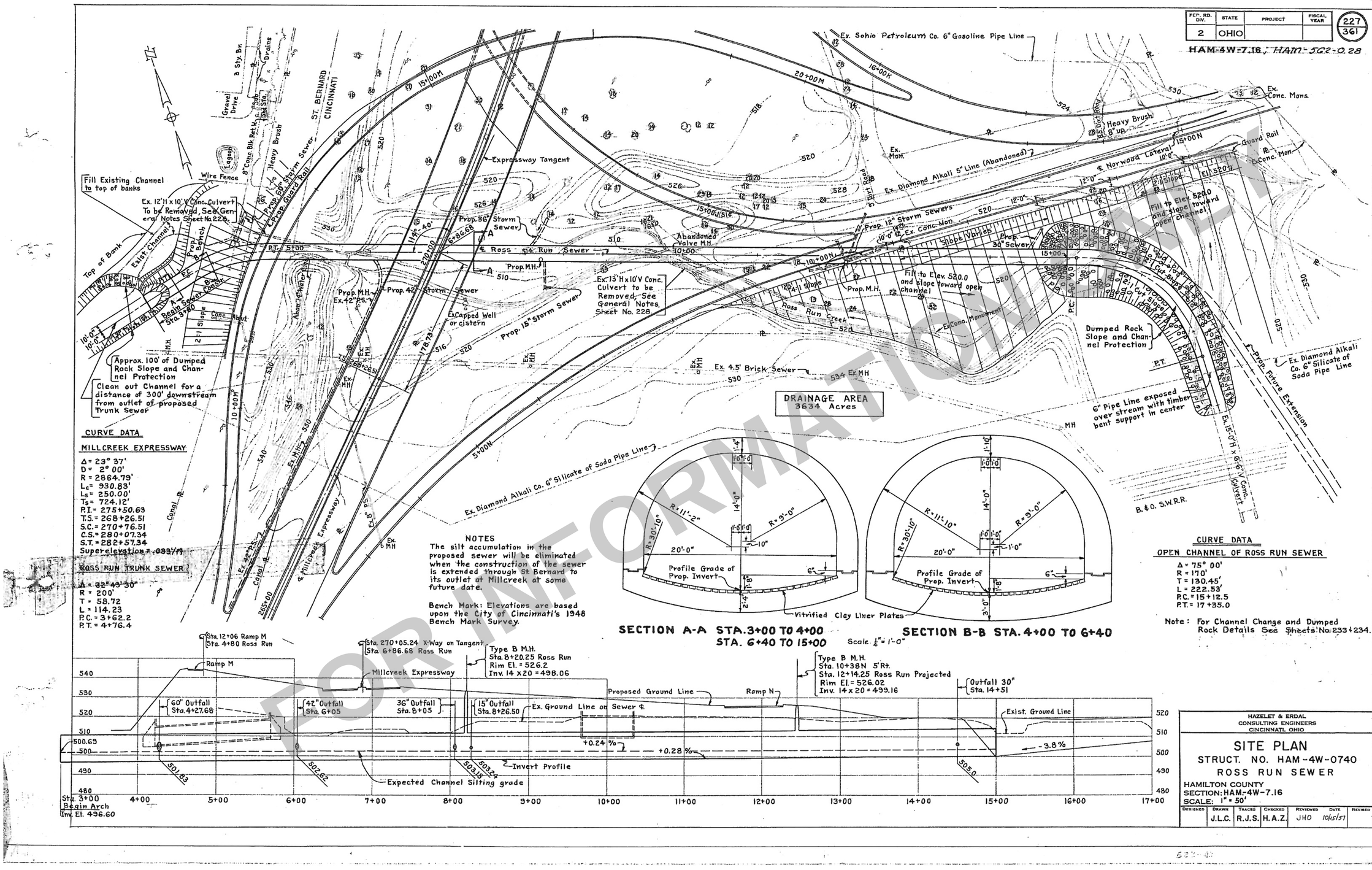
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

227
361

HAM-SW-7.16, HAM-562-0.28

CALCULATED RJE
CHECKED RSH

GENERAL NOTES



CURVE DATA

MILLCREEK EXPRESSWAY

Δ = 23° 37'
D = 2° 00'
R = 2864.79'
L_c = 930.83'
L_s = 250.00'
T_s = 724.12'
P.I. = 275+50.63
T.S. = 268+26.51
S.C. = 270+76.51
C.S. = 280+07.34
S.T. = 282+57.34
Superelevation = .033'/'

ROSS RUN TRUNK SEWER

Δ = 82°49'30"
R = 200'
T = 58.72
L = 114.23
P.C. = 3+62.2
P.T. = 4+76.4

NOTES

The silt accumulation in the proposed sewer will be eliminated when the construction of the sewer is extended through St Bernard to its outlet at Millcreek at some future date.

Bench Mark: Elevations are based upon the City of Cincinnati's 1948 Bench Mark Survey.

SECTION A-A STA. 3+00 TO 4+00
STA. 6+40 TO 15+00

SECTION B-B STA. 4+00 TO 6+40

Scale 1/4" = 1'-0"

CURVE DATA

OPEN CHANNEL OF ROSS RUN SEWER

Δ = 75° 00'
R = 170'
T = 130.45'
L = 222.53'
P.C. = 15+12.5
P.T. = 17+35.0

Note: For Channel Change and Dumped Rock Details See Sheets No. 233 & 234.

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

SITE PLAN

STRUCT. NO. HAM-4W-0740
ROSS RUN SEWER
HAMILTON COUNTY
SECTION: HAM-4W-7.16
SCALE: 1" = 50'

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	J.L.C.	R.J.S.	H.A.Z.	JHO	10/15/57	

HAM-75-7.85

56
2017

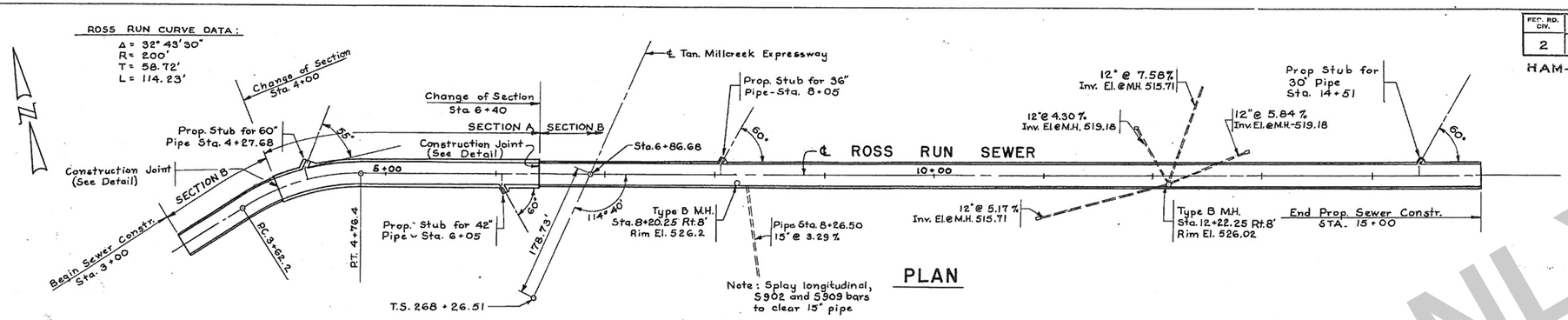
FOR INFORMATION ONLY

PLOTTED BY efoley 2/18/2022 1:26:11 PM J:\20110903\ODOT\HAM\77889\roadway\sheets\77889GN003.dgn

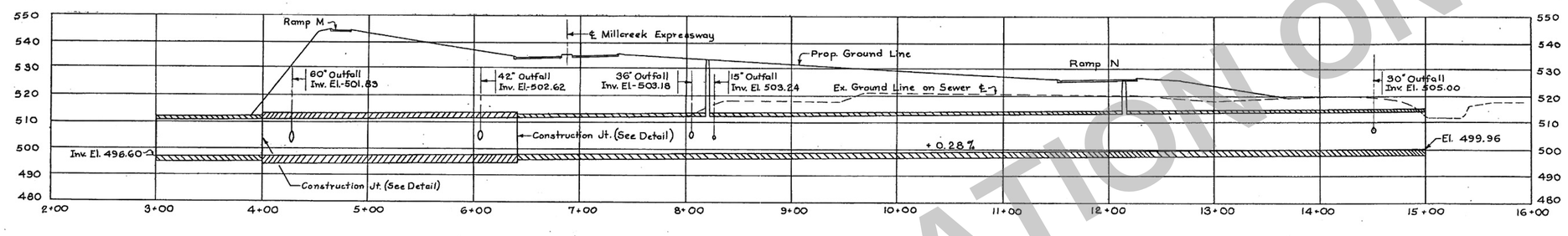
ROSS RUN SEWER PLANS PROVIDED TO FACILITATE PROPOSED DRAIANGE CONNECTION

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR	228 / 361
2	OHIO			

HAM-4W-7.16 ; HAM-562-0.28



PLAN



PROFILE

GENERAL NOTES

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 10-1-51, together with revisions thereof dated 7-15-52, 4-1-54, and 2-1-55.

REMOVAL OF EXISTING STRUCTURE: The existing 12'x 10' and 13'x10' concrete culverts shall be removed in accordance with the provisions of Item S-24.

CONCRETE: Shall be Class "C"

SURFACE FINISH OF CONCRETE: The inside of the sewer shall be finished in accordance with the provisions of Item S-1.

BACKFILL: Shall be placed symmetrically on both sides of the structure and preferably simultaneously along the entire length, in addition to observing the provisions of Item E-2.

VITRIFIED CLAY LINER PLATES: Vitrified clay liner plates shall conform to Supplemental Specification Number 30 dated May 28, 1948.

Liner plates shall be flat, and shall have a wearing surface not less than ¾ inch thick. The back of the plates shall be provided with approximately five longitudinal dovetail shaped ribs to act as keys in the mortar. The plates shall be uniform in size, approximately 9 inches wide and 18 to 20 inches long. However, the widths shall be such that the surface is divided into an exact number of whole plates, due allowance being made for the joints. Shorter lengths shall be provided for breaking joints.

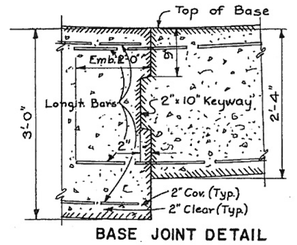
The joints in the liner plates shall be filled with an acid and caustic resistant joint material such as Furan resin cement similar and equal to "Permanite", "Alkor 5E", or "Muken All-Purposes," placed in accordance with the manufacturer's specifications. All excess filler shall be removed from the surface of the liner plates.

MANHOLE STEPS: Shall be identical to those furnished in Type B Manhole.

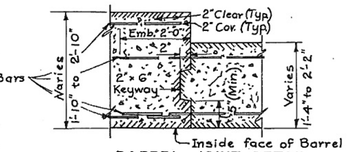
ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION
E-2	24,920	Cu.Yds.	Unclassified Excavation
S-1	5762	Cu.Yds.	Class "C" Concrete
S-4	321,963	Lbs.	Reinforcing Steel
S-24	Lump Sum	Lump Sum	Removal of Existing Structures
S5-30	24,442	Sq.Ft.	Vitrified Clay Liner Plates
I-8	2	Each	Manholes, Type B Complete, Including Manhole Steps.
I-10	3000	Cu. Yds.	Dumped Rock Channel Protection
E-2	Lump Sum	Lump Sum	Cofferdams, Cribs and Sheeting
E-3	6813	Cu. Yds	Channel Excavation

COFFERDAMS, CRIBS AND SHEETING: Adequate facilities for handling the flow of Ross Run Creek shall be provided and shall be considered as included in the Lump Sum price bid for Item E-2, Cofferdams, Cribs and Sheeting



BASE JOINT DETAIL



BARREL JOINT DETAIL

CONSTRUCTION JOINT DETAILS

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

GENERAL PLAN

STRUCT. NO. HAM-4W-0740
ROSS RUN SEWER
HAMILTON COUNTY
SECTION: HAM.-4W-7.16
SCALE:

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.R.B.	H.L.L.	N.H.	H.A.Z.	J.H.O	10/15/57	

CALCULATED RJE CHECKED RSH

GENERAL NOTES

HAM-75-7.85

57 / 2017

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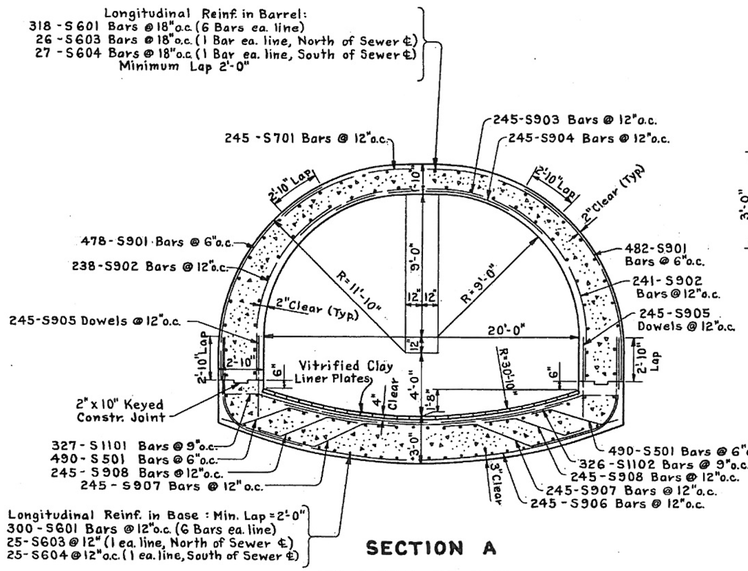
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FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

229
361

HAM-4W-7.16 / HAM-362-0.28

Longitudinal Reinf. in Barrel:
318 - S601 Bars @ 18"o.c. (6 Bars ea. line)
26 - S603 Bars @ 18"o.c. (1 Bar ea. line, North of Sewer ℄)
27 - S604 Bars @ 18"o.c. (1 Bar ea. line, South of Sewer ℄)
Minimum Lap 2'-0"

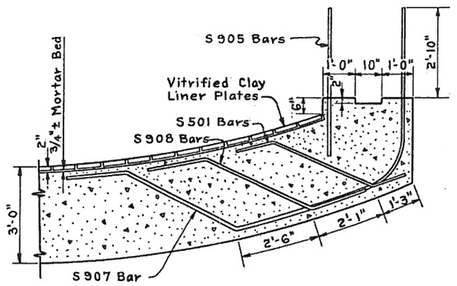


Longitudinal Reinf. in Base : Min. Lap = 2'-0"
300 - S601 Bars @ 12"o.c. (6 Bars ea. line)
25 - S603 @ 12" (1 ea. line, North of Sewer ℄)
25 - S604 @ 12"o.c. (1 ea. line, South of Sewer ℄)

SECTION A

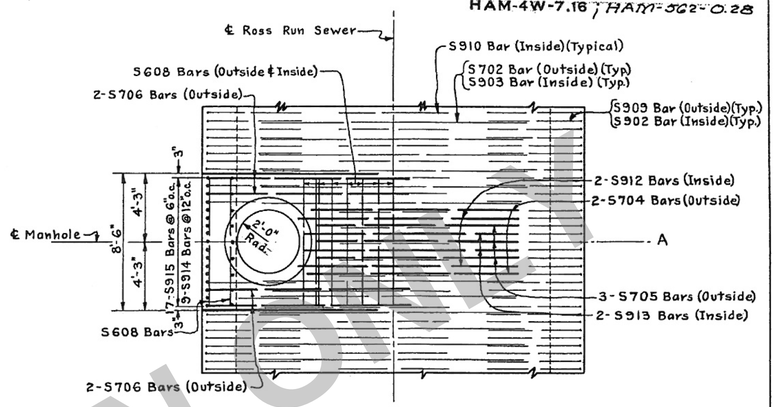
STA. 4+00 to STA. 6+40

Note: Reinforcement for the curved portion of the sewer (Sta. 4+00 to Sta. 4+76.4) to be set radially. For typical spacing dimensions, see "Detail of Reinforcement at Curve".



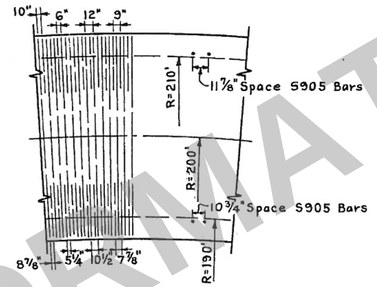
CORNER & CONSTR. JOINT DETAIL

STA. 4+00 to 6+40



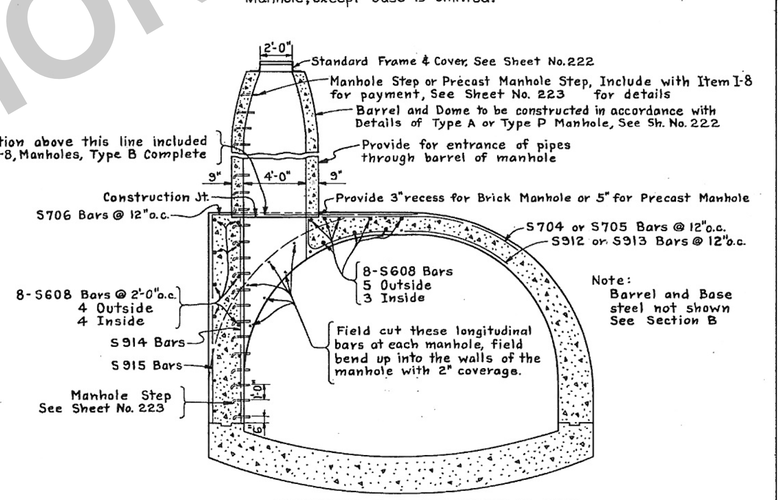
PLAN AT TYPE B M.H.

Note: Type B Manhole is similar to Type A or Type P Manhole, except base is omitted.



DETAIL OF REINFORCEMENT AT CURVE

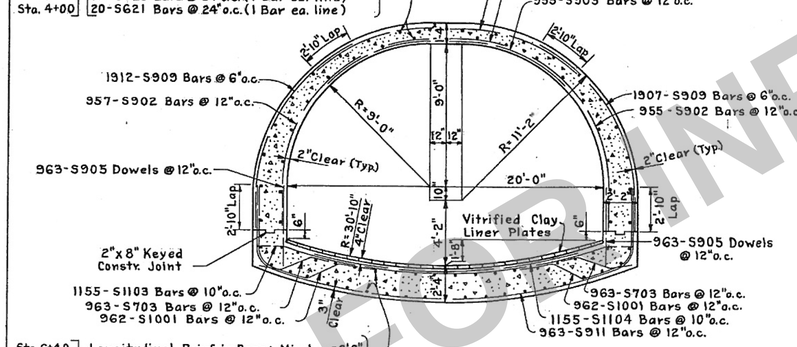
STA. 3+62.2 to STA. 4+76.4



SECTION A-A AT TYPE B M.H.

1 Req'd. Sta. 8+20.25
1 Req'd. Sta. 12+14.25

Sta.	Longitudinal Reinf. in Barrel : Min. Lap 2'-0"
Sta. 6+40 to Sta. 15+00	858-S601 Bars @ 24"o.c. (22 Bars ea. line) 39-S602 Bars @ 24"o.c. (1 Bar ea. line)
Sta. 3+00 to Sta. 4+00	78-S601 Bars @ 24"o.c. (2 Bars ea. line) 19-S620 Bars @ 24"o.c. (1 Bar ea. line) 20-S621 Bars @ 24"o.c. (1 Bar ea. line)



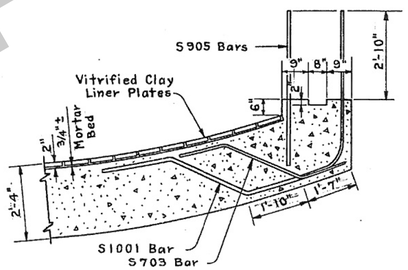
Sta.	Longitudinal Reinf. in Base : Min. Lap = 2'-0"
Sta. 6+40 to Sta. 15+00	858-S601 Bars @ 15"o.c. (22 Bars ea. line) 39-S602 Bars @ 15"o.c. (1 Bar ea. line)
Sta. 3+00 to Sta. 4+00	78-S601 Bars @ 15"o.c. (2 Bars ea. line) 19-S620 Bars @ 15"o.c. (1 Bar ea. line) 20-S621 Bars @ 15"o.c. (1 Bar ea. line)

SECTION B

STA. 3+00 to STA. 4+00
STA. 6+40 to STA. 15+00

Note: Section A & Section B are taken looking in the direction of stationing.

Note: Reinforcement for the curved portion of the Sewer (Sta. 3+62.2 to Sta. 4+00) to be set radially. For typical spacing dimensions, see "Detail of Reinforcement at Curve"



CORNER & CONSTR. JOINT DETAIL

STA. 3+00 to STA. 4+00
STA. 6+40 to STA. 15+00

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

DETAILS

STRUCT. NO. HAM-4W-0740
ROSS RUN SEWER
HAMILTON COUNTY
SECTION: HAM.-4W-7.16
SCALE:

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.R.B.	H.L.L.	RJS	H.A.Z.	JHO	10/15/57	

CALCULATED RJE
CHECKED RSH

GENERAL NOTES

HAM-75-7.85

58
2017

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SEQUENCE OF CONSTRUCTION

CONSTRUCTION SEQUENCE - IR 75

PRE-PHASE 1
PRIOR TO IMPLEMENTATION OF THE PHASE 1 SET-UP, TEMPORARY PAVEMENT SHALL BE CONSTRUCTED AT ALL LOCATIONS FOR USE IN FUTURE PHASES. THIS WILL BE COMPLETED UTILIZING SHOULDER CLOSURES (PER ODOT SCD MT-95.45), AND NIGHT-TIME LANE CLOSURES (PER ODOT SCD MT-95.30) AS PERMITTED BY THE PLCM.

PHASE 1
PHASE 1 SHALL CONSTRUCT THE OUTSIDE PORTIONS OF SB IR 75 WITH TRAFFIC MAINTAINED ON EXISTING PAVEMENT. ONE SB LANE WILL BE CROSSED OVER INTO CONTRA FLOW DURING PHASE 1. A SUB-PHASE (PHASE 1A) HAS BEEN IMPLEMENTED TO ALLOW FOR PART-WIDTH CONSTRUCTION NEAR AND WITHIN INTERCHANGE RAMPS.

DRAINAGE HAS BEEN SHOWN ON THE PHASE 1 MOT PLAN SHEETS. THE CONTRACTOR SHALL INSTALL THE DRAINAGE NORTH OF STATION 473+00 DURING PHASE 1 PRIOR TO THE PUMP STATION BEING OPERATIONAL. ALL OTHER DRAINAGE SHOWN SHALL BE INSTALLED ACCORDING TO THE CONTRACTORS WORK SCHEDULE. THE PIPES BETWEEN DRAINAGE STRUCTURES 922 AND 602 AND 617 AND 602 SHALL BE INSTALLED DURING ONE OF THE 2 (TWO) PLANNED I-75 CLOSURES FOR THE CONSTRUCTION OF THE HAM-75-0834 RAIL ROAD STRUCTURE PRIOR TO PHASE 1A.

THE CONTRACTOR SHALL DELAY PAVING WORK IN THE PHASE 1 WORK ZONE FROM STATION 471+00 TO STATION 499+00 AS SHOWN IN THE PHASE 1 PLANS UNTIL AFTER 09/1/2023. PAVING WORK IS DEFINED AS SUBGRADE STABILIZATION, AGGREGATE SUBBASE, ASPHALT BASE, INTERMEDIATE AND SURFACE COURSES.

PHASE 2
PHASE 2 SHALL CONSTRUCT INSIDE PORTIONS OF SB IR 75 WITH TRAFFIC MAINTAINED ON EXISTING AND NEWLY CONSTRUCTED PAVEMENT. ONE SB LANE WILL BE CROSSED OVER INTO CONTRA FLOW DURING PHASE 2 IN THE SAME SET-UP AS THE PREVIOUS PHASE. RAMP M (SR 562 WB TO IR 75 SB) WILL BE CLOSED FOR 30 DAYS DURING PHASE 2.

DRAINAGE HAS BEEN SHOWN ON THE PHASE 2 MOT PLAN SHEETS. THE PIPES BETWEEN DRAINAGE STRUCTURES 304 TO 322 AND 302 TO 307 SHALL BE INSTALLED DURING ONE OF THE 2 (TWO) PLANNED I-75 CLOSURES DURING PHASE 1 FOR THE CONSTRUCTION OF THE HAM-75-0834 RAIL ROAD STRUCTURE OR THE 1 (ONE) PLANNED I-75 CLOSURE FOR THE DEMOLITION OF THE HAM-75-0834 RAIL ROAD STRUCTURE.

PHASE 3
PHASE 3 SHALL CONSTRUCT THE INSIDE PORTION OF NB IR 75, WITH TRAFFIC MAINTAINED ON EXISTING AND NEWLY CONSTRUCTED PAVEMENT. ONE NB LANE SHALL BE CROSSED OVER INTO CONTRA FLOW DURING THIS PHASE. A SUB-PHASE (PHASE 3A) HAS BEEN IMPLEMENTED SO THAT THE AREA UTILIZED FOR THE CROSSOVER IN PHASE 3 CAN BE CONSTRUCTED.

PHASE 4
PHASE 4 SHALL CONSTRUCT THE OUTSIDE PORTION OF NB IR 75, WITH NB TRAFFIC CROSSED OVER TO THE SB SIDE OF THE HIGHWAY. A SUB-PHASE (PHASE 4A) HAS BEEN INCLUDED TO ALLOW FOR PART-WIDTH CONSTRUCTION NEAR AND WITHIN INTERCHANGE RAMPS.

PHASE 5
PHASE 5 SHALL UTILIZE SHOULDER CLOSURES (PER ODOT SCD MT-95.45) AND IF NECESSARY, NIGHTTIME LANE CLOSURES (AS PERMITTED BY THE PLCM) PER ODOT SCD MT-95.30 TO CONSTRUCT SECTIONS OF MEDIAN BARRIER THAT WERE NON-PERFORMED IN PREVIOUS PHASES. ALL PERMANENT SIGNAGE SHALL BE INSTALLED PRIOR TO PHASE 5.

CONSTRUCTION SEQUENCE - SR 562 AND RAMP CONNECTIONS

THE CONTRACTOR SHALL ASSUME THAT WORK ON THE HAM-562-0026 STRUCTURE MAY NOT COMMENCE UNTIL MAY 1, 2023. THIS START DATE IS LATER THAN ANTICIPATED DURING THE MOT DESIGN. AS SUCH, THE MOT PHASES FOR THE RAMP CONNECTIONS TO SR 562 AND THE WORK ALONG SR 562 MAY NOT ALIGN WITH THE MAINLINE I-75 PHASING. THE COMPLETE DEMOLITION OF THE HAM-562-0026 STRUCTURE AND THE NEW RAMP CONNECTIONS/SR 562 WIDENING SHALL BE COMPLETED PRIOR TO THE BEGINNING OF THE MAINLINE PHASE 4 MOT SETUP. IN ORDER TO ALLOW FOR MOT REVISIONS TO BE PROVIDED IF NECESSARY, THE CONTRACTOR SHALL PROVIDE A 45 DAY NOTICE TO THE DEPARTMENT PRIOR TO SWITCHING PHASES. THE START DATE FOR THE HAM-562-0026 STRUCTURE WILL IMPACT THE FOLLOWING RAMP MOT PHASES BY NOT ALIGNING WITH THE I-75 PHASING, AS CURRENTLY SHOWN IN THE PLANS:

RAMP M PHASE 2, EAST OF I-75 ONLY (SEE SHEETS 168-169)
RAMP N AND RAMP K PHASE 3 (SEE SHEETS 181, 195, 198, 199)
RAMP P: PHASE 3A (SEE SHEETS 209-210)

THE FOLLOWING ADDRESSES THE MOT PHASES TO BE UTILIZED FOR CONSTRUCTION OF THE HAM-562-0026 STRUCTURE:
PHASE 1: THE MOT SET-UP ALONG SR 562 AS SHOWN ON SHEET 118 WILL NEED TO BE IN PLACE UNTIL THE EAST SIDE OF THE HAM-562-0026 STRUCTURE IS BUILT AND THE WEST SIDE OF THE EXISTING STRUCTURE IS REMOVED.

PHASE 2: THE MOT SET-UP ALONG SR 562 AS SHOWN ON SHEET 169 CANNOT BEGIN UNTIL THE EAST SIDE OF THE HAM-562-0026 STRUCTURE IS BUILT AND THE WEST SIDE OF THE EXISTING STRUCTURE IS REMOVED. TWO SEPARATE 30 DAY CLOSURES OF RAMP M WILL BE PERMITTED TO ALLOW WORK ON THE WEST SIDE AND EAST SIDE OF I-75 ALONG RAMP M TO BE COMPLETED INDEPENDENTLY.

PHASE 3: THE OUTSIDE PORTIONS OF I-75 RAMP CONNECTIONS TO SR 562 EB AND SR 562 WB TO I-75 SHALL BE CONSTRUCTED IN PHASE 3 WITH TRAFFIC SHIFTED TO THE INSIDE. SUB PHASE 3A IS NECESSARY TO COMPLETE WORK NEAR INTERCHANGE RAMPS. RAMP P (PADDOCK RD TO SR 562 WB) WILL BE CLOSED AND DETOURED FOR THE FINAL 30 DAYS OF PHASE 3A.

PHASE 4: THE INSIDE PORTIONS OF SR 562 AND THE RAMP CONNECTIONS TO I-75 SHALL BE CONSTRUCTED WITH TRAFFIC MAINTAINED ON NEWLY CONSTRUCTED PAVEMENT. A LEFT LANE CLOSURE FOR WB SR 562 IS DETAILED WITHIN.

ANY MOT MODIFICATIONS REQUIRED AT THE TRANSISTIONS OF THE MISMATCHED MOT PHASES WILL BE ADDRESSED BY THE DEPARTMENT PER C&MS 109.05.

CONSTRUCTION SEQUENCE - STRUCTURES OVER MAINLINE HIGHWAYS

WORK OVER MAINLINE LANES SHALL BE COMPLETED WITH TRAFFIC MAINTAINED BELOW IN EACH PHASE AS DETAILED WITHIN. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PROTECT TRAFFIC AND PEDESTRIANS FROM FALLING DEBRIS AT ALL TIMES. IF DEMOLITION, BEAM PLACEMENT OR ANY OTHER MAJOR CONSTRUCTION ACTIVITY MUST BE PERFORMED OVER TRAVEL LANES, SHORT TERM NIGHTTIME CLOSURES SHALL BE IMPLEMENTED PER ODOT SCD MT-99.60.

HAM-75-0834 (RAILROAD BRIDGE OVER IR 75)
THE PROPOSED STRUCTURE IS OFFSET FROM THE EXISTING STRUCTURE, ALLOWING FOR RAIL TRAFFIC TO BE MAINTAINED DURING CONSTRUCTION. IN PHASE 1, THE PROPOSED STRUCTURE SHALL BE CONSTRUCTED IN ITS ENTIRETY. UPON COMPLETION, RAIL TRAFFIC SHALL BE PERMANENTLY SHIFTED TO THE NEWLY CONSTRUCTED STRUCTURE. IN PHASE 2, THE EXISTING BRIDGE DECK, ALONG WITH THE WESTERN PIER SHALL BE REMOVED. THE EXISTING CENTER PIER SHALL BE REMOVED IN PHASE 3. THE EXISTING EASTERN PIER SHALL BE REMOVED IN PHASE 4.

CONSTRUCTION SEQUENCE - STRUCTURES OVER MAINLINE HIGHWAYS (CONT)

HAM-75-0992 (PEDESTRIAN BRIDGE OVER IR 75)
THE EXISTING PEDESTRIAN BRIDGE SHALL BE CLOSED DURING PHASES 1-4. THE EXISTING DECK AS WELL AS THE WESTERN PIER SHALL BE REMOVED IN PHASE 1, WHILE THE PROPOSED WESTERN PIER IS CONSTRUCTED. THE EXISTING CENTER PIER SHALL BE REMOVED AND REPLACED IN PHASE 3 AND THE EXISTING EASTERN PIER SHALL BE REMOVED AND REPLACED IN PHASE 4. THE PROPOSED BRIDGE DECK SHALL ALSO BE COMPLETED IN PHASE 4.

HAM-562-0026 (RAILROAD BRIDGE OVER SR 562)
THE EAST SIDE OF THE STRUCTURE AND THE COMPLETE DEMOLITION OF THE EXISTING STRUCTURE SHALL BE COMPLETED BY PHASE 4. AS DETAILED IN THE BRIDGE PLANS, THIS WORK SHALL BE COMPLETED PART WIDTH SO THAT RAIL TRAFFIC IS MAINTAINED.

CONSTRUCTION SEQUENCE - LOCAL STREETS

TOWNE ST
OVERHEAD WORK FOR PHASES 1-3 SHALL BE COMPLETED WITH TOWNE STREET MAINTAINED AS DETAILED WITHIN. IN PHASE 4, THE EXISTING NB RAMPS TO/FROM TOWNE STREET SHALL BE PERMANENTLY REMOVED.

DURING THIS PHASE, THE SOUTHERN HALF OF TOWNE STREET SHALL BE RECONSTRUCTED WITH WB TRAFFIC MAINTAINED. EB AND PEDESTRIAN TRAFFIC SHALL BE CLOSED AND DETOURED DURING PHASE 4. IN PHASE 4A, THE REMAINING NORTHERN HALF OF TOWNE STREET SHALL BE RECONSTRUCTED. PEDESTRIAN TRAFFIC SHALL BE DETOURED FOR PHASE 4A WORK, HOWEVER BOTH EB AND WB VEHICULAR TRAFFIC SHALL BE MAINTAINED.

CEDAR ST
CEDAR STREET SHALL BE RECONSTRUCTED INTO THE PERMANENT ONE WAY CONDITION DURING PHASE 1. THIS WORK SHALL BE COMPLETED WITH CEDAR STREET CLOSED AS DETAILED IN THE TOWNE ST MOT PLANS. ONE-WAY CEDAR ST SHALL THEN BE MAINTAINED FOR THE REMAINING PHASES.

LAIDLAW AVE
PRIOR TO PHASE 1, UTILITY WORK SHALL BE COMPLETED WITHIN LAIDLAW AVE. LEFT LANE CLOSURES SHALL BE UTILIZED FOR BOTH DIRECTIONS DURING NON PEAK HOURS AS DETAILED WITHIN. RIGHT LANE CLOSURES SHALL BE UTILIZED ANYTIME ADJACENT STRUCTURE WORK IMPACTS THE ROADWAY. THIS SAME SETUP SHALL BE IMPLEMENTED THROUGHOUT PHASES 1-4.

PROSSER AVE
PHASE 1 CONSTRUCTION OF THE RAILROAD BRIDGE MAY IMPACT PROSSER AVE. TWO PHASE 1 SET-UPS HAVE BEEN PROVIDED TO ALLOW FOR WORK ON EITHER SIDE OF THE ROAD. PROSSER AVE PEDESTRIAN TRAFFIC SHALL BE DETOURED DURING PHASE 1 AS DETAILED WITHIN.

SUMMIT RD
PHASE 4 INCLUDES THE COMPLETION OF THE PEDESTRIAN BRIDGE AS WELL AS RECONSTRUCTION OF THE ADJACENT CURB RAMP (NW CORNER OF SUMMIT RD/SECTION RD INTERSECTION). THIS WORK SHALL BE COMPLETED WITH SB TRAFFIC SHIFTED AWAY FROM THE WORK ZONE AS DETAILED WITHIN. INTERMITTENT ROAD CLOSURES WILL ALSO BE UTILIZED IN PHASE 4 TO CONSTRUCT STORM CROSSINGS AS WELL AS FOR ACCESS TO WALL CONSTRUCTION ALONG THE WEST SIDE OF SUMMIT. IN PHASE 4A, THE OPPOSITE CURB RAMP (NE CORNER OF THE INTERSECTION) SHALL BE REPLACED WITH NB TRAFFIC SHIFTED AS DETAILED WITHIN. EXISTING TRAVEL LANES ON SUMMIT RD SHALL BE MAINTAINED DURING ALL OTHER PHASES.

ITEM 614, MAINTAINING TRAFFIC

MAINTAIN ALL EXISTING LANES OF TRAFFIC AT ALL TIMES IN ACCORDANCE WITH THE PERMITTED LANE CLOSURE TIMES NOTE BY USE OF THE EXISTING PAVEMENT, ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, AND THE COMPLETED PAVEMENT.

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES ON I-75 AND SR 562 SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
MEMORIAL DAY	THANKSGIVING
EASTER	TOTAL SOLAR ECLIPSE

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF HOLIDAY OR EVENT	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00 AM FRIDAY
THURSDAY (THANKSGIVING ONLY)	6:00 AM WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT IN THE AMOUNT AS SPECIFIED IN THE PERMITTED LANE CLOSURE TIMES AND UNAUTHORIZED LANE USE TABLE.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

ACCESS TO ALL ADJOINING PROPERTIES SHALL BE MAINTAINED AT ALL TIMES. ACCESS FOR MAIL DELIVERY, EMERGENCY AND SERVICE VEHICLES SHALL NOT BE DISRUPTED. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE ENGINEER AND THE OWNERS OF THE ABUTTING PROPERTIES IN ADVANCE (10 DAYS) OF ANY OPERATIONS WHICH AFFECT ACCESS.

ANY WORK (FALSEWORK, TRAFFIC PROTECTION, CONTAINMENT, ETC.) OVER LIVE TRAFFIC BY THE CONTRACTOR THAT REDUCES THE EXISTING VERTICAL CLEARANCE IS PROHIBITED UNLESS 30 DAYS ADVANCED NOTICE IS PROVIDED TO THE ENGINEER WITH NEW PROPOSED VERTICAL CLEARANCES. THE CONTRACTOR SHALL PROVIDE FIELD MEASUREMENTS BEFORE ALLOWING TRAFFIC UNDERNEATH. IF ANY WORK IS TO OCCUR BELOW 14'-6", THEN SIGNS ON THE STRUCTURE AND ADVANCE WARNING SIGNS SHALL BE INSTALLED A MINIMUM OF 2 WEEKS PRIOR TO PERFORMING SUCH WORK. SIGNING SHALL BE IN ACCORDANCE WITH THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (OMUTCD) AND THE OHIO "TRAFFIC ENGINEERING MANUAL" (TEM). NO WORK OVER TRAFFIC SHALL OCCUR WITH A VERTICAL CLEARANCE LESS THAN 14'-0". LOWERING THE VERTICAL CLEARANCE DURING CONSTRUCTION IS CONSIDERED THE CONTRACTOR'S MEANS AND METHODS OF ACCOMPLISHING THE WORK, AND THEREFORE THE STATE IS NOT RESPONSIBLE FOR ANY DAMAGE FROM VEHICULAR IMPACTS THAT MAY RESULT AS PER 107.10.

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CALCULATED SMM CHECKED JDS

MAINTENANCE OF TRAFFIC NOTES

HAM-75-7.85

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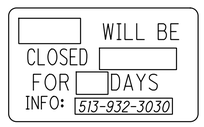
NOTICE OF CLOSURE SIGNS (W20-H13) SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD OR RAMP CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW. [AT THE APPROVAL OF THE ENGINEER, PORTABLE CHANGEABLE MESSAGE SIGNS MAY BE USED IN LIEU OF THE STANDARD FLATSHEET SIGN FOR CLOSURE DURATIONS OF LESS THAN 1 WEEK.]

THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT OR NEAR THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.

NOTIFICATION TIME FRAME TABLE

ITEM	DURATION OF CLOSURE	SIGN DISPLAY TO PUBLIC	NOTIFICATION DUE TO DISTRICT 6 COMMUNICATIONS OFFICE
RAMP & ROAD CLOSURES	>=2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE	21 CALENDAR DAYS PRIOR TO CLOSURE
	>12 HOURS & <2 WEEKS	7 CALENDAR DAYS PRIOR TO CLOSURE	14 CALENDAR DAYS PRIOR TO CLOSURE
	<12 HOURS	2 BUSINESS DAYS PRIOR TO CLOSURE	4 BUSINESS DAYS PRIOR TO CLOSURE

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MMM-DD FORMAT AND THE NUMBER OF DAYS OF THE CLOSURE. THE LAST LINE OF THE W20-H13 SIGN LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION. THIS IS TO BE A SPECIFIC OFFICE WITHIN THE DISTRICT RATHER THAN THE GENERAL SWITCHBOARD NUMBER.



ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

POTHOLE PATCHING

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR USE AS DETERMINTED BY THE ENGINEER FOR POTHOLE PATCHING:

ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC
145 CU YD

DRUM REQUIREMENTS

IN ADDITION TO THE REQUIREMENTS OF THE PLANS, SPECIFICATION AND PROPOSAL, DRUMS FURNISHED BY THE CONTRACTOR SHALL BE NEW AND UNUSED AT THE TIME OF ARRIVAL ON THE PROJECT. ANY DRUMS BROUGHT ON THE PROJECT, WHICH HAVE PREVIOUSLY BEEN USED ELSEWHERE, WILL NOT BE ACCEPTED. PAYMENT FOR DRUMS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR MAINTAINING TRAFFIC UNLESS SEPARATELY ITEMIZED.

FLOODLIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER 1850 M. GAL.

PORTABLE BARRIER

32" PORTABLE BARRIER SHALL BE ANCHORED ANYTIMG THERE IS LESS THAN 2' BETWEEN THE BACK OF BARRIER AND THE WORK ZONE. PORTABLE BARRIER QUANTITIES HAVE BEEN SPLIT INTO ANCHORED AND UNANCHORED LENGTHS ACCORDINGLY.

WORK ZONE MARKINGS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS IDENTIFIED BY THE ENGINEER FOR WORK ZONE PAVEMENT MARKINGS PER THE REQUIREMENTS OF C&MS 614.04 AND 614.11. THESE QUANTITIES HAVE BEEN PROVIDED AS A CONTINGENCY FOR PLACEMENT ON THE ASPHALT SURFACE COURSE PRIOR TO APPLICATION OF PERMANENT PAVEMENT MARKINGS.

ITEM 614, WORK ZONE LANE LINE, CLASS III, 642 PAINT 17.12 MILE
ITEM 614, WORK ZONE EDGE LINE, CLASS III, 642 PAINT 17.51 MILE
ITEM 614, WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT 16,879 FEET
ITEM 614, WORK ZONE DOTTED LINE, CLASS III, 642 PAINT 21,503 FEET

ITEM 614, REPLACEMENT SIGN

FLATSHEET SIGNS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT SIGNS SHALL BE NEW. OTHER MATERIALS MAY BE IN USED, BUT GOOD, CONDITION SUBJECT TO APPROVAL BY THE ENGINEER.

PAYMENT FOR THE NEW SIGNS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT SIGN, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF DAMAGED SIGNS, HARDWARE AND SUPPORTS, AND PROVIDING THE NECESSARY REPLACEMENT HARDWARE, SUPPORTS, ETC.

AN ESTIMATED QUANTITY OF 25 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

ITEM 614, REPLACEMENT DRUM

DRUMS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT DRUMS SHALL BE NEW.

PAYMENT FOR THE NEW DRUMS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT DRUM, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUM, AND PROVIDING AND MAINTAINING THE REPLACEMENT DRUM IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUM.

AN ESTIMATED QUANTITY OF 250 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

PERMITTED LANE CLOSURE TIMES

SHORT TERM LANE CLOSURES ARE THOSE WHICH ARE PERMITTED BY THE PERMITTED LANE CLOSURE NOTE. THESE TIMES SHALL NOT BE REVISED WITHOUT PRIOR APPROVAL FROM THE DISTRICT 8 WORK ZONE TRAFFIC CONTROL MANAGER. SHORT TERM LANE CLOSURES SHALL ONLY BE IMPLEMENTED WHEN WORK IS BEING CONTINUOUSLY PERFORMED IN THE LANE. THE CLOSURE SHALL BE REMOVED AS SOON AS POSSIBLE AFTER WORK HAS STOPPED. PERMITTED LANE CLOSURES SHALL ONLY BE ALLOWED DURING THE TIMES SPECIFIED IN THE PERMITTED LANE CLOSURE TIMES AND UNAUTHORIZED LANE USE TABLE INCLUDED IN THESE PLANS. NO LANE OR SHOULDER CLOSURE SHALL BE IN PLACE WHEN NO WORK IS BEING PERFORMED.

PERMITTED LANE CLOSURE TIMES AND UNAUTHORIZED LANE USE TABLE

LOCATION	DIRECTION	EX. NO. OF THRU	1 LANE CLOSED		2 LANES CLOSED		15 MINUTE SHORT DURATION	COMPLETE CLOSURE	TIME UNIT	DISINCENTIVE PER LANE PER TIME UNIT	NOTES
			WEEKDAY	WEEKEND	WEEKDAY	WEEKEND					
IR-75	BOTH	3	8 PM - 6 AM	7 PM - 6 AM	11 PM - 5 AM	10 PM - 6 AM	12 AM - 4 AM	11 PM - 5 AM	1 MINUTE	$540	NOTE 1 (SOUTHBOUND), NOTE 2 (NORTHBOUND), NOTE 3, NOTE 4
SR-562	BOTH	2	8 PM - 6 AM	7 PM - 7 AM	NONE	NONE	11 PM - 5 AM	11 PM - 5 AM	1 MINUTE	$305	NOTE 1, NOTE 3, NOTE 4
RAMPS	BOTH		NONE	NONE	NONE	NONE	NONE	10 PM - 5 AM	1 MINUTE	$540	NOTE 5, NOTE 6
LAIDLAW AVE.	BOTH	1	9AM-4PM 6PM-7AM	9AM-4PM 6PM-7AM	NONE	NONE	NONE	NONE	1 MINUTE	$50	
TOWNE ST.	BOTH	1	ANYTIME	ANYTIME	NONE	NONE	11 PM - 5 AM	NONE	1 MINUTE	$50	
PADDOCK	BOTH	2	8 PM - 6 AM	7 PM - 7 AM	NONE	NONE	NONE	NONE	1 MINUTE	$130	
SEYMOUR AVE.	BOTH	2	ANYTIME	ANYTIME	NONE	NONE	NONE	NONE	1 MINUTE	$40	
PROSSER AVE	BOTH	1	ANYTIME	ANYTIME	NONE	NONE	NONE	9 AM - 3 PM	1 MINUTE	$50	NOTE 7

NOTES

1 NO CLOSURES 2 HOURS BEFORE TO 1 HOUR AFTER THE START TIME OF EVENTS AT GREAT AMERICAN BALL PARK, PAUL BROWN STADIUM, OR HERITAGE BANK ARENA.
THIS RESTRICTION ALSO APPLIES TO ANY OTHER LOCAL VENUE REACHING AN ATTEDANCE OF 20,000+
2 NO CLOSURES FROM 30 MINUTES BEFORE THE SCHEDULED FINISH TIME TO 2 HOURS AFTER EVENTS AT GREAT AMERICAN BALL PARK, PAUL BROWN STADIUM, OR HERITAGE BANK ARENA.
THIS RESTRICTION ALSO APPLIES TO ANY OTHER LOCAL VENUE REACHING AN ATTEDANCE OF 20,000+
3 COMPLETE CLOSURES OF IR-75 AND SR-562 ARE PERMITTED ACCORDING TO THE APPROVED MAINTENANCE OF TRAFFIC POLICY EXCEPTION NOTE ONLY.
4 NO SHORT TERM SHOULDER CLOSURES BETWEEN THE HOURS OF 6 AM TO 9 AM AND 3 PM TO 7 PM MONDAY THROUGH FRIDAY.
5 APPROVED MAINTENANCE OF TRAFFIC POLICY EXCEPTION RAMP CLOSURES: DISINCENTIVES SHALL BE ASSESSED FOR FAILURE TO REOPEN THE RAMP IN THE SPECIFIED TIME PERIOD.
6 RAMPS ARE PERMITTED TO BE CLOSED OVERNIGHT FOR MOT TRAFFIC SWITCHES AND FINAL SURFACING ONLY. ONLY ONE RAMP IS PERMITTED TO BE CLOSED AT A TIME.
7 PROSSER AVE IS PERMITTED TO BE CLOSED BETWEEN THE HOURS OF 9 AM AND 3 PM FOR DEMO/ERECTION OF THE STRUCTURE AS WELL AS FOR SEWER/WATERLINE WORK WITHIN THE ROADWAY.

NORFOLK SOUTHERN RAILROAD COORDINATION

THE CONTRACTOR SHALL COORDINATE WITH NORFOLK SOUTHERN RAILROAD TO PROVIDE THE RAILROAD WITH NOTICE FOR THEIR WORK TO COMMENCE AS OUTLINED HERE. THE MINIMUM NOTICE REQUIRED IS NOTED BELOW AS A GUIDE FOR BIDDING PURPOSES, WITH EXAMPLES OF CRITICAL PATH ITEMS NOTED:

FOR REMOVALS AND CUT/THROW TRACK WORK COMPLETION, A MINIMUM OF 6 MONTHS NOTICE TO NORFOLK SOUTHERN RAILROAD IS REQUIRED. FOR THE HAM-562-0026 STRUCTURE, THIS INCLUDES, BUT IS NOT LIMITED TO, THE STAGE 1A REMOVALS SHOWN ON SHEETS 1781-1782 AND THE STAGE 2B REMOVALS SHOWN ON SHEETS 1805-1806. FOR THE HAM-75-0834 AND HAM-PROSR-00.000 STRUCTURES, THIS INCLUDES, BUT IS NOT LIMITED TO, THE STAGE 1A REMOVALS AND CUT/THROW WORK SHOWN ON SHEETS 1784-1786.

FOR ACTIVITES REQUIRING SPECIALTY TRACK WORK, YARD INSTALLATIONS, AND RECONFIGURATION WORK, A MINIMUM OF 12 MONTHS NOTICE TO NORFOLK SOUTHERN RAILROAD IS REQUIRED. FOR THE HAM-562-0026 STRUCTURE, THIS INCLUDES, BUT IS NOT LIMITED TO, THE NEW RAIL WORK INSTALLED IN STAGE 2A AS SHOWN ON SHEETS 1797-1799. FOR THE HAM-75-0834 AND HAM-PROSR-00.000 STRUCTURES, THIS INCLUDES ALL THE RAIL WORK SHOWN IN STAGE 2A AS SHOWN ON SHEETS 1800-1804.

ASSUMED DURATIONS OF NORFOLK SOUTHERN RAILROAD WORK

THE TIMEFRAMES LAID OUT ABOVE ASSUME THE RAILROAD BEGINS THEIR WORK FOLLOWING THE NOTICE PERIOD OUTLINED. FOR BIDDING PURPOSES, THE CONTRACTOR SHOULD ASSUME THE FOLLOWING DURATIONS FOR THE WORK TO BE PERFORMED BY NORFOLK SOUTHERN RAILROAD THAT WILL BE INTEGRAL TO THE CONTRACTOR'S SCHEDULE.

HAM-562-0026: ASSUME 1 MONTH FOR STAGE 1A REMOVALS SHOWN ON SHEETS 1781-1782 AND ASSUME 120 DAYS FOR STAGE 2A NEW RAIL INSTALLATION AND STAGE 2B REMOVALS FOLLOWING THE COMPLETION OF THE EAST SIDE OF THE STRUCTURE AND PRIOR TO BEGINNING THE WEST SIDE.

HAM-75-0834 AND HAM-PROSR-00.000: ASSUME 120 DAYS FOR STAGE 2A NEW RAIL INSTALLATION FOLLOWING THE COMPLETION OF THE NEW STRUCTURE AND PRIOR TO DEMOLITION OF THE EXISTING STRUCTURE.

FOR INFORMATION ONLY

CALCULATED SMM CHECKED JDS

MAINTENANCE OF TRAFFIC NOTES

HAM-75-7.85

60
2017

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ITEM 614, WORK ZONE SPEED LIMIT SIGN
THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, COVER DURING SUSPENSION OF WORK, AND SUBSEQUENTLY REMOVE WORK ZONE SPEED LIMIT (R2-1) (45 MPH SPEED LIMIT) SIGNS AND SUPPORTS WITHIN THE WORK LIMITS IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:

THE CONTRACTOR SHALL COVER OR REMOVE ANY EXISTING SPEED LIMIT SIGNS WITHIN THE REDUCED SPEED ZONE(S). THESE SIGNS SHALL BE RESTORED DURING SUSPENSION OR TERMINATION OF THE REDUCED SPEED LIMIT. THE EXPENSE OF COVERING OR REMOVAL AND RESTORATION OF EXISTING SPEED LIMIT OR MINIMUM SPEED LIMIT SIGNS SHALL BE INCLUDED IN THE PAY ITEM FOR THE WORK ZONE SPEED LIMIT SIGNS.

THE WORK ZONE SPEED LIMIT SIGNS MAY BE ERECTED OR UNCOVERED NO MORE THAN FOUR HOURS BEFORE THE ACTUAL START OF WORK THAT CAUSES THE WARRANTING CONDITION(S) TO OCCUR. THE SIGNS SHALL BE REMOVED OR COVERED NO LATER THAN FOUR HOURS FOLLOWING REMOVAL OF THE WARRANTING CONDITION(S), OR SOONER AS DIRECTED BY THE ENGINEER. TEMPORARY SIGN COVERING AND UNCOVERING DUE TO TEMPORARY REMOVAL OF WARRANTING CONDITION(S) SHALL BE GUIDED BY THE FOUR-HOUR LIMITATIONS STATED ABOVE.

CONSTRUCTION AND MATERIAL SPECIFICATIONS ITEM 614, PARAGRAPH 614.02(B), INDICATES THAT THE TWO DIRECTIONS OF A DIVIDED HIGHWAY ARE CONSIDERED SEPARATE HIGHWAY SECTIONS. THEREFORE, IF THE WORK ON A MULTI-LANE DIVIDED HIGHWAY IS LIMITED TO ONLY ONE DIRECTION, A SPEED REDUCTION IN THE DIRECTION OF THE WORK DOES NOT AUTOMATICALLY CONSTITUTE A SPEED REDUCTION IN THE OPPOSITE DIRECTION. A SPEED LIMIT REDUCTION IN THE OPPOSITE DIRECTION, IN SUCH CASE, IS APPROPRIATE ONLY IF CONDITIONS ARE EXPECTED TO HAVE AN IMPACT ON THE DIRECTIONAL TRAFFIC FLOW, AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL ERECT A WORK ZONE SPEED LIMIT SIGN IN ADVANCE OF THE WARRANTING CONDITION, AS DETAILED IN THE PLANS OR AS DIRECTED BY THE ENGINEER. THE SIGN SHALL BE MOUNTED ON BOTH SIDES OF A DIRECTIONAL ROADWAY OF DIVIDED HIGHWAYS. THE FIRST WORK ZONE SPEED LIMIT SIGN SHALL BE PLACED APPROXIMATELY 500 FEET IN ADVANCE OF THE LANE REDUCTION, SHIFT TAPER, OR OTHER ROADWAY OR SHOULDER RESTRICTION THAT WARRANTED THE WORK ZONE SPEED ZONE. ON UNDIVIDED HIGHWAYS THE SIGN SHALL BE MOUNTED ON THE RIGHT SIDE, APPROXIMATELY 250 FEET IN ADVANCE OF SUCH RESTRICTIONS. THE SIGN SHALL BE REPEATED EVERY 1 MILE FOR 60 AND 55 MPH ZONES AND EVERY ONE-HALF MILE FOR 50 MPH AND 45 MPH ZONES. THESE SIGNS SHALL ALSO BE ERECTED IMMEDIATELY AFTER EACH OPEN ENTRANCE RAMP WITHIN THE ZONE.

THE SPEED LIMIT REDUCTION SHALL BE LIMITED TO ONLY THE PORTION OF THE PROJECT AND THE WORK THAT WARRANTED THE WORK ZONE SPEED LIMIT REDUCTION.

SPEED REDUCTION (SPEED ZONE AHEAD SYMBOL) SIGNS (W3-5) SHALL BE ERECTED IN ADVANCE OF THE SPEED REDUCTION, APPROXIMATELY 1250 FEET ON MULTI-LANE HIGHWAYS AND 500 FEET ON TWO-LANE HIGHWAYS.

A SIGN(S) TO INDICATE THE RESUMPTION OF THE STATUTORY SPEED LIMIT SHALL BE ERECTED AT THE END OF ANY REDUCED SPEED ZONE. THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED, BUT GOOD CONDITION, PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE RETROREFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF C&MS 730.19.

WORK ZONE SPEED LIMIT SIGNS SHALL BE MOUNTED ON TWO ITEM 630, GROUND MOUNTED SUPPORTS, NO. 3 POSTS, UNLESS MOUNTED ON A TEMPORARY SIGN SUPPORT PER SCD MT 105.10.

WORK ZONE SPEED LIMIT AND RELATED SIGN SIZES, PLACEMENT, SUPPORTS, ETC SHALL BE PER THE OMUTCD, WITH TWO EXCEPTIONS: 1) EXPRESSWAY SIZE SPEED LIMIT SIGNS MAY BE USED ON FREEWAYS AND EXPRESSWAYS, IF NECESSARY; 2) THE HEIGHT OF SIGNS MOUNTED ON PORTABLE SUPPORTS SHOULD BE THE HEIGHT REQUIRED FOR GROUND-MOUNTED SIGNS BUT SHALL NOT BE MORE THAN 1 FOOT LOWER THAN THE HEIGHT REQUIRED BY THE OMUTCD, OR AS DIRECTED BY THE ENGINEER. PORTABLE SUPPORTS SHOULD NOT BE USED FOR A DURATION OF MORE THAN 3 DAYS.

WORK ZONE SPEED LIMIT SIGNS AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGNS AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND REERECTED AT ANOTHER LOCATION WITHIN THE PROJECT DUE TO CHANGES IN THE SPEED ZONE AS DETAILED IN THE PLANS OR AS DIRECTED BY THE ENGINEER, IT SHALL BE CONSIDERED ANOTHER UNIT.

VARIABLE WORK ZONE SPEED ZONES USING DIGITAL SPEED LIMIT SIGN ASSEMBLIES SHALL NOT BE USED IN LOCATIONS WHERE A TRADITIONAL APPROVED WORK ZONE SPEED LIMIT HAS BEEN APPROVED AND/OR IMPLEMENTED.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE IN PLACE, WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, ERECTING, MAINTAINING, COVERING DURING SUSPENSION OF WORK, AND REMOVING THE SIGNS AND SUPPORTS. SPEED LIMIT SIGNING FOR THE POINT OF RESUMPTION OF THE STATUTORY SPEED LIMIT SHALL BE PAID FOR AS WORK ZONE SPEED LIMIT SIGNS. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, WORK ZONE SPEED LIMIT SIGN 41 EACH
ITEM 614, SPEED ZONE AHEAD SYMBOL SIGN 7 EACH

THE FOLLOWING TABLE PROVIDES DETAILS ON WORK ZONE SPEED ZONES APPROVED FOR USE ON THIS PROJECT:

WZSZ REVISION NUMBER	COUNTY & ROUTE	SLM		PHASE/PART & DIRECTION	APPROVED SPEED LIMIT (MPH)	SPECIFIC WARRANTING CONDITIONS AND FACTORS
		FROM	TO			
WZ-45099	HAM IR-75	7.85	10.10	PHASES 1-4	45	

ITEM 614, WORK ZONE INCREASED PENALTIES SIGN (R11-H5A)
R11-H5A-48 SIGNS SHALL BE FURNISHED, ERECTED, AND MAINTAINED IN GOOD CONDITION AND/OR REPLACED AS NECESSARY AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. SIGNS SHALL BE MOUNTED AT THE APPROPRIATE OFFSETS AND ELEVATIONS AS PRESCRIBED BY THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THEY SHALL BE MAINTAINED ON SUPPORTS MEETING CURRENT SAFETY CRITERIA.

THE SIGNS MAY BE ERECTED OR UNCOVERED NO MORE THAN FOUR HOURS BEFORE THE ACTUAL START OF WORK. THE SIGNS SHALL BE REMOVED OR COVERED NO LATER THAN FOUR HOURS FOLLOWING RESTORATION OF ALL LANES TO TRAFFIC WITH NO RESTRICTIONS, OR SOONER AS DIRECTED BY THE ENGINEER. TEMPORARY SIGN COVERING AND UNCOVERING DUE TO TEMPORARY LANE RESTORATIONS SHALL BE GUIDED BY THE FOUR-HOUR LIMITATIONS STATED ABOVE. SUCH LANE RESTORATIONS SHOULD BE EXPECTED TO REMAIN IN EFFECT FOR 30 OR MORE CONSECUTIVE CALENDAR DAYS, SUCH AS DURING WINTER SHUT-DOWNS.

THE SIGNS ON THE MAINLINE SHALL BE DUAL MOUNTED UNLESS NOT PHYSICALLY POSSIBLE. THE FIRST SIGN SHALL BE PLACED BETWEEN THE ROAD WORK AHEAD (W20-1) SIGN AND THE NEXT SIGN IN THE SEQUENCE. SIGNS SHALL BE ERECTED ON EACH ENTRANCE RAMP AND EVERY 2 MILES THROUGH THE CONSTRUCTION WORK LIMITS. SIGNS ON THE MAINLINE SHALL BE R11-H5A-48. SIGNS USED ON THE RAMPS SHALL BE R11-H5A-24. R11-H5A-24 SIGNS MAY BE USED IN THE MEDIAN IN LIEU OF R11-H5A-48 SIGNS IF IT IS NOT PHYSICALLY POSSIBLE TO PROVIDE R11-H5A-48 SIGNS IN THE MEDIAN.

THE R11-H5A-48 SIGNS SHALL BE MOUNTED ON 2 NO. 3 POSTS WHEN LOCATED WITHIN CLEAR ZONES.

THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED, BUT GOOD, CONDITION PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE RETROREFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF C&MS 730.19.

WORK ZONE INCREASED PENALTIES SIGNS AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGN AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND REERECTED AT ANOTHER LOCATION AS DIRECTED BY THE ENGINEER, IT SHALL BE CONSIDERED ANOTHER UNIT.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE, IN PLACE WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, ERECTING, MAINTAINING, COVERING DURING SUSPENSION OF WORK, AND REMOVAL OF THE SIGN AND SUPPORT.

ITEM 614, WORK ZONE INCREASED PENALTIES SIGN
27 EACH

WORK ZONE INCREASED PENALTIES SIGNS WILL BE PLACED AS DETAILED IN THE PLANS.

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL OR BIDIRECTIONAL)
THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS APPROVED PRODUCTS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER5#32S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS. WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

APPROVED MAINTENANCE OF TRAFFIC (MOT) POLICY EXCEPTIONS
PORTIONS OF THE MOT PLANS AS DESCRIBED BELOW HAVE APPROVED MOT EXCEPTION(S) PER TRAFFIC MANAGEMENT IN WORK ZONES POLICY (21-008(P)) AND STANDARD PROCEDURE (123-001(SP)).

APPROVED MOT EXCEPTION(S) INCLUDE:
- MOTPE #1: CLOSE RAMP J, SOUTHBOUND I-75 TO EASTBOUND SR 562, FOR A WEEKEND AS SHOWN IN PHASE 1. THE WEEKEND BEGINS FRIDAY AT 9 PM AND ENDS MONDAY AT 5 AM.
- MOTPE #2: CLOSE RAMP M, WESTBOUND SR 562 TO SOUTHBOUND I-75, FOR 30 DAYS AS SHOWN IN PHASE 2.
- MOTPE #3: CLOSE RAMP P, PADDOCK ROAD TO WESTBOUND SR 562, FOR 30 DAYS AS SHOWN IN PHASE 3A.
- MOTPE #4: CLOSE THE LEFT LANE OF WESTBOUND SR 562 FOR 30 DAYS AS SHOWN IN PHASE 4.
- MOTPE #5: CLOSE IR 75 OVERNIGHT FROM 11 PM TO 5 AM TO OCCUR 3 TIMES PER DIRECTION (2-INSTALL, 1-DEMO).
- MOTPE #6: CLOSE SR 562 OVERNIGHT FROM 11 PM TO 5 AM TO OCCUR 10 TIMES PER DIRECTION (PHASE 1, 4-DEMO, 3-INSTALL; PHASE 2, 3 INSTALL).

A MAINTENANCE OF TRAFFIC MEETING SHALL BE HELD A MINIMUM OF 30 CALENDAR DAYS PRIOR TO IMPLEMENTATION OF EACH APPROVED MOT EXCEPTION. THIS MEETING SHALL INCLUDE THE DISTRICT WORK ZONE TRAFFIC MANAGER AND CITY OF CINCINNATI AS WELL AS THE CONTRACTOR, WORKSITE TRAFFIC SUPERVISOR (WTS) AND ANY SUBCONTRACTORS INVOLVED WITH TEMPORARY TRAFFIC CONTROL.

IN ADDITION TO ANY NOTIFICATIONS REQUIRED IN OTHER NOTES, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AT LEAST 3 BUSINESS DAYS IN ADVANCE OF IMPLEMENTATION OF THE APPROVED MOT EXCEPTION(S) REFERENCED ABOVE SO THAT THE PROJECT ENGINEER CAN SEND EMAIL NOTIFICATION TO THE OFFICE OF ROADWAY ENGINEERING, STATEWIDE TMC, DWZTM AND SPECIAL HAULING PERMITS AT LEAST 2 BUSINESS DAYS IN ADVANCE OF THE IMPLEMENTATION OF THE APPROVED MOT EXCEPTION(S) REFERENCED ABOVE. REFERENCE "EXCEPTION REQUEST APPROVAL DATED [____/____/____] FOR PID 77889" IN THE NOTIFICATION AND OTHER CORRESPONDENCE.

ANY CHANGES TO THE MOT THAT IMPACT THE PREVIOUSLY APPROVED MOT EXCEPTION(S) LISTED ABOVE SHALL BE APPROVED IN WRITING BY THE MOT EXCEPTION COMMITTEE (MOTEC). IN THE EVENT THAT SUCH CHANGES ARE PROPOSED, THE REQUEST SHALL BE COORDINATED THROUGH THE DISTRICT WORK ZONE TRAFFIC MANAGER (DWZTM) A MINIMUM OF 30 CALENDAR DAYS PRIOR TO THE DESIRED

IMPLEMENTATION DATE. IF THE DISTRICT AGREES WITH THE PROPOSED CHANGES THE DWZTM SHALL SEEK APPROVAL FROM THE MOTEC. IN THE EVENT THE PROPOSED CHANGES ARE APPROVED IN WRITING, THE CLOSURES ARE STILL SUBJECT TO NOTIFICATION REQUIREMENTS WITHIN THIS NOTE PRIOR TO IMPLEMENTATION.

EXTRA ADVANCE WARNING SIGNS
AN EXTRA ADVANCE WARNING SIGN GROUP CONSISTS OF TWO W20-1 (ROAD WORK AHEAD) SIGNS, TWO W20-5 (RIGHT /LEFT LANE CLOSED AHEAD) SIGNS WITH W16-3A DISTANCE PLATES, AND TWO W3-H7 (WATCH FOR STOPPED TRAFFIC) SIGNS AND REQUIRED WARNING LIGHTS. THE CONTRACTOR SHALL PROVIDE, ERECT, MAINTAIN AND REMOVE EXTRA ADVANCE WARNING SIGN GROUPS DURING MOTPE LANE CLOSURES ON IR 75 AND SR 562. SIGNS SHALL BE INSTALLED AS SHOWN ON TRAFFIC SCD MT-95.50, WITH THE EXTRA W20-5 LANE CLOSURE SIGNS PLACED 2 MILES FROM THE BEGINNING OF THE TAPER WITH THE APPROPRIATE W16-3A DISTANCE PLATES.

FOR INFORMATIONAL ONLY

CALCULATED SMM CHECKED JDS

MAINTENANCE OF TRAFFIC NOTES

HAM-75-7.85

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PAYMENT FOR PROVIDING, ERECTING, MAINTAINING AND REMOVING EXTRA ADVANCE WARNING SIGN GROUPS SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614, MAINTAINING TRAFFIC.

ITEM 614, WORK ZONE CROSSOVER LIGHTING SYSTEM

THIS WORK SHALL CONSIST OF FURNISHING, ERECTING, OPERATING, MAINTAINING AND REMOVING A WORK ZONE LIGHTING SYSTEM FOR A SINGLE CROSSOVER, OR OVERLAPPING A PAIR OF CROSSOVERS. THE SYSTEM SHALL BE AS SHOWN ON TRAFFIC SCD MT-100.00. THE CONTRACTOR SHALL ARRANGE FOR AND PAY FOR POWER. ALL MATERIALS AND CONSTRUCTION SHALL COMPLY WITH APPLICABLE PORTIONS OF 625 AND 725 EXCEPT: THE PERFORMANCE TEST OF 625.19F, AND CERTIFIED DRAWING REQUIREMENT OF 625.04, ARE WAIVED AND USED MATERIALS IN GOOD CONDITION ARE ACCEPTABLE.

POLES WHICH ARE NOT PROTECTED BY GUARDRAIL OR PORTABLE BARRIER SHALL BE LOCATED OUTSIDE THE CLEAR ZONE, AND SHOULD BE LOCATED AT LEAST 30 FEET (PREFERABLY 40 FEET) FROM THE EDGE OF PAVEMENT WHEN POSSIBLE. ADDITIONAL POLE LINES, CABLES AND APPURTENANCES NECESSARY TO FURNISH POWER TO THE LIGHTING SYSTEM SHALL BE INCLUDED IN THIS ITEM. SERVICE POLES SHALL BE POSITIONED WITH THE SAME CONSTRAINTS AS THE LIGHTING POLES AS A MINIMUM.

PAYMENT WILL BE MADE AT THE UNIT PRICE PER EACH FOR ITEM 614, WORK ZONE CROSSOVER LIGHTING SYSTEM THROUGHOUT ALL PHASES OF WORK WHEN THE CROSSOVER ROADWAYS ARE USED.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) AS DETAILED WITHIN. IN ADDITION TO THE SPECIFIC LOCATIONS AND APPLICATIONS DETAILED IN THE PLAN SHEETS, THE CONTRACTOR SHALL PROVIDE PCMS PRIOR TO EACH MAJOR PHASE CHANGE. SIGNS SHALL BE IN PLACE 7 DAYS PRIOR TO AND 7 DAYS AFTER EACH PHASE CHANGE AND SHALL BE LOCATED A MINIMUM OF 1500' IN ADVANCE OF THE TEMPORARY TRAFFIC CONTROL SETUP FOR SB I-75, NB I-75 AND WB SR-562. THE PCMS LOCATIONS SHALL NOT BE IN CONFLICT WITH ANY OTHER EXISTING OR TEMPORARY SIGNAGE. PRIOR TO THE PHASE CHANGE, THE MESSAGE SHOULD READ "NEW TRAFFIC PATTERN/*DATE*". AFTER THE PHASE CHANGE, THE MESSAGE SHOULD READ "NEW TRAFFIC PATTERN". AN ADDITIONAL 14 SIGN MONTHS OF ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR PCMS UTILIZED FOR PHASE CHANGES.

ALL SIGNS SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 800 FEET AND 650 FEET, RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. THE PCMS SHALL BE DELINEATED IN ACCORDANCE WITH C&MS 614.03.

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS ARE SHOWN IN THE PLANS. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED AWAY FROM ALL TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF C&MS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614, WORKSITE TRAFFIC SUPERVISOR

SUBJECT TO APPROVAL OF THE ENGINEER, THE CONTRACTOR SHALL EMPLOY AND IDENTIFY (SOMEONE OTHER THAN THE SUPERINTENDENT) A PREQUALIFIED WORKSITE TRAFFIC SUPERVISOR (WTS) BEFORE STARTING WORK IN THE FIELD. THE WTS SHALL BE TRAINED IN ACCORDANCE WITH CMS 614.03, SHALL HAVE SUCCESSFULLY COMPLETED ODOT ADMINISTERED WTS TESTING (AND RE-TESTING WHEN APPLICABLE) AND BE LISTED ON THE ODOT PREQUALIFIED WTS ROSTER. PREQUALIFICATION EXPIRES EVERY 5 YEARS. RE-TESTING SHALL BE SUCCESSFULLY REPEATED EVERY 5 YEARS TO REMAIN PREQUALIFIED.

THE NAME OF THE PREQUALIFIED WTS AND RELATED 24-HOUR CONTACT INFORMATION SHALL BE PROVIDED TO THE ENGINEER AT THE PRECONSTRUCTION CONFERENCE. IF THE DESIGNATED WTS WILL NOT BE AVAILABLE FULL TIME (24/7), THE CONTRACTOR MAY DESIGNATE AN ALTERNATE (SECONDARY) WTS TO BE AVAILABLE WHEN THE PRIMARY IS OFF DUTY; HOWEVER THE PRIMARY WTS SHALL REMAIN THE POINT OF CONTACT AT ALL TIMES. ANY ALTERNATE (SECONDARY) WTS IS SUBJECT TO THE SAME TRAINING, PREQUALIFICATION AND OTHER REQUIREMENTS OUTLINED WITHIN THIS PLAN NOTE. AT ALL TIMES THE ENGINEER, OR ENGINEER'S REPRESENTATIVES, MUST BE INFORMED OF WHO THE PRIMARY WTS (AND SECONDARY WTS, IF APPLICABLE) IS AT THE CURRENT TIME.

THE WTS POSITION HAS THE PRIMARY RESPONSIBILITY OF IMPLEMENTING THE TRAFFIC MANAGEMENT PLAN (TMP), MONITORING THE SAFETY AND MOBILITY OF THE ENTIRE WORK ZONE, AND CORRECTING TEMPORARY TRAFFIC CONTROL (TTC) DEFICIENCIES FOR THE ENTIRE WORK ZONE. THE WTS, AND ALTERNATE WTS WHEN ON DUTY, SHALL HAVE SUFFICIENT AUTHORITY TO EFFECTIVELY CARRY OUT THE IDENTIFIED WTS RESPONSIBILITIES AND DUTIES. THE DUTIES OF THE WTS ARE AS FOLLOWS:

1. BE AVAILABLE ON A 24-HOUR PER DAY BASIS.
2. BE ON SITE FOR ALL EMERGENCY TTC NEEDS WITHIN ONE HOUR OF NOTIFICATION BY POLICE OR PROJECT STAFF, AND EFFECT CORRECTIVE MEASURES IMMEDIATELY ON EXISTING WORK ZONE TTC DEVICES.
3. ATTEND PRECONSTRUCTION MEETING AND ALL PROJECT MEETINGS WHERE TTC MANAGEMENT IS DISCUSSED.
4. BE AVAILABLE ON SITE FOR OTHER MEETINGS OR DISCUSSIONS WITH THE ENGINEER UPON REQUEST.
5. BE AWARE OF ALL EXISTING AND PROPOSED TTC OPERATIONS OF THE CONTRACTOR, SUBCONTRACTORS AND SUPPLIERS, AND ENSURE COORDINATION OCCURS BETWEEN THEM TO ELIMINATE CONFLICTING TEMPORARY AND/OR PERMANENT TRAFFIC CONTROL.
6. COORDINATE PROJECT ACTIVITIES WITH ALL LAW ENFORCEMENT OFFICERS (LEOS). THE WTS SHALL ALSO BE THE MAIN CONTACT PERSON WITH THE LEOS WHILE LEOS ARE ON THE PROJECT.
7. COORDINATE AND FACILITATE MEETINGS WITH ODOT PERSONNEL, LEOS AND OTHER APPLICABLE ENTITIES BEFORE EACH PLAN PHASE SWITCH TO DISCUSS THE WORK ZONE TTC FOR IMPLEMENTING THE PHASE SWITCH. SUBMIT A WRITTEN DETAIL OF MOT OPERATIONS AND SCHEDULE OF EVENTS TO IMPLEMENT THE SWITCH BETWEEN PHASE PLANS TO THE ENGINEER 5 CALENDAR DAYS PRIOR TO THIS MEETING.
8. BE PRESENT, ON SITE FOR, AND INVOLVED WITH, EACH TTC SET UP/TAKE DOWN AND EACH PHASE CHANGE IN ACCORDANCE WITH CMS 614.03.
9. ON A CONTINUAL BASIS ENSURE THAT THE TTC ZONE AND ALL RELATED DEVICES ARE INSTALLED, MAINTAINED AND REMOVED IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.
10. ON A CONTINUAL BASIS FACILITATE CORRECTIVE ACTION(S) NECESSARY TO BRING DEFICIENT TTC ZONES AND ALL RELATED DEVICES INTO COMPLIANCE WITH CONTRACT DOCUMENTS IN THE TIMEFRAME DETERMINED BY THE ENGINEER.
11. INSPECT, EVALUATE, PROPOSE NECESSARY MODIFICATIONS TO, AND DOCUMENT THE EFFECTIVENESS OF, THE TTC DEVICES AND TRAFFIC OPERATIONS ON A DAILY BASIS (7 DAYS A WEEK). IN ADDITION, PERFORM ONE WEEKLY NIGHT INSPECTION OF THE WORK ZONE SETUP FOR DAYTIME WORK OPERATIONS; AND ONE DAYTIME INSPECTION PER WEEK FOR NIGHTTIME PROJECTS. THIS SHALL INCLUDE (BUT NOT BE LIMITED TO) DOCUMENTATION ON THE FOLLOWING PROJECT EVENTS:
    A. INITIAL TTC SETUP (DAY AND NIGHT REVIEW).
    B. DAILY TTC SETUP AND REMOVAL.
    C. WHEN CONSTRUCTION STAGING CAUSES A CHANGE IN THE TTC SETUP.
    D. CRASH OCCURRENCES WITHIN THE CONSTRUCTION AREA AND WITHIN THE INFLUENCE AREA(S) APPROACHING THE WORK ZONE.
    E. REMOVAL OF TTC DEVICES AT THE END OF A PHASE OR PROJECT.
    F. ALL OTHER EMERGENCY TTC NEEDS.
12. COMPLETE THE DEPARTMENT APPROVED LONG TERM INSPECTION FORM (CA-D-8) AFTER EACH INSPECTION AS REQUIRED IN # 11 AND SUBMIT IT TO THE ENGINEER THE FOLLOWING WORKDAY. THESE REPORTS SHALL INCLUDE A CHECKLIST OF ALL TTC MAINTENANCE ITEMS TO BE REVIEWED. A COPY OF THE FORM WILL BE PROVIDED AT THE PRE-CONSTRUCTION MEETING.
    ANY DEFICIENCIES OBSERVED SHALL BE NOTED, ALONG WITH RECOMMENDED OR COMPLETED CORRECTIVE ACTIONS AND THE DATES BY WHICH SUCH CORRECTIONS WERE, OR WILL BE, COMPLETED. A COPY OF THE CURRENT CA-D-8 DOCUMENT CAN BE FOUND ON THE OFFICE OF CONSTRUCTION ADMINISTRATION'S INSPECTION FORMS WEBSITE.
13. HAVE COPIES OF THE ODOT TEMPORARY TRAFFIC CONTROL MANUAL AND CONTRACT DOCUMENTS AVAILABLE AT ALL TIMES ON THE PROJECT.

THE DEPARTMENT WILL DEDUCT:

A. THE PRORATED DAILY AMOUNT OF ITEM 614 MAINTAINING TRAFFIC FOR ANY DAY IN WHICH THE WTS FAILS TO PERFORM THE DUTIES SET FORTH ABOVE. THE PRORATED DAILY AMOUNT WILL BE EQUAL TO THE ORIGINAL BID AMOUNT FOR ITEM 614 MAINTAINING TRAFFIC DIVIDED BY THE DIFFERENCE BETWEEN THE ORIGINAL COMPLETION DATE AND THE FIRST DAY OF WORK, IN CALENDAR DAYS.

B. 1% OF THE ORIGINAL BID AMOUNT FOR ITEM 614 MAINTAINING TRAFFIC FOR ANY DAY THAT A TTC ISSUE IS IDENTIFIED IN THE FIELD AND IS NOT CORRECTED IN THE GIVEN TIMEFRAME PER THE ENGINEER. DEDUCTION B SHALL NOT APPLY TO SITUATIONS COVERED BY DEDUCTION C.

C. 1% OF THE ORIGINAL BID AMOUNT FOR ITEM 614 MAINTAINING TRAFFIC FOR ANY DAY THAT A LANE OR RAMP IS BLOCKED (FULLY OR PARTIALLY) WITHOUT TTC, AS DETERMINED BY THE ENGINEER. THIS DEDUCTION SHALL BE IN ADDITION TO ANY OTHER DISINCENTIVES ESTABLISHED FOR UNAUTHORIZED LANE USE.

FOR DAYS IN WHICH MORE THAN ONE DEDUCTION LISTED ABOVE OCCUR, THE HIGHEST DEDUCTION AMOUNT WILL APPLY.

FOR UNIFORM ONLY

CALCULATED SMM CHECKED JDS

MAINTENANCE OF TRAFFIC NOTES

HAM-75-7.85

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IF THREE OR MORE TOTAL DAYS RESULT IN TTC ISSUES DESCRIBED IN DEDUCTION B OR C ABOVE, THE PRIMARY WTS SHALL BE IMMEDIATELY REMOVED FROM THE WORK IN ACCORDANCE WITH C&MS 108.05. UPON REMOVAL THE ENGINEER SHALL NOTIFY ODOT CENTRAL OFFICE (WTSPREQUALIFICATION@DOT.OHIO.GOV) TO REGISTER A REMOVAL AGAINST THE STATEWIDE PREQUALIFICATION FOR THE PRIMARY WTS. THREE REMOVALS SHALL CAUSE STATEWIDE DISQUALIFICATION FOR ANY PREVIOUSLY PREQUALIFIED WTS.

PAYMENT FOR THE ABOVE REQUIREMENTS, RESPONSIBILITIES AND DUTIES SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

TRAFFIC INCIDENT MANAGEMENT (TIM) DURING MOT

OHIO TIM IS OHIO'S TRAFFIC INCIDENT MANAGEMENT PROGRAM WHICH IS COMMITTED TO MAINTAINING THE SAFE AND EFFECTIVE FLOW OF TRAFFIC DURING EMERGENCIES AS TO PREVENT FURTHER DAMAGE, INJURY OR UNDUE DELAY OF THE MOTORING PUBLIC. IN ADDITION TO COMPLYING WITH THE PROVISION OF OMUTCD CHAPTER 6I, CONTROL OF TRAFFIC THROUGH TRAFFIC INCIDENT MANAGEMENT AREAS, THE CONTRACTOR SHALL ACTIVELY PARTICIPATE IN TIM PLANNING AND IMPLEMENTATION AS OUTLINED BELOW.

1. SUPERINTENDENT SHALL IDENTIFY THE INDIVIDUAL PERSONS ON THE PROJECT WHO WILL, OR MAY NEED TO, PERFORM THE DUTIES HEREIN. AT A MINIMUM, INCLUDE THE SUPERINTENDENT, FOREMEN AND SUPERVISORS (OR EQUIVALENT) AS WELL AS THE WORKSITE TRAFFIC SUPERVISOR (WTS; IF APPLICABLE TO THE PROJECT). THESE INDIVIDUALLY IDENTIFIED PERSONS SHALL COLLECTIVELY BE KNOWN AS CONTRACTOR TRAFFIC INCIDENT MANAGEMENT (TIM) CONTACTS. NOTIFY THE PROJECT ENGINEER OF THE CONTRACTOR TIM CONTACTS (ALONG WITH CONTACT INFORMATION FOR EACH) AT OR BEFORE THE PRECONSTRUCTION MEETING.
2. SUPERINTENDENT SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY CONTRACTOR TIM CONTACT IS ADDED, REMOVED OR THE CONTACT INFORMATION CHANGES OVER THE COURSE OF THE PROJECT.
3. PRIOR THE FIRST DAY OF WORK IN THE FIELD, EACH CONTRACTOR TIM CONTACT ON THE PROJECT SHALL HAVE ATTENDED AND SUCCESSFULLY COMPLETED OHIO TIM TRAINING PROVIDED BY THE DEPARTMENT OR DESIGNEE. TRAINING INFORMATION CAN BE FOUND AT WWW.OHIOTIM.COM.
4. SUPERINTENDENT, AT A MINIMUM, SHALL ATTEND AND ACTIVELY PARTICIPATE IN A DEPARTMENT SCHEDULED TIM MEETING BEFORE CONSTRUCTION WORK BEGINS AND BEFORE EACH PHASE CHANGE. THESE MEETINGS WILL RESULT IN A DEPARTMENT ISSUED PROJECT SPECIFIC TRAFFIC INCIDENT MANAGEMENT PLAN (TIMP). AT THE TIM MEETINGS THE ATTENDING CONTRACTOR TIM CONTACTS SHALL:
   A. COLLABORATE WITH ODOT AND SAFETY FORCES;
   B. SHARE PROJECT SPECIFIC DETAILS THAT IMPACT TIM RESPONDERS; AND
   C. RECOMMEND WAYS TO INCORPORATE NECESSARY EMERGENCY ACCESS AND OTHER TIM ELEMENTS FOR TIM RESPONDERS GIVEN PROJECT SPECIFIC WORK BEING COMPLETED AND PROJECT SPECIFIC PHASING.
5. CONTRACTOR TIM CONTACTS SHALL IMPLEMENT COMPONENTS OF THE RESULTING TIMP (SUCH AS APPROVED EMERGENCY INGRESS/EGRESS POINTS, ETC), AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
6. CONTRACTOR TIM CONTACTS SHALL PERFORM, AT A MINIMUM, THE FOLLOWING FUNCTIONS WHEN AN INCIDENT/CRASH OCCURS:
   A. IF OBSERVED OR PRESENT WHEN OCCURS, CALL 911 AND THEN NOTIFY THE TRAFFIC MANAGEMENT CENTER (TMC) TO PROVIDE THE FOLLOWING:
      I. LOCATION, INCLUDING MILEPOST NUMBER AND DIRECTION OF TRAVEL
      II. NUMBER AND TYPE OF VEHICLES INVOLVED, IF KNOWN
      III. ESTIMATED EXTENT OF DAMAGE OR INJURY, IF KNOWN
      IV. ESTIMATED NUMBER OF PATIENTS INVOLVED, IF KNOWN
      V. ANY POTENTIAL HAZARDOUS CONDITIONS, IF KNOWN
      VI. THE PLACARD NUMBER ON ANY HAZARDOUS MATERIALS PLACARD FROM A SAFE DISTANCE, IF APPLICABLE AND VISIBLE
   B. FOLLOWING AN INCIDENT/CRASH:
      I. INITIATE TRAFFIC MANAGEMENT/PROVIDE TEMPORARY TRAFFIC CONTROL AS INDICATED IN THE TIMP, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
      II. RECOMMEND ROADWAY REPAIR NEEDS.
      III. PROVIDE REPAIR RESOURCES AND INITIATE REPAIRS, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
      IV. ATTEND AND PARTICIPATE IN AN AFTER ACTION REVIEW (AAR).

ALL COSTS, UNLESS OTHERWISE SPECIFIED, RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 614, MAINTAINING TRAFFIC. FAILURE TO PERFORM THE REQUIREMENTS OF THIS PLAN NOTE WILL RESULT IN A DAILY FINE OF 2% OF ITEM 614, MAINTAINING TRAFFIC AND MAY RESULT IN ONE OR MORE CONTRACTOR TIM CONTACTS BEING REMOVED FROM THE LIST OF OHIO TIM TRAINED INDIVIDUALS (AT THE SOLE DISCRETION OF THE OHIO TIM EXECUTIVE COMMITTEE). IN THE EVENT AN INDIVIDUAL IS REMOVED FROM THE OHIO TIM TRAINED LIST, THE INDIVIDUAL WILL BE REMOVED FROM CONTRACTOR TIM CONTACT RESPONSIBILITIES ON ALL PROJECTS.

ACCESS MANAGEMENT FOR DAILY/NIGHTLY WORK OPERATIONS

ACCESS MANAGEMENT IS PART OF THE CONTRACTOR'S MEANS AND METHODS. IT IS ANTICIPATED THAT EQUIPMENT WILL BE TRAILERED IN/OUT OF THE WORK AREA OR DRIVEN ACROSS LANES OF TRAFFIC SINCE THE MEDIAN BARRIER RESTRICTS AVAILABLE STAGING AREAS.

IF THE CONTRACTOR ELECTS TO CROSS OPEN LANES OF TRAVEL, MT-99.60 IS THE GOVERNING STANDARD EXCEPT AS FOLLOWS: THE SHORT DURATION CLOSURE IS PERMITTED TO BE PERFORMED BETWEEN 11:00 PM AND 5:00 AM; THE DURATION OF THE CLOSURE SHALL NOT EXCEED 5 MINUTES; AND ALL EQUIPMENT SHALL CROSS PERPENDICULAR TO THE ROAD. REMOVE, TURN, OR COVER ALL SIGNS USED IN THE SHORT-DURATION CLOSURE IF THE NEXT SHORT-DURATION CLOSURE WILL OCCUR MORE THAN 2 HOURS LATER. THIS INCLUDES TURNING OFF OR REVISING THE MESSAGE ON THE PORTABLE CHANGEABLE MESSAGE SIGN.

ALL COSTS ASSOCIATED WITH ACCESS MANAGEMENT INCLUDING LAW ENFORCEMENT OFFICERS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

ITEM 614, WORK ZONE RAISED PAVEMENT MARKER

WORK ZONE RAISED PAVEMENT MARKERS, AS PER PLAN, AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614 OR C&MS 621 AS SPECIFIED HEREIN.

- RAISED PAVEMENT MARKERS IN USE DURING THE SNOW-PLOWING SEASON SHALL CONFORM TO 621.
- RAISED PAVEMENT MARKERS IN USE DURING THE NON-SNOW-PLOW SEASON SHALL CONFORM TO EITHER 614 OR TO 621.

THE SNOW-PLOWING SEASON SHALL RUN FROM OCTOBER 15 THROUGH APRIL 1.

IF PROJECT DELAYS, NOT THE FAULT OF ODOT, CAUSE THE WORK TO EXTEND INTO THE SNOW-PLOWING SEASON, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING WORK ZONE RAISED PAVEMENT MARKERS (WZRPMS) CONFORMING TO C&MS 614, WITH RAISED PAVEMENT MARKERS CONFORMING TO 621, AS DETERMINED BY THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

THIS ITEM SHALL INCLUDE PURCHASE, INSTALLATION AND REMOVAL OF ITEM 614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN, INCLUDING FILLING OF ANY DEPRESSIONS CREATED IN THE PAVEMENT AS PER C&MS 621.08.

RESURFACING OF THE TRANSITION AREAS SHALL BE PERFORMED AT THE TIME THAT THE SURFACE COURSE IS BEING APPLIED TO THE ENTIRE PROJECT. PRIOR TO APPLICATION OF THE SURFACE COURSE ON THE PROJECT, THE EXISTING PAVEMENT WITHIN THE TRANSITION AREA SHALL BE REMOVED TO A DEPTH NECESSARY TO REACH THE LEVEL OF THE INTERMEDIATE COURSE OF THE PAVEMENT, AS DETERMINED BY THE ENGINEER. FOR QUANTITIES PROVIDED BELOW, IT WAS ASSUMED THAT 1 1/2" OF SURFACE COURSE (ITEM 442) WILL BE NEEDED.

THE FOLLOWING BID ITEMS SHOULD BE INCLUDED IN THE PLANS:

ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE
23,500 SQ. YD.
ITEM 407 NON-TRACKING TACK COAT
1,998 GAL
ITEM 442 ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (447), AS PER PLAN 980 CU. YD.
ITEM 614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN 3,600 EACH

PAYMENT FOR RESURFACING WITHIN THE TRANSITION AREA SHALL BE PAID FOR UNDER THE APPROPRIATE BID ITEMS FOR THE WORK REQUIRED, AS PROVIDED FOR IN THE PLANS.

ITEM 614, WORK ZONE RAISED PAVEMENT MARKERS ON PERMANENT CONCRETE SURFACES

RAISED PAVEMENT MARKERS IN WORK ZONES, INSTALLED ON PERMANENT CONCRETE SURFACES, SHALL BE ITEM 614 WORK ZONE RAISED PAVEMENT MARKERS.
WZRPMS ARE INTENDED FOR USE ONLY DURING THE NON-SNOW-PLOWING SEASON. WZRPMS SHALL NOT BE PROVIDED DURING THE SNOW-PLOWING SEASON.

THE SNOW-PLOWING SEASON SHALL RUN FROM OCTOBER 15 THROUGH APRIL 1.

WHERE A TEMPORARY ALIGNMENT WILL REMAIN IN USE THROUGH THE WINTER, THE WZRPMS SHALL BE REMOVED PRIOR TO THE BEGINNING OF THE SNOW-PLOWING SEASON AND REPLACED APPROXIMATELY APRIL 1, OR AS OTHERWISE DETERMINED BY THE ENGINEER.

THIS ITEM SHALL INCLUDE PURCHASE, INSTALLATION AND REMOVAL OF ITEM 614 WORK ZONE RAISED PAVEMENT MARKERS.

AN ESTIMATED QUANTITY OF EACH OF ITEM 614 WORK ZONE RAISED PAVEMENT MARKER HAS BEEN PROVIDED AND CARRIED TO THE GENERAL SUMMARY.

DELINEATION OF PORTABLE AND PERMANENT BARRIER

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL AND ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND TRAFFIC SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE-WAY.

INCREASED BARRIER DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL PB AND CONCRETE PERMANENT BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE ALONG TAPERS AND TRANSITION AREAS AND ALONG CURVES (OUTSIDE ONLY) WITH DEGREE OF CURVATURE GREATER THAN OR EQUAL TO 3 DEGREES.

THE INCREASED BARRIER DELINEATION SHALL CONSIST OF EITHER DELINEATION PANELS OR THE TRIPLE STACKING OF WORK ZONE BARRIER REFLECTORS.

DELINEATION PANELS SHALL CONSIST OF PANELS OF DELINEATION, APPROXIMATELY 34 INCHES LONG AND 6 INCHES WIDE AND SHALL BE "CRIMPED." PANELS SHALL BE INSTALLED AND SPACED PER TRAFFIC SCD MT-101.70.

TRIPLE-STACKED BARRIER REFLECTORS SHALL CONSIST OF ALIGNING THREE BARRIER REFLECTORS VERTICALLY, AT LOCATIONS WHERE A SINGLE BARRIER REFLECTOR WOULD BE OTHERWISE ATTACHED. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TRIPLE-STACKED BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THEY SHALL BE SPACED AND ALIGNED PER TRAFFIC SCD MT-101.70.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE 1 3915 EACH
ITEM 614, BARRIER REFLECTOR, TYPE 2 25 EACH
ITEM 614, OBJECT MARKER, ONE-WAY 2570 EACH
ITEM 614, OBJECT MARKER, TWO-WAY 660 EACH
ITEM 614, INCREASED BARRIER DELINEATION 22729 FEET

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

ALONG RUNS OF INCREASED BARRIER DELINEATION WHERE THIS ITEM IS PROVIDED, THE QUANTITY SHALL BE MEASURED AS THE ENTIRE LENGTH OF THE RUN OF INCREASED BARRIER DELINEATION, INCLUDING THE SPACES BETWEEN THE INDIVIDUAL DELINEATION PANELS OR STACKS OF BARRIER REFLECTORS.

FOR INFORMATION ONLY

CALCULATED SMM CHECKED JDS

MAINTENANCE OF TRAFFIC NOTES

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DELINEATION OF TEMPORARY AND PERMANENT GUARDRAIL
BARRIER REFLECTORS SHALL BE INSTALLED ON ALL TEMPORARY GUARDRAIL USED FOR TRAFFIC CONTROL AND ON ALL PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. BARRIER REFLECTORS SHALL CONFORM TO C&MS 626.

OBJECT MARKERS SHALL BE INSTALLED ON ALL TEMPORARY AND PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. GUARDRAIL-MOUNTING OF OBJECT MARKERS SHALL BE MADE BY INSTALLING THE OBJECT MARKERS ON THE EXTENSION BLOCKS RATHER THAN DIRECTLY ONTO THE GUARDRAIL ITSELF. OBJECT MARKERS SHALL CONFORM TO C&MS 614.03 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE 2 25 EACH
ITEM 614, OBJECT MARKER, ONE-WAY 25 EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING THE ABOVE ITEM(S).

ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS
USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

- DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.
- DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC, OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

IN ADDITION TO THE REQUIREMENT OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS APPROVED BY THE ENGINEER:

- FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).
- FOR OPERATIONS WITHOUT POSITIVE PROTECTION OCCURRING WITHIN 10 FEET OF AN OPEN TRAVELED LANE THAT MEET ALL OF THE FOLLOWING CRITERIA:
  - ON A MULTI-LANE DIVIDED INTERSTATE, OTHER FREEWAY OR EXPRESSWAY; AND
  - AN AUTHORIZED SPEED LIMIT OF 45 MPH OR GREATER THAT IS IN EFFECT AT THE TIME OF THE OPERATION; AND,
  - AADT OF 50,000 (OR AADT OF 30,000 WITH 25% OR HIGHER PERCENT TRUCKS)

  "WITHOUT POSITIVE PROTECTION" MEANS USE OF DRUMS, CONES, SHADOW VEHICLE, ETC, WITHOUT PROTECTION FROM PORTABLE BARRIER OR OTHER RIGID BARRIER ALONG THE WORK AREA. THIS PHRASE DOES NOT APPLY TO CASES WHERE POSITIVE PROTECTION IS REQUIRED. MOBILE OPERATIONS ARE REGARDED AS "WITHOUT POSITIVE PROTECTION". FOR WORK ZONES USING A COMBINATION OF BARRIER AND TEMPORARY TRAFFIC CONTROL DEVICES (CONES, DRUMS, ETC), THE DESIGNATION SHALL BE BASED UPON THE TYPE OF DEVICES USED IN THE AREA THAT WORKERS ARE LOCATED.

  IF MULTIPLE ACTIVE LOCALIZED QUALIFYING WORK AREAS OCCUR WITHOUT POSITIVE PROTECTION, PER MAINLINE TRAFFIC DIRECTION, PROVIDE A UNIFORMED LEO AND OFFICIAL PATROL CAR IN ADVANCE OF:
  - THE FIRST ACTIVE WORK AREA THAT DRIVERS WILL ENCOUNTER; OR
  - THE ACTIVE WORK AREA LATERALLY CLOSEST TO THE OPEN TRAVELED LANE; OR
  - OTHER LOCATION AS APPROVED BY THE ENGINEER.

  THE UNIFORMED LEO AND OFFICIAL PATROL CAR MAY RELOCATE AMONG THE LISTED LOCATIONS AS APPROPRIATE AS THE OPERATIONS PROCEED IN THE LOCALIZED QUALIFYING WORK AREAS.

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION (OR AT THE POINT OF ROAD CLOSURE), AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONES.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

ENSURE PROVIDED LEOS HAVE BEEN TRAINED APPROPRIATE TO THE JOB DECISIONS THEY ARE REQUIRED TO MAKE WHILE ON THE PROJECT, IN ACCORDANCE WITH C&MS 614.03.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE THAT SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 3500 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

ITEM 614, WORK ZONE PAVEMENT MARKINGS, MISC.: SPRAY THERMOPLASTIC
THE CONTRACTOR SHALL PLACE THE WORK ZONE PAVEMENT MARKINGS, SPRAY THERMOPLASTIC, PER ODOT SPECIFICATION 614.11 AND ODOT SPECIFICATION 648 WITH THE EXCEPTION ODOT SPECIFICATION 648.05 SHALL BE MODIFIED TO ALLOW PLACEMENT OF THE MATERIAL AT A TEMPERATURE OF NOT LESS THAN 35 DEGREES FAHRENHEIT.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS AND AT TIMES AS DIRECTED BY THE ENGINEER FOR WORK ZONE PAVEMENT MARKINGS PER THE REQUIREMENTS OF C&MS 614.11.

ITEM 614 WORK ZONE PAVEMENT MARKING, MISC.: LANE LINE, 6", CLASS I SPRAY THERMOPLASTIC, 10.5 MILES

ITEM 614 WORK ZONE PAVEMENT MARKING, MISC.: EDGE LINE, 6", CLASS I SPRAY THERMOPLASTIC, 25.0 MILES

ITEM 614 WORK ZONE PAVEMENT MARKING, MISC.: CHANNELIZING LINE, 8", CLASS I, SPRAY THERMOPLASTIC, 14,125 FEET

ITEM 614 WORK ZONE PAVEMENT MARKING, MISC.: DOTTED LINE, 12", CLASS I, SPRAY THERMOPLASTIC, 6,450 FEET

NOTIFICATION OF TRAFFIC RESTRICTIONS
THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM THE SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION TIME FRAME TABLE

ITEM	DURATION OF CLOSURE	NOTIFICATION DUE TO DISTRICT 6 COMMUNICATIONS OFFICE	SIGN DISPLAYED TO PUBLIC
RAMP & ROAD CLOSURES	>=2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE	14 CALENDAR DAYS PRIOR TO CLOSURE
	>12 HOURS & <2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE	7 CALENDAR DAYS PRIOR TO CLOSURE
	<12 HOURS	4 BUSINESS DAYS PRIOR TO CLOSURE	2 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURE & RESTRICTIONS	>=2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE	
	<2 WEEKS	5 BUSINESS DAYS PRIOR TO CLOSURE	
START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION	

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTICE TO OFFICE OF COMMUNICATIONS TIME TABLE.

INTERIM COMPLETION REQUIREMENTS
THE PUMP STATION PORTION OF THE PROJECT HAS AN INTERIM COMPLETION DATE OF NOVEMBER 1, 2023. ON OR BEFORE THE INTERIM COMPLETION DATE, THE PUMP STATION SHALL BE FULLY OPERATIONAL.

THE CONTRACT WILL BE SUBJECT TO DAILY DISINCENTIVES FOR FAILURE TO COMPLETE ALL THE REQUIRED WORK, AND ASSOCIATED INCIDENTALS RELATED TO THE WORK, AS OUTLINED IN THE TABLE INCLUDED IN THIS NOTE. APPLICATION OF THE DISINCENTIVES WILL BE BASED ON THE OVERALL CONTRACT AMOUNT. DAILY DISINCENTIVES ARE APPLICABLE TO THE WORK REQUIRED TO THE INTERIM COMPLETION DATE ONLY. THE CONTRACT IS STILL SUBJECT TO LIQUIDATED DAMAGES AS OUTLINED IN CMS 108.07 FOR THE REMAINDER OF THE CONTRACT

SEE SHEET 1716 FOR TRACK STAGING INFORMATION

DESCRIPTION OR LOCATION OF CRITICAL WORK	COMPLETION DATE	TIME PERIOD	DISINCENTIVE $ PER TIME PERIOD
PUMP STATION FULLY CONTSTRUCTED AND OPERATIONAL	11/01/2023	DAY	$7,500

FOR INFORMATION ONLY

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NOTIFICATION CONTACT INFO:
DISTRICT PUBLIC INFORMATION OFFICER BY EMAIL AT DOT.D08.PIO@dot.ohio.gov
DISTRICT PERMIT SECTION BY EMAIL AT D08.Permits@dot.ohio.gov
CENTRAL OFFICE SPECIAL HAUL PERMITS SECTION BY EMAIL AT DOT.D08.Detours@dot.ohio.gov
DISTRICT TRAFFIC, DETOUR SECTION BY EMAIL AT DOT.D08.Detours@dot.ohio.gov

ITEM 615, ROADS FOR MAINTAINING TRAFFIC
PER THE REQUIREMENTS OF THE 2019 CONSTRUCTION AND MATERIALS SPECIFICATIONS (CMS), ALL COSTS ASSOCIATED WITH DRAINAGE RELATED TO TEMPORARY PAVEMENT CONSTRUCTION SHALL BE INCIDENTAL TO ITEM 615, ROADS FOR MAINTAINING TRAFFIC. THE MAINTENANCE OF TRAFFIC PLANS IDENTIFY SPECIFIC LOCATIONS WHERE TEMPORARY DRAINAGE CONDUITS AND TEMPORARY GUARDRAIL ARE EXPECTED TO BE NEEDED. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE ACTUAL DESIGN NEEDS. THESE SPECIFIC ITEMS, AS WELL AS ALL OTHER REQUIREMENTS OF THE CMS SHALL BE INCLUDED IN THE BASE BID OF ROADS FOR MAINTAINING TRAFFIC.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN PROVIDED FOR INFORMATION ONLY. THESE QUANTITIES DO NOT INCLUDE ALL ASPECTS OF ITEM 615, BUT HAVE BEEN PROVIDED FOR ASSISTANCE IN BIDDING:

12" CONDUIT, TYPE B = 1745 FEET
12" CONDUIT, TYPE C = 379 FEET
TEMPORARY GUARDRAIL = 1620 FEET

EXCAVATION FOR MAINTAINING TRAFFIC 7520 CU. YD.
EMBANKMENT FOR MAINTAINING TRAFFIC 2329 CU. YD.

PAYMENT FOR ALL COSTS SHALL BE INCLUDED IN THE CONTRACT PRICE PER LUMP SUM FOR ITEM 615, ROADS FOR MAINTAINING TRAFFIC.

ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN

IN ORDER TO REMOVE EXISTING RUMBLE STRIPS PRIOR TO SHIFTING TRAFFIC ONTO SHOULDERS, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN SHALL INCLUDE MILLING 1.5" OF EXISTING INSIDE AND OUTSIDE SHOULDERS FOR THE STATION RANGES DETAILED BELOW. THE MILLED AREAS SHALL THEN BE RESURFACED WITH 1.5" OF ASPHALT CONCRETE SURFACE COURSE (ITEM 448, TYPE 1). THIS WORK SHALL BE COMPLETED PRIOR TO SHIFTING MAINLINE TRAFFIC ONTO THE SHOULDERS.

PAYMENT FOR ALL MATERIALS AND LABOR ASSOCIATED WITH MILLING AND RESURFACING EXISTING SHOULDERS SHALL BE INCIDENTAL TO ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN.

A QUANTITY OF 5840 S.Y. FOR THIS ITEM HAS BEEN CARRIED TO THE GENERAL SUMMARY.

THE MILLING AND RESURFACING DESCRIBED ABOVE SHALL BE APPLIED TO THE FOLLOWING LENGTHS OF EXISTING SHOULDER:

IR 75 NB INSIDE SHOULDER STA 403+96 STA 523+86
IR 75 NB OUTSIDE SHOULDER STA 403+96 STA 523+86
IR 75 SB OUTSIDE SHOULDER STA 438+38 STA 443+50
SR 562 EB OUTSIDE SHOULDER STA 12+57 STA 21+31
SR 562 WB OUTSIDE SHOULDER STA 12+69 STA 21+80

ITEM 622, PORTABLE BARRIER, 50"
THIS WORK SHALL CONSIST OF FURNISHING, MAINTAINING, AND SUBSEQUENTLY REMOVING A 50-INCH PORTABLE BARRIER AT THE LOCATIONS SHOWN ON THE PLANS. FOR DETAILS, SEE SCD RM-4.1.

PORTABLE STEEL BARRIER IS AN APPROVED ALTERNATIVE TO PORTABLE CONCRETE BARRIER. FOR INFORMATION ON APPROVED VENDORS, SEE THE APPROVED PRODUCTS LIST MAINTAINED BY THE OFFICE OF ROADWAY ENGINEERING.

PORTABLE BARRIER, 32 INCHES HIGH WITH AN 18-INCH MINIMUM HEIGHT GLARE SCREEN MAY BE USED AT THE OPTION OF THE CONTRACTOR. THE GLARE SCREEN SHALL BE CONSTRUCTED USING ONE OF THE SCREENS PROVIDED ON THE APPROVED LIST, AVAILABLE ON THE OFFICE OF ROADWAY ENGINEERING WEBSITE.

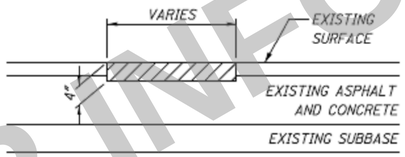
PADDLE OR INTERMITTENT TYPE GLARE SCREENS SHALL BE DESIGNED USING A 20 DEGREE CUT-OFF ANGLE BASED ON TANGENT ALIGNMENT. THAT SPACING SHALL BE USED THROUGHOUT THE BARRIER LENGTH WITHOUT REGARD TO BARRIER CURVATURE.

THE GLARE SCREEN SYSTEM SHALL BE SECURELY FASTENED TO THE 32-INCH PORTABLE BARRIER USING THE HARDWARE AND PROCEDURES SPECIFIED BY THE MANUFACTURER.

FOR DIRECTIONS ON HOW TO INSTALL THE GLARE SCREEN AND THE BARRIER, SEE THE MANUFACTURER'S INSTRUCTIONS.

PAYMENT SHALL INCLUDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO PERFORM THE WORK AND SHALL BE PAID FOR AT THE CONTRACT PRICE PER FOOT FOR ITEM 622, PORTABLE BARRIER, 50", AS PER PLAN.

ITEM, 253 PARTIAL DEPTH PAVEMENT REPAIR
THE FOLLOWING ESTIMATED QUANTITIES OF ITEM 253 PARTIAL DEPTH PAVEMENT REPAIR HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED IN EACH YEAR OF MOT AS DIRECTED BY THE ENGINEER FOR MAINTAINING TRAFFIC.



EXISTING DETERIORATED ASPHALT SHALL BE REMOVED TO A MINIMUM DEPTH OF 4 INCHES OR TOP OF CONCRETE OR AS DIRECTED BY THE ENGINEER AND REPLACED WITH ITEM 301, ASPHALT CONCRETE BASE. THE 301 SHALL BE COMPACTED AS PER 401.15 AND IN APPROXIMATELY EQUAL LAYERS IF REQUIRED DUE TO THE DEPTH OF REPAIR. THE LOCATIONS AND SIZE OF THE REPAIRS SHALL BE DETERMINED BY THE ENGINEER.

ITEM 253 PAVEMENT REPAIR, MISC.: PERFORMED IN 2022
600 CU YDS
ITEM 253 PAVEMENT REPAIR, MISC.: PERFORMED IN 2023
600 CU YDS
ITEM 253 PAVEMENT REPAIR, MISC.: PERFORMED IN 2024
400 CU YDS
ITEM 253 PAVEMENT REPAIR, MISC.: PERFORMED IN 2025
200 CU YDS

ITEM 503, COFFERDAMS AND EXCAVATION BRACING
TEMPORARY SHORING WILL BE REQUIRED TO FACILITATE MAINTAINING TRAFFIC IN THE LOCATIONS DEPICTED IN THE MAINTENANCE OF TRAFFIC PLANS. APPROXIMATE LENGTHS OF THE TEMPORARY SHORING HAS BEEN PROVIDED IN PLAN TO AID IN THE BIDDING OF THESE WALLS. SEPERATE PAY ITEMS HAVE BEEN INCLUDED FOR EACH LOCATION. WITH THE EXCEPTION OF PHASE 4-RAMP A (SEE SHEET 224 FOR DETAILS), THE SHORING IS ANTICIPATED TO HAVE AN EXPOSED HEIGHT OF LESS THAN 8'-0". THE CONTRACTOR IS RESPONSIBLE FOR THEIR CHOSEN METHOD OF SHORING. PLANS, INCLUDING DESIGN AND GEOTECHNICAL EVALUATION, FOR THE TEMPORARY SHORING SHALL BE PREPARED AND PROVIDED PER CMS 501.05. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS ITEM. ALL COSTS ASSOCIATED WITH TEMPORARY SHORING SHALL BE INCIDENTAL TO THE LUMP SUM FOR ITEM 503, COFFERDAMS AND EXCAVATION BRACING, FOR EACH LOCATION IN THE GENERAL SUMMARY.

ID	PHASE	LOCATION	TYPE	STATION	TEMP. SHORING LENGTH
TS1	1	IR-75	SHEET PILE	419+78 - 424+64	486
TS2	1	IR-75	SHEET PILE	479+95 - 482+00	205
TS3	1	IR-75	SHEET PILE	488+00 - 491+00	300
TS4	1	IR-75	SHEET PILE	494+32 - 500+50	618
TS5	1	RAMP B	SHEET PILE	503+50 - 506+00	250
TS6	1	IR-75	SHEET PILE	504+00 - 505+00	100
TS7	1	RAMP M	SHEET PILE	420+57 - 422+63	206
TS8	1A	IR-75	SHEET PILE	491+00 - 494+32	332
TS9	1A	IR-75	SHEET PILE	505+50 - 510+50	500
TS10	2	IR-75	SHEET PILE	417+14 - 417+29	15
TS11	2	IR-75	SHEET PILE	424+64 - 427+00	236
TS12	2	IR-75	SHEET PILE	484+50 - 514+00	2950
TS13	3	IR-75	SHEET PILE	419+50 - 426+50	700
TS14	3	IR-75	SHEET PILE	442+00 - 444+45	245
TS15	3	IR-75	SHEET PILE	486+50 - 511+50	2500
TS16	3	RAMP N	SHEET PILE	416+50 - 421+00	450
TS17	2	RAMP K	SHEET PILE	409+10 - 416+15	705
TS18	3	SR-562	SHEET PILE	422+50 - 428+00	550
TS19	3	RAMP P	SHEET PILE	22+00 - 32+00	1000
TS20	3	RAMP Q	SHEET PILE	22+00 - 32+00	1000
TS21	3A	SR-562	SHEET PILE	22+00 - 32+00	1000
TS22	4	RAMP K	SHEET PILE	442+25 - 444+25	200
TS23	4	RAMP A	SHEET PILE	500+00 - 506+00	600
TS24	4	RAMP J	SHEET PILE	419+00 - 422+50	350
TS25	1	IR-75	TWFMSE WALL	453+50 - 463+00	950
TS26	2	IR-75	TWFMSE WALL	453+50 - 463+00	950
TS27	3	IR-75	TWFMSE WALL	454+00 - 463+25	990
TS28	3A	IR-75	TWFMSE WALL	453+09 - 454+00	91

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:
ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS1
ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS2
ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS3
ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS4
ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS5
ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS6
ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS7
ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS8
ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS9
ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS10
ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS11
ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS12
ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS13
ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS14
ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS15
ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS16
ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS17
ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS18
ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS19
ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS20
ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS21
ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS22
ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS23
ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS24
ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS25
ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS26
ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS27
ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS28

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CALCULATED SMM CHECKED JDS

MAINTENANCE OF TRAFFIC NOTES

HAM-75-7.85

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SHEET NUMBER									ITEM	ITEM EXT.	TOTALS CARRIED TO GENERAL SUMMARY	UNIT	DESCRIPTION	SEE SHEET NO.
68	69	70	71	72										
													MAINTENANCE OF TRAFFIC	
600									253	90000	600	CU YD	PAVEMENT REPAIR, MISC.: PERFORMED IN 2022	65
600									253	90000	600	CU YD	PAVEMENT REPAIR, MISC.: PERFORMED IN 2023	65
400									253	90000	400	CU YD	PAVEMENT REPAIR, MISC.: PERFORMED IN 2024	65
200									253	90000	200	CU YD	PAVEMENT REPAIR, MISC.: PERFORMED IN 2025	65
23500									254	01000	23500	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE	
1998									407	20000	1998	GAL	NON-TRACKING TACK COAT	
980									442	10301	980	CU YD	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (447), AS PER PLAN	43
LUMP									503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS1	65
LUMP									503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS2	65
LUMP									503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS3	65
LUMP									503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS4	65
LUMP									503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS5	65
LUMP									503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS6	65
LUMP									503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS7	65
LUMP									503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS8	65
LUMP									503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS9	65
LUMP									503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS10	65
LUMP									503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS11	65
LUMP									503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS12	65
LUMP									503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS13	65
LUMP									503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS14	65
LUMP									503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS15	65
LUMP									503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS16	65
LUMP									503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS17	65
LUMP									503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS18	65
LUMP									503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS19	65
LUMP									503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS20	65
LUMP									503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS21	65
LUMP									503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS22	65
LUMP									503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS23	65
LUMP									503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS24	65
LUMP									503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS25	65
LUMP									503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS26	65
LUMP									503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS27	65
LUMP									503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS28	65
3500									614	11110	3500	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
22729									614	11630	22729	FT	INCREASED BARRIER DELINEATION	
4	21	15	18	8					614	12380	66	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS (UNIDIRECTIONAL)	
	2								614	12384	2	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS (BIDIRECTIONAL)	
	1	4							614	12400	5	EACH	WORK ZONE IMPACT ATTENUATOR, MISC.: 24" WIDE HAZARDS (UNIDIRECTIONAL), TYPE 3	
	5	2							614	12410	7	EACH	SPEED ZONE AHEAD SYMBOL SIGN	
LUMP	LUMP	LUMP	LUMP						614	12420	LUMP		DETOUR SIGNING	
	18	13	10						614	12470	41	EACH	WORK ZONE SPEED LIMIT SIGN	
	14	11	2						614	12484	27	EACH	WORK ZONE INCREASED PENALTIES SIGN	
25									614	12500	25	EACH	REPLACEMENT SIGN	
250									614	12600	250	EACH	REPLACEMENT DRUM	
6									614	12756	6	EACH	WORK ZONE CROSSOVER LIGHTING SYSTEM	
3600									614	12801	3600	EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	63
145									614	13000	145	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
3915									614	13310	3915	EACH	BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL	
50									614	13312	50	EACH	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL	
2595									614	13350	2595	EACH	OBJECT MARKER, ONE WAY	
660									614	13360	660	EACH	OBJECT MARKER, TWO WAY	
14	1	1							614	18601	16	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	62

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MAINTENANCE OF TRAFFIC SUBSUMMARY

HAM-75-7.85

66
2017

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SHEET NUMBER									ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
68	69	70	71	72										
	6.4	8.8	8.5	14.9					614	20056	38.6	MILE	WORK ZONE LANE LINE, CLASS I, 6", 807 PAINT	
17.12									614	20560	17.12	MILE	WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT	
			0.2						614	21100	0.2	MILE	WORK ZONE CENTER LINE, CLASS I, 642 PAINT	
	19.3	24.6	23.2	12.6					614	22056	79.7	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 807 PAINT	
			0.4						614	22110	0.4	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	
17.51									614	22360	17.51	MILE	WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT	
	14551	21916	10906	12617					614	23110	59990	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807 PAINT	
16879									614	23690	16879	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 12", 642 PAINT	
	6241	7325	7273	16030					614	24102	36869	FT	WORK ZONE DOTTED LINE, CLASS I, 6", 807 PAINT	
21503									614	24612	21503	FT	WORK ZONE DOTTED LINE, CLASS III, 6", 642 PAINT	
	227	336	318	937					614	25200	1818	FT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT	
				56					614	26200	56	FT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	
				378					614	27050	378	FT	WORK ZONE CROSSWALK LINE, CLASS I, 12", 642 PAINT	
	24								614	28200	24	FT	WORK ZONE GORE MARKING, CLASS II, 642 PAINT	
				26					614	30200	26	EACH	WORK ZONE ARROW, CLASS I, 642 PAINT	
10.5									614	98000	10.5	MILE	WORK ZONE PAVEMENT MARKING, MISC.: LANE LINE, 6", CLASS I, SPRAY THERMOPLASTIC	64
25									614	98000	25	MILE	WORK ZONE PAVEMENT MARKING, MISC.: EDGE LINE, 6", CLASS I, SPRAY THERMOPLASTIC	64
14125									614	98100	14125	FT	WORK ZONE PAVEMENT MARKING, MISC.: CHANNELIZING LINE, 8", CLASS I, SPRAY THERMOPLASTIC	64
6450									614	98100	6450	FT	WORK ZONE PAVEMENT MARKING, MISC.: DOTTED LINE, 12", CLASS I, SPRAY THERMOPLASTIC	64
LUMP									615	10000	LUMP		ROADS FOR MAINTAINING TRAFFIC	
5916	2063	1346							615	20000	9325	SQ YD	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	
5840									615	20001	5840	SQ YD	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	64
1850									616	10000	1850	MGAL	WATER	
	12460	8800	12460						622	41011	33720	FT	PORTABLE BARRIER, 50", AS PER PLAN	64
	3	3	3						622	41050	9	EACH	PORTABLE BARRIER, "Y" CONNECTOR	
2620	20670	22615	24550	9080					622	41100	79535	FT	PORTABLE BARRIER, UNANCHORED	
	4200	31080	11830	1000					622	41110	48110	FT	PORTABLE BARRIER, ANCHORED	
													INCIDENTALS	
LUMP									614	11000	LUMP		MAINTAINING TRAFFIC	59

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SUMMARY OF TRAFFIC SUBSUMMARY

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HAM-75-7.85

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SHEET NO.	253 PAVEMENT REPAIR, MISC.: (BY YEAR) CU YD	254 PAVEMENT PLANING, ASPHALT CONCRETE SQ YD	407 NON-TRACKING TACK COAT GAL	442 ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (447), AS PER PLAN CU YD	503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (BY LOCATION)	614 MAINTAINING TRAFFIC	614 LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE HOUR	614 INCREASED BARRIER DELINEATION FT	614 DETOUR SIGNING	614 REPLACEMENT SIGN EACH	614 REPLACEMENT DRUM EACH	614 WORK ZONE CROSSOVER LIGHTING SYSTEM EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN EACH	614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC CU YD	614 BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL EACH	614 BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL EACH	614 OBJECT MARKER, ONE WAY EACH	614 OBJECT MARKER, TWO WAY EACH	614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN SNMT	614 WORK ZONE LANE LINE, CLASS III, 6" PAINT MILE	614 WORK ZONE EDGE LINE, CLASS III, 6" PAINT MILE	614 WORK ZONE CHANNELIZING LINE, CLASS III, 12" PAINT FT	614 WORK ZONE DOTTED LINE, CLASS III, 6" PAINT FT	614 WORK ZONE LANE LINE, 6", CLASS 1, SPRAY THERMOPLASTIC, AS PER PLAN MILE	614 WORK ZONE EDGE LINE, 6", CLASS 1, SPRAY THERMOPLASTIC, AS PER PLAN MILE	614 WORK ZONE CHANNELIZING LINE, 8", CLASS 1, SPRAY THERMOPLASTIC, AS PER PLAN FT	614 WORK ZONE DOTTED LINE, 12", CLASS 1, SPRAY THERMOPLASTIC, AS PER PLAN FT	615 ROADS FOR MAINTAINING TRAFFIC	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SQ YD	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN SQ YD	616 WATER MGAL	622 PORTABLE BARRIER, UNANCHORED FT	622 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL) EACH
60						LUMP				25	250																				1850		
62												6		145					14														
63		23500	1998	980									3600		3915	25	2570	660															
64	1800				LUMP		3500	22729								25	25									10.5	25	14125	6450						
65																														LUMP		5840			
76									LUMP																									
77									LUMP																									
78									LUMP																									
79									LUMP																									
80																														326		960	1	
81																														516				
82																														163				
83																														572				
84																														583				
85																														300				
86																														773				
87																														55				
88																														309				
89																														257		460	1	
90																														149				
91																														76				
92																														118				
93																														1335		1200	2	
94																														384				
TOTALS CARRIED TO SUB SUMMARY	1800	23500	1998	980	LUMP	LUMP	3500	22729	LUMP	25	250	6	3600	145	3915	50	2595	660	14	17	18	16879	21503	10.5	25	14125	6450	LUMP	5916	5840	1850	2620	4

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MAINTENANCE OF TRAFFIC ESTIMATED QUANTITIES

HAM-75-7.85

68
2017

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SHEET NO.	PHASE	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)	614 WORK ZONE IMPACT ATTENUATOR, MISC.: 24" WIDE HAZARDS (UNIDIRECTIONAL), TYPE 3	614 SPEED ZONE AHEAD SYMBOL SIGN	614 DETOUR SIGNING	614 WORK ZONE SPEED LIMIT SIGN	614 WORK ZONE INCREASED PENALTIES SIGN	614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	614 WORK ZONE LANE LINE, CLASS I, 6", 807 PAINT	614 WORK ZONE EDGE LINE, CLASS I, 6", 807 PAINT	614 WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807 PAINT	614 WORK ZONE DOTTED LINE, CLASS I, 6", 807 PAINT	614 WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT	614 WORK ZONE GORE MARKING, CLASS II, 642 PAINT		615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A		622 PORTABLE BARRIER, 50" AS PER PLAN	622 PORTABLE BARRIER, "Y" CONNECTOR	622 PORTABLE BARRIER, UNANCHORED	622 PORTABLE BARRIER, ANCHORED	
		EACH	EACH	EACH	EACH		EACH	EACH	SNMT	FT	FT	FT	FT	FT	FT		SQ YD		FT	EACH	FT	FT	
96	1				2		2	2																
97	1										624	1932												
98	1									50	3482	3185							660		310	300		
99	1	1								1150	4800	1250							800		610	530		
100	1	3					2			2517	7106		466	27					800	1	1130			
101	1									2270	4868	130	439						800		560	140		
102	1	1								1600	4800	800	598						800		1000	60		
103	1									2295	4788	105	125						800		630	170		
104	1						1	1		2504	4929		20						800		800			
105	1						2			2400	4800		707						800		800			
106	1									2400	4800								800		800			
107	1									2400	4800		738						800		800			
108	1	1								2678	4461		370						800		1320			
109	1	2					1	2		2400	5960	50							800		630	700		
110	1	1					1	1		2641	6764	340		94					800	1	1280	270		
111	1						2			2447	5056		1173	18					800		800			
112	1									2232	4800	168	33						800		800			
113	1	1		1						344	3241	2440	878		24				600		410	230		
114	1						2	1			36	890												
115	1				3			6																
117	1	1									815										630	210		
118	1	1	1				2				2651	913									630	300		
119	1	1	1								1422	1011									270			
120	1	4																			290	150		
121	1																							
124	1					LUMP																		
125	1																922							
126	1																601							
133	1					LUMP			1															
134	1																365							
135	1																113							
136	1																62							
137	1A									15	1012	997									400			
138	1A									775	1550										550			
144	1A	1								525	800		275								20			
145	1A						2			350	1250													
146	1A										2138										1090	80		
147	1A										2400										1050	550		
148	1A	1					1	1			1342										930	170		
149	1A	1									1295													
150	1A										1075	340									100	340		
151	1A										2149										1600			
152	1A	1									1900		419	88						1	430			
SUBTOTAL										33993	101914													
TOTALS CARRIED TO SUBSUMMARY		21	2	1	5	LUMP	18	14	1	6.4 MI	19.3 MI	14551	6241	227	24		2063		12460	3	20670	4200		

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MAINTENANCE OF TRAFFIC ESTIMATED QUANTITIES

HAM-75-7.85

SHEET NO.	PHASE	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	614 WORK ZONE IMPACT ATTENUATOR, MISC.: 24" WIDE HAZARDS (UNIDIRECTIONAL), TYPE 3	614 SPEED ZONE AHEAD SYMBOL SIGN	614 DETOUR SIGNING	614 WORK ZONE SPEED LIMIT SIGN	614 WORK ZONE INCREASED PENALTIES SIGN	614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	614 WORK ZONE LANE LINE, CLASS I, 6", 807 PAINT	614 WORK ZONE EDGE LINE, CLASS I, 6", 807 PAINT	614 WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807 PAINT	614 WORK ZONE DOTTED LINE, CLASS I, 6", 807 PAINT	614 WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT				615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A		622 PORTABLE BARRIER, 50", AS PER PLAN	622 PORTABLE BARRIER, "Y" CONNECTOR	622 PORTABLE BARRIER, UNANCHORED	622 PORTABLE BARRIER, ANCHORED	
		EACH	EACH	EACH		EACH	EACH	SNMT	FT	FT	FT	FT	FT				SQ YD		FT	EACH	FT	FT	
153	2	1							224	448											1165	150	
154	2	2							800	3400											1460		
155	2	1							380	3200	420									1	2090		
156	2	1								1762	800	420									730	500	
157	2	1							310	1600	490										330	130	
158	2								800	1600												800	
159	2					2			800	1600												800	
160	2								881	1519		540										800	
161	2								995	1405												800	
162	2								800	1600												800	
163	2								800	1600												800	
164	2					1	1		800	2116			139									800	
165	2								1438	1924			50								730	70	
166	2								1400	1600	300										800		
167	2		1						12	2552	1226		39							1	520		
169	2	1				1			1170	3894											240	800	
172	2				LUMP			1															
173	2									920											730		
174	2	2			LUMP																50	110	
175	2																507						
177	3						2			92	1038												
178	3									1400	2392												
179	3	2							800	3392	2800										840	570	
180	3								2284	3200	916										800	800	
181	3					2			1524	5044	1676	378									1600		
182	3					2			440	4420	2960	550									1700	280	
183	3								2332	3510	713	856	38					200			820	580	
184	3	1	1						2400	4805		131	13					800			1500	320	
185	3								2400	5282		124						800			1130	470	
186	3					2			2400	4800		659						800			800	800	
187	3								2400	5190		605						800			800	800	
188	3								2400	4995		30						800			50	1550	
189	3								2400	4944		236						800				1600	
190	3								2400	4800								800				1600	
191	3								2710	5258								800				1600	
192	3					2			3133	5124		620						800				1600	
193	3								2672	4800	528							800				1600	
194	3						4		211	3600	2894	338						600			270	300	
195	3			2		1				1062												800	
196	3																					700	
197	3									1935	220										400	580	
198	3								2495	6158	324	1288									480	2600	
199	3	1					2		600	5724	1000	160									510	710	
200	3						2			1436	1055												
201	3																679						
206	3																160						
207	3A		2							1933	164										1210	210	
208	3A									1609											380	700	
209	3A	1								3464		390	57							1		1750	
210	3A	1								1688											480	1200	
211	3A				LUMP																		
SUBTOTAL									47611	132405													
TOTALS CARRIED TO SUBSUMMARY		15	4	2	LUMP	13	11	1	8.8 MI	24.6 MI	21916	7325	336				1346		8800	3	22615	31080	

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MAINTENANCE OF TRAFFIC ESTIMATED QUANTITIES

HAM-75-7.85

70
2017

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SHEET NO.	PHASE	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL) EACH	614 DETOUR SIGNING	614 WORK ZONE SPEED LIMIT SIGN EACH	614 WORK ZONE INCREASED PENALTIES SIGN EACH	614 WORK ZONE LANE LINE, CLASS I, 6", 807 PAINT FT	614 WORK ZONE CENTER LINE, CLASS I, 642 PAINT FT	614 WORK ZONE EDGE LINE, CLASS I, 6", 807 PAINT FT	614 WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT FT	614 WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807 PAINT FT	614 WORK ZONE DOTTED LINE, CLASS I, 6", 807 PAINT FT	614 WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT FT							622 PORTABLE BARRIER, 50", AS PER PLAN FT	622 PORTABLE BARRIER, "Y" CONNECTOR EACH	622 PORTABLE BARRIER, UNANCHORED FT	622 PORTABLE BARRIER, ANCHORED FT
212	4							1419		2563		74										
213	4	1						4439		3200	300	70								610	1	760	160
214	4					2870		4800		330										800		800	
215	4			2		3200		6800												800		800	700
216	4	1				3200		7658			171									800		1600	320
217	4					3200		6400			214									800		2300	100
218	4					3200		6400												800		2020	260
219	4					3200		5126												800		800	
220	4			2		3500		5250			495									870		780	90
221	4					3300		4950			167									830		830	
222	4					3395		5026			820	31								800		800	
223	4	1				3200		6338			80	104								800	1	1400	440
224	4	1			1	3200		3870			416									800		410	670
225	4	1				3200		5250												800		1000	480
226	4			2		3290		3411			849									800		800	
227	4					1512		3200		1688	288									800		800	
228	4							2694		2658	368									550		350	240
229	4							420		96	73												
230	4			1				2080														450	670
231	4	2						1200														420	180
232	4							1974														580	840
233	4	1				1080		7854			960										1	970	2480
234	4	1				290		4184		371	292											210	710
237	4																					390	
238	4								1282														
239	4		LUMP																				
242	4		LUMP																				
243	4A	1		2				1400														1370	
244	4A							1191														1010	
245	4A					100		800			357											720	80
246	4A							238			138											240	
247	4A							980			420											10	
248	4A							1200															
249	4A	1						1400			224											380	
250	4A	1						2208			196	39										650	450
251	4A							1159														130	480
252	4A	1			1			1184															510
253	4A							1600														520	100
254	4A							1600															
255	4A	1						1200															
256	4A										445												
257	4A							2200															1090
258	4A	1						1200															360
259	4A	1		1				1840														250	
260	4A	2					648		650														420
261	4A		LUMP																				
SUBTOTAL						44937	648	122143	1932														
TOTALS CARRIED TO SUBSUMMARY		18	LUMP	10	2	8.5 MI	0.2 MI	23.2 MI	0.4 MI	10906	7273	318								12460	3	24550	11830

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MAINTENANCE OF TRAFFIC ESTIMATED QUANTITIES

HAM-75-7.85

71
2017

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SHEET NO.	PHASE	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	614 WORK ZONE LANE LINE, CLASS I, 6", 807 PAINT	614 WORK ZONE EDGE LINE, CLASS I, 6", 807 PAINT	614 WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807 PAINT	614 WORK ZONE DOTTED LINE, CLASS I, 6", 807 PAINT	614 WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT	614 WORK ZONE STOP LINE, CLASS I, 642 PAINT	614 WORK ZONE CROSSWALK LINE, 12", CLASS I, 642 PAINT	614 WORK ZONE ARROW, CLASS I		622 PORTABLE BARRIER, UNANCHORED	622 PORTABLE BARRIER, ANCHORED									
		EACH	FT	FT	FT	FT	FT	FT	FT			FT	FT									
263	5		1200	800	400	200																
264	5	1	4800	3682	1220	210	180					1250										
265	5	1	4800	3200								570										
266	5		6200	5130	1080	100																
267	5		5080	3755	1328	1530																
268	5	1	4800	3200		2400						940										
269	5	1	9600	6400		4500						440										
270	5		4800	3200		1600																
271	5		4800	3736	775		387															
272	5		4800	4800	1580	200																
273	5	1	5600	7475	241					8		440										
274	5		5413	5570	916			56	378	4		600	1000									
275	5		4639	4747	2721	500				14		1600										
276	5	1	4000	3200	856	1790						1430										
277	5	1	4000	3200		2400	50					610										
278	5	1	3600	3200	1200	600	320					1200										
279	5		740	1110	300																	
SUBTOTAL			78872	66405																		
TOTALS CARRIED TO SUBSUMMARY		8	14.9 MI	12.6 MI	12617	16030	937	56	378	26		9080	1000									

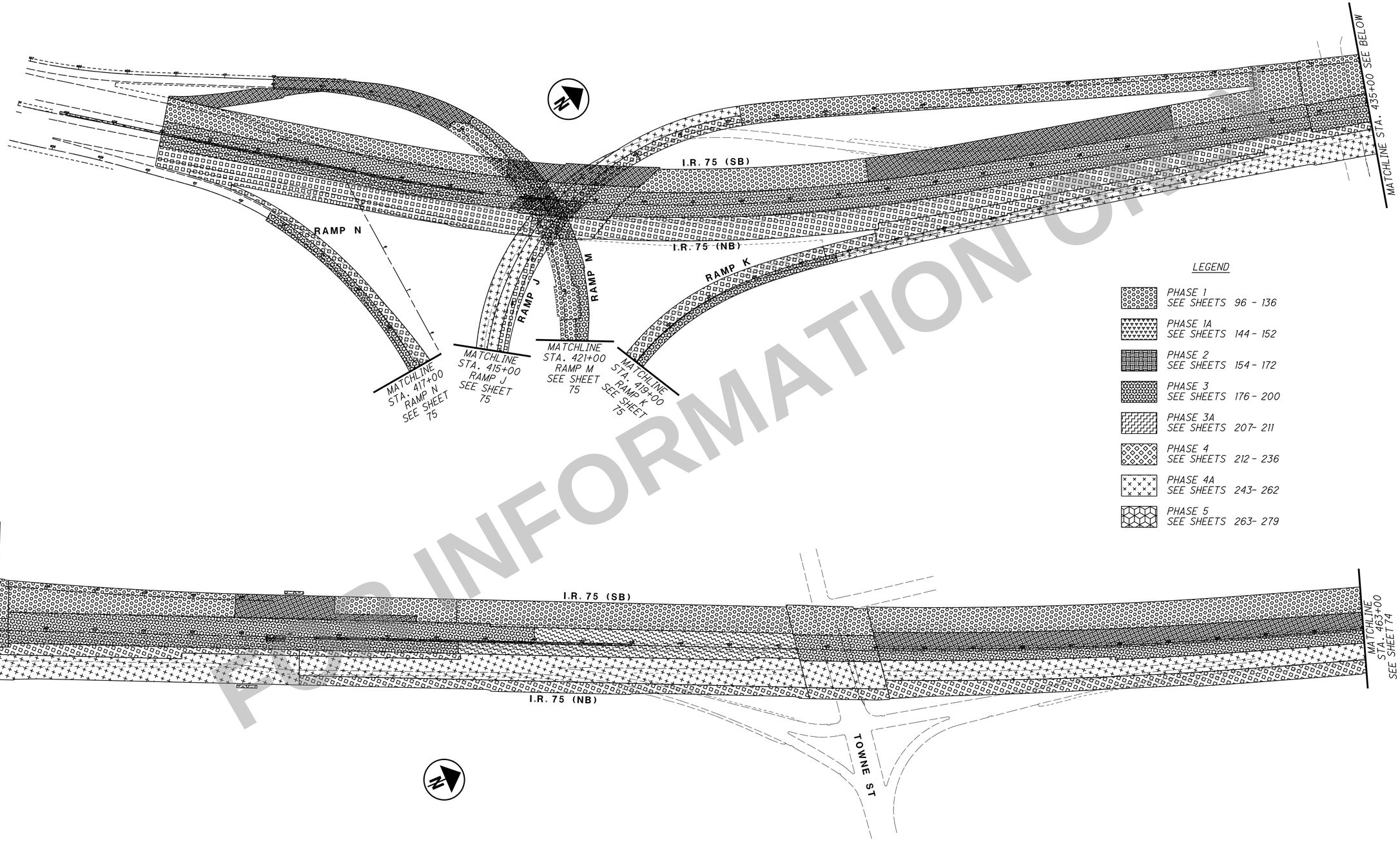
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CALCULATED JMH
CHECKED SMM

MAINTENANCE OF TRAFFIC ESTIMATED QUANTITIES

HAM-75-7.85

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FOR INFORMATION ONLY

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HORIZONTAL SCALE IN FEET
0 50 100 200

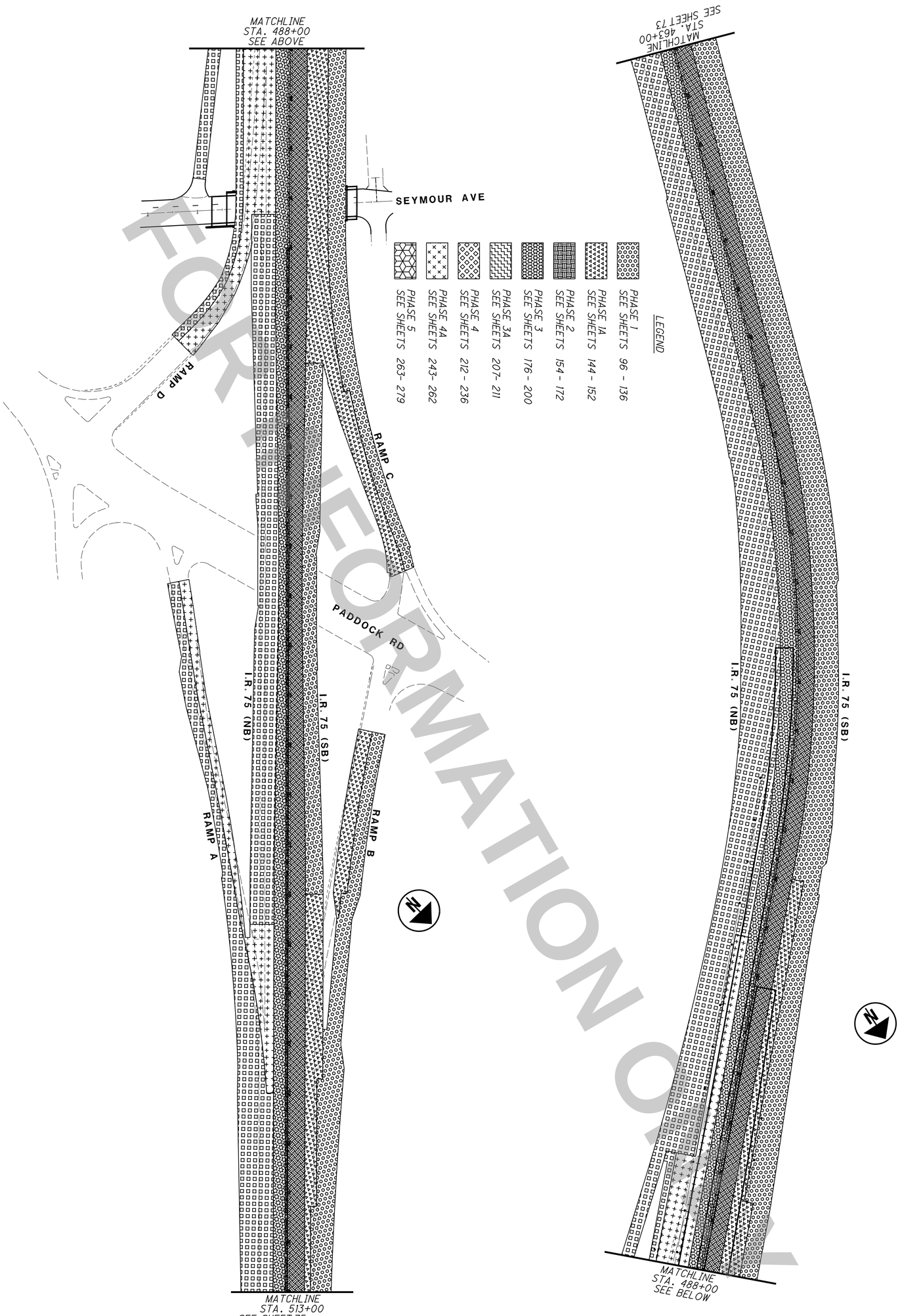
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC - PHASING OVERVIEW
IR 75 - STA. 407+00 TO STA. 463+00

HAM-75-7.85

73
2017

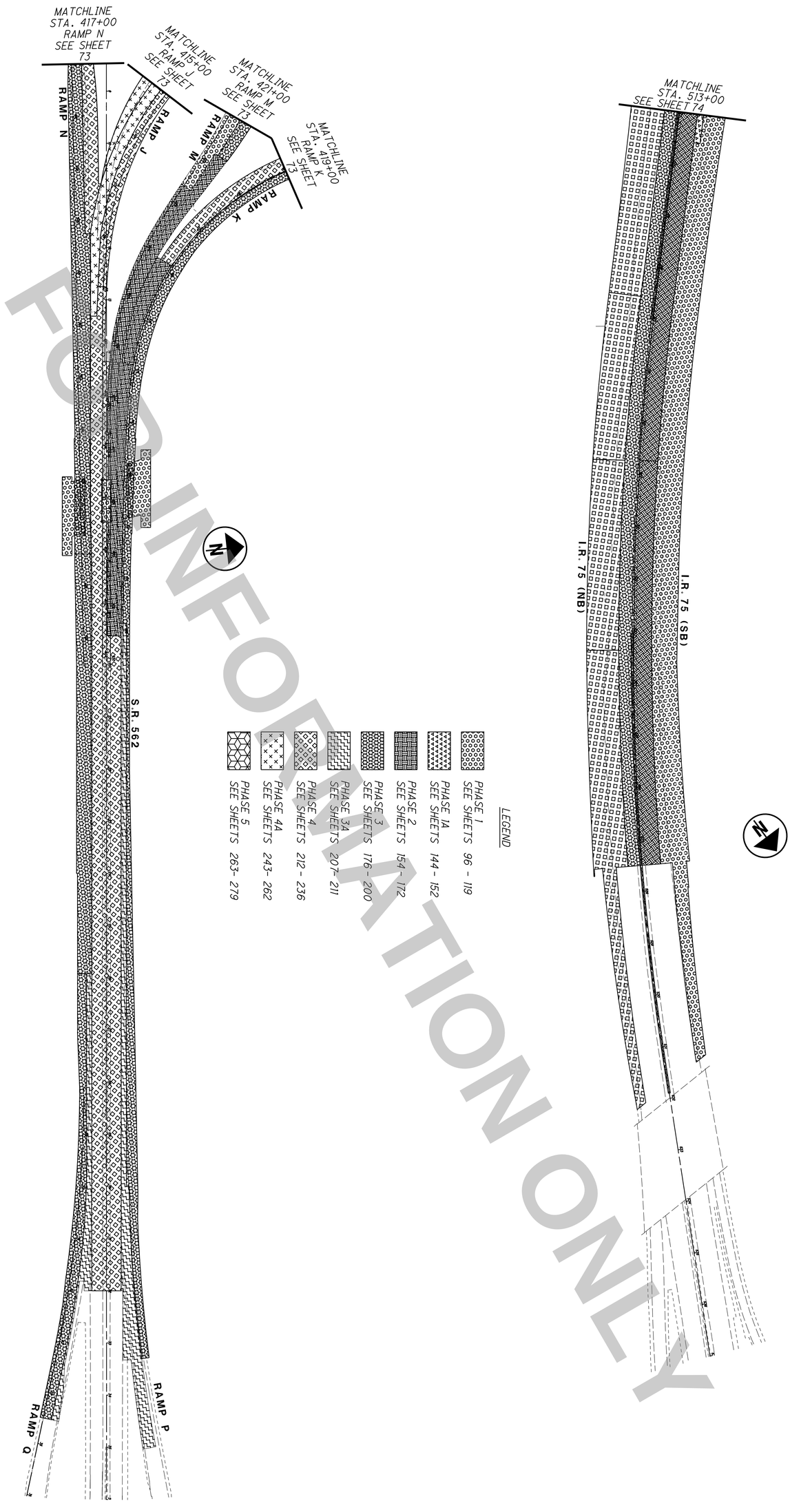
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FOR INFORMATION ONLY

74 / 2017	HAM-75-7.82	MAINTENANCE OF TRAFFIC - PHASING OVERVIEW IR 75 - STA. 463+00 TO STA. 513+00	CALCULATED SMM CHECKED JDS	0 100 50 200 HORIZONTAL SCALE IN FEET

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FOR INFORMATION ONLY

75 2017	HAM-75-7.85	MAINTENANCE OF TRAFFIC - PHASING OVERVIEW IR 75 - STA. 513+00 TO STA. 537+00	CALCULATED SMM CHECKED JDS	0 100 50 200 HORIZONTAL SCALE IN FEET



LEGEND

- DETOUR ROUTE
- TEMPORARY SIGN SUPPORT
- PORTABLE CHANGEABLE MESSAGE SIGN

3:1 NORTHBOUND LANE REDUCTION BEFORE SINGLE LANE EXIT PER ODOT SCD MT-95.32 AND MT-99.50

PORTABLE CHANGEABLE MESSAGE SIGNS PLACED 1 MILE AND 2 MILES IN ADVANCE OF DETOUR

A	B	C	D
I-75 NB CLOSED AHEAD	DETOUR M4-8-30	DETOUR M4-8-30	DETOUR M4-8-30
FOLLOW DETOUR	NORTH M3-1-30	NORTH M3-1-30	NORTH M3-1-30
	INTERSTATE 75 M1-1-30-2	INTERSTATE 75 M1-1-30-2	INTERSTATE 75 M1-1-30-2
	M6-3-30	M5-2R-30	M6-2R-30

NOTES:
1. CLOSE SR 562 WESTBOUND RAMP TO I-75 NORTHBOUND PER ODOT SCD MT-95.31 AND MT-98.29

2. INSTALL SR 562 WB DETOUR SIGNS PER SHEET 79

FOR INFORMATION ONLY

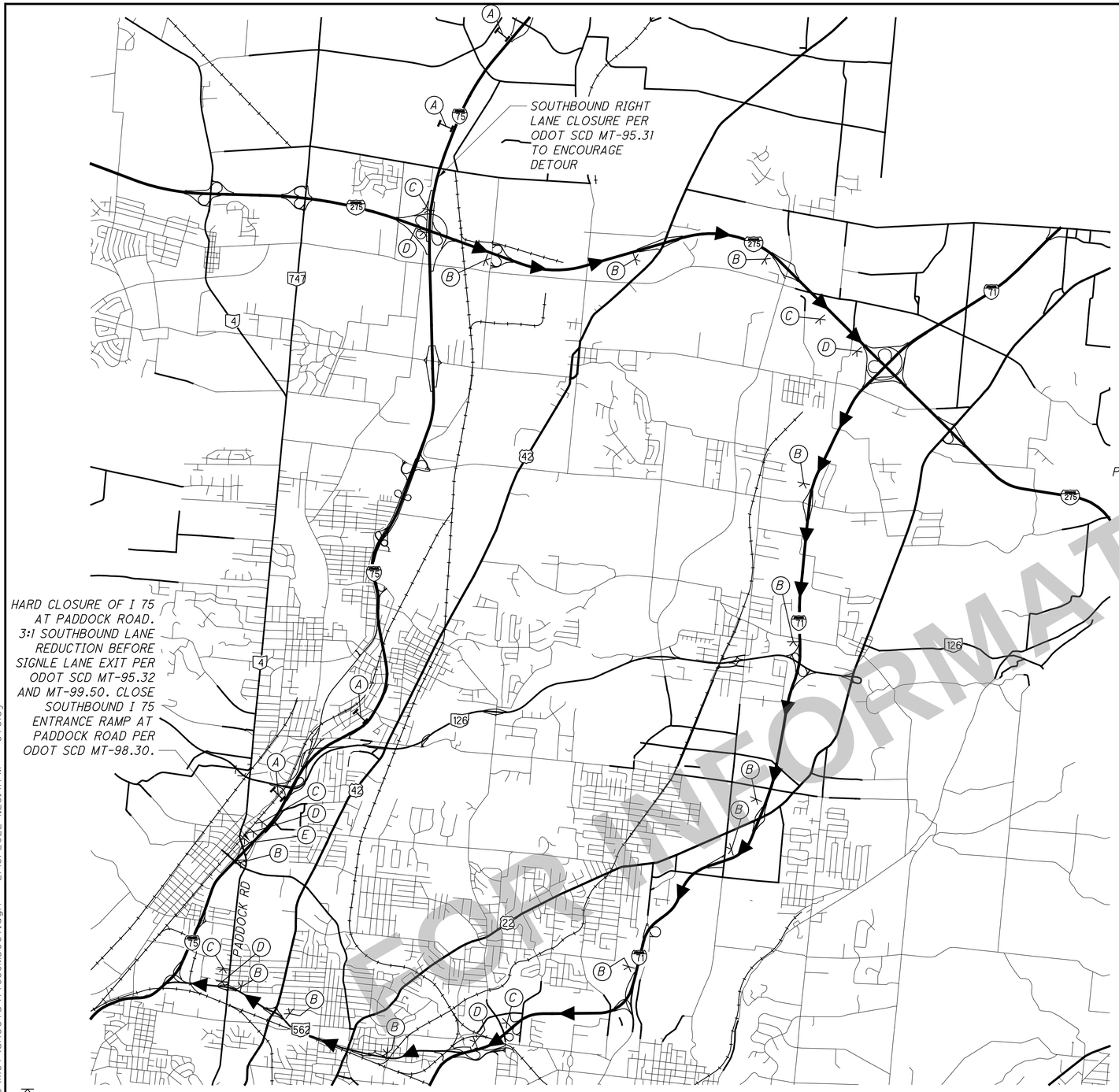
NO SCALE

CALCULATED BDM
CHECKED SMM

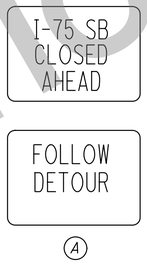
MOTPE DETOUR PLAN
I-75 NORTHBOUND

HAM-75-7.85

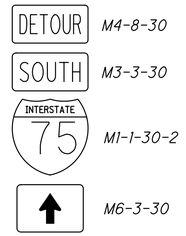
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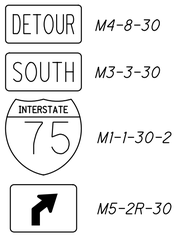
PORTABLE CHANGEABLE MESSAGE SIGNS PLACED 1 MILE AND 2 MILES IN ADVANCE OF DETOUR



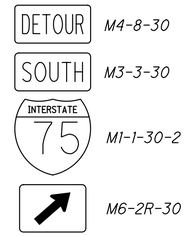
(A)



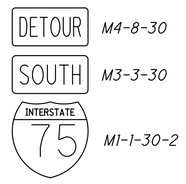
(B)



(C)



(D)



(E)

LEGEND

- DETOUR ROUTE
- TEMPORARY SIGN SUPPORT
- PORTABLE CHANGEABLE MESSAGE SIGN

FOR INFORMATION ONLY

NO SCALE

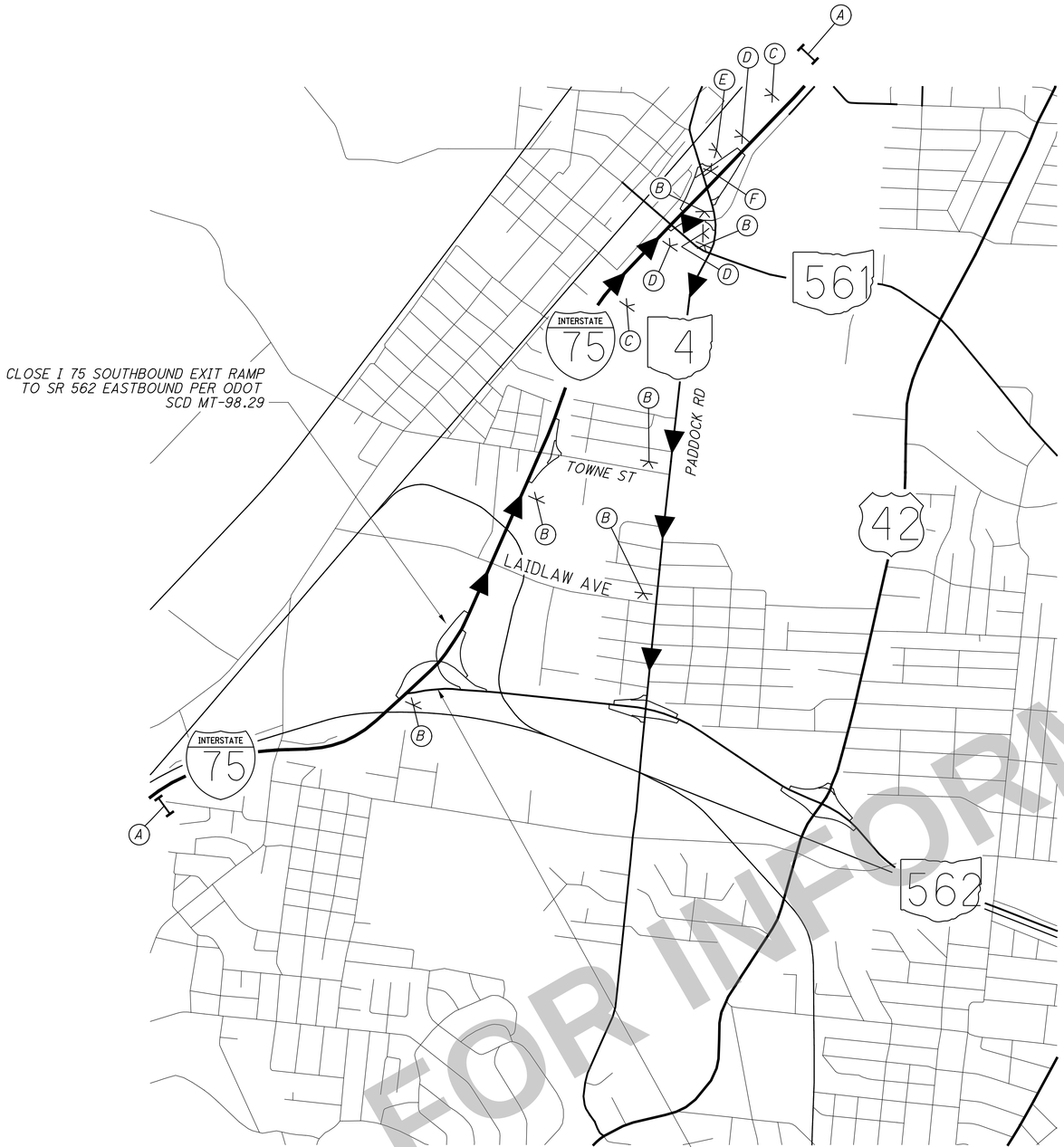
CALCULATED BDM
CHECKED SMM

MOTPE DETOUR PLAN
I-75 SOUTHBOUND

HAM-75-7.85

77
2017

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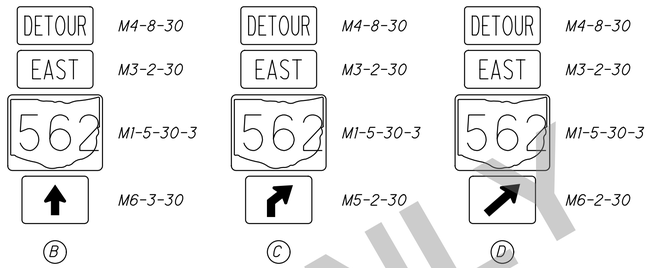


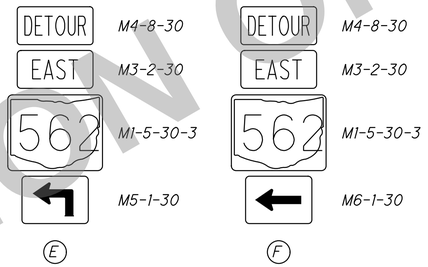
PORTABLE CHANGEABLEMESSAGE SIGN PLACED 1 MILE IN ADVANCE OF DETOUR

SR-562 EB ON RAMP CLOSED

FOLLOW DETOUR

(A)





LEGEND

- DETOUR ROUTE
- TEMPORARY SIGN SUPPORT
- PORTABLE CHANGEABLE MESSAGE SIGN

FOR INFORMATION ONLY

NOT TO SCALE

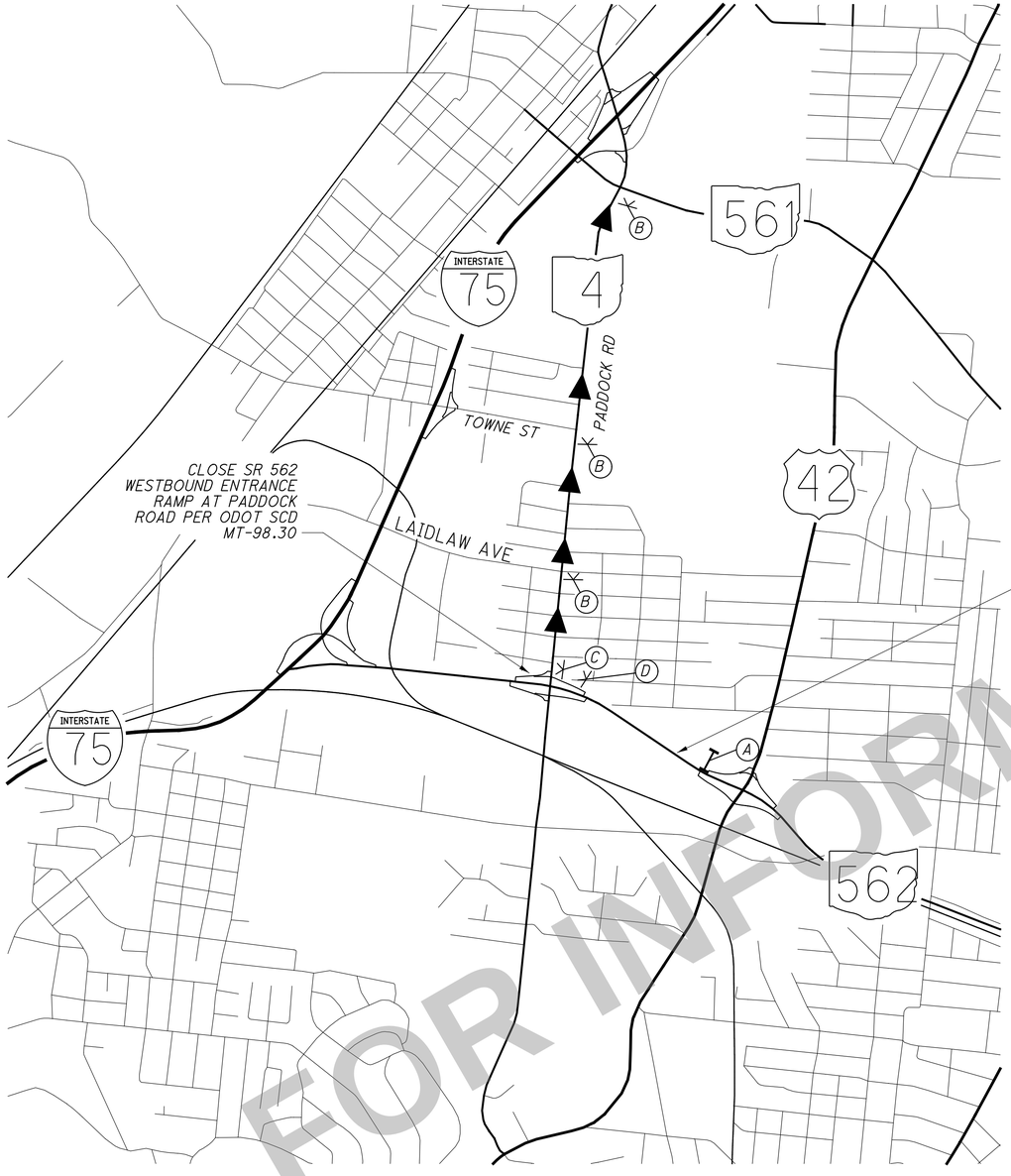
CALCULATED BDM CHECKED SMM

MOTPE DETOUR PLAN
SR 562 EASTBOUND

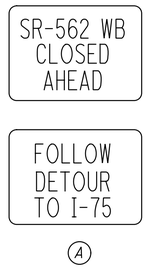
HAM-75-7.85

78
2017

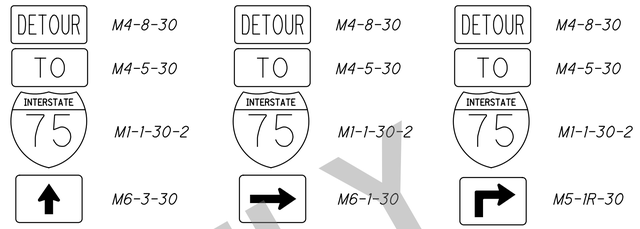
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PORTABLE CHANGEABLEMESSAGE SIGN PLACED 1 MILE IN ADVANCE OF DETOUR



(A)



(B) (C) (D)

LEGEND

- DETOUR ROUTE
- TEMPORARY SIGN SUPPORT
- PORTABLE CHANGEABLE MESSAGE SIGN

FOR INFORMATION ONLY

NOT TO SCALE

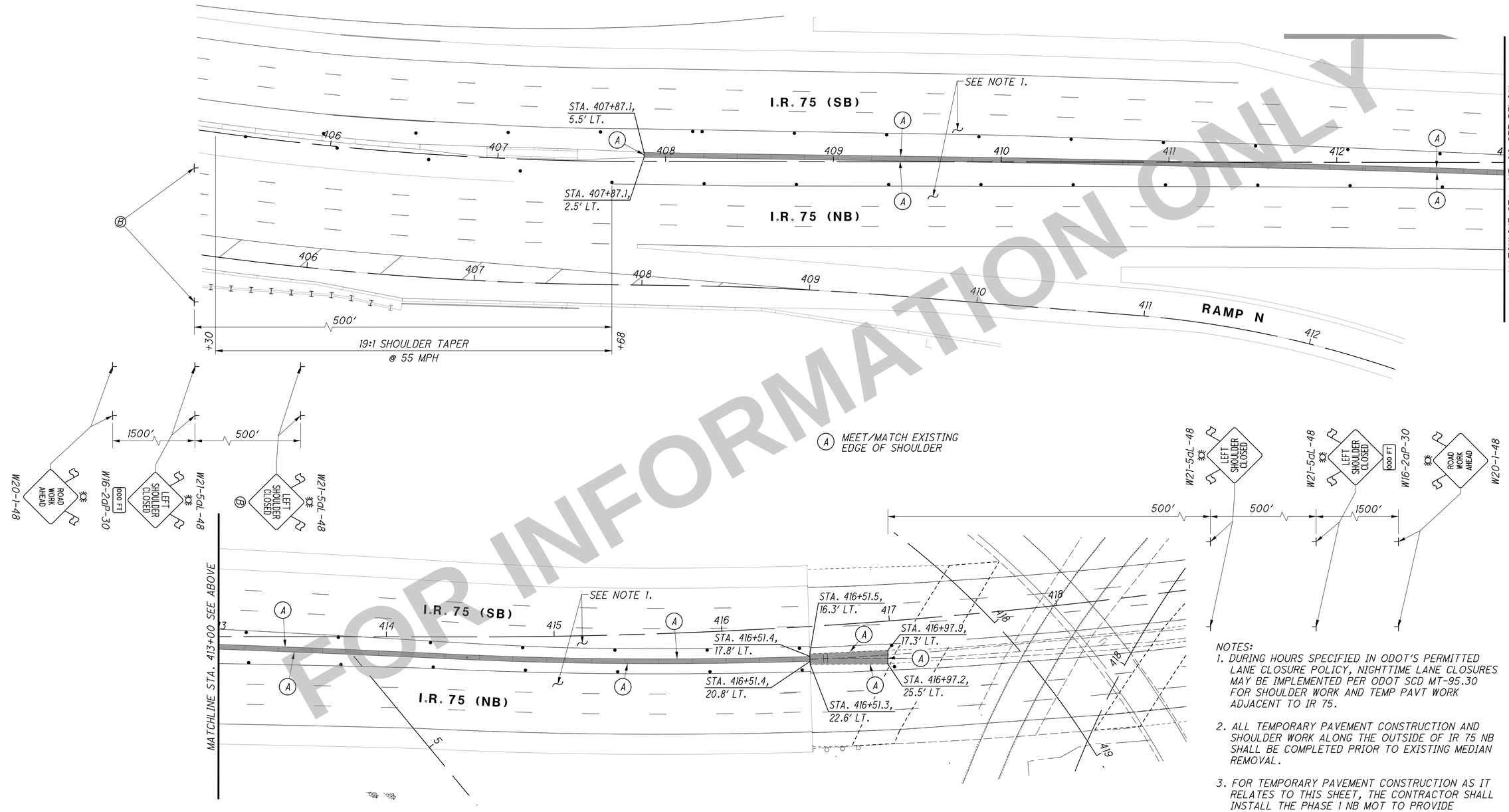
CALCULATED BDM
CHECKED SMM

MOTPE DETOUR PLAN
SR 562 WESTBOUND

HAM-75-7.85

79
2017

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DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

LEGEND

TEMPORARY PAVEMENT

DRUM

NOTES:

1. DURING HOURS SPECIFIED IN ODOT'S PERMITTED LANE CLOSURE POLICY, NIGHTTIME LANE CLOSURES MAY BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMP PAVT WORK ADJACENT TO IR 75.
2. ALL TEMPORARY PAVEMENT CONSTRUCTION AND SHOULDER WORK ALONG THE OUTSIDE OF IR 75 NB SHALL BE COMPLETED PRIOR TO EXISTING MEDIAN REMOVAL.
3. FOR TEMPORARY PAVEMENT CONSTRUCTION AS IT RELATES TO THIS SHEET, THE CONTRACTOR SHALL INSTALL THE PHASE 1 NB MOT TO PROVIDE ADDITIONAL WORK SPACE AND PROTECT THE EXPOSED ENDS OF THE MEDIAN. ADDITIONALLY, THE SB SHOULDER SHALL BE CLOSED WITH PORTABLE BARRIER PER ODOT SCD MT- 95.45. QUANTITIES FOR THE SB SHOULDER CLOSURE HAVE BEEN PROVIDED. THIS SET-UP SHALL REMAIN IN PLACE UNTIL PHASE 1.

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PRE-PHASE 1
I.R. 75 TEMPORARY PAVEMENT PLAN

HAM-75-7.85

80
2017

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(A) MEET/MATCH EXISTING EDGE OF SHOULDER

(B) S 46° 34′ 46″ E
69.50′

(C) S 46° 19′ 35″ W
30.69′

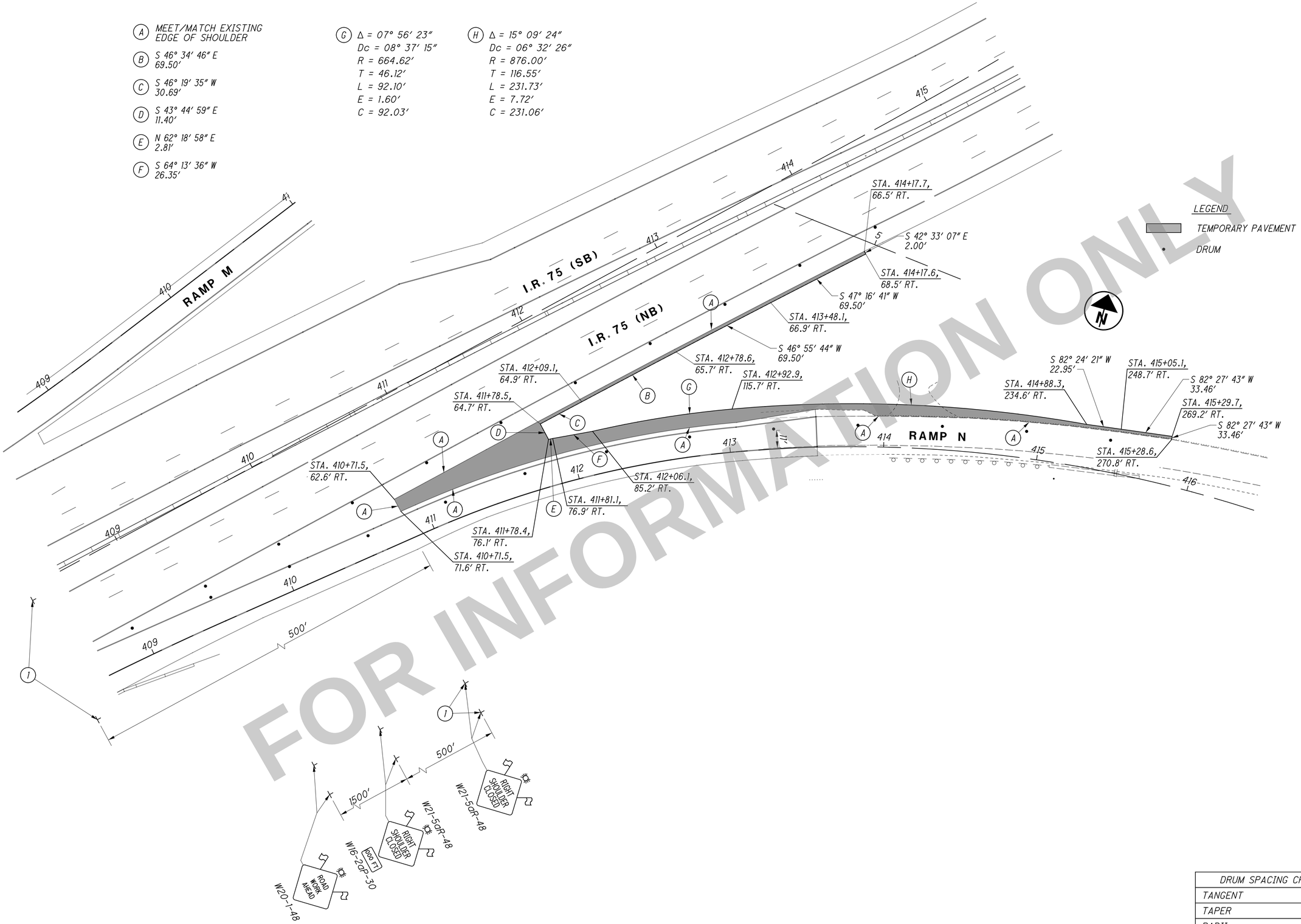
(D) S 43° 44′ 59″ E
11.40′

(E) N 62° 18′ 58″ E
2.81′

(F) S 64° 13′ 36″ W
26.35′

(G) Δ = 07° 56′ 23″
Dc = 08° 37′ 15″
R = 664.62′
T = 46.12′
L = 92.10′
E = 1.60′
C = 92.03′

(H) Δ = 15° 09′ 24″
Dc = 06° 32′ 26″
R = 876.00′
T = 116.55′
L = 231.73′
E = 7.72′
C = 231.06′



DRUM SPACING CHART	
TANGENT	80′ c/c
TAPER	55′ c/c
RADII	10′ c/c

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

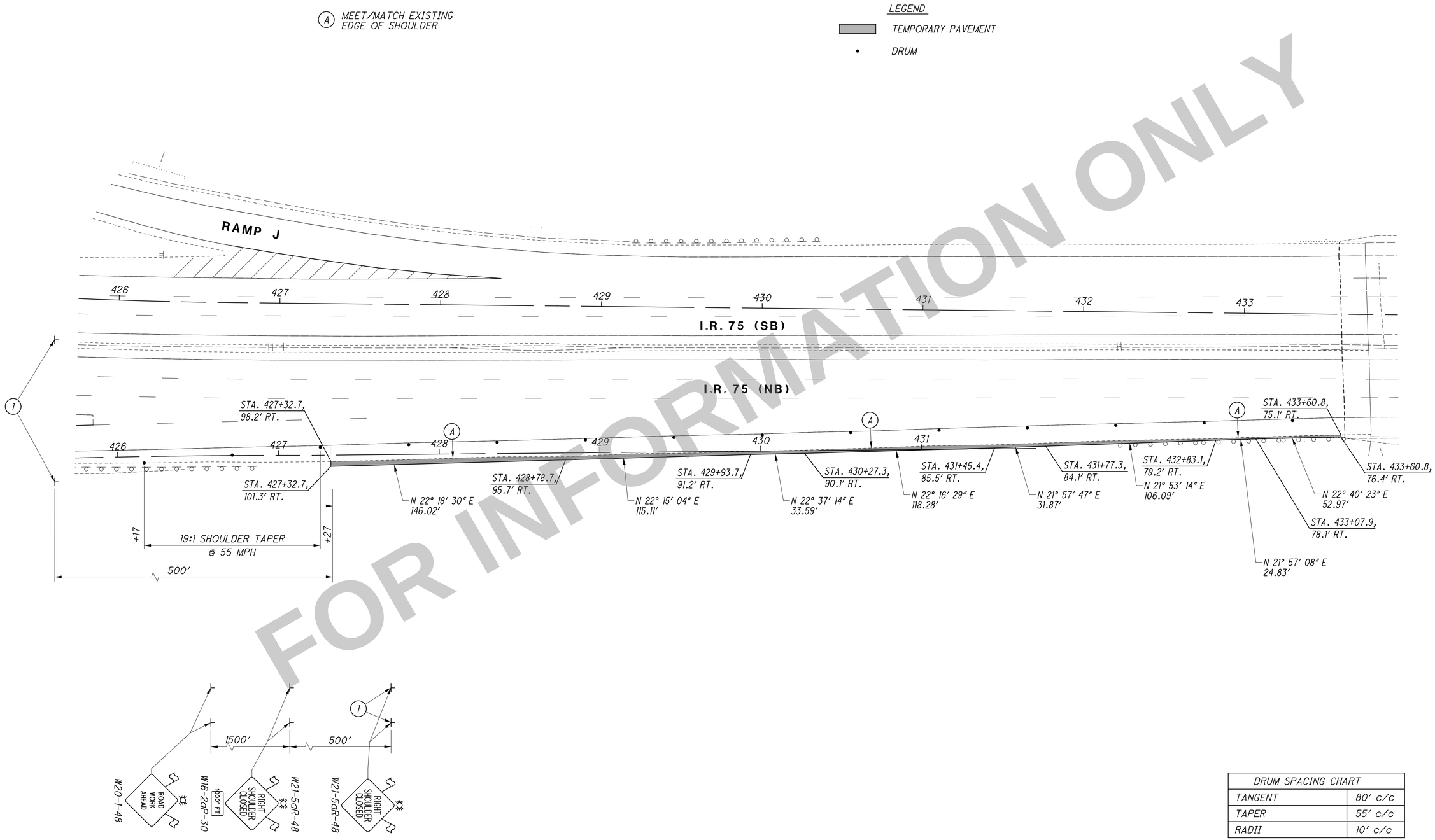
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PRE-PHASE 1
RAMP N TEMPORARY PAVEMENT PLAN

HAM-75-7.85

81
2017

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DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

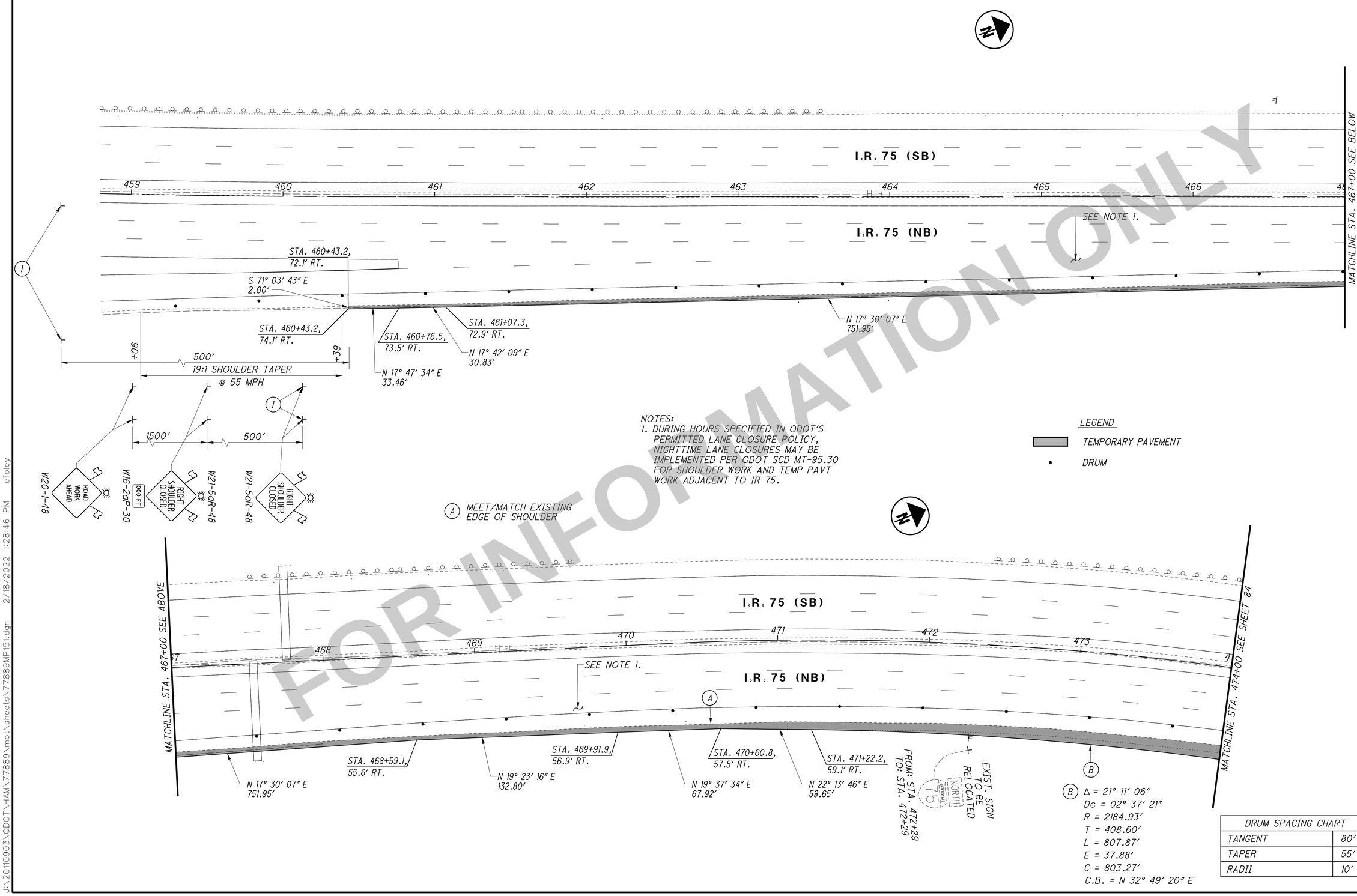
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PRE-PHASE 1
I.R. 75 TEMPORARY PAVEMENT PLAN

HAM-75-7.85

82
2017

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NOTES:
1. DURING HOURS SPECIFIED IN ODOT'S PERMITTED LANE CLOSURE POLICY, NIGHTTIME LANE CLOSURES MAY BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMP PAVT WORK ADJACENT TO IR 75.

LEGEND
- TEMPORARY PAVEMENT
- DRUM

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

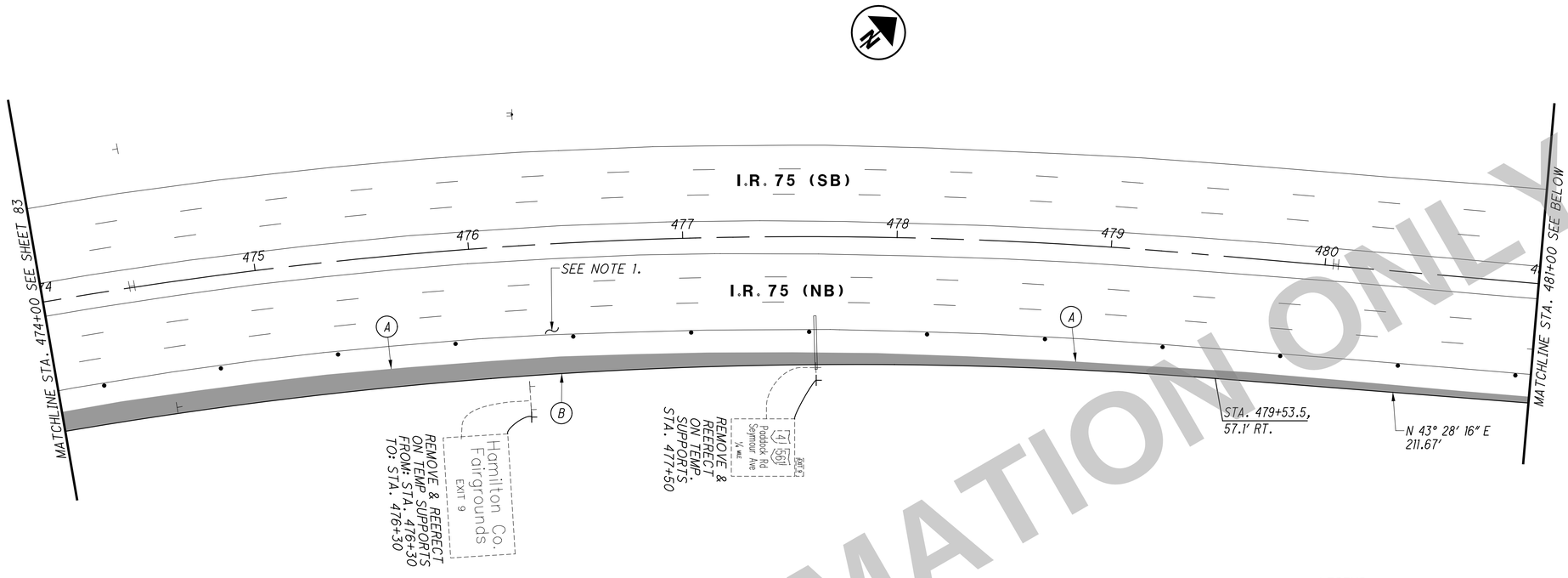
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PRE-PHASE 1
I.R. 75 TEMPORARY PAVEMENT PLAN

HAM-75-7.85

83
2017

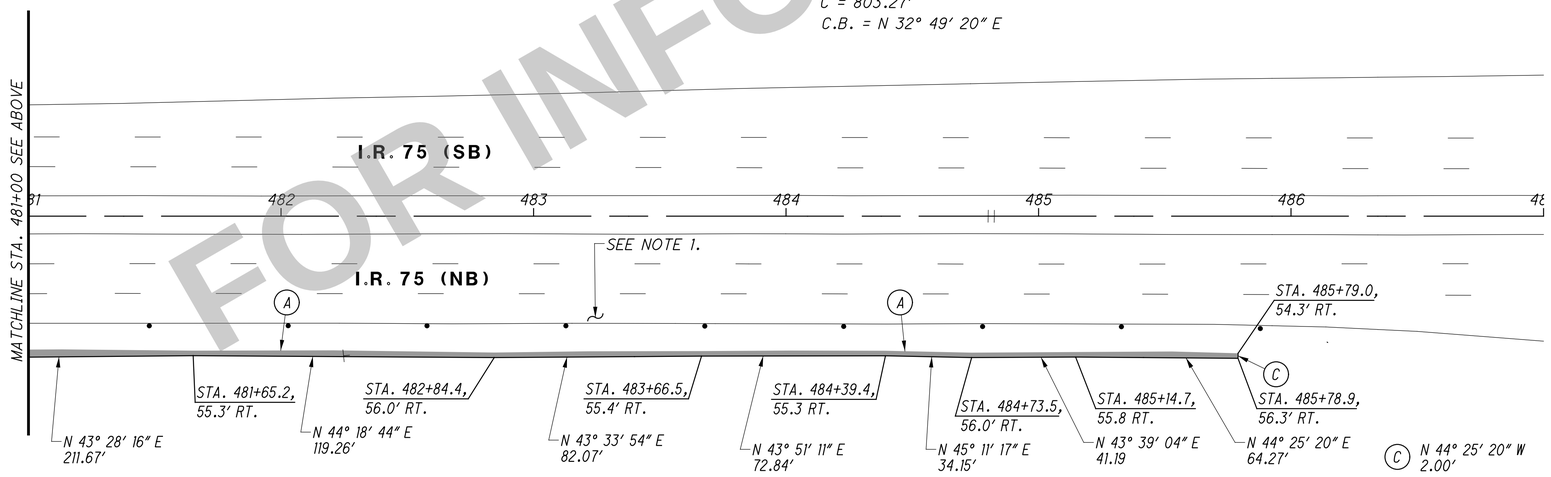
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NOTES:
1. DURING HOURS SPECIFIED IN ODOT'S PERMITTED LANE CLOSURE POLICY, NIGHTTIME LANE CLOSURES MAY BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMP PAVT WORK ADJACENT TO IR 75.

(B) Δ = 21° 11' 06"
Dc = 02° 37' 21"
R = 2184.93'
T = 408.60'
L = 807.87'
E = 37.88'
C = 803.27'
C.B. = N 32° 49' 20" E

LEGEND
- TEMPORARY PAVEMENT
- DRUM
- (A) MEET/MATCH EXISTING EDGE OF SHOULDER



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PRE-PHASE 1
I.R. 75 TEMPORARY PAVEMENT PLAN

HAM-75-7.85

84
2017

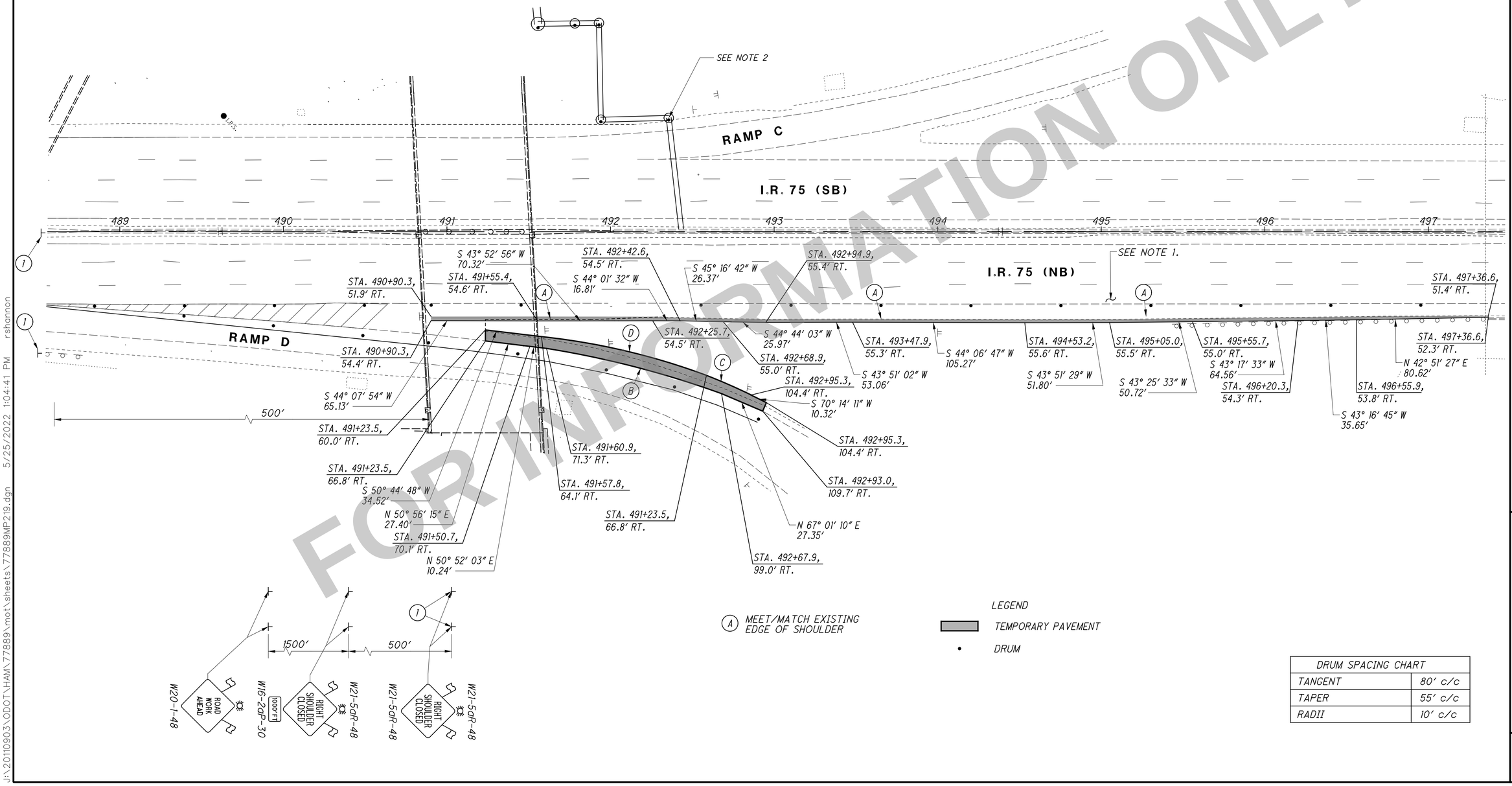
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(B) Δ = 10° 48′ 60″
Dc = 9° 46′ 27″
R = 586.19′
T = 55.50′
L = 110.66′
E = 2.62′
C = 110.50′
C.B. = N 58° 26′ 27″ E

(C) Δ = 4° 42′ 59″
Dc = 15° 45′ 46″
R = 363.48′
T = 14.97′
L = 29.92′
E = 0.31′
C = 29.91′
C.B. = N 67° 38′ 18″ E

(D) Δ = 14° 18′ 06″
Dc = 13° 46′ 20″
R = 416.02′
T = 52.19′
L = 103.85′
E = 3.26′
C = 103.58′
C.B. = N 57° 10′ 24″ E

NOTES:
1. DURING HOURS SPECIFIED IN ODOT'S PERMITTED LANE CLOSURE POLICY, NIGHTTIME LANE CLOSURES MAY BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK, DRAINAGE CONNECTION AT MEDIAN INLET AND TEMP PAVT WORK ADJACENT TO IR 75.
2. TEMPORARY DRAINAGE SHOWN SHALL BE INSTALLED DURING PHASE 1A MOT WORK. THE PIPE UNDER RAMP C AND MAINLINE I-75 SHALL BE JACK AND BORED TO THE EXISITNG INLET LOCATED AT STATION 492+50.



(A) MEET/MATCH EXISTING EDGE OF SHOULDER

LEGEND
TEMPORARY PAVEMENT
DRUM

DRUM SPACING CHART	
TANGENT	80′ c/c
TAPER	55′ c/c
RADII	10′ c/c

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

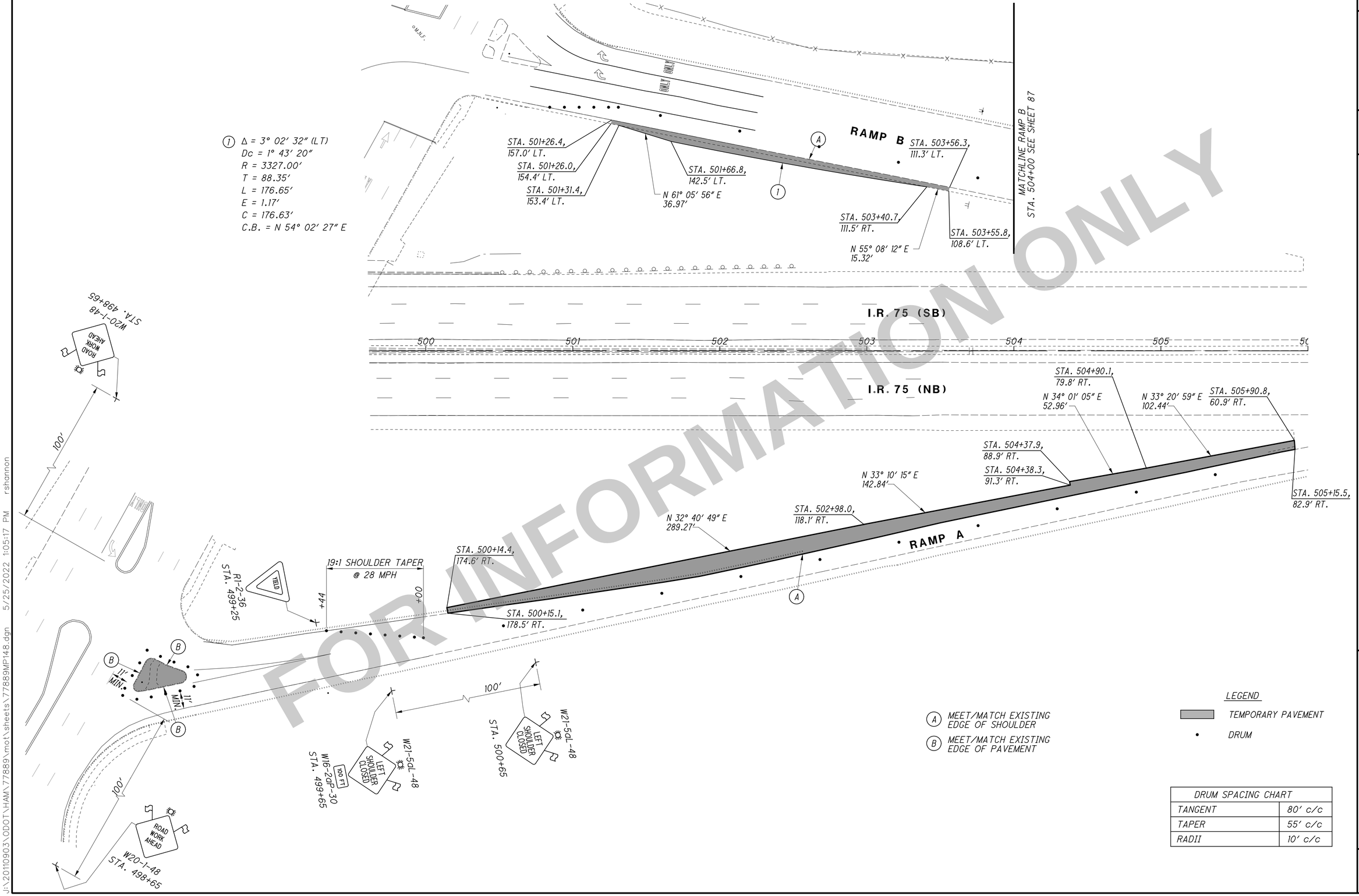
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PRE-PHASE 1
I.R. 75 & RAMP D TEMPORARY PAVEMENT PLAN

HAM-75-7.85

85
2017

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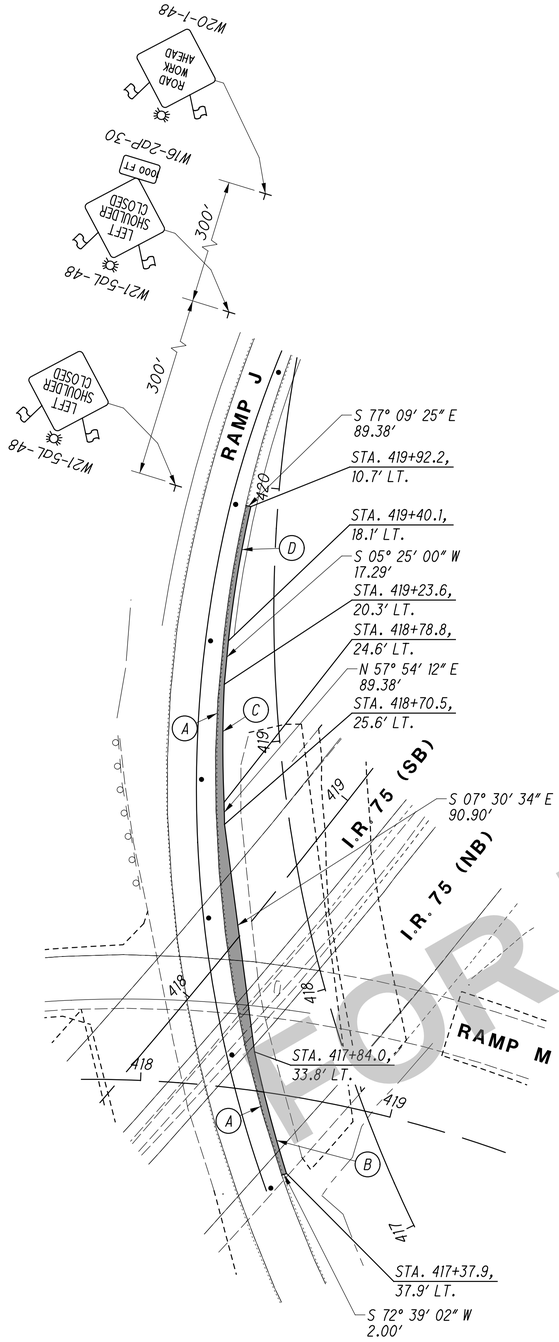
HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PRE-PHASE 1
RAMP A & RAMP B TEMPORARY PAVEMENT PLAN

HAM-75-7.85

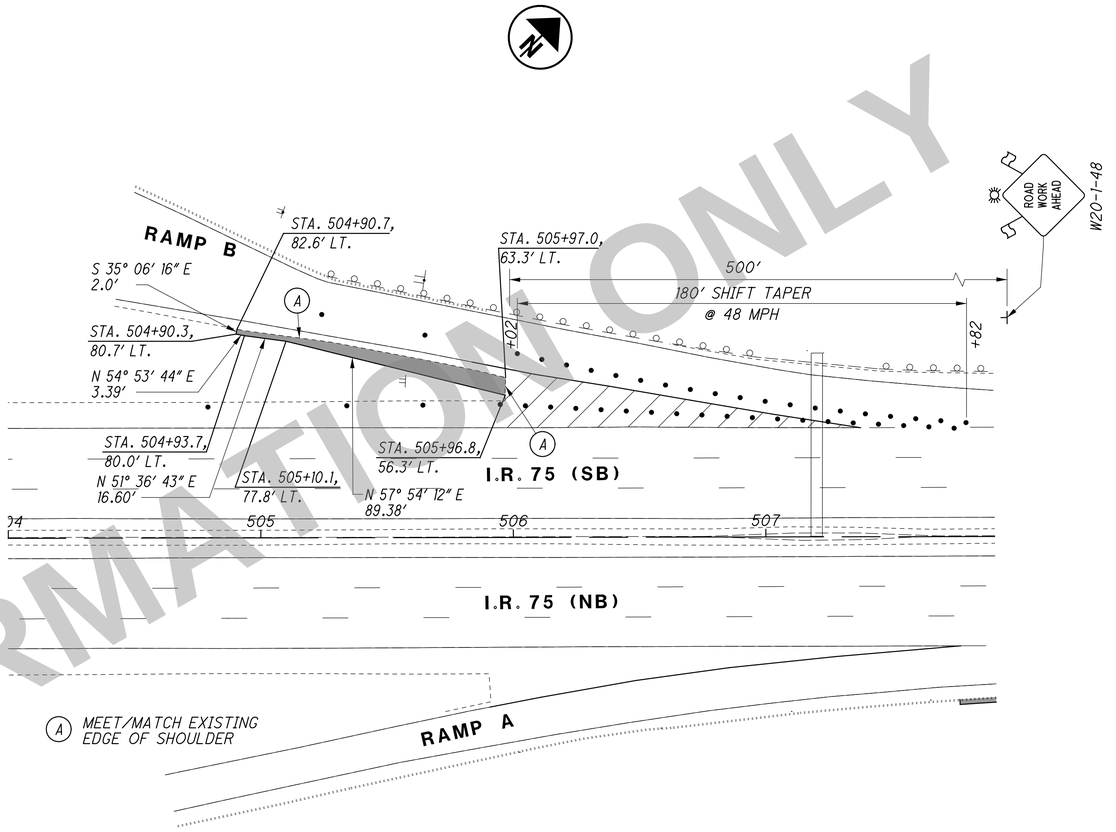
86
2017



(B) Δ = 05° 13' 03" (RT)
Dc = 10° 28' 44"
R = 546.79'
T = 24.91'
L = 49.79'
E = 0.57'
C = 49.77'
C.B. = N 14° 41' 03" W

(C) Δ = 05° 21' 37" (RT)
Dc = 11° 28' 18"
R = 499.46'
T = 23.38'
L = 46.73'
E = 0.55'
C = 46.71'
C.B. = N 00° 06' 42" E

(D) Δ = 06° 44' 48" (RT)
Dc = 12° 30' 52"
R = 457.84'
T = 26.99'
L = 53.91'
E = 0.80'
C = 53.88'
C.B. = N 09° 28' 12" E



LEGEND
TEMPORARY PAVEMENT
DRUM

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

NOTE:
1. STATIONS AND OFFSETS BASED ON MAINLINE I.R. 75 CENTERLINE.

FOR INFORMATION ONLY

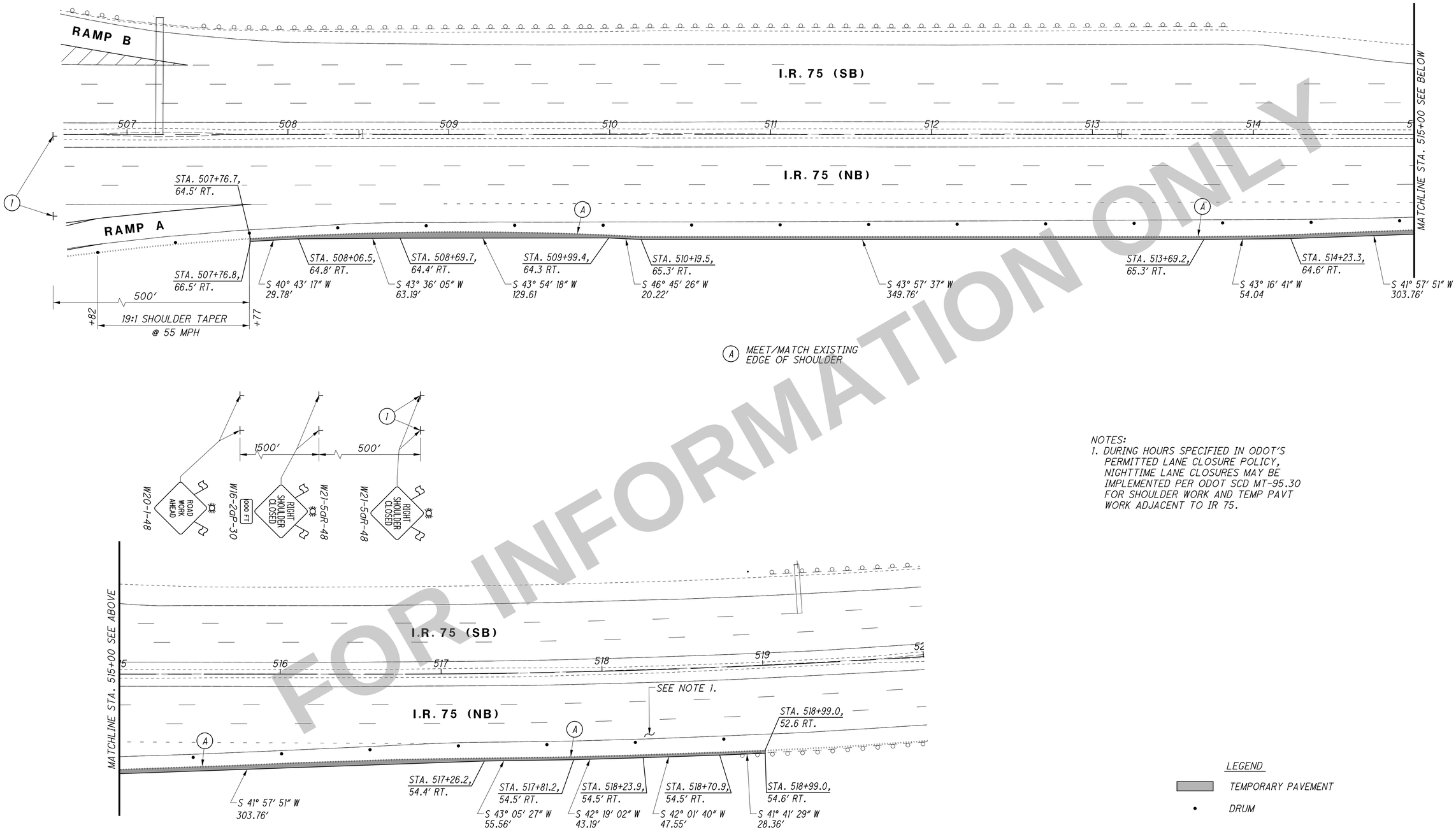
HORIZONTAL SCALE IN FEET
0 15 30 60
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PRE-PHASE 1
RAMP B & RAMP J TEMPORARY PAVEMENT PLAN

HAM-75-7.85

87
2017

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NOTES:
1. DURING HOURS SPECIFIED IN ODOT'S PERMITTED LANE CLOSURE POLICY, NIGHTTIME LANE CLOSURES MAY BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMP PAVT WORK ADJACENT TO IR 75.

LEGEND
- TEMPORARY PAVEMENT
- DRUM

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

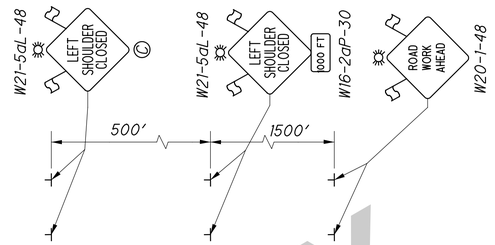
CALCULATED SMM
CHECKED JDS

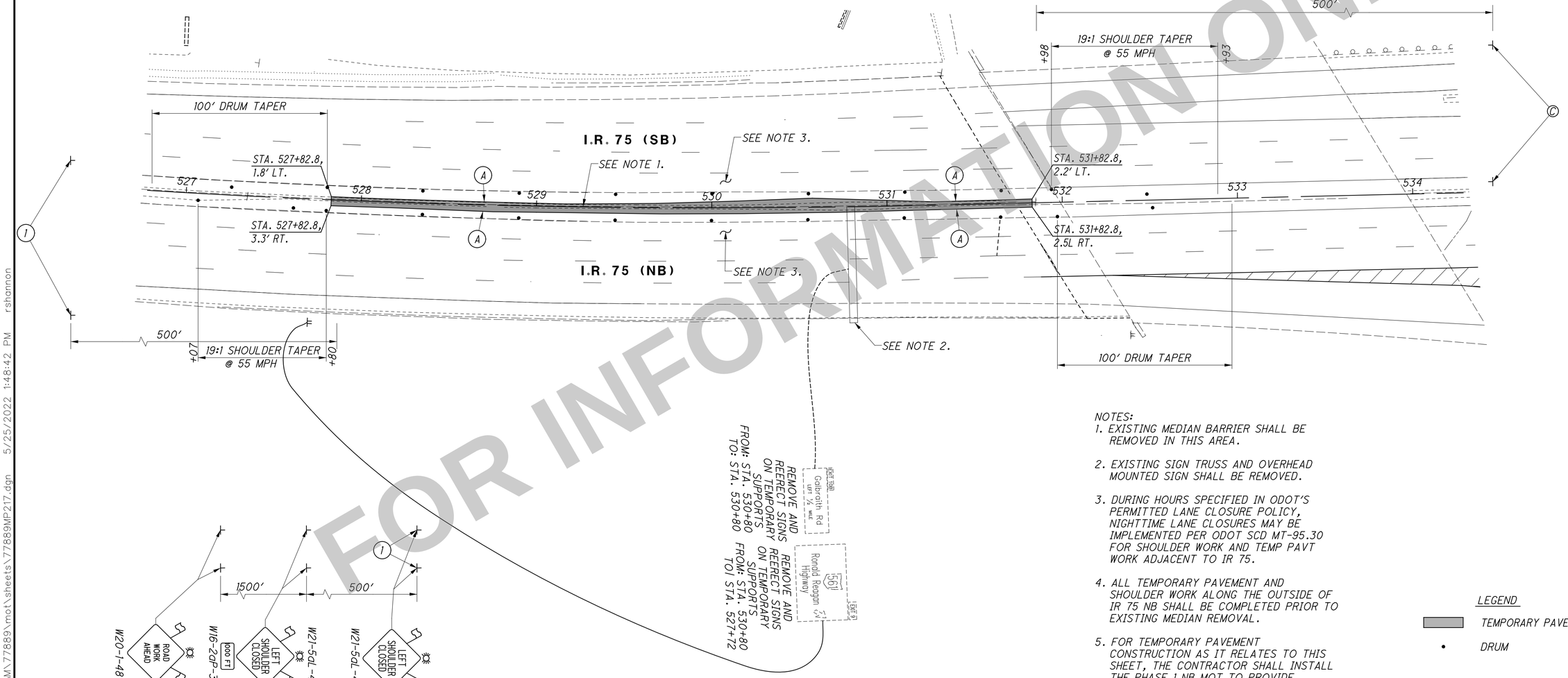
MAINTENANCE OF TRAFFIC PLAN - PRE-PHASE 1
I.R. 75 TEMPORARY PAVEMENT PLAN

HAM-75-7.85

88
2017

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NOTES:

1. EXISTING MEDIAN BARRIER SHALL BE REMOVED IN THIS AREA.
2. EXISTING SIGN TRUSS AND OVERHEAD MOUNTED SIGN SHALL BE REMOVED.
3. DURING HOURS SPECIFIED IN ODOT'S PERMITTED LANE CLOSURE POLICY, NIGHTTIME LANE CLOSURES MAY BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMP PAVT WORK ADJACENT TO IR 75.
4. ALL TEMPORARY PAVEMENT AND SHOULDER WORK ALONG THE OUTSIDE OF IR 75 NB SHALL BE COMPLETED PRIOR TO EXISTING MEDIAN REMOVAL.
5. FOR TEMPORARY PAVEMENT CONSTRUCTION AS IT RELATES TO THIS SHEET, THE CONTRACTOR SHALL INSTALL THE PHASE 1 NB MOT TO PROVIDE ADDITIONAL WORK SPACE AND PROTECT THE EXPOSED ENDS OF THE MEDIAN. ADDITIONALLY, THE SB SHOULDER SHALL BE CLOSED WITH PORTABLE BARRIER PER ODOT SCD MT- 95.45. QUANTITIES FOR THE SB SHOULDER CLOSURE HAVE BEEN PROVIDED. THIS SET-UP SHALL REMAIN IN PLACE UNTIL PHASE 1.

(A) MEET/MATCH EXISTING EDGE OF SHOULDER

LEGEND

TEMPORARY PAVEMENT

DRUM

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

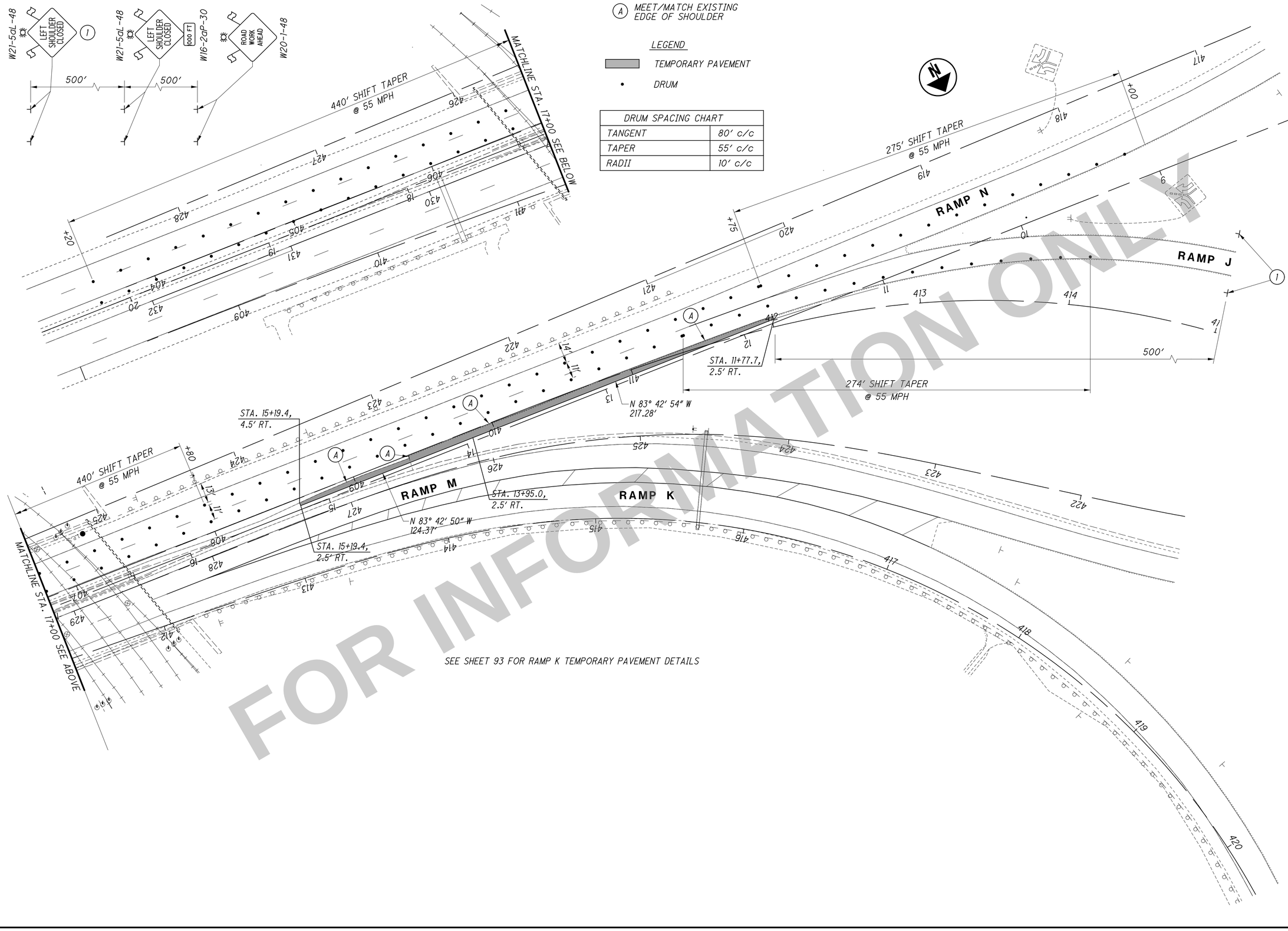
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PRE-PHASE 1
I.R. 75 TEMPORARY PAVEMENT PLAN

HAM-75-7.85

89
2017

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FOR INFORMATION ONLY

CALCULATED SMM
CHECKED JDS

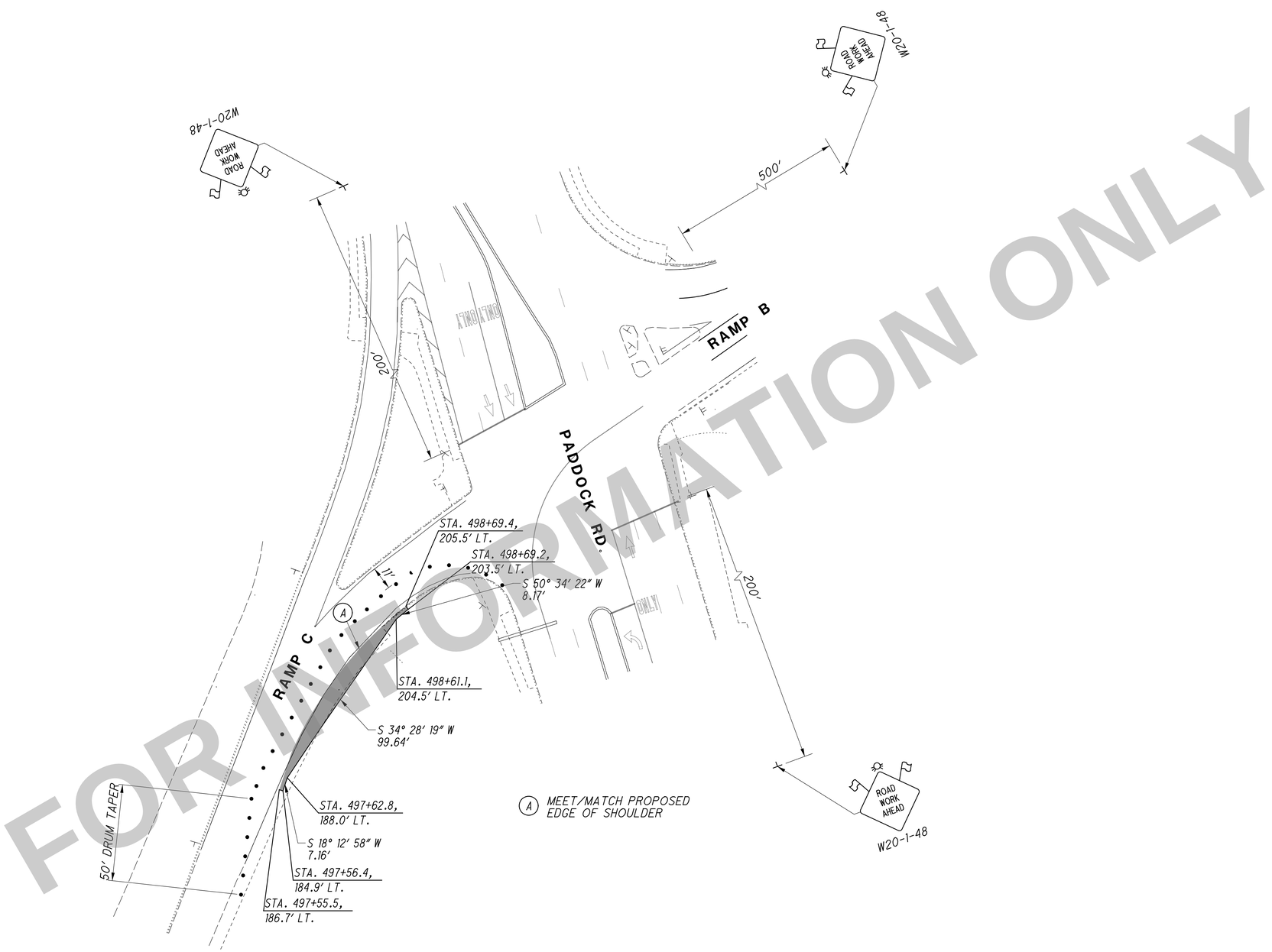
HORIZONTAL SCALE IN FEET
0 15 30 60

MAINTENANCE OF TRAFFIC PLAN - PRE-PHASE 1
RAMP J TEMPORARY PAVEMENT PLAN

HAM-75-7.85

90
2017

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FOR INFORMATION ONLY

NOTE:
1. STATIONS AND OFFSETS BASED ON MAINLINE I.R. 75 CENTERLINE.

LEGEND
TEMPORARY PAVEMENT
DRUM

CALCULATED SMM
CHECKED JDS

0 15 30 60
HORIZONTAL SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PRE-PHASE 1
RAMP C TEMPORARY PAVEMENT PLAN

HAM-75-7.85

91
2017

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LEGEND

TEMPORARY PAVEMENT

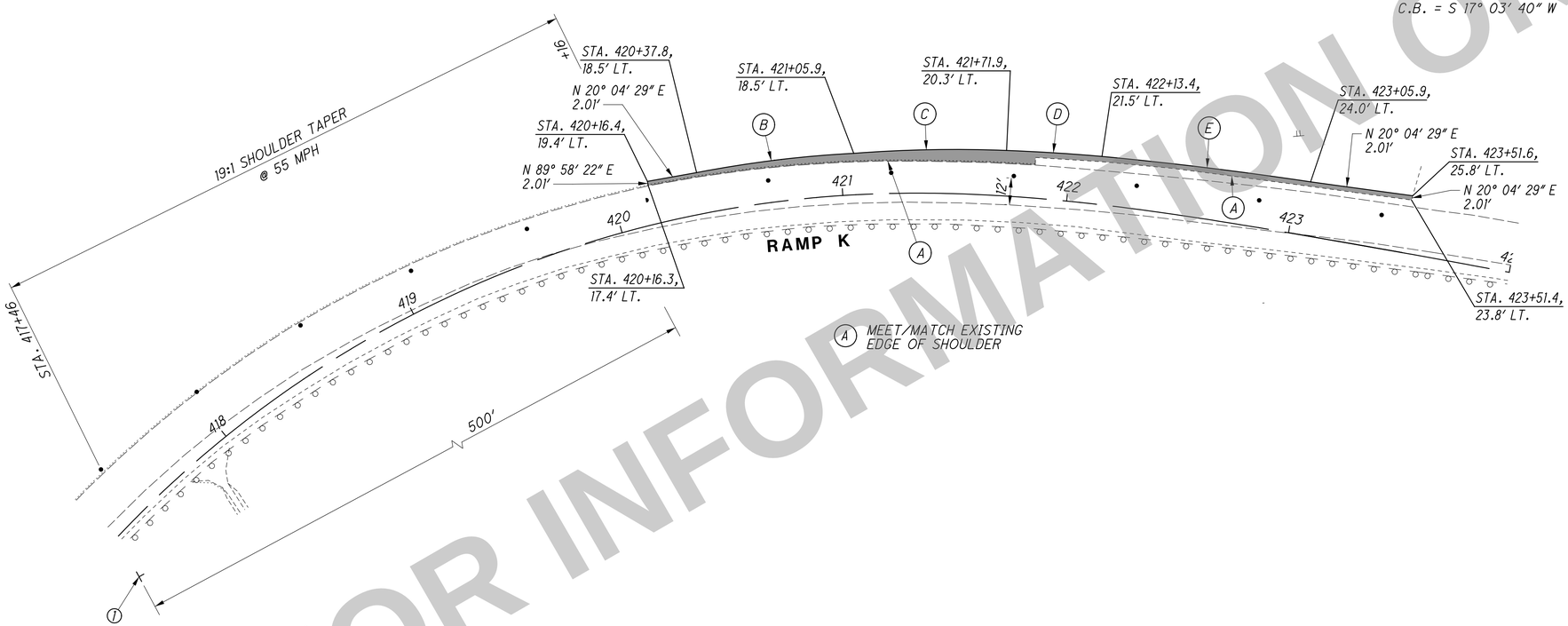
DRUM

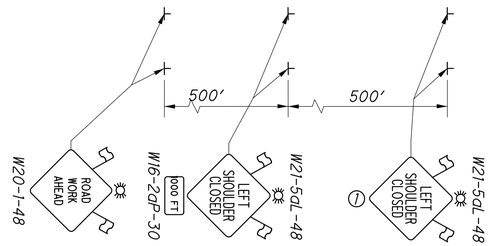
(B) Δ = 7° 59′ 53″
Dc = 11° 19′ 14″
R = 506.12′
T = 35.38′
L = 70.65′
E = 1.24′
C = 70.59′
C.B. = N 3° 05′ 46″ E

(C) = 6° 37′ 09″
Dc = 09° 41′ 57″
R = 590.73′
T = 34.16′
L = 68.24′
E = 0.99′
C = 68.21′
C.B. = N 9° 02′ 48″ E

(D) Δ = 2° 57′ 48″
Dc = 6° 57′ 08″
R = 824.14′
T = 21.32′
L = 42.62′
E = 0.28′
C = 42.62′
C.B. = N 13° 41′ 46″ E

(E) Δ = 3° 15′ 43″
Dc = 3° 28′ 44″
R = 1646.96′
T = 46.90′
L = 93.77′
E = 0.67′
C = 93.75′
C.B. = S 17° 03′ 40″ W





DRUM SPACING CHART	
TANGENT	80′ c/c
TAPER	55′ c/c
RADII	10′ c/c

FOR INFORMATION ONLY

N

0 15 30 60 HORIZONTAL SCALE IN FEET

CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PRE-PHASE 1
RAMP K TEMPORARY PAVEMENT PLAN

HAM-75-7.85

92
2017

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(A) MEET/MATCH EXISTING EDGE OF SHOULDER

LEGEND

TEMPORARY PAVEMENT

DRUM

CONSTRUCT PHASE 1 (SEE NOTE 1)

(B) Δ = 02° 48′ 17″
Dc = 02° 59′ 17″
R = 1917.50′
T = 46.94′
L = 93.87′
E = 0.57′
C = 93.86′
C.B. = S 82° 00′ 30″ E

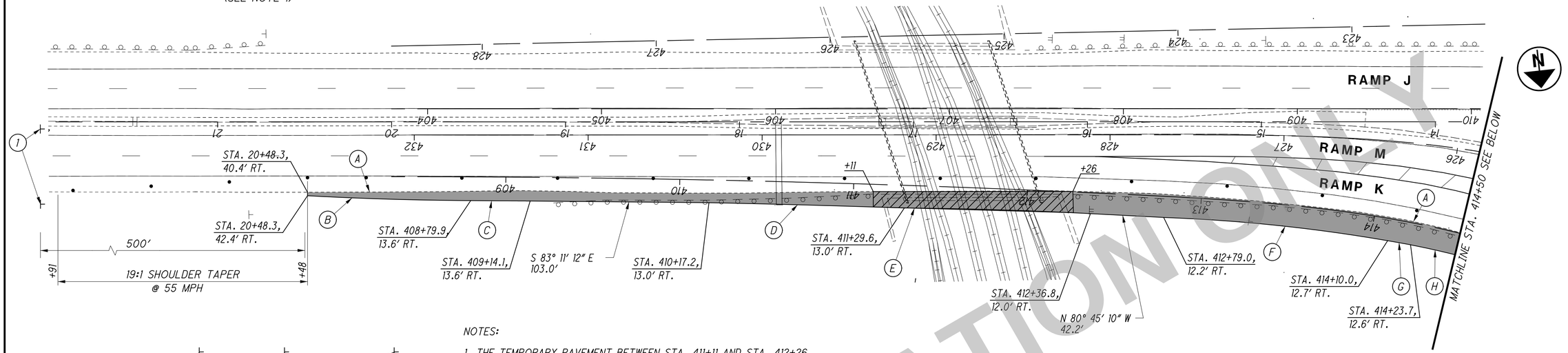
(C) Δ = 00° 13′ 27″
Dc = 00° 39′ 23″
R = 8729.22′
T = 17.08′
L = 34.15′
E = 0.02′
C = 34.15′
C.B. = S 83° 17′ 55″ E

(D) Δ = 00° 44′ 11″
Dc = 00° 39′ 19″
R = 8745.22′
T = 56.20′
L = 112.39′
E = 0.18′
C = 112.39
C.B. = S 82° 08′ 45″ E

(E) Δ = 02° 34′ 02″
Dc = 02° 24′ 21″
R = 2381.65
T = 53.36
L = 106.71
E = 0.60
C = 106.70
C.B. = S 81° 57′ 38″ E

(F) Δ = 07° 41′ 11″
Dc = 05° 56′ 09″
R = 965.24′
T = 64.84′
L = 129.49′
E = 2.18′
C = 129.40′
C.B. = S 77° 47′ 27″ E

(G) Δ = 00° 48′ 22″
Dc = 05° 56′ 09″
R = 965.24′
T = 6.79′
L = 13.58′
E = 0.02′
C = 13.58′
C.B. = S 73° 32′ 40″ E



NOTES:

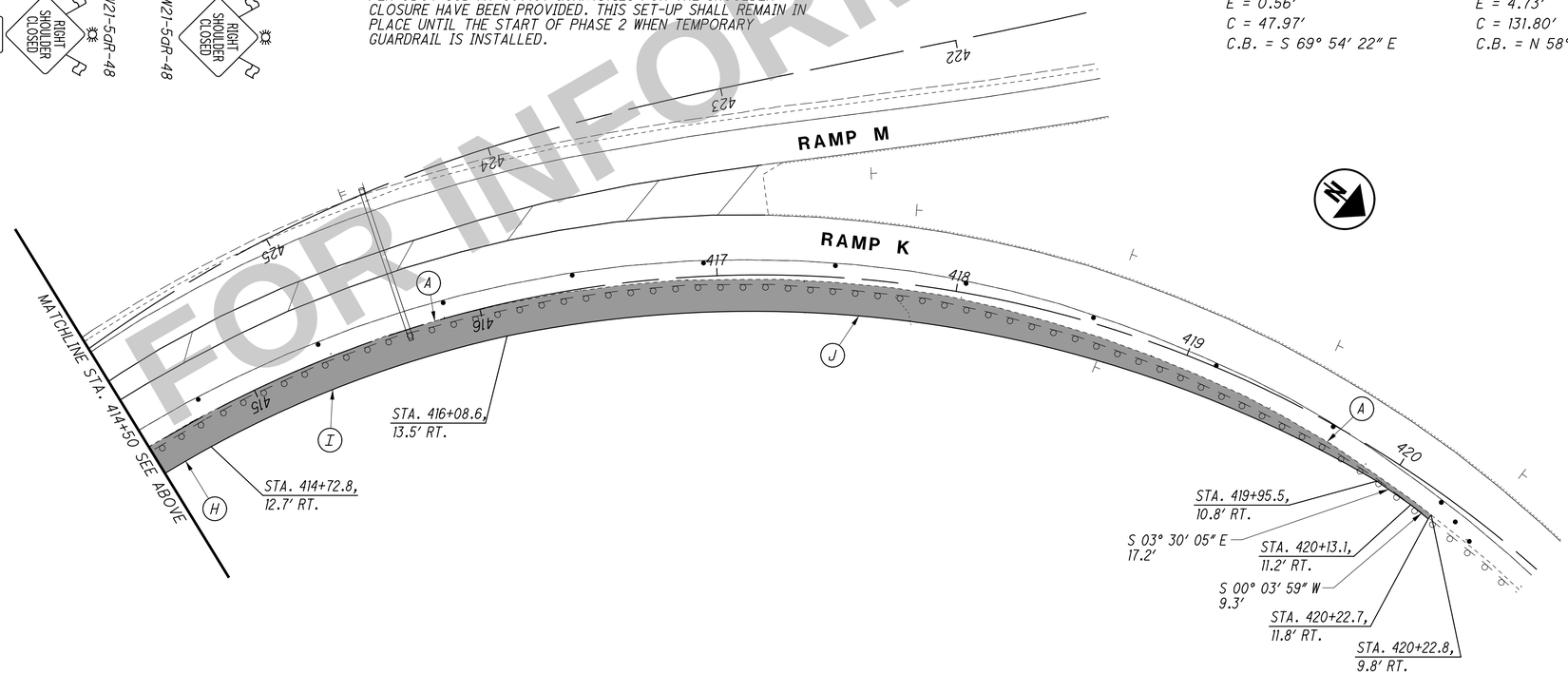
1. THE TEMPORARY PAVEMENT BETWEEN STA. 411+11 AND STA. 412+26 SHALL BE CONSTRUCTED AFTER THE EXISTING HAM-562-0026 ABUTMENTS ARE REMOVED AND PRIOR TO THE 30 DAY CLOSURE OF RAMP M. THE 30 DAY CLOSURE OF RAMP M IS SHOWN IN PHASE 2 AND IT SHOULD BE NOTED THAT THIS WORK MAY NOT HAVE THE SAME TIMING AS PHASE 2 OF MAINLINE I-75.

2. UPON REMOVAL OF THE EXISTING RAMP K GUARDRAIL, THE WB OUTSIDE SHOULDER SHALL BE CLOSED WITH PORTABLE BARRIER PER ODOT SCD MT-95.45. QUANTITIES FOR THE SHOULDER CLOSURE HAVE BEEN PROVIDED. THIS SET-UP SHALL REMAIN IN PLACE UNTIL THE START OF PHASE 2 WHEN TEMPORARY GUARDRAIL IS INSTALLED.

(H) Δ = 05° 21′ 34″
Dc = 11° 10′ 05″
R = 513.04′
T = 24.01′
L = 47.99′
E = 0.56′
C = 47.97′
C.B. = S 69° 54′ 22″ E

(I) Δ = 16° 15′ 50″ (RT)
Dc = 12° 17′ 54″
R = 465.88′
T = 66.57′
L = 132.24′
E = 4.73′
C = 131.80′
C.B. = N 58° 57′ 24″ W

(J) Δ = 41° 55′ 09″ (RT)
Dc = 11° 09′ 29″
R = 513.50′
T = 196.70′
L = 375.69′
E = 36.38′
C = 367.37′
C.B. = N 28° 59′ 14″ W



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

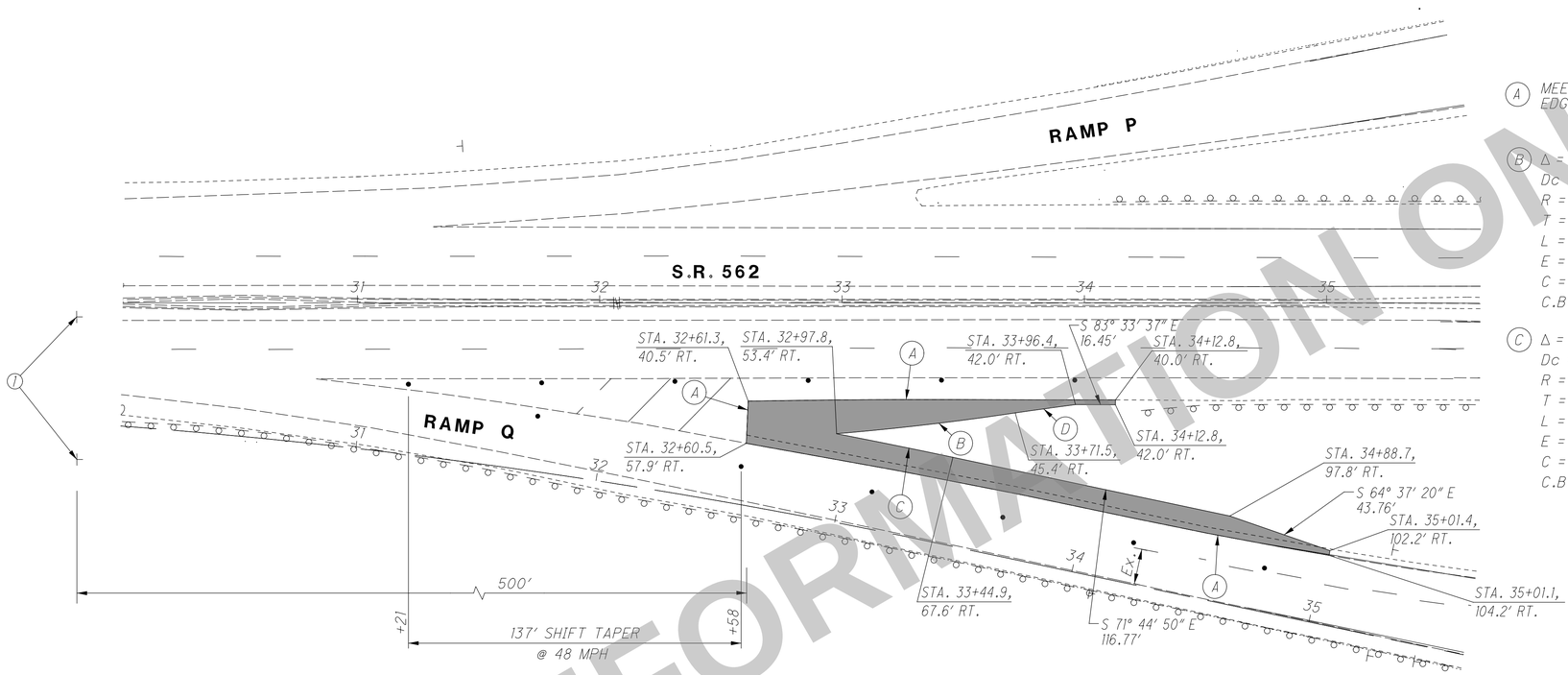
CALCULATED SMM
CHECKED JDS

TRAFFIC PLAN - PRE-PHASE 1
TEMPORARY PAVEMENT PLAN
MAINTENANCE OF TRAFFIC RAMP K

HAM-75-7.85

93
2017

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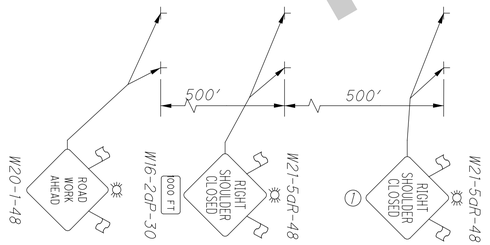


(A) MEET/MATCH EXISTING EDGE OF SHOULDER

(B) Δ = 3° 38' 49"
Dc = 4° 54' 50"
R = 1166.00'
T = 37.12'
L = 74.22'
E = 0.59'
C = 74.20'
C.B. = N 89° 39' 11" E

(C) Δ = 1° 05' 06"
Dc = 2° 12' 56"
R = 2586.00'
T = 24.49'
L = 48.98'
E = 0.12'
C = 48.98'
C.B. = S 72° 17' 23" E

(D) Δ = 1° 15' 54"
Dc = 5° 02' 05"
R = 1138.00'
T = 12.56'
L = 25.13'
E = 0.07'
C = 25.13'
C.B. = N 88° 27' 44" E



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

LEGEND
TEMPORARY PAVEMENT
DRUM

FOR INFORMATION ONLY

0 15 30 60
HORIZONTAL SCALE IN FEET

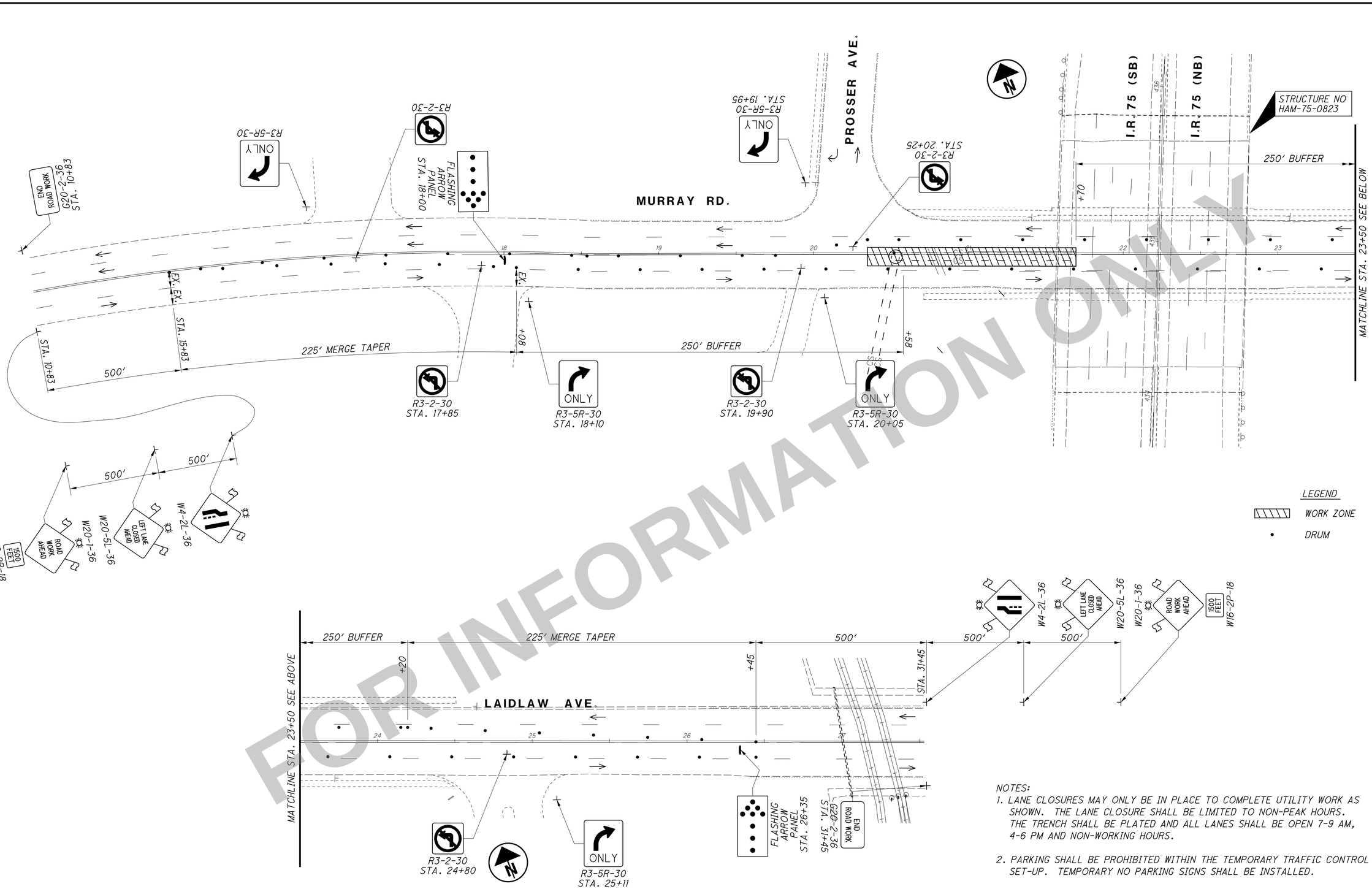
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN
RAMP Q TEMPORARY PAVEMENT PLAN

HAM-75-7.85

94
2017

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FOR INFORMATION ONLY

NOTES:

1. LANE CLOSURES MAY ONLY BE IN PLACE TO COMPLETE UTILITY WORK AS SHOWN. THE LANE CLOSURE SHALL BE LIMITED TO NON-PEAK HOURS. THE TRENCH SHALL BE PLATED AND ALL LANES SHALL BE OPEN 7-9 AM, 4-6 PM AND NON-WORKING HOURS.
2. PARKING SHALL BE PROHIBITED WITHIN THE TEMPORARY TRAFFIC CONTROL SET-UP. TEMPORARY NO PARKING SIGNS SHALL BE INSTALLED.
3. PEDESTRIAN TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PHYSICALLY SEPERATE PEDESTRIAN TRAFFIC FROM THE WORK ZONE AS DISCLOSED IN THE GENERAL NOTES.

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED SMM
CHECKED JDS

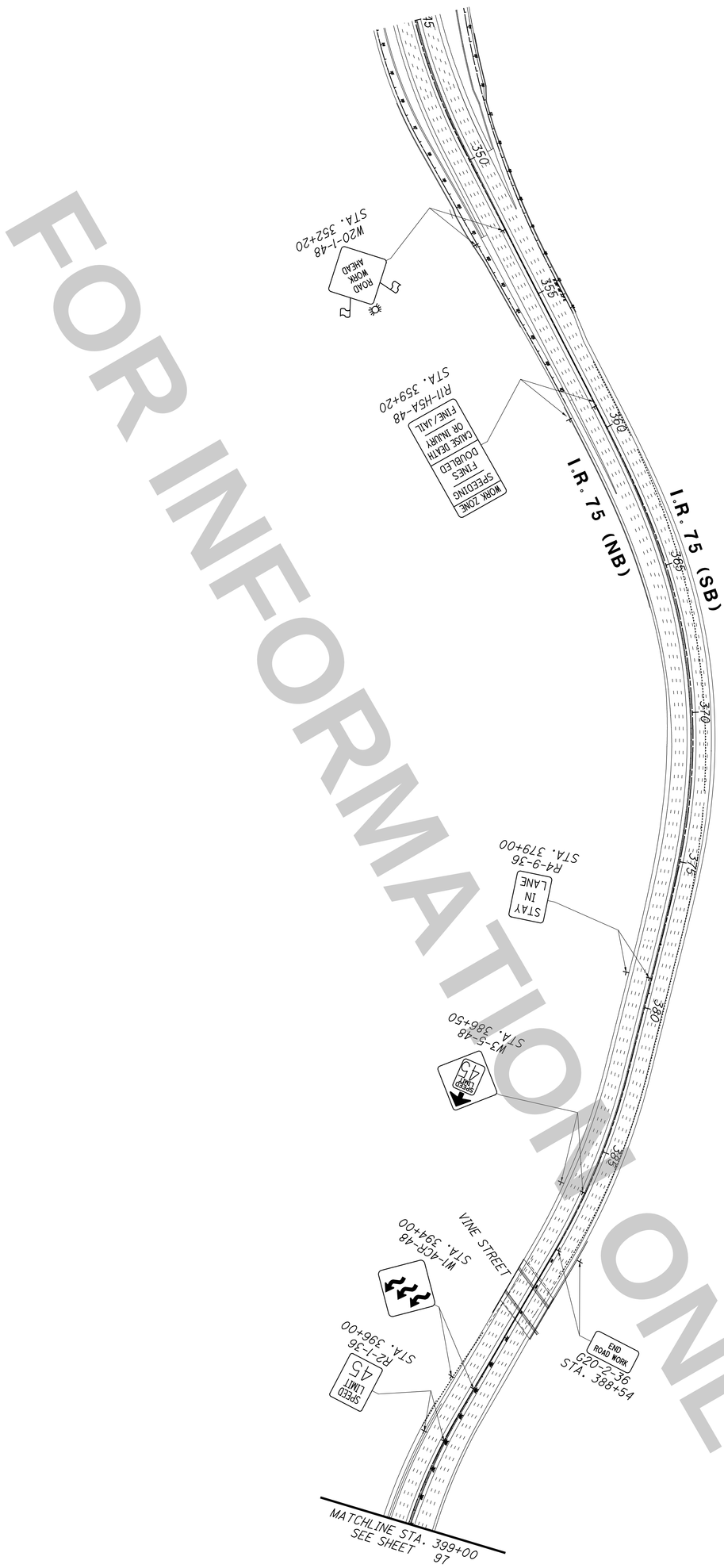
MAINTENANCE OF TRAFFIC PLAN - PRE-PHASE 1
LAIDLAW AVE. - STA. 11+00 TO STA. 27+55

HAM-75-7.85

95
2017

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FOR INFORMATION ONLY

96 / 2017	HAM-75-7.85	MAINTENANCE OF TRAFFIC PLAN - PHASE 1 I.R. 75 - STA. 345+00 TO STA. 399+00	CALCULATED JF CHECKED JDS	0 100 50 200 HORIZONTAL SCALE IN FEET

FOR INFORMATION ONLY

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I.R. 75 - STA. 399+00 TO STA. 406+00

HAM-75-7.85

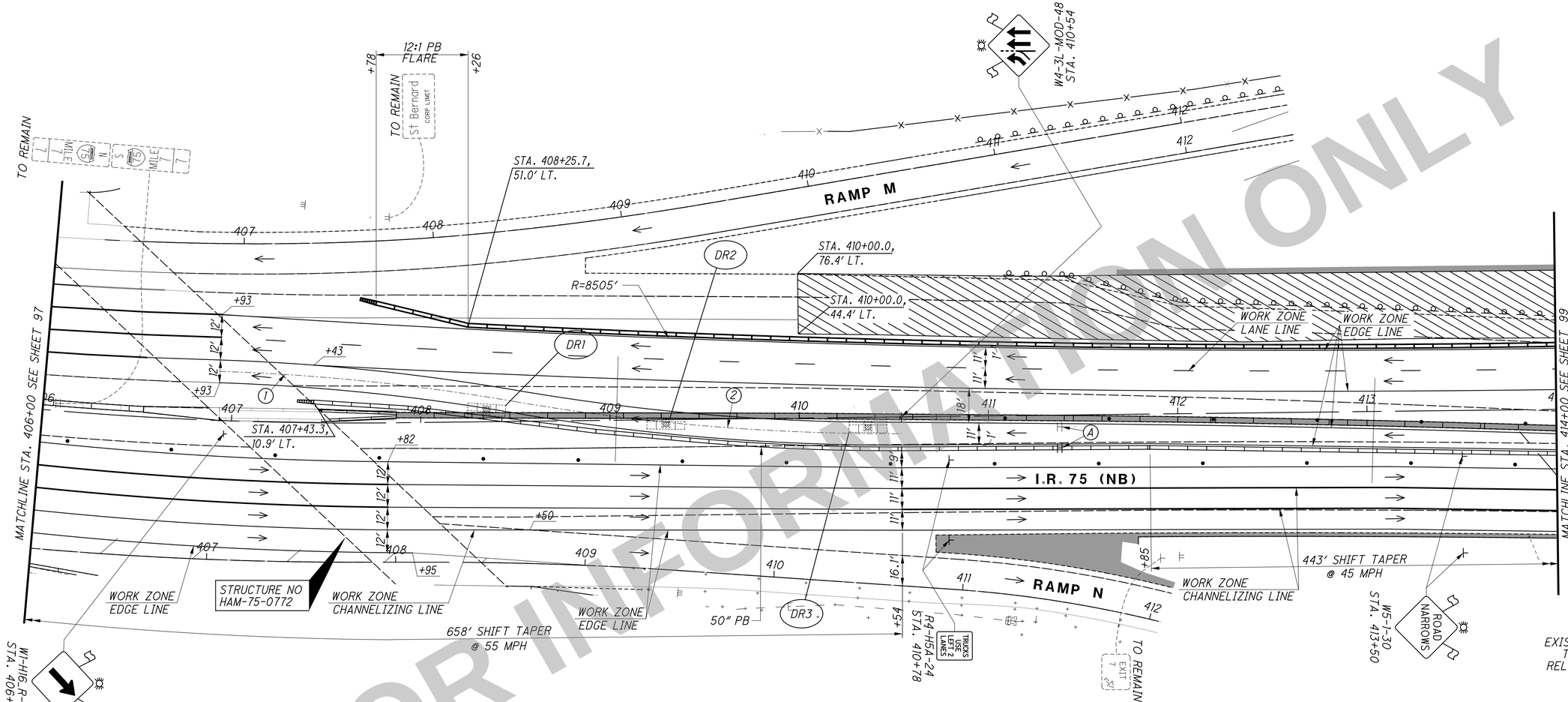
97
2017

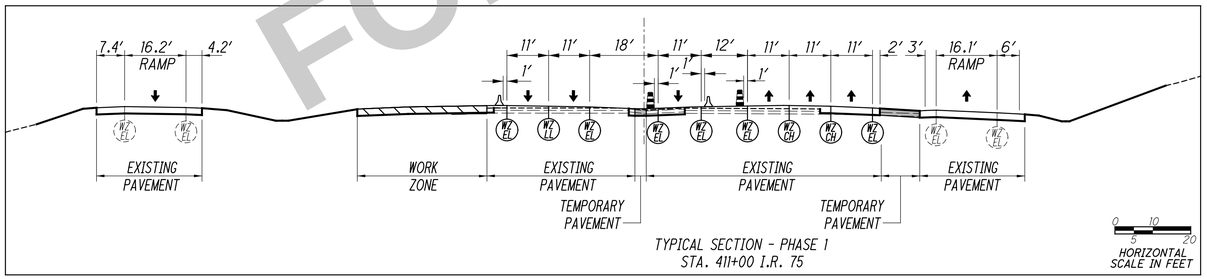
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① Δ = 7° 50′ 1″ (RT)
Dc = 4° 59′ 59″
R = 1146.00′
T = 78.47′
L = 156.69′
E = 2.68′
C = 156.56′
C.B. = S 84° 8′ 59″ E

② Δ = 10° 3′ 0″ (LT)
Dc = 4° 59′ 59″
R = 1146.00′
T = 100.77′
L = 201.01′
E = 4.42′
C = 200.76′
C.B. = N 85° 15′ 32″ W

DR1 - EXISTING BASIN TO BE RECONSTRUCTED TO CATCH BASIN NO. 6 UNTIL RECONSTRUCTED TO ORIGINAL CONDITION IN PHASE 5.
DR2 - EXISTING BASIN TO BE RECONSTRUCTED TO CATCH BASIN NO. 6 UNTIL RECONSTRUCTED TO ORIGINAL CONDITION IN PHASE 5.
DR3 - EXISTING BASIN TO BE RECONSTRUCTED TO CATCH BASIN NO. 6 UNTIL RECONSTRUCTED TO ORIGINAL CONDITION IN PHASE 5.





LEGEND
- PHASE 1 WORK ZONE
- DRUM
- PORTABLE BARRIER
- TAPERED END SECTION
- TEMPORARY PAVEMENT

DRUM SPACING CHART	
TANGENT	80′ c/c
TAPER	55′ c/c
RADII	10′ c/c

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I.R. 75 - STA. 406+00 TO STA. 414+00

HAM-75-7.85

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2017

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(1) Δ = 05° 13′ 03″ (RT)
Dc = 10° 20′ 47″
R = 553.79′
T = 25.23′
L = 50.43′
E = 0.57′
C = 50.41′
C.B. = N 14° 41′ 03″ W

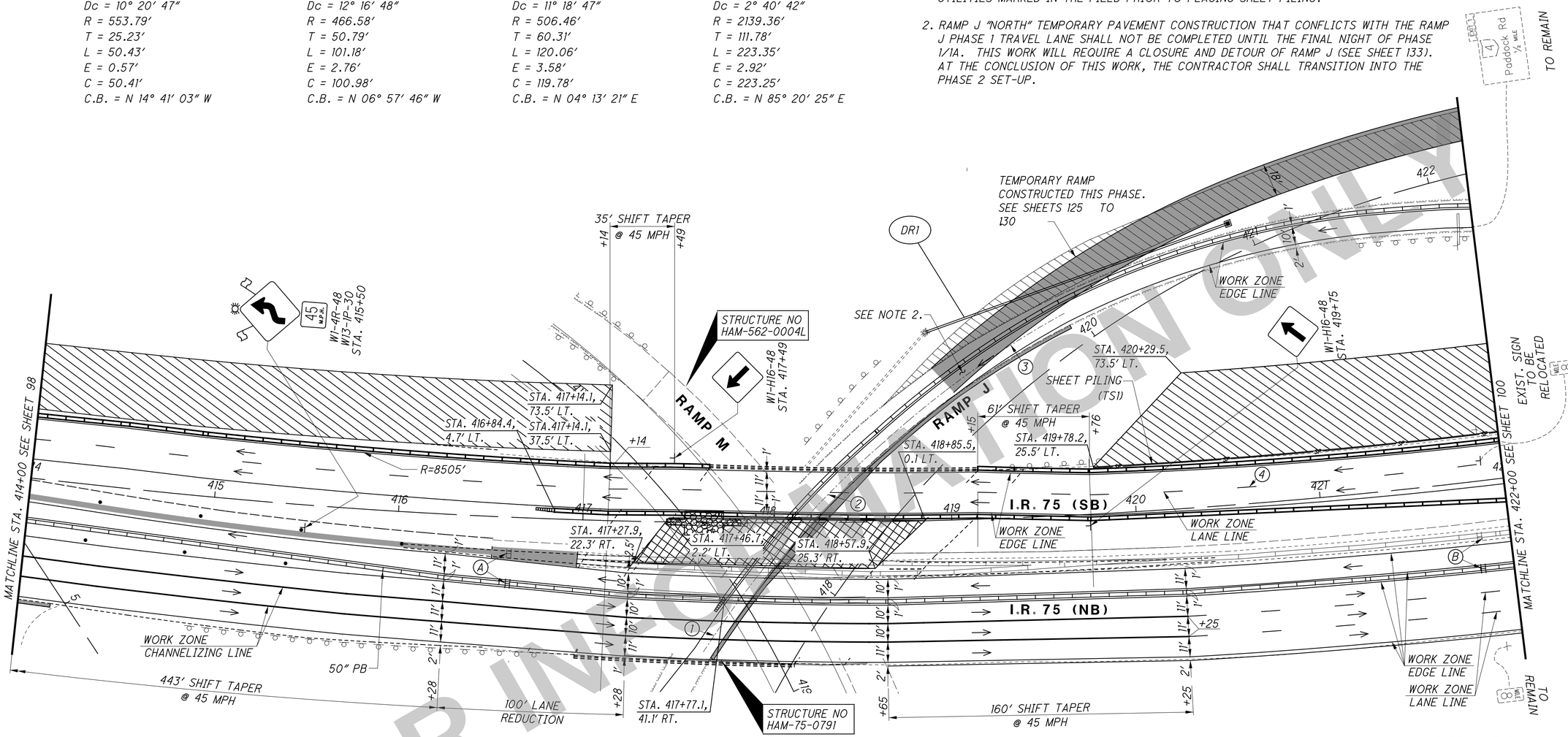
(2) Δ = 12° 25′ 30″ (RT)
Dc = 12° 16′ 48″
R = 466.58′
T = 50.79′
L = 101.18′
E = 2.76′
C = 100.98′
C.B. = N 06° 57′ 46″ W

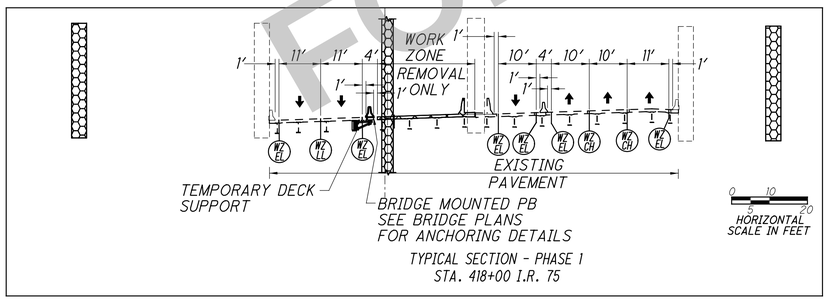
(3) Δ = 13° 34′ 56″ (RT)
Dc = 11° 18′ 47″
R = 506.46′
T = 60.31′
L = 120.06′
E = 3.58′
C = 119.78′
C.B. = N 04° 13′ 21″ E

(4) Δ = 5° 58′ 48″ (LT)
Dc = 2° 40′ 42″
R = 2139.36′
T = 111.78′
L = 223.35′
E = 2.92′
C = 223.25′
C.B. = N 85° 20′ 25″ E

DR1 - CB 2-2B AND 175′-12″ CONDUIT, TYPE B TO BE CONNECTED TO EXISTING BASIN. REMOVE CB 2-2B IN PHASE 4A. CONDUIT SHALL REMAIN IN SERVICE UNTIL FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 4A.

NOTES:
1. THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.
2. RAMP J "NORTH" TEMPORARY PAVEMENT CONSTRUCTION THAT CONFLICTS WITH THE RAMP J PHASE 1 TRAVEL LANE SHALL NOT BE COMPLETED UNTIL THE FINAL NIGHT OF PHASE 1/1A. THIS WORK WILL REQUIRE A CLOSURE AND DETOUR OF RAMP J (SEE SHEET 133). AT THE CONCLUSION OF THIS WORK, THE CONTRACTOR SHALL TRANSITION INTO THE PHASE 2 SET-UP.

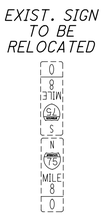




TYPICAL SECTION - PHASE 1
STA. 418+00 I.R. 75

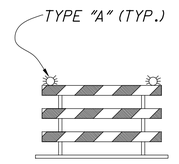


FROM: STA. 416+63
TO: STA. 416+63
(A)



FROM: STA. 421+81
TO: STA. 421+81
(B)

LEGEND
- PHASE 1 WORK ZONE
- PHASE 1 WORK ZONE RAMP M BRIDGE PIER CONSTRUCTION
- PHASE 1 WORK ZONE EXIST. MAINLINE BRIDGE DECK REMOVAL
- PORTABLE BARRIER
- TAPERED END SECTION
- TEMPORARY PAVEMENT
- IMPACT ATTENUATOR



9′ TYPE III SOLID BARRICADE

DRUM SPACING CHART	
TANGENT	80′ c/c
TAPER	55′ c/c
RADII	10′ c/c

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I.R. 75 - STA. 414+00 TO STA. 422+00

HAM-75-7.85

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EXIT 1 — 4 — Paddock Rd ½ MILE

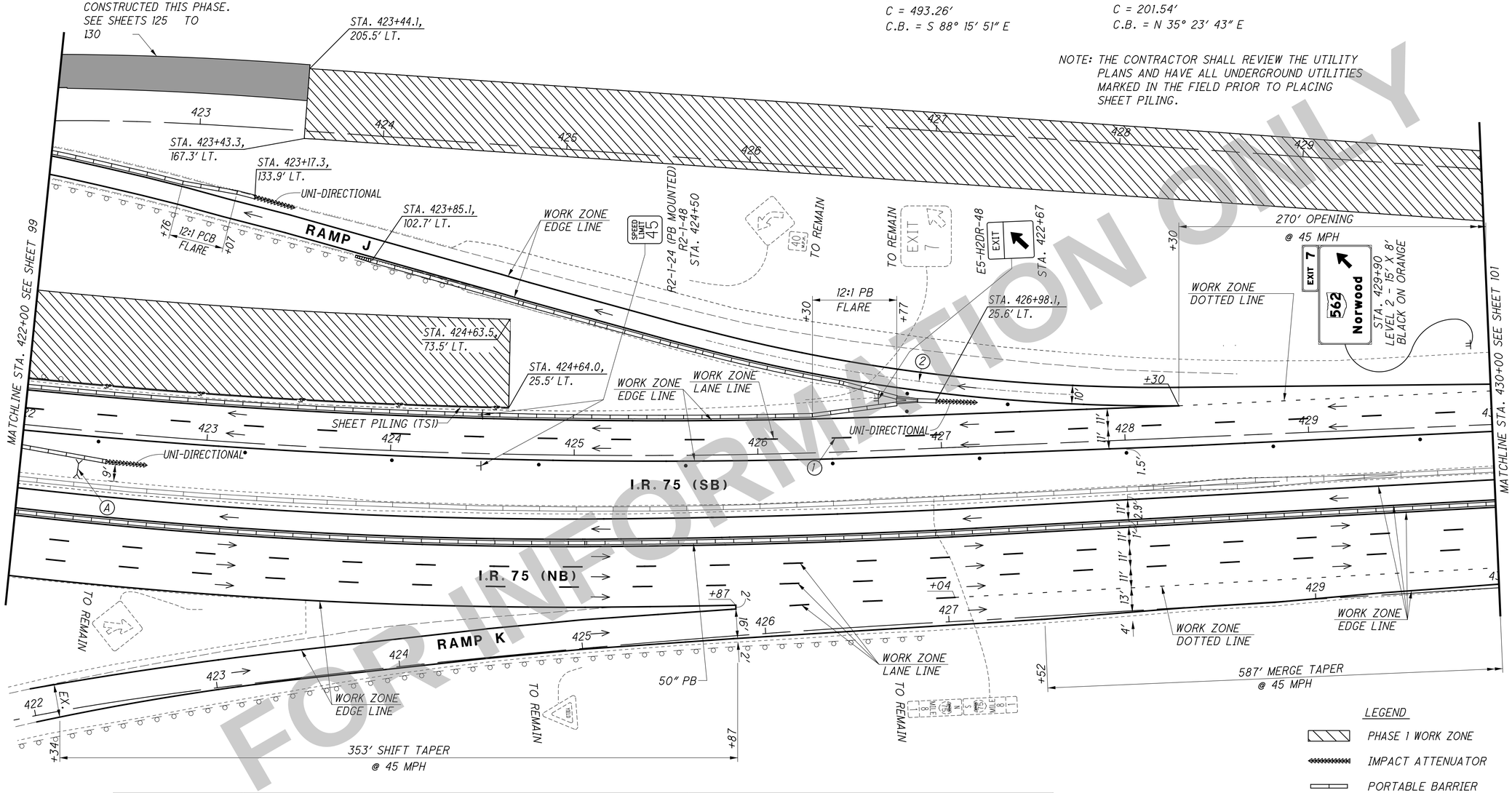
STA. 423+00 INSTALL THIS PHASE - SEE SIGNING PLAN

TEMPORARY RAMP CONSTRUCTED THIS PHASE. SEE SHEETS 125 TO 130

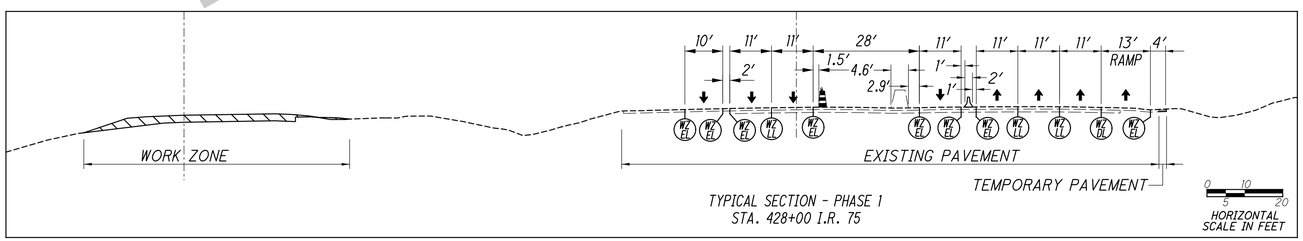
① Δ = 7° 44′ 28″ (LT)
Dc = 1°34′ 06″
R = 3653.43′
T = 247.19′
L = 493.62′
E = 8.35′
C = 493.26′
C.B. = S 88° 15′ 51″ E

② Δ = 12° 06′ 51″ (RT)
Dc = 5° 59′ 58″
R = 955.00′
T = 101.34′
L = 201.92′
E = 5.36′
C = 201.54′
C.B. = N 35° 23′ 43″ E

NOTE: THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.



FOR INFORMATION ONLY



TYPICAL SECTION - PHASE 1
STA. 428+00 I.R. 75

LEGEND

- PHASE 1 WORK ZONE
- IMPACT ATTENUATOR
- PORTABLE BARRIER
- TAPERED END SECTION
- PB "Y" CONNECTING SEGMENT
- TEMPORARY PAVEMENT
- DRUM

DRUM SPACING CHART	
TANGENT	80′ c/c
TAPER	55′ c/c
RADII	10′ c/c

HORIZONTAL SCALE IN FEET: 0 15 30 60

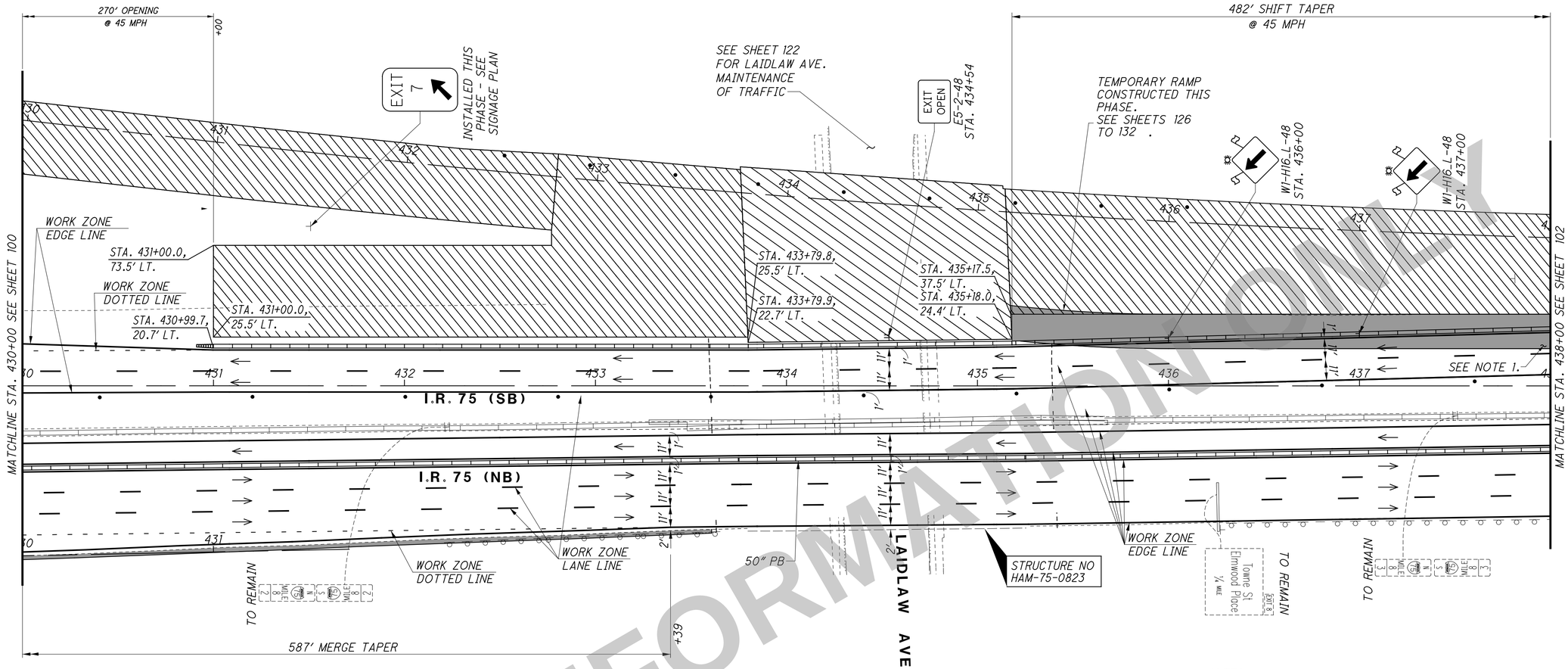
CALCULATED SMM
CHECKED JDS

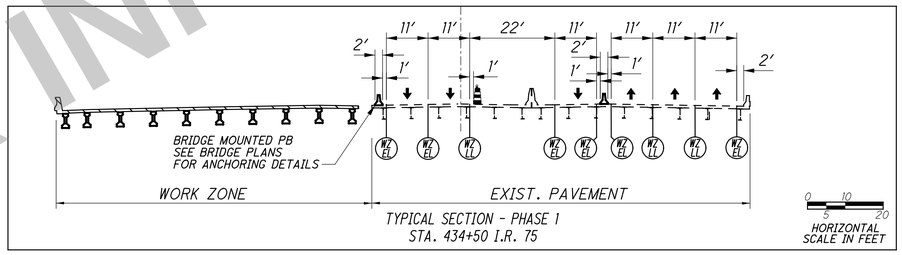
MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I.R. 75 - STA. 422+00 TO STA. 430+00

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2017

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NOTES:
1. RAMP J "NORTH" TEMPORARY PAVEMENT CONSTRUCTION THAT CONFLICTS WITH THE MAINLINE TRAVEL LANES SHALL BE COMPLETED BY UTILIZING A RIGHT LANE CLOSURE PER ODOT SCD MT-95.30 AS ALLOWED BY THE PERMITTED LANE CLOSURE POLICY. THIS WORK SHALL NOT BE COMPLETED UNTIL THE FINAL NIGHT OF PHASE 1/1A. AT THE CONCLUSION OF THIS WORK, THE CONTRACTOR SHALL TRANSITION INTO THE PHASE 2 SET-UP.

LEGEND
- PHASE 1 WORK ZONE
- PORTABLE BARRIER
- TEMPORARY PAVEMENT
- TAPERED END SECTION

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET

CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I.R. 75 - STA. 430+00 TO STA. 438+00

HAM-75-7.85

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2017

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STA. 440+00 TO STA. 440+60
① Δ = 02° 23′ 07″ (RT)
Dc = 03° 58′ 14″
R = 1443.00′
T = 30.04′
L = 60.08′
E = 0.31′
C = 60.07′
C.B. = N 88° 55′ 38″ E

STA. 440+85 TO STA. 442+41
② Δ = 06° 12′ 51″ (LT)
Dc = 03° 59′ 09″
R = 1437.50′
T = 78.03′
L = 155.91′
E = 2.12′
C = 155.83′
C.B. = N 27° 43′ 37″ E

STA. 442+41 TO STA. 444+00
③ Δ = 06° 19′ 55″ (RT)
Dc = 03° 59′ 09″
R = 1437.50′
T = 79.51′
L = 158.78′
E = 2.20′
C = 158.78′
C.B. = N 27° 40′ 06″ E

TEMPORARY RAMP CONSTRUCTED THIS PHASE. SEE SHEETS 126 TO 132 .

482′ SHIFT TAPER

W1-H16_L-48 STA. 438+00

E5-H2B-48 EXIT OPEN AHEAD

W13-1P-24 35 MPH STA. 438+38

W1-H16_L-48 STA. 439+00

W1-H16_L-48 STA. 440+00

W1-H16_L-24 STA. 442+50

STA. 439+86.7, 85.8′ LT.

N.S. R/R

STA. 439+86.3, 37.5′ LT.

STA. 440+49.6, 10.4′ LT.

STA. 441+89.9, 49.5′ LT.

STA. 441+89.9, 85.5′ LT.

TO REMAIN

STA. 443+58.3, 49.5′ LT.

STA. 443+58.3, 37.5′ LT.

STA. 443+11.6, 4.5′ LT.

WORK ZONE CHANNELIZING LINE

STA. 445+09.9, 37.5′ LT.

STA. 445+09.9, 31.2′ LT.

SEE NOTE 1.

I.R. 75 (SB)

I.R. 75 (NB)

MATCHLINE STA. 438+00 SEE SHEET 101

MATCHLINE STA. 446+00 SEE SHEET 103

UNI-DIRECTIONAL SEE NOTE 1.

SEE SHEET 134

50″ PB

WORK ZONE DOTTED LINE

WORK ZONE LANE LINE

WORK ZONE EDGE LINE

84′ DROP TAPER

75′ SHIFT TAPER

75′ SHIFT TAPER

STRUCTURE NO HAM-75-0834

LEGEND

PHASE 1 WORK ZONE

PORTABLE BARRIER

PHASE 1 NORFOLK SOUTHERN PIER CONSTRUCTION

IMPACT ATTENUATOR

TYPE "A" (TYP.)

10′ TYPE III SOLID BARRICADE

Ⓐ

Ⓐ RR BRIDGE AND PIERS CONSTRUCTED THIS PHASE

EXISTING PAVEMENT

TYPICAL SECTION - PHASE 1
STA. 440+00 I.R. 75

HORIZONTAL SCALE IN FEET

NOTES:
1. TEMPORARY PAVEMENT CONSTRUCTION THAT CONFLICTS WITH THE MAINLINE TRAVEL LANES SHALL BE COMPLETED BY UTILIZING A RIGHT LANE CLOSURE PER ODOT SCD MT-95.30 AS ALLOWED BY THE PERMITTED LANE CLOSURE POLICY. THIS WORK SHALL NOT BE COMPLETED UNTIL THE FINAL NIGHT OF PHASE 1/1A. AT THE CONCLUSION OF THIS WORK, THE CONTRACTOR SHALL TRANSITION INTO THE PHASE 2 SET-UP.

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET

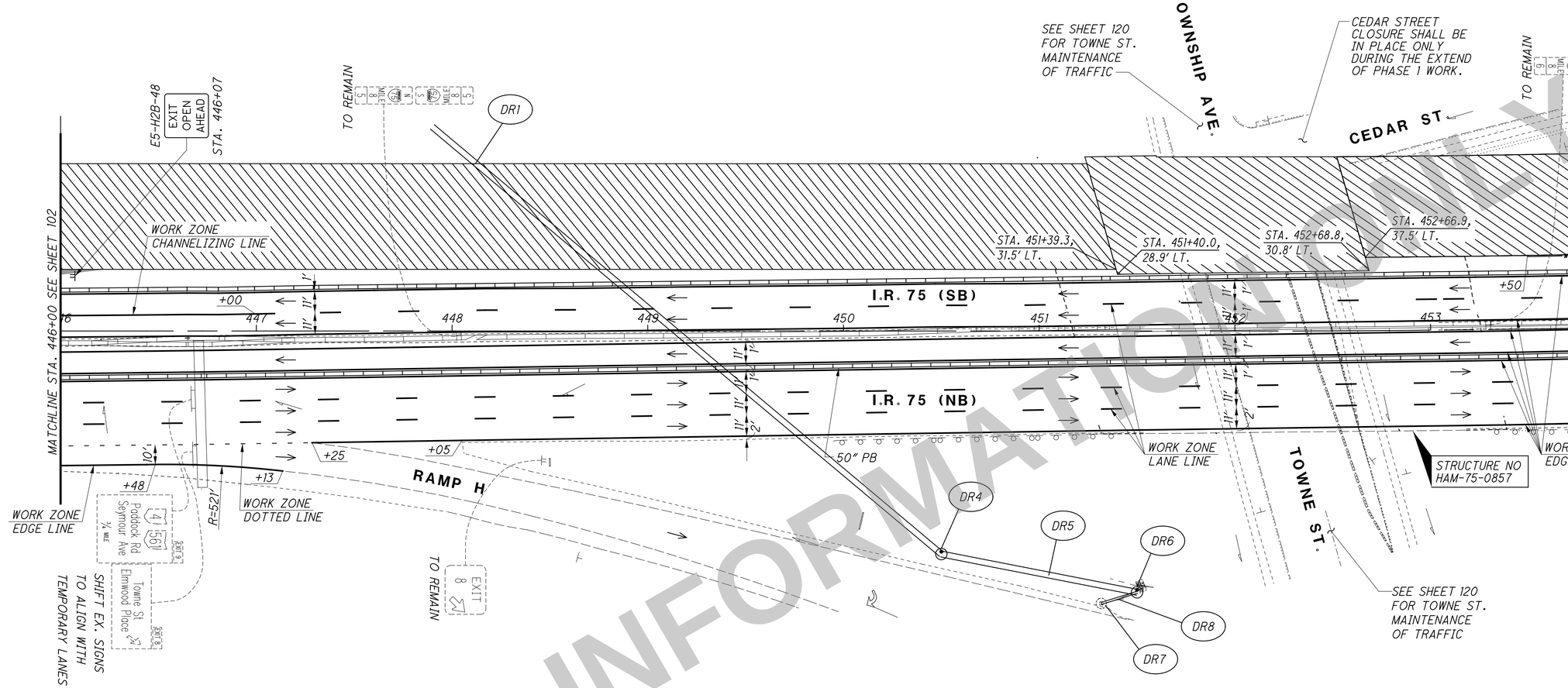
CALCULATED SMM CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I.R. 75 - STA. 438+00 TO STA. 446+00

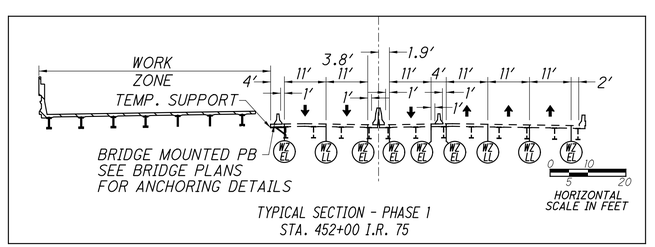
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102
2017

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FOR INFORMATION ONLY



TYPICAL SECTION - PHASE 1
STA. 452+00 I.R. 75

LEGEND
- PHASE 1 WORK ZONE
- PORTABLE BARRIER

DR1 - BORE PROPOSED PIPE TO MAINTAIN EXISTING DRAINAGE.
DR4 - INSTALL PROPOSED MANHOLE STA. 450+50.00, 114.0' RT.
DR5 - INSTALL PROPOSED MANHOLE STA. 451+50.00, 113.5' RT.
DR6 - INSTALL PROPOSED PIPE TO MAINTAIN EXISTING DRAINAGE.
DR7 - EXISTING MANHOLE TO BE REMOVED DURING PHASE 3.
DR8 - 20' - 12" CONUIT, TYPE C TO BE REMOVED IN PHASE 3.

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED SMM
CHECKED JDS

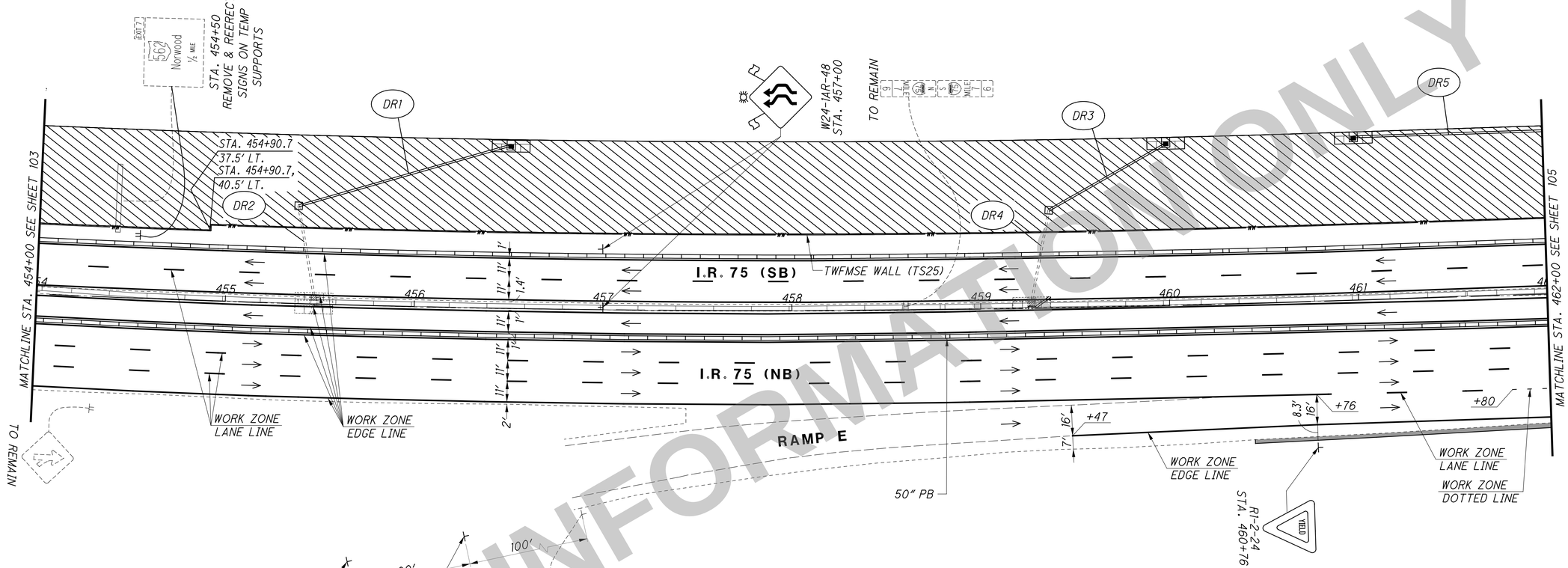
MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I.R. 75 - STA. 446+00 TO STA. 454+00

HAM-75-7.85

103
2017

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DR1 - 117'-12" CONDUIT, TYPE B W/4'x4' BOX CONNECTION TO BE FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 3.
DR2 - EXISTING CONDUIT TO REMAIN IN SERVICE UNTIL FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 3.
DR3 - 72'-12" CONDUIT, TYPE B W/4'x4' BOX CONNECTION TO BE FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 3.
DR4 - EXISTING CONDUIT TO REMAIN IN SERVICE UNTIL FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 3.
DR5 - 300'-12" CONDUIT, TYPE B W/4'x4' BOX CONNECTION TO BE FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 3.



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

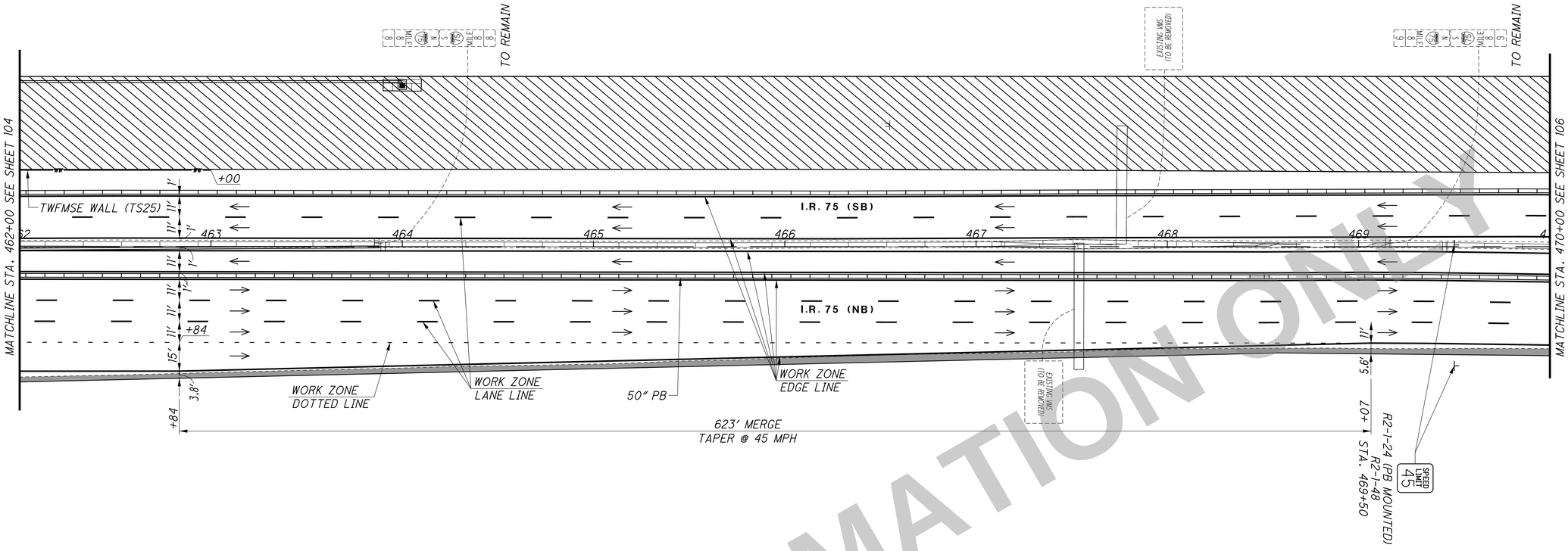
CALCULATED SMM
CHECKED JDS

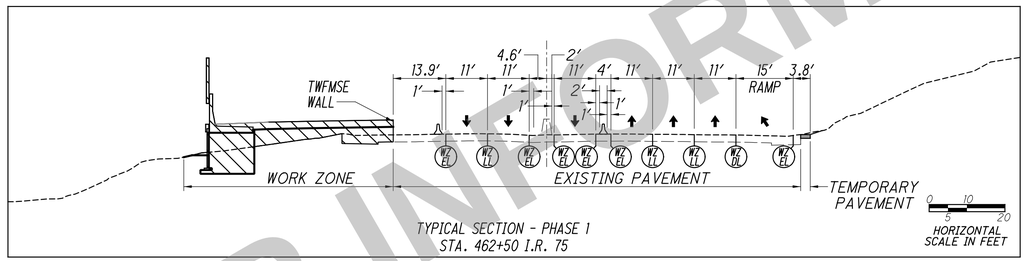
MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I.R. 75 - STA. 454+00 TO STA. 462+00

HAM-75-7.85

104
2017

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TYPICAL SECTION - PHASE 1
STA. 462+50 I.R. 75

DR1 - COVER GRATE UNTIL CONNECTION TO THE MEDIAN INLET IS COMPLETED IN PHASE 2.

LEGEND

- PHASE 1 WORK ZONE
- PORTABLE BARRIER
- TEMPORARY PAVEMENT

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

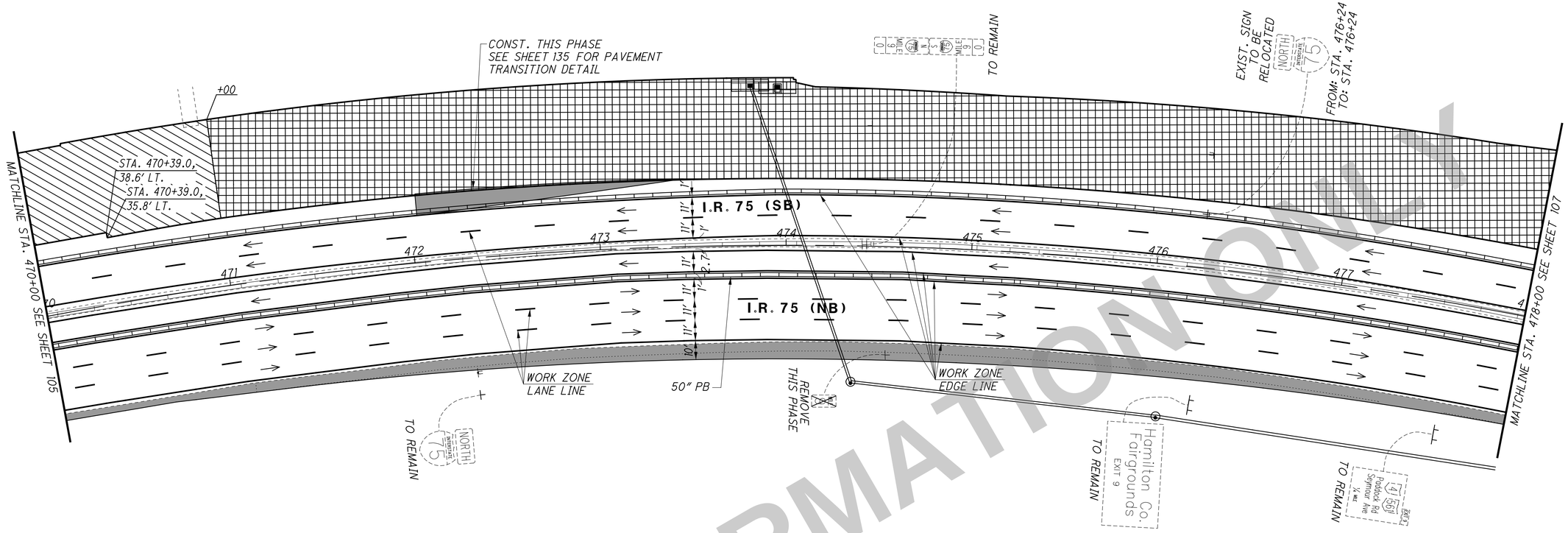
CALCULATED SMM
CHECKED JDS

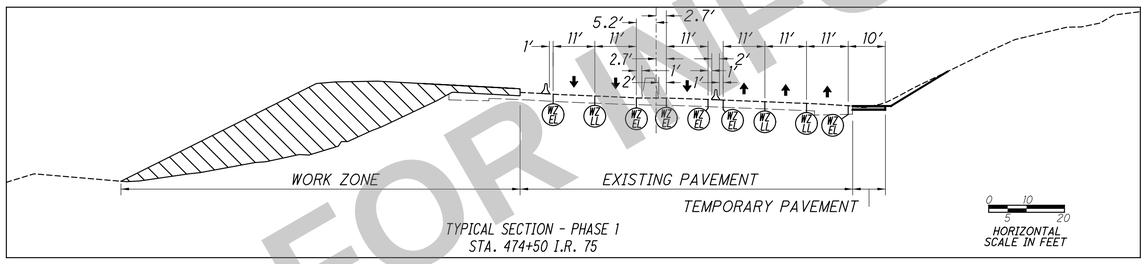
MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I.R. 75 - STA. 462+00 TO STA. 470+00

HAM-75-7.85

105
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TYPICAL SECTION - PHASE 1
STA. 474+50 I.R. 75

LEGEND

- PHASE 1 WORK ZONE
- PORTABLE BARRIER
- TEMPORARY PAVEMENT
- PHASE 1 DELAYED PAVING AREA SEE NOTE 1

NOTES:

1. THE CONTRACTOR SHALL DELAY PAVING WORK IN THE CROSSHATCH AREA SHOWN UNTIL AFTER 09/01/2023. PAVING WORK IS DEFINED AS SUBGRADE STABILIZATAION, AGGREGATE SUBBASE, ASPHALT BASE, INTERMEDIATE AND SURFACE COURSES.
2. PROPOSED DRAINAGE SHOWN ON THIS SHEET SHALL BE INSTALLED PER THE CONSTRUCTION SEQUENCE NOTES.

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

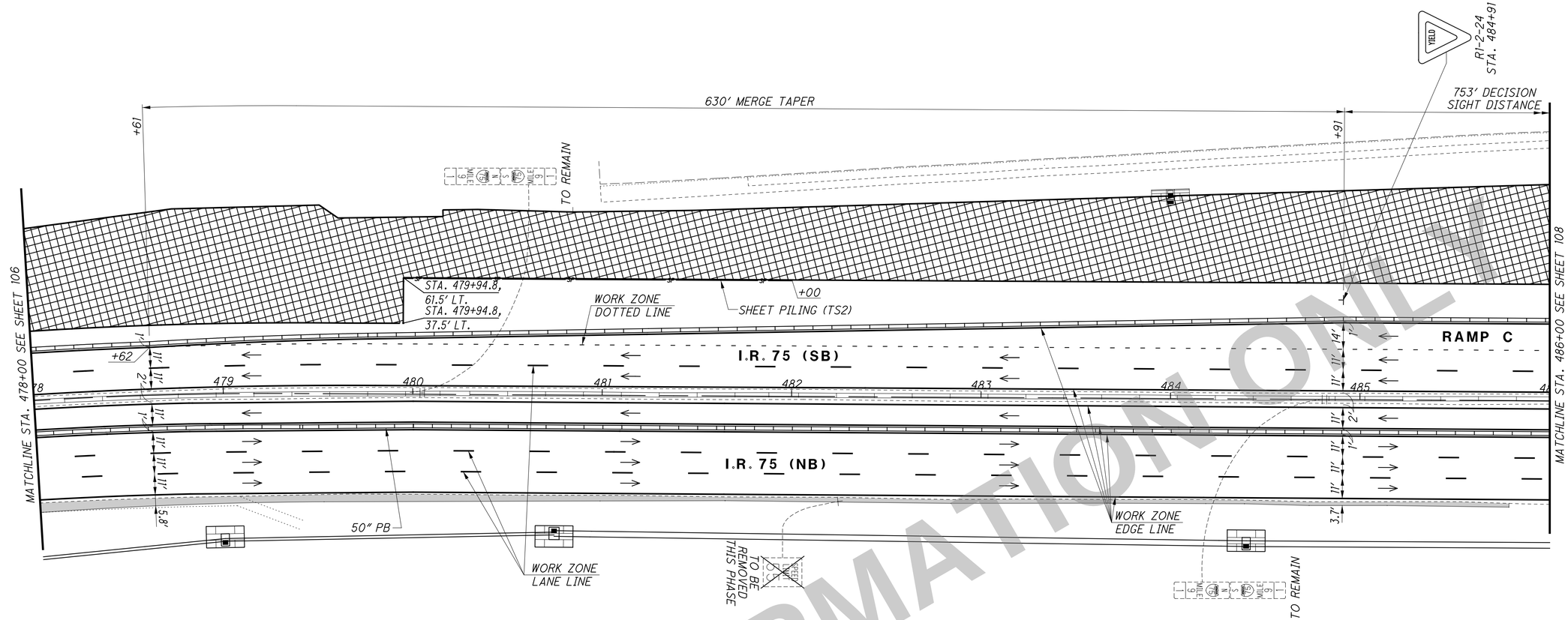
CALCULATED SMM
CHECKED JDS

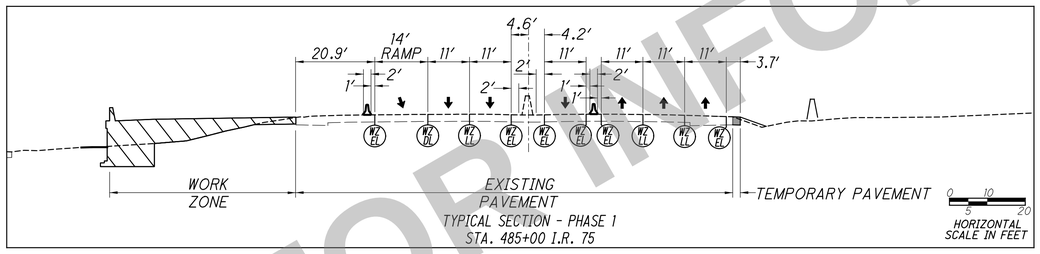
MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I.R. 75 - STA. 470+00 TO STA. 478+00

HAM-75-7.85

106
2017

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TYPICAL SECTION - PHASE 1
STA. 485+00 I.R. 75

LEGEND

- PHASE 1 WORK ZONE
- PORTABLE BARRIER
- TEMPORARY PAVEMENT
- PHASE 1 DELAYED PAVING AREA SEE NOTE 1

NOTES:

1. THE CONTRACTOR SHALL DELAY PAVING WORK IN THE CROSSHATCH AREA SHOWN UNTIL AFTER 09/01/2023. PAVING WORK IS DEFINED AS SUBGRADE STABILIZATAION, AGGREGATE SUBBASE, ASPHALT BASE, INTERMEDIATE AND SURFACE COURSES.
2. THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.
3. PROPOSED DRAINAGE SHOWN ON THIS SHEET SHALL BE INSTALLED PER THE CONSTRUCTION SEQUENCE NOTES.

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

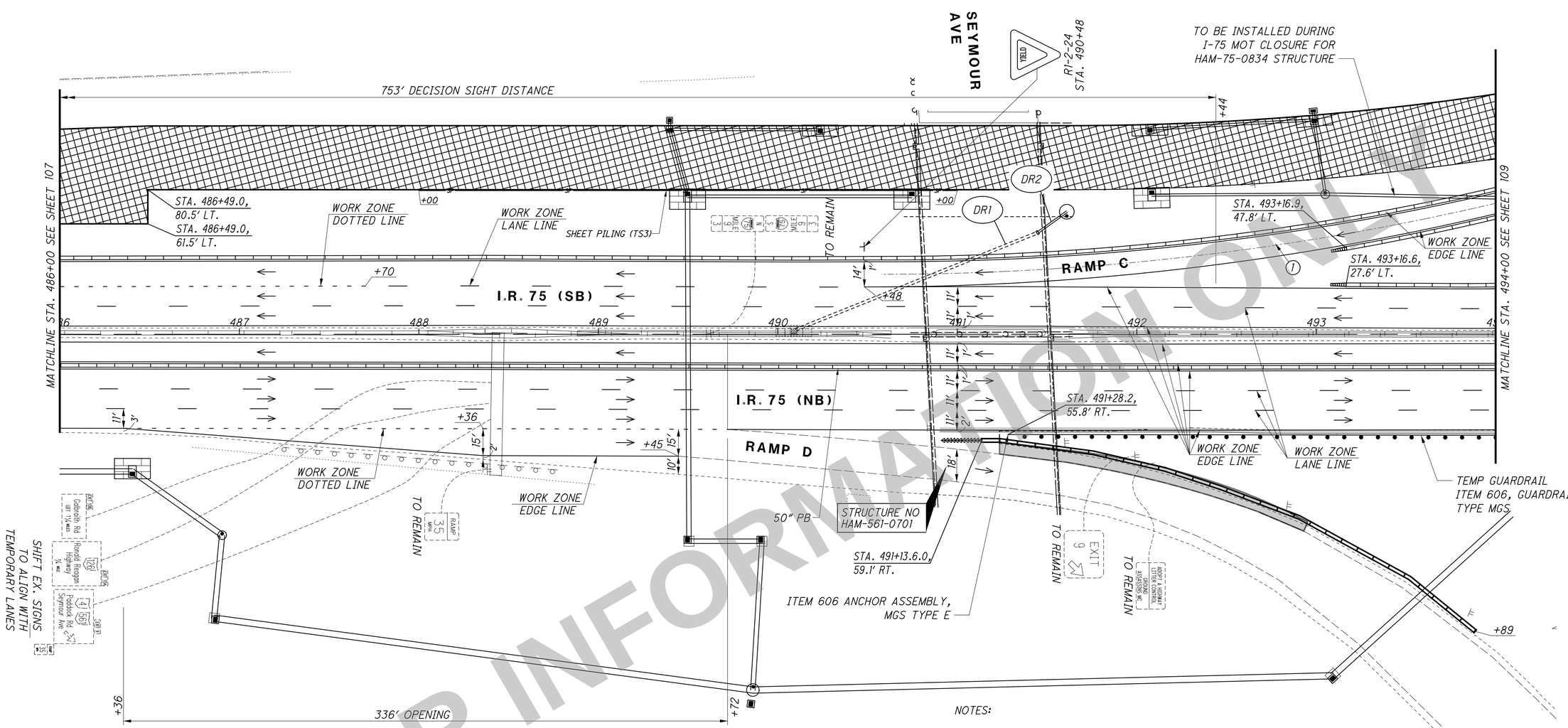
CALCULATED SMM
CHECKED JDS

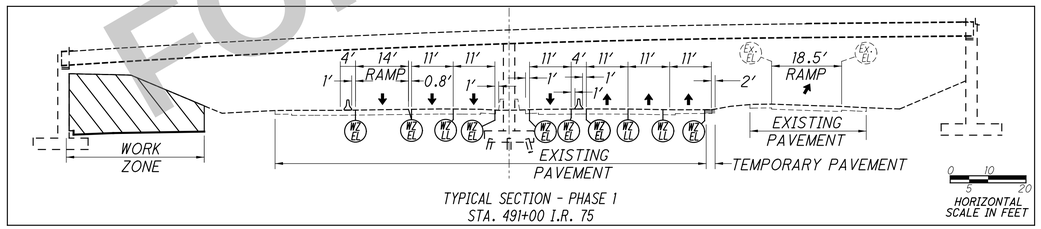
MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I.R. 75 - STA. 478+00 TO STA. 486+00

HAM-75-7.85

107
2017

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TYPICAL SECTION - PHASE 1
STA. 491+00 I.R. 75

NOTES:

1. THE CONTRACTOR SHALL DELAY PAVING WORK IN THE CROSSHATCH AREA SHOWN UNTIL AFTER 09/01/2023. PAVING WORK IS DEFINED AS SUBGRADE STABILIZATAION, AGGREGATE SUBBASE, ASPHALT BASE, INTERMEDIATE AND SURFACE COURSES.
2. THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.
3. PROPOSED DRAINAGE SHOWN ON THIS SHEET SHALL BE INSTALLED PER THE CONSTRUCTION SEQUENCE NOTES.

(1) Δ = 19° 4' 47" (LT)
Dc = 3° 48' 21"
R = 1505.51'
T = 253.01'
L = 501.34'
E = 21.11'
C = 499.03'
C.B. = N 34° 23' 51" E

LEGEND

- PHASE 1 WORK ZONE
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- TAPERED END SECTION
- TEMPORARY PAVEMENT
- PHASE 1 DELAYED PAVING AREA SEE NOTE 1

DR1 - EXISTING CONDUIT TO REMAIN IN SERVICE UNTIL FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 2.
DR2 - 20'-12" CONDUIT, TYPE C WITH CONCRETE COLLAR TO BE FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 2.

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I.R. 75 - STA. 486+00 TO STA. 494+00

HAM-75-7.85

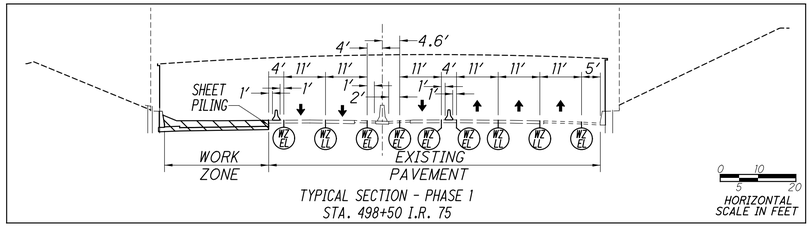
108
2017

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DR1 - EXISTING BASIN TO REMAIN IN SERVICE.
DR2 - EXISTING CONDUIT TO REMAIN IN SERVICE UNTIL REMOVED IN PHASE 2.
DR3 - EXISTING BASIN TO REMAIN IN SERVICE UNTIL REMOVED IN PHASE 2.
DR4 - EXISTIN CONDUIT TO REMAIN IN SERVICE UNTIL FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 2.
DR5 - PROPOSED BASIN TO BE INSTALLED AND COVERED UNTIL CONNECTED TO MEDIAN INLET IN PHASE 2.

LEGEND

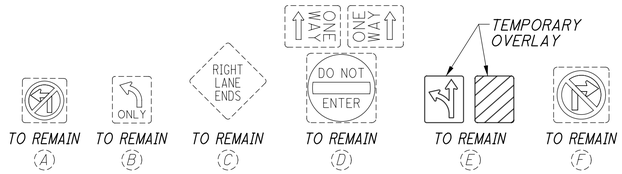
- PHASE 1 WORK ZONE
- DRUM
- PORTABLE BARRIER
- TYPE III BARRICADE
- IMPACT ATTENUATOR
- TEMPORARY PAVEMENT
- TAPERED END SECTION
- PHASE 1 DELAYED PAVING AREA SEE NOTE 1



TYPICAL SECTION - PHASE 1
STA. 498+50 I.R. 75

NOTES:

1. THE CONTRACTOR SHALL DELAY PAVING WORK IN THE CROSSHATCH AREA SHOWN UNTIL AFTER 09/01/2023. PAVING WORK IS DEFINED AS SUBGRADE STABILIZATAION, AGGREGATE SUBBASE, ASPHALT BASE, INTERMEDIATE AND SURFACE COURSES.
2. THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.
3. PROPOSED DRAINAGE SHOWN ON THIS SHEET SHALL BE INSTALLED PER THE CONSTRUCTION SEQUENCE NOTES.



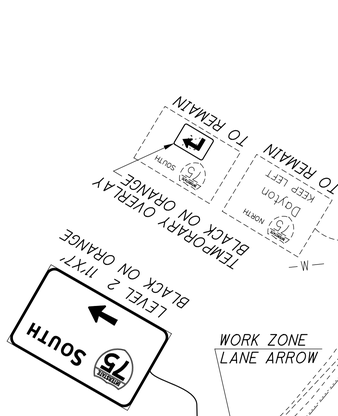


R2-1-48
STA. 497+50
(L)



R11-H5a-48
STA. 496+50
(M)





① Δ = 19° 4' 47" (LT)
Dc = 3° 48' 21"
R = 1505.51'
T = 253.01'
L = 501.34'
E = 21.11'
C = 499.03'
C.B. = N 34° 23' 51" E

TO BE INSTALLED DURING I-75 MOT CLOSURE FOR HAM-75-0834 STRUCTURE

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I.R. 75 - STA. 494+00 TO STA. 502+00
HAM-75-7.85

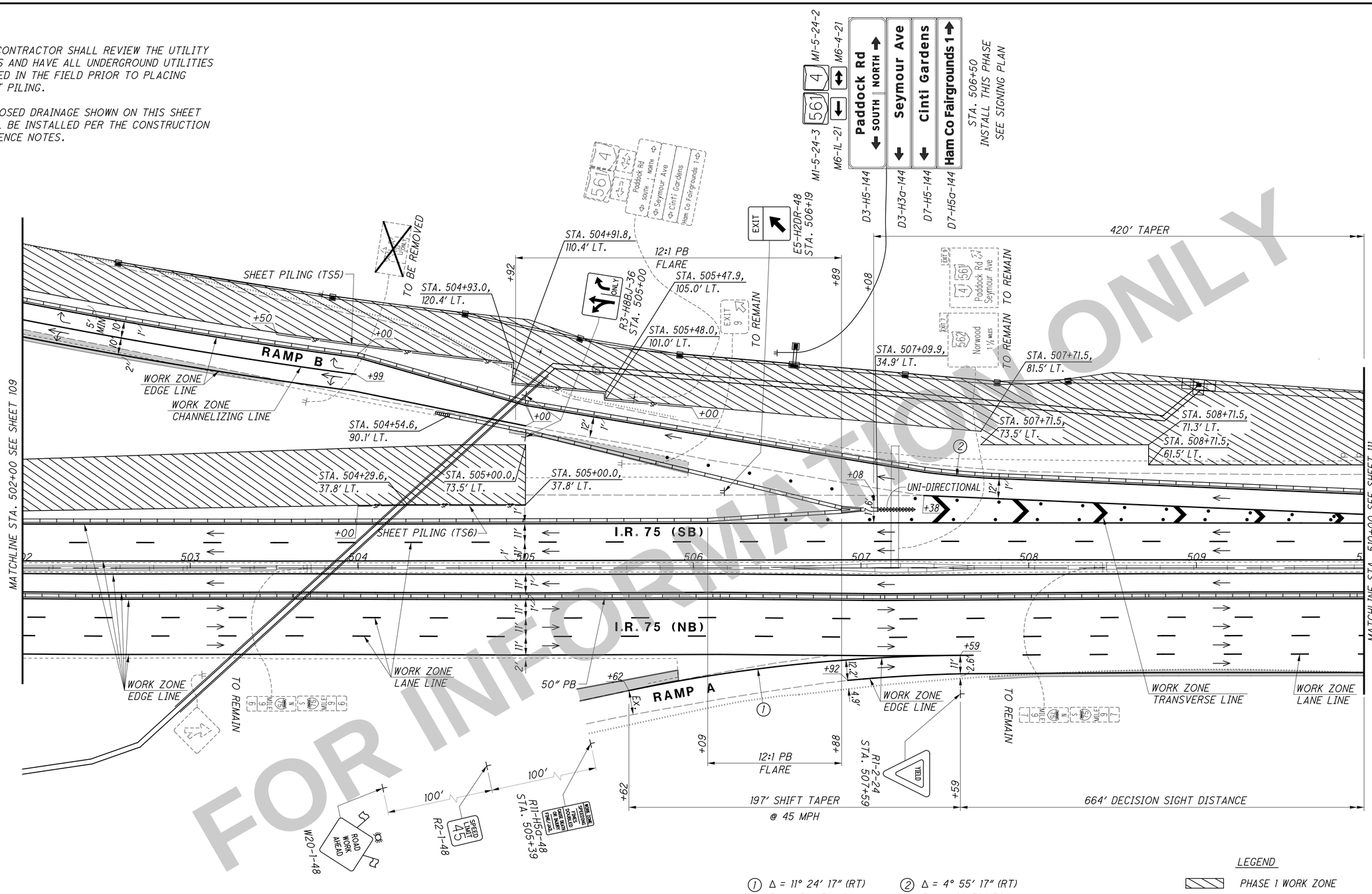
109
2017

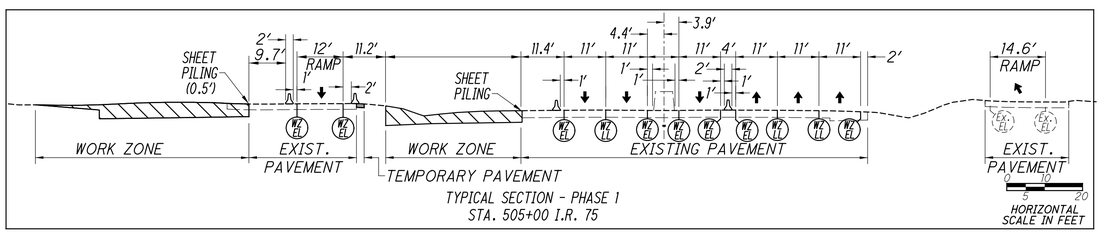
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NOTE:

1. THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.

2. PROPOSED DRAINAGE SHOWN ON THIS SHEET SHALL BE INSTALLED PER THE CONSTRUCTION SEQUENCE NOTES.





① Δ = 11° 24′ 17″ (RT)
Dc = 5° 43′ 46″
R = 1000.00′
T = 99.86′
L = 199.05′
E = 4.97′
C = 198.72′
C.B. = N 37° 53′ 56″ W

② Δ = 4° 55′ 17″ (RT)
Dc = 10° 59′ 50″
R = 521.00′
T = 22.39′
L = 44.75′
E = 0.48′
C = 44.75′
C.B. = N 48° 51′ 60″ E

NOTE: THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.

LEGEND
- PHASE 1 WORK ZONE
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- TAPERED END SECTION
- PB "Y" CONNECTING SEGMENT
- TEMPORARY PAVEMENT

FOR INFORMATION ONLY

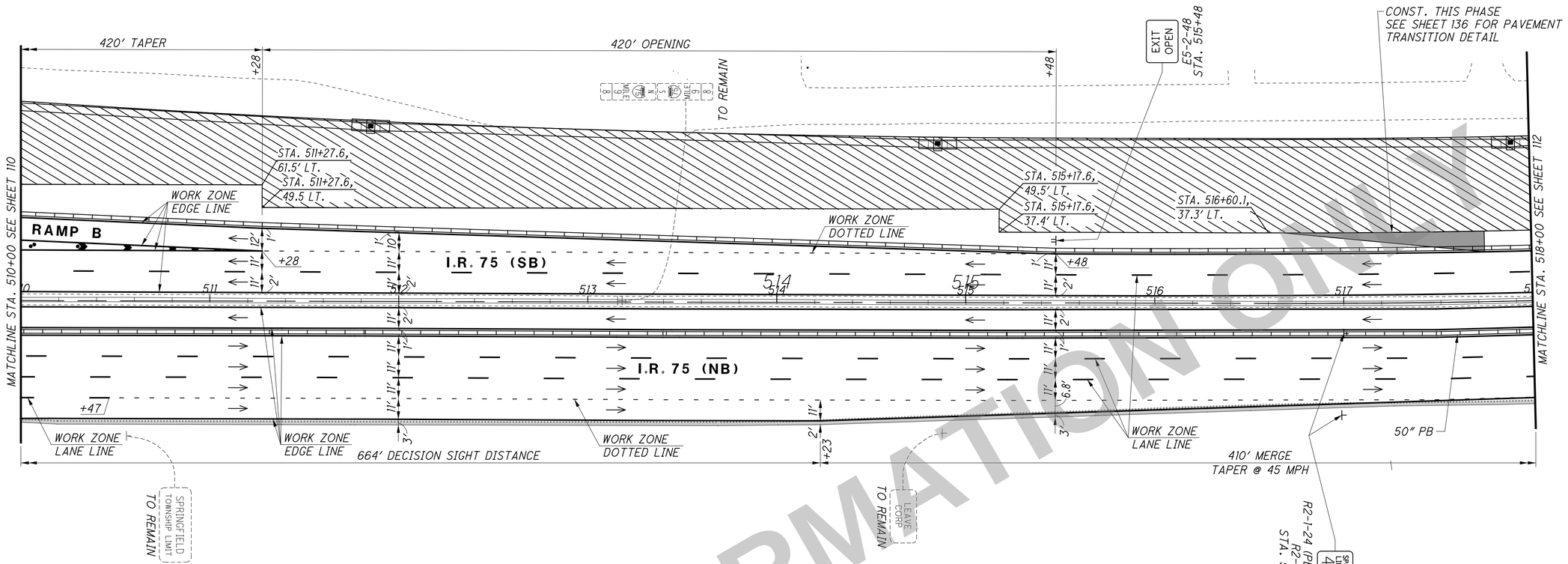
HORIZONTAL SCALE IN FEET
0 15 30 60

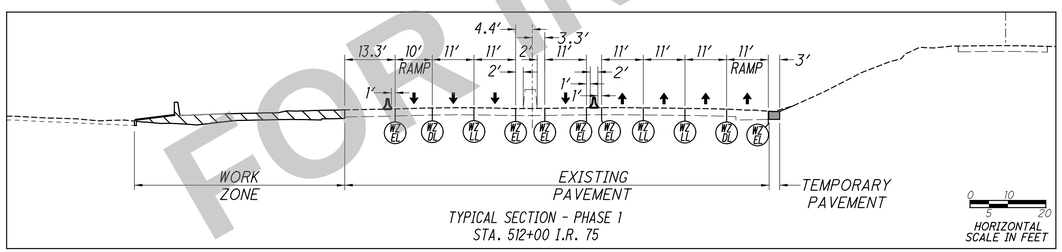
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I.R. 75 - STA. 502+00 TO STA. 510+00

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LEGEND

- PHASE 1 WORK ZONE
- PORTABLE BARRIER
- TEMPORARY PAVEMENT

NOTE:

1. PROPOSED DRAINAGE SHOWN ON THIS SHEET SHALL BE INSTALLED PER THE CONSTRUCTION SEQUENCE NOTES.

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET

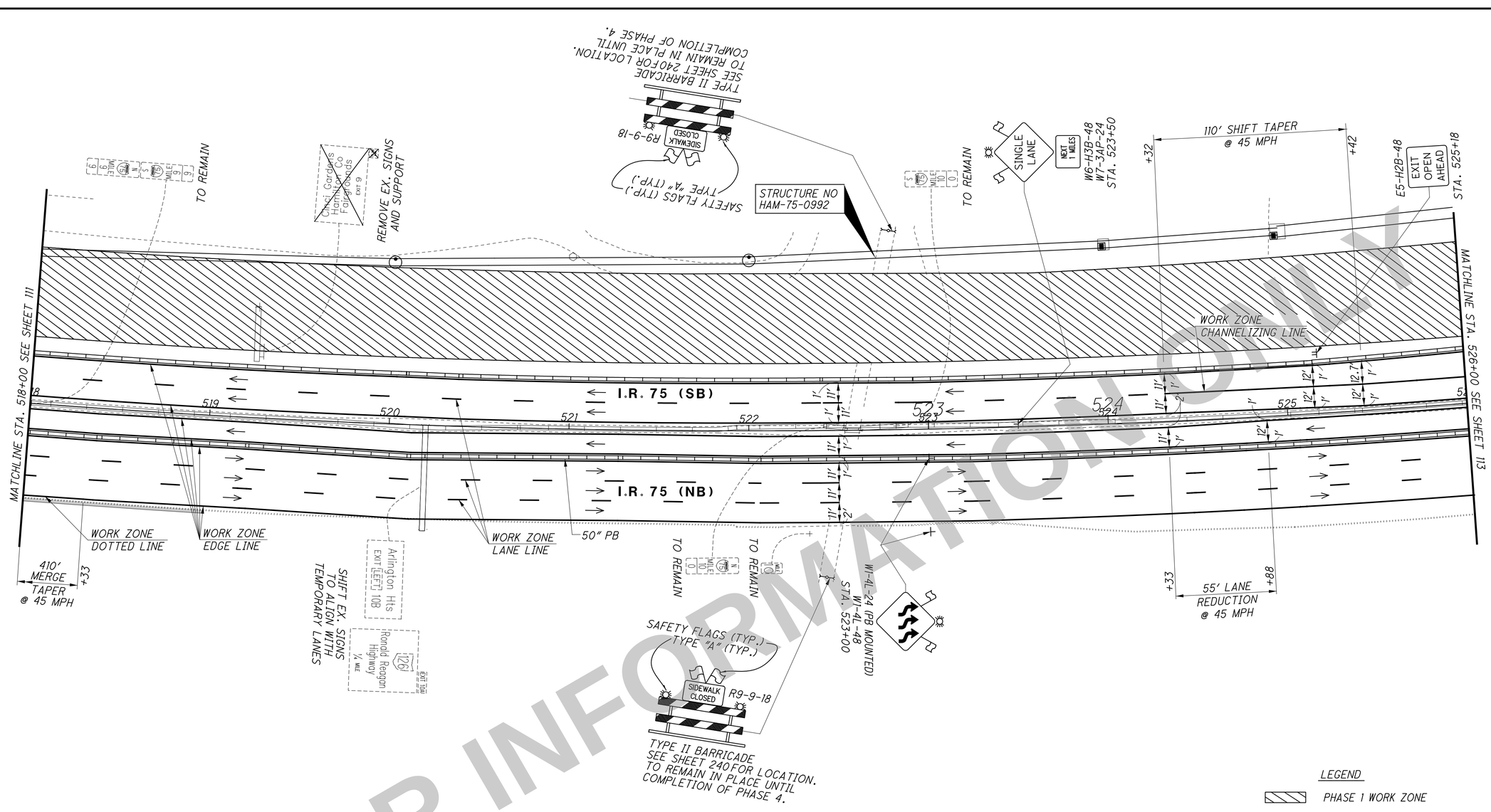
CALCULATED SMM
CHECKED JDS

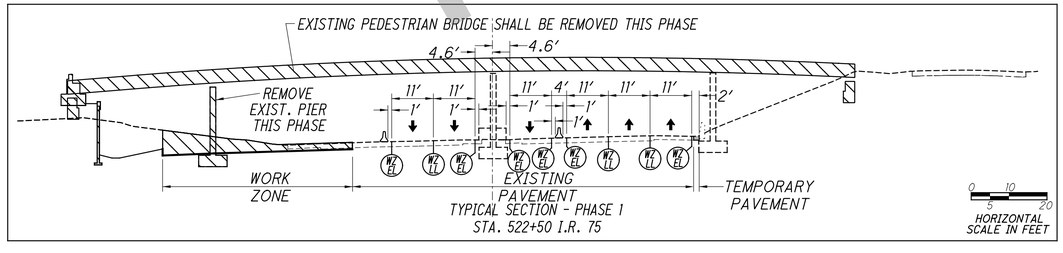
MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I.R. 75 - STA. 510+00 TO STA. 518+00

HAM-75-7.85

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2017

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ALL OVERHEAD WORK (INCLUDING BEAM PLACEMENT) IMPACTING I.R. 75 TRAFFIC BELOW SHALL BE COMPLETED PER ODOT SCD MT-99.60

LEGEND

- PHASE 1 WORK ZONE
- PORTABLE BARRIER
- TEMPORARY PAVEMENT

NOTE:

1. PROPOSED DRAINAGE SHOWN ON THIS SHEET SHALL BE INSTALLED PER THE CONSTRUCTION SEQUENCE NOTES.

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

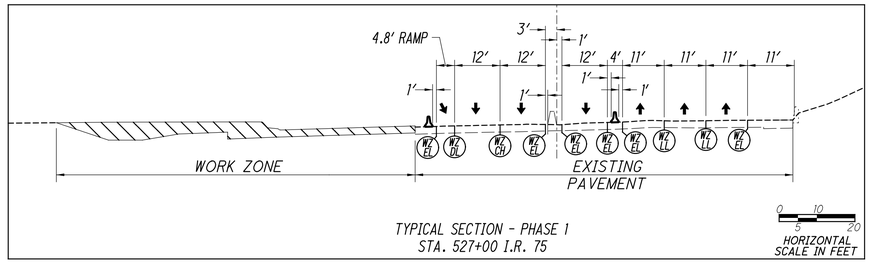
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I.R. 75 - STA. 518+00 TO STA. 526+00

HAM-75-7.85

112
2017

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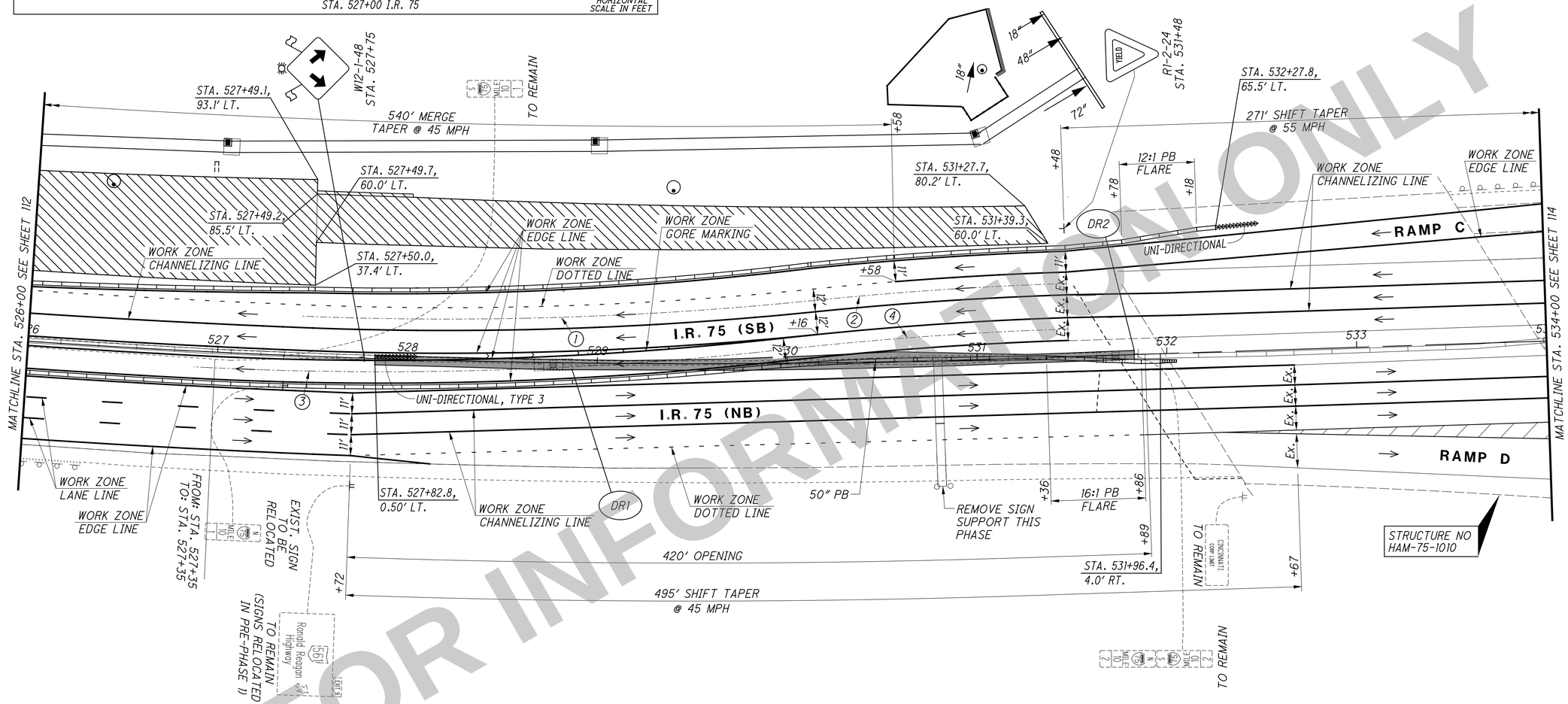
TYPICAL SECTION - PHASE 1
STA. 527+00 I.R. 75

① Δ = 8° 6′ 56″ (LT)
Dc = 2° 59′ 59″
R = 1910.00′
T = 135.50′
L = 270.54′
E = 4.80′
C = 270.32′
C.B. = S 88° 14′ 38″ W

② Δ = 3° 56′ 26″ (RT)
Dc = 2° 57′ 45″
R = 1934.00′
T = 66.53′
L = 133.01′
E = 1.14′
C = 132.99′
C.B. = N 86° 9′ 23″ E

③ Δ = 9° 20′ 56″ (LT)
Dc = 2° 59′ 59″
R = 1910.00′
T = 156.17′
L = 311.66′
E = 6.37′
C = 311.31′
C.B. = N 88° 18′ 49″ E

④ Δ = 4° 29′ 15″ (RT)
Dc = 2° 59′ 59″
R = 1910.00′
T = 74.83′
L = 149.59′
E = X′
C = 149.55′
C.B. = N 85° 52′ 59″ E



FOR INFORMATION ONLY

LEGEND

- PHASE 1 WORK ZONE
- DRUM
- PORTABLE BARRIER
- TEMPORARY PAVEMENT
- IMPACT ATTENUATOR
- TAPERED END SECTION

NOTE:

1. PROPOSED DRAINAGE SHOWN ON THIS SHEET SHALL BE INSTALLED PER THE CONSTRUCTION SEQUENCE NOTES.

DR1 - EXISTING BASIN TO BE RECONSTRUCTED TO CATCH BASIN NO. 6 UNTIL RECONSTRUCTED TO ORIGINAL CONDITION IN PHASE 5.

DR2 - EXISTING BASIN TO BE RECONSTRUCTED TO CATCH BASIN NO. 6 UNTIL RECONSTRUCTED TO ORIGINAL CONDITION IN PHASE 5.

DRUM SPACING CHART	
TANGENT	80′ c/c
TAPER	55′ c/c
RADII	10′ c/c

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED SMM
CHECKED JDS

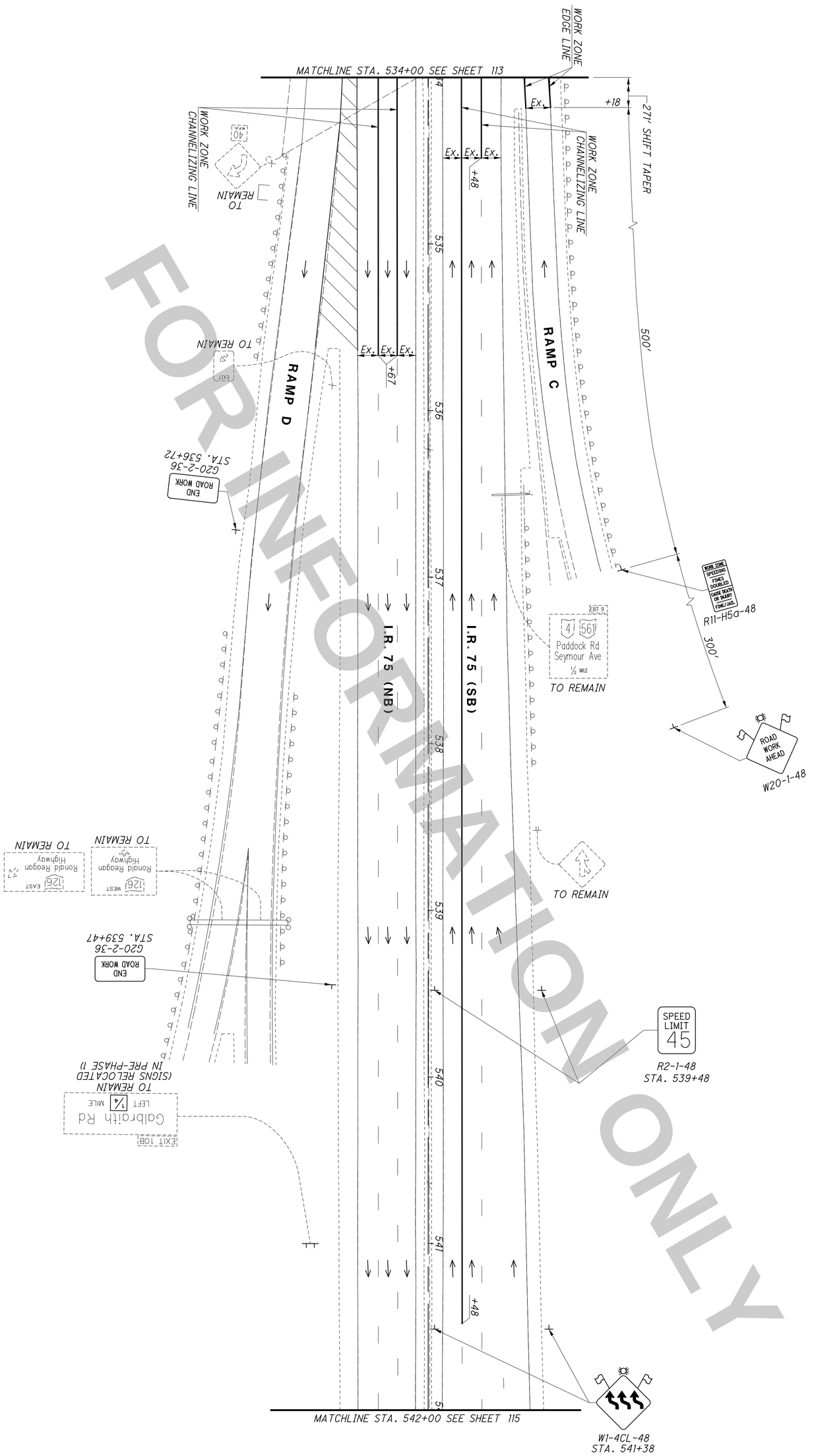
MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I.R. 75 - STA. 526+00 TO STA. 534+00

HAM-75-7.85

113
2017

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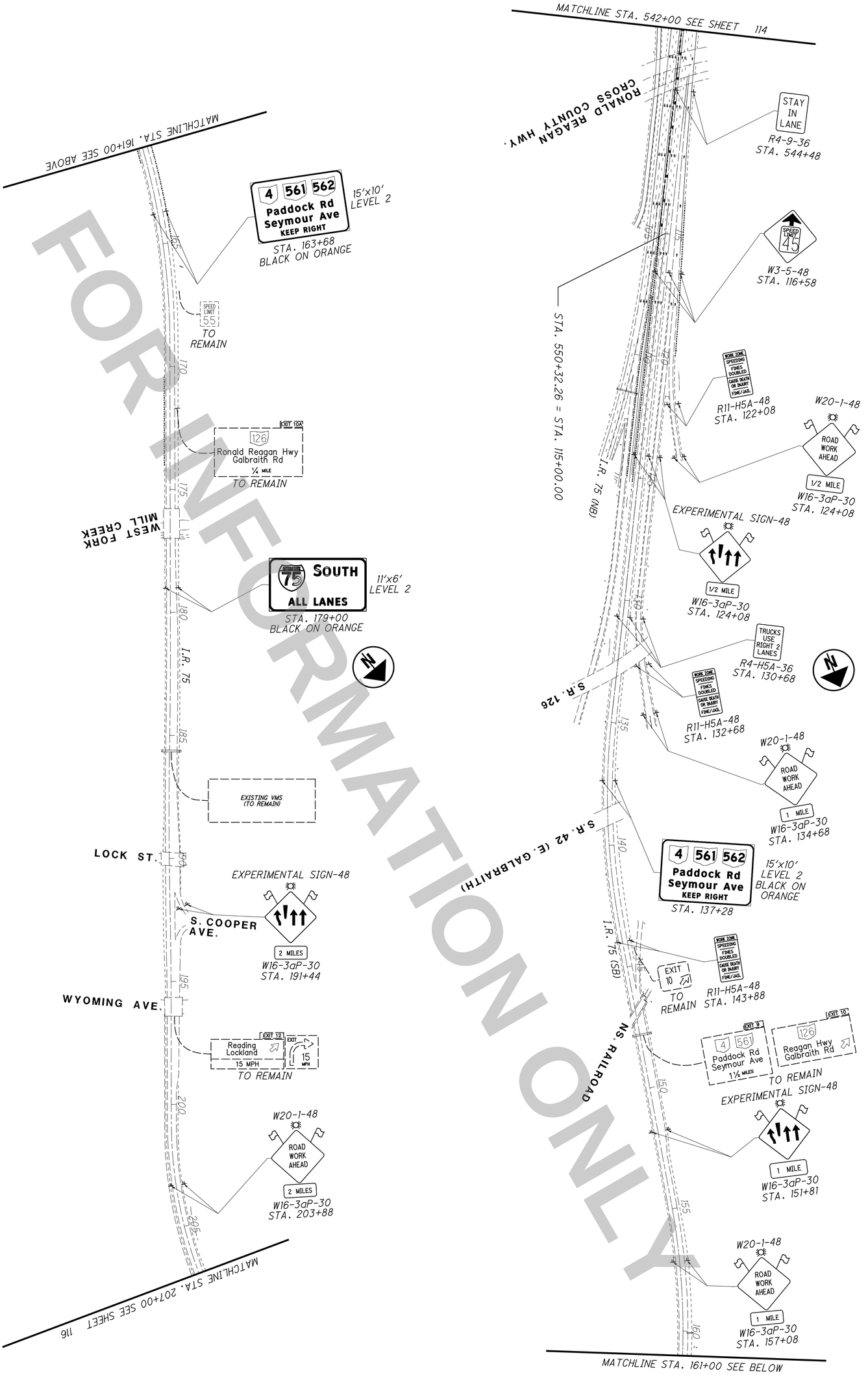
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FOR INFORMATION ONLY

2017 114	HAM-75-7.85	MAINTENANCE OF TRAFFIC PLAN - PHASE 1 I.R. 75 - STA. 534+00 TO STA. 542+00	CALCULATED SMM CHECKED JDS	0 30 15 60 HORIZONTAL SCALE IN FEET

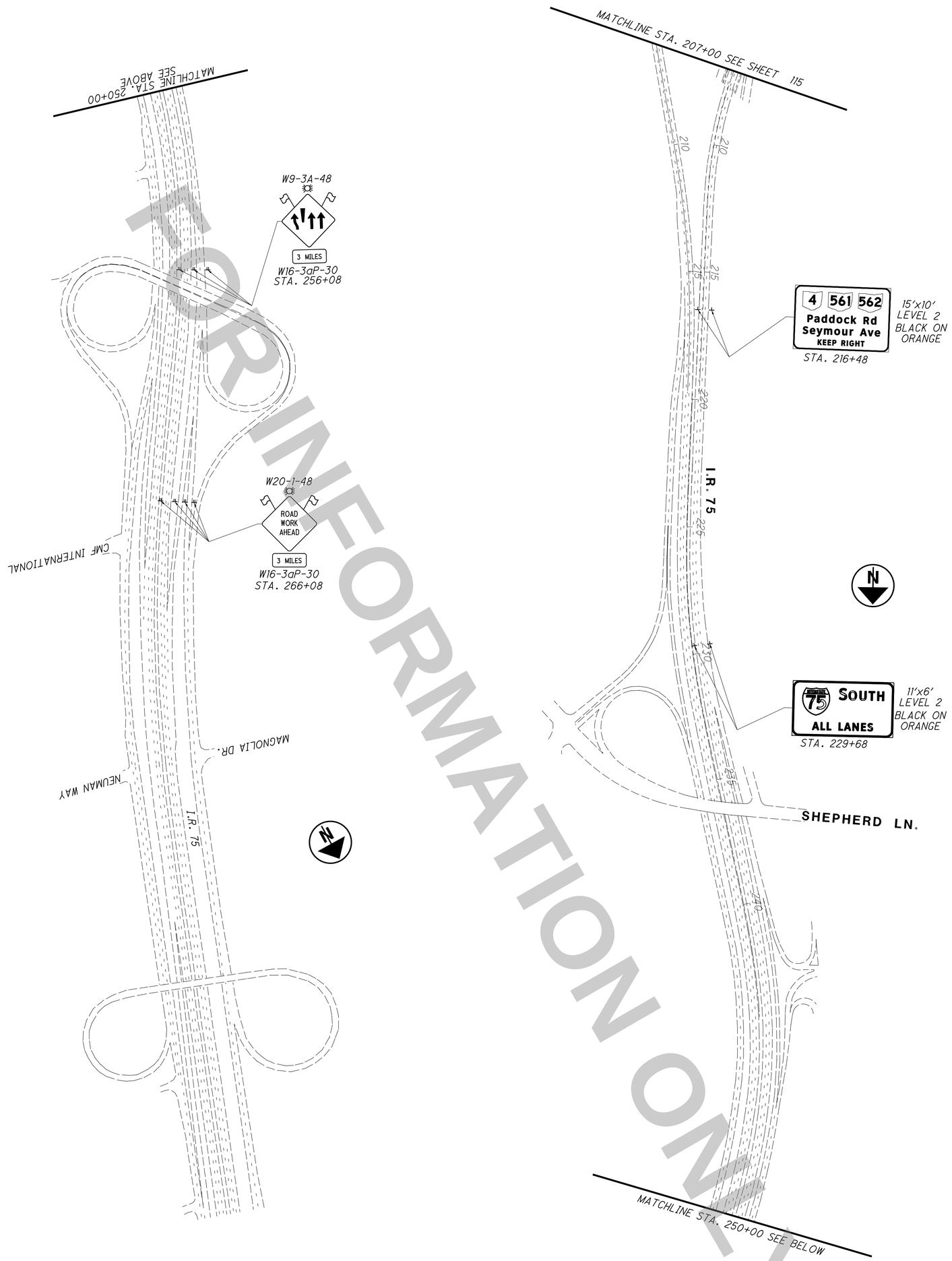
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FOR INFORMATION ONLY

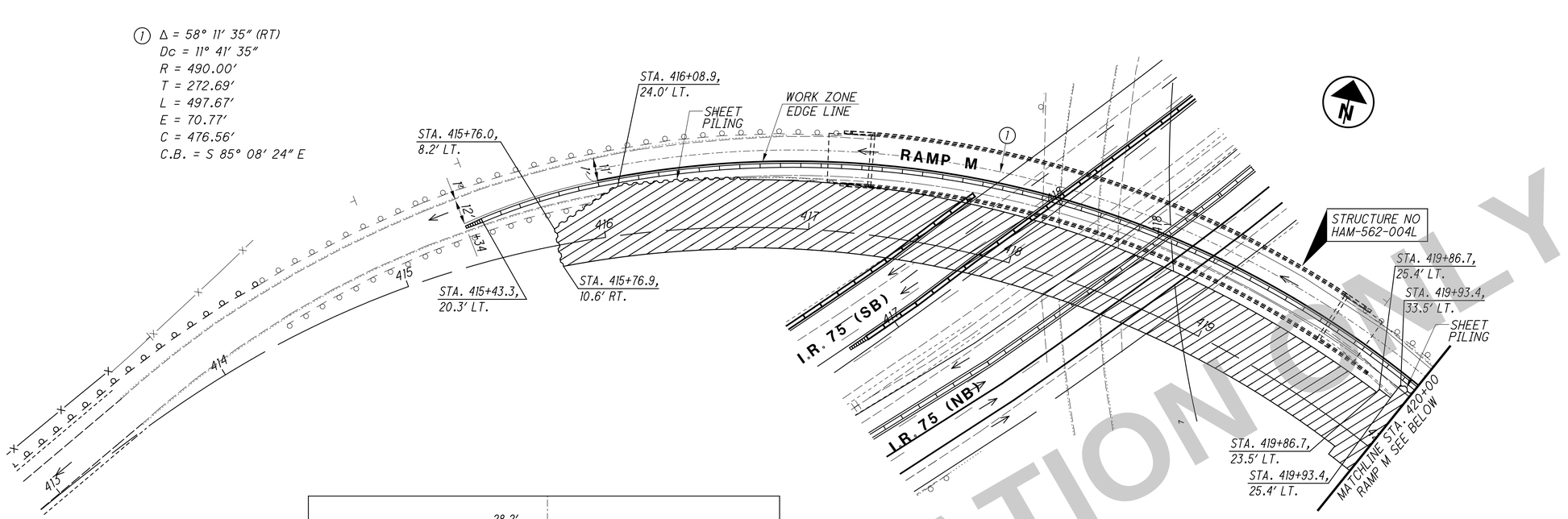
115 / 2017	HAM-75-7.85	MAINTENANCE OF TRAFFIC PLAN - PHASE 1 I.R. 75 - STA. 542+00 TO STA. 207+00	CALCULATED SMM CHECKED JDS	0 100 50 200 HORIZONTAL SCALE IN FEET

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FOR INFORMATION ONLY

116 / 2017	HAM-75-7.85	MAINTENANCE OF TRAFFIC PLAN - PHASE 1 I.R. 75 - STA. 542+00 TO STA. 550+00	CALCULATED SMM CHECKED JDS	0 30 15 60 HORIZONTAL SCALE IN FEET



FOR INFORMATION ONLY

NOTE: THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.

LEGEND

- PHASE 1 WORK ZONE
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- TAPERED END SECTION

HORIZONTAL SCALE IN FEET: 0, 15, 30, 60

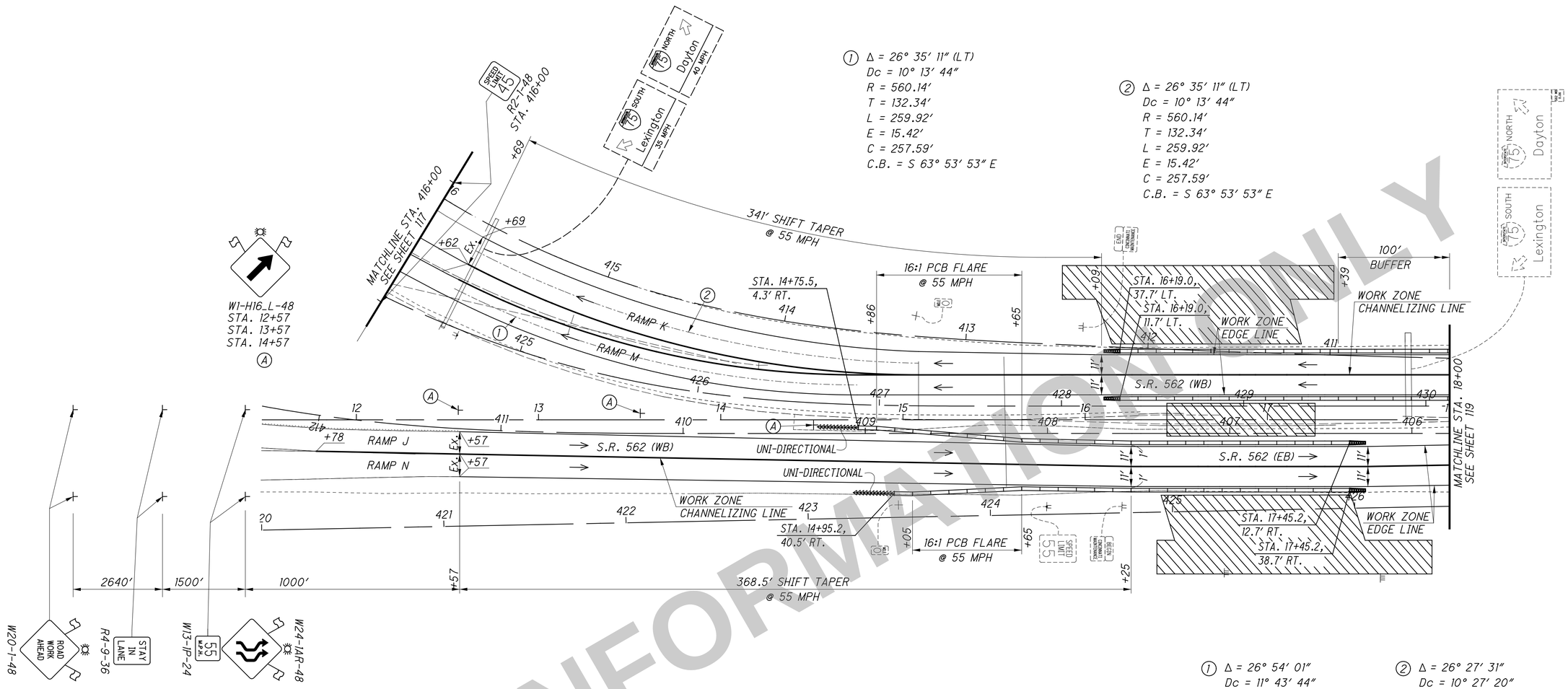
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
RAMP M - STA. 413+00 TO STA. 424+00

HAM-75-7.85

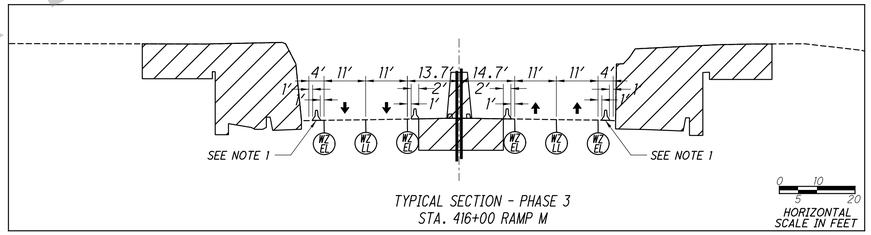
117
2017

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1 Δ = 26° 54′ 01″
Dc = 11° 43′ 44″
R = 488.50′
T = 116.83′
L = 229.35′
E = 13.78′
C = 227.25′
C.B. = N 70° 15′ 50″ W

2 Δ = 26° 27′ 31″
Dc = 10° 27′ 20″
R = 547.99′
T = 128.83′
L = 253.06′
E = 14.94′
C = 250.81′
C.B. = S 69° 27′ 51″ E



TYPICAL SECTION - PHASE 3
STA. 416+00 RAMP M

NOTES:

1. EXISTING PIER FOOTINGS (BELOW PAVEMENT) LOCATED OUTSIDE THE WORK ZONE SHOWN SHALL REMAIN IN PLACE UNTIL ROADWAY PAVEMENT IS REOMOVED IN FUTURE PHASE.

2. CONSTRUCTION OF THE SR 562 RAILROAD STRUCTURE MAY CONTINUE BEYOND PHASE 1. THE SR 562 PHASE 1 MOT SET-UP SHALL REMAIN IN PLACE UNTIL SUCH TIME AS THE EXISTING HAM-562-0026 STRUCTURE IS REMOVED.

LEGEND

- PHASE 1 WORK ZONE
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- TAPERED END SECTION

FOR INFORMATION ONLY

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
S.R 562 - STA. 10+90 TO STA. 18+00

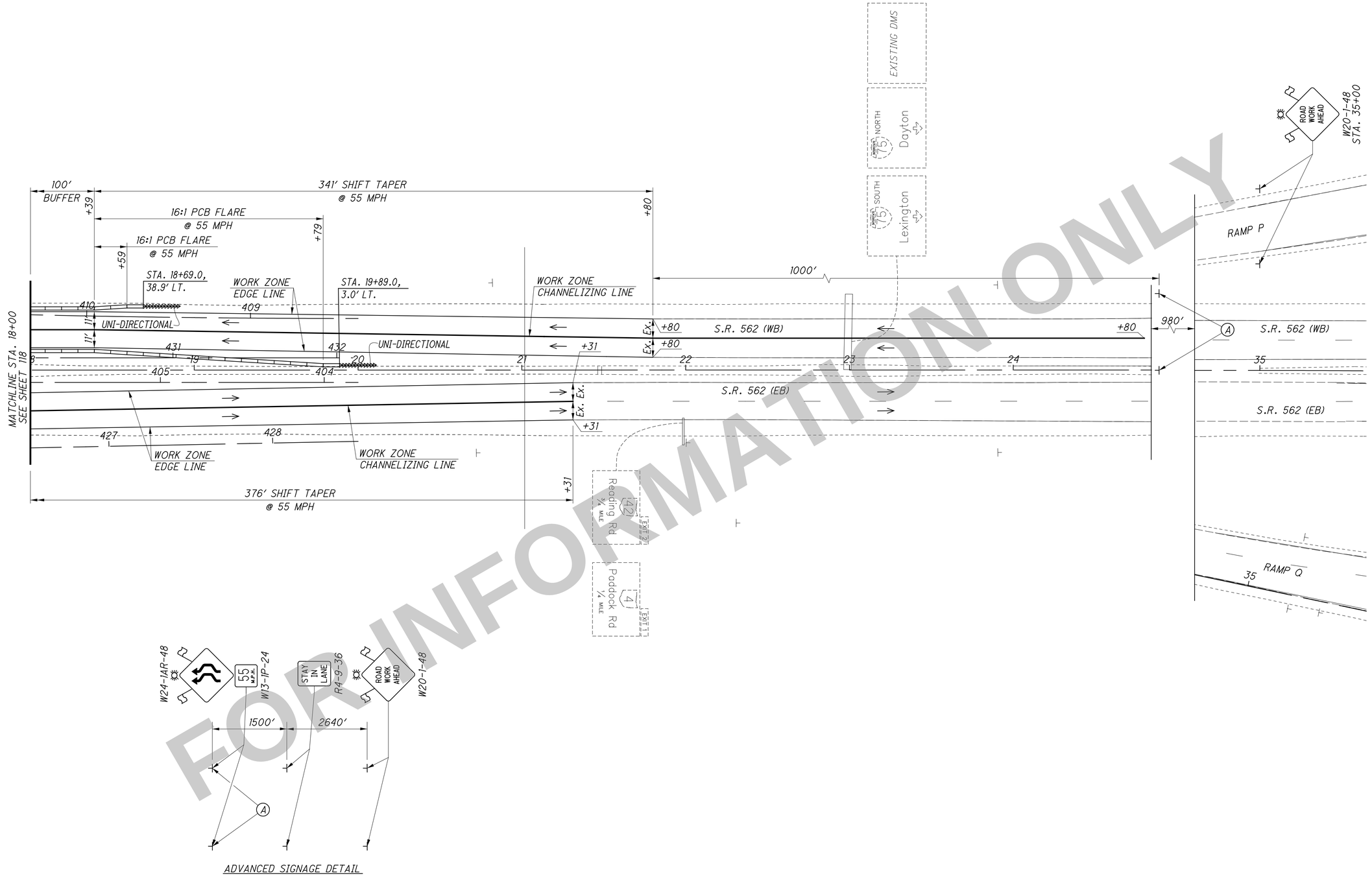
HAM-75-7.85

CALCULATED SMM
CHECKED JDS

HORIZONTAL SCALE IN FEET
0 15 30 60

118
2017

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ADVANCED SIGNAGE DETAIL

LEGEND

PHASE 1 WORK ZONE

PORTABLE BARRIER

IMPACT ATTENUATOR

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

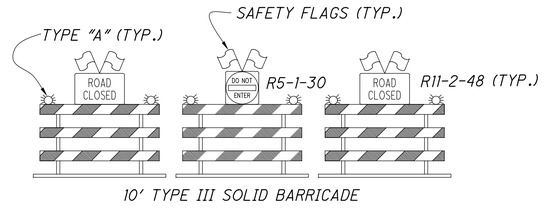
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
S.R. 562 - STA. 18+00 TO STA. 25+05

HAM-75-7.85

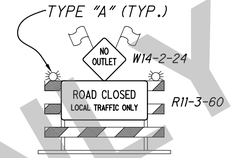
119
2017

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10' TYPE III SOLID BARRICADE

(A)



6' TYPE III SOLID BARRICADE

(B)

FOR INFORMATION ONLY

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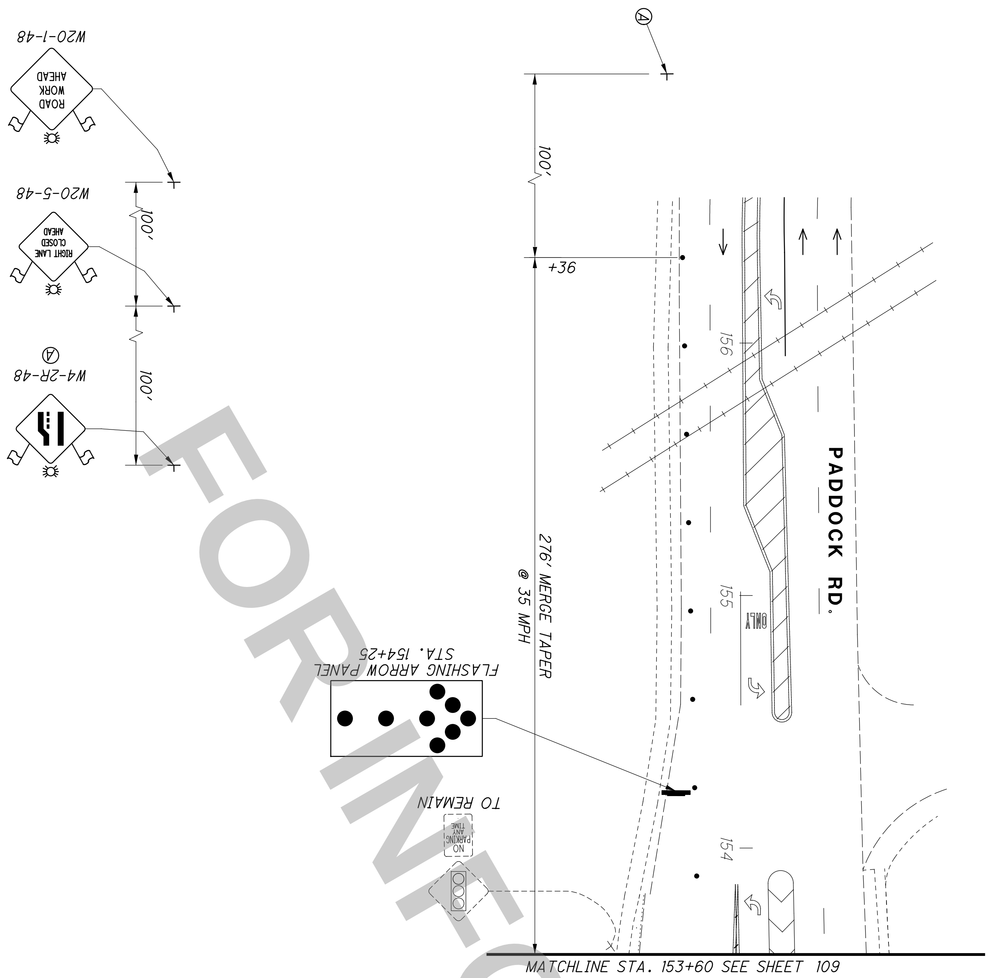
0 15 30 60
HORIZONTAL SCALE IN FEET

CALCULATED SMM
CHECKED JDS

MAINTENACE OF TRAFFIC PLAN - PHASE 1
CEDAR STREET CLOSURE DETAIL

HAM-75-7.85

120
2017



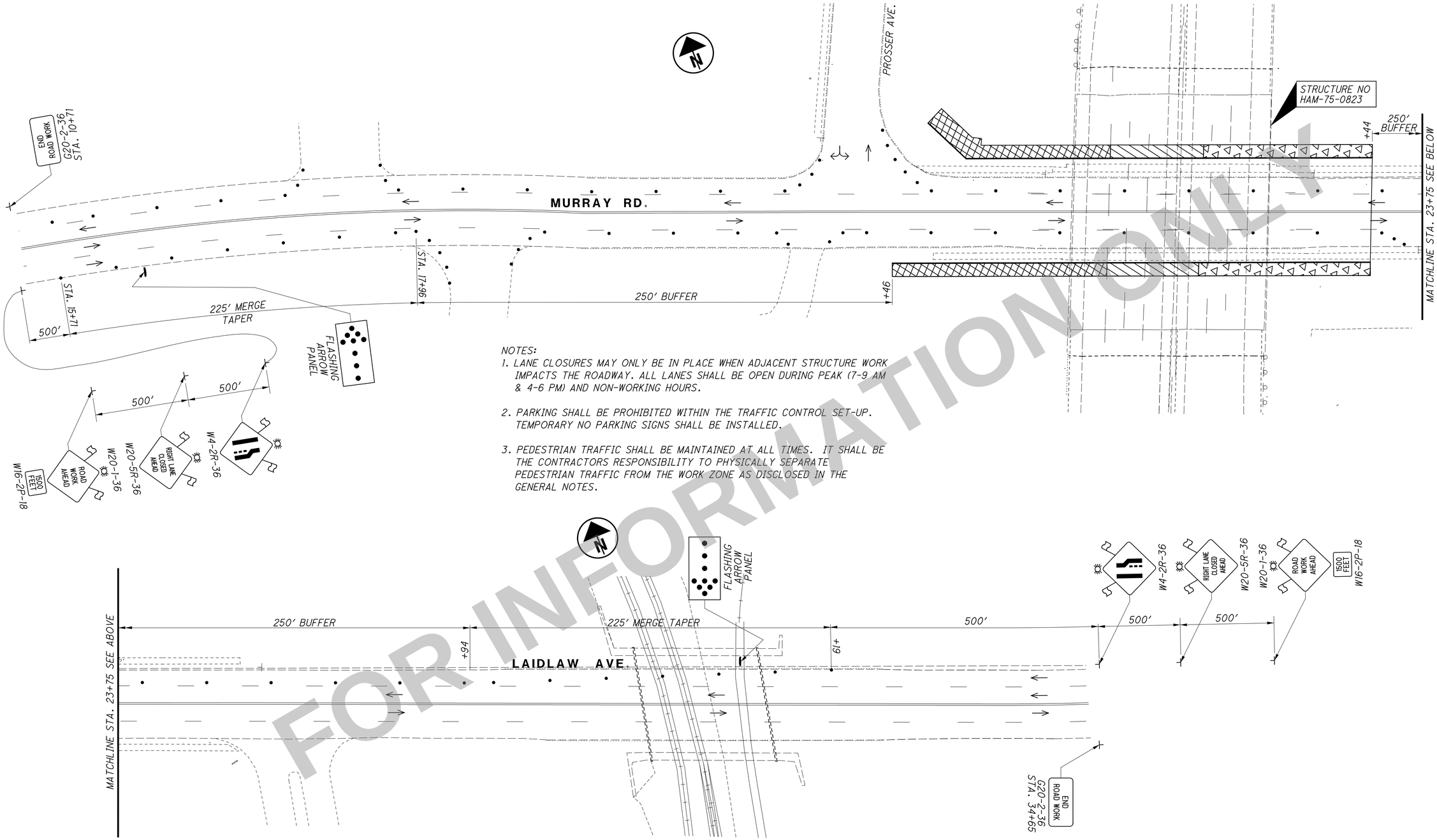
FOR INFORMATION ONLY

LEGEND

DRUM

FLASHING ARROW PANEL

121 2017	HAM-75-7.85	MAINTENANCE OF TRAFFIC PLAN - PHASE 1 PADDOCK RD. - STA. 148+50 TO STA. 156+50	CALCULATED SMM CHECKED JDS	0 30 15 60 HORIZONTAL SCALE IN FEET	



FOR INFORMATION ONLY

MAINTENANCE OF TRAFFIC PLAN - PHASES 1-4
LAIDLAW AVE - STA. 15+50 TO STA. 29+75

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED SMM
CHECKED JDS

HAM-75-7.85

122
2017

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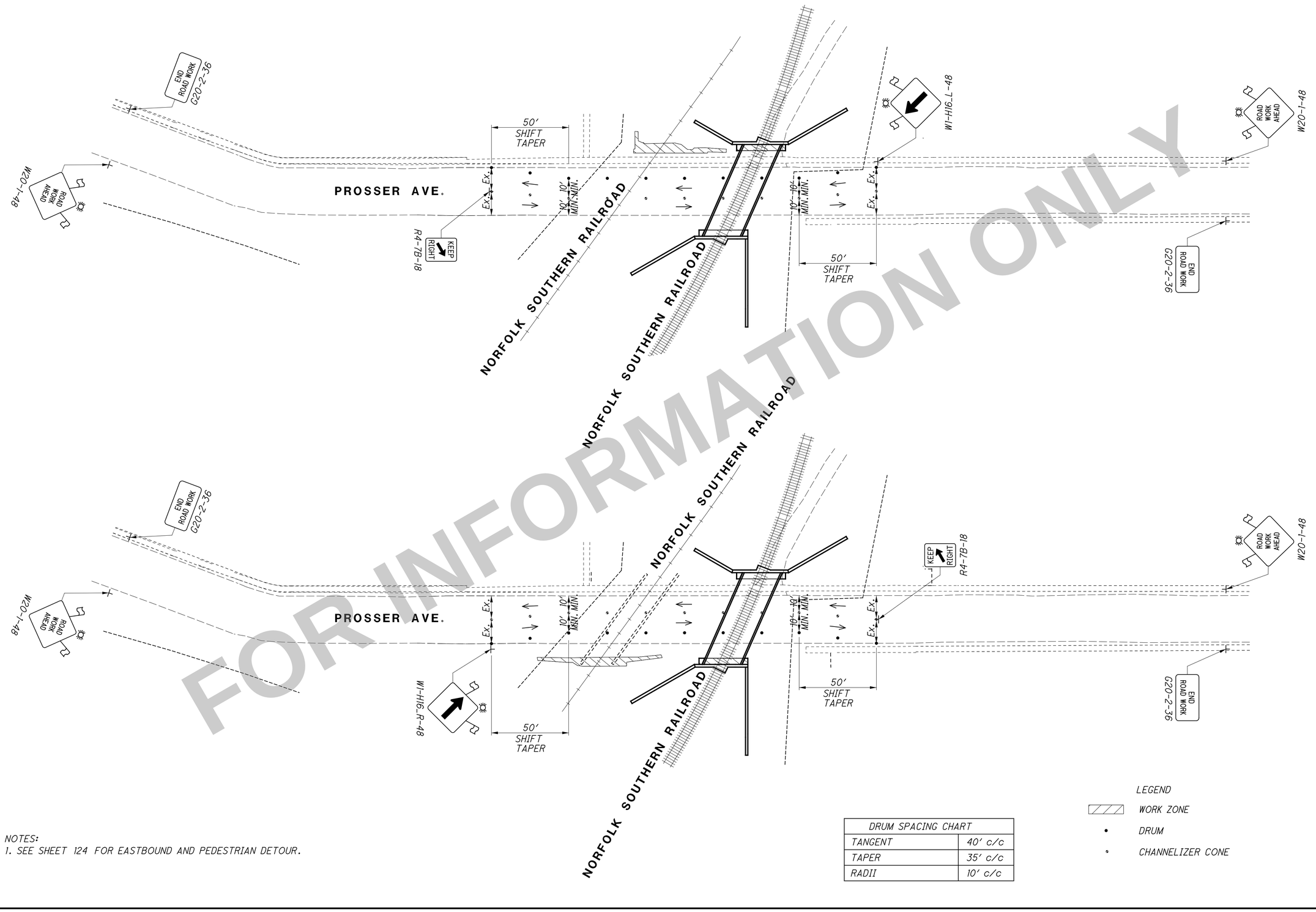
MAINTENANCE OF TRAFFIC PLAN - PHASE 1
PROSSER AVE.

CALCULATED SMM
CHECKED JDS

HORIZONTAL SCALE IN FEET
0 15 30 60

HAM-75-7.85

123
2017



DRUM SPACING CHART	
TANGENT	40' c/c
TAPER	35' c/c
RADII	10' c/c

LEGEND
- WORK ZONE
- DRUM
- CHANNELIZER CONE

NOTES:
1. SEE SHEET 124 FOR EASTBOUND AND PEDESTRIAN DETOUR.

FOR INFORMATION ONLY

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FOR INFORMATION ONLY

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
PROSSER AVE PEDESTRIAN DETOUR PLAN

CALCULATED SMM
CHECKED JDS

0 150 300 600
HORIZONTAL SCALE IN FEET

HAM-75-7.85

124
2017

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NOTES:

1. RAMP J "SOUTH" TEMPORARY PAVEMENT CONSTRUCTION THAT CONFLICTS WITH THE RAMP J PHASE 1 TRAVEL LANE SHALL NOT BE COMPLETED UNTIL THE FINAL NIGHT OF PHASE 1/1A. THIS WORK WILL REQUIRE A CLOSURE AND DETOUR OF RAMP J (SEE SHEET 133). AT THE CONCLUSION OF THIS WORK, THE CONTRACTOR SHALL TRANSITION INTO THE PHASE 2 SET-UP.

2. PHASE 2 WORK ZONE MARKINGS ARE SHOWN FOR ALIGNMENT REFERENCE ONLY.

① P.I. STA. 2+35.71
Δ = 27° 06' 21" (RT)
Dc = 10° 59' 50"
R = 521.00'
T = 125.59'
L = 246.48'
E = 14.92'
C = 244.18'
C.B. = N 6° 13' 16" E

② P.I. STA. 4+06.82
Δ = 6° 34' 39" (RT)
Dc = 6°33' 20"
R = 874.00'
T = 50.22'
L = 50.22'
E = 1.44'
C = 100.28'
C.B. = N 23° 03' 46" E

③ P.I. STA. 5+38.38
Δ = 4° 20' 11" (RT)
Dc = 3° 06' 10"
R = 1,846.66'
T = 69.91'
L = 139.76'
E = 1.32'
C = 139.73'
C.B. = N 29° 30' 17" E

LEGEND

TEMPORARY PAVEMENT

DR1 - CB 2-2B AND 175'-12" CONDUIT, TYPE B TO BE CONNECTED TO EXISTING BASIN. REMOVE CB 2-2B IN PHASE 4A. CONDUIT SHALL REMAIN IN SERVICE UNTIL FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 4A.

DR1

℄ RAMP J

SEE NOTE 1.

N 7° 19' 54" W

PC Sta. 1+10.12

PCC Sta. 3+56.60

PT Sta. 4+56.83

PC Sta. 4+68.47

PT Sta. 5+08.23

N 26° 37' 00" E

PROPOSED RAMP J

EXISTING RAMP J

I.R. 75 (SB)

I.R. 75 (NB)

FOR INFORMATION ONLY

P.V.I. STA. 2+25.00
ELEV = 518.65

P.V.I. STA 3+00.00 ELEV = 521.02'
150.00' VC

P.V.I. STA. 3+75.00
ELEV = 521.05

P.V.I. STA. 4+05.00
ELEV = 521.06

P.V.I. STA 5+00.00 ELEV = 521.10'
190.00' VC

P.V.I. STA. 5+95.00
ELEV = 523.95

MATCH EXISTING
STA. 2+04.25
ELEV = 518.00

MATCH EXISTING/PROPOSED
STA. 6+00.00
ELEV = 524+10

+3.90%
+3.5 %
+0.04 %
+0.04 %
+3.00 %
+3.75%

518.65	519.38	519.97	520.43	520.77	520.97	521.05	521.06	521.10	521.24	521.47	521.81	522.24	522.76	523.39	524.10	514.94	516.01	517.85	519.07	519.71	522.91	527.69	533.79	536.78	536.75	524.10

540 535 530 525 520 515 510 505

1 2 3 4 5 6

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0

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED BER
CHECKED DLR

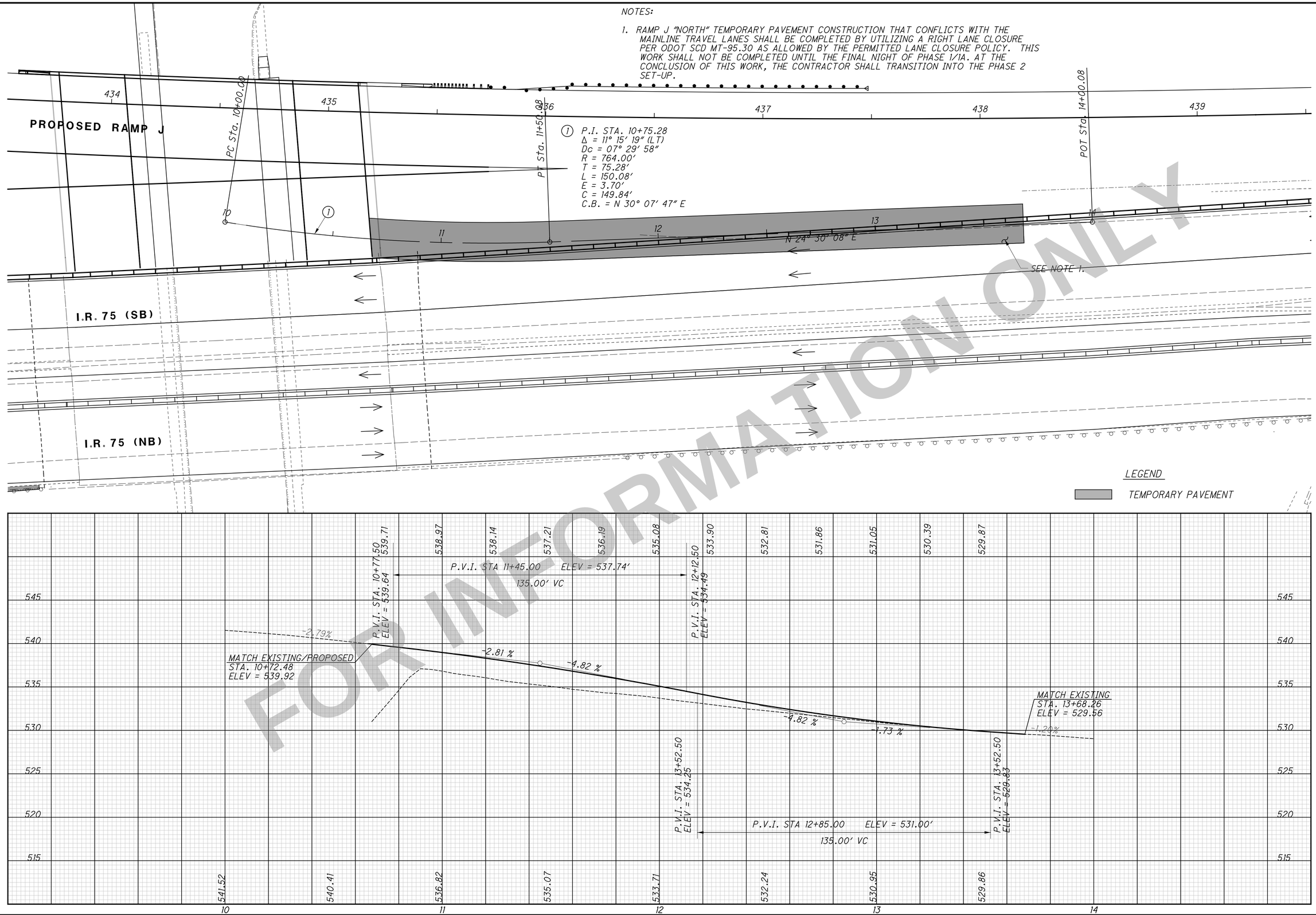
MAINTENANCE OF TRAFFIC PLAN - PHASE 1
TEMPORARY RAMP J (SOUTH)

HAM-75-7.58

125
2017

NOTES:

1. RAMP J "NORTH" TEMPORARY PAVEMENT CONSTRUCTION THAT CONFLICTS WITH THE MAINLINE TRAVEL LANES SHALL BE COMPLETED BY UTILIZING A RIGHT LANE CLOSURE PER ODOT SCD MT-95.30 AS ALLOWED BY THE PERMITTED LANE CLOSURE POLICY. THIS WORK SHALL NOT BE COMPLETED UNTIL THE FINAL NIGHT OF PHASE 1/1A. AT THE CONCLUSION OF THIS WORK, THE CONTRACTOR SHALL TRANSITION INTO THE PHASE 2 SET-UP.



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED BER
CHECKED DLR

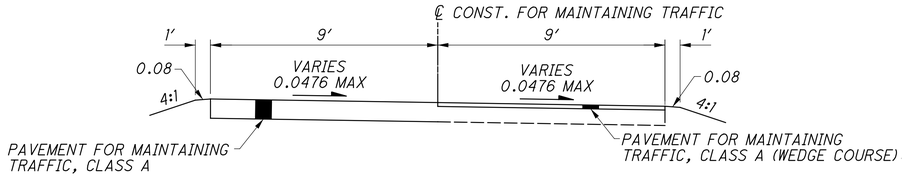
MAINTENANCE OF TRAFFIC - PHASE 1
TEMPORARY RAMP J (NORTH)

HAM-75-7.85

126
2017

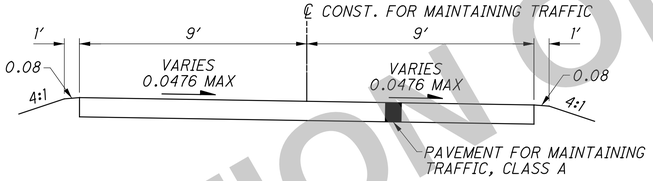
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ELEVATION TABLE					
RAMP J (SOUTH) - 40 MPH					
LEFT SIDE		CENTERLINE CONTROL		RIGHT SIDE	
EDGE ELEVATION	SLOPE	STATION	PROFILE GRADE	SLOPE	EDGE ELEVATION
EXISTING	EXISTING	1+00	514.94	EXISTING	EXISTING
516.44	+4.76%	1+50	516.01	-4.76%	EXISTING
518.23	+4.26%	2+00	517.85	-4.26%	517.47
519.72	+3.76%	2+50	519.38	-3.76%	519.04
520.73	+3.26%	3+00	520.43	-3.26%	520.14
521.22	+2.76%	3+50	520.97	-2.76%	520.72
521.26	+2.26%	4+00	521.06	-2.26%	520.86
521.40	+1.76%	4+50	521.24	-1.76%	521.08
521.81	0.00%	5+00	521.81	-1.76%	521.65
522.58	-2.00%	5+50	522.76	-1.76%	522.60
PROPOSED	-4.00%	6+00	524.10	-1.76%	PROPOSED
PROPOSED	-4.00%	6+50	527.71	-1.60%	PROPOSED



SUPERELEVATED SECTION - RAMP J (SOUTH)

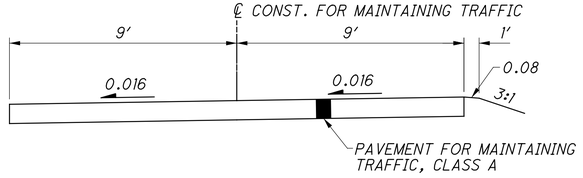
STA. 1+48 TO STA. 2+65



SUPERELEVATED SECTION - RAMP J (SOUTH)

STA. 2+65 TO STA. 6+00

ELEVATION TABLE					
RAMP J (NORTH) - 45 MPH					
LEFT SIDE		CENTERLINE CONTROL		RIGHT SIDE	
EDGE ELEVATION	SLOPE	STATION	PROFILE GRADE	SLOPE	EDGE ELEVATION
EXISTING	EXISTING	10+00	541.52	EXISTING	EXISTING
EXISTING	EXISTING	10+50	540.41	EXISTING	EXISTING
538.82	-1.60%	11+00	538.97	+1.60%	539.11
537.06	-1.60%	11+50	537.21	+1.60%	537.35
534.93	-1.60%	12+00	535.08	+1.60%	535.22
532.66	-1.60%	12+50	532.81	+1.60%	532.95
530.90	-1.60%	13+00	531.05	+1.60%	531.19
529.72	-1.60%	13+50	529.87	+1.60%	530.01
EXISTING	EXISTING	14+00	529.04	EXISTING	EXISTING



SUPERELEVATED SECTION - RAMP J (NORTH)

STA. 10+00 TO STA. 14+00

FOR INFORMATION ONLY

CALCULATED BER
CHECKED DLR

MAINTENANCE OF TRAFFIC

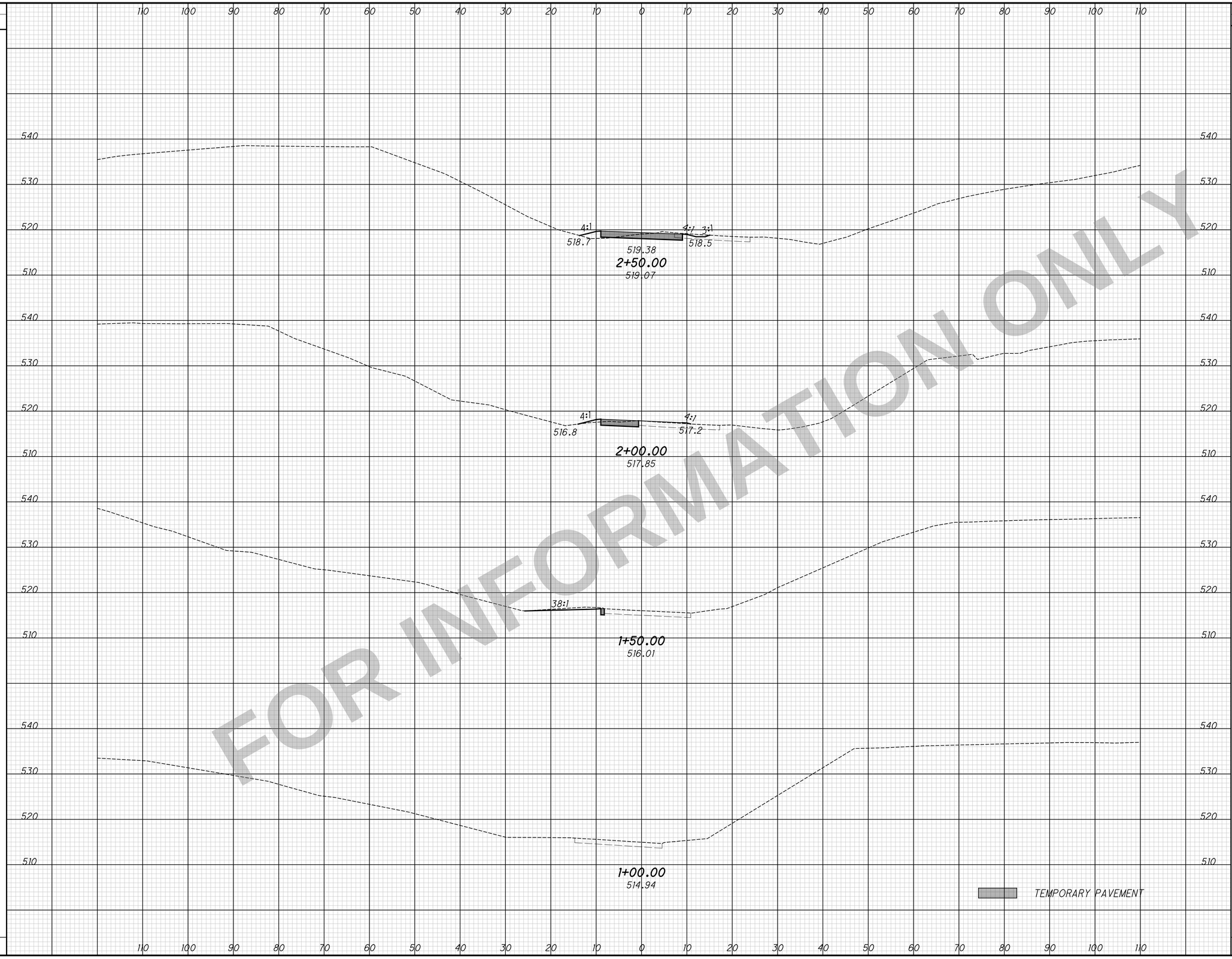
TEMPORARY RAMP J TYPICAL SECTIONS AND ELEVATIONS

HAM-75-7.85

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SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL



FOR INFORMATION ONLY

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CALCULATED BER
CHECKED DLR

MAINTENANCE OF TRAFFIC - TEMPORARY RAMP J (SOUTH)
PHASE 1 CROSS SECTIONS - STA. 1+00 TO STA. 2+50

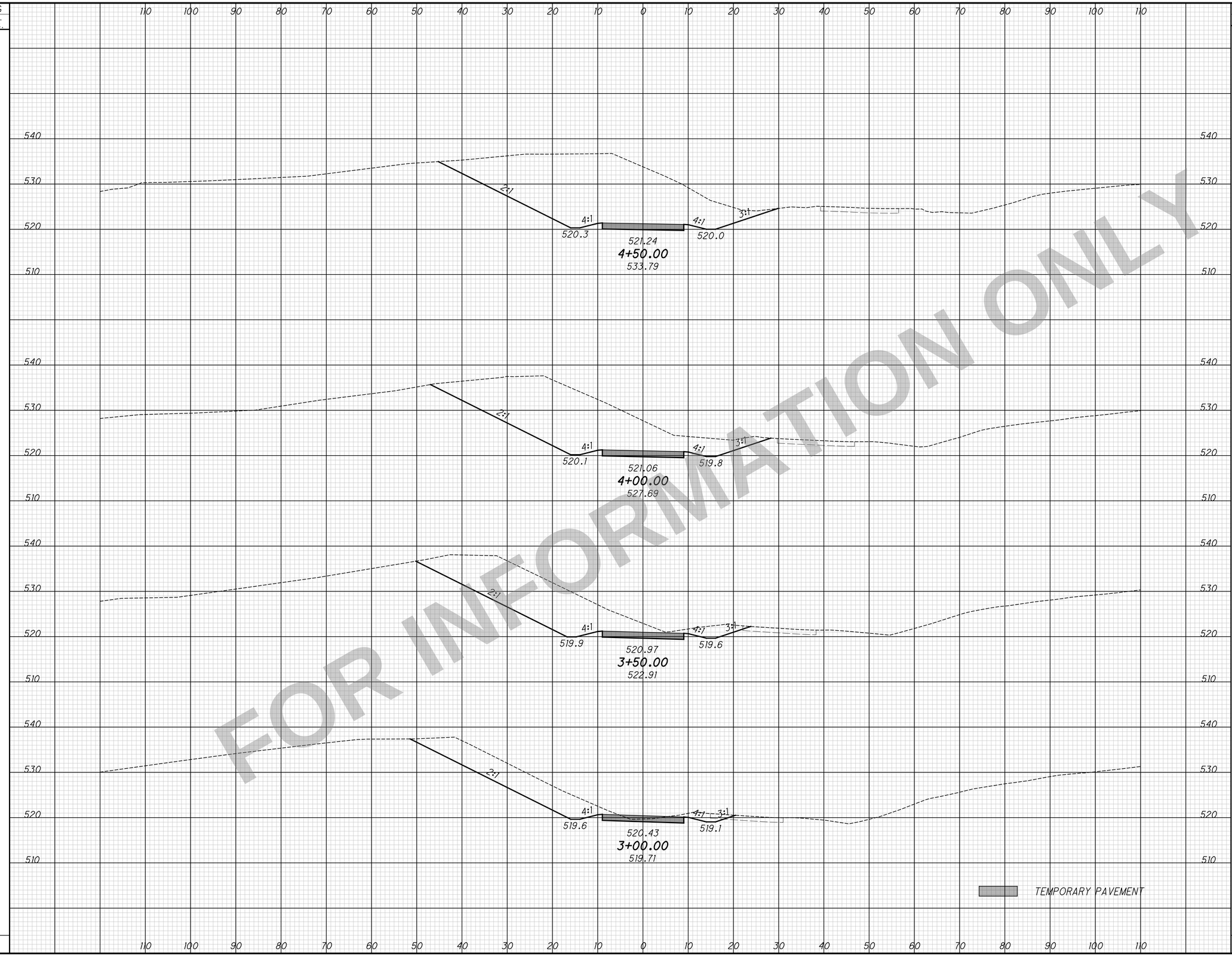
HAM-75-7.85

128
2017

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED BER
CHECKED DLR



FOR INFORMATION ONLY

MAINTENANCE OF TRAFFIC - TEMPORARY RAMP J (SOUTH)
PHASE 1 CROSS SECTIONS - STA. 3+00 TO STA. 4+50

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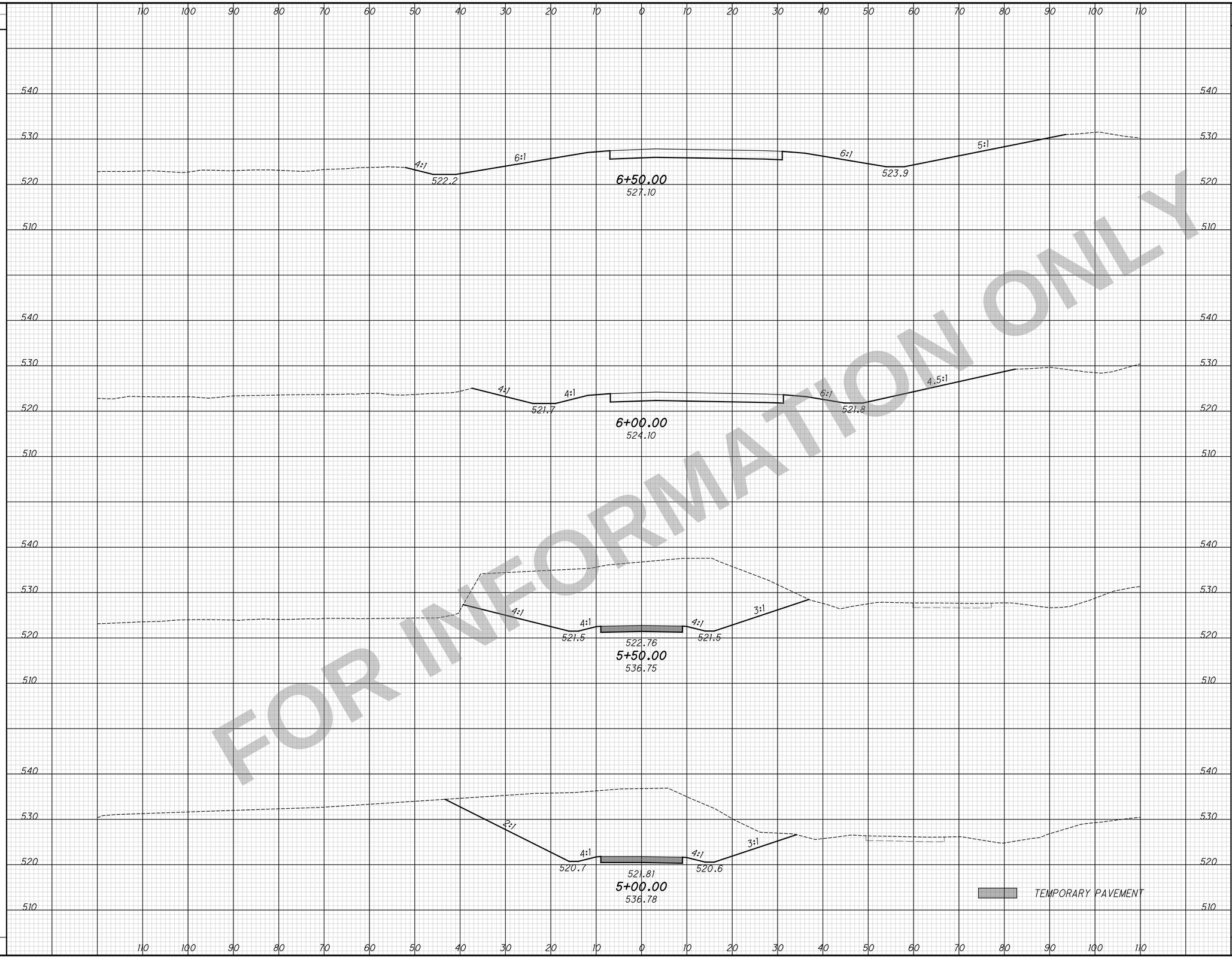
129
2017

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SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED BER
CHECKED DLR



FOR INFORMATION ONLY

MAINTENANCE OF TRAFFIC - TEMPORARY RAMP J (SOUTH)
PHASE 1 CROSS SECTIONS - STA. 5+00 TO STA. 6+50

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130
2017

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SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED BER
CHECKED SMM

110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110

540
530
520

535.08
12+00.00
533.71

537.21
11+50.00
535.07

538.97
11+00.00
536.82

10+50.00
540.41

10+00.00
541.52

TEMPORARY PAVEMENT

FOR INFORMATION ONLY

MAINTENANCE OF TRAFFIC - TEMPORARY RAMP J (NORTH)
PHASE 1 CROSS SECTIONS - STA. 10+00 TO STA. 12+00

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131
2017

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SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED BER

CHECKED SMM

110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110

540
530
520

14+00.00
529.04

531.05
13+00.00
530.95

532.81
12+50.00
532.24

TEMPORARY PAVEMENT

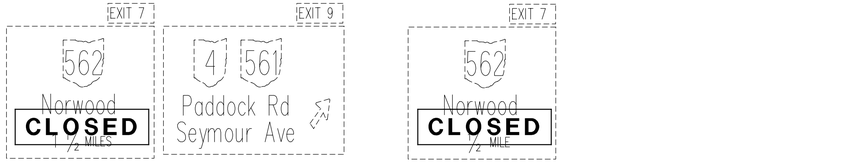
FOR INFORMATION ONLY

MAINTENANCE OF TRAFFIC - TEMPORARY RAMP J (NORTH)
PHASE 1 CROSS SECTIONS - STA. 12+50 TO STA. 14+00

HAM-75-7.85

132
2017

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TRUSS MOUNTED SIGNS

(1)

CANTILEVER MOUNTED SIGN

(2)



TEMP SIGN
SHEET SHEET 100

(3)



CANTILEVER MOUNTED SIGN

(4)



CANTILEVER MOUNTED SIGN

(5)

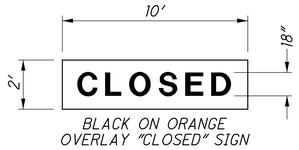


CANTILEVER MOUNTED SIGN

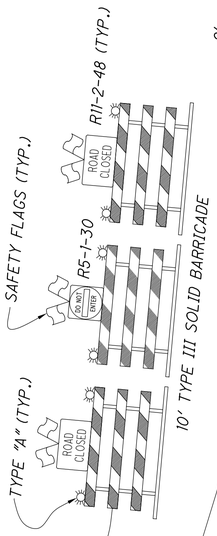
(6)

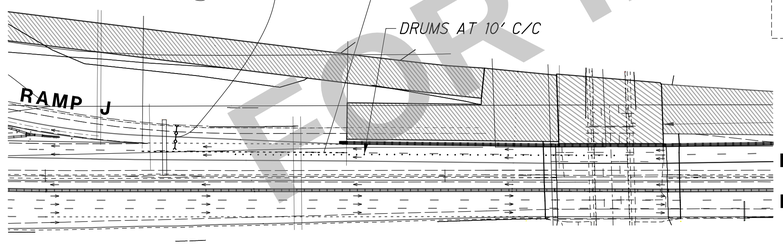
GROUND MOUNTED SIGN

(7)

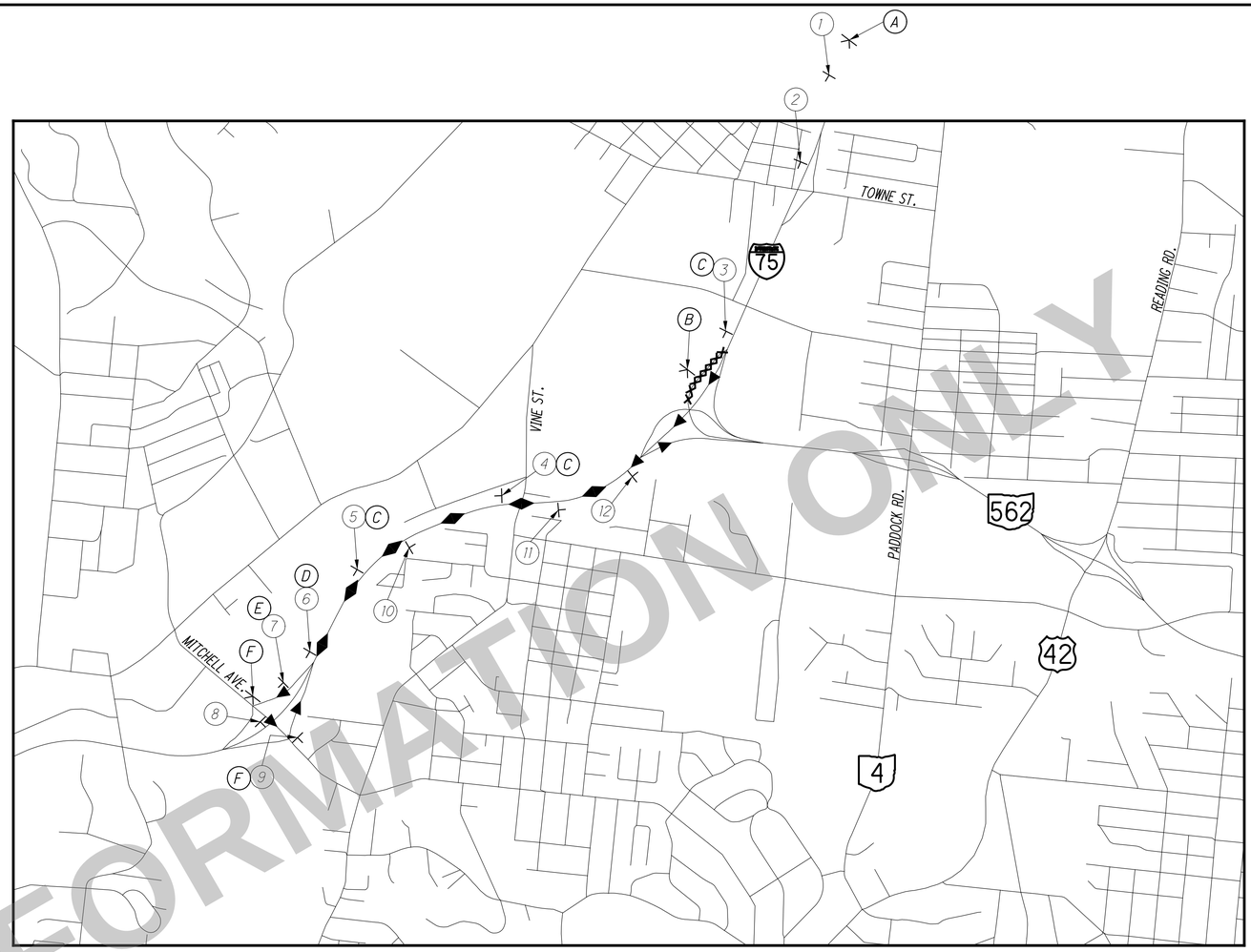


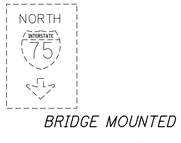
BLACK ON ORANGE
OVERLAY "CLOSED" SIGN





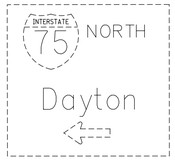
RAMP CLOSURE DETAIL





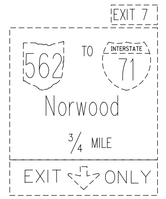
BRIDGE MOUNTED SIGNS

(8)



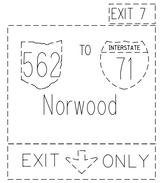
CANTILEVER MOUNTED SIGN

(9)



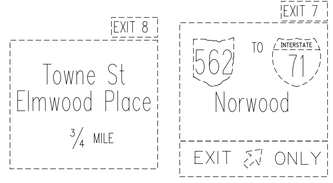
TRUSS MOUNTED SIGN

(10)



CANTILEVER MOUNTED SIGN

(11)



TRUSS MOUNTED SIGNS

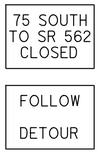
(12)

LEGEND

- × RAMP CLOSURE
- ► DETOUR ROUTE
- ⊥ EXISTING SIGN SUPPORT
- ⊻ TEMPORARY SIGN SUPPORT

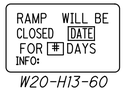
PORTABLE CHANGEABLE MESSAGE SIGNS

DURING CLOSURE



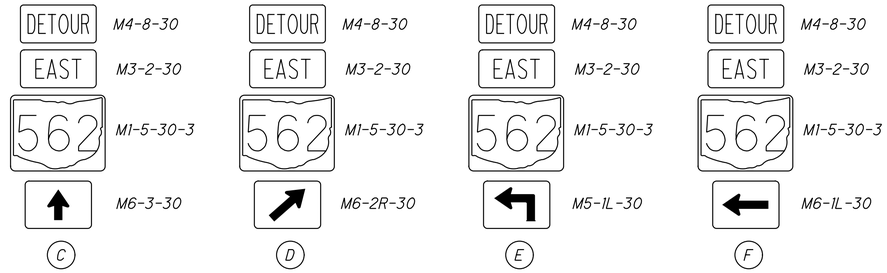
(A)

ONE WEEK PRIOR TO CLOSURE



W20-H13-60

(B)



(C) (D) (E) (F)

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 500 1000 2000

CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC DETOUR PLAN
RAMP J - PHASE 1

HAM-75-7.85

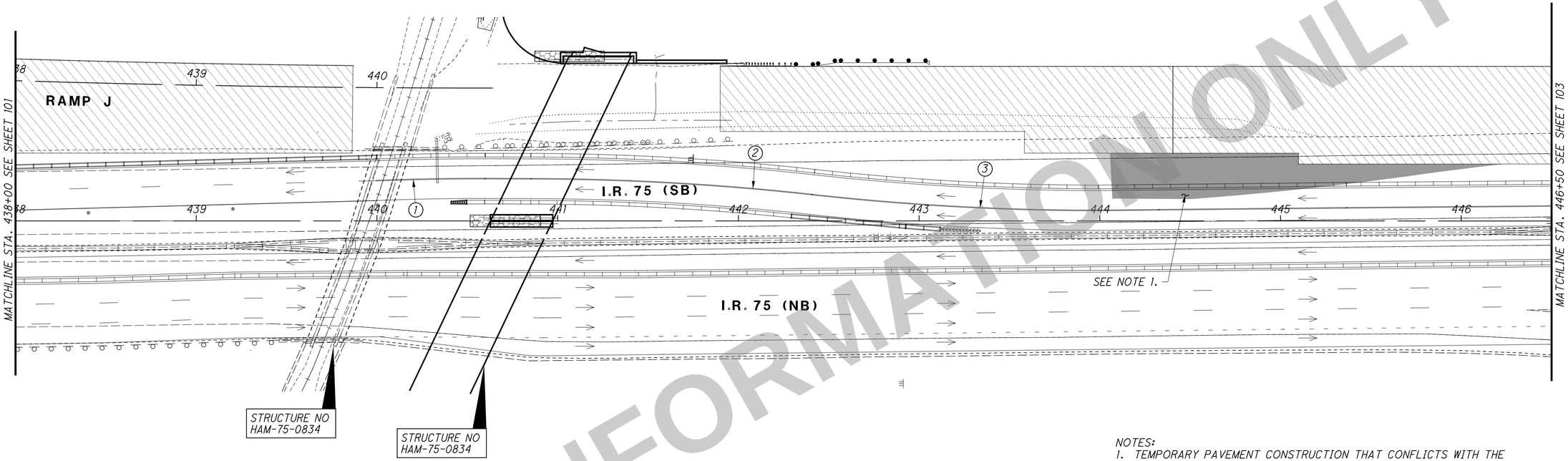
133
2017

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① Δ = 03° 09′ 51″ (RT)
Dc = 03° 59′ 09″
R = 1437.50′
T = 39.70′
L = 79.38′
E = 0.55′
C = 79.37′
C.B. = N 23° 02′ 17″ E

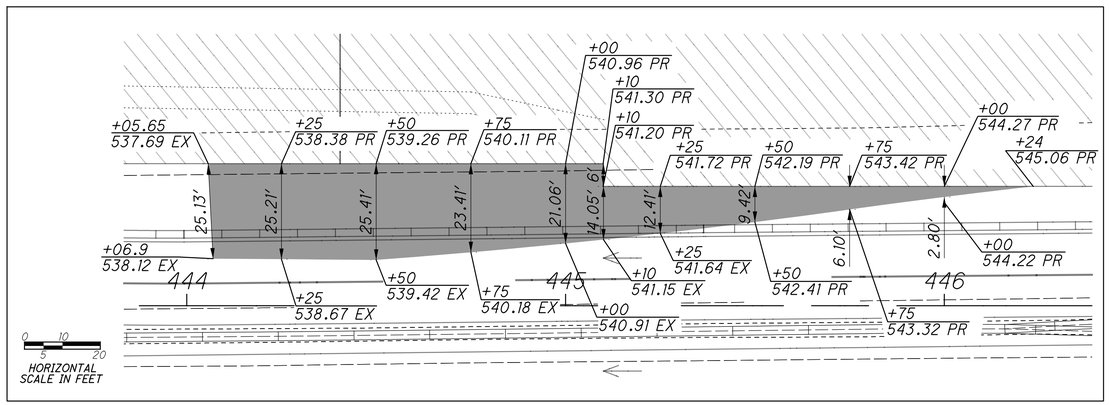
② Δ = 06° 12′ 51″ (LT)
Dc = 03° 59′ 09″
R = 1437.50′
T = 78.03′
L = 155.91′
E = 2.12′
C = 155.83′
C.B. = N 27° 43′ 37″ E

③ Δ = 06° 19′ 55″ (RT)
Dc = 03° 59′ 09″
R = 1437.50′
T = 79.51′
L = 158.78′
E = 2.20′
C = 158.78′
C.B. = N 27° 40′ 06″ E



NOTES:
1. TEMPORARY PAVEMENT CONSTRUCTION THAT CONFLICTS WITH THE MAINLINE TRAVEL LANES SHALL BE COMPLETED BY UTILIZING A RIGHT LANE CLOSURE PER ODOT SCD MT-95.30 AS ALLOWED BY THE PERMITTED LANE CLOSURE POLICY. THIS WORK SHALL NOT BE COMPLETED UNTIL THE FINAL NIGHT OF PHASE 1/1A. AT THE CONCLUSION OF THIS WORK, THE CONTRACTOR SHALL TRANSITION INTO THE PHASE 2 SET-UP.

PAVEMENT TRANSITION DETAIL



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED SMM
CHECKED JDS

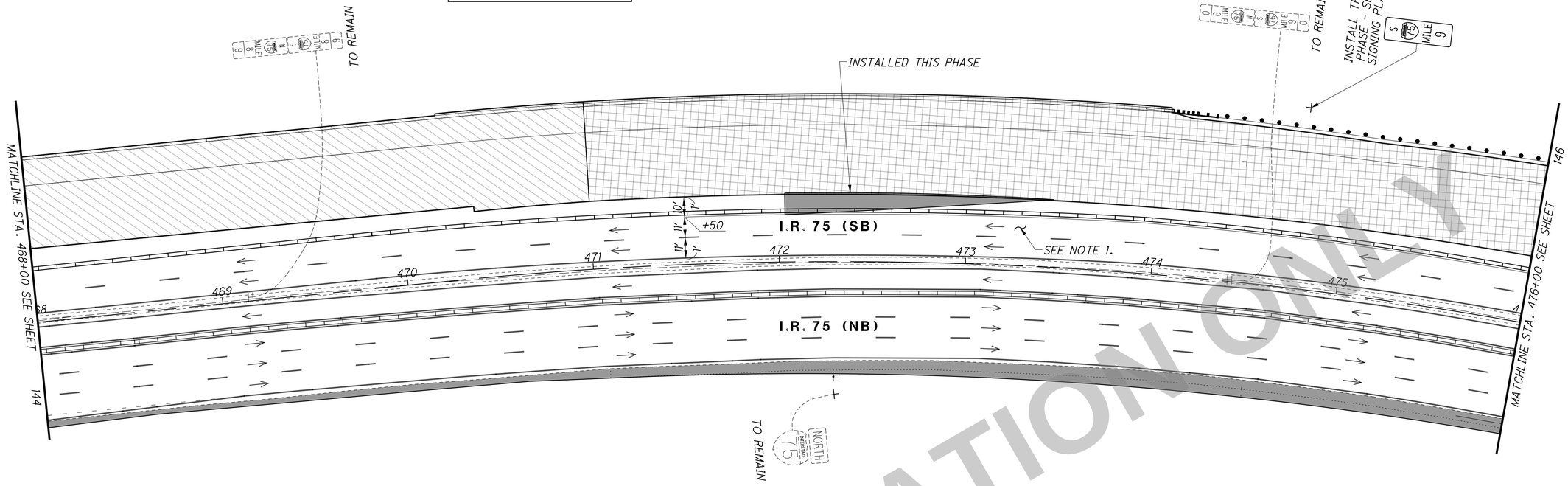
MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I.R. 75 - STA. 438+00 TO STA. 446+50

HAM-75-7.85

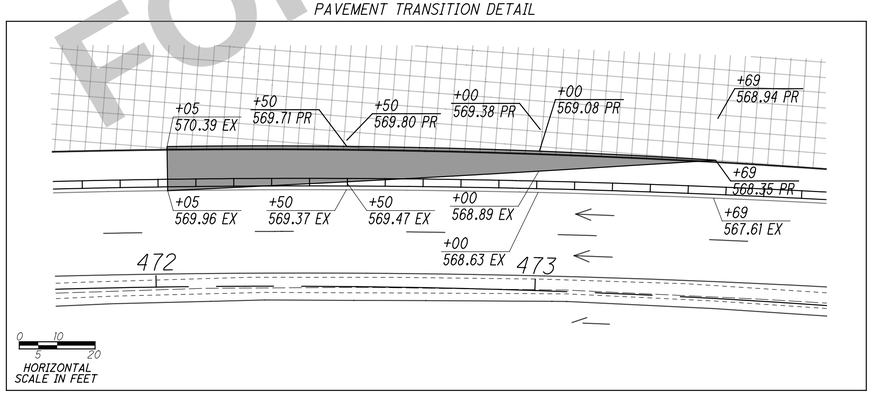
134
2017

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I.R. 75 MAINLINE LANES SHALL REMAIN IN THE PHASE 1 SET-UP.



PAVEMENT TRANSITION DETAIL



LEGEND

- PHASE 1 WORK ZONE
- PHASE 1 DELAYED PAVING AREA SEE NOTE 2
- TEMPORARY PAVEMENT
- PORTABLE BARRIER
- DRUM

NOTES:

1. DURING HOURS SPECIFIED IN ODOT'S PERMITTED LANE CLOSURE POLICY, NIGHTTIME LANE CLOSURES MAY BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR TEMPORARY PAVEMENT WORK ALONG IR 75 FOR TRANSITION AREAS.

2. THE CONTRACTOR SHALL DELAY PAVING WORK IN THE CROSSHATCH AREA SHOWN UNTIL AFTER 09/01/2023. PAVING WORK IS DEFINED AS SUBGRADE STABILIZATAION, AGGREGATE SUBBASE, ASPHALT BASE, INTERMEDIATE AND SURFACE COURSES.

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

FOR INFORMATION ONLY

0 15 30 60 HORIZONTAL SCALE IN FEET

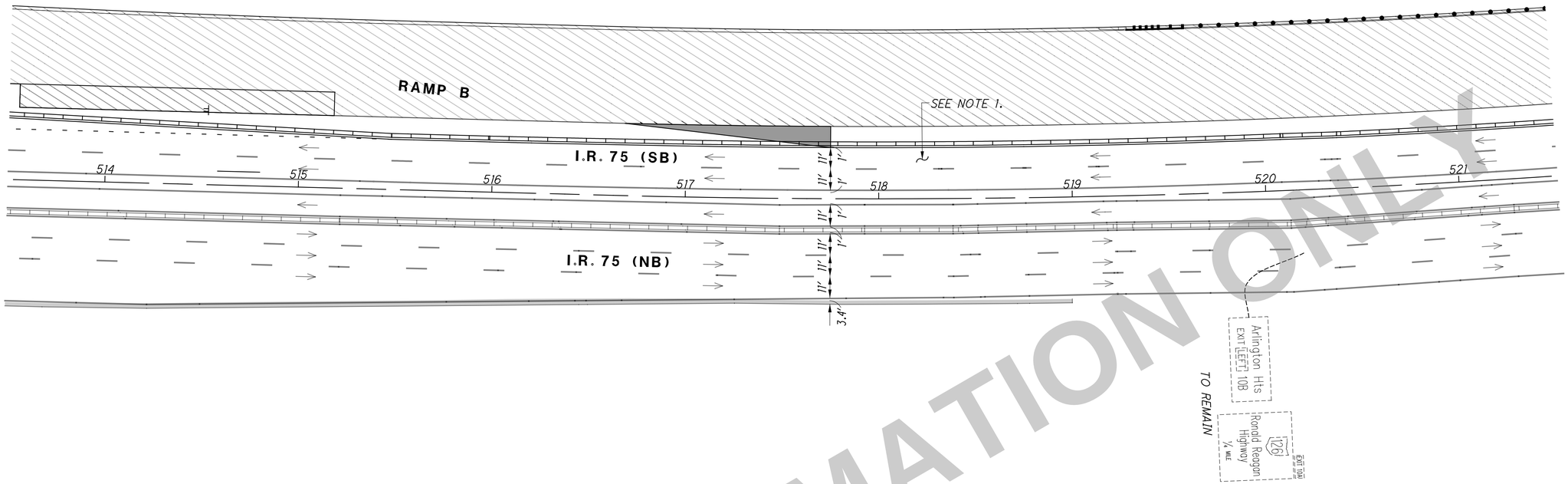
CALCULATED SMM CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I.R. 75 - PAVEMENT WEDGE DETAIL

HAM-75-7.85

135
2017

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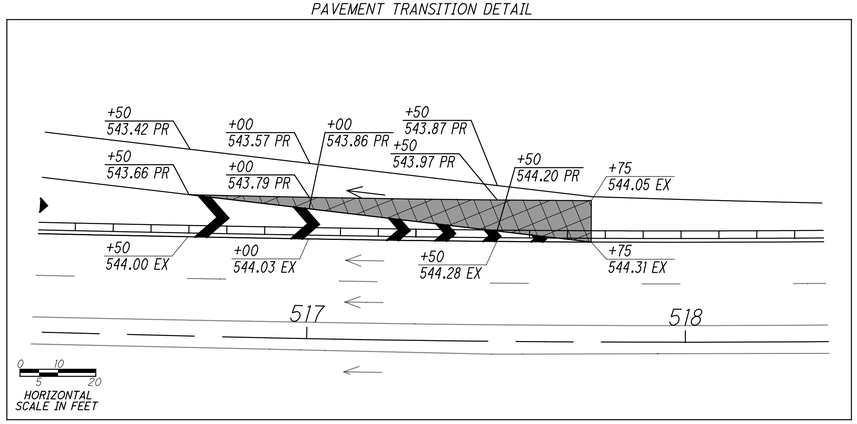


LEGEND

- PHASE 1A WORK ZONE
- DRUM
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- PB "Y" CONNECTING SEGMENT
- TEMPORARY PAVEMENT

NOTES:
1. DURING HOURS SPECIFIED IN ODOT'S PERMITTED LANE CLOSURE POLICY, NIGHTTIME LANE CLOSURES MAY BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR TEMPORARY PAVEMENT WORK ALONG IR 75 FOR TRANSITION AREAS.

PAVEMENT TRANSITION DETAIL



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

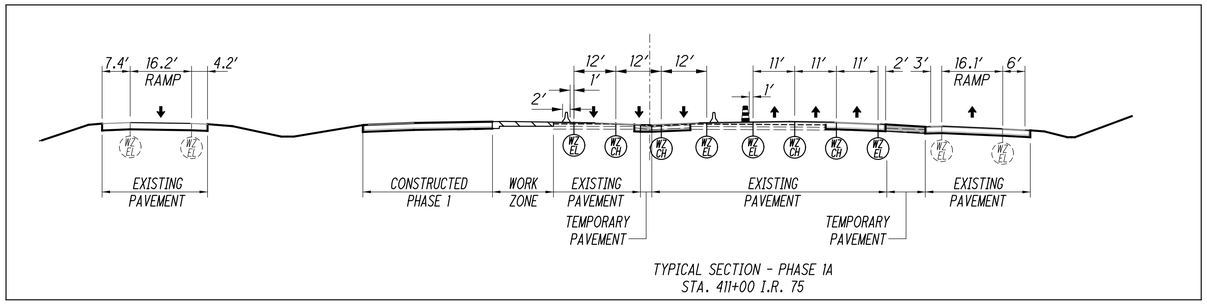
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
I.R. 75 - PAVEMENT WEDGE DETAIL

HAM-75-7.85

136
2017

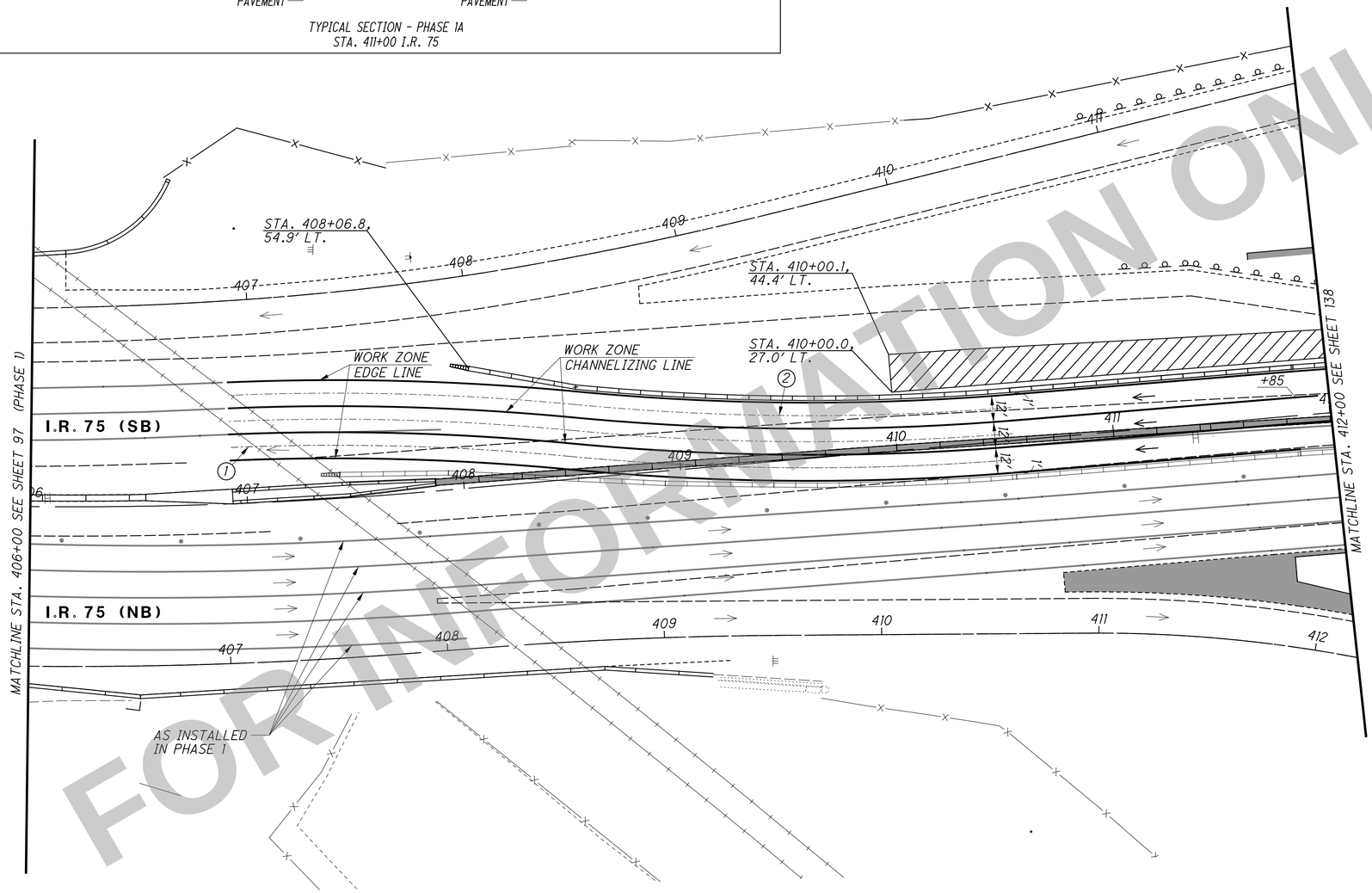
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TYPICAL SECTION - PHASE 1A
STA. 411+00 I.R. 75

LEGEND

- PORTABLE BARRIER
- IMPACT ATTENUATOR
- TEMPORARY PAVEMENT
- DRUM



① Δ = 7° 50' 1" (RT)
Dc = 4° 59' 59"
R = 1146.00'
T = 78.47'
L = 156.69'
E = 2.68'
C = 156.56'
C.B. = S 84° 8' 59" E

② Δ = 10° 3' 0" (LT)
Dc = 4° 59' 59"
R = 1146.00'
T = 100.77'
L = 201.01'
E = 4.42'
C = 200.76'
C.B. = N 85° 15' 32" W

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

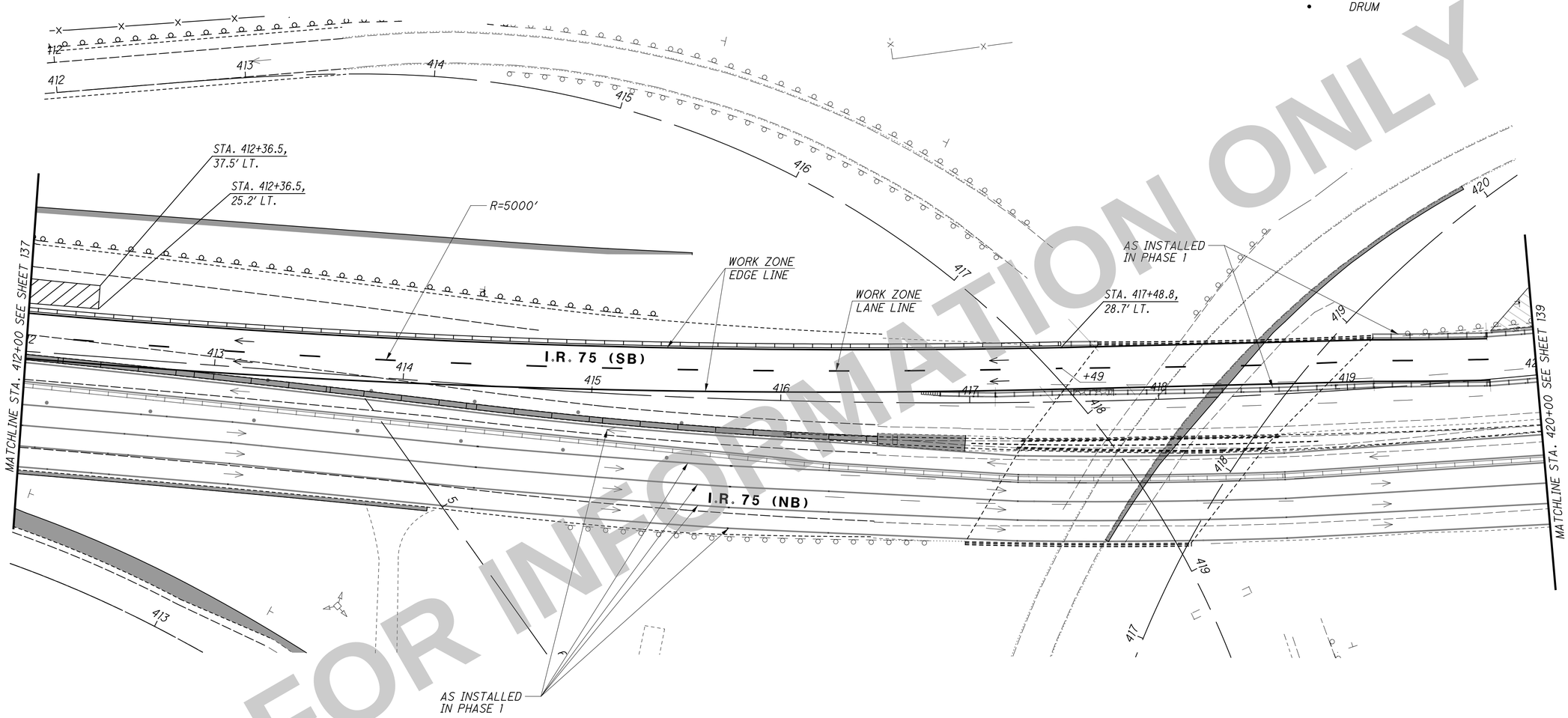
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 1A
I.R. 75 - STA. 406+00 TO STA. 412+00

HAM-75-7.85

137
2017

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FOR INFORMATION ONLY

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

HORIZONTAL SCALE IN FEET
0 15 30 60

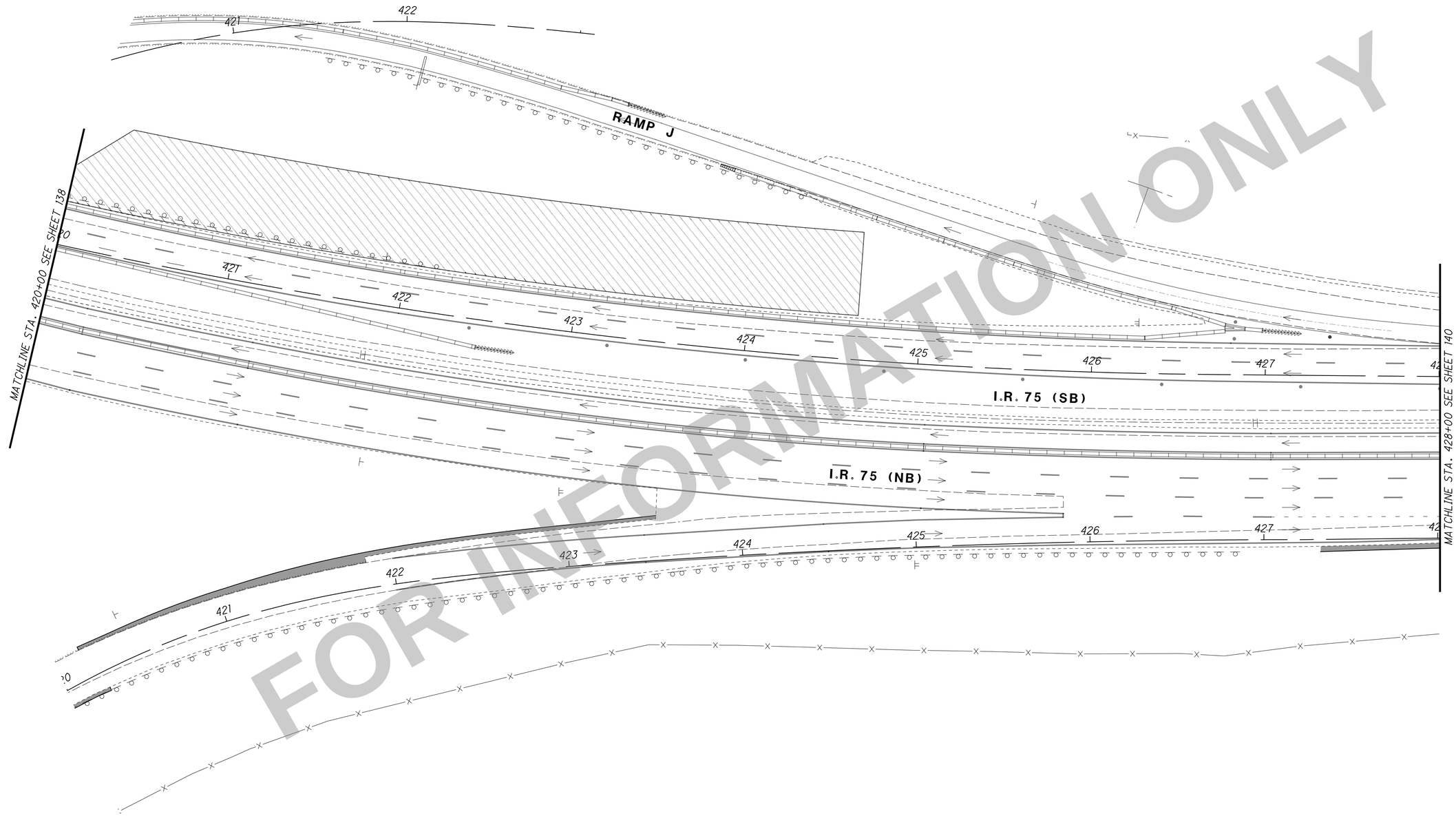
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 1A
I.R. 75 - STA. 412+00 TO STA. 420+00

HAM-75-7.85

138
2017

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FOR INFORMATION ONLY

NOTES:
1. THE PHASE 1 MOT SET-UP APPLICABLE TO THIS SHEET (INCLUDING SIGNAGE) SHALL REMAIN IN PLACE FOR PHASE 1A.

HORIZONTAL SCALE IN FEET
0 15 30 60

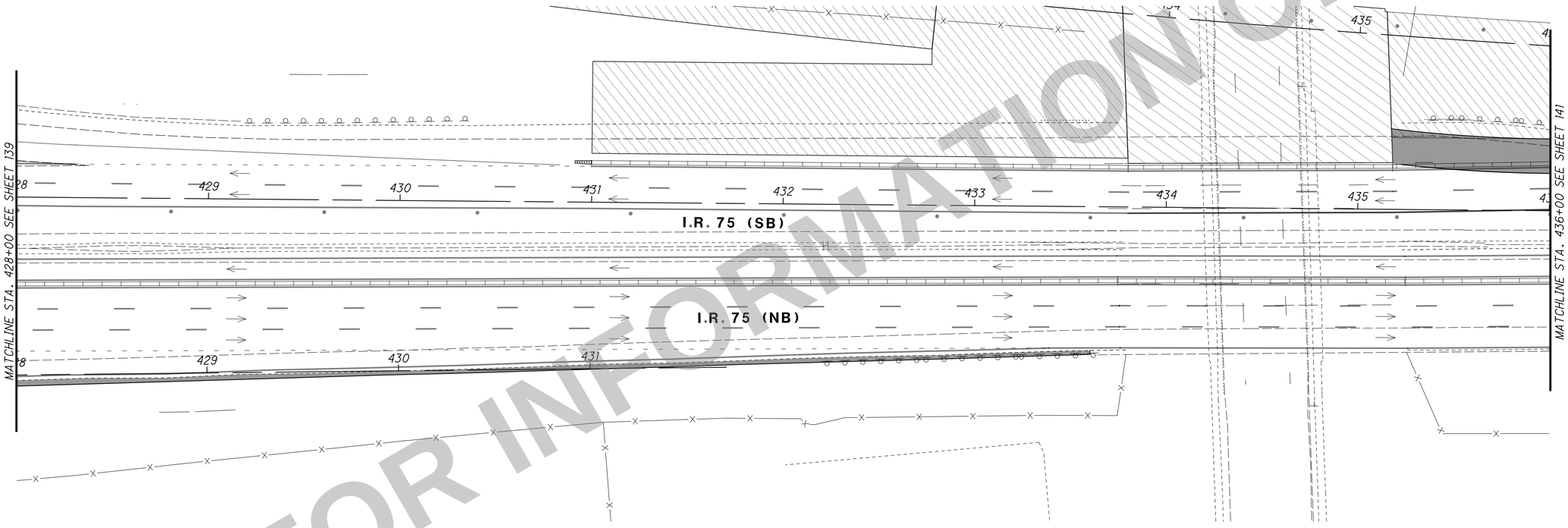
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 1A
I.R. 75 - STA. 420+00 TO STA. 428+00

HAM-75-7.85

139
2017

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FOR INFORMATION ONLY

NOTES:
1. THE PHASE 1 MOT SET-UP APPLICABLE TO THIS SHEET (INCLUDING SIGNAGE) SHALL REMAIN IN PLACE FOR PHASE 1A.

HORIZONTAL SCALE IN FEET
0 15 30 60

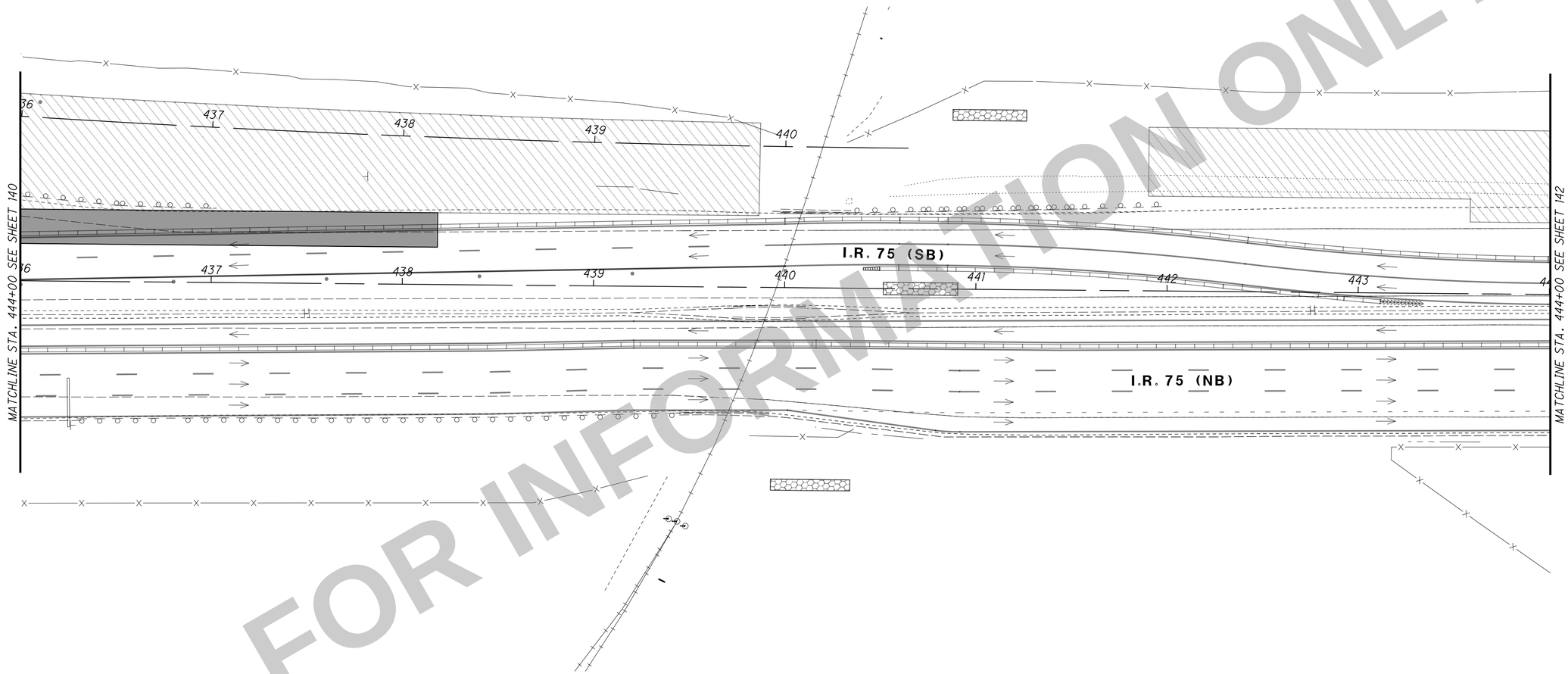
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 1A
I.R. 75 - STA. 428+00 TO STA. 436+00

HAM-75-7.85

140
2017

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FOR INFORMATION ONLY

NOTES:
1. THE PHASE 1 MOT SET-UP APPLICABLE TO THIS SHEET (INCLUDING SIGNAGE) SHALL REMAIN IN PLACE FOR PHASE 1A.

HORIZONTAL SCALE IN FEET
0 15 30 60

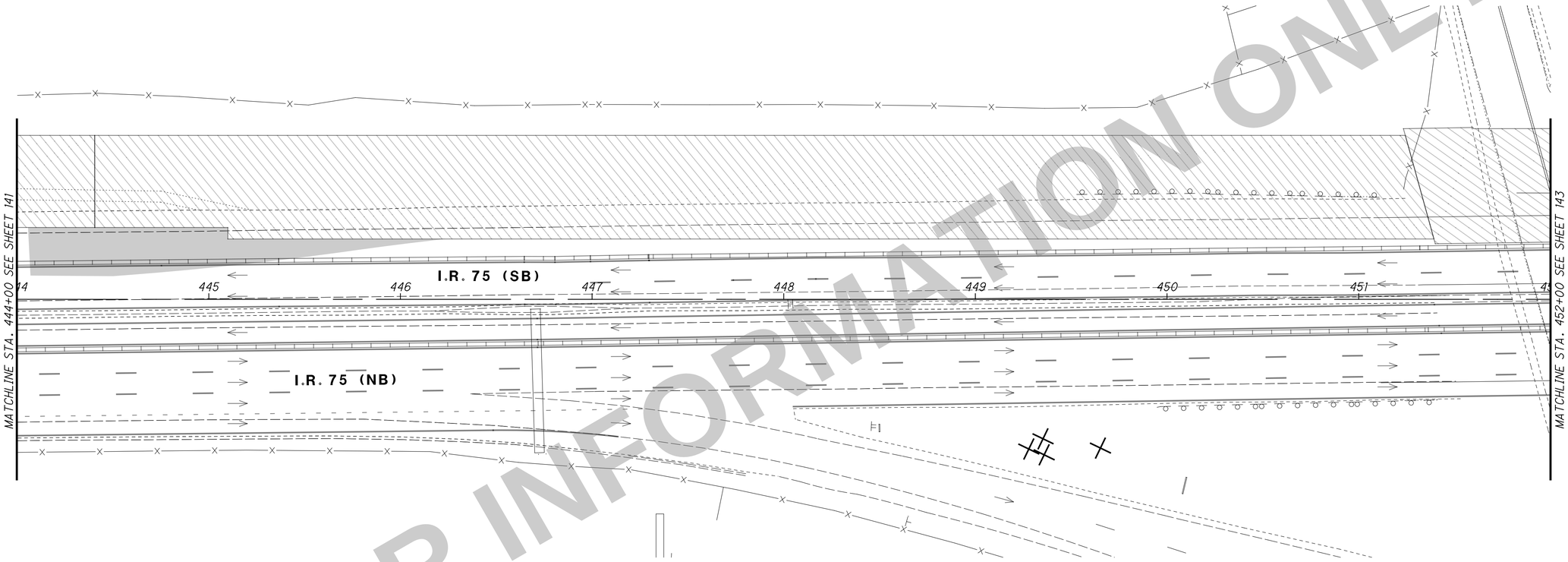
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 1A
I.R. 75 - STA. 436+00 TO STA. 444+00

HAM-75-7.85

141
2017

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FOR INFORMATION ONLY

NOTES:
1. THE PHASE 1 MOT SET-UP APPLICABLE TO THIS SHEET (INCLUDING SIGNAGE) SHALL REMAIN IN PLACE FOR PHASE 1A.

HORIZONTAL SCALE IN FEET
0 15 30 60

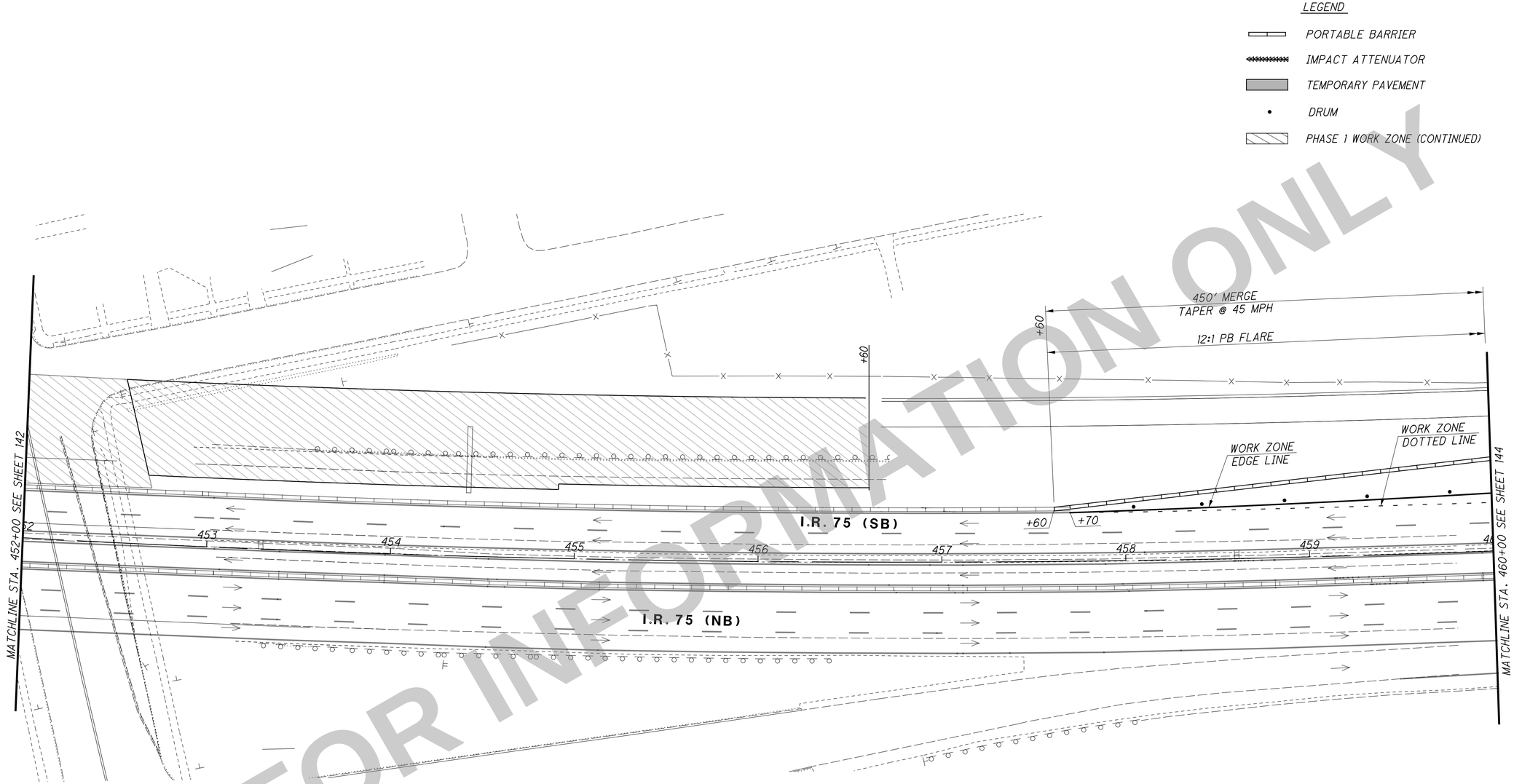
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 1A
I.R. 75 - STA. 444+00 TO STA. 452+00

HAM-75-7.85

142
2017

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FOR INFORMATION ONLY

NOTES:
1. THE PHASE 1 MOT SET-UP APPLICABLE TO THIS SHEET (INCLUDING SIGNAGE) SHALL REMAIN IN PLACE FOR PHASE 1A.

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 1A
I.R. 75 - STA. 452+00 TO STA. 460+00

HAM-75-7.85

143
2017

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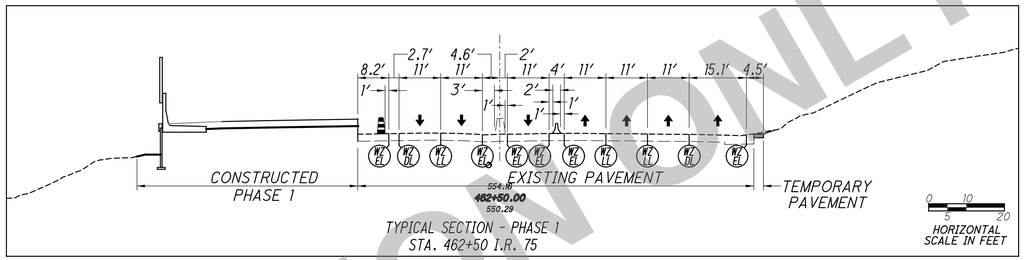
LEGEND

PORTABLE BARRIER

IMPACT ATTENUATOR

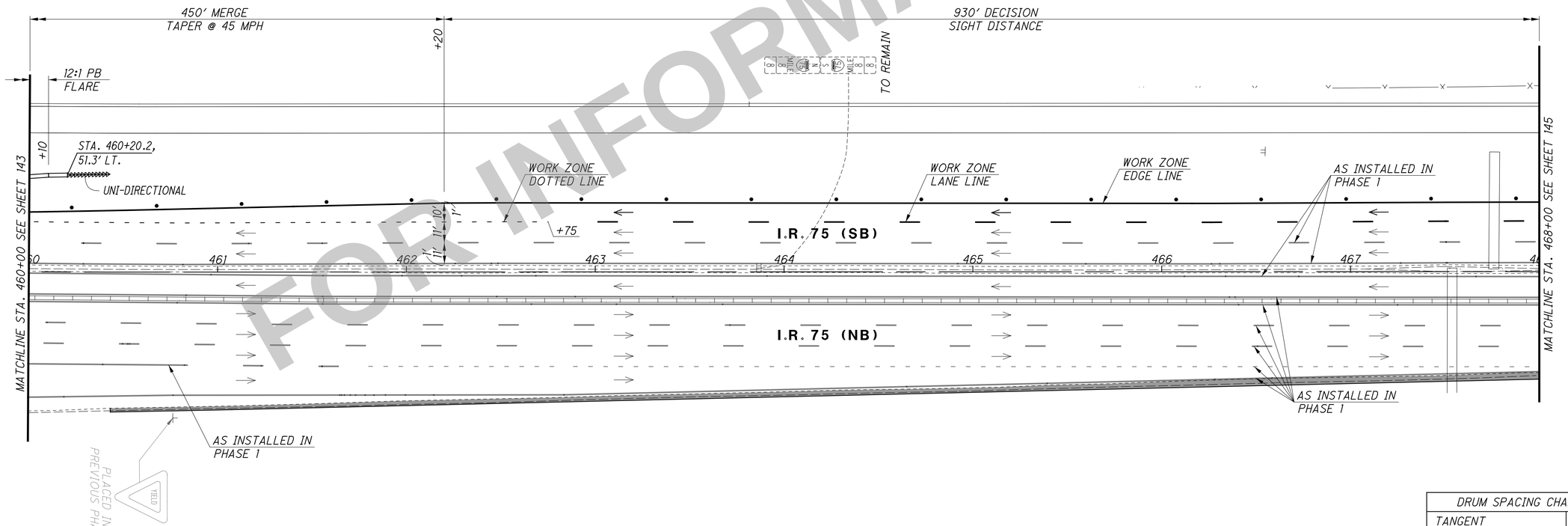
TEMPORARY PAVEMENT

DRUM



TYPICAL SECTION - PHASE 1
STA. 462+50 I.R. 75

I.R. 75 MAINLINE LANES SHALL REMAIN IN THE PHASE 1 SET-UP.



DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED SMM
CHECKED JDS

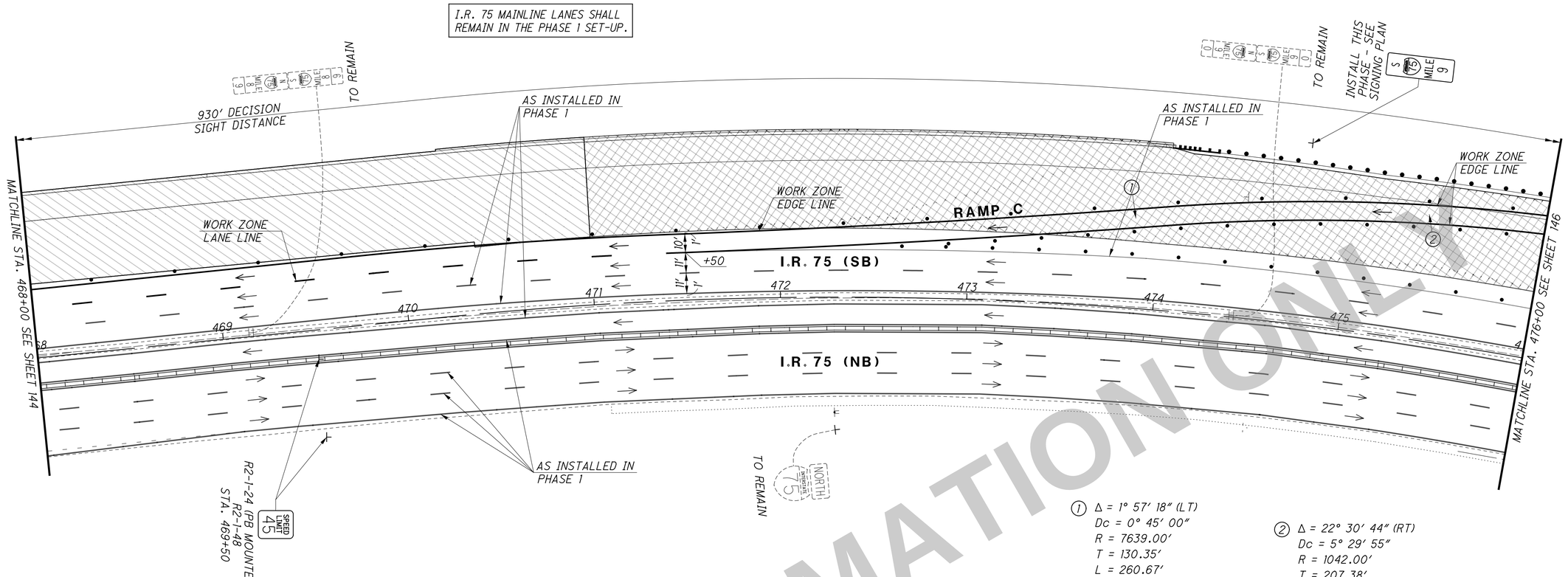
MAINTENANCE OF TRAFFIC PLAN - PHASE 1A
I.R. 75 - STA. 460+00 TO STA. 468+00

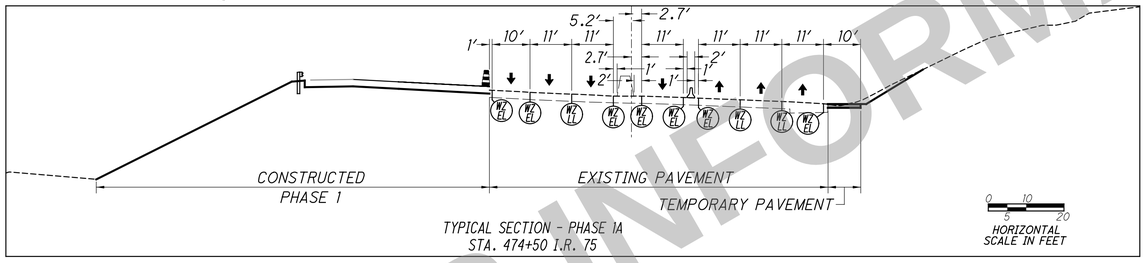
HAM-75-7.85

144
2017

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I.R. 75 MAINLINE LANES SHALL REMAIN IN THE PHASE 1 SET-UP.





TYPICAL SECTION - PHASE 1A
STA. 474+50 I.R. 75

① Δ = 1° 57' 18" (LT)
Dc = 0° 45' 00"
R = 7639.00'
T = 130.35'
L = 260.67'
E = 1.11'
C = 260.66'
C.B. = S 21° 19' 15" W

② Δ = 22° 30' 44" (RT)
Dc = 5° 29' 55"
R = 1042.00'
T = 207.38'
L = 409.42'
E = 20.44'
C = 406.79'
C.B. = S 31° 35' 58" W

LEGEND

- PHASE 1A WORK ZONE
- PORTABLE BARRIER
- DRUM

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

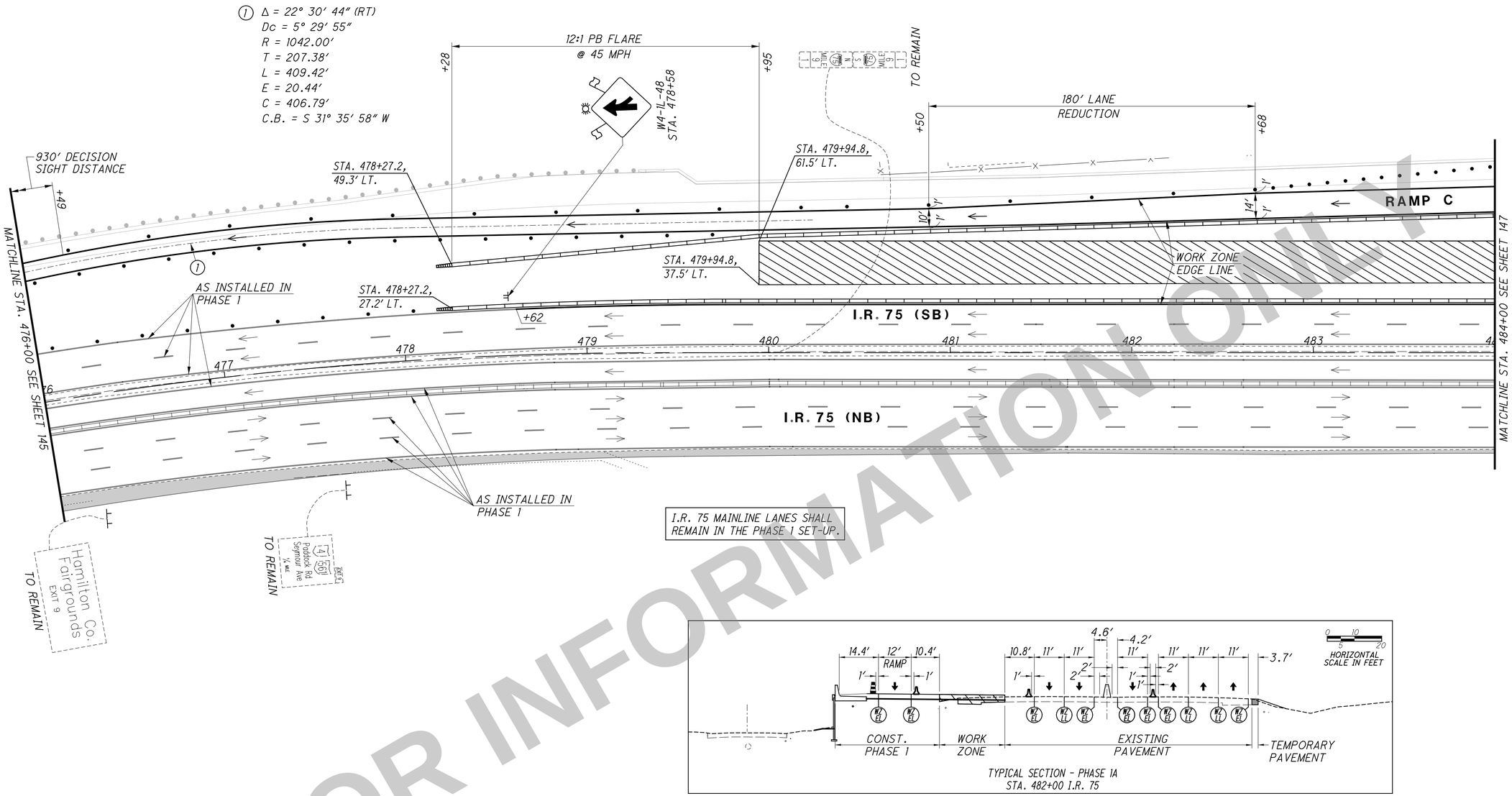
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 1A
I.R. 75 - STA. 468+00 TO STA. 476+00

HAM-75-7.85

145
2017

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TYPICAL SECTION - PHASE 1A
STA. 482+00 I.R. 75

LEGEND

- PHASE 1A WORK ZONE
- DRUM
- PORTABLE BARRIER
- TAPERED END SECTION
- TEMPORARY PAVEMENT

DRUM SPACING CHART	
TANGENT	80′ c/c
TAPER	55′ c/c
RADII	10′ c/c

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

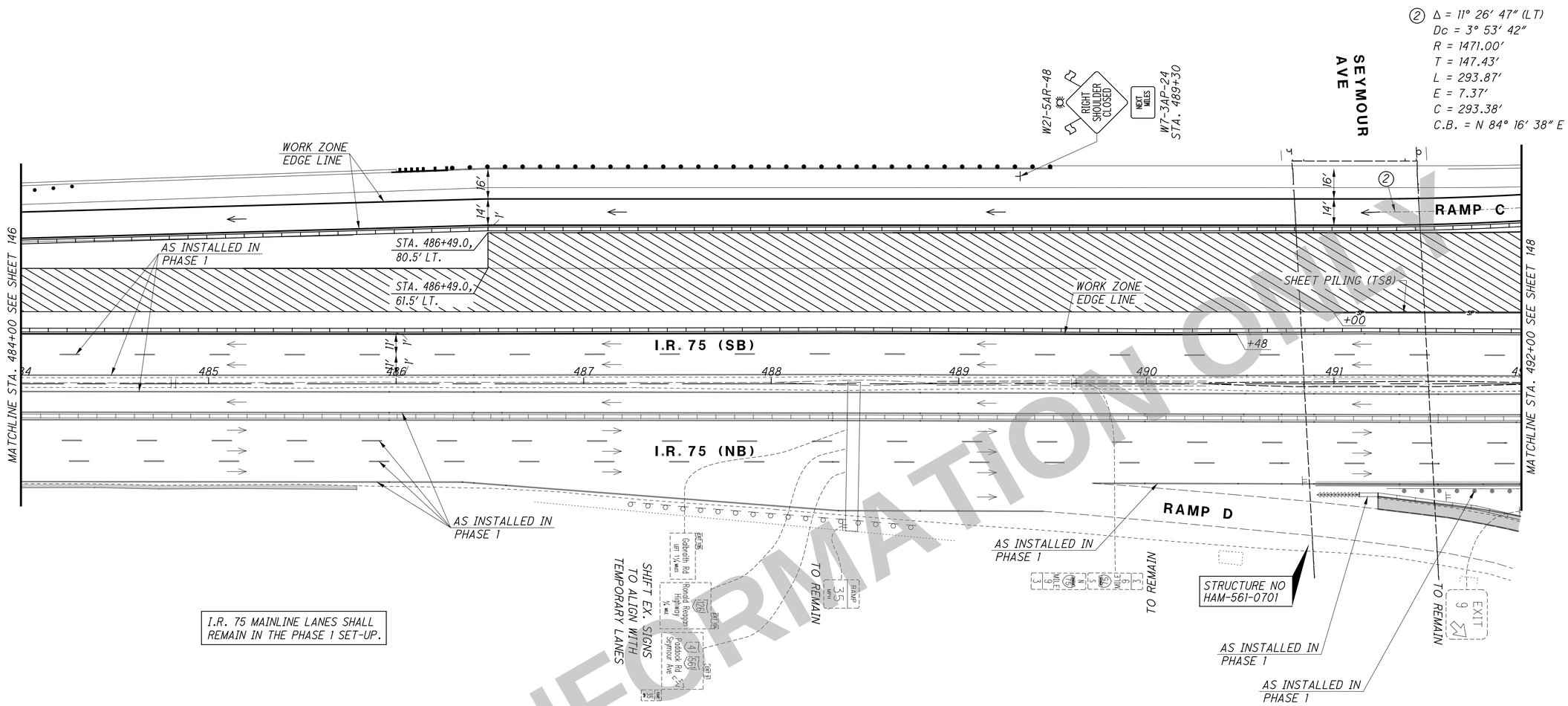
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 1A
I.R. 75 - STA. 476+00 TO STA. 484+00

HAM-75-7.85

146
2017

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NOTE: THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.

DRUM SPACING CHART	
TANGENT	80′ c/c
TAPER	55′ c/c
RADII	10′ c/c

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 1A
I.R. 75 - STA. 484+00 TO STA. 492+00

HAM-75-7.85

147
2017

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LEGEND

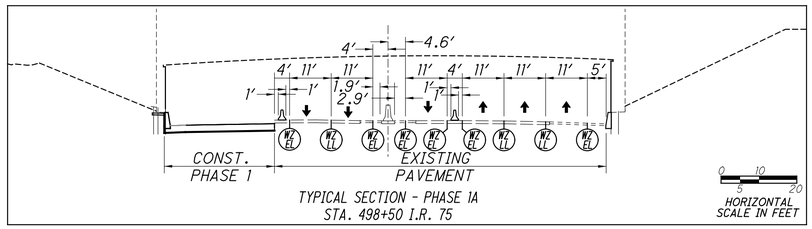
PHASE 1A WORK ZONE

DRUM

PORTABLE BARRIER

IMPACT ATTENUATOR

TEMPORARY PAVEMENT



TYPICAL SECTION - PHASE 1A
STA. 498+50 I.R. 75

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

NOTES:
1. FOR PHASE 1-PART 2 SEE SHEET 149
2. THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.

① Δ = 11° 26' 47" (LT)
Dc = 3° 53' 42"
R = 1471.00'
T = 147.43'
L = 293.87'
E = 7.37'
C = 293.38'
C.B. = S 84° 16' 38" W

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

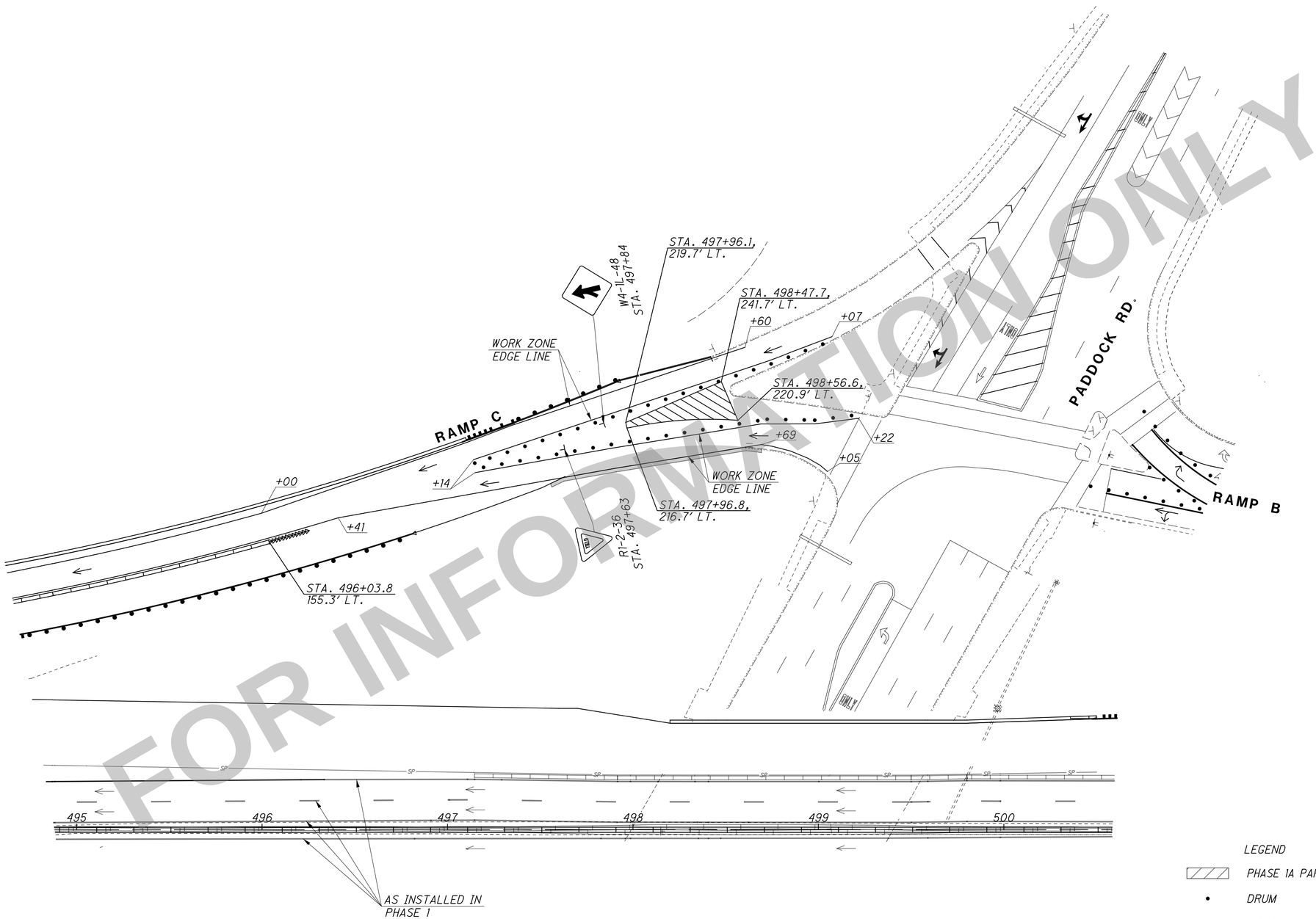
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 1A-PART 1
I.R. 75 - STA. 492+00 TO STA. 500+00

HAM-75-7.85

148
2017

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DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

LEGEND

- PHASE 1A PART 2 WORK ZONE
- DRUM
- PORTABLE CONCRETE BARRIER
- TEMPORARY PAVEMENT
- IMPACT ATTENUATOR

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED SMM
CHECKED JDS

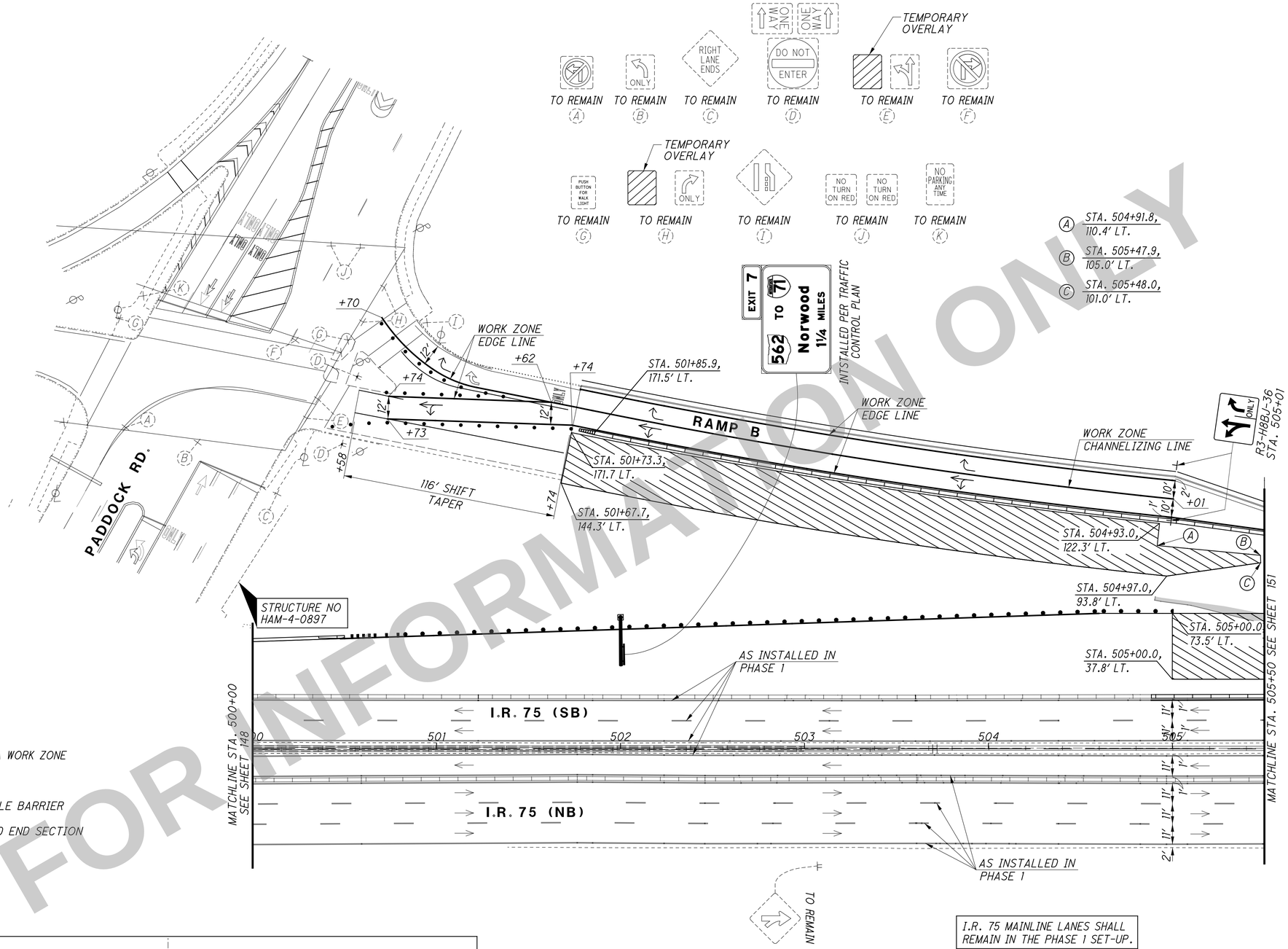
MAINTENANCE OF TRAFFIC PLAN - PHASE 1A-PART 2
PADDOCK RAMP C

HAM-75-7.85

149
2017

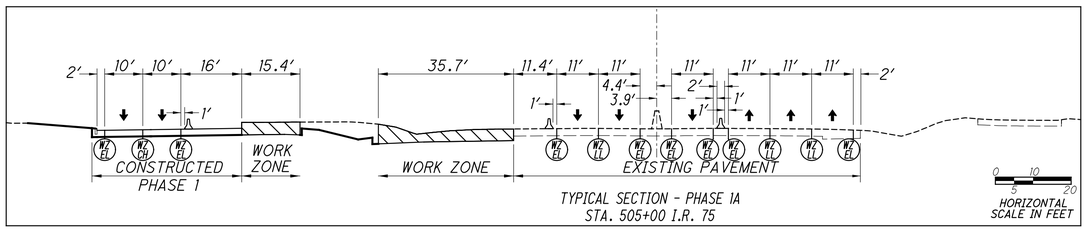
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FOR INFORMATION ONLY



LEGEND

- PHASE 1A WORK ZONE
- DRUM
- PORTABLE BARRIER
- TAPERED END SECTION



TYPICAL SECTION - PHASE 1A
STA. 505+00 I.R. 75

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

0 15 30 60
HORIZONTAL SCALE IN FEET

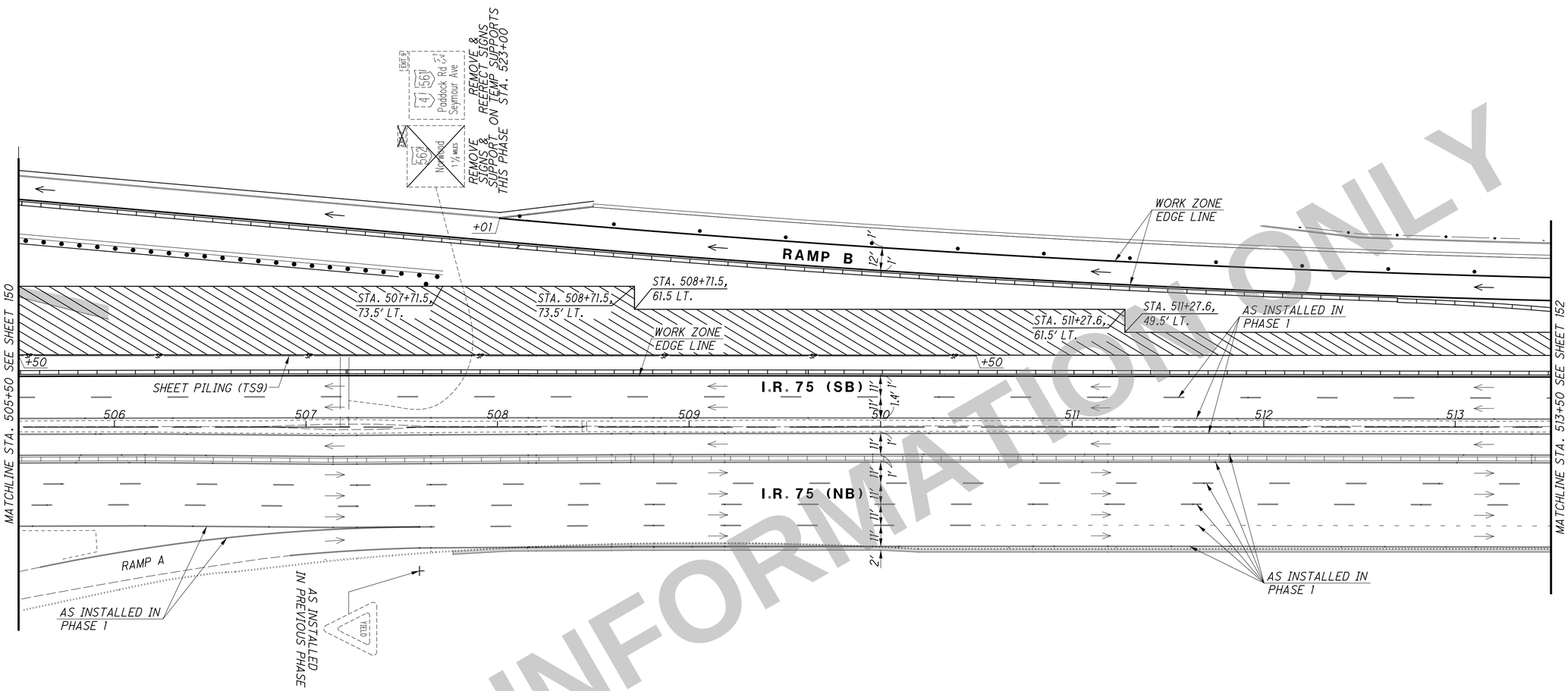
CALCULATED SMM
CHECKED JDS

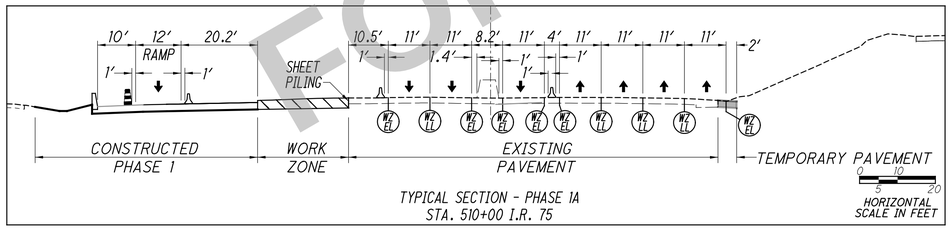
MAINTENANCE OF TRAFFIC PLAN - PHASE 1A
I.R. 75 - STA. 500+00 TO STA. 505+50

HAM-75-7.85

150
2017

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TYPICAL SECTION - PHASE 1A
STA. 510+00 I.R. 75

LEGEND

- PHASE 1A WORK ZONE
- DRUM
- PORTABLE BARRIER
- TEMPORARY PAVEMENT

NOTE: THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET

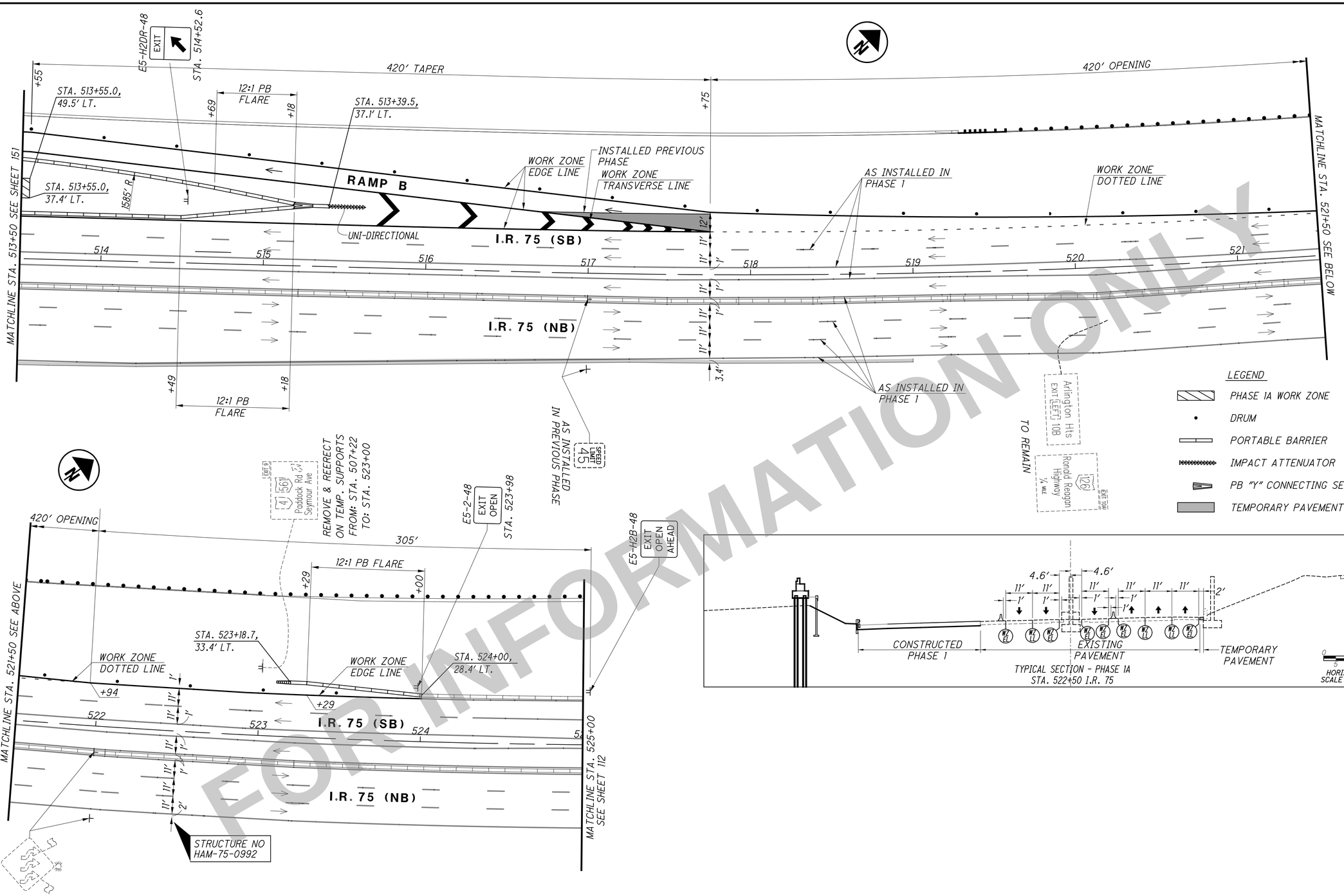
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 1A
I.R. 75 - STA. 505+50 TO STA. 513+50

HAM-75-7.85

151
2017

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DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET

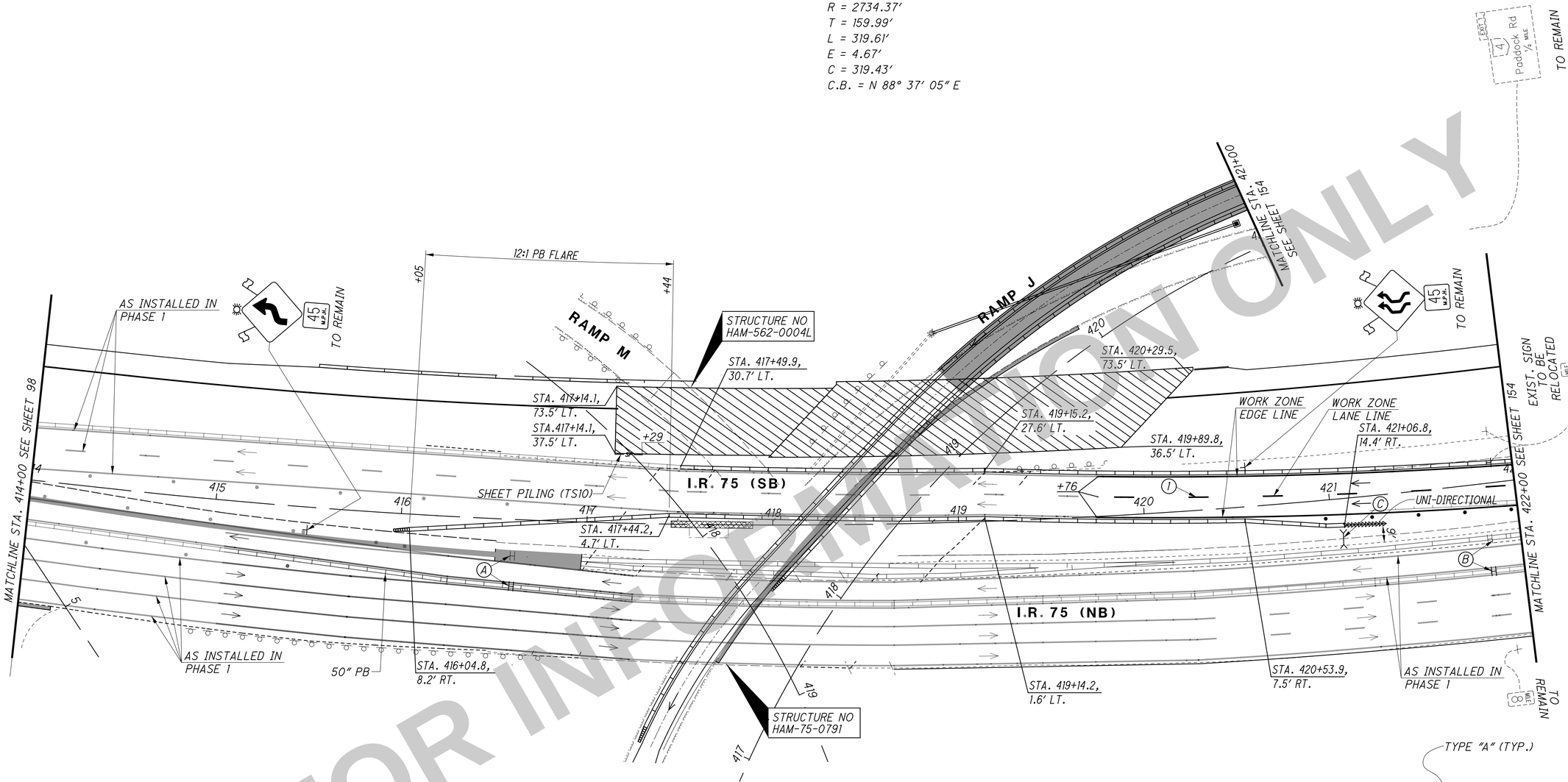
CALCULATED SMM CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 1A
I.R. 75 - STA. 513+50 TO STA. 525+00

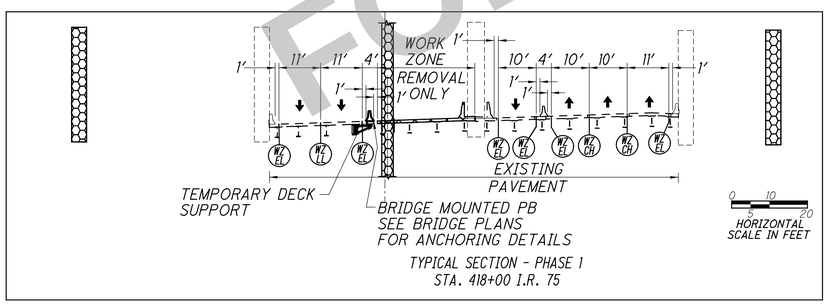
HAM-75-7.85

152
2017

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FOR INFORMATION ONLY



EXIST. SIGN TO BE RELOCATED

FROM: STA. 416+63
TO: STA. 416+63

Ⓐ

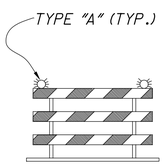
EXIST. SIGN TO BE RELOCATED

FROM: STA. 421+81
TO: STA. 421+81

Ⓑ

LEGEND

- PHASE 2 WORK ZONE
- PORTABLE BARRIER
- TAPERED END SECTION
- TEMPORARY PAVEMENT
- IMPACT ATTENUATOR



10′ TYPE III SOLID BARRICADE

Ⓒ

NOTE: THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.

DRUM SPACING CHART	
TANGENT	80′ c/c
TAPER	55′ c/c
RADII	10′ c/c

HORIZONTAL SCALE IN FEET
0 15 30 60
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I.R. 75 - STA. 414+00 TO STA. 422+00

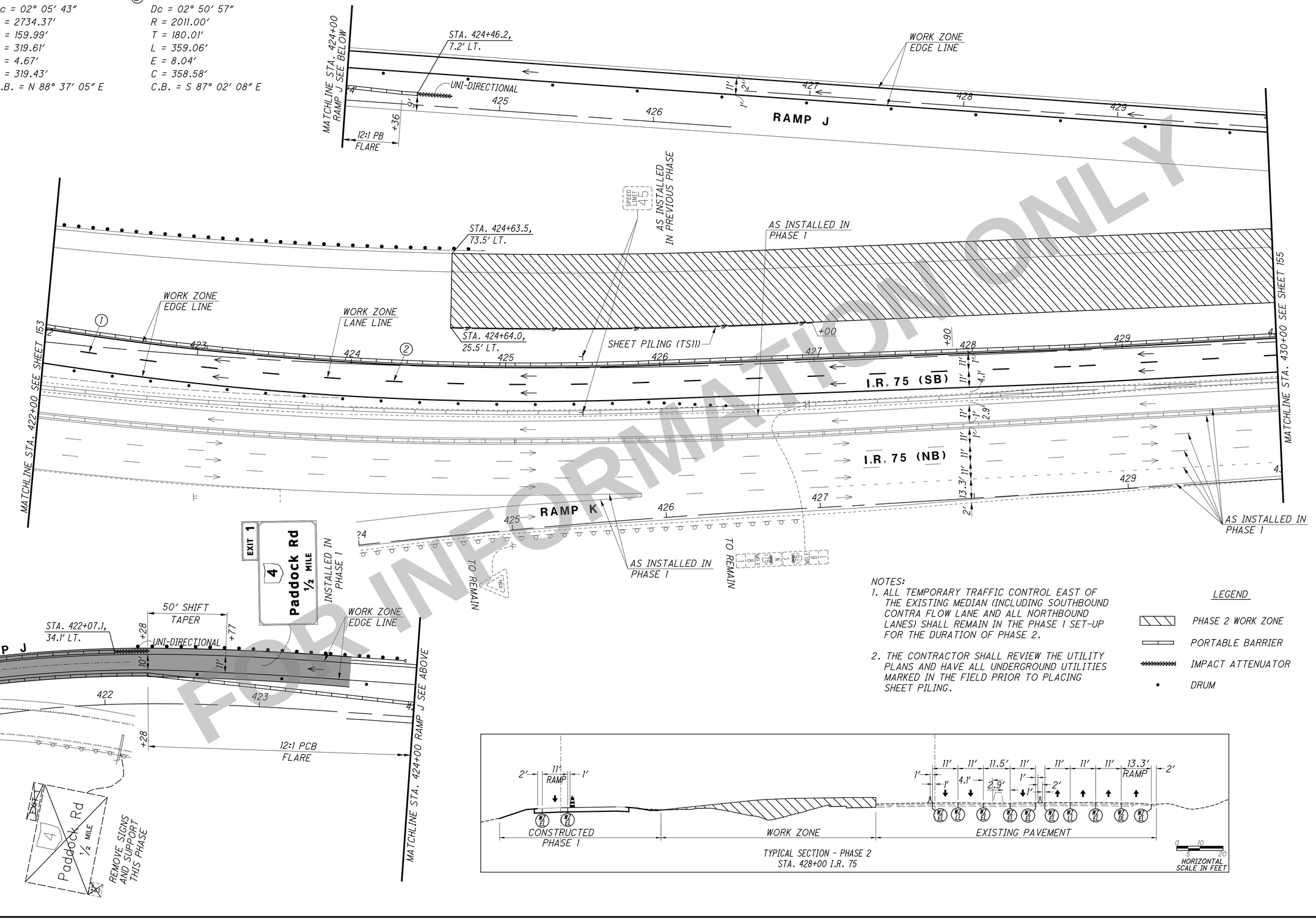
HAM-75-7.85

153
2017

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① Δ = 06° 41′ 50″ (LT)
Dc = 02° 05′ 43″
R = 2734.37′
T = 159.99′
L = 319.61′
E = 4.67′
C = 319.43′
C.B. = N 88° 37′ 05″ E

② Δ = 10° 13′ 48″ (LT)
Dc = 02° 50′ 57″
R = 2011.00′
T = 180.01′
L = 359.06′
E = 8.04′
C = 358.58′
C.B. = S 87° 02′ 08″ E



NOTES:
1. ALL TEMPORARY TRAFFIC CONTROL EAST OF THE EXISTING MEDIAN (INCLUDING SOUTHBOUND CONTRA FLOW LANE AND ALL NORTHBOUND LANES) SHALL REMAIN IN THE PHASE 1 SET-UP FOR THE DURATION OF PHASE 2.
2. THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.

LEGEND
- PHASE 2 WORK ZONE
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- DRUM

FOR INFORMATION ONLY

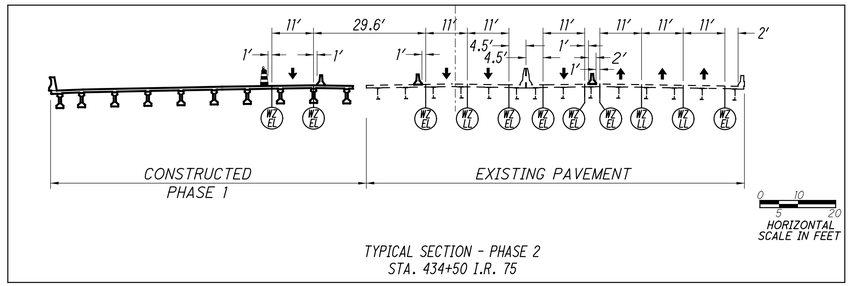
HORIZONTAL SCALE IN FEET 0 15 30 60
CALCULATED SMM CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I.R. 75 - STA. 424+00 TO STA. 430+00

HAM-75-7.85

154
2017

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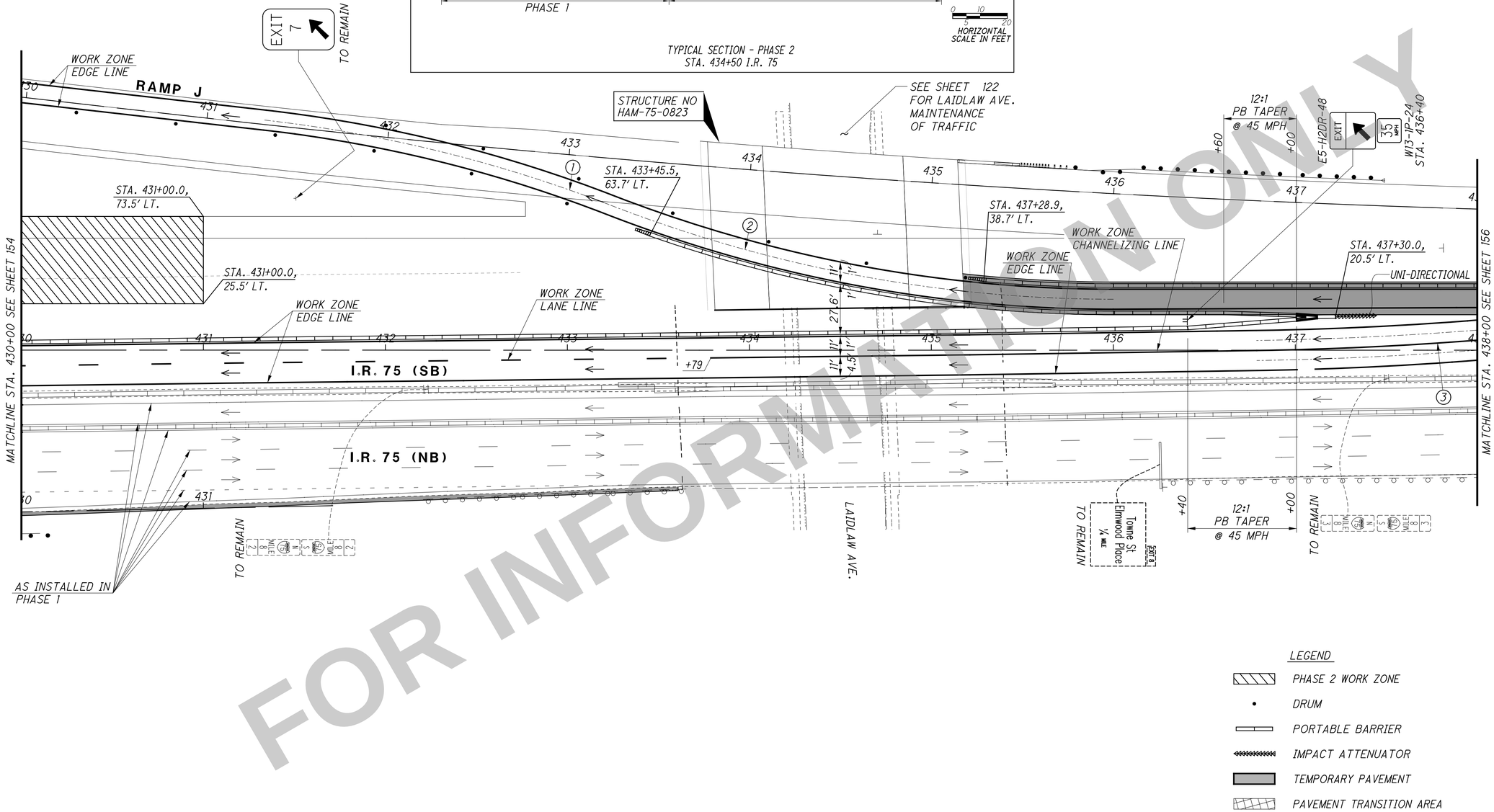


TYPICAL SECTION - PHASE 2
STA. 434+50 I.R. 75

① Δ = 14° 43′ 59″ (RT)
Dc = 07° 30′ 00″
R = 764.00′
T = 98.77′
L = 196.46′
E = 6.36′
C = 195.92′
C.B. = N 38° 19′ 19″ E

② Δ = 21° 11′ 11″ (LT)
Dc = 07° 30′ 00″
R = 764.00′
T = 142.88′
L = 282.50′
E = 13.25′
C = 280.90′
C.B. = N 35° 05′ 44″ E

③ Δ = 04° 39′ 08″ (LT)
Dc = 02° 59′ 29″
R = 1915.50′
T = 77.81′
L = 155.53′
E = 1.58′
C = 155.49′
C.B. = N 21° 18′ 03″ E



LEGEND

- PHASE 2 WORK ZONE
- DRUM
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- TEMPORARY PAVEMENT
- PAVEMENT TRANSITION AREA

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

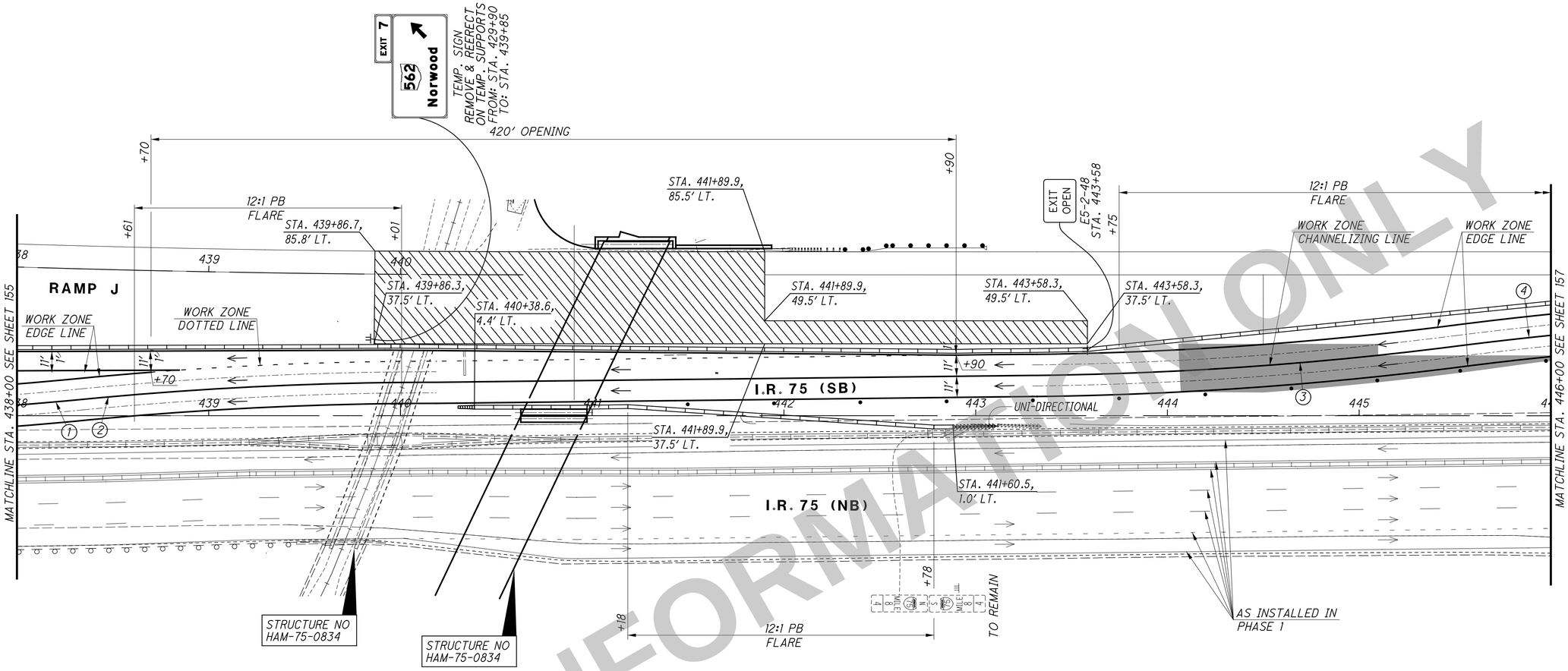
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I.R. 75 - STA. 430+00 TO STA. 438+00

HAM-75-7.85

155
2017

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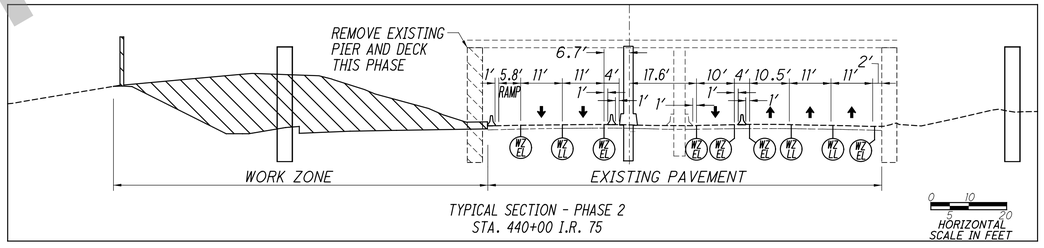


① Δ = 04° 39′ 08″ (LT)
Dc = 02° 59′ 29″
R = 1915.50′
T = 77.81′
L = 155.53′
E = 1.58′
C = 155.49′
C.B. = N 21° 18′ 03″ E

② Δ = 05° 31′ 40″ (RT)
Dc = 02° 59′ 29″
R = 1915.50′
T = 92.47′
L = 184.80′
E = 2.23′
C = 184.73′
C.B. = N 21° 44′ 19″ E

③ Δ = 06° 38′ 49″ (LT)
Dc = 02° 59′ 29″
R = 1915.50′
T = 111.23′
L = 222.22′
E = 3.23′
C = 222.09′
C.B. = N 20° 32′ 26″ E

④ Δ = 07° 10′ 03″ (RT)
Dc = 02° 59′ 29″
R = 1915.50′
T = 119.97′
L = 239.62′
E = 3.75′
C = 239.62′
C.B. = N 20° 48′ 03″ E



TYPICAL SECTION - PHASE 2
STA. 440+00 I.R. 75

LEGEND
- PHASE 2 WORK ZONE
- DRUM
- PORTABLE BARRIER
- IMPACT ATTENUATOR

DRUM SPACING CHART	
TANGENT	80′ c/c
TAPER	55′ c/c
RADII	10′ c/c

ALL OVERHEAD WORK (INCLUDING BEAM PLACEMENT) IMPACTING I.R. 75 TRAFFIC BELOW SHALL BE COMPLETED PER ODOT SCD MT-99.60

FOR INFORMATION ONLY

0 15 30 60 HORIZONTAL SCALE IN FEET

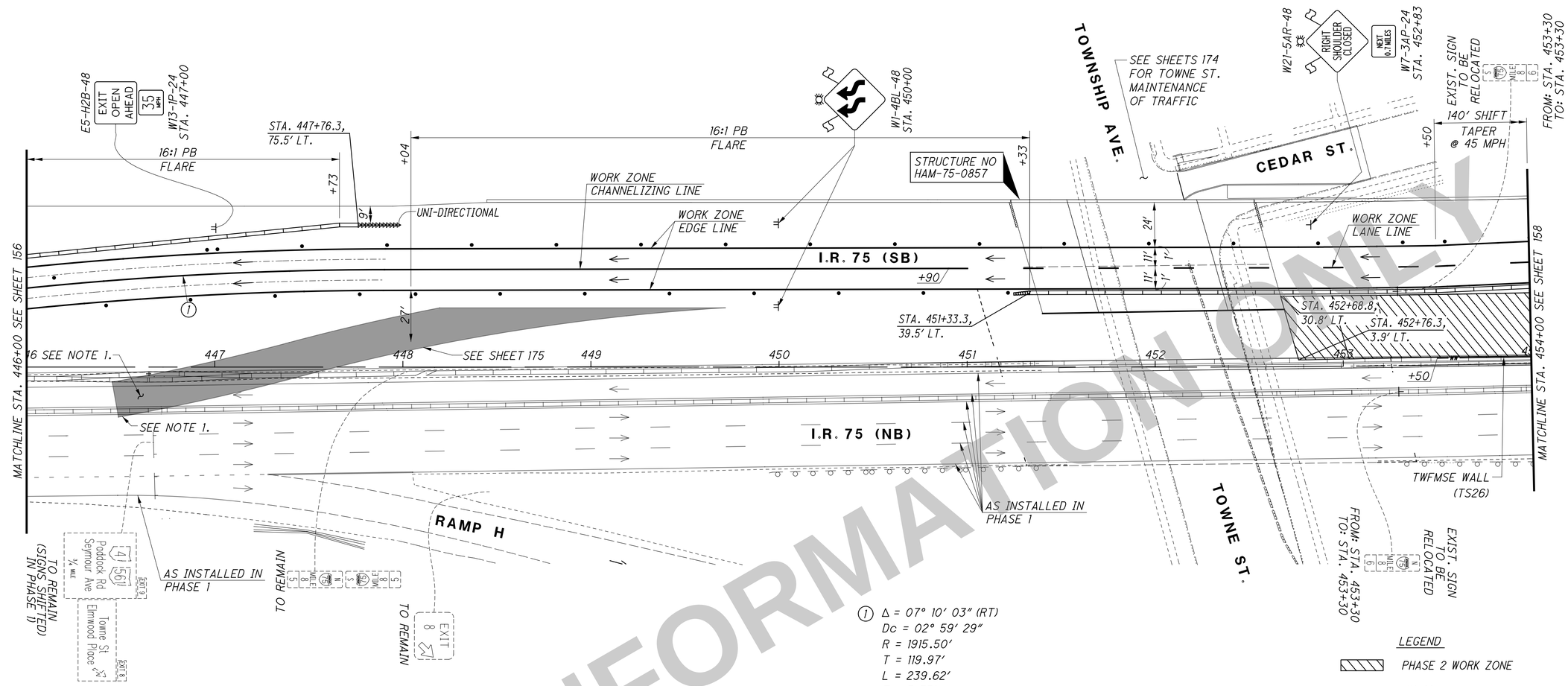
CALCULATED SMM CHECKED JDS

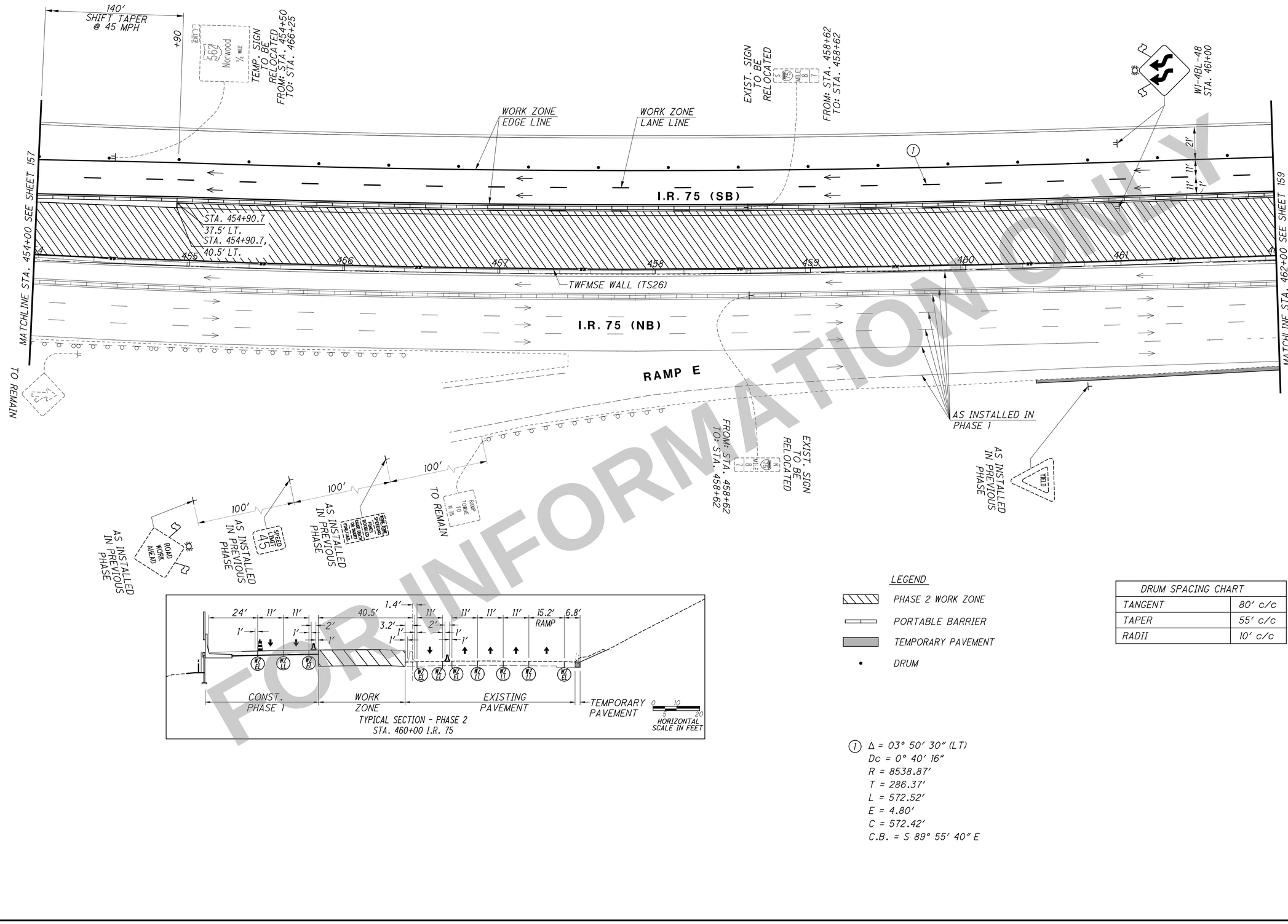
MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I.R. 75 - STA. 438+00 TO STA. 446+00

HAM-75-7.85

156
2017

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E5-H2B-48
EXIT OPEN AHEAD
35 MPH
W13-1P-24
STA. 447+00
STA. 447+76.3, 75.5' LT.
16:1 PB FLARE
+73
+04
9'
UNI-DIRECTIONAL
WORK ZONE CHANNELIZING LINE
WORK ZONE EDGE LINE
W1-4BL-48
STA. 450+00
16:1 PB FLARE
STRUCTURE NO HAM-75-0857
+33
TOWNSHIP AVE.
SEE SHEETS 174 FOR TOWNE ST. MAINTENANCE OF TRAFFIC
W21-5AR-48
RIGHT SHOULDER CLOSED
NEXT 10.1 MILES
W7-3AP-24
STA. 452+83
EXIST. SIGN TO BE RELOCATED
140' SHIFT
TAPER @ 45 MPH
+50
FROM: STA. 453+30
TO: STA. 453+30
CEDAR ST.
24'
11'
1'
WORK ZONE LANE LINE
I.R. 75 (SB)
+90
27'
STA. 451+33.3, 39.5' LT.
STA. 452+68.8, 30.8' LT.
STA. 452+76.3, 3.9' LT.
MATCHLINE STA. 446+00 SEE SHEET 156
MATCHLINE STA. 454+00 SEE SHEET 158
16 SEE NOTE 1.
447
448
SEE SHEET 175
449
450
451
452
453
+50
SEE NOTE 1.
I.R. 75 (NB)
TWFMSE WALL (TS26)
AS INSTALLED IN PHASE 1
RAMP H
TOWNE ST.
AS INSTALLED IN PHASE 1
TO REMAIN (SIGNS SHIFTED IN PHASE 1)
Paddock Rd
Seymour Ave
1/4 MILE
Towne St
Elmwood Place
EXIT 56
EXIT 8
TO REMAIN
TO REMAIN
EXIT 8
EXIT 7
EXIT 6
EXIT 5
EXIT 4
EXIT 3
EXIT 2
EXIT 1
MILE 8
MILE 7
MILE 6
MILE 5
N
S



LEGEND

- PHASE 2 WORK ZONE
- PORTABLE BARRIER
- TEMPORARY PAVEMENT
- DRUM

DRUM SPACING CHART	
TANGENT	80′ c/c
TAPER	55′ c/c
RADII	10′ c/c

① Δ = 03° 50′ 30″ (LT)
Dc = 0° 40′ 16″
R = 8538.87′
T = 286.37′
L = 572.52′
E = 4.80′
C = 572.42′
C.B. = S 89° 55′ 40″ E

FOR INFORMATION ONLY

0 15 30 60
HORIZONTAL
SCALE IN FEET

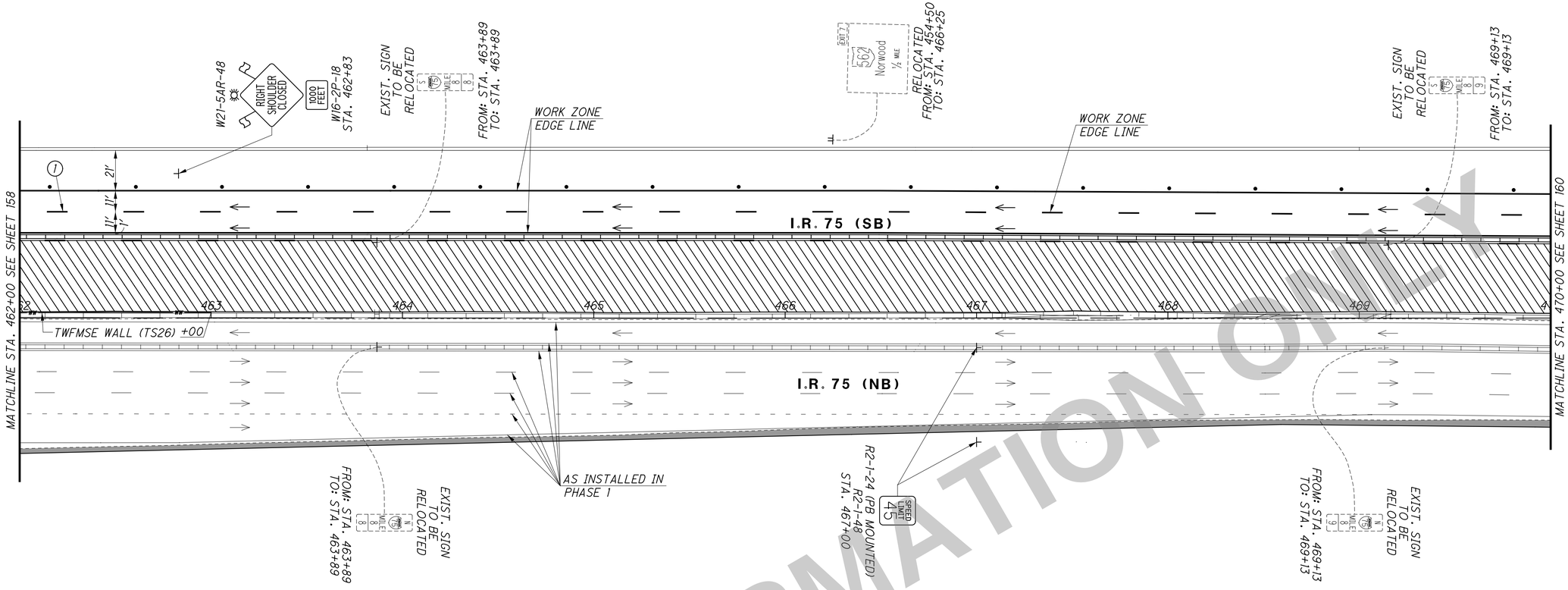
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I.R. 75 - STA. 454+00 TO STA. 462+00

HAM-75-7.85

158
2017

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TYPICAL SECTION - PHASE 2
STA. 462+50 I.R. 75

LEGEND

- PHASE 2 WORK ZONE
- PORTABLE BARRIER
- TEMPORARY PAVEMENT

① Δ = 03° 50′ 30″ (LT)
Dc = 0° 40′ 16″
R = 8538.87′
T = 286.37′
L = 572.52′
E = 4.80′
C = 572.42′
C.B. = S 89° 55′ 40″ E

FOR INFORMATION ONLY

0 15 30 60
HORIZONTAL SCALE IN FEET

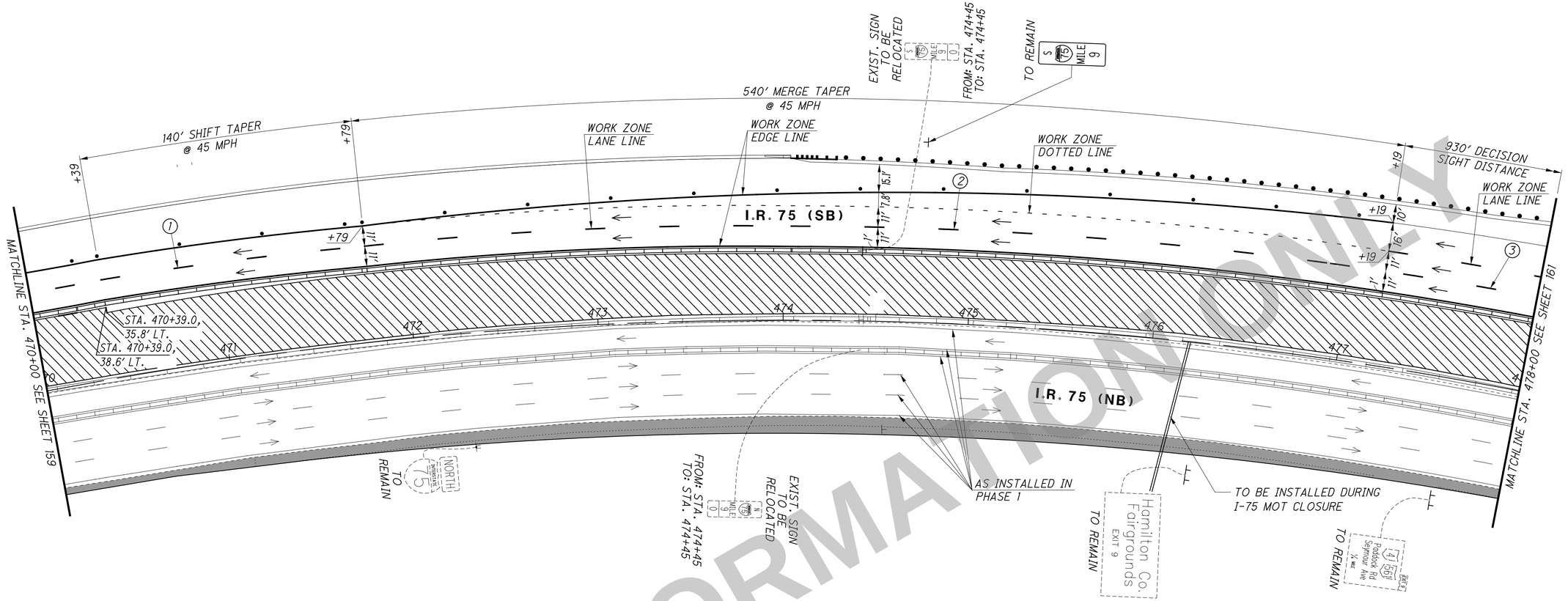
CALCULATED SMM
CHECKED JDS

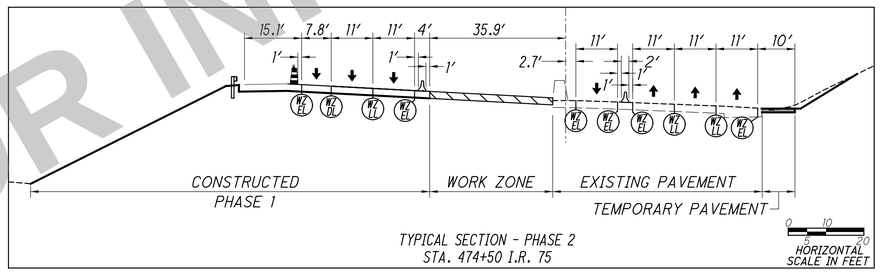
MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I.R. 75 - STA. 462+00 TO STA. 470+00

HAM-75-7.85

159
2017

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LEGEND

- PHASE 2 WORK ZONE
- PORTABLE BARRIER
- TEMPORARY PAVEMENT

① Δ = 04° 18' 08" (RT)
Dc = 02° 59' 46"
R = 1912.44'
T = 71.84'
L = 143.60'
E = 1.35'
C = 143.57'
C.B. = N 82° 43' 43" E

② Δ = 13° 17' 38" (RT)
Dc = 02° 32' 27"
R = 2254.95'
T = 262.78'
L = 523.20'
E = 15.26'
C = 522.02'
C.B. = S 88° 58' 35" E

③ Δ = 07° 27' 18" (RT)
Dc = 02° 39' 21"
R = 2157.41'
T = 140.56'
L = 280.71'
E = 4.57'
C = 280.56'
C.B. = S 78° 32' 31" E

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET

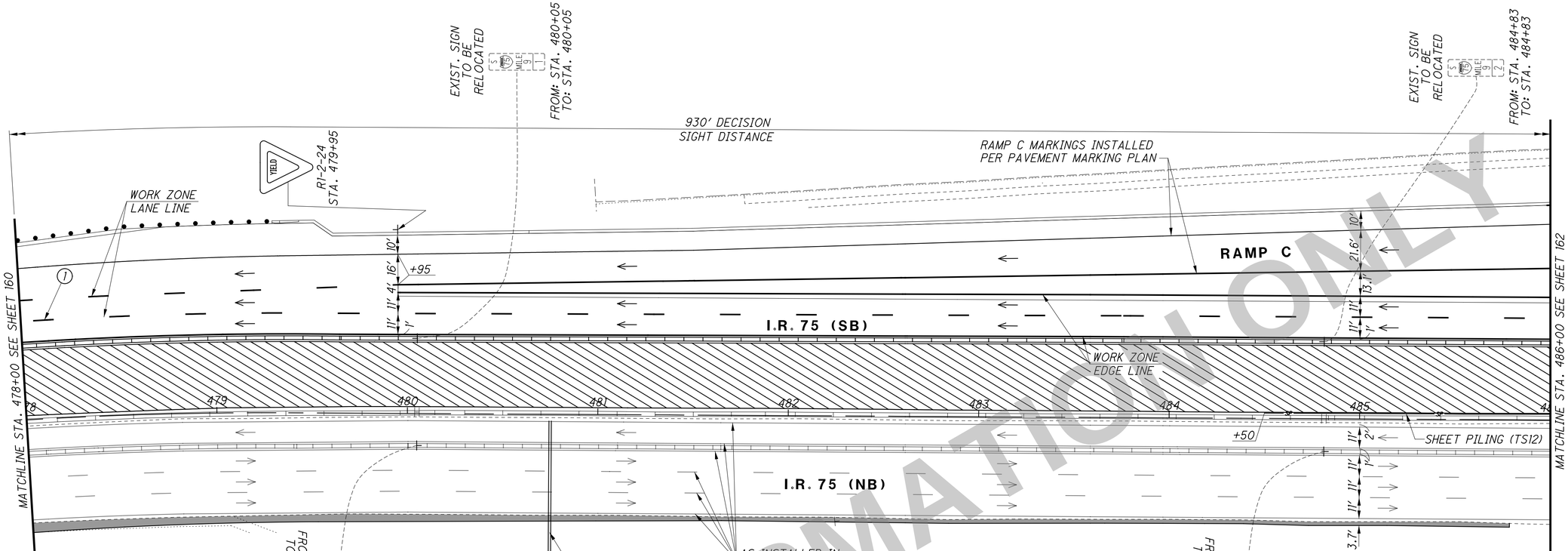
CALCULATED SMM
CHECKED JDS

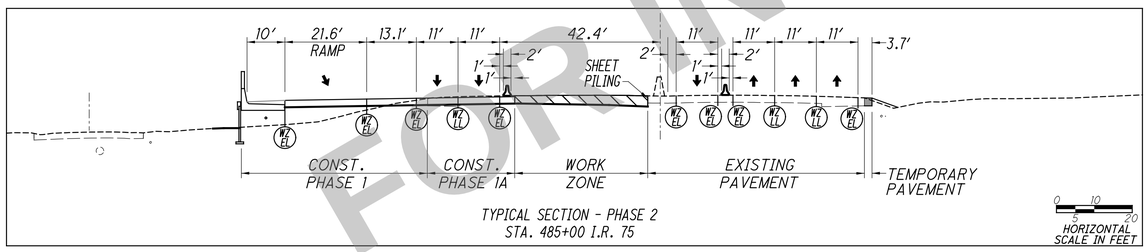
MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I.R. 75 - STA. 470+00 TO STA. 478+00

HAM-75-7.85

160
2017

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TYPICAL SECTION - PHASE 2
STA. 485+00 I.R. 75

LEGEND

- PHASE 2 WORK ZONE
- PORTABLE BARRIER
- TEMPORARY PAVEMENT

(1) Δ = 07° 27' 18" (RT)
Dc = 02° 39' 21"
R = 2157.41'
T = 140.56'
L = 280.71'
E = 4.57'
C = 280.56'
C.B. = S 78° 32' 31" E

NOTE: THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I.R. 75 - STA. 478+00 TO STA. 486+00

HAM-75-7.85

161
2017

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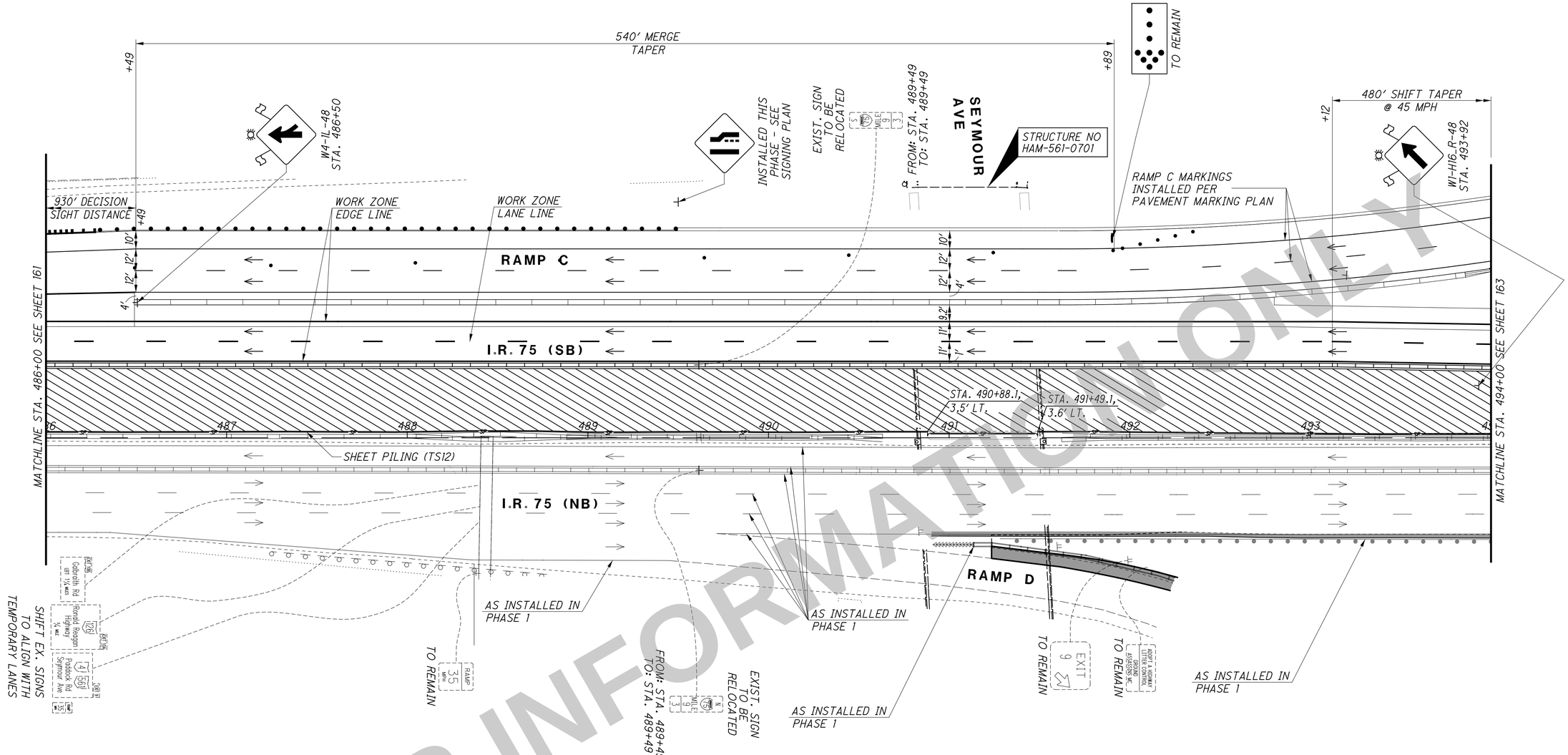
MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I.R. 75 - STA. 486+00 TO STA. 494+00

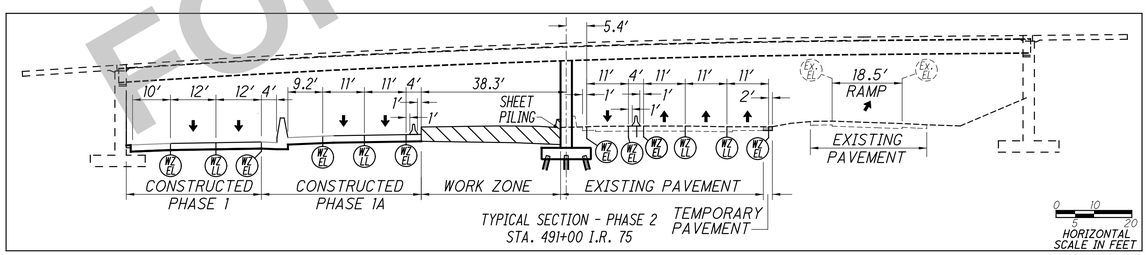
HAM-75-7.85

162
2017

CALCULATED SMM
CHECKED JDS

HORIZONTAL SCALE IN FEET
0 15 30 60





LEGEND

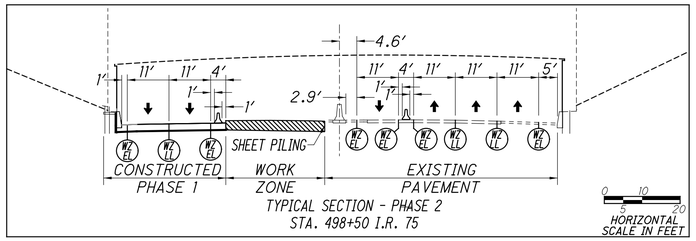
- PHASE 2 WORK ZONE
- PORTABLE BARRIER
- TEMPORARY PAVEMENT

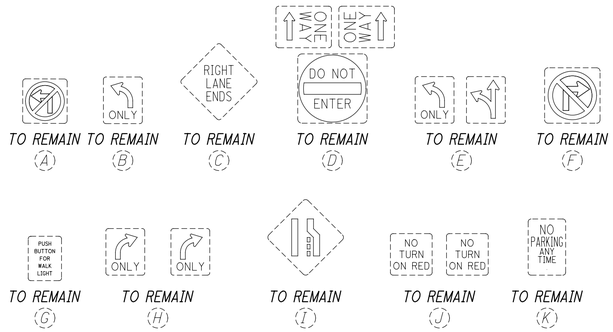
NOTE: THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.

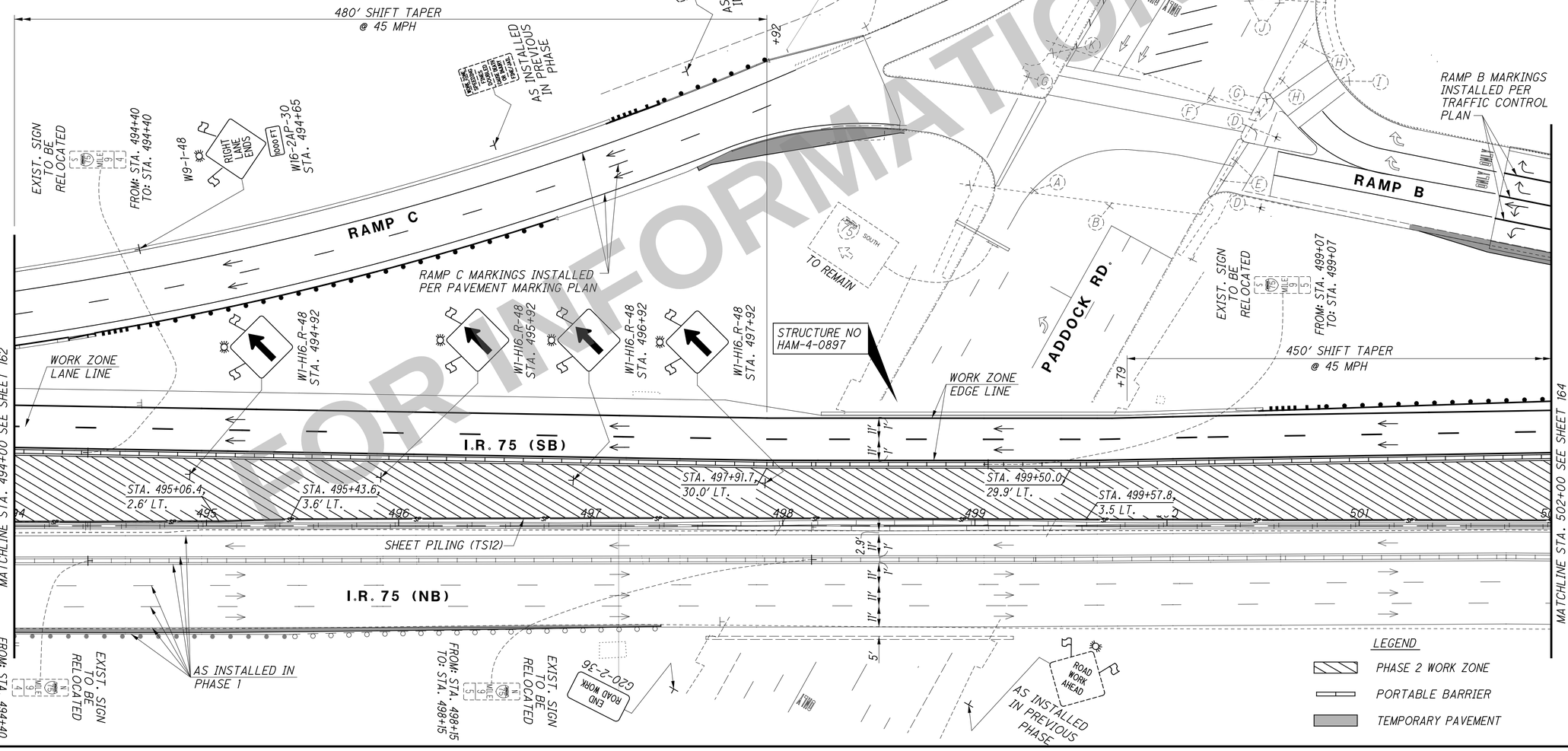
FOR INFORMATION ONLY

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NOTE: THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.







FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I.R. 75 - STA. 494+00 TO STA. 502+00

HAM-75-7.85

163
2017

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MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I.R. 75 - STA. 502+00 TO STA. 510+00

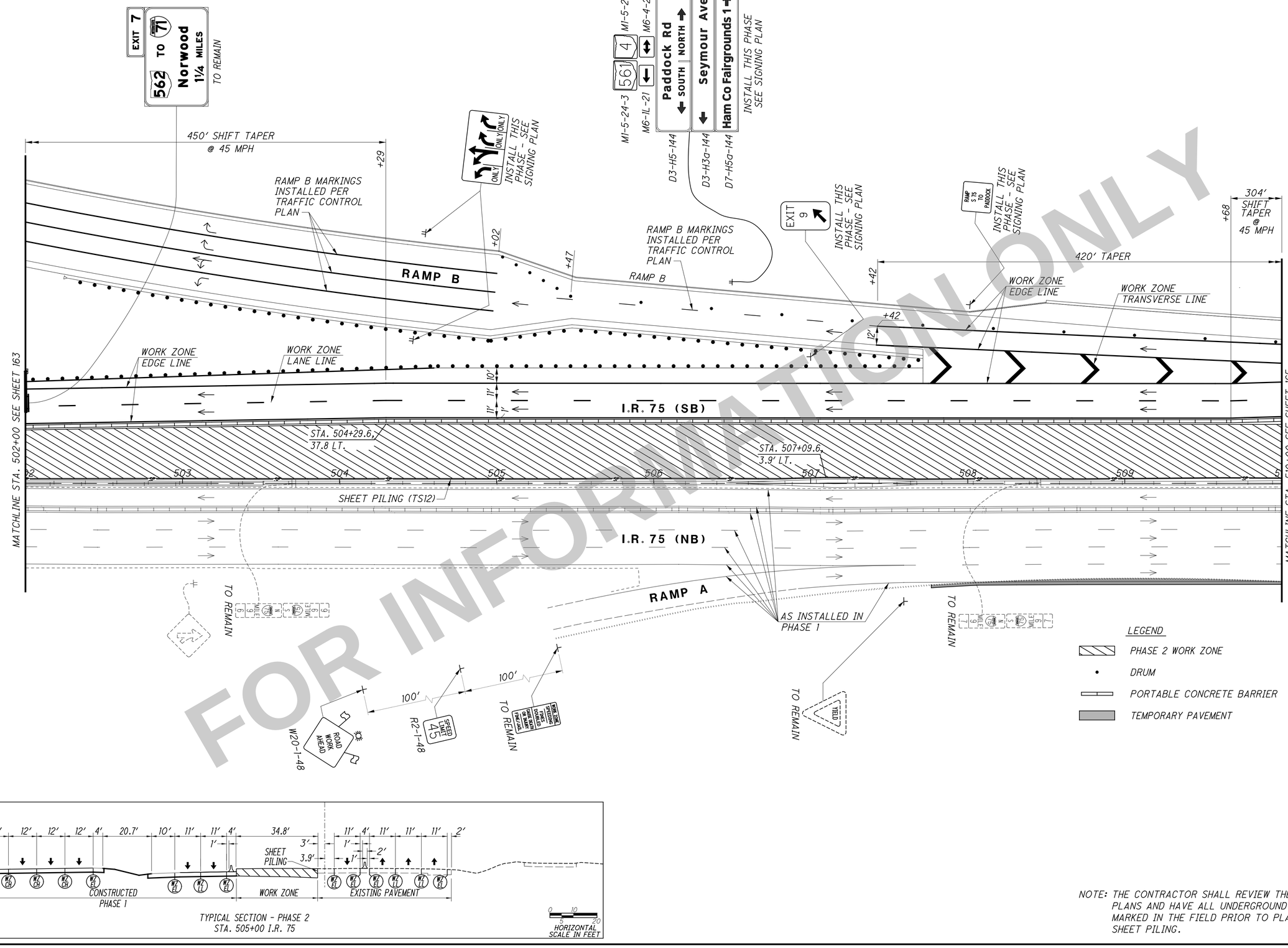
HAM-75-7.85

164
2017

CALCULATED SMM
CHECKED JDS

HORIZONTAL SCALE IN FEET
0 15 30 60

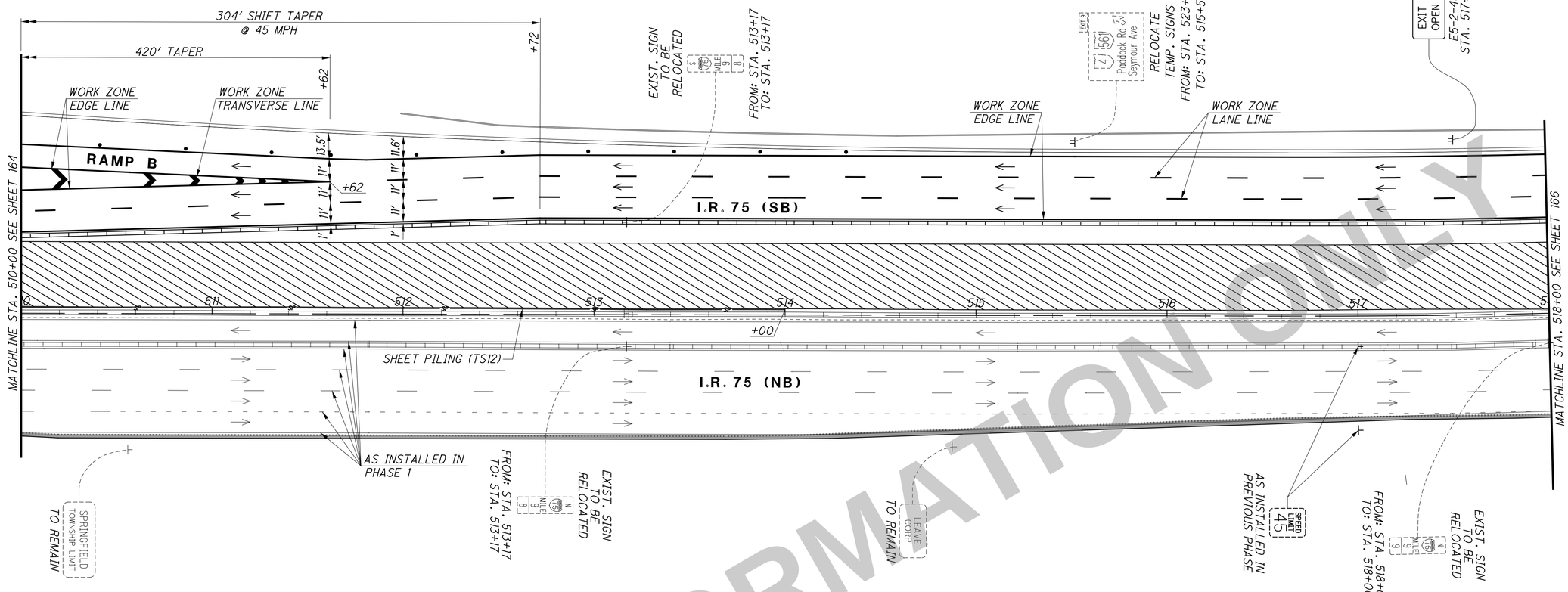
FOR INFORMATION ONLY

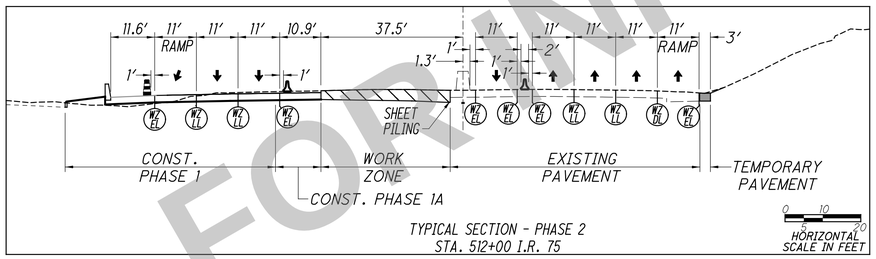


TYPICAL SECTION - PHASE 2
STA. 505+00 I.R. 75

NOTE: THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.

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LEGEND

- PHASE 2 WORK ZONE
- DRUM
- PORTABLE BARRIER
- TEMPORARY PAVEMENT

NOTE: THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET

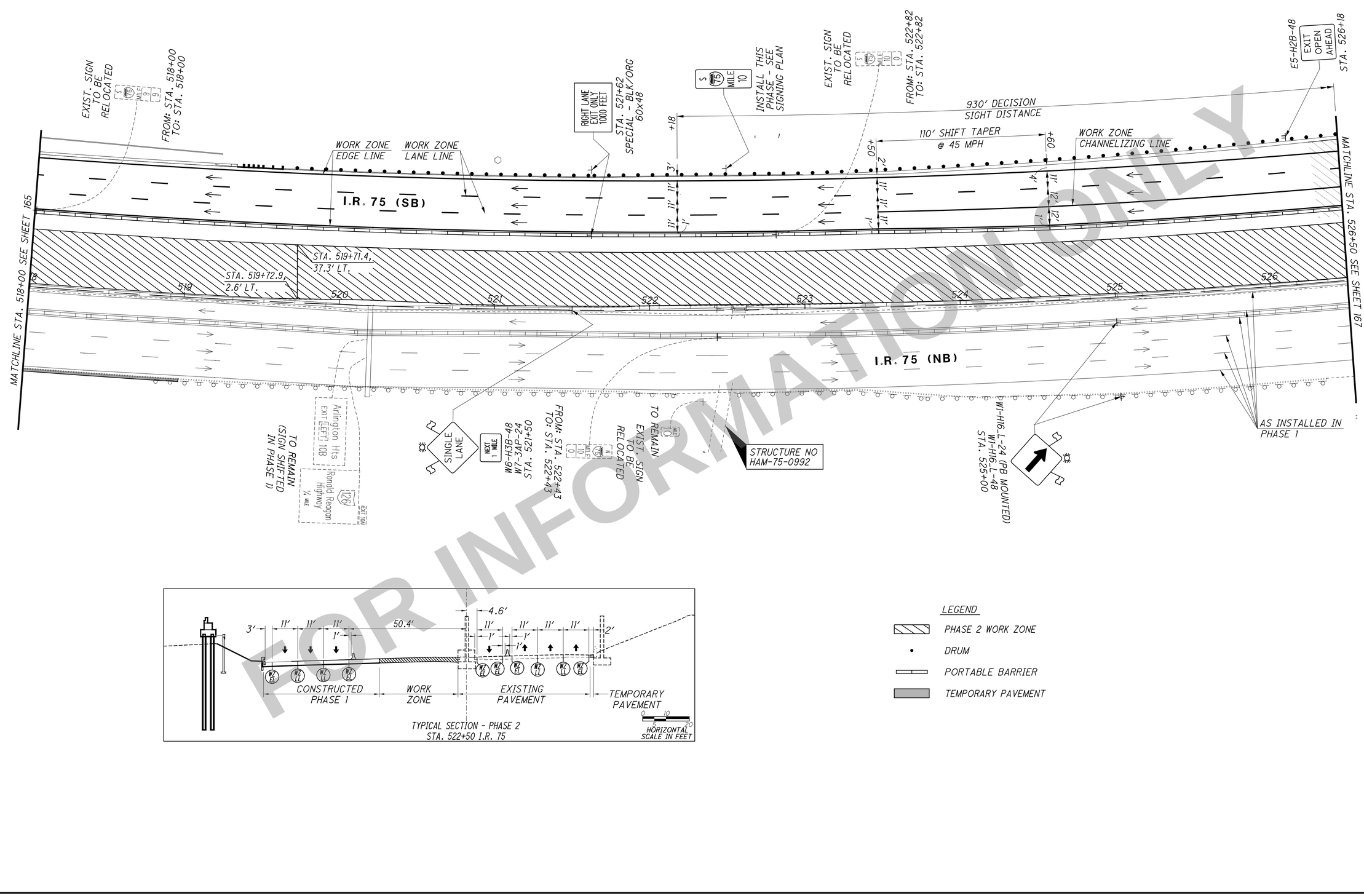
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I.R. 75 - STA. 510+00 TO STA. 518+00

HAM-75-7.85

165
2017

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FOR INFORMATION ONLY

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I.R. 75 - STA. 518+00 TO STA. 526+50

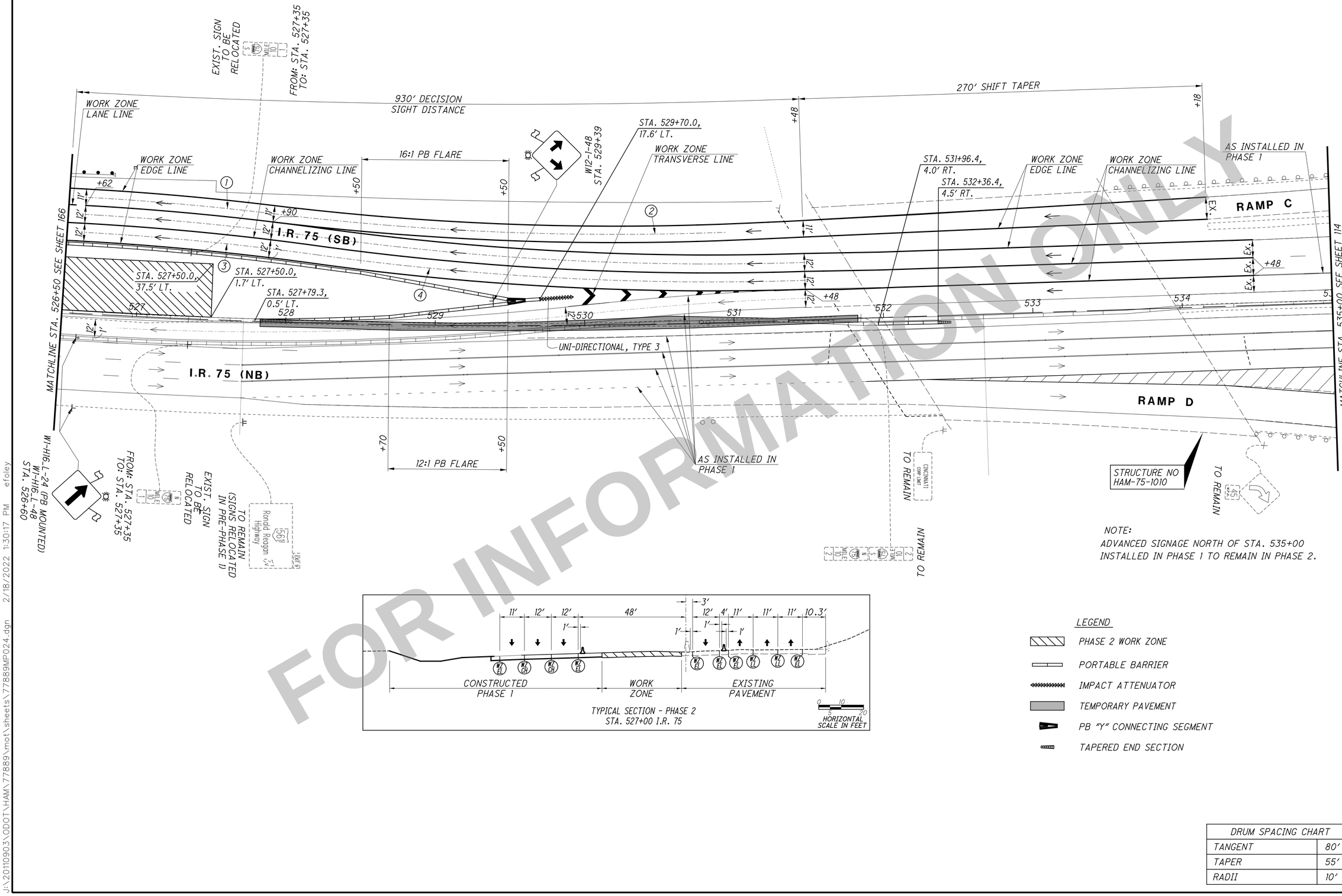
HAM-75-7.85

CALCULATED SMM
CHECKED JDS

HORIZONTAL SCALE IN FEET
0 15 30 60

166
2017

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FOR INFORMATION ONLY

TYPICAL SECTION - PHASE 2
STA. 527+00 I.R. 75

NOTE:
ADVANCED SIGNAGE NORTH OF STA. 535+00 INSTALLED IN PHASE 1 TO REMAIN IN PHASE 2.

LEGEND

- PHASE 2 WORK ZONE
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- TEMPORARY PAVEMENT
- PB "Y" CONNECTING SEGMENT
- TAPERED END SECTION

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

0 15 30 60
HORIZONTAL SCALE IN FEET

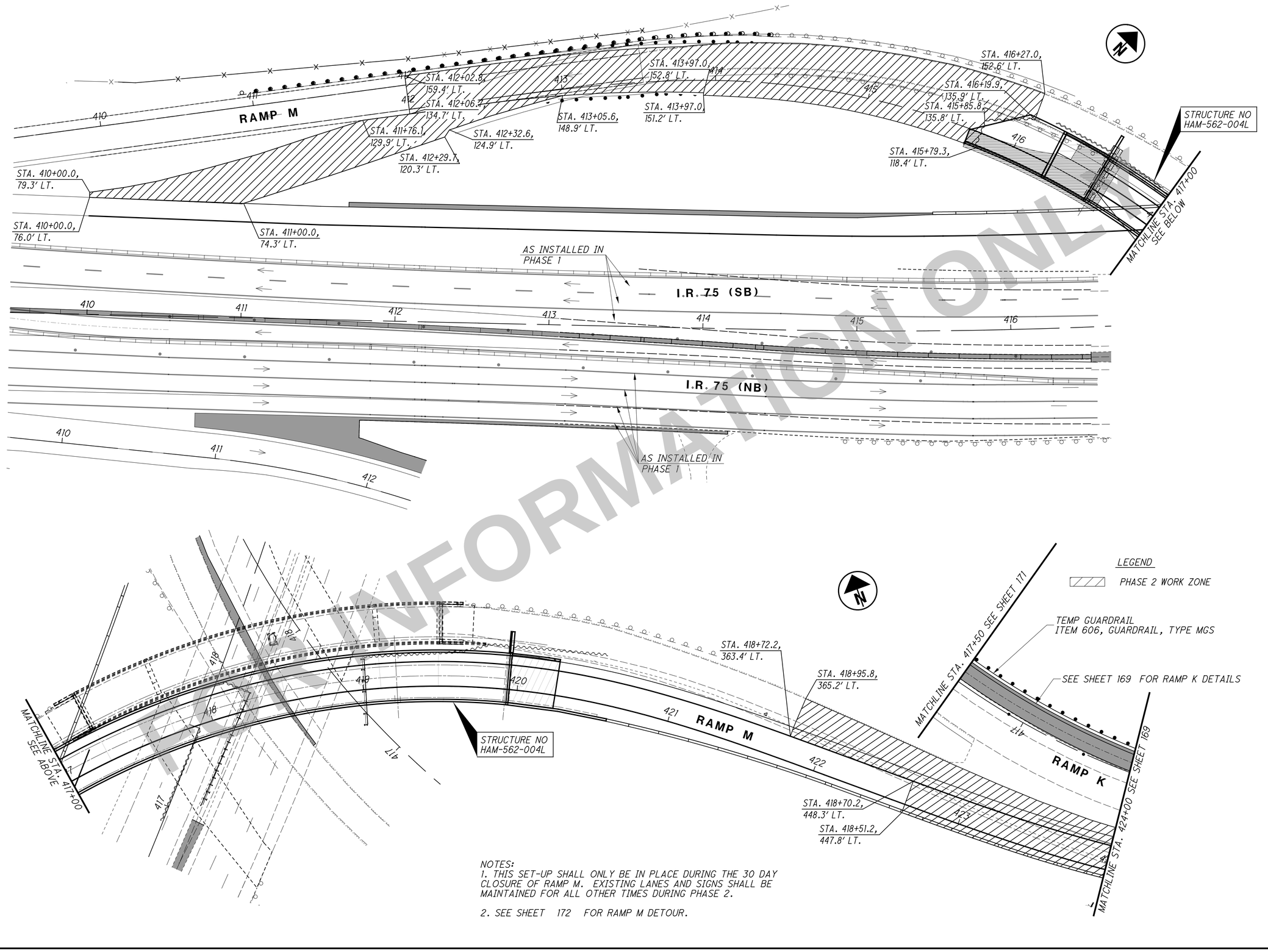
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
I.R. 75 - STA. 526+50 TO STA. 535+00

HAM-75-7.85

167
2017

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FOR INFORMATION ONLY

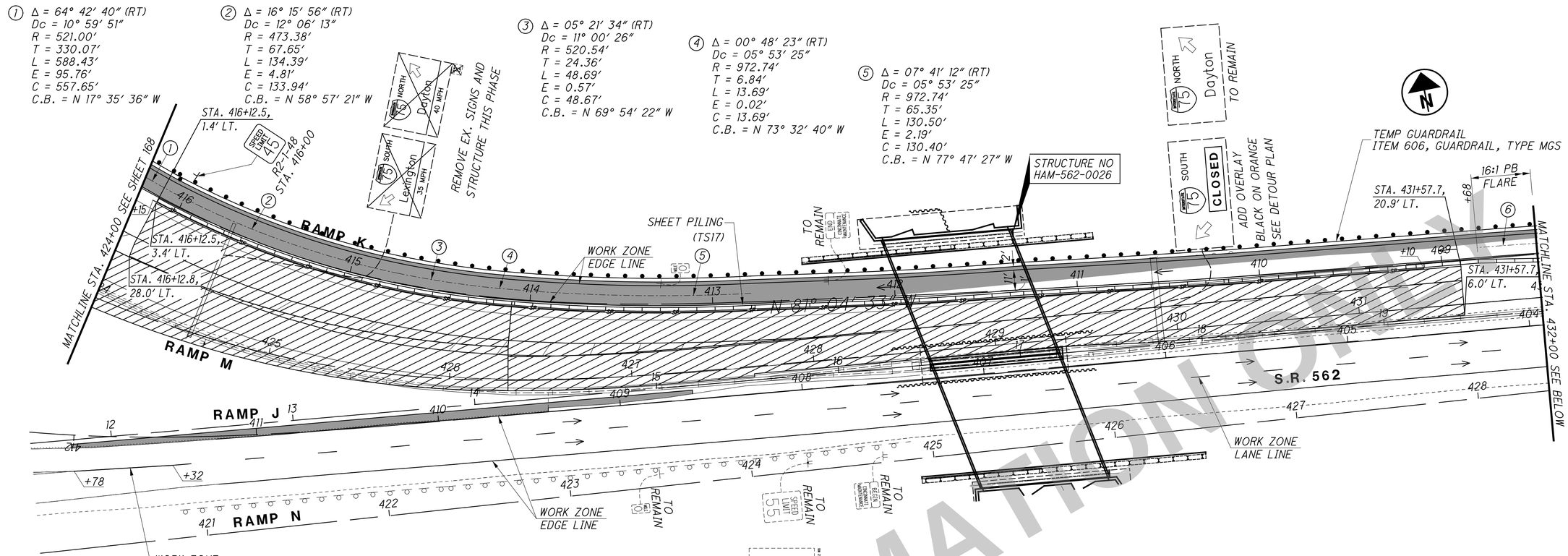
NOTES:
1. THIS SET-UP SHALL ONLY BE IN PLACE DURING THE 30 DAY CLOSURE OF RAMP M. EXISTING LANES AND SIGNS SHALL BE MAINTAINED FOR ALL OTHER TIMES DURING PHASE 2.

2. SEE SHEET 172 FOR RAMP M DETOUR.

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
RAMP M - STA. 409+50 TO STA. 424+00

HAM-75-7.85

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FOR INFORMATION ONLY

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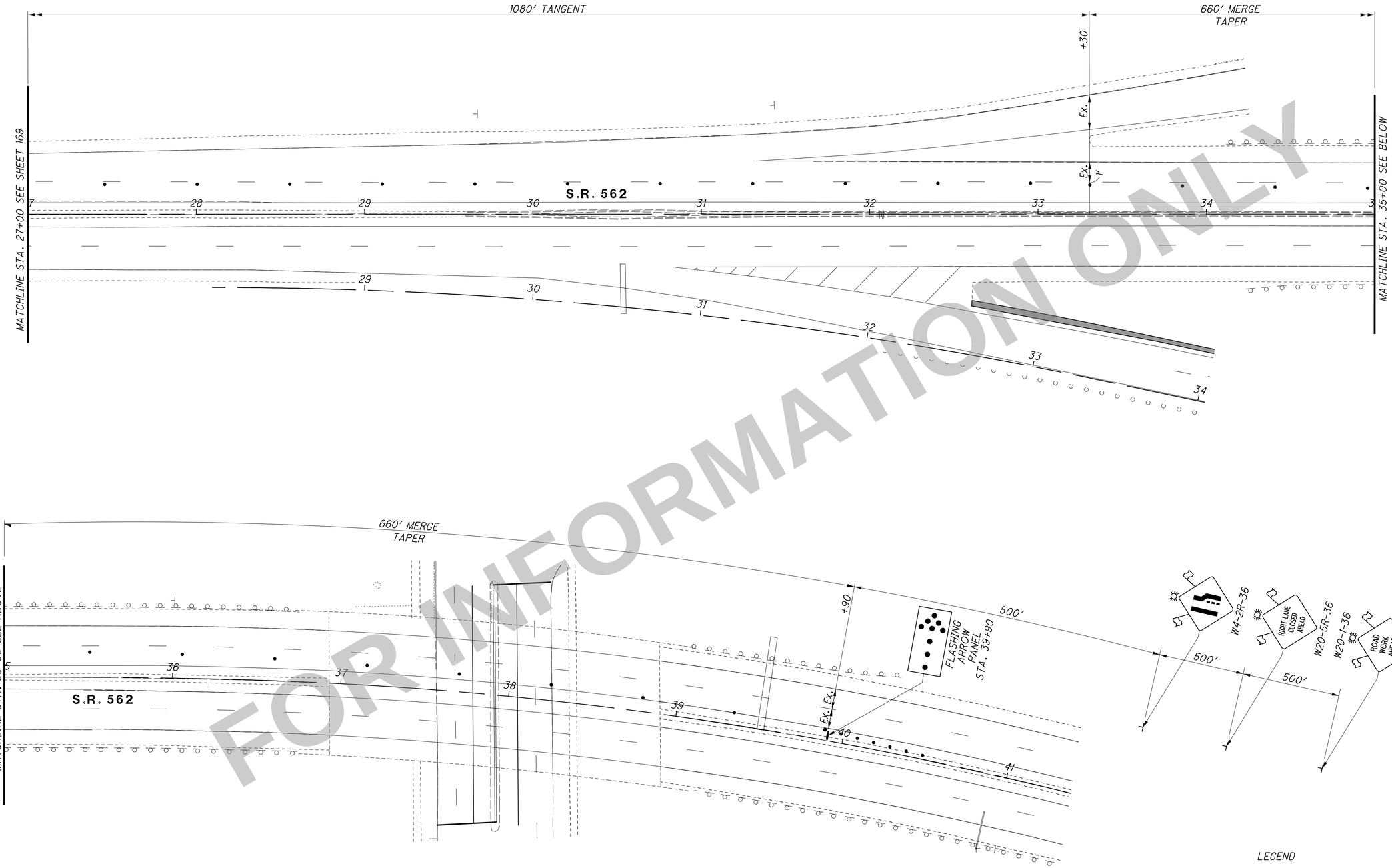
HORIZONTAL SCALE IN FEET 0 15 30 60

CALCULATED SMM CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
RAMP M - STA. 424+00 TO STA. 27+00

HAM-75-7.85

169
2017



FOR INFORMATION ONLY

DRUM SPACING CHART	
TANGENT	80′ c/c
TAPER	55′ c/c
RADII	10′ c/c

LEGEND

• DRUM

HORIZONTAL SCALE IN FEET
0 15 30 60

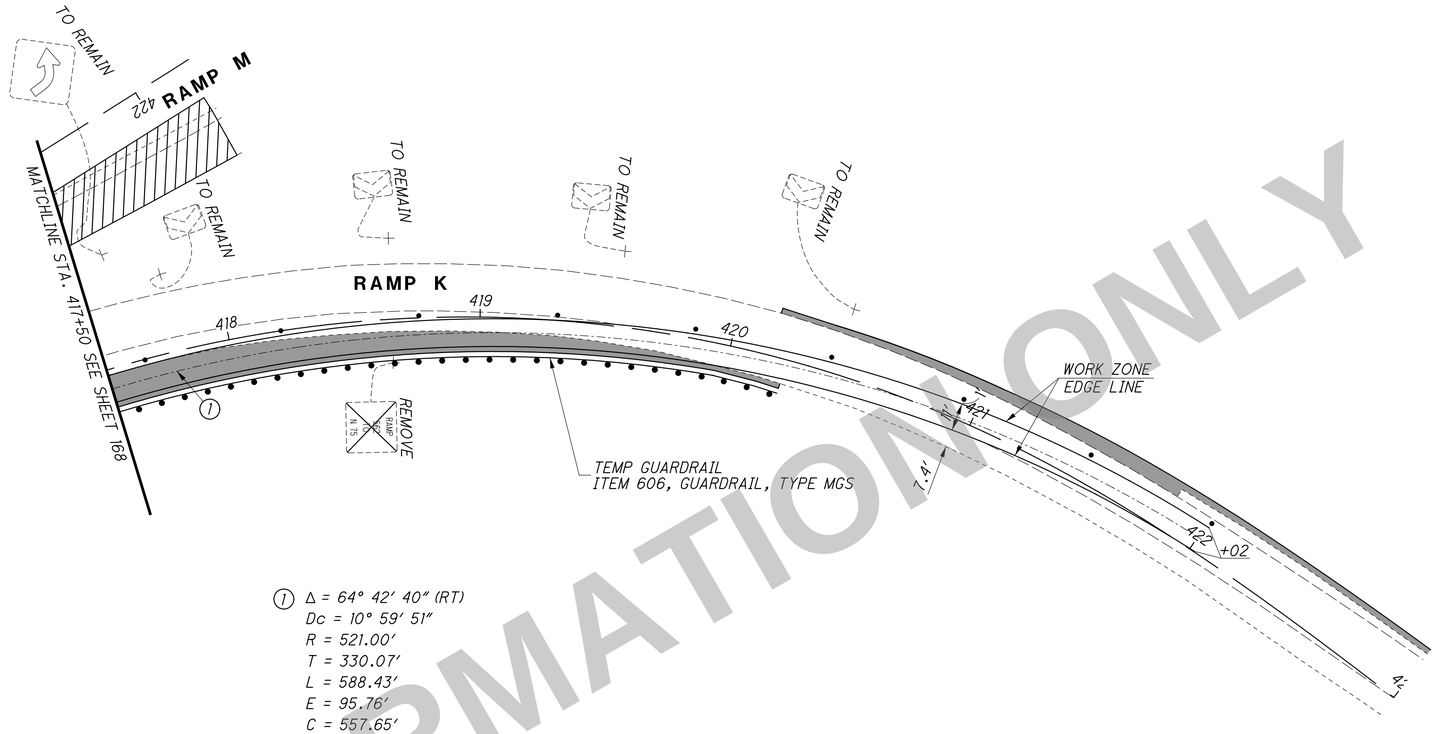
CALCULATED SMM
CHECKED JDS

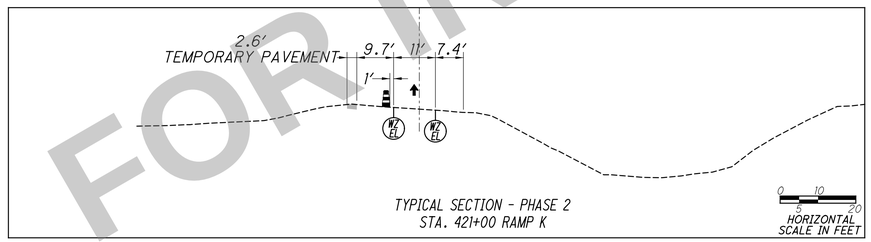
MAINTENANCE OF TRAFFIC PLAN - PHASE 2
S.R. 562 - STA. 27+00 TO STA. 41+00

HAM-75-7.85

170
2017

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LEGEND

- PHASE 2 WORK ZONE
- PORTABLE BARRIER
- TEMPORARY PAVEMENT

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

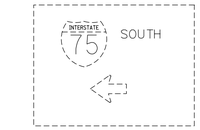
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
RAMP K - STA. 417+50 TO STA. 423+00

HAM-75-7.85

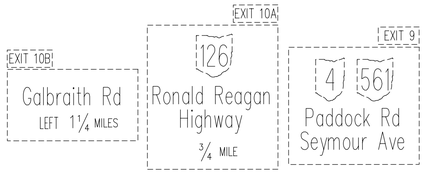
171
2017

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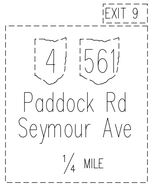
CANTILEVER MOUNTED SIGN

(1)



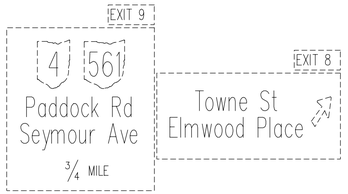
TRUSS MOUNTED SIGNS

(2)



GROUND MOUNTED SIGN

(3)



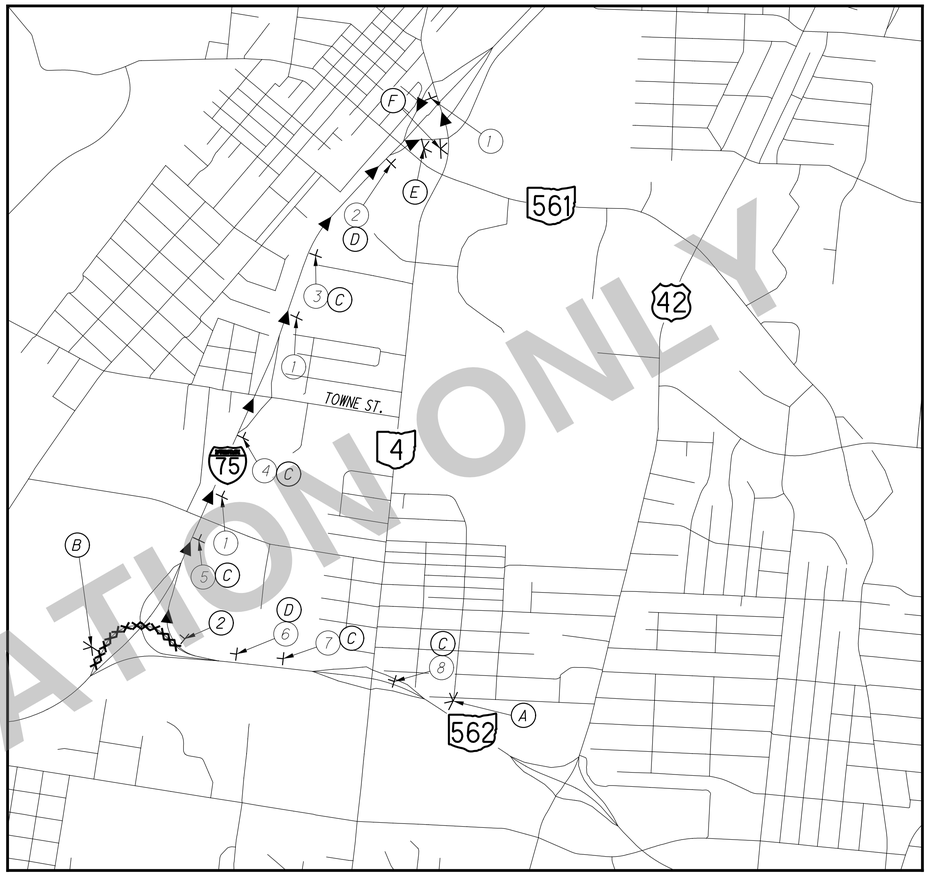
TRUSS MOUNTED SIGNS

(4)

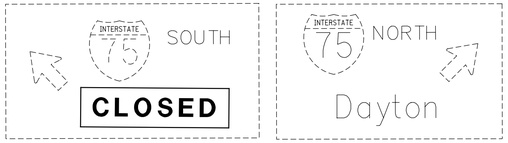


CANTILEVER MOUNTED SIGN

(5)

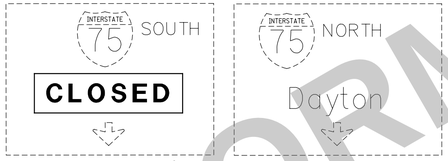


ALL OVERHEAD WORK (INCLUDING BEAM PLACEMENT) IMPACTING I.R. 75 TRAFFIC BELOW SHALL BE COMPLETED PER ODOT SCD MT-99.60



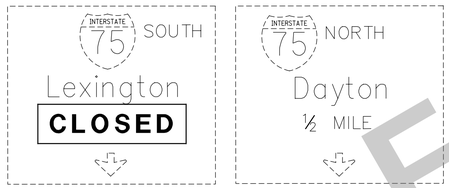
TRUSS MOUNTED SIGNS

(6)



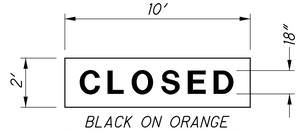
TRUSS MOUNTED SIGNS

(7)



TRUSS MOUNTED SIGNS

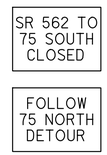
(8)



BLACK ON ORANGE OVERLAY "CLOSED" SIGN

PORTABLE CHANGEABLE MESSAGE SIGNS

DURING CLOSURE



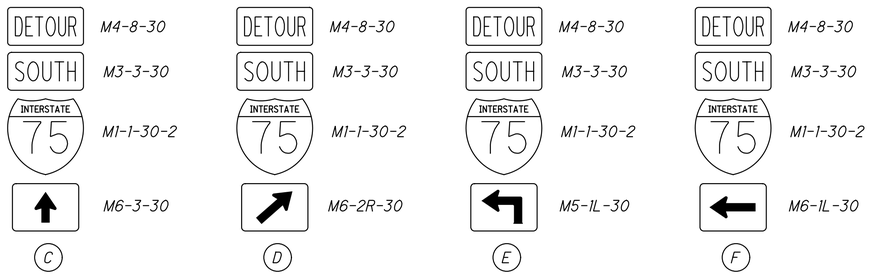
(A)

ONE WEEK PRIOR TO CLOSURE



W20-H13-60

(B)



(C) (D) (E) (F)

LEGEND

× RAMP CLOSURE

▶ DETOUR ROUTE

⊥ EXISTING SIGN SUPPORT

⊻ TEMPORARY SIGN SUPPORT

NOTES:
1. THIS SET-UP SHALL ONLY BE IN PLACE DURING THE 30 DAY CLOSURE OF RAMP M. THE PHASE 1 MOT SET-UP SHALL REMAIN IN PLACE FOR ALL OTHER TIMES DURING PHASE 2.

FOR INFORMATION ONLY

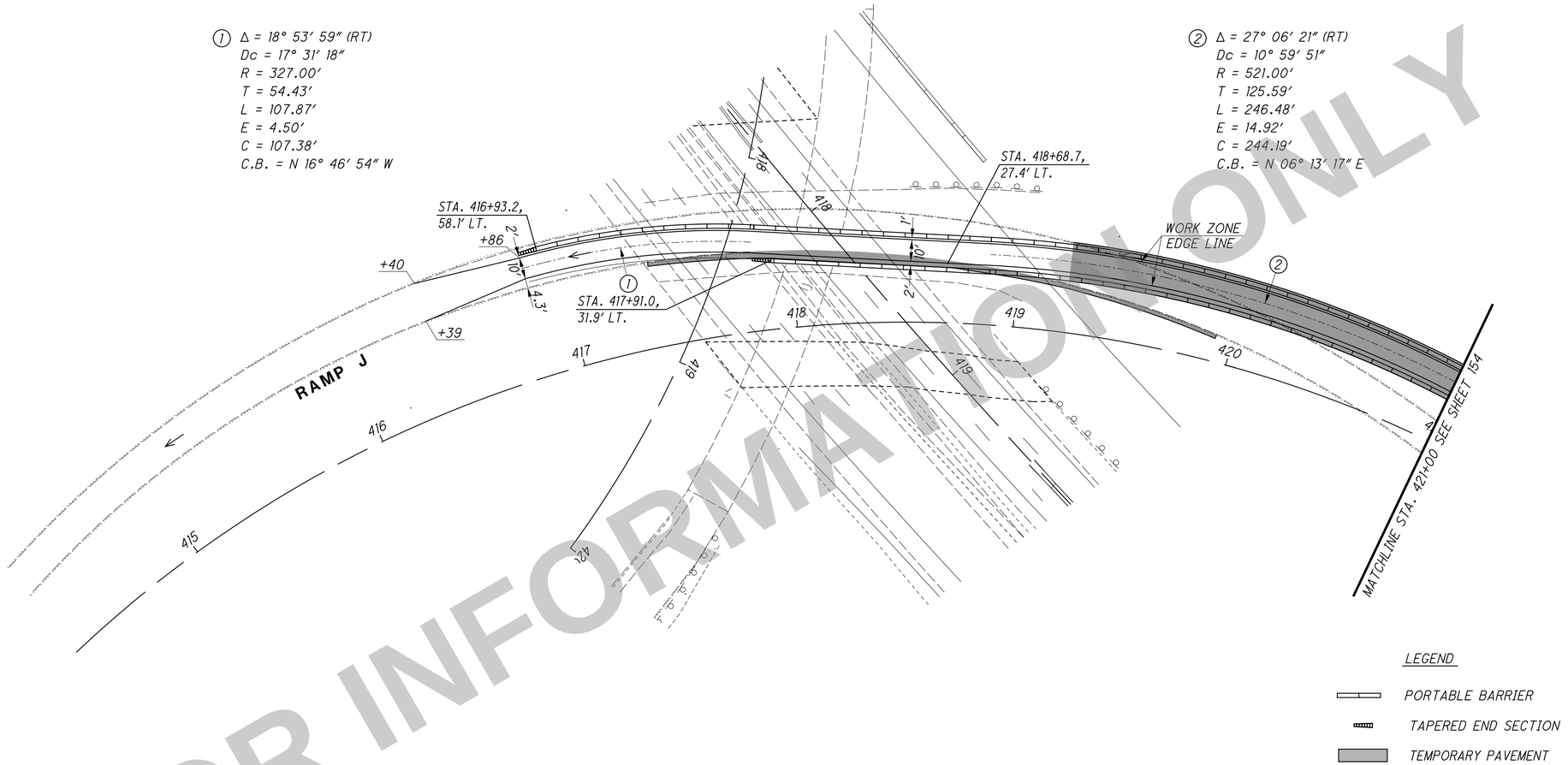
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HORIZONTAL SCALE IN FEET
0 500 1000 2000

CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC DETOUR PLAN
RAMP M - PHASE 2

HAM-75-7.85



FOR INFORMATION ONLY

N

0 15 30 60
HORIZONTAL SCALE IN FEET

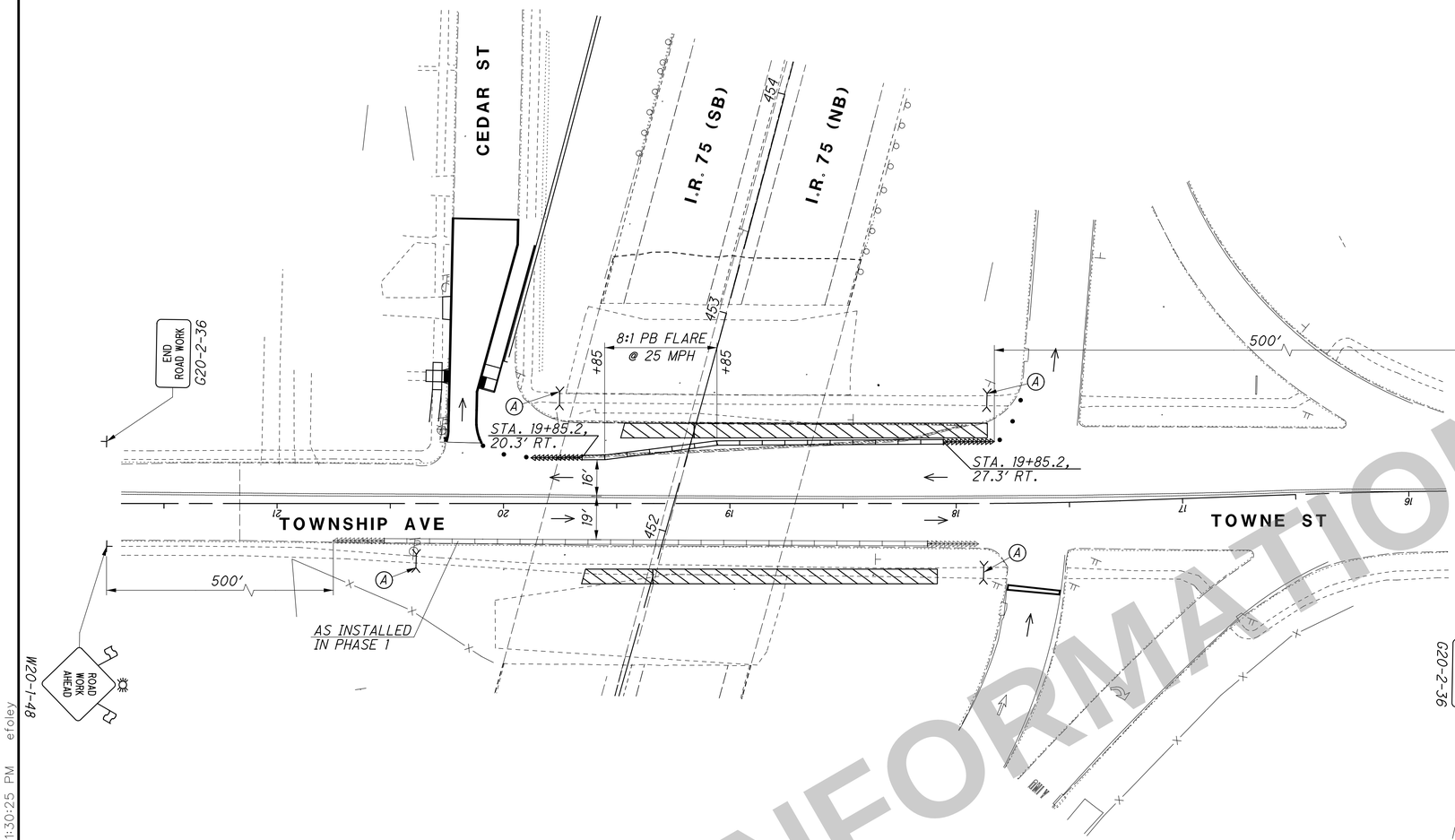
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
RAMP J - STA. 413+00 TO STA. 421+00

HAM-75-7.85

173
2017

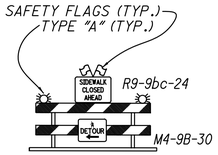
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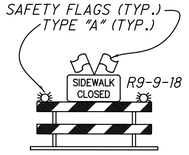


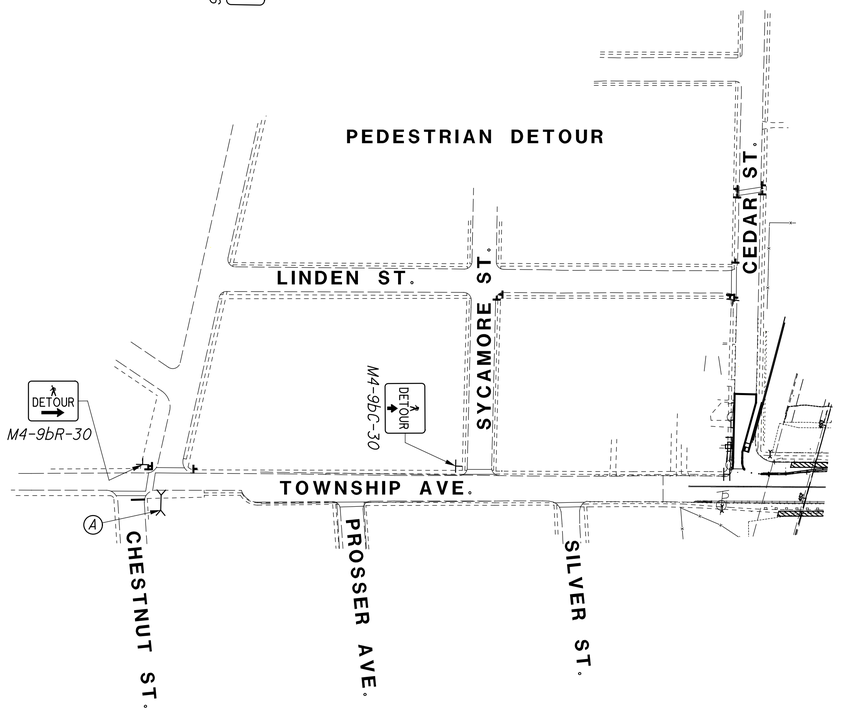
DRUM SPACING CHART	
TANGENT	40' c/c
TAPER	35' c/c
RADII	10' c/c

LEGEND

- PHASES 2 & 3 WORK ZONE
- PORTABLE BARRIER
- TYPE III BARRICADE
- IMPACT ATTENUATOR
- DRUM







FOR INFORMATION ONLY

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HORIZONTAL SCALE IN FEET
0

CALCULATED | CHECKED

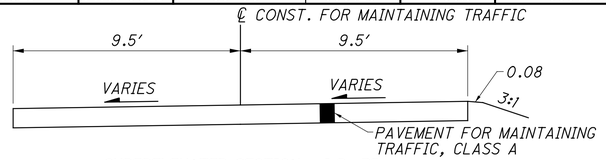
MAINTENANCE OF TRAFFIC PLAN - PHASES 2 & 3
TOWNE STREET

174
2017

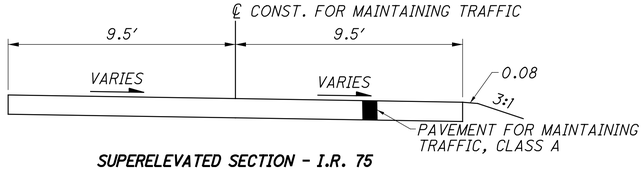
ELEVATION TABLE

I.R. 75 CROSSOVER - 55 MPH

LEFT SIDE		CENTERLINE CONTROL		RIGHT SIDE	
EDGE ELEVATION	SLOPE	STATION	PROFILE GRADE	SLOPE	EDGE ELEVATION
EXISTING	EXISTING	32+00	545.13	EXISTING	EXISTING
545.04	-0.95%	32+02.90	545.13	+1.89%	545.31
546.85	-0.48%	32+50	546.90	+0.95%	546.99
548.67	0.00%	33+00	548.67	0.00%	548.67
550.50	+0.75%	33+50	550.43	-0.80%	550.35
552.35	+1.60%	34+00	552.20	-1.60%	552.05
PROPOSED	PROPOSED	34+37.92	553.54	-1.60%	553.39
PROPOSED	PROPOSED	34+50	553.92	-1.60%	553.77
PROPOSED	PROPOSED	35+00	555.26	-1.60%	555.11



SUPERELEVATED SECTION - I.R. 75
STA. 32+00 TO STA. 33+00



SUPERELEVATED SECTION - I.R. 75
STA. 33+00 TO STA. 35+00

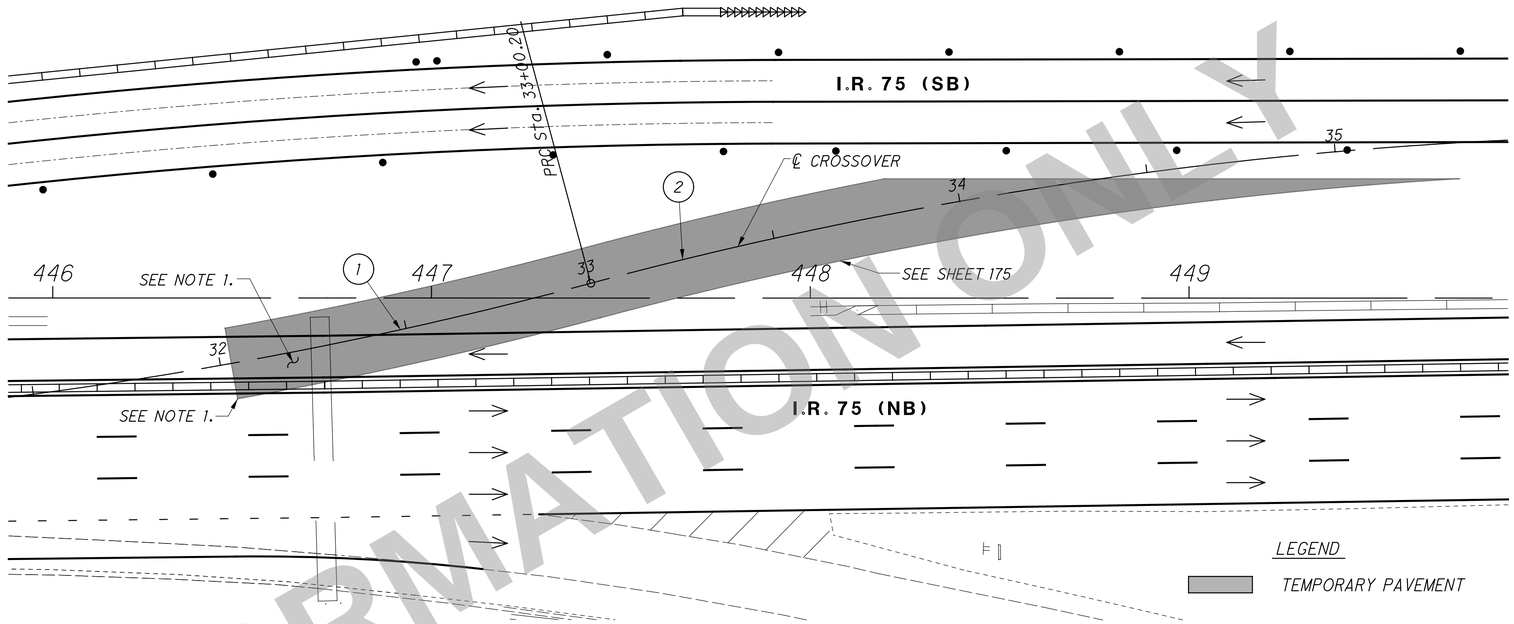
(1) P.I. STA. 31+50.97
Δ = 15° 00′ 32″ (LT)
Dc = 5° 00′ 00″
R = 1,146.00′
T = 150.97′
L = 300.20′
E = 9.90′
C = 299.34′
C.B. = N 16° 59′ 52″ E

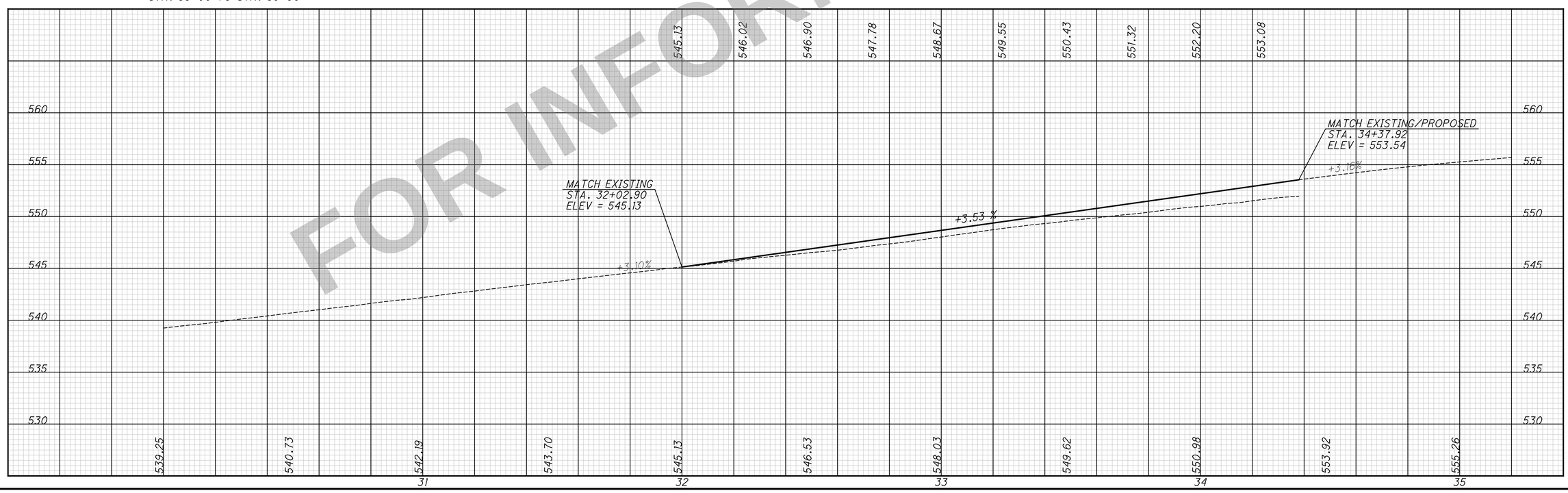
(2) P.I. STA. 34+51.17
Δ = 15° 00′ 32″ (RT)
Dc = 5° 00′ 00″
R = 1,146.00′
T = 150.97′
L = 300.20′
E = 9.90′
C = 299.34′
C.B. = N 16° 59′ 52″ E

NOTES:

1. TEMPORARY PAVEMENT CONSTRUCTION THAT WILL BE UTILIZED TO TRANSITION THROUGH THE CROSSOVER IN PHASE 3 SHALL NOT BE COMPLETED UNTIL THE FINAL NIGHT OF PHASE 2. THIS WORK SHALL BE DONE WITH THE NB LEFT LANE CLOSED PER ODOT SCD MT-95.30. ADDITIONALLY THE SB LEFT LANE (SHOWN IN CONTRAFLOW) SHALL BE CLOSED DURING THE FINAL NIGHT OF PHASE 2. THIS CLOSURE SHALL OCCUR NORTH OF STA 532+00 TO PREVENT THE CONTRAFLOW LANE FROM DEVELOPING, AND SHALL BE IMPLEMENTED PER ODOT SCD MT-95.30. BOTH LANE CLOSURE ARE ONLY ALLOWED TO BE IN PLACE WHEN SPECIFIED BY THE PERMITTED LANE CLOSURE POLICY.

2. DURING THE HOURS SPECIFIED IN ODOT'S PERMITTED LANE CLOSURE POLICY (HTTP://PLCM.DOT.STATE.OH.US/), LEFT LANE CLOSURES MAY BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR CROSSOVER CONSTRUCTION ALONG I.R. 75.





FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED BER
CHECKED DLR

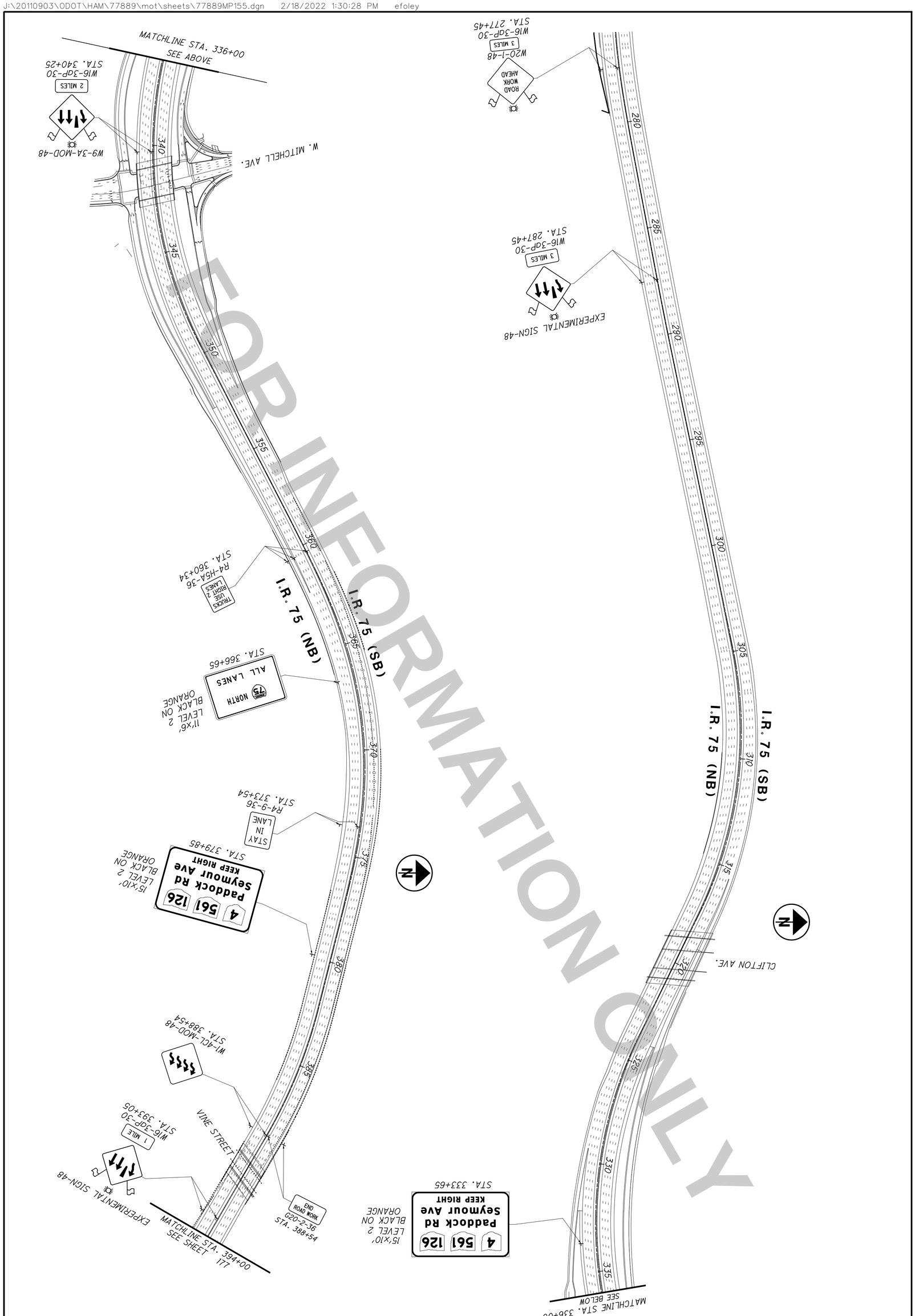
MAINTENANCE OF TRAFFIC PLAN - PHASE 2
TEMPORARY CROSSOVER

HAM-75-7.85

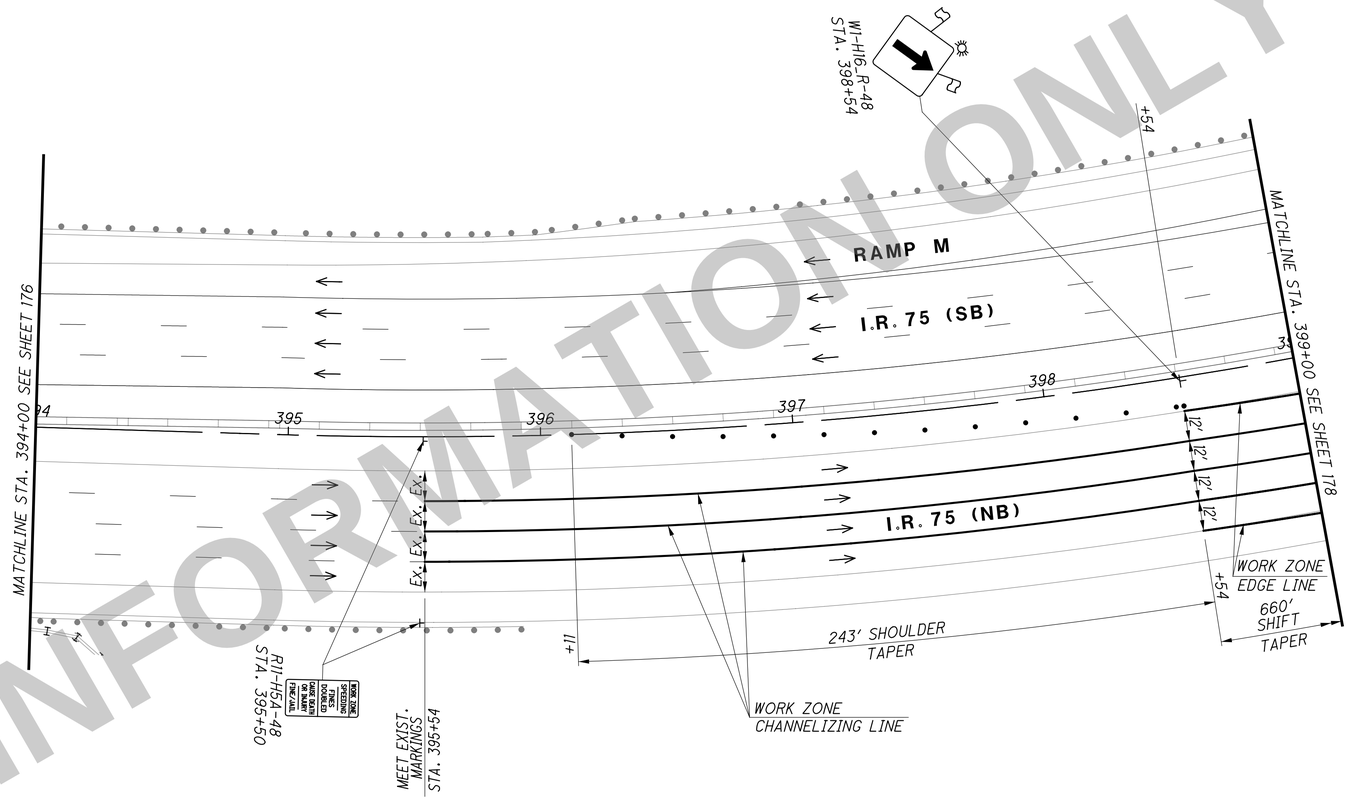
175
2017

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176 / 2017	HAM-75-7.85	MAINTENANCE OF TRAFFIC PLAN - PHASE 3 I.R. 75 - STA. 276+00 TO STA. 394+00	CALCULATED JF CHECKED JDS	0 100 50 200 HORIZONTAL SCALE IN FEET	.



FOR INFORMATION ONLY

LEGEND

• DRUM

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I.R. 75 - STA. 394+00 TO STA. 399+00

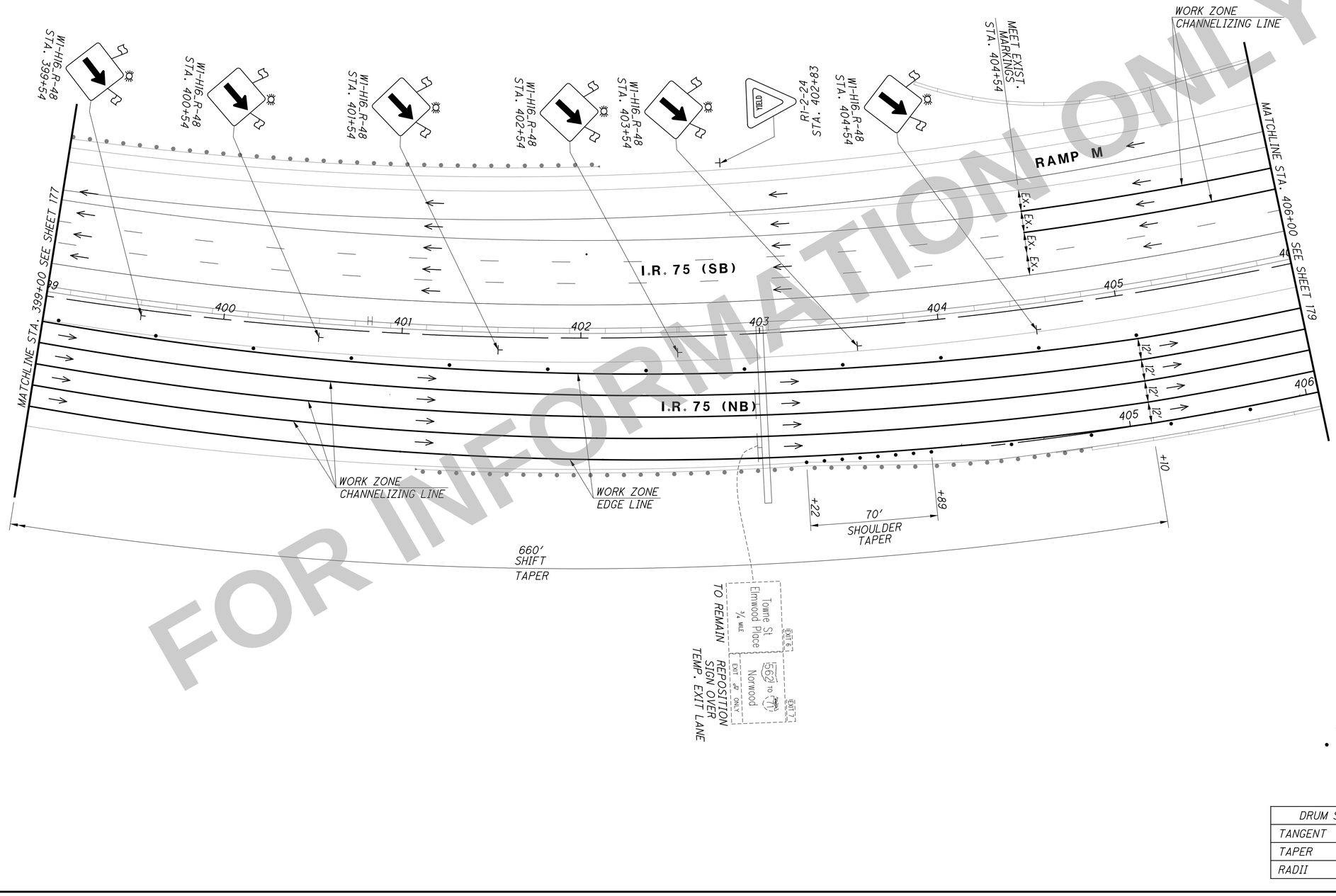
HAM-75-7.85

177
2017

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED SMM
CHECKED JDS

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FOR INFORMATION ONLY

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED SMM
CHECKED JDS

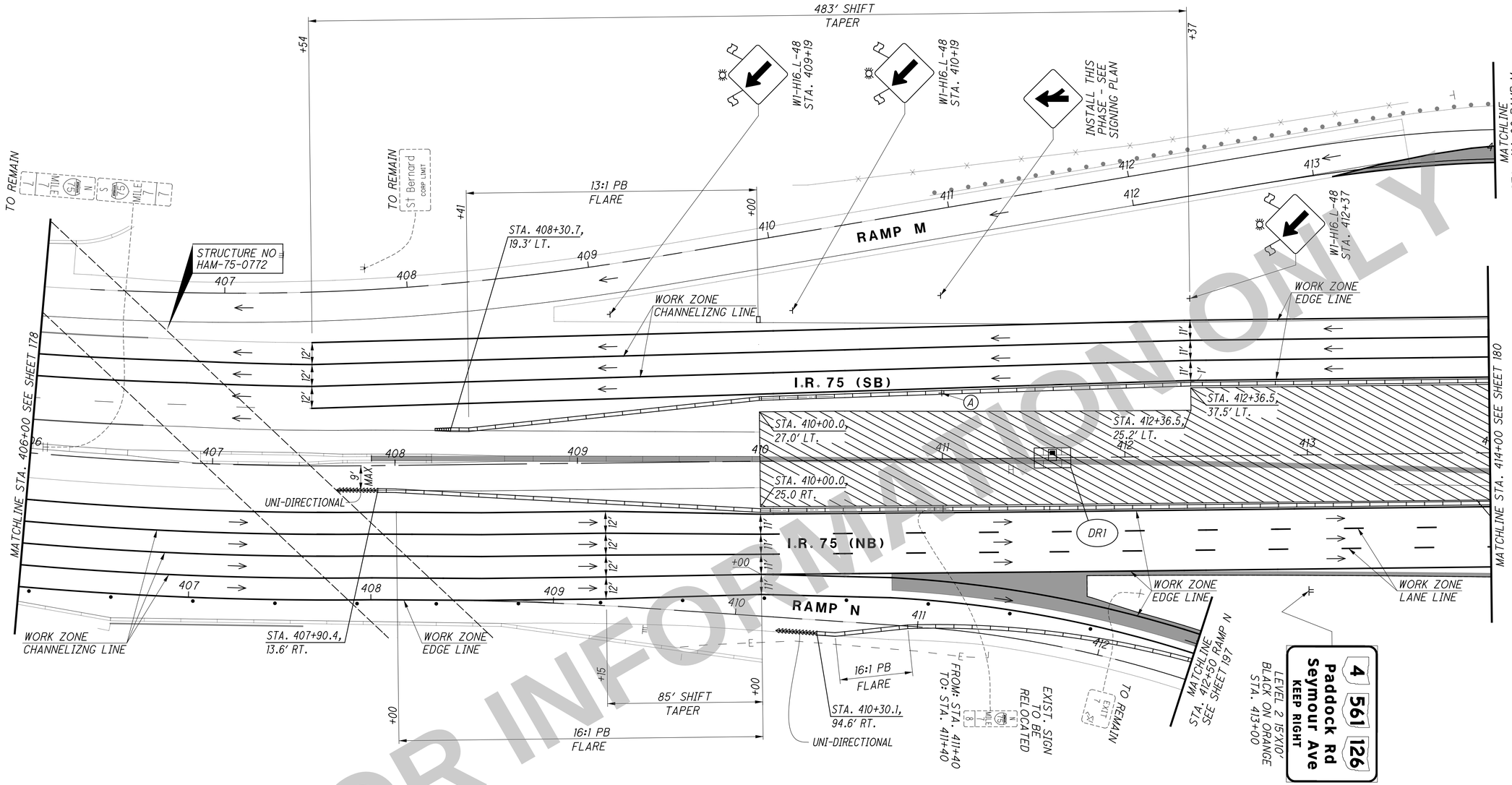
MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I.R. 75 - STA. 399+00 TO STA. 406+00

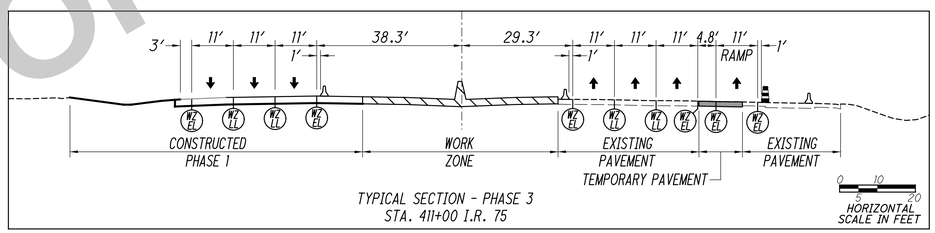
HAM-75-7.85

178
2017

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DR1 - MEDIAN INLET TO BE INSTALLED IN PHASE 4 ALONG WITH THE CONCRETE MEDIAN.





TYPICAL SECTION - PHASE 3
STA. 411+00 I.R. 75

EXIST. SIGN TO BE RELOCATED

FROM: STA. 411+40
TO: STA. 411+40
(A)

LEGEND
- PHASE 3 WORK ZONE
- TEMPORARY PAVEMENT
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- TAPERED END SECTION
- DRUM

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET

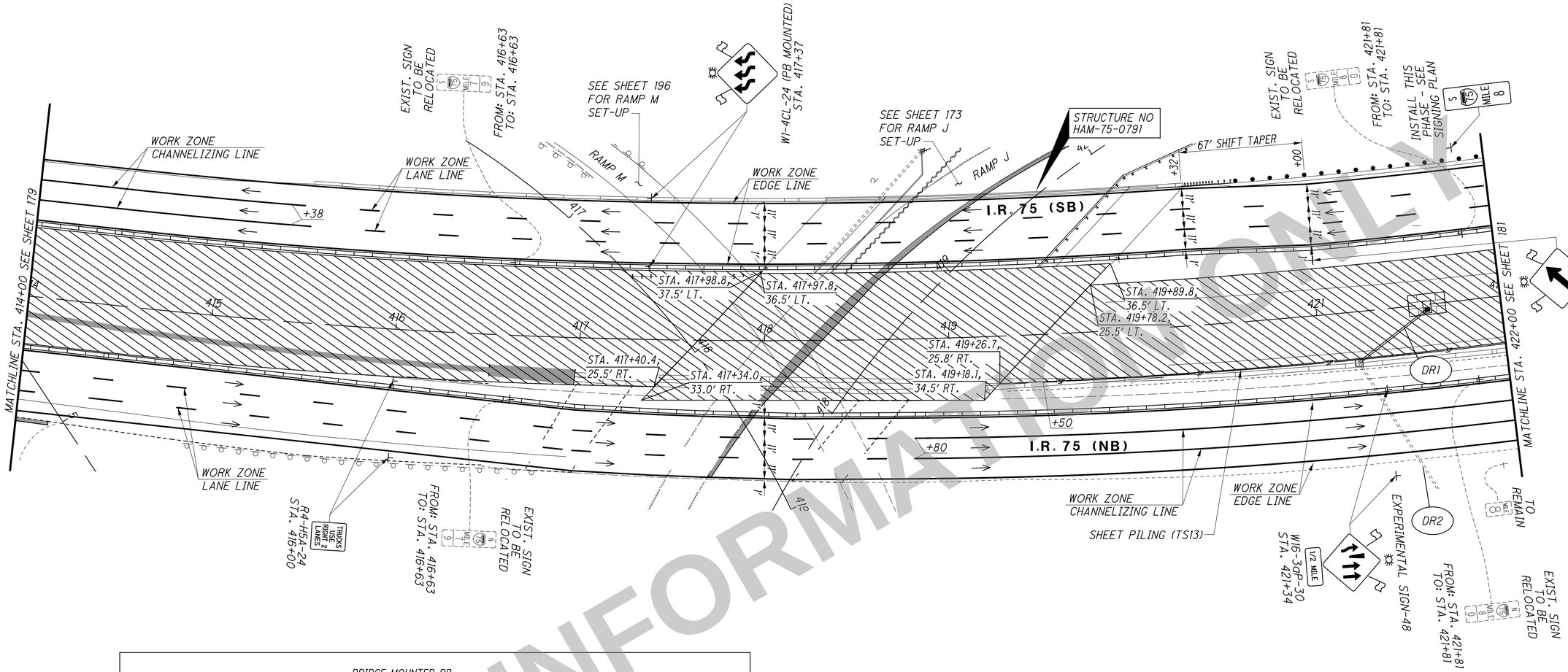
CALCULATED SMM
CHECKED JDS

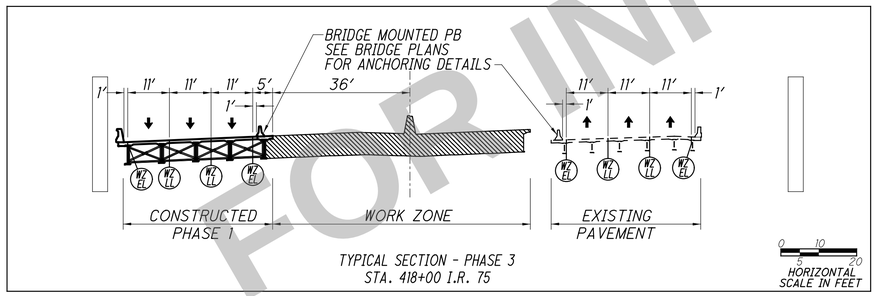
MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I.R. 75 - STA. 406+00 TO STA. 414+00

HAM-75-7.85

179
2017

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DR1 - 47'-12" CONDUIT, TYPE B W/4'X4' BOX CNNECTION TO BE FILLED WITH CONCRETE AND ABANDONED IN PLACE DURING PHASE 3.
DR2 - EXISTING CONDUIT TO REMAIN IN SERVICE UNTIL FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 4.

LEGEND
- PHASE 3 WORK ZONE
- PORTABLE BARRIER
- TEMPORARY PAVEMENT

NOTE: THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED SMM
CHECKED JDS

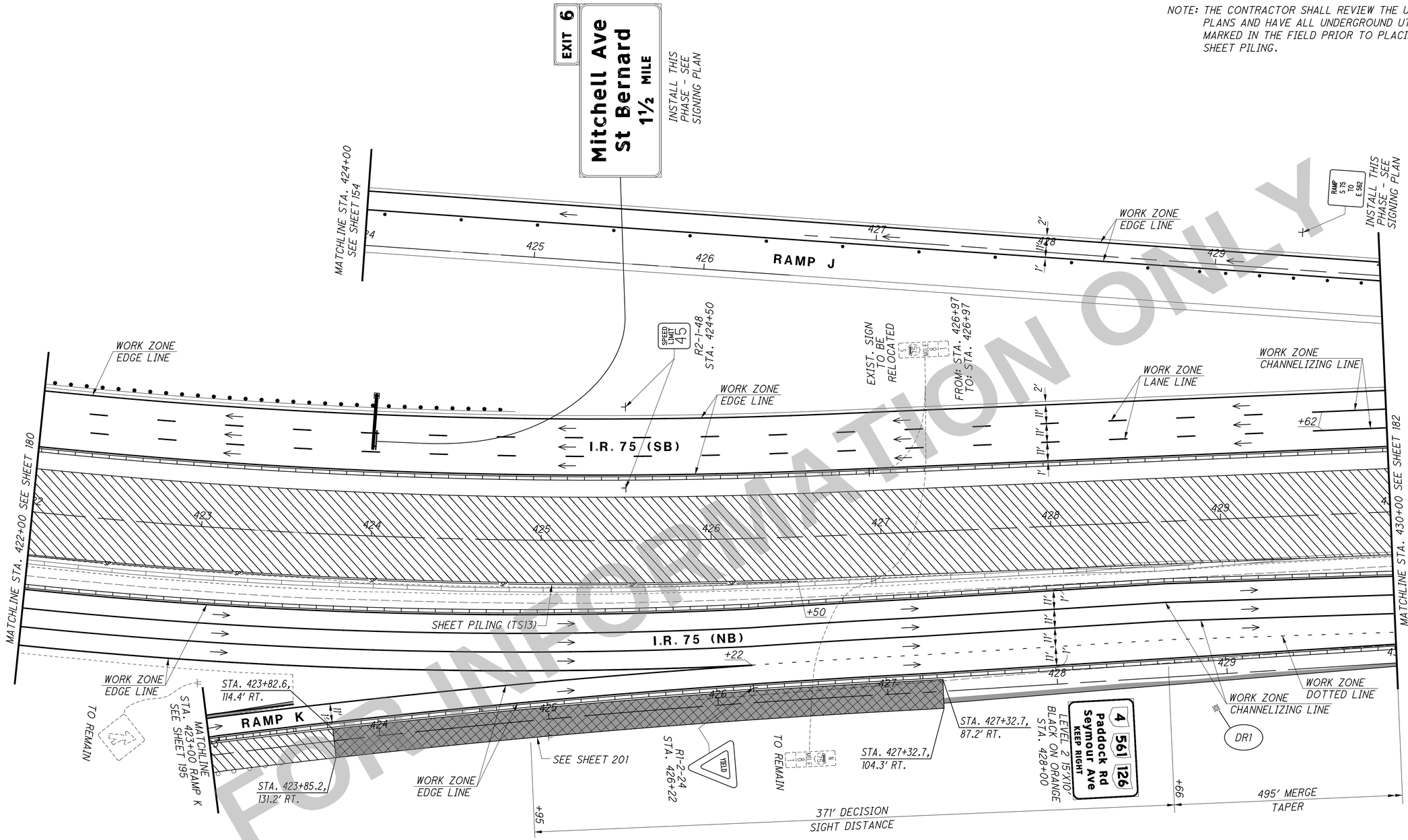
MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I.R. 75 - STA. 414+00 TO STA. 422+00

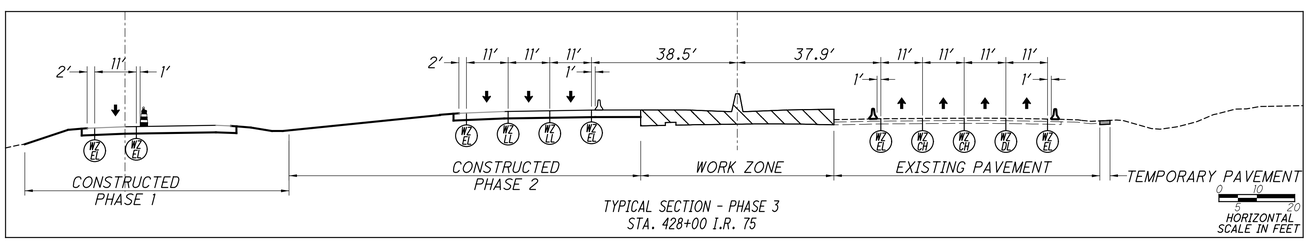
HAM-75-7.85

180
2017

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NOTE: THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.





DR1 - EXISTING BASIN TO BE COVERED SO THAT DITCH DRAINS TO THE EXISTING 66" CULVERT.

LEGEND

- PHASE 3 WORK ZONE
- PAVEMENT TRANSITION AREA
- DRUM
- PORTABLE BARRIER
- TEMPORARY PAVEMENT

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET

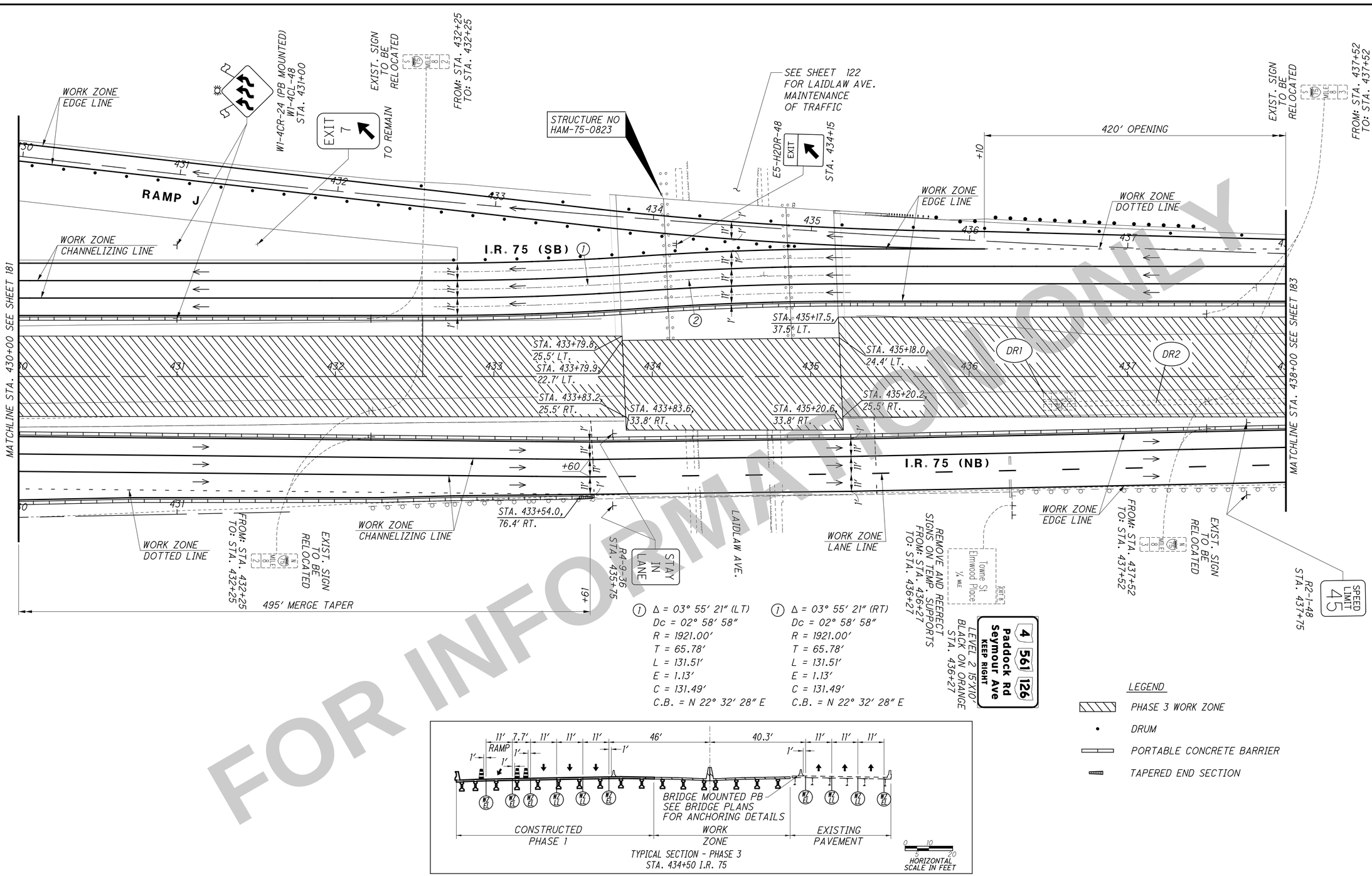
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I.R. 75 - STA. 422+00 TO STA. 430+00

HAM-75-7.85

181
2017

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① Δ = 03° 55′ 21″ (LT)
Dc = 02° 58′ 58″
R = 1921.00′
T = 65.78′
L = 131.51′
E = 1.13′
C = 131.49′
C.B. = N 22° 32′ 28″ E

① Δ = 03° 55′ 21″ (RT)
Dc = 02° 58′ 58″
R = 1921.00′
T = 65.78′
L = 131.51′
E = 1.13′
C = 131.49′
C.B. = N 22° 32′ 28″ E

TYPICAL SECTION - PHASE 3
STA. 434+50 I.R. 75

DR1 - EXISTING CATCH BASIN TO BE ABANDONED IN PLACE AND CONNECTED THROUGH UNTIL PHASE 4.
DR2 - EXISTING CONDUIT TO REMAIN IN SERVICE UNTIL FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 4.

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

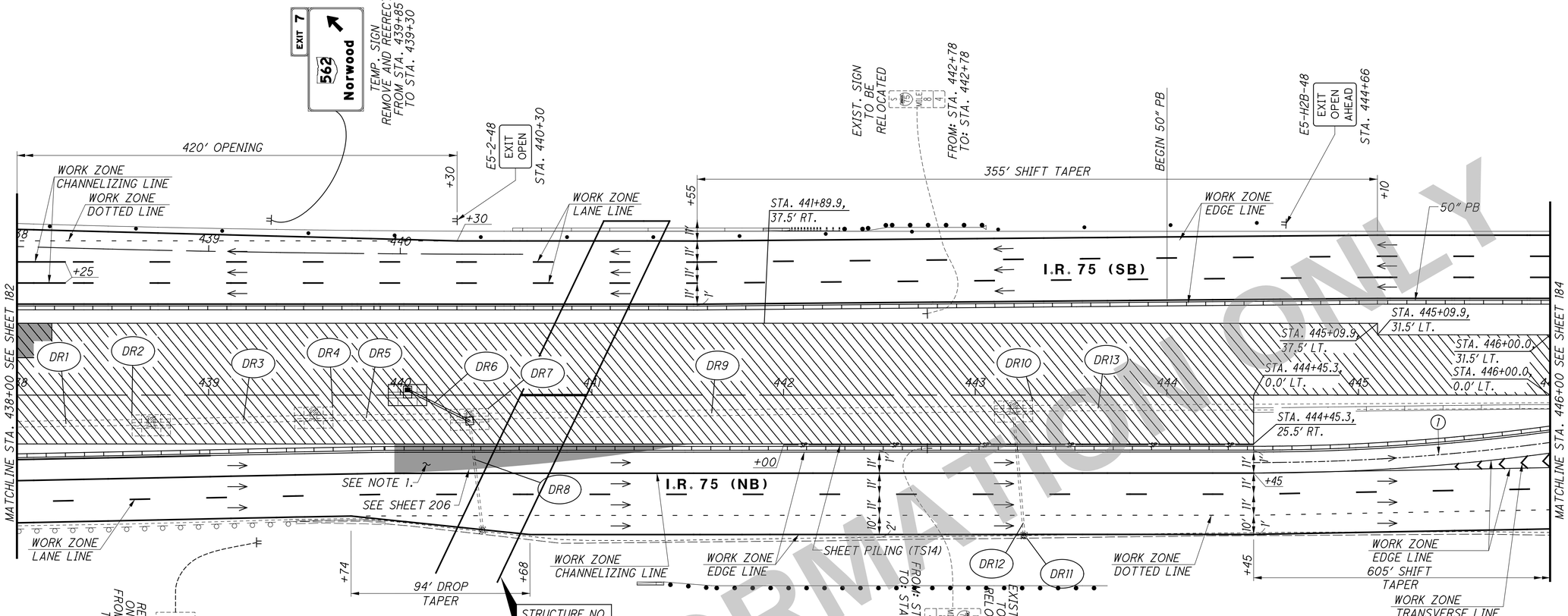
CALCULATED SMM
CHECKED JDS

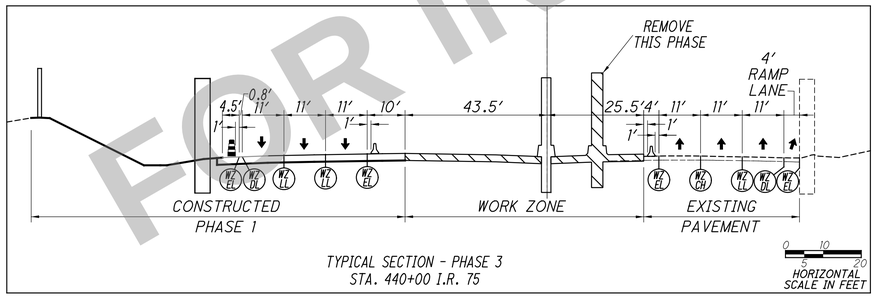
MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I.R. 75 - STA. 430+00 TO STA. 438+00

HAM-75-7.85

182
2017

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TYPICAL SECTION - PHASE 3
STA. 440+00 I.R. 75

LEGEND

- PHASE 3 WORK ZONE
- PORTABLE BARRIER
- DRUM

(1) Δ = 15° 0' 32" (LT)
Dc = 4° 59' 59"
R = 1146.00'
T = 150.97'
L = 300.20'
E = 9.9'
C = 299.34'
C.B. = N 82° 29' 52" E

NOTES:

1. TEMPORARY PAVEMENT CONSTRUCTION THAT WILL BE UTILIZED TO TRANSITION THROUGH THE CROSSOVER IN PHASE 3A SHALL NOT BE COMPLETED UNTIL THE NIGHT OF TRANSITION BETWEEN PHASES 3 AND 3A. THIS WORK SHALL BE DONE WITH THE NB LEFT LANE CLOSED PER ODOT SCD MT-95.30 ONLY DURING HOURS SPECIFIED BY THE PERMITTED LANE CLOSURE POLICY.
2. THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.

DR1 - EXISTING CONDUIT TO REMAIN IN SERVICE UNTIL FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 4.
DR2 - EXISTING CATCH BASIN TO BE ABANDONED IN PLACE AND CONNECTED THROUGH UNTIL PHASE 4.
DR3 - EXISTING CONDUIT TO REMAIN IN SERVICE UNTIL FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 4.
DR4 - EXISTING CATCH BASIN TO BE ABANDONED IN PLACE AND CONNECTED THROUGH UNTIL PHASE 4.
DR5 - EXISTING CONDUIT TO REMAIN IN SERVICE UNTIL FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 4.
DR6 - 37'-12" CONDUIT, TYPE B W/4'x4' BOX CONNECTION TO BE FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 4.
DR7 - EXISTING CATCH BASIN TO BE ABANDONED IN PLACE AND CONNECTED THROUGH UNTIL PHASE 4.
DR8 - EXISTING CONDUIT TO REMAIN IN SERVICE UNTIL FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 4.
DR9 - EXISTING CONDUIT TO REMAIN IN SERVICE UNTIL FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 4.
DR10 - EXISTING CATCH BASIN TO BE ABANDONED IN PLACE AND CONNECTED THROUGH UNTIL PHASE 4.
DR11 - EXISTING BASIN TO BE COVERED.
DR12 - EXISTING CONDUIT TO REMAIN IN SERVICE UNTIL FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 4.
DR13 - EXISTING CONDUIT TO REMAIN IN SERVICE UNTIL FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 4.

FOR INFORMATION ONLY

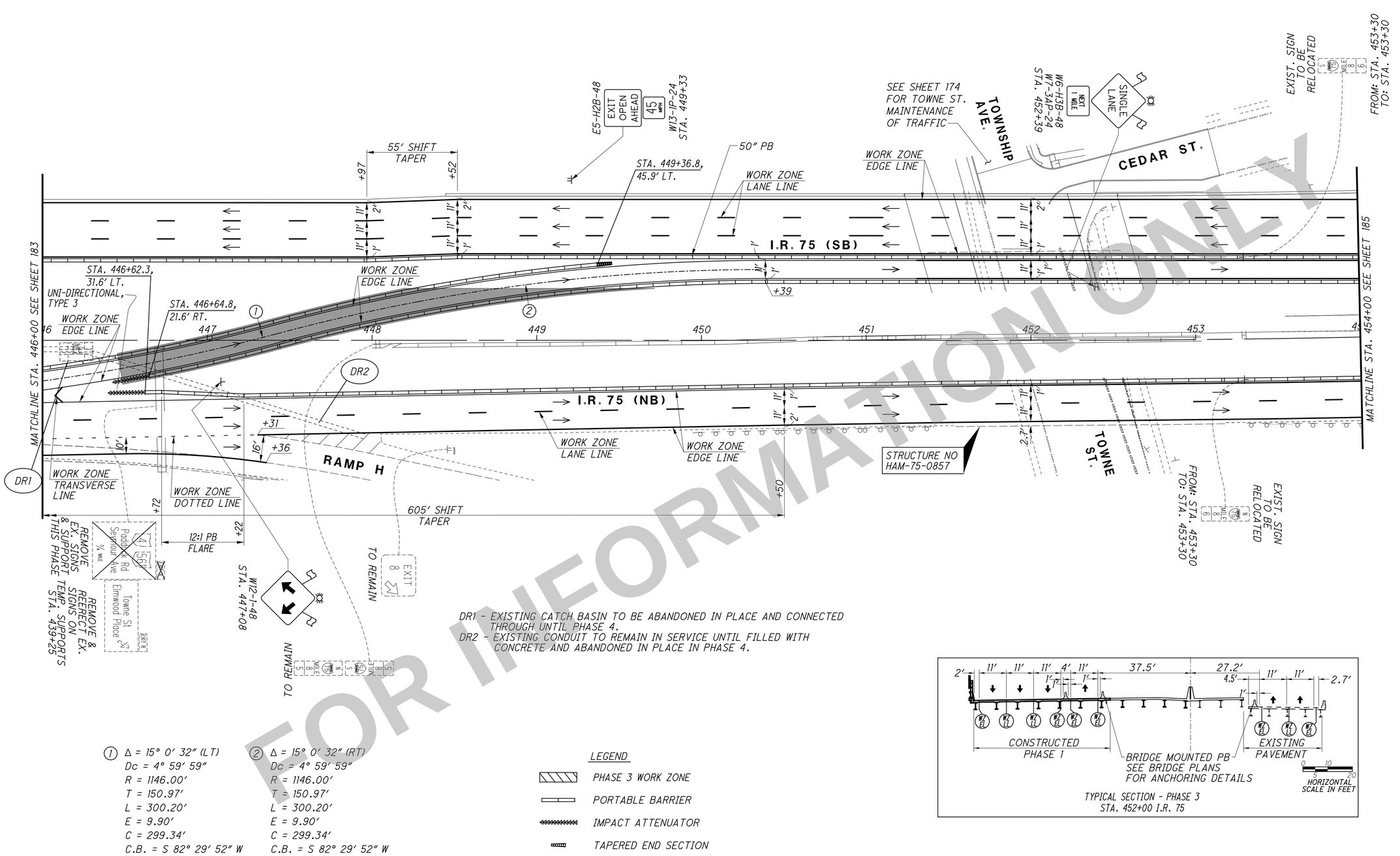
HORIZONTAL SCALE IN FEET
0 15 30 60
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I.R. 75 - STA. 438+00 TO STA. 446+00

HAM-75-7.85

183
2017

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DR1 - EXISTING CATCH BASIN TO BE ABANDONED IN PLACE AND CONNECTED THROUGH UNTIL PHASE 4.
DR2 - EXISTING CONDUIT TO REMAIN IN SERVICE UNTIL FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 4.

① Δ = 15° 0′ 32″ (LT)
Dc = 4° 59′ 59″
R = 1146.00′
T = 150.97′
L = 300.20′
E = 9.90′
C = 299.34′
C.B. = S 82° 29′ 52″ W

② Δ = 15° 0′ 32″ (RT)
Dc = 4° 59′ 59″
R = 1146.00′
T = 150.97′
L = 300.20′
E = 9.90′
C = 299.34′
C.B. = S 82° 29′ 52″ W

LEGEND
- PHASE 3 WORK ZONE
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- TAPERED END SECTION
- PB "Y" CONNECTING SEGMENT

TYPICAL SECTION - PHASE 3
STA. 452+00 I.R. 75

FOR INFORMATION ONLY

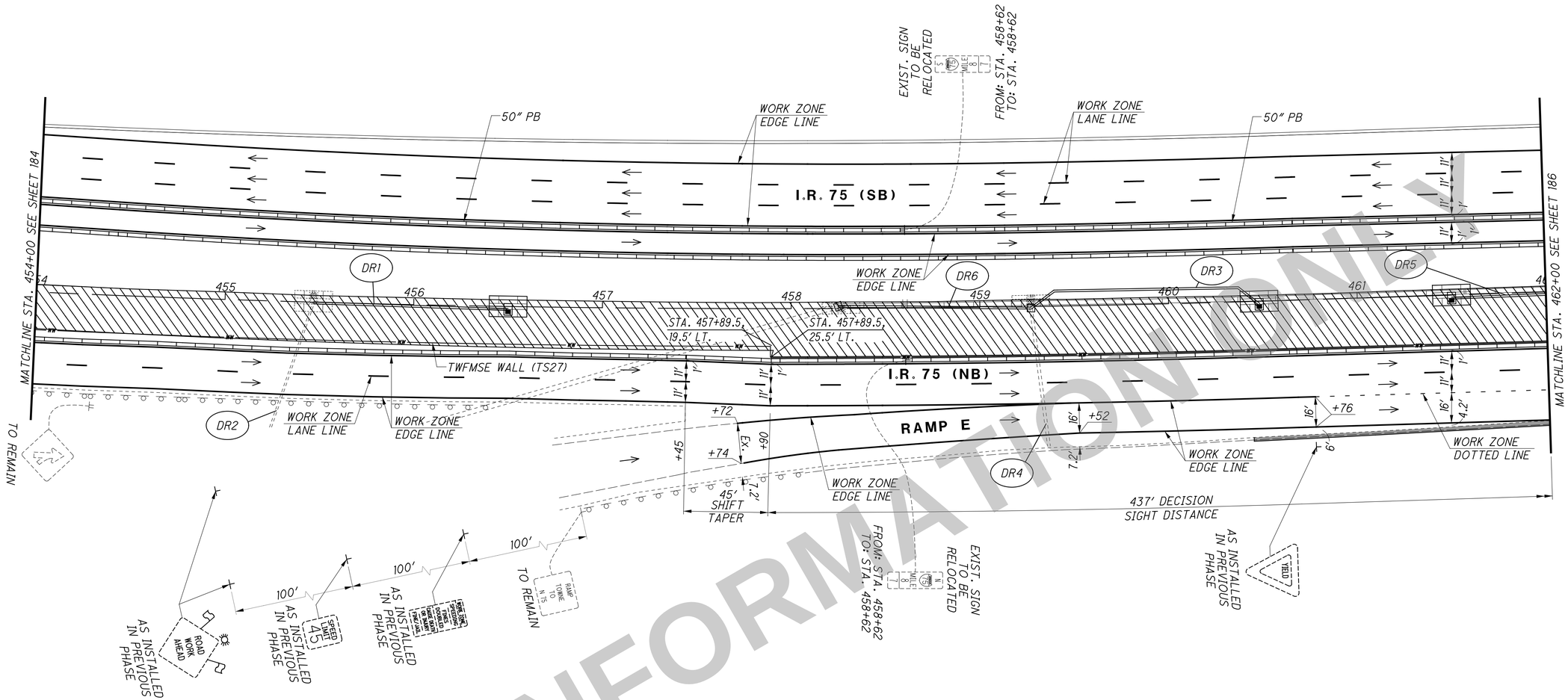
HORIZONTAL SCALE IN FEET
0 15 30 60
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I.R. 75 - STA. 446+00 TO STA. 454+00

HAM-75-7.85

184
2017

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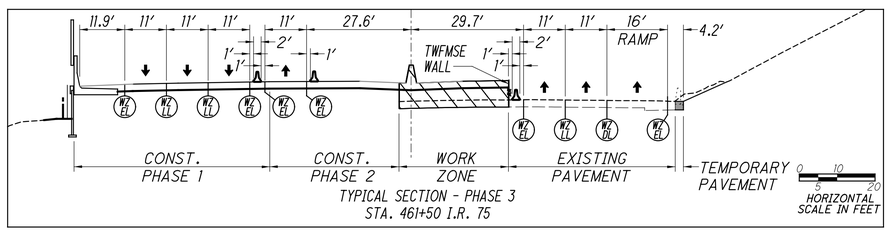
LEGEND

PHASE 3 WORK ZONE

PORTABLE BARRIER

① Δ = 15° 0′ 32″ (LT)
Dc = 4° 59′ 59″
R = 1146.00′
T = 150.97′
L = 300.20′
E = 9.90′
C = 299.34′
C.B. = S 82° 29′ 52″ W

② Δ = 15° 0′ 32″ (RT)
Dc = 4° 59′ 59″
R = 1146.00′
T = 150.97′
L = 300.20′
E = 9.90′
C = 299.34′
C.B. = S 82° 29′ 52″ W



TYPICAL SECTION - PHASE 3
STA. 461+50 I.R. 75

DR1 - 104′-12″ CONDUIT, TYPE B W/4′x4′ BOX CONNECTION TO BE FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 4.
DR2 - EXISTING CONDUIT AND BASIN TO REMAIN IN SERVICE UNTIL FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 4.
DR3 - 129′-12″ CONDUIT, TYPE B W/4′x4′ BOX CONNECTION TO BE FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 4.
DR4 - EXISTING CONDUIT TO REMAIN IN SERVICE UNTIL FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 4.
DR5 - 250′-12″ CONDUIT, TYPE B TO BE FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 4.
DR6 - 103′-12″ CONDUIT, TYPE B W/4′x4′ BOX CONNECTION TO BE FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 4.

FOR INFORMATION ONLY

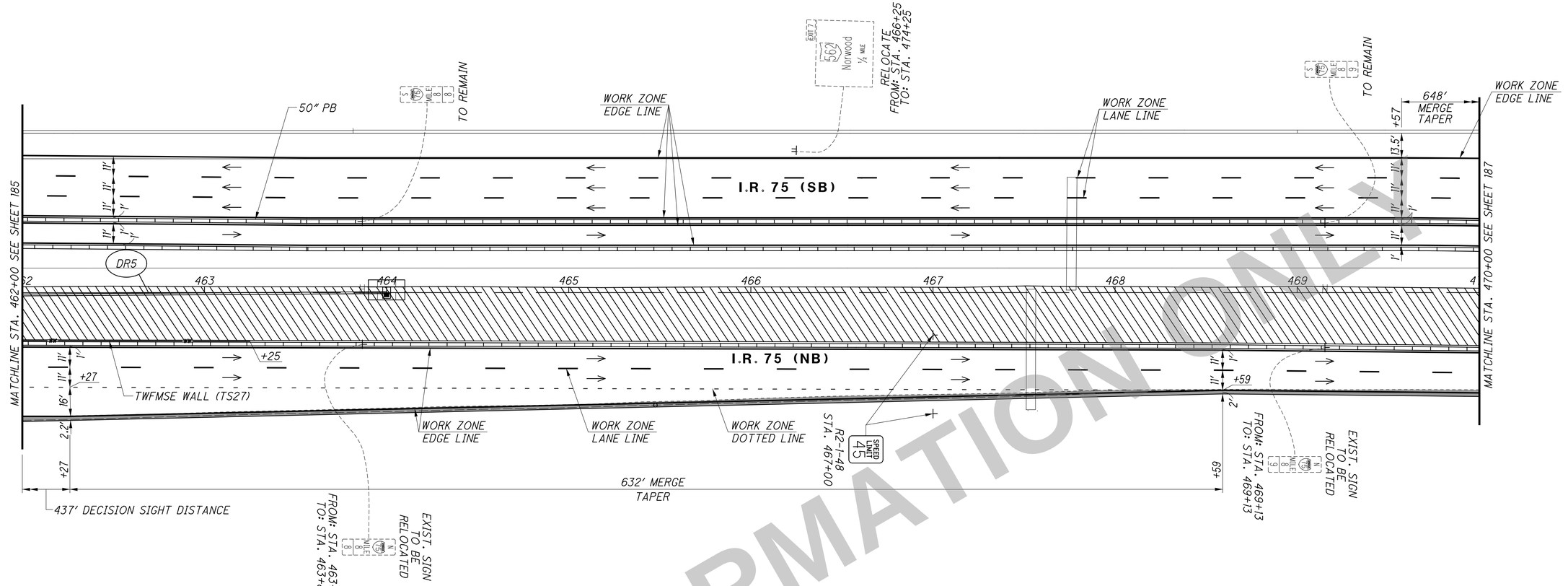
HORIZONTAL SCALE IN FEET
0 15 30 60
CALCULATED SMM
CHECKED JDS

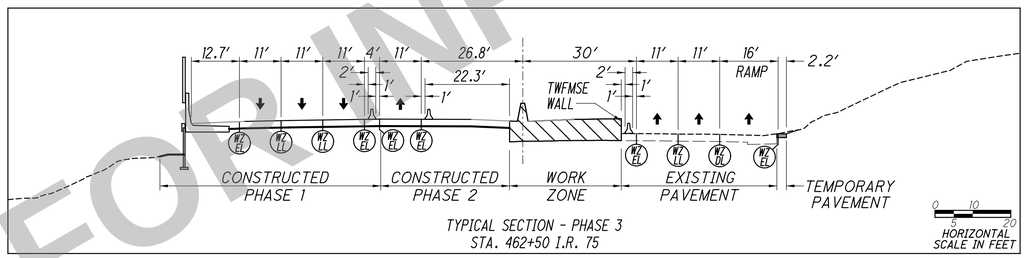
MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I.R. 75 - STA. 454+00 TO STA. 462+00

HAM-75-7.85

185
2017

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TYPICAL SECTION - PHASE 3
STA. 462+50 I.R. 75

LEGEND

- PHASE 3 WORK ZONE
- PORTABLE BARRIER
- TEMPORARY PAVEMENT

DR5 - 250'-12" CONDUIT, TYPE B TO BE FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 4.

HORIZONTAL SCALE IN FEET

CALCULATED SMM
CHECKED JDS

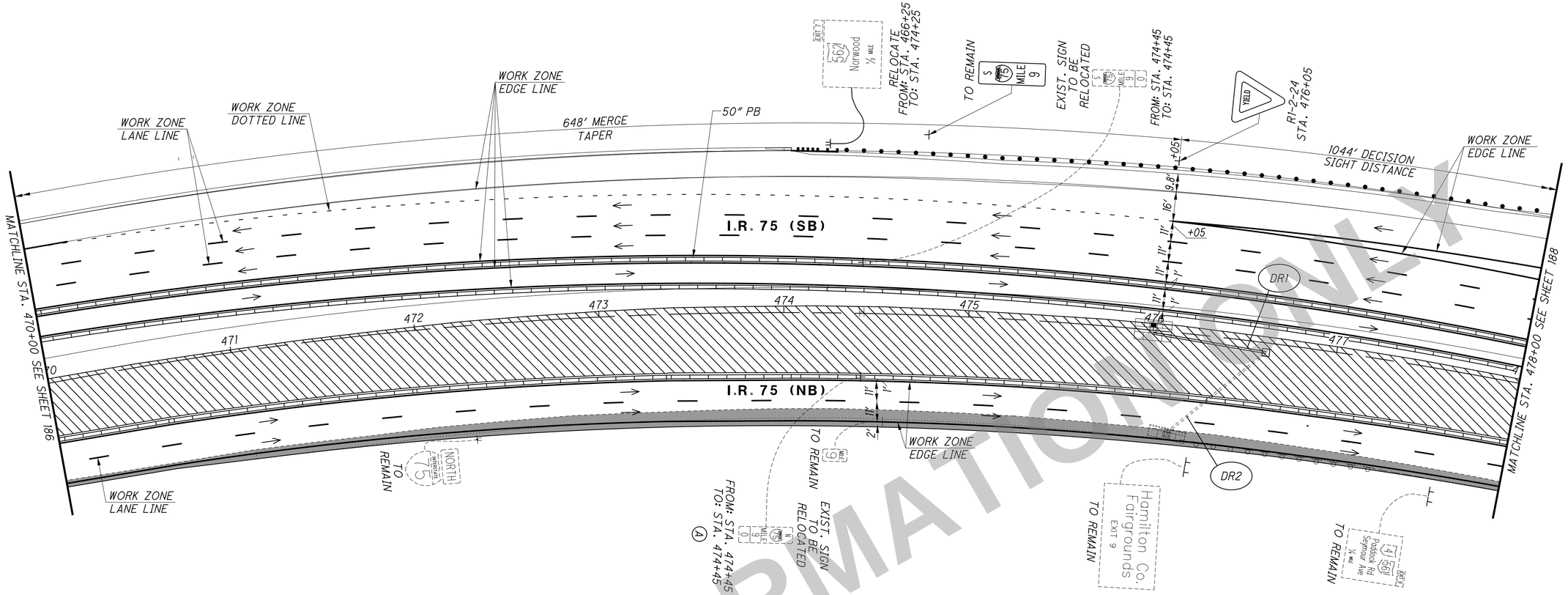
MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I.R. 75 - STA. 462+00 TO STA. 470+00

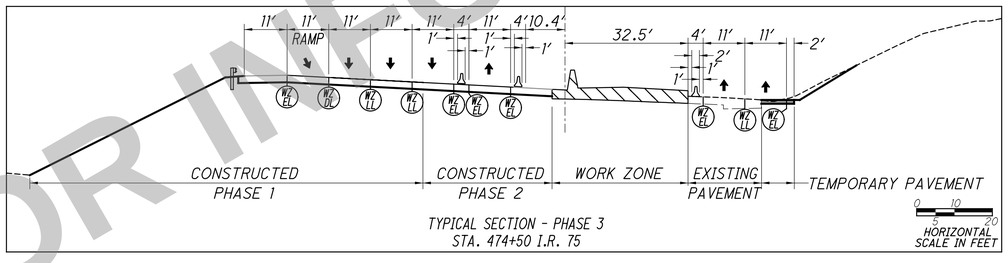
HAM-75-7.85

186
2017

FOR INFORMATION ONLY

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TYPICAL SECTION - PHASE 3
STA. 474+50 I.R. 75

DR1 - 62'-12" CONDUIT, TYPE B W/4'x4' BOX CONNECTION TO BE FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 3.
DR2 - EXISTING CONDUIT TO REMAIN IN SERVICE UNTIL FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 4.

LEGEND
- PHASE 3 WORK ZONE
- PORTABLE BARRIER
- TEMPORARY PAVEMENT

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

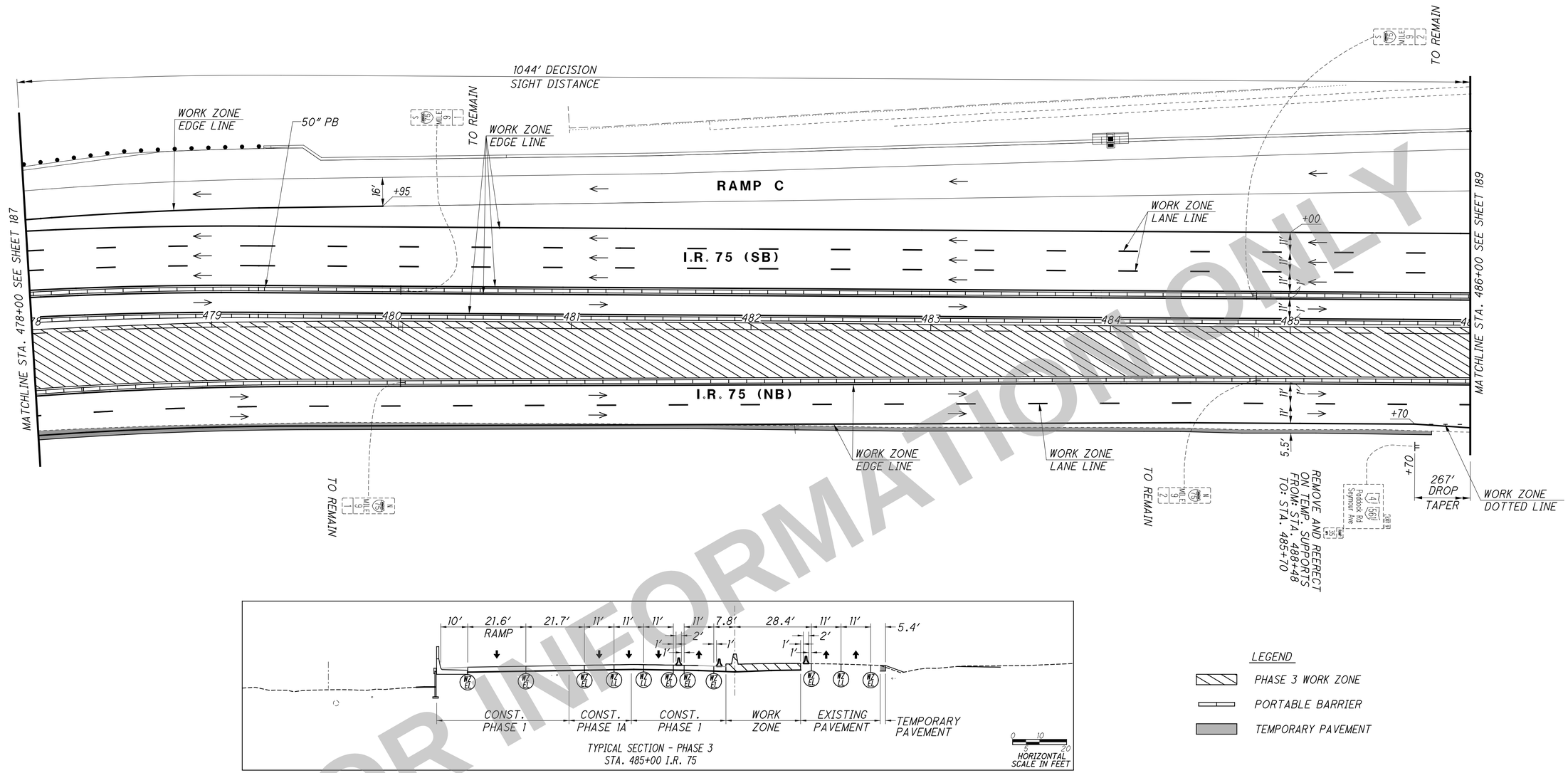
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I.R. 75 - STA. 470+00 TO STA. 478+00

HAM-75-7.85

187
2017

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TYPICAL SECTION - PHASE 3
STA. 485+00 I.R. 75

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

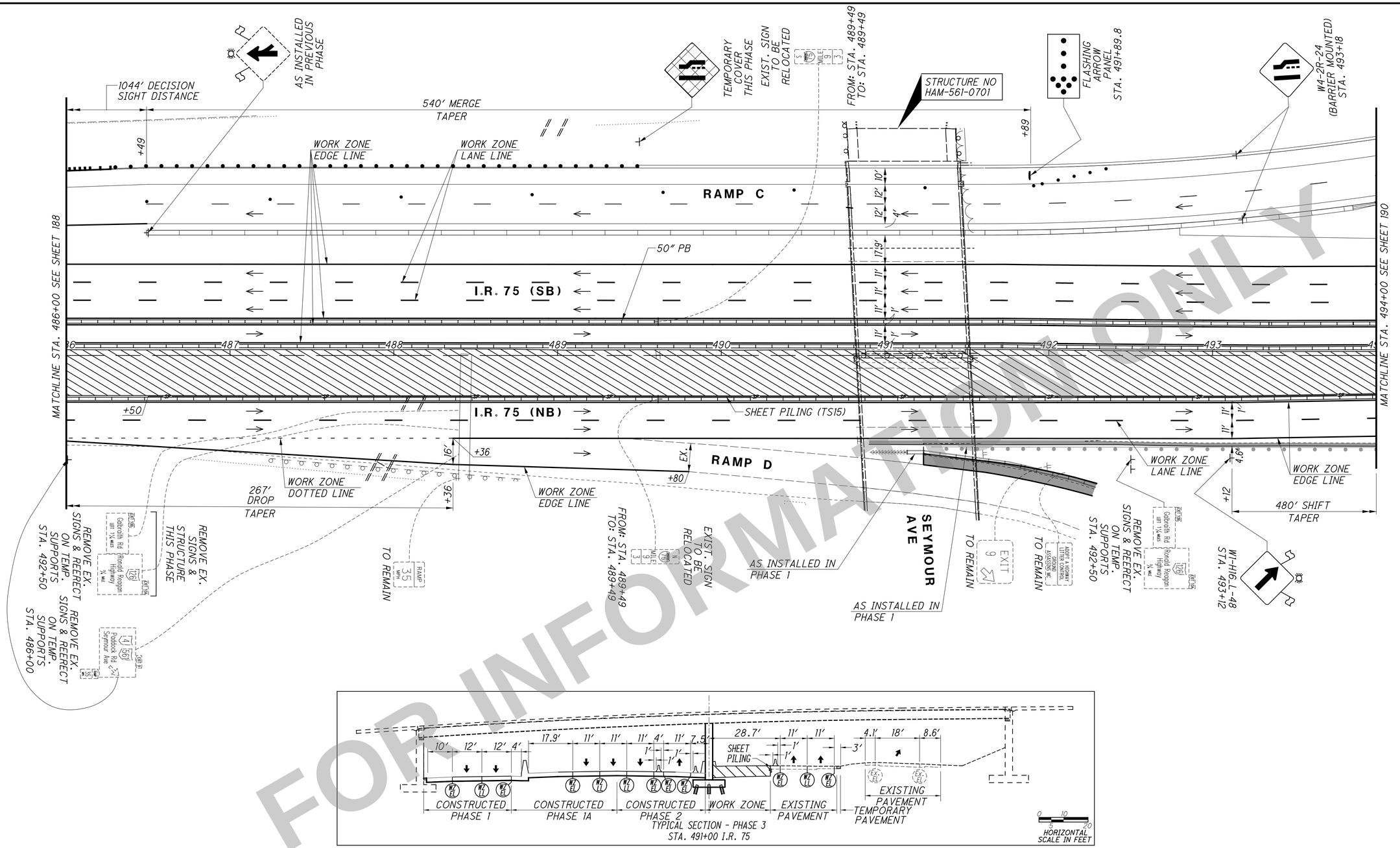
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I.R. 75 - STA. 478+00 TO STA. 486+00

HAM-75-7.85

188
2017

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NOTE: THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.

LEGEND
- PHASE 3 WORK ZONE
- PORTABLE BARRIER
- TEMPORARY PAVEMENT

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET

CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I.R. 75 - STA. 486+00 TO STA. 494+00

HAM-75-7.85

189
2017

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NOTE: THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.

DR1 - 55'-12" CONDUIT, TYPE B W/4'x4' BOX CONNECTION TO BE FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 4.
DR2 - EXISTING CONDUIT TO REMAIN IN SERVICE UNTIL FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 4.
DR3 - 25'-12" CONDUIT, TYPE B W/4'x4' BOX CONNECTION TO BE FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 4.
DR4 - EXISTING CONDUIT TO REMAIN IN SERVICE UNTIL FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 4.
DR5 - 19'-12" CONDUIT, TYPE B W/4'x4' BOX CONNECTION TO BE FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 4.
DR6 - EXISTING CONDUIT TO REMAIN IN SERVICE UNTIL FILLED WITH CONCRETE AND ABANDONED IN PLACE IN PHASE 4.

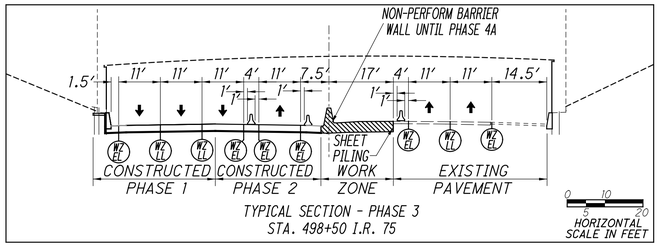
TO REMAIN (A) TO REMAIN (B) TO REMAIN (C) TO REMAIN (D) TO REMAIN (E) TO REMAIN (F) TO REMAIN (G) TO REMAIN (H)

TO REMAIN (I) TO REMAIN (J) TO REMAIN (K)

EXIST. SIGN TO BE RELOCATED — FROM: STA. 494+40 TO: STA. 494+40 (L)

EXIST. SIGN TO BE RELOCATED — FROM: STA. 498+15 TO: STA. 498+15 (M)

EXIST. SIGN TO BE RELOCATED — FROM: STA. 499+07 TO: STA. 499+07 (N)



TYPICAL SECTION - PHASE 3
STA. 498+50 I.R. 75

W1-H16_L-48
STA. 494+12
STA. 495+12
STA. 496+12
STA. 497+12
(O)

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET: 0, 15, 30, 60

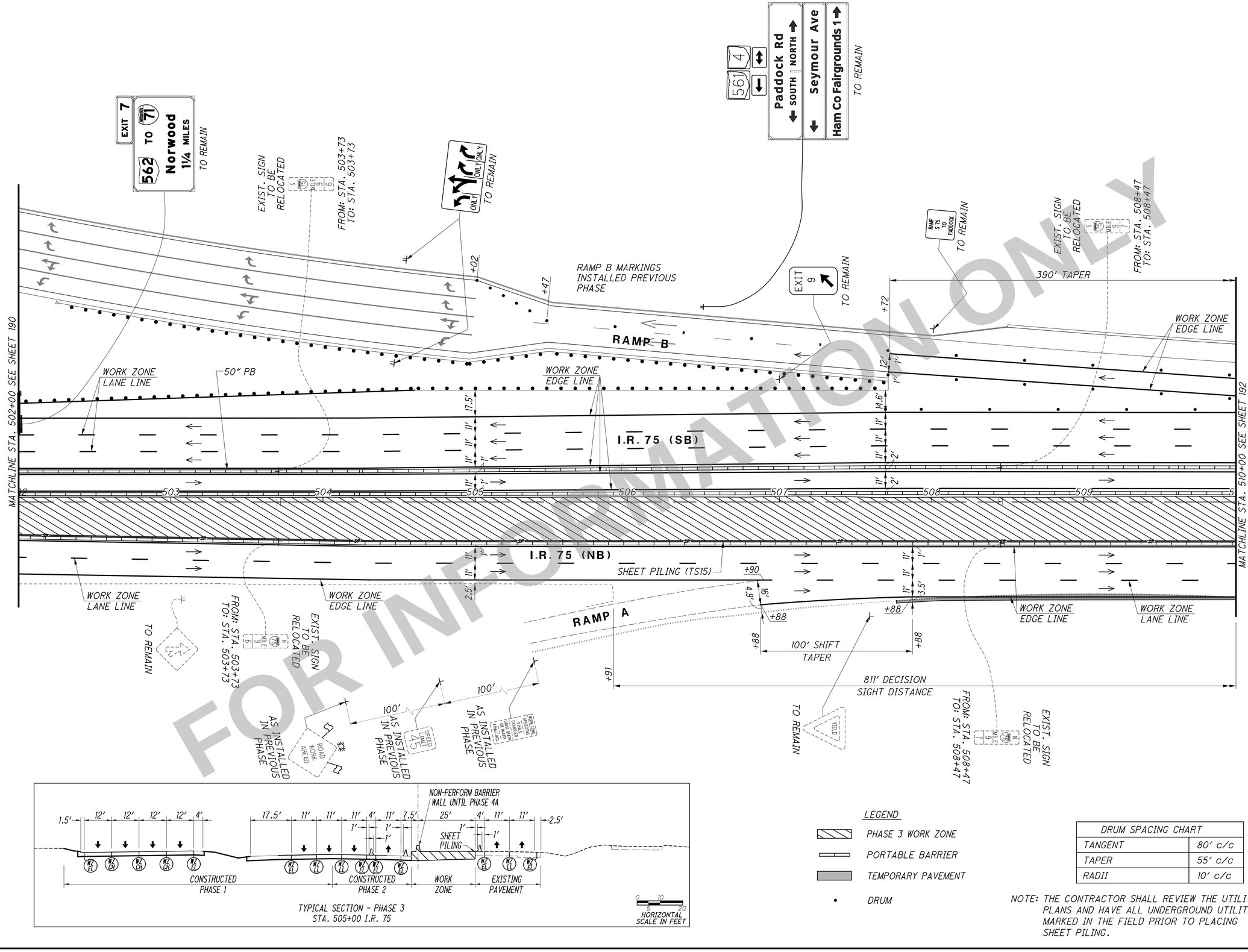
CALCULATED SMM CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I.R. 75 - STA. 494+00 TO STA. 502+00

HAM-75-7.85

190
2017

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HORIZONTAL SCALE IN FEET

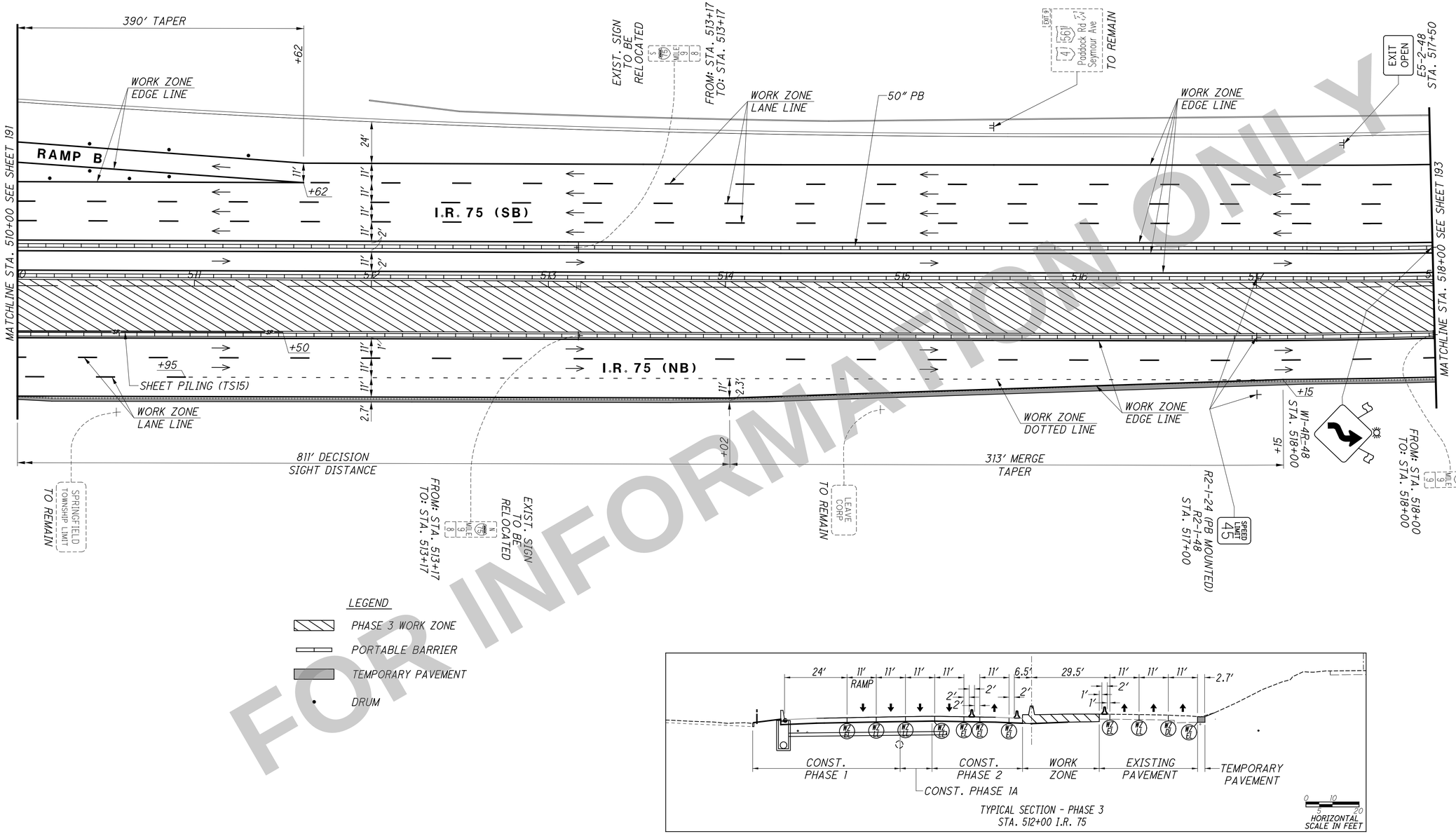
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I.R. 75 - STA. 502+00 TO STA. 510+00

HAM-75-7.85

191
2017

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LEGEND

- PHASE 3 WORK ZONE
- PORTABLE BARRIER
- TEMPORARY PAVEMENT
- DRUM

TYPICAL SECTION - PHASE 3
STA. 512+00 I.R. 75

NOTE: THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

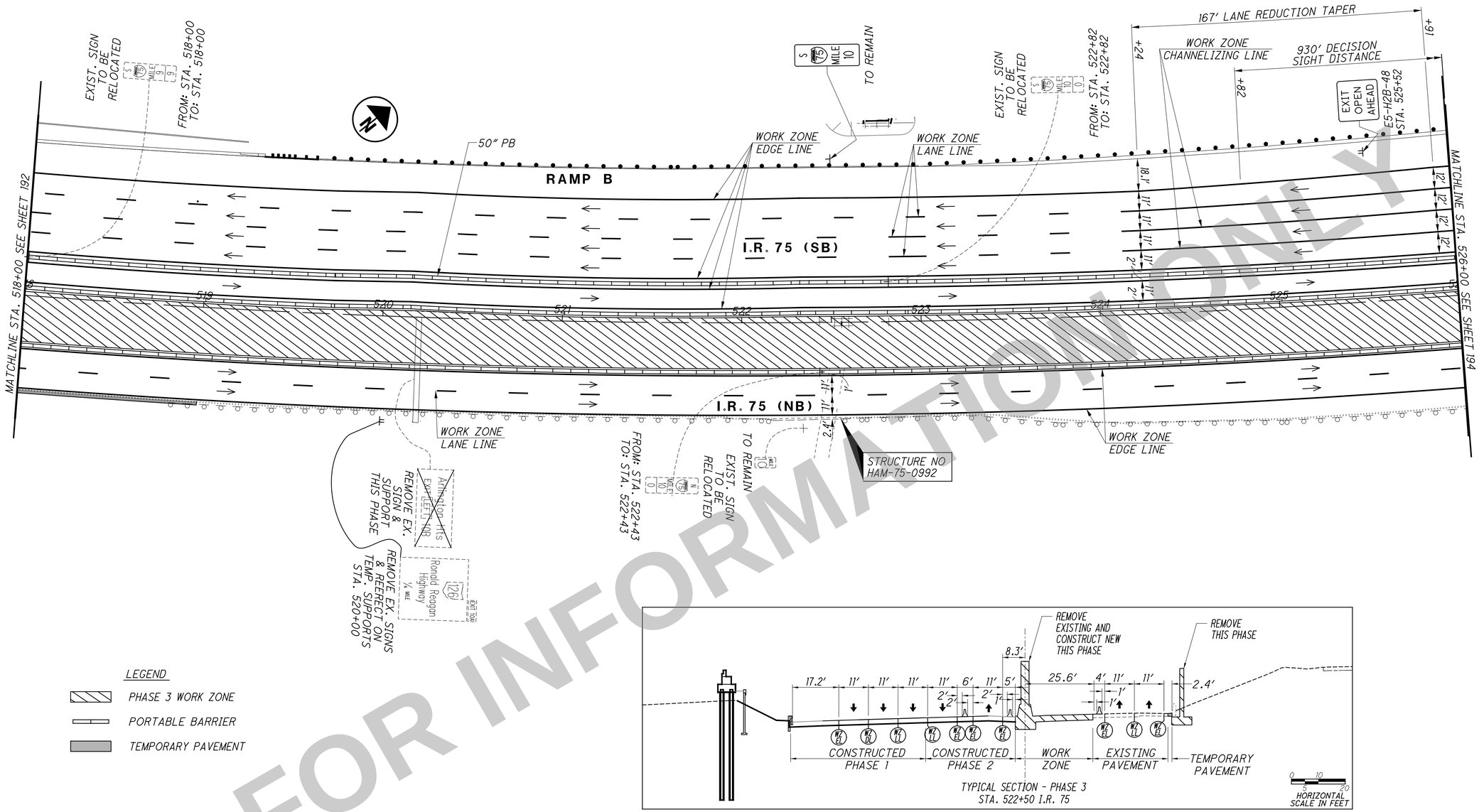
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I.R. 75 - STA. 510+00 TO STA. 518+00

HAM-75-7.85

192
2017

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LEGEND

- PHASE 3 WORK ZONE
- PORTABLE BARRIER
- TEMPORARY PAVEMENT

TYPICAL SECTION - PHASE 3
STA. 522+50 I.R. 75

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

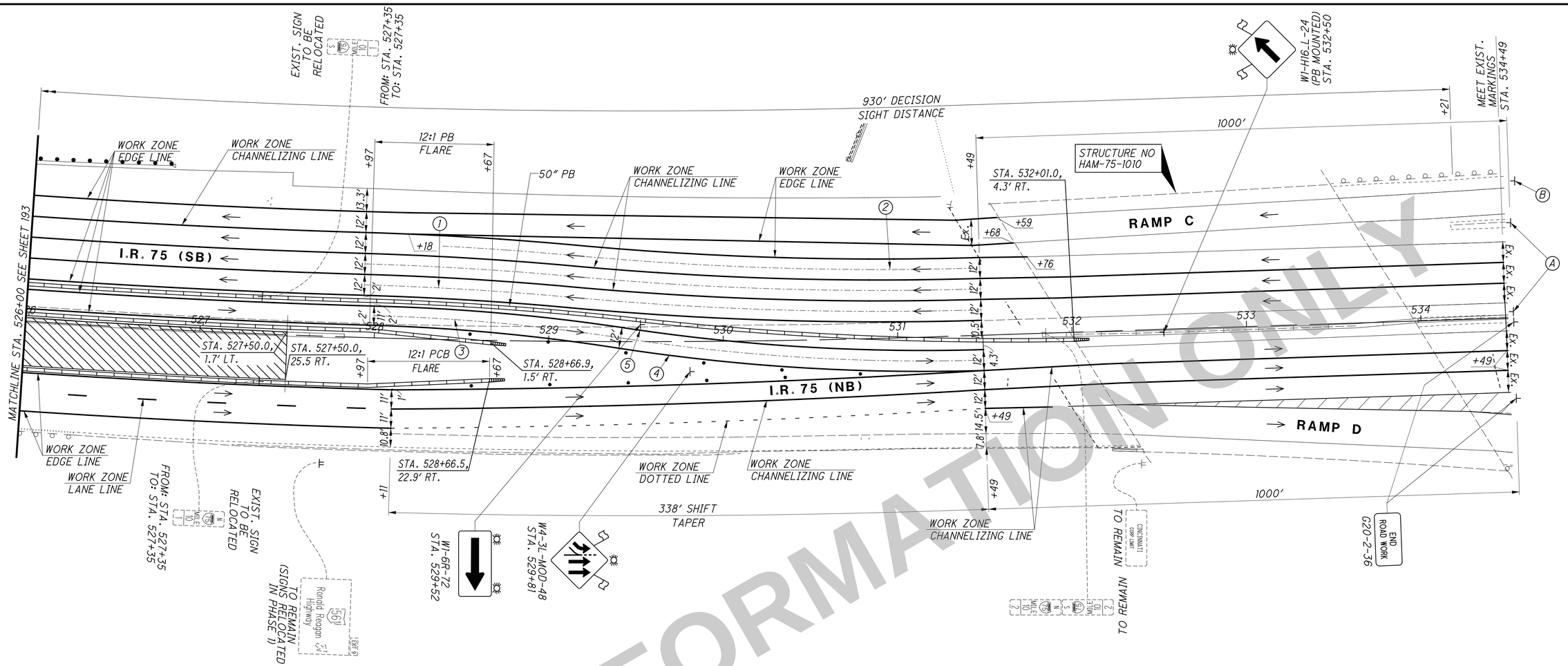
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I.R. 75 - STA. 518+00 TO STA. 526+00

HAM-75-7.85

193
2017

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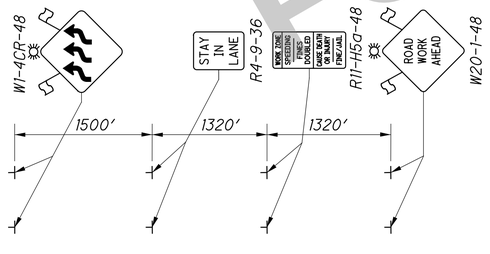
① Δ = 3° 33′ 27″ (RT)
Dc = 2° 59′ 59″
R = 1910.00′
T = 59.31′
L = 118.59′
E = 0.92′
C = 118.57′
C.B. = S 86° 32′ 38″ E

② Δ = 6° 58′ 14″ (LT)
Dc = 2° 59′ 59″
R = 1910.00′
T = 116.33′
L = 232.36′
E = 3.54′
C = 232.22′
C.B. = N 88° 15′ 2″ W

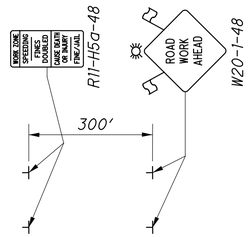
③ Δ = 7° 5′ 57″ (RT)
Dc = 4° 59′ 59″
R = 1146.00′
T = 71.09′
L = 141.99′
E = 2.82′
C = 141.90′
C.B. = S 84° 50′ 36″ E

④ Δ = 10° 26′ 31″ (LT)
Dc = 4° 58′ 25″
R = 1152.00′
T = 105.27′
L = 209.95′
E = 4.80′
C = 209.66′
C.B. = S 86° 30′ 53″ E

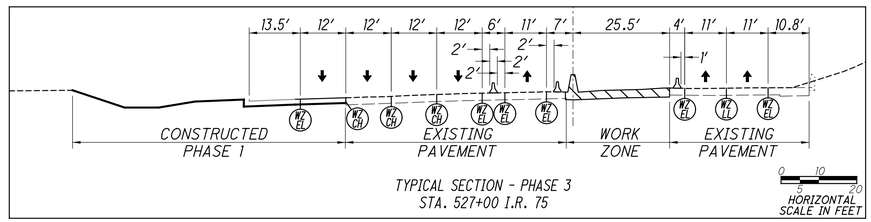
⑤ Δ = 10° 26′ 31″ (RT)
Dc = 5° 1′ 33″
R = 1140.00′
T = 104.17′
L = 207.76′
E = 4.75′
C = 207.47′
C.B. = S 86° 30′ 53″ E



ADVANCED SIGNAGE DETAIL
(A)



ADVANCED SIGNAGE DETAIL
(B)



TYPICAL SECTION - PHASE 3
STA. 527+00 I.R. 75

LEGEND
- PHASE 3 WORK ZONE
- DRUM
- PORTABLE BARRIER
- TAPERED END SECTION

DRUM SPACING CHART	
TANGENT	80′ c/c
TAPER	55′ c/c
RADII	10′ c/c

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

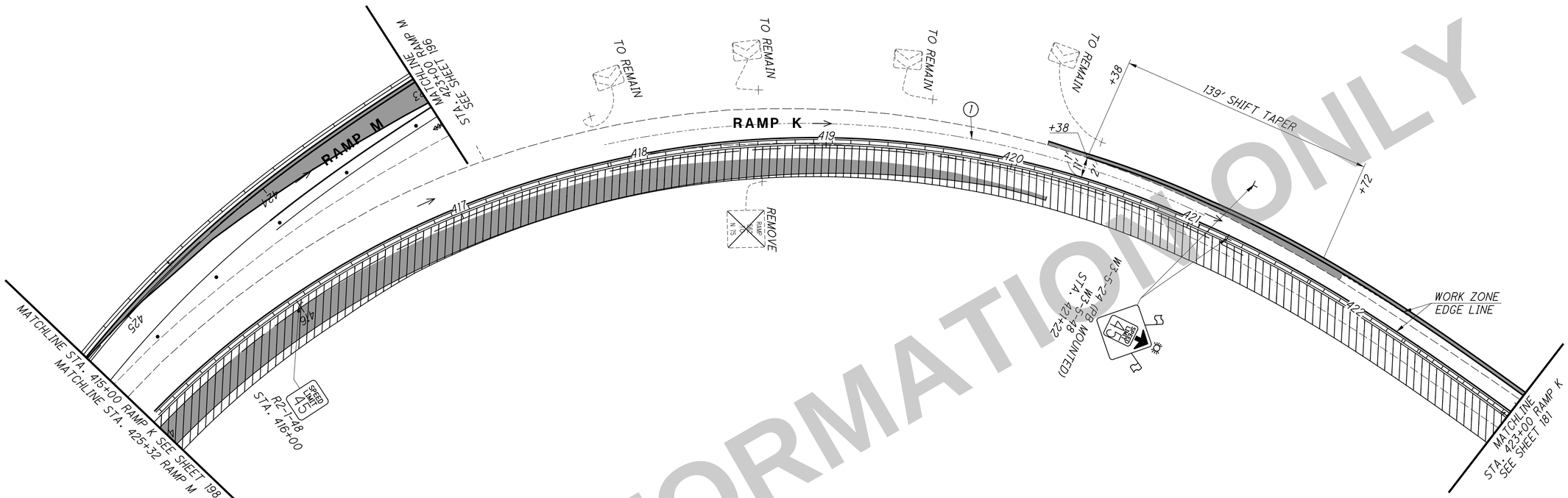
CALCULATED SMM
CHECKED JDS

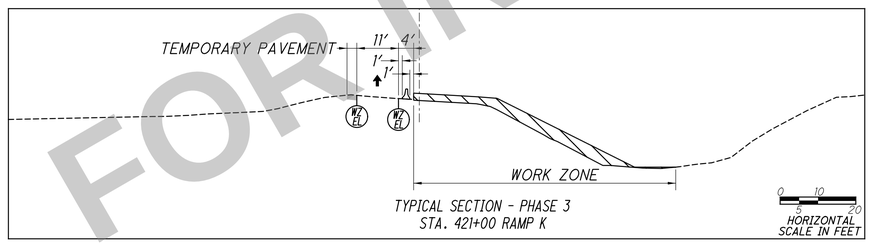
MAINTENANCE OF TRAFFIC PLAN - PHASE 3
I.R. 75 - STA. 526+00 TO STA. 534+50

HAM-75-7.85

194
2017

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TYPICAL SECTION - PHASE 3
STA. 421+00 RAMP K

LEGEND

- PHASE 3 WORK ZONE
- PORTABLE BARRIER
- TEMPORARY PAVEMENT

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

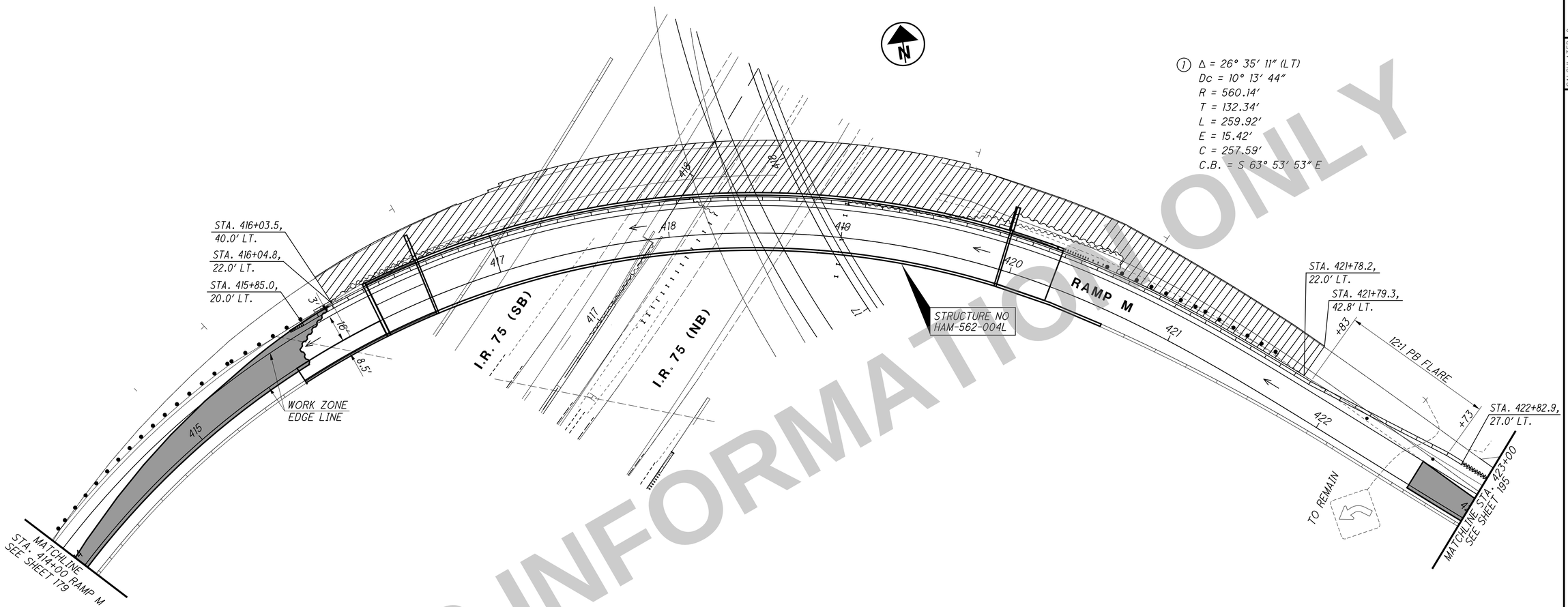
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
RAMP K - STA. 415+00 TO STA. 423+00

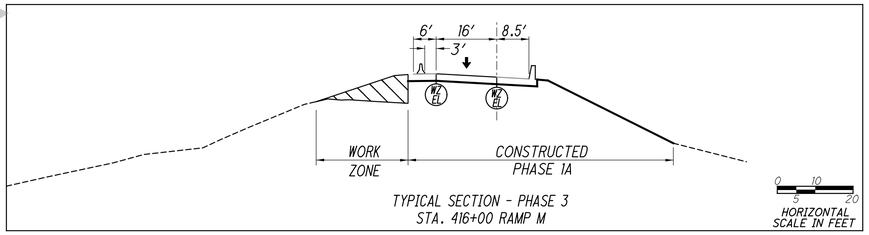
HAM-75-7.85

195
2017

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FOR INFORMATION ONLY



TYPICAL SECTION - PHASE 3
STA. 416+00 RAMP M

HORIZONTAL SCALE IN FEET
0 15 30 60

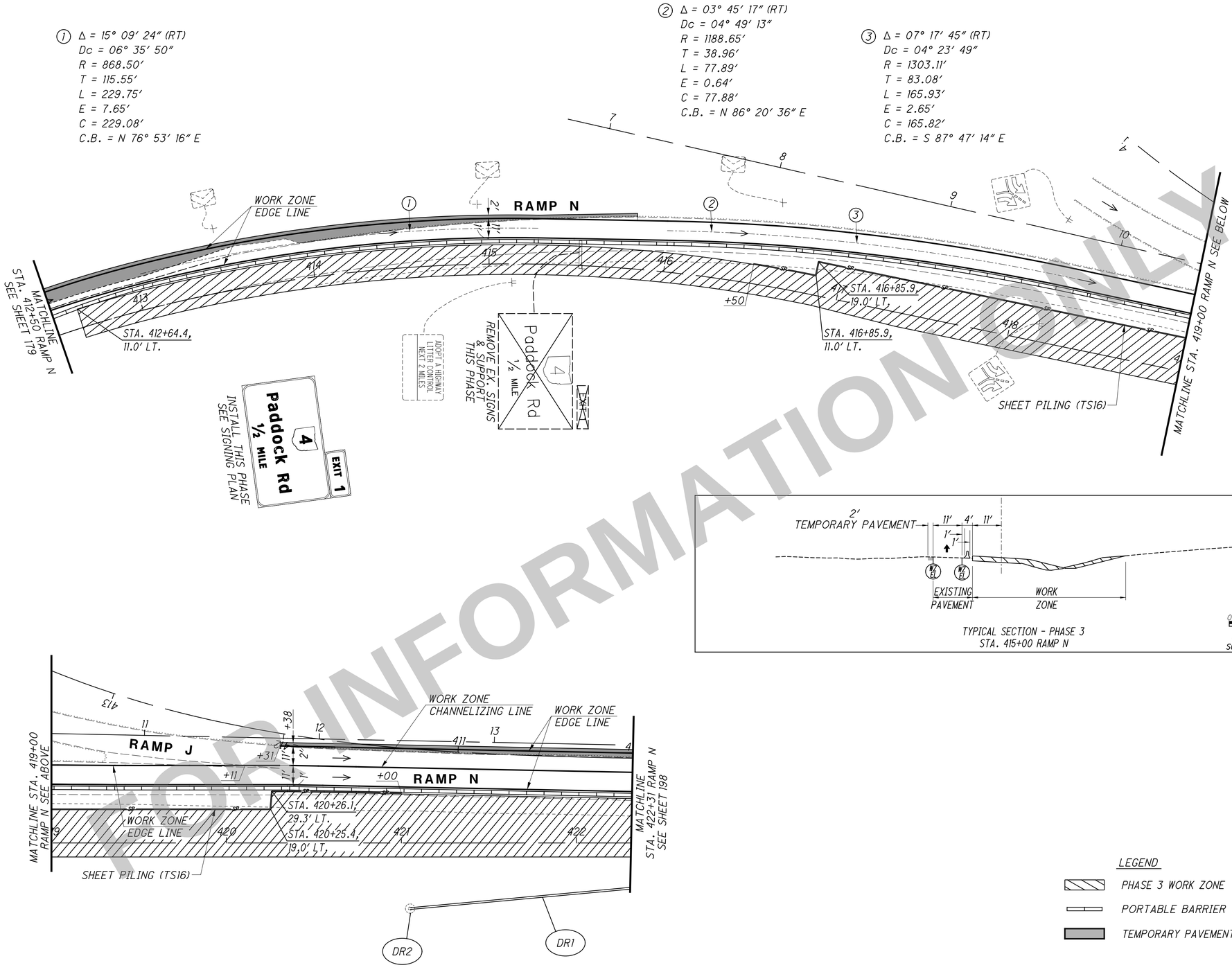
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
RAMP M - STA. 414+00 TO STA. 423+00

HAM-75-7.85

196
2017

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DR1 - 339′-12″ CONDUIT, TYPE C TO BE REMOVED IN PHASE 3A.
DR2 - EXISTING MANHOLE TO REMAIN IN SERVICE

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET

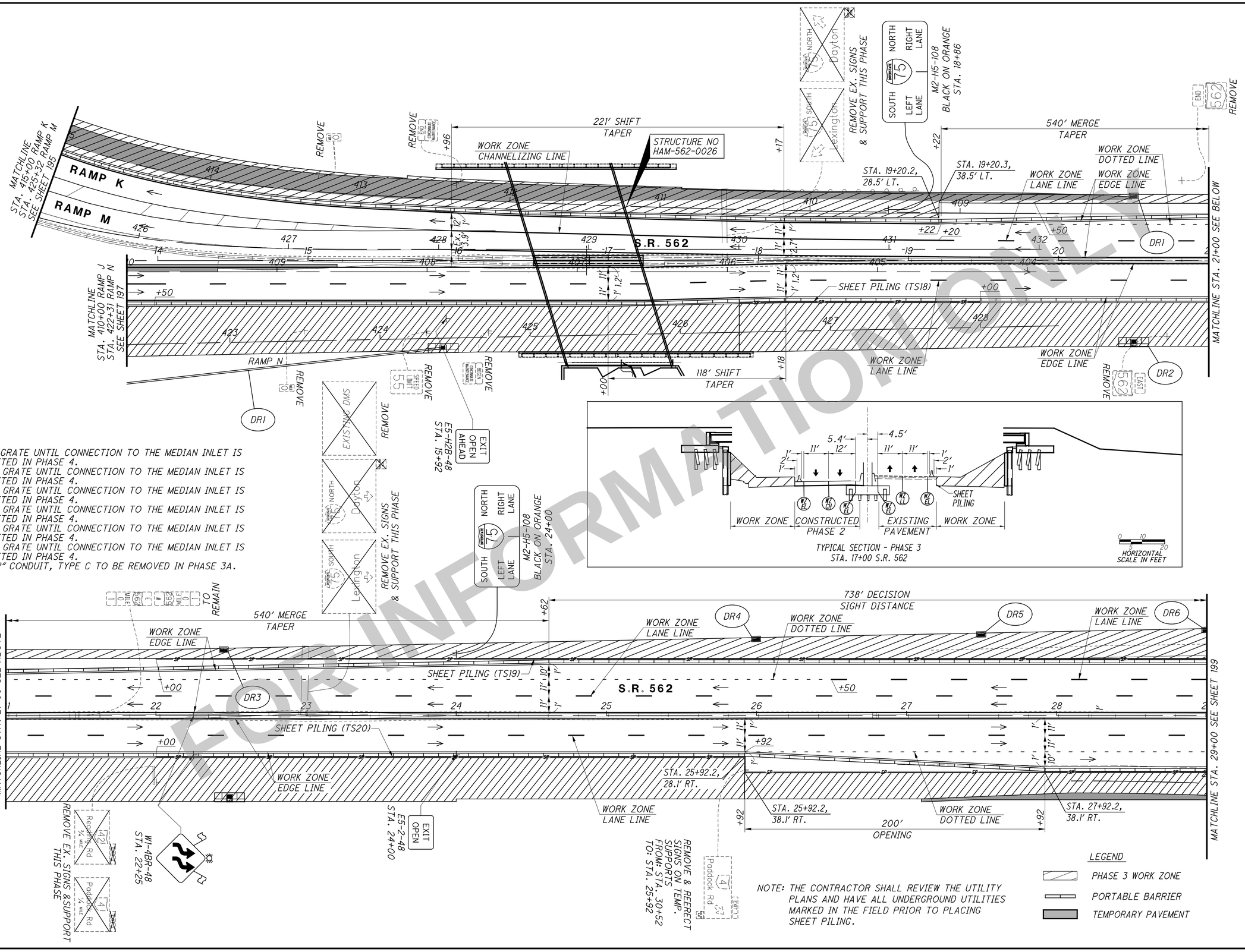
CALCULATED SMM CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
RAMP N - STA. 412+50 TO STA. 422+31

HAM-75-7.85

197
2017

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DR1 - COVER GRATE UNTIL CONNECTION TO THE MEDIAN INLET IS COMPLETED IN PHASE 4.
DR2 - COVER GRATE UNTIL CONNECTION TO THE MEDIAN INLET IS COMPLETED IN PHASE 4.
DR3 - COVER GRATE UNTIL CONNECTION TO THE MEDIAN INLET IS COMPLETED IN PHASE 4.
DR4 - COVER GRATE UNTIL CONNECTION TO THE MEDIAN INLET IS COMPLETED IN PHASE 4.
DR5 - COVER GRATE UNTIL CONNECTION TO THE MEDIAN INLET IS COMPLETED IN PHASE 4.
DR6 - COVER GRATE UNTIL CONNECTION TO THE MEDIAN INLET IS COMPLETED IN PHASE 4.
DR7 - 339'-12" CONDUIT, TYPE C TO BE REMOVED IN PHASE 3A.

NOTE: THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.

FOR INFORMATION ONLY

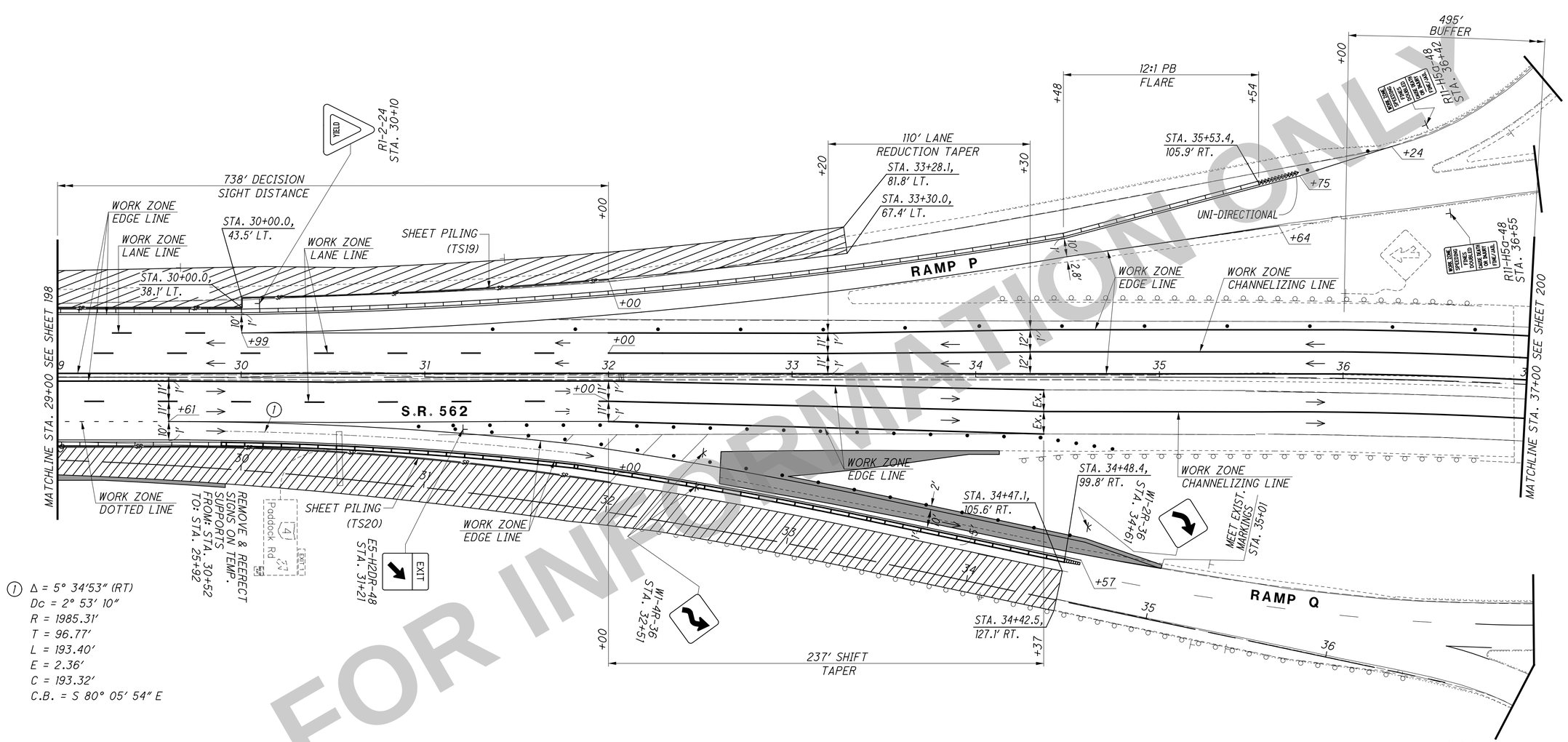
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
S.R. 562 - STA. 13+80 TO STA. 29+00

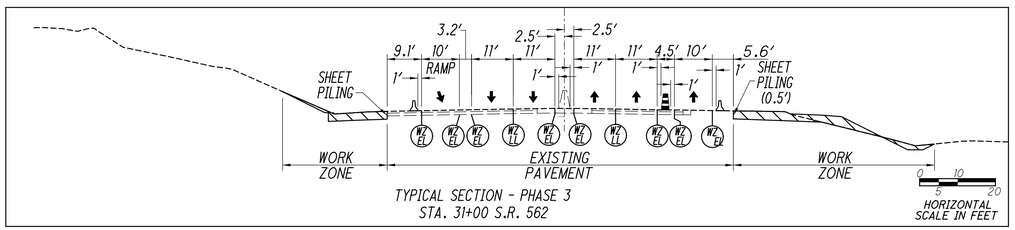
HAM-75-7.85

198
2017

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① Δ = 5° 34′53″ (RT)
Dc = 2° 53′ 10″
R = 1985.31′
T = 96.77′
L = 193.40′
E = 2.36′
C = 193.32′
C.B. = S 80° 05′ 54″ E



TYPICAL SECTION - PHASE 3
STA. 31+00 S.R. 562

NOTE: THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.

DRUM SPACING CHART	
TANGENT	80′ c/c
TAPER	55′ c/c
RADII	10′ c/c

LEGEND
- PHASE 3 WORK ZONE
- TEMPORARY PAVEMENT
- DRUM
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- TAPERED END SECTION
- TEMPORARY SIGN SUPPORT
- OPEN TRAVEL LANE

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED SMM
CHECKED JDS

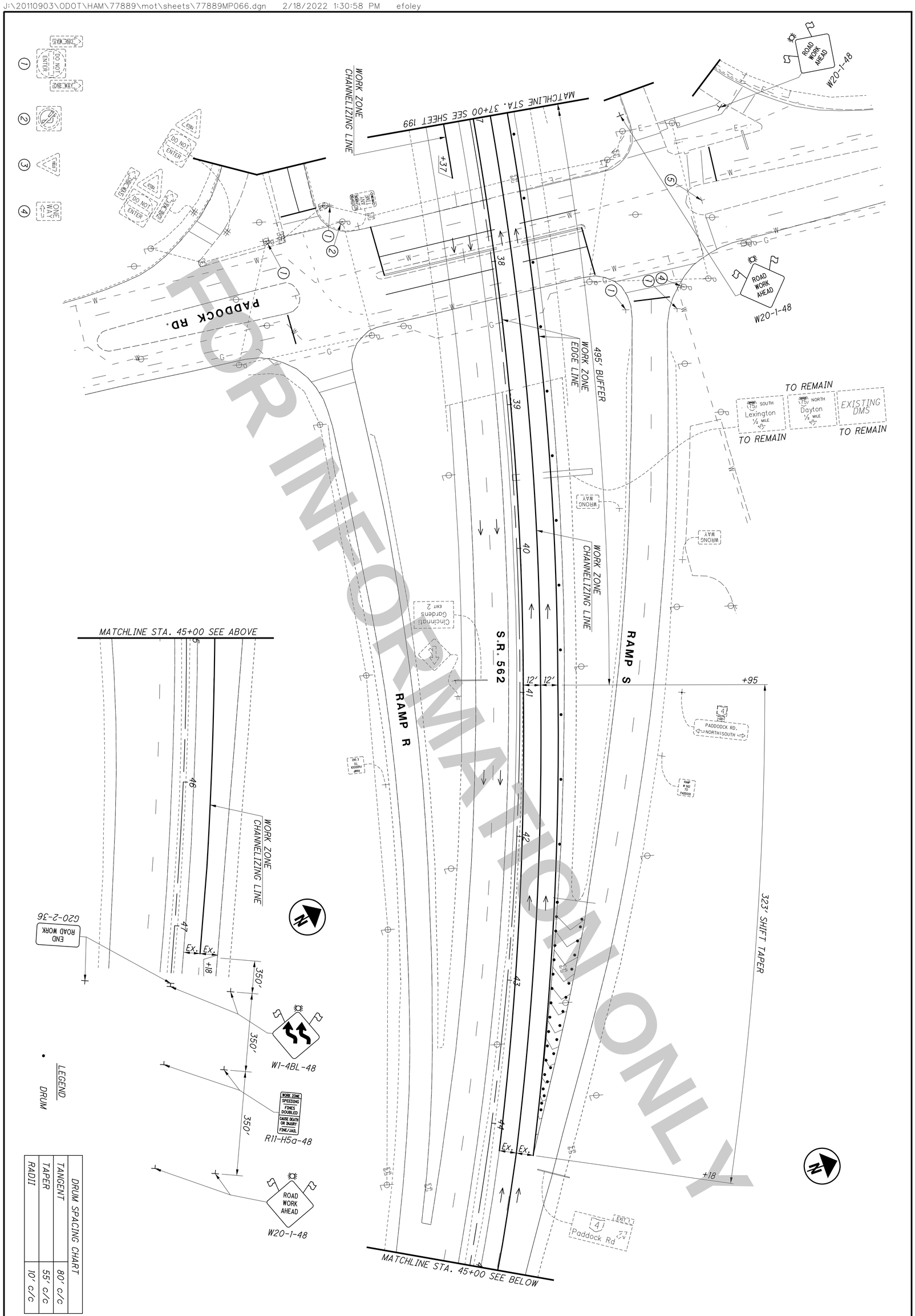
MAINTENANCE OF TRAFFIC PLAN - PHASE 3
S.R. 562 - STA. 29+00 TO STA. 37+00

HAM-75-7.85

199
2017

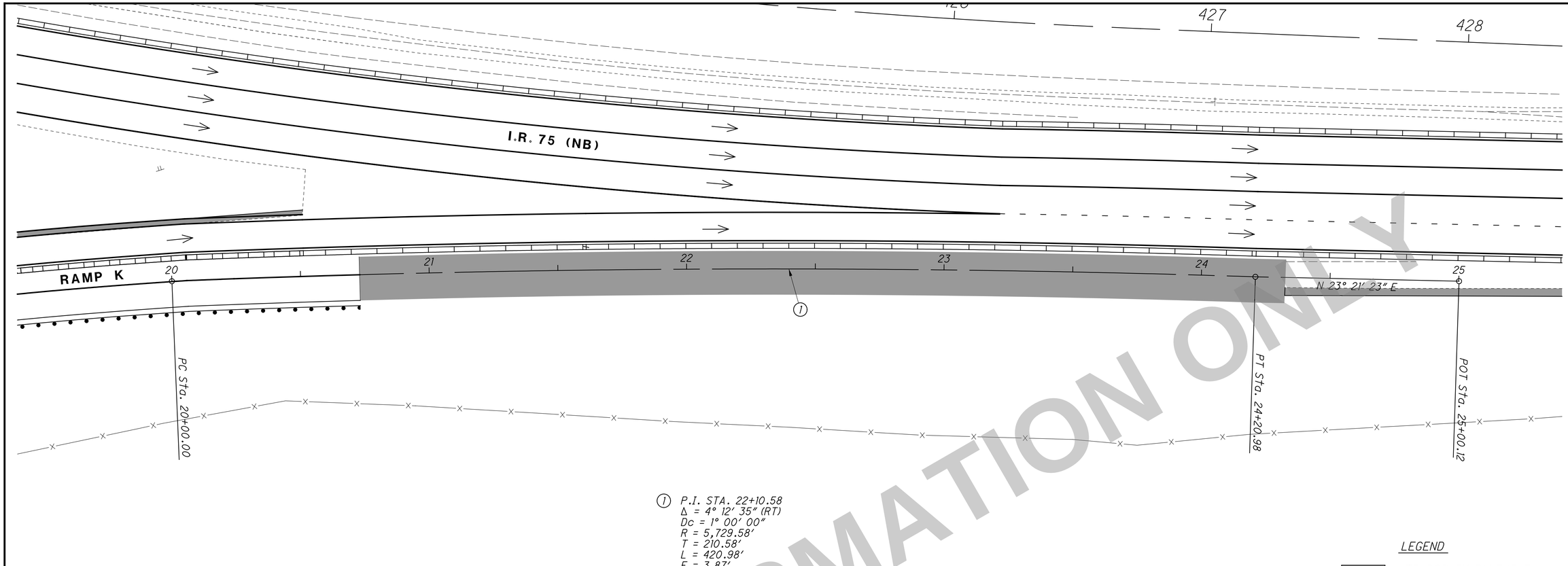
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FOR INFORMATIONAL ONLY

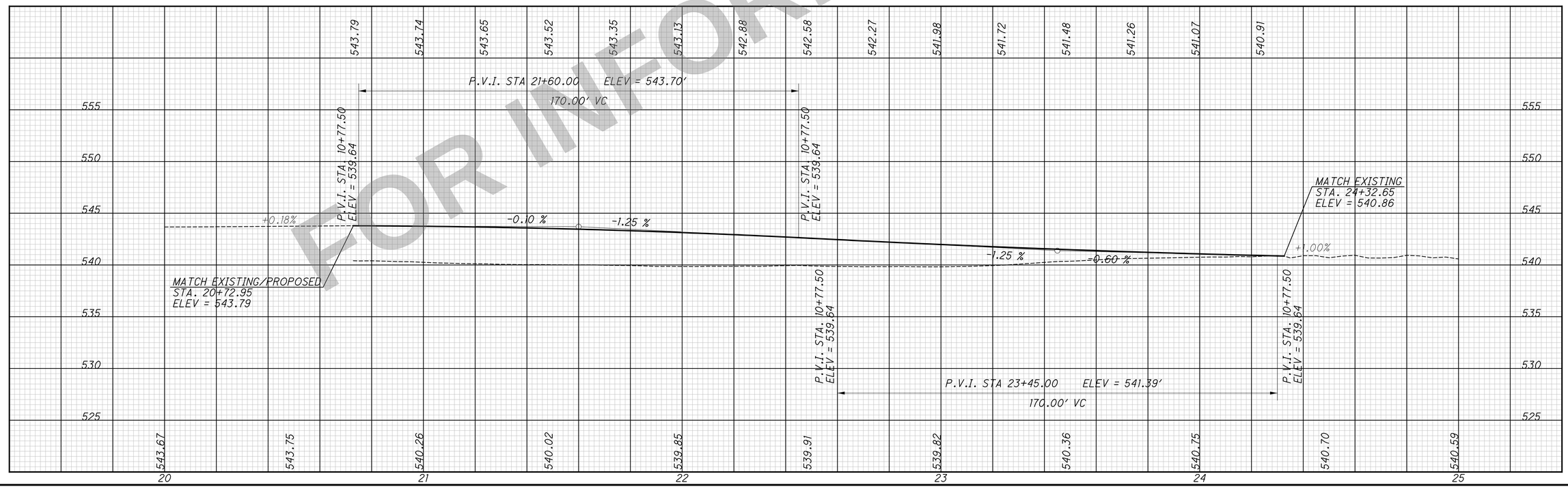
200 2017	HAM-75-7.85	MAINTENANCE OF TRAFFIC PLAN - PHASE 3 S.R. 562 - STA. 37+00 TO STA. 47+25	CALCULATED SMM CHECKED JDS	0 30 15 60 HORIZONTAL SCALE IN FEET



① P.I. STA. 22+10.58
Δ = 4° 12' 35" (RT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 210.58'
L = 420.98'
E = 3.87'
C = 420.88'
C.B. = N 21° 53' 29" E

LEGEND

TEMPORARY PAVEMENT



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED BER
CHECKED DLR

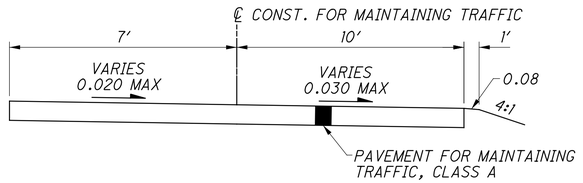
MAINTENANCE OF TRAFFIC PLAN - PHASE 3
TEMPORARY RAMP K

HAM-75-7.85

201
2017

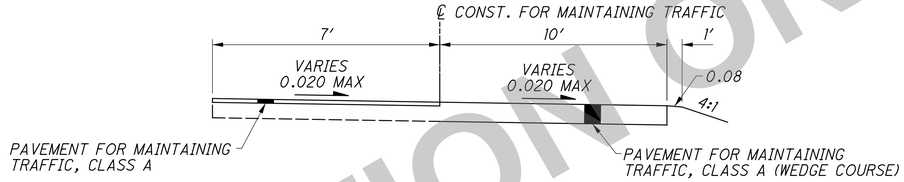
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ELEVATION TABLE					
RAMP K - 55 MPH					
LEFT SIDE		CENTERLINE CONTROL		RIGHT SIDE	
EDGE ELEVATION	SLOPE	STATION	PROFILE GRADE	SLOPE	EDGE ELEVATION
PROPOSED	+2.00%	20+00	543.67	-4.00%	PROPOSED
PROPOSED	+2.00%	20+50	543.75	-4.00%	PROPOSED
543.88	+2.00%	21+00	543.74	-3.00%	543.44
543.66	+2.00%	21+50	543.52	-2.00%	543.32
543.27	+2.00%	22+00	543.13	-2.00%	542.93
542.72	+2.00%	22+50	542.58	-2.00%	542.38
542.12	+2.00%	23+00	541.98	-2.00%	541.78
541.62	+2.00%	23+50	541.48	-2.00%	541.28
541.21	+2.00%	24+00	541.07	-2.00%	540.87
EXISTING	EXISTING	24+50	540.70	-2.00%	540.76
EXISTING	EXISTING	25+00	540.59	-2.00%	540.71



SUPERELEVATED SECTION - RAMP K

STA. 20+72.95 TO STA. 23+75



SUPERELEVATED SECTION - RAMP K

STA. 23+75 TO STA. 24+32.65

FOR INFORMATION ONLY

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CALCULATED BER CHECKED DLR

MAINTENANCE OF TRAFFIC

TEMPORARY RAMP K TYPICAL SECTIONS AND ELEVATIONS

HAM-75-7.85

202 2017

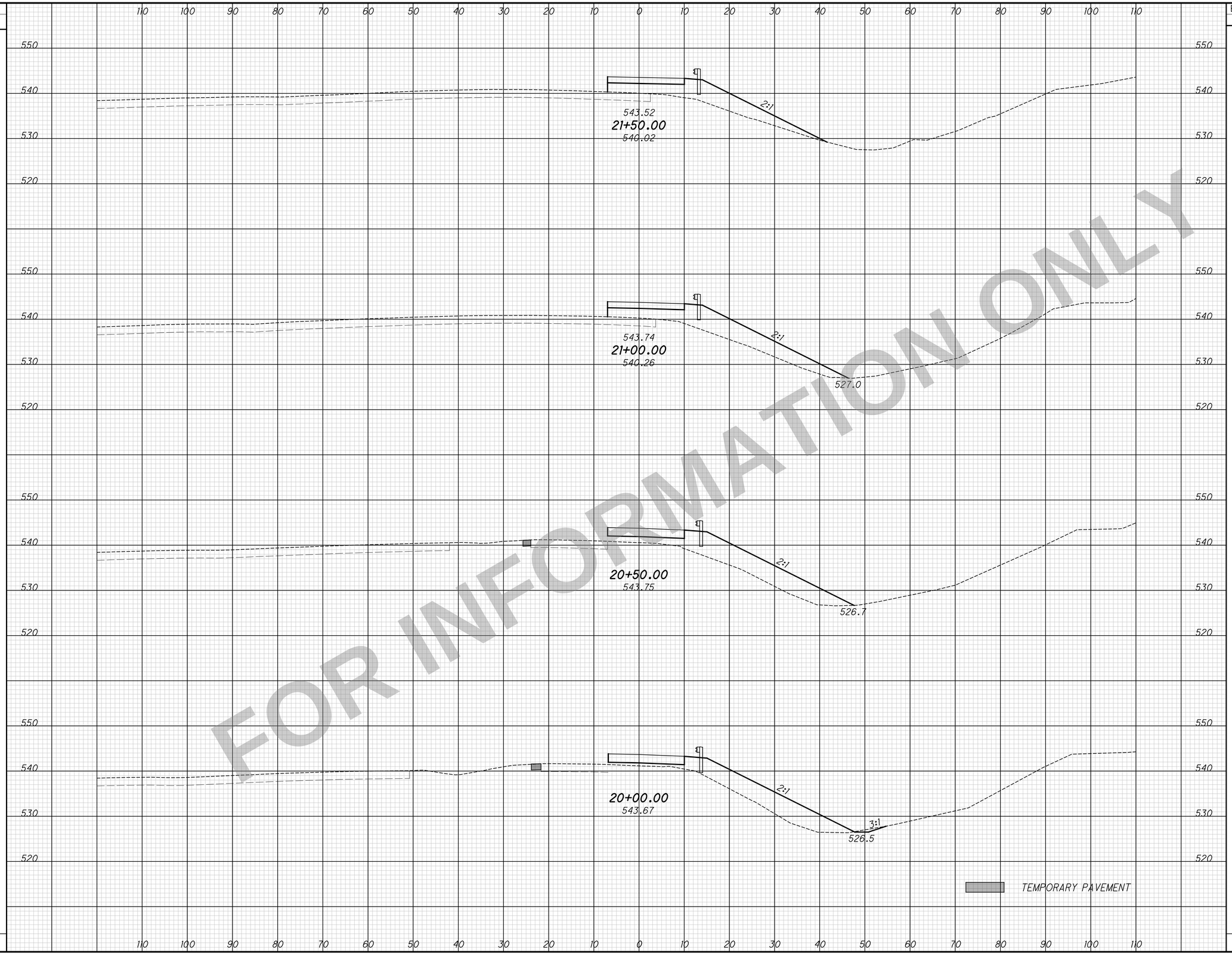
SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED BER

CHECKED DLR



FOR INFORMATION ONLY

MAINTENANCE OF TRAFFIC - TEMPORARY RAMP K
PHASE 3 CROSS SECTIONS - STA. 20+00 TO STA. 21+50

HAM-75-7.85

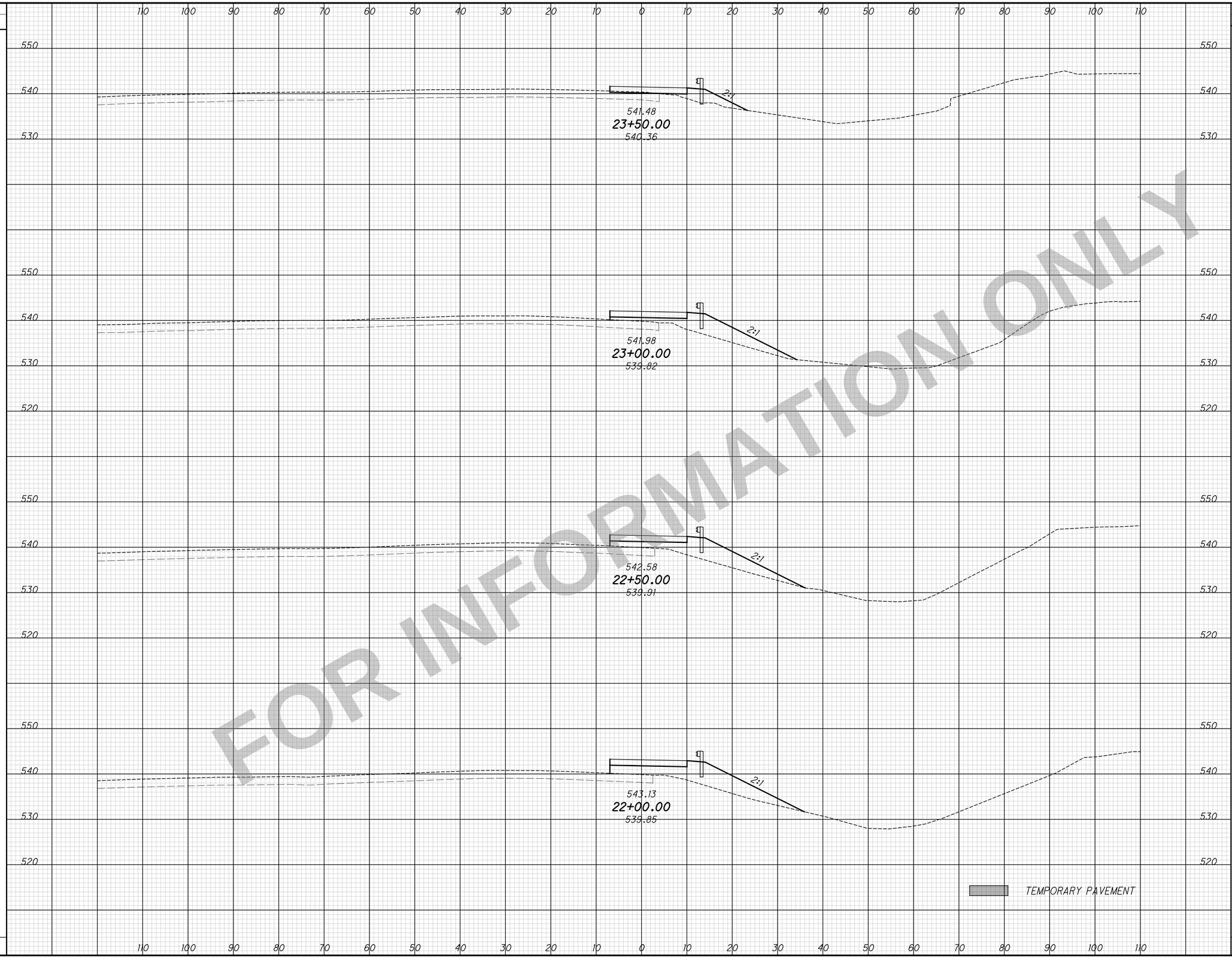
203
2017

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SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED BER
CHECKED DLR



FOR INFORMATION ONLY

MAINTENANCE OF TRAFFIC - TEMPORARY RAMP K
PHASE 3 CROSS SECTIONS - 22+00 TO STA. 23+50

HAM-75-7.85

204
2017

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SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED BER

CHECKED DLR

110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110

560
550
540
530

25+00.00
540.59

4:1

24+50.00
540.70

4:1

541.07
24+00.00
540.75

TEMPORARY PAVEMENT

FOR INFORMATION ONLY

MAINTENANCE OF TRAFFIC - TEMPORARY RAMP K
PHASE 3 CROSS SECTIONS - STA. 24+00 TO STA. 25+00

HAM-75-7.85

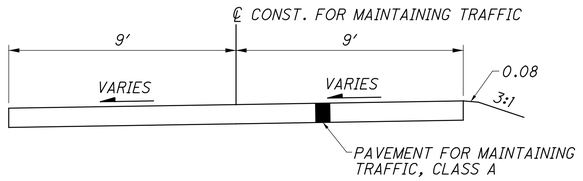
205
2017

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ELEVATION TABLE

I.R. 75 CROSSOVER - 55 MPH

LEFT SIDE		CENTERLINE CONTROL		RIGHT SIDE	
EDGE ELEVATION	SLOPE	STATION	PROFILE GRADE	SLOPE	EDGE ELEVATION
EXISTING	EXISTING	40+00	528.58	EXISTING	EXISTING
528.46	-1.76%	40+14.79	528.63	-0.55%	528.60
528.94	-0.43%	40+50	528.97	0.00%	528.97
529.38	-0.91%	41+00	529.43	+0.91%	529.48
PROPOSED	PROPOSED	41+32.55	529.74	+1.37%	529.81
PROPOSED	PROPOSED	41+50	529.92	+1.82%	530.02



SUPERELEVATED SECTION - I.R. 75

STA. 40+00 TO STA. 41+50

(1) *P.I. STA. 41+39.16*
Δ = 13° 50′ 48″ (LT)
Dc = 5° 00′ 00″
R = 1,146.00′
T = 139.16′
L = 276.96′
E = 8.42′
C = 276.28′
C.B. = N 16° 33′ 48″ E

(2) *P.I. STA. 44+26.43*
Δ = 14° 51′ 45″ (RT)
Dc = 5° 00′ 00″
R = 1146.00′
T = 149.47′
L = 297.27′
E = 9.71′
C = 296.44′
C.B. = N 17° 04′ 16″ E

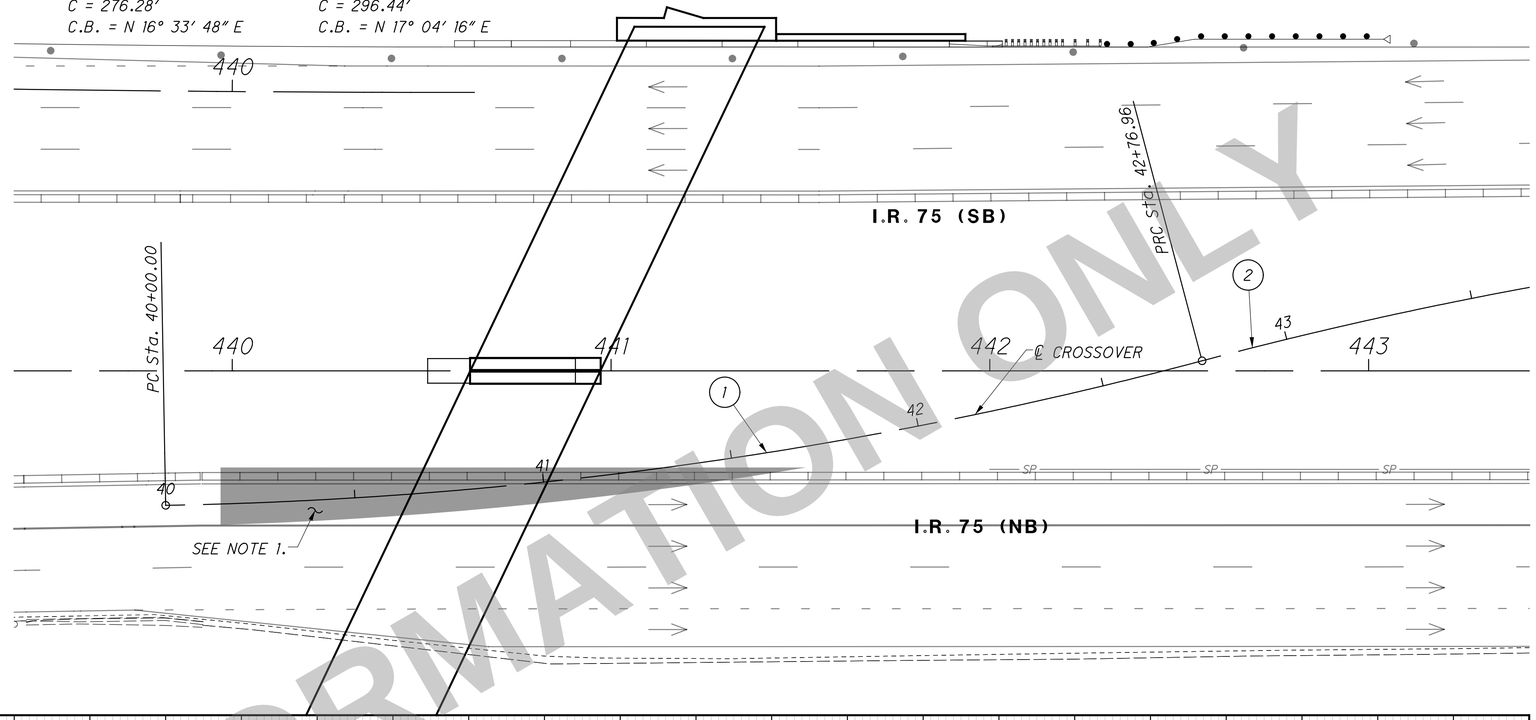
NOTES:

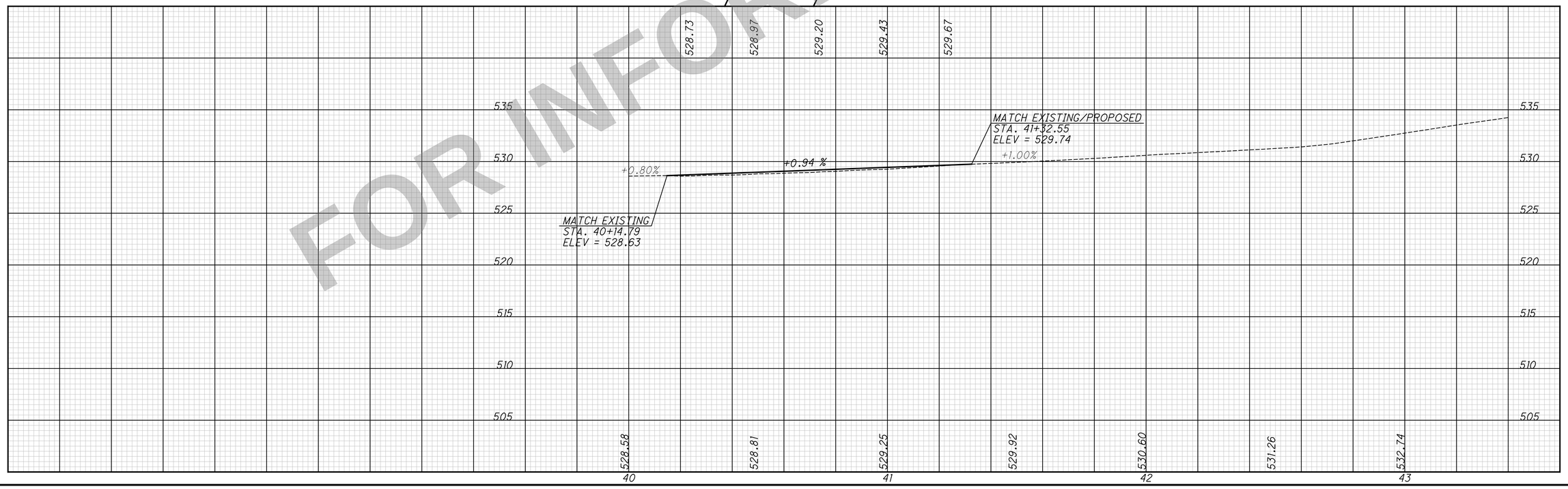
1. TEMPORARY PAVEMENT CONSTRUCTION THAT WILL BE UTILIZED TO TRANSITION THROUGH THE CROSSOVER IN PHASE 3A SHALL NOT BE COMPLETED UNTIL THE NIGHT OF TRANSITION BETWEEN PHASES 3 AND 3A. THIS WORK SHALL BE DONE WITH THE NB LEFT LANE CLOSED PER ODOT SCD MT-95.30 ONLY DURING HOURS SPECIFIED BY THE PERMITTED LANE CLOSURE POLICY.

2. DURING THE HOURS SPECIFIED IN ODOT'S PERMITTED LANE CLOSURE POLICY (HTTP://PLCM.DOT.STATE.OH.US/), LEFT LANE CLOSURES MAY BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR CROSSOVER CONSTRUCTION ALONG I.R. 75.

LEGEND

TEMPORARY PAVEMENT





FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED BER
CHECKED DLR

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
TEMPORARY CROSSOVER

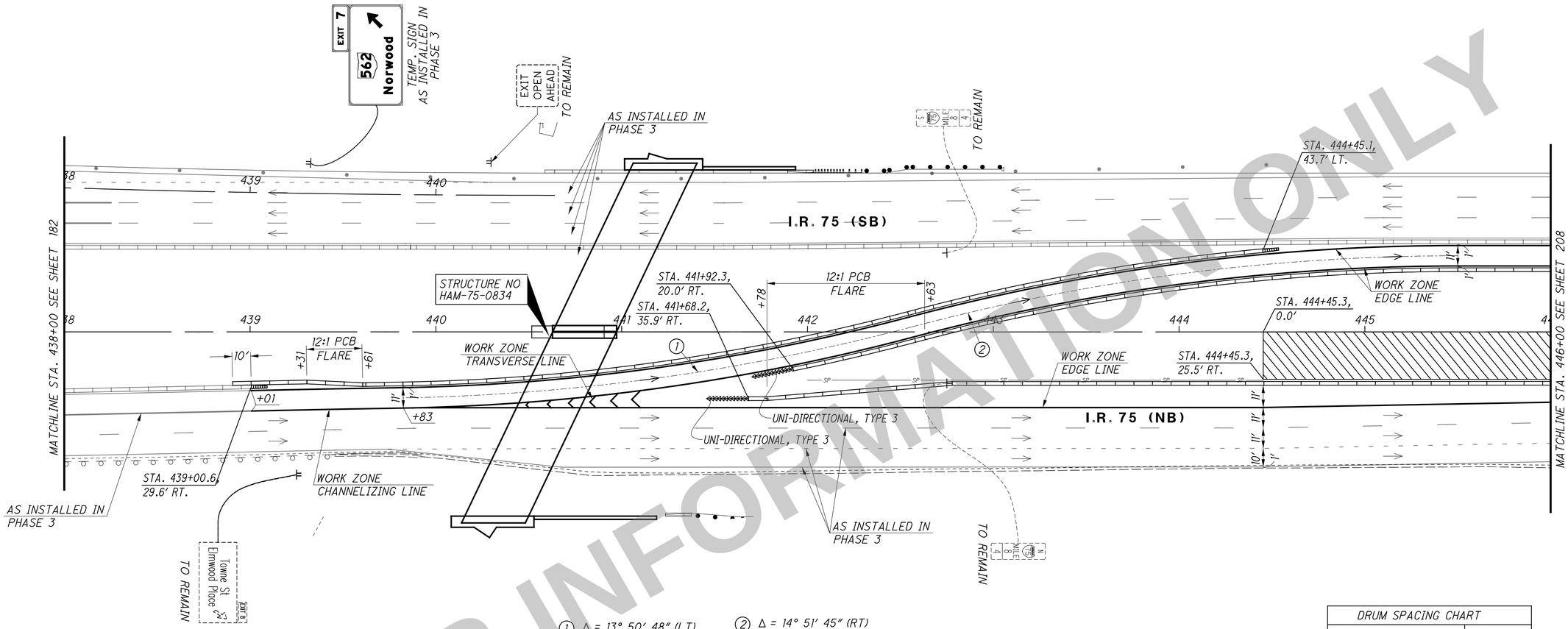
HAM-75-7.85

206
2017

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NOTE:

SET-UP SHALL BE AS PER PHASE 3 PART 1
WITH THE EXCEPTION OF ITEMS SHOWN



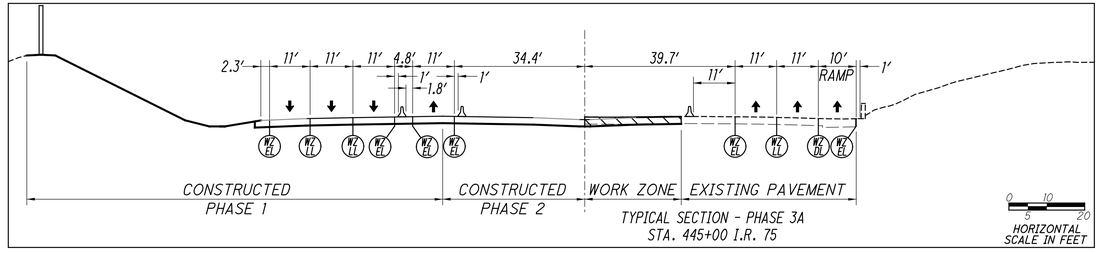
① Δ = 13° 50′ 48″ (LT)
Dc = 4° 59′ 59″
R = 1146.00′
T = 139.16′
L = 276.96′
E = 8.42′
C = 276.28′
C.B. = S 82° 3′ 48″ W

② Δ = 14° 51′ 45″ (RT)
Dc = 4° 59′ 59″
R = 1146.00′
T = 149.47′
L = 297.27′
E = 9.71′
C = 296.44′
C.B. = N 82° 34′ 16″ E

DRUM SPACING CHART	
TANGENT	80′ c/c
TAPER	55′ c/c
RADII	10′ c/c

LEGEND

- PHASE 3A WORK ZONE
- PAVEMENT TRANSITION AREA
- TEMPORARY PAVEMENT
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- TAPERED END SECTION
- PCB "Y" CONNECTING SEGMENT



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET

CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 3A
I.R. 75 - STA. 438+00 TO STA. 446+00

HAM-75-7.85

207
2017

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NOTE:
SEE PREVIOUS SHEET

EXIST. SIGN TO BE RELOCATED

FROM: STA. 448+01
TO: STA. 448+01

96' SHIFT TAPER

+67

+52

AS INSTALLED IN PHASE 3

WORK ZONE EDGE LINE

I.R. 75 (SB)

I.R. 75 (NB)

MATCHLINE STA. 446+00 SEE SHEET 207

446 447 448 449 450 451 452 453

STA. 450+50.3, 19.5' RT.

STA. 450+50.3, 25.5' RT.

STA. 451+30.8, 35.5' RT.

STA. 451+54.8, 19.5' RT.

STA. 451+55.0, 23.9' RT.

STA. 451+45.7, 25.9' RT.

+31

STA. 451+39.3, 31.5' RT.

STA. 451+40.0, 28.8' LT.

+47

STA. 452+68.8, 30.8' LT.

STA. 452+76.3, 3.9' LT.

STA. 452+83.5, 22.6' RT.

STA. 453+82.6, 19.5' RT.

SEE SHEET 174 FOR TOWNE ST. MAINTENANCE OF TRAFFIC

STRUCTURE NO HAM-75-0857

TOWNSHIP AVE.

CEDAR ST.

TOWNE ST.

EXIST. SIGN TO BE RELOCATED

FROM: STA. 453+30
TO: STA. 453+30

MATCHLINE STA. 454+00 SEE BELOW

AS INSTALLED IN PHASE 3

TWFMSE WALL (TS28)

RAMP H

AS INSTALLED IN PHASE 3

FROM: STA. 448+01
TO: STA. 448+01

EXIST. SIGN TO BE RELOCATED

TO REMAIN

EXIT 8

FROM: STA. 453+30
TO: STA. 453+30

EXIST. SIGN TO BE RELOCATED

2' 11' 11' 11' 1' 1' 4' 11' 5' 1' 37.5' 27.9' 4.5' 1' 11' 11' 2.7'

CONSTRUCTED PHASE 1

WORK ZONE

BRIDGE MOUNTED PB SEE BRIDGE PLANS FOR ANCHORING DETAILS

EXISTING PAVEMENT

HORIZONTAL SCALE IN FEET

TYPICAL SECTION - PHASE 3A
STA. 452+00 I.R. 75

WORK ZONE EDGE LINE

MATCHLINE STA. 454+00 SEE ABOVE

454 455 456 457 458 459 460 461

I.R. 75 (SB)

I.R. 75 (NB)

MATCHLINE STA. 462+00 SEE SHEET 186

RAMP E

TO REMAIN

MEET PHASE 2 PART 1 MARKINGS STA. 454+42

AS INSTALLED IN PREVIOUS PHASE

ROAD WORK AHEAD

100'

SPEED LIMIT 45

FINES DOUBLED WHEN WORKERS PRESENT

RAMP TONE N 175

TO REMAIN

LEGEND

PHASE 3A WORK ZONE

PORTABLE BARRIER

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 3A
I.R. 75 - STA. 446+00 TO STA. 462+00

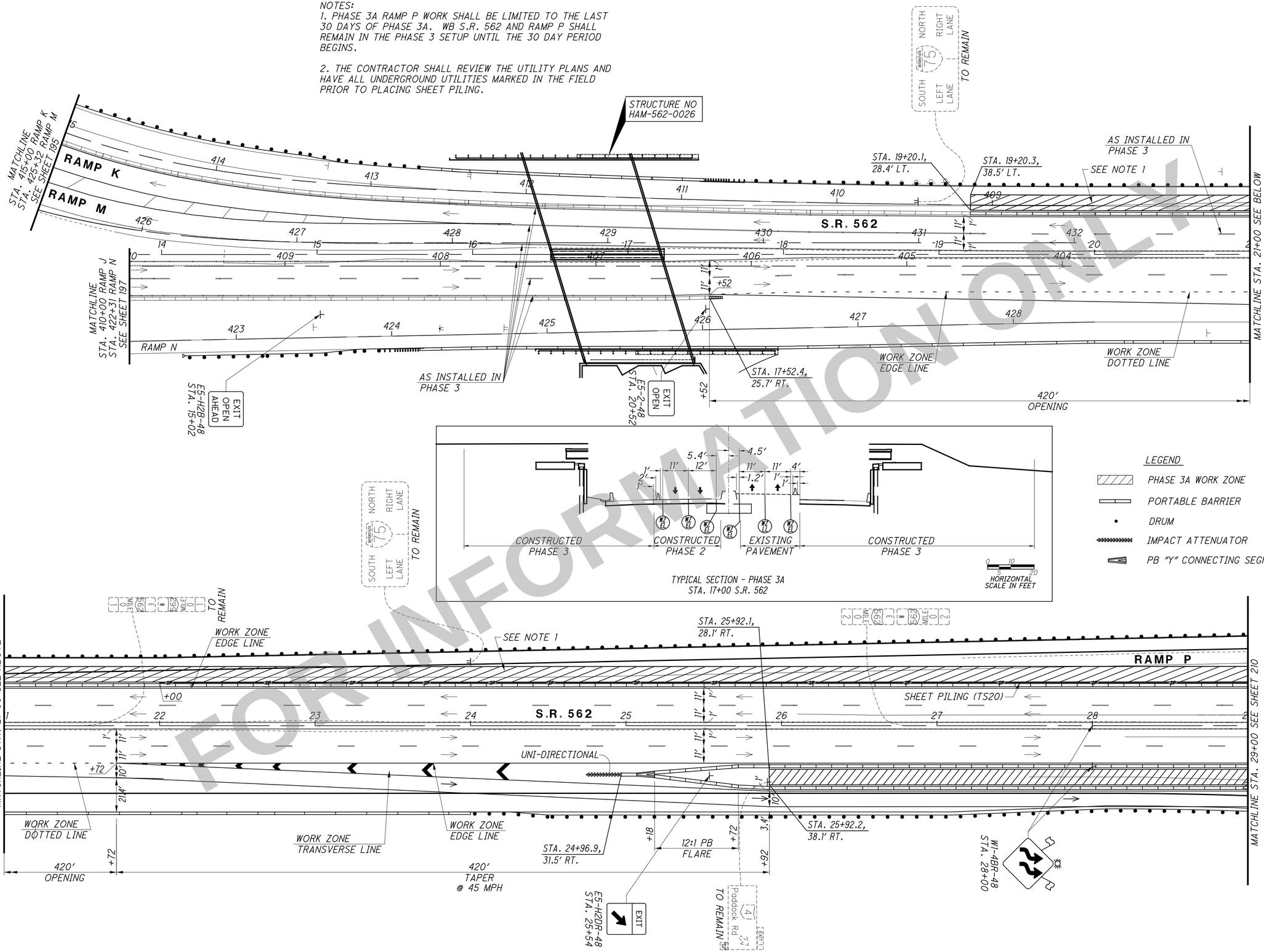
HAM-75-7.85

208
2017

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NOTES:
1. PHASE 3A RAMP P WORK SHALL BE LIMITED TO THE LAST 30 DAYS OF PHASE 3A. WB S.R. 562 AND RAMP P SHALL REMAIN IN THE PHASE 3 SETUP UNTIL THE 30 DAY PERIOD BEGINS.

2. THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.



FOR INFORMATION ONLY

MAINTENANCE OF TRAFFIC PLAN - PHASE 3A
S.R. 562 - STA. 13+00 TO STA. 29+00

HAM-75-7.85

CALCULATED SMM
CHECKED JDS

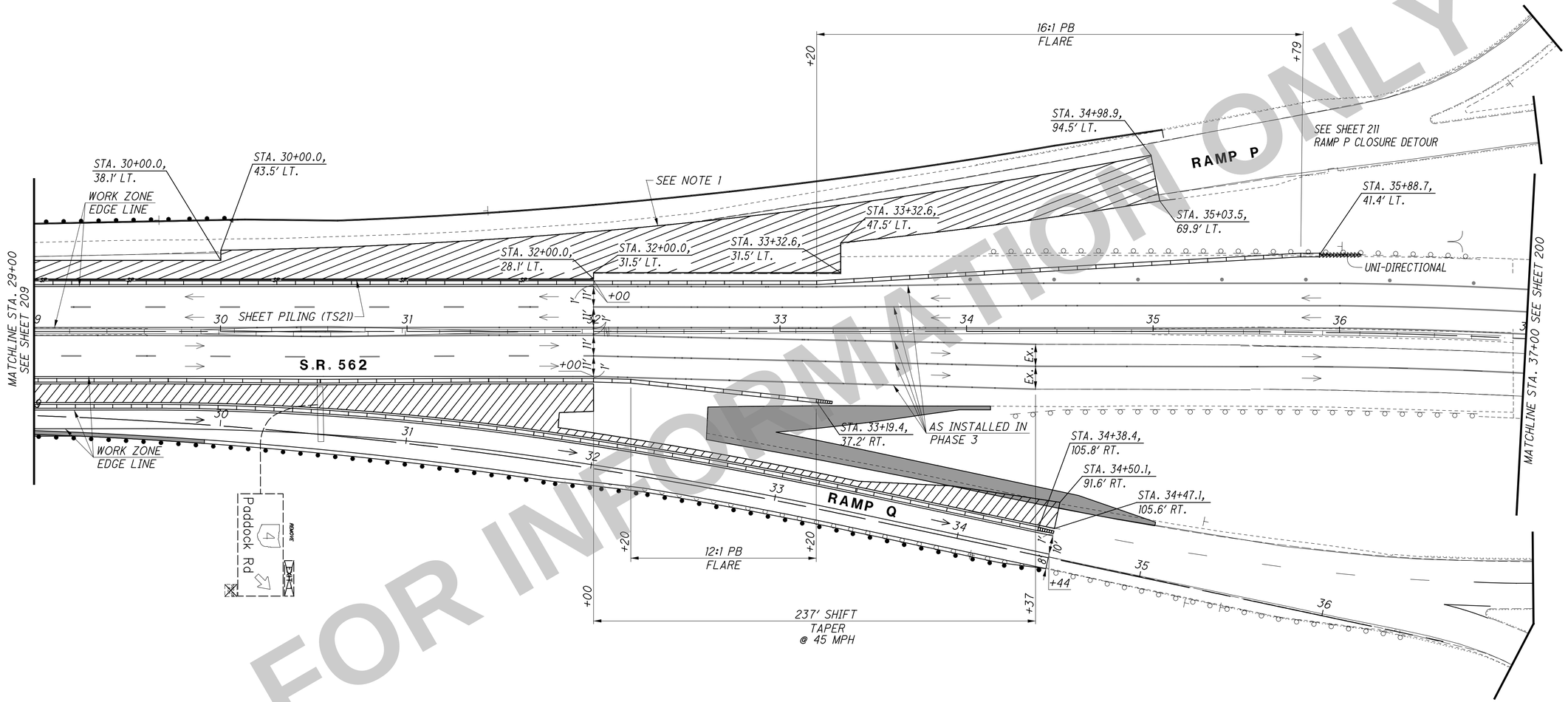
HORIZONTAL SCALE IN FEET

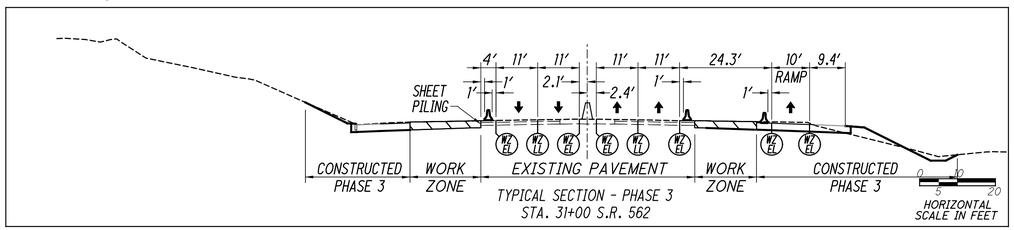
209
2017

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NOTES:
1. PHASE 3A RAMP P WORK SHALL BE LIMITED TO THE LAST 30 DAYS OF PHASE 3A. WB S.R. 562 AND RAMP P SHALL REMAIN IN THE PHASE 3 SETUP UNTIL THE 30 DAY PERIOD BEGINS.

2. THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.





LEGEND
- PHASE 3A WORK ZONE
- TEMPORARY PAVEMENT
- DRUM
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- TAPERED END SECTION

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET: 0, 15, 30, 60

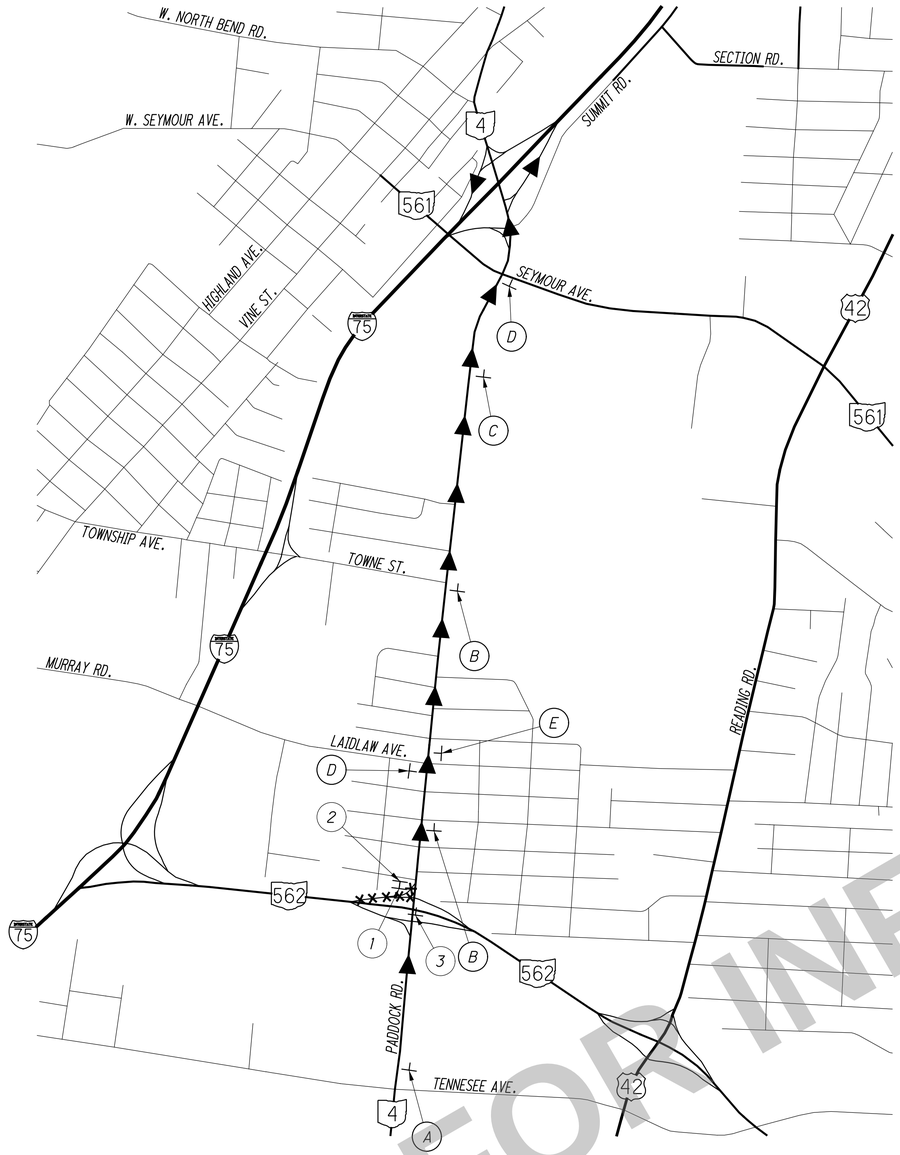
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 3A
S.R. 562 - STA. 29+00 TO STA. 37+00

HAM-75-7.85

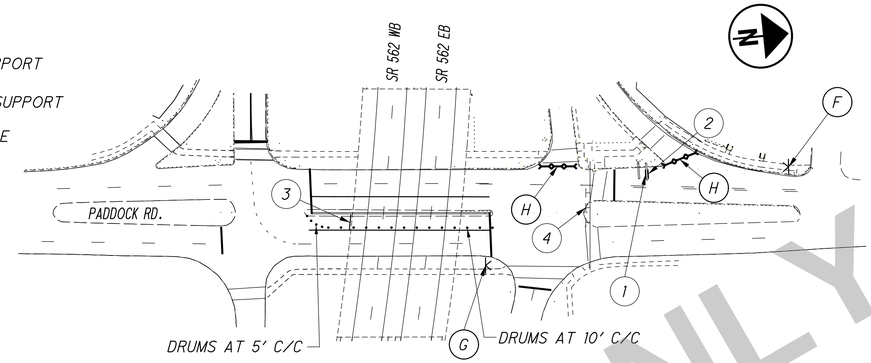
210
2017

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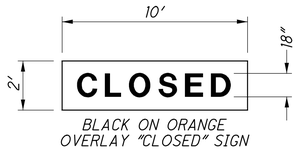


LEGEND

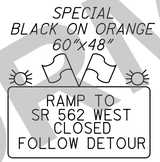
- × RAMP CLOSURE
- ▶ DETOUR ROUTE
- ⊥ EXISTING SIGN SUPPORT
- ⊻ TEMPORARY SIGN SUPPORT
- ⊥ TYPE III BARRICADE



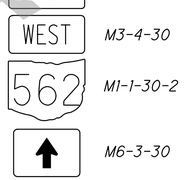
RAMP CLOSURE DETAIL



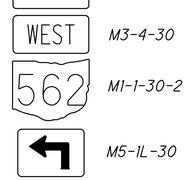
BLACK ON ORANGE
OVERLAY "CLOSED" SIGN



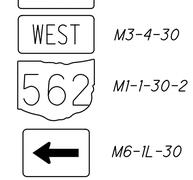
A



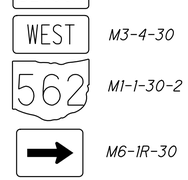
B



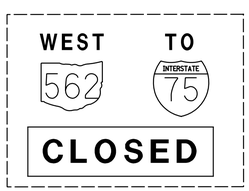
C



D



E



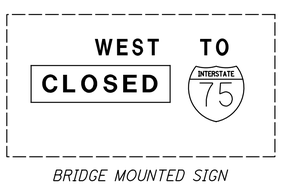
CANTILEVER MOUNTED SIGN

1



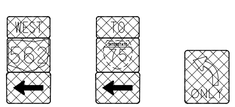
CANTILEVER MOUNTED SIGN

2



BRIDGE MOUNTED SIGN

3



EXISTING W/ TEMPORARY OVERLAY

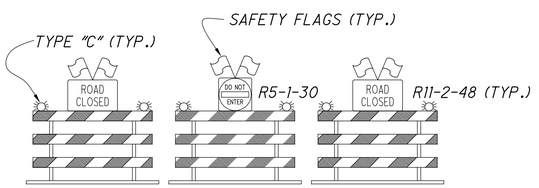
4



F



G



10' TYPE III SOLID BARRICADE

H

ALL OVERHEAD WORK (INCLUDING BEAM PLACEMENT) IMPACTING I.R. 75 TRAFFIC SHALL BE COMPLETED PER ODOT SCD MT-99.60

FOR INFORMATION ONLY

MAINTENANCE OF TRAFFIC PLAN - PHASE 3A
RAMP P DETOUR ROUTE

HAM-75-7.85

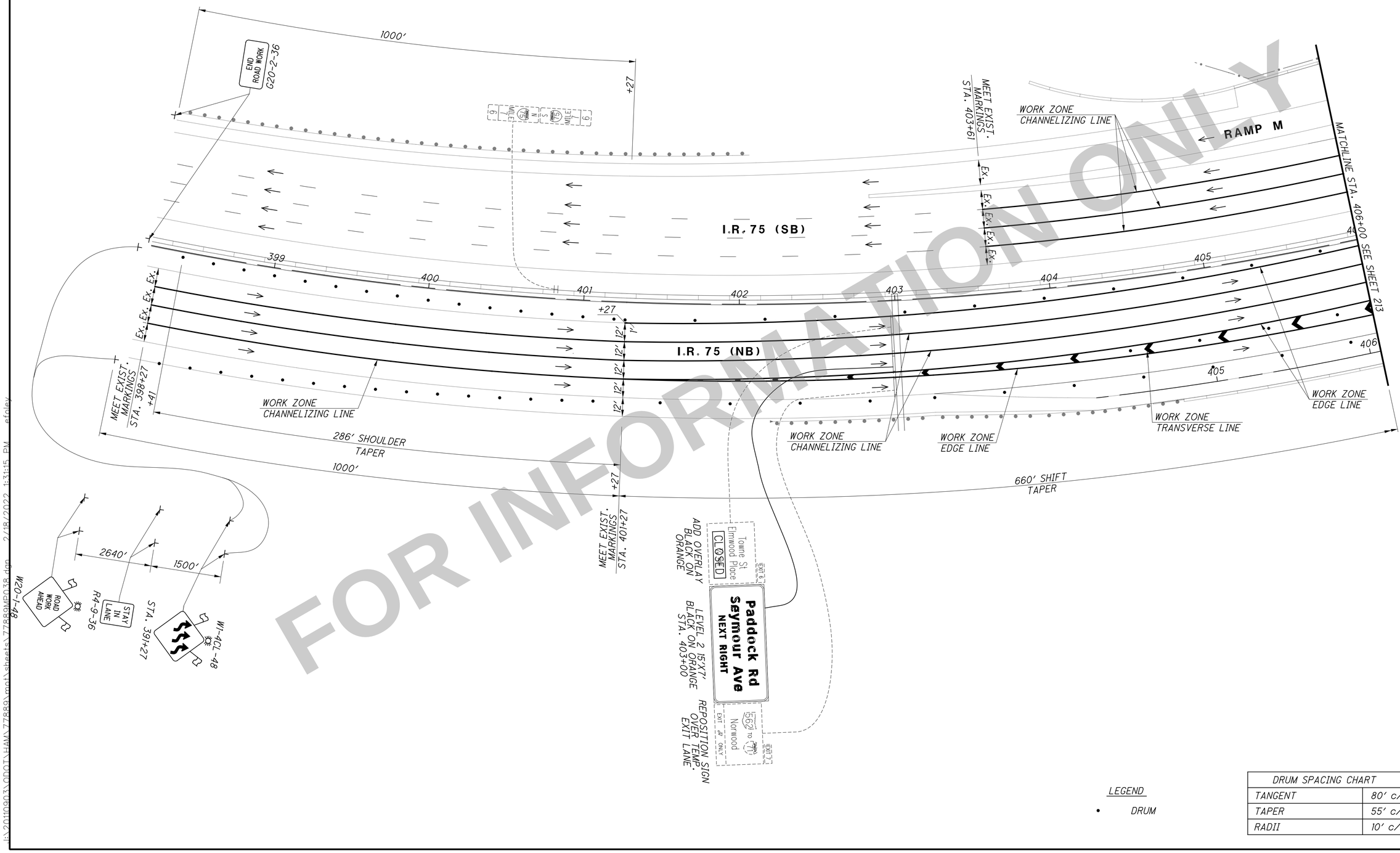
211
2017

CALCULATED SMM
CHECKED JDS

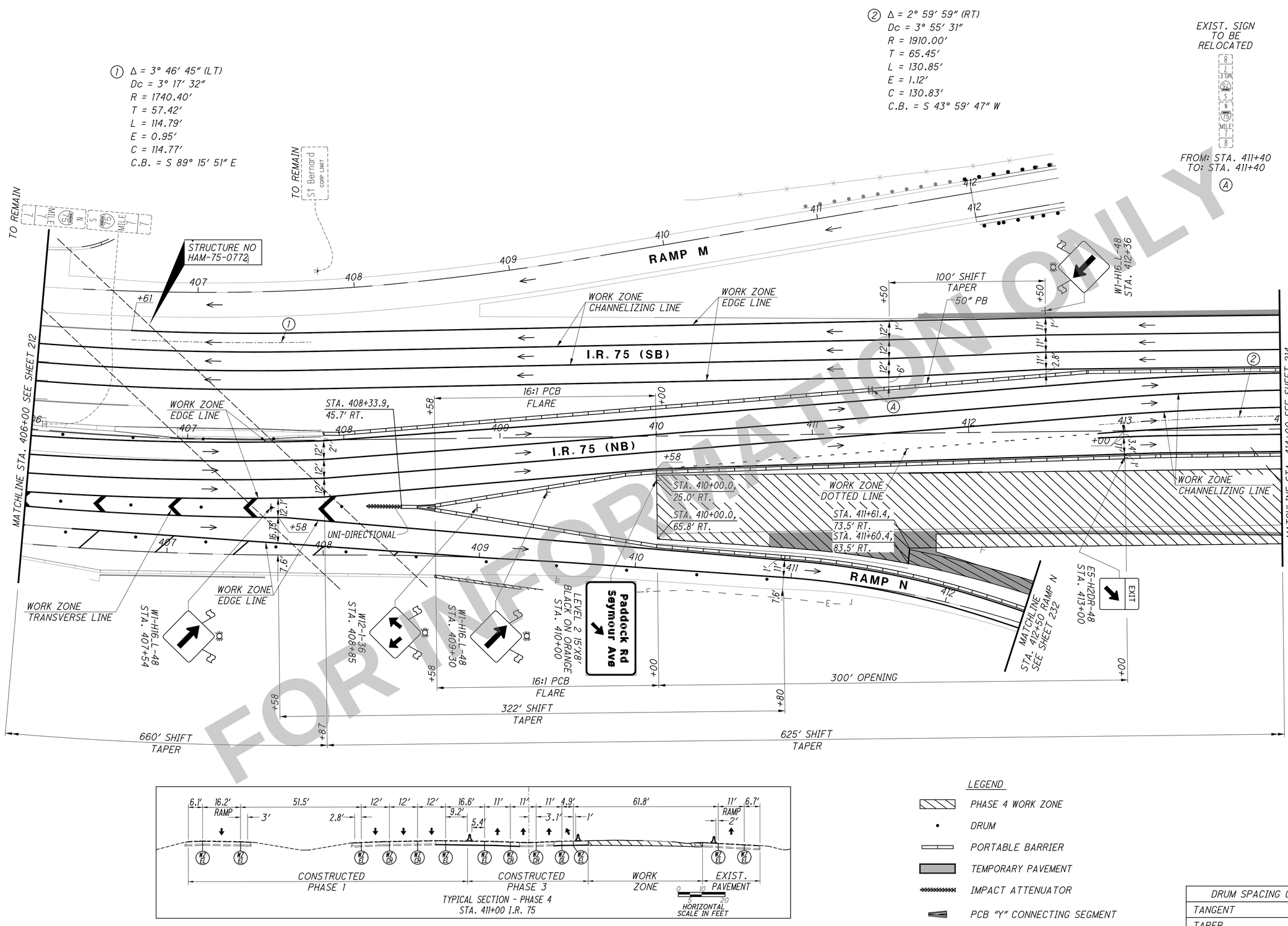
NO SCALE

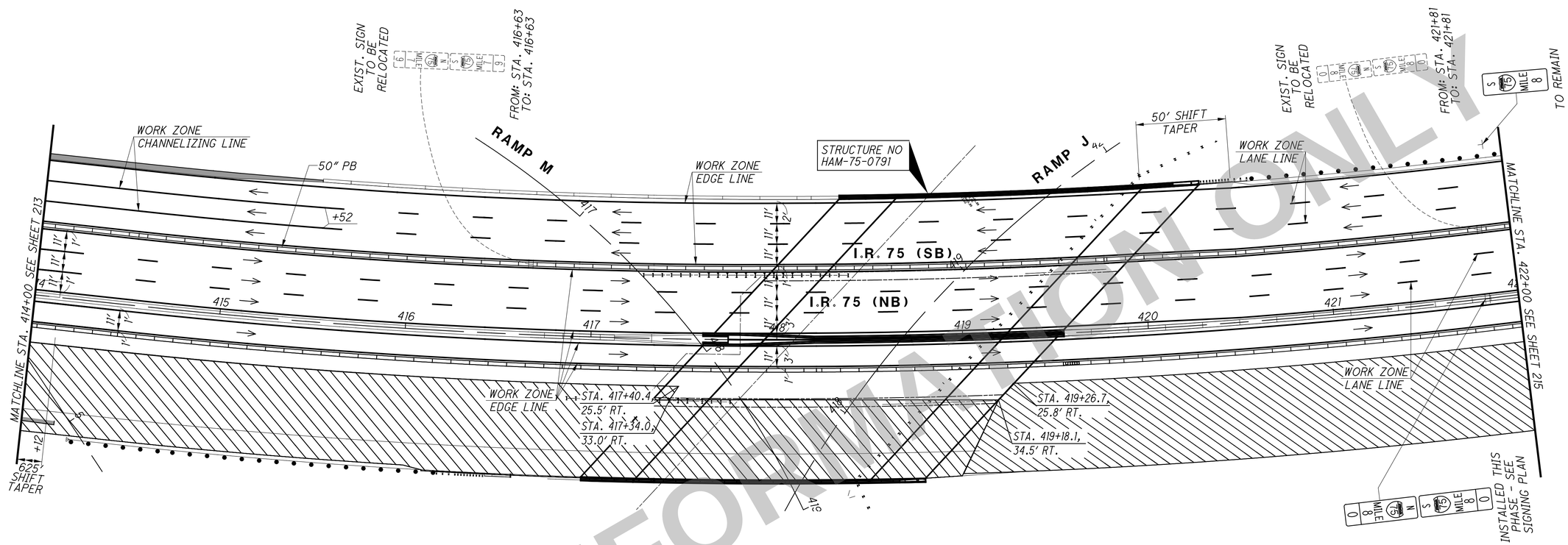
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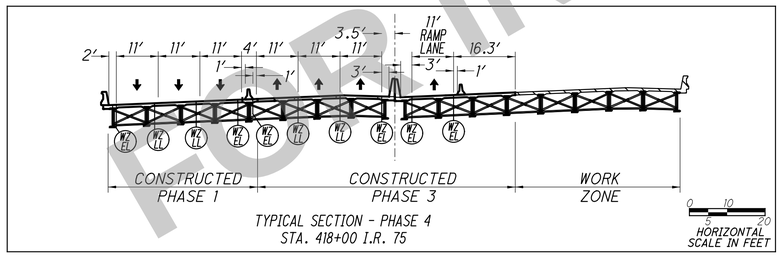
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i:\2011093\ODOT\HAM\77889\mot\sheets\77889MP038.dgn 2/18/2022 1:31:15 PM efoley


① Δ = 3° 46′ 45″ (LT)
Dc = 3° 17′ 32″
R = 1740.40′
T = 57.42′
L = 114.79′
E = 0.95′
C = 114.77′
C.B. = S 89° 15′ 51″ E
② Δ = 2° 59′ 59″ (RT)
Dc = 3° 55′ 31″
R = 1910.00′
T = 65.45′
L = 130.85′
E = 1.12′
C = 130.83′
C.B. = S 43° 59′ 47″ W
EXIST. SIGN TO BE RELOCATED
FROM: STA. 411+40
TO: STA. 411+40
TO REMAIN
St Bernard
CORP LIMIT
STRUCTURE NO HAM-75-0772
RAMP M
I.R. 75 (SB)
I.R. 75 (NB)
RAMP N
WORK ZONE CHANNELIZING LINE
WORK ZONE EDGE LINE
100′ SHIFT TAPER
50″ PB
W1-H16_L-48 STA. 412+36
STA. 408+33.9, 45.7′ RT.
16:1 PCB FLARE
UNI-DIRECTIONAL
WORK ZONE DOTTED LINE
STA. 410+00.0, 25.0′ RT.
STA. 410+00.0, 65.8′ RT.
STA. 411+61.4, 73.5′ RT.
STA. 411+60.4, 83.5′ RT.
WORK ZONE TRANSVERSE LINE
W1-H16_L-48 STA. 407+54
W12-1-36 STA. 408+85
W1-H16_L-48 STA. 409+30
LEVEL 2 15′X8′ BLACK ON ORANGE STA. 410+00
Paddock Rd
Seymour Ave
16:1 PCB FLARE
300′ OPENING
322′ SHIFT TAPER
660′ SHIFT TAPER
625′ SHIFT TAPER
MATCHLINE STA. 412+50 RAMP N SEE SHEET 232
E5-H2DR-48 STA. 413+00
EXIT
MATCHLINE STA. 406+00 SEE SHEET 212
MATCHLINE STA. 414+00 SEE SHEET 214
TYPICAL SECTION - PHASE 4
STA. 411+00 I.R. 75
CONSTRUCTED PHASE 1
CONSTRUCTED PHASE 3
WORK ZONE
EXIST. PAVEMENT
HORIZONTAL SCALE IN FEET
LEGEND
PHASE 4 WORK ZONE
DRUM
PORTABLE BARRIER
TEMPORARY PAVEMENT
IMPACT ATTENUATOR
PCB "Y" CONNECTING SEGMENT
DRUM SPACING CHART
TANGENT 80′ c/c
TAPER 55′ c/c
RADII 10′ c/c
HORIZONTAL SCALE IN FEET
CALCULATED SMM
CHECKED JDS
MAINTENANCE OF TRAFFIC PLAN - PHASE 4
I.R. 75 - STA. 406+00 TO STA. 414+00
HAM-75-7.85
213
2017
FOR INFORMATION ONLY
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TYPICAL SECTION - PHASE 4
STA. 418+00 I.R. 75

LEGEND

- PHASE 4 WORK ZONE
- PORTABLE BARRIER
- TEMPORARY PAVEMENT

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

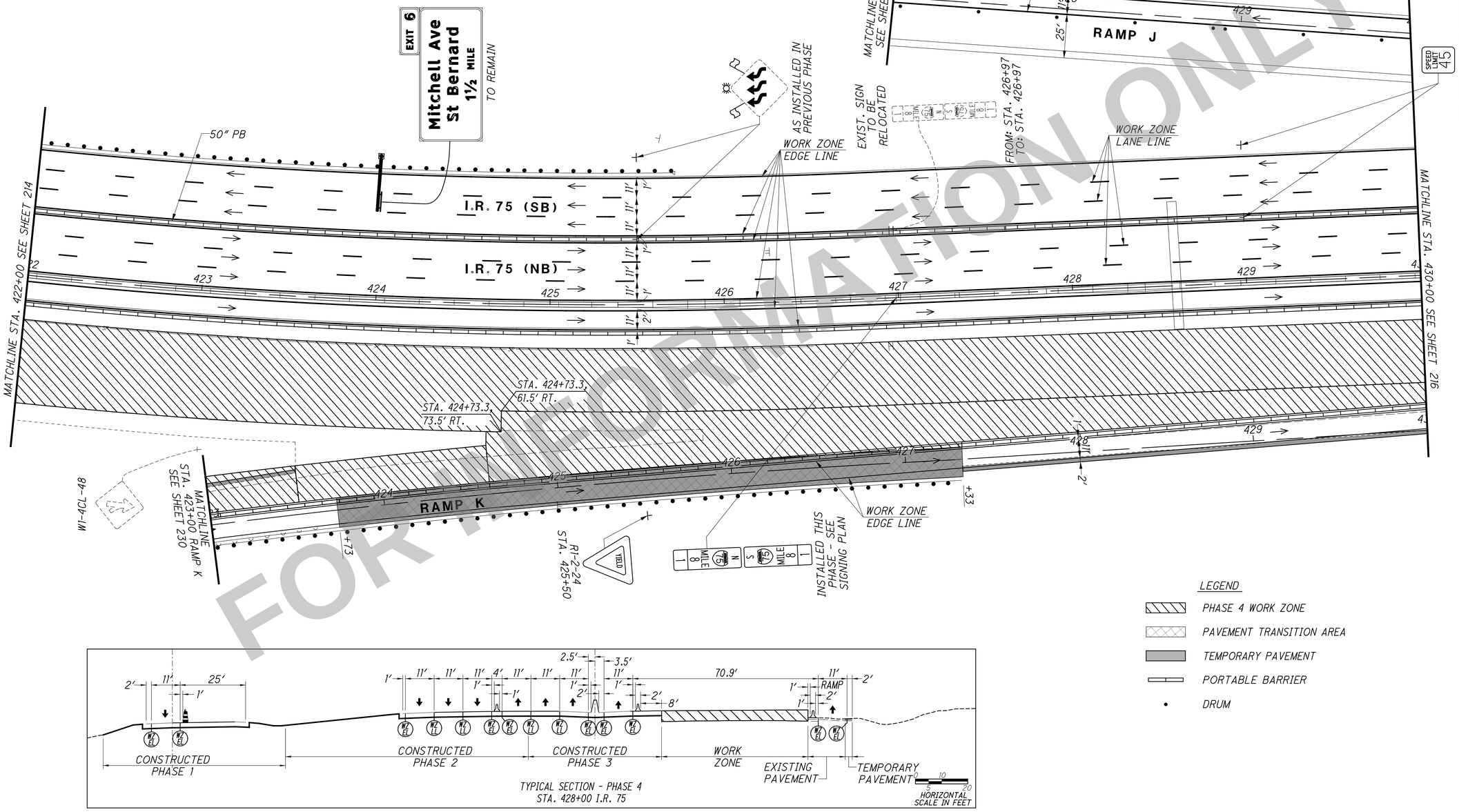
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 4
I.R. 75 - STA. 414+00 TO STA. 422+00

HAM-75-7.85

214
2017

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TYPICAL SECTION - PHASE 4
STA. 428+00 I.R. 75

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HORIZONTAL SCALE IN FEET

CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 4
I.R. 75 - STA. 422+00 TO STA. 430+00

HAM-75-7.85

215
2017

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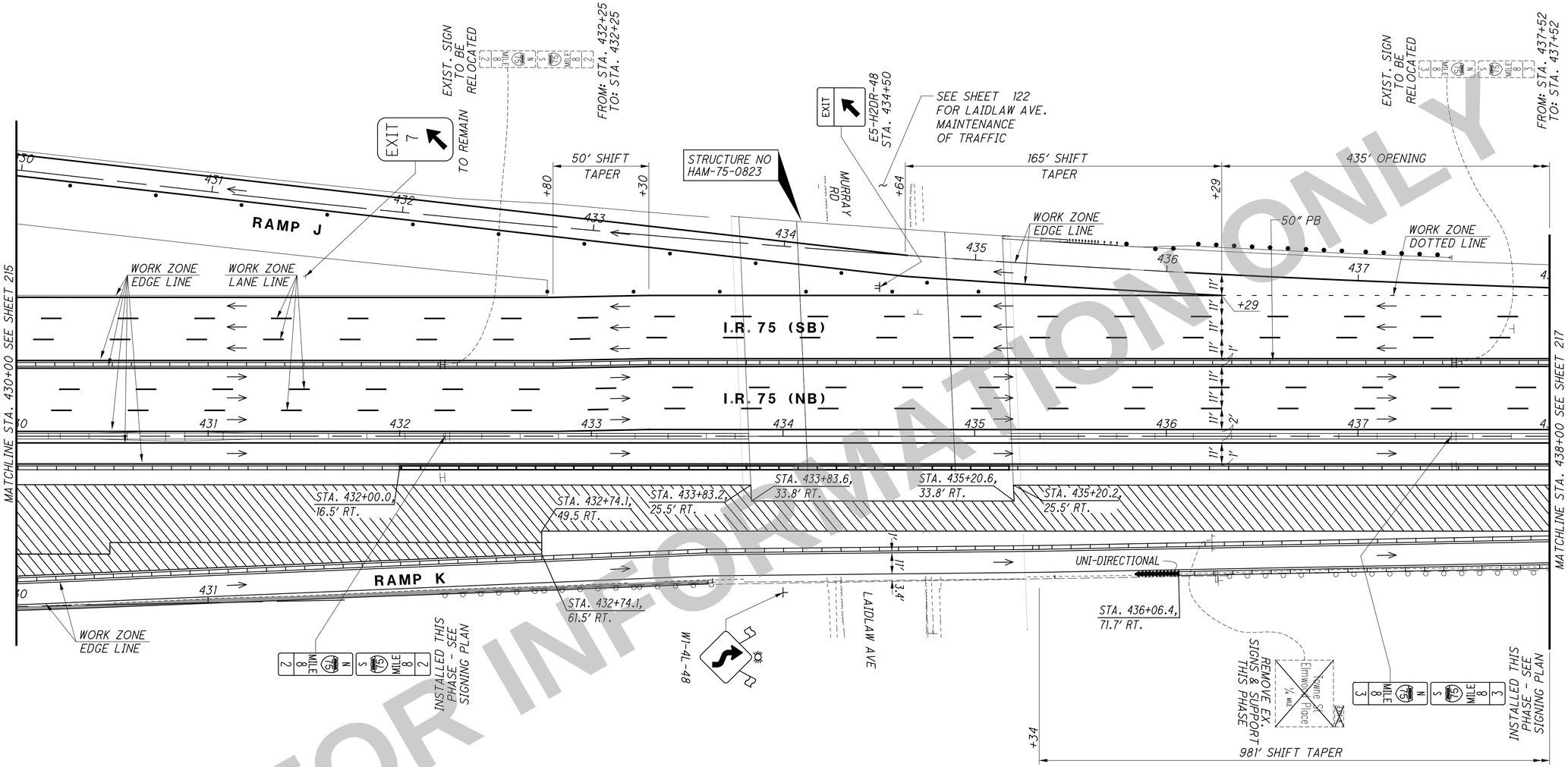
MAINTENANCE OF TRAFFIC PLAN - PHASE 4
I.R. 75 - STA. 430+00 TO STA. 438+00

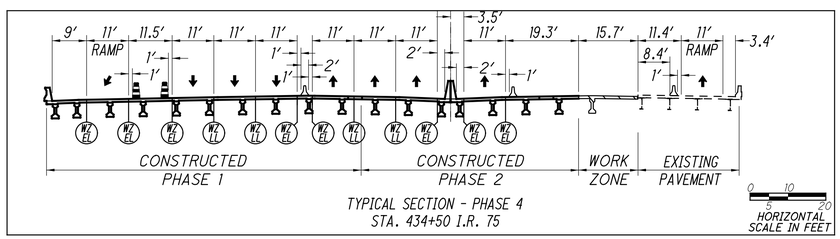
CALCULATED SMM
CHECKED JDS

HORIZONTAL SCALE IN FEET
0 15 30 60

HAM-75-7.85

216
2017





TYPICAL SECTION - PHASE 4
STA. 434+50 I.R. 75

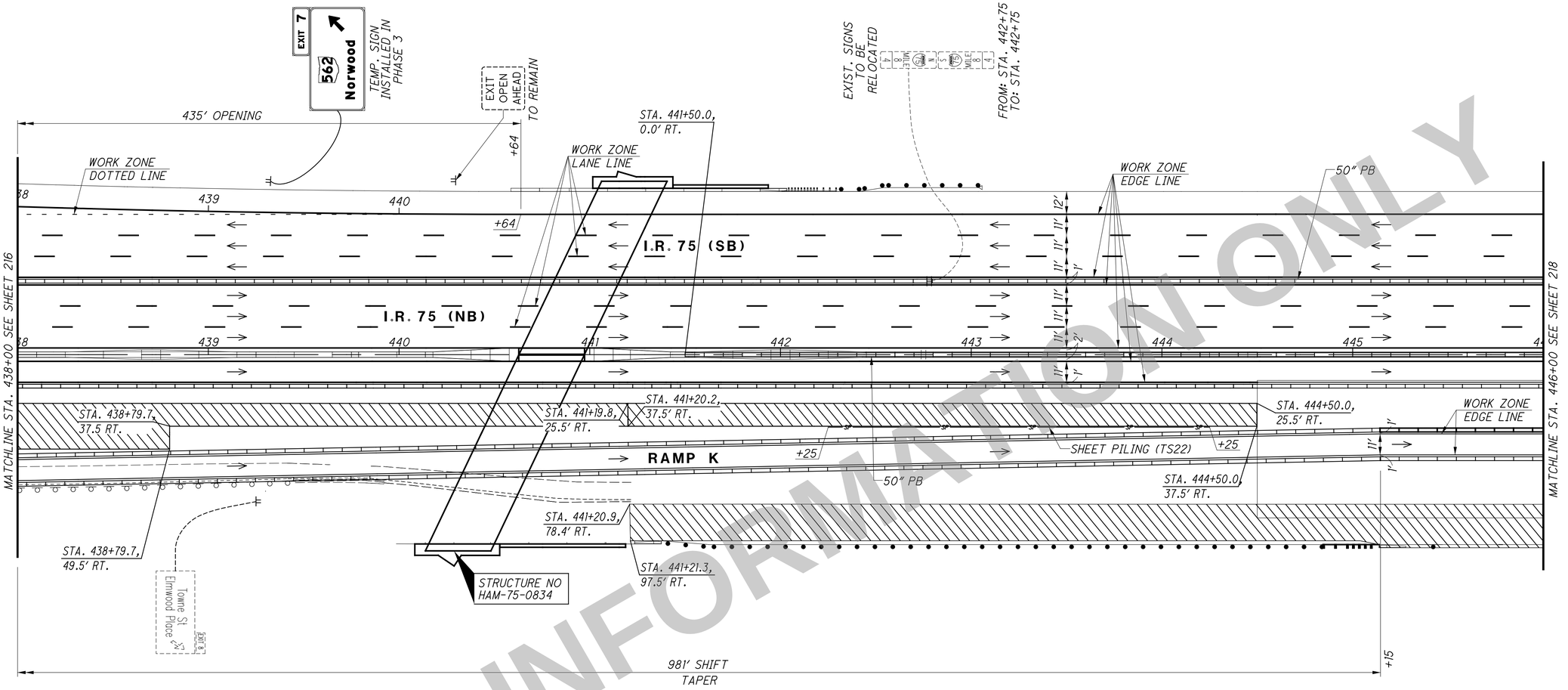
LEGEND

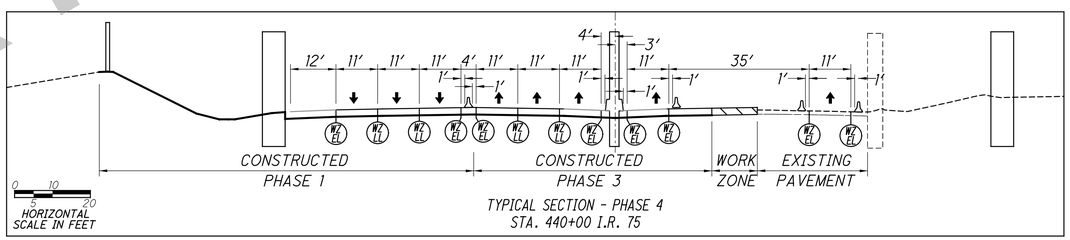
- PHASE 4 WORK ZONE
- DRUM
- PORTABLE BARRIER
- TEMPORARY PAVEMENT
- IMPACT ATTENUATOR

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

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LEGEND

PHASE 4 WORK ZONE

PORTABLE BARRIER

NOTE: THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

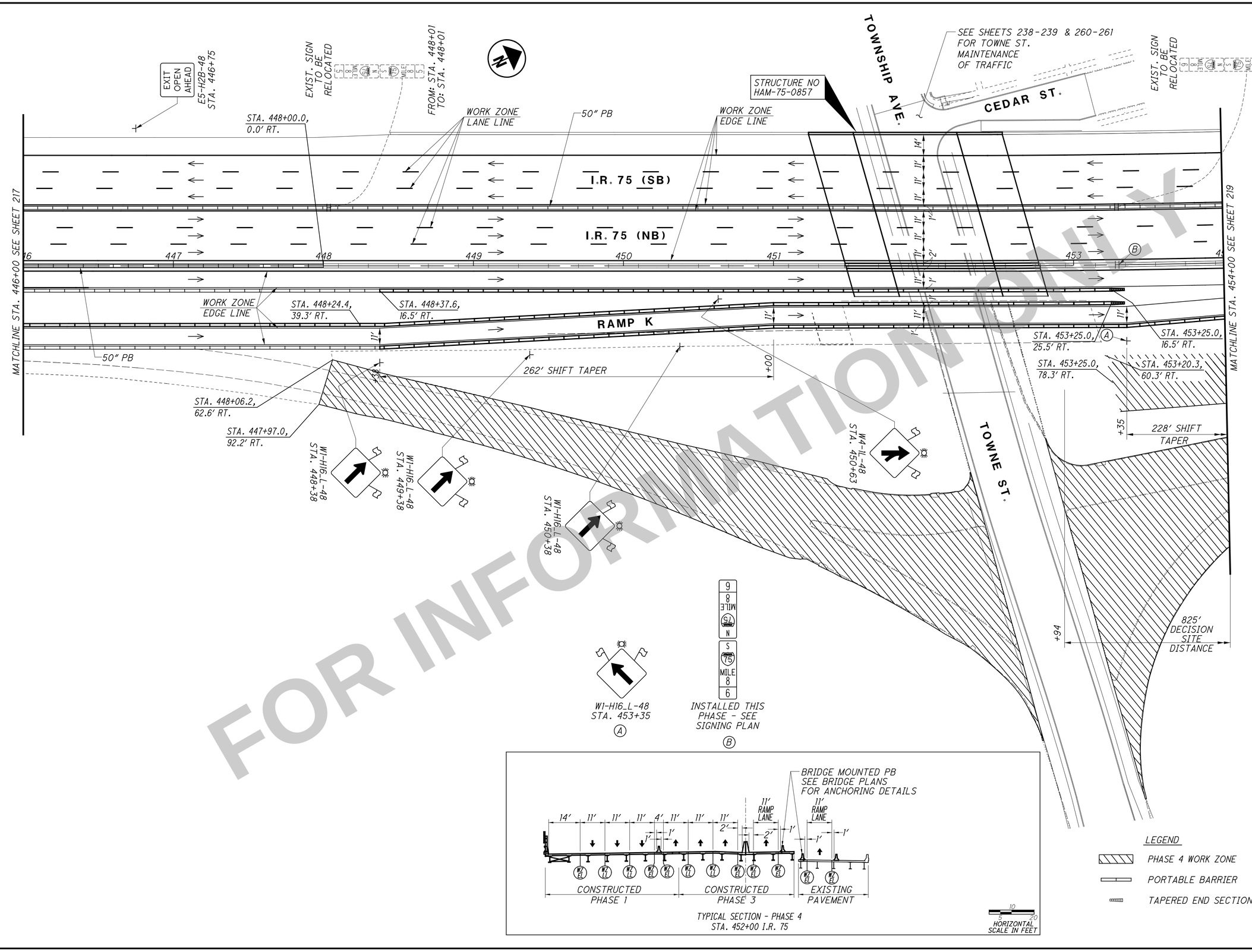
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 4
I.R. 75 - STA. 438+00 TO STA. 446+00

HAM-75-7.85

217
2017

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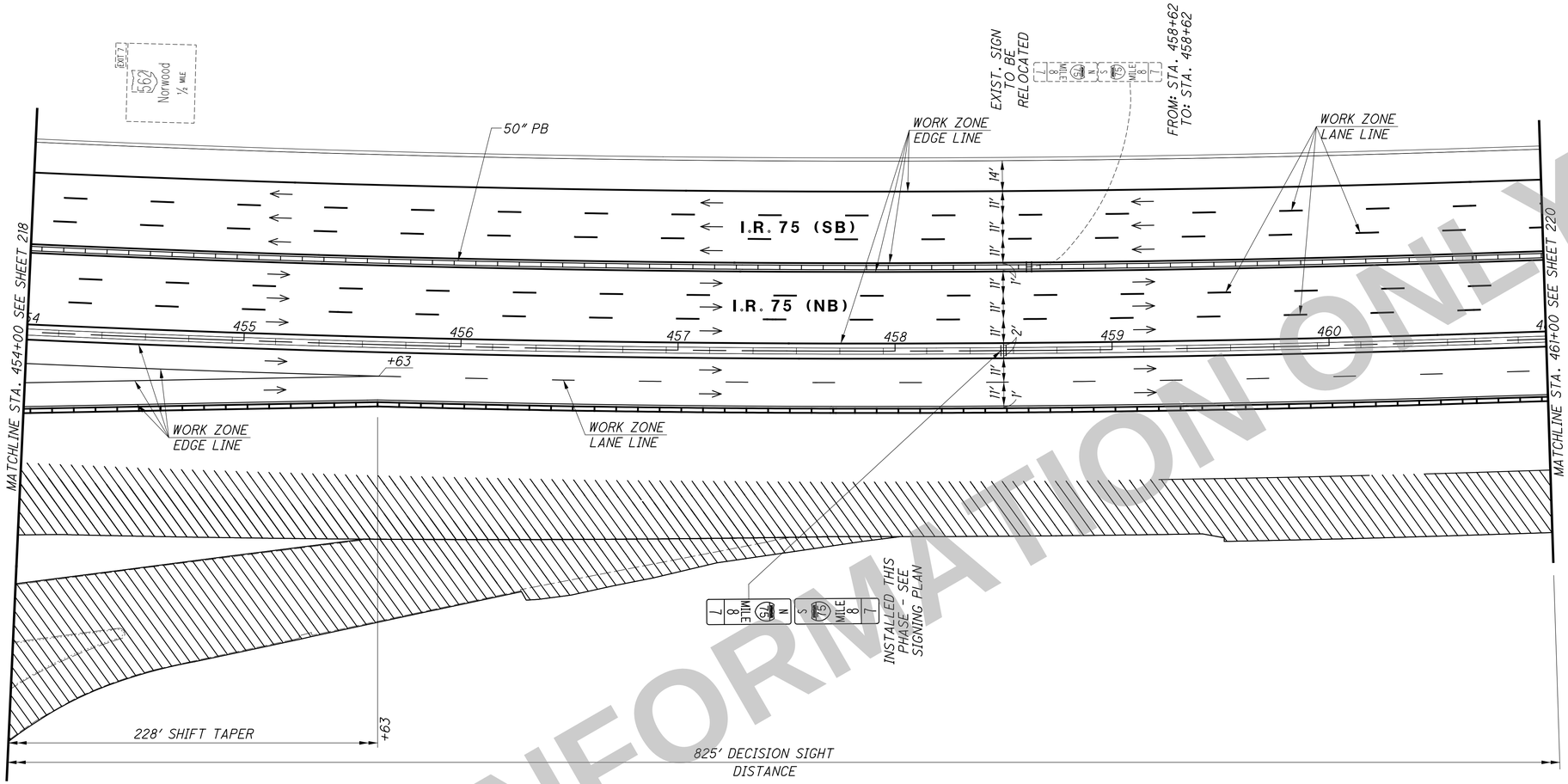
HORIZONTAL SCALE IN FEET

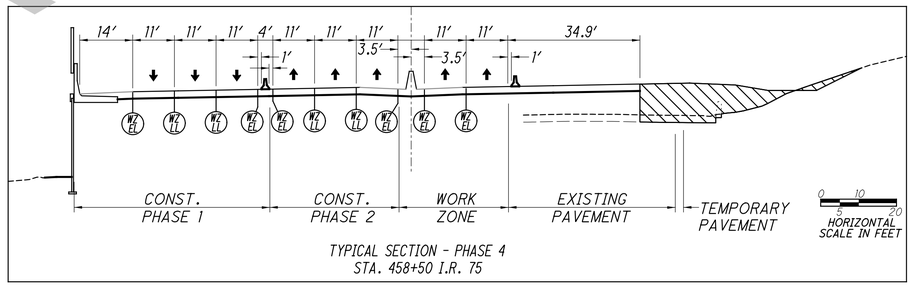
CALCULATED SMM CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 4
I.R. 75 - STA. 446+00 TO STA. 454+00

HAM-75-7.85

218
2017





TYPICAL SECTION - PHASE 4
STA. 458+50 I.R. 75

LEGEND

PHASE 4 WORK ZONE

PORTABLE BARRIER

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

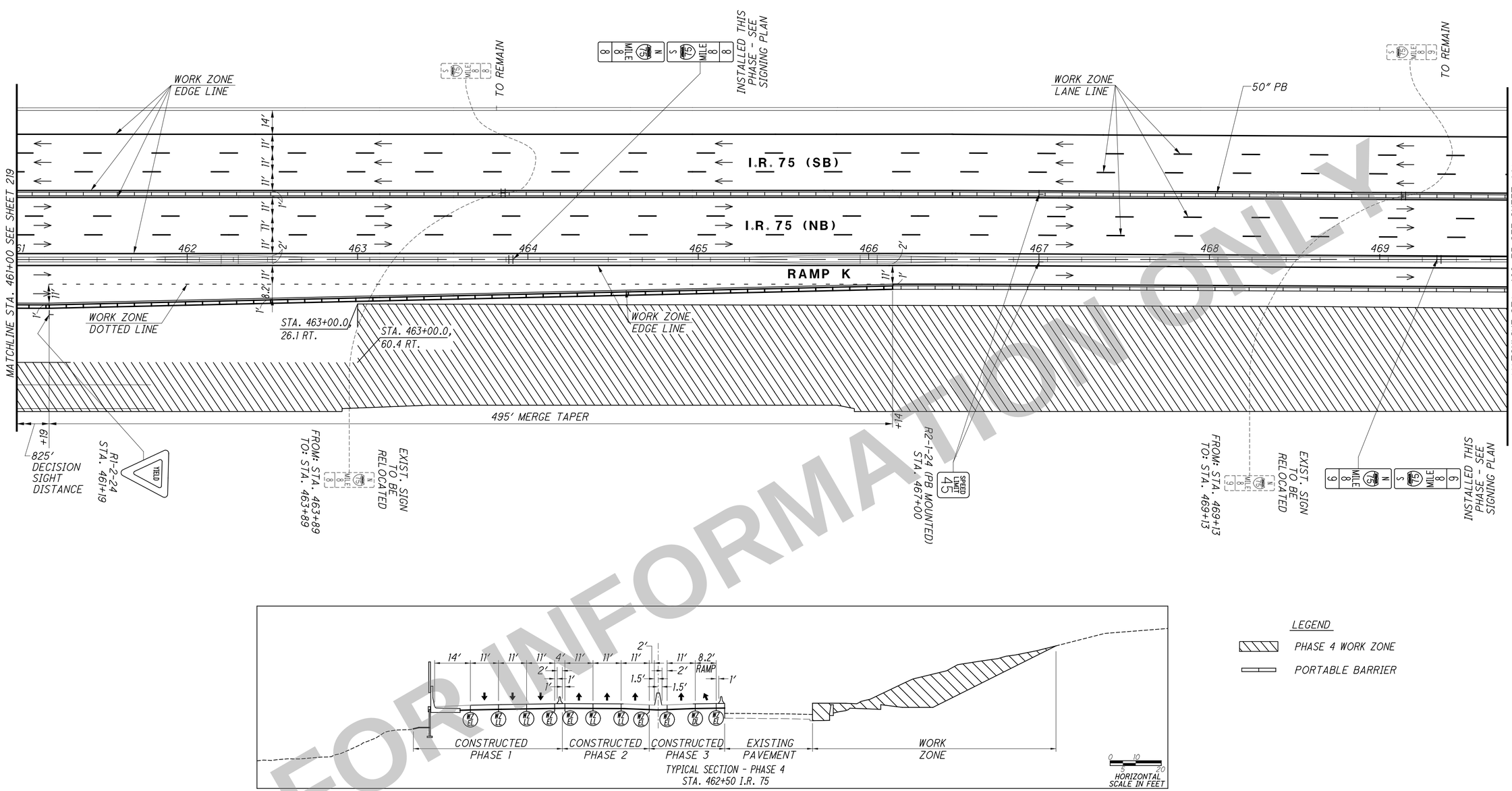
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 4
I.R. 75 - STA. 454+00 TO STA. 461+00

HAM-75-7.85

219
2017

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HORIZONTAL SCALE IN FEET

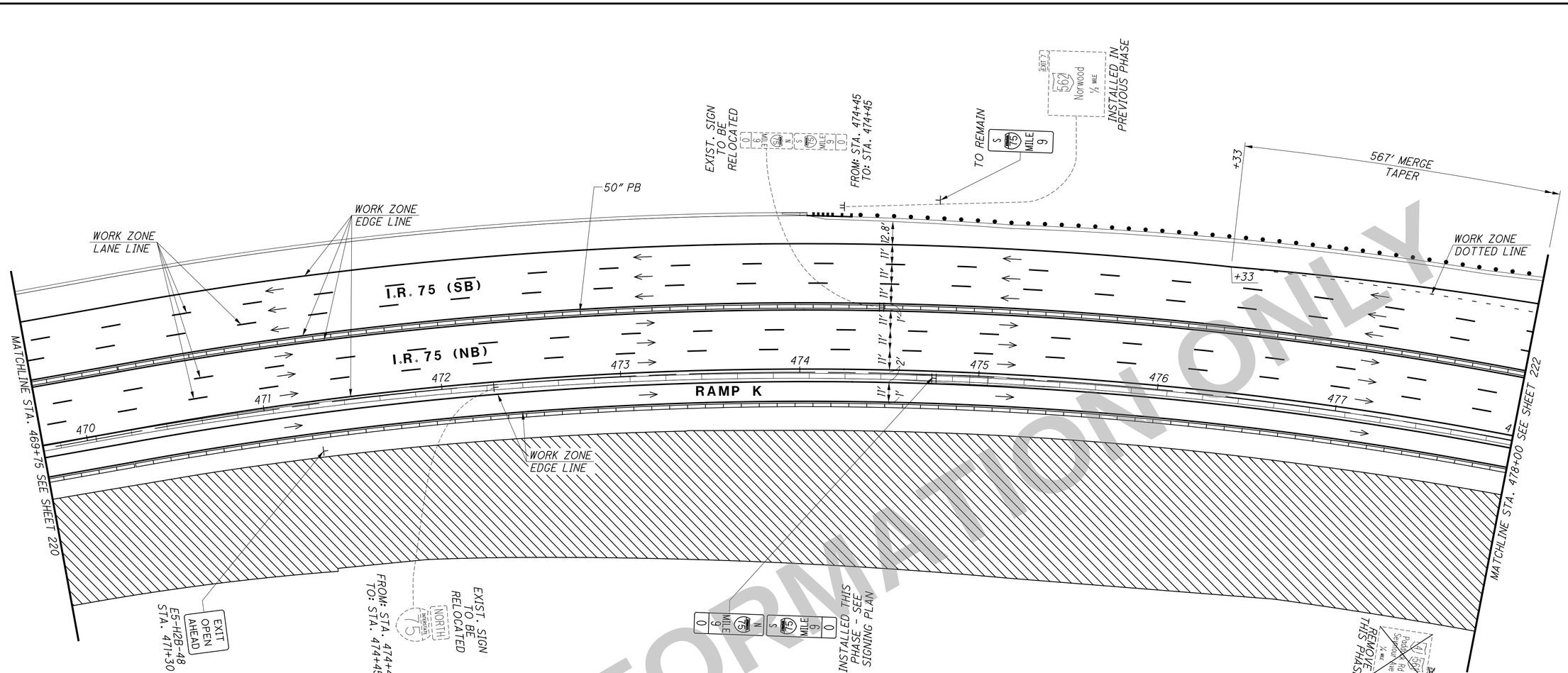
CALCULATED SMM
CHECKED JDS

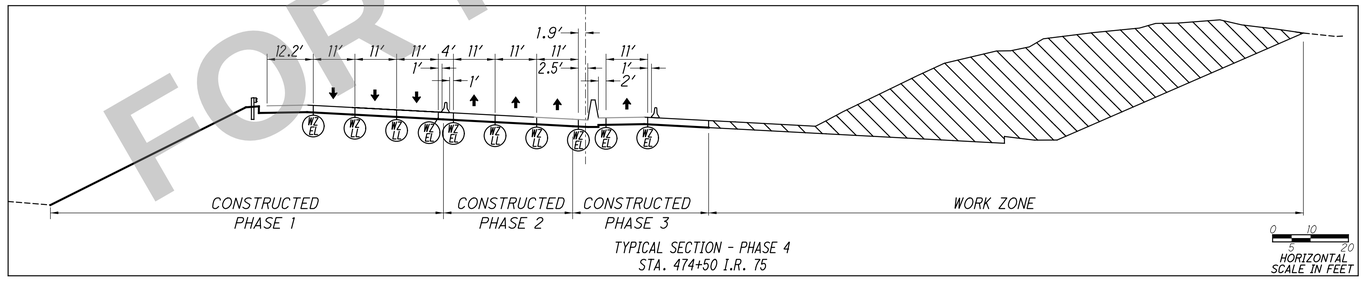
MAINTENANCE OF TRAFFIC PLAN - PHASE 4
I.R. 75 - STA. 461+00 TO STA. 469+75

HAM-75-7.85

220
2017

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LEGEND

PHASE 4 WORK ZONE

PORTABLE BARRIER

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET

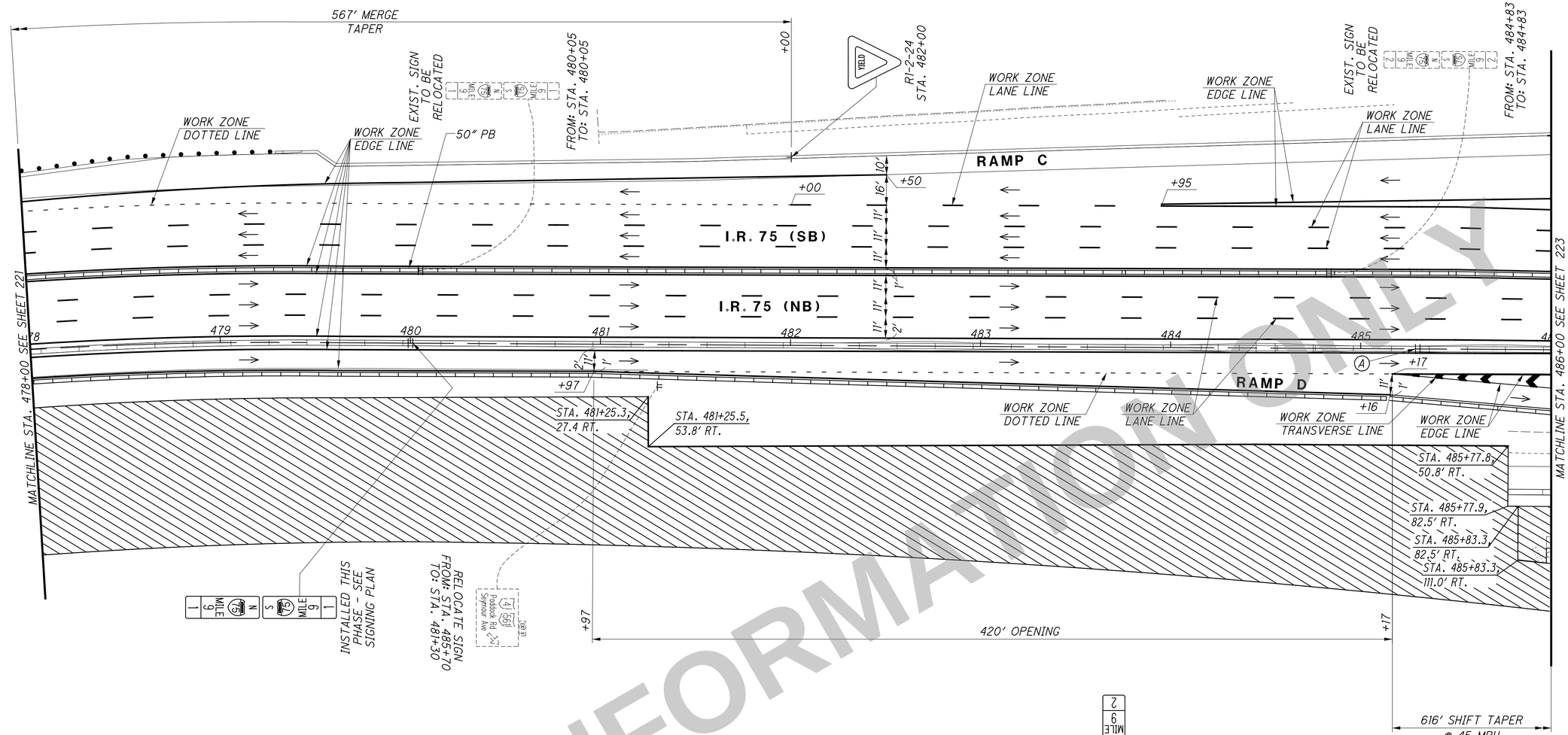
CALCULATED SMM
CHECKED JDS

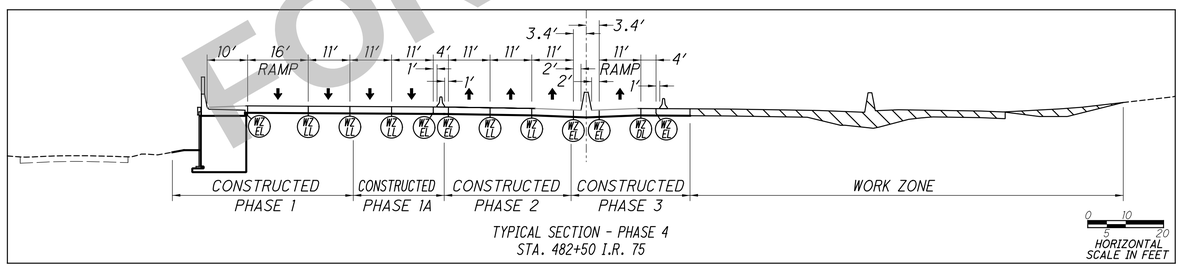
MAINTENANCE OF TRAFFIC PLAN - PHASE 4
I.R. 75 - STA. 469+75 TO STA. 478+00

HAM-75-7.85

221
2017

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TYPICAL SECTION - PHASE 4
STA. 482+50 I.R. 75

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

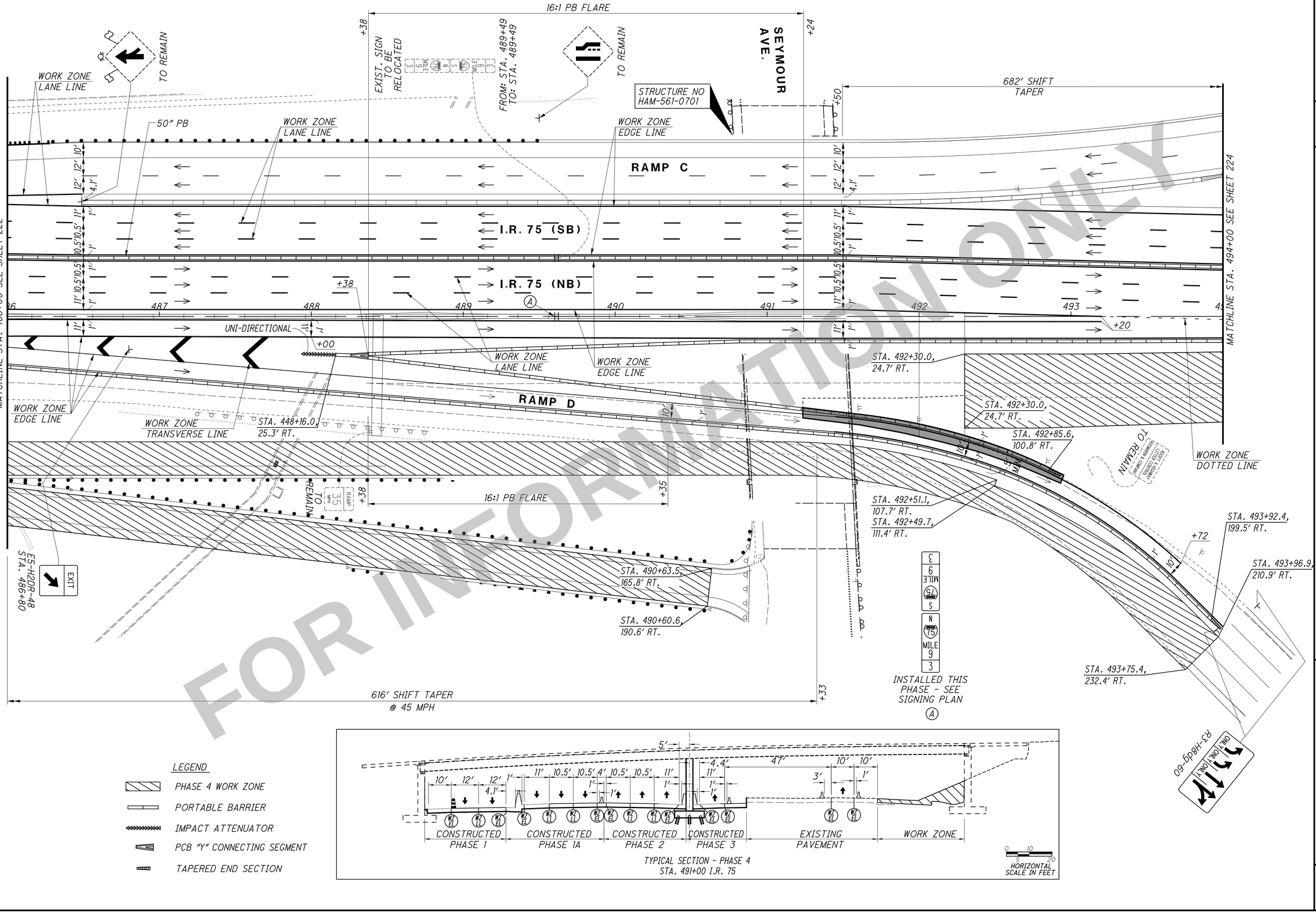
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 4
I.R. 75 - STA. 478+00 TO STA. 486+00

HAM-75-7.85

222
2017

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FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET

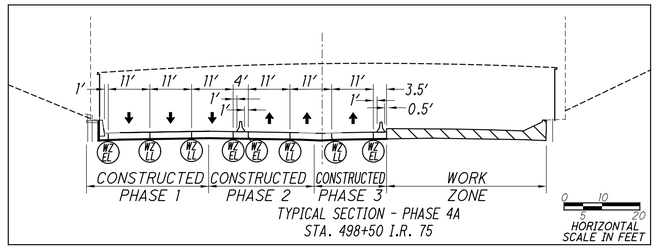
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 4
I.R. 75 - STA. 486+00 TO STA. 494+00

HAM-75-7.85

223
2017

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TYPICAL SECTION - PHASE 4A
STA. 498+50 I.R. 75

TEMPORARY SHEET PILING PROPERTIES (ASTM A572, GRADE 50 STEEL)			
MAX. EXPOSED HEIGHT	MIN. EMBEDMENT DEPTH	MIN. SECTION MODULUS (CU IN/FT)	MIN. MOMENT OF INERTIA (IN^4/FT)
8'-6"±	22'-0"	31.00	187.50

NOTE: THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

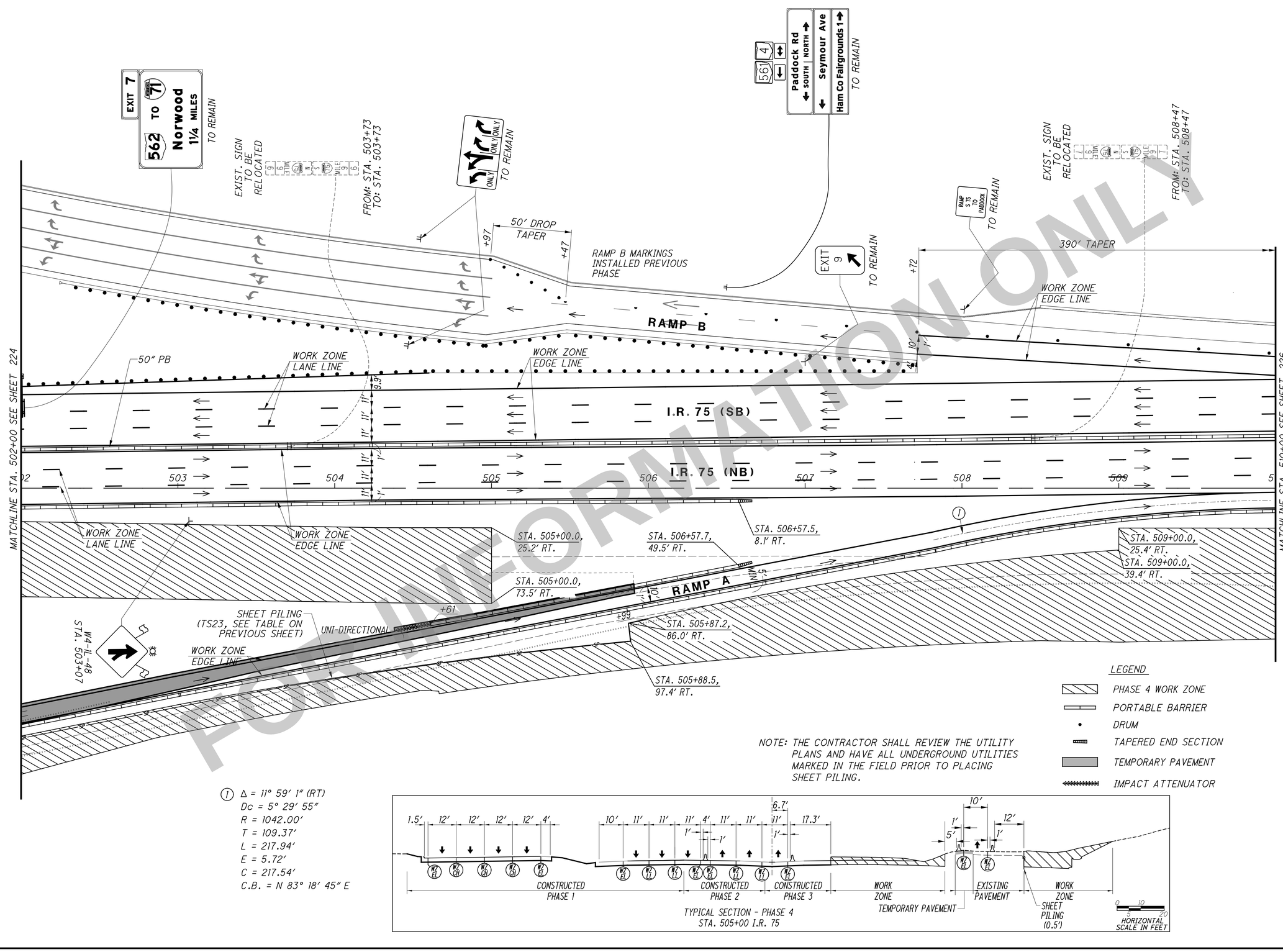
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 4
I.R. 75 - STA. 494+00 TO STA. 502+00

HAM-75-7.85

224
2017

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FOR INFORMATION ONLY

LEGEND

- PHASE 4 WORK ZONE
- PORTABLE BARRIER
- DRUM
- TAPERED END SECTION
- TEMPORARY PAVEMENT
- IMPACT ATTENUATOR

NOTE: THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.

① Δ = 11° 59' 1" (RT)
Dc = 5° 29' 55"
R = 1042.00'
T = 109.37'
L = 217.94'
E = 5.72'
C = 217.54'
C.B. = N 83° 18' 45" E

TYPICAL SECTION - PHASE 4
STA. 505+00 I.R. 75

CALCULATED SMM
CHECKED JDS

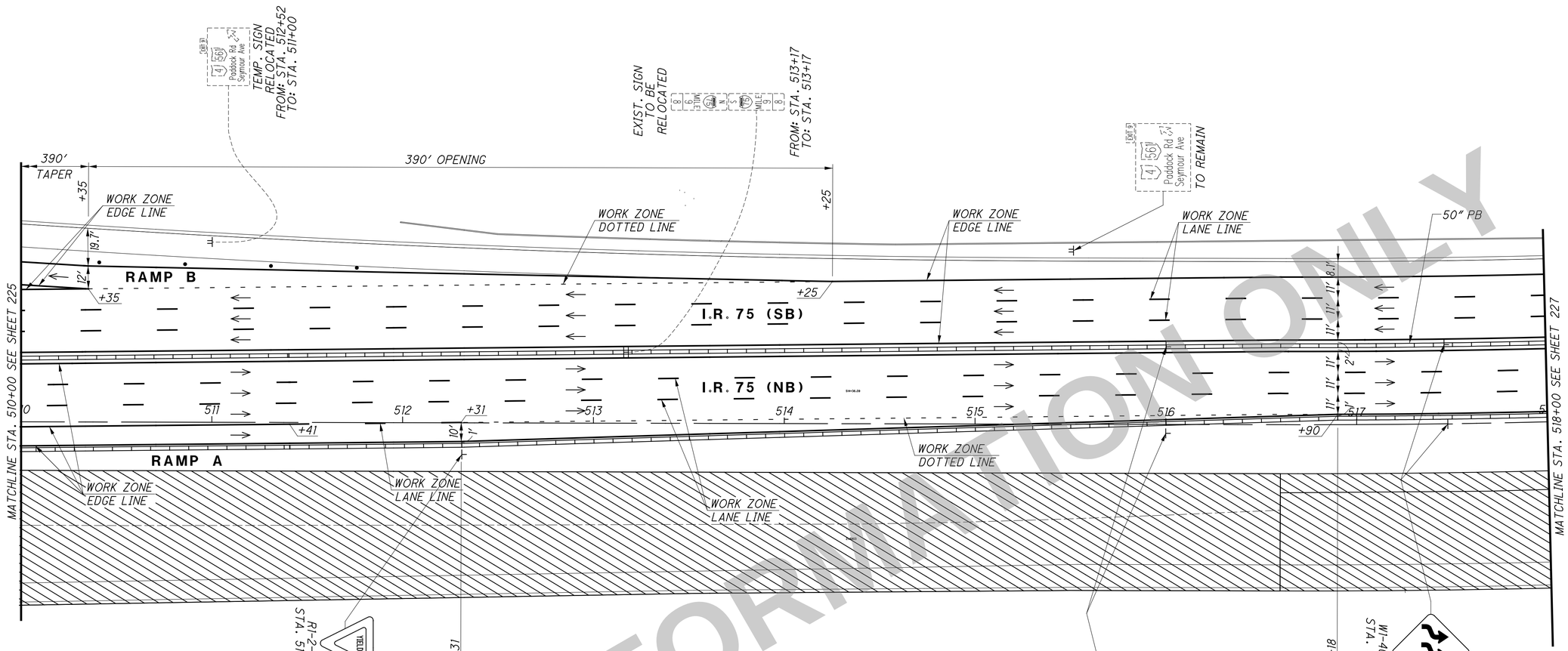
0 15 30 60
HORIZONTAL SCALE IN FEET

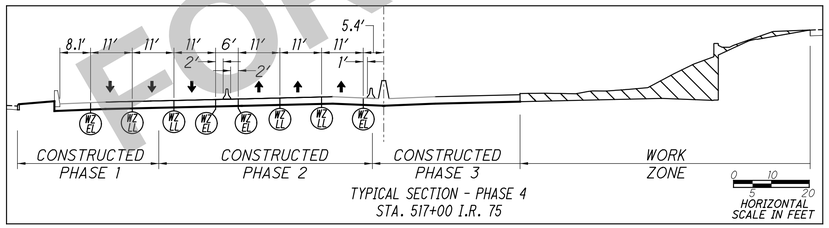
MAINTENANCE OF TRAFFIC PLAN - PHASE 4
I.R. 75 - STA. 502+00 TO STA. 510+00

HAM-75-7.85

225
2017

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TYPICAL SECTION - PHASE 4
STA. 517+00 I.R. 75

DRUM SPACING CHART	
TANGENT	80′ c/c
TAPER	55′ c/c
RADII	10′ c/c

LEGEND

- PHASE 4 WORK ZONE
- DRUM
- PORTABLE BARRIER

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

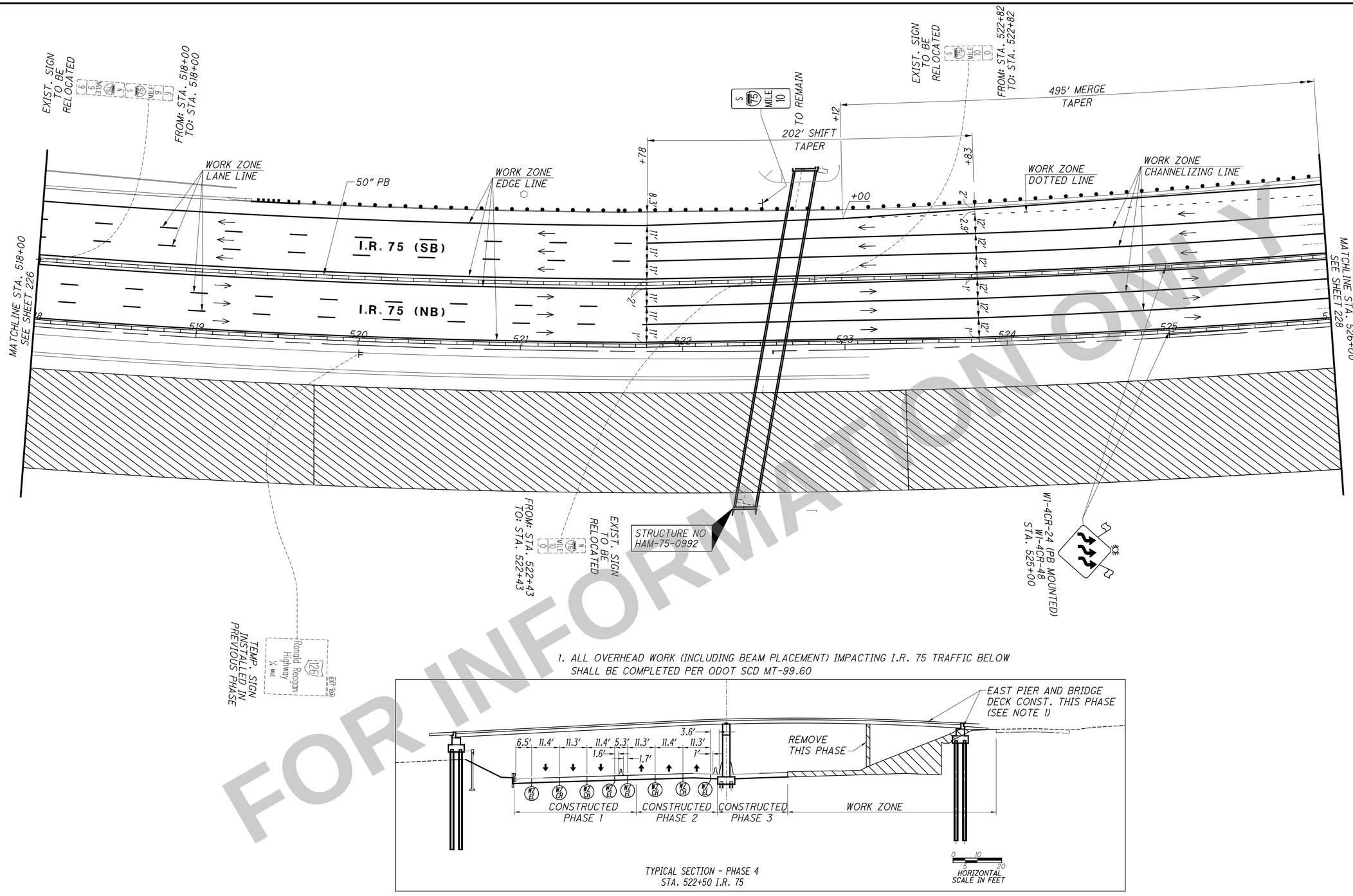
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 4
I.R. 75 - STA. 510+00 TO STA. 518+00

HAM-75-7.85

226
2017

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1. ALL OVERHEAD WORK (INCLUDING BEAM PLACEMENT) IMPACTING I.R. 75 TRAFFIC BELOW SHALL BE COMPLETED PER ODOT SCD MT-99.60

TYPICAL SECTION - PHASE 4
STA. 522+50 I.R. 75

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

LEGEND
- PHASE 4 WORK ZONE
- PORTABLE BARRIER

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

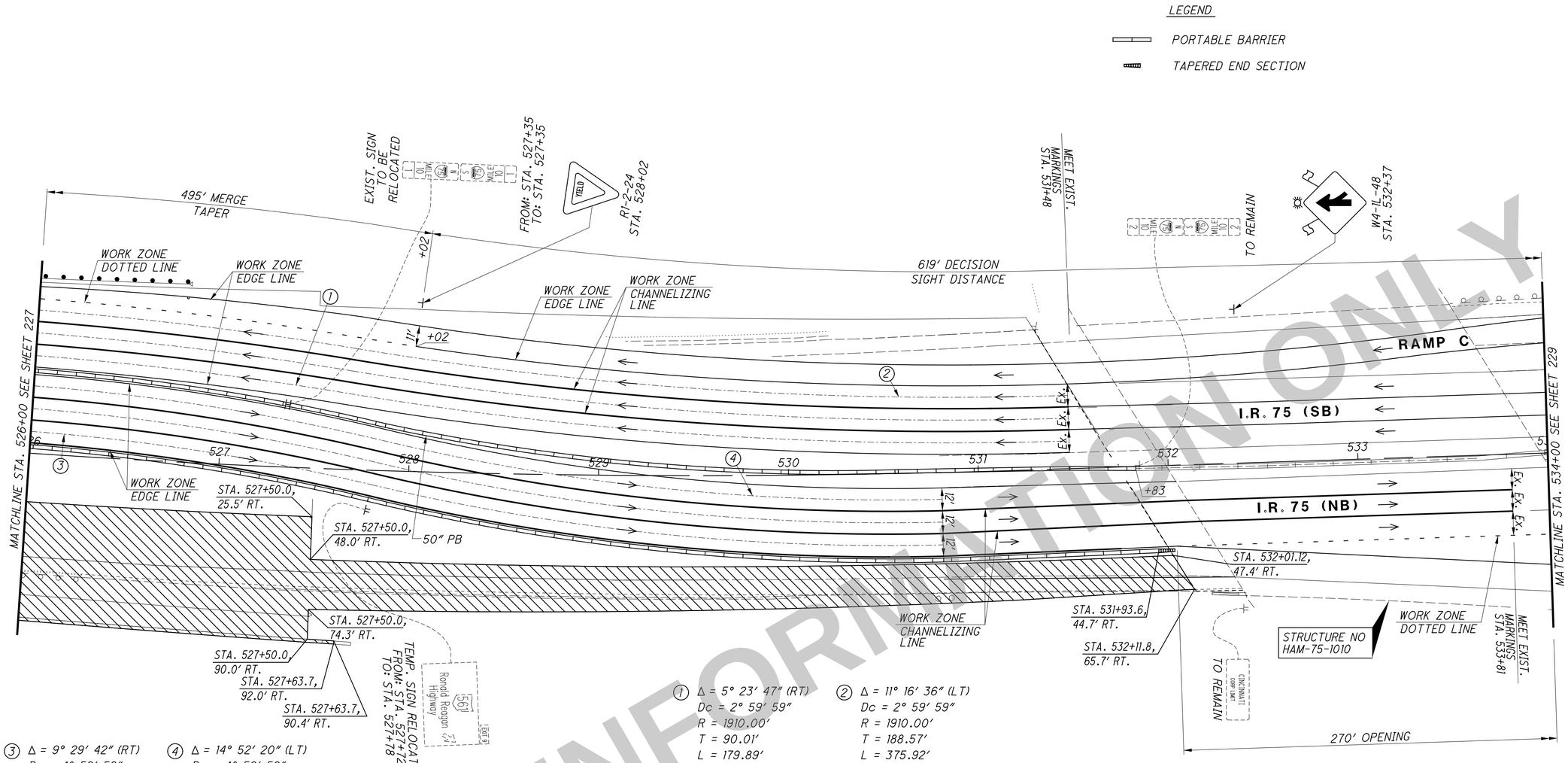
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 4
I.R. 75 - STA. 518+00 TO STA. 526+00

HAM-75-7.85

227
2017

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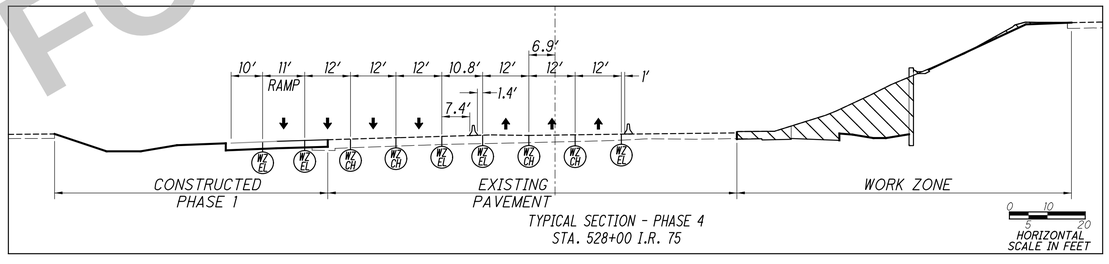


① Δ = 5° 23′ 47″ (RT)
Dc = 2° 59′ 59″
R = 1910.00′
T = 90.01′
L = 179.89′
E = 2.12′
C = 179.82′
C.B. = N 83° 17′ 42″ W

② Δ = 11° 16′ 36″ (LT)
Dc = 2° 59′ 59″
R = 1910.00′
T = 188.57′
L = 375.92′
E = 9.29′
C = 375.31′
C.B. = N 86° 14′ 6″ W

③ Δ = 9° 29′ 42″ (RT)
Dc = 4° 59′ 59″
R = 1146.00′
T = 95.18′
L = 189.91′
E = 3.95′
C = 189.70′
C.B. = S 81° 18′ 30″ E

④ Δ = 14° 52′ 20″ (LT)
Dc = 4° 59′ 59″
R = 1146.00′
T = 149.58′
L = 297.47′
E = 9.72′
C = 296.63′
C.B. = N 83° 59′ 49″ W



TYPICAL SECTION - PHASE 4
STA. 528+00 I.R. 75

DRUM SPACING CHART	
TANGENT	80′ c/c
TAPER	55′ c/c
RADII	10′ c/c

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

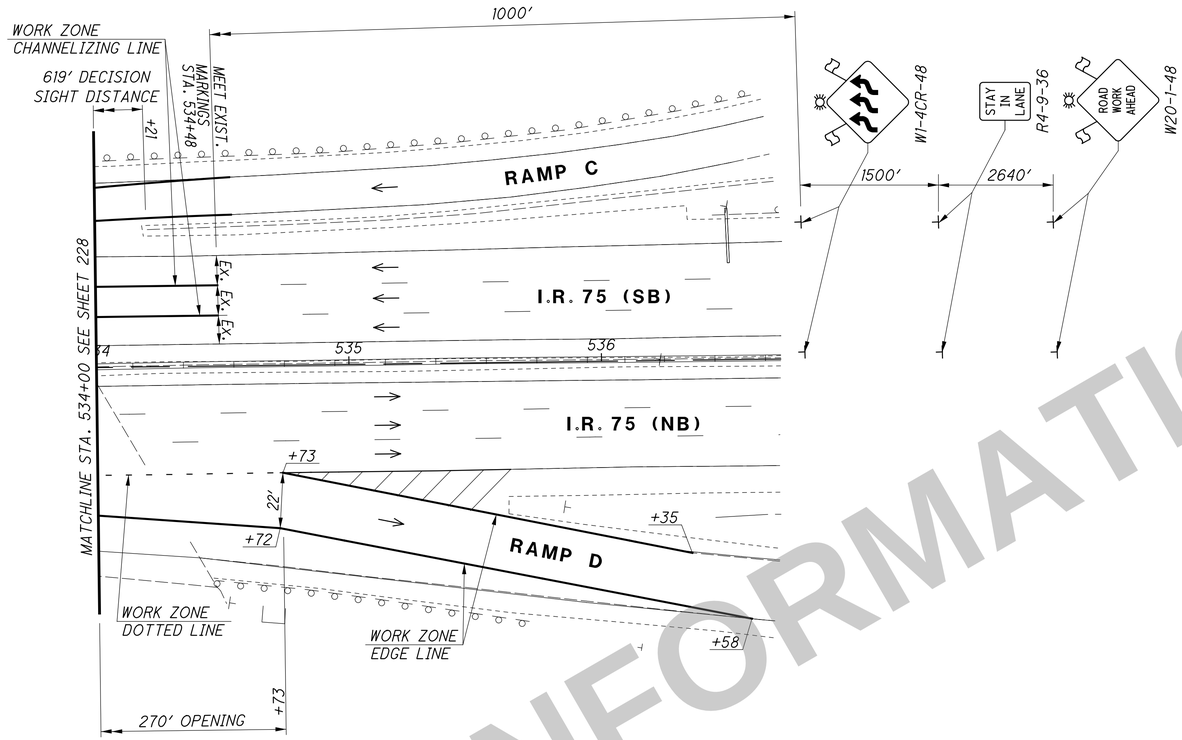
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 4
I.R. 75 - STA. 526+00 TO STA. 534+00

HAM-75-7.85

228
2017

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FOR INFORMATION ONLY

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HORIZONTAL SCALE IN FEET
0 15 30 60

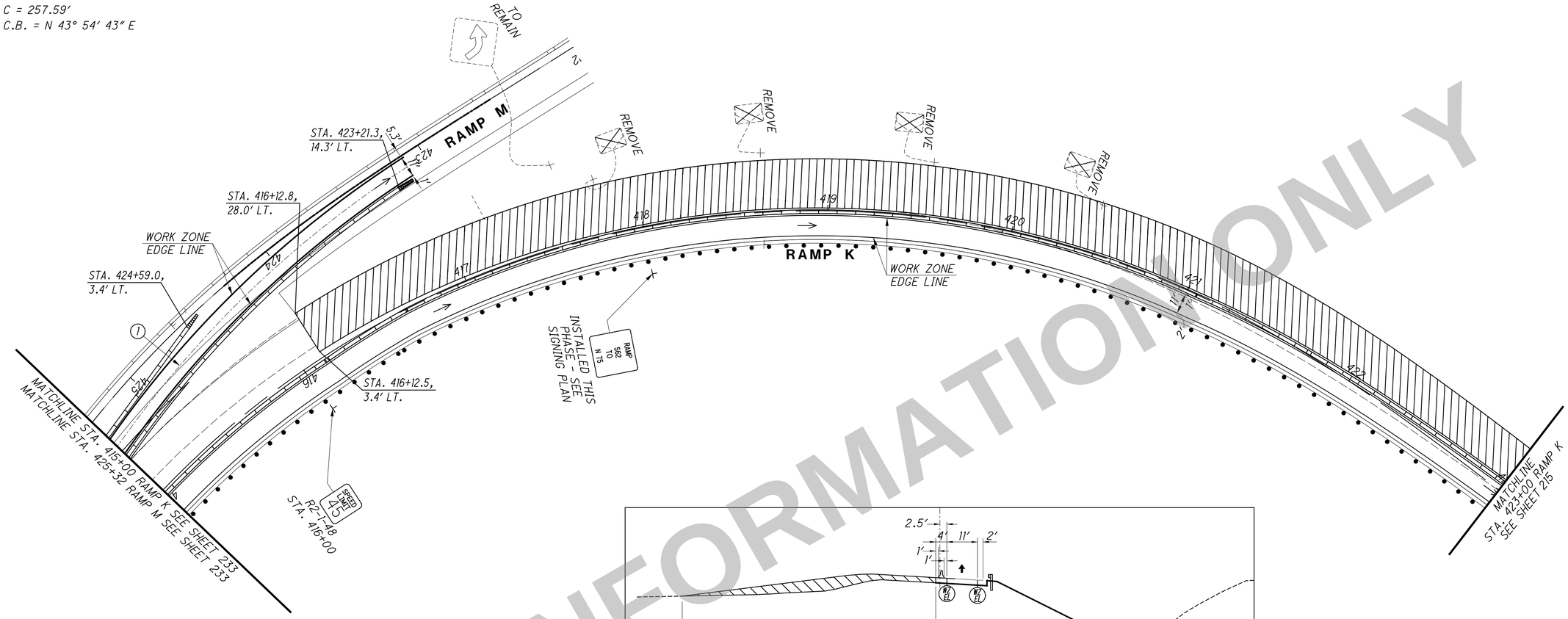
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 4
I.R. 75 - STA. 534+00 TO STA. 536+70

HAM-75-7.85

229
2017

① Δ = 26° 35′ 10″ (RT)
Dc = 10° 13′ 44″
R = 560.14′
T = 132.34′
L = 259.92′
E = 15.42′
C = 257.59′
C.B. = N 43° 54′ 43″ E



LEGEND

PHASE 4 WORK ZONE

PORTABLE BARRIER

TAPERED END SECTION

FOR INFORMATION ONLY

N

0 15 30 60
HORIZONTAL SCALE IN FEET

CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 4
RAMP K - STA. 415+00 TO STA. 423+00

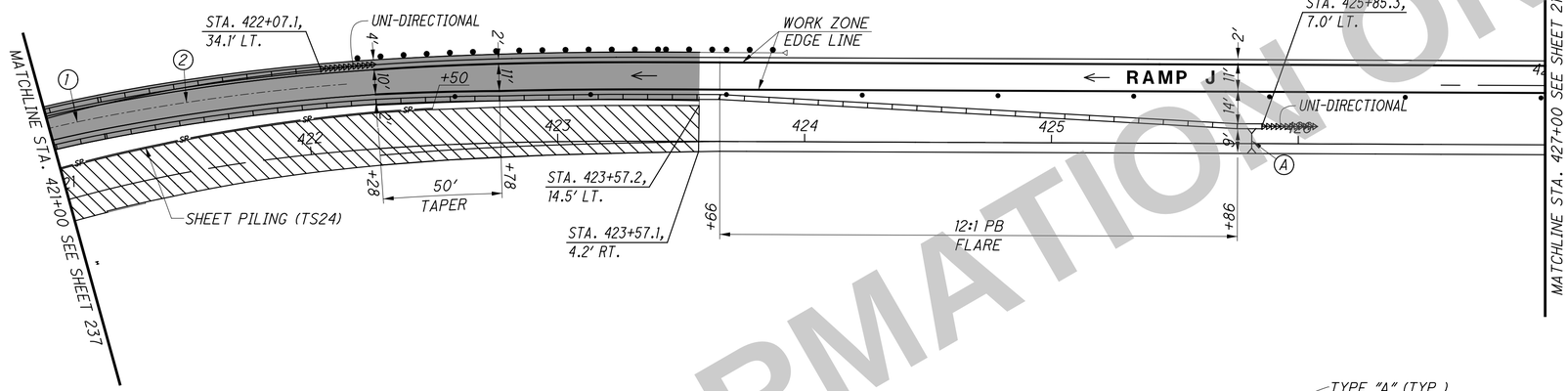
HAM-75-7.85

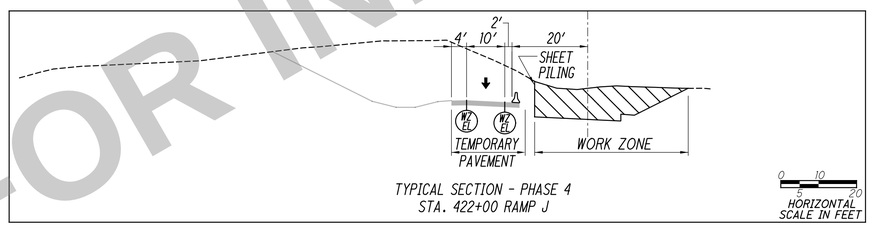
230
2017

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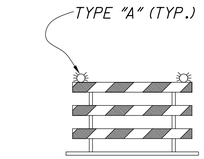
① Δ = 27° 06′ 21″ (RT)
Dc = 10° 59′ 51″
R = 521.00′
T = 125.59′
L = 246.48′
E = 14.92′
C = 244.19′
C.B. = N 06° 13′ 17″ E

② Δ = 06° 34′ 39″ (RT)
Dc = 06° 33′ 20″
R = 874.00′
T = 50.22′
L = 100.33′
E = 1.44′
C = 100.28′
C.B. = N 23° 03′ 46″ E





TYPICAL SECTION - PHASE 4
STA. 422+00 RAMP J



10′ TYPE III SOLID BARRICADE
Ⓐ

LEGEND
- PHASE 4 WORK ZONE
- DRUM
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- TEMPORARY PAVEMENT

NOTE: THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.

DRUM SPACING CHART	
TANGENT	80′ c/c
TAPER	55′ c/c
RADII	10′ c/c

FOR INFORMATION ONLY

0 15 30 60 HORIZONTAL SCALE IN FEET

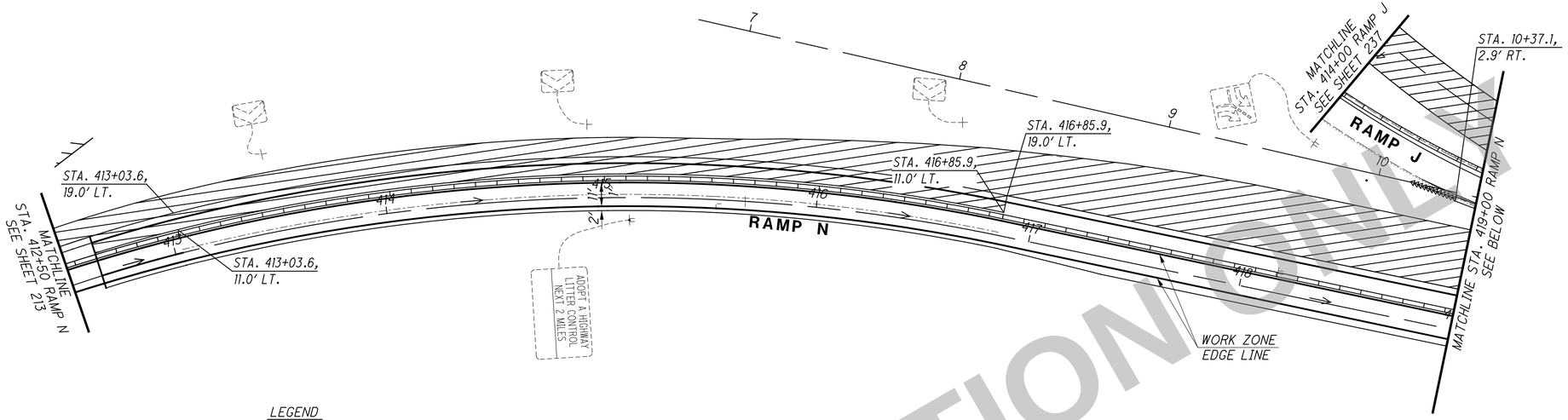
CALCULATED SMM CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 4
RAMP J - STA. 421+00 TO STA. 427+00

HAM-75-7.85

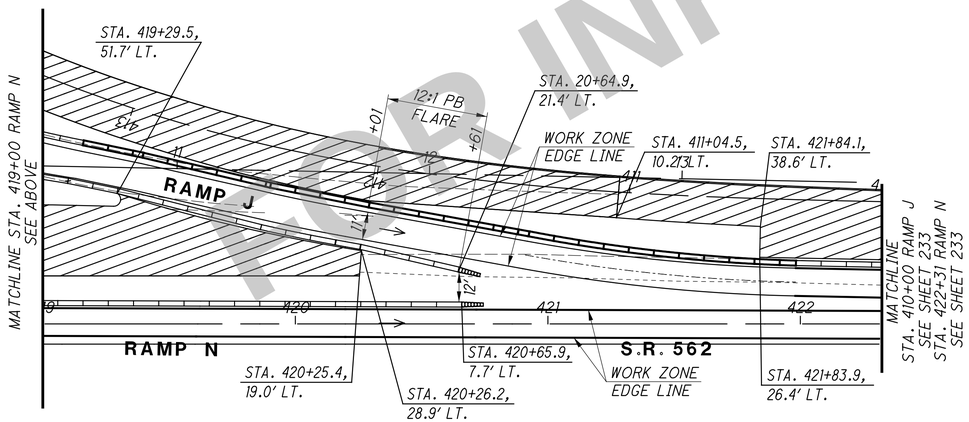
231
2017

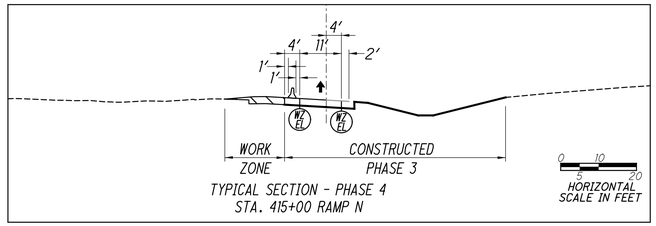
J:\20110903\ODOT\HAM\77889\mot\sheets\77889MP082.dgn 2/18/2022 1:31:37 PM efoley



LEGEND

- PHASE 4 WORK ZONE
- PORTABLE BARRIER
- DRUM
- IMPACT ATTENUATOR





TYPICAL SECTION - PHASE 4
STA. 415+00 RAMP N

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

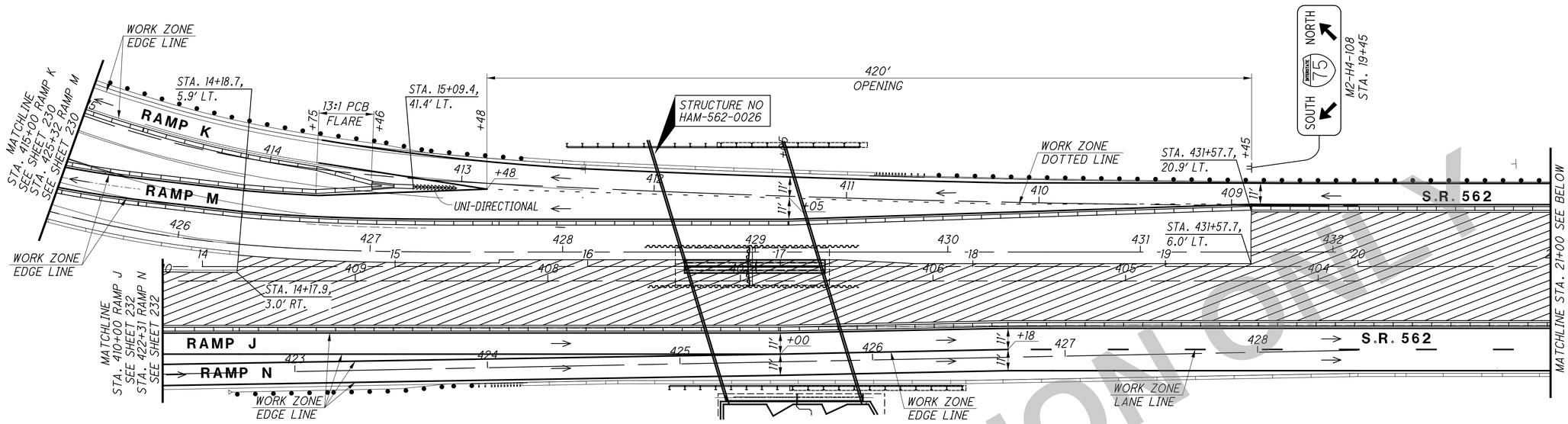
CALCULATED SMM
CHECKED JDS

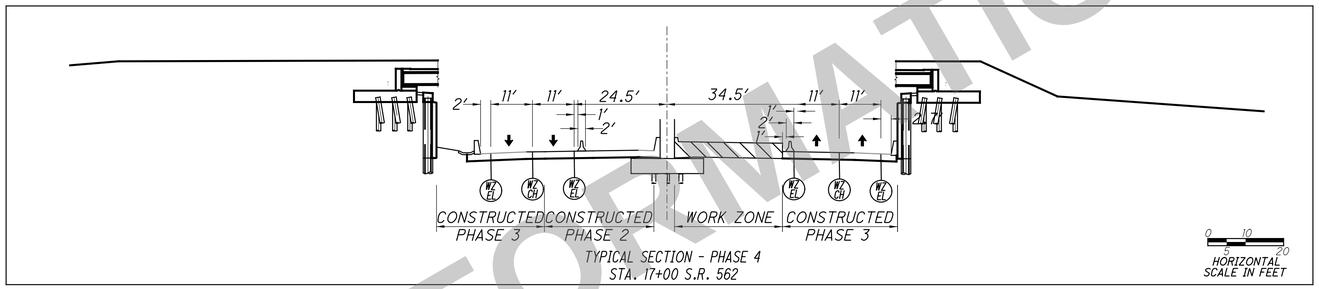
MAINTENANCE OF TRAFFIC PLAN - PHASE 4
RAMP N - STA. 412+50 TO STA. 422+31

HAM-75-7.85

232
2017

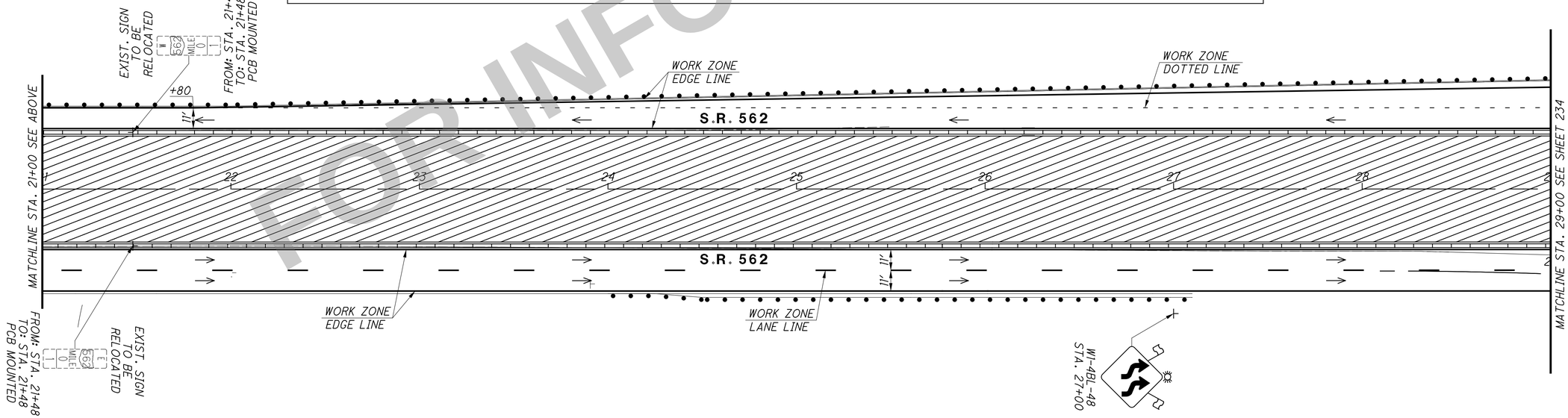
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LEGEND

- PHASE 4 WORK ZONE
- PORTABLE CONCRETE BARRIER
- IMPACT ATTENUATOR
- PB "Y" CONNECTING SEGMENT
- TEMPORARY PAVEMENT



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET

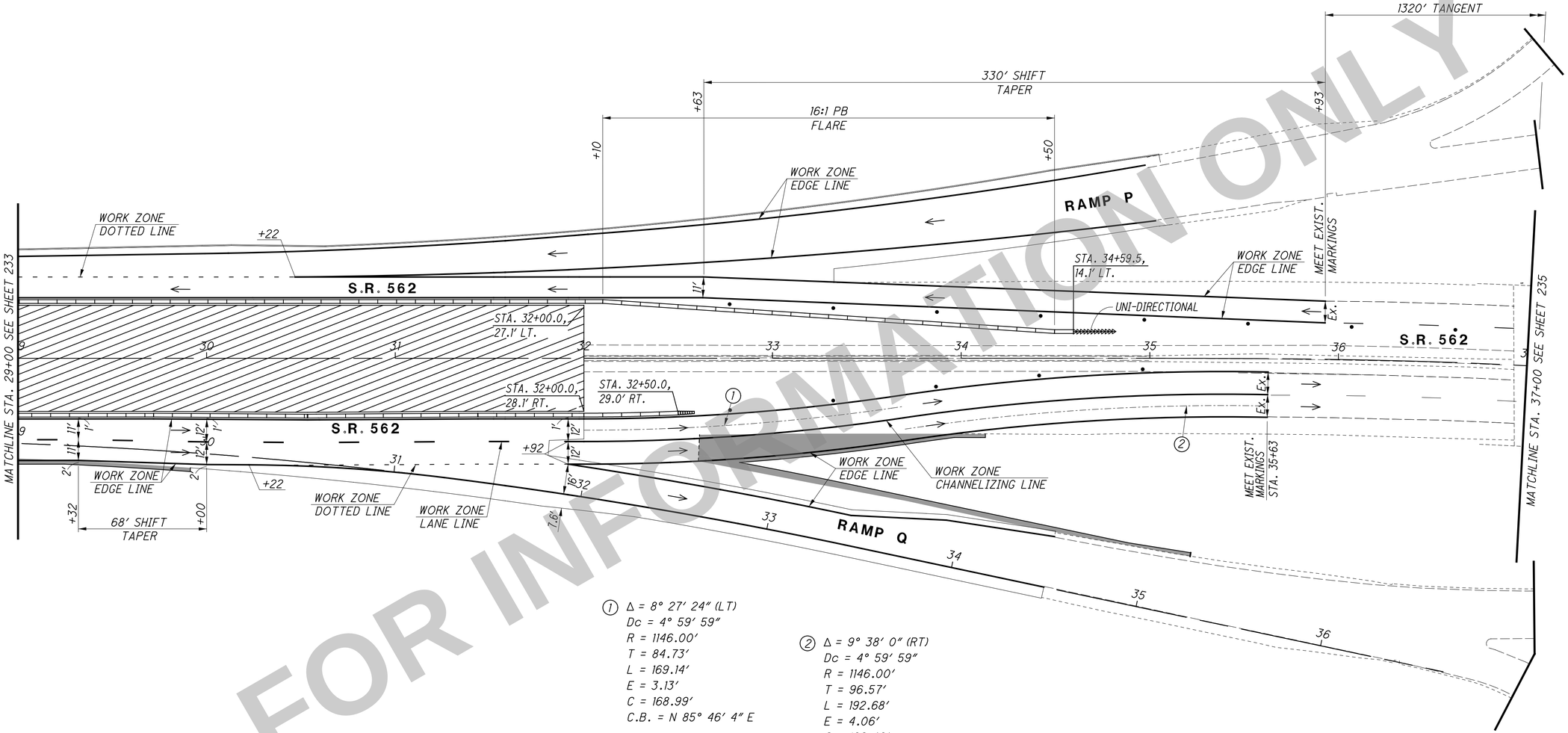
CALCULATED SMM CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 4
S.R. 562 - STA. 13+00 TO STA. 29+00

HAM-75-7.85

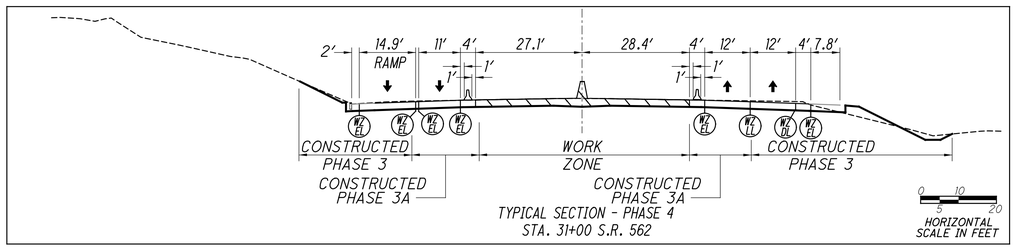
233
2017

J:\20110903\ODOT\HAM\77889\mot\sheets\77889MP067.dgn 2/18/2022 1:31:39 PM efoley



① Δ = 8° 27′ 24″ (LT)
Dc = 4° 59′ 59″
R = 1146.00′
T = 84.73′
L = 169.14′
E = 3.13′
C = 168.99′
C.B. = N 85° 46′ 4″ E

② Δ = 9° 38′ 0″ (RT)
Dc = 4° 59′ 59″
R = 1146.00′
T = 96.57′
L = 192.68′
E = 4.06′
C = 192.46′
C.B. = S 86° 21′ 23″ W



TYPICAL SECTION - PHASE 4
STA. 31+00 S.R. 562

LEGEND
- PHASE 4 WORK ZONE
- DRUM
- PORTABLE BARRIER
- TEMPORARY PAVEMENT
- IMPACT ATTENUATOR
- TAPERED END SECTION

FOR INFORMATION ONLY

N

0 15 30 60
HORIZONTAL SCALE IN FEET

CALCULATED SMM
CHECKED JDS

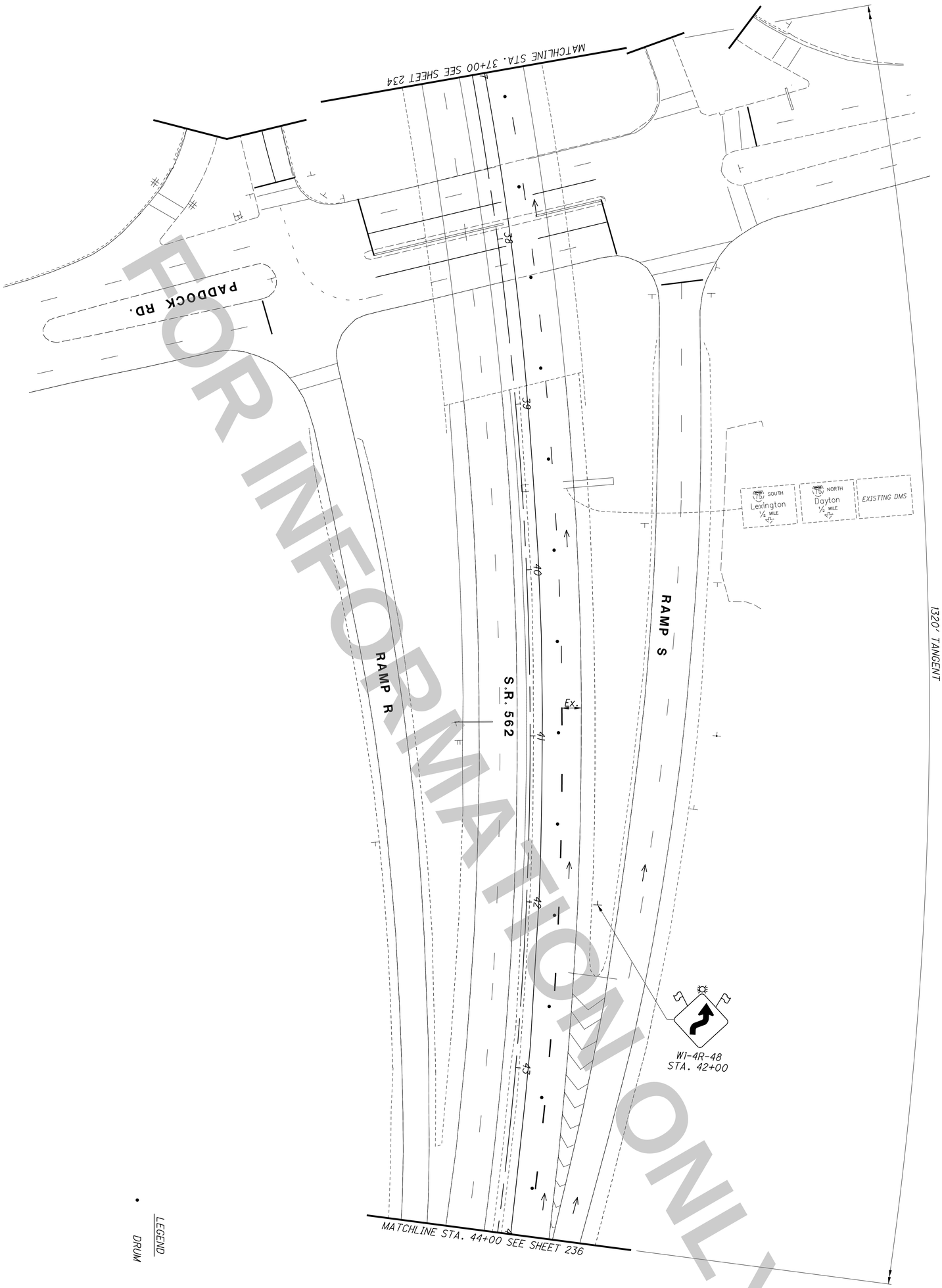
MAINTENANCE OF TRAFFIC PLAN - PHASE 4
S.R. 562 - STA. 29+00 TO STA. 37+00

HAM-75-7.85

234
2017

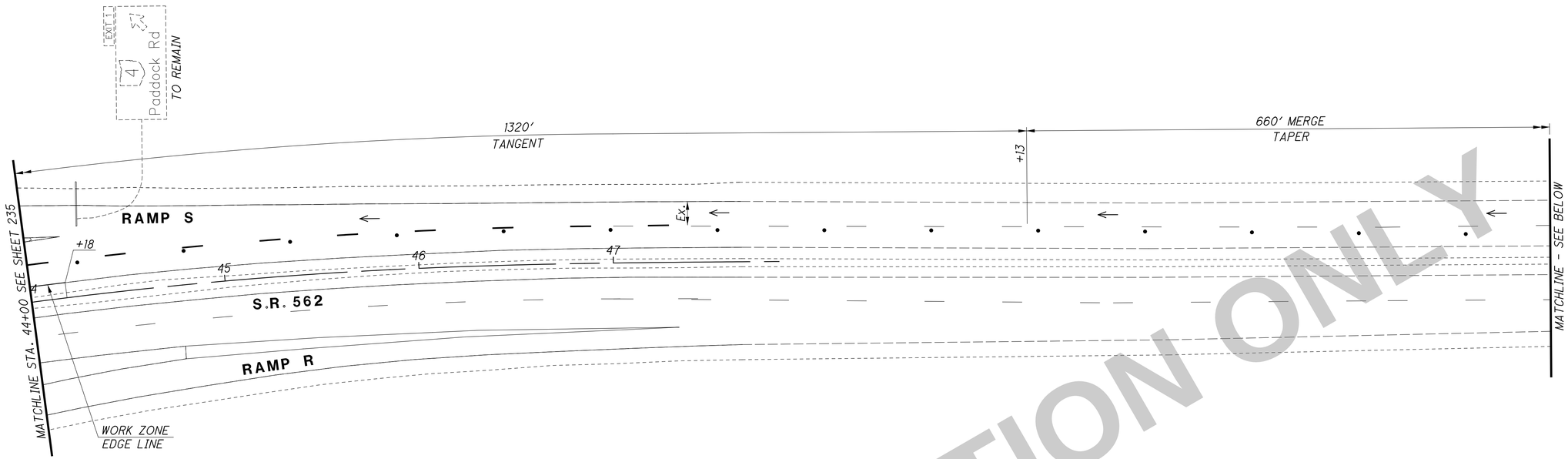
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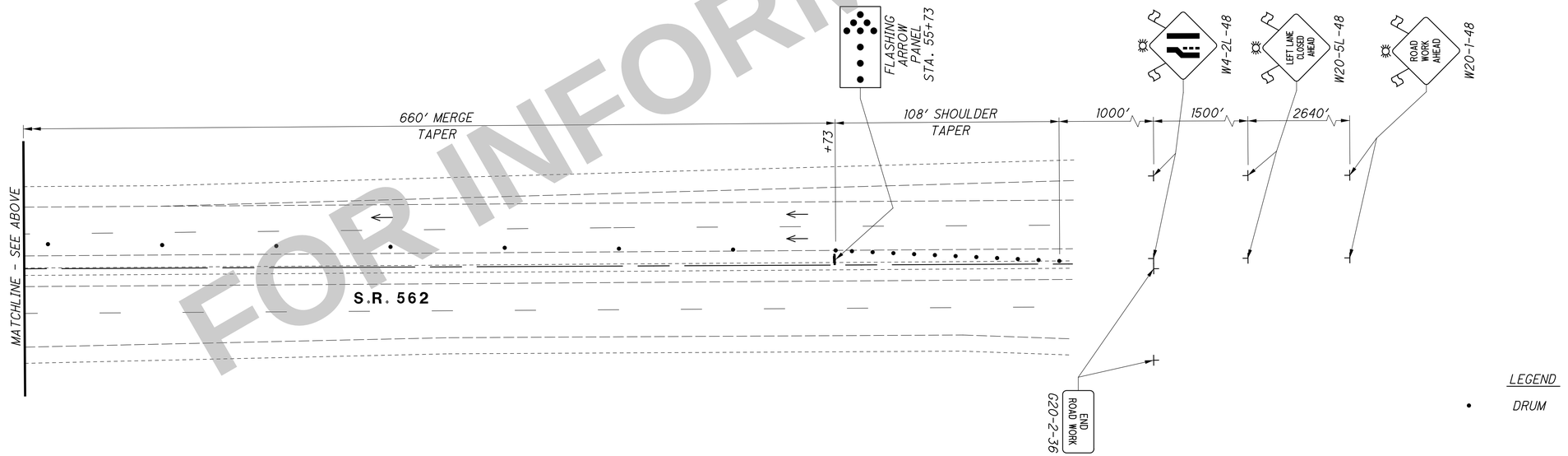
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FOR INFORMATION ONLY

235 2017	HAM-75-7.85	MAINTENANCE OF TRAFFIC PLAN - PHASE 4 S.R. 562 - STA. 37+00 TO STA. 44+00	CALCULATED SMM CHECKED JDS	0 30 15 60 HORIZONTAL SCALE IN FEET





DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

FOR INFORMATION ONLY

N

0 15 30 60
HORIZONTAL SCALE IN FEET

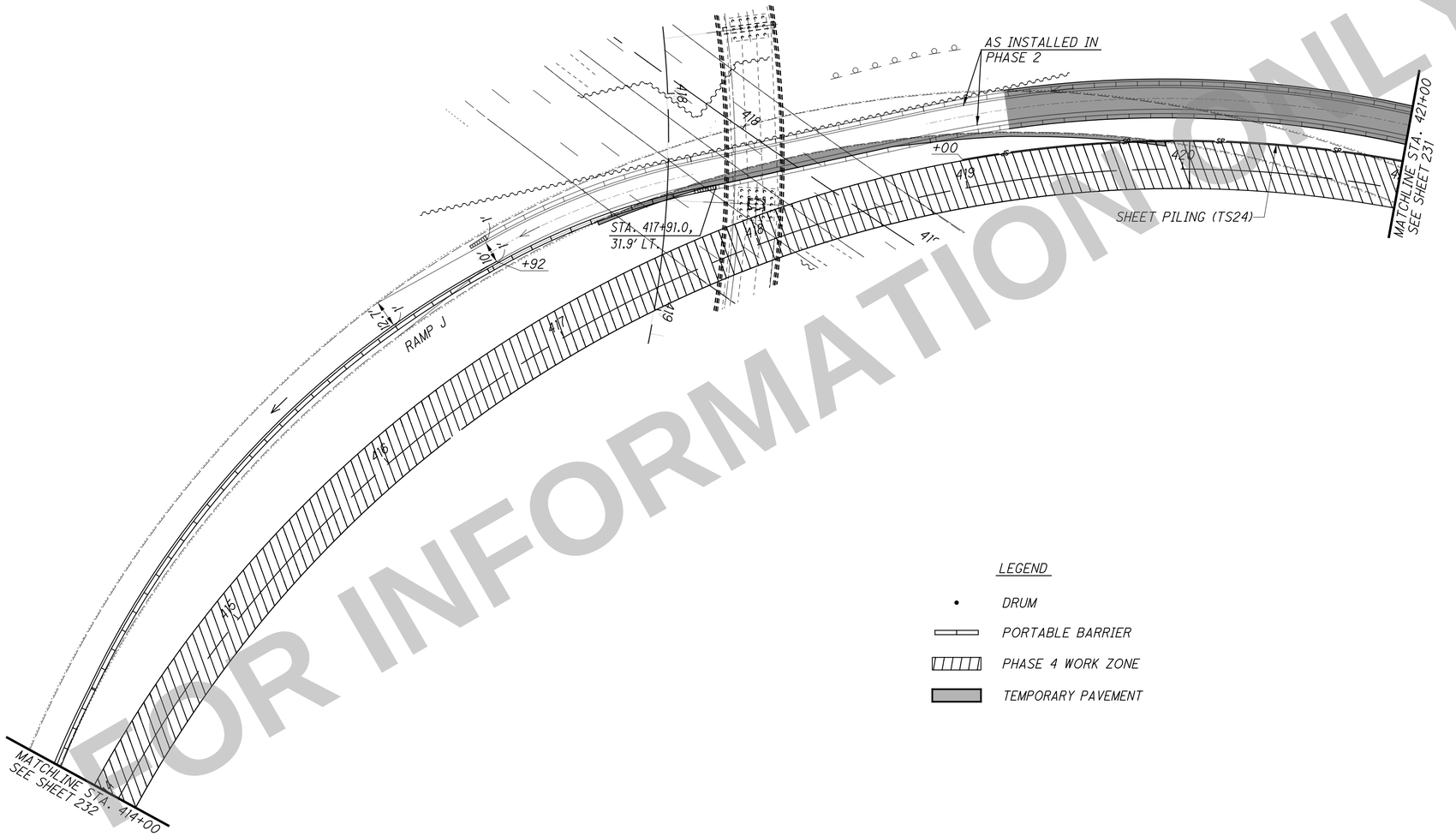
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 4
S.R. 562 - STA. 44+00 TO STA. 56+80

HAM-75-7.85

236
2017

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LEGEND

- DRUM
- PORTABLE BARRIER
- PHASE 4 WORK ZONE
- TEMPORARY PAVEMENT

NOTE: THE CONTRACTOR SHALL REVIEW THE UTILITY PLANS AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD PRIOR TO PLACING SHEET PILING.

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 4
RAMP J

HAM-75-7.85

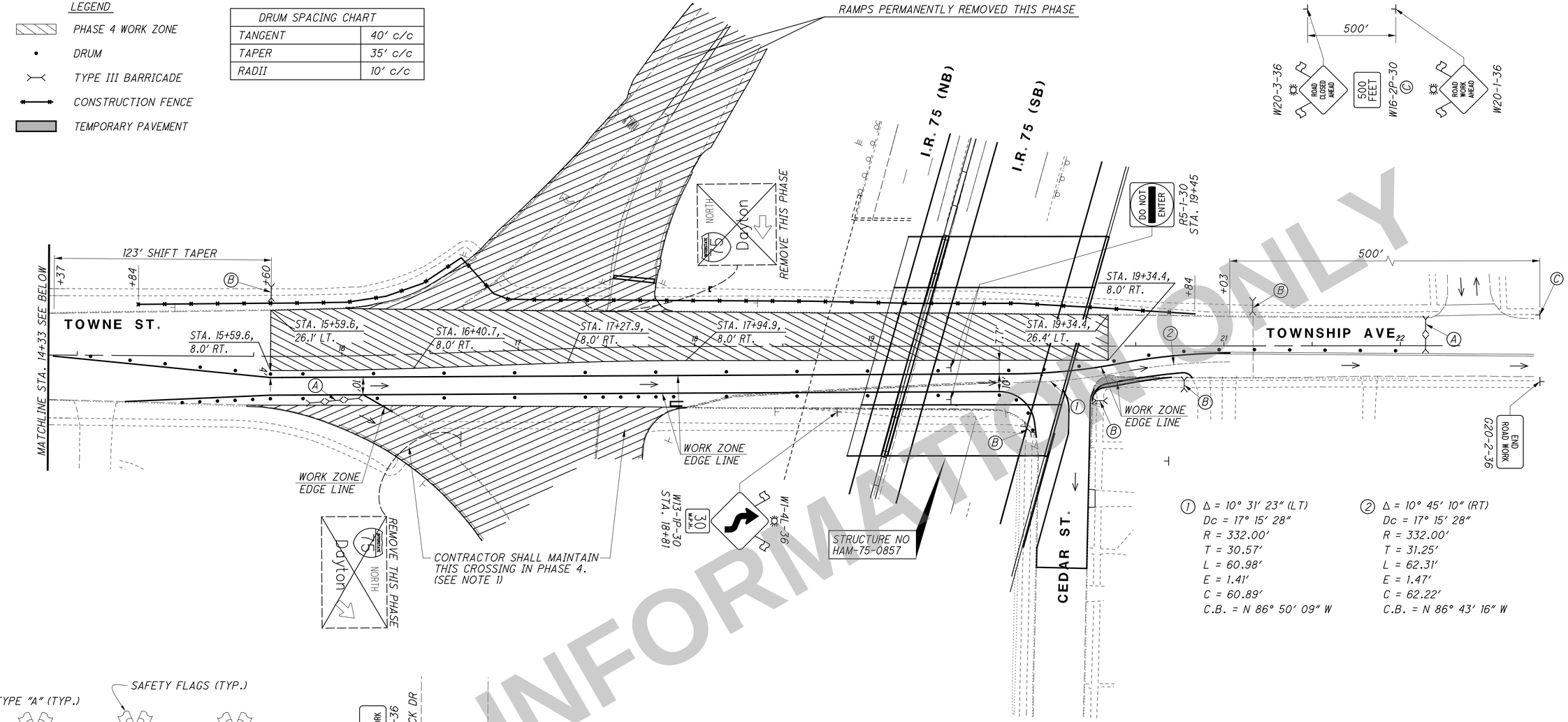
237
2017

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LEGEND

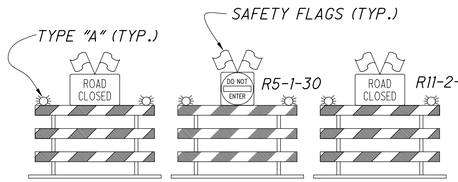
- PHASE 4 WORK ZONE
- DRUM
- TYPE III BARRICADE
- CONSTRUCTION FENCE
- TEMPORARY PAVEMENT

DRUM SPACING CHART	
TANGENT	40′ c/c
TAPER	35′ c/c
RADII	10′ c/c



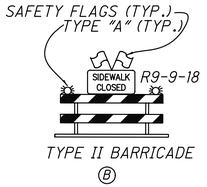
① Δ = 10° 31′ 23″ (LT)
Dc = 17° 15′ 28″
R = 332.00′
T = 30.57′
L = 60.98′
E = 1.41′
C = 60.89′
C.B. = N 86° 50′ 09″ W

② Δ = 10° 45′ 10″ (RT)
Dc = 17° 15′ 28″
R = 332.00′
T = 31.25′
L = 62.31′
E = 1.47′
C = 62.22′
C.B. = N 86° 43′ 16″ W



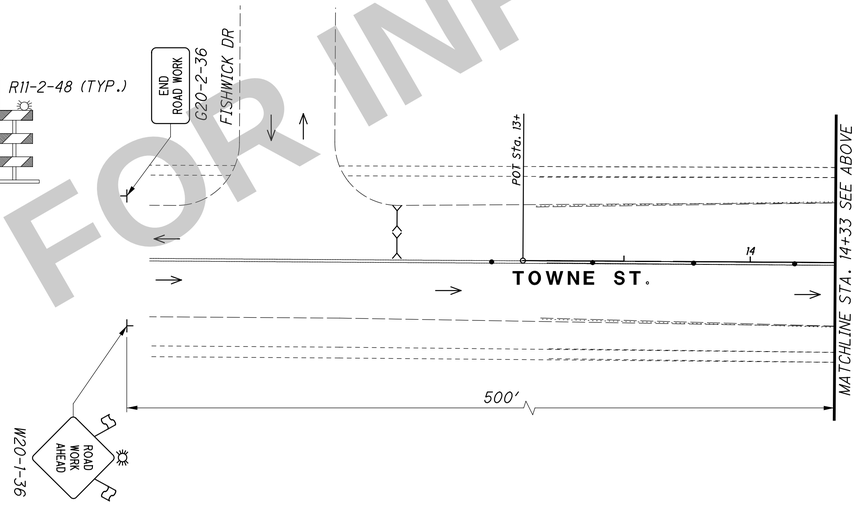
10′ TYPE III SOLID BARRICADE

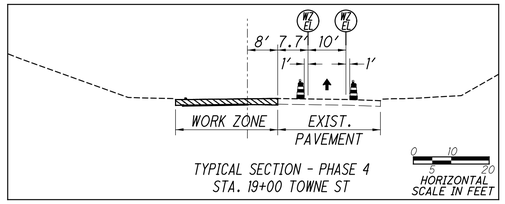
Ⓐ



TYPE II BARRICADE

Ⓑ





TYPICAL SECTION - PHASE 4
STA. 19+00 TOWNE ST

NOTES:
1. PEDESTRIAN TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PHYSICALLY SEPERATE PEDESTRIAN TRAFFIC FROM THE WORK ZONE AS DISCLOSED IN THE GENERAL NOTES.

2. SEE SHEET 239 FOR EASTBOUND AND PEDESTRIAN DETOUR.

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED SMM
CHECKED JDS

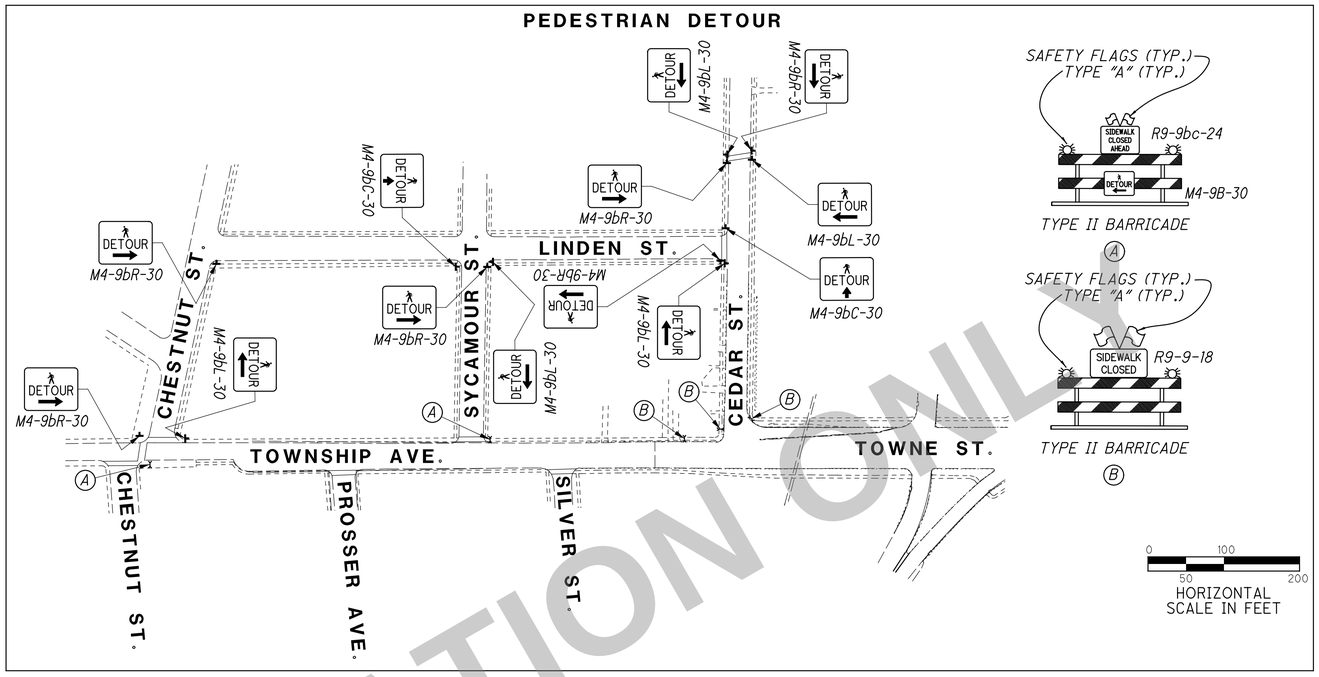
MAINTENANCE OF TRAFFIC PLAN - PHASE 4
TOWNE STREET - STA. 11+50 TO STA. 23+00

HAM-75-7.85

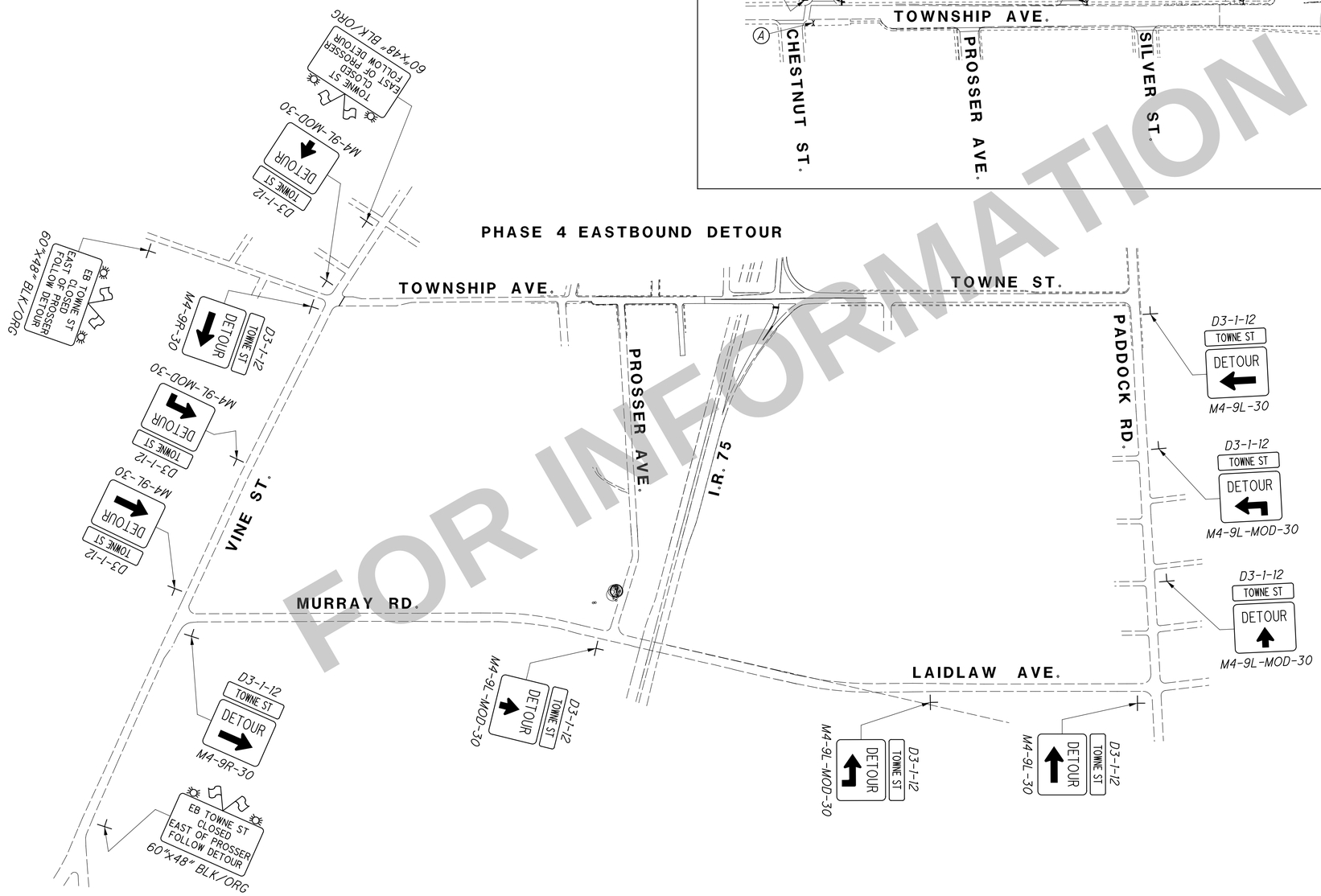
238
2017

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PEDESTRIAN DETOUR



PHASE 4 EASTBOUND DETOUR



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET

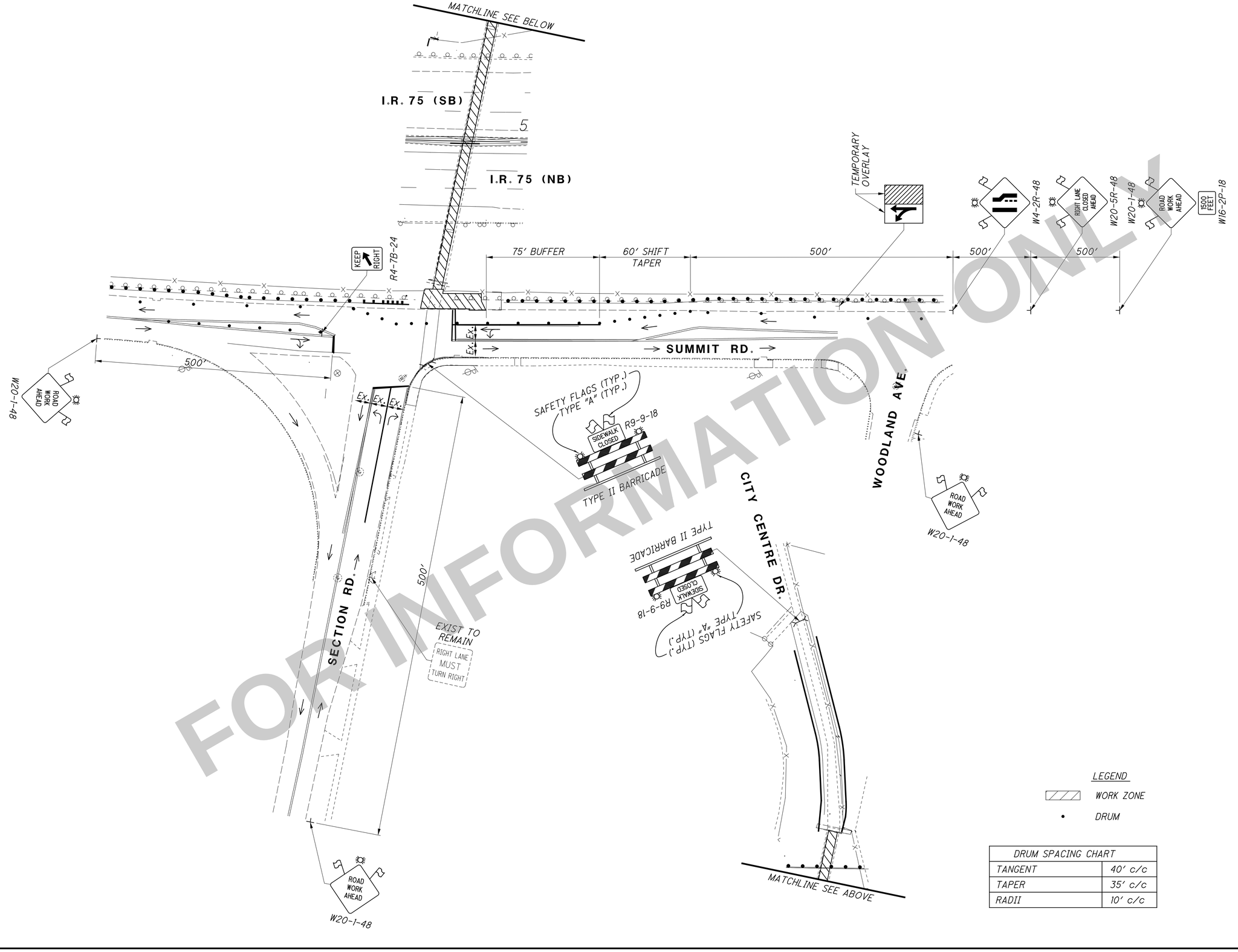
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 4
TOWNE STREET DETOUR PLAN

HAM-75-7.85

239
2017

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FOR INFORMATION ONLY

LEGEND

WORK ZONE

DRUM

DRUM SPACING CHART	
TANGENT	40' c/c
TAPER	35' c/c
RADII	10' c/c

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 4
SUMMIT ROAD

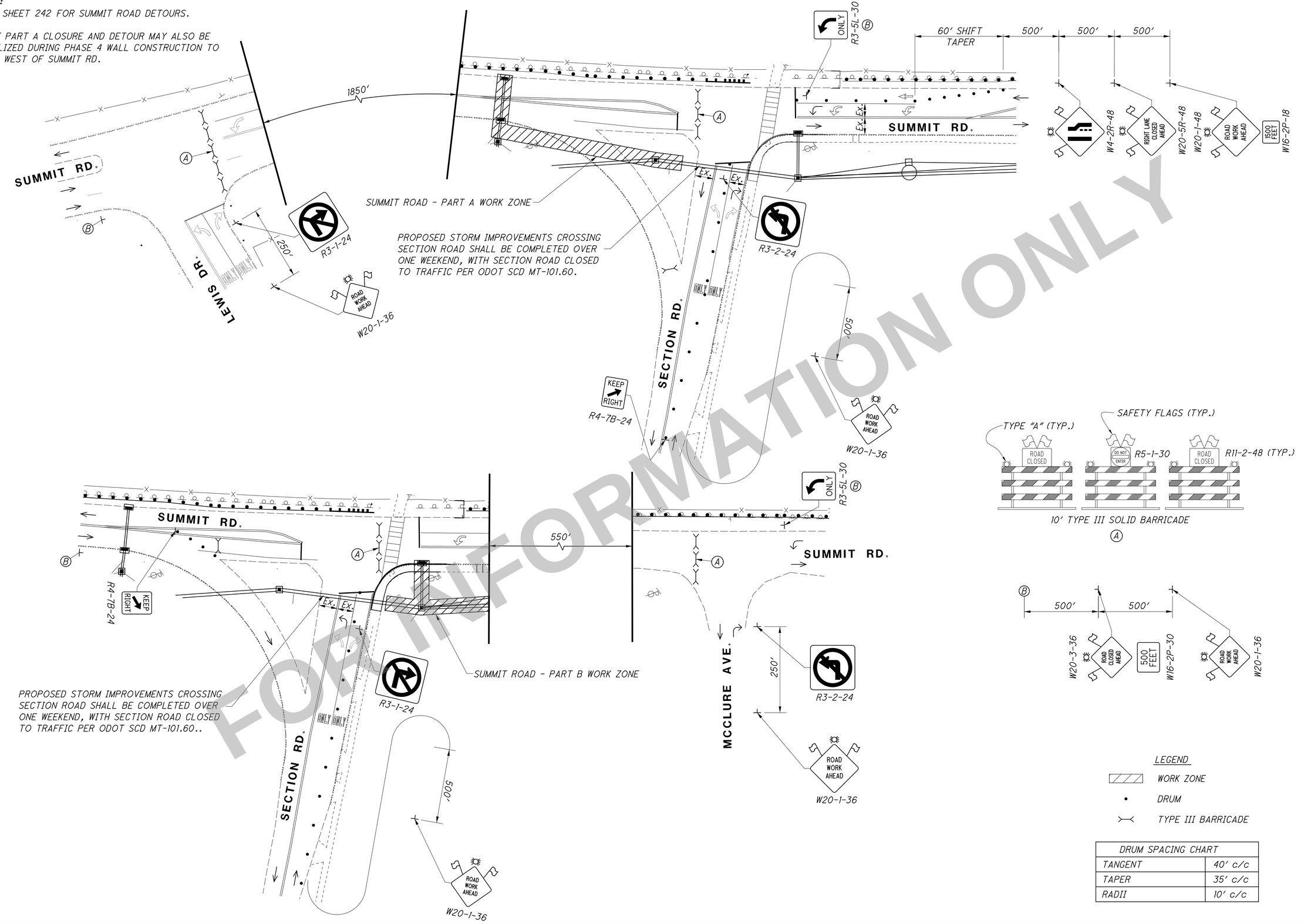
HAM-75-7.85

240
2017

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NOTES:
1. SEE SHEET 242 FOR SUMMIT ROAD DETOURS.

2. THE PART A CLOSURE AND DETOUR MAY ALSO BE UTILIZED DURING PHASE 4 WALL CONSTRUCTION TO THE WEST OF SUMMIT RD.



FOR INFORMATION ONLY

10' TYPE III SOLID BARRICADE

A

LEGEND

- WORK ZONE
- DRUM
- TYPE III BARRICADE

DRUM SPACING CHART	
TANGENT	40' c/c
TAPER	35' c/c
RADII	10' c/c

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 4
SUMMIT ROAD STORM CROSSINGS

HAM-75-7.85

241
2017

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PHASE 4 PART A DETOUR

PHASE 4 PART B DETOUR

10' TYPE III SOLID BARRICADE

Ⓐ

LEGEND

TEMPORARY SIGN SUPPORT

TYPE III BARRICADE

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 250 500 1000

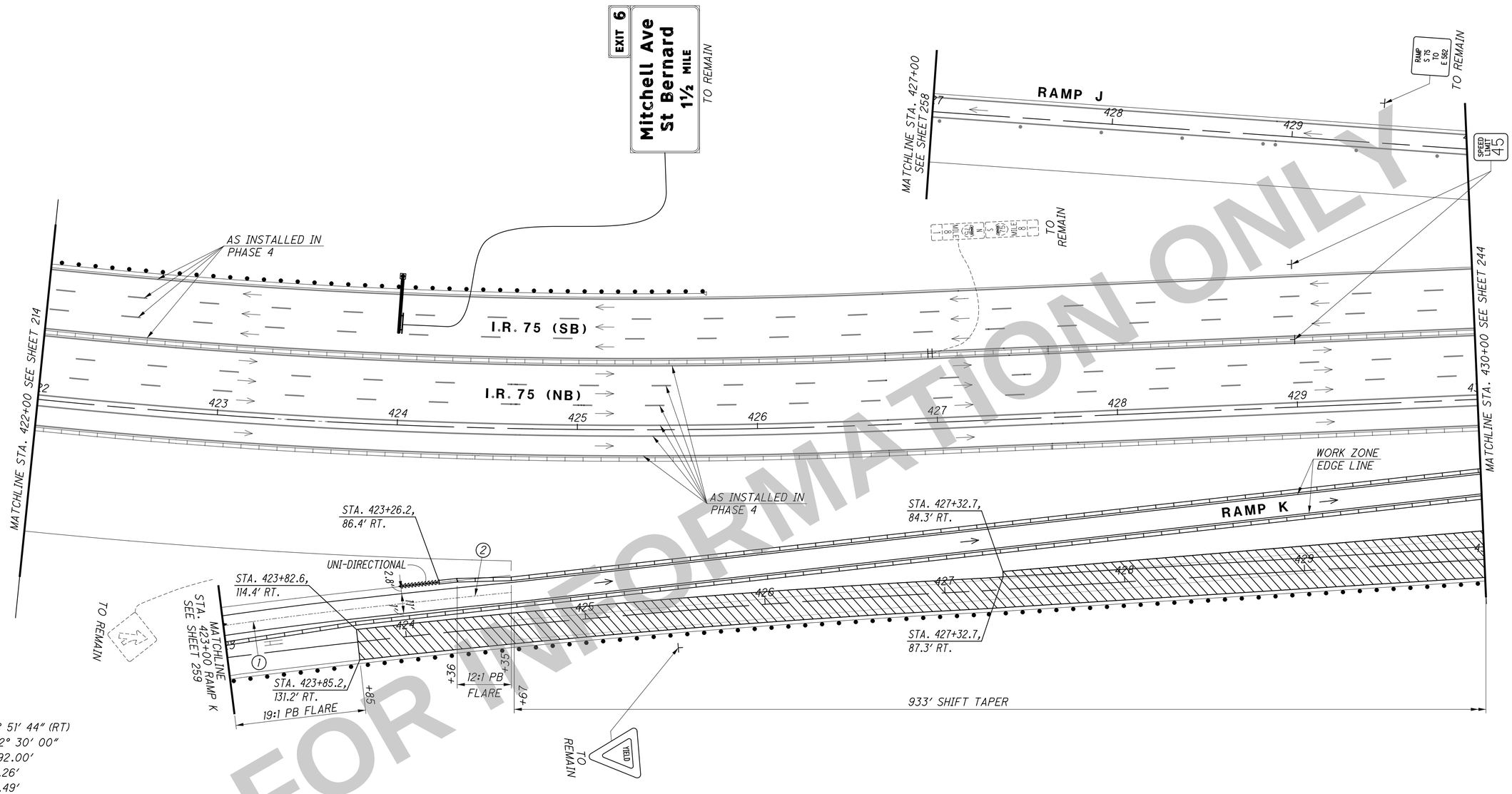
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC DETOUR PLAN
PHASE 4 - SUMMIT ROAD STORM CROSSINGS

HAM-75-7.85

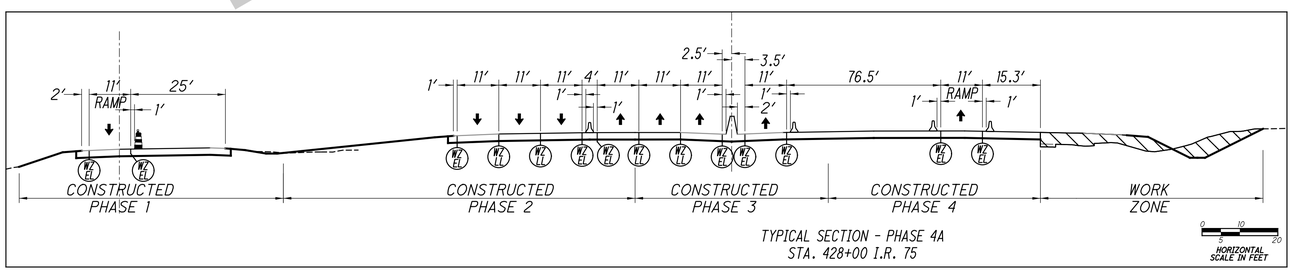
242
2017

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① Δ = 02° 51′ 44″ (RT)
Dc = 02° 30′ 00″
R = 2292.00′
T = 57.26′
L = 114.49′
E = 0.72′
C = 114.48′
C.B. = N 19° 03′ 26″ E

② Δ = 00° 54′ 40″ (RT)
Dc = 00° 59′ 49″
R = 5748.08′
T = 45.70′
L = 91.41′
E = 0.18′
C = 91.41′
C.B. = N 20° 56′ 38″ E



LEGEND
- PHASE 4A WORK ZONE
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- DRUM

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

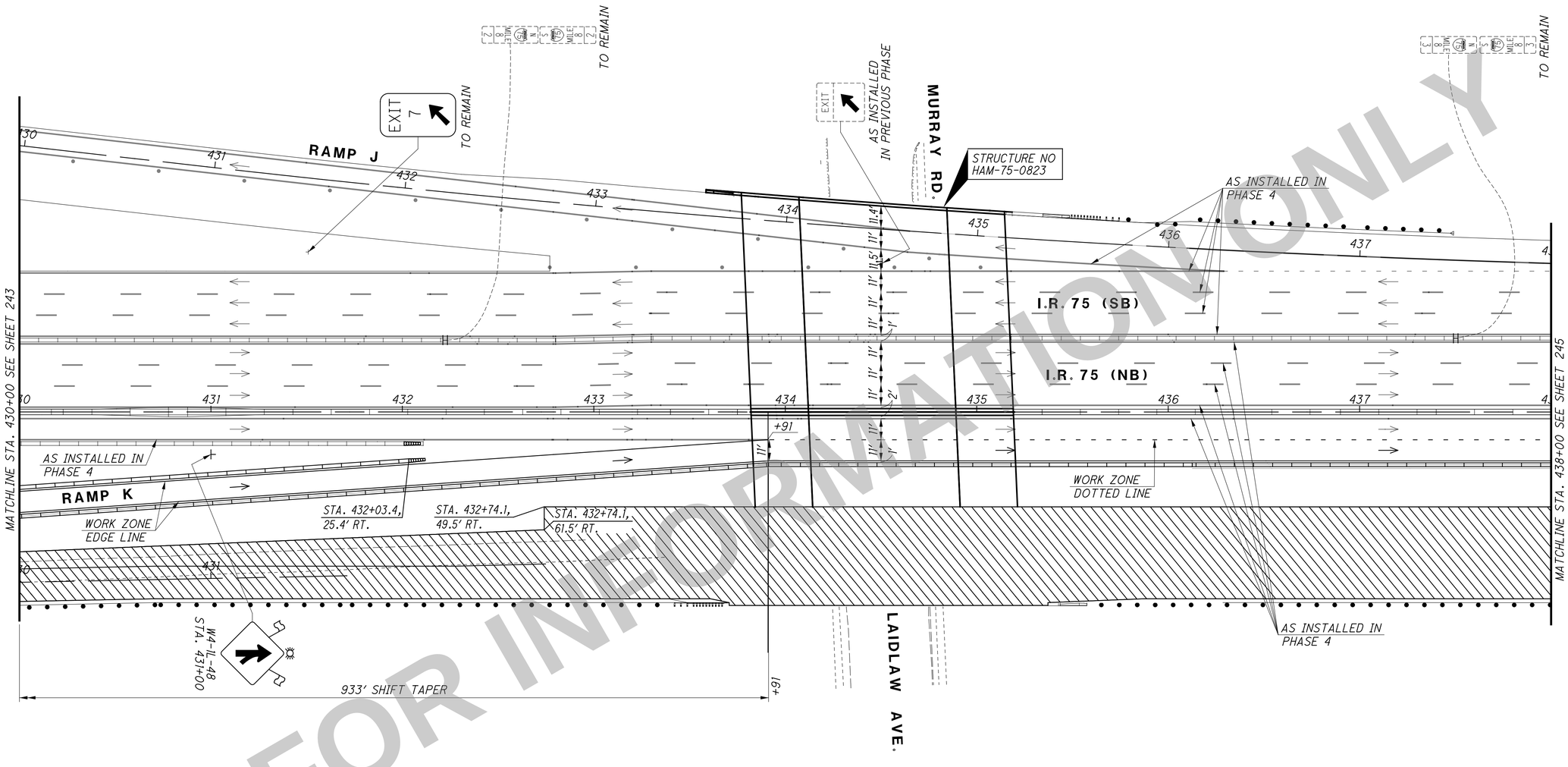
CALCULATED SMM
CHECKED JDS

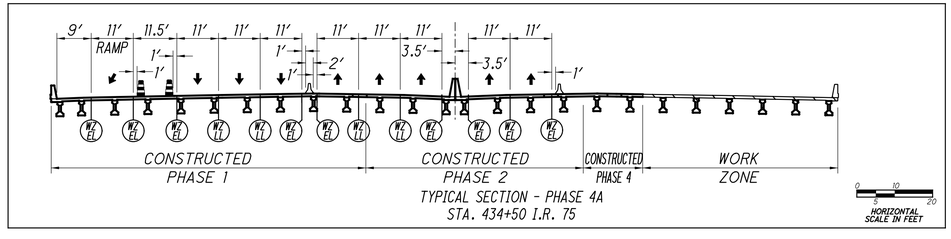
MAINTENANCE OF TRAFFIC PLAN - PHASE 4A
I.R. 75 - STA. 422+00 TO STA. 430+00

HAM-75-7.85

243
2017

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TYPICAL SECTION - PHASE 4A
STA. 434+50 I.R. 75

LEGEND

- PHASE 4A WORK ZONE
- DRUM
- PORTABLE BARRIER
- TAPERED END SECTION

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

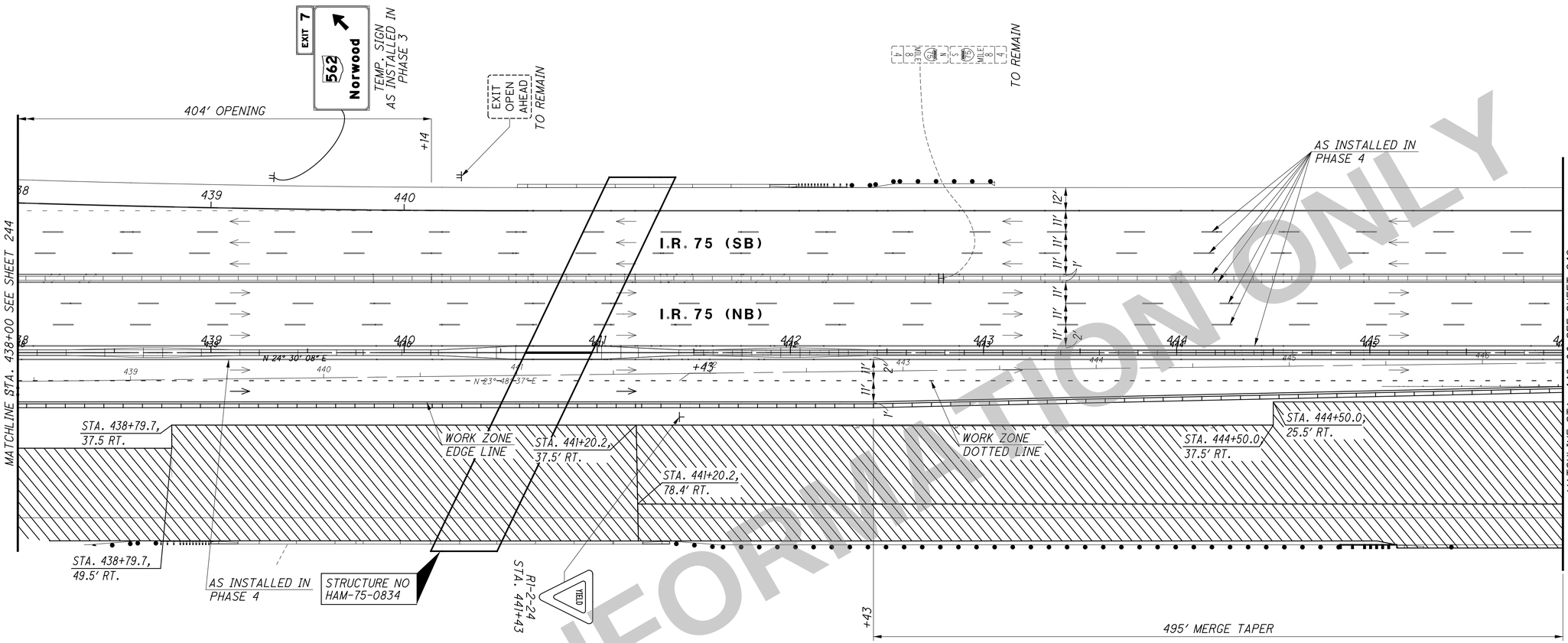
CALCULATED SMM
CHECKED JDS

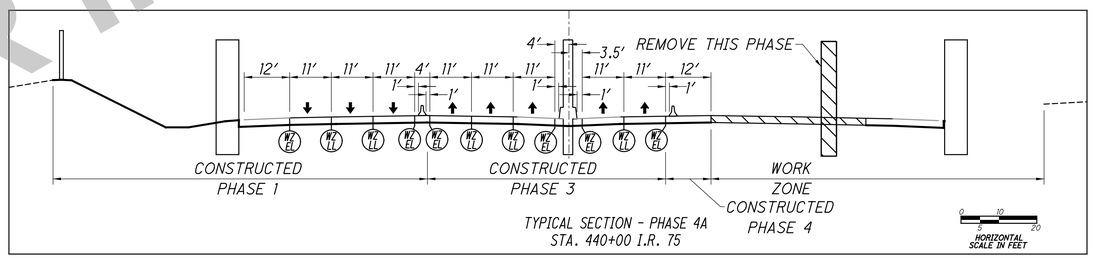
MAINTENANCE OF TRAFFIC PLAN - PHASE 4A
I.R. 75 - STA. 430+00 TO STA. 438+00

HAM-75-7.85

244
2017

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LEGEND

PHASE 4A WORK ZONE

PORTABLE BARRIER

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET

CALCULATED SMM CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 4A
I.R. 75 - STA. 438+00 TO STA. 446+00

HAM-75-7.85

245
2017

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MAINTENANCE OF TRAFFIC PLAN - PHASE 4A
I.R. 75 - STA. 446+00 TO STA. 462+00

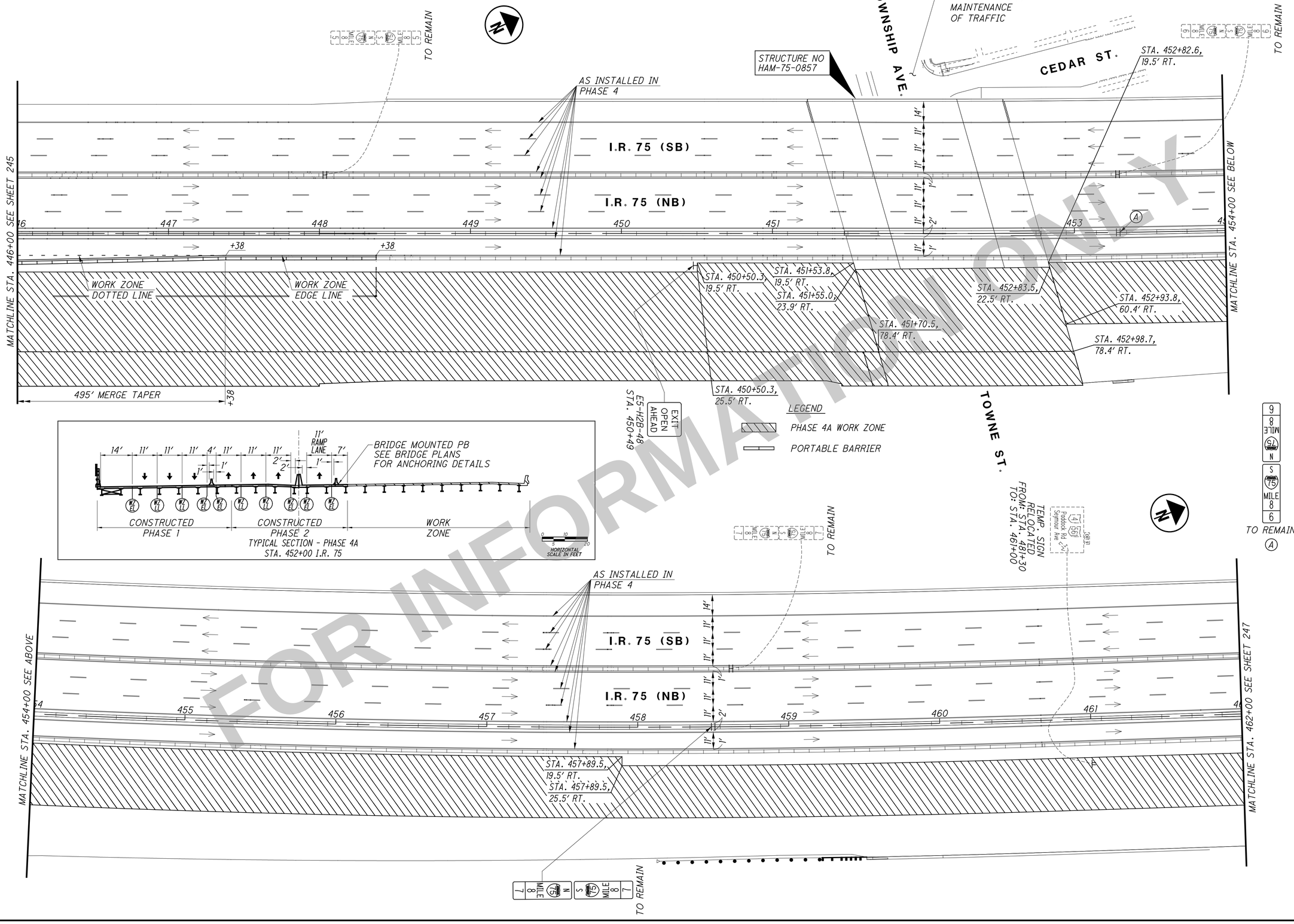
HAM-75-7.85

246
2017

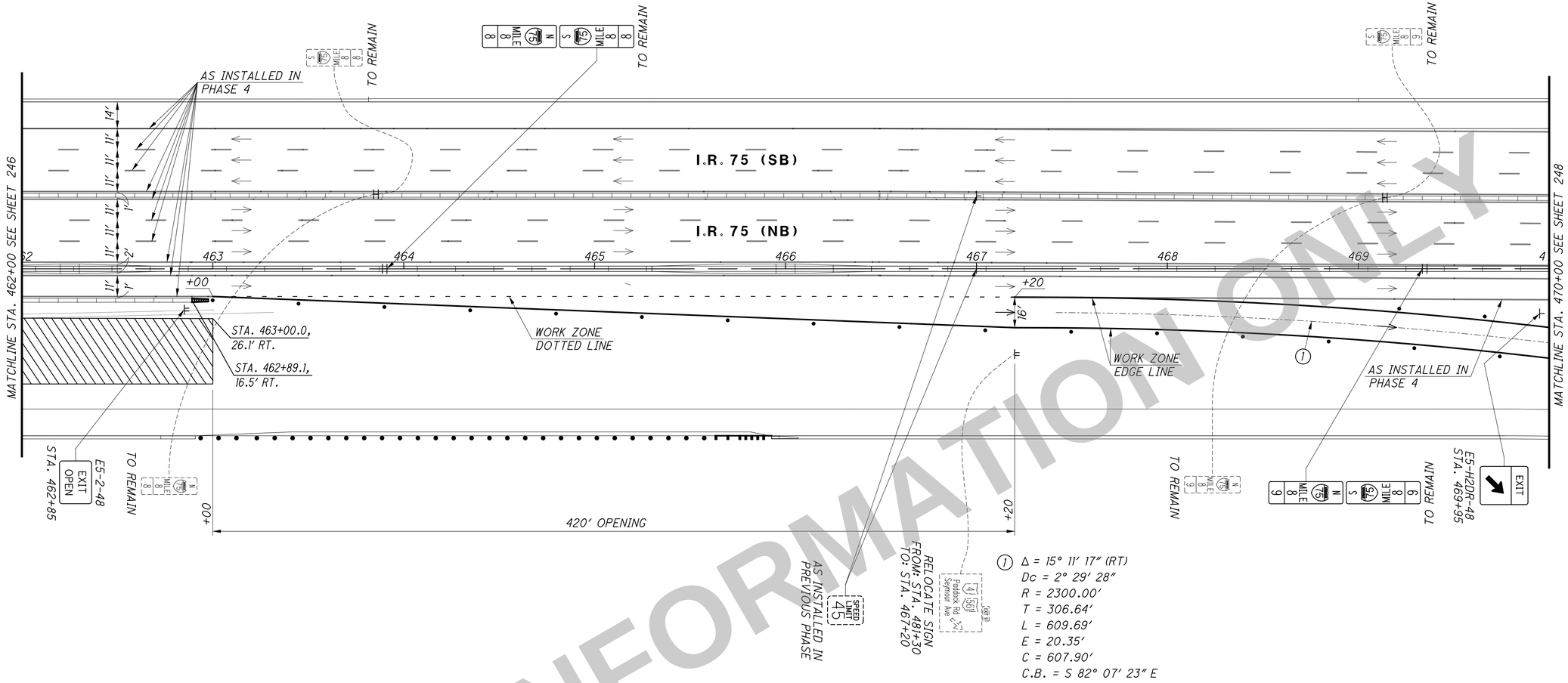
CALCULATED SMM
CHECKED JDS

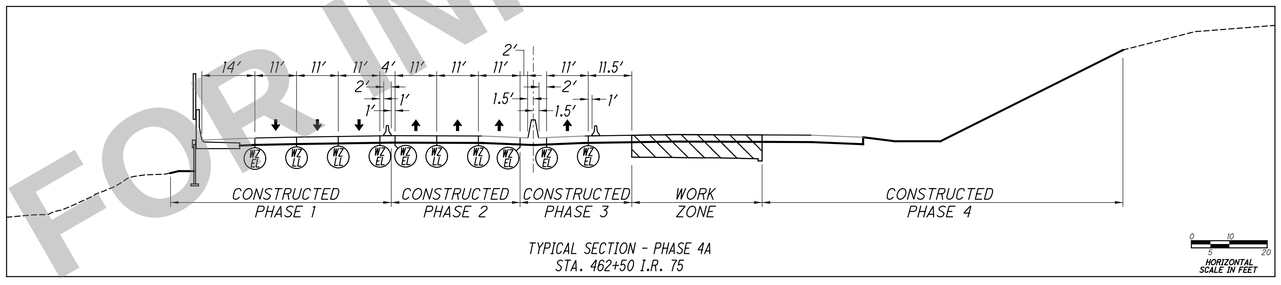
HORIZONTAL SCALE IN FEET
0 15 30 60

FOR INFORMATIONAL ONLY



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TYPICAL SECTION - PHASE 4A
STA. 462+50 I.R. 75

LEGEND

- PHASE 4A WORK ZONE
- PORTABLE BARRIER
- TAPERED END SECTION
- DRUM

HORIZONTAL SCALE IN FEET

CALCULATED SMM
CHECKED JDS

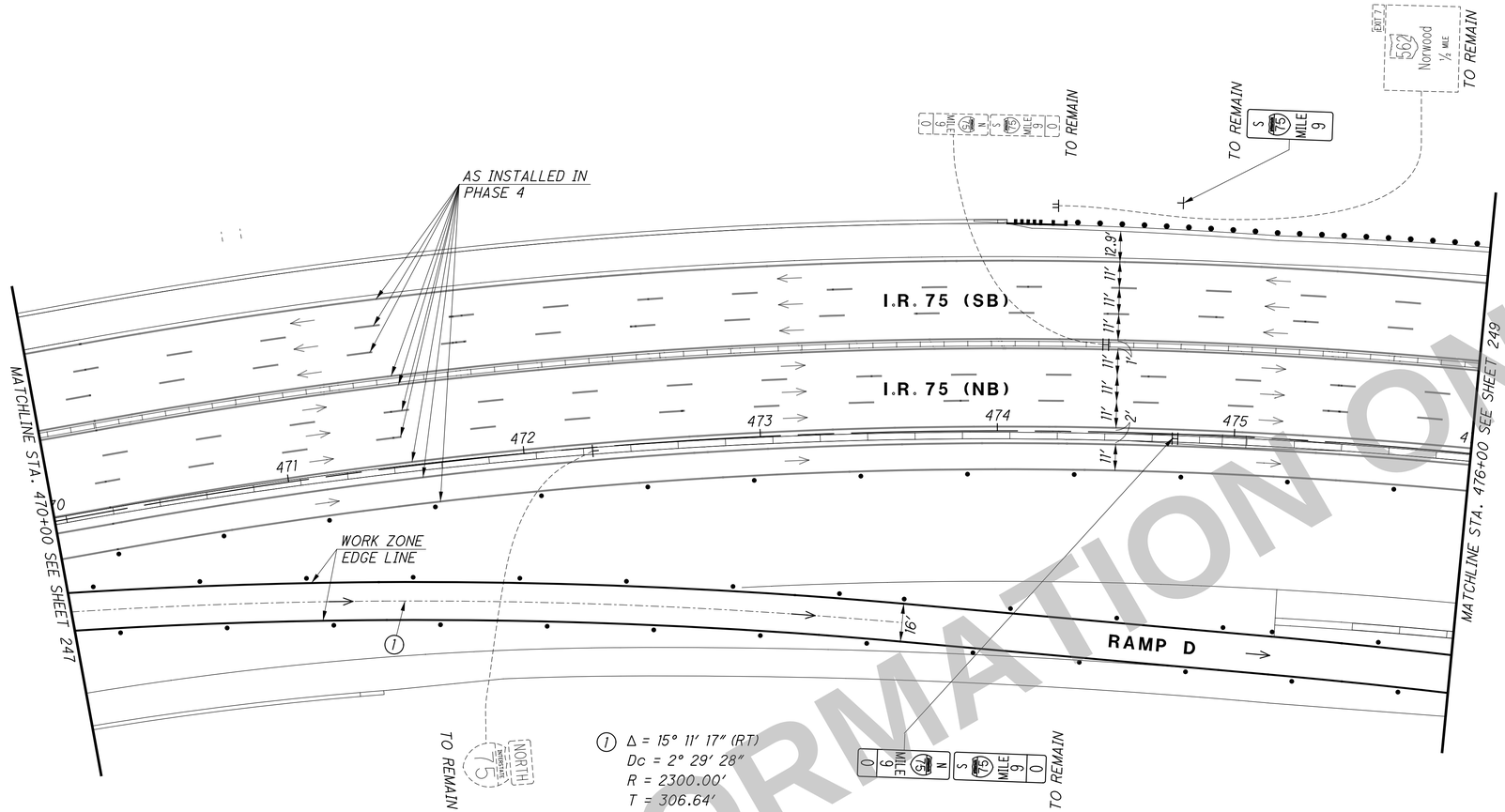
MAINTENANCE OF TRAFFIC PLAN - PHASE 4A
I.R. 75 - STA. 462+00 TO STA. 470+00

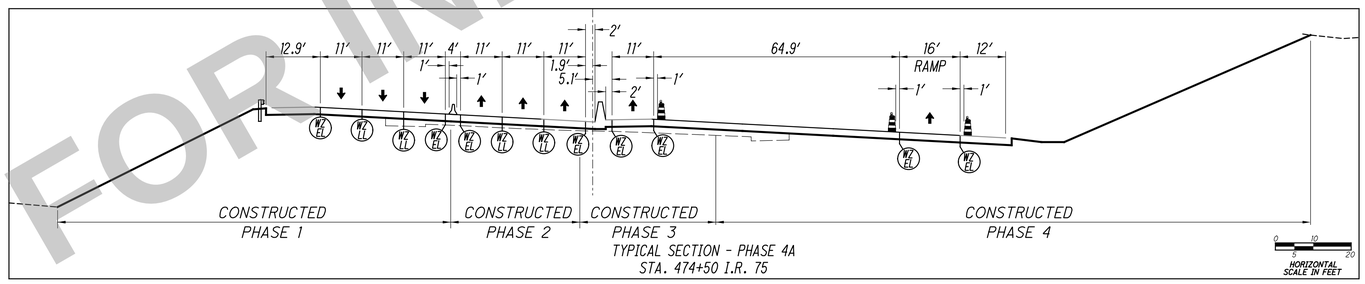
HAM-75-7.85

247
2017

FOR INFORMATION ONLY

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LEGEND

PORTABLE BARRIER

DRUM

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET

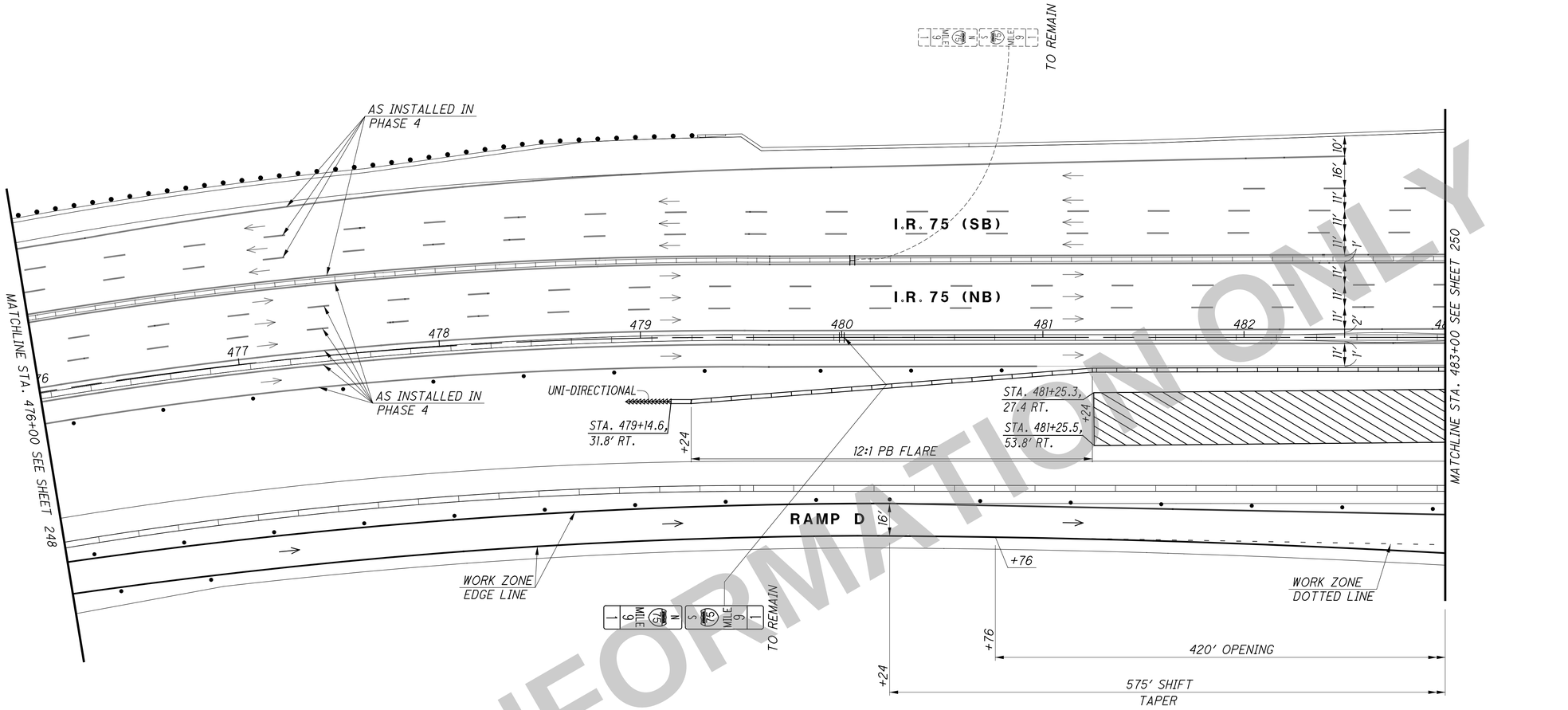
CALCULATED SMM
CHECKED JDS

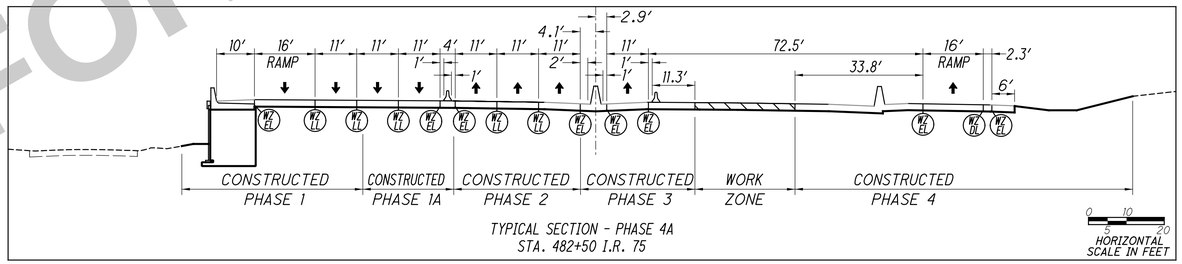
MAINTENANCE OF TRAFFIC PLAN - PHASE 4A
I.R. 75 - STA. 470+00 TO STA. 476+00

HAM-75-7.85

248
2017

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TYPICAL SECTION - PHASE 4A
STA. 482+50 I.R. 75

LEGEND

- PHASE 4A WORK ZONE
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- ORANGE DRUM

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET

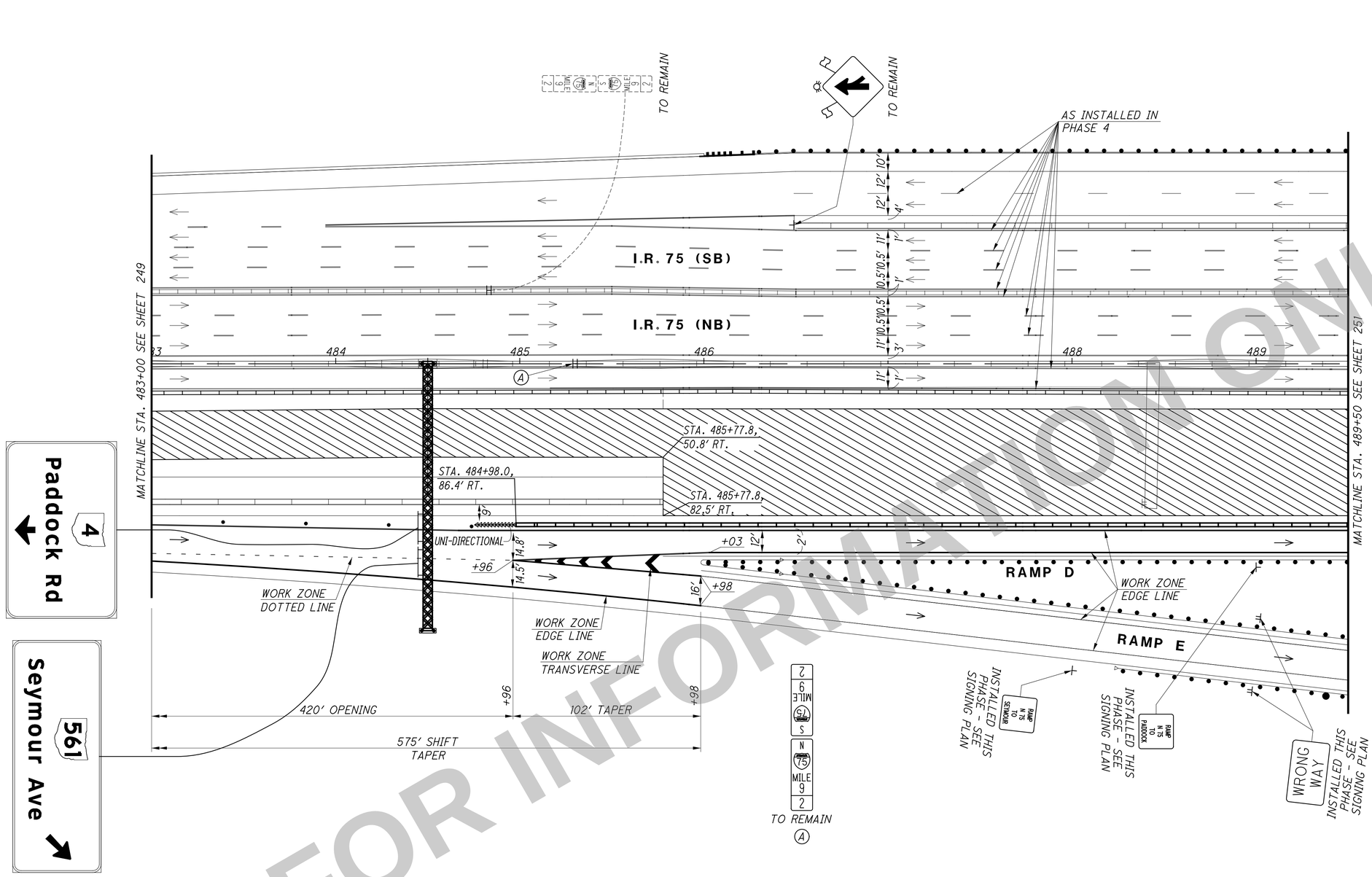
CALCULATED SMM
CHECKED JDS

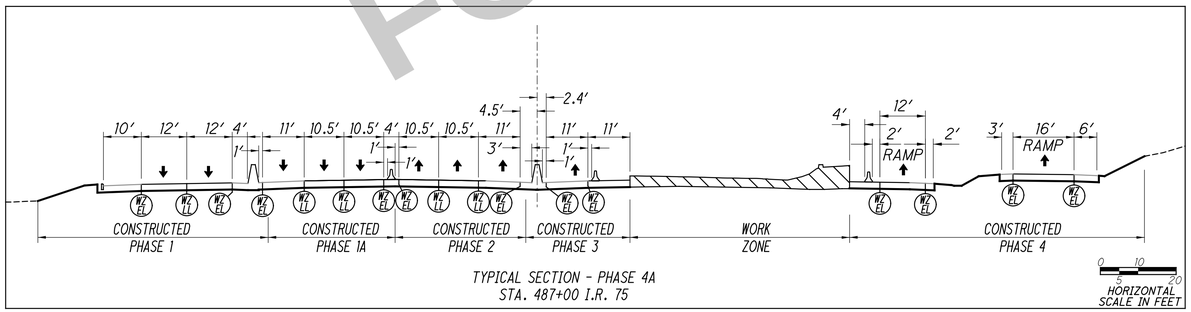
MAINTENANCE OF TRAFFIC PLAN - PHASE 4A
I.R. 75 - STA. 476+00 TO STA. 483+00

HAM-75-7.85

249
2017

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TYPICAL SECTION - PHASE 4A
STA. 487+00 I.R. 75

LEGEND

- PHASE 4A WORK ZONE
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- ORANGE DRUM

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 4A
I.R. 75 - STA. 483+00 TO STA. 489+50

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250
2017

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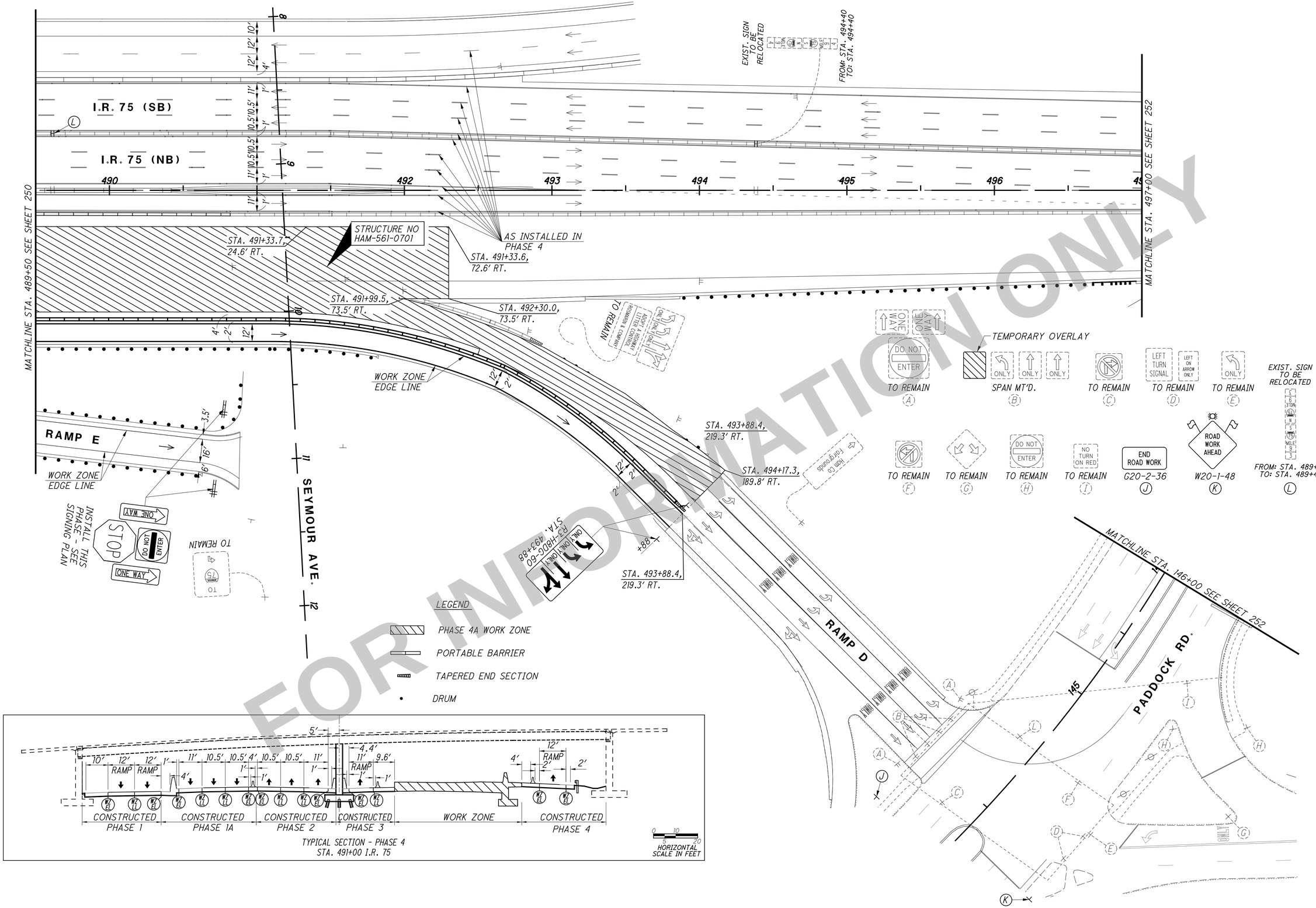
MAINTENANCE OF TRAFFIC PLAN - PHASE 4A
I.R. 75 - STA. 489+50 TO STA. 497+00

HAM-75-7.85

CALCULATED SMM | CHECKED JDS

HORIZONTAL SCALE IN FEET: 0, 15, 30, 60

251 / 2017



LEGEND

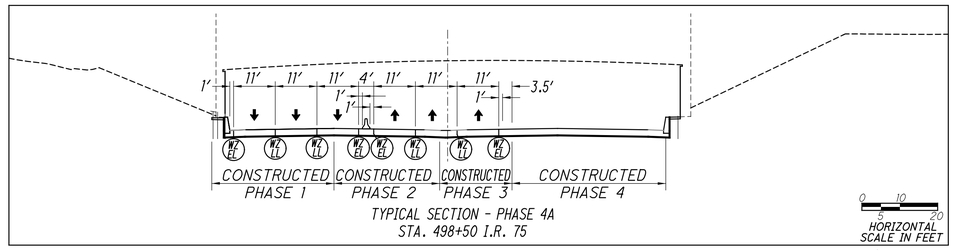
- PHASE 4A WORK ZONE
- PORTABLE BARRIER
- TAPERED END SECTION
- DRUM

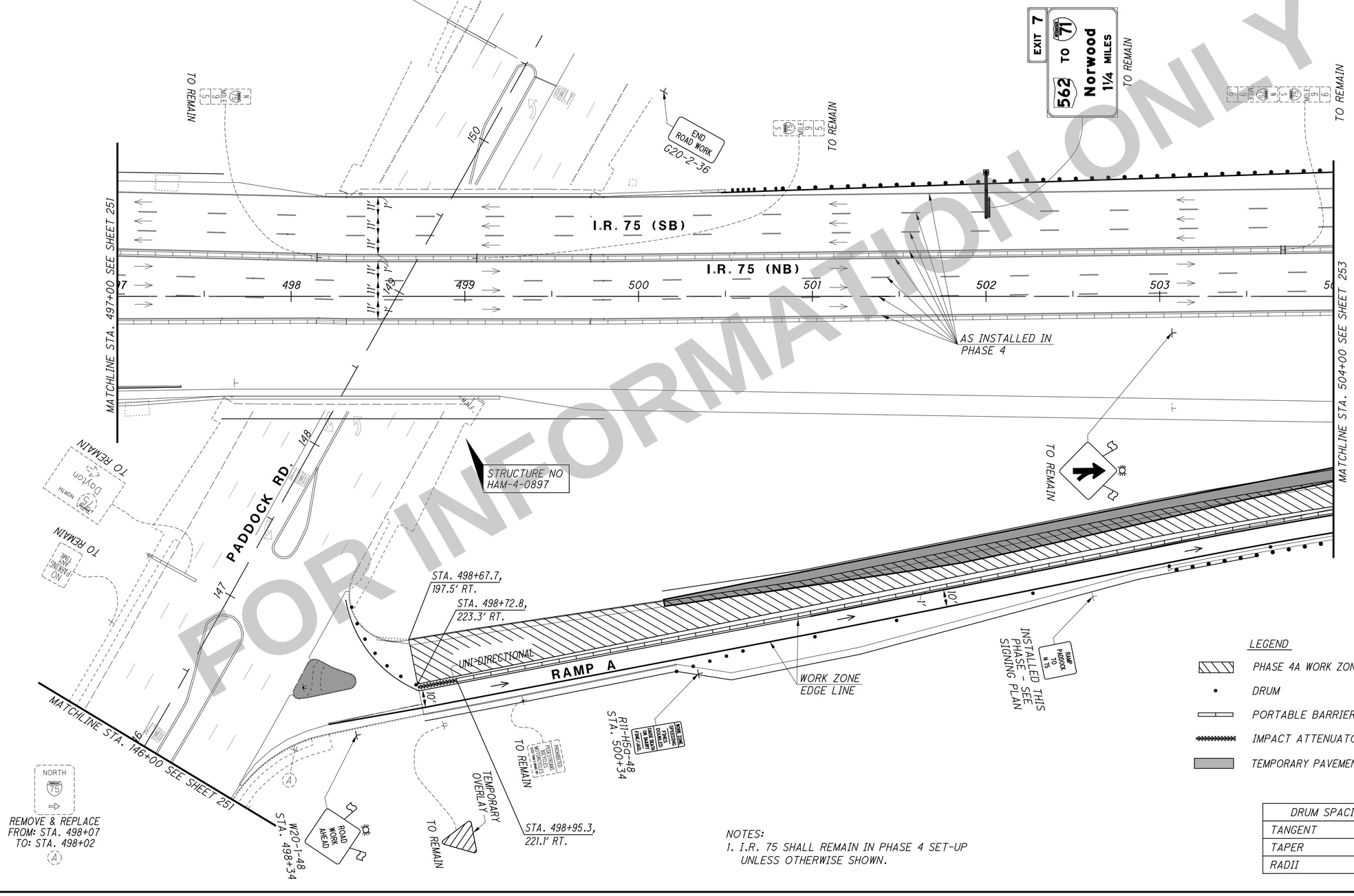
TYPICAL SECTION - PHASE 4
STA. 491+00 I.R. 75

HORIZONTAL SCALE IN FEET: 0, 10, 20

FOR INFORMATION ONLY

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DRUM SPACING CHART	
TANGENT	80′ c/c
TAPER	55′ c/c
RADII	10′ c/c

NOTES:
1. I.R. 75 SHALL REMAIN IN PHASE 4 SET-UP UNLESS OTHERWISE SHOWN.

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET: 0, 15, 30, 60

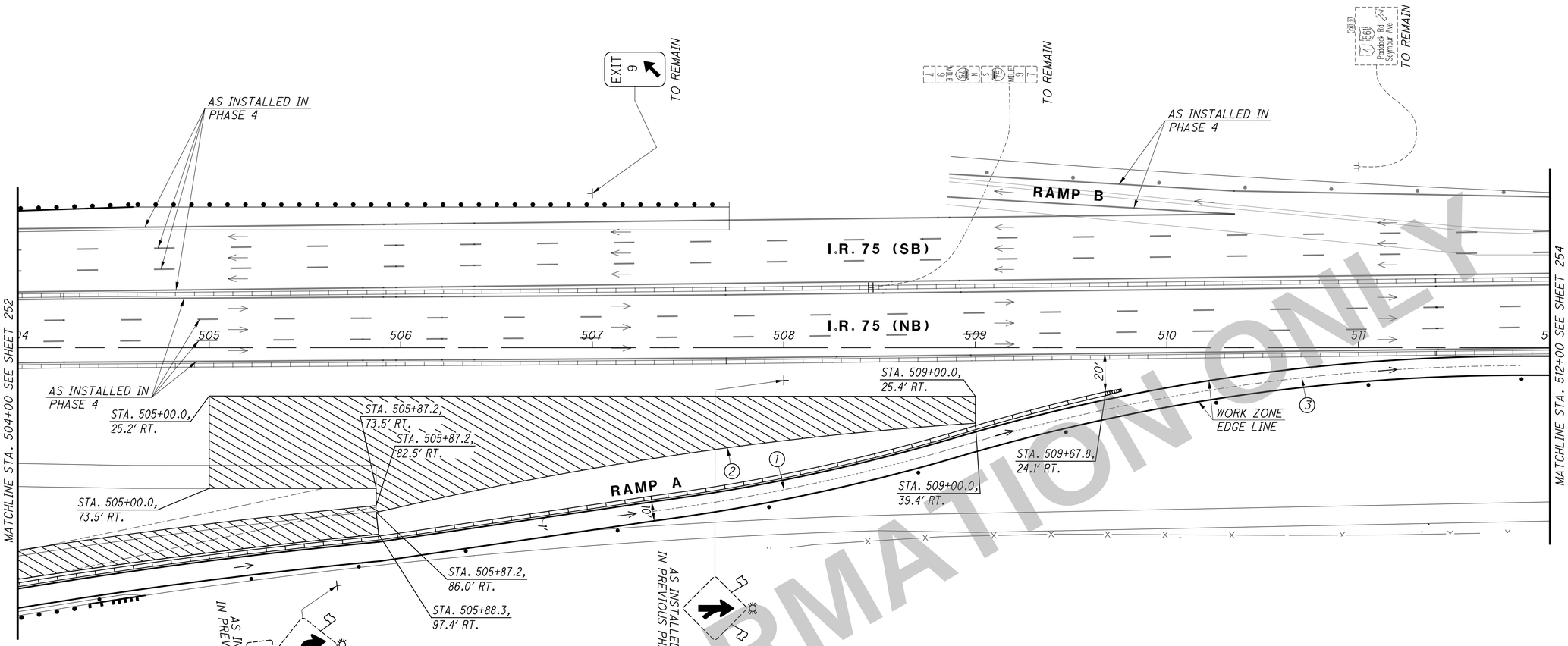
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 4A
I.R. 75 - STA. 497+00 TO STA. 504+00

HAM-75-7.85

252
2017

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FOR INFORMATION ONLY

① Δ = 08° 57′ 03″ (LT)
Dc = 05° 29′ 55″
R = 1042.00′
T = 81.56′
L = 162.78′
E = 3.19′
C = 162.62′
C.B. = N 32° 01′ 44″ E

② Δ = 12° 21′ 25″ (LT)
Dc = 4° 59′ 59″
R = 1042.00′
T = 150.22′
L = 298.38′
E = 10.77′
C = 297.36′
C.B. = N 35° 45′ 25″ E

③ Δ = 08° 57′ 59″ (RT)
Dc = 03° 00′ 56″
R = 1091.00′
T = 149.05′
L = 297.50′
E = 5.84′
C = 297.19′
C.B. = N 35° 45′ 51″ E

HORIZONTAL SCALE IN FEET
0 150 300 600

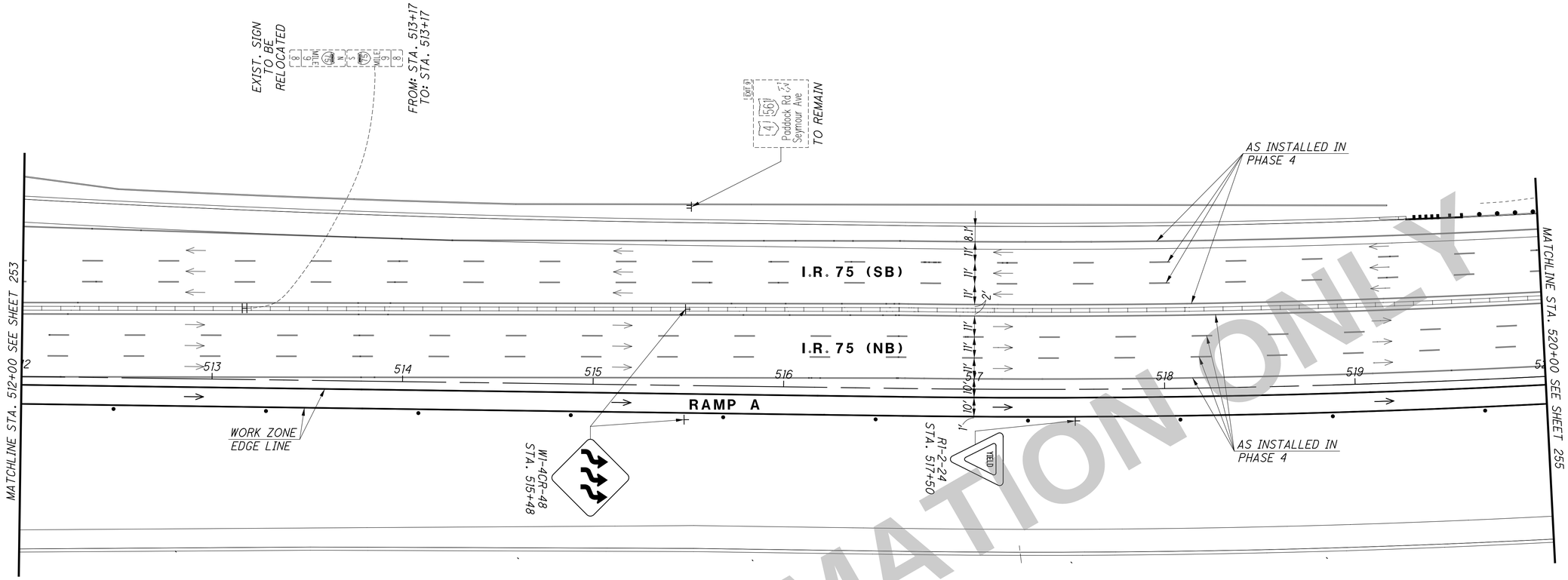
CALCULATED SMM
CHECKED JDS

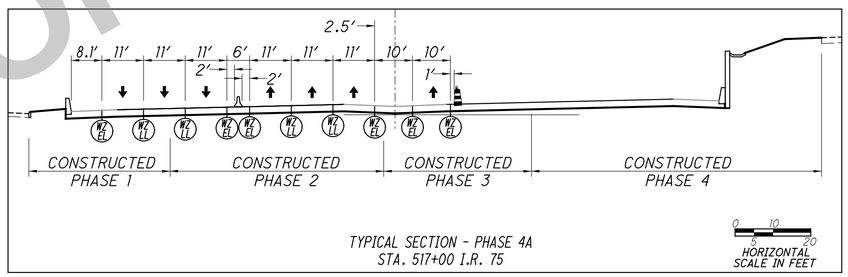
MAINTENANCE OF TRAFFIC PLAN - PHASE 4A
I.R. 75 - STA. 504+00 TO STA. 512+00

HAM-75-7.85

253
2017

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LEGEND

- PORTABLE BARRIER
- DRUM
- TAPERED END SECTION

HORIZONTAL SCALE IN FEET

CALCULATED SMM
CHECKED JDS

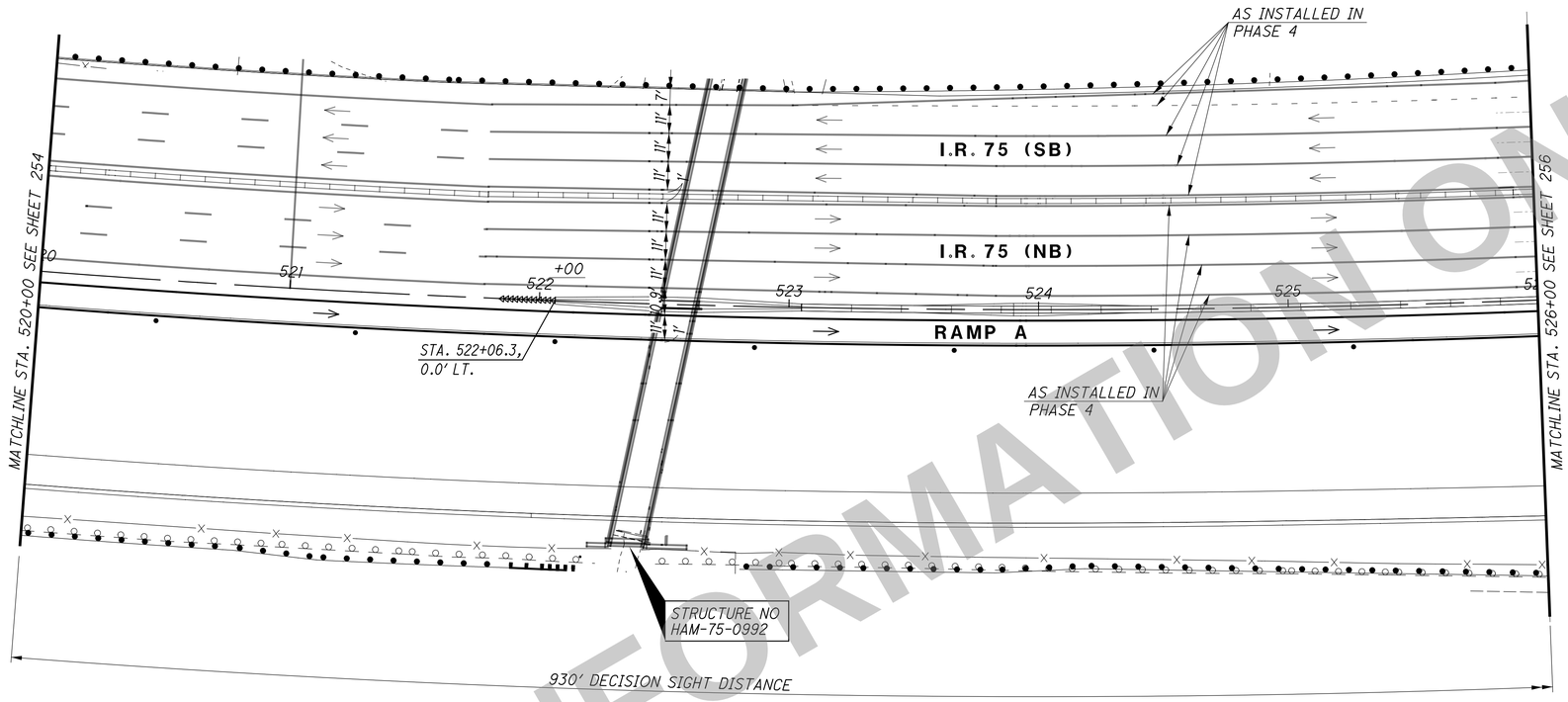
MAINTENANCE OF TRAFFIC PLAN - PHASE 4A
I.R. 75 - STA. 512+00 TO STA. 520+00

HAM-75-7.85

254
2017

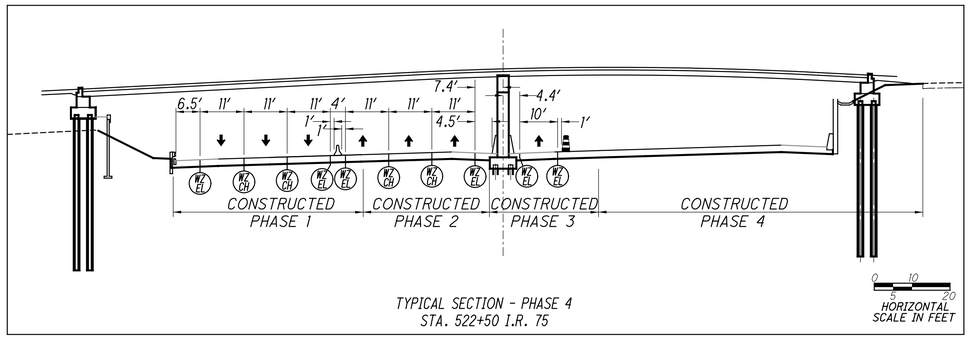
FOR INFORMATION ONLY

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LEGEND

• DRUM



TYPICAL SECTION - PHASE 4
STA. 522+50 I.R. 75

FOR INFORMATION ONLY

0 15 30 60
HORIZONTAL SCALE IN FEET

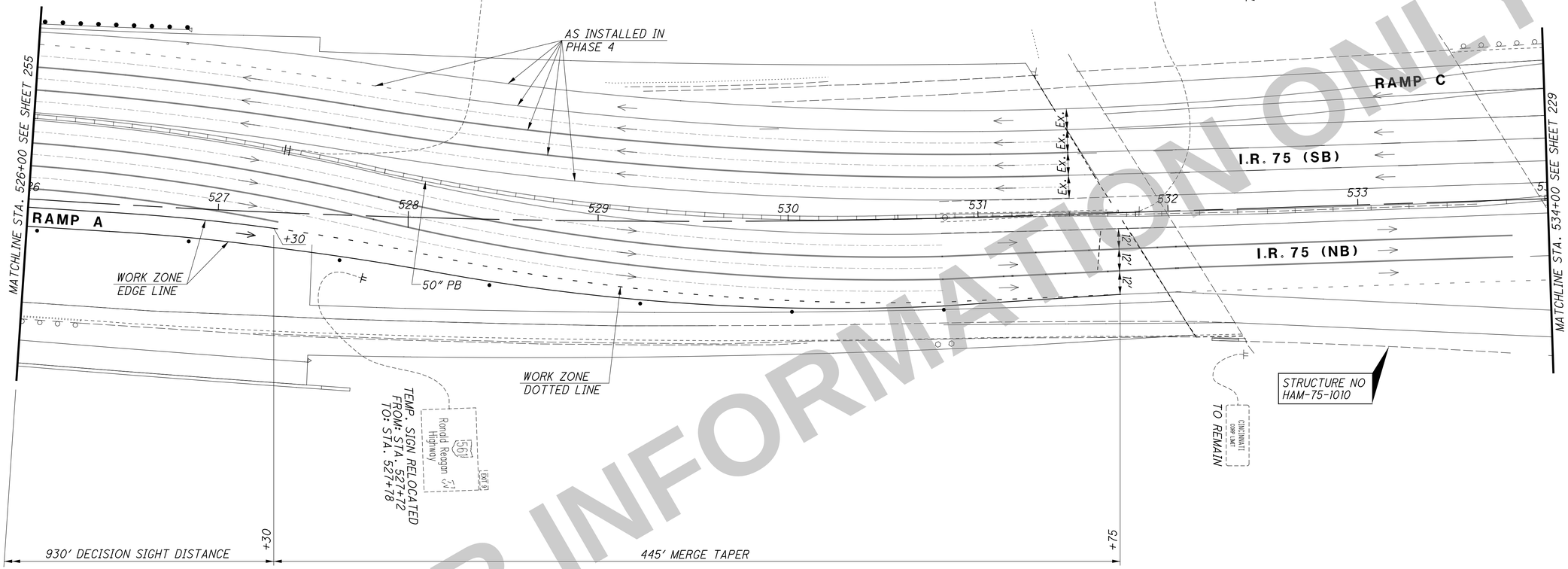
CALCULATED SMM
CHECKED JDS

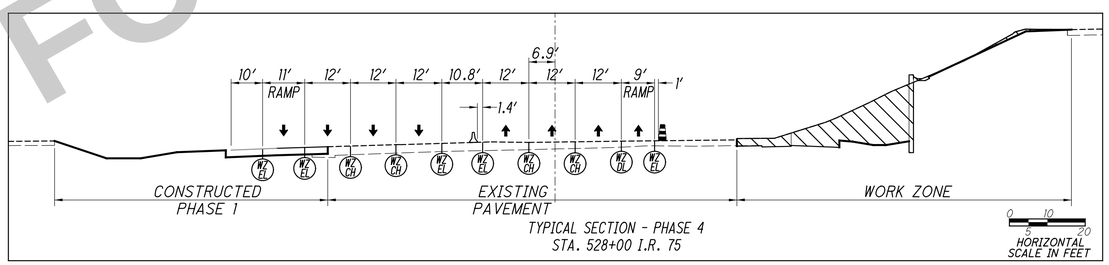
MAINTENANCE OF TRAFFIC PLAN - PHASE 4A
I.R. 75 - STA. 520+00 TO STA. 526+00

HAM-75-7.85

255
2017

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TYPICAL SECTION - PHASE 4
STA. 528+00 I.R. 75

LEGEND

• DRUM

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

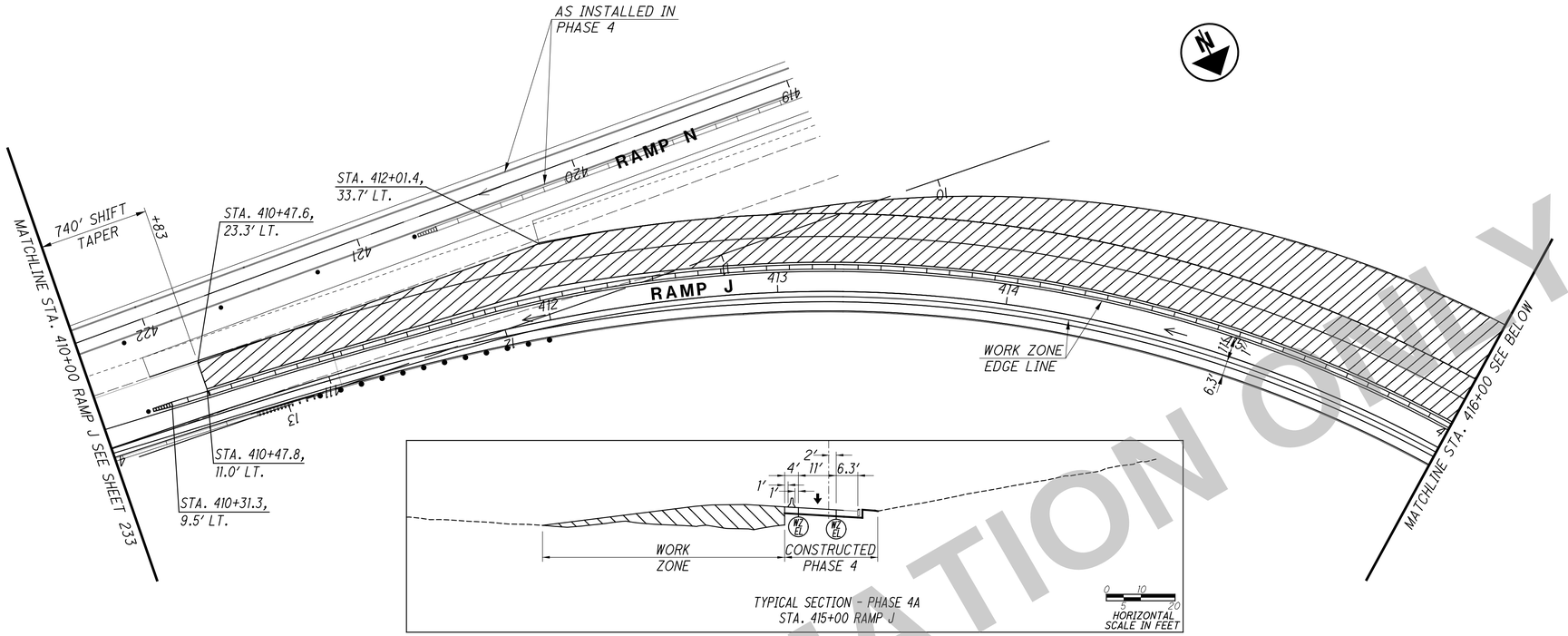
CALCULATED SMM
CHECKED JDS

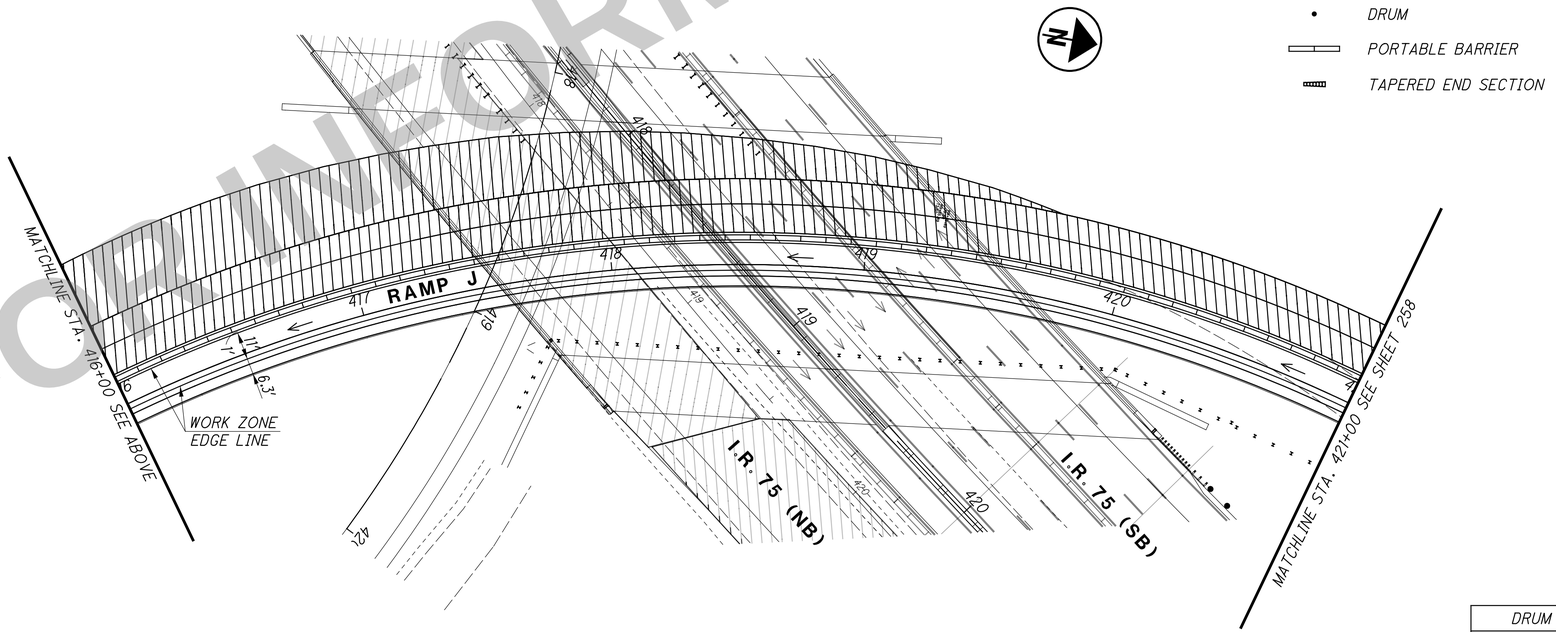
MAINTENANCE OF TRAFFIC PLAN - PHASE 4A
I.R. 75 - STA. 526+00 TO STA. 534+00

HAM-75-7.85

256
2017

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LEGEND

- PHASE 4A WORK ZONE
- DRUM
- PORTABLE BARRIER
- TAPERED END SECTION

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET: 0, 15, 30, 60

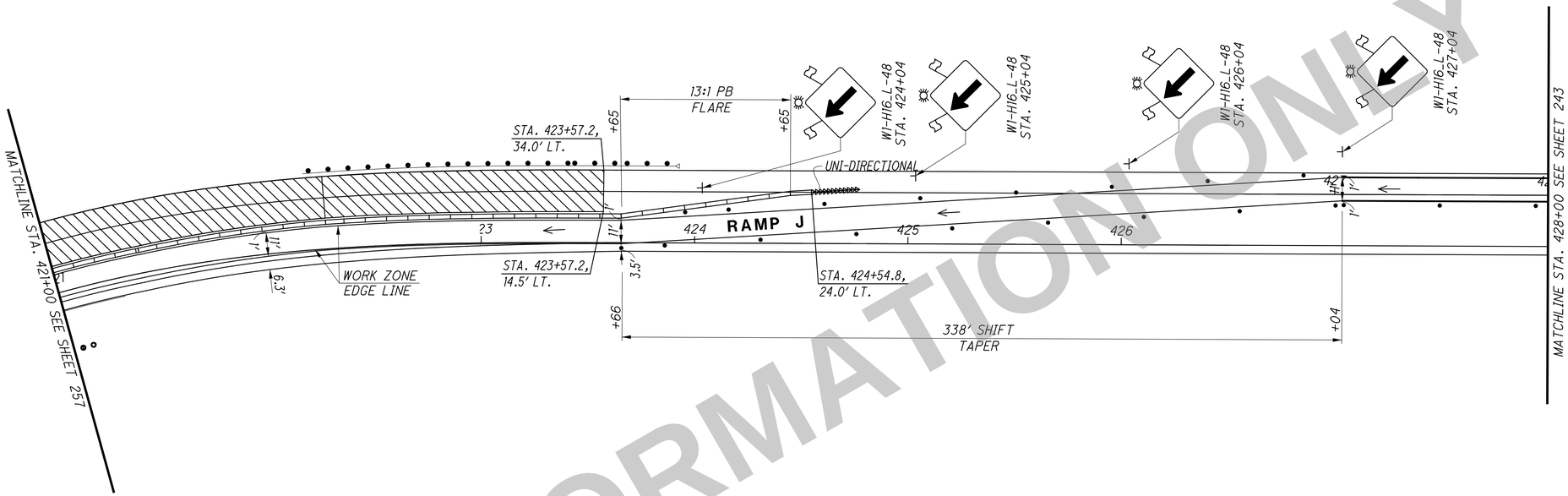
CALCULATED SMM
CHECKED JDS

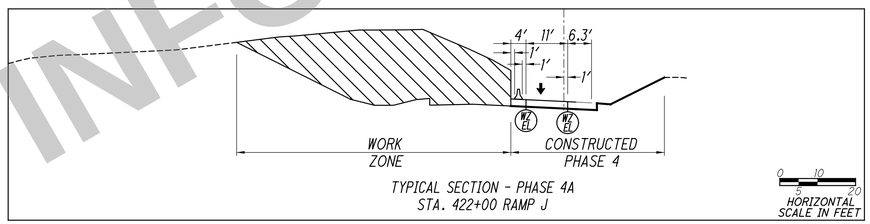
MAINTENANCE OF TRAFFIC PLAN - PHASE 4A
RAMP J - STA. 410+00 TO STA. 421+00

HAM-75-7.85

257
2017

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TYPICAL SECTION - PHASE 4A
STA. 422+00 RAMP J

LEGEND

- PHASE 4A WORK ZONE
- DRUM
- PORTABLE BARRIER
- IMPACT ATTENUATOR

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 4A
RAMP J - STA. 421+00 TO STA. 427+00

HAM-75-7.85

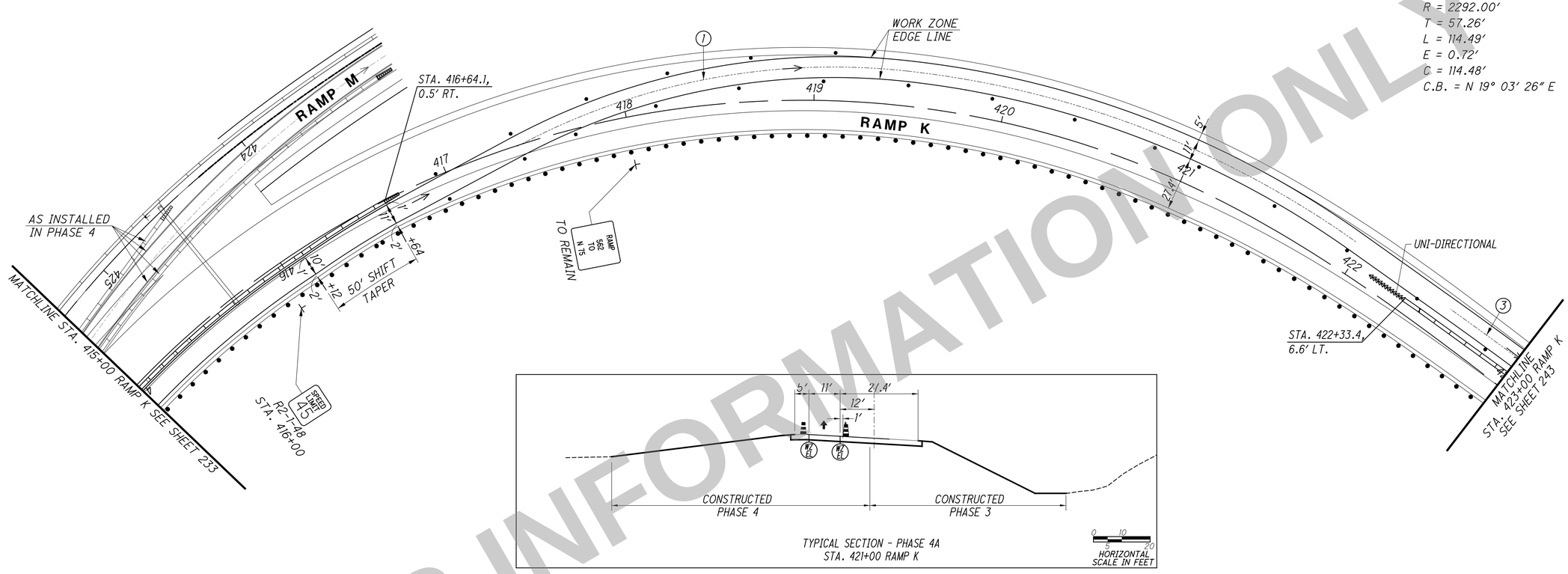
258
2017

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① Δ = 34° 24′ 05″ (RT)
Dc = 16° 07′ 12″
R = 355.50′
T = 110.05′
L = 213.45′
E = 16.64′
C = 210.26′
C.B. = N 28° 43′ 16″ W

② Δ = 29° 08′ 47″ (RT)
Dc = 11° 19′ 14″
R = 506.12′
T = 131.58′
L = 257.47′
E = 16.83′
C = 254.70′
C.B. = N 03° 03′ 11″ E

③ Δ = 02° 51′ 44″ (RT)
Dc = 02° 30′ 00″
R = 2292.00′
T = 57.26′
L = 114.49′
E = 0.72′
C = 114.48′
C.B. = N 19° 03′ 26″ E



TYPICAL SECTION - PHASE 4A
STA. 421+00 RAMP K

DRUM SPACING CHART	
TANGENT	80′ c/c
TAPER	55′ c/c
RADII	10′ c/c

LEGEND
- PHASE 4A WORK ZONE
- DRUM
- PORTABLE BARRIER
- TAPERED END SECTION
- IMPACT ATTENUATOR

FOR INFORMATION ONLY

0 15 30 60 HORIZONTAL SCALE IN FEET

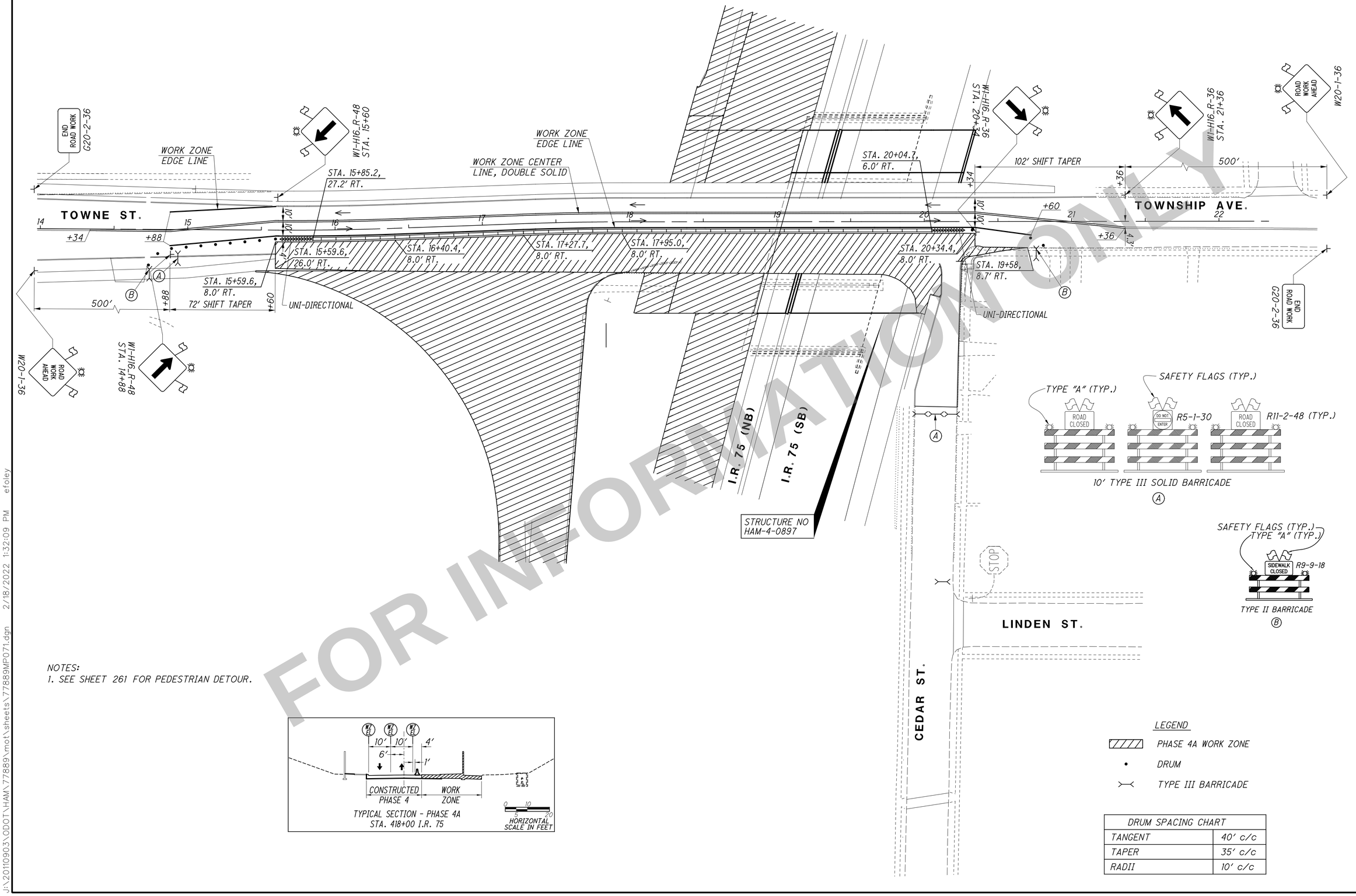
CALCULATED SMM CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 4A
RAMP K - STA. 415+00 TO STA. 423+00

HAM-75-7.85

259
2017

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NOTES:
1. SEE SHEET 261 FOR PEDESTRIAN DETOUR.

TYPICAL SECTION - PHASE 4A
STA. 418+00 I.R. 75

LEGEND

- PHASE 4A WORK ZONE
- DRUM
- TYPE III BARRICADE

DRUM SPACING CHART	
TANGENT	40' c/c
TAPER	35' c/c
RADII	10' c/c

FOR INFORMATION ONLY

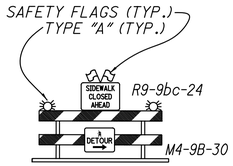
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0 15 30 60
HORIZONTAL SCALE IN FEET

CALCULATED SMM
CHECKED JDS

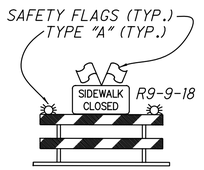
MAINTENANCE OF TRAFFIC PLAN - PHASE 4A
TOWNE STREET - STA. 14+00 TO STA. 22+50

HAM-75-7.85



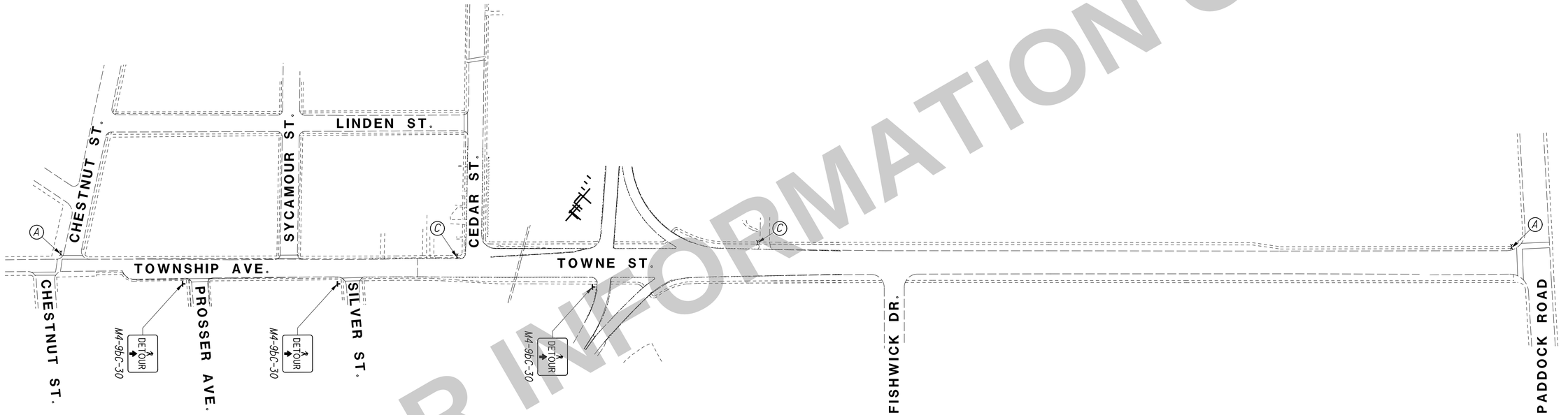
TYPE II BARRICADE

(A)



TYPE II BARRICADE

(C)



NOTES:
1. PHASE 4 SIGNAGE FOR PEDESTRIAN DETOUR SHALL REMAIN IN PLACE FOR PHASE 4A.

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED SMM
CHECKED JDS

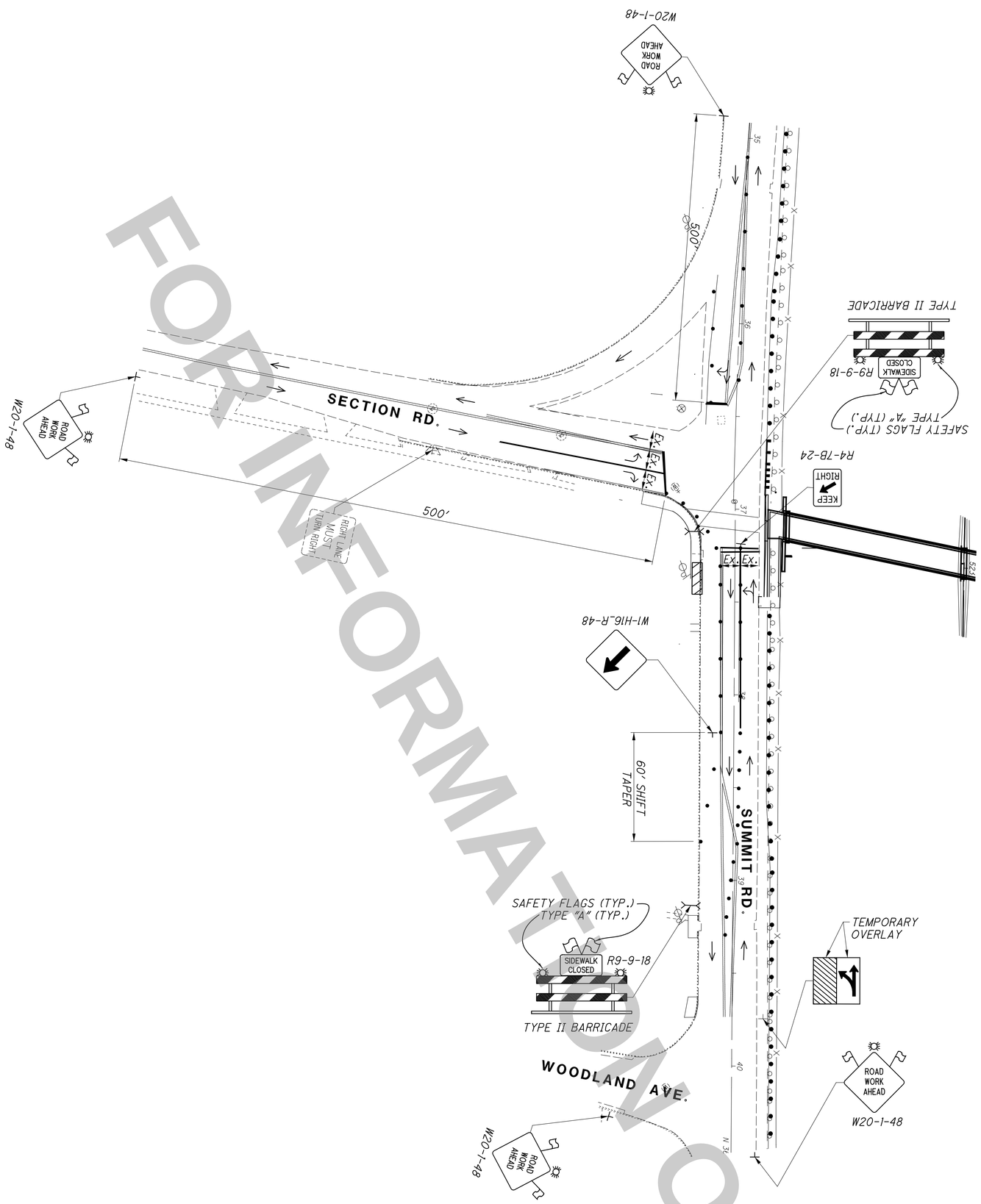
MAINTENANCE OF TRAFFIC PLAN - PHASE 4A
TOWNE ST DETOUR PLAN

HAM-75-7.85

261
2017

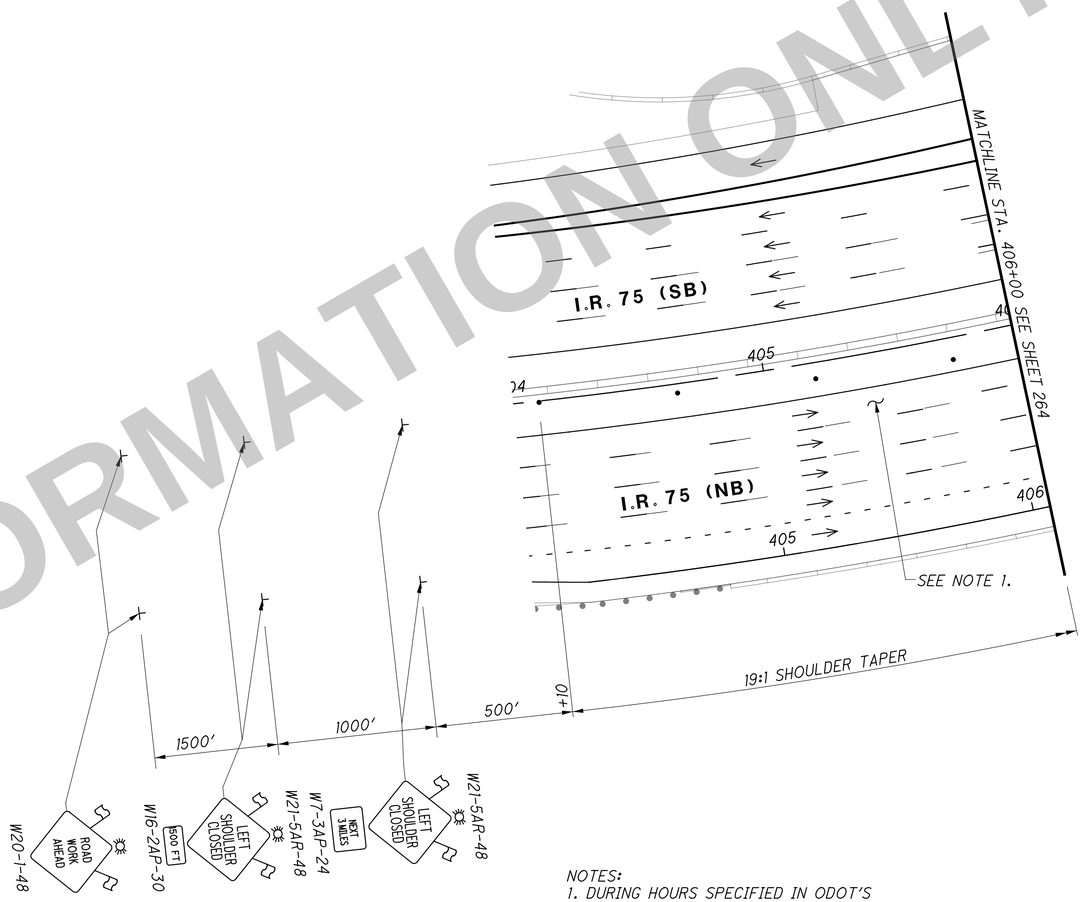
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FOR INFORMATION ONLY

2017 / 262	HAM-75-7.85	MAINTENANCE OF TRAFFIC PLAN - PHASE 4A SUMMIT ROAD	CALCULATED SMM CHECKED JDS	0 30 15 60 HORIZONTAL SCALE IN FEET



FOR INFORMATION ONLY

NOTES:
1. DURING HOURS SPECIFIED IN ODOT'S PERMITTED LANE CLOSURE POLICY, NIGHTTIME LANE CLOSURES MAY BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMP PAVT WORK ADJACENT TO IR 75.

2. PHASE 5 WORK ZONE PAVEMENT MARKINGS SHALL BE INSTALLED PER THE TRAFFIC CONTROL PLANS. QUANTITIES HAVE BEEN PROVIDED FOR PHASE 5 WORK ZONE MARKINGS.

LEGEND

• DRUM

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

0 15 30 60
HORIZONTAL SCALE IN FEET

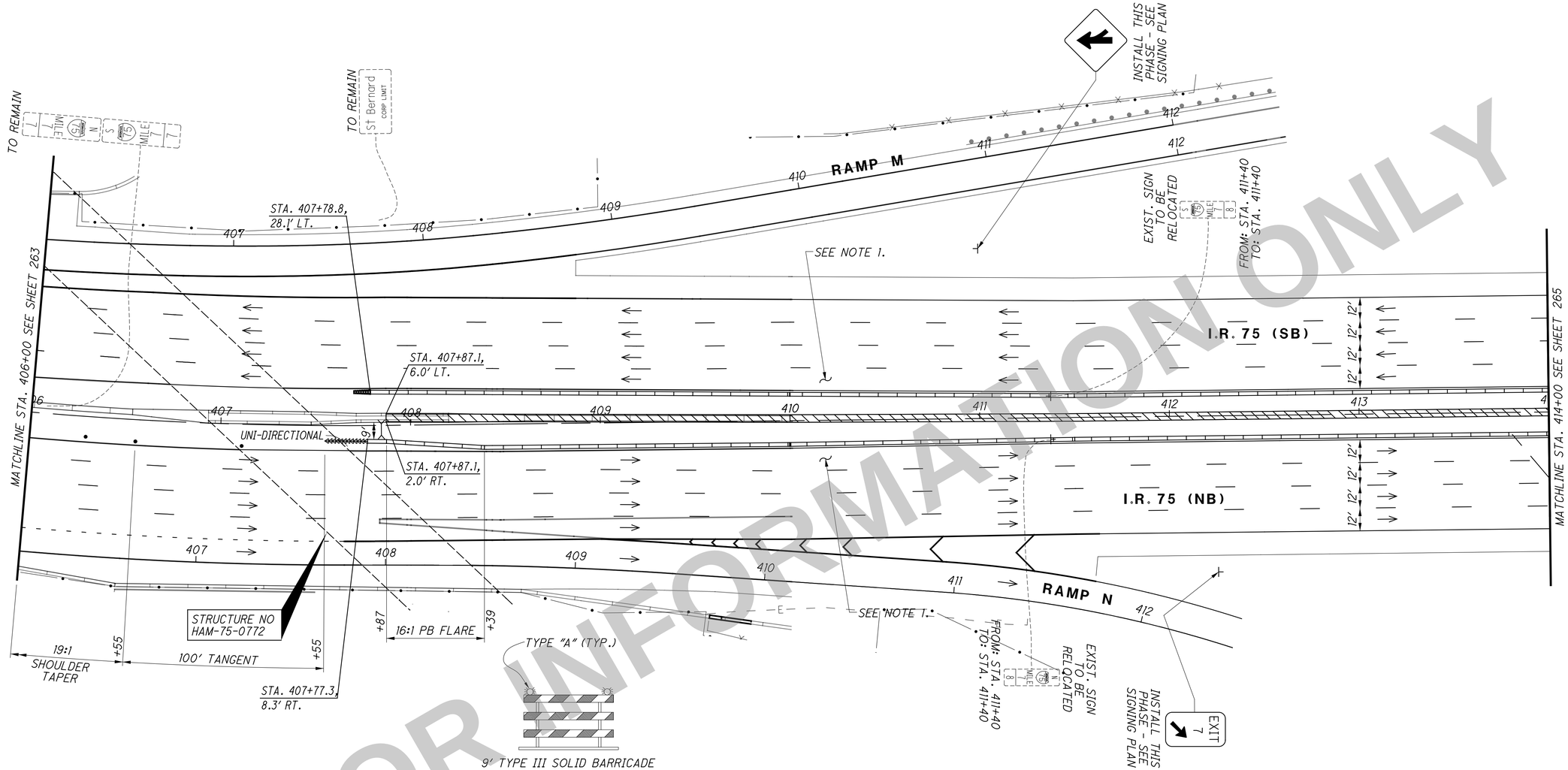
CALCULATED SMM
CHECKED JDS

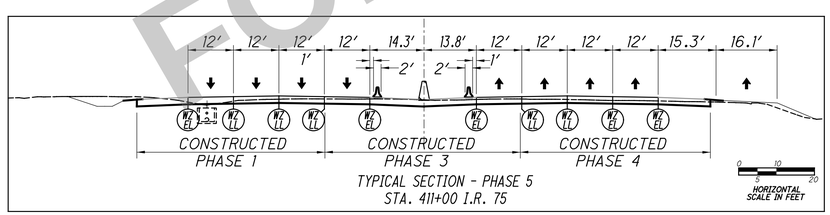
MAINTENANCE OF TRAFFIC PLAN - PHASE 5
I.R. 75 - STA. 404+00 TO STA. 406+00

HAM-75-7.85

263
2017

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TYPICAL SECTION - PHASE 5
STA. 411+00 I.R. 75

NOTES:
1. DURING HOURS SPECIFIED IN ODOT'S PERMITTED LANE CLOSURE POLICY, NIGHTTIME LANE CLOSURES MAY BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMP PAVT WORK ADJACENT TO IR 75.

2. PHASE 5 WORK ZONE PAVEMENT MARKINGS SHALL BE INSTALLED PER THE TRAFFIC CONTROL PLANS. QUANTITIES HAVE BEEN PROVIDED FOR PHASE 5 WORK ZONE MARKINGS.

LEGEND
- PHASE 5 WORK ZONE
- PORTABLE BARRIER
- DRUM
- TYPE III BARRICADE

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

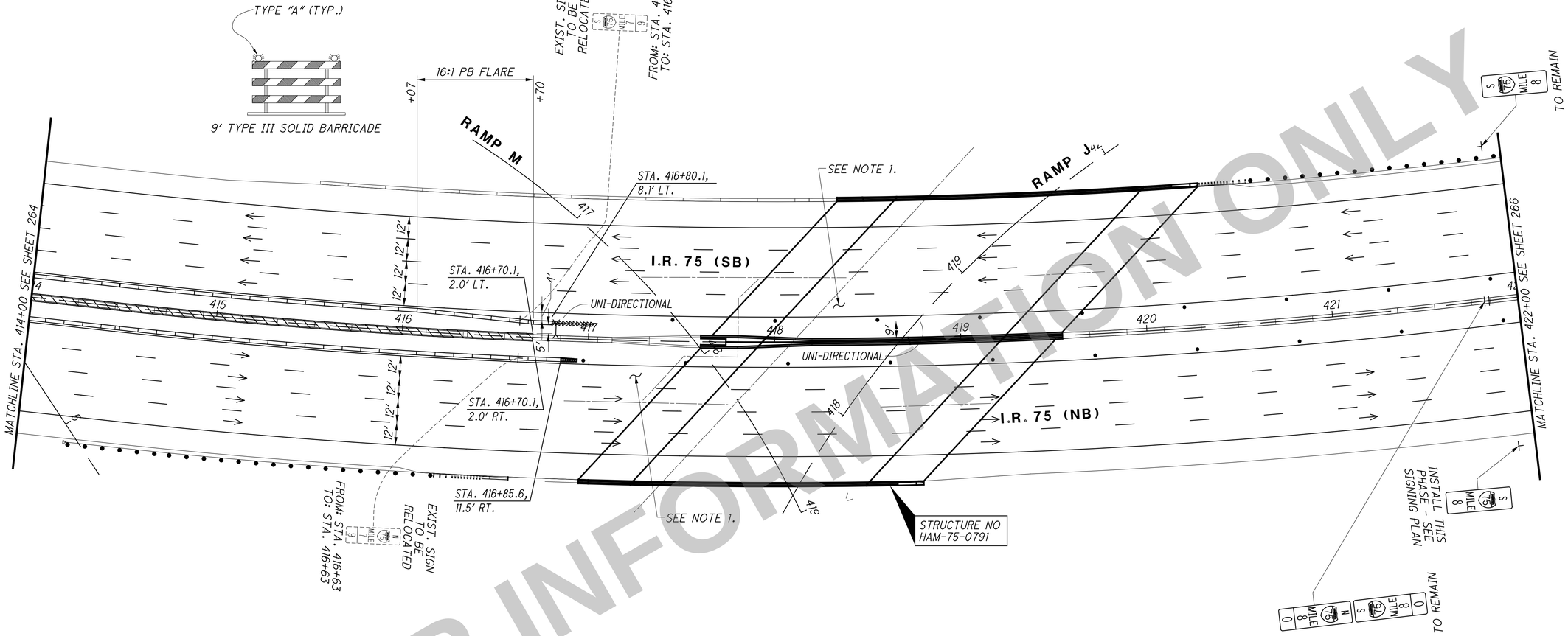
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 5
I.R. 75 - STA. 406+00 TO STA. 414+00

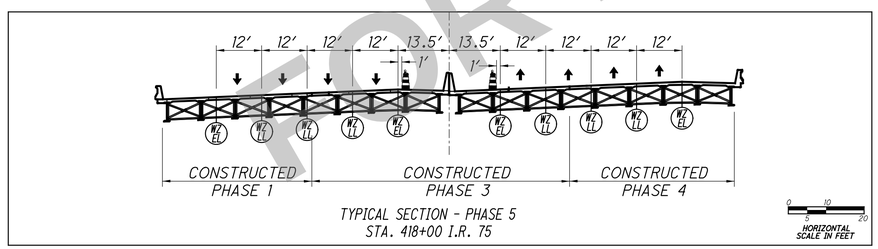
HAM-75-7.85

264
2017

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FOR INFORMATION ONLY



NOTES:

1. DURING HOURS SPECIFIED IN ODOT'S PERMITTED LANE CLOSURE POLICY, NIGHTTIME LANE CLOSURES MAY BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMP PAVT WORK ADJACENT TO IR 75.
2. PHASE 5 WORK ZONE PAVEMENT MARKINGS SHALL BE INSTALLED PER THE TRAFFIC CONTROL PLANS. QUANTITIES HAVE BEEN PROVIDED FOR PHASE 5 WORK ZONE MARKINGS.

LEGEND

- PHASE 5 WORK ZONE
- DRUM
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- TAPERED END SECTION
- TYPE III BARRICADE

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

HORIZONTAL SCALE IN FEET
0 15 30 60

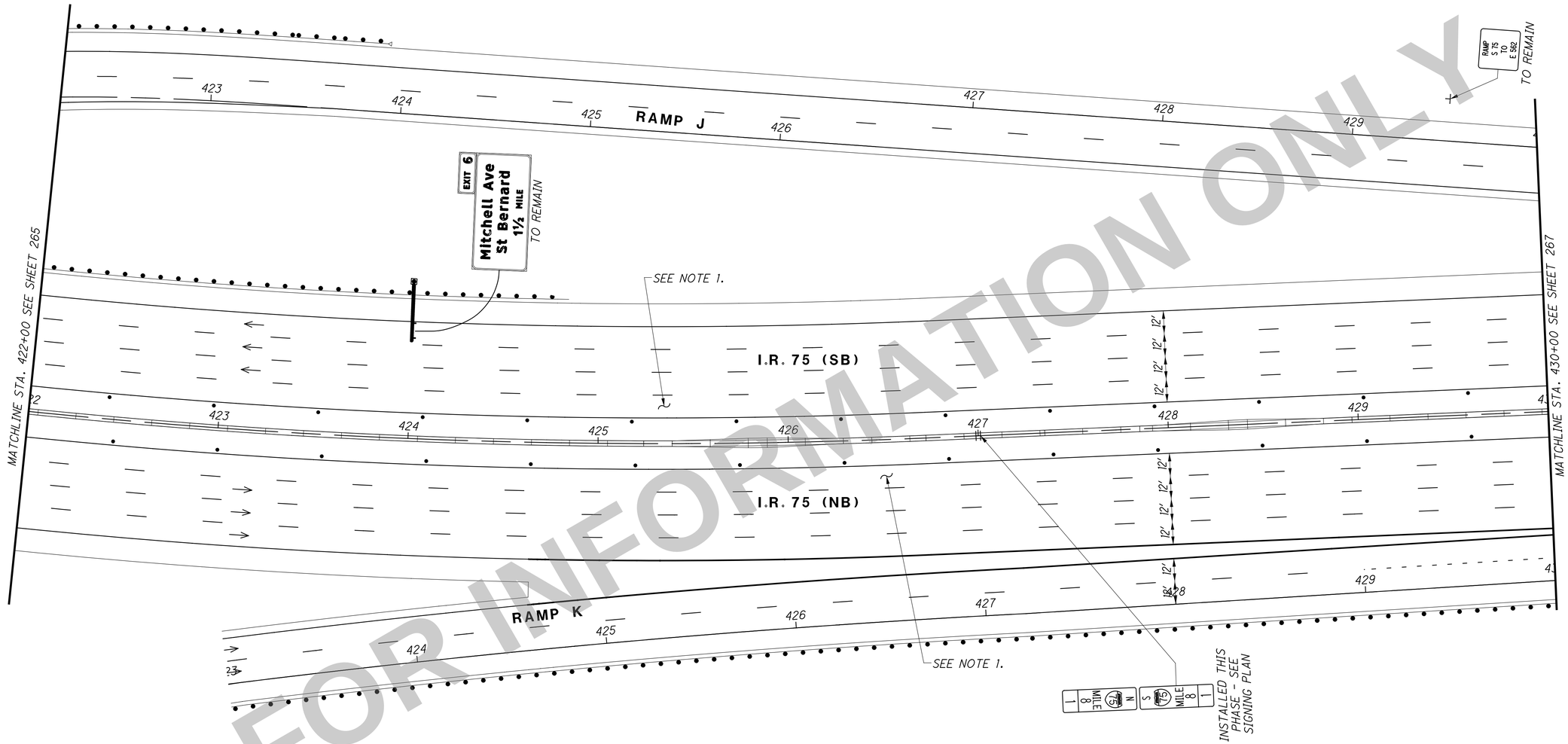
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 5
I.R. 75 - STA. 414+00 TO STA. 422+00

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265
2017

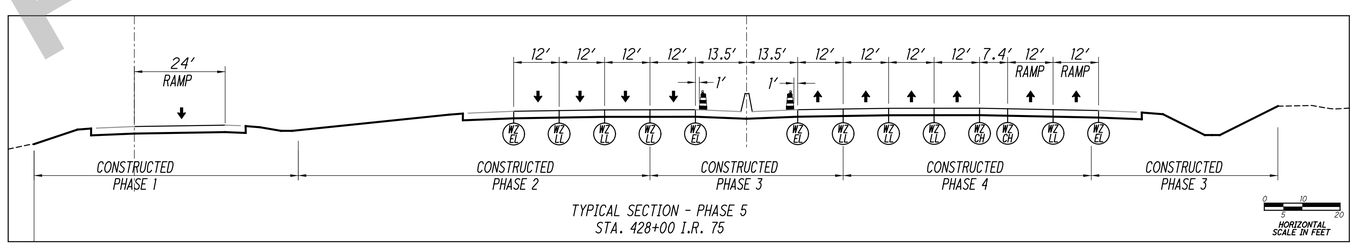
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FOR INFORMATION ONLY

NOTES:

1. DURING HOURS SPECIFIED IN ODOT'S PERMITTED LANE CLOSURE POLICY, NIGHTTIME LANE CLOSURES MAY BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMP PAVT WORK ADJACENT TO IR 75.
2. PHASE 5 WORK ZONE PAVEMENT MARKINGS SHALL BE INSTALLED PER THE TRAFFIC CONTROL PLANS. QUANTITIES HAVE BEEN PROVIDED FOR PHASE 5 WORK ZONE MARKINGS.



TYPICAL SECTION - PHASE 5
STA. 428+00 I.R. 75

LEGEND

• DRUM

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

0 15 30 60
HORIZONTAL SCALE IN FEET

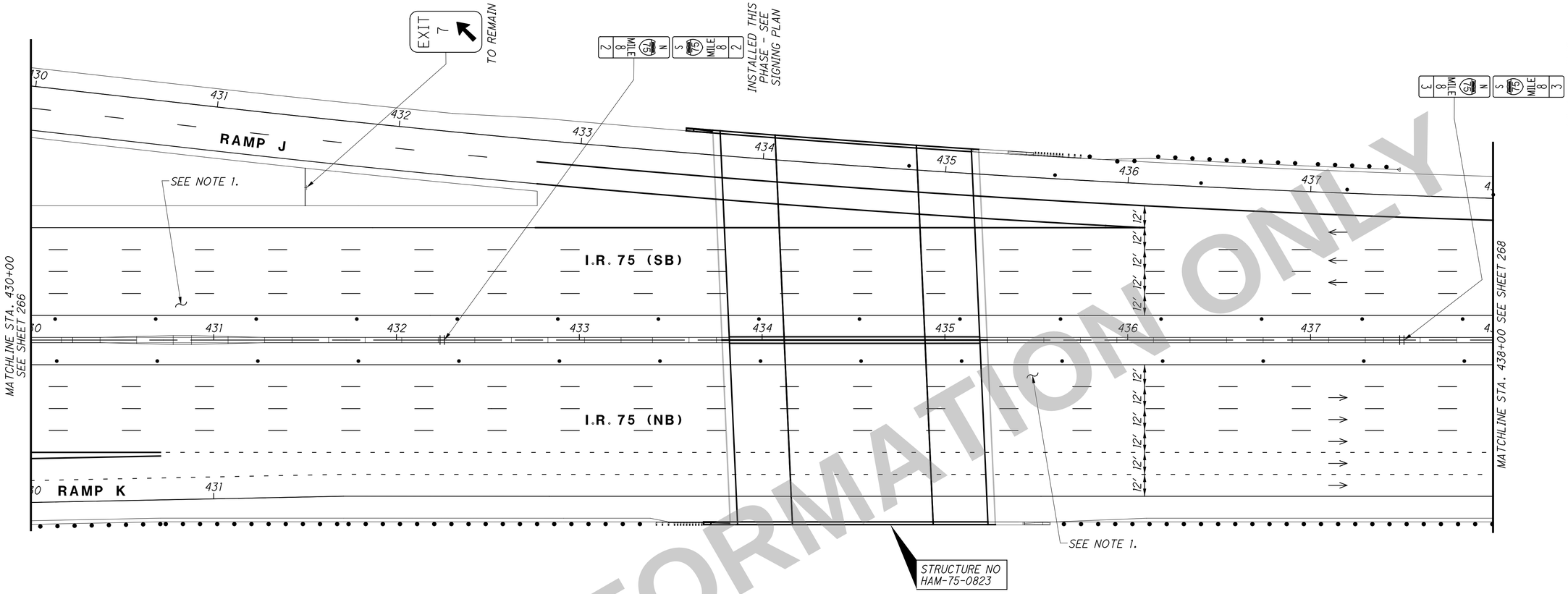
CALCULATED SMM
CHECKED JDS

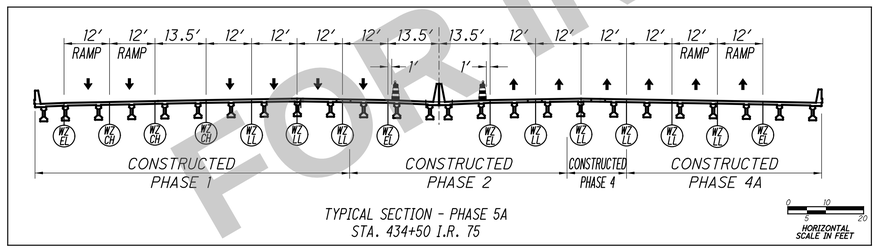
MAINTENANCE OF TRAFFIC PLAN - PHASE 5
I.R. 75 - STA. 422+00 TO STA. 430+00

HAM-75-7.85

266
2017

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TYPICAL SECTION - PHASE 5A
STA. 434+50 I.R. 75

NOTES:
1. DURING HOURS SPECIFIED IN ODOT'S PERMITTED LANE CLOSURE POLICY, NIGHTTIME LANE CLOSURES MAY BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMP PAVT WORK ADJACENT TO IR 75.

2. PHASE 5 WORK ZONE PAVEMENT MARKINGS SHALL BE INSTALLED PER THE TRAFFIC CONTROL PLANS. QUANTITIES HAVE BEEN PROVIDED FOR PHASE 5 WORK ZONE MARKINGS.

LEGEND

• DRUM

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET 0 15 30 60

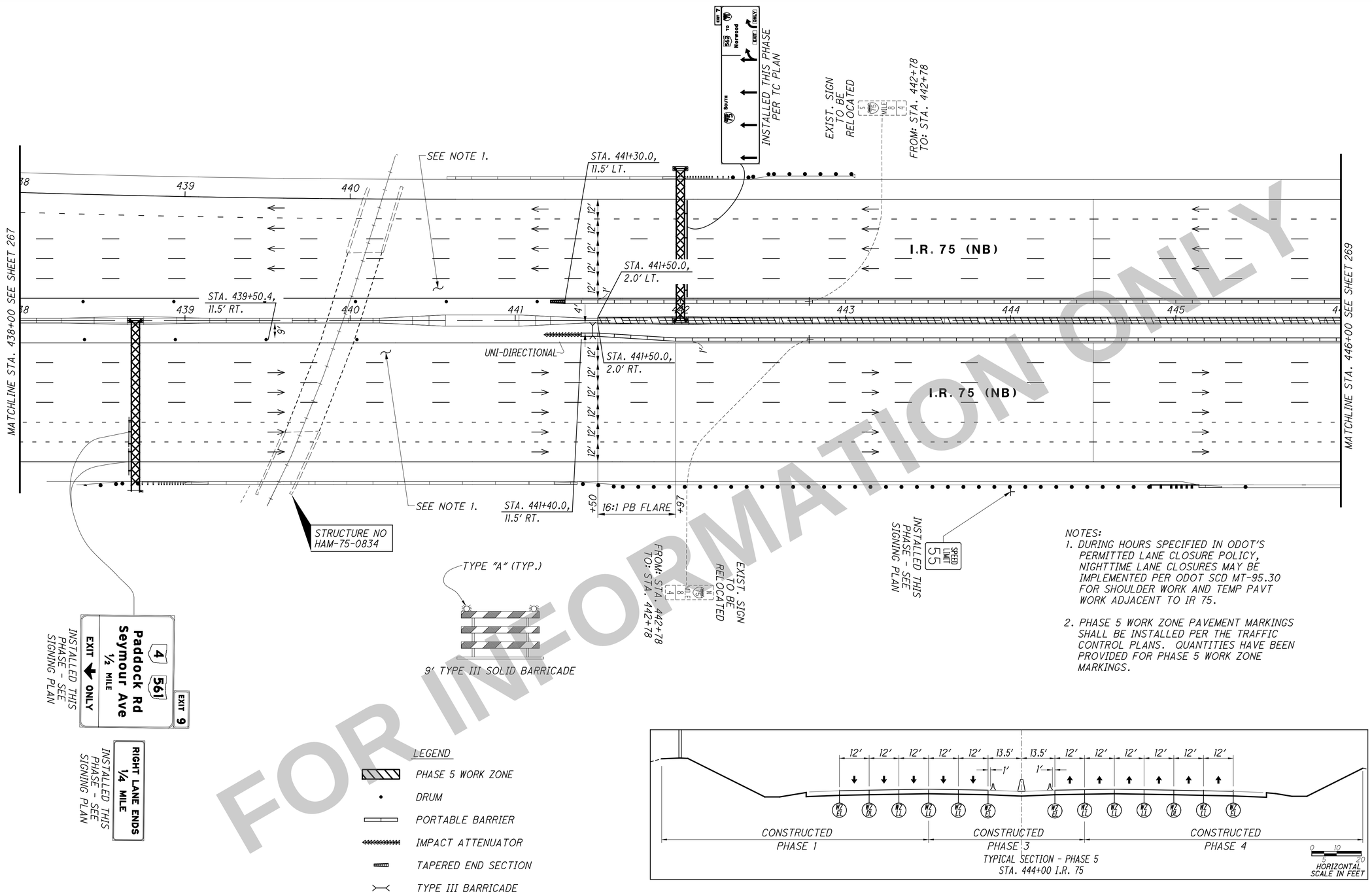
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 5
I.R. 75 - STA. 430+00 TO STA. 438+00

HAM-75-7.85

267
2017

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NOTES:

1. DURING HOURS SPECIFIED IN ODOT'S PERMITTED LANE CLOSURE POLICY, NIGHTTIME LANE CLOSURES MAY BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMP PAVT WORK ADJACENT TO IR 75.
2. PHASE 5 WORK ZONE PAVEMENT MARKINGS SHALL BE INSTALLED PER THE TRAFFIC CONTROL PLANS. QUANTITIES HAVE BEEN PROVIDED FOR PHASE 5 WORK ZONE MARKINGS.

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

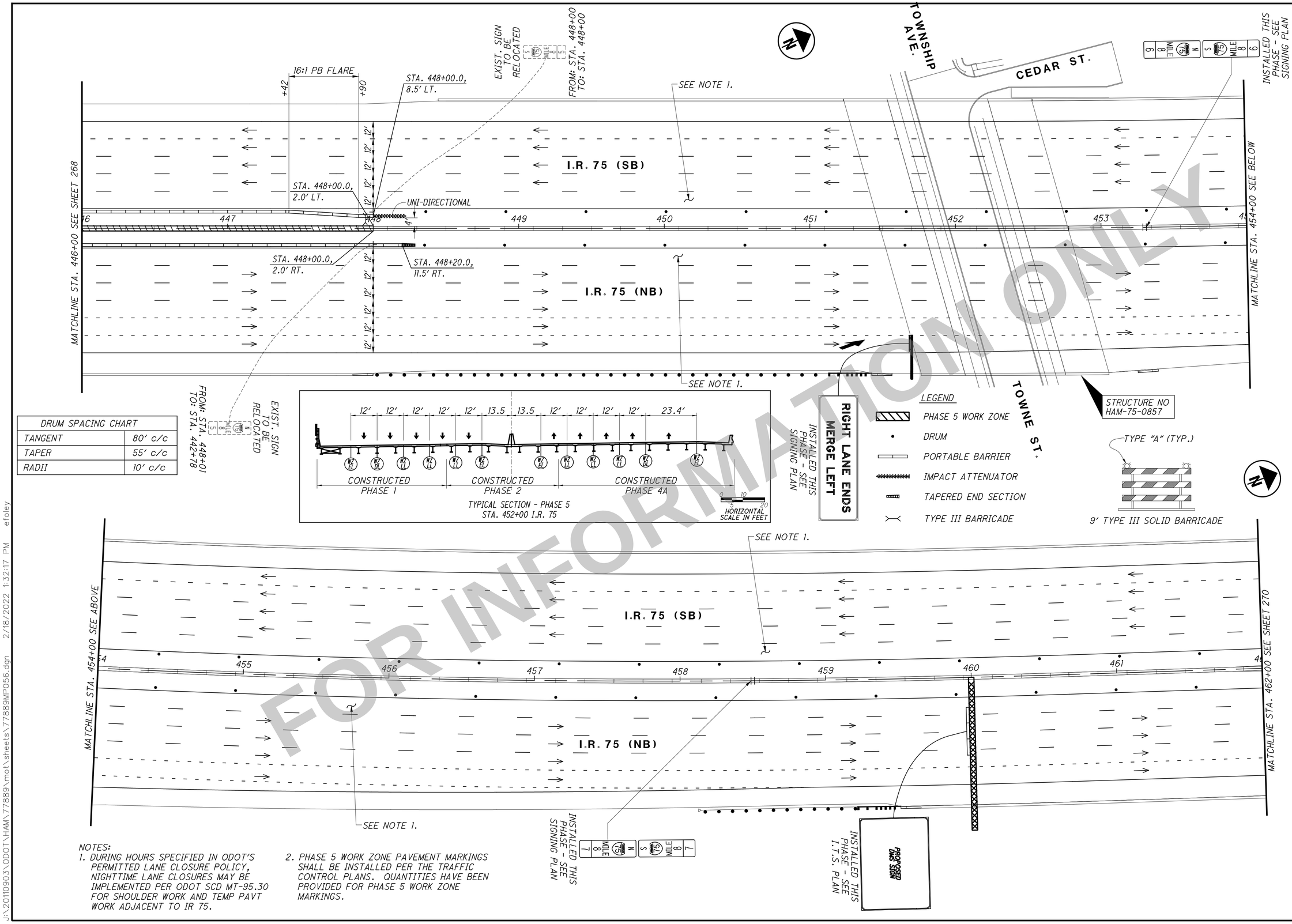
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 5
I.R. 75 - STA. 438+00 TO STA. 446+00

HAM-75-7.85

268
2017

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DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

NOTES:

1. DURING HOURS SPECIFIED IN ODOT'S PERMITTED LANE CLOSURE POLICY, NIGHTTIME LANE CLOSURES MAY BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMP PAVT WORK ADJACENT TO IR 75.
2. PHASE 5 WORK ZONE PAVEMENT MARKINGS SHALL BE INSTALLED PER THE TRAFFIC CONTROL PLANS. QUANTITIES HAVE BEEN PROVIDED FOR PHASE 5 WORK ZONE MARKINGS.

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET: 0, 15, 30, 60

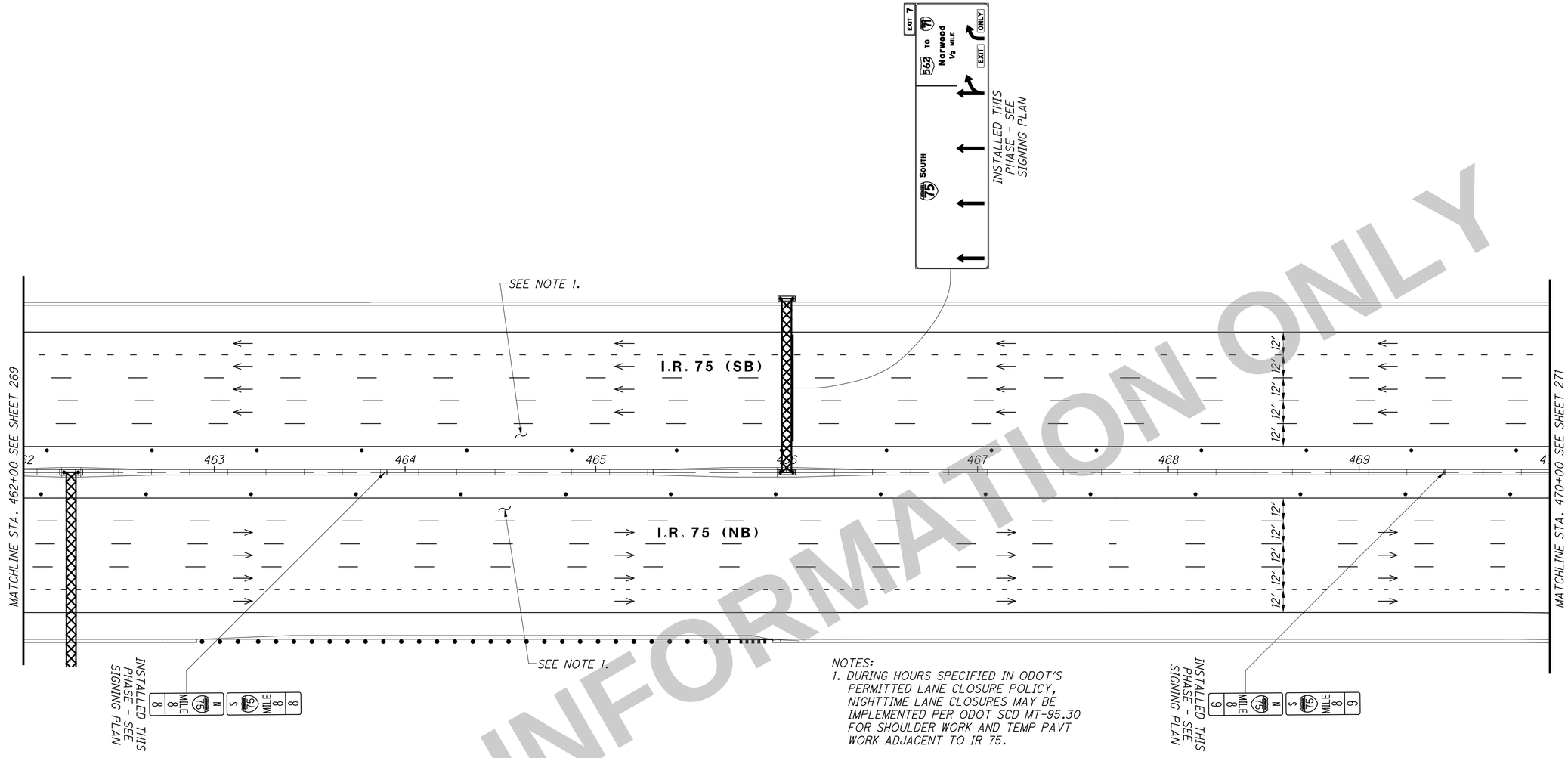
CALCULATED: SMM
CHECKED: JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 5
I.R. 75 - STA. 446+00 TO STA. 462+00

HAM-75-7.85

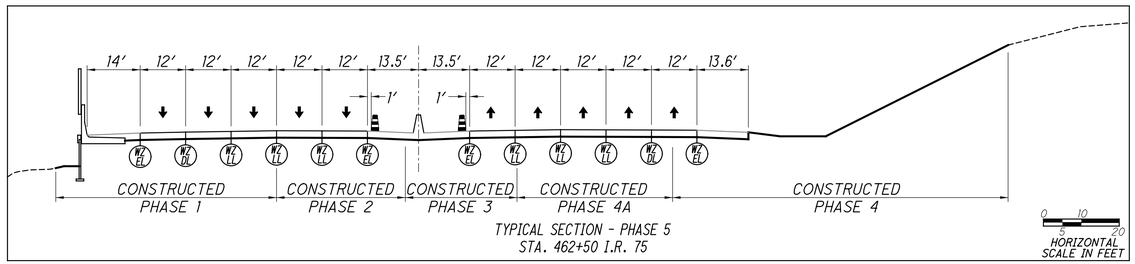
269
2017

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NOTES:

1. DURING HOURS SPECIFIED IN ODOT'S PERMITTED LANE CLOSURE POLICY, NIGHTTIME LANE CLOSURES MAY BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMP PAVT WORK ADJACENT TO IR 75.
2. PHASE 5 WORK ZONE PAVEMENT MARKINGS SHALL BE INSTALLED PER THE TRAFFIC CONTROL PLANS. QUANTITIES HAVE BEEN PROVIDED FOR PHASE 5 WORK ZONE MARKINGS.



TYPICAL SECTION - PHASE 5
STA. 462+50 I.R. 75

LEGEND

• DRUM

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

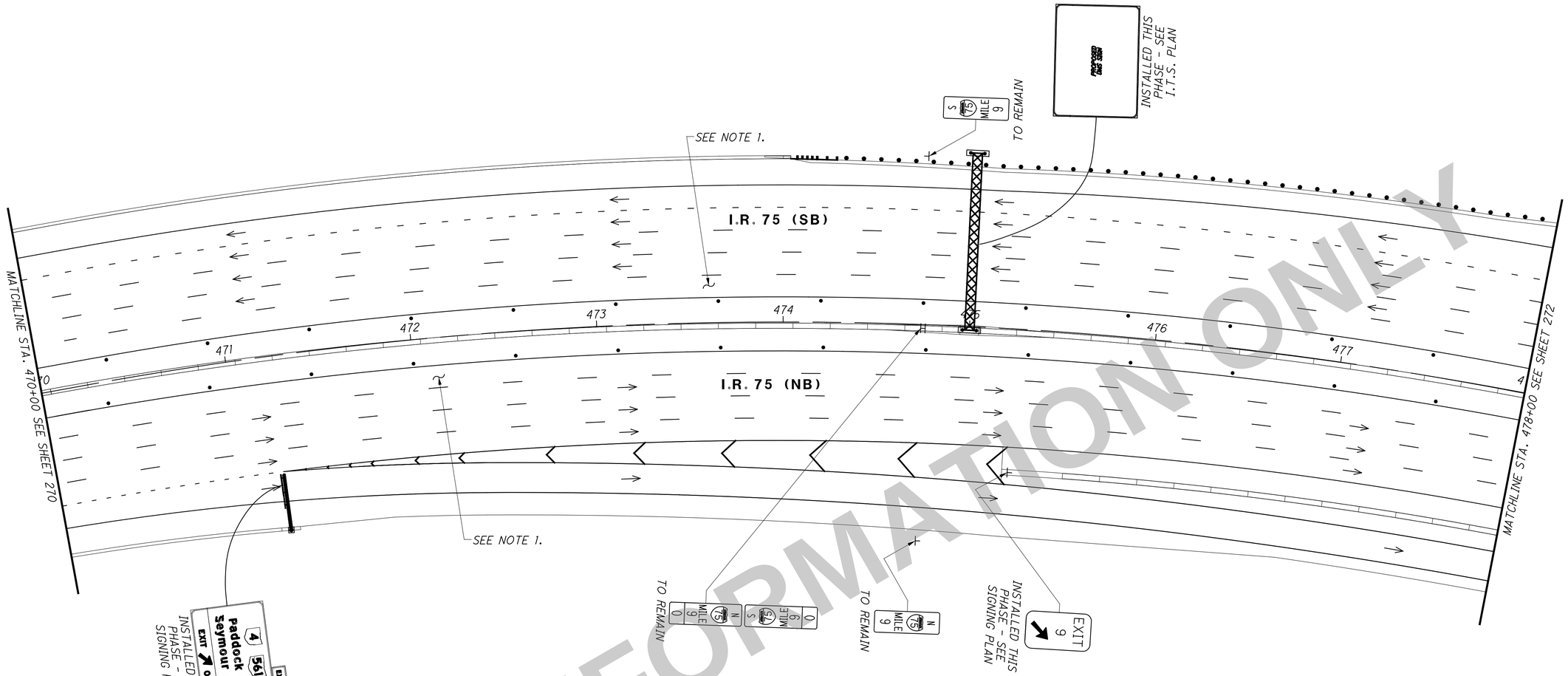
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 5
I.R. 75 - STA. 462+00 TO STA. 470+00

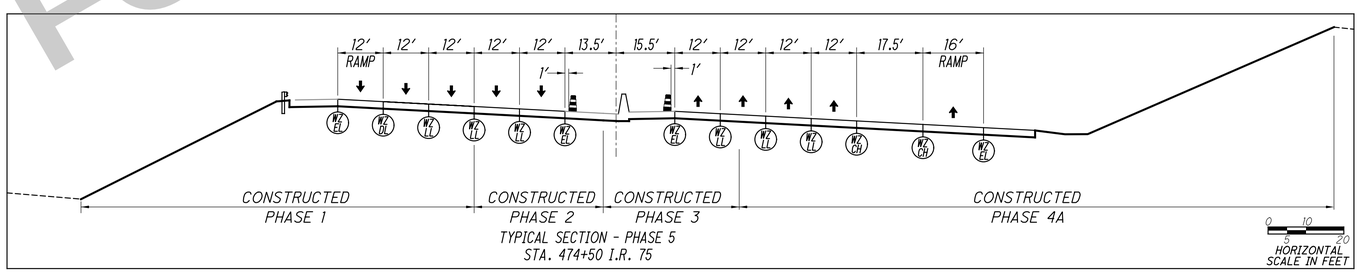
HAM-75-7.85

270
2017

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FOR INFORMATION ONLY



TYPICAL SECTION - PHASE 5
STA. 474+50 I.R. 75

NOTES:
1. DURING HOURS SPECIFIED IN ODOT'S PERMITTED LANE CLOSURE POLICY, NIGHTTIME LANE CLOSURES MAY BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMP PAVT WORK ADJACENT TO IR 75.
2. PHASE 5 WORK ZONE PAVEMENT MARKINGS SHALL BE INSTALLED PER THE TRAFFIC CONTROL PLANS. QUANTITIES HAVE BEEN PROVIDED FOR PHASE 5 WORK ZONE MARKINGS.

LEGEND

• DRUM

DRUM SPACING CHART	
TANGENT	80′ c/c
TAPER	55′ c/c
RADII	10′ c/c

0 15 30 60
HORIZONTAL SCALE IN FEET

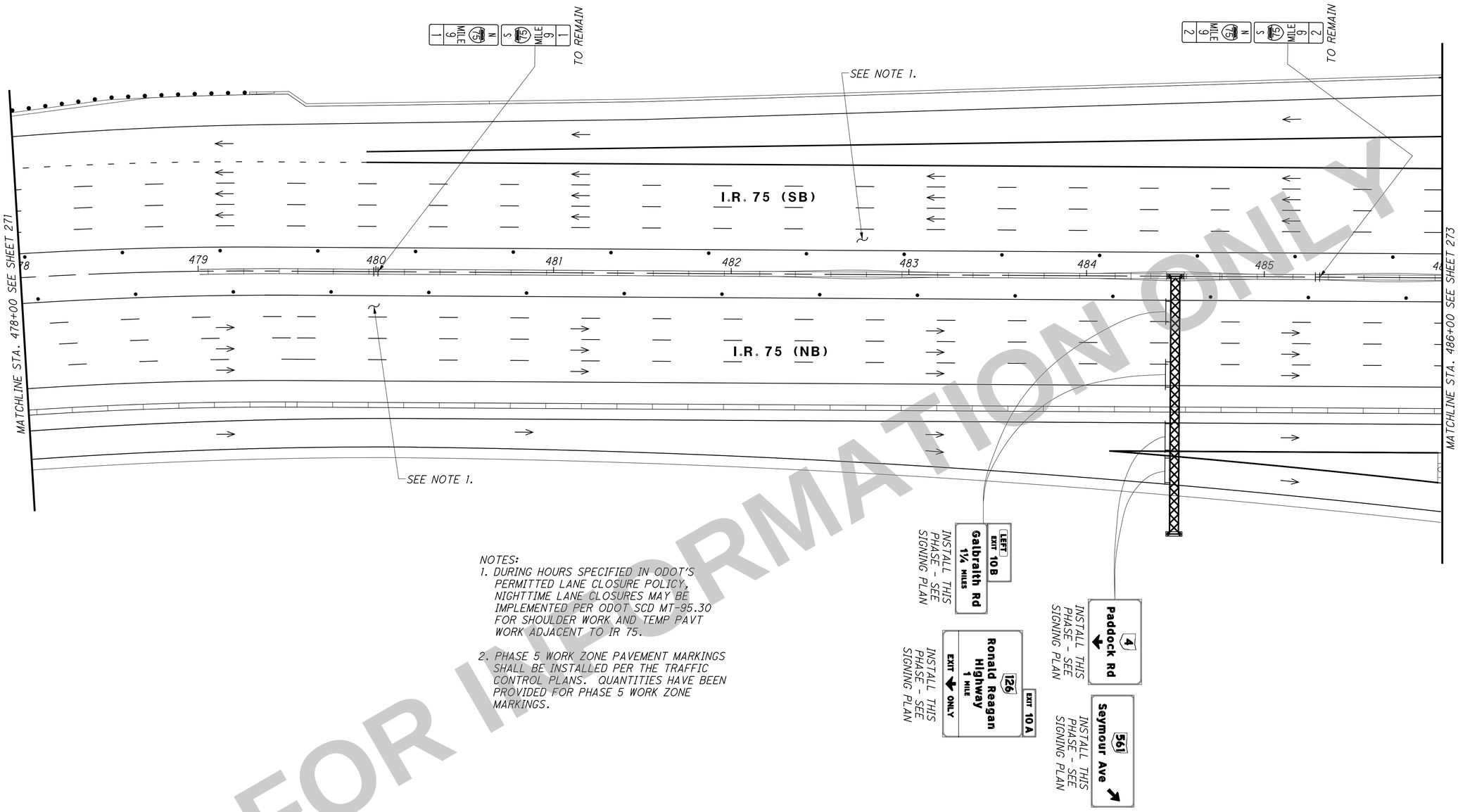
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 5
I.R. 75 - STA. 470+00 TO STA. 478+00

HAM-75-7.85

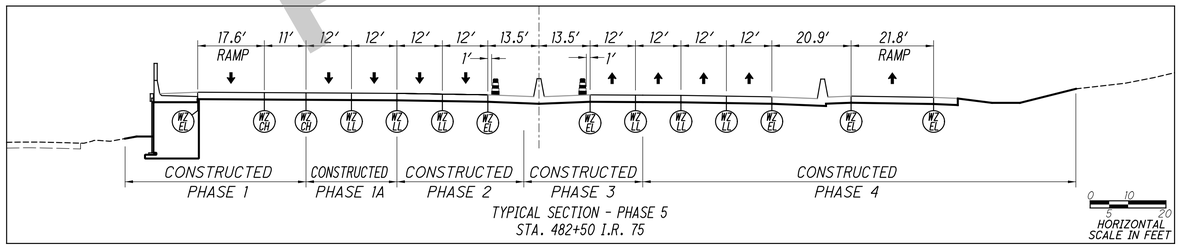
271
2017

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NOTES:
1. DURING HOURS SPECIFIED IN ODOT'S PERMITTED LANE CLOSURE POLICY, NIGHTTIME LANE CLOSURES MAY BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMP PAVT WORK ADJACENT TO IR 75.

2. PHASE 5 WORK ZONE PAVEMENT MARKINGS SHALL BE INSTALLED PER THE TRAFFIC CONTROL PLANS. QUANTITIES HAVE BEEN PROVIDED FOR PHASE 5 WORK ZONE MARKINGS.



TYPICAL SECTION - PHASE 5
STA. 482+50 I.R. 75

LEGEND

• DRUM

DRUM SPACING CHART	
TANGENT	80′ c/c
TAPER	55′ c/c
RADII	10′ c/c

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

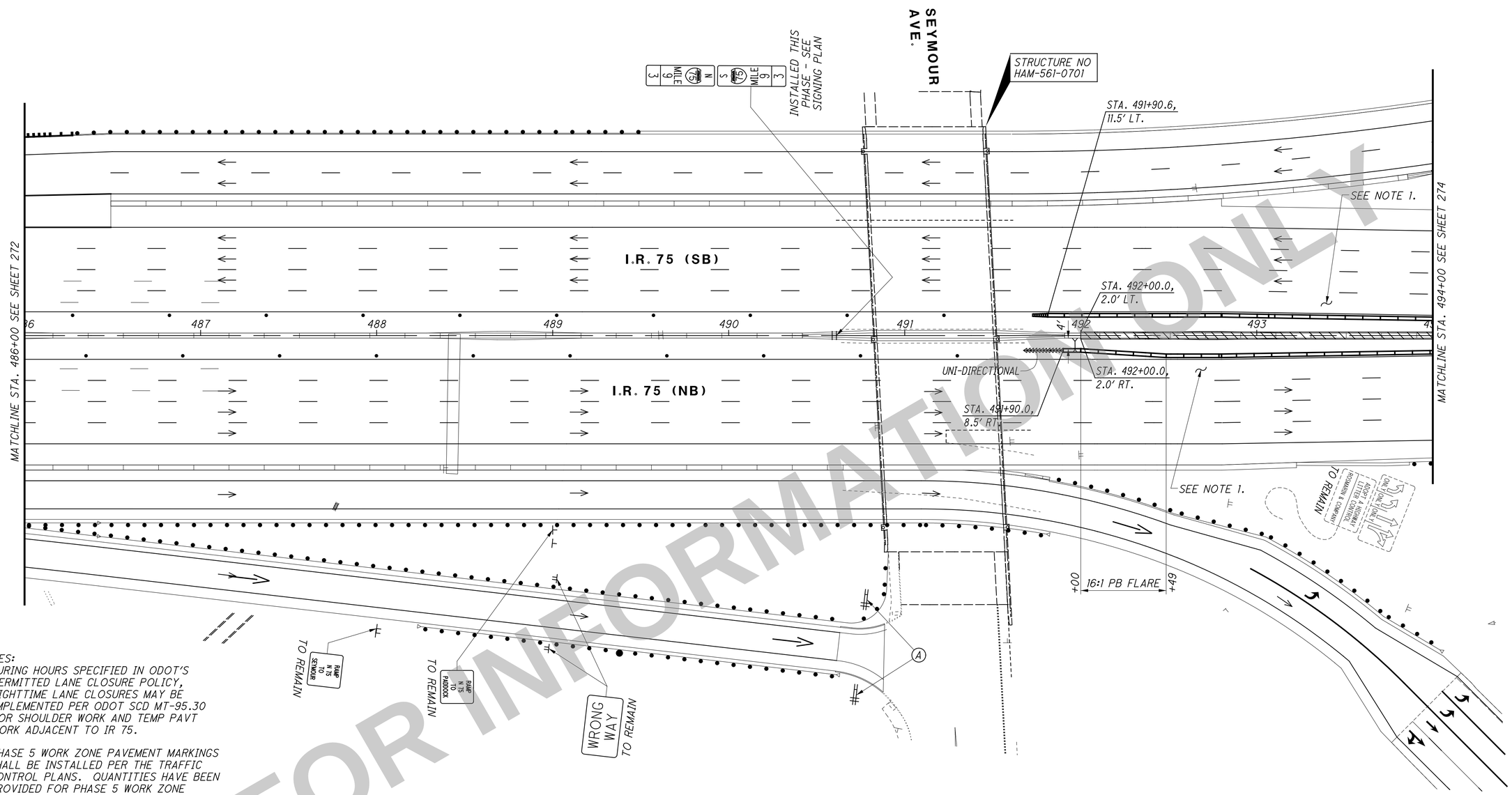
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 5
I.R. 75 - STA. 478+00 TO STA. 486+00

HAM-75-7.85

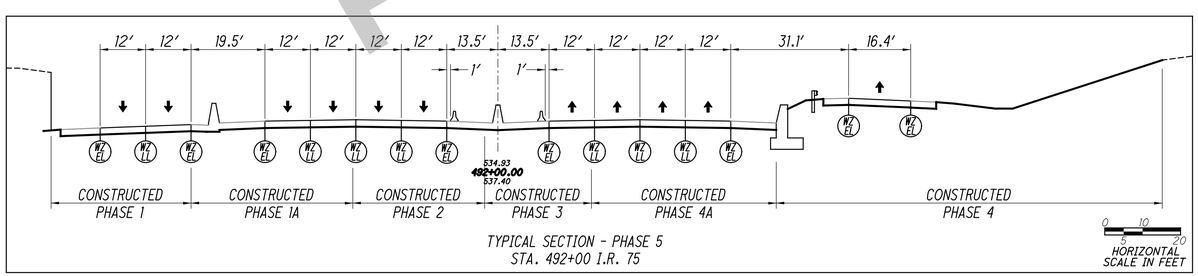
272
2017

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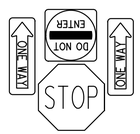


NOTES:

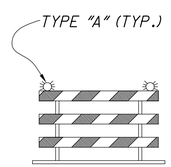
1. DURING HOURS SPECIFIED IN ODOT'S PERMITTED LANE CLOSURE POLICY, NIGHTTIME LANE CLOSURES MAY BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMP PAVT WORK ADJACENT TO IR 75.
2. PHASE 5 WORK ZONE PAVEMENT MARKINGS SHALL BE INSTALLED PER THE TRAFFIC CONTROL PLANS. QUANTITIES HAVE BEEN PROVIDED FOR PHASE 5 WORK ZONE MARKINGS.



TYPICAL SECTION - PHASE 5
STA. 492+00 I.R. 75



INSTALLED THIS PHASE - SEE SIGNING PLAN
(A)



9' TYPE III SOLID BARRICADE

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

LEGEND

- PHASE 5 WORK ZONE
- DRUM
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- TYPE III BARRICADE

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

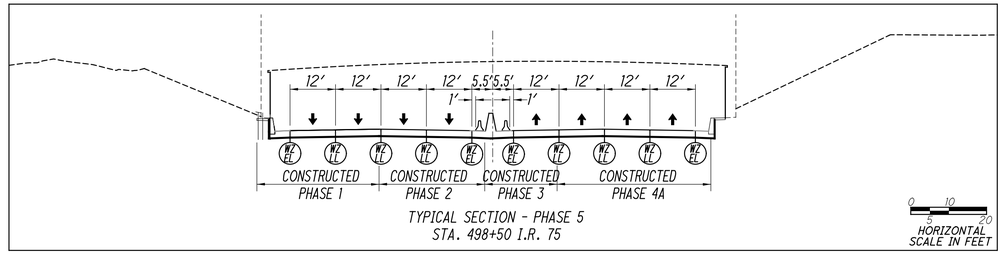
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 5
I.R. 75 - STA. 486+00 TO STA. 494+00

HAM-75-7.85

273
2017

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TYPICAL SECTION - PHASE 5
STA. 498+50 I.R. 75

LEGEND

PHASE 5 WORK ZONE

PORTABLE BARRIER

RAMP C

RAMP B

RAMP A

I.R. 75 (SB)

I.R. 75 (NB)

TO REMAIN

RAMP PADDOCK TO S 15

SOUTH

EXIST. SIGN TO BE RELOCATED

FROM: STA. 494+40
TO: STA. 494+40

FROM: STA. 498+07
TO: STA. 499+07

FROM: STA. 498+15
TO: STA. 498+15

SEE NOTE 1.

MATCHLINE STA. 494+00 SEE SHEET 273

MATCHLINE STA. 502+00 SEE SHEET 275

STRUCTURE NO HAM-4-0897

NOTES:

1. DURING HOURS SPECIFIED IN ODOT'S PERMITTED LANE CLOSURE POLICY, NIGHTTIME LANE CLOSURES MAY BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMP PAVT WORK ADJACENT TO IR 75.
2. PHASE 5 WORK ZONE PAVEMENT MARKINGS SHALL BE INSTALLED PER THE TRAFFIC CONTROL PLANS. QUANTITIES HAVE BEEN PROVIDED FOR PHASE 5 WORK ZONE MARKINGS.

TO REMAIN (A) (B) (C) (D) (E) (F) (G) (H) (I) (J) (K) (L)

FOR INFORMATION ONLY

MAINTENANCE OF TRAFFIC PLAN - PHASE 5
I.R. 75 - STA. 494+00 TO STA. 502+00

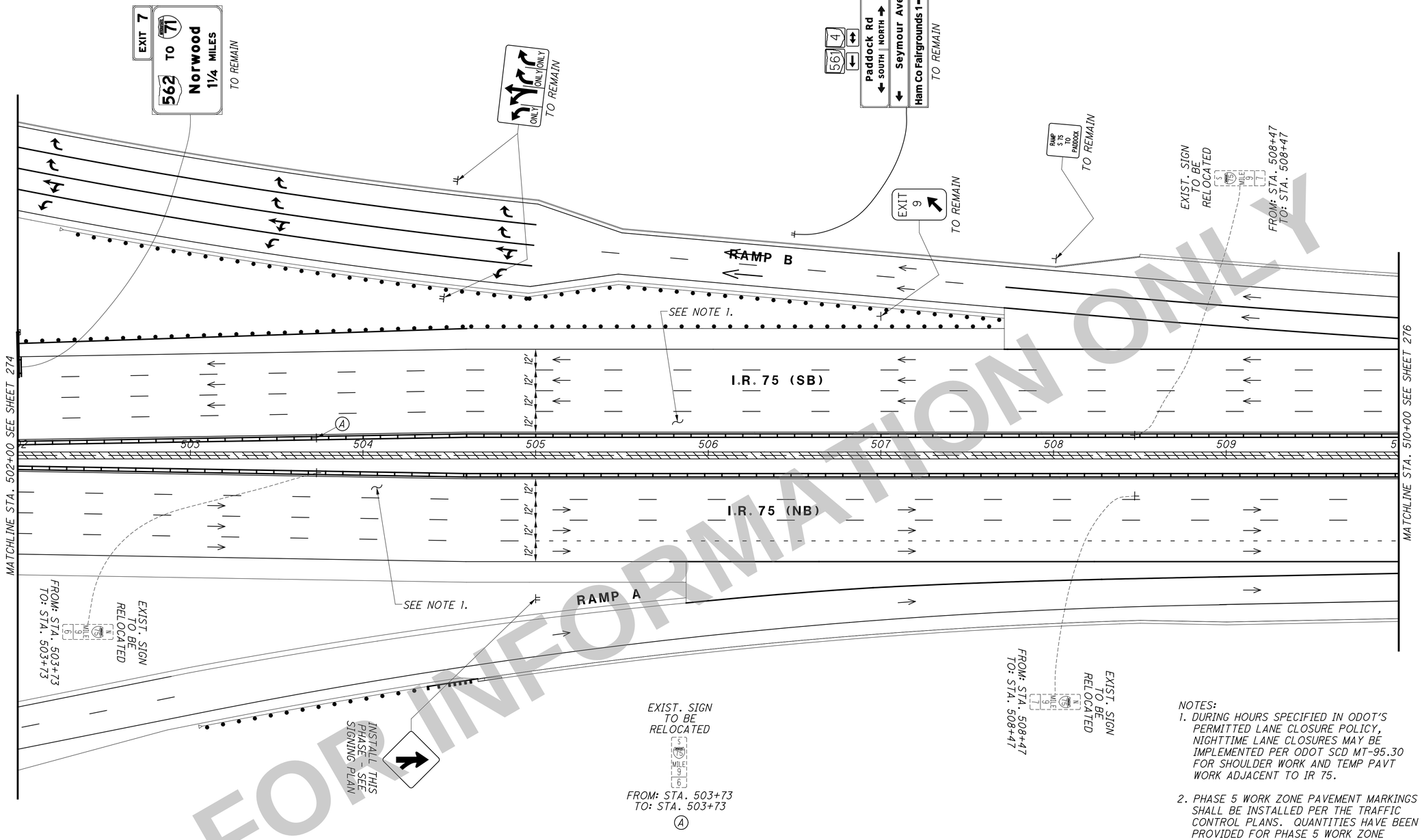
HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED SMM
CHECKED JDS

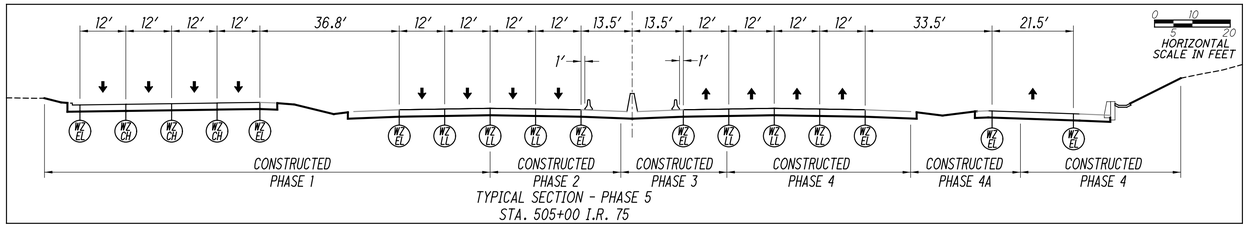
HAM-75-7.85

274
2017

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FOR INFORMATION ONLY



NOTES:
1. DURING HOURS SPECIFIED IN ODOT'S PERMITTED LANE CLOSURE POLICY, NIGHTTIME LANE CLOSURES MAY BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMP PAVT WORK ADJACENT TO IR 75.
2. PHASE 5 WORK ZONE PAVEMENT MARKINGS SHALL BE INSTALLED PER THE TRAFFIC CONTROL PLANS. QUANTITIES HAVE BEEN PROVIDED FOR PHASE 5 WORK ZONE MARKINGS.

LEGEND
- PHASE 5 WORK ZONE
- PORTABLE BARRIER

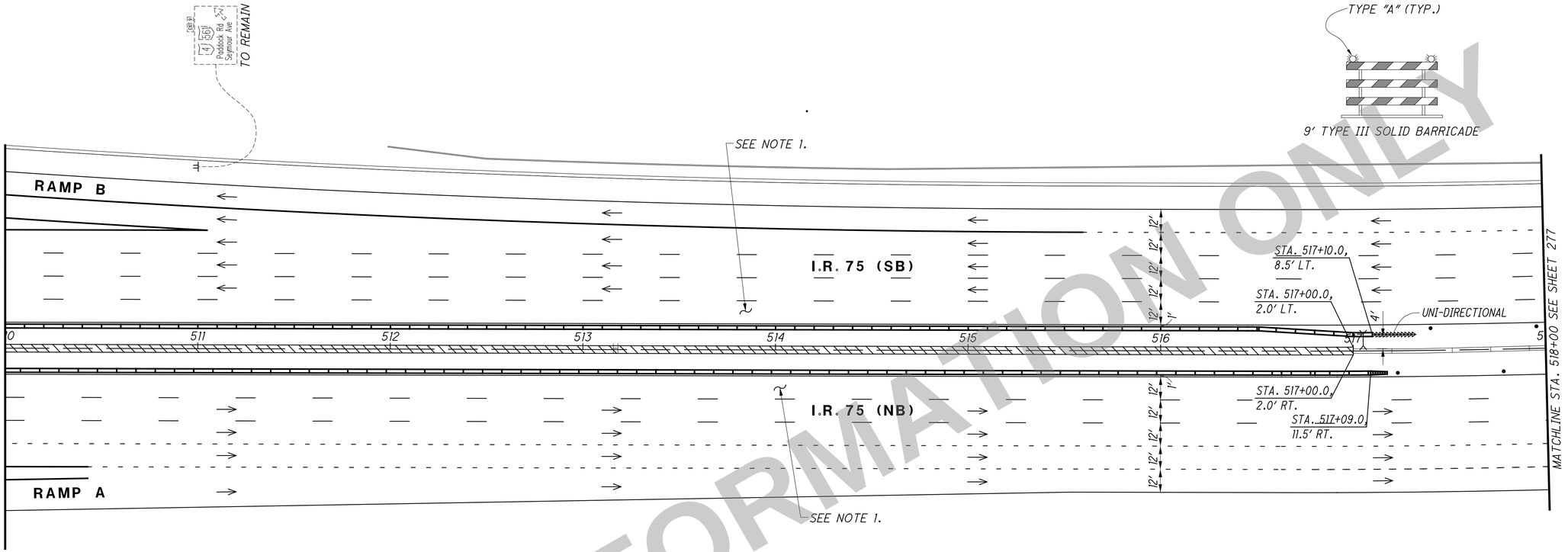
0 15 30 60
HORIZONTAL SCALE IN FEET

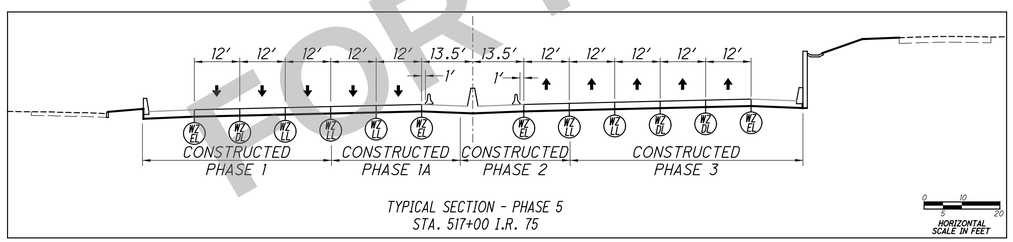
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 5
I.R. 75 - STA. 502+00 TO STA. 510+00

HAM-75-7.85

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TYPICAL SECTION - PHASE 5
STA. 517+00 I.R. 75

NOTES:
1. DURING HOURS SPECIFIED IN ODOT'S PERMITTED LANE CLOSURE POLICY, NIGHTTIME LANE CLOSURES MAY BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMP PAVT WORK ADJACENT TO IR 75.
2. PHASE 5 WORK ZONE PAVEMENT MARKINGS SHALL BE INSTALLED PER THE TRAFFIC CONTROL PLANS. QUANTITIES HAVE BEEN PROVIDED FOR PHASE 5 WORK ZONE MARKINGS.

LEGEND
- PHASE 5 WORK ZONE
- DRUM
- PORTABLE BARRIER
- TAPERED END SECTION
- TYPE III BARRICADE

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

FOR INFORMATION ONLY

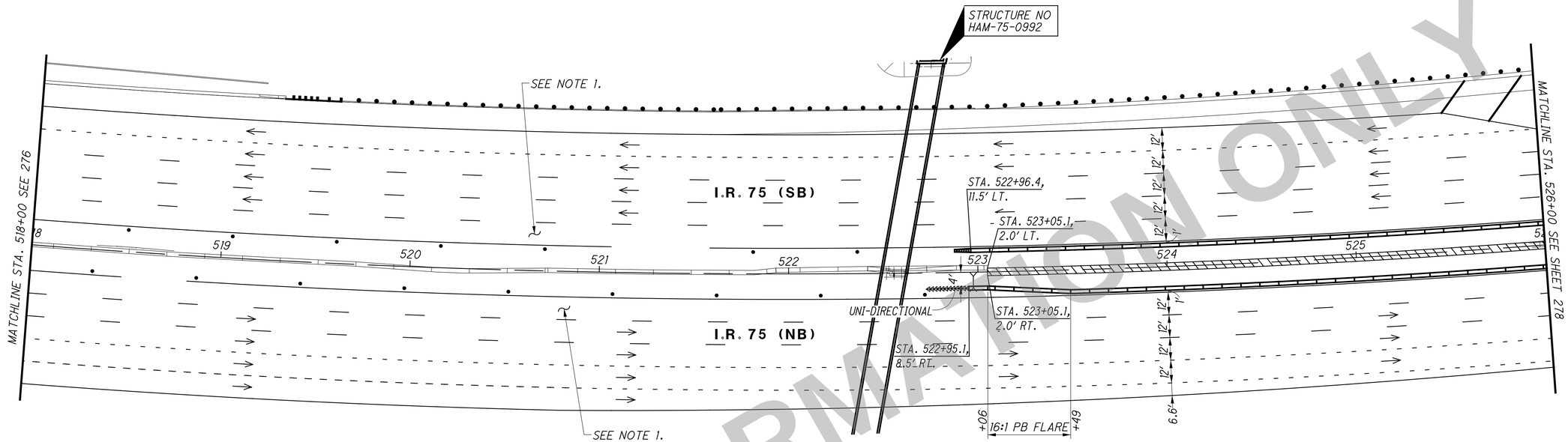
HORIZONTAL SCALE IN FEET
0 15 30 60
CALCULATED SMM
CHECKED JDS

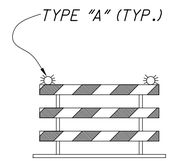
MAINTENANCE OF TRAFFIC PLAN - PHASE 5
I.R. 75 - STA. 510+00 TO STA. 518+00

HAM-75-7.85

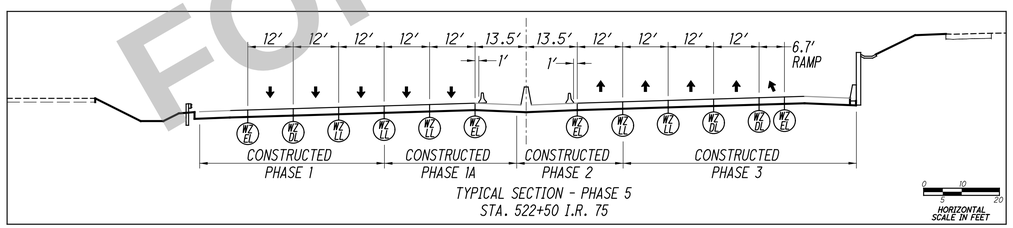
276
2017

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9' TYPE III SOLID BARRICADE



TYPICAL SECTION - PHASE 5
STA. 522+50 I.R. 75

NOTES:
1. DURING HOURS SPECIFIED IN ODOT'S PERMITTED LANE CLOSURE POLICY, NIGHTTIME LANE CLOSURES MAY BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMP PAVT WORK ADJACENT TO IR 75.
2. PHASE 5 WORK ZONE PAVEMENT MARKINGS SHALL BE INSTALLED PER THE TRAFFIC CONTROL PLANS. QUANTITIES HAVE BEEN PROVIDED FOR PHASE 5 WORK ZONE MARKINGS.

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

LEGEND

- PHASE 5 WORK ZONE
- DRUM
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- TAPERED END SECTION
- TYPE III BARRICADE

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 15 30 60

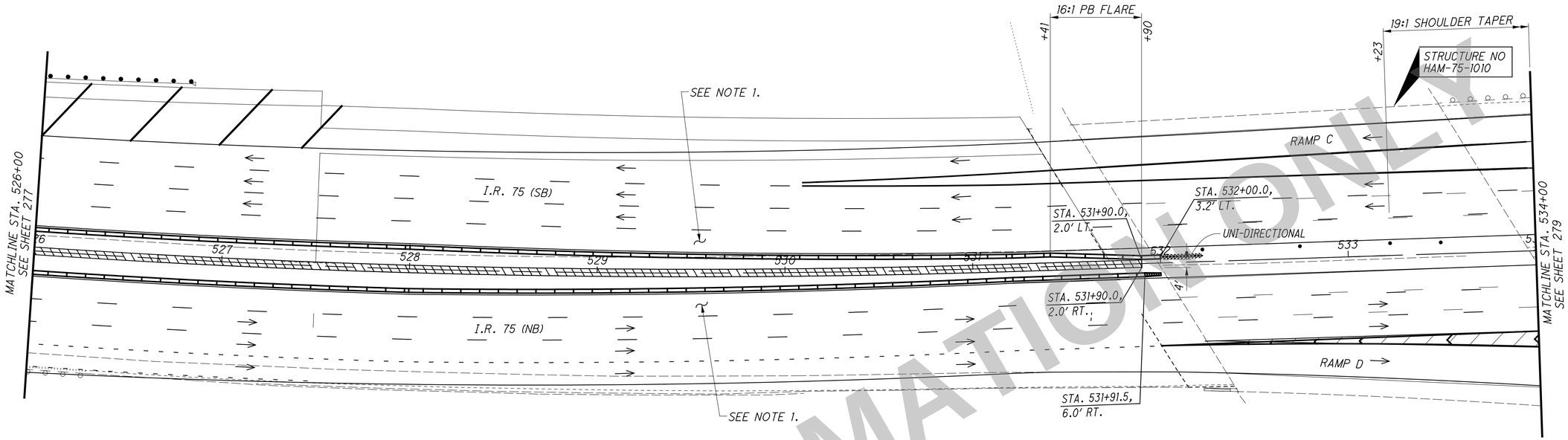
CALCULATED SMM
CHECKED JDS

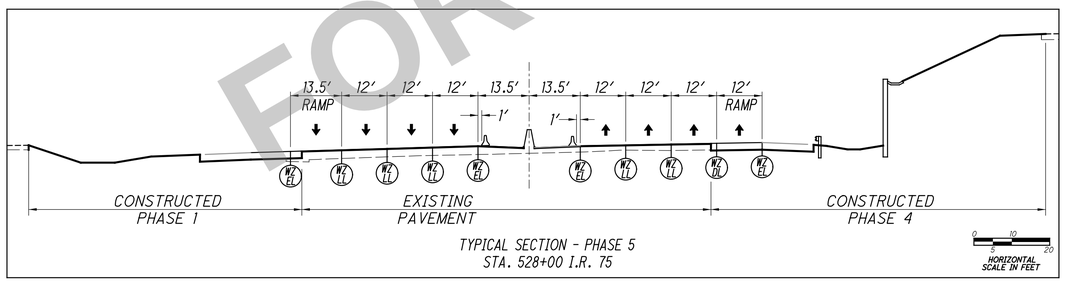
MAINTENANCE OF TRAFFIC PLAN - PHASE 5
I.R. 75 - STA. 518+00 TO STA. 526+00

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TYPICAL SECTION - PHASE 5
STA. 528+00 I.R. 75

LEGEND

- PHASE 5 WORK ZONE
- PORTABLE BARRIER
- IMPACT ATTENUATOR
- TAPERED END SECTION
- DRUM

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

NOTES:

1. DURING HOURS SPECIFIED IN ODOT'S PERMITTED LANE CLOSURE POLICY, NIGHTTIME LANE CLOSURES MAY BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMP PAVT WORK ADJACENT TO IR 75.
2. PHASE 5 WORK ZONE PAVEMENT MARKINGS SHALL BE INSTALLED PER THE TRAFFIC CONTROL PLANS. QUANTITIES HAVE BEEN PROVIDED FOR PHASE 5 WORK ZONE MARKINGS.

FOR INFORMATION ONLY

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0 15 30 60
HORIZONTAL
SCALE IN FEET

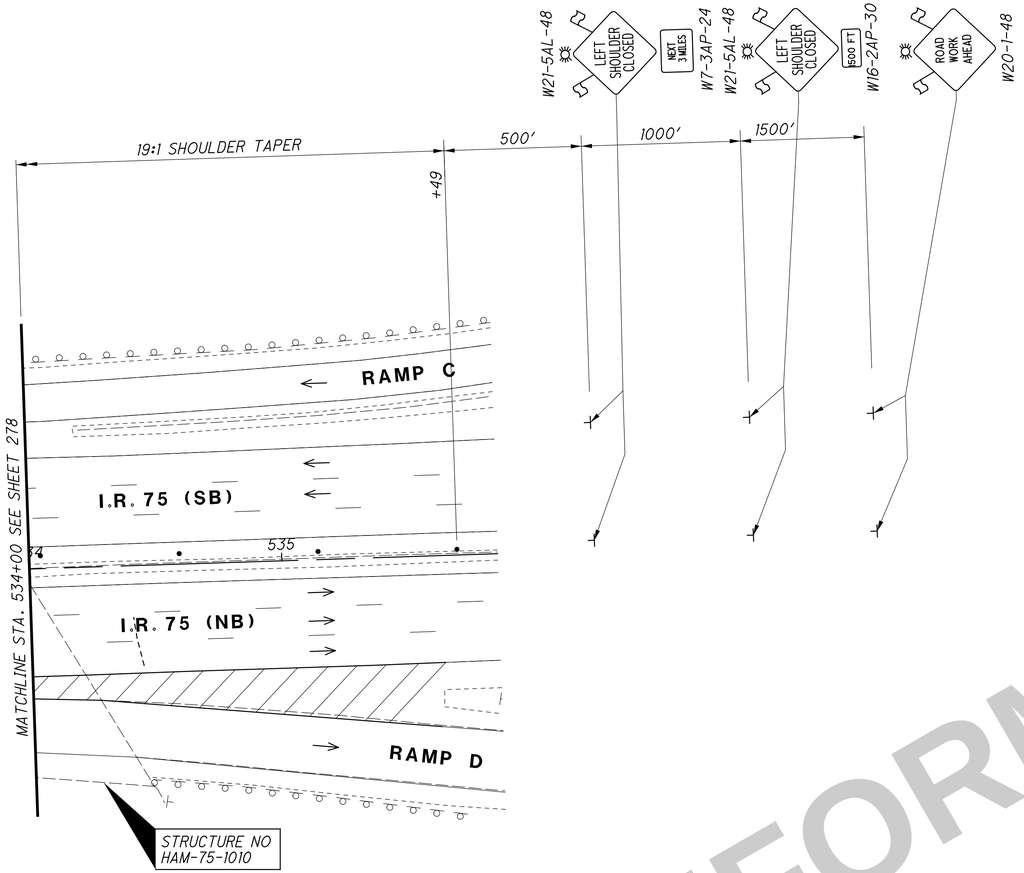
CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 5
I.R. 75 - STA. 526+00 TO STA. 534+00

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278
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LEGEND

PHASE 5 WORK ZONE

• DRUM

NOTES:

1. DURING HOURS SPECIFIED IN ODOT'S PERMITTED LANE CLOSURE POLICY, NIGHTTIME LANE CLOSURES MAY BE IMPLEMENTED PER ODOT SCD MT-95.30 FOR SHOULDER WORK AND TEMP PAVT WORK ADJACENT TO IR 75.
2. PHASE 5 WORK ZONE PAVEMENT MARKINGS SHALL BE INSTALLED PER THE TRAFFIC CONTROL PLANS. QUANTITIES HAVE BEEN PROVIDED FOR PHASE 5 WORK ZONE MARKINGS.

DRUM SPACING CHART	
TANGENT	80' c/c
TAPER	55' c/c
RADII	10' c/c

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED SMM
CHECKED JDS

MAINTENANCE OF TRAFFIC PLAN - PHASE 5
STA. 534+00 TO STA. 536+00

HAM-75-7.85

279
2017

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SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
39	41	42	43	299	306	307	316	317	340	341	882	01/IMS/PV	02/IMS/PV						
																		ROADWAY	
												LUMP	LUMP	201	11000	LS		CLEARING AND GRUBBING	38
				1								1		202	11004	1	EACH	STRUCTURE REMOVED	
				LUMP								LUMP	LUMP	202	11201	LS		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	43
				3								2	1	202	20010	3	EACH	HEADWALL REMOVED	
				197,951								144,505	53,446	202	23001	197,951	SY	PAVEMENT REMOVED, AS PER PLAN	43
				197,878								144,451	53,427	202	23500	197,878	SY	WEARING COURSE REMOVED	
				12,330								9,001	3,329	202	30000	12,330	SF	WALK REMOVED	
						18,684						13,639	5,045	202	30700	18,684	FT	CONCRETE BARRIER REMOVED	
				123		13,275					48	9,816	3,630	202	32000	13,446	FT	CURB REMOVED	
				1,325								967	358	202	32600	1,325	FT	GUTTER REMOVED	
				12,660								9,115	3,545	202	35100	12,660	FT	PIPE REMOVED, 24" AND UNDER	
				3,000								2,190	810	202	35200	3,000	FT	PIPE REMOVED, OVER 24"	
						14,890						10,870	4,020	202	38000	14,890	FT	GUARDRAIL REMOVED	
						1						1		202	47800	1	EACH	IMPACT ATTENUATOR REMOVED	
				LUMP								LUMP	LUMP	202	56001	LS		BUILDING DEMOLISHED, AS PER PLAN - PARCEL #590-0062-0259-00	43
				55							1	41	15	202	58000	56	EACH	MANHOLE REMOVED	
				85								62	23	202	58100	85	EACH	CATCH BASIN REMOVED	
				46								33	13	202	58200	46	EACH	INLET REMOVED	
				8								6	2	202	58400	8	EACH	INLET ABANDONED	
				1								1		202	58401	1	EACH	INLET ABANDONED, AS PER PLAN	48
				8								6	2	202	58500	8	EACH	CATCH BASIN ABANDONED	
				25								18	7	202	58700	25	EACH	MANHOLE ABANDONED	
				1								1		202	58701	1	EACH	MANHOLE ABANDONED, AS PER PLAN	47
				9,583							531	7,282	2,832	SPECIAL	20270000	10,114	FT	FILL AND PLUG EXISTING CONDUIT, VARIES	39
100												73	27	SPECIAL	20270110	100	FT	PIPE CLEANOUT, 24" AND UNDER	39
100												73	27	SPECIAL	20270120	100	FT	PIPE CLEANOUT, 27" TO 48"	39
100												73	27	SPECIAL	20270130	100	FT	PIPE CLEANOUT OVER 48"	39
				23,652								17,266	6,386	202	75000	23,652	FT	FENCE REMOVED	
											48	35	13	202	75200	48	FT	FENCE REMOVED FOR REUSE	
				8								6	2	202	98100	8	EACH	REMOVAL MISC.: BILLBOARD	43
			56									41	15	202	98100	56	EACH	REMOVAL MISC.: DRAINAGE STRUCTURE ABANDONED, AS PER PLAN	43
			1,824									1,332	492	202	98200	1,824	FT	REMOVAL MISC.: DRAINAGE PIPE ABANDONED, AS PER PLAN	43
				230								168	62	202	98200	230	FT	REMOVAL MISC.: ABANDONED WATER LINE	38
4,963							285,284					208,978	81,269	203	10000	290,247	CY	EXCAVATION	
		73										53	20	203	10001	73	CY	EXCAVATION, AS PER PLAN	42
4,963							168,053					126,302	46,714	203	20000	173,016	CY	EMBANKMENT	
					187			1,843		842		2,097	775	204	10000	2,872	SY	SUBGRADE COMPACTION	
	158											115	43	204	45000	158	HOUR	PROOF ROLLING	
	8,865											6,471	2,394	206	10500	8,865	TON	CEMENT	
	286,983											209,498	77,485	206	11000	286,983	SY	CURING COAT	
								286,983				209,498	77,485	206	15020	286,983	SY	CEMENT STABILIZED SUBGRADE, 14 INCHES DEEP	
	LS											LS	LS	206	30000	LS		MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS	
						1,257						918	339	516	13600	1,257	SF	1" PREFORMED EXPANSION JOINT FILLER	
											44	32	12	517	73501	44	FT	RAILING, PIPE, AS PER PLAN	882
						14,684						10,719	3,965	606	15050	14,684	FT	GUARDRAIL, TYPE MGS	
						75						55	20	606	15100	75	FT	GUARDRAIL, TYPE MGS WITH LONG POSTS	
						19						14	5	606	26150	19	EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	41
						11						8	3	606	26550	11	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
						23						17	6	606	35002	23	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
						14						10	4	606	35102	14	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
						3						2	1	606	60022	3	EACH	IMPACT ATTENUATOR, TYPE 2 (UNIDIRECTIONAL) 70 MPH/ 33.75 INCH WIDTH	
											42	31	11	607	22000	42	FT	FENCE REBUILT, TYPE CL	
									23,856			17,415	6,441	607	23000	23,856	FT	FENCE, TYPE CLT	
									1,524			1,113	411	607	23001	1,524	FT	FENCE, TYPE CLT, AS PER PLAN	41
									2			1	1	607	61201	2	EACH	GATE, TYPE CLT, AS PER PLAN	43A
									23,856			17,415	6,441	607	70000	23,856	FT	FENCELINE SEEDING AND MULCHING	

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GENERAL SUMMARY

HAM-75-7.85

280
2017

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SHEET NUM.										PART.				ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
39	41	42	306	307	319	327	339	341	882	01/IMS/PV	02/IMS/PV								
																		ROADWAY CONT.	
			250							183	67			607	98000	250	FT	FENCE, MISC.: WOOD FENCE	388
			17,955					15		13,118	4,852			608	10000	17,970	SF	4" CONCRETE WALK	
			398							291	107			608	52000	398	SF	CURB RAMP	
				7,980						5,825	2,155			622	10100	7,980	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE B1	
				85						62	23			622	10101	85	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE B1, AS PER PLAN	44
				3,648						2,663	985			622	10140	3,648	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C1	
				158						115	43			622	10141	158	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C1, AS PER PLAN	44
				7,467						5,376	2,091			622	10160	7,467	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D	
				1						1				622	10200	1	EACH	BARRIER TRANSITION	
				1						1				622	24860	1	EACH	CONCRETE BARRIER END SECTION, TYPE C1	
				31						22	9			622	25000	31	EACH	CONCRETE BARRIER END SECTION, TYPE D	
				94						69	25			622	25006	94	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1	
				12						9	3			622	25007	12	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1, AS PER PLAN	44
				1						1				622	25007	1	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1, AS PER PLAN, A	46
				38						28	10			622	25014	38	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1	
				2						1	1			622	25015	2	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1, AS PER PLAN	44
				1						1				622	25015	1	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1, AS PER PLAN, A	45
				72						52	20			622	25050	72	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	
				4						3	1			622	25051	4	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN	44
				502						364	138			626	00102	502	EACH	BARRIER REFLECTOR, TYPE 1, 1 WAY	
				148						108	40			626	00110	148	EACH	BARRIER REFLECTOR, TYPE 2, 1 WAY	
				30						22	8			626	00110	30	EACH	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL	
								32		23	9			SPECIAL	69050600	32	EACH	BOLLARD	42
		10,000								7,300	2,700			SPECIAL	69065020	10,000	GAL	WORK INVOLVING WATER	42
		15,000								10,950	4,050			SPECIAL	69065022	15,000	GAL	WORK INVOLVING NON-REGULATED WATER	42
		LUMP								LUMP	LUMP			SPECIAL	69071000	LS		ASBESTOS ABATEMENT, VARIOUS STRUCTURES	42
								LUMP		LUMP	LUMP			SPECIAL	69098400	LS		PUMP STATION BUILDING AND CONTROLS	42
										LUMP	LUMP			SPECIAL	69098400	LS		CONTAMINATED MATERIAL INSPECTION AND TESTING	42
								4		2	2			SPECIAL	69099550	4	MNTH	TEMPORARY GENERATOR	43A
										LUMP	LUMP			878	25000	LS		INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS	
																		EROSION CONTROL	
10						12				22				601	21050	22	SY	TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT	
							206			206				601	21060	206	SY	TIED CONCRETE BLOCK MAT WITH TYPE 2 UNDERLAYMENT	
									78	78				601	32104	78	CY	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC	
					11					11				601	32200	11	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
							441			441				601	37500	441	FT	PAVED GUTTER, TYPE 1-2	
	2									2				659	00100	2	EACH	SOIL ANALYSIS TEST	
	16,485									16,485				659	00300	16,485	CY	TOPSOIL	
	145,184									145,184				659	10000	145,184	SY	SEEDING AND MULCHING	
	7,426									7,426				659	14000	7,426	SY	REPAIR SEEDING AND MULCHING	
	7,426									7,426				659	15000	7,426	SY	INTER-SEEDING	
	33.41									33.41				659	20000	33.41	TON	COMMERCIAL FERTILIZER	
	30.69									30.69				659	31000	30.69	ACRE	LIME	
	843									843				659	35000	843	MGAL	WATER	
	335									335				659	40000	335	MSF	MOWING	
							9,554			9,554				670	00700	9,554	SY	DITCH EROSION PROTECTION	
										LUMP				832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
										LUMP				832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
										LUMP				832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
										698,286				832	30000	698,286	EACH	EROSION CONTROL	
																		DRAINAGE	
					11				0.14	8	3.14			602	20000	11.14	CY	CONCRETE MASONRY	
						70,114				51,183	18,931			605	11100	70,114	FT	6" SHALLOW PIPE UNDERDRAINS	
						2,901				2,118	783			605	13300	2,901	FT	6" UNCLASSIFIED PIPE UNDERDRAINS	
						50,091				36,566	13,525			605	14000	50,091	FT	6" BASE PIPE UNDERDRAINS	
200						6,361				4,790	1,771			611	00510	6,561	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
100										73	27			611	00900	100	FT	6" CONDUIT, TYPE B	
100										73	27			611	01100	100	FT	6" CONDUIT, TYPE C	
100										73	27			611	01400	100	FT	6" CONDUIT, TYPE E	

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GENERAL SUMMARY

HAM-75-7.85

281
2017

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SHEET NUM.										PART.				ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
39	319	341	882							01/IMS/PV	02/IMS/PV								
																		DRAINAGE CONT.	
100										73	27			611	01500	100	FT	6" CONDUIT, TYPE F	
100										73	27			611	01800	100	FT	8" CONDUIT, TYPE B	
100										73	27			611	02000	100	FT	8" CONDUIT, TYPE C	
	192									140	52			611	01800	192	FT	8" CONDUIT, TYPE B, 706.02, JOINTS PER 706.11	
	99									71	28			611	04400	99	FT	12" CONDUIT, TYPE B	
	6,766									4,872	1,894			611	05900	6,766	FT	15" CONDUIT, TYPE B	
	328									239	89			611	05900	328	FT	15" CONDUIT, TYPE B, 706.02, JOINTS PER 706.11	
	1,700									1,241	459			611	06100	1,700	FT	15" CONDUIT, TYPE C	
	505									364	141			611	06100	505	FT	15" CONDUIT, TYPE C, 706.02, JOINTS PER 706.11	
	87									64	23			611	06700	87	FT	15" CONDUIT, TYPE F	
	119									87	32			611	06700	119	FT	15" CONDUIT, TYPE F, JOINTS PER 706.11	
	3,902		59							2,892	1,069			611	07400	3,961	FT	18" CONDUIT, TYPE B	
	461									337	124			611	07600	461	FT	18" CONDUIT, TYPE C	
	151									110	41			611	07600	151	FT	18" CONDUIT, TYPE C, 706.02, JOINTS PER 706.11	
	61									45	16			611	08200	61	FT	18" CONDUIT, TYPE F	
	380									274	106			611	08900	380	FT	21" CONDUIT, TYPE B	
	29									21	8			611	09100	29	FT	21" CONDUIT, TYPE C	
	985									709	276			611	10400	985	FT	24" CONDUIT, TYPE B	
	1,061									764	297			611	10600	1,061	FT	24" CONDUIT, TYPE C	
	983									718	265			611	13400	983	FT	30" CONDUIT, TYPE B	
	1,374									1,003	371			611	13600	1,374	FT	30" CONDUIT, TYPE C	
	176									128	48			611	13600	176	FT	30" CONDUIT, TYPE C, 706.02, JOINTS PER 706.11	
	70									51	19			611	14200	70	FT	30" CONDUIT, TYPE F	
	950									684	266			611	16400	950	FT	36" CONDUIT, TYPE B	
	1,178									848	330			611	16600	1,178	FT	36" CONDUIT, TYPE C	
			48							35	13			611	16600	48	FT	36" CONDUIT, TYPE C, WITH CLASS II BEDDING	
	1,627									1,188	439			611	19400	1,627	FT	42" CONDUIT, TYPE B	
	21									15	6			611	19400	21	FT	42" CONDUIT, TYPE B, 706.02, JOINTS PER 706.11	
	642									469	173			611	19600	642	FT	42" CONDUIT, TYPE C	
	60									44	16			611	19600	60	FT	42" CONDUIT, TYPE C, 706.02, JOINTS PER 706.11	
	2,098									1,532	566			611	20900	2,098	FT	48" CONDUIT, TYPE B	
			51							14	37			611	20900	51	FT	48" CONDUIT, TYPE B, WITH CLASS I BEDDING	
	490	40								387	143			611	21100	530	FT	48" CONDUIT, TYPE C	
			466							340	126			611	21100	466	FT	48" CONDUIT, TYPE C, WITH CLASS II BEDDING	
	233									168	65			611	23800	233	FT	60" CONDUIT, TYPE B, 706.02, JOINTS PER 706.11	
	64									46	18			611	26400	64	FT	72" CONDUIT, TYPE C	
	265									191	74			611	52502	265	FT	24" X 38" CONDUIT, TYPE B, 706.04	
	404									291	113			611	96600	404	FT	CONDUIT, BORED OR JACKED 15", TYPE B	
	168									123	45			611	96600	168	FT	CONDUIT, BORED OR JACKED 18", TYPE B	
	380									277	103			611	96600	380	FT	CONDUIT, BORED OR JACKED 21", TYPE B	
	192									140	52			611	96600	192	FT	CONDUIT, BORED OR JACKED 24", TYPE B	
	167									122	45			611	96600	167	FT	CONDUIT, BORED OR JACKED 30" TYPE A	
	192									140	52			611	96600	192	FT	CONDUIT, BORED OR JACKED 30", TYPE B	
	978									704	274			611	96600	978	FT	CONDUIT, BORED OR JACKED 36", TYPE B	
	472									345	127			611	96600	472	FT	CONDUIT, BORED OR JACKED 42", TYPE B	
	15									11	4			611	98150	15	EACH	CATCH BASIN, NO. 3	
	21									15	6			611	98180	21	EACH	CATCH BASIN, NO. 3A	
	3									2	1			611	98230	3	EACH	CATCH BASIN, NO. 4	
	15									11	4			611	98300	15	EACH	CATCH BASIN, NO. 5	
	9									7	2			611	98341	9	EACH	CATCH BASIN, NO. 5A	
	6									4	2			611	98370	6	EACH	CATCH BASIN, NO. 6	
	18									13	5			611	98410	18	EACH	CATCH BASIN, NO. 8	
	5									4	1			611	98434	5	EACH	CATCH BASIN, NO. 8A	
	2									1	1			611	98470	2	EACH	CATCH BASIN, NO. 2-2B	
	11									8	3			611	98510	11	EACH	CATCH BASIN, NO. 2-3	
	1									1				611	98630	1	EACH	CATCH BASIN ADJUSTED TO GRADE	
	10									7	3			611	99100	10	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1	
	16									12	4			611	99101	16	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1, AS PER PLAN, A	49

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GENERAL SUMMARY

HAM-75-7.85

282
2017

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SHEET NUM.								PART.				ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
39	319	327	341	882				01/IMS/PV	02/IMS/PV								
																DRAINAGE CONT.	
	7							4	3			611	99101	7	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1, AS PER PLAN, B	50
	2							1	1			611	99101	2	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1, AS PER PLAN, C	51
	12							9	3			611	99110	12	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1	
	1							1				611	99111	1	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1, AS PER PLAN, A	52
	43							31	12			611	99114	43	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D	
	4							3	1			611	99115	4	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN, A	53
	1							1				611	99115	1	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN, B	54
	1							1				611	99115	1	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN, C	55
	1							1				611	99150	1	EACH	INLET ADJUSTED TO GRADE	
	62							45	17			611	99574	62	EACH	MANHOLE, NO. 3	
	8							6	2			611	99654	8	EACH	MANHOLE ADJUSTED TO GRADE	
	1							1				611	99660	1	EACH	MANHOLE RECONSTRUCTED TO GRADE	
5		6						8	3			611	99710	11	EACH	PRECAST REINFORCED CONCRETE OUTLET	
	3			1				3	1			611	99690	4	EACH	MANHOLE, MISC.: SANITARY MANHOLE PER MSD STD ACC. NO 49037	882
	5			2				5	2			611	99690	7	EACH	MANHOLE, MISC.: SANITARY MANHOLE PER MSD STD ACC. NO 49040	882
	1			1				1	1			611	99690	2	EACH	MANHOLE, MISC.: SANITARY MANHOLE ADJUST TO GRADE PER MSD STD ACC. NO 49058-A	882
			1					1				611	99690	1	EACH	MANHOLE, MISC.: TRASH RACK STRUCTURE	894
				1				1				611	99900	1	EACH	DRAINAGE STRUCTURE, MISC.: FLAP GATE	880
								LS	LS			611	99920	LS		DRAINAGE STRUCTURE, MISC.: CSO VAULT 25'X13'X AS PER PLAN	876
								LS	LS			SPECIAL	61197910	LS		SANITARY SEWER , MSD SANITARY SEWER PROTECTION	881
1,000								730	270			SPECIAL	61199820	1,000	LB	MISCELLANEOUS METAL	39
	2							1	1			611	99900	2	EACH	DRAINAGE STRUCTURE, MISC.: CHECK VALVE FOR 36" CONDUIT	40
	1							1				611	99900	1	EACH	DRAINAGE STRUCTURE, MISC.: CHECK VALVE FOR 54" CONDUIT	40
			528					385	143			638	07330	528	FT	54" STEEL PIPE ENCASEMENT, BORED OR JACKED	
			1,368					999	369			638	98600	1,368	FT	WATER WORK, MISC.:36" WATER MAIN DUCILE IRON PIPE ANSI CLASS 53, MECHANICAL JOINTS AND FITTINGS	
	LUMP							LUMP	LUMP			SPECIAL	69098400	LS		STORMWATER DETENTION SYSTEM 1	40
	LUMP							LUMP	LUMP			SPECIAL	69098400	LS		STORMWATER DETENTION SYSTEM 2	40
	LUMP							LUMP	LUMP			SPECIAL	69098400	LS		STORMWATER DETENTION SYSTEM 3	40
	LUMP							LUMP	LUMP			SPECIAL	69098400	LS		STORMWATER DETENTION SYSTEM 6	40
12								9	3			SPECIAL	69099550	12	MNTH	TEMP DRAINAGE PUMP	39
			LUMP					LUMP	LUMP			SPECIAL	69098400	LS		STORMWATER PUMP STATION STRUCTURE	42
			LUMP					LUMP	LUMP			SPECIAL	69098400	LS		PRESSURE RELEASE VALVE AND STRUCTURE	42
																DRAINAGE ALTERNATES - 69TH ST - STA 481	
									126			611	13400	126	FT	30" CONDUIT, TYPE B (ALTERNATE 1)	43A
	126								126			611	13400	126	FT	30" CONDUIT, TYPE B (ALTERNATE 2)	43A
	18								18			611	16400	18	FT	36" CONDUIT, TYPE B, 706.02, JOINTS PER 706.11 (ALTERNATE 2)	43A
	3								3			611	99574	3	EACH	MANHOLE, NO. 3(ALTERNATE 2)	43A
	252								252			611	96600	252	FT	CONDUIT, BORED OR JACKED, 36" TYPE B (ALTERNATE 2)	
																DRAINAGE ALTERNATES - SEYMOUR AVE - STA 492	
									112			611	06100	112	FT	15" CONDUIT, TYPE C (ALTERNATE 1)	43A
									23			611	16400	23	FT	36" CONDUIT, TYPE B (ALTERNATE 1)	43A
									2			611	99574	2	EACH	MANHOLE, NO. 3 (ALTERNATE 1)	43A
									256			611	96600	256	FT	CONDUIT, BORED OR JACKED, 36" TYPE B (ALTERNATE 1)	
	243								243			611	22400	243	FT	54" CONDUIT, TYPE B (ALTERNATE 2)	43A
	112								112			611	22600	112	FT	54" CONDUIT, TYPE C (ALTERNATE 2)	43A
	23								23			611	16400	23	FT	36" CONDUIT, TYPE B (ALTERNATE 2)	43A
	3								3			611	99574	3	EACH	MANHOLE, NO. 3 (ALTERNATE 2)	43A
	256								256			611	96600	256	FT	CONDUIT, BORED OR JACKED, 36" TYPE B (ALTERNATE 2)	
																DRAINAGE ALTERNATES - WOODLAND/SUMMIT - STA 525	
	32								32			611	05900	32	FT	15" CONDUIT, TYPE B (ALTERNATE 1)	43A
	147								147			611	07400	147	FT	18" CONDUIT, TYPE B (ALTERNATE 1)	43A
	79								79			611	08900	79	FT	21" CONDUIT, TYPE B (ALTERNATE 1)	43A
	312								312			611	10400	312	FT	24" CONDUIT, TYPE B (ALTERNATE 1)	43A
	244								244			611	10600	244	FT	24" CONDUIT, TYPE C (ALTERNATE 1)	43A
									593			611	22600	593	FT	54" CONDUIT, TYPE C (ALTERNATE 1)	43A
									223			611	10400	223	FT	24" CONDUIT, TYPE B (ALTERNATE 2)	43A
									32			611	13400	32	FT	30" CONDUIT, TYPE B (ALTERNATE 2)	43A
									135			611	16400	135	FT	36" CONDUIT, TYPE B (ALTERNATE 2)	43A
									244			611	16600	244	FT	36" CONDUIT, TYPE C (ALTERNATE 2)	43A
	180								180			611	19400	180	FT	42" CONDUIT, TYPE B (ALTERNATE 2)	43A
	593								593			611	26400	593	FT	72" CONDUIT, TYPE C (ALTERNATE 2)	43A

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GENERAL SUMMARY

HAM-75-7.85

283 2017

J:\2011903\ODOT\HAM\77889\roadway\sheets\77889GG001.dgn 5/25/2022 10:31:23 AM efoley

SHEET NUM.									PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	38	306	307	317	318	341	882	1097	01/IMS/PV	02/IMS/PV						
															PAVEMENT	
							216		158	58	253	01001	216	SY	PAVEMENT REPAIR, AS PER PLAN	875
				40,360					29,463	10,897	254	01000	40,360	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.5" DEPTH	
						70			51	19	301	46000	70	CY	ASPHALT CONCRETE BASE, PG64-22	
		25		94,464					68,977	25,512	302	46000	94,489	CY	ASPHALT CONCRETE BASE, PG64-22	
	12	68		48,829		140			35,806	13,243	304	20000	49,049	CY	AGGREGATE BASE	
		11		43,968		84			32,166	11,897	407	20000	44,063	GAL	NON-TRACKING TACK COAT	
		75							55	20	408	10000	75	GAL	PRIME COAT	
				24,950					17,964	6,986	441	00100	24,950	CY	ANTI-SEGREGATION EQUIPMENT	
				458					334	124	411	10000	458	CY	STABILIZED CRUSHED AGGREGATE	
	9	7		134		35			133	52	441	50000	185	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
	15			94					78	31	441	50200	109	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448)	
				12,162					8,757	3,405	442	10301	12,162	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN	43
		178							130	48	452	10010	178	SY	6" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC IP	
		44							32	12	452	12010	44	SY	8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC IP	
	703	32							529	206	452	13010	735	SY	9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC IP	
		74							55	19	452	14050	74	SY	10" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS	
				22,689					16,563	6,126	452	18010	22,689	SY	15" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC IP	
	37								27	10	609	14000	37	FT	CURB, TYPE 2-A	
			2,869						2,094	775	609	24511	2,869	FT	CURB, TYPE 4-C, AS PER PLAN	44
		106	2,566				39		1,979	732	609	26000	2,711	FT	CURB, TYPE 6	
					12.44				9.08	3.36	618	40600	12.44	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	
				12,566					9,048	3,518	861	11100	12,566	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5 MM, TYPE A (446)	
															WATER WORK	
								5		5	203	10001	5	CY	EXCAVATION, AS PER PLAN, ADDITIONAL EXCAVATION (CIN. 1119)	1097
								5		5	203	10001	5	CY	EXCAVATION, AS PER PLAN, EXPLORATORY EXCAVATION (CIN. 1120)	1097
								2,852		2,852	509	25000	2,852	LB	UNCOATED REINFORCING STEEL	1097
								23		23	602	20001	23	CY	CONCRETE MASONRY, AS PER PLAN, CONCRETE, CLASS C (CIN. 1110)	1097
								1		1	602	98200	1	CY	MASONRY, MISC.: BRICK MASONRY	1097
								1		1	638	11500	1	MBF	SHEETING AND BRACING ORDERED LEFT IN PLACE	1097
								8		8	638	98000	8	EACH	WATER WORK, MISC.: RESETTING EXISTING VALVE BOX, COMPLETE (CIN. 1125)	1097
								1		1	638	98000	1	EACH	WATER WORK, MISC.: RECONNECTING EXISTING SERVICE BRANCH (CIN. 1128), 3/4"	1097
								1		1	638	98000	1	EACH	WATER WORK, MISC.: FURNISHING AND INSTALLING CURB AND ROADWAY BOX (CIN. 1131)	1097
								2		2	638	98000	2	EACH	WATER WORK, MISC.: RESETTING EXISTING CURB AND ROADWAY BOX (CIN. 1132)	1097
								2		2	638	98000	2	EACH	WATER WORK, MISC.:RELOCATE EXISTING FIRE HYDRANT (CIN. 1113)	1097
								5		5	638	98000	5	EACH	WATER WORK, MISC.: FURNISHING AND INSTALLING VALVE BOX, COMPLETE (CIN. 1116)	1097
								2		2	638	98000	2	EACH	WATER WORK, MISC.: FURNISHING AND INSTALLING VALVE BOX, COMPLETE (CIN. 1116), WITH 1" AIR RELEASE	1097
								3		3	638	98000	3	EACH	WATER WORK, MISC.: REMOVING EXISTING MANHOLE CURB AND COVER (CIN. 1122)	1097
								2		2	638	98000	2	EACH	WATER WORK, MISC.:REMOVING EXISTING VALVE BOX	1097
								20		20	638	98600	20	FT	WATER WORK, MISC.: FURNISHING AND LAYING 6" DUCTILE IRON PIPE AND FITTINGS (CIN. 1101)	1097
								145		145	638	98600	145	FT	WATER WORK, MISC.: FURNISHING AND LAYING 8" DUCTILE IRON PIPE AND FITTINGS (CIN. 1101)	1097
								371		371	638	98600	371	FT	WATER WORK, MISC.:FURNISHING AND LAYING 12" DUCTILE IRON PIPE FITTINGS (CIN. 1101)	1097
								42		42	638	98600	42	FT	WATER WORK, MISC.: FURNISHING AND LAYING 16" DUCTILE IRON PIPE AND FITTINGS (CIN. 1101)	1097
								196		196	638	98600	196	FT	WATER WORK, MISC.: FURNISHING AND INSTALLING 24" STEEL CASING (CIN. 1108)	1097
								25		25	638	98600	25	FT	WATER WORK, MISC.: CHANGING 8" AND UNDER PIPE SEWER (CIN. 1123)	1097
								25		25	638	98600	25	FT	WATER WORK, MISC.: CHANGING 10" THRU 24" PIPE SEWER (CIN. 1123)	1097

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GENERAL SUMMARY

HAM-75-7.85

284
2017

J:\2011090\3\ODOT\HAM\77889\roadway\sheets\77889GG001.dgn 4/15/2022 12:56:26 PM efoley

SHEET NUM.											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
									1187	1232	01/IMS/PV	02/IMS/PV							
																		LIGHTING	
										1	1			202	62000	1	EACH	JUNCTION BOX REMOVED	
										118	86	32		625	00450	118	EACH	CONNECTION, FUSED PULL APART	
										14	10	4		625	00451	14	EACH	CONNECTION, FUSED PULL APART, AS PER PLAN	1230
										42	31	11		625	00480	42	EACH	CONNECTION, UNFUSED PERMANENT	
										59	43	16		625	10494	59	EACH	LIGHT POLE, LOW MAST, ALM50	
										3	2	1		625	10503	3	EACH	LIGHT POLE (INSTALLATION ONLY), AS PER PLAN	1231
										8	6	2		625	13200	8	EACH	LIGHT TOWER, BBBB100	
										13	9	4		625	13400	13	EACH	LIGHT TOWER, BBBBBB100	
										3	2	1		625	14001	3	EACH	LIGHT POLE FOUNDATION, 24" X 6' DEEP, AS PER PLAN	1230
										57	42	15		625	14306	57	EACH	MEDIAN LIGHT POLE FOUNDATION, 10' DEEP	
										2	1	1		625	14307	2	EACH	MEDIAN LIGHT POLE FOUNDATION, 10' DEEP, AS PER PLAN	43
										6	4	2		625	15100	6	EACH	LIGHT TOWER FOUNDATION, 36" X 20' DEEP	
										5	4	1		625	15200	5	EACH	LIGHT TOWER FOUNDATION, 36" X 25' DEEP	
										10	7	3		625	15700	10	EACH	LIGHT TOWER FOUNDATION, MISC.:, MEDIAN, 36" X 20' DEEP	1230
										48,529	35,426	13,103		625	23200	48,529	FT	NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE	
										1,872	1,367	505		625	23300	1,872	FT	NO. 2 AWG 2400 VOLT DISTRIBUTION CABLE	
										8,850	6,461	2,389		625	23400	8,850	FT	NO. 10 AWG POLE AND BRACKET CABLE	
										2,722	1,987	735		625	24320	2,722	FT	1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES	
										1,281	935	346		625	25500	1,281	FT	CONDUIT, 3", 725.04	
										386	282	104		625	25605	386	FT	CONDUIT, 4", 725.051, AS PER PLAN	1229
										2,551	1,862	689		625	25902	2,551	FT	CONDUIT, JACKED OR DRILLED, 725.04, 3"	
										112	82	30		625	26263	112	EACH	LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN, 480V	1230
										8	6	2		625	26273	8	EACH	LUMINAIRE, LOW MAST, SOLID STATE (LED), AS PER PLAN, 240V	1230
										55	40	15		625	26273	55	EACH	LUMINAIRE, LOW MAST, SOLID STATE (LED), AS PER PLAN, 480V	1230
										7	5	2		625	27503	7	EACH	LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN, 240V	1230
										7	5	2		625	27503	7	EACH	LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN, 480V	1230
										3	2	1		625	27561	3	EACH	LUMINAIRE, INSTALLATION ONLY, AS PER PLAN	1229
										3,744	2,733	1,011		625	29000	3,744	FT	TRENCH	
										6	4	2		625	29910	6	EACH	TRANSITION JUNCTION BOX	
										81	59	22		625	29930	81	EACH	MEDIAN JUNCTION BOX	
										19	14	5		625	30700	19	EACH	PULL BOX, 725.08, 18"	
										3	2	1		625	30706	3	EACH	PULL BOX, 725.08, 24"	
										55	40	15		625	31510	55	EACH	PULL BOX REMOVED	
										142	104	38		625	32000	142	EACH	GROUND ROD	
										7	5	2		625	33000	7	EACH	STRUCTURE GROUNDING SYSTEM	
										7	5	2		625	34001	7	EACH	POWER SERVICE, AS PER PLAN	1229
										3,744	2,733	1,011		625	36010	3,744	FT	UNDERGROUND WARNING/MARKING TAPE	
										4	3	1		625	37101	4	EACH	SERVICE TO UNDERPASS LIGHTING, AS PER PLAN	1229
										LUMP	LUMP	LUMP		625	38000	LS		HIGH VOLTAGE TEST	
										LUMP	LUMP	LUMP		SPECIAL	62540000	LS		MAINTAIN EXISTING LIGHTING	1230
										2	1	1		SPECIAL	62540010	2	EACH	REPLACEMENT OF EXISTING LIGHTING UNIT	1230
										13	9	4		625	75350	13	EACH	LIGHT TOWER REMOVED	
										77	56	21		625	75400	77	EACH	LIGHT POLE REMOVED	
										3	2	1		625	75402	3	EACH	LIGHT POLE REMOVED FOR STORAGE	
										80	58	22		625	75500	80	EACH	LIGHT POLE FOUNDATION REMOVED	
										3	2	1		625	75504	3	EACH	LUMINAIRE REMOVED FOR STORAGE	
										121	88	33		625	75506	121	EACH	LUMINAIRE REMOVED	
										5	4	1		625	75510	5	EACH	POWER SERVICE REMOVED	
										13	9	4		625	75540	13	EACH	LIGHT TOWER FOUNDATION REMOVED	
										30,000	21,900	8,100		625	75551	30,000	FT	DISTRIBUTION CABLE REMOVED, AS PER PLAN	1229
										5	4	1		625	75800	5	EACH	DISCONNECT CIRCUIT	
										3	2	1		625	98000	3	EACH	LIGHTING, MISC.: REMOVAL OF UNDERPASS LIGHTING	1230
																		TRAFFIC SURVEILLANCE	
									33		33			625	25400	33	FT	CONDUIT, 2", 725.04	
									204		204			625	25408	204	FT	CONDUIT, 2", 725.051	
									1,561		1,561			625	25500	1,561	FT	CONDUIT, 3", 725.04	
									305		305			625	25902	305	FT	CONDUIT, JACKED OR DRILLED, 725.04, 3"	

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GENERAL SUMMARY

HAM-75-7.85

285
2017

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SHEET NUM.									PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
							1187	1188	01/IMS/PV	02/IMS/PV							
																TRAFFIC SURVEILLANCE (CONT.)	
							172		172			625	25906	172	FT	CONDUIT, JACKED OR DRILLED, 725.051, 2"	
							4,474		4,474			625	29000	4,474	FT	TRENCH	
							34		34			625	29931	34	EACH	MEDIAN JUNCTION BOX, AS PER PLAN	1185
							16		16			625	30700	16	EACH	PULL BOX, 725.08, 18"	
							28		28			625	30711	28	EACH	PULL BOX, 725.08, 32", AS PER PLAN	1185
							71		71			625	31510	71	EACH	PULL BOX REMOVED	
							54		54			625	32000	54	EACH	GROUND ROD	
							4,367		4,367			625	36010	4,367	FT	UNDERGROUND WARNING/MARKING TAPE	
							7		7			625	75510	7	EACH	POWER SERVICE REMOVED	
							42		42			630	02100	42	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
							2		2			630	70021	2	EACH	OVERHEAD SIGN SUPPORT, DMS TRUSS, 115', AS PER PLAN	1186
							2		2			630	70051	2	EACH	CATWALK, DMS TRUSS, AS PER PLAN	1186
							2		2			630	70070	2	EACH	CONCRETE BARRIER MEDIAN OVERHEAD SIGN SUPPORT FOUNDATION, DMS TRUSS	
							2		2			630	70080	2	EACH	OVERHEAD SIGN SUPPORT FOUNDATION, DMS TRUSS	
							2		2			630	79100	2	EACH	SIGN HANGER ASSEMBLY, MAST ARM	
							1		1			630	79610	1	EACH	SIGN SUPPORT ASSEMBLY, BARRIER MOUNTED	
							68		68			630	80100	68	SF	SIGN, FLAT SHEET	
							2		2			630	89702	2	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL	
							11		11			630	89812	11	EACH	REMOVAL OF WOOD POLE AND DISPOSAL	
							6		6			632	04905	6	EACH	VEHICULAR SIGNAL HEAD, (LED), 2-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	1175
							6		6			632	25000	6	EACH	COVERING OF VEHICULAR SIGNAL HEAD	
							16		16			632	26500	16	EACH	DETECTOR LOOP	
							3,312		3,312			632	40500	3,312	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	
							2		2			632	64010	2	EACH	SIGNAL SUPPORT FOUNDATION	
							2,776		2,776			632	65200	2,776	FT	LOOP DETECTOR LEAD-IN CABLE	
							440		440			632	69300	440	FT	POWER CABLE, 3 CONDUCTOR, NO. 4 AWG	
							811		811			632	69320	811	FT	POWER CABLE, 3 CONDUCTOR, NO. 2 AWG	
							1,961		1,961			632	69350	1,961	FT	POWER CABLE, MISC.: 3 CONDUCTOR, 1/0 AWG	1186
							6		6			632	70001	6	EACH	POWER SERVICE, AS PER PLAN	1186
							6		6			632	70400	6	EACH	CONDUIT RISER, 2" DIAMETER	
							1		1			632	72110	1	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 4	
							1		1			632	72130	1	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 12	
							LUMP		LUMP			632	90300	LS		SIGNALIZATION, MISC.: REMOVAL OF FIBER OPTIC CABLE	1186
							4		4			632	90400	4	EACH	SIGNALIZATION, MISC.: RAMP METER SIGN	1186
							1		1			632	90400	1	EACH	SIGNALIZATION, MISC.: STEP-DOWN TRANSFORMER AND SUPPORT	1186
							2		2			633	67100	2	EACH	CABINET FOUNDATION	
							8		8			633	67101	8	EACH	CABINET FOUNDATION, AS PER PLAN	1186
							2		2			633	67200	2	EACH	CONTROLLER WORK PAD	
							7		7			633	67201	7	EACH	CONTROLLER WORK PAD, AS PER PLAN	1186
							27,165		27,165			804	21030	27,165	FT	FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE, 72 FIBER	
							170		170			804	21050	170	FT	FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE, 288 FIBER	
							1,405		1,405			804	32012	1,405	EACH	DROP CABLE, 24 FIBER	
							535		535			804	32016	535	EACH	DROP CABLE, 48 FIBER	
							8		8			804	34042	8	EACH	FIBER TERMINATION PANEL, 72 FIBER	
							1		1			804	34082	1	EACH	FIBER TERMINATION PANEL, 288 FIBER	
							9		9			804	37000	9	EACH	SPLICE ENCLOSURE, BUTT STYLE	
							1,701		1,701			809	25000	1,701	FT	CONDUIT, MULTICELL, MISC.: 2" HDPE WITH 4-14MM/10MM INNERDUCTS	1185
							1,121		1,121			809	25000	1,121	FT	CONDUIT, MULTICELL, MISC.: 2" HDPE WITH 4-14MM/10MM INNERDUCTS, JACKED OR DRILLED	1185
							4,362		4,362			809	25000	4,362	FT	CONDUIT, MULTICELL, MISC.: 4" HDPE	1185
							1,733		1,733			809	25000	1,733	FT	CONDUIT, MULTICELL, MISC.: 4" HDPE, JACKED OR DRILLED	1185
							3		3			809	60030	3	EACH	CCTV IP-CAMERA SYSTEM, ENHANCED	
							3		3			809	61000	3	EACH	CCTV CONCRETE POLE WITH LOWERING UNIT, 70 FEET	
							2		2			809	63000	2	EACH	DYNAMIC MESSAGE SIGN (DMS), FULL-SIZE WALK-IN	
							975		975			809	64550	975	FT	ETHERNET CABLE, OUTDOOR-RATED	
							5		5			809	65000	5	EACH	ITS CABINET - GROUND MOUNTED	
								2	2			809	65030	2	EACH	ITS CABINET - RAMP METER	
								2	2			809	65040	2	EACH	ITS CABINET - DMS	

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GENERAL SUMMARY

HAM-75-7.85

286
2017

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SHEET NUM.											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
									1115	1188	01/IMS/PV	02/IMS/PV							
																		TRAFFIC SURVEILLANCE (CONT.)	
										1	1			809	65990	1	EACH	ITS DEVICE, MISC.: RELOCATE CCTV CAMERA AND WIRELESS RADIO EQUIPMENT	1186
										3	3			809	65990	3	EACH	ITS DEVICE, MISC.: REMOVAL OF CCTV POLE, CAMERA, FOUNDATION, AND CABINET ASSEMBLY	1186
										3	3			809	65990	3	EACH	ITS DEVICE, MISC.: REMOVAL OF DMS SIGN	1186
										15	15			809	65990	15	EACH	ITS DEVICE, MISC.: REMOVAL OF ITS CABINET ASSEMBLY	1186
										5	5			809	65990	5	EACH	ITS DEVICE, MISC.: REMOVAL OF SIDE-FIRED RADAR VEHICLE DETECTOR	1186
										6	6			809	65990	6	EACH	ITS DEVICE, MISC.: REMOVAL OF WIRELESS RADIO EQUIPMENT	1186
										2	2			809	68900	2	EACH	SIDE-FIRED RADAR DETECTOR	
										2	2			809	69123	2	EACH	ATC CONTROLLER, AS PER PLAN	1185
										LUMP	LUMP			809	70000	LS		MAINTAINING ITS DURING CONSTRUCTION	1185
																		TRAFFIC CONTROL	
									93		68	25		620	00500	93	EACH	DELINEATOR, POST GROUND MOUNTED	
									6		4	2		620	11000	6	EACH	DELINEATOR, BRACKET MOUNTED	
									9		7	2		620	31200	9	EACH	REMOVAL OF DELINEATOR	
									1,572		1,148	424		621	00100	1,572	EACH	RPM	
									860		628	232		621	54000	860	EACH	RAISED PAVEMENT MARKER REMOVED	
									29		21	8		625	32000	29	EACH	GROUND ROD	
									1,734		1,266	468		630	03100	1,734	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
									98		72	26		630	06400	98	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, S4X7.7	
									33		24	9		630	06500	33	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W6X9	
									229		167	62		630	07500	229	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X22	
									76		55	21		630	08004	76	FT	ONE WAY SUPPORT, NO. 3 POST	
									70		51	19		630	08600	70	EACH	SIGN POST REFLECTOR	
									20		15	5		630	09000	20	EACH	BREAKAWAY STRUCTURAL BEAM CONNECTION	
									6		4	2		630	72340	6	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.31, DESIGN 12	
									2		1	1		630	72410	2	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-15.116, DESIGN 1	
									3		2	1		630	72420	3	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-15.116, DESIGN 2	
									6		4	2		630	72430	6	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-15.116, DESIGN 3	
									14		10	4		630	75000	14	EACH	SIGN ATTACHMENT ASSEMBLY	
									1		1			630	79611	1	EACH	SIGN SUPPORT ASSEMBLY, BARRIER MOUNTED, AS PER PLAN	1114
									1,362		994	368		630	80100	1,362	SF	SIGN, FLAT SHEET	
									570		416	154		630	80200	570	SF	SIGN, GROUND MOUNTED EXTRUSHEET	
									8,356		6,100	2,256		630	80224	8,356	SF	SIGN, OVERHEAD EXTRUSHEET	
									30		22	8		630	81021	30	EACH	CONCRETE MEDIAN BARRIER SIGN BRACKET, AS PER PLAN	1114
									12		9	3		630	84010	12	EACH	CONCRETE BARRIER MEDIAN OVERHEAD SIGN SUPPORT FOUNDATION, TYPE TC-21.50	
									20		15	5		630	84500	20	EACH	GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION	
									17		12	5		630	84510	17	EACH	RIGID OVERHEAD SIGN SUPPORT FOUNDATION	
									166		121	45		630	84900	166	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
									3		2	1		630	85400	3	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL	
									1		1			630	85600	1	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION	
									137		100	37		630	86002	137	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
									20		15	5		630	86102	20	EACH	REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL	
									2		1	1		630	86310	2	EACH	REMOVAL OF STRUCTURE MOUNTED SIGN AND DISPOSAL	
									54		39	15		630	87400	54	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	
									23		17	6		630	87500	23	EACH	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL	
									7		5	2		630	89706	7	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-12.30	
									1		1			630	89708	1	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-9.30	
									9		7	2		630	89802	9	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-7.65	
									1		1			630	89806	1	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-18.24	
									14.91		10.88	4.03		807	14010	14.91	MILE	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, EDGE LINE, 6"	
									16.22		11.84	4.38		807	14110	16.22	MILE	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, LANE LINE, 6"	
									0.15		0.11	0.04		644	00300	0.15	MILE	CENTER LINE	
									14,194		10,362	3,832		807	14310	14,194	FT	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, CHANNELIZING LINE, 12"	
									172		126	46		644	00500	172	FT	STOP LINE	
									745		544	201		644	00620	745	FT	CROSSWALK LINE, 12"	
									215		157	58		644	00700	215	FT	TRANSVERSE/DIAGONAL LINE	
									523		382	141		644	00720	523	FT	CHEVRON MARKING	

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GENERAL SUMMARY

HAM-75-7.85

287
2017

SHEET NUM.								PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
					1115	1116	1178	01/IMS/PV	02/IMS/PV							
															TRAFFIC CONTROL (CONT.)	
					34			25	9		644	01300	34	EACH	LANE ARROW	
					2			1	1		644	01350	2	EACH	LANE REDUCTION ARROW	
					7,956			5,808	2,148		807	14410	7,956	FT	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, DOTTED LINE, 6"	
					13,289			9,701	3,588		807	14430	13,289	FT	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, DOTTED LINE, 12"	
					1,881			1,373	508		644	30000	1,881	FT	REMOVAL OF PAVEMENT MARKING	
					7			5	2		644	30020	7	EACH	REMOVAL OF PAVEMENT MARKING	
						2.6		2	0.6		807	12010	2.6	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6"	
						0.9		0.66	0.24		807	12110	0.9	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6"	
						2,685		1,960	725		807	12310	2,685	FT	WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12"	
						105		77	28		646	10620	105	FT	CHEVRON MARKING	
						13		9	4		646	20300	13	EACH	LANE ARROW	
						5		4	1		646	20320	5	EACH	WRONG WAY ARROW	
						258		188	70		807	12430	258	FT	WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 12"	
						31.13		22.72	8.41		850	10010	31.13	MILE	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)	
						7,956		5,808	2,148		850	10110	7,956	FT	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)	
						27,483		20,063	7,420		850	10130	27,483	FT	GROOVING FOR 12" RECESSED PAVEMENT MARKING, (ASPHALT)	
						3.5		2.6	0.9		850	20010	3.5	MILE	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (CONCRETE)	
						2,943		2,148	795		850	20130	2,943	FT	GROOVING FOR 12" RECESSED PAVEMENT MARKING, (CONCRETE)	
															TRAFFIC SIGNALS	
							325		325		625	25408	325	FT	CONDUIT, 2", 725.051	
							6		6		625	25504	6	FT	CONDUIT, 3", 725.051	
							96		96		625	25902	96	FT	CONDUIT, JACKED OR DRILLED, 725.04, 3"	
							166		166		625	29000	166	FT	TRENCH	
							3		3		625	30706	3	EACH	PULL BOX, 725.08, 24"	
							6		6		625	32000	6	EACH	GROUND ROD	
							166		166		625	36010	166	FT	UNDERGROUND WARNING/MARKING TAPE	
							28		28		630	02100	28	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
							6		6		630	79100	6	EACH	SIGN HANGER ASSEMBLY, MAST ARM	
							2		2		630	79500	2	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	
							9		9		630	80100	9	SF	SIGN, FLAT SHEET	
							3		3		630	80510	3	EACH	SIGN, STREET NAME	
							6		6		632	05007	6	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	1175
							1		1		632	05087	1	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	1175
							2		2		632	20731	2	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN	1175
							7		7		632	25000	7	EACH	COVERING OF VEHICULAR SIGNAL HEAD	
							2		2		632	25010	2	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD	
							2		2		632	26001	2	EACH	PEDESTRIAN PUSHBUTTON, AS PER PLAN	1175
							716		716		632	40700	716	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
							2		2		632	64011	2	EACH	SIGNAL SUPPORT FOUNDATION, AS PER PLAN	1176
							2		2		632	64021	2	EACH	PEDESTAL FOUNDATION, AS PER PLAN	1176
							246		246		632	65200	246	FT	LOOP DETECTOR LEAD-IN CABLE	
							62		62		632	68200	62	FT	POWER CABLE, 2 CONDUCTOR, NO. 6 AWG	
							119		119		632	69800	119	FT	SERVICE CABLE, 3 CONDUCTOR, NO. 6 AWG	
							1		1		632	70001	1	EACH	POWER SERVICE, AS PER PLAN	1176
							1		1		632	72111	1	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 4, AS PER PLAN	1175
							1		1		632	72421	1	EACH	SIGNAL SUPPORT, TYPE TC-81.22 DESIGN 12 POLE, WITH MAST ARMS TC-81.22 DESIGN 4 AND DESIGN 2, AS PER PLAN	1175
							1		1		632	90001	1	EACH	PEDESTAL, 11', TRANSFORMER BASE, AS PER PLAN	1176
							1		1		632	90010	1	EACH	PEDESTAL, MISC.: PEDESTAL, 19', TRANSFORMER BASE	1176
							1		1		632	90101	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	1176
							1		1		633	65521	1	EACH	CABINET, TYPE 332, AS PER PLAN	1176
							1		1		633	67100	1	EACH	CABINET FOUNDATION	
							1		1		633	67200	1	EACH	CONTROLLER WORK PAD	
							1		1		633	75001	1	EACH	UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN	1176
							6		6		809	69101	6	EACH	STOP LINE RADAR DETECTION, AS PER PLAN	1176
															TRAFFIC SIGNALS ALTERNATES	
							1		1		809	69123	1	EACH	ATC CONTROLLER, AS PER PLAN (ALTERNATE 1)	1176
							1		1		809	69123	1	EACH	ATC CONTROLLER, AS PER PLAN (ECONOLITE) (ALTERNATE 2)	1177

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GENERAL SUMMARY

HAM-75-7.85

288
2017

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J:\20110903\ODOT\HAM\77889\roadway\sheets\77889GG001.dgn 4/14/2022 10:28:40 AM rshannon

SHEET NUM.				PART.				ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
944	996	1034		02/IMS/PV	03/IMS/BR	04/IMS/BR	05/NHS/BR						
												RETAINING WALLS (SOLDIER PILE)	
LUMP				LUMP				503	21301	LS		UNCLASSIFIED EXCAVATION, AS PER PLAN	942
16,559				16,559				507	00400	16,559	FT	STEEL PILES, MISC.: SOLDIER PILES HP12X53	942
1,779				1,779				507	00400	1,779	FT	STEEL PILES, MISC.: SOLDIER PILES W18X86	942
347,588				347,588				509	10000	347,588	LB	EPOXY COATED REINFORCING STEEL	
2,802				2,802				511	46011	2,802	CY	CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN	942
5,757				5,757				512	10001	5,757	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)	942
5,757				5,757				512	10101	5,757	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	942
910				910				512	33001	910	SY	TYPE 2 WATERPROOFING, AS PER PLAN	942
9,674				9,674				516	13600	9,674	SF	1" PREFORMED EXPANSION JOINT FILLER	
1,600				1,600				518	20000	1,600	SY	PREFABRICATED GEOCOMPOSITE DRAIN	
924				924				518	39900	924	FT	4" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	
2,478				2,478				524	94503	2,478	FT	DRILLED SHAFTS, 24" DIAMETER, ABOVE BEDROCK, AS PER PLAN	942
15,823				15,823				524	94603	15,823	FT	DRILLED SHAFTS, 30" DIAMETER, ABOVE BEDROCK, AS PER PLAN	942
60,668				60,668				530	51020	60,668	SF	SPECIAL - RETAINING WALL, TIMBER LAGGING TIMBER LAGGING	943
2				2				601	20000	2	SY	CRUSHED AGGREGATE SLOPE PROTECTION	
77				77				601	21000	77	SY	CONCRETE SLOPE PROTECTION	
3,682				3,682				601	37500	3,682	FT	PAVED GUTTER, TYPE 1-2	942
657				657				605	14020	657	FT	6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
645				645				611	01100	645	FT	6" CONDUIT, TYPE C	
3				3				866	00100	3	EACH	GROUND ANCHOR, 30 KIP MAX TEST LOAD	
39				39				866	00100	39	EACH	GROUND ANCHOR, 63 KIP MAX TEST LOAD	
11				11				866	00100	11	EACH	GROUND ANCHOR, 78 KIP MAX TEST LOAD	
39				39				866	00100	39	EACH	GROUND ANCHOR, 89 KIP MAX TEST LOAD	
266				266				866	00100	266	EACH	GROUND ANCHOR, 105 KIP MAX TEST LOAD	
243				243				866	00100	243	EACH	GROUND ANCHOR, 128 KIP MAX TEST LOAD	
9				9				866	00100	9	EACH	GROUND ANCHOR, 138 KIP MAX TEST LOAD	
76				76				866	00100	76	EACH	GROUND ANCHOR, 150 KIP MAX TEST LOAD	
38				38				866	00100	38	EACH	GROUND ANCHOR, 172 KIP MAX TEST LOAD	
18				18				866	00100	18	EACH	GROUND ANCHOR, 175 KIP MAX TEST LOAD	
24				24				866	00100	24	EACH	GROUND ANCHOR, 215 KIP MAX TEST LOAD	
LUMP				LUMP				866	00300	LS		INVESTIGATIVE ANCHOR PULLOUT TESTS	
40				40				866	00400	40	EACH	PERFORMANCE TEST	
8				8				866	00500	8	EACH	EXTENDED CREEP TEST	
												RETAINING WALLS (CAST-IN-PLACE)	
	127			127				203	22000	127	CY	EMBANKMENT, USING NATURAL SOILS, 703.16.A	
	LUMP			LUMP				503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
	LUMP			LUMP				503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	995
	LUMP			LUMP				503	21301	LS		UNCLASSIFIED EXCAVATION, AS PER PLAN	995
	LUMP			LUMP				505	11100	LS		PILE DRIVING EQUIPMENT MOBILIZATION	
	475			475				507	00600	475	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	
	570			570				507	00650	570	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	
	473			473				507	92201	473	FT	PREBORED HOLES, AS PER PLAN	995
	160,688			160,688				509	10000	160,688	LB	EPOXY COATED REINFORCING STEEL	
	1,359			1,359				511	50212	1,359	CY	CLASS QC1 CONCRETE WITH QC/QA, SUBSTRUCTURE	
	1,025			1,025				512	10001	1,025	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)	995
	1,025			1,025				512	10100	1,025	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	995
	123			123				512	33000	123	SY	TYPE 2 WATERPROOFING	
	19			19				516	13400	19	SF	3/4" PREFORMED EXPANSION JOINT FILLER	
	489			489				516	13600	489	SF	1" PREFORMED EXPANSION JOINT FILLER	
	531			531				518	21200	531	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
	1,215			1,215				518	40000	1,215	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
	381			381				518	40010	381	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	
	22			22				518	42200	22	FT	8" PERFORATED CORRUGATED STEEL PIPE, 707.01	
	2			2				518	42300	2	FT	8" NON-PERFORATED CORRUGATED STEEL PIPE, INCLUDING SPECIALS, 707.01	
	1			1				523	20000	1	EACH	DYNAMIC LOAD TESTING	
	2,799			2,799				SPECIAL	53013000	2,799	SF	FORM LINER	995
	372			372				601	37500	372	FT	PAVED GUTTER, TYPE 1-2	
	530			530				601	37501	530	FT	PAVED GUTTER, TYPE 1-2, AS PER PLAN	995

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GENERAL SUMMARY

HAM-75-7.85

289
2017

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SHEET NUM.				PART.				ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
1034	1079C	1283		02/IMS/PV	03/IMS/BR	04/IMS/BR	05/NHS/BR						
												RETAINING WALLS (MSE)	
LUMP				LUMP				202	11200	LS		PORTIONS OF STRUCTURE REMOVED	
2,615				2,615				203	20000	2,615	CY	EMBANKMENT	
7,789				7,789				203	35110	7,789	CY	GRANULAR MATERIAL, TYPE B	
2,538				2,538				203	35111	2,538	CY	GRANULAR MATERIAL, TYPE B, AS PER PLAN	1032
35				35				SPECIAL	20365000	35	EACH	SETTLEMENT PLATFORM	1033
LUMP				LUMP				503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	1032
9,799				9,799				512	10001	9,799	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)	1032
9,799				9,799				512	10101	9,799	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	1032
788				788				516	13200	788	SF	1/2" PREFORMED EXPANSION JOINT FILLER	
528				528				516	13600	528	SF	1" PREFORMED EXPANSION JOINT FILLER	
24				24				516	13900	24	SF	2" PREFORMED EXPANSION JOINT FILLER	
622				622				517	76300	622	FT	RAILING, MISC.: TRAFFIC BARRIER ON MSE WALL	1032
1,355				1,355				517	80010	1,355	FT	RAILING (COMBINATION NOISE AND TRAFFIC BARRIER ON MSE WALL WITH FLEXIBLE PAVEMENT)	
245				245				601	21000	245	SY	CONCRETE SLOPE PROTECTION	
512				512				601	37500	512	FT	PAVED GUTTER, TYPE 1-2	1032
LUMP				LUMP				SPECIAL	69098400	LS		TEMPORARY SURCHARGE	1032
72,893				72,893				840	20001	72,893	SF	MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN	1032
34,265				34,265				840	21000	34,265	CY	WALL EXCAVATION	
3,327				3,327				840	22000	3,327	SY	FOUNDATION PREPARATION	
6,027				6,027				840	22001	6,027	SY	FOUNDATION PREPARATION, AS PER PLAN	1032
49,130				49,130				840	23000	49,130	CY	SELECT GRANULAR BACKFILL	
914				914				840	23050	914	CY	NATURAL SOIL	
7,888				7,888				840	25010	7,888	FT	6" DRAINAGE PIPE, PERFORATED	
441				441				840	25020	441	FT	6" DRAINAGE PIPE, NON-PERFORATED	
4,148				4,148				840	26000	4,148	FT	CONCRETE COPING	
65,588				65,588				840	26050	65,588	SF	AESTHETIC SURFACE TREATMENT	
15				15				840	27000	15	DAY	ON-SITE ASSISTANCE	
LUMP				LUMP				867	00100	LS		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL B-1)	
LUMP				LUMP				867	00100	LS		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL C-1)	
LUMP				LUMP				867	00100	LS		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL C-2)	
LUMP				LUMP				867	00100	LS		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL F1)	
LUMP				LUMP				867	00100	LS		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL F2)	
LUMP				LUMP				867	00100	LS		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL F3)	
LUMP				LUMP				867	00100	LS		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL G1)	
LUMP				LUMP				867	00100	LS		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL G2)	
LUMP				LUMP				867	00100	LS		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL G3)	
LUMP				LUMP				867	00100	LS		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL H1-1)	
LUMP				LUMP				867	00100	LS		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL H1-2)	
LUMP				LUMP				867	00100	LS		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL I1-1)	
LUMP				LUMP				867	00100	LS		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL I1-2)	
												NOISE BARRIERS	
	36			36				513	95000	36	FT	STRUCTURAL STEEL, MISC.: C10x15.3	1079C
	5			5				513	95000	5	FT	STRUCTURAL STEEL, MISC.: L4x4x1/2	1079C
	11			11				513	95030	11	EACH	STRUCTURAL STEEL, MISC.: 5/8" DIA. A325 BOLTS	1079C
	19			19				513	95030	19	EACH	STRUCTURAL STEEL, MISC.: 5/8" DIA. THREADED ANCHOR BOLTS	1079C
	25,265			25,265				SPECIAL	60610210	25,265	SF	NOISE BARRIER (REFLECTIVE)	1079C
	8,562			8,562				SPECIAL	60610920	8,562	SF	NOISE BARRIER (PARAPET MOUNTED)	1079C
	36			36				SPECIAL	60610920	36	SF	NOISE BARRIER (METAL PANELS)	1079C
												STRUCTURE OVER 20 FOOT SPAN (HAM-562-0004)	
		LUMP				LUMP		202	11003	LS		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	1271
		109				109		202	22900	109	SY	APPROACH SLAB REMOVED	
		LUMP				LUMP		503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL B)	1271
		LUMP				LUMP		503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL C)	1271
		LUMP				LUMP		503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL D)	1271
		LUMP				LUMP		503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL E)	1271

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GENERAL SUMMARY

HAM-75-7.85

290
2017

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SHEET NUM.			PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
1283	1284	1338	02/IMS/PV	03/IMS/BR	04/IMS/BR						
										STRUCTURE OVER 20 FOOT SPAN (HAM-562-0004) CONT.	
LUMP					LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL F)	1271
LUMP					LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL G)	1271
LUMP					LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL H)	1271
LUMP					LUMP	503	21300	LS		UNCLASSIFIED EXCAVATION	
LUMP					LUMP	505	11100	LS		PILE DRIVING EQUIPMENT MOBILIZATION	
8,300					8,300	507	00700	8,300	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	
8,875					8,875	507	00750	8,875	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	
100,994					100,994	509	10000	100,994	LB	EPOXY COATED REINFORCING STEEL	
112,426					112,426	509	25001	112,426	LB	UNCOATED REINFORCING STEEL, AS PER PLAN	1271
15,296					15,296	509	30020	15,296	FT	NO. 4 GFRP DEFORMED BARS	
2,048					2,048	509	30030	2,048	FT	NO. 5 GFRP DEFORMED BARS	
340					340	511	46512	340	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	
346					346	511	53014	346	CY	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN	1272
136					136	511	53014	136	CY	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN	1272
193					193	511	53014	193	CY	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS, AS PER PLAN	1272
271					271	511	53014	271	CY	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTINGS, AS PER PLAN	1272
1,530					1,530	512	10100	1,530	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
788,910					788,910	513	10300	788,910	LB	STRUCTURAL STEEL MEMBERS, LEVEL 5	
5,436					5,436	513	20000	5,436	EACH	WELDED STUD SHEAR CONNECTORS	
9,362					9,362	514	00061	9,362	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT, AS PER PLAN	1272
9,362					9,362	514	00067	9,362	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN	1272
34					34	516	10010	34	FT	ARMORLESS PREFORMED JOINT SEAL	
66					66	516	11210	66	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL	
111					111	516	13600	111	SF	1" PREFORMED EXPANSION JOINT FILLER	
3					3	516	44201	3	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN, 15"x11"x3.94" ELAST. PAD, 26"X12"X2.25" BEV.LOAD PL	1308
2					2	516	44201	2	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN,15"x11"x3.67" ELAST. PAD, 26"X12"X2.25" BEV.LOAD PL, 1.5" MAS. PL	1308
3					3	516	44201	3	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN, 17"x15"x3.94" ELAST. PAD, 26"X16"X3.02" BEV. LOAD PL	1308
2					2	516	44201	2	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN, 17"x15"x3.67" ELAST. PAD, 26"X16"X3.02" BEV. LOAD PL, 1.5" MAS. PL	1308
5					5	516	44201	5	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN, 15"x11"x3.67" ELAST. PAD, 26"X12"X1.69" BEV. LOAD PL, 1.5" MAS. PL	1308
5					5	516	44201	5	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN, 15"x11"x3.94" ELAST. PAD, 32"X12"X2.38" BEV.LOAD PL	1308
	136				136	518	21200	136	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
	94				94	518	40000	94	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
	21				21	518	40011	21	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	1272
	8				8	523	20000	8	EACH	DYNAMIC LOAD TESTING	
	8				8	523	20500	8	EACH	RESTRIKE	
	224				224	526	30001	224	SY	REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN	1272
	33				33	526	90010	33	FT	TYPE A INSTALLATION	
	34				34	526	90030	34	FT	TYPE C INSTALLATION	
	LUMP				LUMP	867	00100	LS		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL A)	
										STRUCTURE OVER 20 FOOT SPAN (HAM-75-0791)	
		LUMP		LUMP	LUMP	202	11003	LS		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	1335
		582		372	210	202	22900	582	SY	APPROACH SLAB REMOVED	
		44		28	16	203	20001	44	CY	EMBANKMENT, AS PER PLAN	1335
		LUMP		LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL A)	1335
		LUMP		LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL B)	1335
		LUMP		LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL C)	1335
		LUMP		LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL D)	1335
		LUMP		LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL E)	1335
		LUMP		LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL F)	1335
		LUMP		LUMP	LUMP	503	21300	LS		UNCLASSIFIED EXCAVATION	
		LUMP		LUMP	LUMP	505	11100	LS		PILE DRIVING EQUIPMENT MOBILIZATION	
		10,140		6,490	3,650	507	00700	10,140	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	
		10,760		6,886	3,874	507	00750	10,760	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	
		224,903		143,938	80,965	509	10000	224,903	LB	EPOXY COATED REINFORCING STEEL	
		6,828		4,370	2,458	509	30020	6,828	FT	NO. 4 GFRP DEFORMED BARS	
		916		586	330	509	30030	916	FT	NO. 5 GFRP DEFORMED BARS	
		6,259		4,006	2,253	509	30040	6,259	FT	NO. 6 GFRP DEFORMED BARS	
		4		3	1	511	33501	4	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN	1337
		415		266	149	511	46512	415	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	1337

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GENERAL SUMMARY

HAM-75-7.85

291
2017

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SHEET NUM.			PART.				ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
1338	1339	1395	02/IMS/PV	03/IMS/BR	04/IMS/BR	05/NHS/BR						
											STRUCTURE OVER 20 FOOT SPAN (HAM-75-0791) CONT.	
882				564	318		511	53014	882	CY	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN	1336
66				42	24		511	53014	66	CY	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK (MEDIAN PARAPET), AS PER PLAN	1336
51				33	18		511	53014	51	CY	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK (EXTERIOR PARAPET), AS PER PLAN	1336
230				147	83		511	53014	230	CY	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTINGS, AS PER PLAN	1336
1,348				863	485		512	10100	1,348	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
143				92	51		512	10300	143	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN	
24				15	9		512	33000	24	SY	TYPE 2 WATERPROOFING	
834,999				534,399	300,600		513	10280	834,999	LB	STRUCTURAL STEEL MEMBERS, LEVEL 4	
6,696				4,285	2,411		513	20000	6,696	EACH	WELDED STUD SHEAR CONNECTORS	
2,629				1,683	946		514	00061	2,629	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT, AS PER PLAN	1335
2,629				1,683	946		514	00067	2,629	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN	1335
524				335	189		516	13600	524	SF	1" PREFORMED EXPANSION JOINT FILLER	
142				91	51		516	13800	142	SF	1-1/2" PREFORMED EXPANSION JOINT FILLER	
198				127	71		516	13900	198	SF	2" PREFORMED EXPANSION JOINT FILLER	
491				314	177		516	14020	491	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	
36				23	13		516	44401	36	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN, 14"X13"X4.77" ELAST. PAD AND TOP/BOT. LOAD PLATES	1360
	180			115	65		518	21200	180	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
	317			203	114		518	40000	317	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
	71			45	26		518	40010	71	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	
	8			5	3		523	20000	8	EACH	DYNAMIC LOAD TESTING	
	8			5	3		523	20500	8	EACH	RESTRIKE	
	1,028			658	370		526	30001	1,028	SY	REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN	1336
	422			270	152		526	90010	422	FT	TYPE A INSTALLATION	
	LS			LS	LS		SPECIAL	53000200	LS		STRUCTURES : MISC. TEMPORARY DECK SUPPORT	1344
	948			607	341		601	20000	948	SY	CRUSHED AGGREGATE SLOPE PROTECTION	
	LS			LS	LS		867	00100	LS		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL G)	
	LS			LS	LS		867	00100	LS		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL H)	
											STRUCTURE OVER 20 FOOT SPAN (HAM-75-0823)	
		LUMP		LUMP	LUMP		202	11003	LS		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	1392
		407		240	167		202	22900	407	SY	APPROACH SLAB REMOVED	
		LUMP		LUMP	LUMP		503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL F1)	1392
		LUMP		LUMP	LUMP		503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL F2)	1392
		LUMP		LUMP	LUMP		503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL F3)	1392
		LUMP		LUMP	LUMP		503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL G1)	1392
		LUMP		LUMP	LUMP		503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL G2)	1392
		LUMP		LUMP	LUMP		503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL G3)	1392
		LUMP		LUMP	LUMP		503	21300	LS		UNCLASSIFIED EXCAVATION	
		LUMP		LUMP	LUMP		505	11100	LS		PILE DRIVING EQUIPMENT MOBILIZATION	
		10,850		6,402	4,448		507	00701	10,850	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN, AS PER PLAN	1392
		11,625		6,859	4,766		507	00751	11,625	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED, AS PER PLAN	1392
		199,164		117,507	81,657		509	10000	199,164	LB	EPOXY COATED REINFORCING STEEL	
		4,971		2,933	2,038		509	30020	4,971	FT	NO. 4 GFRP DEFORMED BARS	
		712		420	292		509	30030	712	FT	NO. 5 GFRP DEFORMED BARS	
		4,168		2,460	1,708		509	30040	4,168	FT	NO. 6 GFRP DEFORMED BARS	
		4		2	2		511	33501	4	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN	1393
		372		219	153		511	46512	372	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	
		689		407	282		511	53014	689	CY	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN	1392
		36		21	15		511	53014	36	CY	CLASS QC3 CONCRETE, MISC.: BRIDGE DECK (MEDIAN PARAPET), AS PER PLAN	1393
		30		18	12		511	53014	30	CY	CLASS QC3 CONCRETE, MISC.: BRIDGE DECK (EXTERIOR PARAPET), AS PER PLAN	1393
		148		87	61		511	53014	148	CY	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN	1393
		1,434		846	588		512	10100	1,434	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
		25		15	10		512	33000	25	SY	TYPE 2 WATERPROOFING	
		24		14	10		515	15010	24	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 3 (LENGTH = 76'-8")	
		1		1			515	15010	1	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 3 (LENGTH = 77'-1 1/4")	
		23		14	9		515	20000	23	EACH	INTERMEDIATE DIAPHRAGMS	
		41		24	17		516	13600	41	SF	1" PREFORMED EXPANSION JOINT FILLER	
		91		54	37		516	13900	91	SF	2" PREFORMED EXPANSION JOINT FILLER	
		454		268	186		516	14020	454	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	
		50		30	20		516	44200	50	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE)1'-1" X 1'-8" X 3 13/16"	
		4		2	2		523	20000	4	EACH	DYNAMIC LOAD TESTING	1393
		4		2	2		523	20500	4	EACH	RESTRIKE	

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GENERAL SUMMARY

HAM-75-7.85

292
2017

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SHEET NUM.				PART.				ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
1395	1449	1489		02/IMS/PV	03/IMS/BR	04/IMS/BR	05/NHS/BR						
												STRUCTURE OVER 20 FOOT SPAN (HAM-75-0823) CONT.	
1,404					828	576		526	30001	1,404	SY	REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN	1393
422					249	173		526	90010	422	FT	TYPE A INSTALLATION	
2					1	1		622	25001	2	EACH	CONCRETE BARRIER END SECTION, TYPE D, AS PER PLAN	1393
176					104	72		846	00110	176	CF	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	
												STRUCTURE OVER 20 FOOT SPAN (HAM-75-0857)	
	LUMP				LUMP	LUMP		202	11003	LS		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	1447
	473				270	203		202	22900	473	SY	APPROACH SLAB REMOVED	
	LUMP				LUMP	LUMP		503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN(WALL A)	1447
	LUMP				LUMP	LUMP		503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN(WALL B)	1447
	LUMP				LUMP	LUMP		503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN(WALL C)	1447
	LUMP				LUMP	LUMP		503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN(WALL D)	1447
	LUMP				LUMP	LUMP		503	21300	LS		UNCLASSIFIED EXCAVATION	
	LUMP				LUMP	LUMP		505	11100	LS		PILE DRIVING EQUIPMENT MOBILIZATION	
	7,940				4,526	3,414		507	00500	7,940	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	
	8,550				4,874	3,676		507	00550	8,550	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	
	136,813				77,983	58,830		509	10000	136,813	LB	EPOXY COATED REINFORCING STEEL	
	2,594				1,479	1,115		509	30020	2,594	FT	NO. 4 GFRP DEFORMED BARS	
	1,365				778	587		509	30030	1,365	FT	NO. 5 GFRP DEFORMED BARS	
	2,170				1,237	933		509	30040	2,170	FT	NO. 6 GFRP DEFORMED BARS	
	8				5	3		511	33501	8	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN	1448
	316				180	136		511	46513	316	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING, AS PER PLAN	1448
	540				308	232		511	53014	540	CY	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN	1447
	32				18	14		511	53014	32	CY	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK (MEDIAN PARAPET), AS PER PLAN	1447
	26				15	11		511	53014	26	CY	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK (EXTERIOR PARAPET), AS PER PLAN	1447
	152				87	65		511	53014	152	CY	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, ABUTMENT, AS PER PLAN	1448
	1,010				576	434		512	10100	1,010	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
	13				7	6		512	33000	13	SY	TYPE 2 WATERPROOFING	
	328,782				187,406	141,376		513	10260	328,782	LB	STRUCTURAL STEEL MEMBERS, LEVEL 3	
	7,383				4,208	3,175		513	20000	7,383	EACH	WELDED STUD SHEAR CONNECTORS	
	18,231				10,392	7,839		514	00061	18,231	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT, AS PER PLAN	1447
	18,231				10,392	7,839		514	00067	18,231	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN	1447
	10				6	4		514	10000	10	EACH	FINAL INSPECTION REPAIR	
	396				226	170		516	10010	396	FT	ARMORLESS PREFORMED JOINT SEAL	
	353				201	152		516	13600	353	SF	1" PREFORMED EXPANSION JOINT FILLER	
	44				25	19		516	13900	44	SF	2" PREFORMED EXPANSION JOINT FILLER	
	414				236	178		516	14020	414	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	
	46				26	20		516	44101	46	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN12"X12"X3.12" WITH 13"X13"X1.5" LOAD PLATE	1447
	LUMP				LUMP	LUMP		516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	1447
	2				1	1		523	20000	2	EACH	DYNAMIC LOAD TESTING	
	2				1	1		523	20500	2	EACH	RESTRIKE	
	1,267				722	545		526	30001	1,267	SY	REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN	1447
	396				226	170		526	90030	396	FT	TYPE C INSTALLATION	
												STRUCTURE OVER 20 FOOT SPAN (HAM-75-0992)	
		LUMP				LUMP		202	11002	LS		STRUCTURE REMOVED, OVER 20 FOOT SPAN	
		65				65		203	35110	65	CY	GRANULAR MATERIAL, TYPE B	
		LUMP				LUMP		503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
		103				103		503	21100	103	CY	UNCLASSIFIED EXCAVATION	
		LUMP				LUMP		505	11100	LS		PILE DRIVING EQUIPMENT MOBILIZATION	
		1,270				1,270		507	00600	1,270	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	
		1,380				1,380		507	00650	1,380	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	1486
		11,324				11,324		509	10000	11,324	LB	EPOXY COATED REINFORCING STEEL	
		45				45		511	46510	45	CY	CLASS QC1 CONCRETE, FOOTING	
		72				72		511	53014	72	CY	CLASS QC3 CONCRETE, MISC.:CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN	1486
		52				52		511	53014	52	CY	CLASS QC3 CONCRETE, MISC.:CONCRETE WITH QC/QA, SUBSTRUCTURE, AS PER PLAN	1487
		10				10		511	53014	10	CY	CLASS QC3 CONCRETE, MISC.:CONCRETE WITH QC/QA, SIDEWALK, AS PER PLAN	1487
		131				131		512	10100	131	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
		LUMP				LUMP		513	95020	LS		STRUCTURAL STEEL, MISC.: PREFABRICATED BRIDGE	1487
		12				12		516	10010	12	FT	ARMORLESS PREFORMED JOINT SEAL	
		42				42		516	10501	42	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC COMPRESSION SEAL, AS PER PLAN	1488

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GENERAL SUMMARY

HAM-75-7.85

293
2017

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SHEET NUM.				PART.				ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
1489	1518			02/IMS/PV	03/IMS/BR	04/IMS/BR	05/NHS/BR						
												STRUCTURE OVER 20 FOOT SPAN (HAM-75-0992) CONT.	
68						68		516	13600	68	SF	1" PREFORMED EXPANSION JOINT FILLER	
96						96		517	76300	96	FT	RAILING, MISC.: STEEL ORNAMENTAL RAILING	1488
6						6		523	20000	6	EACH	DYNAMIC LOAD TESTING	1488
6						6		523	20500	6	EACH	RESTRIKE	
28						28		526	10000	28	SY	REINFORCED CONCRETE APPROACH SLABS (T=12")	
12						12		526	90030	12	FT	TYPE C INSTALLATION	
421						421		607	39921	421	FT	VANDAL PROTECTION FENCE, 10' CURVED, COATED FABRIC, AS PER PLAN	1488
55						55		622	10161	55	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN	1488
												STRUCTURE OVER 20 FOOT SPAN (HAM-562-0026)	
	LUMP						LUMP	202	11003	LS		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	1517
	LUMP						LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN(PHASE A, REAR ABUTMENT)	1502
	LUMP						LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN(PHASE A, PIER)	1502
	LUMP						LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN(PHASE A, FORWARD ABUTMENT)	1502
	LUMP						LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN(PHASE C, REAR ABUTMENT)	1502
	LUMP						LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN(PHASE C, PIER)	1502
	LUMP						LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN(PHASE C, FORWARD ABUTMENT)	1502
	2,105						2,105	503	21101	2,105	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN	1502
	LUMP						LUMP	505	11100	LS		PILE DRIVING EQUIPMENT MOBILIZATION	
	1,500						1,500	507	00400	1,500	FT	STEEL PILES, MISC.: SOLDIER PILES	1517
	10,950						10,950	507	00601	10,950	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN, AS PER PLAN	1503
	11,615						11,615	507	00651	11,615	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED, AS PER PLAN	1503
	2,800						2,800	507	00701	2,800	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN, AS PER PLAN	1503
	3,000						3,000	507	00751	3,000	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED, AS PER PLAN	1503
	158,802						158,802	509	10000	158,802	LB	EPOXY COATED REINFORCING STEEL	
	345						345	511	34447	345	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN	1503
	22						22	511	34451	22	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN	1503
	233						233	511	40513	233	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS, AS PER PLAN	1503
	94						94	511	44113	94	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN	1503
	21						21	511	46013	21	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN	1503
	643						643	511	46511	643	CY	CLASS QC1 CONCRETE, FOOTING, AS PER PLAN	1503
	4,144						4,144	511	71200	4,144	SF	CONCRETE, MISC.: FACING OF CANTILEVER WALLS	1503
	1,237						1,237	512	10001	1,237	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN	1504
	1,411						1,411	512	10100	1,411	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
	1,086						1,086	512	44451	1,086	SY	TYPE E WATERPROOFING, AS PER PLAN	1504
	97						97	SPECIAL	51256100	97	SY	BUTYL RUBBER MEMBRANE WATERPROOFING	1517
	1,086						1,086	SPECIAL	51256202	1,086	SY	ASPHALTIC PANEL	1504
	1,241						1,241	SPECIAL	51267400	1,241	SF	WATERPROOFING, MISC: DAMPROOFING OF RAILROAD STRUCTURES	1503
	59,300						59,300	513	10221	59,300	LB	STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN	1504
	1,441,405						1,441,405	513	10321	1,441,405	LB	STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN	1504
	11,248						11,248	513	20000	11,248	EACH	WELDED STUD SHEAR CONNECTORS	
	39,225						39,225	514	80020	39,225	SF	SHOP PAINTING AND FIELD TOUCH-UP OF STRUCTURAL STEEL	1504
	208						208	516	12201	208	FT	STRUCTURAL STEEL EXPANSION JOINT, AS PER PLAN	1504
	48						48	516	13600	48	SF	1" PREFORMED EXPANSION JOINT FILLER	
	38						38	516	43201	38	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE), AS PER PLAN14"x20"x2.948" BEARING WITH LOAD PLATE	1561
	38						38	516	43301	38	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE), AS PER PLAN16"x18"x3.772" BEARING WITH LOAD PLATE	1561
	356						356	517	73101	356	FT	TEMPORARY BRIDGE RAILING, AS PER PLAN	1519
	70						70	517	75001	70	FT	RAILING, ALUMINUM, AS PER PLAN	1509
	292						292	517	76300	292	FT	RAILING, MISC.: NSRR ALUMINUM HANDRAIL WITH VANDAL PROTECTION FENCE	1510
	93						93	518	21200	93	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
	340						340	518	40012	340	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE	
	211						211	518	42201	211	FT	8" PERFORATED CORRUGATED STEEL PIPE, 707.01, AS PER PLAN	1504
	710						710	518	42301	710	FT	8" NON-PERFORATED CORRUGATED STEEL PIPE, INCLUDING SPECIALS, 707.01, AS PER PLAN	1504
	LUMP						LUMP	518	63300	LS		STRUCTURE DRAINAGE, MISC.: SUPERSTRUCTURE DRAINAGE SYSTEM	1504
	12						12	523	20000	12	EACH	DYNAMIC LOAD TESTING	
	12						12	523	20500	12	EACH	RESTRIKE	
	1,460						1,460	524	94603	1,460	FT	DRILLED SHAFTS, 30" DIAMETER, ABOVE BEDROCK, AS PER PLAN	1517
	LUMP						LUMP	SPECIAL	53000200	LS		STRUCTURES: SURVEY AND MONITORING OF TRACK AND TEMPORARY SHORING	1506
	LUMP						LUMP	SPECIAL	53000200	LS		STRUCTURES: PRECONSTRUCTION CONDITION SURVEY	1506
	4,144						4,144	SPECIAL	53013000	4,144	SF	FORM LINER	1504

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GENERAL SUMMARY

HAM-75-7.85

294
2017

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SHEET NUM.				PART.				ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
1518	1577	1615		02/IMS/PV	03/IMS/BR	04/IMS/BR	05/NHS/BR						
												STRUCTURE OVER 20 FOOT SPAN (HAM-562-0026) CONT.	
LUMP							LUMP	SPECIAL	53014000	LS		STRUCTURAL SURVEY AND MONITORING OF VIBRATION	1507
4,144							4,144	530	50010	4,144	SF	SPECIAL - RETAINING WALL: PREFABRICATED GEOCOMPOSITE DRAIN	1517
4,144							4,144	530	51020	4,144	SF	SPECIAL - RETAINING WALL, TIMBER LAGGING	1517
308							308	625	25605	308	FT	CONDUIT, 4", 725.051, AS PER PLAN	1513
												STRUCTURE OVER 20 FOOT SPAN (HAM-75-0834)	
	LUMP						LUMP	202	11003	LS		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	1575
	2						2	SPECIAL	20365000	2	EACH	SETTLEMENT PLATFORM	1575
	6,074						6,074	203	20001	6,074	CY	EMBANKMENT, AS PER PLAN	1767
	LUMP						LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (PIER)	1502
	216						216	503	21101	216	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN	1502
	LUMP						LUMP	503	21301	LS		UNCLASSIFIED EXCAVATION, AS PER PLAN	1576
	LUMP						LUMP	505	11100	LS		PILE DRIVING EQUIPMENT MOBILIZATION	
	7,975						7,975	507	00501	7,975	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN, AS PER PLAN	1575
	8,600						8,600	507	00551	8,600	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED, AS PER PLAN	1503
	8,085						8,085	507	00601	8,085	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN, AS PER PLAN	1575
	8,640						8,640	507	00651	8,640	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED, AS PER PLAN	1503
	204,278						204,278	509	10000	204,278	LB	EPOXY COATED REINFORCING STEEL	
	264						264	511	34447	264	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN	1503
	32						32	511	34451	32	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN	1503
	132						132	511	40513	132	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS, AS PER PLAN	1503
	85						85	511	44113	85	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN	1503
	480						480	511	45603	480	CY	CLASS QC4 MASS CONCRETE, SUBSTRUCTURE WITH QC/QA, AS PER PLAN	1503
	224						224	511	46013	224	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN	1503
	312						312	511	46513	312	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING, AS PER PLAN	1503
	433						433	511	53016	433	CY	CLASS QC4 CONCRETE, MISC.: FOOTING MASS CONCRETE WITH QC/QA	1503
	822						822	511	71200	822	SF	CONCRETE, MISC.: FACING OF CANTILEVER WALLS	1503
	821						821	512	10001	821	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN	1504
	1,089						1,089	512	10100	1,089	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
	738						738	512	44451	738	SY	TYPE E WATERPROOFING, AS PER PLAN	1504
	738						738	SPECIAL	51256202	738	SY	ASPHALTIC PANEL	1504
	5,373						5,373	SPECIAL	51267400	5,373	SF	WATERPROOFING MISC: DAMPPROOFING OF RAILROAD STRUCTURES	1503
	94,050						94,050	513	10221	94,050	LB	STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN	1504
	1,001,135						1,001,135	513	10321	1,001,135	LB	STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN	1504
	4,824						4,824	513	20000	4,824	EACH	WELDED STUD SHEAR CONNECTORS	
	40,550						40,550	514	80020	40,550	SF	SHOP PAINTING AND FIELD TOUCH-UP OF STRUCTURAL STEEL	
	99						99	516	12201	99	FT	STRUCTURAL STEEL EXPANSION JOINT, AS PER PLAN	1504
	294						294	516	13600	294	SF	1" PREFORMED EXPANSION JOINT FILLER	
	16						16	516	46201	16	EACH	BEARING DEVICE, ROCKER, AS PER PLAN	1605
	16						16	516	46900	16	EACH	BEARING DEVICE, MISC.: SELF-LUBRICATING CYLINDRICAL BEARING (EXP)	1604
	260						260	517	75001	260	FT	RAILING, ALUMINUM, AS PER PLAN	1509
	429						429	517	76300	429	FT	RAILING, MISC.: NSRR ALUMINUM HANDRAIL WITH VANDAL PROTECTION FENCE	1510
	549						549	518	21200	549	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
	266						266	518	42201	266	FT	8" PERFORATED CORRUGATED STEEL PIPE, 707.01, AS PER PLAN	1504
	60						60	518	42301	60	FT	8" NON-PERFORATED CORRUGATED STEEL PIPE, INCLUDING SPECIALS, 707.01, AS PER PLAN	1504
	LS						LS	518	63300	LS		STRUCTURE DRAINAGE, MISC.: SUPERSTRUCTURE DRAINAGE SYSTEM	1504
	6						6	523	20000	6	EACH	DYNAMIC LOAD TESTING	
	6						6	523	20500	6	EACH	RESTRIKE	
	1,092						1,092	524	94803	1,092	FT	DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK, AS PER PLAN	1505
	15						15	524	95100	15	EACH	DRILLED SHAFTS, MISC.: CSL TESTING	1505
	LUMP						LUMP	SPECIAL	53000200	LS		STRUCTURES SURVEY AND MONITORING OF TRACK AND TEMPORARY SHORING	1506
	LUMP						LUMP	SPECIAL	53000200	LS		STRUCTURES: PRECONSTRUCTION CONDITION SURVEY	1506
	6,169						6,169	SPECIAL	53013000	6,169	SF	FORM LINER	1504
	LUMP						LUMP	SPECIAL	53014000	LS		STRUCTURAL SURVEY AND MONITORING OF VIBRATION	1507
	90						90	611	01801	90	FT	8" CONDUIT, TYPE B, AS PER PLAN (DUCTILE IRON PIPE ANSI CLASS 52, MECHANICAL JOINTS AND FITTINGS)	1583
	443						443	625	25604	443	FT	CONDUIT, 4", 725.051	
												STRUCTURE OVER 20 FOOT SPAN (HAM-75-PROSSER)	
		LUMP					LUMP	202	11003	LS		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	1614
		250					250	202	23000	250	SY	PAVEMENT REMOVED	
		60					60	202	75000	60	FT	FENCE REMOVED	
		LUMP					LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN(REAR ABUTMENT)	1502

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GENERAL SUMMARY

HAM-75-7.85

295
2017

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SHEET NUM.			PART.					ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
1615	40	882	01/IMS/PV	02/IMS/PV	03/IMS/BR	04/IMS/BR	05/NHS/BR						
												STRUCTURE OVER 20 FOOT SPAN (HAM-75-PROSSER) CONT.	
LUMP							LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (SOUTHEAST WINGWALL)	1502
LUMP							LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (FORWARD ABUTMENT)	1502
LUMP							LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (SOUTHWEST WINGWALL)	1502
905							905	503	21101	905	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN	1502
LUMP							LUMP	505	11100	LS		PILE DRIVING EQUIPMENT MOBILIZATION	
11,025							11,025	507	00501	11,025	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN, AS PER PLAN	1614
11,860							11,860	507	00551	11,860	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED, AS PER PLAN	1503
97,065							97,065	509	10000	97,065	LB	EPOXY COATED REINFORCING STEEL	
58							58	511	34447	58	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN	1503
11							11	511	34451	11	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN	1503
32							32	511	44113	32	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN	1503
285							285	511	45603	285	CY	CLASS QC4 MASS CONCRETE, SUBSTRUCTURE WITH QC/QA, AS PER PLAN	1503
215							215	511	46013	215	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN	1503
165							165	511	46511	165	CY	CLASS QC1 CONCRETE, FOOTING, AS PER PLAN	1503
344							344	511	53016	344	CY	CLASS QC4 CONCRETE, MISC.: FOOTING MASS CONCRETE WITH QC/QA	1503
193							193	511	71200	193	SF	CONCRETE, MISC.: FACING OF CANTILEVER WALLS	1503
478							478	512	10001	478	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN	1504
562							562	512	10100	562	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
177							177	512	44451	177	SY	TYPE E WATERPROOFING, AS PER PLAN	1504
177							177	SPECIAL	51256202	177	SY	ASPHALTIC PANEL	1504
4,534							4,534	SPECIAL	51267400	4,534	SF	WATERPROOFING MISC.: DAMPPROOFING OF RAILROAD STRUCTURES	1503
10,585							10,585	513	10221	10,585	LB	STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN	1504
166,810							166,810	513	10321	166,810	LB	STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN	1504
1,656							1,656	513	20000	1,656	EACH	WELDED STUD SHEAR CONNECTORS	
5,340							5,340	514	80020	5,340	SF	SHOP PAINTING AND FIELD TOUCH-UP OF STRUCTURAL STEEL	
46							46	516	12201	46	FT	STRUCTURAL STEEL EXPANSION JOINT, AS PER PLAN	1504
259							259	516	13600	259	SF	1" PREFORMED EXPANSION JOINT FILLER	
6							6	516	46201	6	EACH	BEARING DEVICE, ROCKER, AS PER PLAN	1641
6							6	516	46900	6	EACH	BEARING DEVICE, MISC.: SELF-LUBRICATING CYLINDRICAL BEARING (EXP)	1640
161							161	517	75001	161	FT	RAILING, ALUMINUM, AS PER PLAN	1509
136							136	517	76300	136	FT	RAILING, MISC.: NSRR ALUMINUM HANDRAIL WITH VANDAL PROTECTION FENCE	1510
309							309	518	21200	309	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
212							212	518	42201	212	FT	8" PERFORATED CORRUGATED STEEL PIPE, 707.01, AS PER PLAN	1504
150							150	518	42301	150	FT	8" NON-PERFORATED CORRUGATED STEEL PIPE, INCLUDING SPECIALS, 707.01, AS PER PLAN	1504
LUMP							LUMP	518	63300	LS		STRUCTURE DRAINAGE, MISC.: SUPERSTRUCTURE DRAINAGE SYSTEM	1504
4							4	523	20000	4	EACH	DYNAMIC LOAD TESTING	
4							4	523	20500	4	EACH	RESTRIKE	
410							410	524	94803	410	FT	DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK, AS PER PLAN	1505
5							5	524	95100	5	EACH	DRILLED SHAFTS, MISC.: CSL TESTING	1505
LUMP							LUMP	SPECIAL	53000200	LS		STRUCTURES: SURVEY AND MONITORING OF TRACK AND TEMPORARY SHORING	1506
LUMP							LUMP	SPECIAL	53000200	LS		STRUCTURES: PRECONSTRUCTION CONDITION SURVEY	1506
4,828							4,828	SPECIAL	53013000	4,828	SF	FORM LINER	1504
LUMP							LUMP	SPECIAL	53014000	LS		STRUCTURAL SURVEY AND MONITORING OF VIBRATION	1507
148							148	625	25604	148	FT	CONDUIT, 4", 725.051	
												MISCELLANEOUS STRUCTURE	
	LUMP						LUMP		503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, STORMWATER DETENTION SYSTEM 1	40
	LUMP						LUMP		503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, STORMWATER DETENTION SYSTEM 2	40
	LUMP						LUMP		503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, STORMWATER DETENTION SYSTEM 3	40
	LUMP						LUMP		503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, STORMWATER DETENTION SYSTEM 6	40
		LUMP	LUMP	LUMP					503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
		LUMP	LUMP	LUMP					503	21300	LS		UNCLASSIFIED EXCAVATION	
		8,329	6,080	2,249					509	10000	8,329	LB	EPOXY COATED REINFORCING STEEL	
		27	20	7					511	46010	27	CY	CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING	
		47	34	13					511	46510	47	CY	CLASS QC1 CONCRETE, FOOTING	
		63	46	17					512	10100	63	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
		28	20	8					518	21201	28	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC, AS PER PLAN	882

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GENERAL SUMMARY

HAM-75-7.85

296
2017

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SHEET NUM.	PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
66	01/IMS/PV	02/IMS/PV						
							MAINTENANCE OF TRAFFIC	
600	438	162	253	90000	600	CY	PAVEMENT REPAIR, MISC.: PERFORMED IN 2022	65
600	438	162	253	90000	600	CY	PAVEMENT REPAIR, MISC.: PERFORMED IN 2023	65
400	292	108	253	90000	400	CY	PAVEMENT REPAIR, MISC.: PERFORMED IN 2024	65
200	146	54	253	90000	200	CY	PAVEMENT REPAIR, MISC.: PERFORMED IN 2025	65
23,500	17,155	6,345	254	01000	23,500	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.5" DEPTH	
1,998	1,459	539	407	20000	1,998	GAL	NON-TRACKING TACK COAT	
980	715	265	442	10301	980	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN	43
LUMP	LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS1	65
LUMP	LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS2	65
LUMP	LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS3	65
LUMP	LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS4	65
LUMP	LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS5	65
LUMP	LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS6	65
LUMP	LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS7	65
LUMP	LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS8	65
LUMP	LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS9	65
LUMP	LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS10	65
LUMP	LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS11	65
LUMP	LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS12	65
LUMP	LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS13	65
LUMP	LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS14	65
LUMP	LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS15	65
LUMP	LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS16	65
LUMP	LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS17	65
LUMP	LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS18	65
LUMP	LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS19	65
LUMP	LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS20	65
LUMP	LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS21	65
LUMP	LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS22	65
LUMP	LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS23	65
LUMP	LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS24	65
LUMP	LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS25	65
LUMP	LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS26	65
LUMP	LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS27	65
LUMP	LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, TS28	65
3,500	2,555	945	614	11110	3,500	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
22,729	16,592	6,137	614	11630	22,729	FT	INCREASED BARRIER DELINEATION	
66	48	18	614	12380	66	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	
2	1	1	614	12384	2	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)	
5	4	1	614	12400	5	EACH	WORK ZONE IMPACT ATTENUATOR, MISC.: 24" WIDE HAZARDS (UNIDIRECTIONAL), TYPE 3	61
7	5	2	614	12410	7	EACH	SPEED ZONE AHEAD SYMBOL SIGN	
LUMP	LUMP	LUMP	614	12420	LS		DETOUR SIGNING	
41	30	11	614	12470	41	EACH	WORK ZONE SPEED LIMIT SIGN	
27	20	7	614	12484	27	EACH	WORK ZONE INCREASED PENALTIES SIGN	
25	18	7	614	12500	25	EACH	REPLACEMENT SIGN	
250	183	67	614	12600	250	EACH	REPLACEMENT DRUM	
6	4	2	614	12756	6	EACH	WORK ZONE CROSSOVER LIGHTING SYSTEM	
3,600	2,628	972	614	12801	3,600	EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	63
145	106	39	614	13000	145	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
3,915	2,858	1,057	614	13310	3,915	EACH	BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL	
50	37	13	614	13312	50	EACH	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL	
2,595	1,894	701	614	13350	2,595	EACH	OBJECT MARKER, ONE WAY	
660	482	178	614	13360	660	EACH	OBJECT MARKER, TWO WAY	
16	12	4	614	18601	16	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	62

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GENERAL SUMMARY

HAM-75-7.85

297
2017

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SHEET NUM.													PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
									66	67	1716		01/IMS/PV	02/IMS/PV						
																			MAINTENANCE OF TRAFFIC CONT.	
										38.6			28.2	10.4	614	20056	38.6	MILE	WORK ZONE LANE LINE, CLASS I, 6", 807 PAINT	
										17.12			12.5	4.62	614	20560	17.12	MILE	WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT	
										0.2			0.1	0.1	614	21100	0.2	MILE	WORK ZONE CENTER LINE, CLASS I, 642 PAINT	
										79.7			58.2	21.5	614	22056	79.7	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 807 PAINT	
										0.4			0.3	0.1	614	22110	0.4	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	
										17.51			12.78	4.73	614	22360	17.51	MILE	WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT	
										59,990			43,793	16,197	614	23110	59,990	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807 PAINT	
										16,879			12,322	4,557	614	23690	16,879	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 12", 642 PAINT	
										36,869			26,914	9,955	614	24102	36,869	FT	WORK ZONE DOTTED LINE, CLASS I, 6", 807 PAINT	
										21,503			15,697	5,806	614	24612	21,503	FT	WORK ZONE DOTTED LINE, CLASS III, 6", 642 PAINT	
										1,818			1,327	491	614	25200	1,818	FT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT	
										56			41	15	614	26200	56	FT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	
										378			276	102	614	27050	378	FT	WORK ZONE CROSSWALK LINE, CLASS I, 12", 642 PAINT	
										24			18	6	614	28200	24	FT	WORK ZONE GORE MARKING, CLASS II, 642 PAINT	
										26			19	7	614	30200	26	EACH	WORK ZONE ARROW, CLASS I, 642 PAINT	
										10.5			7.7	2.8	614	98000	10.5	MILE	WORK ZONE PAVEMENT MARKING, MISC.: LANE LINE, 6", CLASS I, SPRAY THERMOPLASTIC	64
										25			18	7	614	98000	25	MILE	WORK ZONE PAVEMENT MARKING, MISC.: EDGE LINE, 6", CLASS I, SPRAY THERMOPLASTIC	64
										14,125			10,311	3,814	614	98100	14,125	FT	WORK ZONE PAVEMENT MARKING, MISC.: CHANNELIZING LINE, 8", CLASS I, SPRAY THERMOPLASTIC	64
										6,450			4,709	1,741	614	98100	6,450	FT	WORK ZONE PAVEMENT MARKING, MISC.: DOTTED LINE, 12", CLASS I, SPRAY THERMOPLASTIC	64
										LUMP			LUMP	LUMP	615	10000	LS		ROADS FOR MAINTAINING TRAFFIC	
										9,325			6,807	2,518	615	20000	9,325	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	
										5,840			4,263	1,577	615	20001	5,840	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	64
										1,850			1,350	500	616	10000	1,850	MGAL	WATER	
										33,720			24,616	9,104	622	41011	33,720	FT	PORTABLE BARRIER, 50", AS PER PLAN	64
										9			7	2	622	41050	9	EACH	PORTABLE BARRIER, "Y" CONNECTOR	
										79,535			58,061	21,474	622	41100	79,535	FT	PORTABLE BARRIER, UNANCHORED	
										48,110			35,120	12,990	622	41110	48,110	FT	PORTABLE BARRIER, ANCHORED	
																			ITEMS OF WORK (RAILROAD)	
											LUMP		LUMP		100	00300	LS		PREMIUM ON RAILROADS' PROTECTIVE PUBLIC LIABILITY AND PROPERTY DAMAGE LIABILITY INSURANCE	
											9,480		9,480		203	10001	9,480	CY	EXCAVATION, AS PER PLAN	1716
											341		341		203	35001	341	CY	GRANULAR EMBANKMENT, AS PER PLAN	1716
											13,890		13,890		204	20001	13,890	CY	EMBANKMENT, AS PER PLAN	1716
											1,696		1,696		304	20001	1,696	CY	AGGREGATE BASE, AS PER PLAN	1716
											LUMP		LUMP		623	10001	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN	1716
											11,549		11,549		659	10000	11,549	SY	SEEDING AND MULCHING	
											7,500		7,500		SPECIAL	90012000	7,500	TKFT	TRACK REMOVED	1716A
																			INCIDENTALS	
									LUMP				LUMP	LUMP	614	11000	LS		MAINTAINING TRAFFIC	59
													29	11	619	16021	40	MNTH	FIELD OFFICE, TYPE C, AS PER PLAN	42
													LUMP	LUMP	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
													LUMP	LUMP	624	10001	LS		MOBILIZATION, AS PER PLAN	43A
													LUMP	LUMP	108	10000	LS		CPM PROGRESS SCHEDULE	
													LUMP	LUMP	SPECIAL	11110000	LS		DEPARTMENTS SHARE FACILITATED PARTNERING COSTS	
													LUMP	LUMP	SPECIAL	69098400	LS		CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION	43

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GENERAL SUMMARY

HAM-75-7.85

298
2017

J:\20110903\ODOT\HAM\77889\roadway\sheets\77889GG001.dgn 5/25/2022 2:22:02 PM rshannon

ESTIMATED QUANTITIES SHEET NO.	202 STRUCTURE REMOVED EACH	202 PORTIONS OF STRUCTURE REMOVED, AS PER PLAN LUMP	202 HEADWALL REMOVED EACH	202 PAVEMENT REMOVED, AS PER PLAN SQ YD	202 WEARING COURSE REMOVED SQ YD	202 WALK REMOVED SQ FT	202 CURB REMOVED FT	202 GUTTER REMOVED FT	202 PIPE REMOVED, 24" AND UNDER FT	202 PIPE REMOVED, OVER 24" FT	202 BUILDING DEMOLISHED LS	202 MANHOLE REMOVED EACH	202 CATCH BASIN REMOVED EACH	202 INLET REMOVED EACH	202 INLET ABANDONED EACH	202 INLET ABANDONED, AS PER PLAN EACH	202 CATCH BASIN ABANDONED EACH	202 MANHOLE ABANDONED EACH	202 MANHOLE ABANDONED, AS PER PLAN EACH	202 SPECIAL - FILL & PLUG EX. CONDUIT FT	202 FENCE REMOVED FT	202 REMOVAL MISC.: BILLBOARD EACH	202 REMOVAL MISC.: ABANDONED WATER LINE FT	
300			2	40,952	40,952			397	631	756		1	10	7	4	1	1	3		1,896	4,994	4		
301				37,438	37,438			134	2,484	30		9	18	6	3		4	4		1,758	4,198			
302		1	1	55,052	54,979	1,654			4,876	330		24	14	9				1		1,001	6,775			
303				28,118	28,118				2,635	1,220		8	27	16				6		2,274	4,997			
304	1			22,567	22,567	3,010		794	2,004	664	1	13	13	8	1		3	6	1	1,410	2,494	4		
305				13,824	13,824	7,666	123		30				3					5		1,244	194		230	
TOTALS CARRIED TO GENERAL SUMMARY	1	1	3	197,951	197,878	12,330	123	1,325	12,660	3,000	1	55	85	46	8	1	8	25	1	9,583	23,652	8	230	

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REMOVAL SUBSUMMARY

HAM-75-7.85

299
2017

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SHEET NO.	REF. NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	202 STRUCTURE REMOVED	202 PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	202 HEADWALL REMOVED	202 PAVEMENT REMOVED, AS PER PLAN	202 WEARING COURSE REMOVED	202 WALK REMOVED	202 GUTTER REMOVED	202 PIPE REMOVED, 24" AND UNDER	202 PIPE REMOVED, OVER 24"	202 BUILDING DEMOLISHED	202 MANHOLE REMOVED	202 CATCH BASIN REMOVED	202 INLET REMOVED	202 INLET ABANDONED	202 INLET ABANDONED, AS PER PLAN	202 CATCH BASIN ABANDONED	202 MANHOLE ABANDONED	202 MANHOLE ABANDONED, AS PER PLAN	202 SPECIAL - FILL & PLUG EX. CONDUIT	202 FENCE REMOVED	202 REMOVAL MISC.: BILLBOARD	
						EACH	LUMP	EACH	SQ YD	SQ YD	SQ FT	FT	FT	FT	LS	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	EACH	
346	R1	414+61		LT	I.R. 75																						
346	R2	410+00	417+16	LT/RT	I.R. 75				4522	4522												1		36			
346	R3	413+51	415+99	RT	I.R. 75								248					1									
346	R4	418+86	419+26	LT/RT	I.R. 75								162			1		1									
346	R5	419+12	419+50	LT/RT	I.R. 75				736	736																	
346	R6	416+45	419+50	LT	I.R. 75																				335		
346	R7	416+52	419+50	LT	I.R. 75																				279		
346	R8	410+00	417+39	RT	I.R. 75				4855	4855																	
346	R9	409+58		RT	I.R. 75												1										
348	R1	419+50	421+53	LT	I.R. 75																				189		
348	R2	419+50	432+00	LT	I.R. 75																				1250		
348	R3	430+50	431+37	LT	I.R. 75																				87		
348	R4	420+98	421+22	LT/RT	I.R. 75								20						1			1		264			
348	R5	423+84	423+98	LT/RT	I.R. 75								5						1					119			
348	R6	426+25	426+28	LT/RT	I.R. 75			2																207			
348	R7	428+93	429+60	LT/RT	I.R. 75												2	1						184			
348	R8	424+65	432+00	RT	I.R. 75																				749		
348	R9	431+07	431+07	RT	I.R. 75																				13		
348	R10	419+50	432+00	LT/RT	I.R. 75				7835	7835																	
348	R11	419+50	432+00	RT	I.R. 75				9209	9209																	
348	R12	429+16	430+35	RT	I.R. 75																			419			
348	R13	422+79	426+66	LT	I.R. 75				322	322																	
348	R14	426+33	426+42		LT/RT														1					59			
349	R1	433+19	434+46	LT	I.R. 75									183								1		166			
349	R2	432+00	433+57	LT	I.R. 75																				157		
349	R3	435+39	444+50	RT	I.R. 75				5840	5840																	
349	R4	436+61	437+40	LT	I.R. 75								6											74			
349	R5	435+23	439+97	LT	I.R. 75																				523		
349	R6	440+32	444+50	LT	I.R. 75																				426		
349	R7	440+53	444+50	LT	I.R. 75							397															
349	R8	436+57	444+50	RT	I.R. 75									573				4		1				228			
349	R9	432+00	433+80	RT	I.R. 75																				210		
349	R10	436+78	436+91	RT	I.R. 75																1			14			
349	R11	435+26	439+29	RT	I.R. 75																				433		
349	R12	440+36	440+43	RT	I.R. 75								4				2							57			
349	R13	443+20	443+26	RT	I.R. 75								66				2										
349	R14	443+18	444+50	RT	I.R. 75																				286		
349	R15	439+22	439+54	LT/RT	I.R. 75								68				1										
349	R16	440+36	440+68	LT	I.R. 75												1							69			
349	R17	440+63		LT	I.R. 75																					2	
349	R18	439+82	440+38	RT	I.R. 75																				57		
349	R19	439+54		RT	I.R. 75																					2	
349	R20	432+00	433+61	LT	I.R. 75				1135	1135																	
349	R21	432+00	433+61	RT	I.R. 75				1023	1023																	
349	R22	435+39	444+50	LT/RT	I.R. 75				5475	5475																	
349	R23	439+55	439+64	RT	I.R. 75								52				1										
349	R24	429+14	433+36	RT	I.R. 75														1								
TOTALS CARRIED TO REMOVAL SUBSUMMARY								2	40952	40952		397	631	756		1	10	7	4	1	1	3		1896	4994	4	

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REMOVAL ESTIMATED QUANTITIES

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300
2017

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SHEET NO.	REF. NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	202 STRUCTURE REMOVED	202 PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	202 HEADWALL REMOVED	202 PAVEMENT REMOVED, AS PER PLAN	202 WEARING COURSE REMOVED	202 WALK REMOVED	202 GUTTER REMOVED	202 PIPE REMOVED, 24" AND UNDER	202 PIPE REMOVED, OVER 24"	202 BUILDING DEMOLISHED	202 MANHOLE REMOVED	202 CATCH BASIN REMOVED	202 INLET REMOVED	202 INLET ABANDONED	202 INLET ABANDONED, AS PER PLAN	202 CATCH BASIN ABANDONED	202 MANHOLE ABANDONED	202 MANHOLE ABANDONED, AS PER PLAN	202 SPECIAL - FILL & PLUG EX. CONDUIT	202 FENCE REMOVED	202 REMOVAL MISC.: BILLBOARD
						EACH	LUMP	EACH	SQ YD	SQ YD	SQ FT	FT	FT	FT	LS	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	EA
350	R1	444+50	451+17		I.R. 75				8616	8616																
350	R2	453+25	457+00		I.R. 75				4376	4376																
350	R3	03+21	08+65		RAMP H				2134	2134																
350	R4	13+99	10+54		RAMP E				2099	2099																
350	R5	13+34	21+17		TOWNE/CEDAR				3413	3413																
350	R6	444+50	457+00	CENTER/RT	I.R. 75									30		1						2		1234		
350	R7	446+20	446+29	RT	I.R. 75								65				1		1							
350	R8	447+97	449+16	RT	I.R. 75								129					1				1				
350	R9	450+99	451+84	LT	I.R. 75								84			1										
350	R10	451+31	451+52	RT	I.R. 75								20				1					1				
350	R11	451+31	451+28	RT	I.R. 75								70			1	2									
350	R12	452+13	451+71	RT	I.R. 75								160			2										
350	R13	452+13	452+08	RT	I.R. 75								6				1									
350	R14	452+13	17+42	RT/LT	75/TOWNE								42				1									
350	R15	452+13	452+32	RT	I.R. 75								108				1									
350	R16	453+08	17+34	RT	75/TOWNE								44				1									
350	R17	453+08	453+16	RT	I.R. 75								6				1									
350	R18	452+79	452+82	LT	I.R. 75								26			1										
350	R19	NOT USED		LT	I.R. 75																					
350	R20	453+08	16+27	RT	I.R. 75								144			1										
350	R21	453+08	452+72	RT	I.R. 75								114			2										
350	R22	453+08	453+35	RT	I.R. 75								32				1									
350	R23	455+18	455+33	RT	I.R. 75																1			43		
350	R24	455+18	455+47	LT/RT	I.R. 75														1		1			143		
350	R25	444+50	451+43	LT	I.R. 75																				804	
350	R26	454+30	457+00	LT	I.R. 75																				471	
350	R27	444+50	449+05	RT	I.R. 75																				463	
350	R28	451+23	452+36	RT	I.R. 75																				155	
350	R29	444+50	445+22	LT	I.R. 75							74														
350	R30	447+21	447+80	RT	I.R. 75							60														
350	R31	452+09	452+82		I.R. 75								204													
351	R1	457+00	469+50		I.R. 75				16625	16625																
351	R2	10+04	10+54		RAMP E				175	175																
351	R3	457+00	467+95	RT/CENTER	I.R. 75								856					4	1					228		
351	R4	458+26	458+36	LT	I.R. 75																1			50		
351	R5	459+27	459+37	LT	I.R. 75								49				1									
351	R6	459+27	459+36	RT	I.R. 75								76				2									
351	R7	460+28	460+36	LT	I.R. 75								49				1									
351	R8	462+48	462+58	LT	I.R. 75								68				1									
351	R9	462+48	462+57	RT	I.R. 75								66				1									
351	R10	465+19	465+31	RT	I.R. 75								2				1				1			60		
351	R11	467+95	467+95	LT	I.R. 75								64				1	1								
351	R12	457+00	469+50	LT	I.R. 75																				1246	
351	R13	458+97	469+50	RT	I.R. 75																				1059	
TOTALS CARRIED TO REMOVAL SUBSUMMARY									37438	37438		134	2484	30		9	18	6	3		4	4		1758	4198	

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REMOVAL ESTIMATED QUANTITIES

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301
2017

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SHEET NO.	REF. NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	202 STRUCTURE REMOVED	202 PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	202 HEADWALL REMOVED	202 PAVEMENT REMOVED, AS PER PLAN	202 WEARING COURSE REMOVED	202 WALK REMOVED	202 GUTTER REMOVED	202 PIPE REMOVED, 24" AND UNDER	202 PIPE REMOVED, OVER 24"	202 BUILDING DEMOLISHED	202 MANHOLE REMOVED	202 CATCH BASIN REMOVED	202 INLET REMOVED	202 INLET ABANDONED	202 INLET ABANDONED, AS PER PLAN	202 CATCH BASIN ABANDONED	202 MANHOLE ABANDONED	202 MANHOLE ABANDONED, AS PER PLAN	202 SPECIAL - FILL & PLUG EX. CONDUIT	202 FENCE REMOVED	202 REMOVAL MISC.: BILLBOARD	
						EACH	LUMP	EACH	SQ YD	SQ YD	SQ FT	FT	FT	FT	LS	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	EA	EA
352	R1	469+50	482+00		I.R. 75				14826	14826																	
352	R2	473+87	482+00	CENTER	I.R. 75								553					3						250			
352	R3	475+74	476+65	RT	RAMP D/75								187			2	2										
352	R4	477+50	479+02	RT	RAMP D								172			1											
352	R5	479+02	480+89	RT	RAMP D								196														
352	R6	478+98	479+08	RT	RAMP D/75								116			1						1		66			
352	R7	480+80		RT	RAMP D											1											
352	R8	480+85	481+15	RT	RAMP D/75												1	1						80			
352	R9	469+50	482+00	LT	I.R. 75																				1324		
352	R10	476+17	476+66	LT	I.R. 75																				158		
352	R11	469+50	482+00	RT	I.R. 75																				1205		
352	R12	470+94	482+00	RT	I.R. 75																				1348		
352	R13	481+15	482+00	RT	I.R. 75											1								138			
352	R14	475+91	481+46	LT	I.R. 75								578														
352	R15	480+98	482+00	LT	I.R. 75				74		92																
353	R1	482+00	494+50		I.R. 75				17099	17099																	
353	R2	493+81	494+48		RAMP C				212	212																	
353	R3	490+25	493+83		RAMP D				1605	1605																	
353	R4	482+40	482+00	CENTER	I.R. 75								39					1									
353	R5	485+99	491+63	CENTER	I.R. 75								486					3						82			
353	R6	490+09	490+10	RT	I.R. 75								72				1										
353	R7	490+87	491+63	RT	I.R. 75								95			1											
353	R8	491+33	491+33	RT	I.R. 75								26			1											
353	R9	487+98	491+29	RT	RAMP E/D								355			4	1										
353	R10	491+32	491+29	LT	RAMP D								10				1										
353	R11	491+60	491+54	LT	RAMP D/C									256		2											
353	R12	494+50	491+69	CENTER	I.R. 75								206	74				1									
353	R13	494+46	491+63	RT	RAMP C								285			1											
353	R14	493+35	493+20	RT	RAMP C								20				1										
353	R15	482+00	490+80	LT	I.R. 75																				911		
353	R16	491+42	494+50	LT	I.R. 75																				327		
353	R17	482+00	490+90	RT	I.R. 75																				906		
353	R18	482+00	485+96	RT	I.R. 75																				401		
353	R19	482+00	486+84	RT	I.R. 75								142			2								385			
353	R20	485+91	486+17	RT	I.R. 75			1																			
353	R21	488+26		CENTER	I.R. 75	1																					
353	R22	10+39	11+40	LT	S.R. 561																				195		
353	R23	482+00	485+86	LT	I.R. 75						1562																
354	R1	494+50	507+00		I.R. 75				15393	15393																	
354	R2	498+63	505+95		RAMP A				2146	2146																	
354	R3	501+70	506+03		RAMP B				2139	2139																	
354	R4	494+48	498+64		RAMP C				1557	1557																	
354	R5	499+96	506+74	RT	RAMP A								721			4	3										
354	R6	505+79	506+57	RT	RAMP A								250				1										
354	R7	503+27	504+42	LT/RT	RAMP B								367			3	3										
TOTALS CARRIED TO REMOVAL SUBSUMMARY							1	1	55052	54979	1654		4876	330		24	14	9				1		1001	6775		

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REMOVAL ESTIMATED QUANTITIES

HAM-75-7.85

302
2017

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SHEET NO.	REF. NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	202 STRUCTURE REMOVED	202 PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	202 HEADWALL REMOVED	202 PAVEMENT REMOVED, AS PER PLAN	202 WEARING COURSE REMOVED	202 WALK REMOVED	202 GUTTER REMOVED	202 PIPE REMOVED, 24" AND UNDER	202 PIPE REMOVED, OVER 24"	202 BUILDING DEMOLISHED	202 MANHOLE REMOVED	202 CATCH BASIN REMOVED	202 INLET REMOVED	202 INLET ABANDONED	202 INLET ABANDONED, AS PER PLAN	202 CATCH BASIN ABANDONED	202 MANHOLE ABANDONED	202 MANHOLE ABANDONED, AS PER PLAN	202 SPECIAL - FILL & PLUG EX. CONDUIT	202 FENCE REMOVED	202 REMOVAL MISC.: BILLBOARD	
						EACH	LUMP	EACH	SQ YD	SQ YD	SQ FT	FT	FT	FT	LS	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	EA	
354	R8	494+50	504+44	LT/CENTER	RAMP B/75								374	511		1		6									
354	R9	500+28	499+69	LT	I.R. 75												1							140			
354	R10	500+38	499+97	LT	I.R. 75								40				1										
354	R11	499+87	499+69	RT	I.R. 75								135														
354	R12	499+46	499+69	RT	I.R. 75								65				1										
354	R13	498+06	497+87	RT	I.R. 75								55				1										
354	R14	497+28	497+19	LT	I.R. 75								62				1										
354	R15	496+92	497+19	RT	I.R. 75								88				3										
354	R16	496+17	494+46	RT	RAMP C								169			1	1										
354	R17	494+76	494+81	LT	RAMP C								38														
354	R18	505+91	507+00	RT/LT	RAMP B/75								58			1											
354	R19	494+50	498+30	LT	I.R. 75																				400		
354	R20	505+64	507+00	RT	I.R. 75																				142		
354	R21	506+28	507+00	LT	I.R. 75																				73		
354	R22	494+92	-	RT	RAMP C											1											
354	R23	19+00	19+01	LT/RT	SUMMIT								35					1									
354	R24	19+01	19+01	RT	SUMMIT								8				1										
354	R25	19+00	19+01	RT	SUMMIT								11				1										
355	R1	507+00	519+50	RT/LT	I.R. 75				16694	16694																	
355	R2	507+14	507+36	RT	I.R. 75								69	52			1	1									
355	R3	507+00	519+50	LT	I.R. 75									647		2						2		582			
355	R4	509+93	510+64	RT/CENTER	I.R. 75								48			1	1							117			
355	R5	510+76	510+64	LT	I.R. 75								45					1									
355	R6	513+87	513+59	CENTER/LT	I.R. 75								55					1									
355	R7	513+59	513+68	CENTER/RT	I.R. 75								42				1					1		113			
355	R8	517+13	516+88	RT/LT	I.R. 75								165				1	1									
355	R9	516+84	516+88	LT	I.R. 75								76				1	1									
355	R10	518+81	519+50	CENTER	I.R. 75								67					1									
355	R11	507+00	508+00	RT/LT	I.R. 75								75														
355	R12	507+00	519+50	LT	I.R. 75																				1250		
355	R13	507+00	519+50	RT	I.R. 75																				1258		
355	R14	511+99	514+58	LT	I.R. 75				154	154																	
355	R15	509+93	509+93	RT	I.R. 75								39				1	1									
355	R16	513+68	517+13	RT	I.R. 75								350				1										
356	R1	519+50	532+12		I.R. 75				11269	11269																	
356	R2	519+50	531+17	LT	I.R. 75									10		1						3		1173			
356	R3	519+50	520+08	CENTER/LT	I.R. 75								56				2							100			
356	R4	520+40	520+08	LT	I.R. 75								33				1										
356	R5	521+00		CENTER	I.R. 75													1									
356	R6	526+25	526+28	LT	I.R. 75													1						49			
356	R7	526+24	526+25	LT	I.R. 75								5				1										
356	R8	NOT USED																									
356	R9	528+75	528+75	LT	I.R. 75								16				1										
356	R10	NOT USED																									
356	R11	531+15	531+15	LT	I.R. 75								8				1										
356	R12	529+00	532+39	RT	I.R. 75								348				3										
356	R13	519+50	522+53	LT	I.R. 75																				448		
356	R14	522+53	531+36	LT	I.R. 75																				1138		
356	R15	519+50	522+32	RT	I.R. 75																				287		
TOTALS CARRIED TO REMOVAL SUBSUMMARY									28118	28118			2635	1220		8	27	16				6		2274	4997		

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REMOVAL ESTIMATED QUANTITIES

HAM-75-7.85

303
2017

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SHEET NO.	REF. NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	202 STRUCTURE REMOVED EACH	202 PORTIONS OF STRUCTURE REMOVED, AS PER PLAN LUMP	202 HEADWALL REMOVED EACH	202 PAVEMENT REMOVED, AS PER PLAN SQ YD	202 WEARING COURSE REMOVED SQ YD	202 WALK REMOVED SQ FT	202 CURB REMOVED FT	202 GUTTER REMOVED FT	202 PIPE REMOVED, 24" AND UNDER FT	202 PIPE REMOVED, OVER 24" FT	202 BUILDING DEMOLISHED LS	202 MANHOLE REMOVED EACH	202 CATCH BASIN REMOVED EACH	202 INLET REMOVED EACH	202 INLET ABANDONED EACH	202 INLET ABANDONED, AS PER PLAN EACH	202 CATCH BASIN ABANDONED EACH	202 MANHOLE ABANDONED EACH	202 MANHOLE ABANDONED, AS PER PLAN EACH	202 SPECIAL - FILL & PLUG EX. CONDUIT FT	202 FENCE REMOVED FT	202 REMOVAL MISC.: BILLBOARD EA
356	R16	522+44	532+43	RT	I.R. 75																						1075	
356	R17	525+15	530+22	LT	I.R. 75								500							1								
356	R18	530+84		LT	I.R. 75	1																						
356	R19	527+35		LT	I.R. 75											1											
356	R20	524+93	531+21	LT	I.R. 75				4141	4141																		
356	R21	520+58	522+07	RT	I.R. 75									313			1	2	3									
356	R22	525+45	526+20	RT	I.R. 75									40					2									
356	R23	524+48	524+58	RT	I.R. 75									126					2									
357	R1	412+00	417+27	LT/RT	RAMP M				1191	1191																		
357	R2	419+49	420+55	LT/RT	RAMP M				323	323																		
361	R1	412+64	416+99	LT/RT	RAMP N				1259	1259																		
361	R2	414+25	414+91	LT/RT	RAMP N										63		1											
361	R3	414+91	415+06	LT/RT	RAMP N									23				1										
363	R1	404+67	406+32	LT/RT	RAMP J								237															
363	R2	405+95	411+21	LT/RT	RAMP J									159			1	1						4		412		
363	R3	406+22	406+40	LT/RT	RAMP J									63				1										
363	R4	410+05	410+15	RT	RAMP J																	1				112		
363	R5	412+54	413+43	LT/RT	RAMP J									129				2				1		1	134			
363	R6	413+10	413+51	LT	RAMP J																			1		63		
363	R7	407+88	415+34	RT	RAMP J																						636	
363	R8	403+79	404+98	LT	RAMP J																						137	
363	R9	407+31	408+75	LT	RAMP J																						183	
363	R10	406+20		LT	RAMP J																							1
363	R11	407+02		LT	RAMP J																							1
363	R12	406+77		RT	RAMP J																							1
363	R13	407+83		RT	RAMP J																							1
363	R14	403+79	404+93	LT	RAMP J				149	149																		
363	R15	403+79	416+00	LT/RT	RAMP J				5118	5118																		
363	R16	403+79	416+29	LT/RT	RAMP J				6088	6088																		
363	R17	413+20	413+57	RT	RAMP J								57															
363	R18	408+33	408+43	LT/RT	RAMP J									15					1									
364	R1	416+14	429+29	LT/RT	RAMP J									274	601		5							1		533		
364	R2	416+99	418+14	LT	RAMP J									264			3											
364	R3	416+99	417+90	LT	RAMP J									255			1	1								43		
364	R4	416+00	428+49	LT/RT	RAMP J				3043	3043																		
364	R5	418+42	419+32	LT	RAMP J									97				1										
364	R6	423+97	424+18	RT	RAMP J									50				1										
364	R7	423+97	424+37	RT	RAMP J									41				1										
364	R8	415+97	416+99	LT	RAMP J																	1				113		
364	R9	419+43	419+58	LT	RAMP J									19				1										
364	R10	421+17	421+86	RT	RAMP J									7				1										
365	R1	20+48	23+42	RT	LAIDLAW						1462																	
365	R2	20+87	23+47	LT	LAIDLAW						1548																	
367	R1	419+50	423+51	LT/RT	RAMP K				1255	1255																		
367	R2	419+50	424+51	RT	RAMP K																						463	
367	R3	421+50	421+60	LT	RAMP K									129			1											
TOTALS CARRIED TO REMOVAL SUBSUMMARY						1			22567	22567	3010		794	2004	664	1	13	13	8	1		3	6	1	1410	2494	4	

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HAM-75-7.85

304
2017

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SHEET NO.	REF. NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	202 STRUCTURE REMOVED	202 PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	202 HEADWALL REMOVED	202 PAVEMENT REMOVED, AS PER PLAN	202 WEARING COURSE REMOVED	202 WALK REMOVED	202 CURB REMOVED	202 GUTTER REMOVED	202 PIPE REMOVED, 24" AND UNDER	202 PIPE REMOVED, OVER 24"	202 MANHOLE REMOVED	202 CATCH BASIN REMOVED	202 INLET REMOVED	202 INLET ABANDONED	202 INLET ABANDONED, AS PER PLAN	202 CATCH BASIN ABANDONED	202 MANHOLE ABANDONED	202 MANHOLE ABANDONED, AS PER PLAN	202 SPECIAL - FILL & PLUG EX. CONDUIT	202 FENCE REMOVED	202 REMOVAL MISC.: BILLBOARD	202 REMOVAL MISC.: ABANDONED WATER LINE
						EACH	LUMP	EACH	SQ YD	SQ YD	SQ FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	EA	FT
376	R1	20+76	22+22	LT	S.R. 562																	1		143			
376	R2	22+22	22+35	LT/RT	S.R. 562									15			1							41			
376	R3	20+00	27+50	RT	S.R. 562				3315	3315																	
376	R4	20+00	27+50	LT	S.R. 562				3411	3411																	
376	R5	20+00	20+36	RT	S.R. 562																				36		
376	R6	22+22	26+30	LT/RT	S.R. 562												1					2		475			
377	R1	26+30	31+59	LT/RT	S.R. 562																	2		524			
377	R2	29+19	29+19	RT	S.R. 562									15			1							61			
377	R3	27+50	32+00	RT	S.R. 562				2383	2383																	
377	R4	27+50	33+33	LT	S.R. 562				2989	2989																	
387	R1	39+19	39+31	RT	SUMMIT						60	12															
387	R2	39+63	39+74	RT	SUMMIT						60	12															
387	R3	40+59	40+71	RT	SUMMIT						60	12															
379	R1	33+30	34+00	LT/RT	RAMP P				238	238																	
380	R1	34+00	35+09	LT/RT	RAMP P				420	420																	
381	R1	31+80	34+50	LT/RT	RAMP Q				1068	1068																	
383	R1	13+34	16+78	LT	TOWNE						1344																
383	R2	13+34	16+36	RT	TOWNE						1225																
383	R3	16+44	17+00	RT	TOWNE						216																
383	R4	16+87	17+00	LT	TOWNE						51																
384	R1	17+00	17+45	RT	TOWNE						176																
384	R2	17+00	17+50	LT	TOWNE						203																
384	R3	00+45	01+26	RT	CEDAR						320																
384	R4	17+74	19+87	RT	TOWNE						870																
384	R5	17+77	20+89	LT	TOWNE						1186																
384	R6	00+48	00+64	LT	CEDAR						82																
384	R7	20+24	20+37	RT	TOWNE						94																
384	R7	17+60	19+86	RT	TOWNE																						230
382	R1	440+77	442+03	LT	I.R. 75						488																
388	R1	05+00	06+42	LT/RT	PED PATH						771																
388	R2	04+91	06+42	LT	PED PATH																				158		
388	R3	08+86	09+15	LT	PED PATH						460	87															
TOTALS CARRIED TO REMOVAL SUBSUMMARY									13824	13824	7666	123		30			3					5		1244	194		230

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REMOVAL ESTIMATED QUANTITIES

HAM-75-7.85

305
2017

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SHEET NO.	REF. NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	204 SUBGRADE COMPACTION	301 4 3/4" ASPHALT CONCRETE BASE	304 6" AGGREGATE BASE	407 NON-TRACKING TACK COAT	408 PRIME COAT	448 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1	452 6" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1	452 8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1	452 9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1	452 10" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS	607 FENCE MISC.: WOOD FENCE	608 4" CONCRETE WALK	608 CURB RAMP	609 CURB, TYPE 6			
						SY	CY	CU YD	GAL	GAL	CY	SQ YD	SQ YD	SQ YD	SY	FT	SF	SF	FT			
352	D1	480+98	481+76	LT	I.R. 75										74							
352	W1	481+76	482+00	LT	I.R. 75												92					
353	W1	482+00	485+86	LT	I.R. 75												1562					
387	W1	39+19	39+31	RT	SUMMIT												60					
387	W2	39+63	39+74	RT	SUMMIT												60					
387	W3	40+59	40+71	RT	SUMMIT												60					
387	C1	39+19	39+31	RT	SUMMIT														12			
387	C2	39+63	39+74	RT	SUMMIT														12			
387	C3	40+59	40+71	RT	SUMMIT														12			
365	W1	20+48	23+42	RT	LAIDLAW												2432					
365	W2	20+87	23+47	LT	LAIDLAW												2515					
382	W1	440+77	442+03	LT	I.R. 75												488					
383	W1	13+34	17+00	LT	TOWNE												2558					
383	W2	13+34	17+00	RT	TOWNE												2567					
383	D1	14+48	14+74	RT	TOWNE								41									
384	W1	17+00	20+89	LT	TOWNE												2659					
384	W2	17+00	20+09	RT	TOWNE												2041	121				
384	CR1	00+50	01+26	RT	CEDAR												267	57				
384	CR2	00+32	00+62	LT	CEDAR												85	84				
384	CR3	20+24	20+44	RT	TOWNE												118	19				
384	D1	00+80	00+91	RT	CEDAR								3									
388	P1	05+00	06+35	LT/RT	PED PATH			30				178										
388	P2	08+60	08+73	LT/RT	PED PATH			6						32								
388	W1	08+89	08+97	LT	SUMMIT												41					
388	W2	08+94	09+15	LT	SUMMIT												350					
388	CR1	08+89	08+95	LT	SUMMIT													117				
388	C1	08+89	08+91	LT	SUMMIT														8			
388	C2	08+94	09+12	LT	SUMMIT														62			
388	M1	05+17	06+43	LT	PED PATH											130						
388	M2	05+22	06+46	RT	PED PATH											120						
806	P1	7+96	8+11	LT	PROSSER	186	25	31	10	74	6											
TOTALS CARRIED TO GENERAL SUMMARY						187	25	68	11	75	7	178	44	32	74	250	17955	398	106			

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ROADWAY ESTIMATED QUANTITIES

HAM-75-7.85

306
2017

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ESTIMATED QUANTITIES SHEET NO.	202 CONCRETE BARRIER REMOVED FT	202 CURB REMOVED FT	202 GUARDRAIL REMOVED FT	202 IMPACT ATTENUATOR REMOVED EACH	516 1" PREFORMED EXPANSION JOINT FILLER SF	606 GUARDRAIL, TYPE MGS FT	606 GUARDRAIL, TYPE MGS WITH LONG POSTS FT	606 ANCHOR ASSEMBLY, MGS TYPE E EACH	606 ANCHOR ASSEMBLY, MGS TYPE T EACH	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 EACH	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2 EACH	606 IMPACT ATTENUATOR, TYPE 2 (UNIDIRECTIONAL) EACH	609 CURB, TYPE 4-C, AS PER PLAN FT	609 CURB, TYPE 6 FT	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE B1 FT	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE B1, AS PER PLAN FT	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE C1 FT	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE C1, AS PER PLAN FT	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE D FT	622 BARRIER TRANSITION EACH	622 CONCRETE BARRIER END SECTION, TYPE C1 EACH	622 CONCRETE BARRIER END SECTION, TYPE D EACH	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1 EACH	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1, AS PER PLAN EACH	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1, AS PER PLAN A EACH	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1 EACH	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1, AS PER PLAN EACH	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1, AS PER PLAN, A EACH	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D EACH	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN EACH	626 BARRIER REFLECTOR, TYPE 1, 1 WAY EACH	626 BARRIER REFLECTOR, TYPE 2, 1 WAY EACH	626 BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL EACH
308	3,040	3,675	3,463			868	75	4	3	3	2		755		287		610		465			3	1			7	1		5	1	36	32	
309	2,971	3,996	1,617		711	2,956		4	1	6	4		29		1,145		460		226			5	16	6		4			5		58	42	
310	4,989	641	2,459	1		2,577		2	4	4	5	2		406	2,833	85	2,498		2,204		1	12	31	4		26		1	17	1	211	33	
311	3,020	3,755	4,870			3,134		4	1	5	1	1		1,807	1,807				2,548			5	26	1					21	1	102	28	19
312	4,664	1,208	2,481		546	5,149		5	2	5	2		2,085	353	1,908		80	158	2,024	1		6	20	1	1	1	1		24	1	95	13	11
TOTALS CARRIED TO GENERAL SUMMARY	18,684	13,275	14,890	1	1,257	14,684	75	19	11	23	14	3	2,869	2,566	7,980	85	3,648	158	7,467	1	1	31	94	12	1	38	2	1	72	4	502	148	30

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ROADSIDE BARRIER SUBSUMMARY

HAM-75-7.85

307
2017

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SHEET NO.	REF. NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	202 CONCRETE BARRIER REMOVED	202 CURB REMOVED	202 GUARDRAIL REMOVED	606 GUARDRAIL, TYPE MGS	606 GUARDRAIL, TYPE MGS WITH LONG POSTS	606 ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	606 ANCHOR ASSEMBLY, MGS TYPE T	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	609 CURB, TYPE 4-C, AS PER PLAN	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE B1	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE C1	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE D	622 CONCRETE BARRIER END SECTION, TYPE D	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1, AS PER PLAN	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN	626 BARRIER REFLECTOR, TYPE 1, 1 WAY	626 BARRIER REFLECTOR, TYPE 2, 1 WAY
						FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
1100	R1	412+00	417+12	LT	RAMP M			542																			
1100	R2	414+00	417+00	LT	RAMP M		361																				
1100	R3	414+00	417+12	LT	RAMP M			283																			
1100	R4	414+00	417+05	LT	RAMP M		365																				
1100	R5	412+00	415+61	LT	I.R. 75			425																			
1100	R6	407+87	417+01	RT	I.R. 75	916																					
1100	R7	414+90	416+79	LT	I.R. 75			194																			
1100	R8	416+54	416+98	RT	I.R. 75		46																				
1100	R9	418+51	419+07	LT	RAMP J			63																			
1100	R10	413+69	421+25	LT	RAMP J		825																				
1100	R11	413+76	421+20	LT	RAMP J		788																				
1100	R12	418+84	421+00	RT	I.R. 75	218																					
1100	R13	419+31	421+00	LT	I.R. 75			168																			
1100	R14	419+61	421+18	LT	RAMP M			172																			
1100	R15	419+63	421+79	LT	RAMP M	225																					
1100	R16	418+54	420+51	RT	RAMP K			194																			
1100	R17	414+04	415+09	RT	RAMP N			105																			
1100	R18	413+94	418+53	LT	RAMP N		470																				
1100	R19	419+74	421+78	LT	RAMP M		219																				
1100	R20	415+09	415+68	RT	RAMP N	60																					
1100	R21	418+38	420+69	LT	RAMP K		241																				
1100	G1	412+00	416+26	LT	RAMP M				412.5					1													9
1100	G2	412+02	413+88	RT	RAMP M				175.0			1		1													5
1100	G3	420+33	420+97	LT	I.R. 75				37.5				1														3
1100	G4	414+27	416+97	RT	I.R. 75				150.0		1		1														3
1100	G5	420+25	421+58	LT	RAMP M				62.5		1		1														3
1100	G6	418+60	420+47	RT	RAMP K				180.3																		3
1100	G7	414+74	415+63	RT	RAMP N					25	1	1															3
1100	G8	419+17	420+30	LT	RAMP J					50	1	1															3
1100	C1	420+33	420+51	LT	I.R. 75										19												
1100	C2	413+93	421+21	RT	RAMP J										718												
1100	C3	420+25	420+42	LT	RAMP M										18												
1100	B1	407+87	417+61	RT/LT	I.R. 75											287	479			1	7				18		
1100	B2	415+50	418+34	LT	I.R. 75													248					2		4		
1100	B3	419+54	421+00	RT/LT	I.R. 75												131					1			6		
1100	B4	413+88	415+69	RT	RAMP M													113	1				2		3		
1100	B5	420+61	421+80	RT	RAMP M													104					1		3		
1100	B6	416+46	416+97	RT	I.R. 75														1					1	1		
1100	B7	415+94	416+07	LT	RAMP M														1						1		
1101	R1	421+25	424+24	RT	RAMP J		321																				
1101	R2	421+52	424+46	RT	RAMP J			294																			
1101	R3	426+04	429+17	LT	I.R. 75	315																					
1101	R4	429+18	430+36	LT	I.R. 75			118																			
1101	R5	433+34	433+60	LT	I.R. 75		26																				
1101	R6	421+00	422+25	LT	I.R. 75			125																			
1101	R7	421+00	434+00	RT	I.R. 75	1306																					
1101	R8	420+51	426+90	RT	RAMP K			634																			
1101	R9	432+21	433+67	RT	I.R. 75			146																			
1101	R10	433+51	433+64	RT	I.R. 75		13																				
TOTALS CARRIED TO ROADSIDE BARRIER SUBSUMMARY						3040	3675	3463	1018	75	4	3	3	2	755	287	610	465	3	1	7	1	5	1	36	32	

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CALCULATED SEA
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ROADSIDE BARRIER ESTIMATED QUANTITIES

HAM-75-7.85

308
2017

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SHEET NO.	REF. NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	202 CONCRETE BARRIER REMOVED	202 CURB REMOVED	202 GUARDRAIL REMOVED	516 1" PREFORMED EXPANSION JOINT FILLER	606 GUARDRAIL, TYPE MGS	606 ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	606 ANCHOR ASSEMBLY, MGS TYPE T	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	609 CURB, TYPE 4-C, AS PER PLAN	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE B1	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE C1	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE D	622 CONCRETE BARRIER END SECTION, TYPE D	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1, AS PER PLAN	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	626 BARRIER REFLECTOR, TYPE 1, 1 WAY	626 BARRIER REFLECTOR, TYPE 2, 1 WAY	
						FT	FT	FT	SF	FT	EACH	EACH	EACH	EACH	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	
1101	R11	421+20	424+36	RT	RAMP J		316																			
1101	R12	433+65	434+00	RT	I.R. 75	36																				
1101	R13	420+69	421+85	LT	RAMP K		119																			
1101	G1	420+97	425+71	LT	I.R. 75					412.5	1															5
1101	G2	421+00	433+68	RT	I.R. 75					1289.0			1													13
1101	G3	422+19	423+91	LT	RAMP J					112.5	1	1														3
1101	C1	421+21	421+30	RT	RAMP J										9											
1101	C2	433+49	433+68	RT	I.R. 75										20											
1101	B1	421+00	433+82	RT/LT	I.R. 75											560	460			6	2	4		26		
1102	R1	435+34	435+60	LT	I.R. 75		27																			
1102	R2	435+32	437+02	LT	I.R. 75			171																		
1102	R3	439+93	440+37	LT	I.R. 75	44																				
1102	R4	440+37	441+97	LT	I.R. 75			161																		
1102	R5	434+00	444+50	RT	I.R. 75	1051																				
1102	R6	434+00	436+33	RT	I.R. 75	233																				
1102	R7	436+30	439+44	RT	I.R. 75			315																		
1102	R8	439+44	444+50	RT	I.R. 75	507																				
1102	G1	435+48	437+49	LT	I.R. 75					125.0	1		1													3
1102	G2	442+03	443+04	LT	I.R. 75					25.0	1		1													3
1102	G3	435+58	439+00	RT	I.R. 75					325.0			1	1												4
1102	G4	441+38	444+50	RT	I.R. 75					312.5				1												4
1102	B1	440+59	442+03	LT	I.R. 75				322									116	1					1	3	
1102	B2	435+19	444+50	LT/RT	I.R. 75											585				10	4				20	
1102	B3	439+00	441+38	RT	I.R. 75				389									110	2					4	3	
1102	B4	435+34	435+48	LT	I.R. 75														1						3	
1102	B5	435+44	435+58	RT	I.R. 75														1						3	
1103	R1	449+49	451+11	LT	I.R. 75		26	162																		
1103	R2	453+01	457+00	LT	I.R. 75	58	340	343																		
1103	R3	449+95	451+41	RT	I.R. 75		19	146																		
1103	R4	453+30	456+40	RT	I.R. 75		20	309																		
1103	R5	456+91	457+00	RT	I.R. 75			9																		
1103	R6	444+50	451+17	CL	I.R. 75	667																				
1103	R7	453+26	457+00	CL	I.R. 75	374																				
1103	R8	13+34	16+98	RT	TOWNE		646																			
1103	R9	16+26	17+44	RT	TOWNE		481																			
1103	R10	17+32	19+87	RT	TOWNE		553																			
1103	R11	13+34	17+66	LT	TOWNE		474																			
1103	R12	16+70	17+86	LT	TOWNE		362																			
1103	R13	17+78	21+17	LT	TOWNE		417																			
1103	R14	00+17	1+26	LT	TOWNE		113																			
1103	R15	00+45	1+26	RT	TOWNE		83																			
1103	G1	444+50	445+14	RT	I.R. 75					39			1	1												3
1103	G2	448+00	451+42	RT	I.R. 75					315			1	1												4
TOTALS CARRIED TO ROADSIDE BARRIER SUBSUMMARY						2971	3996	1617	711	2956	4	1	6	4	29	1145	460	226	5	16	6	4	5	58	42	

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CALCULATED SEA
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ROADSIDE BARRIER ESTIMATED QUANTITIES

HAM-75-7.85

309
2017

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SHEET NO.	REF. NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	202 CONCRETE BARRIER REMOVED	202 CURB REMOVED	202 GUARDRAIL REMOVED	202 IMPACT ATTENUATOR REMOVED	606 GUARDRAIL, TYPE MGS	606 ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	606 ANCHOR ASSEMBLY, MGS TYPE T	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	606 IMPACT ATTENUATOR, TYPE 2 (UNIDIRECTIONAL)	609 CURB, TYPE 6	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE B1	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE B1, AS PER PLAN	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE C1	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE D	626 CONCRETE BARRIER END SECTION, TYPE C1	622 CONCRETE BARRIER END SECTION, TYPE D	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1, AS PER PLAN	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1, AS PER PLAN, A	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN	626 BARRIER REFLECTOR, TYPE 1, 1 WAY
						FT	FT	FT	EACH	FT	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
1103	B1	445+14	448+00	RT	I.R. 75															223		2					1		4
1103	B2	451+42	451+77	RT	I.R. 75																	1							3
1103	B3	453+05	453+38	RT	I.R. 75																						1		3
1103	B4	448+45	451+23	LT	I.R. 75																								4
1103	B5	452+53	457+00	LT	I.R. 75																								6
1103	B6	444+50	451+48	CL	I.R. 75												518						6						16
1103	B7	452+77	457+00	CL	I.R. 75												334						3						12
1104	R1	457+00	463+55	LT	I.R. 75		641	653																					
1104	R2	467+53	469+50	LT	I.R. 75			197																					
1104	R3	457+00	467+98	RT	I.R. 75	994		109																					
1104	R4	457+00	469+50	CL	I.R. 75	1250																							
1104	G1	458+14	459+50	RT	I.R. 75					62.5	1		1																
1104	G2	462+91	465+93	RT	I.R. 75					279.3			1	1															
1104	B1	463+82	469+50	LT	I.R. 75															525							3	1	6
1104	B2	459+50	462+91	RT	I.R. 75															264		2					2		4
1104	B3	465+92	469+50	RT	I.R. 75															309		1					1		4
1104	B4	457+00	469+50	CL	I.R. 75												819	85					10	1					26
1105	R1	469+50	469+68	LT	I.R. 75			18																					
1105	R2	472+37	482+00	LT	I.R. 75			982																					
1105	R3	476+20	477+65	RT	I.R. 75	34		106																					
1105	R4	469+50	482+00	CL	I.R. 75	1250																							
1105	G1	474+05	479+95	LT	I.R. 75					525.0			1	1															
1105	B1	469+50	471+30	RT	I.R. 75															160							1		4
1105	B2	469+50	474+05	LT	I.R. 75															422		1					1		6
1105	B3	469+50	482+00	CL	I.R. 75												233		729				2		8				24
1105	B4	475+56	482+00	RT	I.R. 75										1				500		1				4				6
1105	B5	479+29	482+00	LT	I.R. 75															108		1					1		3
1106	R1	482+00	482+20	LT	I.R. 75			20																					
1106	R2	490+84	492+76	LT	I.R. 75	74		118																					
1106	R3	487+25	488+77	RT	I.R. 75			153																					
1106	R4	490+51	492+26	RT	I.R. 75	137			1																				
1106	R5	482+00	494+50	CL	I.R. 75	1250																							
1106	R6	10+39	11+40	LT	S.R. 561			103																					
1106	G1	486+00	490+47	LT	RAMP E					450		1		1															
1106	G2	485+58	491+42	RT	RAMP D					525		1			1														
1106	G3	487+88	490+25	RT	RAMP E					175.0	1	1																	
1106	G4	491+11	493+66	LT	RAMP D					237.5		1		1															
1106	G5	486+00	489+50	LT	RAMP C					322.4			1	1															
1106	C1	486+00	489+50	LT	RAMP C											350													
1106	C2	490+25	490+50	LT	RAMP E											26													
1106	C3	490+25	490+54	RT	RAMP E											30													
1106	B1	482+00	486+00	LT	RAMP C																								5
1106	B2	482+00	490+65	RT	I.R. 75														700						7				18
1106	B3	482+00	494+50	CL	I.R. 75												929						10	3					26
1106	B4	489+50	491+73	LT	RAMP C															144		1					3		5
1106	B5	486+48	494+39	RT	RAMP C														569	13		1			7	1	1		16
1106	B6	491+11	491+38	LT	RAMP D																	1					1		3
1106	B7	491+73	494+50	LT	RAMP C																								4
1106	B8	493+23	493+87	RT	I.R.75															35		1					1		3
TOTALS CARRIED TO ROADSIDE BARRIER SUBSUMMARY						4989	641	2459	1	2577	2	4	4	5	2	406	2833	85	2498	2204	1	12	31	4	26	1	17	1	211

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ROADSIDE BARRIER ESTIMATED QUANTITIES

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310
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SHEET NO.	REF. NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	202 CONCRETE BARRIER REMOVED FT	202 CURB REMOVED FT	202 GUARDRAIL REMOVED FT	606 GUARDRAIL, TYPE MGS FT	606 ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016) EACH	606 ANCHOR ASSEMBLY, MGS TYPE T EACH	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 EACH	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2 EACH	606 IMPACT ATTENUATOR, TYPE 2 (UNIDIRECTIONAL) EACH	609 CURB, TYPE 6 FT	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE B1 FT	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE D FT	622 CONCRETE BARRIER END SECTION, TYPE D EACH	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1 EACH	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1, AS PER PLAN EACH	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D EACH	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN EACH	626 BARRIER REFLECTOR, TYPE 1, 1 WAY EACH	626 BARRIER REFLECTOR, TYPE 2, 1 WAY EACH	626 BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL EACH	
1107	R1	498+15	502+55	LT	I.R. 75	234		206																			
1107	R2	505+27	506+99	RT	RAMP B			173																			
1107	R3	495+43	499+31	RT	I.R. 75	195		193																			
1107	R4	494+50	507+00	CL	I.R. 75	1250																					
1107	R5	496+13	498+67	LT/RT	RAMP C		254																				
1107	R6	501+70	505+95	LT/RT	RAMP B		427																				
1107	R7	498+63	505+77	LT	RAMP A		714																				
1107	R8	498+63	507+02	LT	RAMP A		839																				
1107	R9	506+96	507+00	LT	I.R. 75	4																					
1107	R10	17+65	21+55	LT	SUMMIT AVE			398																			
1107	G1	494+47	496+33	RT	RAMP C				136.5	1																3	
1107	G2	500+50	507+00	LT	I.R. 75				625.0			1														8	
1107	G3	502+26	507+00	RT	RAMP B				462.5	1	1															5	
1107	G4	493+87	496+96	RT	I.R. 75				129.5			1	1													3	
1107	G5	503+01	504+64	RT	RAMP A				87.5	1		1														3	
1107	G6	497+25	498+12	LT	RAMP C				12.5	1		1														3	
1107	G7	17+65	21+55	LT	SUMMIT AVE				398																		5
1107	C1	497+79	498+62	RT	RAMP C										89												
1107	C2	498+63	500+11	LT	RAMP A										149												
1107	C3	498+63	500+11	RT	RAMP A										149												
1107	C4	501+70	507+00	LT	RAMP B										531												
1107	B1	494+50	507+00	CL	I.R. 75											910			14				28				
1107	B2	496+96	499+20	RT	I.R. 75												195	1			1		5				
1107	B3	498+20	500+50	LT	I.R. 75												201	1			1		5				
1107	B4	504+64	507+00	RT	RAMP A												173	1			1	1	4				
1107	B5	496+20	497+25	LT	RAMP C												76	1			1		3				
1107	B6	494+50	496+20	LT	RAMP C																		3				
1108	R1	507+00	513+87	LT	I.R. 75	44		643																			
1108	R2	519+07	519+50	LT	I.R. 75			43																			
1108	R3	21+55	34+14	LT	SUMMIT AVE			1258																			
1108	R4	518+84	519+50	RT	I.R. 75			66																			
1108	R5	507+00	519+50	CL	I.R. 75	1250																					
1108	R6	507+00	519+50	RT	I.R. 75		1250																				
1108	G1	519+29	519+50	LT	RAMP C							1														3	
1108	G2	21+55	34+14	LT	SUMMIT AVE				1257																		14
1108	G3	507+00	507+71	LT	I.R. 75				25					1													
1108	C1	507+00	508+50	LT	I.R. 75										151												
1108	C2	511+99	519+20	LT	I.R. 75										718												
1108	C3	519+30	519+50	LT	I.R. 75										20												
1108	B1	507+00	519+50	CL	I.R. 75											897			12	1			28				
1108	B2	508+50	519+30	LT	I.R. 75												848	1			9		12				
1108	B3	507+00	519+50	RT	I.R. 75												1055				8		14				
1109	R1	519+50	525+13	LT	I.R. 75			557																			
1109	R2	519+50	522+18	RT	I.R. 75		271	271																			
1109	R3	34+14	37+04	LT	SUMMIT AVE			282																			
1109	R4	522+18	522+52	RT	I.R. 75	43																					
1109	R5	37+21	44+98	LT	SUMMIT AVE			780																			
TOTALS CARRIED TO ROADSIDE BARRIER SUBSUMMARY						3020	3755	4870	3134	4	1	5	1	1	1807	1807	2548	5	26	1	21	1	102	28	19		

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ROADSIDE BARRIER ESTIMATED QUANTITIES

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311
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SHEET NO.	REF. NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	202 CONCRETE BARRIER REMOVED	202 CURB REMOVED	202 GUARDRAIL REMOVED	516 1" PREFORMED EXPANSION JOINT FILLER	606 GUARDRAIL, TYPE MGS	606 (MASH 2016) ANCHOR ASSEMBLY, MGS TYPE E	606 ANCHOR ASSEMBLY, MGS TYPE T	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	609 CURB, TYPE 4-C, AS PER PLAN	609 CURB, TYPE 6	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE B1	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE C1	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE C1, AS PER PLAN	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE D	622 BARRIER TRANSITION	622 CONCRETE BARRIER END SECTION, TYPE D	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1, AS PER PLAN	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1, AS PER PLAN A	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1, AS PER PLAN	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN	626 BARRIER REFLECTOR, TYPE 1, 1 WAY
						FT	FT	FT	SF	FT	EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
1109	R6	522+52	526+31	RT	I.R. 75		376	385																							
1109	R7	519+50	531+74	CL	I.R. 75	1224																									
1109	R8	525+10	531+54	LT	I.R. 75	617																									
1109	R9	526+31	532+38	RT	I.R. 75	587																									
1109	G1	519+50	526+79	LT	I.R.75					662.5	1																				
1109	G2	34+14	36+96	LT	SUMMIT AVE					253			1																		
1109	G3	37+43	45+10	LT	SUMMIT AVE					750.0		1																			
1109	G4	527+59	532+22	RT	I.R. 75					400.0	1		1										1								
1109	C1	519+50	523+00	LT	I.R. 75											345															
1109	C2	37+47	37+53	LT	SUMMIT AVE											8															
1109	B1	519+50	531+74	CL	I.R. 75												882							11	1	1					26
1109	B2	519+50	527+73	RT	I.R. 75															741										5	10
1110	R1	412+26	418+54	RT	RAMP K			625																							
1110	R2	409+28	411+13	RT	RAMP K			185																							
1110	R3	22+48	23+00	LT	S.R. 562			52																							
1110	R4	417+21	418+38	LT	RAMP K		123																								
1110	R5	421+78	422+82	LT	RAMP M		104																								
1110	R6	421+79	23+00	LT/RT	M & 562	1336																									
1110	R7	422+64	426+54	LT/RT	RAMP M		443																								
1110	R8	418+53	419+31	LT	RAMP N		162																								
1110	R9	420+83	424+88	RT	RAMP N			406																							
1110	R10	20+69	22+44	RT	S.R. 562			175																							
1110	G1	412+69	418+60	RT	RAMP K					573.0				1																	
1110	G2	410+86	23+00	LT/RT	K & 562					525.0			1																		
1110	G3	410+65	413+44	RT	RAMP J					200.0	1		1																		
1110	G4	422+67	424+18	RT	RAMP N					75.0	1		1																		
1110	C1	410+86	23+00	LT/RT	K & 562										552																
1110	C2	410+65	413+93	RT	RAMP J										324																
1110	B1	410+86	412+69	RT	RAMP K															20		2							5		3
1110	B2	421+80	427+67	RT	RAMP M															525									3		7
1110	B3	408+25	410+65	LT	RAMP J															161		1							3		5
1110	B4	15+54	23+00	LT/RT	562												284	80	158				5				1	1			16
1110	B5	424+18	23+00	RT	N & 562				546											491		1							8	1	7
1111	R1	23+00	23+88	LT	S.R. 562			89																							
1111	R2	23+00	32+00	LT/RT	S.R. 562	900																									
1111	R3	23+27	23+68	RT	S.R. 562			37																							
1111	R4	29+23	34+50	RT	562 & Q			527																							
1111	G1	23+00	30+05	LT	S.R. 562					675.0	1																				
1111	G2	24+00	34+50	RT	562 & Q					1035.5		1		1																	
1111	C1	23+00	35+09	LT	562 & P										1209																
1111	B1	23+00	32+00	LT/RT	S.R. 562												742				1		4								18
1111	B2	23+00	24+00	RT	S.R. 562															86		1									3
TOTALS CARRIED TO ROADSIDE BARRIER SUBSUMMARY						4664	1208	2481	546	5149	5	2	5	2	2085	353	1908	80	158	2024	1	6	20	1	1	1	1	24	1	95

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312
2017

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SHEET NO.	STATION FROM	STATION TO	SEED. SQ. YD.	EXC. CU. YD.	EXC., APP CU. YD.	EMB. CU. YD.
	MAINLINE IR-75 (SB/NB)					
395	409+00	409+50	0			
396	409+00	409+50		0		0
397	410+00	410+00	0			
398	410+00	410+00		0		0
399	410+50	411+00	363			
400	410+50	411+00		284		10
401	411+50	412+00	562			
402	411+50	412+00		352		34
403	412+50	413+00	756			
404	412+50	413+00		366		143
405	413+50	414+00	856			
406	413+50	414+00		300		466
407	414+50	415+00	905			
408	414+50	415+00		381		913
409	415+50	416+00	750			
410	415+50	416+00		523		1,212
411	416+50	417+00	650			
412	416+50	417+00		1,177		1,292
413	417+50	417+93.36	679			
414	417+50	417+93.36		1,224		803
415	419+22.73	419+52.73	896			
416	419+22.73	419+52.73		161		642
417	420+00	420+50	427			
418	420+00	420+50		64		2,262
419	421+00	421+50	821			
420	421+00	421+50		43		2,605
421	422+00	422+50	973			
422	422+00	422+50		130		2,568
423	423+00	423+50	933			
424	423+00	423+50		153		2,466
425	424+00	424+50	850			
426	424+00	424+50		114		2,365
427	425+00	425+50	1,150			
428	425+00	425+50		19		3,017
429	426+00	426+50	1,262			
430	426+00	426+50		56		3,188
431	427+00	427+50	1,105			
432	427+00	427+50		448		2,655
433	428+00	428+50	834			
434	428+00	428+50		250		2,153
435	429+00	429+50	673			
436	429+00	429+50		128		1,822
437	430+00	430+50	572			
438	430+00	430+50		89	1	1,579
439	431+00	431+50	472			
440	431+00	431+50		34	26	1,449
441	432+00	432+50	373			
442	432+00	432+50		56	32	1,133
443	433+00	433+50	467			
444	433+00	433+50		751	14	826
445	433+82.10	434+12.10	307			
446	433+82.10	434+12.10		141		1,823
447	434+89.11	435+19.11	140			
448	434+89.11	435+19.11		2		677
449	435+50	436+00	605			
450	435+50	436+00		700		1,631
451	436+50	437+00	833			
452	436+50	437+00		1,139		1,295
453	437+50	438+00	860			
454	437+50	438+00		1,465		816
455	438+50	439+00	1,017			
456	438+50	439+00		2,457	397	264
457	439+50	440+00	716			
458	439+50	440+00		3,806	145	71
459	440+50	441+00	250			
460	440+50	441+00		2,693	23	16
461	441+50	442+00	372			
462	441+50	442+00		2,147	1	7
463	442+50	443+00	972			
464	442+50	443+00		4,899	0	108
465	443+50	444+00	1,122			
466	443+50	444+00		5,384	0	701
467	444+50	445+00	718			
468	444+50	445+00		3291	0	1552
469	445+50	446+00	1093			
470	445+50	446+00		5620	12	3,272
471	446+50	447+00	755			
472	446+50	447+00		4002	98	3,280
473	447+50	448+00	622			
474	447+50	448+00		2419	285	2,308
475	448+50	449+00	477			
476	448+50	449+00		238	920	1,657
477	449+50	450+00	531			
478	449+50	450+00		21	1529	1,391
479	450+50	451+00	871			
480	450+50	451+00		73	2473	1,427
481	451+48.21	451+78.21	485			
482	451+48.21	451+78.21		38	3885	1,278
483	452+00	452+47.26	0			
484	452+00	452+47.26		0	0	730
485	452+77.26	453+00	0			
486	452+77.26	453+00		0	0	687
487	453+50	454+00	982			
488	453+50	454+00		159	5981	446
489	454+50	455+00	898			
490	454+50	455+00		68	5714	337
491	455+50	456+00	779			
492	455+50	456+00		28	5815	149
493	456+50	457+00	650			
494	456+50	457+00		16	5645	0
495	457+50	458+00	728			
496	457+50	458+00		293	5082	0
497	458+50	459+00	614			
498	458+50	459+00		285	4355	0
499	459+50	460+00	356			
500	459+50	460+00		83	3876	0
501	460+50	461+00	236			
502	460+50	461+00		6	3200	0
503	461+50	462+00	291			
504	461+50	462+00		617	2571	4
505	462+50	463+00	782			
506	462+50	463+00		2101	1862	10
507	463+50	464+00	604			
508	463+50	464+00		1084	1354	0
509	464+50	465+00	766			
510	464+50	465+00		1407	1269	0
511	465+50	466+00	731			
512	465+50	466+00		1800	1090	0
513	466+50	467+00	640			
514	466+50	467+00		1918	746	0
515	467+50	468+00	502			
516	467+50	468+00		1554		264
517	468+50	469+00	513			
518	468+50	469+00		1586		71
519	469+50	470+00	396			
520	469+50	470+00		1911		16
521	470+50	471+00	482			
522	470+50	471+00		2530		7
523	471+50	472+00	864			
524	471+50	472+00		4487		108
525	472+50	473+00	1281			
526	472+50	473+00		5826		701
527	473+50	474+00	1561			
528	473+50	474+00		7371		1552
529	474+50	475+00	1695			
530	474+50	475+00		7643		3,272
531	475+50	476+00	910			
532	475+50	476+00		1909		3,280
533	476+50	477+00	200			
534	476+50	477+00		238		2,308
535	477+50	478+00	62			
536	477+50	478+00		222		1,657
537	478+50	479+00	0			
538	478+50	479+00		169		1,391
539	479+50	480+00	19			
540	479+50	480+00		71		1,427
541	480+50	481+00	19			
542	480+50	481+00		28		1,278
543	481+50	482+00	0			
544	481+50	482+00		67		730
545	482+50	483+00	0			
546	482+50	483+00		284		687
547	483+50	484+00	0			
548	483+50	484+00		557		446
549	484+50	485+00	62			
550	484+50	485+00		596		337
551	486+50	487+50	62			
552	486+50	487+50		1292		149
553	488+00	488+50	0			
554	488+00	488+50		1024		0
555	489+00	489+50	0			
556	489+00	489+50		1187		0
557	490+00	490+50	0			
558	490+00	490+50		1374		0
559	491+00	491+50	0			
560	491+00	491+50		1618		0
561	492+00	492+50	0			
562	492+00	492+50		1880		0
563	493+00	493+50	214			
564	493+00	493+50		1872		4
565	494+00	494+50	781			
566	494+00	494+50		3325		10
567	495+50	496+00	882			
568	495+50	496+00		2039		0
569	496+50	497+00	1144			
570	496+50	497+00		1842		0
571	497+50	498+00	874			
572	497+50	498+00		1406		0
573	498+50	499+00	176			
574	498+50	499+00		746		0
SUBTOTALS CARRIED TO SHEET		316	51,831	114,157	73	119,868

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EARTHWORK AND SEEDING SUBSUMMARY

HAM-75-7.85

313
2017

J:\2011093\ODOT\HAM\77889\roadway\sheets\77889GS004_Earthwork.dgn 2/18/2022 1:33:23 PM efoley

SHEET NO.	STATION FROM	STATION TO	SEED. SQ. YD.	EXC. CU. YD.	EMB. SQ. YD.
	MAINLINE IR-75 (SB/NB)				
575	499+50	500+00	732		
576	499+50	500+00		1319	2
577	500+50	501+00	1260		
578	500+50	501+00		1691	0
579	501+50	502+00	1057		
580	501+50	502+00		1539	1
581	502+50	503+00	405		
582	502+50	503+00		1196	0
583	503+50	504+00	352		
584	503+50	504+00		1303	0
585	504+50	505+00	252		
586	504+50	505+00		1459	0
587	505+50	506+00	212		
588	505+50	506+00		1575	0
589	506+50	507+00	199		
590	506+50	507+00		1783	2
591	507+50	508+00	340		
592	507+50	508+00		1924	107
593	508+50	509+00	341		
594	508+50	509+00		2017	291
595	509+50	510+00	300		
596	509+50	510+00		2054	268
597	510+50	511+00	355		
598	510+50	511+00		1881	220
599	511+50	512+00	361		
600	511+50	512+00		1695	123
601	512+50	513+00	290		
602	512+50	513+00		1525	91
603	513+50	514+00	312		
604	513+50	514+00		1343	70
605	514+50	515+00	314		
606	514+50	515+00		1203	91
607	515+50	516+00	334		
608	515+50	516+00		1064	104
609	516+50	517+00	362		
610	516+50	517+00		1029	123
611	517+50	518+00	360		
612	517+50	518+00		908	119
613	518+50	519+00	343		
614	518+50	519+00		806	109
615	519+50	520+00	342		
616	519+50	520+00		734	150
617	520+50	521+00	378		
618	520+50	521+00		820	98
619	521+50	522+00	409		
620	521+50	522+00		1065	16
621	522+50	523+00	490		
622	522+50	523+00		1728	14
623	523+50	524+00	587		
624	523+50	524+00		1640	29
625	524+50	525+00	608		
626	524+50	525+00		1584	4
627	525+50	526+00	651		
628	525+50	526+00		1407	11
629	526+50	527+00	672		
630	526+50	527+00		1333	16

SHEET NO.	STATION FROM	STATION TO	SEED. SQ. YD.	EXC. CU. YD.	EMB. SQ. YD.
	MAINLINE IR-75 (SB/NB) (CONT.)				
631	527+50	528+00	1037		
632	527+50	528+00		1610	12
633	528+50	529+00	1103		
634	528+50	529+00		1823	20
635	529+50	530+00	1173		
636	529+50	530+00		2271	38
637	530+50	531+00	1315		
638	530+50	531+00		2349	71
639	531+21.35		298		
				522	3
SUBTOTALS CARRIED TO SHEET		316	17,544	48,200	2,203

SHEET NO.	STATION FROM	STATION TO	SEED. SQ. YD.	EXC. CU. YD.	EMB. SQ. YD.

CALCULATED SEA
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EARTHWORK AND SEEDING SUBSUMMARY

HAM-75-7.85

314
2017

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J:\20110903\ODOT\HAM\77889\roadway\sheets\77889GS004_Earthwork.dgn 2/18/2022 1:33:24 PM efoley

SHEET NO.	STATION FROM	STATION TO	SEED. SQ. YD.	EXC. CU. YD.	EMB. SQ. YD.
	RAMP M				
641	412+00	412+50	145	60	1
642	413+00	413+50	361	33	104
643	414+00	414+50	383	0	596
644	415+00	415+50	478	0	1,207
645	416+00	416+26.45	382	21	896
646	416+56.45	420+24.75	1,678	89	726
647	420+50	421+50	807	0	2,442
648	422+00	423+00	699	36	1,790
649	423+50	424+08.79	381	6	546
	RAMP M SUBTOTALS:		5,314	245	8,308
	RAMP N				
650	412+64.37	413+00	190	27	13
651	413+50	414+50	666	90	105
652	415+00	416+00	827	118	322
653	416+50	417+00	583	29	628
654	417+50	418+00	689	49	1,191
655	418+50	419+00	850	62	1,800
656	419+50	420+00	712	5	1,979
657	420+50	421+00	895	19	2,656
658	421+50	422+00	722	8	1,911
659	422+50	423+00	411	150	547
660	423+50	424+00	300	526	54
661	424+50	425+00	156	1,038	0
662	425+50	426+00	28	1,839	0
663	426+50	427+00	283	1,176	0
664	427+50	428+00	322	602	0
	RAMP N SUBTOTALS:		7,634	5,738	11,206
	RAMP J				
665	412+01.34	412+50	308	9	607
666	413+00	414+00	1,707	115	2,791
667	414+50	415+50	2,844	662	2,644
668	416+00	416+50	1,372	1,264	683
669	417+00	417+50	1,557	4,560	287
670	418+00	418+50	811	4,061	89
671	419+00	419+50	666	2,810	194
672	420+00	420+50	1,094	2,510	271
673	421+00	421+50	978	4,242	40
674	422+00	422+50	916	4,859	0
675	423+00	423+50	756	4,498	0
676	424+00	424+50	650	3,307	0
677	425+00	425+50	644	2,276	0
678	426+00	426+50	539	1,469	0
679	426+57.83	426+57.83	35	90	0
680	427+00	427+50	241	280	10
681	428+00	429+00	716	138	288
682	429+50	430+50	778	14	653
683	431+00	431+50	539	487	47
684	432+00	432+50	411	680	0
685	432+78.47	432+78.47	114	210	0
	RAMP J SUBTOTALS:		17,676	38,541	8,604

SHEET NO.	STATION FROM	STATION TO	SEED. SQ. YD.	EXC. CU. YD.	EMB. SQ. YD.
	RAMP K				
686	408+50	408+50	0	0	0
687	409+00	409+50	111	164	32
688	410+00	410+50	128	333	4
689	411+00	411+50	95	1000	7
690	412+00	412+50	72	1947	7
691	413+00	413+50	457	1280	0
692	414+00	414+50	450	828	12
693	415+00	415+50	650	534	276
694	416+00	416+50	766	193	747
695	417+00	417+50	873	115	843
696	418+00	418+50	984	171	959
697	419+00	419+50	1139	27	1253
698	420+00	420+50	1310	19	1388
699	421+00	421+50	1172	12	1174
700	422+00	422+50	989	11	978
701	423+00	423+50	778	7	927
702	424+00	424+50	627	5	963
703	424+61.11	424+61.11	69	1	94
	RAMP K SUBTOTALS:		10,670	6,647	9,664
	RAMP E				
736	486+00	486+50	278	622	0
737	487+00	488+00	844	2374	0
738	488+50	490+00	1335	1070	1009
739	490+25.18		230	49	361
	RAMP E SUBTOTALS:		2687	4115	1370
	RAMP C				
714	486+48.45	487+50	239	45	362
715	488+00	489+00	244	775	20
716	489+50	490+50	457	2590	0
717	491+00	492+00	65	3044	0
718	492+50	493+50	413	2344	0
719	494+00	495+00	311	844	13
720	495+50	496+50	510	521	22
721	497+00	497+78.75	481	231	57
722	498+00	498.25.06	99	48	22
	RAMP C SUBTOTALS:		2819	10442	496
	RAMP D				
723	475+01.01	475+50	503	3161	0
724	476+00	477+00	1650	7626	0
725	477+50	478+50	1634	7371	0
726	479+00	480+00	1438	4478	17
727	480+50	482+00	1109	1259	316
728	482+50	484+00	667	622	72
729	484+50	485+57.91	760	1665	0
730	486+00	487+00	253	1343	0
731	487+50	488+50	317	2514	0
732	489+00	490+00	336	1792	0
733	490+50	491+50	220	992	5
734	492+00	493+00	1262	888	30
735	493+50	493+82.72	462	179	39
	RAMP D SUBTOTALS:		10611	33890	479

SHEET NO.	STATION FROM	STATION TO	SEED. SQ. YD.	EXC. CU. YD.	EMB. SQ. YD.
	RAMP A				
704	499+00	500+50	483	670	0
705	501+00	502+50	2501	4791	0
706	503+00	504+50	2263	5929	0
707	505+00	505+88.65	511	1643	1
708	506+00	506+50	46	232	2
709	507+00	508+00	297	1350	17
	RAMP A SUBTOTALS:		6,101	14,615	20
	RAMP B				
710	501+69.65	502+50	620	461	1
711	503+00	504+50	1090	1658	0
712	505+00	506+00	714	980	101
713	506+50	507+72.50	538	70	596
	RAMP B SUBTOTALS:		2,962	3,169	698
	MAINLINE SR 562				
740	20+00.00	20+50.00	144	212	17
741	21+00.00	21+50.00	217	369	34
742	22+00.00	22+50.00	239	325	63
743	23+00.00	23+50.00	250	261	97
744	24+00.00	24+50.00	311	258	95
745	25+00.00	25+50.00	338	261	145
746	26+00.00	26+50.00	366	301	118
747	27+00.00	27+50.00	390	312	150
748	28+00.00	28+50.00	417	322	115
749	29+00.00	29+50.00	456	374	114
750	30+00.00	30+50.00	527	413	119
751	31+00.00	31+50.00	450	470	86
752	32+00.00	32+00.00	104	200	16
	MAINLINE SR 562 SUBTOTALS:		4,209	4,078	1,169
	RAMP P				
753	32+00.00	32+50.00	56	75	6
754	33+00.00	33+50.00	67	115	6
755	34+00.00	34+50.00	172	44	23
756	35+00.00	35+50.00	63	47	1
	RAMP P SUBTOTALS:		358	281	36
	RAMP Q				
757	31+79.61	32+50.00	257	71	40
758	33+00.00	33+50.00	328	92	14
759	34+00.00	34+50.00	222	94	0
	RAMP Q SUBTOTALS:		807	257	54
	SUBTOTALS CARRIED TO SHEET 316		71,848	122,018	42,104

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EARTHWORK AND SEEDING SUBSUMMARY

HAM-75-7.85

315
2017

J:\20110903\ODOT\HAM\77889\roadway\sheets\77889GS004_Earthwork.dgn 2/18/2022 1:33:24 PM efoley

SHEET NO.	STATION FROM	STATION TO	SEED. SQ. YD.	EXC. CU. YD.	EMB. SQ. YD.
	TOWNE STREET				
760	13+34.18	14+00	179	31	7
761	14+50	15+00	363	30	53
762	15+50	16+50	681	56	325
763	17+00	18+00	2076	467	1609
764	18+50	19+50	292	118	633
765	20+00	20+50	125	137	123
766	21+00	21+50	106	18	96
	TOWNE STREET SUBTOTALS:		3,822	857	2,846
	CEDAR STREET				
767	0+36.40	1+00	77	22	15
768	1+25.67	1+50	62	30	8
	CEDAR STREET SUBTOTALS:		139	52	23
	HAM-75-7.85 ADDITIONAL EARTHWORK				
	ADDITIONAL FILL AREA ABOVE PAVT STEPS (L*A/27)				
	CONCRETE PAVT STEP - LENGTH = 5858' AREA = 0.62 SQFT				135
	ASPHALT PAVT STEP - LENGTH = 19499' AREA = 1.21 SQFT				874
	ADDITIONAL EARTHWORK SUBTOTALS:		0	0	1,009

SHEET NO.	STATION FROM	STATION TO	SEED. SQ. YD.	EXC. CU. YD.	EMB. SQ. YD.

SHEET NO.	STATION FROM	STATION TO	SEED. SQ. YD.	EXC. CU. YD.	EXC., APP CU. YD.	EMB. SQ. YD.
	SUBTOTALS THIS SHEET		3,961	909		3,878
313	SUBTOTALS CARRIED FROM SHEET		51,831	114,157	73	119,868
314	SUBTOTALS CARRIED FROM SHEET		17,544	48,200		2,203
315	SUBTOTALS CARRIED FROM SHEET		71,848	122,018		42,104
	TOTALS CARRIED TO GENERAL SUMMARY			285,284		168,053
	TOTALS CARRIED TO GENERAL NOTES		145,184		73	

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CHECKED DLR

EARTHWORK AND SEEDING SUBSUMMARY

HAM-75-7.85

316
2017

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J:\20110903\ODOT\HAM\77889\roadway\sheets\77889GS004_Earthwork.dgn 4/21/2022 1:45:38 PM jtheuring

ESTIMATED QUANTITIES SHEET NO.

	204		206	254	302	302	304	407	407	411	442	861	452		441	441	441				
	SUBGRADE COMPACTION		CEMENT STABILIZED SUBGRADE, 14" DEEP	PAVEMENT PLANING ASPHALT CONCRETE	13" ASPHALT CONCRETE BASE, PG64-22	9" ASPHALT CONCRETE BASE, PG64-22	6" AGGREGATE BASE	NON-TRACKING TACK COAT (@0.085 GAL/SY)	NON-TRACKING TACK COAT (@0.055 GAL/SY)	STABILIZED CRUSHED AGGREGATE (T-8")	1.5" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN	1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5 MM, TYPE A (446)	15" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1		ANTI-SEGREGATION EQUIPMENT	1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (448), PG 64-22	1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448)				
	SQ YD		SQ YD	SQ YD	CU YD	CU YD	CU YD	GAL	GAL	CU YD	CU YD	CU YD	SQ YD		CU YD	CU YD	CU YD				
IR-75																					
SEE SUPPLEMENTAL PAVEMENT CALCULATIONS - SHEET 1			10,340	13,573	3,698		1,724	1,154	1,686		981	495			1,476						
SEE SUPPLEMENTAL PAVEMENT CALCULATIONS - SHEET 2			14,574		5,222		2,624		2,382		591	699			1,290						
SEE SUPPLEMENTAL PAVEMENT CALCULATIONS - SHEET 3			45,567		16,437		7,595		7,509		1,889	2,211			4,100						
SEE SUPPLEMENTAL PAVEMENT CALCULATIONS - SHEET 4			14,075	48	5,061		2,346		2,411		656	679			1,335						
SEE SUPPLEMENTAL PAVEMENT CALCULATIONS - SHEET 5			1,637		567		273		257		56	74			130						
SEE SUPPLEMENTAL PAVEMENT CALCULATIONS - SHEET 6			5,301		1,747		884		779		166	218			384						
SEE SUPPLEMENTAL PAVEMENT CALCULATIONS - SHEET 7			2,267		748		378		338		79	97			176						
SEE SUPPLEMENTAL PAVEMENT CALCULATIONS - SHEET 8			10,600		3,828		1,767		1,750		384	516			899						
SEE SUPPLEMENTAL PAVEMENT CALCULATIONS - SHEET 9			3,944	443	1,425		762		676		164	192			356						
SEE SUPPLEMENTAL PAVEMENT CALCULATIONS - SHEET 10			7,258	6,616	2,593		1,210	563	1,182		564	347			910						
SEE SUPPLEMENTAL PAVEMENT CALCULATIONS - SHEET 11			20,895		7,473		3,688		3,407		839	999			1,838						
SEE SUPPLEMENTAL PAVEMENT CALCULATIONS - SHEET 12			54,807		19,792		9,135		8,022		2,284	2,665			4,948						
SEE SUPPLEMENTAL PAVEMENT CALCULATIONS - SHEET 13			5,332	2,660	1,901		889		1,305		310	254			563						
SEE SUPPLEMENTAL PAVEMENT CALCULATIONS - SHEET 14			3,026		1,063		505		483		111	141			251						
SEE SUPPLEMENTAL PAVEMENT CALCULATIONS - SHEET 15			3,577		1,199		597		541		120	155			275						
SEE SUPPLEMENTAL PAVEMENT CALCULATIONS - SHEET 16			7,921		2,834		1,321		1,292		293	379			672						
SEE SUPPLEMENTAL PAVEMENT CALCULATIONS - SHEET 17			5,286		1,909		986		873		193	257			450						
SEE SUPPLEMENTAL PAVEMENT CALCULATIONS - SHEET 18			713		254		119		116		28	34			62						
RAMP M																					
SEE SUPPLEMENTAL PAVEMENT CALCULATIONS - SHEET 19			1,526	895	553		302	76	301		98	74			172						
SEE SUPPLEMENTAL PAVEMENT CALCULATIONS - SHEET 20			1,246		427		208		193		44	56			100						
RAMP N																					
SEE SUPPLEMENTAL PAVEMENT CALCULATIONS - SHEET 21			8,342	259	2,920		1,391	22	1,339		329	385			714						
RAMP J																					
SEE SUPPLEMENTAL PAVEMENT CALCULATIONS - SHEET 22			10,072		3,475		1,679		1,576		392	458			849						
RAMP K																					
SEE SUPPLEMENTAL PAVEMENT CALCULATIONS - SHEET 23			9,527		3,341		1,588		1,517		368	442			810						
RAMP E & RAMP D																					
SEE SUPPLEMENTAL PAVEMENT CALCULATIONS - SHEET 24			10,273	1,804			1,697		100		76		9,996		76						
RAMP A																					
SEE SUPPLEMENTAL PAVEMENT CALCULATIONS - SHEET 25			3,112	419			519	24			18		2,983		18						
RAMP B & RAMP C																					
SEE SUPPLEMENTAL PAVEMENT CALCULATIONS - SHEET 26			8,528	1,463			1,422	125			61		8,142		61						
SR 562																					
SEE SUPPLEMENTAL PAVEMENT CALCULATIONS - SHEET 27			15,599	1,021	5,514		2,600	77	836		655	739			1,394						
RAMP P & RAMP Q																					
SEE SUPPLEMENTAL PAVEMENT CALCULATIONS - SHEET 28			1,638	9,891			273	841			413		1,568		413						
TOWNE ST, CEDAR ST & SUMMIT AVE																					
SEE SUPPLEMENTAL PAVEMENT CALCULATIONS - SHEET 29	1,843			1,268		483	347	108	107	458					228	134	94				
					SUBTOTAL			SUBTOTAL													
					93,981	483		2,990	40,978												
TOTALS CARRIED TO GENERAL SUMMARY	1,843		286,983	40,360	94,464		48,829	43,968		458	12,162	12,566	22,689		24,950	134	94				

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CALCULATED SEA
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PAVEMENT CALCULATIONS SUBSUMMARY

HAM-75-7.85

317
2017

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ALIGNEMENT	SIDE	STATION FROM	STATION TO		618 RUMBLE STRIPS, IASPHALT CONCRETE MILE
I.R. 75 NORTHBOUND	RT-IN	395+50.00	417+55.67		0.42
I.R. 75 NORTHBOUND	RT-OUT	395+00.00	410+60.12	*	0.30
I.R. 75 NORTHBOUND	RT-OUT	410+60.12	417+08.21	*	0.13
I.R. 75 NORTHBOUND	RT-IN	419+44.10	433+82.48		0.28
I.R. 75 NORTHBOUND	RT-OUT	418+90.92	425+73.25		0.13
I.R. 75 NORTHBOUND	RT-OUT	425+73.25	433+85.94		0.16
I.R. 75 NORTHBOUND	RT-IN	435+19.48	451+50.62		0.31
I.R. 75 NORTHBOUND	RT-OUT	435+22.95	451+72.72		0.32
I.R. 75 NORTHBOUND	RT-IN	452+79.60	531+78.64		1.50
I.R. 75 NORTHBOUND	RT-OUT	423+00.14	469+76.37		0.89
I.R. 75 NORTHBOUND	RT-OUT	474+18.41	506+87.17	*	0.62
I.R. 75 NORTHBOUND	RT-OUT	506+87.17	532+08.70		0.48
I.R. 75 SOUTHBOUND	LT-IN	403+40.00	417+71.11		0.28
I.R. 75 SOUTHBOUND	LT-OUT	403+40.00	407+88.14	*	0.09
I.R. 75 SOUTHBOUND	LT-OUT	407+88.14	418+21.57	*	0.20
I.R. 75 SOUTHBOUND	LT-IN	419+61.44	433+81.72		0.27
I.R. 75 SOUTHBOUND	LT-OUT	420+18.23	433+66.17	*	0.26
I.R. 75 SOUTHBOUND	LT-OUT	433+66.17	433+77.52	*	0.01
I.R. 75 SOUTHBOUND	LT-IN	435+18.73	451+45.80		0.31
I.R. 75 SOUTHBOUND	LT-OUT	435+15.02	451+27.11		0.31
I.R. 75 SOUTHBOUND	LT-IN	452+74.91	531+69.19		1.50
I.R. 75 SOUTHBOUND	LT-OUT	452+56.56	485+48.99	*	0.63
I.R. 75 SOUTHBOUND	LT-OUT	485+48.99	506+82.94	*	0.41
I.R. 75 SOUTHBOUND	LT-OUT	508+82.94	531+34.14	*	0.43
RAMP J	RT	403+79.32	411+00.67		0.14
RAMP K	RT	408+34.32	415+20.89		0.14
RAMP M	RT	423+95.75	432+13.01		0.16
RAMP N	RT	421+28.49	428+52.11		0.14
S.R. 562 EASTBOUND	RT-IN	20+00.00	36+74.44		0.32
S.R. 562 EASTBOUND	RT-OUT	20+00.00	30+92.64	*	0.21
S.R. 562 EASTBOUND	RT-OUT	30+92.64	36+75.93	*	0.12
S.R. 562 WESTBOUND	LT-IN	20+00.00	36+73.58		0.32
S.R. 562 WESTBOUND	LT-OUT	20+00.00	32+63.19	*	0.24
S.R. 562 WESTBOUND	LT-OUT	32+63.19	36+72.10	*	0.08
S.R. 562 WESTBOUND	LT-IN	39+08.62	47+50.00		0.16
S.R. 562 WESTBOUND	LT-OUT	39+05.44	43+16.33	*	0.08
S.R. 562 WESTBOUND	LT-OUT	43+16.33	47+50.00	*	0.09
NOTE:					
* = MAINLINE SWITCH OVER AT RAMP GORE					
SUBTOTAL CARRIED TO GENERAL SUMMARY					12.44

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RUMBLE STRIP ESTIMATED QUANTITIES

HAM-75-7.85

318
2017

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ESTIMATED QUANTITIES SHEET NO.	601	602	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611
	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	CONCRETE MASONRY	8" CONDUIT, TYPE B, 706.02, JOINTS PER 706.11	12" CONDUIT, TYPE B	15" CONDUIT, TYPE B	15" CONDUIT, TYPE B, 706.02, JOINTS PER 706.11	15" CONDUIT, TYPE C	15" CONDUIT, TYPE C, 706.02, JOINTS PER 706.11	15" CONDUIT, TYPE F	15" CONDUIT, TYPE F, JOINTS PER 706.11	18" CONDUIT, TYPE B	18" CONDUIT, TYPE C	18" CONDUIT, TYPE C, 706.02, JOINTS PER 706.11	18" CONDUIT, TYPE F	21" CONDUIT, TYPE B	21" CONDUIT, TYPE C	24" CONDUIT, TYPE B	24" CONDUIT, TYPE C		30" CONDUIT, TYPE B	30" CONDUIT, TYPE C	30" CONDUIT, TYPE C, 706.02, JOINTS PER 706.11	30" CONDUIT, TYPE F	36" CONDUIT, TYPE B	36" CONDUIT, TYPE B, 706.02, JOINTS PER 706.11	36" CONDUIT, TYPE C	36" CONDUIT, TYPE C, 706.02, JOINTS PER 706.11	42" CONDUIT, TYPE B	42" CONDUIT, TYPE B, 706.02, JOINTS PER 706.11	42" CONDUIT, TYPE C	42" CONDUIT, TYPE C, 706.02, JOINTS PER 706.11	48" CONDUIT, TYPE B	48" CONDUIT, TYPE C	54" CONDUIT, TYPE B	54" CONDUIT, TYPE C	60" CONDUIT, TYPE B, 706.02, JOINTS PER 706.11
	CU YD	CU YD	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT		FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
320	11	9.2			917		220		54	119	743	247			85	6	210	553			119				494		190							
321		0.5			1,091	226	368	38			337					6	318				256			125		488		739		340				
322					1,454		191		33		465	148	151	61			99	209		616	201	176		307	18					302				
323					1,158		156				840	66				11	67			91	198		70	524				300				20		243	112	
324					409		640										516	486			600							578				2,078	490			
325		0.6			1,554		92				1,517				111	6	57	57		402				148		181									
326			192	99	215	102	33	467			147				184		30							102		15			21	60				233
TOTALS CARRIED TO GENERAL SUMMARY	11	10	192	99	6,798	328	1,700	505	87	119	4,049	461	151	61	380	29	1,297	1,305		1,109	1,374	176	70	1,206	18	1,178		1,807	21	642	60	2,098	490	243	112	233

ESTIMATED QUANTITIES SHEET NO.	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611
	72" CONDUIT, TYPE C	CONDUIT BORED OR JACKED: 15", TYPE B	CONDUIT BORED OR JACKED: 18", TYPE B	CONDUIT BORED OR JACKED: 21", TYPE B	CONDUIT BORED OR JACKED: 24", TYPE B	CONDUIT BORED OR JACKED: 30", TYPE A	CONDUIT BORED OR JACKED: 30", TYPE B	CONDUIT BORED OR JACKED: 36", TYPE B	CONDUIT BORED OR JACKED: 42", TYPE B	CATCH BASIN, NO. 3	CATCH BASIN, NO. 3A	CATCH BASIN, NO. 4	CATCH BASIN, NO. 5	CATCH BASIN, NO. 5A	CATCH BASIN, NO. 6	CATCH BASIN, NO. 8	CATCH BASIN, NO. 8A	CATCH BASIN, NO. 2-2B	CATCH BASIN, NO. 2-3	CATCH BASIN ADJUSTED TO GRADE	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1, AS PER PLAN, A	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1, AS PER PLAN, B	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1, AS PER PLAN, C	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1, AS PER PLAN	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN, A	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN, B	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN, C	INLET ADJUSTED TO GRADE	MANHOLE NO. 3	MANHOLE ADJUSTED TO GRADE	MANHOLE RECONSTRUCTED TO GRADE	DRAINAGE STRUCTURE, MISC.: CHECK VALVE FOR 36" CONDUIT	DRAINAGE STRUCTURE, MISC.: CHECK VALVE FOR 54" CONDUIT
	FT	FT	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
320				380	192			402		1	3	3				11	1		1	4				2		3				1	14	4	1	2	
321								340			2		1	3	1	2				4	5					14					11				
322			168				192		323		1		7		1		2	1		1	4			8	1	5	1				12				
323		138						423	149	3	5		6		1	2	1		2		4	4		2		3	1				9				1
324	657									8	3			6	2			9				3	2			3	3	1	1		8				
325						167					7					3	1	1		1	2					14					7	3			
326		266						69		3			1		1						1					1					7				
TOTALS CARRIED TO GENERAL SUMMARY	657	404	168	380	192	167	192	1,234	472	15	21	3	15	9	6	18	5	2	11	1	10	16	7	2	12	1	43	4	1	1	1	68	7	1	2	1

	690	690	690	690	611	690	690	690
	SPECIAL - MISC.: STORMWATER DETENTION SYSTEM 1	SPECIAL - MISC.: STORMWATER DETENTION SYSTEM 2	SPECIAL - MISC.: STORMWATER DETENTION SYSTEM 3	SPECIAL - MISC.: STORMWATER DETENTION SYSTEM 6	24" X 38" CONDUIT, TYPE B, 706.04	MANHOLE MISC.: SANITARY MANHOLE ADJUSTED TO GRADE PER MSD SCD ACC NO. 49058-A	MANHOLE MISC.: SANITARY MANHOLE PER MSD ACC NO. 49037	MANHOLE MISC.: SANITARY MANHOLE PER MSD ACC NO. 49040
	LUMP	LUMP	LUMP	LUMP	FT	EACH	EACH	EACH
320	LUMP		LUMP					
321								
322								2
323				LUMP	265			3
324								
325		LUMP						
326						2	3	5
TOTALS CARRIED TO GENERAL SUMMARY	LUMP	LUMP	LUMP	LUMP	265	2	3	10

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DRAINAGE SUBSUMMARY

HAM-75-7.85

319
2017

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	601 ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CU YD	602 CONCRETE MASONRY CU YD	611 15" CONDUIT, TYPE B FT	611 15" CONDUIT, TYPE C FT	611 15" CONDUIT, TYPE F FT	611 15" CONDUIT, TYPE F, JOINTS PER 706.11 FT	611 18" CONDUIT, TYPE B FT	611 18" CONDUIT, TYPE C FT	611 21" CONDUIT, TYPE B FT	611 21" CONDUIT, TYPE C FT	611 24" CONDUIT, TYPE B FT	611 24" CONDUIT, TYPE C FT		611 30" CONDUIT, TYPE C FT	611 36" CONDUIT, TYPE C FT	611 42" CONDUIT, TYPE B FT	611 CONDUIT BORED OR JACKED: 21", TYPE B FT	611 CONDUIT BORED OR JACKED: 24", TYPE B FT	611 CONDUIT BORED OR JACKED: 36", TYPE B FT	611 CATCH BASIN, NO. 3 EACH	611 CATCH BASIN, NO. 3A EACH	611 CATCH BASIN, NO. 4 EACH	611 CATCH BASIN, NO. 8 EACH	611 CATCH BASIN, NO. 8A EACH	611 CATCH BASIN ADJUSTED TO GRADE EACH	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1 EACH	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1 EACH	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D EACH	611 INLET ADJUSTED TO GRADE EACH	611 MANHOLE NO. 3 EACH	611 MANHOLE ADJUSTED TO GRADE EACH	611 MANHOLE RECONSTRUCTED TO GRADE EACH	690 DRAINAGE STRUCTURE, MISC.: CHECK VALVE FOR 36" CONDUIT EACH	690 SPECIAL - MISC.: STORMWATER DETENTION SYSTEM 1 LUMP	690 SPECIAL - MISC.: STORMWATER DETENTION SYSTEM 3 LUMP
D1	809	411+01		LT	I.R. 75																															1				
D2	809	411+01	411+60	LT	I.R. 75			88																							1								
D3	809	413+06		LT	RAMP N																									1								
D4	809	413+27		LT	I.R. 75																															1				
D5	809	413+47		RT	I.R. 75																																1			
D6	809	413+50		RT	I.R. 75										6																				1				
D7	809	414+17		RT	I.R. 75																																		1		
D8	809	414+17	414+17	LT	I.R. 75		0.3		7	54																										1				
D9	809	415+42		RT	I.R. 75																																		1		
D10	809	415+76	415+90	RT	I.R. 75															15																		1		1		
D11	809	415+90	416+12	RT	I.R. 75															65																		1			LUMP	
D12	809	416+69		RT	I.R. 75		0.3				41																											1				
D13	809	413+50	416+60	RT	I.R. 75			311																												1					
D14	809	414+94	417+01	LT	I.R. 75																			211														1		1		
D15	809	416+80	417+45	RT	I.R. 75									85																1								1				
D16	809	417+45	417+91	RT	I.R. 75							58															1															
D17	809	417+91	417+96	RT	I.R. 75				19																					1												
D18	809	418+34	419+22	LT/RT	I.R. 75				148																					1												
D19	809	417+01	419+06	LT	I.R. 75															200																		1				
D20	809	419+06	419+06	LT	I.R. 75								24																	1												
D21	809	419+22	419+42	LT	I.R. 75			25																			1															
D22	809	419+06	419+42	LT	I.R. 75			56																				1														
D23	809	419+42	419+62	LT	I.R. 75			25																			1															
D24	809	419+50	421+50	RT	I.R. 75											210														1												
D25	809	416+12	8+95	LT/RT	IR75/SR562															214												1										
D26	809	419+50	421+50	RT	I.R. 75								207																	1												
D27	809	416+31	417+01	LT	I.R. 75						78																												1				
D1	810	419+38	421+40	LT	I.R. 75																			191														1				
D2	810	421+40	421+55	LT	I.R. 75																																	1				
D3	810	421+40	421+57	LT	I.R. 75								16																	1												
D4	810	421+88	422+30	LT/RT	I.R. 75																		192																			
D5	810	421+97	422+30	LT/RT	I.R. 75			98																													1				
D6	810	421+55	422+30	LT	I.R. 75																																	1				
D7	810	421+88	423+17	RT	I.R. 75																		167																			
D8	810	421+88	424+23	LT	I.R. 75												185																					1				LUMP
D9	810	424+23	425+26	LT	I.R. 75												98																					1				
D10	810	427+60	427+60	LT	I.R. 75				46																					1												
D11	810	425+26	427+60	LT	I.R. 75												270																					1				
D12	810	427+60	427+60	LT/RT	I.R. 75							81																											1				
D13	810	427+60	428+40	RT	I.R. 75							144																		1												
D14	810	427+60	429+30	LT	I.R. 75							170																										1				
D15	810	429+30	432+20	LT	I.R. 75							290																										1				
D16	810	432+20	433+38	LT	I.R. 75			127																						1												
D17	810	432+20	433+65	LT	I.R. 75			165																												1					
D1	811	437+00	437+08	LT	I.R. 75	11.3	8.7														104																1				
D2	811	437+08	437+15	LT	I.R. 75																86																1				
D3	811	437+15	437+15	LT	I.R. 75																		85																			
D4	811	437+15	437+40	LT/RT	I.R. 75																		128																			
D5	811	438+90	439+00	RT	I.R. 75			22																						1												
TOTALS CARRIED TO DRAINAGE SUBSUMMARY						11	9.2	917	220	54	119	743	247	85	6	210	553	0	119	494	190	380	192	402	1	3	3	11	1	1	4	2	3	1	14	4	1	2	LUMP	LUMP

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CALCULATED RSH
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DRAINAGE ESTIMATED QUANTITIES

HAM-75-7.85

320
2017

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	602 CONCRETE MASONRY		611 15" CONDUIT, TYPE B	611 15" CONDUIT, TYPE B, 706.02, JOINTS PER 706.11	611 15" CONDUIT, TYPE C	611 15" CONDUIT, TYPE C, 706.02, JOINTS PER 706.11	611 18" CONDUIT, TYPE B	611 21" CONDUIT, TYPE C	611 24" CONDUIT, TYPE B		611 30" CONDUIT, TYPE C	611 36" CONDUIT, TYPE B	611 36" CONDUIT, TYPE C	611 42" CONDUIT, TYPE B	611 42" CONDUIT, TYPE C	611 CATCH BASIN, NO. 3A	611 CATCH BASIN, NO. 5	611 CATCH BASIN, NO. 5A	611 CATCH BASIN, NO. 6	611 CATCH BASIN, NO. 8	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1, AS PER PLAN, A	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D	611 MANHOLE NO. 3		611 CONDUIT, BORED OR JACKED: 36" TYPE B
						CU YD		FT	FT	FT	FT	FT	FT	FT		FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH		FT
D6	811	439+00	439+50	RT	I.R. 75			50																					1		
D7	811	437+15	439+40	LT	I.R. 75														225										1		
D8	811	439+50	440+04	RT	I.R. 75			54																				1			
D9	811	439+40	439+50	LT	I.R. 75									79												1					
D10	811	439+40	439+70	LT	I.R. 75			39																							
D11	811	439+50	440+04	LT/RT	I.R. 75								6	54													1				
D12	811	440+04	440+04	RT	I.R. 75			7																				1			
D13	811	440+04	440+04	RT	I.R. 75									87															1		
D14	811	440+04	443+59	LT	I.R. 75			44																				1			
D15	811	443+59	443+59	LT/RT	I.R. 75			7																				1			
D16	811	440+04	441+25	RT	I.R. 75							121																	1		
D17	811	441+25	441+25	RT	I.R. 75							21														1					
D18	811	439+50	442+10	LT	I.R. 75														270										1		
D19	811	442+10	442+10	LT	I.R. 75			21																		1					
D20	811	442+10	443+15	LT	I.R. 75														105										1		
D21	811	443+15	443+15	LT	I.R. 75			78																			1				
D22	811	443+15	444+50	LT	I.R. 75														139										1		
D23	NOT USED																														
D24	NOT USED																														
D25	NOT USED																														
D26	811	435+24	435+50	LT	I.R. 75	0.25			28																			1			
D27	811	435+34	435+50	RT	I.R. 75	0.25					38																	1			
D1	NOT USED																														
D2	812	444+50	445+38	RT	I.R. 75			131																				1			
D3	812	444+50	444+50	CL	I.R. 75																						1				
D4	812	444+50	447+00	CL	I.R. 75			250																			1				
D5	812	444+50	447+90	LT	I.R. 75															340									1		
D6	812	447+90	448+60	LT	I.R. 75					72																		1			
D7	812	448+60	449+50	LT	I.R. 75			90																	1						
D8	NOT USED																														
D9	812	448+50	450+50	RT	I.R. 75																								1		340
D10	812	451+50	451+50	LT	I.R. 75					20												1									
D11	812	451+50	451+66	LT	I.R. 75					38																		1			
D12	812	450+50	451+50	LT	I.R. 75													101											1		
D13	812	451+50	452+13	LT	I.R. 75													64											1		
D14	812	452+13	452+32	LT	I.R. 75					29											1										
D15	812	452+32	452+61	LT	I.R. 75					31											1										
D16	812	453+14	453+34	LT	I.R. 75					178																		1			
D17	812	452+13	453+34	LT	I.R. 75											125							1								
D18	812	453+34	455+49	LT	I.R. 75													220					1								
D19	812	455+49	456+51	LT	I.R. 75													103					1								
D20	812	456+50	456+51	LT	I.R. 75			131																			1				
D21	812	456+50	456+50	LT	I.R. 75			88																				1			
D22	812	456+51	459+06	LT	I.R. 75												256														
D23	812	449+50	450+00	RT	I.R. 75			101																			1				
D1	813	459+00	460+00	LT	I.R. 75				99																			1			
D2	813	460+00	460+48	LT	I.R. 75							97																1			
D3	813	460+00	461+00	LT	I.R. 75				99																			1			
D4	813	460+48	460+99	LT	I.R. 75									98												1					
D5	813	459+50	460+48	CL	I.R. 75							98														1					
TOTALS CARRIED TO DRAINAGE SUBSUMMARY						0.5		1091	226	368	38	337	6	318		256	125	488	739	340	2	1	3	1	2	4	5	14	11		340

FOR INFORMATION ONLY

CALCULATED RSH
CHECKED DLR

DRAINAGE ESTIMATED QUANTITIES

HAM-75-7.85

321
2017

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	611 15" CONDUIT, TYPE B FT	611 15" CONDUIT, TYPE C FT	611 15" CONDUIT, TYPE F FT	611 18" CONDUIT, TYPE B FT	611 18" CONDUIT, TYPE C FT	611 18" CONDUIT, TYPE C, 706.02, JOINTS PER 706.11 FT	611 18" CONDUIT, TYPE F FT	611 24" CONDUIT, TYPE B FT	611 24" CONDUIT, TYPE C FT	611 30" CONDUIT, TYPE B FT	611 30" CONDUIT, TYPE C FT	611 30" CONDUIT, TYPE C, 706.02, JOINTS PER 706.11 FT	611 36" CONDUIT, TYPE B FT	611 36" CONDUIT, TYPE B, 706.02, JOINTS PER 706.11 FT	611 42" CONDUIT, TYPE C FT	611 CONDUIT BORED OR JACKED: 30", TYPE B FT	611 CONDUIT BORED OR JACKED: 18", TYPE B FT	611 CONDUIT BORED OR JACKED: 42", TYPE B FT	611 CATCH BASIN, NO. 3A EACH	611 CATCH BASIN, NO. 5 EACH	611 CATCH BASIN, NO. 6 EACH	611 CATCH BASIN, NO. 8A EACH	611 CATCH BASIN, NO. 2-2B EACH	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1 EACH	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1, AS PER PLAN, A EACH	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1 EACH	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1, AS PER PLAN EACH	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D EACH	611 MANHOLE NO. 3 EACH	611 CONDUIT, BORED OR JACKED: 36" TYPE B FT	690 MANHOLE MISC.: SANITARY MANHOLE PER MSD ACC NO. 49040 EACH
D6	813	460+48	461+50	LT	I.R. 75	102																									1							
D7	813	459+00	459+00	RT	I.R. 75																				1												
D8	813	460+99	460+99	RT	I.R. 75									8																				1			
D9	813	459+00	460+99	RT	I.R. 75											201																			1		
D10	813	460+99	463+00	RT	I.R. 75									201											1												
D11	813	463+00	464+00	RT	I.R. 75				141																						1						
D12	813	464+00	464+00	LT	I.R. 75	85																												1			
D13	813	464+00	465+80	LT	I.R. 75	180																									1						
D14	813	465+80	466+16	LT	I.R. 75	90																												1			
D1	814	473+82	474+10	LT	I.R. 75																	168												1			
D2	814	474+10	476+20	RT	I.R. 75																														1			
D3	814	476+00	476+20	RT	I.R. 75				42																1												
D4	814	476+20	478+50	RT	I.R. 75	83																													1			
D5	814	478+50	480+75	RT	I.R. 75	219																														1		
D6	814	480+68	480+75	RT	I.R. 75	72																									1						
D7	814	480+58	480+75	LT	I.R. 75	113																						1									
D8	814	480+75	484+40	RT	I.R. 75										365																			1			
D9	814	479+00	480+75	LT	I.R. 75	173																												1			
D10	814	480+75	480+75	RT	I.R. 75	44																				1										
D11	814	475+87	479+54	RT	I.R. 75		183																												1		
D12	814	477+83	479+41	RT	I.R. 75						151																								1		
D13	814	479+41	479+41	RT	I.R. 75							61																							1		
D14	814	479+41	481+17	RT	I.R. 75												176																	1		
D15	814	479+54	480+96	RT	I.R. 75	165																												1		
D16	814	480+96	480+96	RT	I.R 75														18															1		
D17	814	480+91	480+96	RT/LT	I.R 75																													2	252	
D18	814	481+17	481+17	RT	I.R 75			33																												1
D19	814	481+14	481+17	RT	I.R 75										126																					1
D20	814	480+92	481+12	LT	I.R 75				282																									1		
D1	815	484+40	486+41	RT	I.R 75													200															1			
D2	815	486+41	486+90	RT	I.R 75													61															1			
D3	815	486+86	486+90	RT	I.R 75													46																1		
D4	815	486+86	489+86	RT	I.R 75															302									1							
D5	815	484+40	485+88	RT	I.R 75					148															1											
D6	815	485+88	486+86	RT	I.R 75								99												1											
D7	815	489+86	493+09	RT	I.R 75																			323										1		
D8	815	489+85	489+86	RT	I.R 75		8																		1											
D9	815	489+40	490+24	LT	I.R 75	84																													1		
D10	815	489+40	489+40	LT	I.R 75	5																							1							
D11	815	489+40	489+50	LT	I.R 75	39																				1										
D12	815	489+50	489+50	RT	I.R 75																192													1		
D13	815	489+50	489+90	RT	I.R 75																										1						
D14	815	489+90	489+91	RT	I.R 75										42																			1			
D15	815	489+86	489+91	RT	I.R 75										83														1							
TOTALS CARRIED TO DRAINAGE SUBSUMMARY						1454	191	33	465	148	151	61	99	209	616	201	176	307	18	302	192	168	323	1	7	1	2	1	1	4	8	1	5	12	252	2

FOR INFORMATION ONLY

CALCULATED RSH
CHECKED DLR

DRAINAGE ESTIMATED QUANTITIES

HAM-75-7.85

322
2017

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DRAINAGE ESTIMATED QUANTITIES

CALCULATED RSH
CHECKED DLR

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	611 15" CONDUIT, TYPE B FT	611 15" CONDUIT, TYPE C FT	611 18" CONDUIT, TYPE B FT	611 18" CONDUIT, TYPE C FT	611 21" CONDUIT, TYPE C FT	611 24" CONDUIT, TYPE B FT	611 30" CONDUIT, TYPE B FT	611 30" CONDUIT, TYPE C FT	611 30" CONDUIT, TYPE F FT	611 36" CONDUIT, TYPE B FT	611 42" CONDUIT, TYPE B FT	611 48" CONDUIT, TYPE B FT	611 54" CONDUIT, TYPE B FT	611 54" CONDUIT, TYPE C FT	611 24" X 38" CONDUIT, TYPE B, 706.04 FT	611 CONDUIT BORED OR JACKED: 15", TYPE B FT	611 CONDUIT BORED OR JACKED: 36", TYPE B FT	611 CONDUIT BORED OR JACKED: 42", TYPE B FT	611 CATCH BASIN, NO. 3 EACH	611 CATCH BASIN, NO. 4 EACH	611 CATCH BASIN, NO. 3A EACH	611 CATCH BASIN, NO. 5A EACH	611 CATCH BASIN, NO. 5 EACH	611 CATCH BASIN, NO. 6 EACH	611 CATCH BASIN, NO. 8 EACH	611 CATCH BASIN, NO. 8A EACH	611 CATCH BASIN, NO. 2-3 EACH	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1, AS PER PLAN, B EACH	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1, AS PER PLAN, A EACH	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1 EACH	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D EACH	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN, A EACH	611 MANHOLE NO. 3 EACH	690 DRAINAGE STRUCTURE, MISC.: CHECK VALVE FOR 54" CONDUIT EACH	690 SPECIAL - MISC.: STORMWATER DETENTION SYSTEM 6 LUMP	690 MANHOLE MISC.: SANITARY MANHOLE PER MSD ACC NO. 49040 EACH
D16	815	492+99	493+28	LT/RT	RAMP D																		149								1													
D17	815	492+00	492+99	RT	RAMP D			92																						1													
D18	815	494+20	494+40	RT	I.R. 75												20																								1			
D19	815	493+50	494+34	RT	I.R. 75	85																																						
D20	815	492+00	493+50	RT	I.R. 75	150																																						
D21	815	494+20	494+34	RT	I.R. 75																																					1		
D22	815	494+34	494+50	LT	I.R. 75																	167																			1		
D23	815	493+05	494+50	LT	I.R. 75			145																																	1		
D24	815	492+99	493+05	LT	I.R. 75	41																																					
D25	815	492+98	492+99	LT	I.R. 75	6																								1													
D26	815	492+08	492+08	RT	RAMP C		91																																				
D27	815	492+08	493+05	LT	I.R. 75			97																																	1		
D28	815	491+78	491+95	LT/RT	I.R. 75																	256																				1	
D29	815	491+56	491+71	LT/RT	I.R. 75													235																								1	1	
D30	815	491+54	491+56	LT	I.R. 75													8																										1	
D31	815	491+56	491+78	LT	I.R. 75										23																												1	
D32	815	489+50	490+75	LT	I.R. 75			125																																	1			
D33	815	489+50	489+91	RT	I.R. 75								40																															
D34	815	490+42	491+78	RT	I.R. 75														112																								1		
D35	815	491+78	491+71	RT	I.R. 75																138																					1		
D1	816	494+50	494+76	LT	I.R. 75	74																																			1			
D2	816	494+50	496+64	LT	I.R. 75			214																																				
D3	816	494+34	495+64	RT	I.R. 75										130																											1		
D4	816	495+64	496+64	RT	I.R. 75										100																											1		
D5	816	496+64	496+64	RT	I.R. 75				54																																			
D6	816	496+64	497+45	LT	I.R. 75										81																											1		
D7	816	497+45	500+10	LT	I.R. 75																265																					1		
D8	816	499+65	500+10	RT	I.R. 75			86																																				
D9	816	500+10	500+50	LT	I.R. 75			81																																				
D10	816	500+28	500+50	LT	I.R. 75		65																																					
D11	816	500+10	502+00	RT	I.R. 75										190																												1	
D12	816	502+00	502+50	RT	I.R. 75	94																																						
D13	816	502+00	505+00	RT	I.R. 75	300																																					1	
D14	816	504+48	505+96	RT	RAMP A								148																															
D15	816	504+48	504+51	RT	RAMP A				12																																			
D16	816	504+47	504+48	RT	RAMP A								10																															1	
D17	816	504+37	504+47	RT	RAMP A							38																																
D18	816	504+47	504+50	RT	RAMP A									70																														
D19	816	504+50	505+00	RT	RAMP A							53																																
D20	816	505+00	506+50	RT	RAMP A											150																												
D21	816	502+50	503+80	LT	RAMP B	130																																						
D22	816	503+80	504+60	LT	RAMP B	80																																						
D23	816	504+60	505+30	LT	RAMP B	70																																						
D24	816	505+30	505+90	LT	RAMP B	60																																						
D25	816	505+90	506+58	LT	RAMP B	68																																						
D26	816	506+58	507+25	LT	RAMP B						67																																	
D27	816	506+58	506+58	LT	RAMP B					11																																		
D28	816	506+50	508+00	RT	RAMP A											150																											1	
D29	816	494+50	495+90	RT	I.R. 75																																						LUMP	
TOTALS CARRIED TO DRAINAGE SUBSUMMARY						1158	156	840	66	11	67	91	198	70	524	300	20	243	112	265	138	423	149	3	0	5	0	6	1	2	1	2	4	4	2	3	1	9	1	LUMP	3

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323
2017

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DRAINAGE ESTIMATED QUANTITIES

CALCULATED RSH CHECKED DLR

HAM-75-7.85

324
2017

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	602 CONCRETE MASONRY	611 15" CONDUIT, TYPE B	611 15" CONDUIT, TYPE C	611 24" CONDUIT, TYPE B	611 24" CONDUIT, TYPE C	611 30" CONDUIT, TYPE C	611 42" CONDUIT, TYPE B	611 48" CONDUIT, TYPE B	611 48" CONDUIT, TYPE C	611 72" CONDUIT, TYPE C	611 CATCH BASIN, NO. 3	611 CATCH BASIN, NO. 3A	611 CATCH BASIN, NO. 5A	611 CATCH BASIN, NO. 6	611 CATCH BASIN, NO. 2-3	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE BI, AS PER PLAN, B	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE BI, AS PER PLAN, C	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN, A	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN, B	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN, C	611 MANHOLE NO. 3
						CU YD	FT	FT	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
D1	817	507+25	507+80	LT	RAMP B				55								1										
D2	817	507+80	508+22	LT	RAMP B					42							1										
D3	817	508+22	509+00	LT	RAMP B				78								1										
D4	817	509+00	511+84	LT	RAMP B								284													1	
D5	817	511+84	514+85	LT	RAMP B								300								1						
D6	817	514+85	517+90	LT	I.R. 75								303								1						
D7	817	517+90	519+97	LT	I.R. 75								207								1						
D8	817	508+00	508+00	RT	I.R. 75							98													1		
D9	817	508+00	511+00	LT	I.R. 75							300										1					
D10	817	511+00	514+00	LT	I.R. 75								300								1						
D11	817	511+00	511+00	RT	I.R. 75		93																				
D12	817	514+00	517+00	LT	I.R. 75								300								1						
D13	817	514+00	514+00	RT	I.R. 75		88																				
D14	817	517+00	520+00	LT	I.R. 75								300								1						
D15	817	517+00	517+00	RT	I.R. 75		83																				
D16	817	505+96	508+21	RT	I.R. 75						218									1							
D17	817	506+07	509+94	RT	I.R. 75						173									1							
D18	817	509+93	509+94	RT	I.R. 75		41									1											
D19	817	509+94	512+03	RT	I.R. 75						209									1							
D20	817	512+03	514+03	RT	I.R. 75					200										1							
D21	817	514+01	514+03	RT	I.R. 75			21											1								
D22	817	514+03	514+03	RT	I.R. 75		37									1											
D23	817	514+03	517+13	RT	I.R. 75			311												1							
D24	817	517+13	517+13	RT	I.R. 75		38									1											
D25	817	517+03	517+13	RT	I.R. 75			22											1								
D26	817	518+41	520+58	RT	I.R. 75			223												1							
D1	818	520+00	520+00	LT	I.R. 75								84									1					
D2	818	520+00	522+00	LT	I.R. 75									196													1
D3	818	522+00	524+00	LT	I.R. 75									197													1
D4	818	524+00	525+00	LT	I.R. 75									97				1									
D5	818	525+00	527+00	LT	I.R. 75										198			1									
D6	818	527+00	529+00	LT	I.R. 75										194			1									
D7	818	529+00	531+05	LT	I.R. 75										201			1									
D8	818	531+05	531+59	LT	I.R. 75										64			1									
D9	818	520+58	521+60	RT	I.R. 75				107																		1
D10	818	520+57	520+58	RT	I.R. 75			20										1									
D11	818	520+58	520+58	RT	I.R. 75			13								1											
D12	818	520+58	520+59	RT	I.R. 75		29									1											
D13	818	521+60	522+54	RT	I.R. 75				96											1							
D14	818	522+54	524+48	RT	I.R. 75					244										1							
D15	818	522+54	522+54	RT	I.R. 75			30								1											
D16	818	524+48	524+49	RT	I.R. 75				56											1							
D17	818	524+49	524+49	RT	I.R. 75				29							1											
D18	818	524+49	524+49	RT	I.R. 75				6							1											
D19	818	524+49	524+91	RT	I.R. 75				43																		1
D20	818	524+91	524+91	RT	I.R. 75				26																		1
D21	818	524+91	525+00	RT	I.R. 75				10																		1
D22	818	525+00	525+00	RT	I.R. 75							180															1
D23	818	525+00	525+09	RT	I.R. 75				10																		1
TOTALS CARRIED TO DRAINAGE SUBSUMMARY						0.0	409	640	516	486	600	578	2078	490	657	8	3	6	2	9	3	2	3	3	1	1	8

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	602 CONCRETE MASONRY CU YD	611 15" CONDUIT, TYPE B FT	611 15" CONDUIT, TYPE C FT	611 18" CONDUIT, TYPE B FT	611 21" CONDUIT, TYPE B FT	611 21" CONDUIT, TYPE C FT	611 24" CONDUIT, TYPE B FT	611 24" CONDUIT, TYPE C FT		611 30" CONDUIT, TYPE B FT	611 36" CONDUIT, TYPE B FT	611 36" CONDUIT, TYPE C FT	611 CONDUIT BORED OR JACKED: 30", TYPE A FT	611 CATCH BASIN, NO. 3A EACH	611 CATCH BASIN, NO. 8 EACH	611 CATCH BASIN, NO. 8A EACH	611 CATCH BASIN, NO. 2-2B EACH	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1 EACH	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1, AS PER PLAN, A EACH	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D EACH	611 MANHOLE NO. 3 EACH	611 MANHOLE ADJUSTED TO GRADE EACH	690 SPECIAL - MISC.: STORMWATER DETENTION SYSTEM 2 LUMP
D1	819	8+95	10+20	LT	S.R.562											148						1						
D2	819	10+20	11+00	LT	S.R.562			92																		1		
D3	819	11+00	11+90	LT	S.R.562		81																			1		
D4	819	11+90	12+15	LT	S.R.562												181		1									
D5	819	11+90	13+13	LT	S.R.562	0.6												167										
D6	819	13+13	14+75	LT/RT	S.R.562										287											1		
D7	819	14+75	15+90	RT	S.R.562										115											1		
D8	819	15+90	15+90	LT/RT	S.R.562							9														1		
D9	819	15+76	15+90	LT	S.R.562					18										1								
D10	819	15+90	15+90	LT	S.R.562							48														1		
D11	819	15+90	15+90	RT	S.R.562				54																	1		
D12	819	15+90	16+34	RT	S.R.562				44																	1		
D13	819	15+90	15+34	RT	S.R.562		44																			1		
D14	819	15+90	16+40	LT/RT	S.R.562				50																	1		
D15	819	16+34	16+40	LT/RT	S.R.562		11																			1		
D16	819	16+34	16+84	RT	S.R.562				50																	1		
D17	819	16+40	16+90	LT	S.R.562				50																	1		
D18	819	16+84	17+98	RT	S.R.562		114																				1	
D19	819	17+98	18+08	RT	S.R.562		12																1					
D20	819	20+50	20+50	RT	S.R.562		52																			1		
D21	819	20+50	20+50	LT/RT	S.R.562		45																	1				
D22	819	20+50	22+22	LT	S.R.562		174													1								
D23	819	22+22		LT	S.R.562																						1	
D24		NOT USED																										
D25		NOT USED																										
D26	819	22+45	22+45	LT	S.R.562						6									1								
D27	819	22+45	22+45	LT/RT	S.R.562					40															1			
D28	819	22+45	22+49	RT	S.R.562					53																1		
D29	819	22+22		LT	S.R.562																						1	
D30	819	22+22		LT	S.R.562																						1	
D31	819	22+45	22+45	LT	S.R.562								24														1	
D32	819	22+45	22+45	LT/RT	S.R.562								33														1	
D33	819	22+45	22+49	RT	S.R.562																							LUMP
D1	820	22+49	23+80	RT	S.R.562		132														1							
D2	820	22+45	26+00	LT	S.R.562				355											1								
D3	820	22+45	26+30	LT/RT	S.R.562				385																1			
D4	820	26+00	27+50	LT	S.R.562		150													1								
D5	820	26+30	28+60	LT	S.R.562				230																	1		
D6	820	27+50	29+00	LT	S.R.562		150													1								
D7	820	28+60	31+59	LT	S.R.562				299																			1
D8	820	29+00	31+98	LT	S.R.562		299																			1		
D9	820	31+98	34+44	LT	S.R.562		247													1								
D10	820	34+44	34+87	LT	S.R.562		43													1								
TOTALS CARRIED TO DRAINAGE SUBSUMMARY						0.6	1554	92	1517	111	6	57	57		402	148	181	167	7	3	1	1	1	2	14	7	3	LUMP

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CALCULATED RSH CHECKED DLR

DRAINAGE ESTIMATED QUANTITIES

HAM-75-7.85

325
2017

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	611 8" CONDUIT, TYPE B , 706.02, JOINTS PER 706.11 FT	611 15" CONDUIT, TYPE B, 706.02, JOINTS PER 706.11 FT	611 12" CONDUIT, TYPE B FT	611 15" CONDUIT, TYPE B FT	611 15" CONDUIT, TYPE C FT	611 15" CONDUIT, TYPE C, 706.02, JOINTS PER 706.11 FT	611 18" CONDUIT, TYPE B FT	611 21" CONDUIT, TYPE B FT	611 24" CONDUIT, TYPE B FT	611 36" CONDUIT, TYPE B FT	611 36" CONDUIT, TYPE C FT	611 42" CONDUIT, TYPE B, 706.02, JOINTS PER 706.11 FT	611 42" CONDUIT, TYPE C, 706.02, JOINTS PER 706.11 FT	611 60" CONDUIT, TYPE B, 706.02, JOINTS PER 706.11 FT	611 CONDUIT, BORED OR JACKED: 15" TYPE B FT	611 CONDUIT BORED OR JACKED: 36", TYPE B FT	611 CATCH BASIN, NO. 3 EACH	611 CATCH BASIN, NO. 5 EACH	611 CATCH BASIN, NO. 6 EACH	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1, AS PER PLAN, A EACH	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D EACH	611 MANHOLE NO. 3 EACH	690 MANHOLE MISC.: SANITARY MANHOLE ADJUSTED TO GRADE PER MSD SCD ACC NO. 49058-A EACH	690 MANHOLE MISC.: SANITARY MANHOLE PER MSD ACC NO. 49037 EACH	690 MANHOLE MISC.: SANITARY MANHOLE PER MSD ACC NO. 49040 EACH
D24	818	525+09	525+09	RT	I.R. 75									30													1			
D25	818	525+09	525+86	RT	I.R. 75								79														1			
D26	818	525+84	525+86	RT	I.R. 75				32													1							
D27	818	525+86	526+21	RT	I.R. 75							35										1							
D28	818	526+21	527+30	RT	I.R. 75							112										1							
D29	818	527+30	527+33	RT	I.R. 75					33														1					
D30	818	527+00	527+33	RT	I.R. 75				93																1				
D31	818	527+00	529+00	LT	I.R. 75								105											1					
D32	818	529+00	529+00	LT	I.R. 75			66																			1		
D33	818	529+00	531+50	LT	I.R. 75			33																			1		
D34	818	531+50	531+50	RT	I.R. 75				90														1						
S1	809	413+84	414+33	RT	I.R. 75													60									1		
S2	809	414+33	414+49	RT	I.R. 75												21												1
S2	NOT USED																												
S1	810	432+76	832+86	LT	I.R. 75														10										1
S1	811	433+50	434+41	LT	I.R. 75														110									1	
S2	811	434+41	434+46	LT	I.R. 75														113								1		
S3	811	438+26	438+52	LT	I.R. 75	26																							
S4	811	437+18	438+26	LT	I.R. 75	109																						1	
S5	811	436+61	438+26	LT	I.R. 75	57																						1	
S1	815	493+14	493+30	RT/LT	RAMP D		102																						1
S1	816	498+32	500+65	RT	I.R. 75						239																		
S2	816	495+66	498+32	RT	I.R. 75																266								1
S3	816	493+30	495+50	LT	RAMP D						228																		1
D36	815	491+78	491+92	LT	I.R. 75											15											1		
D37	815	491+92	491+94	LT	I.R. 75										60												1		
D38	815	491+94	492+36	LT	I.R. 75										42												1		
D39	815	492+36	492+43	LT	I.R. 75																69								
TOTALS CARRIED TO DRAINAGE SUBSUMMARY						192	102	99	215	33	467	147	184	30	102	15	21	60	233	266	69	3	1	1	1	1	7	2	3	5

FOR INFORMATION ONLY

CALCULATED RSH CHECKED DLR

DRAINAGE ESTIMATED QUANTITIES

HAM-75-7.85

326
2017

J:\2011090\3\ODOT\HAM\77889\drainage\sheets\77889DS001_Drainage.dgn 5/25/2022 8:44:37 AM efoley

ESTIMATED QUANTITIES SHEET NO.	601 TIED CONCRETE BLOCK, MAT, TYPE 1 SQ YD	605 6" SHALLOW PIPE UNDERDRAINS FT	605 6" UNCLASSIFIED PIPE UNDERDRAINS FT	605 6" BASE PIPE UNDERDRAINS FT	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS FT	611 PRECAST REINFORCED CONCRETE OUTLET EACH
328		3,368	1,612	6,446	847	
329	6	7,164		6,659	840	3
330	2	6,465		2,964	596	1
331		9,650	456	5,204	591	
332		8,753		5,313	696	
333		9,068		5,174	515	
334		5,832	108	4,266	508	
335		8,277		4,715	526	
336		2,822	511	2,034	307	
337		5,757		4,834	511	
338	4	2,957	214	2,482	424	2
TOTALS CARRIED TO GENERAL SUMMARY	12	70,114	2,901	50,091	6,361	6

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CALCULATED RSH
CHECKED DLR

UNDERDRAIN SUBSUMMARY

HAM-75-7.85

327
2017

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	OUTLET ELEVATION	601 TIED CONCRETE BLOCK, MAT, TYPE 1	605 6" SHALLOW PIPE UNDERDRAINS	605 6" UNCLASSIFIED PIPE UNDERDRAINS	605 6" BASE PIPE UNDERDRAINS	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	611 PRECAST REINFORCED CONCRETE OUTLET				FOR INFORMATION ONLY BENDS AND BRANCHES: PLUG		6" x 45° BEND	6" x 90° BEND	6" x 6" TEE	6" x 6" CROSS	6" x 6" WYE
							SQ YD	FT	FT	FT	FT	EACH				EACH		EACH	EACH	EACH	EACH	EACH
UD1	809	410+00	411+58	LT	I.R. 75	EX UD				158						1						
UD2	809	411+60	416+58	LT	I.R. 75	526.67				490	72					1		2	1	2		
UD3	809	416+60	418+34	LT	I.R. 75	531.05				114	74					1		2	1	2		
UD4	809 -810	419+50	421+18	LT/RT	I.R. 75	530.96				84	266					1		2	1	1		5
UD5	809	410+00	411+58	LT	I.R. 75	EX UD		99								1						
UD6	809	411+01	411+58	LT	I.R. 75	526.20		48			10					1						
UD7	809	411+60	416+58	LT	I.R. 75			493								1						
UD8	809	416+60	418+22	LT	I.R. 75			107								1						
UD9	809 - 810	420+17	421+00	LT	I.R. 75			97								1						
UD10	809	410+00	411+58	LT	I.R. 75	523.12			156		12					1			2			
UD11	809	411+60	414+59	LT	I.R. 75			495			26					1			2			
UD12	809	411+61	416+58	LT	I.R. 75			86								1						
UD13	809 - 810	419+93	421+18	LT	I.R. 75			123								1						
UD14	809	410+00	411+58	RT	I.R. 75	EX UD				158						1						
UD15	809	411+62	413+48	RT	I.R. 75	527.88				177	10					1						
UD16	809	413+50	416+58	RT	I.R. 75	529.80				305	10					1			1			
UD17	809	416+62	417+43	RT	I.R. 75	534.28				39	10					1						
UD18	809 - 810	419+49	421+58	RT	I.R. 75					203	8					1		2				
UD19	809	410+00	411+58	RT	I.R. 75	EX UD		158								1						
UD20	809	411+60	413+48	RT	I.R. 75			187								1				1		
UD21	809	413+52	416+58	RT	I.R. 75			297			10					1						
UD22	809	416+60	417+34	RT	I.R. 75	529.88		42			10					1			1			
UD23	809 - 810	419+40	421+58	RT	I.R. 75			219								1						
UD24	809	412+27	413+48	RT	I.R. 75			121			24					1			1			
UD25	809	413+50	417+13	RT	I.R. 75	529.80		335			23					1			1			
UD26	809 - 810	419+16	421+58	RT	I.R. 75			236			10					1		2				
UD27	809	410+00	411+58	RT	I.R. 75	EX UD		158								1						
UD28	809	411+60	412+27	RT	I.R. 75			67								1						
UD29	809	411+60	413+45	RT	I.R. 75	526.53				182	75					1		2	1	2		
UD30	809	413+47	416+23	RT	I.R. 75	530.00				308	10					1				1		
UD31		NOT USED																				
UD32	809	418+79	419+16	RT	I.R. 75				33		10					1		2	1			
UD33	809 - 810	419+16	424+65	RT	I.R. 75					555	10					1		2	1			
UD34	809	412+00	416+33	LT	RAMP M	EX UD				447						1						
UD35	809	412+00	414+09	RT	RAMP M	EX UD				208						1						
UD36	809	414+14	415+67	RT	RAMP M	541.96				140	10					1						
UD37	809 - 819	420+07	424+02	LT	RAMP M	537.35				393	10					1						
UD38	809 - 819	420+61	422+86	RT	RAMP M	545.18				214	10					1						
UD39	809	412+64	415+00	LT	RAMP N	521.10				241	45									1	1	2
UD40	809	415+00	420+25	LT	RAMP N					530						1						
UD41	809	412+64	415+00	RT	RAMP N				235													
UD42	809	412+64	415+00	RT	RAMP N					227	10							2				
UD43	809	415+00	419+99	RT	RAMP N				499							1						
UD44	809	415+00	419+99	RT	RAMP N					491	10					1		2				
UD45	809 - 819	418+83	417+00	LT	RAMP J	513.00				337	13					1			1			
UD46	809	417+02	419+58	LT	RAMP J	510.28				272	29					1				1		
UD47	809	419+58	421+21	LT	RAMP J					173						1						
UD48	809 - 819	413+85	416+89	RT	RAMP J	513.50			292		10					1						
UD49	809	416+92	419+37	RT	RAMP J	508.06			236		10					1		1	1			
UD50	809 - 819	419+52	421+21	RT	RAMP J	508.06			161		10					1		1	1			
IR-75 SUBTOTAL CARRIED TO UNDERDRAIN SUBSUMMARY							0	3368	1612	6446	847	0	0	0	0							

FOR INFORMATION ONLY

CALCULATED RSH CHECKED DLR

UNDERDRAIN ESTIMATED QUANTITIES

HAM-75-7.85

328 2017

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	OUTLET ELEVATION	601 TIED CONCRETE BLOCK, MAT, TYPE 1	605 6" SHALLOW PIPE UNDERDRAINS	605 6" UNCLASSIFIED PIPE UNDERDRAINS	605 6" BASE PIPE UNDERDRAINS	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	611 PRECAST REINFORCED CONCRETE OUTLET				FOR INFORMATION ONLY BENDS AND BRANCHES: PLUG		6" x 45° BEND	6" x 90° BEND	6" x 6" TEE	6" x 6" CROSS	6" x 6" WYE
		FROM	TO				SQ YD	FT	FT	FT	FT	EACH				EACH		EACH	EACH	EACH	EACH	EACH
UD51	809 - 819	413+85	416+89	RT	RAMP J	514.50				289	10					1						
UD52	809	416+92	419+18	RT	RAMP J	509.11				212	10					1						
UD53	809	419+22	419+42	RT	RAMP J					10	10					1						1
UD54	809	419+47	419+67	RT	RAMP J					10	10					1						1
UD55	809	419+71	421+21	RT	RAMP J	509.10				138	10					1						
UD56	809 - 819	416+17	419+24	LT	RAMP K	536.82				318	10					1			1			
UD57	809 - 810	419+26	421+50	LT	RAMP K	527.80	2			237	80	1				1			1	1		1
UD58	809 - 819	415+45	419+24	RT	RAMP K	523.00	2			374	30	1				1			1			1
UD59	809 - 810	419+26	421+50	RT	RAMP K					221						1						
UD60	809 - 819	415+45	419+24	RT	RAMP K			360			10					1		1	1			
UD61	809 - 810	416+26	421+50	RT	RAMP K			211			10					1		1	1			
UD1	809 - 810	421+23	427+56	LT	RAMP J	510.56				641	50					1			1	1		1
UD2	810	426+58	431+25	LT	RAMP J					368	15					1		1	1			
UD3	810	431+27	433+35	LT	RAMP J					208						1						
UD4	810	433+37	433+60	LT	RAMP J					20	13					1		1	1			
UD5	810	421+23	426+58	LT	RAMP J			101			26					1			2			
UD6	810	426+58	427+59	LT	RAMP J	534.63		369			40					1			1	1		1
UD7	810	427+61	431+25	LT	RAMP J	537.88		208			20					1			1	1		
UD8	810	431+27	433+35	RT	RAMP J	538.41		27			99					1			1	2		1
UD9	810	433+37	433+64	RT	RAMP J			534														
UD10	810	421+23	427+59	RT	RAMP J					626	10					1		1	1			
UD11	810	427+61	431+25	RT	RAMP J					365						1						
UD12	810	431+27	432+21	RT	RAMP J	540.04				90	10					1			1			
UD13	810	421+20	424+83	LT	I.R. 75					349	10					1		1	1			
UD14	810	424+85	427+58	LT	I.R. 75					263	10					1		1	1			
UD15	810	427+60	431+24	LT	I.R. 75					355	10					1			1			
UD16	810	431+26	432+18	LT	I.R. 75	540.11				83	11					1		2				
UD17	810	421+20	424+83	LT	I.R. 75			356								1						
UD18	810	424+85	427+58	LT	I.R. 75			269								1						
UD19	810	427+60	431+24	LT	I.R. 75			364								1						
UD20	810	431+26	432+20	LT	I.R. 75	540.01		94			15					1			1			
UD21	810	432+22	433+65	LT	I.R. 75			143														
UD22	810	421+20	422+83	LT	I.R. 75	532.13		359			45					1			1	1		1
UD23	810	422+85	427+58	LT	I.R. 75	536.46		271			54					1			1	1		1
UD24	810	427+60	428+92	LT	I.R. 75	538.24		132			39					1			1	1		
UD25	810	427+60	431+24	LT	I.R. 75	538.86		364			12					1			1			
UD26	810	431+26	433+65	LT	I.R. 75			239								1						
UD27	810	421+62	427+58	RT	I.R. 75	536.77				587	10					1						
UD28	810	427+62	431+24	RT	I.R. 75	539.50				353	10					1						
UD29	810	431+26	433+64	RT	I.R. 75	539.13				228	10					1		1				
UD30	810	421+60	427+58	RT	I.R. 75			600								1						
UD31	810	427+60	431+24	RT	I.R. 75			364								1						
UD32	810	431+26	433+65	RT	I.R. 75			239								1						
UD33	810	421+60	427+58	RT	I.R. 75			604								1			1	1		
UD34	810	427+61	428+92	RT	I.R. 75			131								1						
UD35	810	427+61	431+24	RT	I.R. 75	538.86		363			58					1			1	2		
UD36	810	431+26	433+65	RT	I.R. 75			239								1						
UD37	810	421+52	423+06	LT	RAMP K					158	34					1		1	1	1		
UD38	810	423+06	424+61	LT	RAMP K					156						1						
UD39	810	421+52	423+75	RT	RAMP K	538.03	2	223			39	1				1				1		3
IR-75 SUBTOTAL CARRIED TO UNDERDRAIN SUBSUMMARY							6	7164	0	6659	840	3	0	0	0							

CALCULATED RSH CHECKED DLR

UNDERDRAIN ESTIMATED QUANTITIES

HAM-75-7.85

329 2017

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	OUTLET ELEVATION	601 TIED CONCRETE BLOCK, MAT, TYPE 1	605 6" SHALLOW PIPE UNDERDRAINS	605 6" UNCLASSIFIED PIPE UNDERDRAINS	605 6" BASE PIPE UNDERDRAINS	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	611 PRECAST REINFORCED CONCRETE OUTLET				FOR INFORMATION ONLY BENDS AND BRANCHES						
																PLUG		6" x 45° BEND	6" x 90° BEND	6" x 6" TEE	6" x 6" CROSS	6" x 6" WYE
							SQ YD	FT	FT	FT	FT	EACH				EACH		EACH	EACH	EACH	EACH	EACH
UD40	810	423+75	425+74	RT	RAMP K			199								1						
UD41	810	425+76	428+39	RT	RAMP K	534.62	2	263			27	1				1				1		2
UD42	810	428+39	431+24	RT	RAMP K			285								1						
UD43	810	431+26	433+65	RT	I.R. 75			239								1						
UD44	810	421+52	423+75	RT	RAMP K					216	10					1		1	1			
UD45	810	423+75	425+74	RT	RAMP K					193	10					1		1	1			
UD46	810	425+76	428+39	RT	RAMP K					257	10					1		1	1			
UD47	810	428+39	431+24	RT	RAMP K					278	10					1		1	1			
UD48	810	431+26	433+65	RT	I.R. 75	537.84				239	97					1			1	3		
UD1	811	435+31	437+15	LT	I.R. 75	529.40				179	10					1			1			
UD2	811	437+17	439+40	LT	I.R. 75	525.25				217	10					1			1			
UD3	811	439+42	440+04	LT	I.R. 75					57	10					1		1	1			
UD4	811	440+04	442+07	LT	I.R. 75					200	10					1		3	1			
UD5	811	442+10	443+13	LT	I.R. 75	525.44				97	10					1			1			
UD6	811	443+15	444+50	LT	I.R. 75	530.27				129	10					1			1			
UD7	811	435+17	437+12	LT	I.R. 75	528.40		188			10					1		2				
UD8	811	437+17	439+37	LT	I.R. 75	524.25		213			10					1		2				
UD9	811	439+42	440+04	LT	I.R. 75			62														
UD10	811	440+04	442+08	LT	I.R. 75			204														
UD11	811	442+13	443+13	LT	I.R. 75	524.44		94			10					1		2				
UD12	811	443+18	444+50	LT	I.R. 75	529.27		125			10					1		2				
UD13	811	435+18	437+15	LT	I.R. 75	528.76		197			21					1			1			
UD14	811	437+17	439+40	LT	I.R. 75	524.25		223			15					1			1			
UD15	811	439+42	440+04	LT	I.R. 75	523.75		62			67					1		1		1	1	2
UD16	811	440+04	442+08	LT	I.R. 75			204								1						
UD17	811	442+10	443+13	LT	I.R. 75	526.63		103			14					1			1			
UD18	811	443+15	444+50	LT	I.R. 75	529.27		135			14					1			1			
UD19	811	435+23	437+15	LT	I.R. 75	528.92		191			10					1			1			
UD20	811	437+17	439+50	LT	I.R. 75	524.37		232			10					1			1			
UD21	811	439+52	440+04	LT	I.R. 75	523.92		49			10					1				1		
UD22	811	440+04	443+13	LT	I.R. 75			309								1						
UD23	811	443+15	444+50	LT	I.R. 75	529.15		134			10					1			1			
UD24	811	435+21	437+14	RT	I.R. 75	529.96				183	10					1						
UD25	811	437+17	439+49	RT	I.R. 75	525.37				222	10					1						
UD26	811	439+54	440+02	RT	I.R. 75	526.16				38	10					1						
UD27	811	440+05	440+46	RT	I.R. 75	526.16				30	10					1						
UD28	811	440+49	443+13	RT	I.R. 75	525.35				256	10					1		2				
UD28A	811	440+49	441+05	LT	I.R. 75	525.35				48	10					1		1				
UD29	811	443+17	444+50	RT	I.R. 75	530.52				125	10					1						
UD30	811	435+22	437+15	RT	I.R. 75	527.65		193			12					1			1			
UD31	811	437+17	439+50	RT	I.R. 75	523.15		233			12					1			1			
UD32	811	439+52	440+04	RT	I.R. 75	523.15		51			10					1				1		
UD33	811	440+04	443+13	RT	I.R. 75			309								1						
UD34	811	443+15	444+50	RT	I.R. 75	529.15		135			12					1			1			
UD35	811	435+24	440+04	RT	I.R. 75	524.15		480			25					1				1	1	
UD36	811	440+04	444+50	RT	I.R. 75			446								1						
UD37	811	435+25	439+00	RT	I.R. 75	524.69		368			10					1			1			
UD38	811	439+02	440+04	RT	I.R. 75			102								1						
UD39	811	440+04	441+23	RT	I.R. 75			119								1						
UD40	811	441+25	444+50	RT	I.R. 75	524.90		318			10					1			1			
IR-75 SUBTOTAL CARRIED TO UNDERDRAIN SUBSUMMARY							2	6465	0	2964	596	1										

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CALCULATED RSH CHECKED DLR

UNDERDRAIN ESTIMATED QUANTITIES

HAM-75-7.85

330
2017

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	OUTLET ELEVATION	601 TIED CONCRETE BLOCK, MAT, TYPE 1	605 6" SHALLOW PIPE UNDERDRAINS	605 6" UNCLASSIFIED PIPE UNDERDRAINS	605 6" BASE PIPE UNDERDRAINS	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	611 PRECAST REINFORCED CONCRETE OUTLET				FOR INFORMATION ONLY BENDS AND BRANCHES PLUG		6" x 45° BEND	6" x 90° BEND	6" x 6" TEE	6" x 6" CROSS	6" x 6" WYE
							SQ YD	FT	FT	FT	FT	EACH				EACH		EACH	EACH	EACH	EACH	EACH
UD41	811	435+40	438+90	RT	I.R. 75	524.75				350	11					1			1			
UD42	811	438+99	439+49	RT	I.R. 75	524.97				40	10					1						
UD43	811	439+53	440+02	RT	I.R. 75	524.92				40	10					1						
UD44	811	440+05	441+22	RT	I.R. 75	524.92				107	10					1						
UD45	811	441+26	444+50	RT	I.R. 75	525.10				317	10					1			1			
UD1	812	444+50	448+40	LT	I.R. 75					384	30					1		1	1			1
UD2	812	444+50	449+40	LT	I.R. 75			494			20					1		1	1			1
UD3	812	444+50	451+31	LT	I.R. 75	533.75		681			18					1			1			
UD4	812	444+50	449+98	LT	I.R. 75	534.40		545			10					1			1			
UD5	812	444+52	447+00	RT	I.R. 75	534.46				237	10					1						
UD6	812	444+50	451+52	RT	I.R. 75			699			10					1		1	1			1
UD7	812	444+50	451+66	RT	I.R. 75			709			60					1		1	1			1
UD8	812	444+50	450+79	RT	I.R. 75			629								1				1		
UD9	812	444+50	445+37	RT	I.R. 75	534.43				85	12					1			1			
UD10	812	445+40	451+76	RT	I.R. 75	537.50				622	10					1						
UD11	812	447+02	449+99	RT	I.R. 75	542.94				287	10					1						
UD12	812	450+00	450+79	LT	I.R. 75	551.92		79			13					1			1			
UD13	812	450+02	451+49	RT	I.R. 75	551.94				138	10					1						
UD14	812	450+79	451+38	LT	I.R. 75			58			24					1			1	1		
UD15	812	450+79	451+59	RT	I.R. 75			79			24					1			1	1		
UD16	812	452+60	457+00	LT	I.R. 75			371	66							1						
UD17	812	452+67	457+00	LT	I.R. 75			372	59							1						
UD18	812	452+78	456+49	RT	I.R. 75	553.09			48	314	10					1						
UD19	812	452+81	457+00	RT	I.R. 75			375	45							1						
UD20	812	452+88	457+00	RT	I.R. 75			376	39							1						
UD21	812	452+94	457+00	RT	I.R. 75			374	32							1						
UD22	812	453+04	457+00	RT	I.R. 75				22	378						1						
UD23	812	456+52	457+00	RT	I.R. 75					49						1						
UD24	812	20+25		LT	TOWNSHIP	526.10																
UD24	812		0+91	LT	CEDAR			73	36		18									1		
UD25	812	0+91	1+26	LT	CEDAR				35							1						
UD26	812	0+92	1+25	RT	CEDAR	526.30			24		10					1						
UD27	812	18+01	20+25	LT	TOWNSHIP					214	10					1			1			
UD28	812	18+01	20+03	RT	TOWNSHIP	527.90				265	10					1						
UD29	812	15+60	17+99	LT	TOWNSHIP	538.20				229	10					1						
UD30	812	15+60	17+99	RT	TOWNSHIP	538.20				229	10					1						
UD1	813	457+00	460+48	LT	I.R. 75	548.69		345			63							1		1		1
UD2	813	457+00	460+48	LT	I.R. 75			346			10							1		1		1
UD3	813	457+00	459+49	RT	I.R. 75	549.37				240	10					1						
UD4	813	457+00	460+48	RT	I.R. 75			350			10							1		1		1
UD5	813	457+00	460+48	RT	I.R. 75			349			10							1		1		1
UD6	813	457+00	460+48	RT	I.R. 75	548.69		350			59									1		
UD7	813	457+00	460+98	RT	I.R. 75	549.82			50	342	10											
UD8	813	459+52	460+47	RT	I.R. 75	549.06				95						1						
UD9	813	460+48	466+45	LT	I.R. 75			597								1						
UD10	813	460+48	462+03	LT	I.R. 75			155								1						
UD11	813	460+50	461+49	LT	I.R. 75	549.06				89	10					1						
UD12	813	460+48	465+78	RT	I.R. 75			527			10					1						
UD13	813	460+48	462+03	RT	I.R. 75			152			10					1						
UD14	813	460+48	466+16	RT	I.R. 75			568								1				1		
UD15	813	461+01	466+15	RT	I.R. 75	549.82				504	10					1						
IR-75 SUBTOTAL CARRIED TO UNDERDRAIN SUBSUMMARY							0	9650	456	5204	591	0										

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CALCULATED RSH CHECKED DLR

UNDERDRAIN ESTIMATED QUANTITIES

HAM-75-7.85

331 2017

efoley
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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	OUTLET ELEVATION	601 TIED CONCRETE BLOCK, MAT, TYPE 1	605 6" SHALLOW PIPE UNDERDRAINS	605 6" UNCLASSIFIED PIPE UNDERDRAINS	605 6" BASE PIPE UNDERDRAINS	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	611 PRECAST REINFORCED CONCRETE OUTLET				FOR INFORMATION ONLY BENDS AND BRANCHES: PLUG		6" x 45° BEND	6" x 90° BEND	6" x 6" TEE	6" x 6" CROSS	6" x 6" WYE
							SQ YD	FT	FT	FT	FT	EACH				EACH		EACH	EACH	EACH	EACH	EACH
UD16	813	461+50	465+78	LT	I.R. 75	548.73		427			10					1			1			
UD17	813	461+52	463+99	RT	I.R. 75	549.40				237	10					1						
UD18	813	462+03	466+16	RT	I.R. 75			413			13					1			1	1		
UD19	813	464+02	469+50	LT	I.R. 75	552.71				539	10											
UD20	813	464+02	466+45	LT	I.R. 75	552.71		243			11					1			1			
UD21	813	464+02	465+79	RT	I.R. 75	552.99				167	10					1						
UD22	813	465+80	469+50	LT	I.R. 75	557.21		370			11								1			
UD23	813	465+82	469+50	LT	I.R. 75	557.91				359	10											
UD24	813	465+80	466+47	RT	I.R. 75	557.23		64			10								1			
UD25	813	466+18	469+50	RT	I.R. 75	557.46		332			24								1			
UD26	813	466+18	469+50	RT	I.R. 75			330			10							1	1			1
UD27	813	466+18	469+50	RT	I.R. 75	558.44				322	10											
UD28	813	466+47	469+50	LT	I.R. 75			303			48								1	1		
UD29	813	466+47	469+50	LT	I.R. 75			300			10							1	1			1
UD30	813	466+47	469+50	RT	I.R. 75			303			23								1	1		
UD1	814	469+50	470+75	LT	I.R. 75					127						1						
UD2	814	469+50	470+75	LT	I.R. 75			127								1						
UD3	814	469+50	470+75	LT	I.R. 75			126								1						
UD4	814	469+50	470+75	LT	I.R. 75			125								1						
UD5	814	469+50	470+75	LT	I.R. 75					125						1						
UD6	814	469+50	470+75	RT	I.R. 75			124								1						
UD7	814	469+50	470+75	RT	I.R. 75			124								1						
UD8	814	469+50	470+75	RT	I.R. 75			123								1						
UD9	814	469+50	470+75	RT	I.R. 75					123						1						
UD10	814	470+77	473+80	LT	I.R. 75	565.86				306	10					1						
UD11	814	470+77	473+87	LT	I.R. 75	561.44		320			64					1			1			
UD12	814	470+77	473+98	LT	I.R. 75			319			10					1		1	1			1
UD13	814	470+77	474+07	LT	I.R. 75			324			10					1		1	1			1
UD14	814	470+77	474+09	LT	I.R. 75	562.13				322	10					1						
UD15	814	470+77	479+00	RT	I.R. 75	544.15		807			36					1			1			
UD16	814	470+77	479+00	RT	I.R. 75			793			10					1		1	1			1
UD17	814	470+76	475+77	RT	RAMP D	551.72		501			27					1			1			
UD18	814	470+76	475+77	RT	RAMP D					407	10					1		1	1			1
UD19	814	473+97	476+20	LT	I.R. 75	555.63				248	84					1			1			
UD20	814	473+92	476+20	LT	I.R. 75			229			10					1		1	1			1
UD21	814	474+00	476+20	LT	I.R. 75			224			10					1		1	1			1
UD22	814	474+09	476+20	LT	I.R. 75			208			10					1		1	1			1
UD23	814	474+12	476+19	LT	I.R. 75	556.36				197	10					1						
UD24	814	475+01	478+62	RT	RAMP D	545.35				354	10					1						
UD25	814	476+22	477+70	LT	I.R. 75			154			29					1			1	1		
UD26	814	476+22	480+69	LT	I.R. 75	540.74		294			57					1				1		
UD27	814	476+22	480+69	LT	I.R. 75			449			10					1		1	1			1
UD28	814	476+22	480+69	LT	I.R. 75					445	10					1		1	1			1
UD29	814	476+22	478+50	RT	I.R. 75	542.62				219	10							1				
UD30	814	475+78	480+31	RT	RAMP D	540.06				453	28					1			1			
UD31	814	478+52	480+69	LT	I.R. 75	541.42				202	10					1						
UD32	814	479+02	482+00	RT	I.R. 75			297								1						
UD33	814	479+02	482+00	RT	I.R. 75			297								1						
UD34	814	478+64	480+33	RT	RAMP D	541.47				160	10											
UD35	814	480+71	482+00	LT	I.R. 75			129								1						
IR-75 SUBTOTAL CARRIED TO UNDERDRAIN SUBSUMMARY							0	8753	0	5313	696	0										

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CALCULATED RSH CHECKED DLR

UNDERDRAIN ESTIMATED QUANTITIES

HAM-75-7.85

332 2017

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	OUTLET ELEVATION	601 TIED CONCRETE BLOCK, MAT, TYPE 1	605 6" SHALLOW PIPE UNDERDRAINS	605 6" UNCLASSIFIED PIPE UNDERDRAINS	605 6" BASE PIPE UNDERDRAINS	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	611 PRECAST REINFORCED CONCRETE OUTLET				FOR INFORMATION ONLY BENDS AND BRANCHES						
																PLUG		6" x 45° BEND	6" x 90° BEND	6" x 6" TEE	6" x 6" CROSS	6" x 6" WYE
		FROM	TO				SQ YD	FT	FT	FT	FT	EACH				EACH		EACH	EACH	EACH	EACH	EACH
UD36	814	480+71	482+00	LT	I.R. 75			129								1						
UD37	814	480+71	482+00	LT	I.R. 75			129								1						
UD38	814	480+79	482+00	LT	I.R. 75					121						1						
UD39	814	480+36	481+59	RT	RAMP D		.			123						1						
UD40	814	480+34	481+59	RT	RAMP D					125						1						
UD1	815	482+00	489+50	LT	I.R. 75	532.14		750			12								1			
UD2	815	482+00	483+14	LT	I.R. 75			114			24								1	1		
UD3	815	482+00	489+49	LT	I.R. 75	532.50		739			10								1			
UD4	815	482+00	489+49	RT	I.R. 75	533.00				739	10											
UD5	815	482+00	483+14	RT	I.R. 75			114			23								1	1		
UD6	815	483+14	484+40	RT	I.R. 75			126										1	1			1
UD7	815	481+59	483+99	LT	RAMP D	537.55				229	10											
UD8	815	481+60	485+50	RT	RAMP E			390													1	
UD9	815	482+48	489+47	RT	RAMP D	532.24		699			15					1				1		
UD10	815	483+14	484+40	RT	I.R. 75	536.37		126			61								1			
UD11	815	486+10	492+06	LT	RAMP C	528.28		601			26					1			1			
UD12	815	484+42	489+50	RT	I.R. 75	532.50		508			12								1			
UD13	815	484+42	489+90	RT	I.R. 75	532.16		547			10					1			1			
UD14	815	484+02	485+99	LT	RAMP D	535.91				185	10					1						
UD15	815	484+91	485+50	LT	RAMP E	534.80		60			36					1				1		
UD16	815	486+01	489+39	LT	RAMP C	531.74				339	10					1						
UD17	815	485+50	490+25	LT	RAMP E			475								1						
UD18	815	485+50	490+25	RT	RAMP E			475								1						
UD19	815	486+48	489+49	RT	RAMP C	532.19				290	10					1						
UD20	815	486+02	489+49	LT	RAMP D	533.45				338	10											
UD21	815	489+42	490+23	LT	RAMP C	531.15				65	10					1						
UD22	815	489+52	490+73	RT	RAMP C	532.10				111	10					1						
UD23	815	489+50	494+50	LT	I.R. 75			500								1						
UD24	815	489+52	492+80	LT	I.R. 75			328			15					1			1			
UD25	815	489+52	491+99	LT	I.R. 75	531.12				237	10					1						
UD26	815	489+52	492+80	RT	I.R. 75			328			11					1			1			
UD27	815	489+92	494+50	RT	I.R. 75			458								1						
UD28	815	489+92	494+50	RT	I.R. 75					458												
UD29	815	489+50	493+83	RT	RAMP D			433								1				2		
UD30	815	490+26	492+06	LT	RAMP C	529.23				171	10											
UD31	815	490+76	492+08	LT	RAMP C	530.20				122	10								1			
UD32	815	492+10	492+99	LT	RAMP C	529.13				79	10											
UD33	815	492+08	494+52	LT	RAMP C	528.00		244		15	10							1	1			
UD34	815	492+09	494+50	LT	I.R. 75					240						1						
UD35	815	492+02	493+49	LT	I.R. 75	530.32				137	10					1					1	
UD36	815	491+50	493+83	LT	RAMP D			233			24					1			1	1		
UD37	815	492+28	493+83	LT	RAMP D			157			23					1			1	1		
UD38	815	493+02	494+53	LT	RAMP C	529.79				141	10											
UD39	815	493+00	494+47	RT	RAMP C	530.20				149	36								1			
UD40	815	493+52	494+50	LT	I.R. 75					99						1						
UD1	816	494+53	494+79	LT	RAMP C					26						1						
UD2	816	494+52	497+79	LT	RAMP C			327								1						
UD3	816	494+47	498+62	RT	RAMP C					426						1						
UD4	816	494+50	496+64	LT	I.R. 75					208								1	1			1
UD5	816	494+50	496+64	LT	I.R. 75	528.75		208			27							1	1			
IR-75 SUBTOTAL CARRIED TO UNDERDRAIN SUBSUMMARY							0	9068	0	5174	515	0										

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CALCULATED RSH CHECKED DLR

UNDERDRAIN ESTIMATED QUANTITIES

HAM-75-7.85

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	OUTLET ELEVATION	601 TIED CONCRETE BLOCK, MAT, TYPE 1	605 6" SHALLOW PIPE UNDERDRAINS	605 6" UNCLASSIFIED PIPE UNDERDRAINS	605 6" BASE PIPE UNDERDRAINS	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	611 PRECAST REINFORCED CONCRETE OUTLET				FOR INFORMATION ONLY BENDS AND BRANCHES: PLUG		6" x 45° BEND	6" x 90° BEND	6" x 6" TEE	6" x 6" CROSS	6" x 6" WYE
							SQ YD	FT	FT	FT	FT	EACH				EACH		EACH	EACH	EACH	EACH	EACH
UD6	816	494+50	495+63	RT	I.R. 75	529.81				103	10					1						
UD7	816	494+50	496+64	RT	I.R. 75	528.75		209			25							1	1			
UD8	816	494+50	495+20	RT	I.R. 75					69	10								1	1		
UD9	816	494+81	498+65	LT	RAMP C	533.91				374	10					1						
UD10	816	495+64	496+64	RT	I.R. 75	529.80				88	10					1						
UD11	816	496+64	497+70	LT	I.R. 75					102						1		1	1			1
UD12	816	496+64	500+27	LT	I.R. 75	528.75		359			24					1			1			
UD13	816	496+64	497+64	LT	I.R. 75	529.80				88	10					1						
UD14	816	496+64	499+30	RT	I.R. 75	528.75		259			25					1		1	1			
UD15	816	497+66	499+50	RT	I.R. 75	529.94				174	10					1						
UD16	816	498+63	505+00	LT	RAMP A	531.91		638			30					1				1		
UD17	816	498+63	505+00	RT	RAMP A			637								1					1	
UD18	816	499+52	501+99	LT	I.R. 75	530.47				235	10					1						
UD19	816	499+30	504+98	RT	I.R. 75	529.37		569			22					1			1			
UD20	816	499+30	504+98	RT	I.R. 75					570						1		1	1			1
UD21	816	500+50	504+98	LT	I.R. 75	529.91		448			16					1			1			
UD22	816	501+70	502+49	LT	RAMP B	541.93				69	10					1						
UD23	816	501+70	505+30	LT	RAMP B			360								1		1	1			1
UD24	816	501+70	505+30	RT	RAMP B	534.80		363			29					1			1			
UD25	816	501+70	506+58	RT	RAMP B	533.91				489	30					1				1		
UD26	816	502+02	504+99	RT	I.R. 75	531.71				287	10					1						
UD27	816	502+20	507+00	LT	I.R. 75					478	10								1	1		
UD28	816	504+60	505+00	LT	I.R. 75				40							1		1	1			1
UD29	816	504+60	505+00	RT	I.R. 75				40							1		1	1			1
UD30	816	505+00	507+00	LT	I.R. 75	532.48		199			59								1			
UD31	816	505+00	507+00	LT	I.R. 75			200														
UD32	816	505+02	507+00	RT	I.R. 75	533.34				189	10											
UD33	816	505+00	507+00	RT	I.R. 75			198			10											
UD34	816	505+00	505+87	RT	I.R. 75			197								1		1	1	1		1
UD35	816	505+00	505+87	RT	I.R. 75	532.49				87	68					1			1			
UD36	816	505+00	507+00	LT	RAMP A			202	10													
UD37	816	505+00	507+00	RT	RAMP A			198	9													
UD38	816	506+61	506+98	LT	RAMP B					38												
UD39	816	506+58	507+01	RT	RAMP B					43												
UD40	816	502+51	503+79	LT	RAMP B	537.77				117	10					1						
UD41	816	503+81	504+59	LT	RAMP B	535.81				67	10					1						
UD42	816	504+61	505+29	LT	RAMP B	534.73				58	10					1						
UD43	816	505+31	505+89	LT	RAMP B	534.13				48	10					1						
UD44	816	505+91	506+56	LT	RAMP B	533.94				55	10					1						
UD45	816	504+63	504+99	RT	RAMP A	532.64				25	10					1						
UD46	816	505+02	506+99	RT	RAMP A	532.63			9	171	10											
UD1	817	506+98	507+24	LT	RAMP B					26						1						
UD2	817	507+01	509+50	RT	RAMP B					249						1						
UD3	817	507+00	507+71	LT	I.R. 75					71						1						
UD4	817	507+00	510+98	LT	I.R. 75			398								1						
UD5	817	507+00	510+98	LT	I.R. 75			398								1						
IR-75 SUBTOTAL CARRIED TO UNDERDRAIN SUBSUMMARY							0	5832	108	4266	508	0										

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CALCULATED RSH CHECKED DLR

UNDERDRAIN ESTIMATED QUANTITIES

HAM-75-7.85

334
2017

J:\20110903\ODOT\HAM\77889\drainage\sheets\77889DS002_Underdrains.dgn 2/18/2022 1:33:29 PM efoley

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	OUTLET ELEVATION	601 TIED CONCRETE BLOCK, MAT, TYPE 1	605 6" SHALLOW PIPE UNDERDRAINS	605 6" UNCLASSIFIED PIPE UNDERDRAINS	605 6" BASE PIPE UNDERDRAINS	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	611 PRECAST REINFORCED CONCRETE OUTLET				FOR INFORMATION ONLY BENDS AND BRANCHES PLUG		6" x 45° BEND	6" x 90° BEND	6" x 6" TEE	6" x 6" CROSS	6" x 6" WYE
							SQ YD	FT	FT	FT	FT	EACH				EACH		EACH	EACH	EACH	EACH	EACH
UD6	817	507+00	507+99	RT	I.R. 75					99						1						
UD7	817	507+00	510+98	RT	I.R. 75			398								1						
UD8	817	507+00	510+98	RT	I.R. 75			398								1						
UD9	817	507+00	508+00	LT	RAMP A			100								1						
UD10	817	507+00	508+00	RT	RAMP A			100								1						
UD11	817	507+00	507+99	RT	RAMP A					99						1						
UD12	817	507+26	507+79	LT	RAMP B	534.12				43	10					1						
UD13	817	507+81	508+21	LT	RAMP B	534.43				30	10					1						
UD14	817	508+02	510+99	RT	I.R. 75	535.14				287	10					1						
UD15	817	508+00	511+00	RT	I.R. 75	533.83		292			10					1		1	1			1
UD16	817	508+02	510+98	RT	I.R. 75	534.50				287	10					1						
UD17	817	508+23	508+99	LT	RAMP B	534.56				66	10					1						
UD18	817	508+22	514+83	LT	RAMP B	533.66		657			10					1			1			
UD19	817	509+02	511+83	LT	RAMP B	534.00				271	10					1						
UD20	817	511+00	517+88	LT	I.R. 75	535.79		686			58					1			1			
UD21	817	511+00	514+50	LT	I.R. 75			350														
UD22	817	511+02	513+99	RT	I.R. 75	536.94				289	10					1						
UD23	817	511+02	513+98	RT	I.R. 75	536.25		297			14					1			1			
UD24	817	511+01	514+00	RT	I.R. 75	536.10		297			28					1			1			
UD25	817	511+03	513+99	RT	I.R. 75			297								1		1	1			1
UD26	817	511+01	514+00	RT	I.R. 75	536.69				288	10					1						
UD27	817	511+86	514+83	LT	RAMP B	536.04				287	10					1						
UD28	817	514+02	516+99	RT	I.R. 75	538.74				288	10					1						
UD29	817	514+02	516+98	RT	I.R. 75	538.25				292	16					1			1			
UD30	817	514+02	516+98	RT	I.R. 75	538.20		284			24					1		1	1			1
UD31	817	514+05	514+50	RT	I.R. 75			45								1						
UD32	817	514+03	516+99	RT	I.R. 75	539.00				286	10					1						
UD33	817	514+50	517+88	LT	I.R. 75			338			25					1			2			
UD34	817	514+50	516+98	RT	I.R. 75			249			24					1			1	1		
UD35	817	514+87	517+88	LT	I.R. 75	537.54				290	10					1						
UD36	817	514+85	517+88	LT	I.R. 75	537.88		301			25					1			1			
UD37	817	517+02	519+50	RT	I.R. 75	540.54				239	10											
UD38	817	517+05	519+50	RT	I.R. 75			245										1	1			1
UD39	817	517+05	519+50	RT	I.R. 75			241			10							1	1			1
UD40	817	517+05	519+50	RT	I.R. 75	539.89		248			57							1	1			
UD41	817	517+02	519+50	RT	I.R. 75	541.96				243	10											
UD42	817	517+92	519+50	LT	I.R. 75	539.28				146	10											
UD43	817	517+90	519+50	LT	I.R. 75			152			10							1	1			1
UD44	817	517+90	519+50	LT	I.R. 75			153			10							1	1			1
UD45	817	517+90	519+50	LT	I.R. 75	538.63		159			45								1			
UD1	818	519+50	522+82	LT	I.R. 75					327						1						
UD2	818	519+50	522+82	LT	I.R. 75			328								1						
UD3	818	519+50	522+82	LT	I.R. 75			328								1						
UD4	818	519+50	522+82	LT	I.R. 75			332								1						
UD5	818	519+50	519+99	RT	I.R. 75					49						1						
UD6	818	519+50	522+82	RT	I.R. 75			333								1						
UD7	818	519+50	522+82	RT	I.R. 75			335								1						
UD8	818	519+50	522+82	RT	I.R. 75			335								1						
UD9	818	519+50	522+82	RT	I.R. 75					338						1						
UD10	818	520+02	522+82	RT	I.R. 75	542.342				271	10					1						
IR-75 SUBTOTAL CARRIED TO UNDERDRAIN SUBSUMMARY							0	8277	0	4715	526	0										

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CALCULATED RSH CHECKED DLR

UNDERDRAIN ESTIMATED QUANTITIES

HAM-75-7.85

335
2017

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REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	OUTLET ELEVATION	601 TIED CONCRETE BLOCK, MAT, TYPE 1	605 6" SHALLOW PIPE UNDERDRAINS	605 6" UNCLASSIFIED PIPE UNDERDRAINS	605 6" BASE PIPE UNDERDRAINS	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	611 PRECAST REINFORCED CONCRETE OUTLET				FOR INFORMATION ONLY BENDS AND BRANCHES: PLUG		6" x 45° BEND	6" x 90° BEND	6" x 6" TEE	6" x 6" CROSS	6" x 6" WYE
		FROM	TO				SQ YD	FT	FT	FT	FT	EACH				EACH		EACH	EACH	EACH	EACH	EACH
UD11	818	522+84	527+00	LT	I.R. 75					412						1		1		1		1
UD12	818	522+84	527+00	LT	I.R. 75			404			10					1		1	1			1
UD13	818	522+84	527+00	LT	I.R. 75			407								1				1		
UD14	818	522+84	531+00	LT	I.R. 75	537.31		413			72					1				1		
UD15	818	522+84	526+99	RT	I.R. 75	540.25				414						1						
UD16	818	522+84	527+00	RT	I.R. 75			417								1		1		1		1
UD17	818	522+84	527+00	RT	I.R. 75			419								1		1		1		1
UD18	818	522+84	527+00	RT	I.R. 75	539.58		419			57					1					1	
UD19	818	522+84	525+65	RT	I.R. 75					285	26					1			1	1		
UD20	818	525+69	527+32	RT	I.R. 75	541.24				155	10					1						
UD21	818	527+03	527+50	LT	I.R. 75				47							1						
UD22	818	527+02	531+00	LT	I.R. 75	533.21				381	10					1						
UD23	818	527+00	527+50	LT	I.R. 75				44		10					1						
UD24	818	527+00	527+50	LT	I.R. 75				50							1						
UD25	818	527+00	527+50	RT	I.R. 75	539.63			39		10					1						
UD26	818	527+00	527+50	RT	I.R. 75				44		10					1		1	1			1
UD27	818	527+00	527+50	RT	I.R. 75				47							1						
UD28	818	527+00	527+50	RT	I.R. 75				51							1						
UD29	818	527+50	531+00	LT	I.R. 75	533.73		345			60					1			1			1
UD30	818	527+50	531+45	RT	I.R. 75	533.42				398	32					1				1		
UD31	818	527+50	531+45	RT	I.R. 75					400						1		1	1			1
UD32	818	531+00	531+27	LT	I.R. 75				32							1						
UD33	818	531+00	531+34	LT	I.R. 75				34							1						
UD34	818	531+45	532+01	RT	I.R. 75				56							1						
UD35	818	531+45	532+12	RT	I.R. 75				67							1						
IR-75 SUBTOTAL CARRIED TO UNDERDRAIN SUBSUMMARY							0	2822	511	2034	307	0										

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CALCULATED RSH CHECKED DLR

UNDERDRAIN ESTIMATED QUANTITIES

HAM-75-7.85

336
2017

J:\20110903\ODOT\HAM\77889\drainage\sheets\77889DS002_Underdrains.dgn 2/18/2022 1:33:29 PM efoley

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	OUTLET ELEVATION	601 TIED CONCRETE BLOCK, MAT, TYPE 1	605 6" SHALLOW PIPE UNDERDRAINS	605 6" UNCLASSIFIED PIPE UNDERDRAINS	605 6" BASE PIPE UNDERDRAINS	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	611 PRECAST REINFORCED CONCRETE OUTLET				FOR INFORMATION ONLY BENDS AND BRANCHES PLUG		6" x 45° BEND	6" x 90° BEND	6" x 6" TEE	6" x 6" CROSS	6" x 6" WYE
							SQ YD	FT	FT	FT	FT	EACH				EACH		EACH	EACH	EACH	EACH	EACH
UD1	819	412+60	415+43	RT	RAMP K	523.95				273	10					1			1			
UD2	819	15+92	16+40	LT	S.R. 562	523.35				40	10					1				1		
UD3	819	16+40	16+88	LT	S.R. 562					48						1						
UD4	819	16+90	20+48	LT	S.R. 562	523.58				351	10					1		2	1			
UD5	819 -820	20+51	22+43	LT	S.R. 562	534.61				182	10					1						
UD6	819 -820	22+46	25+96	LT	S.R. 562	542.14				340	10					1						
UD7	819	412+45	415+43	RT	RAMP K	522.45		293			10					1			1			
UD8	819	15+93	16+40	LT	S.R. 562	522.78		45			10					1				1		
UD9	819	16+40	16+88	LT	S.R. 562			48								1						
UD10	819	16+90	20+48	LT	S.R. 562	523.01		356			10					1			1			
UD11	819	20+50	22+43	LT	S.R. 562	533.61		189			10					1			1			
UD12	819 -820	22+45	27+47	LT	S.R. 562			503								1						
UD13	819 -820	22+45	27+48	LT	S.R. 562	541.42		503			11					1			1	1		
UD14	819	412+46	416+13	LT	RAMP K	523.86		379			17					1			2			1
UD15	819	15+93	16+41	LT	S.R. 562	523.22		48			14					1				1		
UD16	819	16+41	20+00	LT	S.R. 562			359								1						
UD17	819	424+09	426+08	LT	RAMP M			196								1		1				
UD18	819	422+89	424+18	RT	RAMP M	537.03				130	40					1			1			
UD19	819	424+20	426+88	RT	RAMP M	526.06				265	10					1			1			
UD20	819	14+77	15+89	RT	S.R. 562	524.35				103	10					1		1				
UD21	819	15+94	16+33	RT	S.R. 562	524.19				29	10					1						
UD22	819	16+36	20+39	RT	S.R. 562	524.19				397	10					1		1				
UD22A	819	16+40	17+70	LT	S.R. 562	524.22				127	10					1		1				
UD23	819	20+52	22+33	RT	S.R. 562	535.14				172	10					1						
UD24	819	22+47	26+26	RT	S.R. 562	542.81				370	10					1						
UD25	819	411+76	413+83	RT	RAMP J					197	10					1		1	1			
UD26	819	411+76	413+83	RT	RAMP J			205								1						
UD27	819	409+06	411+74	RT	RAMP J	526.06				262	10					1		2	2			
UD28	819	412+01	413+81	LT	RAMP J	523.90				190	69					1			1	1		1
UD29	819	407+92	411+74	LT	RAMP J	522.57		385			27					1			2			
UD30	819	15+93	16+34	RT	S.R. 562	522.42		41			23					1				1	1	
UD31	819	16+34	20+48	RT	S.R. 562			413								1						
UD32	819	20+51	22+47	RT	S.R. 562	534.00		196			20					1			1	1		
UD33	819	22+49	25+98	RT	S.R. 562	541.50		349			20					1			1	1		
UD34	819	420+01	424+39	RT	RAMP N			438								1						
UD35	819	15+93	16+34	RT	S.R. 562			42								1						
UD36	819	16+34	16+82	RT	S.R. 562			46								1						
UD37	819	16+84	17+96	RT	S.R. 562	522.16		108			10					1			1			
UD38	819	17+98	20+48	RT	S.R. 562	524.38		245			10					1			1			
UD39	819	20+51	22+47	RT	S.R. 562			21								1						
UD40	819	22+49	25+98	RT	S.R. 562			349								1						
UD41	819	420+01	424+40	RT	RAMP N	523.24				430	10					1						
UD42	819	15+94	16+33	RT	S.R. 562	523.10				29	10					1						
UD43	819	16+36	16+80	RT	S.R. 562	523.10				34	10					1						
UD44	819	16+86	18+01	RT	S.R. 562	523.32				105	10					1						
UD45	819	18+09	20+48	RT	S.R. 562	527.35				229	10					1						
UD46	819	20+50	22+47	RT	S.R. 562	534.39				189	10					1			1			
UD47	819	22+49	25+98	RT	S.R. 562	541.95				342	10					1			1			
IR-75 SUBTOTAL CARRIED TO UNDERDRAIN SUBSUMMARY							0	5757	0	4834	511	0										

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UNDERDRAIN ESTIMATED QUANTITIES

HAM-75-7.85

337
2017

J:\20110903\ODOT\HAM\77889\drainage\sheets\77889DS002_Underdrains.dgn 2/18/2022 1:33:30 PM efoley

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	OUTLET ELEVATION	601 TIED CONCRETE BLOCK, MAT, TYPE 1	605 6" SHALLOW PIPE UNDERDRAINS	605 6" UNCLASSIFIED PIPE UNDERDRAINS	605 6" BASE PIPE UNDERDRAINS	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	611 PRECAST REINFORCED CONCRETE OUTLET				FOR INFORMATION ONLY BENDS AND BRANCHES PLUG		6" x 45° BEND	6" x 90° BEND	6" x 6" TEE	6" x 6" CROSS	6" x 6" WYE
							SQ YD	FT	FT	FT	FT	EACH				EACH		EACH	EACH	EACH	EACH	EACH
UD1	820	26+01	27+48	LT	RAMP P	555.48				137	10					1						
UD2	820	27+51	28+98	LT	RAMP P	561.05				137	10					1						
UD3	820	29+01	31+98	LT	RAMP P	566.75				287	10					1						
UD4	820	32+03	32+62	LT	RAMP P					105	10					1		1	1			
UD5	820	33+64	34+47	LT	RAMP P	580.10				72	10					1						
UD6	820	34+49	34+89	LT	RAMP P	580.40			30		10					1						
UD7	820	27+50	28+97	LT	RAMP P			148								1						
UD8	820	29+00	31+98	LT	RAMP P	566.07		294			10					1			1			
UD9	820	32+03	33+62	LT	RAMP P			159								1						
UD10	820	33+64	33+48	LT	RAMP P			83								1						
UD11	820	34+49	35+09	LT	RAMP P	578.32			54		10					1		1	1			
UD12	820	27+50	33+33	LT	S.R. 562			583			21					1			1	1		
UD13	820	32+03	33+62	RT	RAMP P	577.14		160			31					1			1	1		1
UD14	820	33+64	34+48	RT	RAMP P			84								1						
UD15	820	34+48	35+09	RT	RAMP P				56		10					1		1	1			
UD16	820	33+30	33+62	RT	RAMP P					30	15					1		2	1	1		
UD17	820	33+64	34+48	RT	RAMP P	578.48				81	38					1		2	1	2		2
UD18	820	34+48	35+09	RT	RAMP P	578.32			56		10					1		1	1			
UD19	820	26+32	28+58	RT	S.R. 562	557.16				217	10					1						
UD20	820	28+60	31+57	RT	S.R. 562	566.15				291	10					1			1			
UD21	820	31+59	32+00	RT	S.R. 562	577.47				34	10					1			1			
UD22	820	26+00	32+00	RT	S.R. 562	554.00	2	600			35	1				1			1	1		1
UD23	820	31+82	32+00	LT	RAMP Q				18	18	14					1		1	3			
UD24	820	32+00	33+53	LT	RAMP Q	575.00				151	43					1		2	1	1		2
UD25	820	33+53	34+50	LT	S.R. 562	578.00	2			93	67	1				1		2	1	1		1
UD26	820	26+00	31+98	RT	S.R. 562			598								1						
UD27	820	26+00	31+98	RT	S.R. 562			152								1						
UD28	820	32+00	33+52	RT	S.R. 562			96								1						
UD29	820	33+54	34+50	RT	S.R. 562					592	10					1		1	1			
UD30	820	32+00	33+52	RT	S.R. 562					147	10					1		1	1			
UD31	820	33+54	34+50	RT	S.R. 562					90	10					1		1	1			
IR-75 SUBTOTAL CARRIED TO UNDERDRAIN SUBSUMMARY							4	2957	214	2482	424	2										

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CALCULATED RSH CHECKED DLR

UNDERDRAIN ESTIMATED QUANTITIES

HAM-75-7.85

338
2017

J:\20110903\ODOT\HAM\77889\drainage\sheets\77889DS002_Underdrains.dgn 2/18/2022 1:33:30 PM efoley

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	601 TIED CONCRETE BLOCK MAT, TYPE 2 SQ YD	601 PAVED GUTTER, TYPE 1-2 SQ YD	670 DITCH EROSION PROTECTION SQ YD
EC1	809	410+52	412+00	LT	I.R. 75			124
EC2	809	415+47		LT	I.R. 75	14		
EC3	809	416+00	416+54	LT	I.R. 75		23	
EC4	809	416+00	417+27	RT	I.R. 75			108
EC5	809	416+10		RT	I.R. 75	33		
EC6	809	416+58	417+50	LT	I.R. 75		40	
EC7	809	412+07	413+07	LT	RAMP N			86
EC8	809	413+04	416+50	RT	RAMP N			281
EC9	809	413+18	414+50	LT	RAMP J			129
EC10	809	415+34	417+68	RT	RAMP J			188
EC11	809 - 810	415+50	417+00	LT	RAMP J			144
EC12	809	419+07	420+95	LT	RAMP J			165
EC13	809	418+87	419+45	LT	RAMP J			79
EC14	809	419+24	419+35	LT	RAMP J		8	
EC15	809 - 819	420+51	421+40	RT	RAMP J		39	
EC1	810	421+40	422+90	RT	RAMP J			122
EC2	810	421+50	423+00	RT	I.R. 75			129
EC3	810	422+50	424+00	RT	RAMP K			116
EC4	810	427+60	429+10	RT	RAMP J			125
EC5	810	428+39	429+99	RT	RAMP K			133
EC6	810	431+88	433+35	LT	RAMP J			123
EC1	811	435+90	438+50	RT	I.R. 75			319
EC2	811	438+50	438+90	RT	I.R. 75			391
EC3	811	438+00	440+65	LT	I.R. 75			49
EC4	811	440+19	442+75	RT	I.R. 75			328
EC5	811	442+05	443+60	LT	I.R. 75			425
EC1	812	450+00	451+50	RT	I.R. 75			213
EC2	812	453+34	455+00	RT	I.R. 75			146
EC3	812	455+50	457+00	RT	I.R. 75			78
EC4	812	451+50	452+52	RT	I.R. 75			123
EC1	813	457+00	458+00	RT	I.R. 75			150
EC2	813	459+00	459+50	RT	I.R. 75			121
EC3	813	462+00	463+00	RT	I.R. 75			139
EC4	813	463+00	464+50	RT	I.R. 75			369
EC1	814	474+14	476+00	RT	I.R. 75			232
EC2	814	479+23	480+70	RT	I.R. 75			232
EC1	815	482+00	488+00	RT	RAMP E			548
EC2	815	489+58	490+24	RT	RAMP E			55
EC3	815	487+50	491+00	RT	RAMP D			271
EC4	815	492+06	493+75	RT	RAMP D			127
EC5	815	487+03	490+49	RT	RAMP D	159		
SUBTOTAL						206	110	6368

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	601 TIED CONCRETE BLOCK MAT, TYPE 2 SQ YD	601 PAVED GUTTER, TYPE 1-2 SQ YD	670 DITCH EROSION PROTECTION SQ YD
EC1	816	495+00	496+64	LT	I.R. 75			120
EC2	816	496+64	498+25	LT	I.R. 75			108
EC3	816	500+50	502+00	LT	I.R. 75			119
EC4	816	505+00	506+58	LT	RAMP B			119
EC5	816	495+01	496+64	RT	I.R. 75			280
EC6	816	496+64	497+50	RT	I.R. 75			24
EC7	816	499+30	501+00	RT	I.R. 75			119
EC8	816	502+50	504+00	RT	I.R. 75			119
EC9	816	500+50	502+50	RT	RAMP A			499
EC1	818	525+50	527+00	LT	I.R. 75			233
EC2	818	527+00	531+00	LT	I.R. 75			463
EC3	818	530+00	531+50	RT	I.R. 75			120
EC1	819	412+23	413+83	RT	RAMP J			125
EC2	819	416+17	417+70	LT	RAMP K			137
EC3	819	410+90	412+60	RT	RAMP K		76	
EC4	819	17+96	23+70	RT	S.R. 562		255	
EC1	820	23+80	31+00	RT	S.R. 562			601
SUBTOTAL							331	3186
TOTALS CARRIED TO GENERAL SUMMARY						206	441	9554

FOR INFORMATION ONLY

CALCULATED RSH CHECKED DLR

EROSION CONTROL ESTIMATED QUANTITIES

HAM-75-7.85

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REF. NO.	SHEET	STATION FROM	STATION TO	SIDE	CENTERLINE ROADWAY REFERENCE	607 FENCE, TYPE CLT	607 FENCE, TYPE CLT, AS PER PLAN	607 FENCELINE SEEDING AND MULCHING	FOR INFORMATION ONLY LINE POST	LINE POST ENCASED IN CONCRETE	END/CORNER POST ASSEMBLY	ABUTMENT CONNECTION	607 GATE, TYPE CLT, AS PER PLAN
						FT	FT	FT	EACH	EACH	EACH	EACH	EACH
F1	1648	415+64.00	421+00.00	LT	IR 75	518		518	48	1	3		
F2	1648	420+47.00	421+00.00	RT	IR 75	87		87	8		1		
F1	1649	421+00.00	434+11.00	LT	IR 75	1,281		1,281	124	1	4	1	
F2	1649	421+00.00	434+24.00	RT	IR 75	1,400		1,400	134	1	5	1	
F1	1650	434+94.00	440+69.00	LT	IR 75	581		581	56		3	2	
F2	1650	434+89.00	439+63.00	RT	IR 75	518		518	47	1	4	2	
F3	1650	441+19.00	444+50.00	RT	IR 75	389		389	36		3	1	
F4	1650	441+94.00	444+50.00	LT	IR 75	315		315	31		1	1	
F1	1653	444+50.00	451+59.00	LT	IR 75	771		771	71	3	4	1	
F2	1653	444+50.00	449+07.00	RT	IR 75	466		466	44		3		
F3	1653	453+29.00	457+00.00	LT	IR 75	378		378	35		3	1	
F1	1654	457+00.00	469+50.00	LT	IR 75	1,256		1,256	119	3	4		
F2	1654	457+00.00	469+50.00	RT	IR 75	1,286		1,286	120	1	8		
F1	1655	469+50.00	482+00.00	LT	IR 75	1,511		1,511	139	1	12		
F2	1655	469+50.00	482+00.00	RT	IR 75	1,178		1,178	113	4	1		
F1	1656	480+86.00	490+74.00	LT	IR 75		986						
F2	1656	482+00.00	490+84.00	RT	IR 75	918		918	85	1	6		
F3	1656	491+72.00	494+50.00	LT	IR 75	301		301	30		1	1	
F1	1657	494+50.00	498+30.00	LT	IR 75	398		398	37	2	1		
F2	1657	501+19.00	507+00.00	LT	IR 75	610		610	56		5		
F3	1657	505+64.00	507+00.00	RT	IR 75	153		153	12		4		
F4	1657	494+07.00	496+40.00	RT	IR75		538						2
F1	1658	507+00.00	519+50.00	LT	IR 75	1,248		1,248	120	2	3		
F2	1658	507+00.00	507+00.00	RT	IR 75	1,256		1,256	121	3	2		
F1	1659	519+50.00	522+52.00	LT	IR 75	308		308	30		1	1	
F2	1659	519+50.00	522+22.00	RT	IR 75	279		279	26	2		1	
F3	1659	522+62.00	533+23.00	RT	IR 75	1,090		1,090	104	2	3	1	
F4	1659	522+89.00	531+22.18	LT	IR 75	815		815	77	3	2		
F1	1651	412+17.00	419+01.00	RT	RAMP K	622		622	60		3	1	
F2	1651	423+71.00	425+20.00	RT	RAMP N	158		158	14		2	1	
F3	1651	17+07.00	23+00.00	LT	SR 562	598		598	58	1	1	1	
F4	1651	17+53.00	23+00.00	RT	SR 562	567		567	52		5	1	
F1	1652	23+00.00	33+89.00	LT	SR 562	1,108		1,108	104		7		
F2	1652	23+00.00	37+62.00	RT	SR 562	1,492		1,492	144	2	4		
TOTALS CARRIED TO GENERAL SUMMARY						23,856	1,524	23,856	2,255	34	109	18	2

FOR INFORMATION ONLY

CALCULATED SEA CHECKED DLR

FENCE ESTIMATED QUANTITIES

HAM-75-7.85

340
2017

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REF NO.	SHEET NO.	STATION TO STATION	204 SUBGRADE COMPACTION	301 ASPHALT CONCRETE BASE, PG64-22	304 AGGREGATE BASE	407 NON-TRACKING TACK COAT	441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	608 4" CONCRETE WALK	611 48" CONDUIT, TYPE C	611 MANHOLE, MISC.;TRASH RACK STRUCTURE		638 54" STEEL PIPE ENCASEMENT, BORED OR JACKED	638 WATER WORK, MISC.:36" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 53, MECHANICAL JOINTS AND FITTINGS	SPECIAL BOLLARD	SPECIAL STORMWATER PUMP STATION STRUCTURE	SPECIAL PUMP STATION BUILDING AND CONTROLS	SPECIAL PRESSURE RELEASE VALVE AND STRUCTURE	SPECIAL TEMPORARY 600KW GENERATOR				
			SY	CY	CY	GAL	CY	SF	FT	EACH		FT	FT	EACH				MNTH				
	883 - 933		842	70	140	84	35	15	40	1		528	1368	32	LUMP	LUMP	LUMP	4				
SUBTOTALS			842.00	70.00	140.00	84.00	35.00	15.00	40.00	1.00		528.00	1368.00	32.00				4.00				
TOTALS CARRIED TO GENERAL SUMMARY			842	70	140	84	35	15	40	1		528	1368	32	LS	LS	LS	4				

FOR INFORMATION ONLY

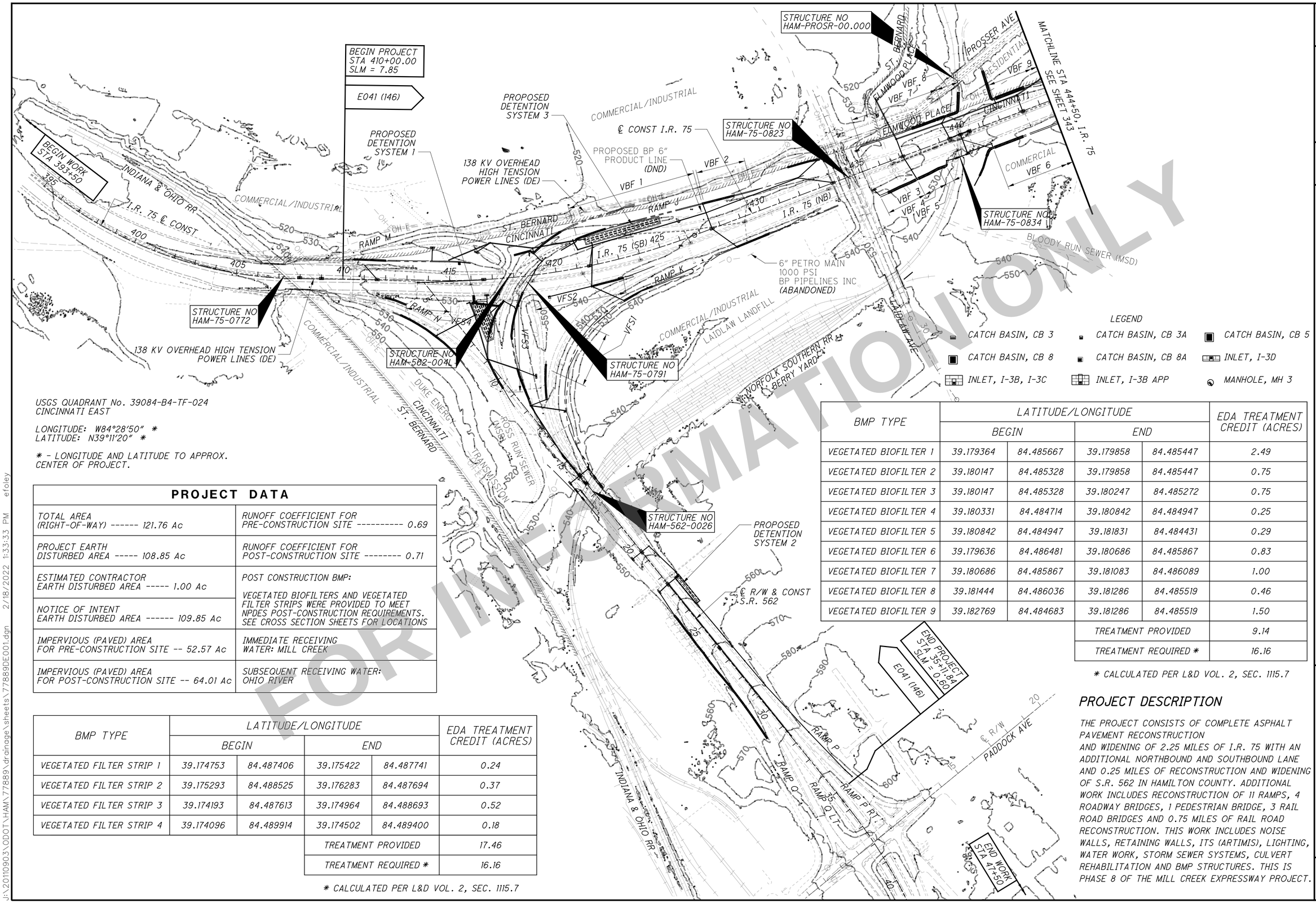
CALCULATED SEA CHECKED DLR

PUMP STATION ESTIMATED QUANTITIES

HAM-75-7.85

341
2017

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LEGEND

- CATCH BASIN, CB 3
- CATCH BASIN, CB 3A
- CATCH BASIN, CB 5
- CATCH BASIN, CB 8
- CATCH BASIN, CB 8A
- INLET, I-3D
- INLET, I-3B, I-3C
- INLET, I-3B APP
- MANHOLE, MH 3

USGS QUADRANT No. 39084-B4-TF-024
CINCINNATI EAST

LONGITUDE: W84°28'50" *
LATITUDE: N39°11'20" *

* - LONGITUDE AND LATITUDE TO APPROX. CENTER OF PROJECT.

PROJECT DATA

TOTAL AREA (RIGHT-OF-WAY) ------ 121.76 Ac	RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE ---------- 0.69
PROJECT EARTH DISTURBED AREA ----- 108.85 Ac	RUNOFF COEFFICIENT FOR POST-CONSTRUCTION SITE -------- 0.71
ESTIMATED CONTRACTOR EARTH DISTURBED AREA ----- 1.00 Ac	POST CONSTRUCTION BMP: VEGETATED BIOFILTERS AND VEGETATED FILTER STRIPS WERE PROVIDED TO MEET NPDES POST-CONSTRUCTION REQUIREMENTS. SEE CROSS SECTION SHEETS FOR LOCATIONS
NOTICE OF INTENT EARTH DISTURBED AREA ------ 109.85 Ac	
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE -- 52.57 Ac	IMMEDIATE RECEIVING WATER: MILL CREEK
IMPERVIOUS (PAVED) AREA FOR POST-CONSTRUCTION SITE -- 64.01 Ac	SUBSEQUENT RECEIVING WATER: OHIO RIVER

BMP TYPE	LATITUDE/LONGITUDE BEGIN		END		EDA TREATMENT CREDIT (ACRES)
VEGETATED FILTER STRIP 1	39.174753	84.487406	39.175422	84.487741	0.24
VEGETATED FILTER STRIP 2	39.175293	84.488525	39.176283	84.487694	0.37
VEGETATED FILTER STRIP 3	39.174193	84.487613	39.174964	84.488693	0.52
VEGETATED FILTER STRIP 4	39.174096	84.489914	39.174502	84.489400	0.18
			TREATMENT PROVIDED		17.46
			TREATMENT REQUIRED *		16.16

* CALCULATED PER L&D VOL. 2, SEC. 1115.7

BMP TYPE	LATITUDE/LONGITUDE BEGIN		END		EDA TREATMENT CREDIT (ACRES)
VEGETATED BIOFILTER 1	39.179364	84.485667	39.179858	84.485447	2.49
VEGETATED BIOFILTER 2	39.180147	84.485328	39.179858	84.485447	0.75
VEGETATED BIOFILTER 3	39.180147	84.485328	39.180247	84.485272	0.75
VEGETATED BIOFILTER 4	39.180331	84.484714	39.180842	84.484947	0.25
VEGETATED BIOFILTER 5	39.180842	84.484947	39.181831	84.484431	0.29
VEGETATED BIOFILTER 6	39.179636	84.486481	39.180686	84.485867	0.83
VEGETATED BIOFILTER 7	39.180686	84.485867	39.181083	84.486089	1.00
VEGETATED BIOFILTER 8	39.181444	84.486036	39.181286	84.485519	0.46
VEGETATED BIOFILTER 9	39.182769	84.484683	39.181286	84.485519	1.50
			TREATMENT PROVIDED		9.14
			TREATMENT REQUIRED *		16.16

* CALCULATED PER L&D VOL. 2, SEC. 1115.7

PROJECT DESCRIPTION

THE PROJECT CONSISTS OF COMPLETE ASPHALT PAVEMENT RECONSTRUCTION AND WIDENING OF 2.25 MILES OF I.R. 75 WITH AN ADDITIONAL NORTHBOUND AND SOUTHBOUND LANE AND 0.25 MILES OF RECONSTRUCTION AND WIDENING OF S.R. 562 IN HAMILTON COUNTY. ADDITIONAL WORK INCLUDES RECONSTRUCTION OF 11 RAMPS, 4 ROADWAY BRIDGES, 1 PEDESTRIAN BRIDGE, 3 RAIL ROAD BRIDGES AND 0.75 MILES OF RAIL ROAD RECONSTRUCTION. THIS WORK INCLUDES NOISE WALLS, RETAINING WALLS, ITS (ARTIMIS), LIGHTING, WATER WORK, STORM SEWER SYSTEMS, CULVERT REHABILITATION AND BMP STRUCTURES. THIS IS PHASE 8 OF THE MILL CREEK EXPRESSWAY PROJECT.

HORIZONTAL SCALE IN FEET
0 100 200 400

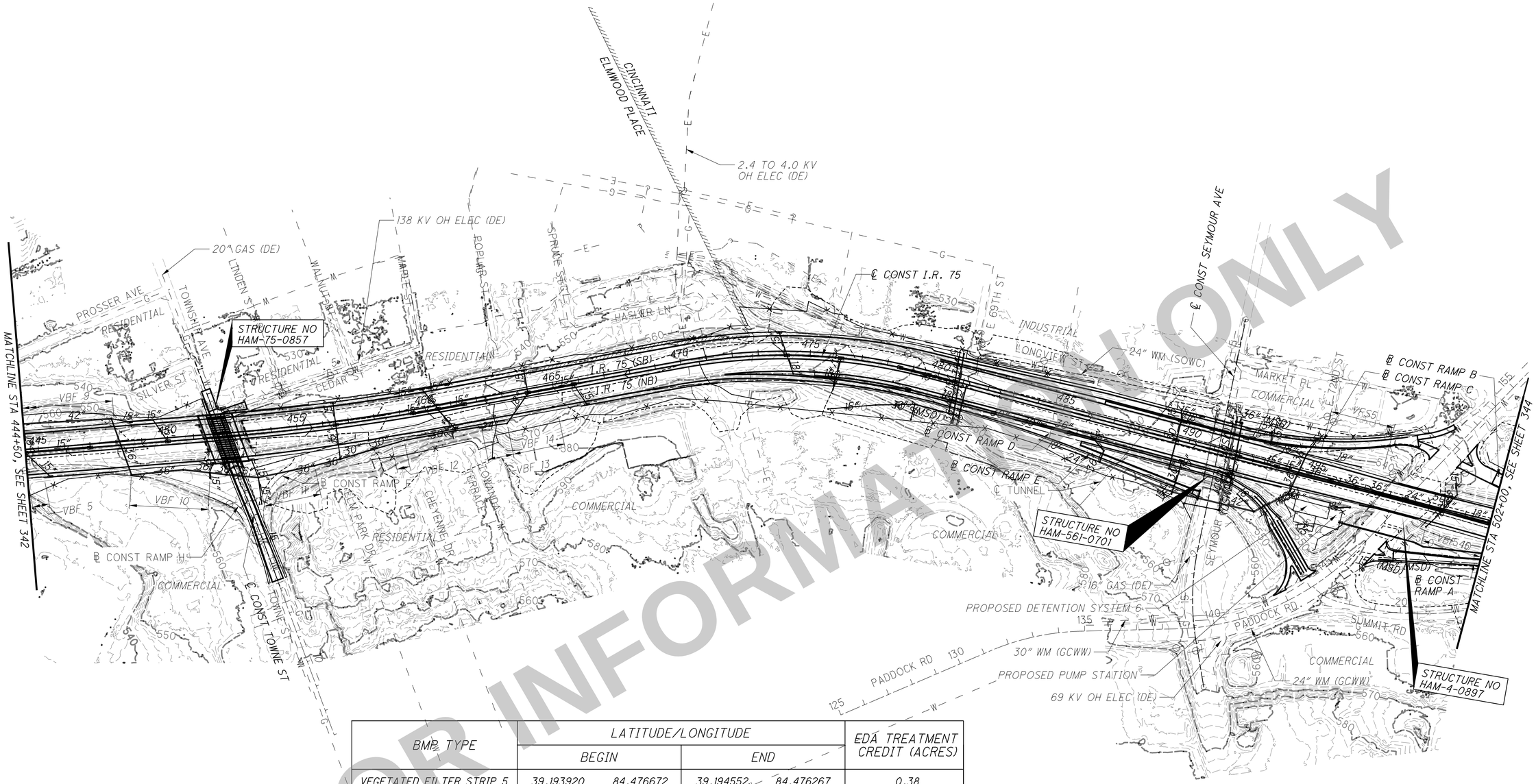
CALCULATED RSH CHECKED DLR

PROJECT SITE PLAN
I.R. 75 & S.R. 562 NORWOOD LATERAL PKWY

HAM-75-7.85

342
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BMP TYPE	LATITUDE/LONGITUDE				EDA TREATMENT CREDIT (ACRES)
	BEGIN		END		
VEGETATED FILTER STRIP 5	39.193920	84.476672	39.194552	84.476267	0.38
VEGETATED BIOFILTER 5	39.180842	84.484947	39.181831	84.484431	0.29
VEGETATED BIOFILTER 9	39.182769	84.484683	39.181286	84.485519	1.50
VEGETATED BIOFILTER 10	39.182553	84.484033	39.182669	84.483936	0.89
VEGETATED BIOFILTER 11	39.182669	84.483936	39.183381	84.483386	0.94
VEGETATED BIOFILTER 12	39.183878	84.483061	39.183839	84.483075	0.09
VEGETATED BIOFILTER 13	39.185247	84.482650	39.185383	84.482603	0.26
VEGETATED BIOFILTER 14	39.186175	84.482297	39.186428	84.482153	1.08
VEGETATED BIOFILTER 15	39.186956	84.481953	39.186428	84.482153	1.11
			TREATMENT PROVIDED		17.26
			TREATMENT REQUIRED *		16.16

* CALCULATED PER L&D VOL. 2, SEC. 1115.7

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 100 200 400

CALCULATED RSH
CHECKED DLR

PROJECT SITE PLAN
I.R. 75

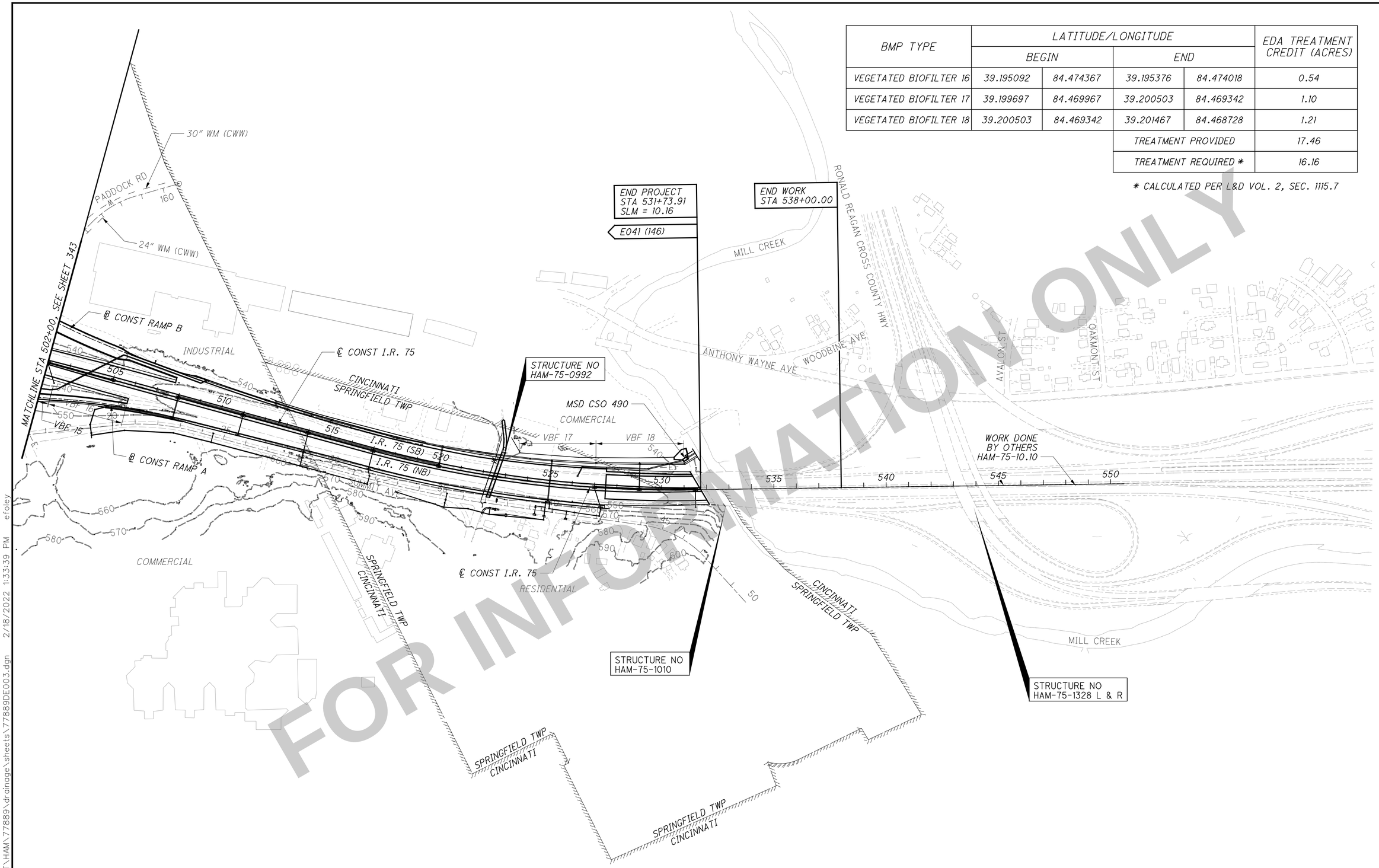
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343
2017

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BMP TYPE	LATITUDE/LONGITUDE				EDA TREATMENT CREDIT (ACRES)
	BEGIN		END		
VEGETATED BIOFILTER 16	39.195092	84.474367	39.195376	84.474018	0.54
VEGETATED BIOFILTER 17	39.199697	84.469967	39.200503	84.469342	1.10
VEGETATED BIOFILTER 18	39.200503	84.469342	39.201467	84.468728	1.21
			TREATMENT PROVIDED		17.46
			TREATMENT REQUIRED *		16.16

* CALCULATED PER L&D VOL. 2, SEC. 1115.7



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 100 200 400

CALCULATED RSH
CHECKED DLR

PROJECT SITE PLAN
I.R. 75

HAM-75-7.85

344
2017

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CURVE 75-1
P.I. Sta. 401+67.56
Δ = 38° 43′ 05″ (LT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 671.03′
L = 1,290.60′
E = 114.46′
C = 1,266.19′
C.B. = N 65° 19′ 05″ E
e_{max} = 0.055

BEGIN WORK
STA 393+50.00

PC Sta. 394+96.53

POLES SHOWN WITHIN ROADWAY TO BE RELOCATED AS A PART OF HAM-75-6.78. CONTRACTOR TO FIELD VERIFY.

N 84° 40′ 37″ E

395+50.00
2.50′ LT

395+50.00
73.50′ RT

℄ CONST I.R. 75
(HAM-75-6.78)

CONST LIMITS

403+40.00
93.69′ LT

403+40.00
5.66′ LT

403+21.63
73.50′ RT

405+39.61
110.28′ LT

405+39.61
98.07′ LT

406+16.11
116.30′ LT

406+16.11
99.72′ LT

406+49.55
86.82′ RT

405+99.99
81.50′ RT

404+21.63
81.50′ RT

PC Sta. 404+21.63

STRUCTURE NO
HAM-75-0772

INDIANA & OHIO RAILWAY

CINCINNATI
ST. BERNARD

℄ RAMP M
(HAM-75-6.78)

℄ RAMP N
(HAM-75-6.78)

MATCHLINE STA 407+00 SEE SHEET346

75-1

Ex R/W
Ex LA-R/W
EX R/W
EX LA-R/W

RESURFACING

CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITIES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLAN
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SEA
CHECKED DLR

PLAN - I.R. 75 RESURFACING
STA 394+50 TO STA 407+00

HAM-75-7.85

345
2017

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CURVE 75-1
PI STA 401+67.56
Δ = 38° 43′ 05″ (LT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 671.03′
L = 1,290.60′
E = 114.46′
C = 1,266.19′
C.B. = N 65° 19′ 05″ E
e max = 0.055

RESURFACING
EROSION CONTROL
TIED CONCRETE BLOCK MAT

BEGIN PROJECT STA 410+00.00 SLM = 7.85

E041 (146)

CONST LIMITS

1 OVERHEAD HIGH TENSION POWER LINES 107.12′ (635.60), ABOVE EX. GRADE (528.48)

MATCHLINE STA 407+00 SEE SHEET 345

MATCHLINE STA 419+50 SEE SHEET 348

BEGIN TAPER 410+00.00, 15.95′ LT

BEGIN TAPER 410+00.00, 14.50′ RT

410+00.00 68.83′ RT

BEGIN TAPER 410+69.34, 98.47′ RT

END TAPER 411+18.85, 101.66′ RT

END TAPER 411+50.00, 13.50′ LT

END TAPER 411+50.00, 13.50′ RT

SAWCUT 411+61.42 73.50′ RT

BEGIN TAPER 415+00.00, 73.50′ LT

END TAPER 415+50.00, 75.50′ LT

BEGIN TAPER 416+02.82, 73.50′ RT

END TAPER 416+12.82, 75.50′ RT

417+63.36 BEGIN APP SLAB

END TAPER 419+34.40, 73.50′ RT

BEGIN TAPER 418+78.31, 75.50′ RT

PT STA 407+87.13

PC STA 414+46.39

N 45° 57′ 32″ E

I.R. 75 (SB)

I.R. 75 (NB)

RAMP M

RAMP N

RAMP J

ST. BERNARD
CITY OF CINCINNATI

CINCINNATI
ST. BERNARD
INDIANA & OHIO RAILWAY

PROP MEDIAN BARRIER

℄ CONST I.R. 75

℄ CONST RAMP M

℄ CONST RAMP N

SEE SHEET 357 FOR RAMP M

SEE SHEET 363 FOR RAMP J

STRUCTURE NO HAM-562-0004

PROP BARRIER

STRUCTURE NO HAM-75-0772

STRUCTURE NO HAM-75-0791

EX DRIVE (DND)

DETENTION AREA (HAM-75-6.78)

PROPOSED DETENTION SYSTEM

ROSS RUN SEWER (14′ x 20′) (MSD)

PROPOSED BP 6″ PRODUCT LINE (DND)

CURVE 75-2
PI STA 420+66.70
Δ = 21° 27′ 24″ (LT)
Dc = 1° 45′ 00″
R = 3,274.04′
T = 620.31′
L = 1,226.10′
E = 58.25′
C = 1,218.94′
C.B. = N 35° 13′ 50″ E
e MAX = 0.042

CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITIES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLAN
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS
1333 - 1389	BRIDGE PLANS HAM-75-0791
1269 - 1332	BRIDGE PLANS HAM-562-0004

FOR INFORMATION ONLY

P.V.I. STA 408+50.00
ELEV = 526.66′
440.00′ VC
K = 195

P.V.I. STA 411+60.00
ELEV = 531.61′

P.V.I. STA 415+94.10
ELEV = 537.80′
270.00′ VC
K = 284
SSD = 1272′

PROP PROFILE

EX PROFILE

FUTURE EXISTING PROFILE

BUTT JOINT PER SCD BP-3.1

STA 410+70.00 ELEV 530.17

STA 414+59.10 ELEV 535.87

STA 417+29.10 ELEV 538.44

+1.60 %
+1.43 %
-0.66 %
+0.48 %

MIN. VERTICAL CLEARANCE
15′-6″ REQUIRED
16′-9″ PROVIDED

MIN. VERTICAL CLEARANCE
15′-6″ REQUIRED
16′-8 1/8″ PROVIDED

EX 30″ RCP
EX 12″ RCP
EX 15″ RCP (ABANDONED)
EX 42″ RCP (ABANDONED)
FUTURE EX 42″ B
EX 42″ B
EX 42″ RCP
FUTURE EX 42″ B (EMERGENCY SPILLWAY)
EX 12″ RCP (TBR)
ROSS RUN SEWER (14′x20′)

FOR EXISTING DRAINAGE INVERTS SEE SHEET 347

529.18 529.51 529.86 530.25 530.65 531.05 531.45 531.82 532.18 532.54 532.89 533.25 533.61 533.96 534.32 534.68 535.03 535.39 535.75 536.10 536.43 536.74 537.03 537.29 537.54 537.76 537.96 538.13 538.29 538.42 538.54 538.66 538.78 538.90 539.02 539.14 539.26 539.38 539.50

527.24 527.15 527.18 527.32 527.62 528.04 528.62 529.35 530.16 530.88 531.53 532.08 532.59 533.10 533.60 534.03 534.41 534.74 535.07 535.34 530.06 530.71 536.07 536.30

540 530 520 510

407+00 408+00 409+00 410+00 411+00 412+00 413+00 414+00 415+00 416+00 417+00 418+00 419+00

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SEA CHECKED DLR

PLAN AND PROFILE - I.R. 75
STA 407+00 TO STA 419+50

HAM-75-7.85

346
2017

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A STA 406+60.88, 59.20' RT
EX CB, GRATE ELEV 527.79
EX 30" RCP SE 524.39
EX 30" RCP NW 524.39

B STA 406+78.96, 27.56' LT
EX MH-1, RIM ELEV 528.09
EX 12" RCP S 522.35
EX 30" RCP SE 522.12
EX 30" RCP NE 522.12

C STA 407+64.79, 41.90' LT
EX MH, RIM ELEV 528.47
EX 30" RCP SW 521.22
EX 30" RCP NE 521.22

D STA 408+33.34, 1.94' RT
EX CB, GRATE ELEV 528.43
EX 12" RCP NW 521.38

E STA 408+92.15, 52.14' RT
EX CB, GRATE ELEV 528.11
EX 6" UD SW 524.51
EX 12" RCP W 525.81

F STA 409+28.38, 2.27' LT
EX CB, GRATE ELEV 528.63
EX 12" RCP SW 520.72
EX 15" RCP NE 520.47

G STA 410+35.28, 0.44' RT
EX CB, GRATE ELEV 529.35
EX 15" RCP SW 519.42
EX 15" RCP NE 519.42
EX 15" RCP NW 521.23

H STA 410+36.18, 47.35' LT
EX MH, RIM ELEV 529.41
ABANDONED W/PID 82286
EX 12" RCP SW 522.51
EX 15" RCP NE 521.21
EX 15" RCP S 518.56
EX 42" RCP S 516.46
EX 42" RCP N 516.36

I STA 411+01.18, 66.51' LT
EX MH, RIM ELEV 530.38
EX 24" B NORTHWESTERLY 521.26
EX 42" B NORTHEASTERLY 509.88
EX 42" B SO 509.88

J STA 412+45.42, 41.83' LT
EX MH, RIM ELEV 531.22
EX 12" RCP NW 522.92
EX 42" RCP NE 514.77
EX 42" RCP SW 514.72

K *FUTURE EXISTING BY OTHERS, TO REMAIN*
STA 413+27.47, 66.61' LT
EX MH, RIM ELEV 531.00
ADJUST TO GRADE, 533.35
EX 42" B SE 508.75
EX 42" B SW 508.75

L *FUTURE EXISTING BY OTHERS, TO REMAIN*
STA 413+47.13, 83.50' RT
EX MH, RIM ELEV 530.52
RECONSTRUCT TO GRADE, 532.75
FUTURE EX 15" (NW) 527.30
FUTURE EX 24" (SE) 519.00
FUTURE EX 42" (NW) 507.95
FUTURE EX 42" (NE) 507.95

M *FUTURE EXISTING BY OTHERS, TO REMAIN*
ADJUST TO GRADE, 534.23
REPLACE FRAME AND GRATE WITH MH FRAME & LID
STA 413+49.78, 11.41' RT
EX CB, GRATE ELEV 532.82
FUTURE EX 15" (NE) 527.57
FUTURE EX 15" (SE) 527.57
15" (NE) 528.25

N *FUTURE EXISTING BY OTHERS, TO REMAIN*
STA 414+16.63, 85.95' RT
EX MH, RIM ELEV 530.40
ADJUST TO GRADE, 532.85
EX 42" B NE 517.13
EX 42" B SW 507.15
EX 42" B SE 507.15

O STA 414+61.29, 36.20' LT
ABANDONED W/ PID 82286
EX MH, RIM ELEV 532.88
12" RCP E 523.89
12" RCP W 524.79
42" RCP S 512.81±
42" RCP N 512.81±

P *FUTURE EXISTING BY OTHERS, TO REMAIN*
STA 415+41.54, 97.77' RT
EX MH, RIM ELEV 529.40
ADJUST TO GRADE, 531.71
FUTURE EX 42" (SW) 515.65
(EMERGENCY SPILLWAY)
FUTURE EX 42" (NE) 506.80
FUTURE EX 18" (SE) 506.80

Q *(TO BE REMOVED)*
STA 415+98.92, 20.86' RT
EX CB, GRATE ELEV 534.92
EX 15" (SW) 529.67

R *(TO BE REMOVED)*
STA 417+26.26, 71.62' RT
EX MH, RIM ELEV 521.38
EX 12" RCP E 508.48
EX 6" DRN S 519.18
EX 12" RCP W 508.48

S *(TO BE REMOVED)*
STA 417+45.15, 40.51' RT
EX MH, RIM ELEV 522.02
EX 12" RCP SE 510.57
EX 12" RCP NW 510.57
EX 8" RCP SW 511.94
EX 8" RCP N 511.94

T *(TO BE REMOVED)*
STA 417+85.27, 15.74' LT
EX MH, RIM ELEV 522.25
EX 6" RCP S 515.55
EX 12" RCP E 513.05
EX 12" RCP W 513.05

U *(TO BE REMOVED)*
STA 418+19.52, 28.74' LT
EX MH, RIM ELEV 515.92
EX 12" RCP N 512.39
EX 6" UD N 512.09
EX 36" RCP SE 506.14
EX 36" RCP NE 506.14

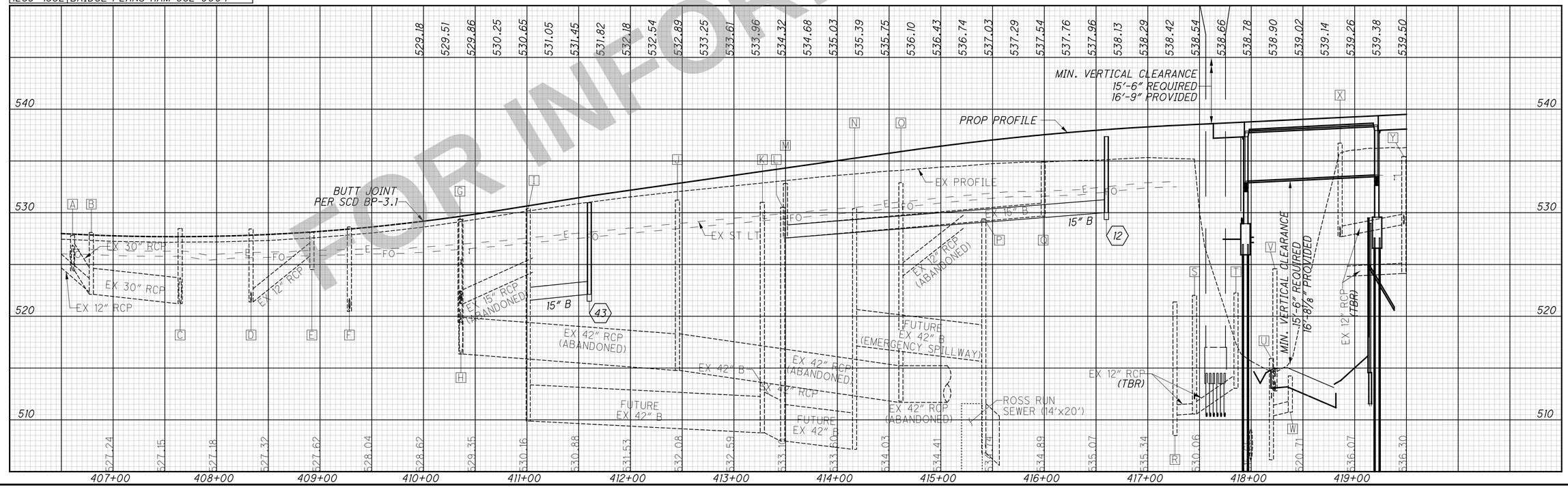
V *(TO BE REMOVED)*
STA 418+22.89, 42.52' RT
EX MH, RIM ELEV 524.59
EX 12" RCP W 514.09
EX 12" RCP NW 512.79
EX 12" RCP S 512.79

W *(TO BE REMOVED)*
STA 418+37.78, 14.49' LT
EX CB, GRATE ELEV 514.24
EX 12" RCP W 510.74

X *(TO BE REMOVED)*
STA 418+85.87, 29.55' RT
EX CB, GRATE ELEV 536.72
EX 12" RCP N 531.70

Y *(TO BE REMOVED)*
STA 419+47.48, 23.86' LT
EX MH-1, RIM ELEV 535.43
EX 12" RCP SW 528.83
EX 12" RCP S 527.70
EX 12" RCP W 524.13

CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITIES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLAN
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS
1333 - 1389	BRIDGE PLANS HAM-75-0791
1269 - 1332	BRIDGE PLANS HAM-562-0004



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SEA
CHECKED DLR

EXISTING STORM PROFILE DATA - I.R. 75
STA 407+00 TO STA 419+50

HAM-75-7.85

347
2017

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CURVE 75-2
PI STA 420+66.70
Δ = 21° 27′ 24″ (LT)
Dc = 1° 45′ 00″
R = 3,274.04′
T = 620.31′
L = 1,226.10′
E = 58.25′
C = 1,218.94′
C.B. = N 35° 13′ 50″ E
e_{max} = 0.042

STRUCTURE NO HAM-75-0791

EROSION CONTROL

60″ COMB (MSD)
LA R/W
Ex LA R/W
ST. BERNARD CINCINNATI
VBF #1
VBF #2
CONST LIMITS
CONC TRUCK DOCK
60″ COMB RCP (MSD)
℄ CONST RAMP J
RAMP J
PROPOSED DETENTION SYSTEM 3
END TAPER 420+61.15, 73.50′ LT
BEGIN TAPER 420+51.15, 75.50′ LT
EX RAMP J
PT STA 426+72.49
I.R. 75 (SB)
℄ CONST I.R. 75
419+52.73 END APP SLAB
MATCHLINE STA 419+50 SEE SHEET 346
MATCHLINE STA 432+00 SEE SHEET 349
424+64.86 73.50′ RT
I.R. 75 (NB)
PROP MEDIAN BARRIER
℄ CONST RAMP K
RAMP K
PROPOSED BP 6″ PRODUCT LINE (DND)
EX 66″ CULVERT
CONST LIMITS
LAIDLAW LANDFILL
N 24° 30′ 08″ E
430+70.83 61.50′ RT
END TAPER 431+71.07, 97.50′ RT
BEGIN TAPER 430+71.07, 97.50′ RT
DND BUILDING
EX 6″ BP HIGH PRESSURE PETROLEUM LINE (ABANDONED)
A PIPE DEPTH CONFIRMED PER SUE IN MAY, 2013.

R1 R2 R3 R4 R5 R6 R7 R8 R9 R10 R11 R12 R13 R14 75-2

CROSS REFERENCES

SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITIES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLAN
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS

FOR INFORMATION ONLY

(TO BE ABANDONED)
STA 421+20.84, 27.52′ RT
EX CB, GRATE ELEV 537.50
EX 12″ RCP NE 530.49
EX 12″ RCP W 530.49

(TO BE ABANDONED)
STA 423+97.56, 28.40′ RT
EX CB, GRATE ELEV 538.92
EX 12″ RCP W 530.72

(TO BE ABANDONED)
STA 426+32.99, 37.71′ LT
EX MH, RIM ELEV 538.69
EX 12″ RCP E 531.25
EX 21″ RCP NE & SW 526.04

(TO BE ABANDONED)
STA 428+92.66, 110.97′ RT
EX CB, GRATE ELEV 537.66
EX 15″ RCP NW 535.26
6″ N 536.06

(TO BE ABANDONED)
STA 429+14.32, 26.89′ RT
EX MH-1, RIM ELEV 541.59
EX 15″ RCP SE 530.07
EX 12″ RCP NW 531.82
EX 12″ RCP NE 530.07
EX 21″ RCP SW 530.07

PROP PROFILE
EX PROFILE
+0.48 %
17
22
EX ST LT
EX 12″ RCP (TBA)
EX 15″ RCP (TBA)
(TO BE REMOVED)
STA 423+84.02, 97.72′ LT
EX. MH, RIM ELEV 530.46
EX. 21″ RCP NE 520.66
EX. 12″ RCP SE 523.86
EX. 24″ RCP SW 520.66
EX. 15″ RCP NW 523.46
EX. 12″ RCP NW 524.56
EX 24″ RCP (TBR)
24″ B
(TBA) EX 66″ CULV
EX 21″ RCP (TBA)
(TO BE ABANDONED)
STA 426+40.93, 26.82′ RT
EX CB, GRATE ELEV 540.06
EX 12″ RCP W 535.47
EX 12″ RCP (TBA)
EX 15″ RCP (TBA)
DND 6″ BP HIGH PRESSURE PETROLEUM LINE
STA 430+43.37 ELEV 541.71
P.V.I. STA 433+43.37
ELEV = 546.14′
600.00′ VC
K = 153
SSD = 574′
(TO BE ABANDONED)
STA 429+59.84, 65.02′ LT
EX. CB, GRATE ELEV 537.66
EX. 12″ RCP SE 535.36

539.74 539.85 539.97 540.09 540.21 540.33 540.45 540.57 540.69 540.81 540.93 541.05 541.17 541.28 541.40 541.52 541.64 541.76 541.88 542.00 542.12 542.24 542.36 542.48 542.60 542.72 542.83 542.95 543.07 543.19 543.31 543.43 543.55 543.67 543.79 543.91 544.03 544.15 544.26 544.38 544.50 544.62 544.74 544.83 544.87 544.88 544.85 544.77 544.65

536.47 536.75 536.91 537.16 537.42 537.70 537.95 538.16 538.34 538.70 539.01 539.25 539.57 539.98 540.24 540.73 541.16 541.46 541.79 542.12 542.44 542.63 542.75 542.88

550 540 530 520

420+00 421+00 422+00 423+00 424+00 425+00 426+00 427+00 428+00 429+00 430+00 431+00 432+00

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SEA CHECKED DLR

PLAN AND PROFILE - I.R. 75
STA 419+50 TO STA 432+00

HAM-75-7.85

348
2017

efoley
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CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
1092 - 1095	SANITARY SEWER PROFILES
299 - 341	ESTIMATED QUANTITIES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLAN
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS
1390 - 1444	BRIDGE PLANS HAM-75-0823
1572 - 1612	BRIDGE PLANS HAM-75-0834
1613 - 1647	BRIDGE PLANS HAM-PROSR-00.000

STRUCTURE NO HAM-75-0823

NOTE 1

STRUCTURE NO HAM-PROSR-00.000

PROSSER AVE

RAMP J

LAIDLAW AVE

OVERHEAD HIGH TENSION POWER LINES ELEV UNKNOWN, CONTRACTOR TO FIELD VERIFY

NOISE WALL 1A

NOISE WALL 1B-1

CONST LIMITS

REMOVE BILLBOARD

I.R. 75 (SB)

I.R. 75 (NB)

℄ CONST I.R. 75

N 24° 30' 08" E

PROP MEDIAN BARRIER

MATCHLINE STA 432+00 SEE SHEET 348

MATCHLINE STA 444+50 SEE SHEET 350

BEGIN APP SLAB 433+82.10

END APP SLAB 435+19.11

BEGIN TAPER 433+38.82, 97.50' RT

END TAPER 433+48.82, 99.50' RT

BEGIN TAPER 435+60.28, 99.50' RT

END TAPER 436+10.28, 97.50' RT

BLOODY RUN SEWER (15'x10') (MSD)

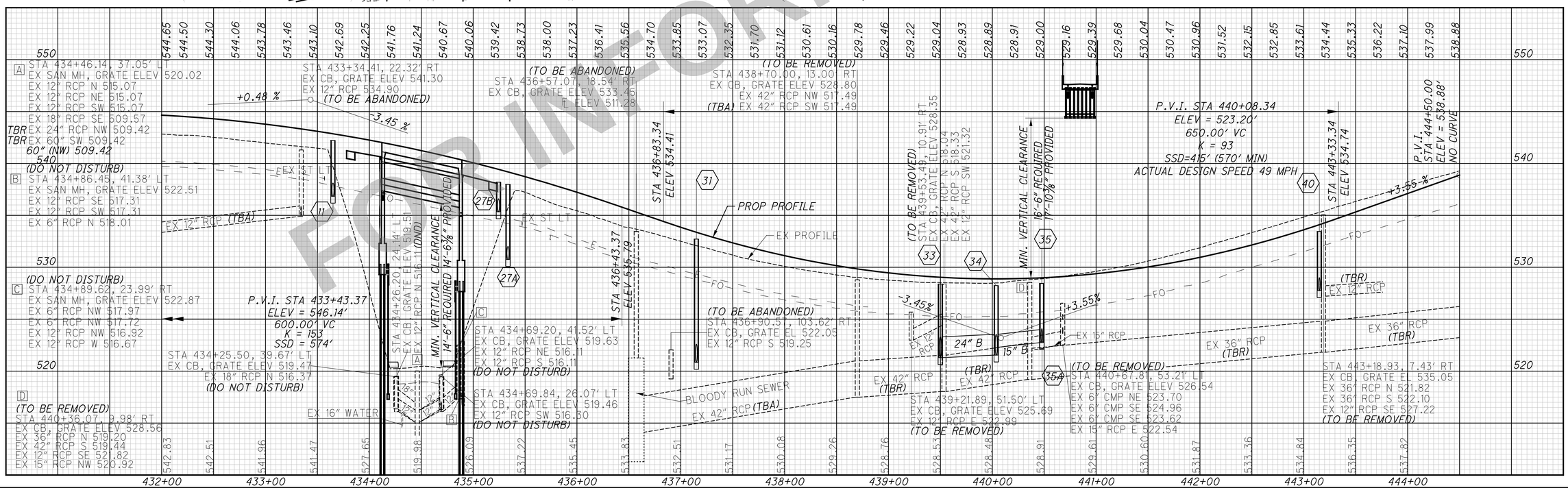
LAIDLAW LANDFILL

STRUCTURE NO HAM-75-0834

REMOVE LIGHTED BILLBOARD

NOTE 1:
MSD PROJECT 11240020 CSO 181 REAL TIME CONTROL

EROSION CONTROL



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET (0, 25, 50, 100)

CALCULATED SEA CHECKED DLR

PLAN AND PROFILE - I.R. 75
STA 432+00 TO STA 444+50

HAM-75-7.85

349
2017

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CURVE 75-3
PI STA 456+41.20
Δ = 5°41'01" (LT)
Dc = 0°40'00"
R = 8,594.37'
T = 426.63'
L = 852.56'
E = 10.58'
emax = 0.019

LIMITS OF PAVEMENT REMOVED

1 BEGIN APP SLAB STA 451+48.21

2 END APP SLAB STA 452+77.26

3 ℄ CONST I.R. 75 452+12.74= ℄ CONST TOWNE ST 19+24.88

CROSS REFERENCES	
SHEET NO	DESCRIPTION
821-860	STORM SEWER PROFILES
809-820	DRAINAGE PLANS
299-341	ESTIMATED QUANTITES
769-788	SUPERELEVATION TABLES
1100-1111	ROADSIDE BARRIER PLANS
789-802	INTERCHANGE DETAILS
1229-1268	LIGHTING PLANS
1333-1389	BRIDGE PLANS HAM-75-0791
1269-1332	BRIDGE PLANS HAM-562-0004

MATCHLINE STA 444+50, SEE SHEET 349

MATCHLINE STA 457+00, SEE SHEET 351

I.R. 75 (SB)

I.R. 75 (NB)

SILVER ST

POT STA 22+33.74

TOWNSHIP AVE

℄ TOWNSHIP AVE

LINDEN ST

CEDAR ST

TOWNE ST

RAMP E

RAMP F

CONST LIMITS

EX ST LT

EX ITS

FO

OHE TRANSMISSION (138kv)

Ex U

Ex SL

Ex LA-R/W

Ex R/W

EX 20" GAS

8" SAN

10" SAN

8" WAT

EX 6" WAT

EX 12" GAS

EX 8" GAS

DND

TMP

STRUCTURE NO HAM-75-0857

N 24° 30' 08" E

℄ CONST I.R. 75

PROP MEDIAN BARRIER

BARRIER TYPE D

NOISE WALL 1B-1

NOISE WALL 1B-2

NOISE WALL 2A

NOISE WALL 1C
PC STA 452+14.57

BEGIN WALL I, BEGIN WALL I1
STA 452+16.05, 87.16' LT

WALL H

WALL H1

WALL I

WALL I1

WALL S

VBF #9

VBF #10

VBF #11

VBF #12

BEGIN SHLD TAPER
STA 445+03.91, 97.50' RT

BEGIN WALL S
STA 445+38.00, 101.17' RT

END WALL S
STA 447+42.00, 101.17' RT

END SHLD TAPER
STA 445+13.91, 99.50' RT

BEGIN SHLD TAPER
STA 448+00.00, 99.50' RT

END SHLD TAPER
STA 448+50.00, 97.50' RT

BEGIN WALL H
STA 448+44+67, 89.17' RT

END SHLD TAPER
STA 448+44+67, 87.50' RT

BEGIN SHLD TAPER
STA 447+94.67, 85.50' RT

END WALL H, BEGIN WALL H1
STA 451+59.52, 88.75' LT

BEGIN PVMT TAPER
STA 451+71.07, 85.50' RT

BEGIN SHLD TAPER
STA 451+32.45, 97.50' RT

END SHLD TAPER
STA 451+42.45, 99.50' RT

END WALL H1
STA 452+24.02, 137.36' RT

BEGIN SHLD TAPER
STA 453+04.39, 99.50' RT

PT STA 17+95.00

PC STA 17+27.70

END SHLD TAPER
STA 454+09.39, 93.53' RT

END WALL I1
STA 452+79.27, 139.07' RT

75-3

R1 R2 R3 R4 R5 R6 R7 R8 R9 R10 R11 R12 R13 R14 R15 R16 R17 R18 R20 R21 R22 R23 R24 R25 R26 R27 R28 R29 R30 R31

FOR TOWNE ST
DATA SEE SHEETS 383 AND 384

STA 447+97.04, 58.91' RT
EX MH, GRATE ELEV 549.18
EX 36" RCP N 526.68
EX 6" UD N 540.18
EX 36" RCP SW 526.68
EX 12" RCP SW 540.18
EX 12" RCP NW 540.18
(TO BE ABANDONED)

(TO BE REMOVED)
STA 449+15.50, 0.61' RT
EX CB, GRATE ELEV 552.93
EX 12" RCP S 545.92

P.V.I. STA 451+75.00 ELEV = 563.53'
725.00' VC
SSD = 571'
K = 151
+3.40 %
-1.40 %

(TO BE ABANDONED)
STA 455+18.41, 92.09' RT
EX MH, GRATE ELEV 544.33
EX 30" RCP N 532.53
EX 12" RCP E 536.93
EX 33" RCP S 532.53
EX 12" RCP NW 536.13

(TO BE ABANDONED)
STA 455+37.40, 53.27' LT
EX CB, GRATE ELEV 551.61
EX 12" RCP SE 548.41

STA 455+37.3960, 53.27' LT
EX. CB, GRATE ELEV 551.61
EX. 12" RCP SE 548.41

STA 455+37.50
ELEV 558.45

STA 448+12.50
ELEV 551.20

(TO BE REMOVED)
STA 446+29.39, 72.67' RT
EX CB, GRATE ELEV 543.53
EX 12" RCP W 540.43

(TO BE ABANDONED)
STA 446+20.45, 4.19' RT
EX CB, GRATE ELEV 544.09
EX 36" RCP NE 524.53
EX 36" RCP S 525.09
EX 12" RCP SE 535.42

EX PROFILE
PROPOSED PROFILE

+3.40 %

EX 12" RCP

15" B

(TO BE REMOVED)
STA 451+90.26, 51.98' RT
EX. MH, GRATE ELEV 537.77
EX. 12" RCP E 532.57
EX. 8" DRN S 534.07
EX. 12" RCP W 532.57
EX. 8" DRN NW 532.57

(TO BE REMOVED)
STA 451+71.49, 15.45' LT
EX. SAN MH, GRATE ELEV 535.36
EX. 8" DRN NE 533.01
EX. 12" RCP E 532.81
EX. 8" DRN S 532.91
EX. 8" DRN SW 532.91
EX. 8" DRN NW 532.91

(TO BE REMOVED)
STA 452+71.60, 12.14' RT
EX. SAN MH, GRATE ELEV 537.28
EX. 8" DRN N 534.27
EX. 12" RCP E 531.77
EX. 8" DRN SW 532.87
EX. 8" DRN W 532.87
EX. 8" DRN NW 534.47

MIN. VERTICAL CLEARANCE
15'-6" REQUIRED 16'-8" PROVIDED

(TO BE REMOVED)
STA 452+81.96, 72.18' LT
EX. CB, GRATE ELEV 543.09
EX. 8" RCP NW 532.81
EX. 12" RCP NE 532.16

(TO BE REMOVED)
STA 452+83.32, 50.45' RT
EX. SAN MH, GRATE ELEV 538.96
EX. 8" PVC N 533.75
EX. 12" RCP E 532.45
EX. 8" CLAY S 532.60
EX. 8" PVC SW 534.85
EX. 12" RCP W 532.45

(TO BE ABANDONED)
STA 455+46.85, 3.22' LT
EX CB, GRATE ELEV 552.35
EX 12" RCP E 545.71
EX 12" RCP W 546.45
EX 30" RCP (TBA)

116 118 121 128

538.88 539.73 540.58 541.43 542.28 543.13 543.98 544.83 545.68 546.53 547.38 548.23 549.08 549.93 550.78 551.62 552.43 553.20 553.92 554.61 555.25 555.85 556.41 556.93 557.41 557.85 558.24 558.60 558.91 559.18 559.41 559.60 559.74 559.85 559.91 559.93 559.91 559.85 559.75 559.61 559.42 559.20 558.93 558.62 558.28 557.93 557.58 557.23 556.88 556.53 556.18

570 565 560 555 550 545 540 535 530

445+00 446+00 447+00 448+00 449+00 450+00 451+00 452+00 453+00 454+00 455+00 456+00 457+00

540.03 540.77 542.23 543.72 545.19 546.70 548.20 549.71 551.14 552.66 553.80 554.86 555.72 556.35 556.99 556.23 555.78 552.73 556.33 555.62 554.67 553.44 552.25 550.75 549.39 548.37

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED CFR CHECKED JLM

PLAN AND PROFILE - I.R. 75
STA 444+50 TO STA 457+00

HAM-75-7.85

350
2017

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CURVE 75-3
PI STA 456+41.20
Δ = 5°41'01" (LT)
Dc = 0°40'00"
R = 8,594.37'
T = 426.63'
L = 852.56'
E = 10.58'
emax = 0.019

CEDAR ST
MAPLE ST
POPLAR ST
HASLER LN
TOWANDA TERR.
OHE TRANSMISSION (138kV)
Ex R/W
PT STA 460+67.13
END WALL I
STA 463+81.62, 89.17' LT
WALL I
NOISE WALL 2A
NOISE WALL 2B
CONST LIMITS
PROP BARRIER
I.R. 75 (SB)
PROP MEDIAN BARRIER
I.R. 75 (NB)
℄ CONST I.R. 75
N 18° 49' 07" E
WALL T
WALL U
BEGIN WALL U
STA 466+27.00, 90.33' RT
MATCHLINE STA 457+00, SEE SHEET 350
MATCHLINE STA 469+50, SEE SHEET 352
R1 R2 R3 R4 R5 R6 R7 R8 R9 R10 R11 R12 R13 75-3
VBF #12
VBF #13
VBF #14
END PVMT TAPER
STA 458+91.07, 73.50' RT
BEGIN SHLD TAPER
STA 459+40.00, 85.50' RT
END SHLD TAPER
STA 459+50.00, 87.50' RT
BEGIN SHLD TAPER
STA 465+81.60, 85.50' RT
END SHLD TAPER
STA 465+91.60, 87.50' RT
END SHLD TAPER
STA 463+40.91, 85.50' RT
BEGIN SHLD TAPER
STA 462+90.91, 87.50' RT
LIMITS OF PAVEMENT REMOVED

CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITIES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLANS
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS
1333 - 1389	BRIDGE PLANS HAM-75-0791
1269 - 1332	BRIDGE PLANS HAM-562-0004

FOR INFORMATION ONLY

(TO BE ABANDONED)
STA 458+26.50, 0.00' LT
EX. CB, GRATE ELEV 546.44
A EX. 27" RCP N 537.69
EX. 30" RCP S 537.60
EX. 12" RCP W 537.69

(TO BE ABANDONED)
STA 458+35.66, 53.44' LT
B EX. CB, GRATE ELEV 545.41
EX. 12" RCP E 542.41

(TO BE REMOVED)
STA 459+27.0677, 2.76' LT
EX. CB, GRATE ELEV 545.99
C EX. 21" RCP N 537.28
EX. 18" RCP E 539.39
EX. 27" RCP S 536.39
EX. 12" RCP W 539.39

STA 458+25.00
ELEV 554.43

STA 459+35.37, 75.13' RT
EX. CB, GRATE ELEV 546.19
D EX. 18" RCP E 541.09
EX. 12" RCP S 543.59
EX. 18" RCP W 541.09

(TO BE REMOVED)
STA 459+35.57, 79.29' RT
EX. CB, GRATE ELEV 547.29
E EX. 6" UD N 545.99
EX. 6" UD S 545.99
EX. 18" RCP W 541.29

STA 459+37.24, 53.10' LT
F EX. CB, GRATE ELEV 545.06
EX. 12" RCP E 541.76

(TO BE REMOVED)
STA 460+27.70, 2.83' LT
EX CB, GRATE ELEV 546.39
EX 18" RCP N 538.08
EX 21" RCP S 538.08
EX 12" RCP NW 538.08

STA 460+36.82, 53.08' LT
EX CB, GRATE ELEV 545.51
EX 12" RCP SE 542.6
(TO BE REMOVED)

STA 462+58.22, 72.05' LT
EX CB, GRATE ELEV 546.92
EX 12" RCP E 545.51
(TO BE REMOVED)
STA 462+57.22, 66.35' RT
EX CB, GRATE ELEV 549.90
EX 6" UD N 547.20
EX 12" RCP W 546.80
(TO BE REMOVED)

STA 462+48.23, 2.97' LT
EX CB, GRATE ELEV 550.12
EX 15" RCP N 541.42
EX 12" RCP E 541.42
EX 18" RCP S 541.42
EX 12" RCP W 541.42
(TO BE REMOVED)

P.V.I. STA 461+75.00 ELEV = 549.53'
700.00' VC
K = 159

(TO BE REMOVED)
STA 465+29.48, 60.19' RT
EX CB, GRATE ELEV 558.66
(TBA) EX 12" RCP W 553.03
EX 12" RCP E 553.03

(TO BE REMOVED)
STA 465+18.94, 2.80' LT
EX CB, GRATE ELEV 558.17
EX 12" RCP N 549.68
(TBA) EX 12" RCP E 549.68
EX 15" RCP S 549.68

STA 465+25.00
ELEV 560.03

STA 466+00.00
ELEV 562.28

P.V.I. STA 471+00.00 ELEV = 577.28'
1,000.00' VC
K = 159

(TO BE REMOVED)
STA 465+30.94, 63.57' RT
EX CB, GRATE ELEV 558.48
EX 18" RCP E 556.28
EX 24" RCP NW 556.23

(TO BE REMOVED)
STA 467+85.17, 67.82' LT
EX CB, GRATE ELEV 563.59
EX 12" RCP SE 561.02
(TO BE REMOVED)
STA 467+94.52, 0.42' RT
EX CB, GRATE ELEV 566.23
EX 12" RCP S 561.07
EX 12" RCP W 561.07
EX 12" RCP NW 559.72

PROPOSED PROFILE
EX PROFILE
EX 12" RCP (TBR)
EX 15" RCP (TBR)
EX 18" RCP (TBR)
EX ITS
-1.40 %
+3.00 %
548.37
556.18

570 565 560 555 550 545 540
457+00 458+00 459+00 460+00 461+00 462+00 463+00 464+00 465+00 466+00 467+00 468+00 469+00

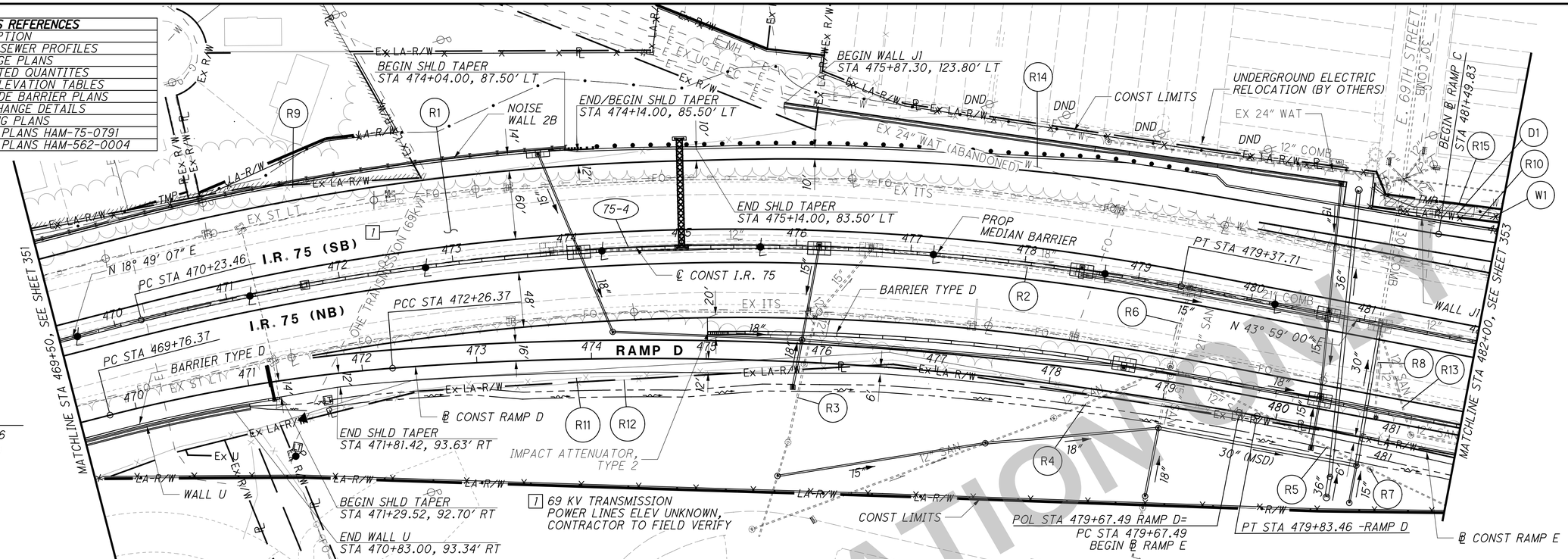
PLAN AND PROFILE - I.R. 75
STA 457+00 TO STA 469+50
HAM-75-7.85
351
2017

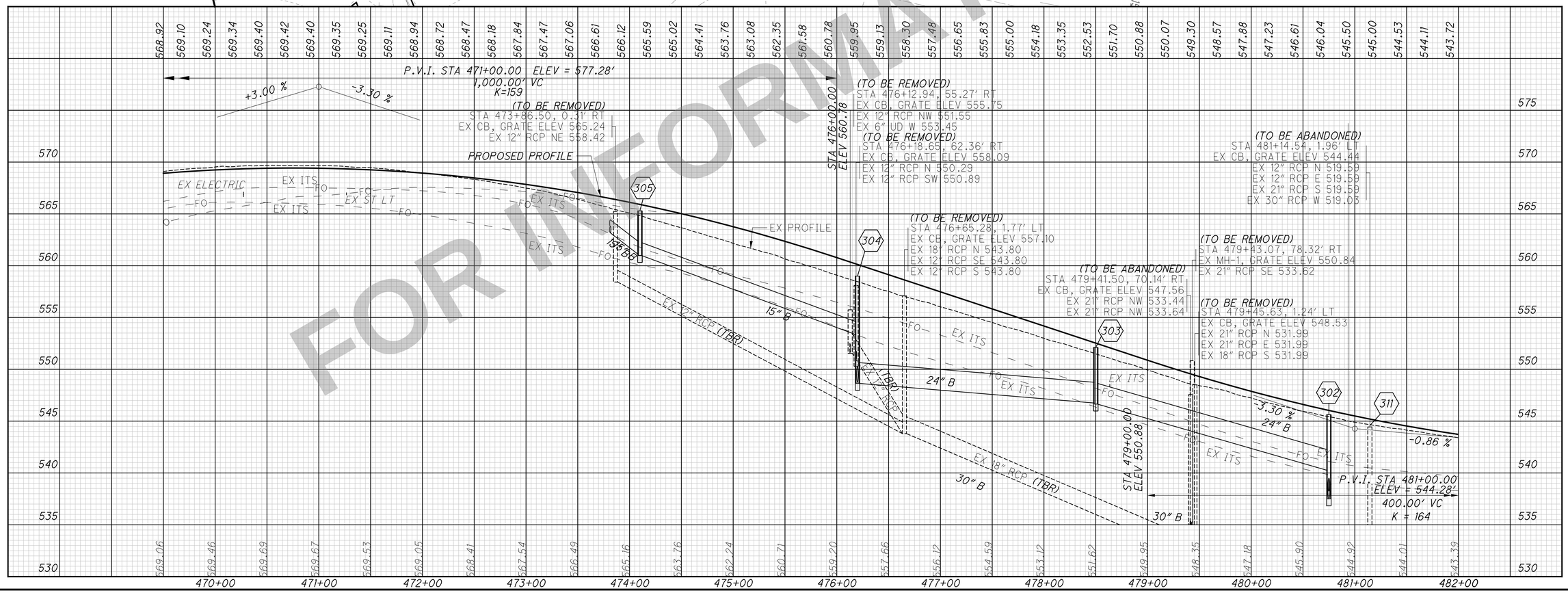
CALCULATED CFR CHECKED JLM
HORIZONTAL SCALE IN FEET 0 25 50 100

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CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLANS
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS
1333 - 1389	BRIDGE PLANS HAM-75-0791
1269 - 1332	BRIDGE PLANS HAM-562-0004

CURVE 75-4
PI STA 474+88.06
Δ = 25°08'30" (RT)
Dc = 2°45'00"
R = 2,083.48'
T = 464.60'
L = 914.25'
E = 51.17'
emax = 0.053





FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED JLM
CHECKED CFR

PLAN AND PROFILE - I.R. 75
STA 469+50 TO STA 482+00

HAM-75-7.85

352
2017

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CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITIES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLANS
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS
1333 - 1389	BRIDGE PLANS HAM-75-0791
1269 - 1332	BRIDGE PLANS HAM-562-0004

RESURFACING

A CONTRACTOR TO ABANDON EXISTING UTILITY TUNNEL. PROVIDE BULKHEADS AT STATION/OFFSET LOCATIONS PER THIS SHEET. SEE SHEET 43 FOR PLAN NOTES AND PAY ITEMS FOR THIS WORK.

FOR INFORMATION ONLY

PLAN AND PROFILE - I.R. 75
STA 482+00 TO STA 494+50

HAM-75-7.85

CALCULATED CFR CHECKED JLM

HORIZONTAL SCALE IN FEET 0 25 50 100

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RESURFACING

LIMITS OF PAVEMENT REMOVED

END WALL K (RAMP C)
STA 496+20.00, 10.00' LT

WALL K

LONGVIEW ST

RAMP C

PT STA 498+25.06

END ℄ RAMP C 498+67.39

℄ CONST RAMP C

END SHLD TAPER
STA 498+20.00, 57.50' LT

BEGIN SHLD TAPER
STA 497+70.00, 65.50' LT

℄ PADDOCK RD

+45.32
52' RT.

PT Sta. 501+69.65

CONST LIMITS

℄ CONST RAMP B

END SHLD TAPER
STA 504+60.00, 73.50' LT

PT Sta. 505+48.04

RAMP B

BEGIN SHLD TAPER
STA 499+80.00, 57.50' LT

END PVMT SHIFT
STA 497+60.00, 5.50' LT

PROP BARRIER

BEGIN PVMT SHIFT
STA 499+80.00, 5.50' LT

PROP MEDIAN BARRIER

I.R. 75 (SB)

END PVMT SHIFT
STA 504+60.00, 13.50' LT

END PVMT SHIFT
STA 497+60.00, 5.50' RT

BEGIN PVMT SHIFT
STA 499+80.00, 5.50' RT

END SHLD TAPER
STA 499+70.00, 65.50' RT

℄ CONST I.R. 75

VBF #15

VBF #16

I.R. 75 (NB)

END PVMT SHIFT
STA 504+60.00, 13.50' RT

N 43° 59' 00" E

PROP BARRIER

END SHLD TAPER
STA 497+60.00, 57.50' RT

PADDOCK RD

BEGIN SHLD TAPER
STA 499+20.00, 57.50' RT

RAMP A

PC STA 503+00.12

SUMMIT RD

WALL V

STRUCTURE NO
HAM-4-0897

℄ RAMP D

℄ CONST RAMP A

CONST LIMITS

℄ SUMMIT RD

PCX STA 20+15.35

PCX OHE TRANSMISSION LINE (69kV)

MATCHLINE STA 494+50, SEE SHEET 353

MATCHLINE STA 507+00, SEE SHEET 355

1 ℄ CONST I.R. 75
498+60.85=
℄ CONST PADDOCK RD
148+97.21

2 EX 30" WATERLINE
IN 60" CASING
℄ = 524.50 ±

3 EX 24" WATERLINE
IN 42" CASING
℄ = 526.71 ±

* (NDC 12')

CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLANS
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS
1333 - 1389	BRIDGE PLANS HAM-75-0791
1269 - 1332	BRIDGE PLANS HAM-562-0004

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED CFR
CHECKED JLM

PLAN AND PROFILE - I.R. 75
STA 494+50 TO STA 507+00

HAM-75-7.85

354
2017

FOR INFORMATION ONLY

STA 497+25.77, 45.39' RT
EX CB, GRATE ELEV 534.28
EX 12" RCP NW 529.73
EX 12" RCP SE 529.74

(TO BE REMOVED)
STA 497+18.99, 1.66' LT
EX CB, GRATE ELEV 534.56
EX 30" RCP N 527.70
EX 12" RCP E 528.05
EX 33" RCP S 527.60
EX 12" RCP W 528.05

(TO BE REMOVED)
STA 497+10.61, 65.18' RT
EX CB, GRATE ELEV 532.47
EX 12" CPP SW 530.47
EX 12" RCP NW 530.22

STA 496+91.54, 65.14' RT
EX CB, GRATE ELEV 532.40
EX 12" CPP NE 530.57

STA 497+28.49, 65.43' LT
EX CB, GRATE ELEV 532.06
EX 6" HDPE NE 530.66
EX 12" HDPE E 529.06
EX 6" HDPE SE 530.56

(TO BE REMOVED)
STA 497+86.51, 3.42' LT
EX CB, GRATE ELEV 534.12
EX 30" RCP SW 527.92
EX 27" RCP N 528.17
EX 12" RCP SE 529.71

(TBR) STA 498+05.23, 13.56' LT
EX MH, GRATE ELEV 534.63
EX 27" RCP NE 528.88
EX 27" RCP SE 528.87

STA 498+05.75, 50.26' RT
EX CB, GRATE ELEV 534.0
EX 12" RCP NW 530.32
EX 8" CPP S 531.70
EX 6" CPP SW 531.32
EX 6" CPP NE 531.13

(TO BE REMOVED)
STA 499+46.32, 62.42' RT
EX CB, GRATE ELEV 532.38
EX 12" RCP NW 530.82

(TO BE REMOVED)
STA 499+96.65, 65.57' LT
EX CB, GRATE ELEV 538.65
EX 12" HDPE NE 530.94
EX 15" HDPE NW 531.00
EX 12" HDPE SE 530.85
EX 12" HDPE SE 531.40

STA 500+16.35, 2.47' LT
EX CB, GRATE ELEV 535.38
EX 12" RCP NW 530.22
EX 18" RCP SW 530.04
EX 18" RCP NE 530.05

(TO BE REMOVED)
STA 499+68.71, 2.63' LT
EX CB, GRATE ELEV 535.05
EX 12" RCP NW 530.01
EX 12" RCP NW 529.95
EX 18" RCP NE 529.54
EX 12" RCP SE 529.69
EX 24" RCP SW 528.87

(TO BE REMOVED)
STA 500+37.90, 65.82' LT
EX CB, GRATE ELEV 533.53
EX 12" CPP SW 531.10

(TO BE REMOVED)
STA 503+46.62, 2.52' L
EX CB, GRATE ELEV 537.57
EX 15" RCP SW 533.76
EX 12" RCP SE 533.76
EX 12" RCP NW 533.76

(TO BE REMOVED)
STA 506+71.98, 66.27' RT
EX MH, GRATE ELEV 538.79
EX 24" RCP S 533.57
EX 27" RCP N 533.32

(TO BE REMOVED)
STA 506+63.16, 75.25' RT
EX CB, GRATE ELEV 538.47
EX 24" RCP N 533.23
EX 24" RCP S 533.20

(TO BE REMOVED)
STA 506+39.34, 73.28' LT
EX MH, GRATE ELEV 538.89
EX 18" RCP SW 533.27
EX 27" RCP NE 532.27

MIN. VERTICAL CLEARANCE 15'-6" REQUIRED 16.9' PROVIDED

P.V.I. STA 495+75.00
ELEV = 531.59'
1,000.00' VC
K = 685

STA 500+75.00
ELEV 534.59

EX PROFILE

PROPOSED PROFILE

-0.86 %

+0.60 %

15" B

36" B

30" B

18" B

EX 24" RCP(TBR)

EX 33" RCP(TBR)

EX 12"

EX 27" RCP (TBR)

EX 18" RCP

EX 12" HDPE

EX 15" RCP

EX 42" RCP (TBR)

EX 24" RCP (TBR)

616 605 604 606 607 622

495+00 496+00 497+00 498+00 499+00 500+00 501+00 502+00 503+00 504+00 505+00 506+00 507+00

efoley
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CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITIES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLANS
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS
1333 - 1389	BRIDGE PLANS HAM-75-0791
1269 - 1332	BRIDGE PLANS HAM-562-0004

CURVE 75-5
PI STA 523+96.89
Δ = 16°02'37" (LT)
Dc = 1°06'00"
R = 5,208.71'
T = 734.06'
L = 1,458.52'
E = 51.47'
emax = 0.029

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED CFR CHECKED JLM

PLAN AND PROFILE - I.R. 75
STA 507+00 TO STA 519+50

HAM-75-7.85

355
2017

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FOR INFORMATION ONLY

CROSS REFERENCES	
SHEET NO	DESCRIPTION
821-860	STORM SEWER PROFILES
809-820	DRAINAGE PLANS
299-341	ESTIMATED QUANTITES
769-788	SUPERELEVATION TABLES
1100-1111	ROADSIDE BARRIER PLANS
789-802	INTERCHANGE DETAILS
1229-1268	LIGHTING PLANS
1333-1389	BRIDGE PLANS HAM-75-0791
1269-1332	BRIDGE PLANS HAM-562-0004

CURVE 75-5
PI STA 523+96.89
Δ = 16°02'37" (LT)
Dc = 1°06'00"
R = 5,208.71'
T = 734.06'
L = 1,458.52'
E = 51.47'
emax = 0.030

1 ℄ CONST I.R. 75 522+55.68=
℄ CONST PED PATH 7+57.41

RESURFACING

END PROJECT
STA 531+73.91
SLM = 10.16

E041 (146)

END WORK
STA 538+00.00

STRUCTURE NO
HAM-75-0992

CITY OF CINCINNATI
SPRINGFIELD
TOWNSHIP

EX SECUITY CAMERAS AROUND
PERIMETER TO BE REMOVED

EX ASPHALT TO REMAIN

EX FLAGPOLE TO
BE REMOVED

BEGIN PVMT SHIFT
STA 528+00.00, 13.50' LT

PT STA 531+21.35

END PVMT SHIFT
STA 531+21.35, 8.20' LT

+50.00
60' LT

+50.00
48' RT

N 27° 55' 00" E

BEGIN APP SLAB
531+73.91

END PVMT SHIFT
STA 531+21.35, 8.20' RT

MATCHLINE STA 519+50, SEE SHEET 355

CONST
LIMITS

I.R. 75 (SB)

I.R. 75 (NB)

℄ CONST I.R. 75

1 PROP MEDIAN BARRIER

PT STA 36+95.90

POT STA 36+95.90

℄ SUMMIT RD

SUMMIT RD

EX 18" WATER

24" COMB

TBRO

WOODLAND
AVE

SECTION ST

BEGIN PVMT TAPER
STA 524+72.45, 73.50' RT

BEGIN PVMT SHIFT
STA 528+00.00, 13.50' RT

END PVMT TAPER
STA 527+50.00, 78.00' RT

WALL V

EQUATION:
STA 44+13.54 BK =
STA 44+15.49 AH

STRUCTURE NO
HAM-75-1010

VBF #17

VBF #18

EX ITS

EX TELEPHONE

EX 12" WATERLINE

PROPOSED 12" WATERLINE

PROPOSED PROFILE

EX PROFILE

FUTURE I.R. 75 PROFILE 1.20%

P.V.I. STA 523+50.00 ELEV = 548.24'
400.00' VC
K = 211

MIN. VERT. CLEARANCE
17'-0" REQUIRED 17'-10⅛" PROVIDED

STA 521+50.00
ELEV 547.04

STA 525+50.00
ELEV 545.64

PVI STA 527+50.00
EX ELEV 543.29

MATCH
STA 531+73.91
EX ELEV.537.55

+0.60 %

-1.20 %

-1.39 %

PROPOSED REDESTRIAN BRIDGE

(TO BE ABANDONED)
STA 520+08.04, 52.47' LT
EX MH, GRATE ELEV 544.73
EX 30" RCP N 525.45
EX 12" RCP N 529.18
EX 12" RCP E 529.18
EX 36" RCP N & S 525.45

(TO BE REMOVED)
STA 520+07.37, 5.49' LT
EX CB, GRATE ELEV 546.03
EX 12" RCP N 540.38
EX 12" RCP S 540.08
EX 15" RCP W 537.83

(TO BE REMOVED)
STA 520+39.66, 69.16' LT
EX CB, GRATE ELEV 540.76
EX 12" RCP S 538.68

(TO BE ABANDONED)
STA 523+01.43, 25.83' LT
EX MH, GRATE ELEV 546.5±
EX 36" RCP SW 525.45±
EX 36" RCP NE 525.45±
(PAVED OVER)

(TO BE REMOVED)
STA 520+98.83, 1.27' RT
EX CB, GRATE ELEV 546.12

(TO BE REMOVED)
STA 526+23.88, 60.76' LT
EX CB, GRATE ELEV 543.01
EX 12" RCP E 539.16
EX 6" CMP S 539.36

(TO BE REMOVED)
STA 526+25.16, 52.75' LT
EX MH, GRATE ELEV 543.42
EX 48" RCP N 529.62
EX 12" CLAY E 538.17
EX 36" RCP SE 521.32
EX 36" RCP S 521.22
EX 12" CLAY W 536.77

(TO BE REMOVED)
STA 526+27.32, 1.18' RT
EX CB, GRATE ELEV 544.30
EX 12" RCP NW 541.58

(TO BE ABANDONED)
STA 528+74.92, 53.53' LT
EX MH, GRATE ELEV 540.08
EX 42" RCP N 519.18
EX 12" RCP E 534.93
EX 42" RCP S 519.18
EX 12" RCP W 533.43

(TO BE REMOVED)
STA 528+75.75, 67.03' LT
EX CB, GRATE ELEV 539.49
EX 12" RCP E 535.70
EX 12" RCP W 535.80

STA 528+75.99, 1.57' LT
EX CB, GRATE ELEV 541.20
EX 12" ECP NW 538.28

15" B

42" B

(TBR)
EX 12" RCP

EX 12" C

728

725

722

723

520+00 521+00 522+00 523+00 524+00 525+00 526+00 527+00 528+00 529+00 530+00 531+00

570 565 560 555 550 545 540 535 530

FOR INFORMATION ONLY

PLAN AND PROFILE - I.R. 75
STA 519+50 TO STA 531+72.45

HAM-75-7.85

356
2017

CALCULATED CFR CHECKED JLM

HORIZONTAL SCALE IN FEET
0 25 50 100

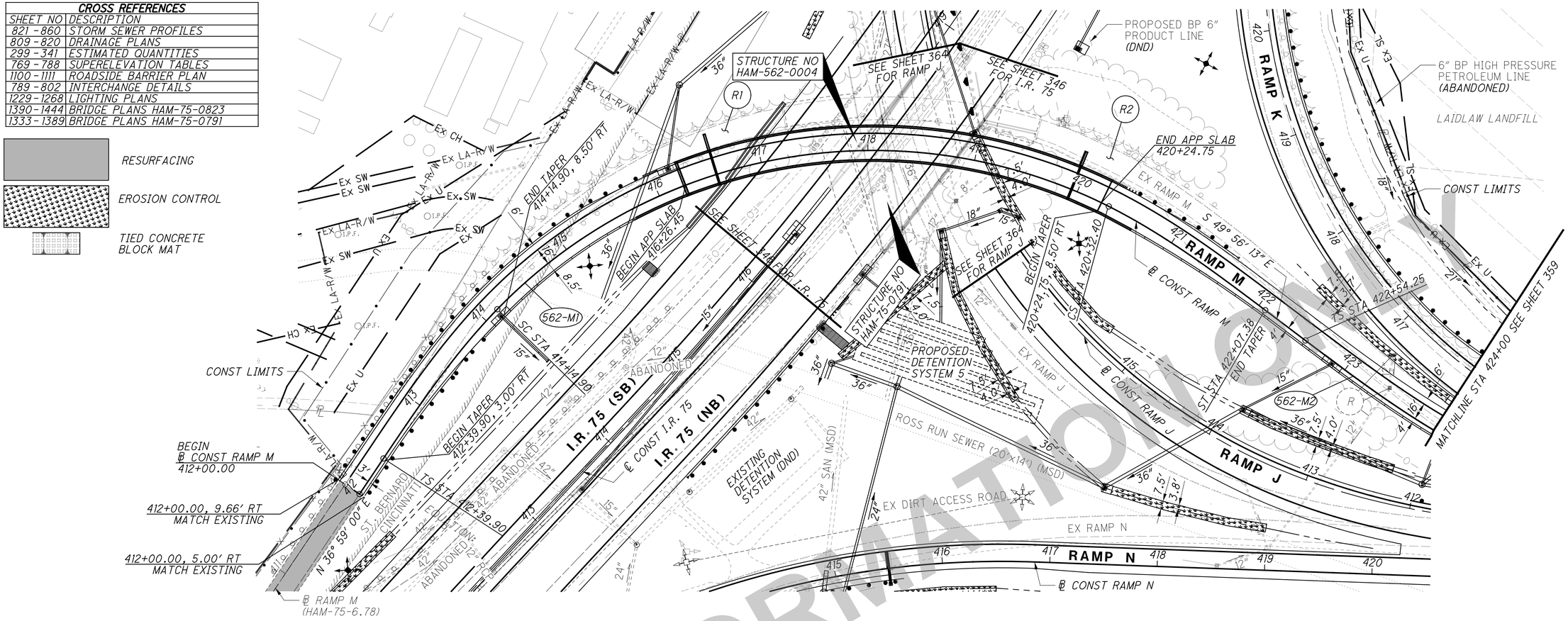
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CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITIES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLAN
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS
1390 - 1444	BRIDGE PLANS HAM-75-0823
1333 - 1389	BRIDGE PLANS HAM-75-0791

RESURFACING

EROSION CONTROL

TIED CONCRETE BLOCK MAT



FOR INFORMATION ONLY

CURVE 562-M1	CURVE 562-M2
PI STA 418+44.84	PI STA 425+16.31
Δ = 93° 04' 47" (RT)	Δ = 33°46'37" (LT)
Dc = 11° 44' 43"	Dc = 10°00'00"
R = 487.82'	R = 572.96'
Ls_1 = 175.00'	Ls_1 = 175.00'
θs_1 = 10° 16' 37"	θs_1 = 8°45'00"
LT_1 = 116.86'	LT_1 = 116.81'
ST_1 = 58.51'	ST_1 = 58.46'
x_1 = 174.44'	x_1 = 174.59'
y_1 = 10.44'	y_1 = 8.89'
k_1 = 87.41'	k_1 = 87.43'
p_1 = 2.61'	p_1 = 2.23'
T_1 = 604.94'	T_1 = 262.06'
Ls_2 = 174.98'	Ls_2 = 174.98'
θs_2 = 10° 16' 33"	θs_2 = 8°44'56"
LT_2 = 116.85'	LT_2 = 116.80'
ST_2 = 58.51'	ST_2 = 58.46'
x_2 = 174.42'	x_2 = 174.57'
y_2 = 10.44'	y_2 = 8.89'
k_2 = 87.40'	k_2 = 87.42'
p_2 = 2.61'	p_2 = 2.22'
T_2 = 604.93'	T_2 = 262.05'
Lc = 617.50'	Lc = 162.78'
Es = 225.18'	Es = 28.15'
C_1 = 174.75'	C_1 = 174.82'
C = 577.09'	C = 162.23'
C_2 = 174.73'	C_2 = 174.80'
$C.B._1$ = N 40° 24' 29" E	$C.B._1$ = S 52° 51' 11" E
C.B. = N 83° 31' 25" E	C.B. = S 66° 49' 33" E
$C.B._2$ = S 53° 21' 41" E	$C.B._2$ = S 80° 47' 53" E
e_{MAX} = 0.056	e_{MAX} = 0.059

FOR RAMP M PROFILE SEE SHEET 358

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SEA
CHECKED DLR

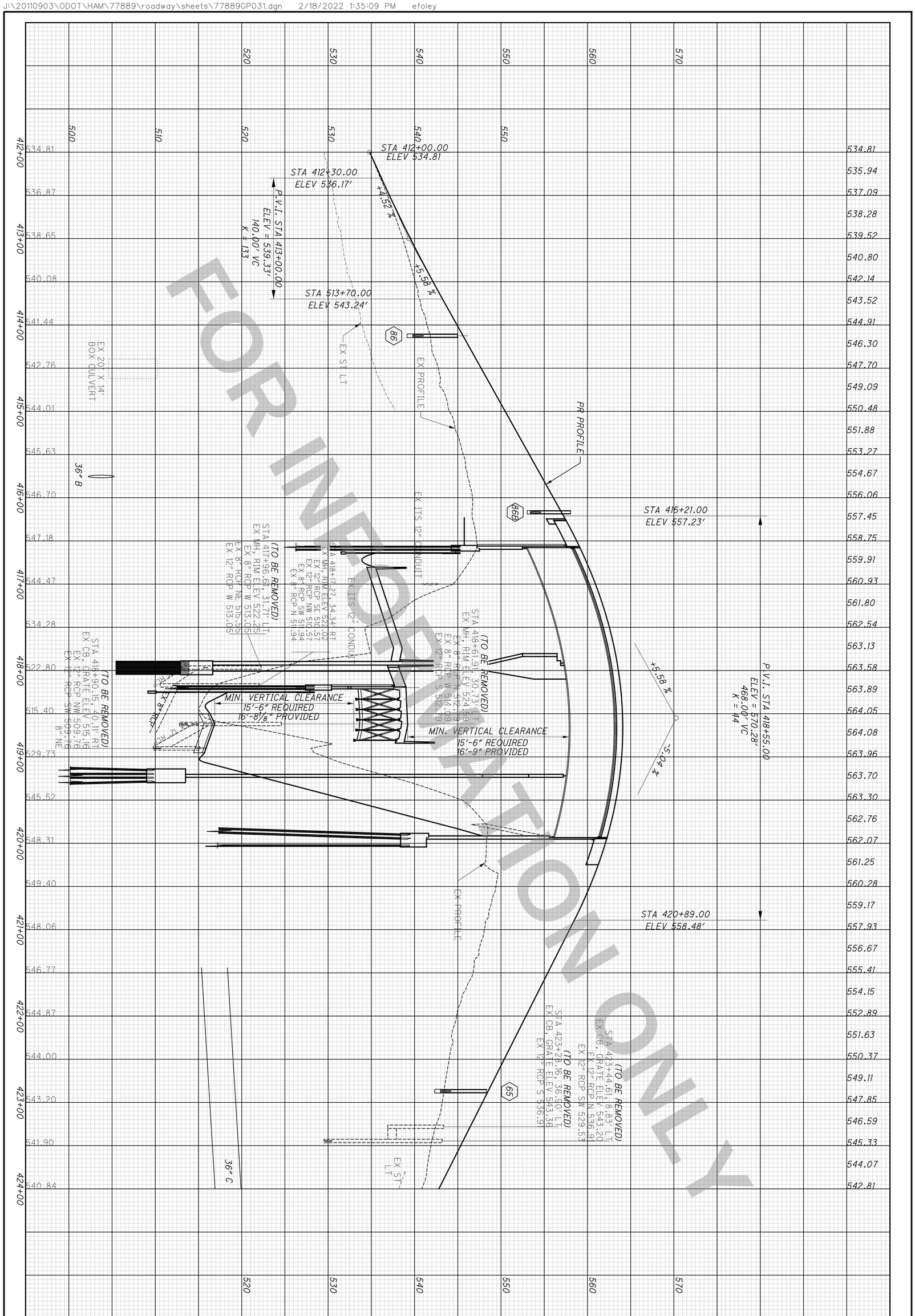
PLAN AND PROFILE - S.R. 562 RAMP M
STA 412+00.00 TO STA 424+00.00

HAM-75-7.85

357
2017

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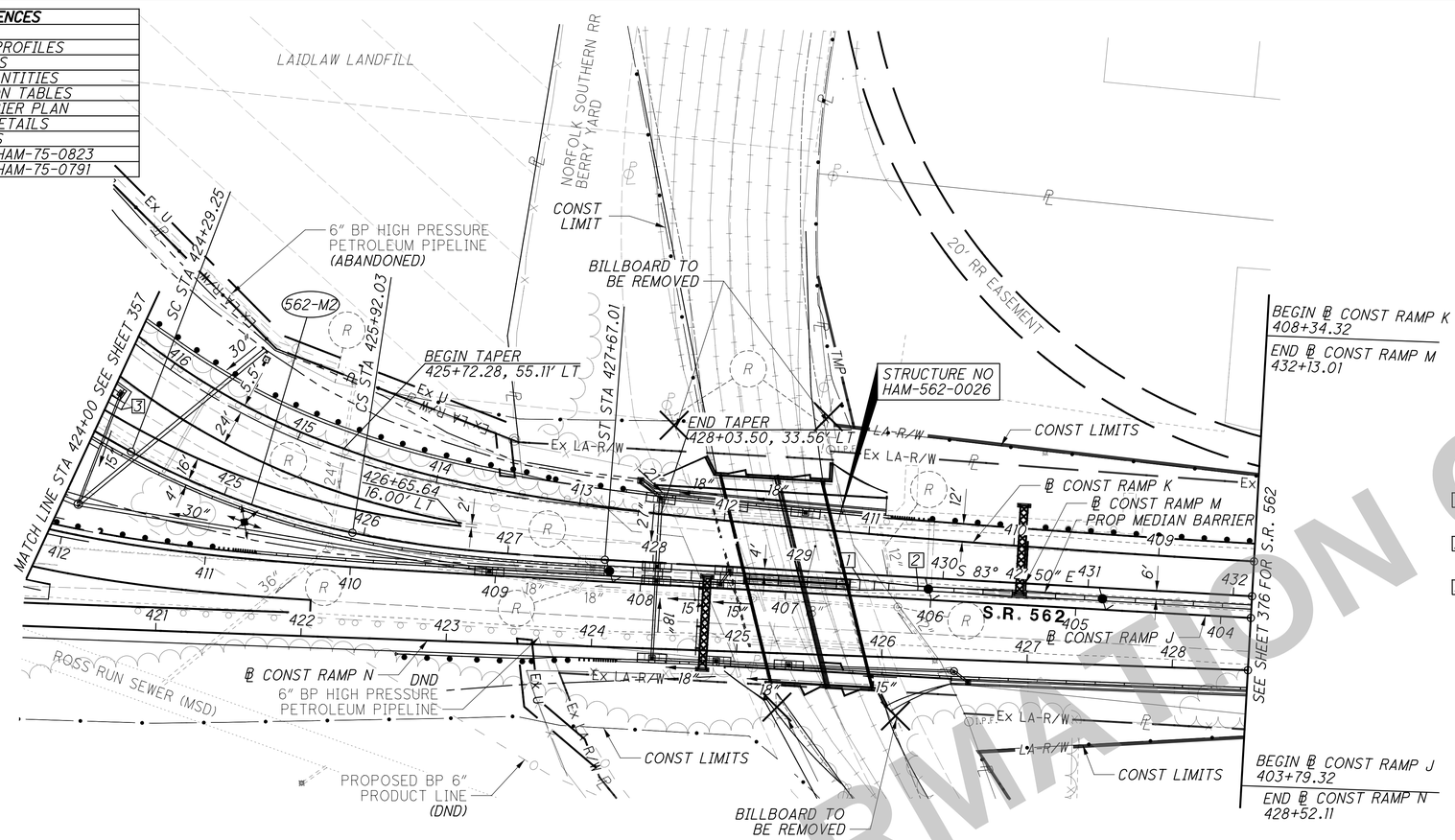
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FOR INFORMATION ONLY

358 (2017)	HAM-75-7.85	PROFILE - SR 562 RAMP M STA 412+00.00 TO STA 424+00.00	CALCULATED SEA CHECKED DLR

CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITIES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLAN
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS
1390 - 1444	BRIDGE PLANS HAM-75-0823
1333 - 1389	BRIDGE PLANS HAM-75-0791



1 BEGIN TAPER
429+43.13, 4.00' RT

2 END TAPER
429+83.10, 6.00' RT

3 424+08.79
22.00' LT

R FOR REMOVALS SEE SHEET 363

CURVE 562-M2
PI STA 425+16.31
Δ = 33°46'37" (LT)
Dc = 10°00'00"
R = 572.96'
Ls_1 = 175.00'
θs_1 = 8°45'00"
LT_1 = 116.81'
ST_1 = 58.46'
x_1 = 174.59'
y_1 = 8.89'
k_1 = 87.43'
p_1 = 2.23'
T_1 = 262.06'
Ls_2 = 174.98'
θs_2 = 8°44'56"
LT_2 = 116.80'
ST_2 = 58.46'
x_2 = 174.57'
y_2 = 8.89'
k_2 = 87.42'
p_2 = 2.22'
T_2 = 262.05'
Lc = 162.78'
Es = 28.15'
C_1 = 174.82'
C = 162.23'
C_2 = 174.80'
C.B.$_1$ = S 52° 51' 11" E
C.B. = S 66° 49' 33" E
C.B.$_2$ = S 80° 47' 53" E
θMAX = 0.059

FOR RAMP M PROFILE SEE SHEET 360

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SEA
CHECKED DLR

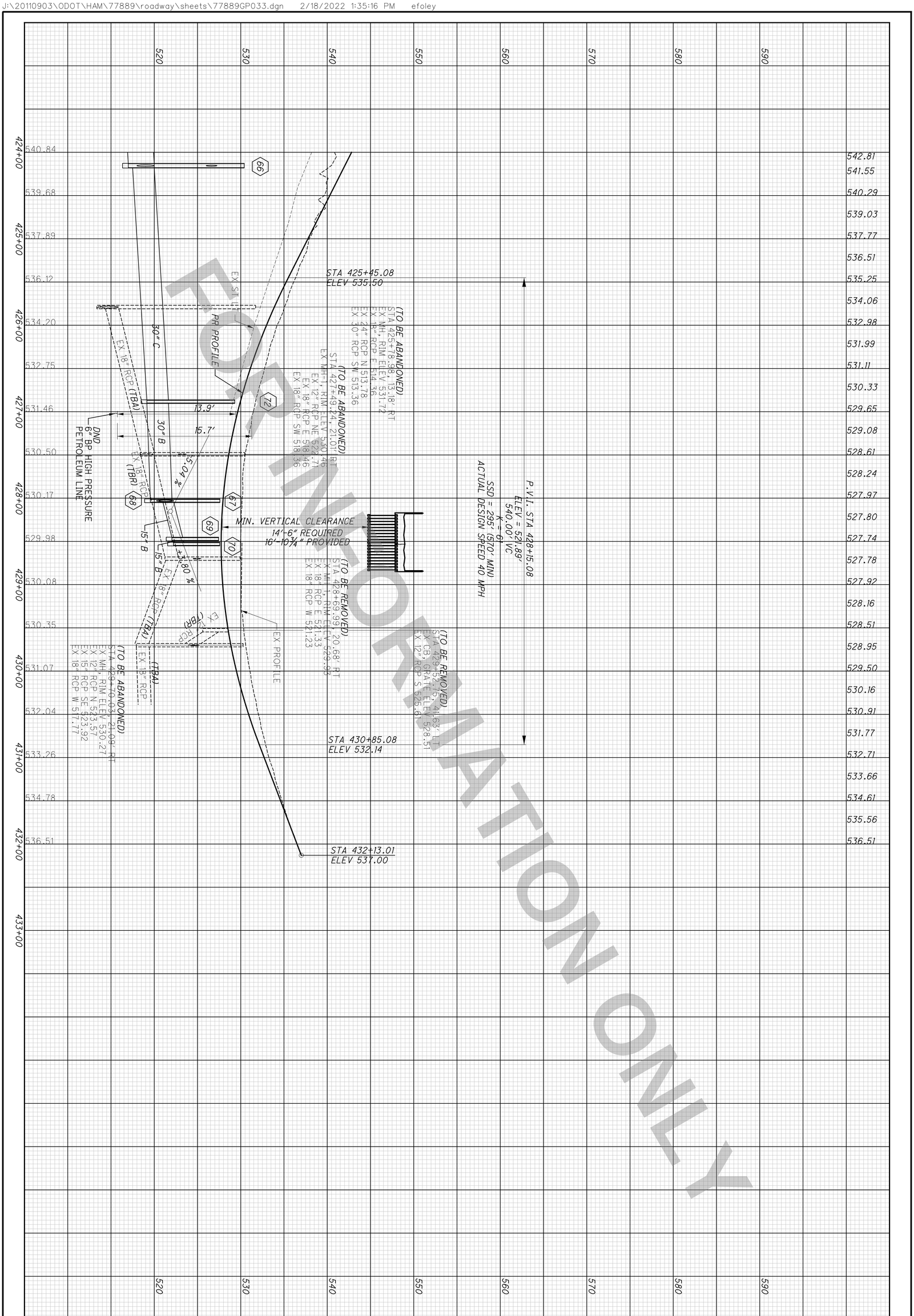
PLAN AND PROFILE - S.R. 562 RAMP M
STA 424+00.00 TO STA 432+13.01

HAM-75-7.85

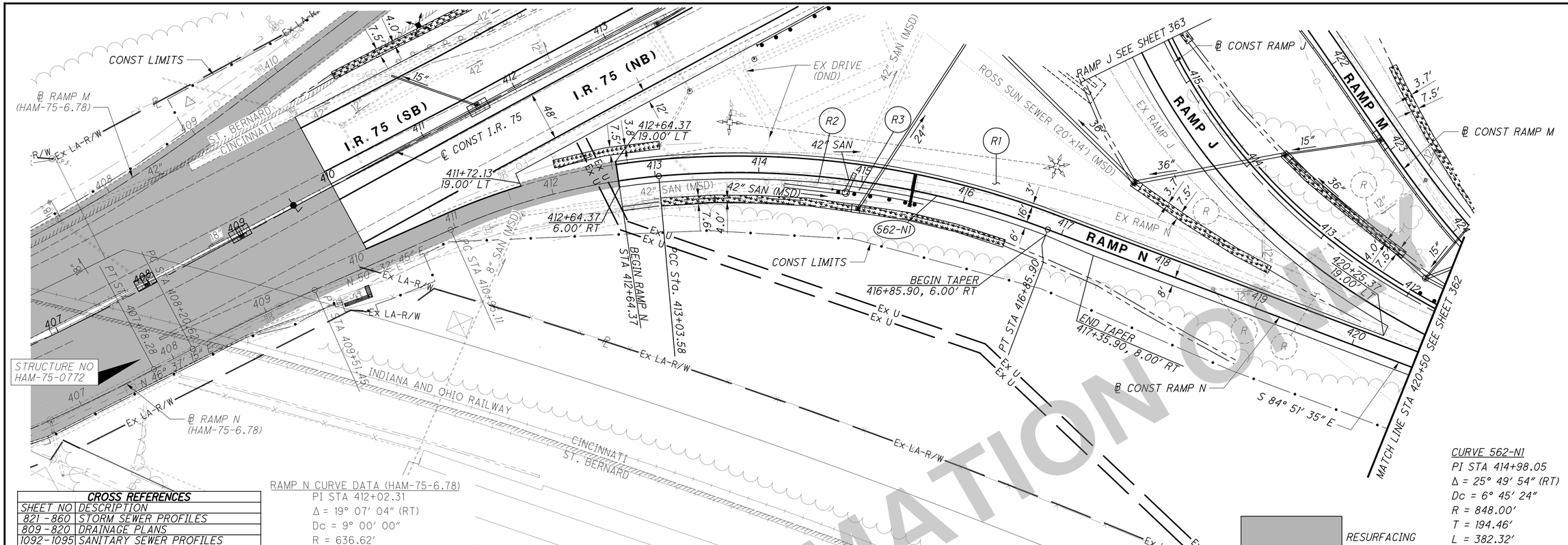
359
2017

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360 2017	HAM-75-7.85	PROFILE - SR 562 RAMP M STA 424+00.00 TO STA 432+13.01	CALCULATED SEA CHECKED DLR



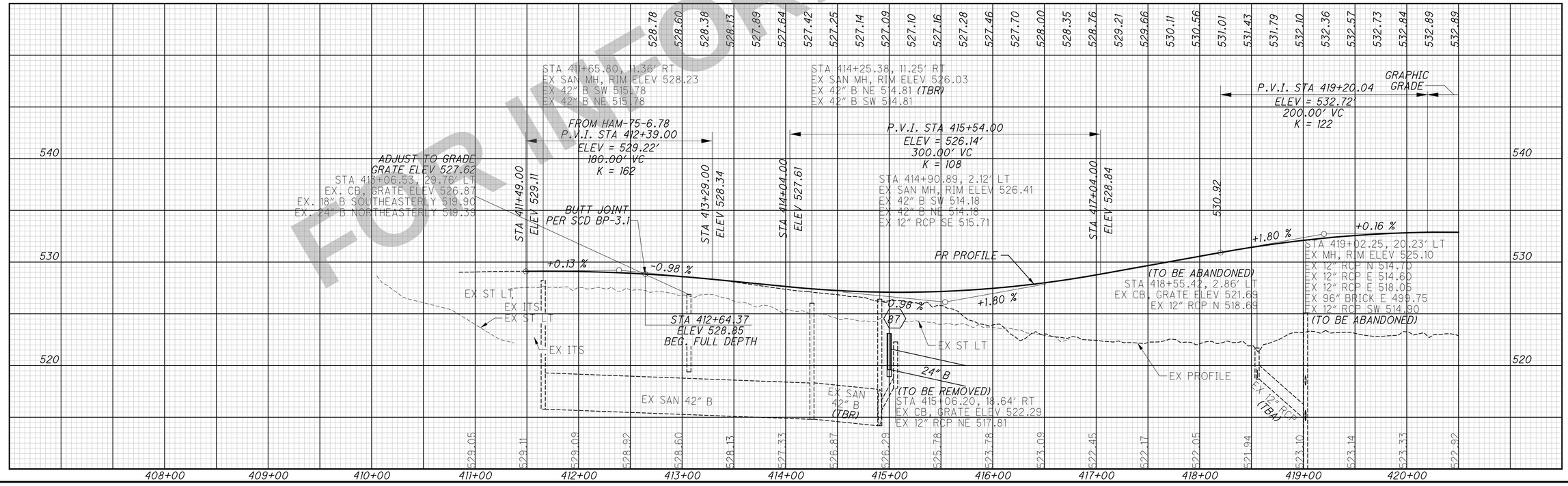
CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
1092 - 1095	SANITARY SEWER PROFILES
299 - 341	ESTIMATED QUANTITIES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLAN
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS

RAMP N CURVE DATA (HAM-75-6.78)
PI STA 412+02.31
Δ = 19° 07' 04" (RT)
Dc = 9° 00' 00"
R = 636.62'
T = 107.21'
L = 212.42'
E = 8.96'
e_{max} = 0.060

CURVE 562-N1
PI STA 414+98.05
Δ = 25° 49' 54" (RT)
Dc = 6° 45' 24"
R = 848.00'
T = 194.46'
L = 382.32'
E = 22.01'
C = 379.09'
C.B. = N 82° 13' 28" E
e_{max} = 0.060

RESURFACING

EROSION CONTROL



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

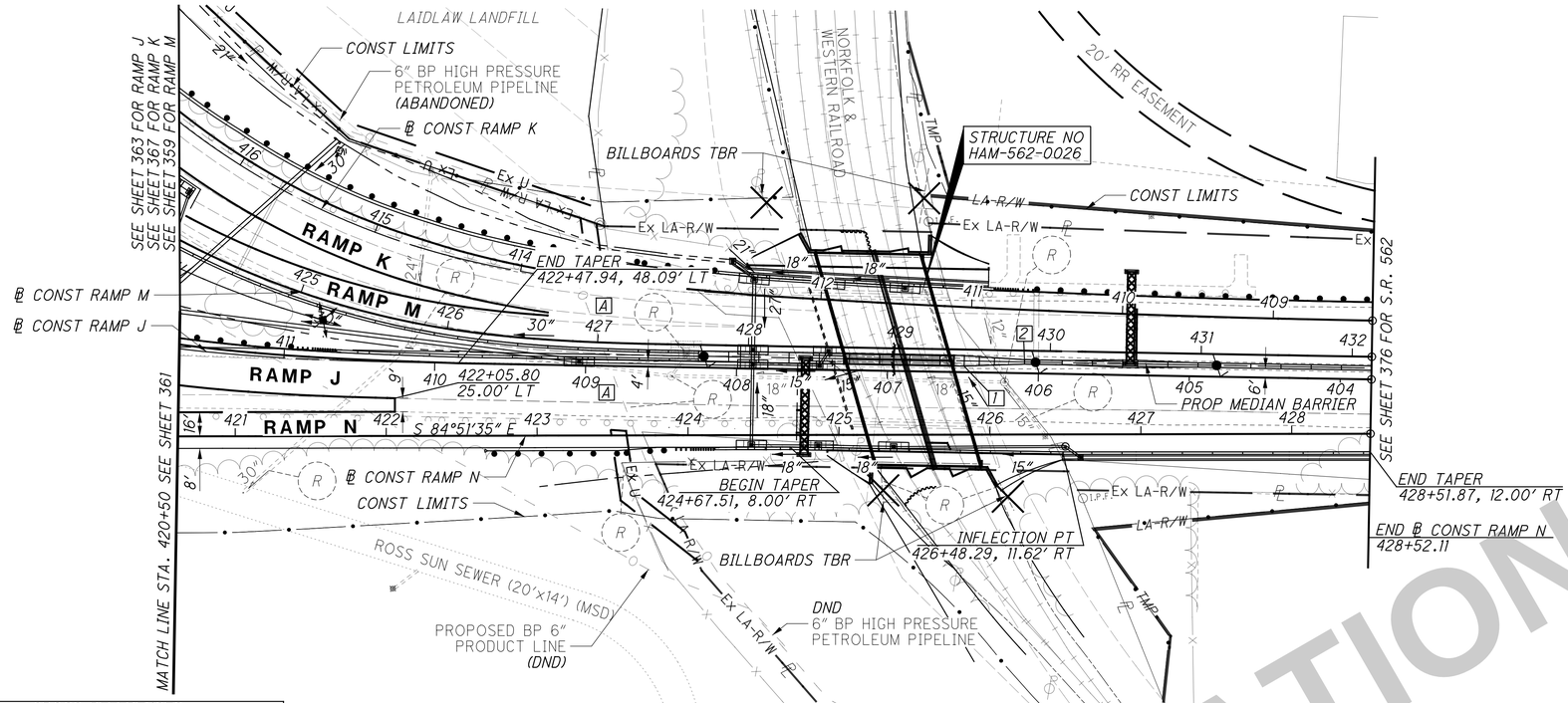
CALCULATED SEA
CHECKED DLR

PLAN AND PROFILE - S.R. 562 RAMP N
STA 407+87.13 TO STA 420+50.00

HAM-75-7.85

361
2017

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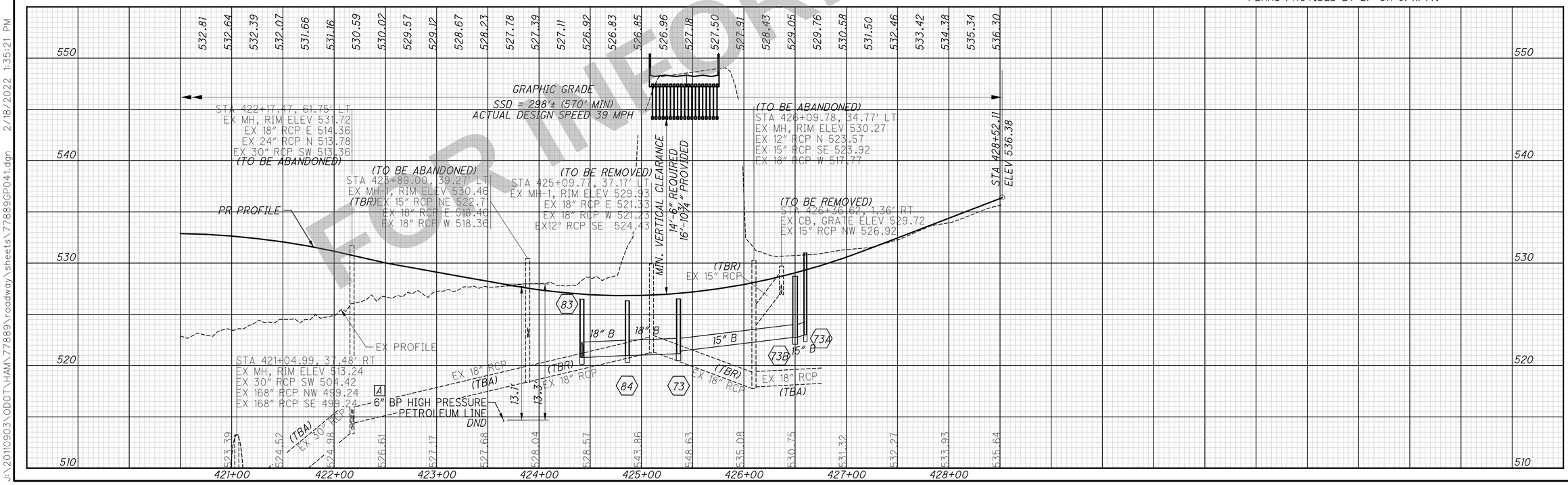


CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLAN
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS
1515 -1571	BRIDGE PLANS HAM-562-0026

(R) FOR REMOVALS SEE SHEET 363

[A] GROUND PENETRATING RADAR (GPR) DEPTHS PROVIDED BY BP ON 5/27/14 ARE APPROXIMATE BASED ON FIELD OBSERVATIONS.

ACTUAL PIPE ELEVATIONS SHOWN BASED ON EXISTING PLANS PROVIDED BY BP ON 9/11/14.



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED SEA CHECKED DLR

PLAN AND PROFILE - S.R. 562 RAMP N
STA 420+50 TO STA 428+40.82

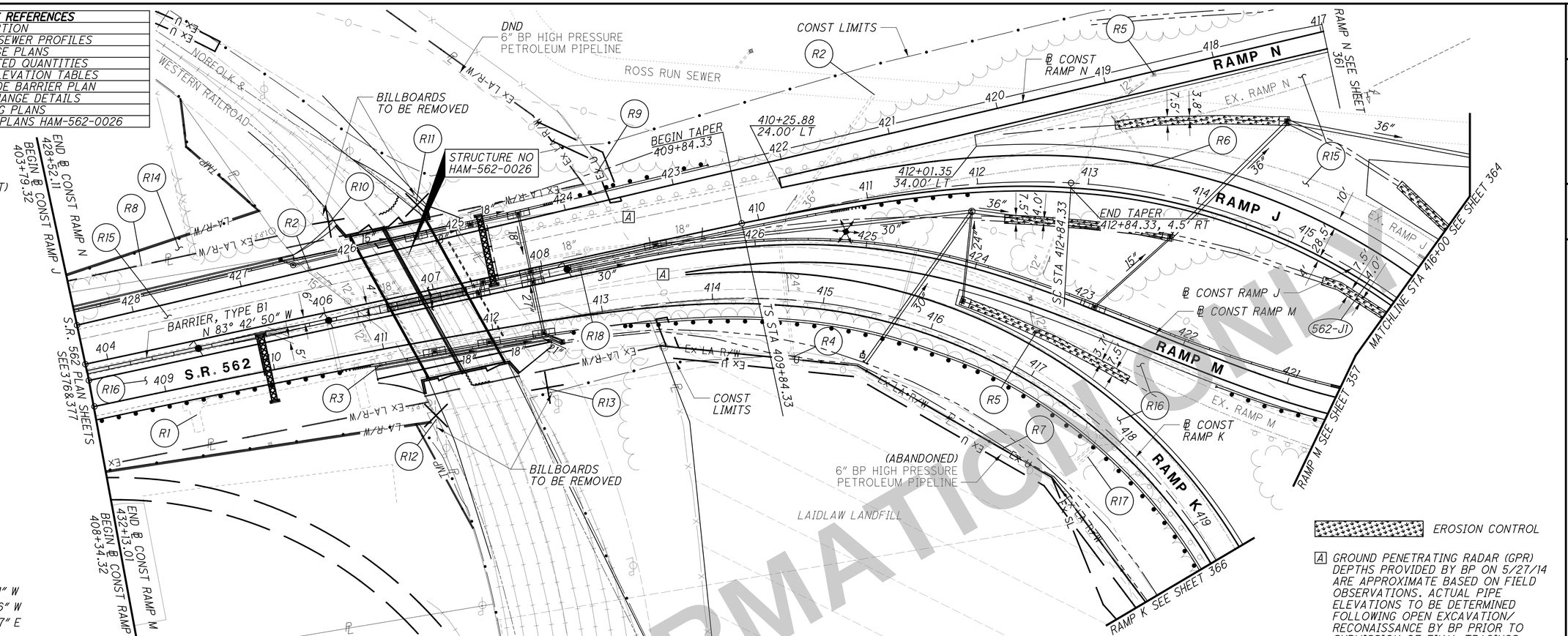
HAM-75-7.85

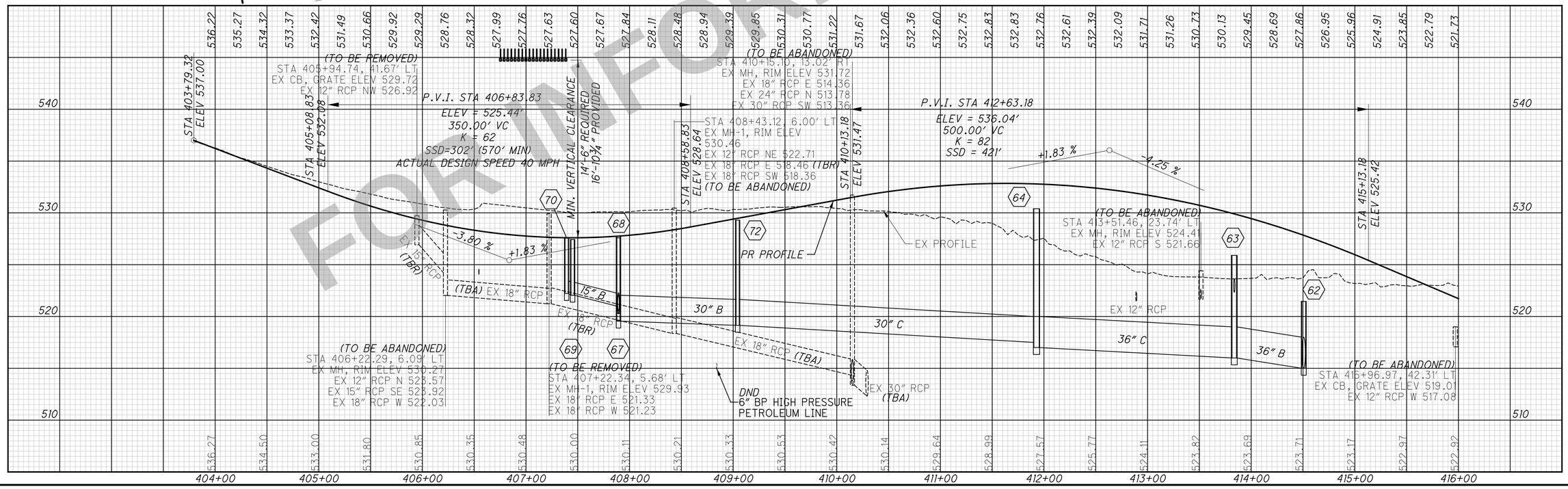
362
2017

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CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITIES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLAN
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS
1515 - 1571	BRIDGE PLANS HAM-562-0026

CURVE 562-J1
PI STA 420+13.05
Δ = 114° 40′ 09″ (RT)
Dc = 10° 15′ 00″
R = 558.98′
Ls_1 = 300.00′
θs_1 = 15° 22′ 30″
LT_1 = 200.76′
ST_1 = 100.69′
x_1 = 297.85′
y_1 = 26.70′
k_1 = 149.64′
p_1 = 6.69′
T_1 = 1028.72′
Ls_2 = 224.99′
θs_2 = 11° 31′ 51″
LT_2 = 150.31′
ST_2 = 75.29′
x_2 = 224.08′
y_2 = 15.05′
k_2 = 112.34′
p_2 = 3.77′
T_2 = 933.30′
Lc = 856.23′
Es = 486.38′
C_1 = 299.04′
C = 774.94′
C_2 = 224.59′
$C.B._1$ = N 78° 35′ 31″ W
C.B. = N 24° 27′ 26″ W
$C.B._2$ = N 27° 06′ 47″ E
e_{MAX} = 0.059





FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SEA CHECKED DLR

PLAN AND PROFILE - S.R. 562 RAMP J
STA 403+79.32 TO STA 416+00.00

HAM-75-7.85

363
2017

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CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITIES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLAN
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS
1390 - 1444	BRIDGE PLANS HAM-75-0791
1333 - 1389	BRIDGE PLANS HAM 562-0004

EROSION CONTROL

CURVE 562-J1
PI STA 420+13.05
Δ = 114° 40′ 09″ (RT)
Dc = 10° 15′ 00″
R = 558.98′
Ls_1 = 300.00′
θs_1 = 15° 22′ 30″
LT_1 = 200.76′
ST_1 = 100.69′
x_1 = 297.85′
y_1 = 26.70′
k_1 = 149.64′
p_1 = 6.69′
T_1 = 1028.72′
Ls_2 = 224.99′
θs_2 = 11° 31′ 51″
LT_2 = 150.31′
ST_2 = 75.29′
x_2 = 224.08′
y_2 = 15.05′
k_2 = 112.34′
p_2 = 3.77′
T_2 = 933.30′
Lc = 856.23′
Es = 486.38′
C_1 = 299.04′
C = 774.94′
C_2 = 224.59′
C.B.$_1$ = N 78° 35′ 31″ W
C.B. = N 24° 27′ 26″ W
C.B.$_2$ = N 27° 06′ 47″ E
e_{MAX} = 0.059

HORIZONTAL SCALE IN FEET (0, 25, 50, 100)

CALCULATED SEA CHECKED DLR

PLAN AND PROFILE - S.R. 562 RAMP J
STA 416+00.00 TO STA 429+00.00

HAM-75-7.85

364
2017

FOR INFORMATION ONLY

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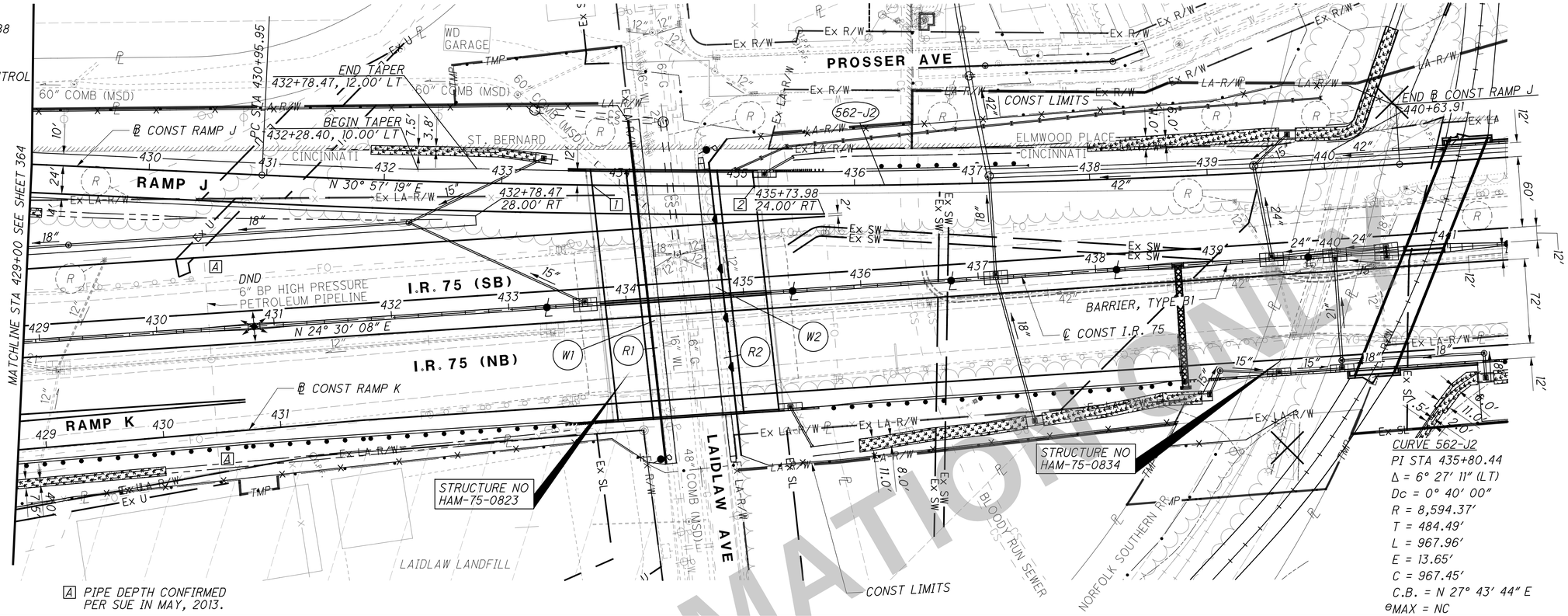
1 BEGIN APP SLAB STA 433+76.88
2 END APP SLAB STA 435+14.68

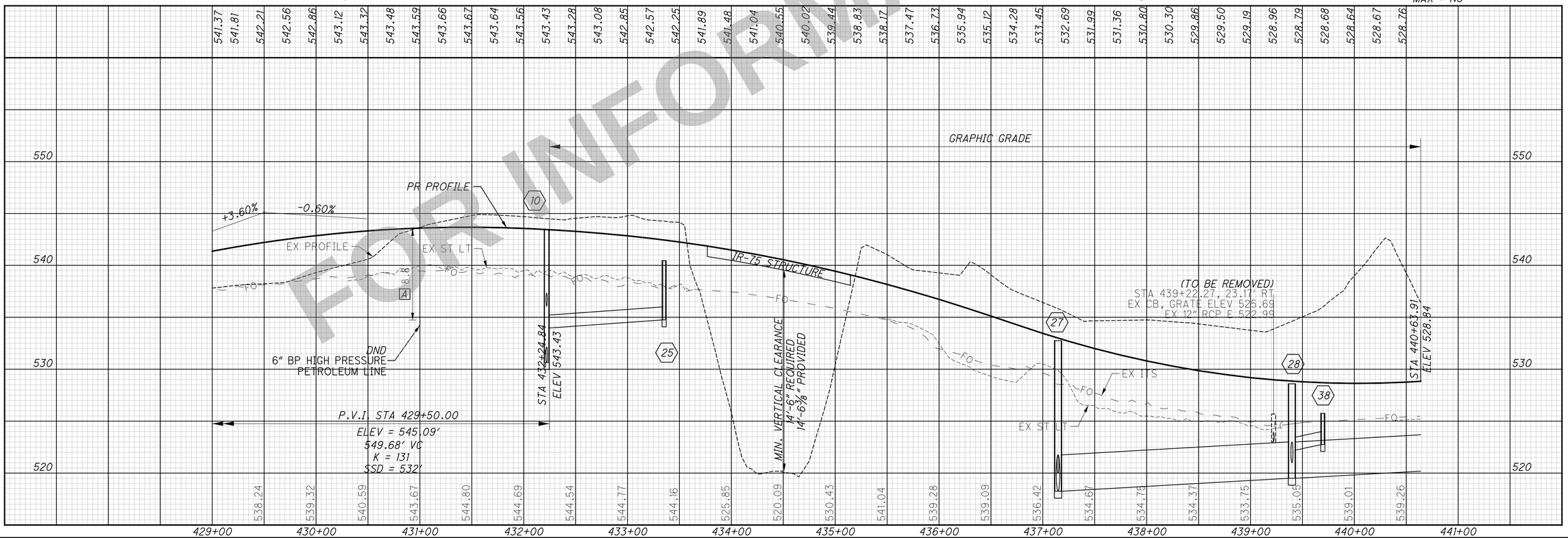
EROSION CONTROL

CROSS REFERENCES

SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITIES
769 - 788	SUPERELLEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLAN
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS
1390 - 1444	BRIDGE PLANS HAM-75-0823
1572 - 1612	BRIDGE PLANS HAM-75-0834

A PIPE DEPTH CONFIRMED PER SUE IN MAY, 2013.





FOR INFORMATIONAL

HORIZONTAL SCALE IN FEET

CALCULATED SEA CHECKED DLR

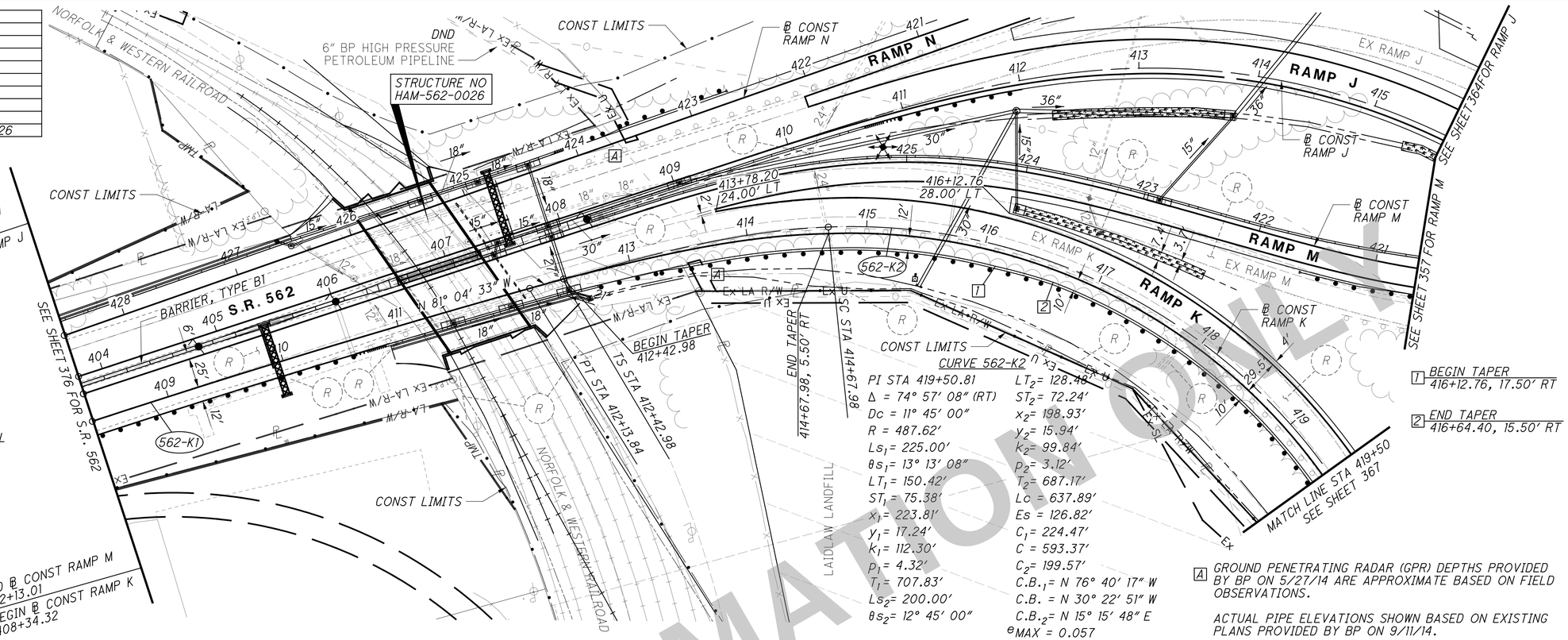
PLAN AND PROFILE - S.R. 562 RAMP J
STA 429+00.00 TO STA 440+63.91

HAM-75-7.85

365
2017

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CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITIES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLAN
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS
1515 -1571	BRIDGE PLANS HAM-562-0026



CURVE 562-K1
PI STA 410+24.11
Δ = 2° 28' 59" (RT)
Dc = 0° 39' 15"
R = 8,757.22'
T = 189.79'
L = 379.52'
E = 2.06'
C = 379.49'
C.B. = N 82° 28' 20" W

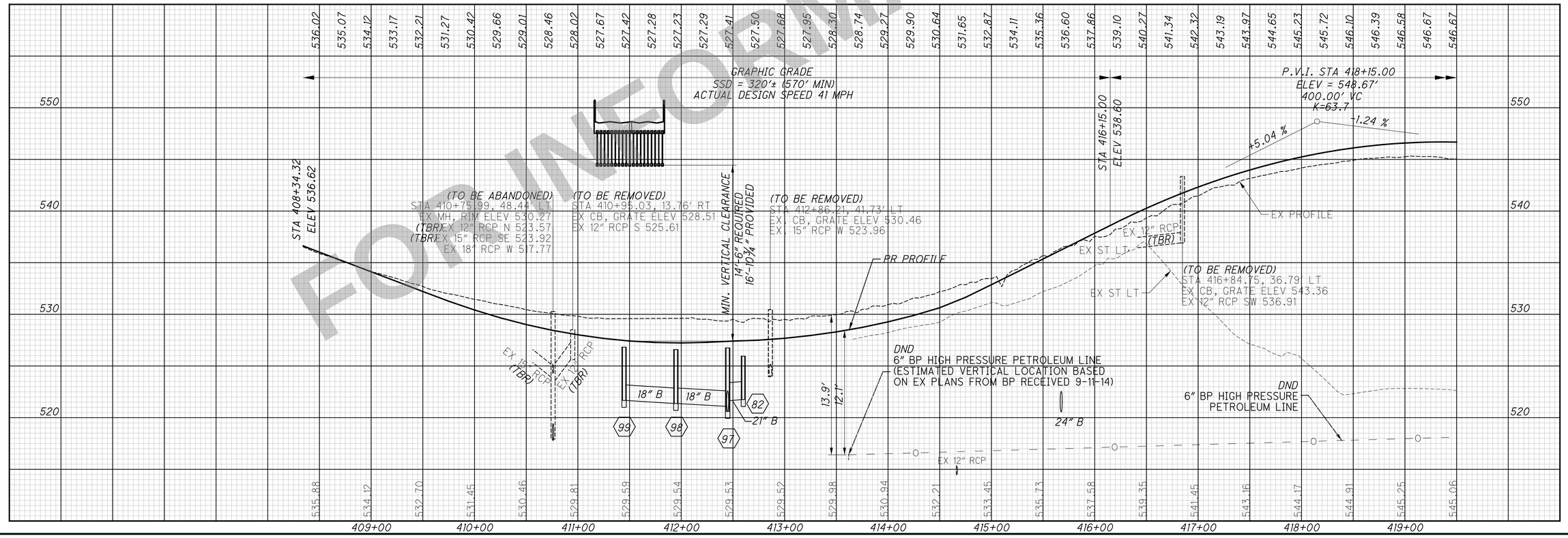
CURVE 562-K2
PI STA 419+50.81
Δ = 74° 57' 08" (RT)
Dc = 11° 45' 00"
R = 487.62'
Ls_1 = 225.00'
θs_1 = 13° 13' 08"
LT_1 = 150.42'
ST_1 = 75.38'
x_1 = 223.81'
y_1 = 17.24'
k_1 = 112.30'
p_1 = 4.32'
T_1 = 707.83'
Ls_2 = 200.00'
θs_2 = 12° 45' 00"
LT_2 = 128.48'
ST_2 = 72.24'
x_2 = 198.93'
y_2 = 15.94'
k_2 = 99.84'
p_2 = 3.12'
T_2 = 687.17'
Lc = 637.89'
Es = 126.82'
C_1 = 224.47'
C = 593.37'
C_2 = 199.57'
C.B.$_1$ = N 76° 40' 17" W
C.B. = N 30° 22' 51" W
C.B.$_2$ = N 15° 15' 48" E
e_{MAX} = 0.057

1 BEGIN TAPER
416+12.76, 17.50' RT

2 END TAPER
416+64.40, 15.50' RT

4 GROUND PENETRATING RADAR (GPR) DEPTHS PROVIDED BY BP ON 5/27/14 ARE APPROXIMATE BASED ON FIELD OBSERVATIONS.

ACTUAL PIPE ELEVATIONS SHOWN BASED ON EXISTING PLANS PROVIDED BY BP ON 9/11/14.



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SEA
CHECKED DLR

PLAN AND PROFILE - S.R. 562 RAMP K
STA 408+34.32 TO STA 419+50.00

HAM-75-7.85

366
2017

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FOR INFORMATION ONLY

CROSS REFERENCES

SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITIES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLAN
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS
1333 - 1389	BRIDGE PLANS HAM-75-0791

I.R. 75 SEE SHEET 346

STRUCTURE NO HAM-75-0791

I.R. 75 (SB)

I.R. 75 (NB)

RAMP J

RAMP K

℄ CONST RAMP J

℄ CONST RAMP K

℄ CONST I.R. 75

BARRIER, TYPE B1

CONST LIMITS

EX LA R/W

LA R/W

PROPOSED DETENTION

EX RAMP J

EX 66" CULVERT

ST. BERNARD

CINCINNATI

6" BP HIGH PRESSURE PETROLEUM PIPELINE DND

LAIDLAW LANDFILL

DND BUILDING

TBR SIGN

TMP

BEGIN TAPER
421+05.87, 5.50' RT

END TAPER
423+05.87

424+61.11
28.00' LT

430+71.29
24.00' LT

BEGIN TAPER
430+70.85, 10.00' RT

END TAPER
431+70.83, 12.00' RT

END ℄ CONST RAMP K
STA 431+71.07

PT STA 422+20.68

N 23° 21' 23" E

MATCHLINE STA 419+50
SEE SHEET 366

SC STA 421+05.87

CS STA 423+05.87

562-K2

562-K3

R1

R2

R3

CURVE 562-K3
PI STA 425+13.52
Δ = 4° 09' 04" (RT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 207.65'
L = 415.11'
E = 3.76'
C = 415.02'
C.B. = N 21° 55' 15" E
e_{MAX} = NC

CURVE 562-K2
PI STA 419+50.81
Δ = 74° 57' 08" (RT)
Dc = 11° 45' 00"
R = 487.62'
Ls_1 = 225.00'
θs_1 = 13° 13' 08"
LT_1 = 150.42'
ST_1 = 75.38'
x_1 = 223.81'
y_1 = 17.24'
k_1 = 112.30'
p_1 = 4.32'
T_1 = 707.83'
Ls_2 = 200.00'
θs_2 = 12° 45' 00"
LT_2 = 128.48'
ST_2 = 72.24'
x_2 = 198.93'
y_2 = 15.94'
k_2 = 99.84'
p_2 = 3.12'
T_2 = 687.17'
Lc = 637.89'
Es = 126.82'
C_1 = 224.47'
C = 593.37'
C_2 = 199.57'
$C.B._1$ = N 76° 40' 17" W
C.B. = N 30° 22' 51" W
$C.B._2$ = N 15° 15' 48" E
e_{MAX} = 0.057

EROSION CONTROL

[A] PIPE DEPTH CONFIRMED PER SUE IN MAY, 2013.

P.V.I. STA 418+15.00
ELEV = 548.67'
400.00' VC
K=63.7

P.V.I. STA 422+30.00
ELEV = 543.53'
180.00' VC
K=126

STA 420+15.00
ELEV 546.19

STA 421+40.00
ELEV 544.64

STA 423+20.00
ELEV 543.69

STA 431+71.07
ELEV 544.30

-1.24 %

+0.18 %

PR PROFILE

(TBA)
EX 12" RCP

(TO BE ABANDONED)
STA 421+59.77, 21.67' LT
EX MH, RIM ELEV 543.29
EX 12" RCP SW 537.07

EX LOOP DETECTOR LINE

EX ITS

EX PROFILE

EX ST LT

GRAPHIC GRADE

(TO BE ABANDONED)
STA 428+92.21, 19.90' RT
EX CB, GRATE ELEV 537.66
EX 6" UD N 536.06
EX 15" RCP W 535.26

18" B

DND
6" BP HIGH PRESSURE PETROLEUM LINE

DND
6" BP HIGH PRESSURE PETROLEUM LINE
(ESTIMATED VERTICAL LOCATION BASED ON BORINGS)

6.75'

4.20'

546.56 546.36 546.07 545.76 545.45 545.14 544.83 544.52 544.26 544.04 543.88 543.76 543.69 543.67 543.70 543.75 543.80 543.84 543.89 543.93 543.98 544.00 544.04 544.10 544.17 544.09 543.98 543.86 543.76 543.65 543.54 543.47 543.41 543.35 543.35 543.37 543.39 543.44 543.57 543.70 543.83 543.96 544.09 544.21 544.31 544.37 544.38 544.36

544.66 544.06 543.43 542.96 542.43 541.82 541.16 540.56 540.26 540.02 539.85 539.91 539.83 540.36 540.75 540.70 540.59 541.08 541.34 541.49 541.58 541.59 541.99 541.95

560 550 540 530

420+00 421+00 422+00 423+00 424+00 425+00 426+00 427+00 428+00 429+00 430+00 431+00 432+00

HORIZONTAL SCALE IN FEET
0 25 50 100

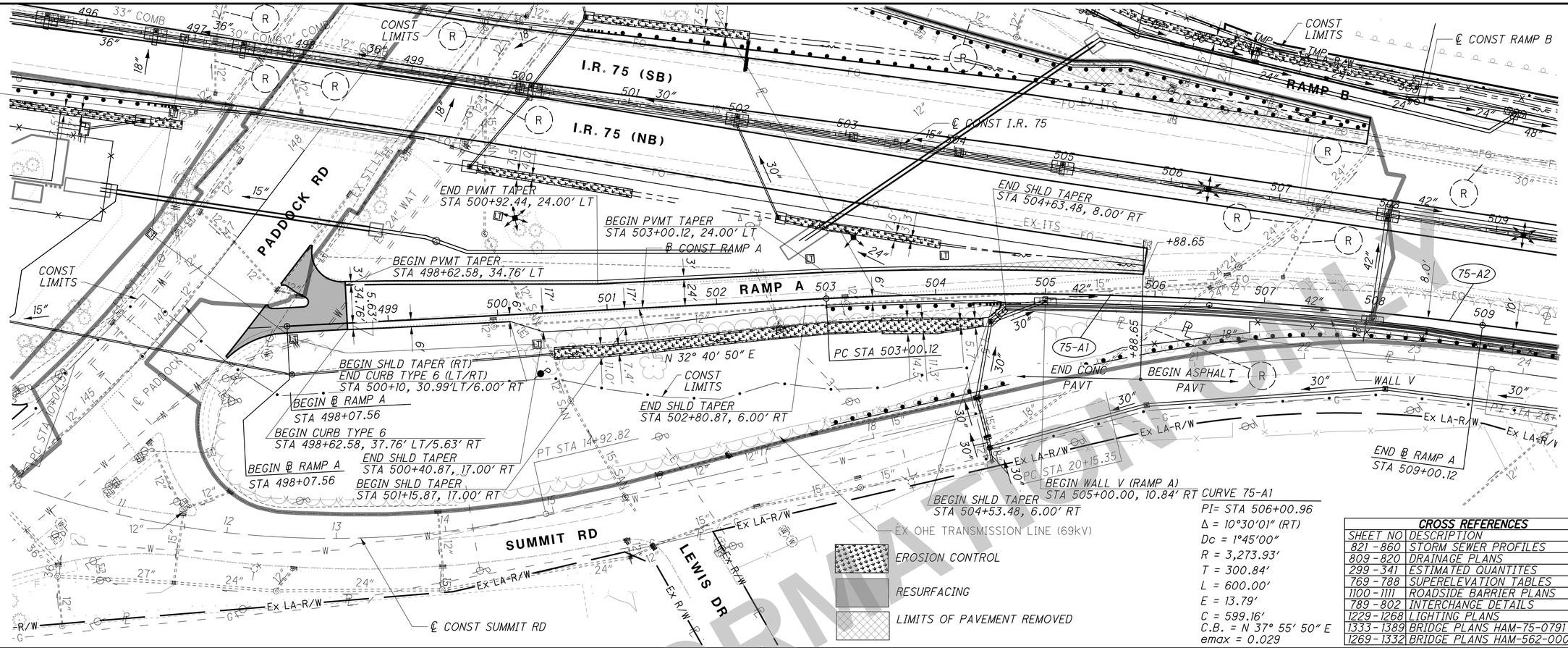
CALCULATED SEA
CHECKED DLR

PLAN AND PROFILE - S.R. 562 RAMP K
STA 419+50 TO STA 431+71.07

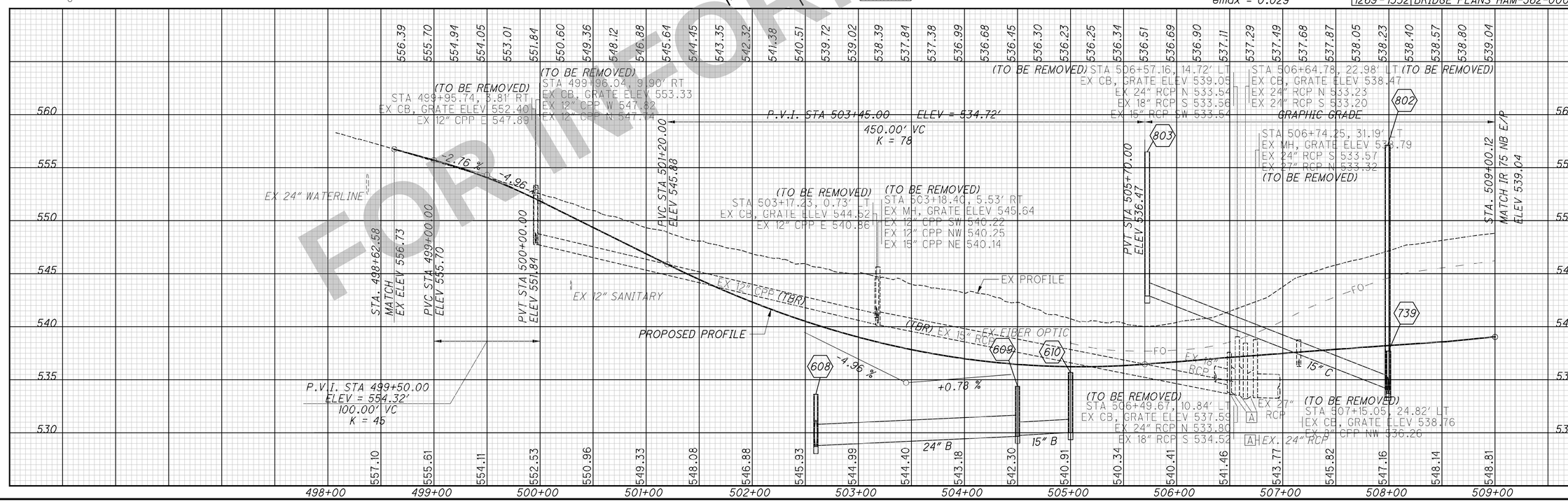
HAM-75-7.85

367
2017

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CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITIES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLANS
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS
1333 - 1389	BRIDGE PLANS HAM-75-0791
1269 - 1332	BRIDGE PLANS HAM-562-0004



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET (0, 25, 50, 100)

CALCULATED JLM CHECKED SSK

PLAN AND PROFILE - PADDOCK RD RAMP A
498+07.56 TO 509+00.12

HAM-75-7.85

368
2017

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LIMITS OF PAVEMENT REMOVED

RESURFACING

CURVE 75-B1
PI= STA 503+59.05
Δ = 6°35'59" (LT)
Dc = 1°44'39"
R = 3,285.00'
T = 189.40'
L = 378.39'
E = 5.46'
emax = N.C.

CURVE 75-B2
PI= STA 511+85.04
Δ = 4°59'37" (LT)
Dc = 0°40'00"
R = 8,595.00'
T = 374.78'
L = 749.08'
E = 8.17'
emax = N.C.

CROSS REFERENCES

SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITIES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLANS
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS
1333 - 1389	BRIDGE PLANS HAM-75-0791
1269 - 1332	BRIDGE PLANS HAM-562-0004

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED JLM CHECKED SSK

PLAN AND PROFILE - PADDOCK RD RAMP B
501+69.65 TO 515+59.35

HAM-75-7.85

369
2017

FOR INFORMATION ONLY

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CROSS REFERENCES	
SHEET NO	DESCRIPTION
821-860	STORM SEWER PROFILES
809-820	DRAINAGE PLANS
299-341	ESTIMATED QUANTITES
769-788	SUPERELEVATION TABLES
1100-1111	ROADSIDE BARRIER PLANS
789-802	INTERCHANGE DETAILS
1229-1268	LIGHTING PLANS
1333-1389	BRIDGE PLANS HAM-75-0791
1269-1332	BRIDGE PLANS HAM-562-0004

LIMITS OF PAVEMENT REMOVED

CURVE 75-C1
PI= STA 494+97.83
Δ = 23°13'49" (LT)
Dc = 3°30'00"
R = 1,637.00'
T = 336.48'
L = 663.71'
E = 34.22'
emax = 0.037

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED JLM CHECKED SSK

PLAN AND PROFILE - PADDOCK RD RAMP C
STA 481+49.83 TO STA 494+00.00

HAM-75-7.85

370
2017

FOR INFORMATION ONLY

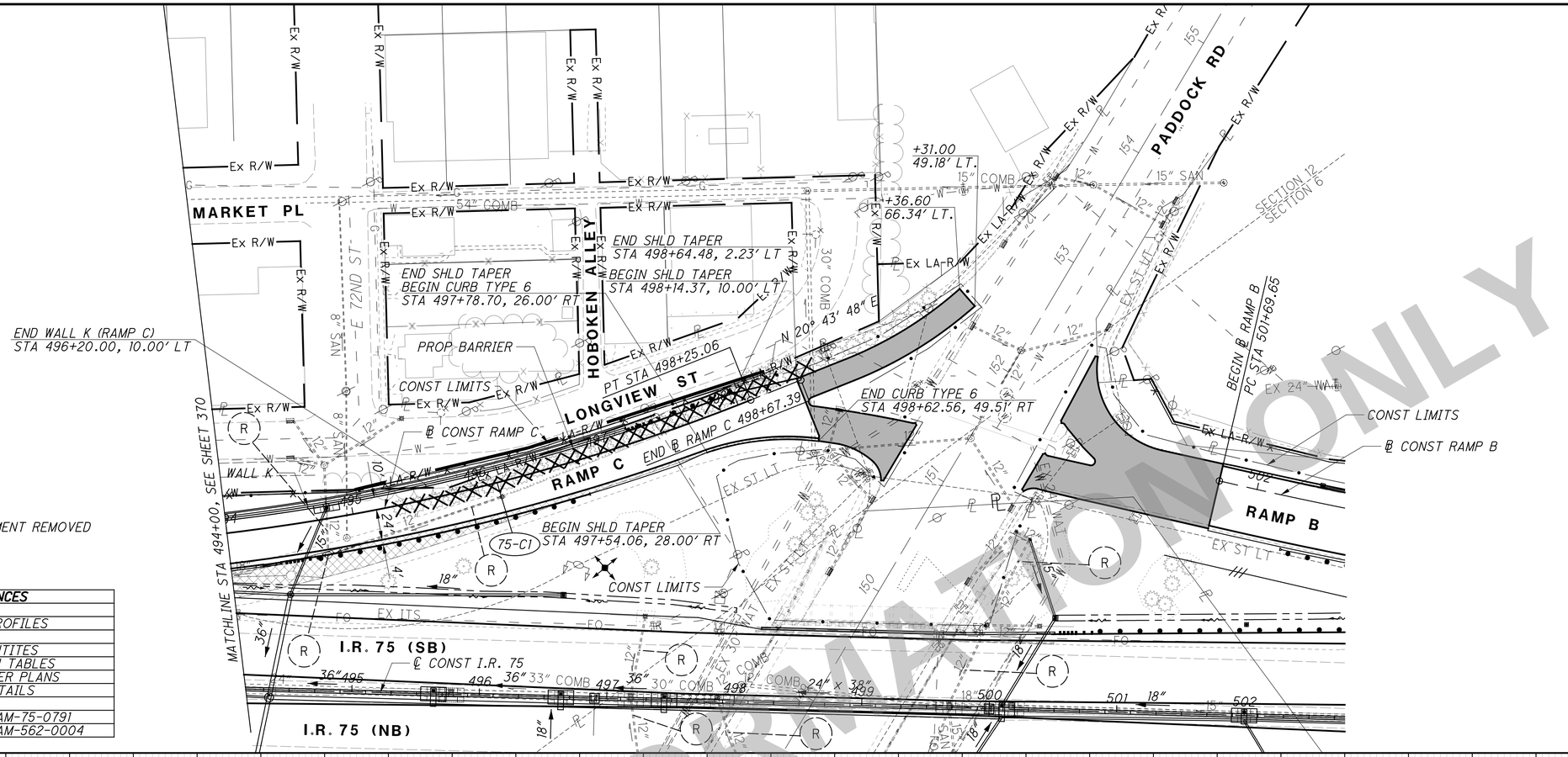
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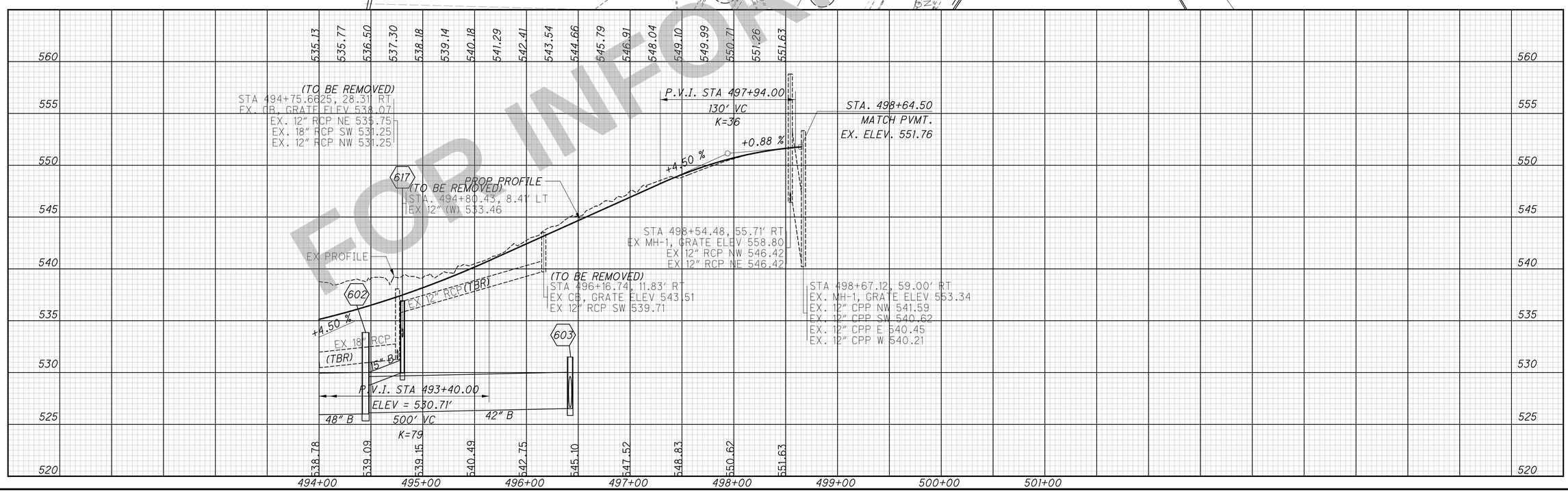
CURVE 75-C1
PI= STA 494+97.83
Δ = 23°13'49" (LT)
Dc = 3°30'00"
R = 1,637.00'
T = 336.48'
L = 663.71'
E = 34.22'
emax = 0.037

RESURFACING

LIMITS OF PAVEMENT REMOVED

CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLANS
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS
1333 - 1389	BRIDGE PLANS HAM-75-0791
1269 - 1332	BRIDGE PLANS HAM-562-0004





FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED JLM
CHECKED SSK

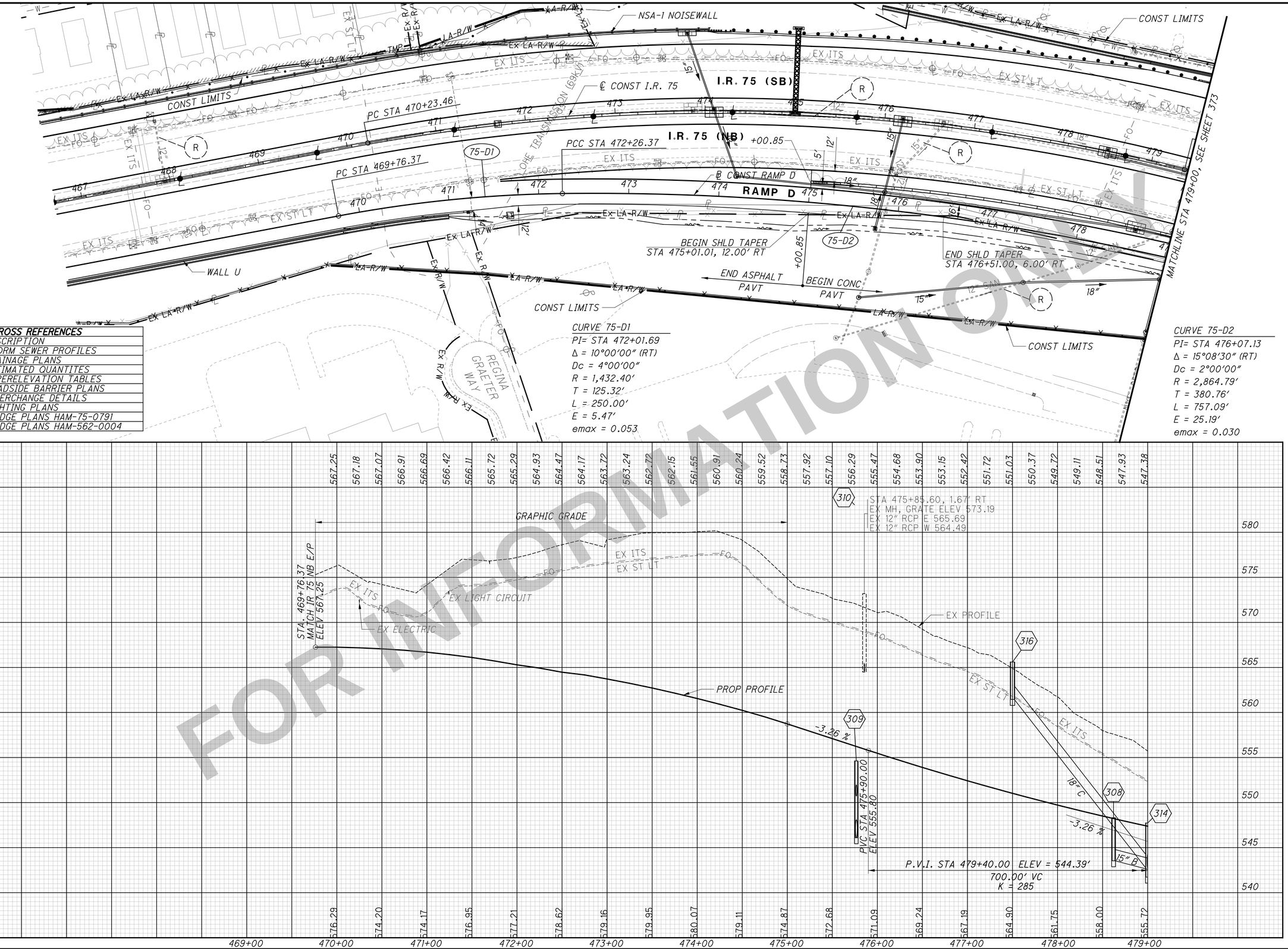
PLAN AND PROFILE - PADDOCK RD RAMP C
494+00.00 TO 498+64.50

HAM-75-7.85

371
2017

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CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLANS
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS
1333 - 1389	BRIDGE PLANS HAM-75-0791
1269 - 1332	BRIDGE PLANS HAM-562-0004



CURVE 75-D1
PI= STA 472+01.69
Δ = 10°00'00" (RT)
Dc = 4°00'00"
R = 1,432.40'
T = 125.32'
L = 250.00'
E = 5.47'
emax = 0.053

CURVE 75-D2
PI= STA 476+07.13
Δ = 15°08'30" (RT)
Dc = 2°00'00"
R = 2,864.79'
T = 380.76'
L = 757.09'
E = 25.19'
emax = 0.030

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

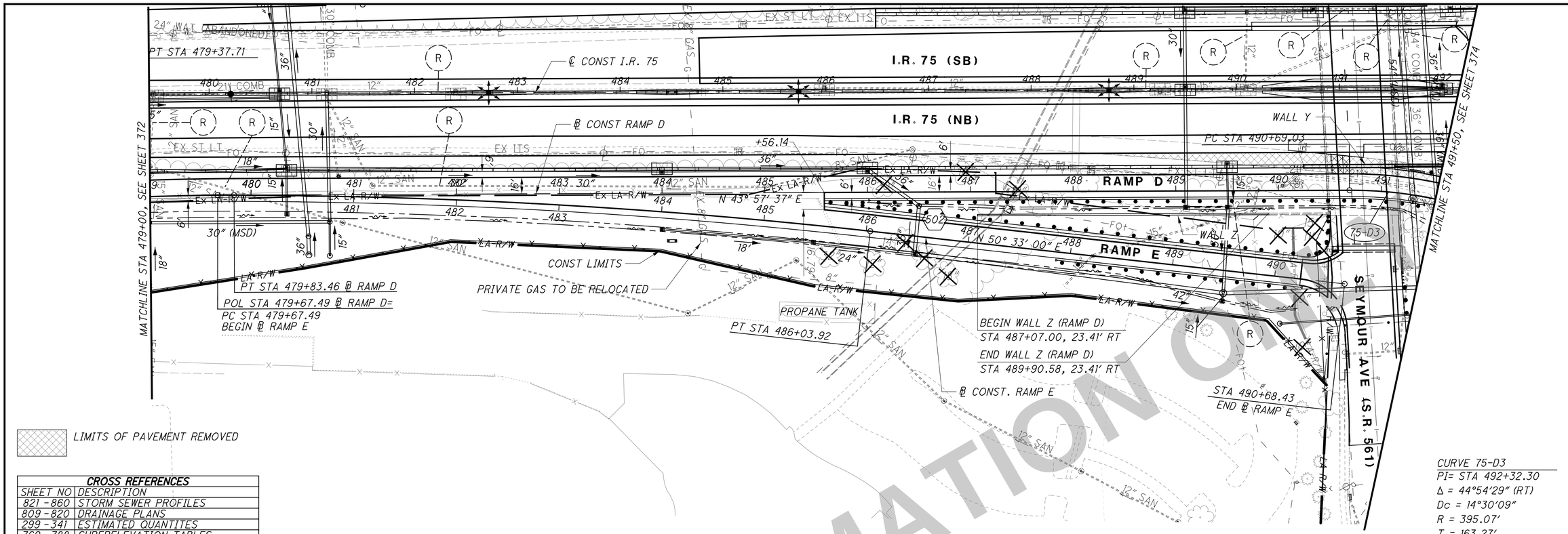
CALCULATED JLM CHECKED SSK

PLAN AND PROFILE - PADDOCK RD RAMP D
STA 469+76.37 TO STA 479+00.00

HAM-75-7.85

372
2017

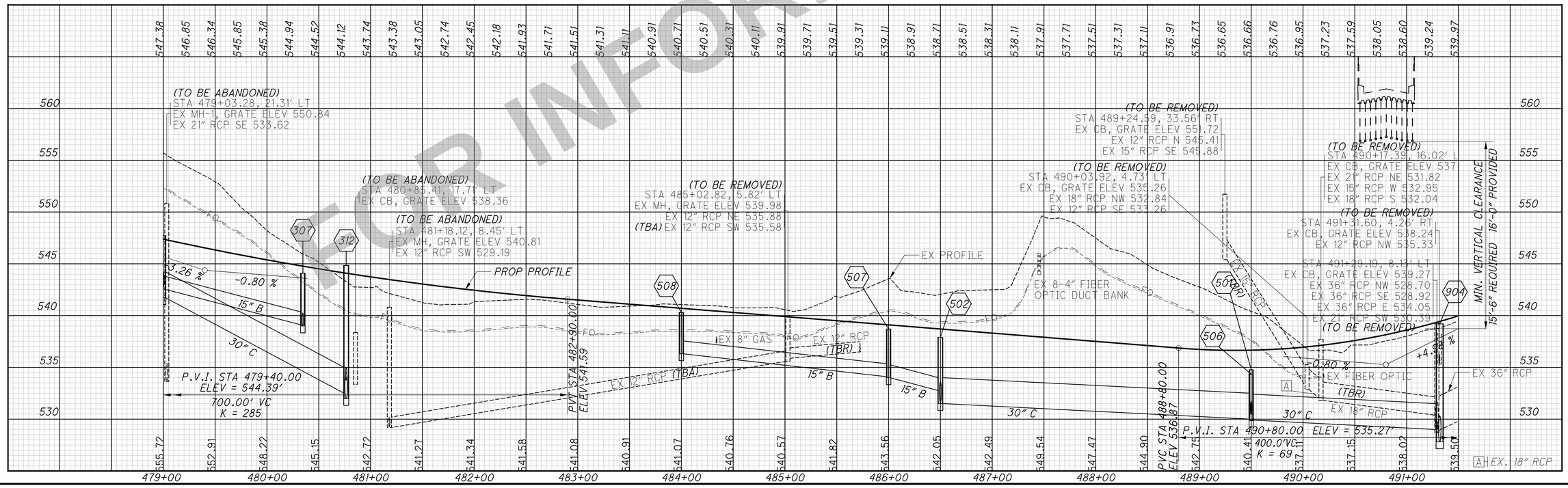
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LIMITS OF PAVEMENT REMOVED

CROSS REFERENCES	
SHEET NO	DESCRIPTION
821-860	STORM SEWER PROFILES
809-820	DRAINAGE PLANS
299-341	ESTIMATED QUANTITES
769-788	SUPERELEVATION TABLES
1100-1111	ROADSIDE BARRIER PLANS
789-802	INTERCHANGE DETAILS
1229-1268	LIGHTING PLANS
1333-1389	BRIDGE PLANS HAM-75-0791
1269-1332	BRIDGE PLANS HAM-562-0004

CURVE 75-D3
PI= STA 492+32.30
Δ = 44°54'29" (RT)
Dc = 14°30'09"
R = 395.07'
T = 163.27'
L = 309.65'
E = 32.41'
emax = 0.053



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED JLM CHECKED SSK

PLAN AND PROFILE- PADDOCK ROAD RAMP D
STA 479+00 TO STA 491+50

HAM-75-7.85

373
2017

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CURVE 75-D3
PI= STA 492+32.30
Δ = 44°54'29" (RT)
Dc = 14°30'09"
R = 395.07'
T = 163.27'
L = 309.65'
E = 32.41'
emax = 0.053

1 BEGIN PVMT TAPER
STA 492+08.04, 16.00' LT

2 END PVMT TAPER
STA 492+58.04, 23.58' LT

3 BEGIN PVMT TAPER
STA 493+32.72, 21.74' LT

4 END PVMT TAPER
STA 493+82.72, 32.20' LT

5 BEGIN PVMT TAPER
STA 492+01.35

6 STA 493+32.72
2.27' RT

7 END PVMT TAPER
STA 493+82.72, 16.36' RT

RESURFACING

LIMITS OF PAVEMENT REMOVED

CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITIES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLANS
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS
1333 - 1389	BRIDGE PLANS HAM-75-0791
1269 - 1332	BRIDGE PLANS HAM-562-0004

FOR INFORMATION ONLY

PROP PROFILE
EX PROFILE
(TO BE REMOVED)
STA 491+60.26, 19.26' RT
EX CB, GRATE E EV 542.80
EX 36" RCP NW 530.20
EX 36" RCP SW 530.18
EX 12" RCP SE 534.99
EX 16" GAS
EX LIGHT CIRCUIT
906
EX 36" RCP
P.V.I. STA 490+80.00
ELEV = 535.27'
400.00' VC
K = 69
PVT STA 492+80.00
ELEV 543.23
STA 493+31.92, 33.90' RT
EX CB, GRATE ELEV 544.00
EX 12" RCP SW 541.48
PVC STA 494+80.00
ELEV 555.19
P.V.I. STA 495+40.00
ELEV = 558.17'
120.00' VC
K = 45
PVT STA 496+00.00
ELEV 559.55
+4.98 %
+2.30 %
EX 12" RCP
PVT STA 496+08.69
MATCH PAVMT.
ELEV 559.75
STA 495+67.92, 18.10' RT
EX CB, GRATE ELEV 558.11
EX 12" CPP E 553.42

539.97 540.79 541.70 542.71 543.80 544.98 546.22 547.47 548.71 549.96 551.20 552.45 553.69 554.94 556.14 557.20 558.12 558.91 559.55
539.50 541.50 543.70 546.12 548.59 551.20 553.70 556.01 558.07 559.52
570 560 550 540 530 520 510
492+00 493+00 494+00 495+00 496+00

I.R. 75 (SB)
I.R. 75 (NB)
WALL Y
END WALL Y
STA 493+22.53, 72.10' RT
MATCHLINE STA 491+50, SEE SHEET 373
RAMP D
75-D3
R=381.5'
R=357.5'
N 88°52'06" E
PT STA 493+78.68
RAMP A
BEGIN ℄ RAMP A
STA 498+07.56
END ℄ RAMP D
STA 496+08.69
℄ CONST RAMP D
℄ CONST RAMP A
℄ CONST I.R. 75
CONST LIMITS
℄ PADDOCK RD
PADDOCK RD
SEYMOUR AVE (S.R. 561)
SUMMIT RD
PT STA 14+92.8
OHE TRANSMISSION (69kV)
EX 12" WAT
EX 30" WAT
EX 16" WAT
EX LA-R/W
+52.51* 42' LT
+82.60* 42' LT
+12.98* 41' LT
+59.43* 41' LT
15" (MSD)
EX ST LT
2' (TYP)

CALCULATED JLM CHECKED SSK

HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN AND PROFILE - PADDOCK RD RAMP D
STA 491+50 TO STA 496+08.69

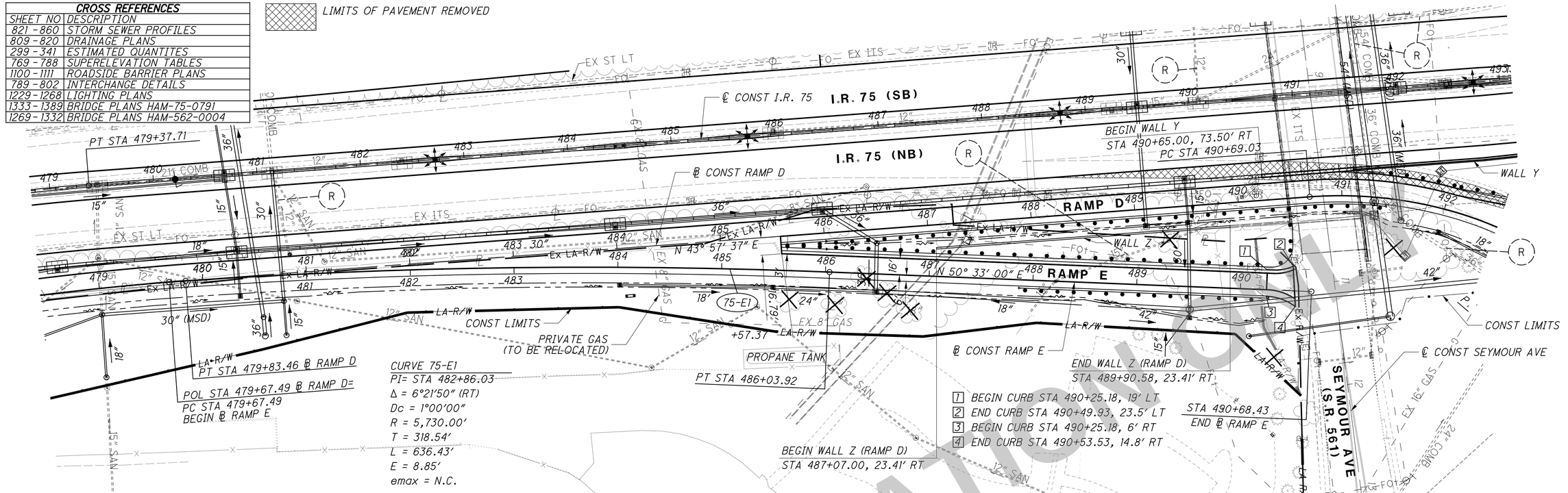
HAM-75-7.85

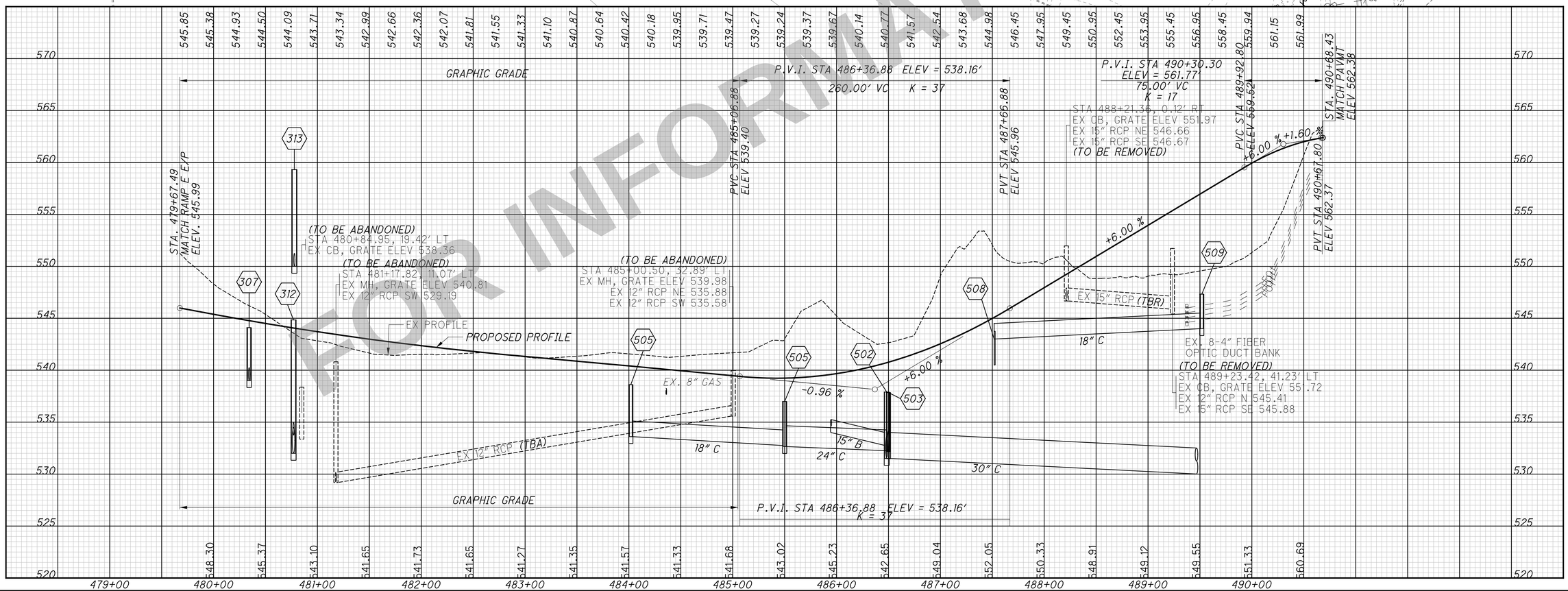
374
2017

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CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLANS
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS
1333 - 1389	BRIDGE PLANS HAM-75-0791
1269 - 1332	BRIDGE PLANS HAM-562-0004

LIMITS OF PAVEMENT REMOVED





FOR INFORMATION

HORIZONTAL SCALE IN FEET (0, 25, 50, 100)

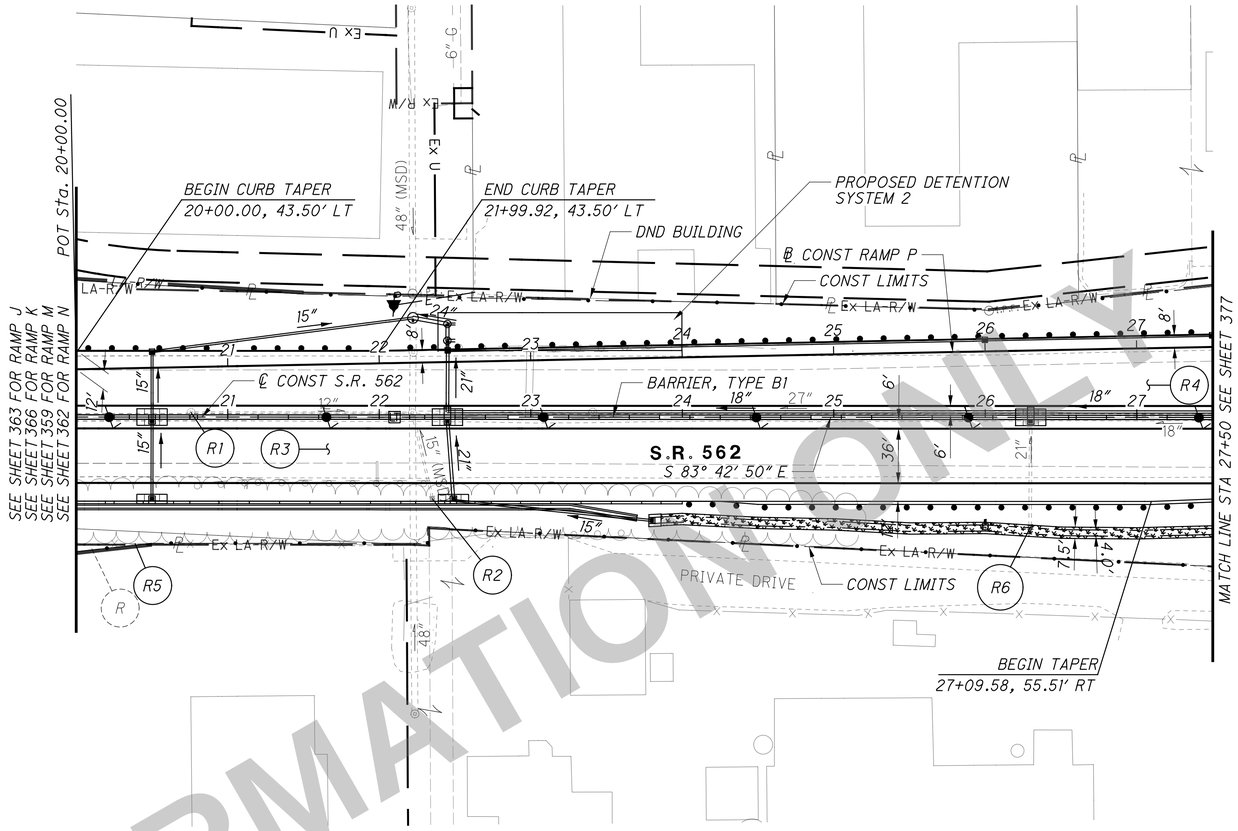
CALCULATED JLM CHECKED SSK

PLAN AND PROFILE - PADDOCK RD RAMP E
STA 479+67.49 TO STA 490+68.43

HAM-75-7.85

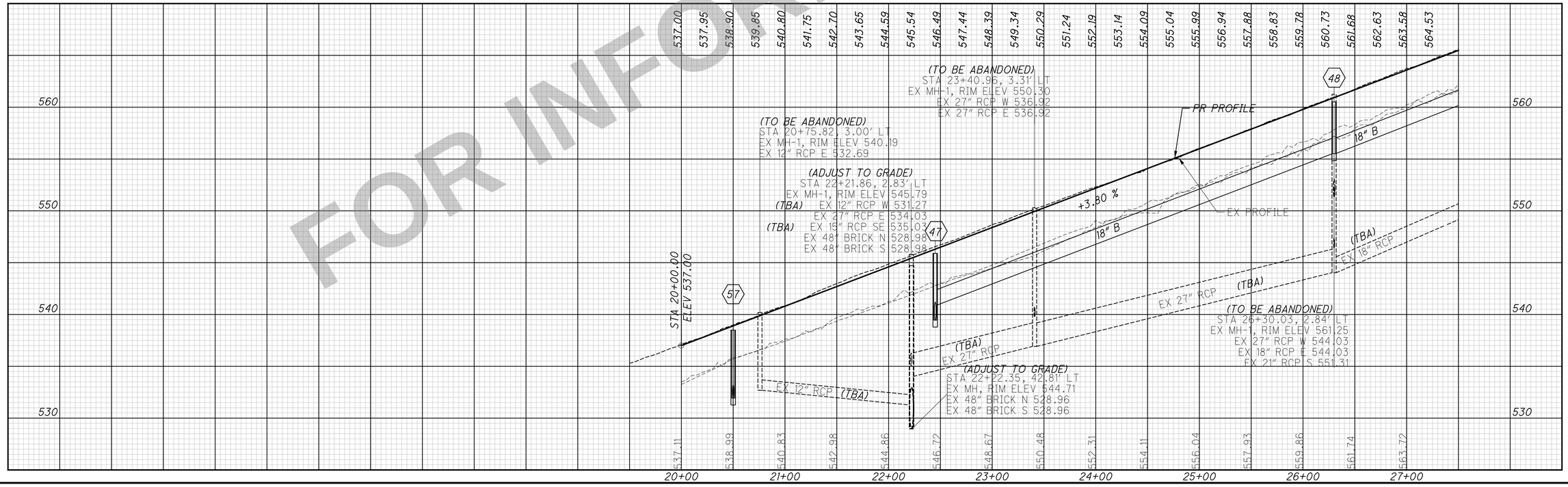
375
2017

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EROSION CONTROL

CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITIES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLAN
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

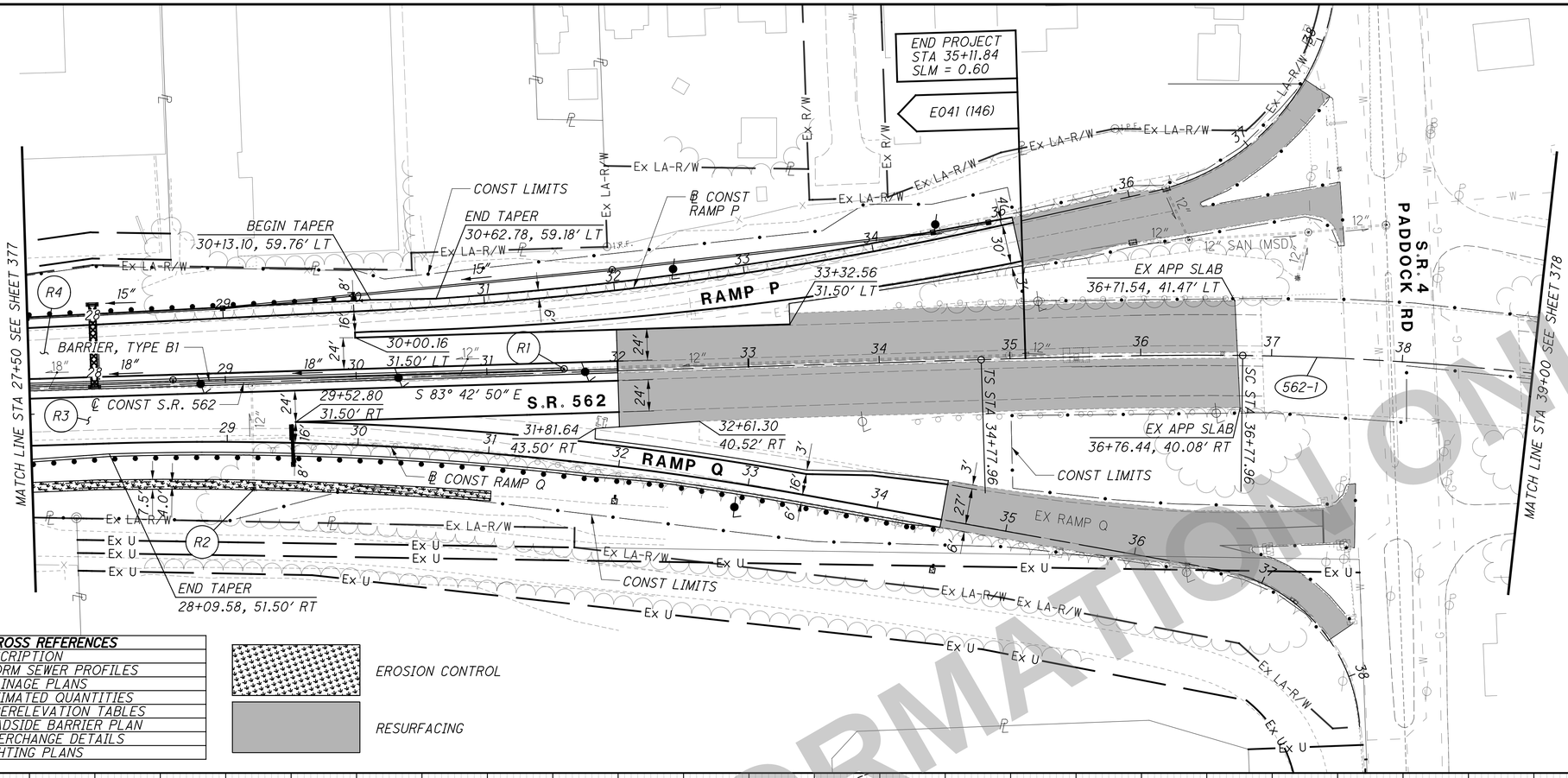
CALCULATED SEA
CHECKED DLR

PLAN AND PROFILE - S.R. 562
STA 20+00 TO STA 27+50

HAM-75-7.85

376
2017

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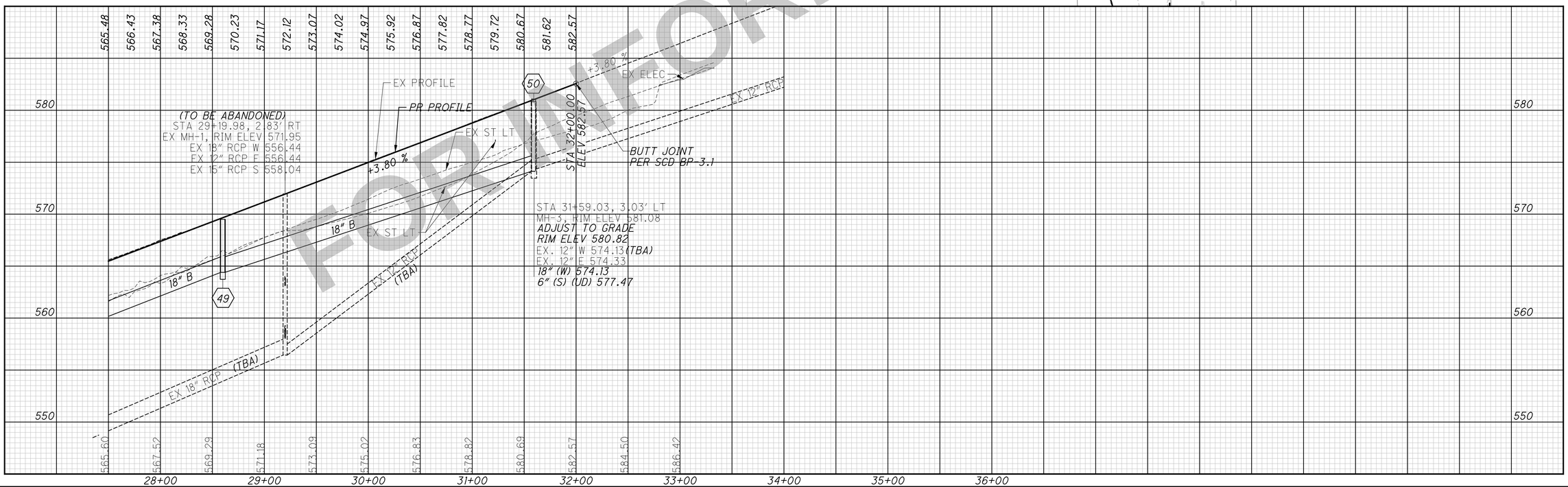
CROSS REFERENCES

SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITIES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLAN
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS

EROSION CONTROL

RESURFACING

CURVE 562-1
PI STA 41+42.83
Δ = 27° 41' 00" (RT)
Dc = 2° 30' 00"
R = 2,291.83'
Ls = 200.00'
θs = 2° 30' 00"
LT = 133.35'
ST = 66.68'
x = 199.96'
y = 2.91'
k = 99.99'
p = 0.73'
Δc = 22° 41' 00" (RT)
Lc = 907.33'
Ts = 664.87'
Es = 69.29'
C = 901.42'
Cl = C2 = 199.98'
C.B. 1 = S 82° 52' 50" E
C.B. = S 69° 52' 20" E
C.B. 2 = S 56° 51' 50" E



FOR INFORMATION ONLY

N

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SEA
CHECKED DLR

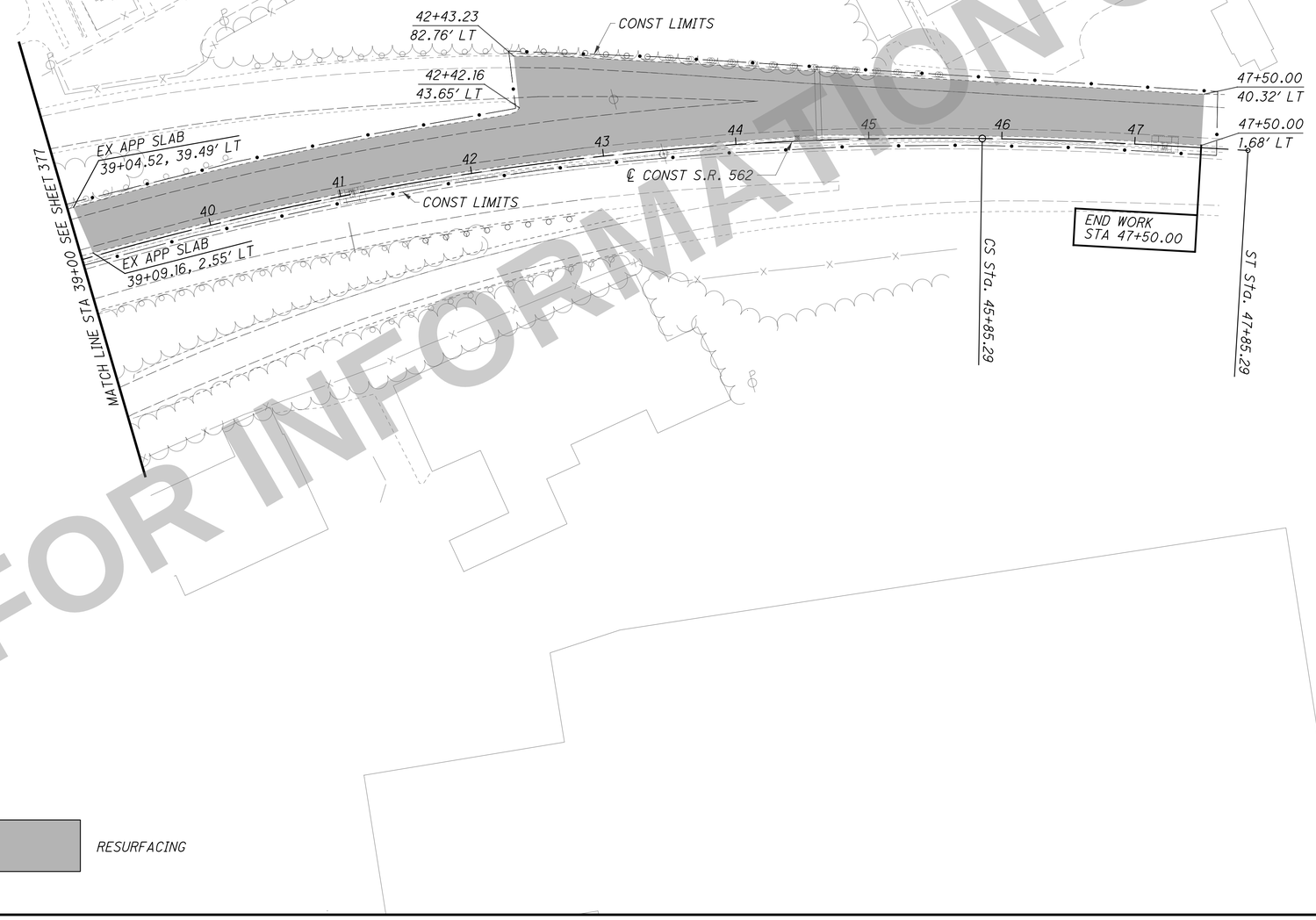
PLAN AND PROFILE - S.R. 562
STA 27+50 TO STA 39+00

HAM-75-7.85

377
2017

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CURVE 562-1
PI STA 41+42.83
Δ = 27° 41′ 00″ (RT)
Dc = 2° 30′ 00″
R = 2,291.83′
Ls = 200.00′
θs = 2° 30′ 00″
LT = 133.35′
ST = 66.68′
x = 199.96′
y = 2.91′
k = 99.99′
p = 0.73′
Δc = 22° 41′ 00″ (RT)
Lc = 907.33′
Ts = 664.87′
Es = 69.29′
C = 901.42′
C1 = C2 = 199.98′
C.B. 1 = S 82° 52′ 50″ E
C.B. = S 69° 52′ 20″ E
C.B. 2 = S 56° 51′ 50″ E



FOR INFORMATION ONLY

CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITIES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLAN
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS

RESURFACING

HORIZONTAL SCALE IN FEET
0 25 50 100

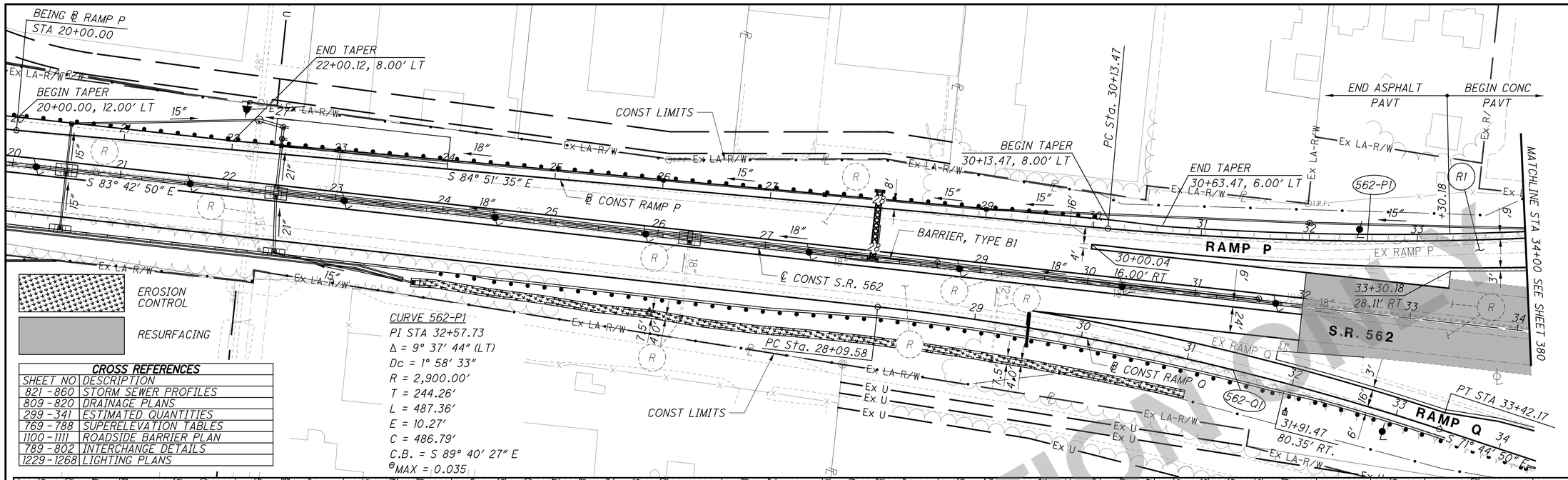
CALCULATED SEA
CHECKED DLR

PLAN AND PROFILE - S.R. 562
STA 39+00 TO STA 47+85.29

HAM-75-7.85

378
2017

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CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITIES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLAN
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS

FOR INFORMATION ONLY

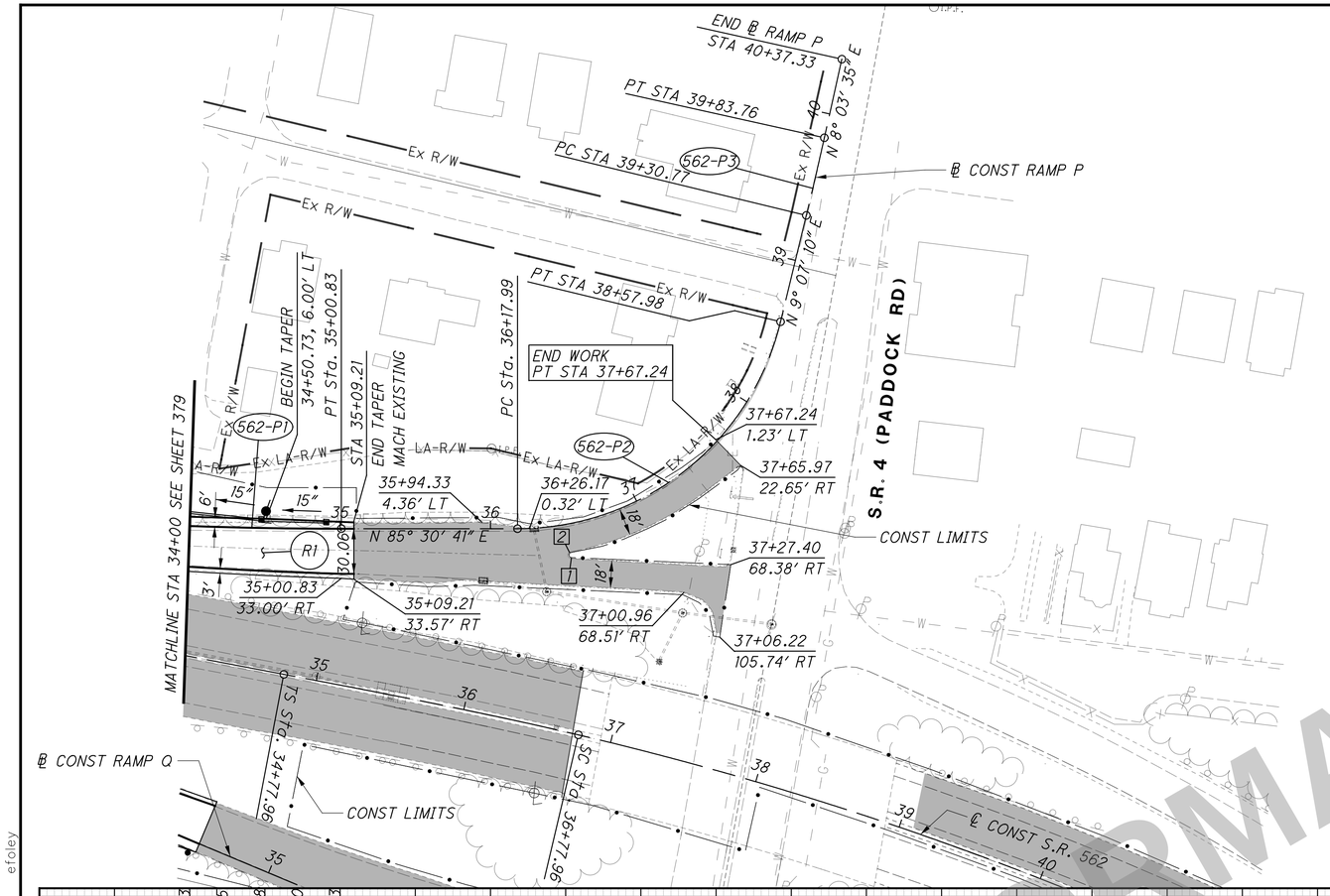
HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SEA
CHECKED DLR

PLAN AND PROFILE - S.R. 562 RAMP P
STA. 20+00 TO STA. 34+00.00

HAM-75-7.85

379
2017

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CURVE 562-P1
PI STA 32+57.73
Δ = 9° 37' 44" (LT)
Dc = 1° 58' 33"
R = 2,900.00'
T = 244.26'
L = 487.36'
E = 10.27'
C = 486.79'
C.B. = S 89° 40' 27" E
e_{MAX} = 0.035

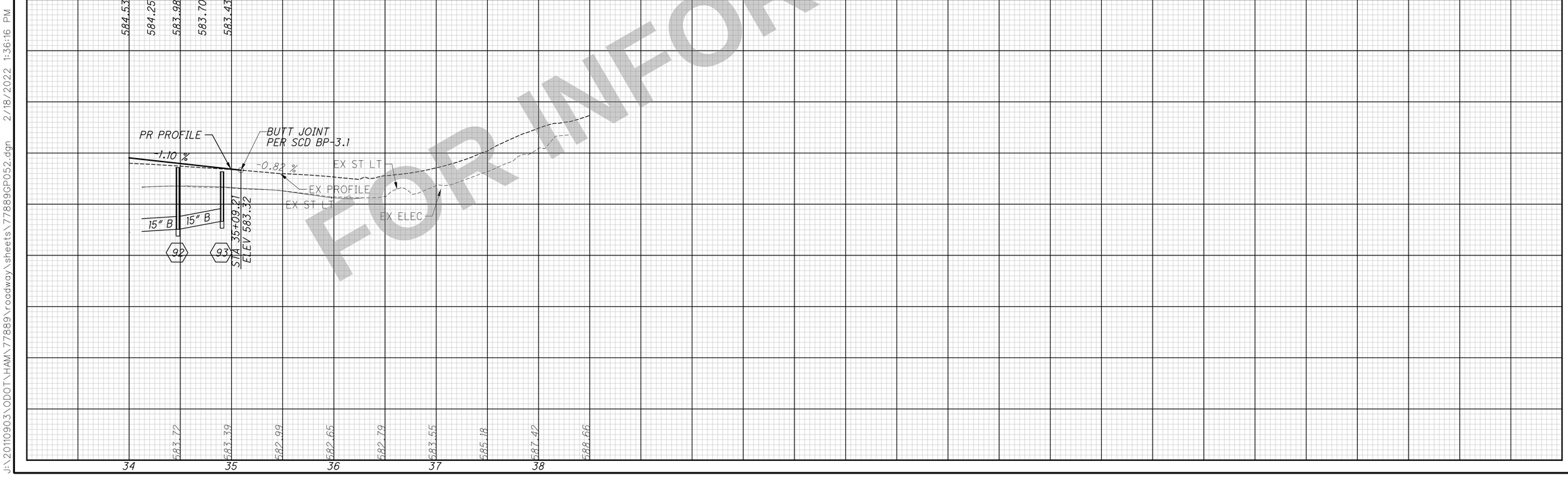
CURVE 562-P2
PI STA 37+59.61
Δ = 76° 23' 31" (LT)
Dc = 31° 49' 52"
R = 180.00'
T = 141.62'
L = 239.99'
E = 49.04'
C = 222.61'
C.B. = N 47° 18' 55" E

CURVE 562-P3
PI STA 39+57.26
Δ = 1° 03' 35" (LT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 26.49'
L = 52.99'
E = 0.12'
C = 52.99'
C.B. = N 8° 35' 22" E

1 36+49.90 23.07' RT
2 36+49.39 18.58' RT

RESURFACING

CROSS REFERENCES	
SHEET NO	DESCRIPTION
821-860	STORM SEWER PROFILES
809-820	DRAINAGE PLANS
299-341	ESTIMATED QUANTITES
769-788	SUPERELEVATION TABLES
1100-1111	ROADSIDE BARRIER PLAN
789-802	INTERCHANGE DETAILS
1229-1268	LIGHTING PLANS



FOR INFORMATION ONLY

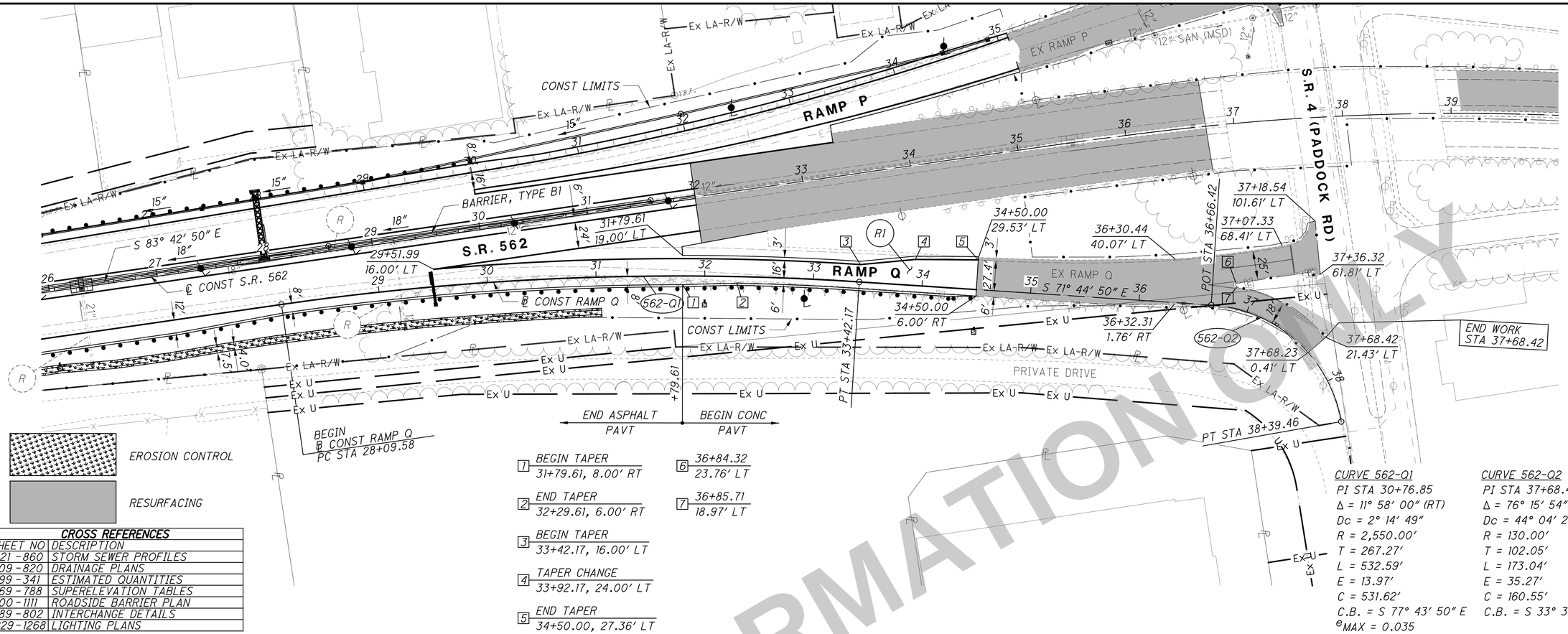
HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SEA
CHECKED DLR

PLAN AND PROFILE - S.R. 562 RAMP P
STA 34+00.00 TO END WORK

HAM-75-7.78

380
2017

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EROSION CONTROL

RESURFACING

CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITIES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLAN
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS

1 BEGIN TAPER
31+79.61, 8.00' RT

2 END TAPER
32+29.61, 6.00' RT

3 BEGIN TAPER
33+42.17, 16.00' LT

4 TAPER CHANGE
33+92.17, 24.00' LT

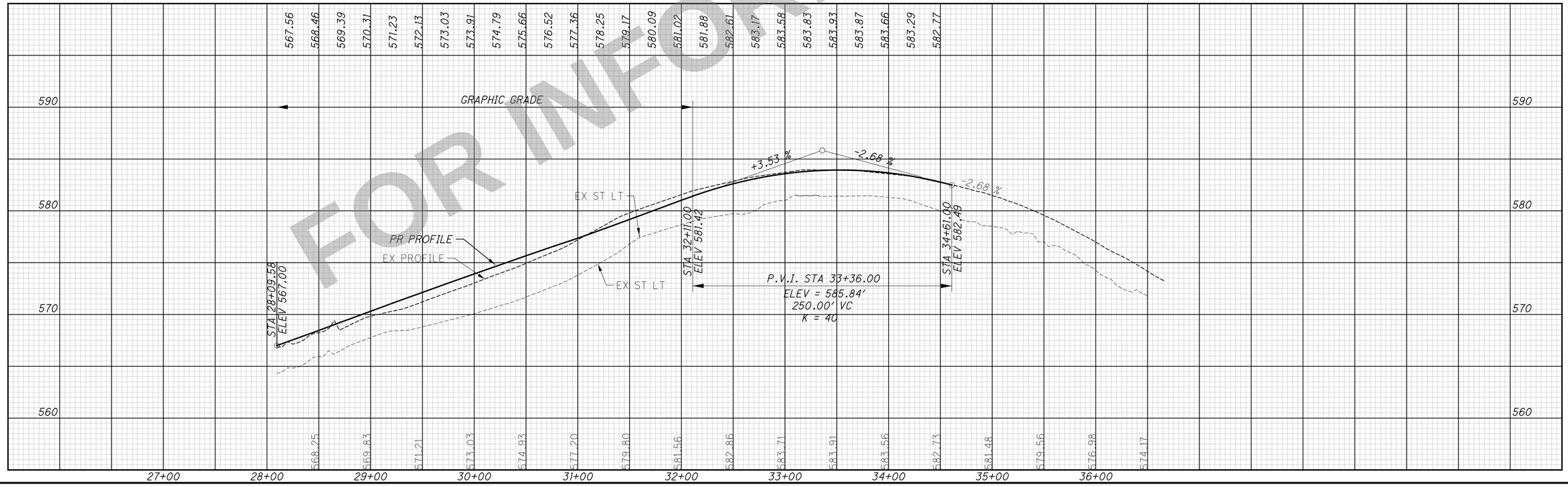
5 END TAPER
34+50.00, 27.36' LT

6 36+84.32
23.76' LT

7 36+85.71
18.97' LT

CURVE 562-Q1
PI STA 30+76.85
Δ = 11° 58' 00" (RT)
Dc = 2° 14' 49"
R = 2,550.00'
T = 267.27'
L = 532.59'
E = 13.97'
C = 531.62'
C.B. = S 77° 43' 50" E
e_{MAX} = 0.035

CURVE 562-Q2
PI STA 37+68.47
Δ = 76° 15' 54" (RT)
Dc = 44° 04' 25"
R = 130.00'
T = 102.05'
L = 173.04'
E = 35.27'
C = 160.55'
C.B. = S 33° 36' 53" E



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SEA
CHECKED DLR

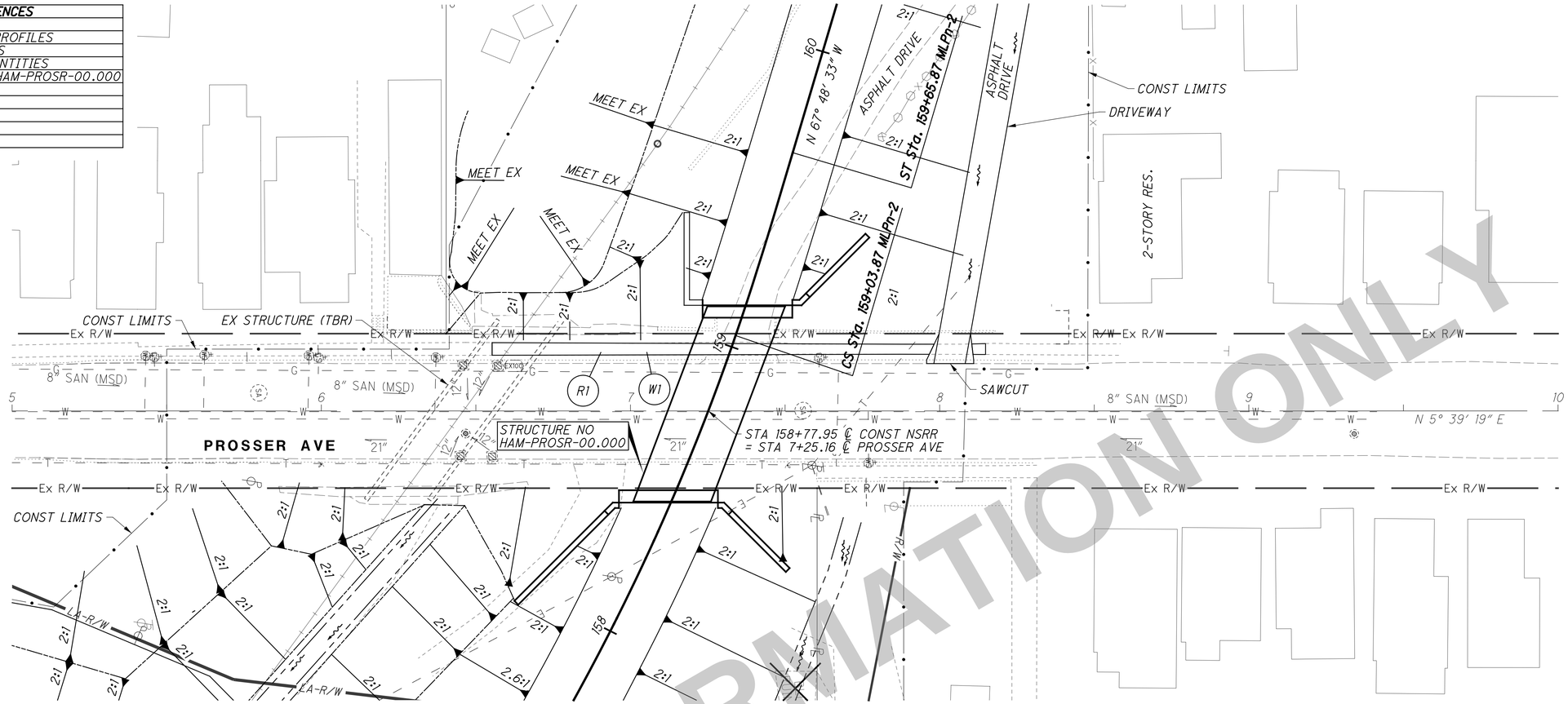
PLAN AND PROFILE - S.R. 562 RAMP Q
STA 28+09.58 TO STA 36+00.00

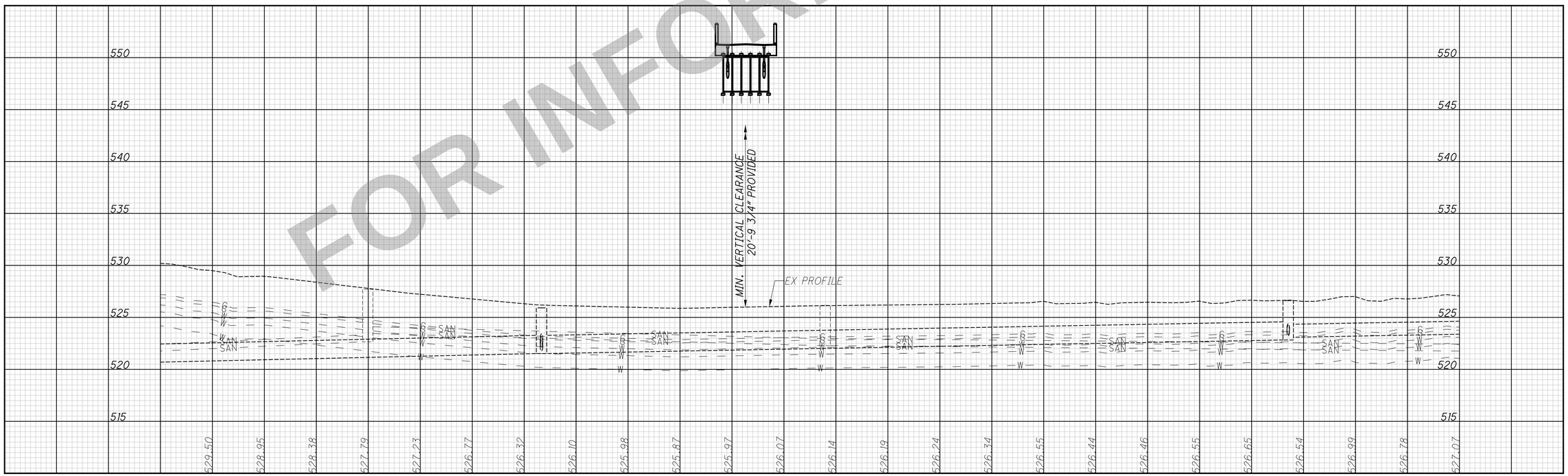
HAM-75-7.85

381
2017

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CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITIES
1613 - 1647	BRIDGE PLANS HAM-PROSR-00.000





FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED RSH
CHECKED DLR

PLAN AND PROFILE - PROSSER AVENUE
STA 5+00 TO STA 10+00

HAM-75-7.85

382
2017

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BEGIN WORK
STA 13+30.00

CURVE TO-1
PI STA 16+00.01
Δ = 2°25'26" (LT)
Dc = 2°59'59"
R = 1,910.00'
T = 40.41'
L = 80.80'
E = 0.43'
C = 80.80'
C.B. = N 82°09'06" W

LIMITS OF PAVEMENT REMOVED

RESURFACING

FISHWICK DR

ELM VIEW PL

EX R/W

EX SIDEWALK

PT Sta. 13+09.98

+34.00
37.34'± LT

+00.00
30.49' LT

+99.65
23.50' LT

FIRE DEPT.
PROTECTION (DND)

W1

CONST LIMITS

R1

END PVMT TAPER
STA 15+59.60, 16.00' LT

PC Sta. 15+59.60

PT Sta. 8+72.80

PC Sta. 7+75.00

PT Sta. 16+40.40

EX LA-R/W

RAMP H

+59.73
26.50' LT

TO-1

R4

7' SIDEWALK

+34.00
30.30' LT

SAWCUT

20" GAS

14

15

32.0'

+59.65
19.50' LT

16

12" CIP W

16.0'

16.0'

℄ TOWNE ST

TOWNE ST

MATCHLINE STA.17+00, SEE SHEET 384

BEGIN TAPER
STA 13+34.00, 21.63'± LT

90°

CURB, TYPE 6

SAWCUT

END PVMT TAPER
STA 15+59.60, 16.00' RT

BEGIN TAPER
STA 13+34.00, 23.04'± RT

SAWCUT

4" GAS

EX. MANHOLE
(TO REMAIN)

7' SIDEWALK

+34.00
31.87' RT

+34.00
38.85'± RT

7.0'

① PROP 8" NON REINFORCED CONCRETE DRIVE. SEE SHEET 805 FOR DRIVE PROFILE.

D1

+60.72, COMM. DR
19.5'

+98.74
32.91' RT

W2

R2

+00.00
25.87' RT

+59.60
26.50' RT

+59.60
19.50' RT

CONST LIMITS

(TO BE REMOVED)

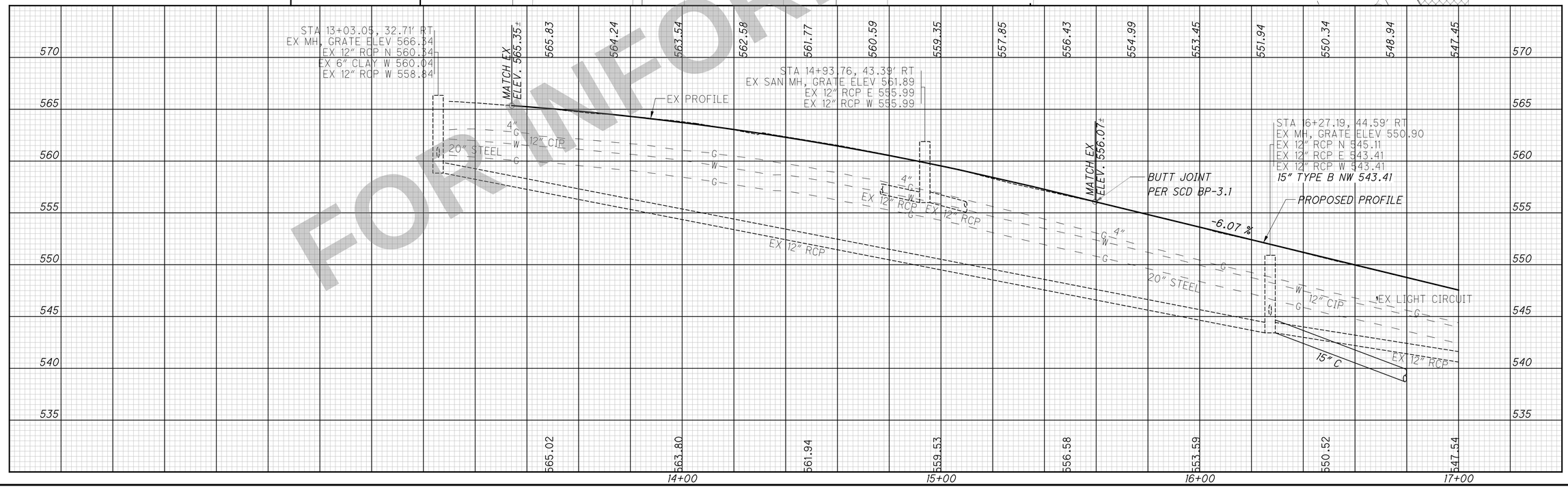
RAMP E

R3

15'

PT Sta. 15+70.95

CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLANS
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS
1333 - 1389	BRIDGE PLANS HAM-75-0791
1269 - 1332	BRIDGE PLANS HAM-562-0004



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED CFR
CHECKED JLM

PLAN AND PROFILE - TOWNE ST
STA. 13+09.98 TO STA. 17+00.00

HAM-75-7.85

383
2017

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CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITIES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLANS
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS
1333 - 1389	BRIDGE PLANS HAM-75-0791
1269 - 1332	BRIDGE PLANS HAM-562-0004

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED CFR
CHECKED JLM

PLAN AND PROFILE - TOWNE ST
STA. 17+00.00 TO STA. 21+16.51

HAM-75-7.85

384
2017

I.R. 75 (NB)
I.R. 75 (SB)
TOWNE ST.
CEDAR ST.
MATCHLINE STA 17+00, SEE SHEET 383
RAMP H
RAMP E
WALL H
WALL H1
WALL I1
WALL I
BEGIN WALL H1
STA 17+89.70, 26.98' LT
END WALL H, END WALL H1
STA 20+24.79, 26.97' LT
STA. 20+38.51, 26.50' LT
BEGIN WALL I1
STA 17+72.56, 26.97' RT
END/BEGIN WALL I & WALL I1
STA 20+07.83, 26.97' RT
TO BE RELOCATED
℄ CONST I.R. 75
℄ TOWNE ST
℄ CEDAR ST
PC STA. 452+14.57
PT STA. 17+95.00
POT Sta. 0+00.00
BEGIN TAPER
STA 20+34.41, 16.00' LT
+88.51
23.84' LT
+88.51
19.50' LT
END TAPER
STA 21+16.51, 16.35' LT
END TAPER
STA 21+16.51, 18.00' RT
BEGIN PVMT MILL & OVERLAY
STA 20+34.41, 17.31' RT
CONST LIMITS
SAWCUT
7' SIDEWALK
6" WATER LINE ABANDONED
20" GAS
12" WAT (CIP)
4" WAT (DIP)
8" SAN
DND
Ex R/W
Ex LA R/W
UGE
FO
R1 R2 R3 R4 R5 R6 R7 R8 W1 W2 CR1 CR2 CR3 D1

1 STA 20+10.43 TOWNE ST= STA 0+00.00 CEDAR ST

CURVE TO-2
PI STA 17+61.35
Δ = 2°01'08" (RT)
Dc = 2°59'59"
R = 1,910.00'
T = 33.65'
L = 67.30'
E = 0.30'
C = 67.30'
C.B. = N 82°21'15" W

LIMITS OF PAVEMENT REMOVED

RESURFACING

A = STA 17+60.00, 42.78 RT
BEGIN 6" ABANDONED WATER LINE REMOVAL

B = STA 19+85.53, 13.32 RT
END 6" ABANDONED WATER LINE REMOVAL

(TO BE REMOVED)
STA 17+42.8511, 20.80' LT
EX CB, GRATE ELEV 544.52
EX 12" RCP SW 541.62

(TO BE REMOVED)
STA 17+33.9663, 33.08' RT
EX CB, GRATE ELEV 544.98
EX 12" RCP NW 541.28

(TO BE REMOVED)
STA 17+79.9320, 46.61' LT
EX CB, GRATE ELEV 542.12
EX 12" RCP NW 538.32

(TO BE REMOVED)
STA 17+84.2363, 39.55' LT
EX MH, GRATE ELEV 543.03
EX 30" RCP N 530.03
EX 12" RCP NE 537.03
EX 12" RCP E 537.33
EX 12" RCP SE 538.33
EX 12" RCP W 532.22±
EX 33" RCP SW 530.03

STA 18+81.02, 35.82' LT
EX MH, GRATE ELEV 537.77
EX 12" RCP E 532.57
EX 8" DRN S 534.07
EX 12" RCP W 532.57
EX 8" DRN NW 532.57

STA 19+51.01, 35.46' LT
EX MH, GRATE ELEV 535.36
EX 8" DRN NE 533.01
EX 12" RCP E 532.81
EX 8" DRN S 532.91
EX 8" DRN SW 532.91
EX 8" DRN NW 532.91

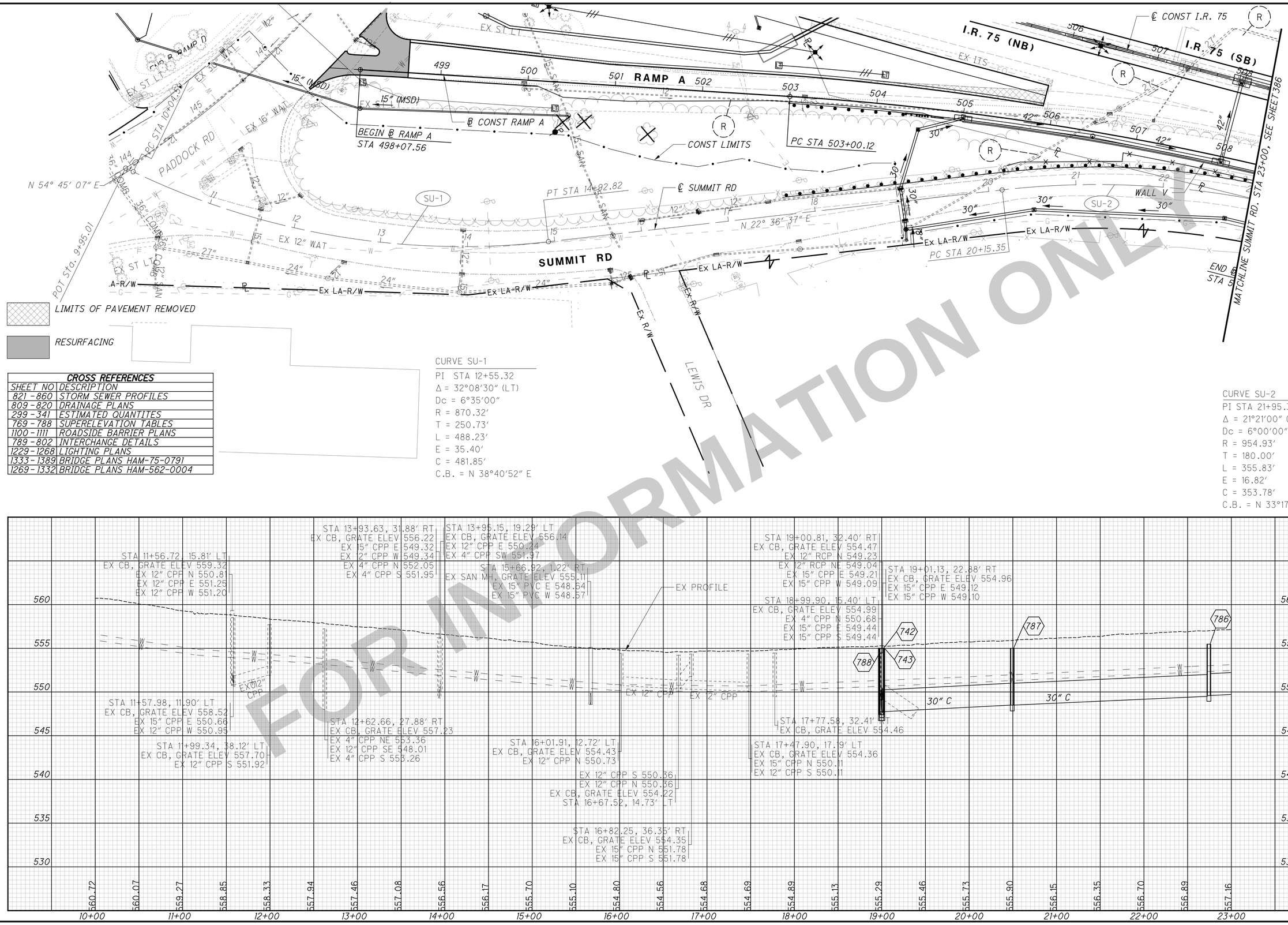
STA 20+34.75, 1.54' RT
EX SAN MH, GRATE ELEV 532.58
EX 8" RCP W 527.29
EX 8" RCP S 527.29

PROPOSED I.R. 75 BRIDGE
MIN. VERTICAL CLEARANCE 15'-6" REQUIRED 16'-8 1/2" PROVIDED
EX PROFILE
PROPOSED PROFILE
-6.07 %
-1.45 %
P.V.I. STA 19+20.00
ELEV = 534.20'
250.00' VC
PVC STA. 17+95.00 ELEV. 541.78
PVC STA. 20+45.00 ELEV. 532.38
MATCH EX. F.F.EV. 531.35
36" B
15" C
12" GAS (CIP)
EX 12" RCP
4" GAS (DIP)
EX 8" WAT
EX 8" SAN RCP
106 124 125

17+00 18+00 19+00 20+00 21+00 22+00

PRELIMINARY INFORMATION ONLY

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CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLANS
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS
1333 - 1389	BRIDGE PLANS HAM-75-0791
1269 - 1332	BRIDGE PLANS HAM-562-0004

CURVE SU-1
PI STA 12+55.32
Δ = 32°08'30" (LT)
Dc = 6°35'00"
R = 870.32'
T = 250.73'
L = 488.23'
E = 35.40'
C = 481.85'
C.B. = N 38°40'52" E

CURVE SU-2
PI STA 21+95.35
Δ = 21°21'00" (RT)
Dc = 6°00'00"
R = 954.93'
T = 180.00'
L = 355.83'
E = 16.82'
C = 353.78'
C.B. = N 33°17'07" E

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

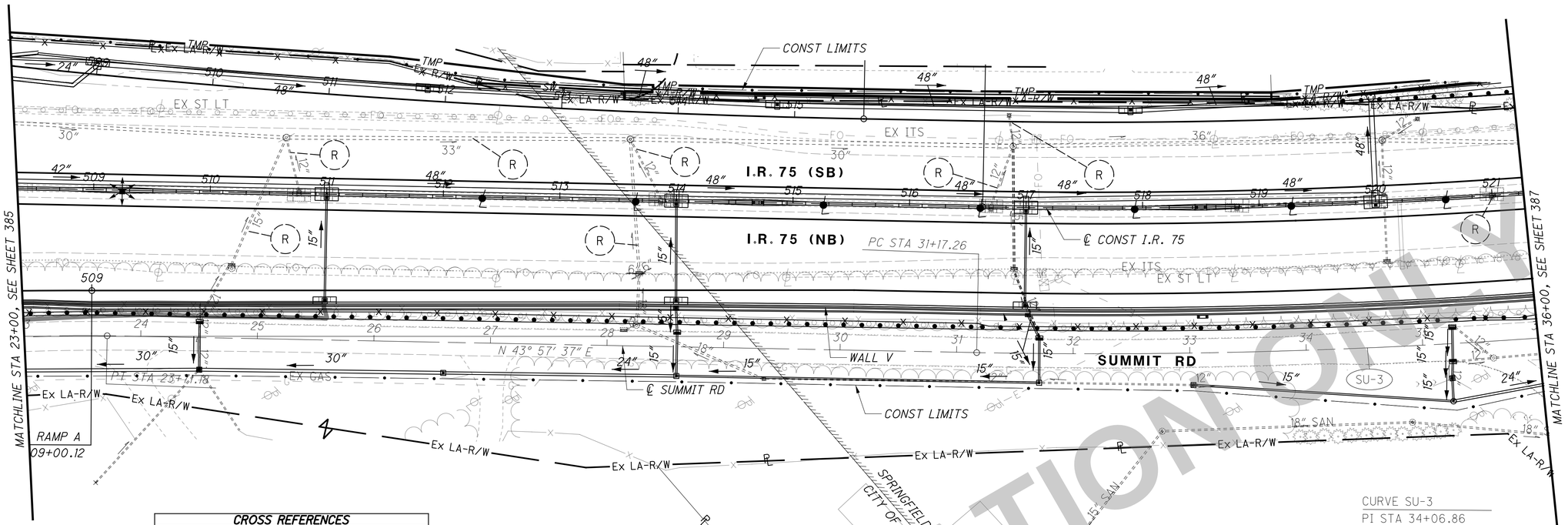
CALCULATED JLM CHECKED SSK

PLAN AND PROFILE - SUMMIT ROAD
STA 9+95.01 TO STA 23+00

HAM-75-7.85

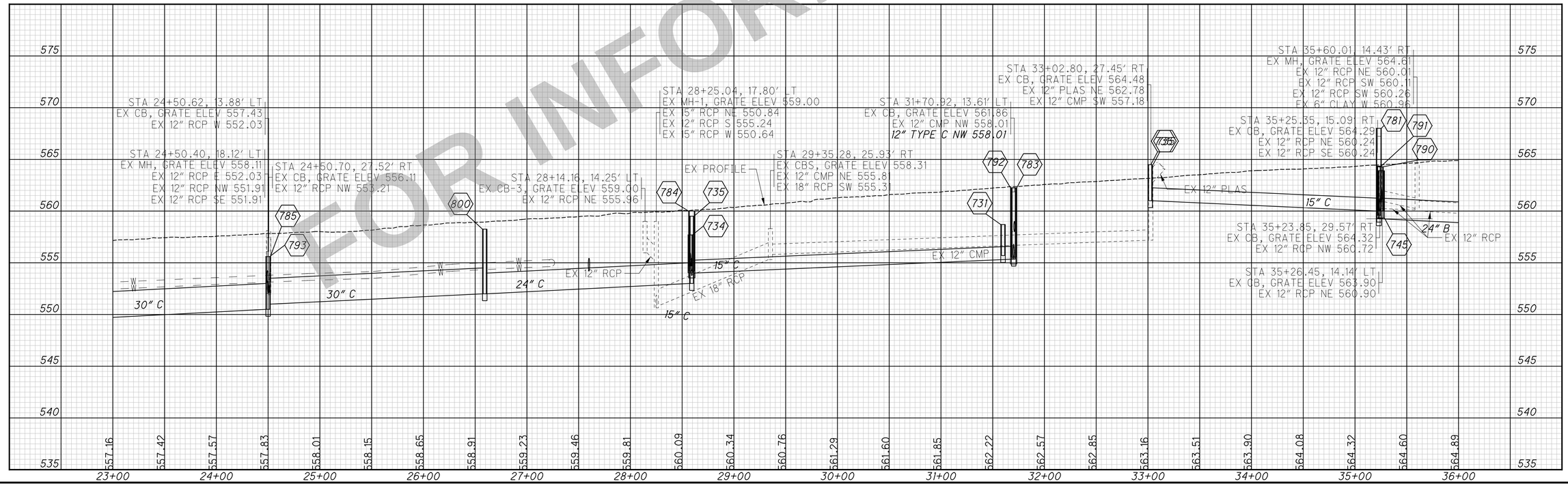
385
2017

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CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLANS
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS
1333 - 1389	BRIDGE PLANS HAM-75-0791
1269 - 1332	BRIDGE PLANS HAM-562-0004

CURVE SU-3
PI STA 34+06.86
Δ = 6°12'57" (LT)
Dc = 1°04'27"
R = 5,333.71'
T = 289.60'
L = 578.64'
E = 7.86'
C = 578.35'
C.B. = N 40°51'09" E



FOR INFORMATION ONLY

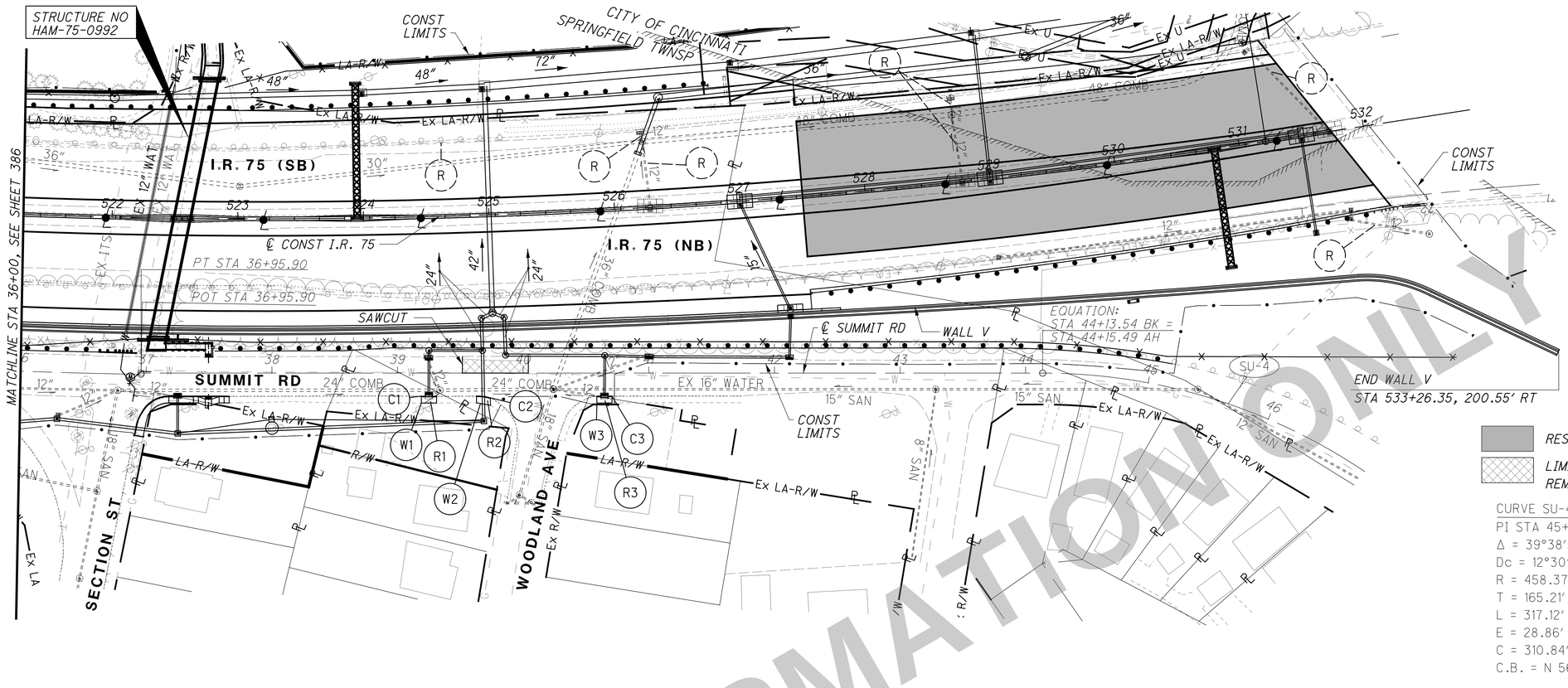
HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED JLM
CHECKED SSK

PLAN AND PROFILE - SUMMIT ROAD
STA 23+00 TO STA 36+00

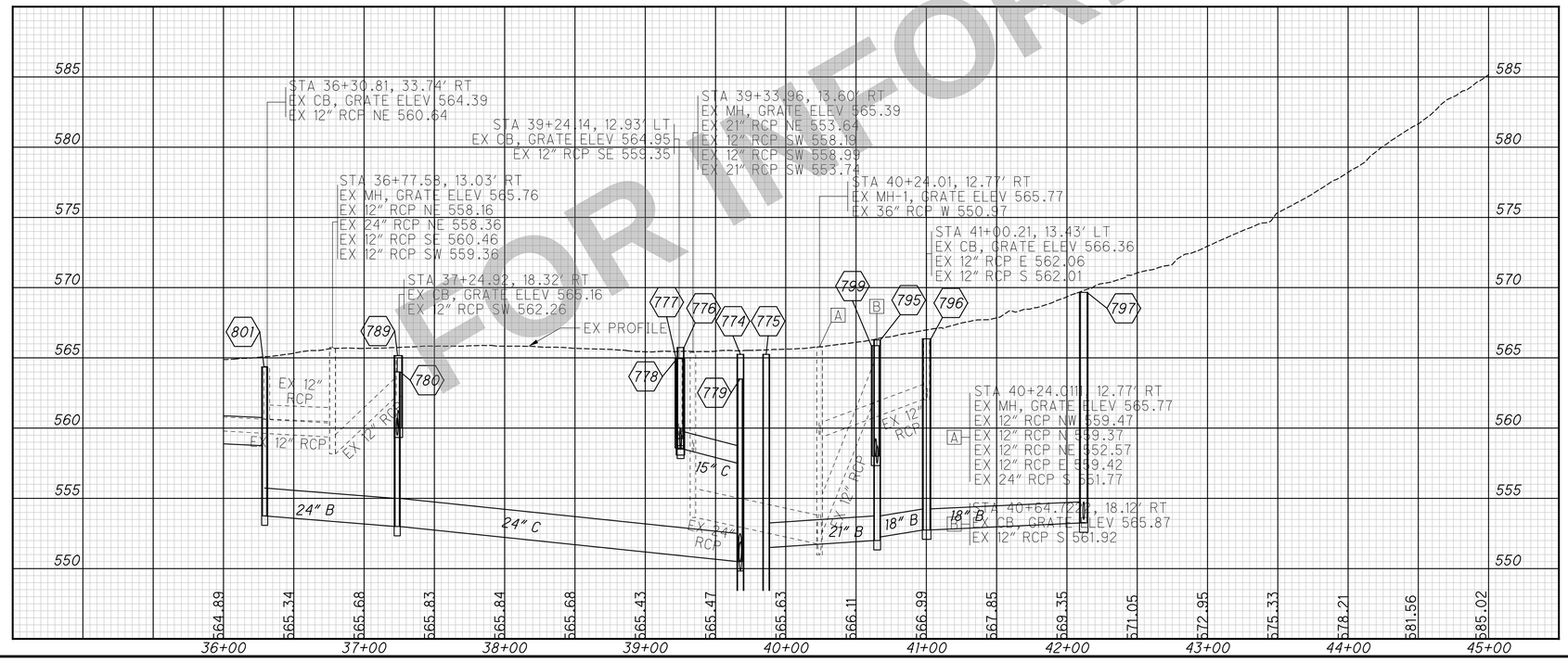
HAM-75-7.85

386
2017

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CURVE SU-4
PI STA 45+80.70
Δ = 39°38'26" (RT)
Dc = 12°30'00"
R = 458.37'
T = 165.21'
L = 317.12'
E = 28.86'
C = 310.84'
C.B. = N 56°33'35" E



CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLANS
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS
1333 - 1389	BRIDGE PLANS HAM-75-0791
1269 - 1332	BRIDGE PLANS HAM-562-0004

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED JLM
CHECKED SSK

PLAN AND PROFILE - SUMMIT ROAD
STA 36+00 TO STA 45+00

HAM-75-7.85

387
2017

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CROSS REFERENCES	
SHEET NO	DESCRIPTION
821 - 860	STORM SEWER PROFILES
809 - 820	DRAINAGE PLANS
299 - 341	ESTIMATED QUANTITIES
769 - 788	SUPERELEVATION TABLES
1100 - 1111	ROADSIDE BARRIER PLAN
789 - 802	INTERCHANGE DETAILS
1229 - 1268	LIGHTING PLANS

NOTE:
EXISTING SECURITY CAMERAS/DETECTORS ALONG EXISTING FENCE TO BE REMOVED BY OWNER.

CONST LIMITS
BEGIN APP SLAB
+33.38
FENCE MISC.: WOOD FENCE
LA-R/W
Ex LA-R/W
Ex R/W
POT Sta. 5+00.00
S 56°18'35" E
S 67°50'53" E
PC STA 5+77.84
PT STA 5+97.98
PC STA 6+25.58
PT STA 6+38.18
+22.45
+02.05
6.00' LT
+00.00
2.36' LT
+04.04
6.00' RT
+17.05
5' EX WALK
Ex SW
Ex U
TMP
R1
M1
R2
P1
M2
VARIES
13.5'
60'
12'
I.R. 75 (SB)
I.R. 75 (NB)
523
522
℄ CONST PEDESTRIAN BRIDGE
℄ CONST I.R. 75 522+55.68=
℄ CONST PED PATH 7+57.41
STRUCTURE NO HAM-75-0992
PROP MEDIAN BARRIER
℄ CONST I.R. 75
CONST LIMITS
SUMMIT RD
24" COMB (MSD)
+89.19
64.76' LT
+94.07
65.75' LT
C1
+61.57
42.36' LT
+92.45
48.59' LT
W1
CR1
R3
+03.57
18.70' LT
P2
W2
C2
+16.75
4.25' LT.
15.32
0.54' RT
POT STA 9+11.79
SECTION ST
18" SAN (MSD)
42"
30"

555.21	556.18	558.27	559.93	561.60	563.68	564.68	565.93	567.17	568.42	569.52	570.07	570.06	569.47	568.36	565.41

P.V.I. STA 5+20.00 ELEV = 556.18'
P.V.I. STA 5+25.00 ELEV = 556.18'
P.V.I. STA 5+55.00 558.68'
P.V.I. STA 5+60.00 558.68'
P.V.I. STA 5+90.00 ELEV = 561.18'
P.V.I. STA 5+95.00 ELEV = 561.18'
P.V.I. STA 6+25.00 ELEV = 563.68'
P.V.I. STA 6+30.00 ELEV = 563.68'
P.V.I. STA 7+87.00 ELEV = 571.51'
110.00' VC
P.V.I. STA 8+57.00 ELEV = 568.01'
+4.85 %
+8.33 %
+8.33 %
+4.98 %
+4.98 %
5.00 %
PROP PROFILE
EX PROFILE
PROP GRADE I.R. 75
℄ CONST I.R. 75
℄ SUMMIT RD
570
565
560
555
550
545

555.21	555.54	555.92	556.53	557.96	560.32	558.28	549.98	546.13	546.81	547.38	547.83	548.42	553.34	564.97	565.53	565.55

* 17'-0" REQUIRED MINIMUM VERTICAL CLEARANCE
17'-1" ACTUAL MINIMUM VERTICAL CLEARANCE

5 6 7 8 9

FOR INFORMATION ONLY

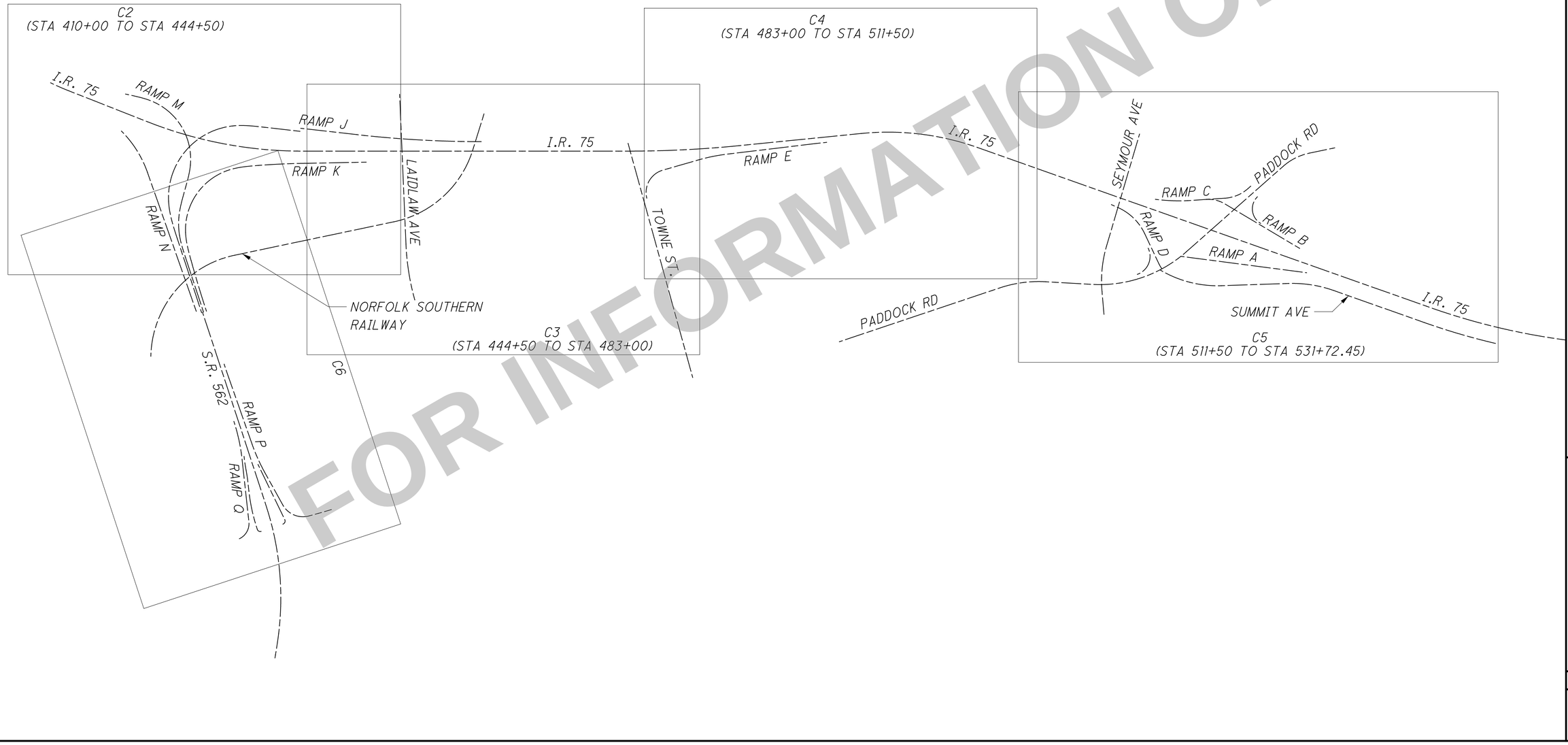
HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED SEA
CHECKED DLR

PLAN AND PROFILE
PEDESTRIAN PATH

HAM-75-7.85

388
2017

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FOR INFORMATION ONLY

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HORIZONTAL SCALE IN FEET
0 250 500 1000

CALCULATED AAF
CHECKED EDK

CROSS SECTION LAYOUT

HAM-75-7.85

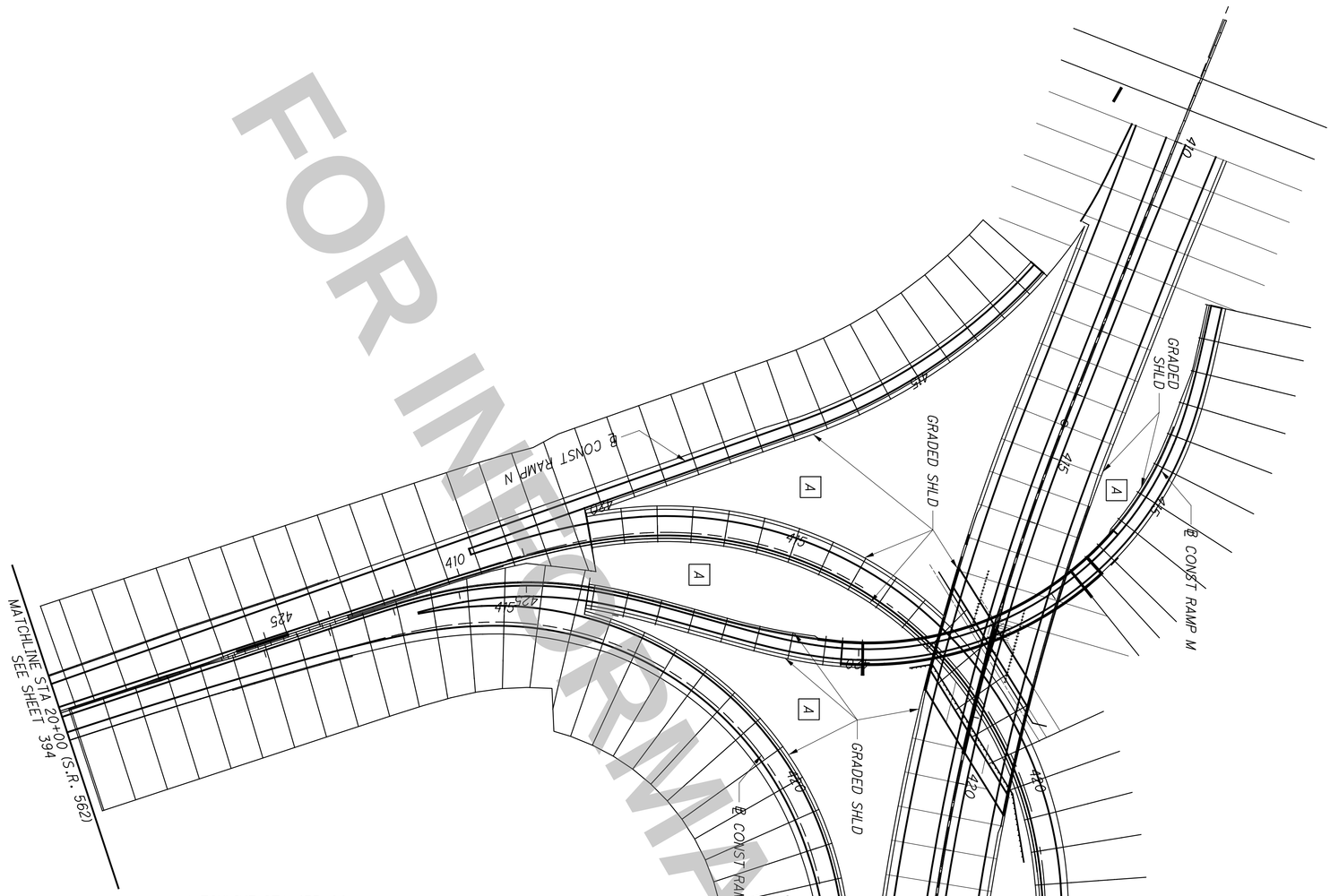
C1

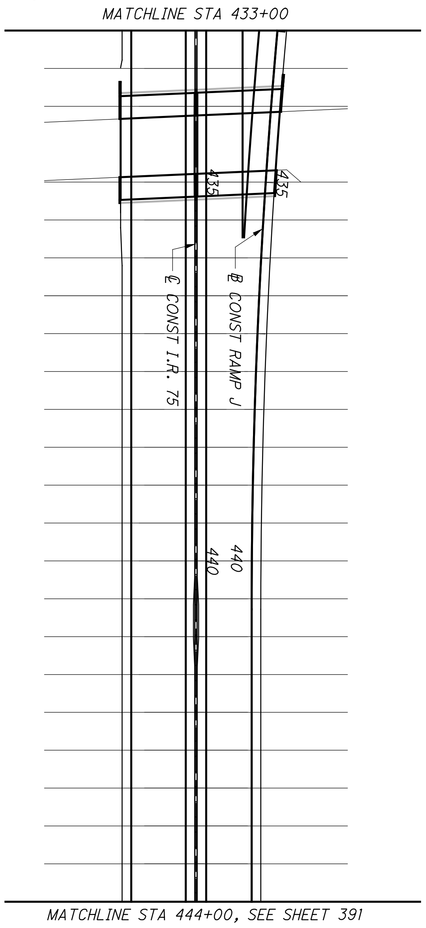
389
2017

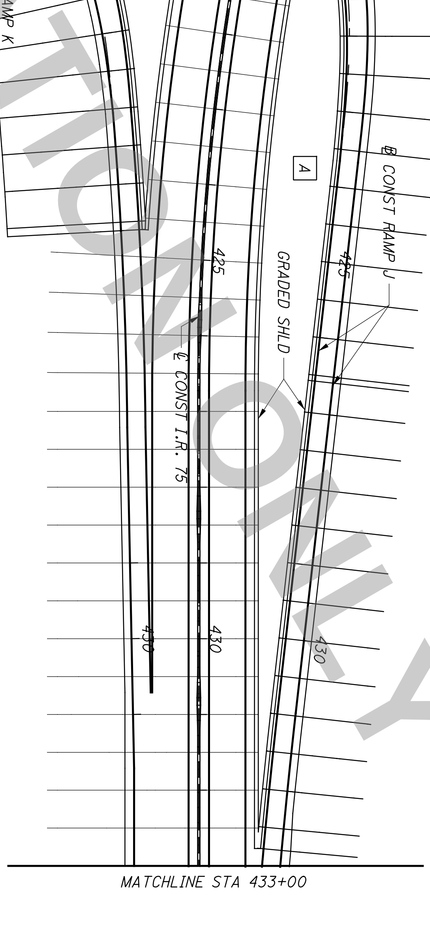
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FOR INFORMATION ONLY

A FOR INFIELD GRADING, SEE GRADING DETAILS, SHEETS 934 AND 935

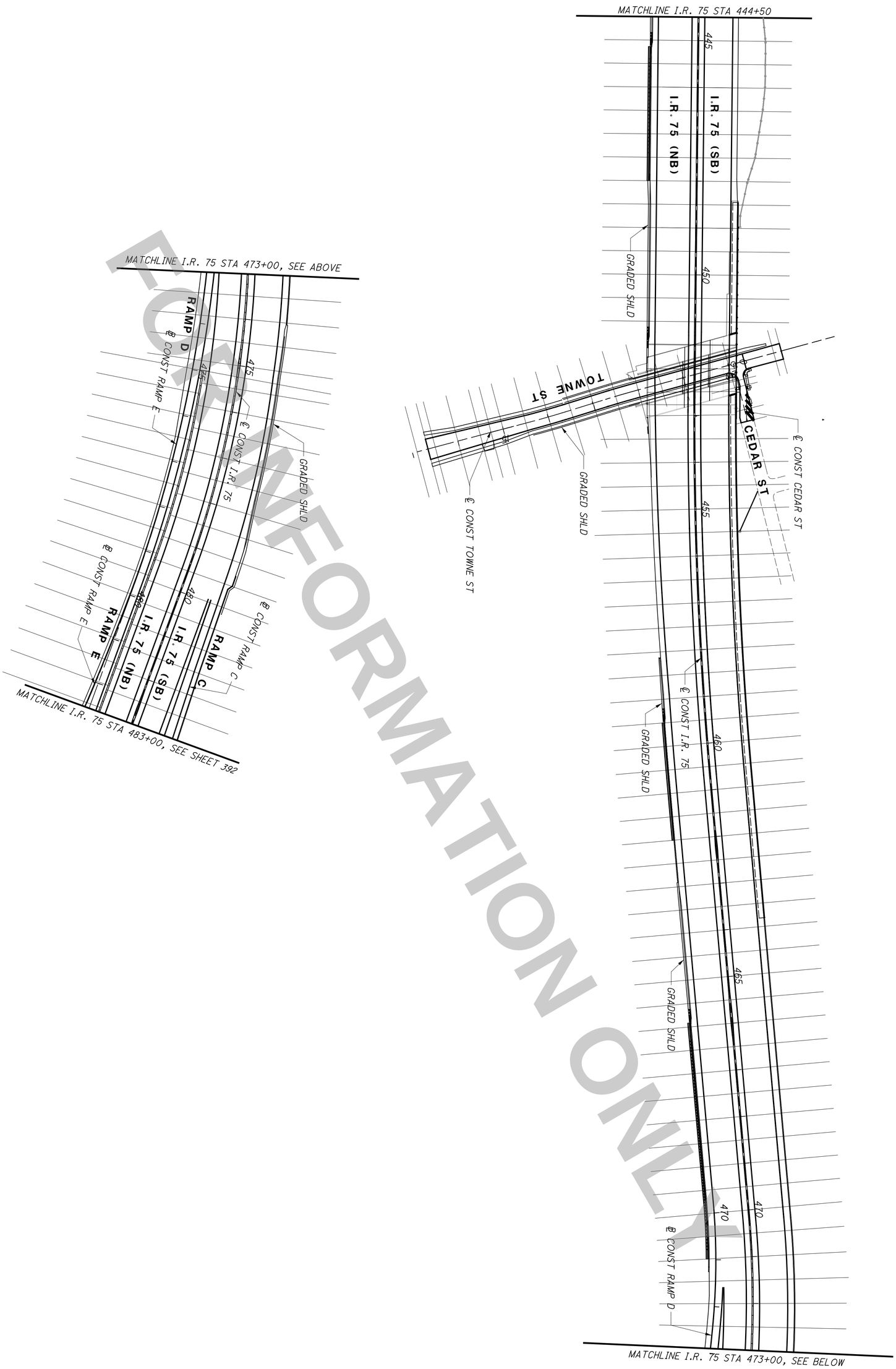






390 / 2017	C2	HAM-75-7.85	CROSS SECTION LAYOUT I.R. 75 STA 409+00 TO STA 444+00	CALCULATED AAF CHECKED EDK	0 100 50 200 HORIZONTAL SCALE IN FEET

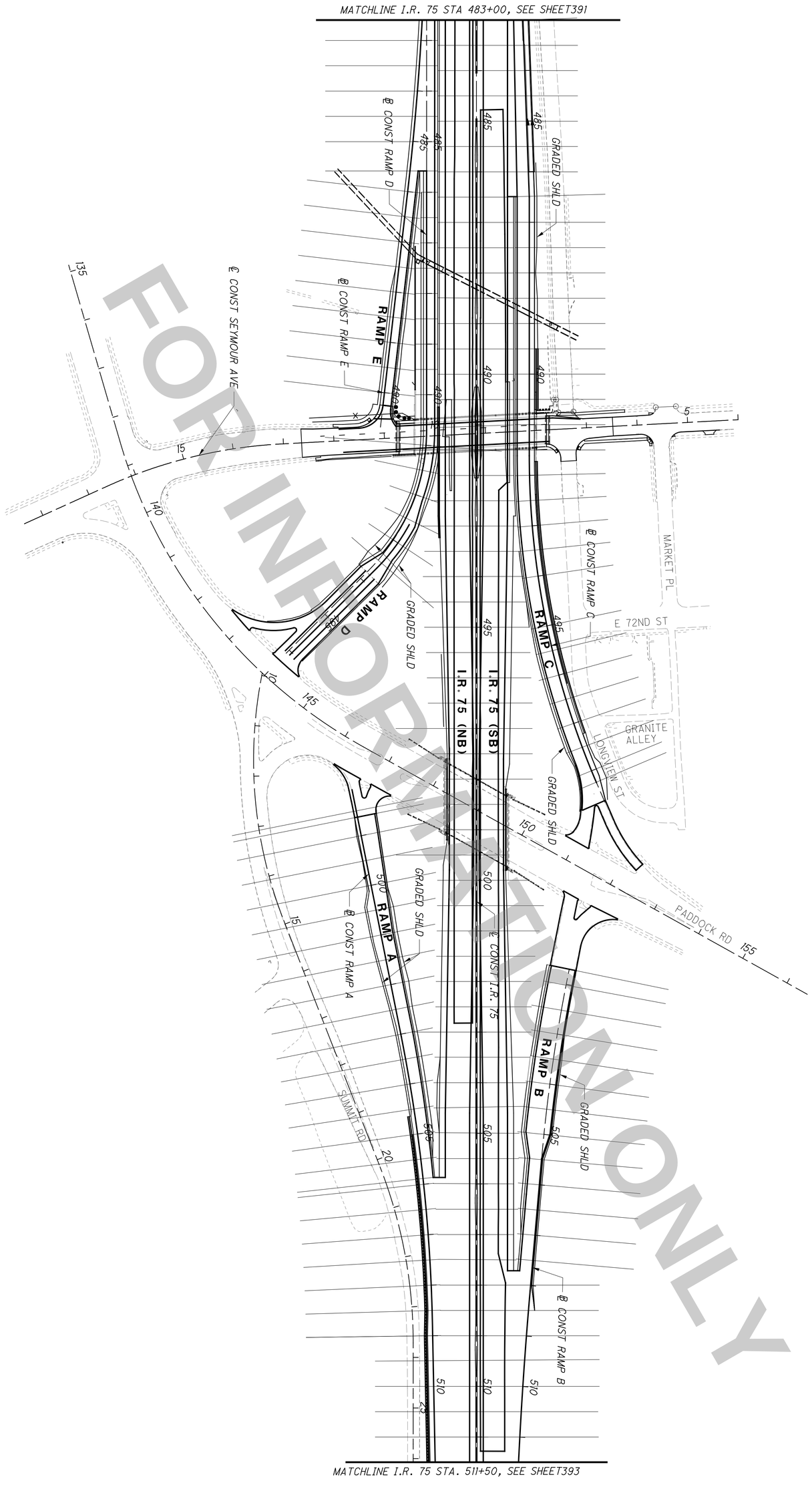
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FOR INFORMATION ONLY

391 / 2017	C3	HAM-75-7.85	I.R. 75 CROSS SECTION LAYOUT STA. 444+50 TO STA. 457+00	CALCULATED DPF CHECKED SEK	0 100 50 200 HORIZONTAL SCALE IN FEET

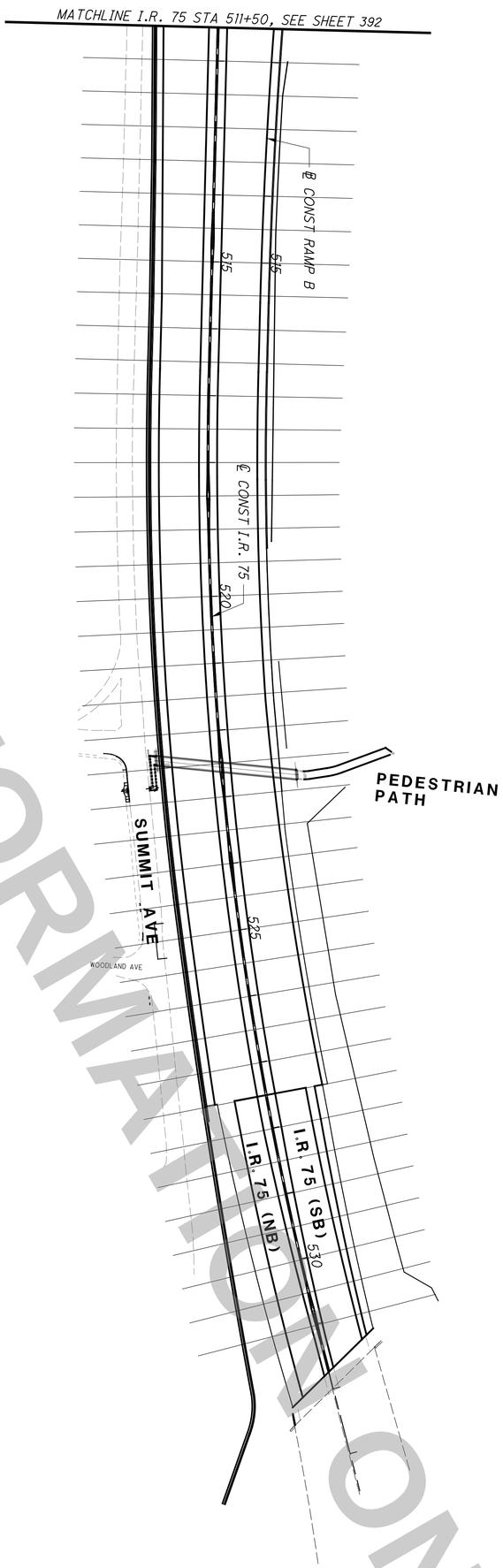
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FOR INFORMATION ONLY

392 / 2017	C4	HAM-75-7.85	CROSS SECTION LAYOUT STA. 483+00.00 TO STA. 511+50.00	CALCULATED DPF CHECKED SEK	0 100 50 200 HORIZONTAL SCALE IN FEET

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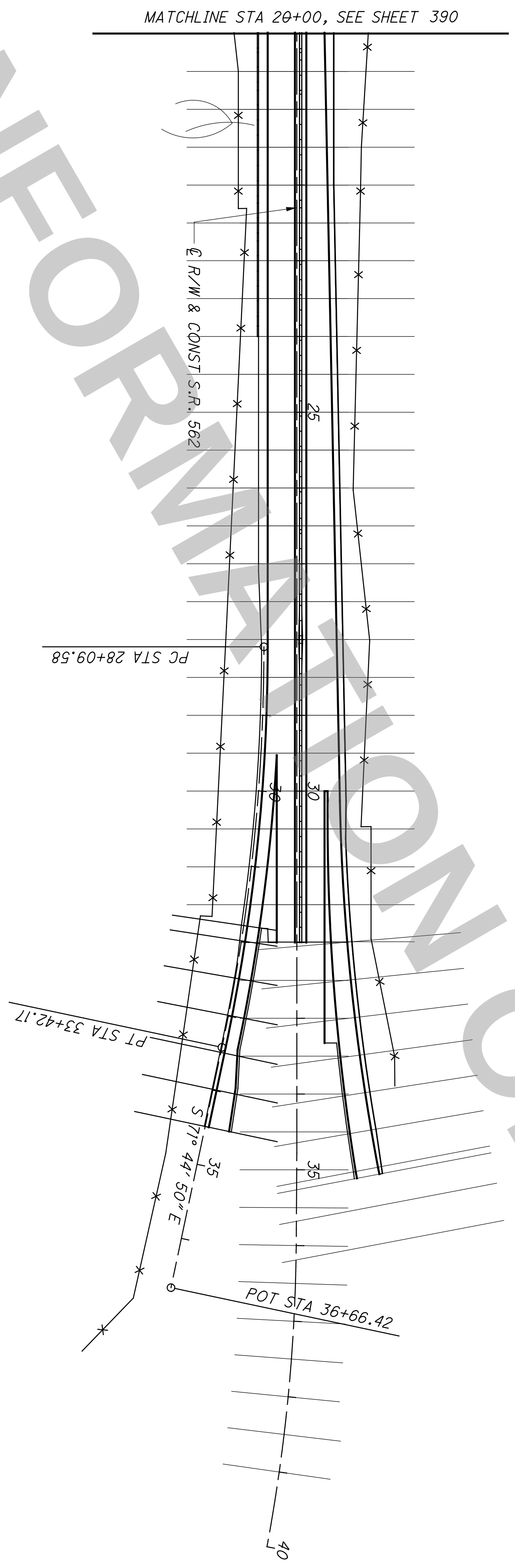


FOR INFORMATION ONLY

2017 393	C5	HAM-75-7.85	I.R. 75 CROSS SECTION LAYOUT STA. 511+50.00 TO STA. 531+50.00	CALCULATED DPF CHECKED SEK	0 100 50 200 HORIZONTAL SCALE IN FEET

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FOR INFORMATION ONLY



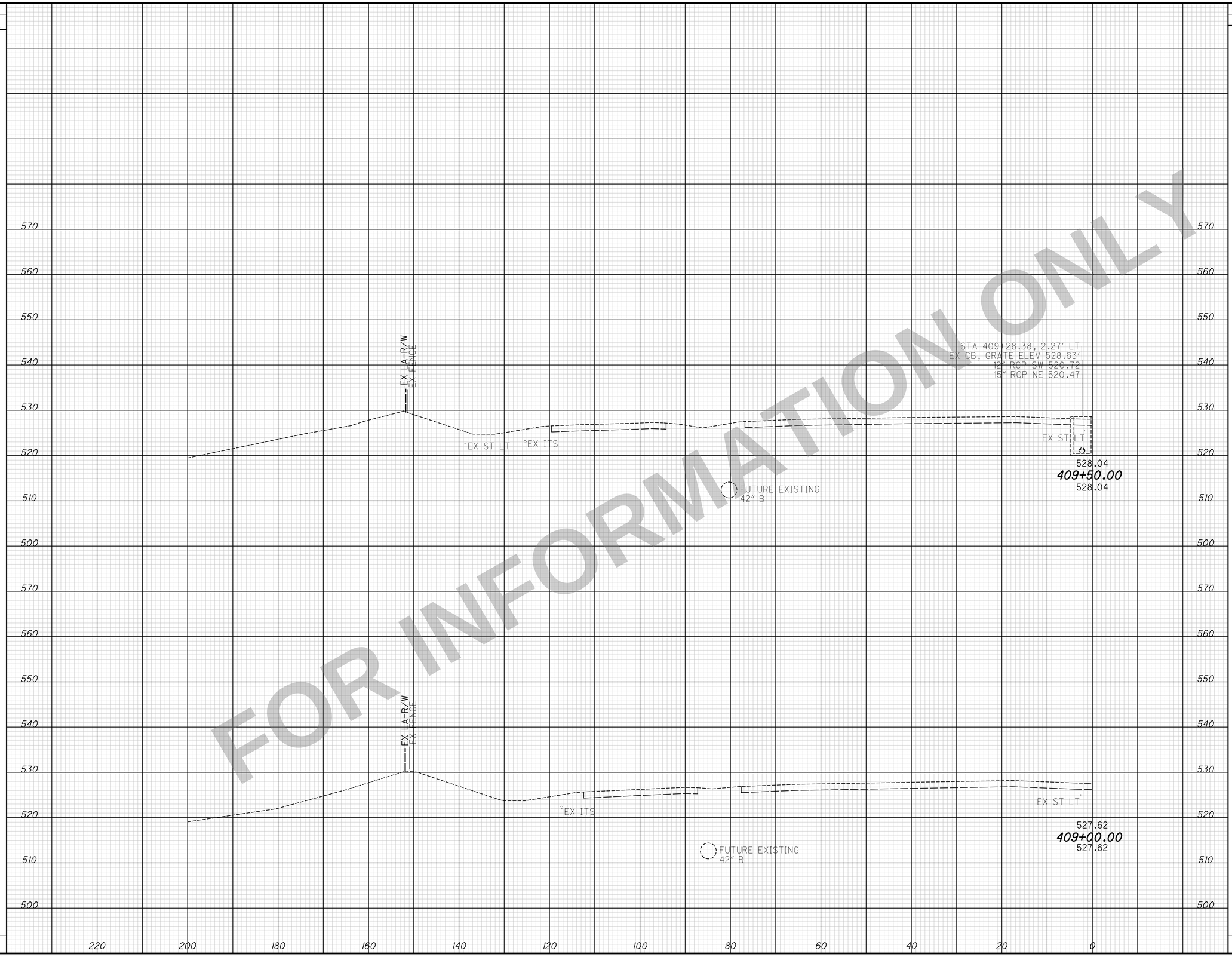
SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED SEA

CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 409+00.00 TO STA. 409+50.00

HAM-75-7.85

395
2017

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SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA

CHECKED DLR

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 409+00.00 TO STA. 409+50.00

HAM-75-7.85

396
2017

FOR INFORMATION ONLY

528.04
409+50.00
528.04

EX 42" SAN

EX LA-R/W

EX ST LT

EX ITS

STA 409+00.00, 177.23' RT
EX SAN MH, RIM ELEV 528.84'
42" TYPE B SW 517.03
42" TYPE B NE 517.03

527.62
409+00.00
527.62

570 560 550 540 530 520 510 500

0 20 40 60 80 100 120 140 160 180 200 220

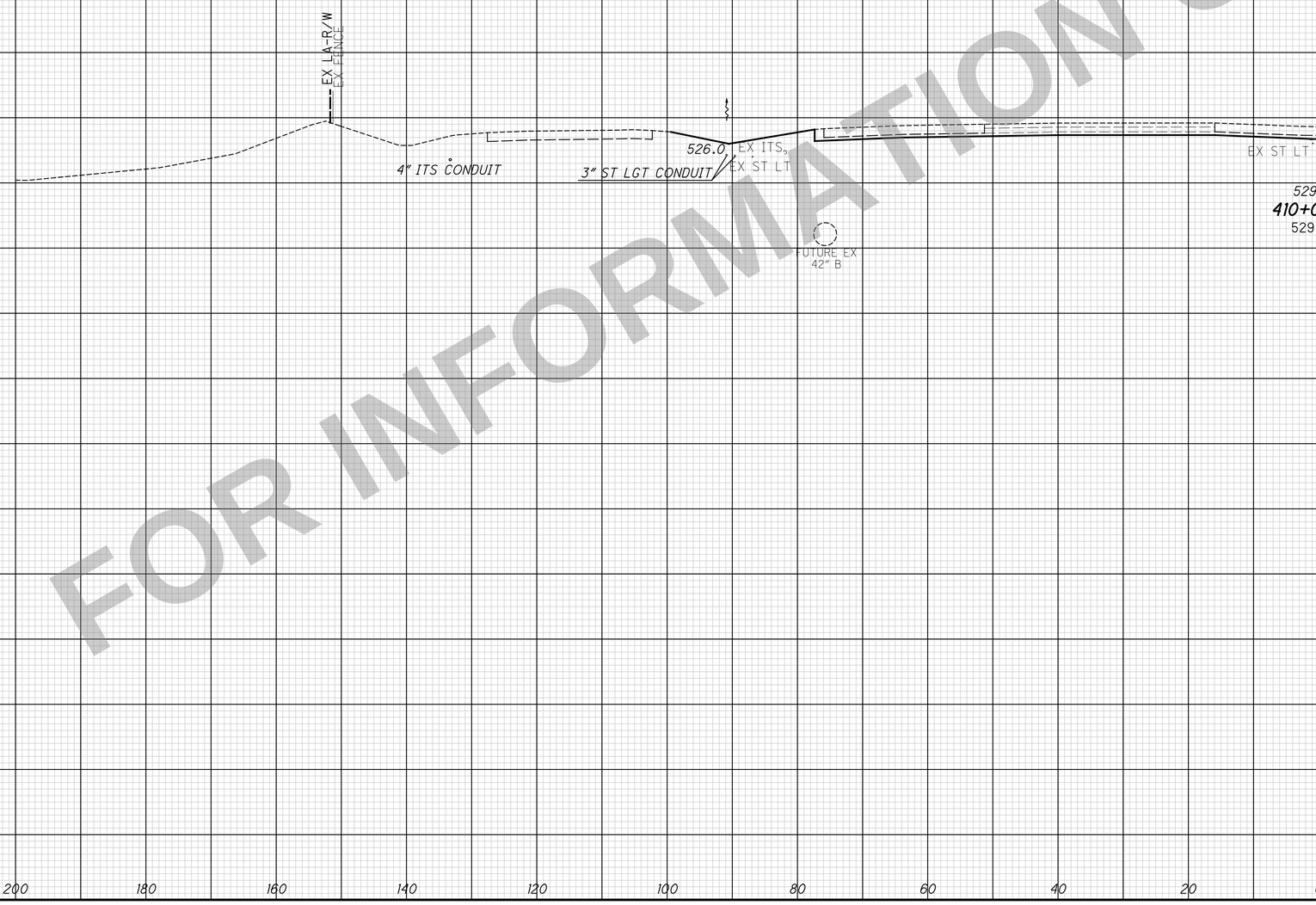
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SEEDING	
END WIDTH	SQ. YDS.
22	
0	
0	

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA
CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 410+00.00

HAM-75-7.85

397
2017

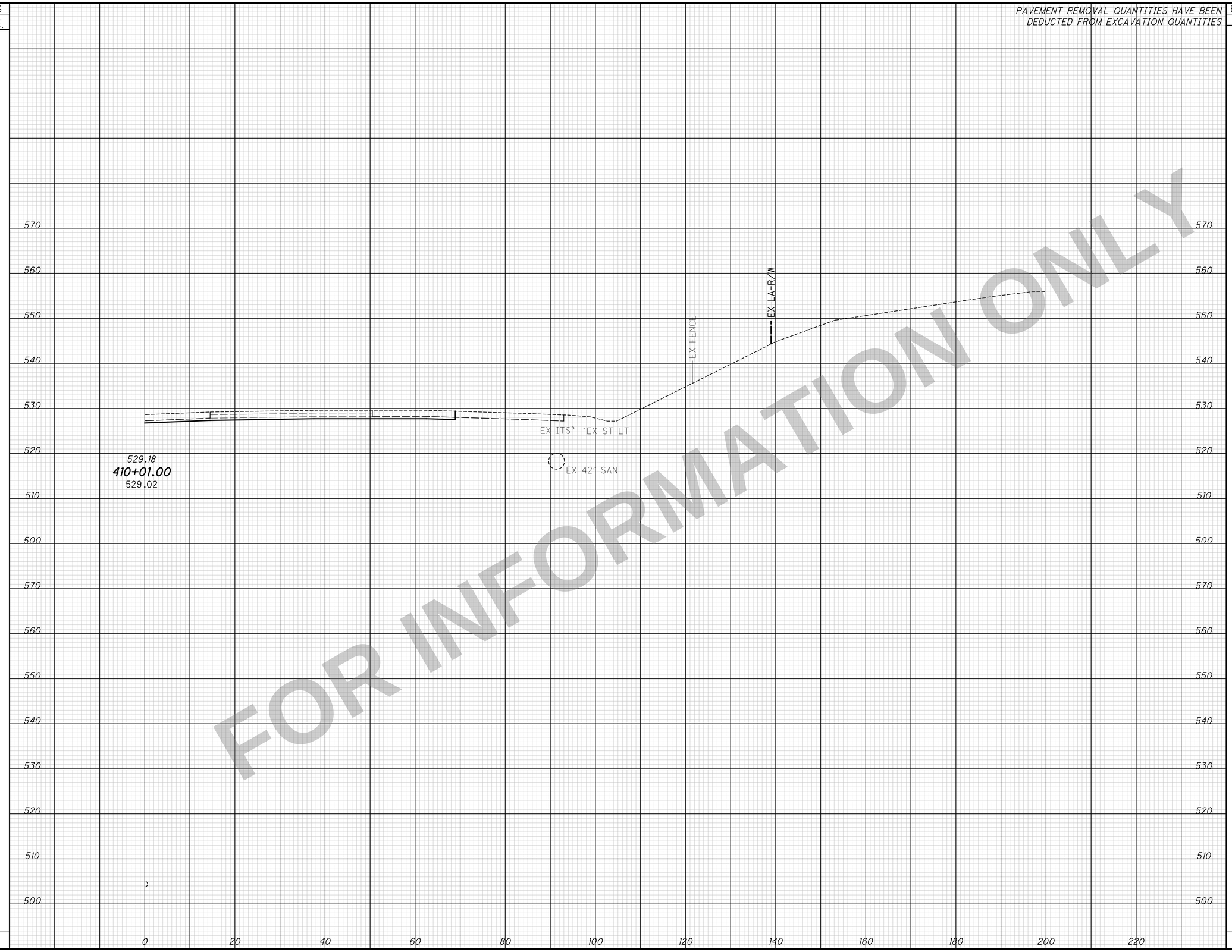
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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL
74	0		
		0	0
		0	0

CALCULATED SEA
CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 410+00.00

HAM-75-7.85

398
2017

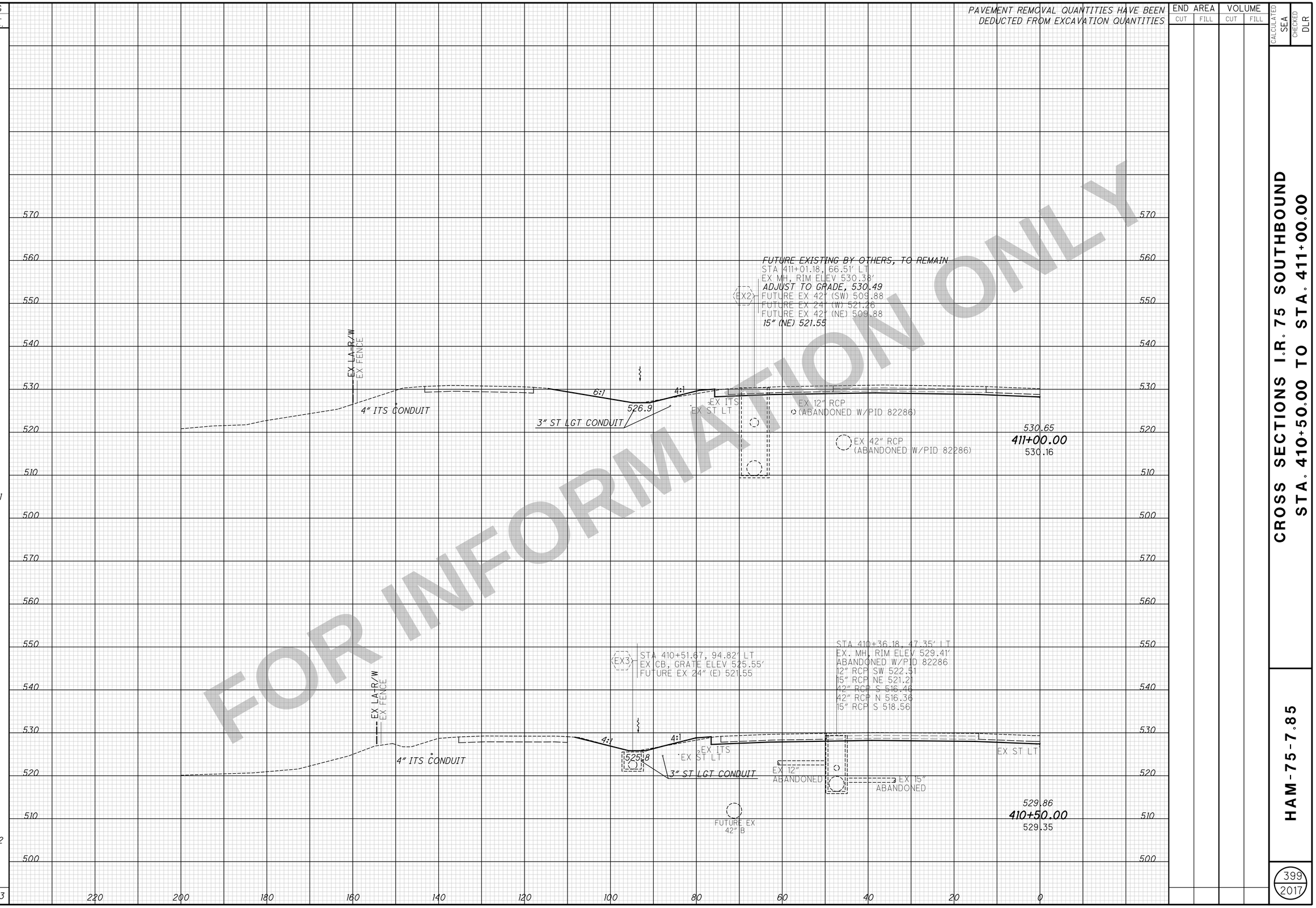
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SEEDING	
END WIDTH	SQ. YDS.
41	211
34	152
	363

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA
CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 410+50.00 TO STA. 411+00.00

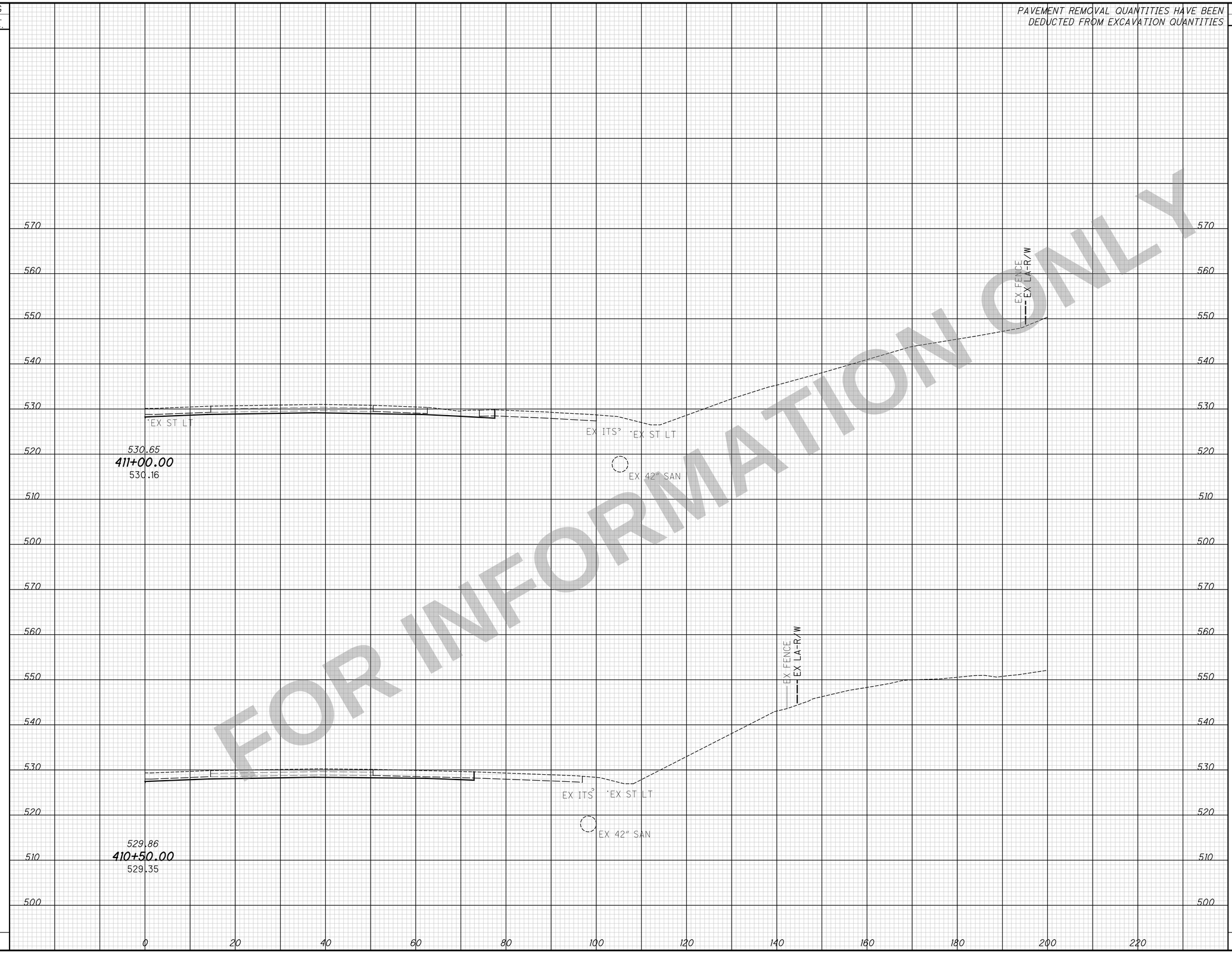
HAM-75-7.85

399
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
85	4		
		149	7
76	3		
		135	3
		284	10

CALCULATED SEA

CHECKED DLR

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 410+50.00 TO STA. 411+00.00

HAM-75-7.85

400
2017

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SEEDING	
END WIDTH	SQ. YDS.
71	
	323
44	
	239
562	

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA
CHECKED DLR

570 560 550 540 530 520 510 500

EX LA-R/W
EX FENCE
4" ITS CONDUIT
3" ST LGT CONDUIT
EX ST LT
8:1
4:1
529.0
EX ITS
532.18
412+00.00
531.53
EX 42" RCP
(ABANDONED W/PID 82286)
FUTURE EX
42" B

570 560 550 540 530 520 510 500

EX LA-R/W
EX FENCE
4" ITS CONDUIT
3" ST LGT CONDUIT
7:1
4:1
527.9
EX ITS
EX ST LT
43
15" B
EX 42" RCP
(ABANDONED W/PID 82286)
FUTURE EX
42" B
531.45
411+50.00
530.88

220 200 180 160 140 120 100 80 60 40 20 0

FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 411+50.00 TO STA. 412+00.00

HAM-75-7.85

401
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

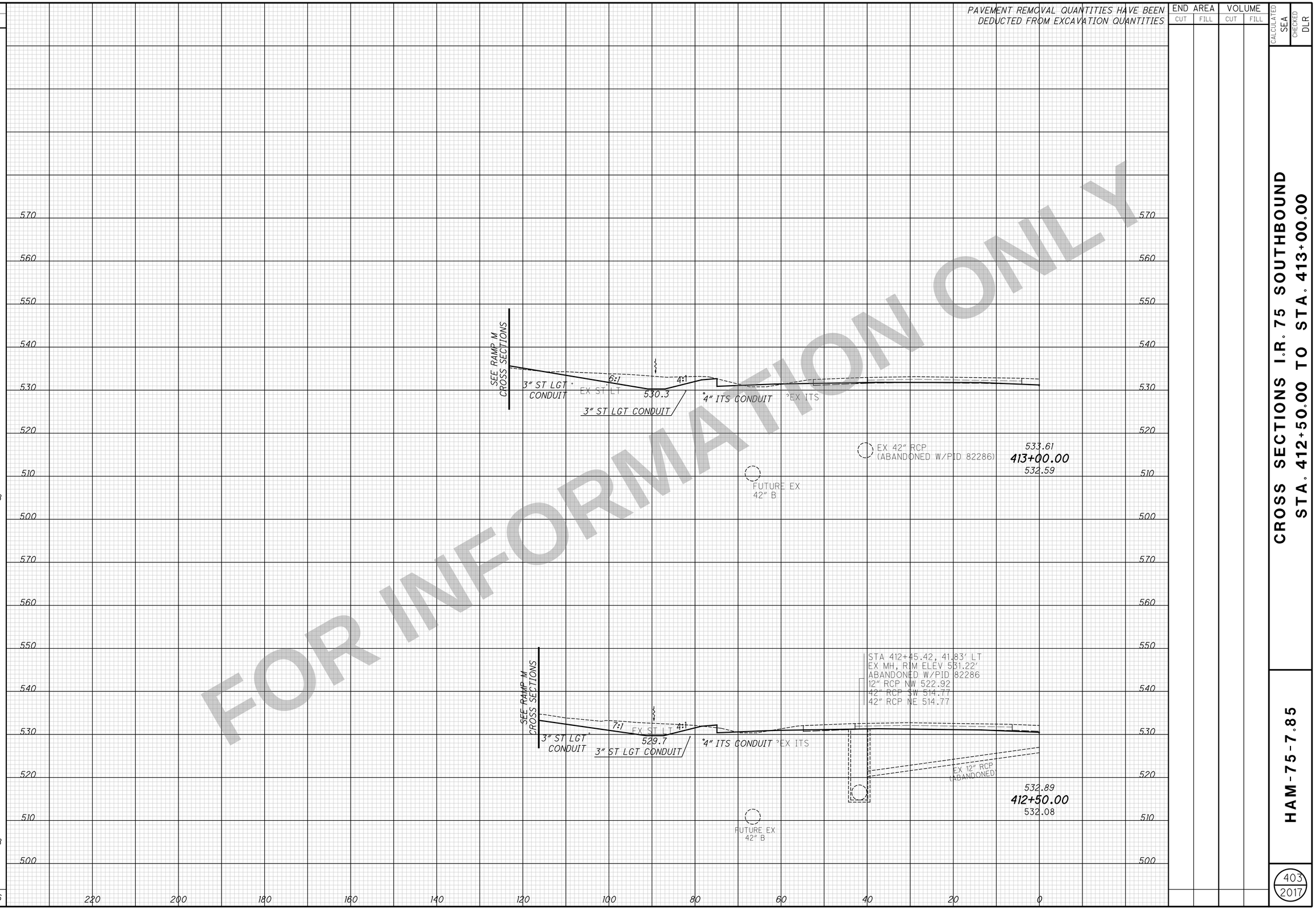
END AREA		VOLUME	
CUT	FILL	CUT	FILL

SEEDING	
END WIDTH	SQ. YDS.
70	378
64	378
	756

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA | CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 412+50.00 TO STA. 413+00.00

HAM-75-7.85

403
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL
78	73		
90	30		
		155	96
		211	47
		366	143

CALCULATED SEA

CHECKED DLR

533.61
413+00.00
532.59

532.89
412+50.00
532.08

6:1
3:1
EX ITS
EX ST LT
SEE RAMP N CROSS SECTIONS

570 560 550 540 530 520 510 500

0 20 40 60 80 100 120 140 160 180 200 220

FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 412+50.00 TO STA. 413+00.00

HAM-75-7.85

404
2017

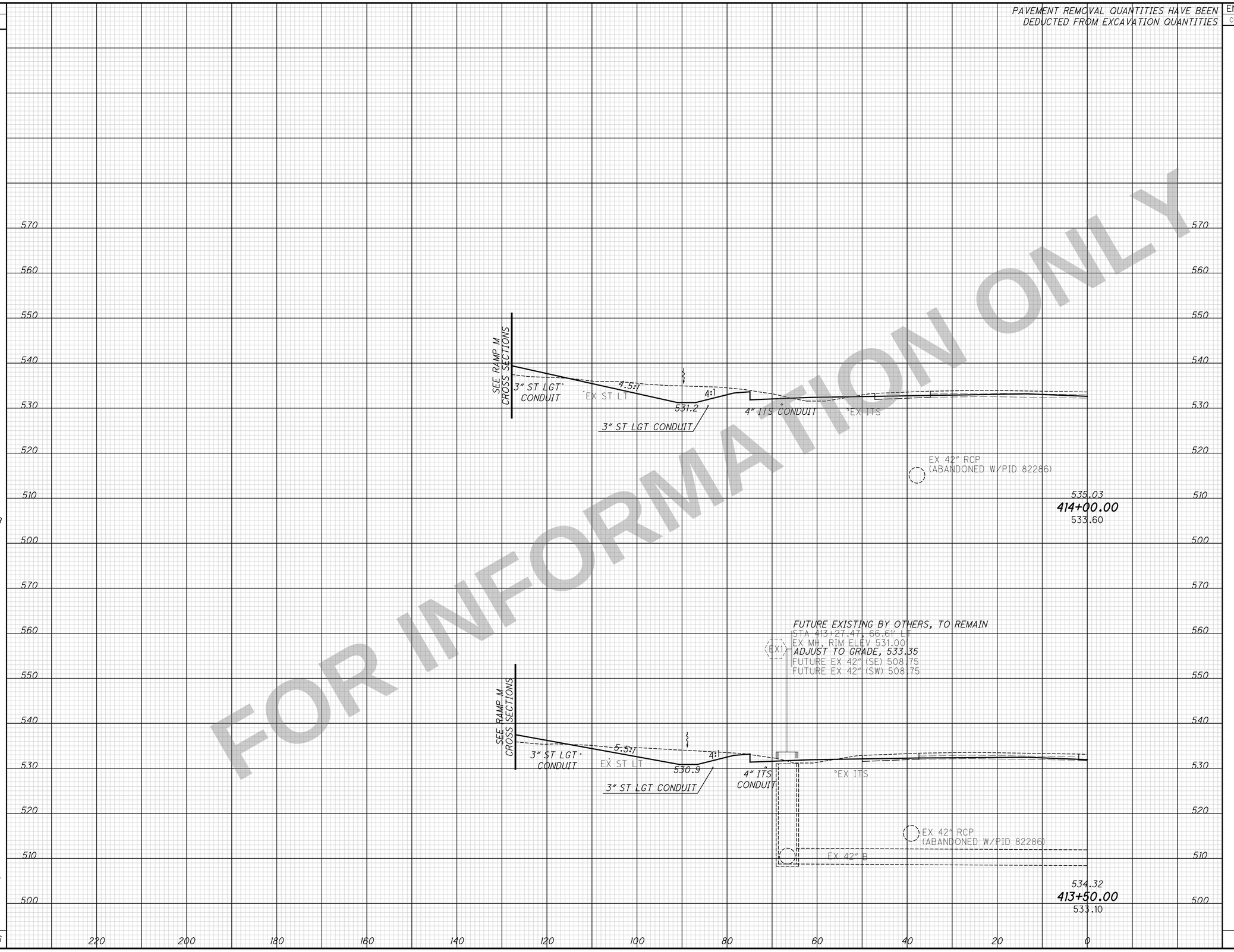
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SEEDING	
END WIDTH	SQ. YDS.
78	439
79	417
	856

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA
CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 413+50.00 TO STA. 414+00.00

HAM-75-7.85

405
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

EXISTING BY OTHERS, TO REMAIN
STA 414+16.63, 85.95' RT
EX MH, RIM ELEV 530.40',
ADJUST TO GRADE, 533.70
EX 42" (NE) 517.13
(EMERGENCY SPILLWAY)
EX 42" (SE) 507.15
EX 42" (SW) 507.15

6:1
3:1
EX 15" B *(TO BE REMOVED)*
15" B
535.03
414+00.00
533.60
*EX ITS
SEE RAMP N CROSS SECTIONS
EXISTING STORMWATER DETENTION AREA

EXISTING BY OTHERS, TO REMAIN
ADJUST TO GRADE, 534.23
REPLACE FRAME AND GRATE WITH MH FRAME AND LID
EX4
STA 413+49.78, 11.14' RT
EX CB, GRATE ELEV 532.82'
EX 15" (NE) 527.57' *(TO BE REMOVED)*
EX 15" (SE) 527.57',
15" (NE) 528.25

EXISTING BY OTHERS, TO REMAIN
STA 413+47.13, 83.50' RT
EX MH, RIM ELEV 530.52'
RECONSTRUCT TO GRADE, 532.75
EX5
EX 15" (NW) 527.30
EX 24" (SE) 519.00
EX 42" (NW) 507.95
EX 42" (NE) 507.95

6:1
3:1
EX ITS
534.32
413+50.00
533.10
15" B
EX BY OTHERS *(TO REMAIN)*
EX 42" B
SEE RAMP N CROSS SECTIONS

FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
93	169		
		157	277
77	131		
		143	189
		300	466

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 413+50.00 TO STA. 414+00.00

HAM-75-7.85

406
2017

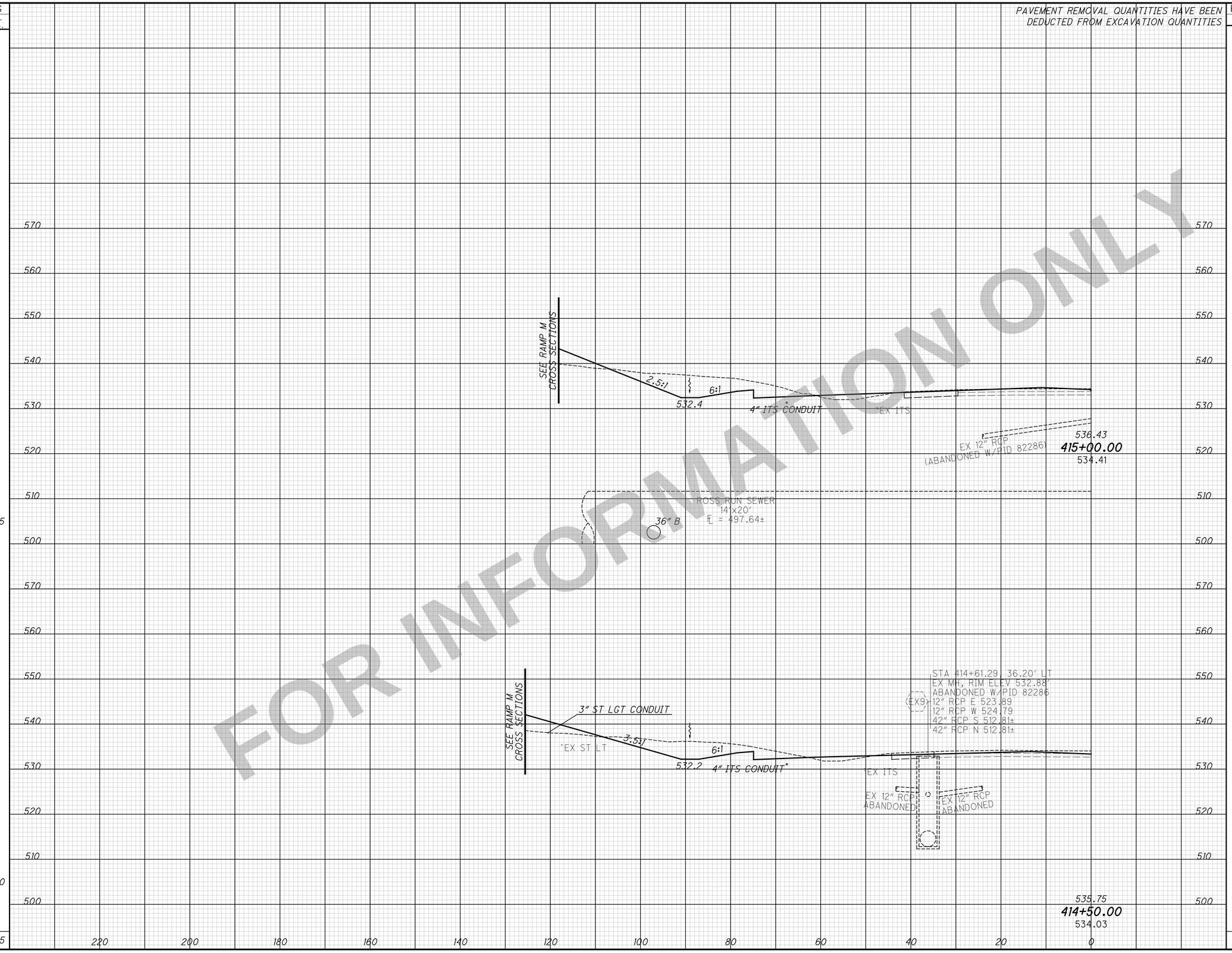
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SEEDING	
END WIDTH	SQ. YDS.
81	455
82	450
	905

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA
CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 414+50.00 TO STA. 415+00.00

HAM-75-7.85

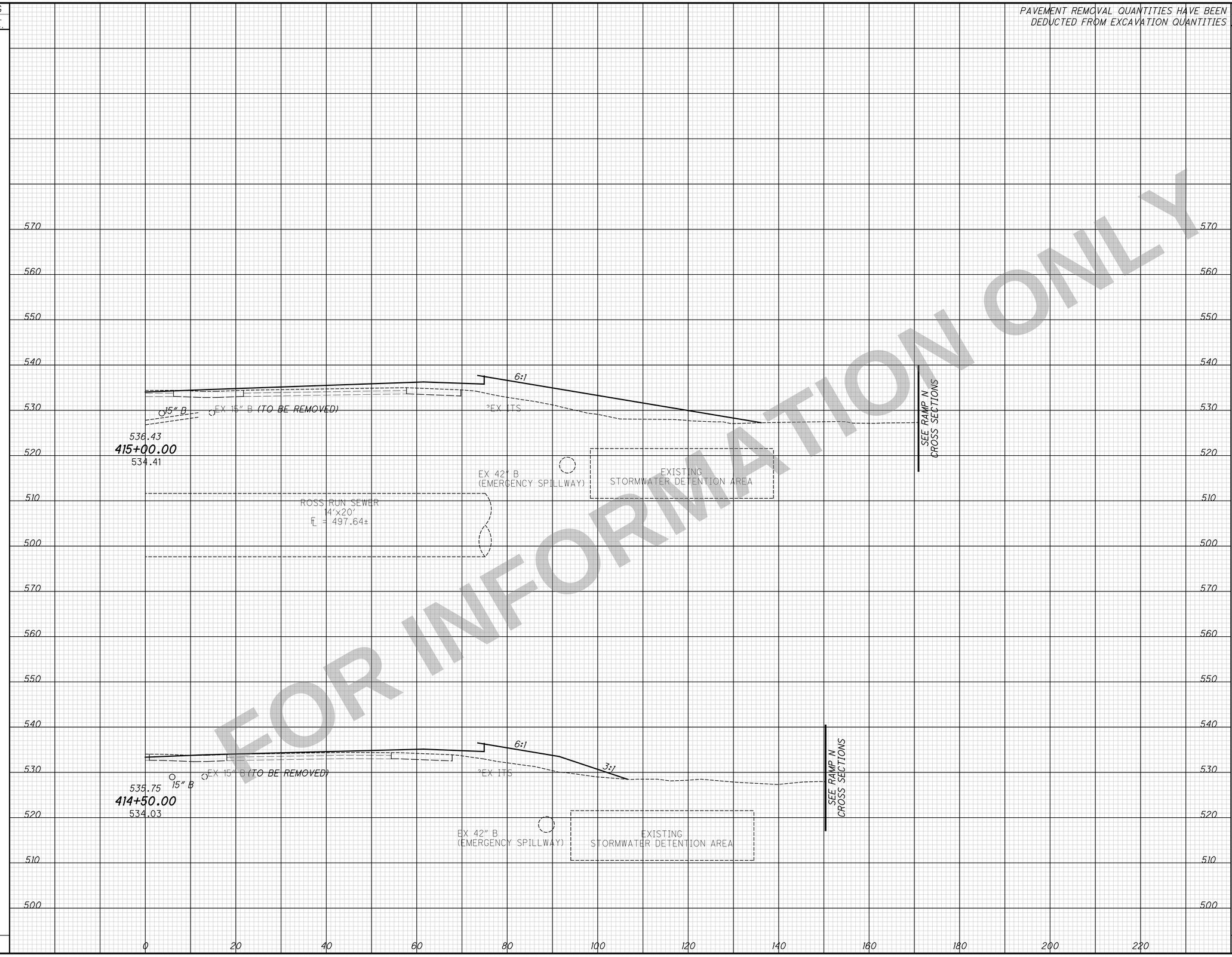
407
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
		124	313		
		98	252		
				205	523
				176	390
				381	913

CALCULATED SEA
CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 414+50.00 TO STA. 415+00.00

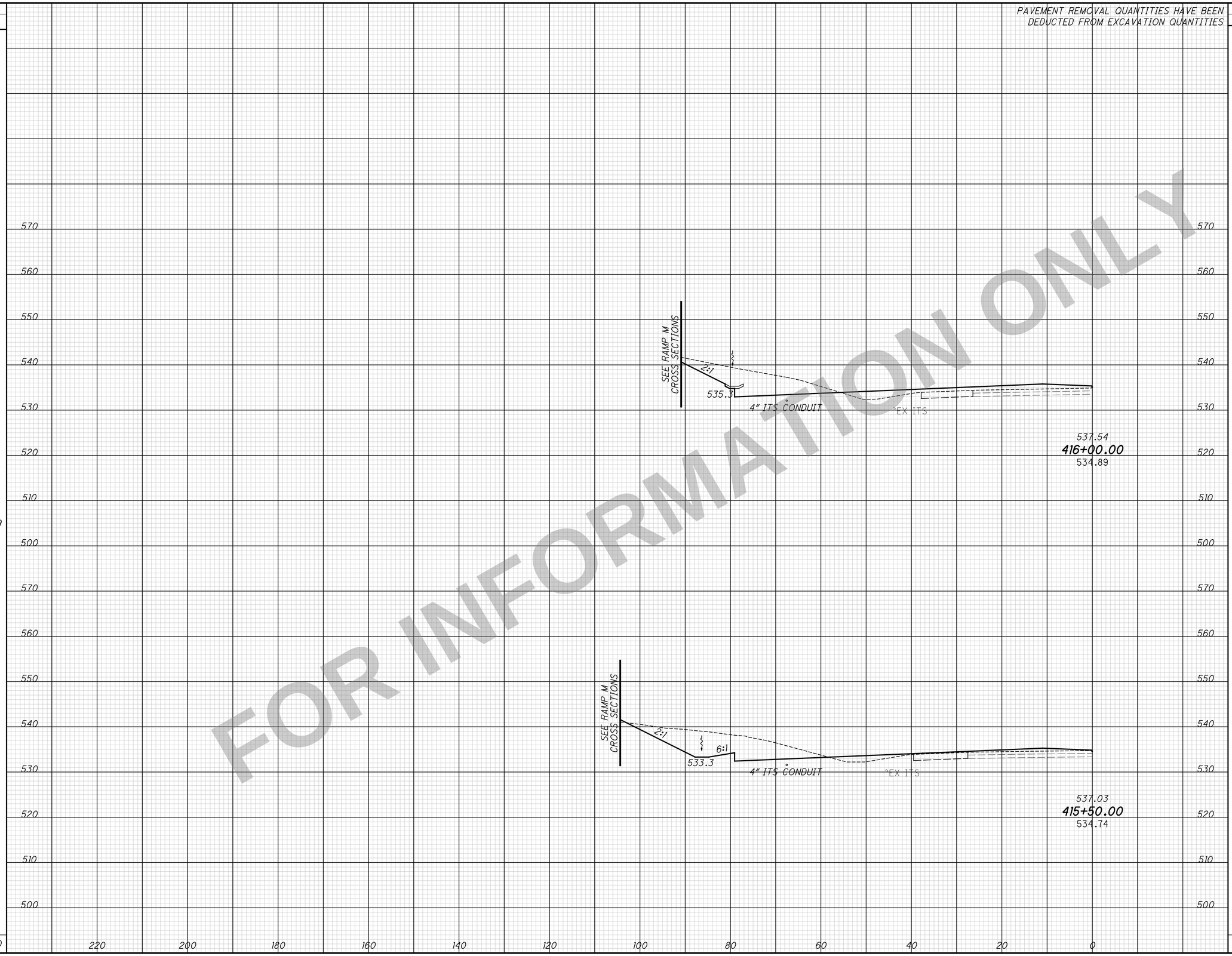
HAM-75-7.85

408
2017

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SEEDING	
END WIDTH	SQ. YDS.
54	339
67	411
	750

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 415+50.00 TO STA. 416+00.00

HAM-75-7.85

409
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL
136	314		
		267	607
152	341		
		256	605
		523	1212

CALCULATED SEA
CHECKED DLR

(TO BE REMOVED)
STA 415+98.92, 20.86' RT
EX CB, GRATE ELEV 534.92'
15" B SW 529.67

15" B
537.54
416+00.00
534.89

2:1
4:1
525.6
60
EX ITS
APPROXIMATE LOCATION OF PROPOSED STORM WATER DETENTION TO BE DESIGNED BY CONTRACTOR. SEE GENERAL NOTE SHEET 39
SEE RAMP J CROSS SECTIONS
36" C

EXISTING BY OTHERS, TO REMAIN
STA 415+41.54, 97.17' RT
EX MH, RIM ELEV 529.40'
ADJUST TO GRADE, 531.71
EX 42" (SW) 515.65
(EMERGENCY SPILLWAY)
EX 42" (NE) 506.80
EX 18" (SE) 506.80

6:1
3:1
EX 15" B (TO BE REMOVED)
EX ITS
15" B
537.03
415+50.00
534.74
SEE RAMP N CROSS SECTIONS
EXISTING STORMWATER DETENTION AREA

FOR INFORMATION ONLY

570 560 550 540 530 520 510 500

0 20 40 60 80 100 120 140 160 180 200 220

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 415+50.00 TO STA. 416+00.00

HAM-75-7.85

410
2017

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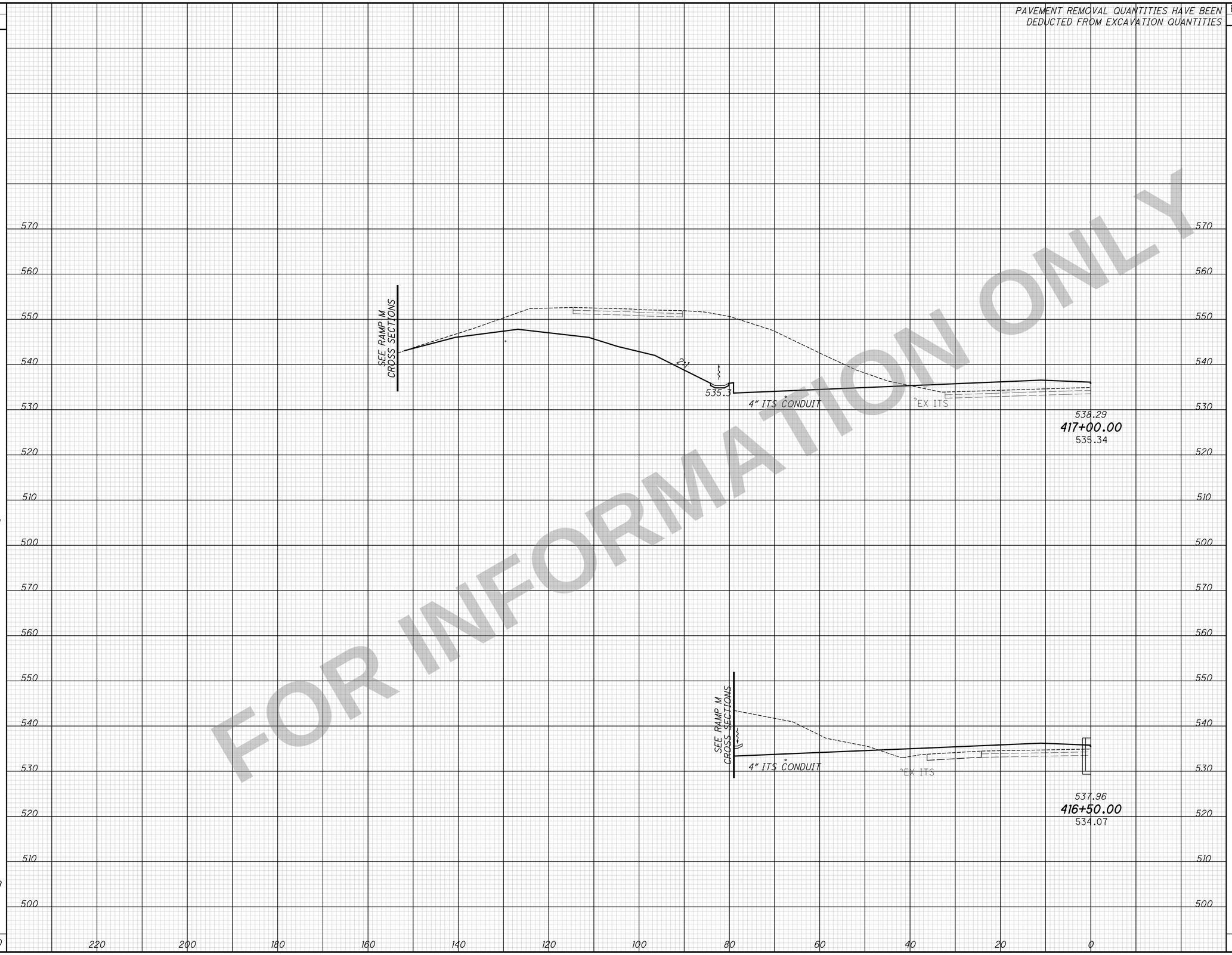
SEEDING	
END WIDTH	SQ. YDS.
79	
	361
49	
	289
650	

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA

CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 416+50.00 TO STA. 417+00.00

HAM-75-7.85

411
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL
763	310		
879	644		
186	386		
298	648		
		1177	1292

CALCULATED SEA
CHECKED DLR

570 560 550 540 530 520 510 500

538.29
417+00.00
535.34

4" ITS CONDUIT

SEE APPROACH SLAB SECTION

12

87

537.96
416+50.00
535.07

2:1

EX ITS
15" F

15" F

15" F

4:1

522.4

APPROXIMATE LOCATION OF PROPOSED STORM WATER DETENTION TO BE DESIGNED BY CONTRACTOR. SEE GENERAL NOTE SHEET 39.

SEE RAMP J CROSS SECTIONS

0 20 40 60 80 100 120 140 160 180 200 220

FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 416+50.00 TO STA. 417+00.00

HAM-75-7.85

412
2017

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SEEDING	
END WIDTH	SQ. YDS.
98	293
77	80
30	306
	679

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

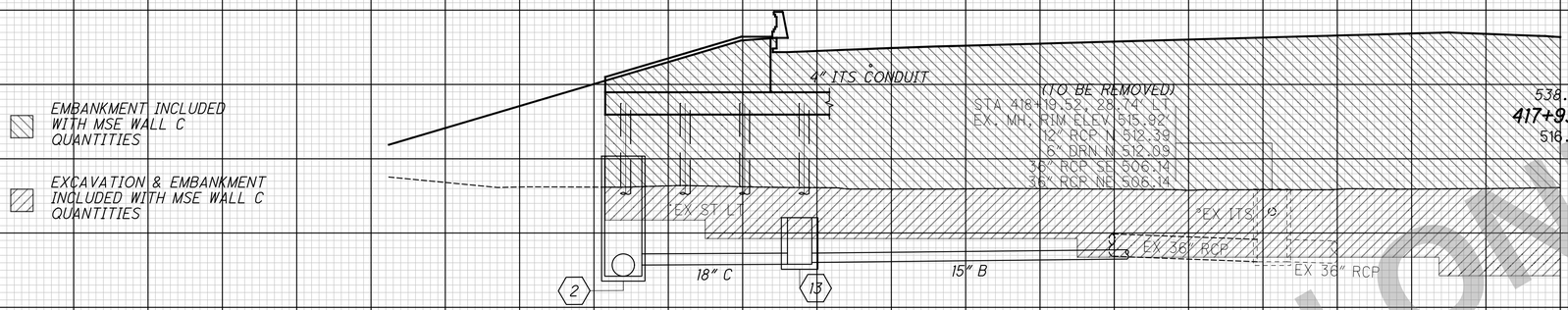
END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA

CHECKED DLR

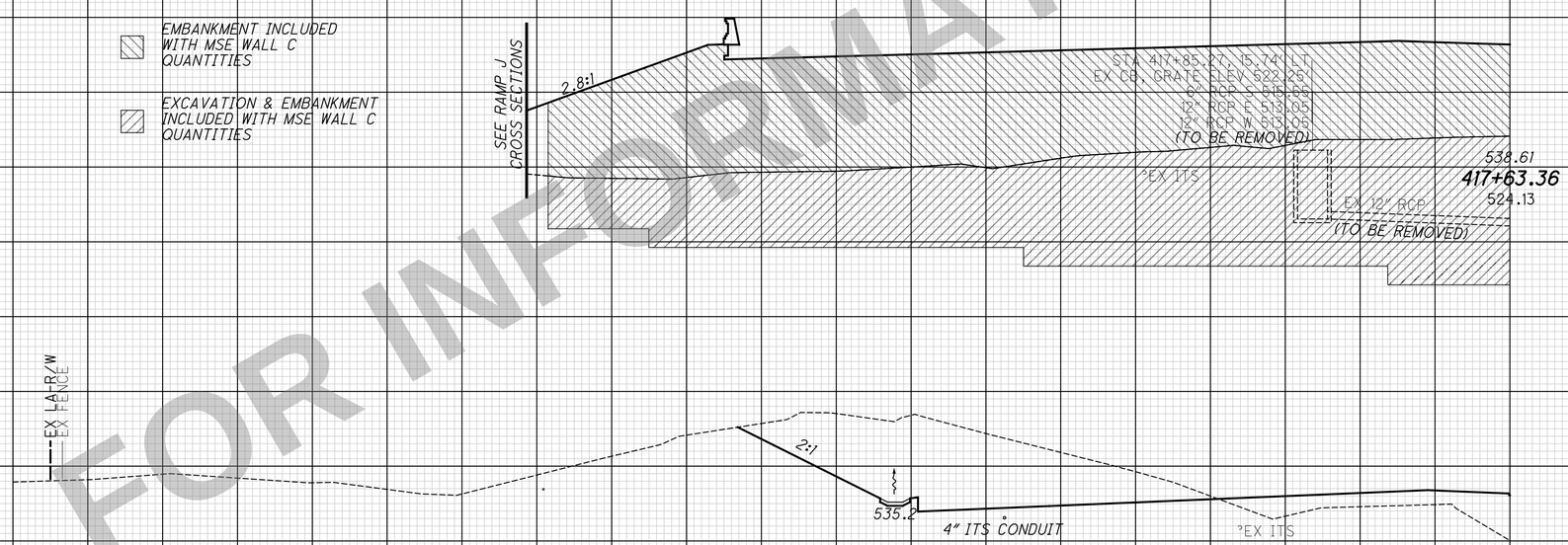
SKEW = 42.78° LF

BRIDGE APPROACH SLAB SECTION
STRUCTURE HAM-75-0791



SKEW = 42.26° LF

BRIDGE APPROACH SLAB SECTION
STRUCTURE HAM-75-0791



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 417+50.00 TO STA. 417+93.36

HAM-75-7.85

413
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SKEW = 42.78° LF

BRIDGE APPROACH SLAB SECTION
STRUCTURE HAM-75-0791

538.75
417+93.36
516.12

4" ITS CONDUIT (TO BE REMOVED)
STA 417+26.26, 71.62' RT
EX MH, RIM ELEV 521.38
12" RCP SE 508.48
6" DRN S 519.18
12" RCP N 508.48

EX ITS

EMBANKMENT INCLUDED WITH MSE WALL C QUANTITIES

EXCAVATION & EMBANKMENT INCLUDED WITH MSE WALL C QUANTITIES

SKEW = 42.26° LF

BRIDGE APPROACH SLAB SECTION
STRUCTURE HAM-75-0791

538.61
417+63.36
524.13

(TO BE REMOVED)
STA 417+45.19, 40.51' RT
EX MH, RIM ELEV 522.02
EX 12" RCP SE 510.51
EX 12" RCP NW 510.51
EX 8" RCP SW 511.84
EX 8" RCP N 511.84

EX 12" RCP (TO BE REMOVED)

EX 12" RCP

2.7:1

EX ITS

18" B

EMBANKMENT INCLUDED WITH MSE WALL C QUANTITIES

EXCAVATION & EMBANKMENT INCLUDED WITH MSE WALL C QUANTITIES

SEE APPROACH SLAB SECTION

538.54
417+50.00
530.06

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	352		
		0	227
0	56		
		109	72
442	234		
		1115	504
		1224	803

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 417+50.00 TO STA. 417+93.36

HAM-75-7.85

414
2017

FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SQ. YDS.
56	13
26	
16	64
	819
	896

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SKEW = 45.57° LF

BRIDGE APPROACH SLAB SECTION
STRUCTURE HAM-75-0791

2.8:1

*EX ITS

539.51
419+52.73
536.32

SEE APPROACH SLAB SECTION

539.50
419+50.00
536.30

SKEW = 45.05° LF

BRIDGE APPROACH SLAB SECTION
STRUCTURE HAM-75-0791

(TO BE REMOVED)
STA 419+47.48, 23.86' LT
EX MH, RIM ELEV 535.43'
12" RCP S 527.70
12" RCP SW 528.83
12" RCP W 524.13

UNCLASSIFIED EXCAVATION INCLUDED WITH HAM-75-0791 BRIDGE QUANTITIES

4" ITS CONDUIT

EX ITS

EX MH

539.37
419+22.73
536.19

EX 12" RCP (TO BE REMOVED)

16 14 15

15" B

15" B

15" B

36" B

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 419+22.73 TO STA. 419+52.73

HAM-75-7.85

415
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SKEW = 45.57° LF

BRIDGE APPROACH SLAB SECTION
STRUCTURE HAM-75-0791

17.9:1

°EX ITS

18" C

°EX ITS

539.51
419+52.73
536.32

19

SEE APPROACH SLAB SECTION

6:1

°EX ITS

SEE RAMP W CROSS SECTIONS

539.50
419+50.00
536.30

SKEW = 45.05° LF

BRIDGE APPROACH SLAB SECTION
STRUCTURE HAM-75-0791

(TO BE REMOVED)
STA 418+85.87, 29.55' RT
EX CB, GRATE ELEV 536.72'
12" RCP N 531.70

(TO BE REMOVED)

4" ITS CONDUIT

°EX ITS

UNCLASSIFIED EXCAVATION
INCLUDED WITH HAM-75-0791
BRIDGE QUANTITIES

539.37
419+22.73
536.19

784

15" C

END AREA		VOLUME	
CUT	FILL	CUT	FILL
73	1004		
		4	63
0	248		
		157	579
312	899		
		0	0
		161	642

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 419+22.73 TO STA. 419+52.73

HAM-75-7.85

416
2017

FOR INFORMATION ONLY

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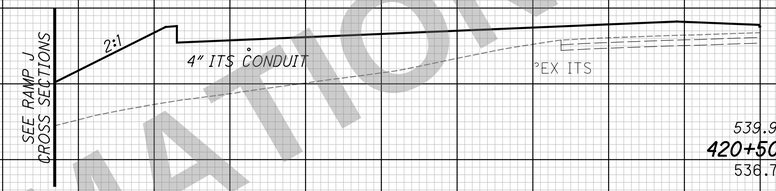
SEEDING	
END WIDTH	SQ. YDS.
46	206
26	221
	427

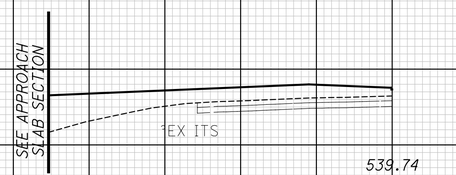
PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA

CHECKED DLR





570 560 550 540 530 520 510 500 570 560 550 540 530 520 510 500

220 200 180 160 140 120 100 80 60 40 20 0

FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 420+00.00 TO STA. 420+50.00

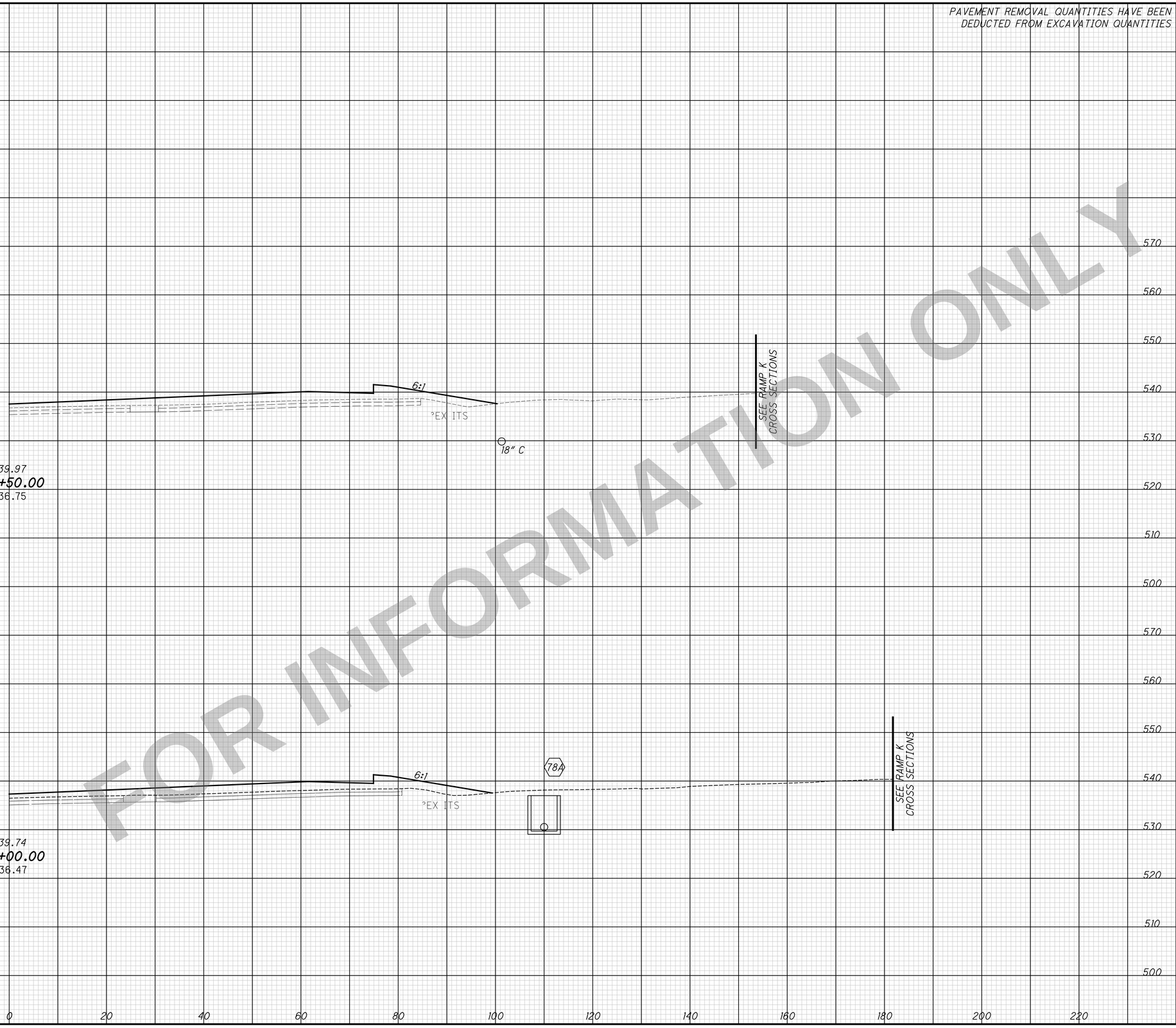
HAM-75-7.85

417
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	726		
		0	1038
0	395		
		64	1224
		64	2262

CALCULATED SEA

CHECKED DLR

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 420+00.00 TO STA. 420+50.00

HAM-75-7.85

418
2017

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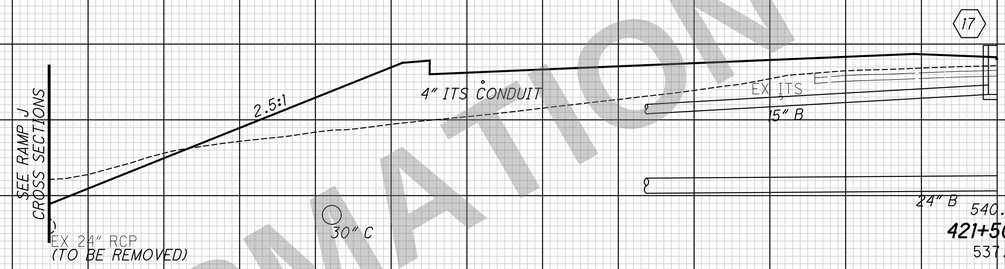
SEEDING	
END WIDTH	SQ. YDS.
86	466
80	355
	821

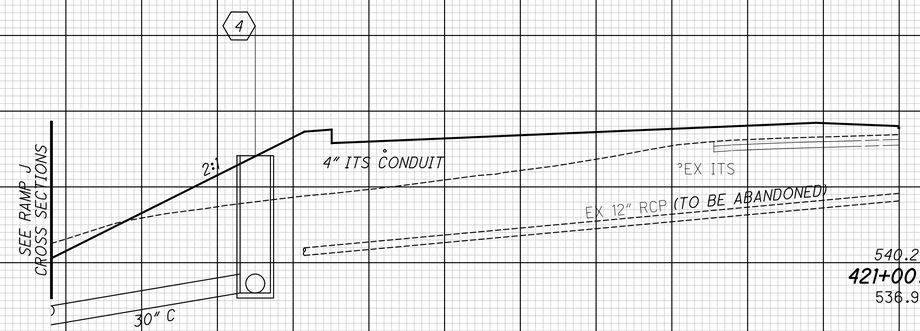
PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA
CHECKED DLR

570 560 550 540 530 520 510 500





220 200 180 160 140 120 100 80 60 40 20 0

FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 421+00.00 TO STA. 421+50.00

HAM-75-7.85

419
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

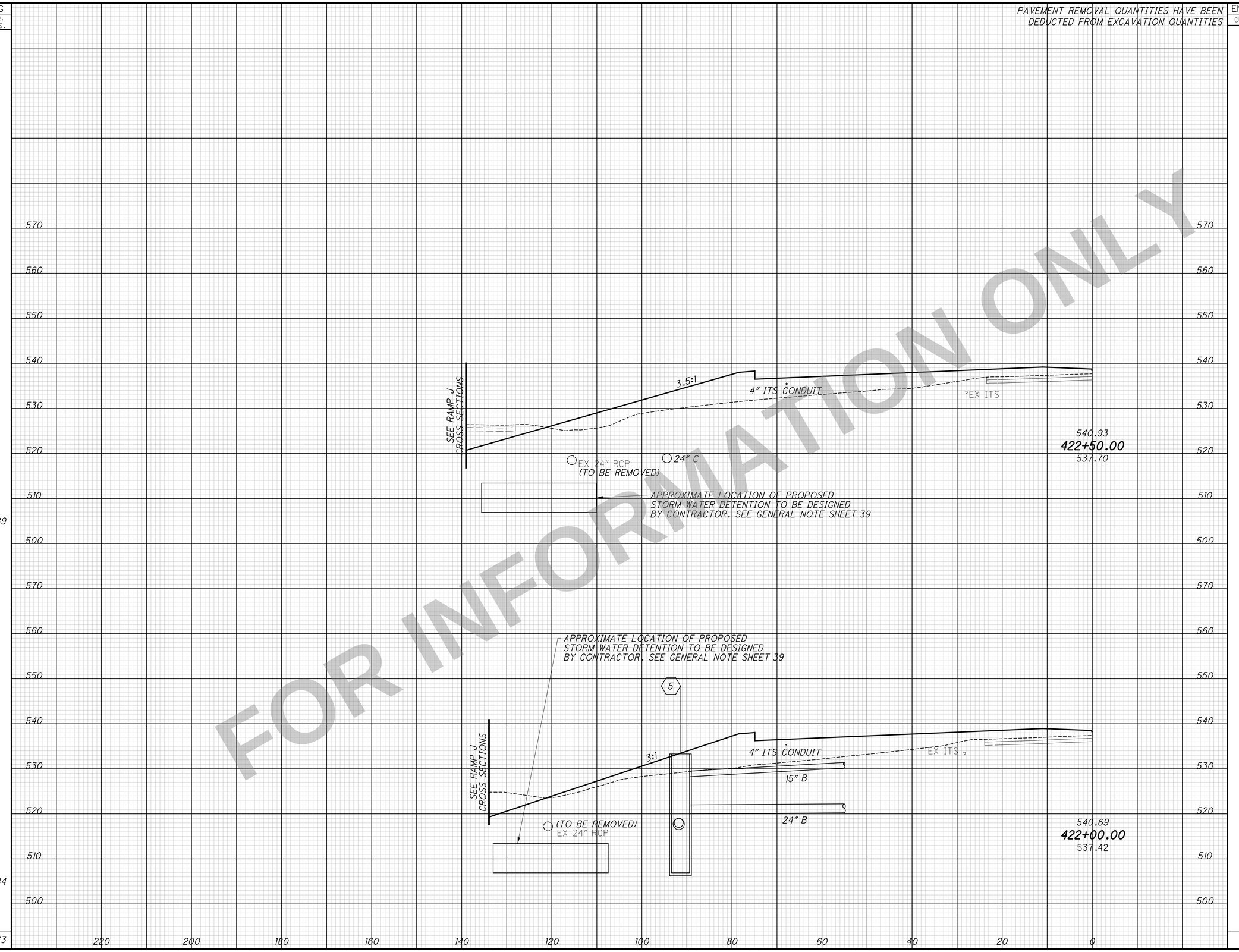
END AREA		VOLUME	
CUT	FILL	CUT	FILL

SEEDING	
END WIDTH	SQ. YDS.
87	489
87	484
	973

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA
CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 422+00.00 TO STA. 422+50.00

HAM-75-7.85

421
2017

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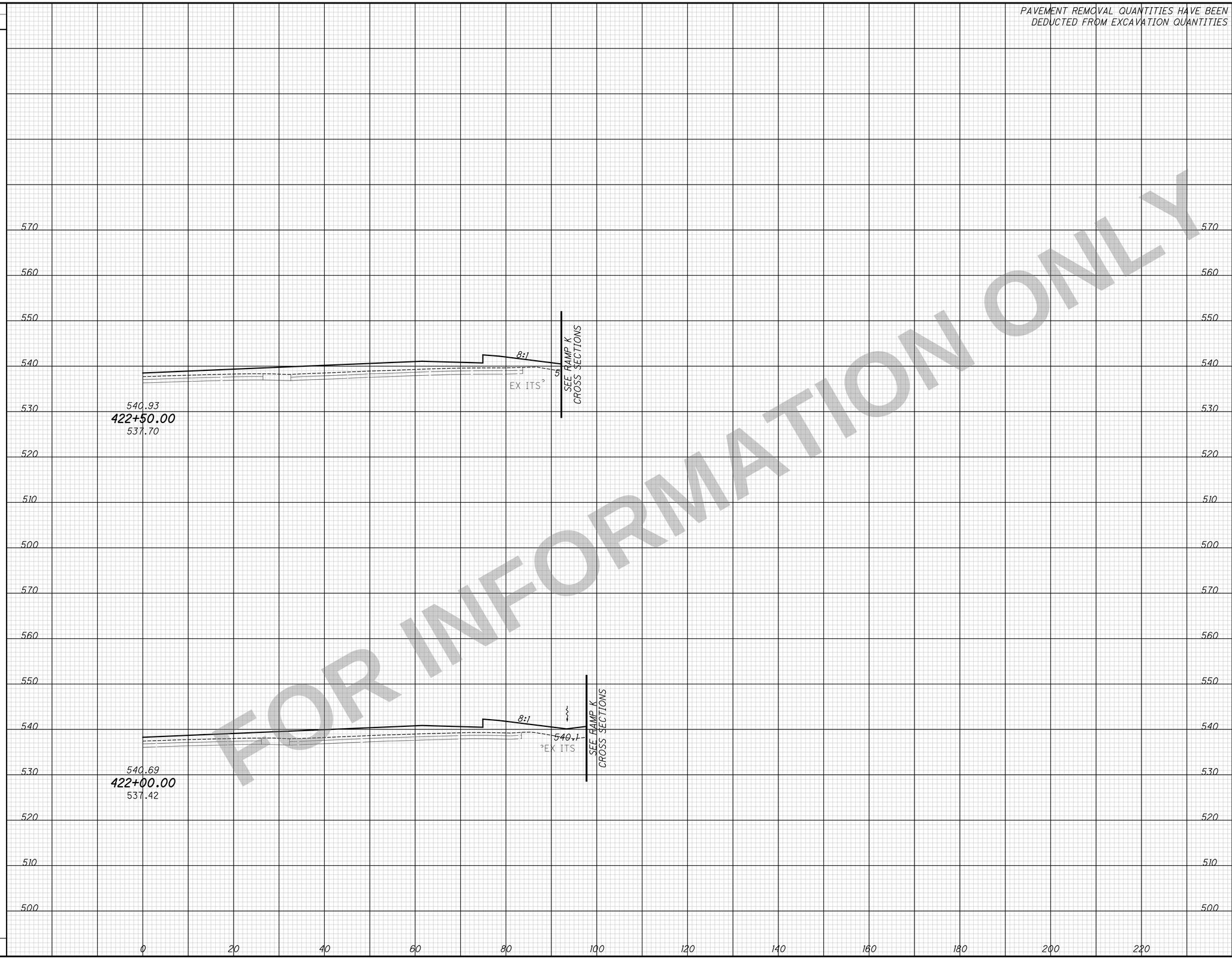
SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL
39	682		
		71	1277
37	698		
		59	1291
		130	2568

CALCULATED SEA

CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 422+00.00 TO STA. 422+50.00

HAM-75-7.85

422
2017

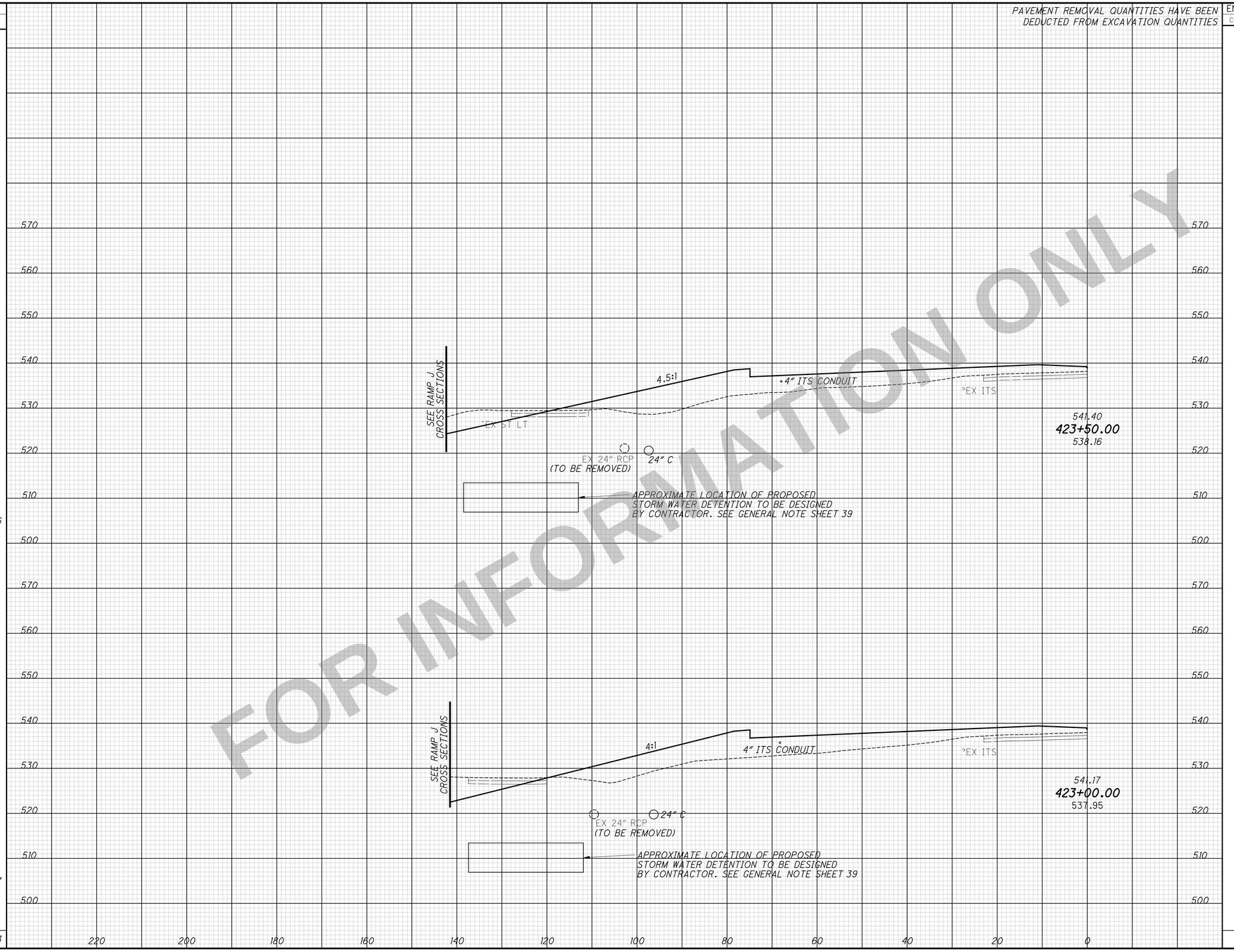
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SEEDING	
END WIDTH	SQ. YDS.
80	456
84	477
	933

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA
CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 423+00.00 TO STA. 423+50.00

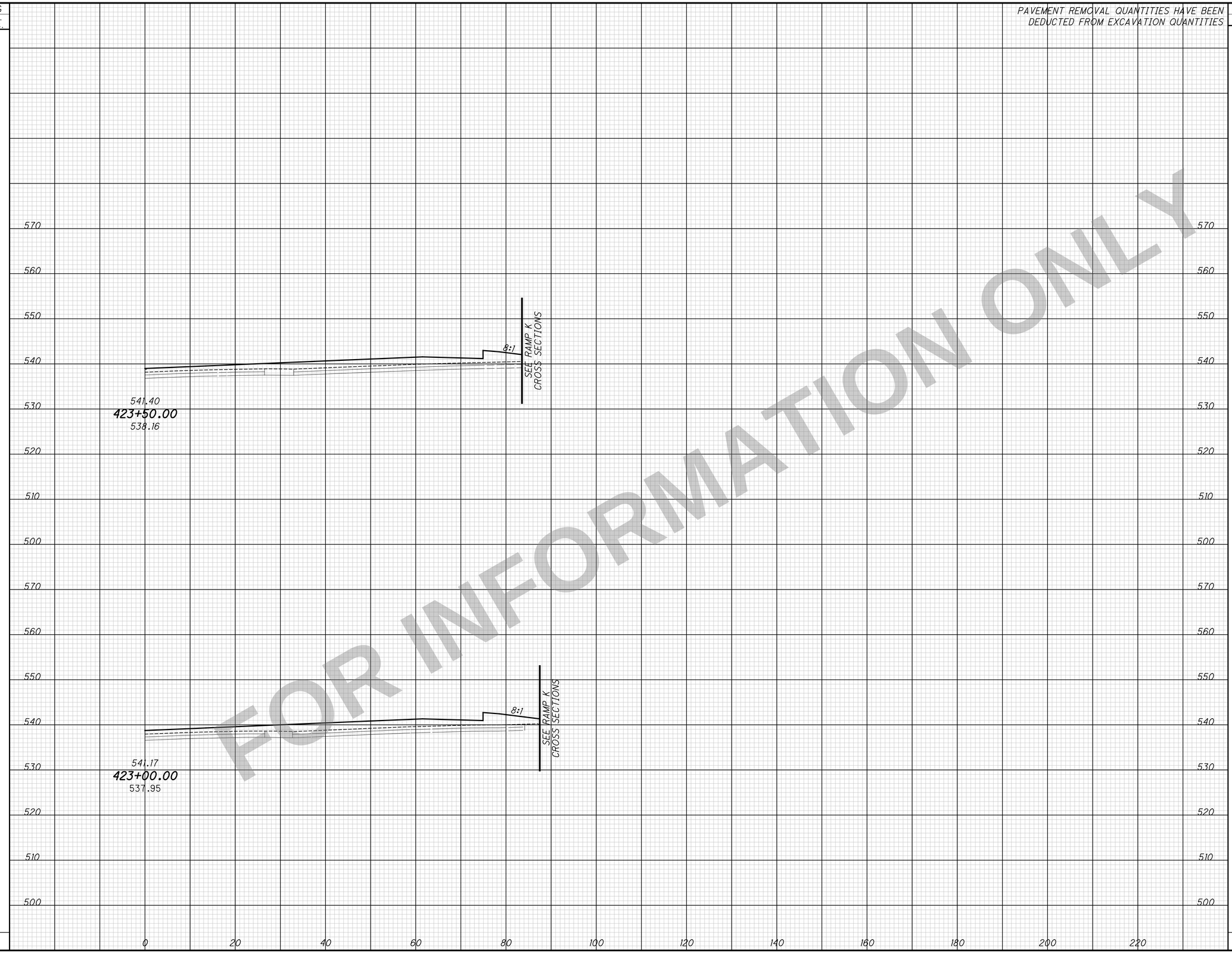
HAM-75-7.85

423
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA		VOLUME	
CUT	FILL	CUT	FILL
49	656		
		81	1221
39	663		
		72	1245
		153	2466

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 423+00.00 TO STA. 423+50.00

HAM-75-7.85

424
2017

FOR INFORMATION ONLY

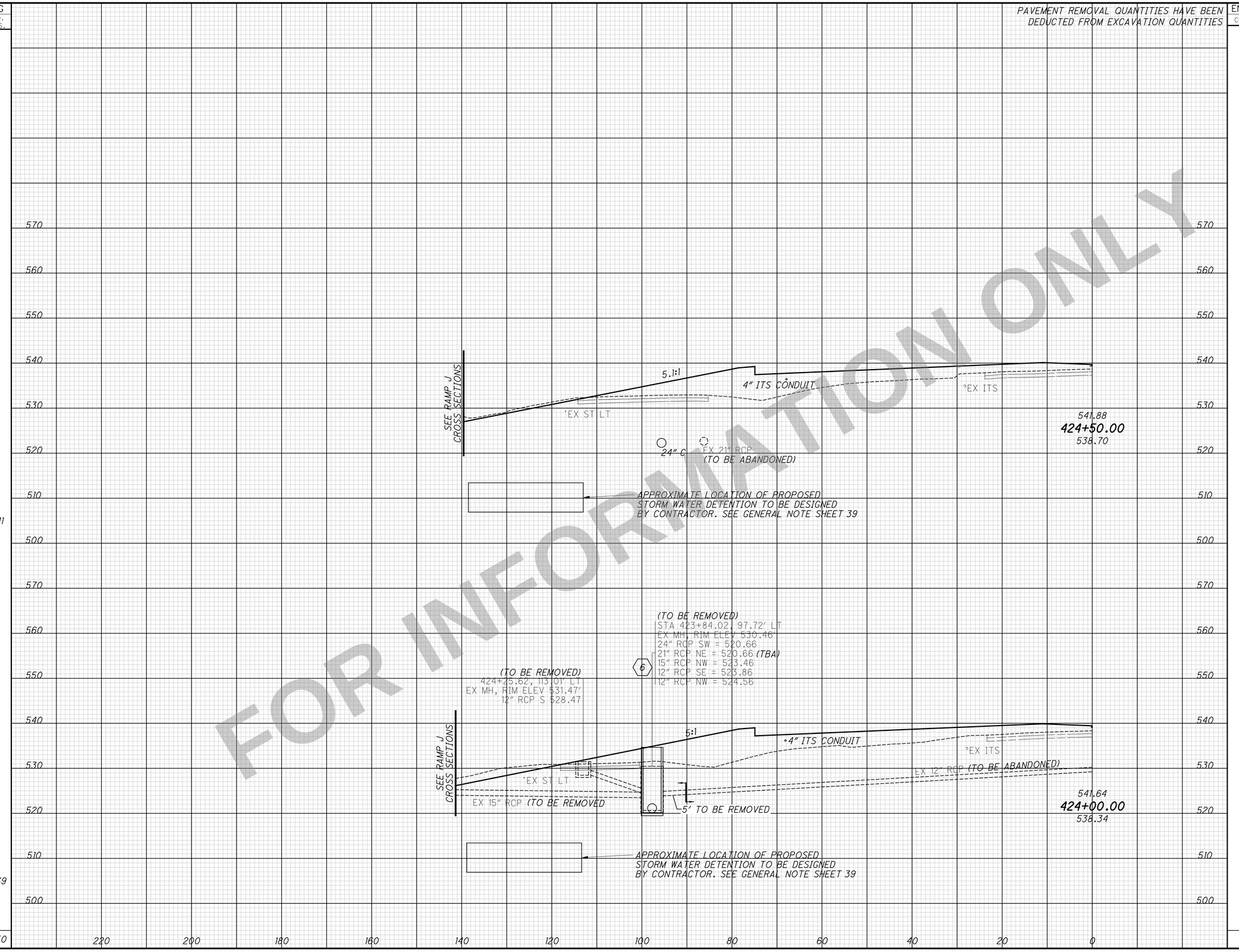
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SEEDING	
END WIDTH	SQ. YDS.
72	411
76	439
	850

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA
CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 424+00.00 TO STA. 424+50.00

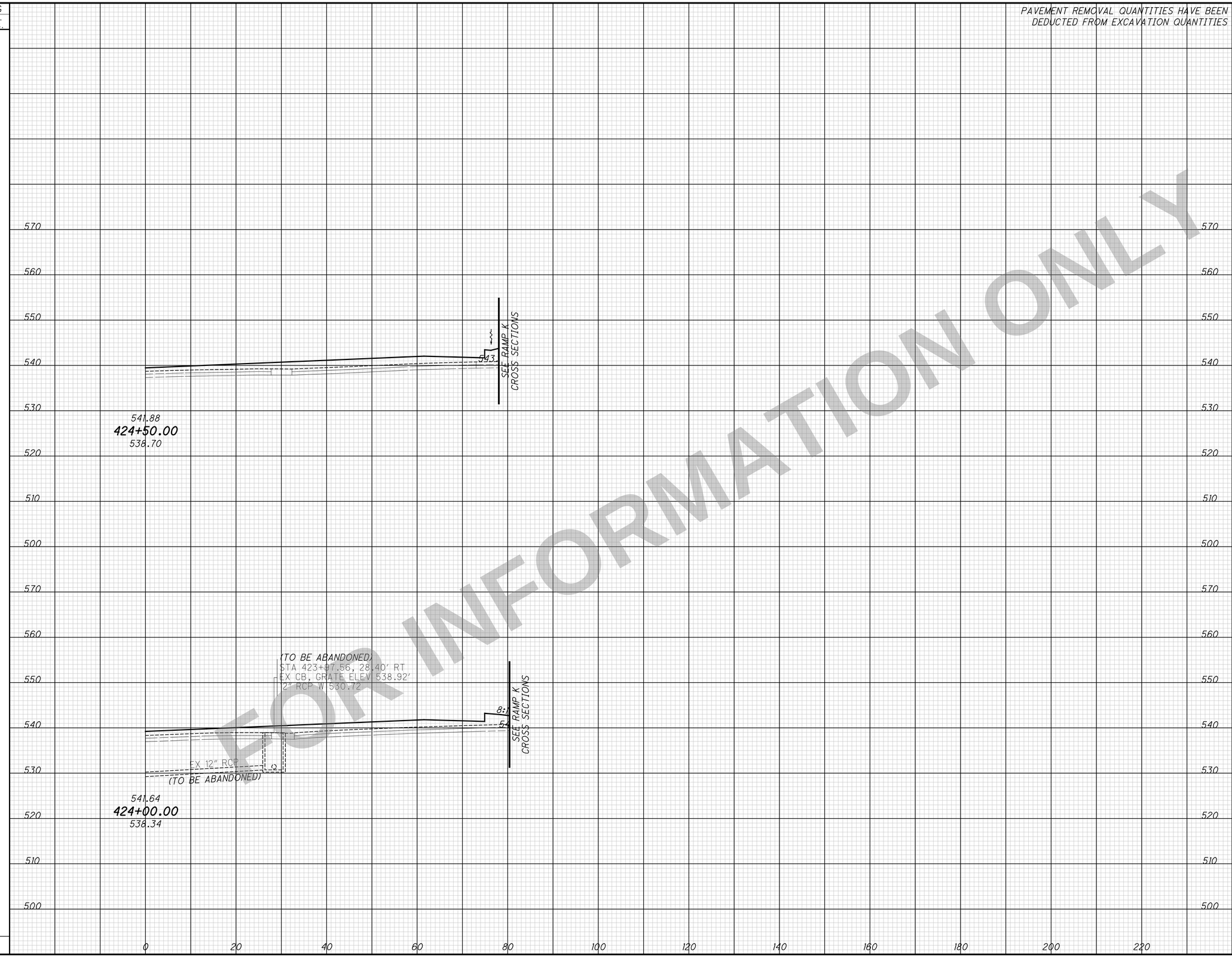
HAM-75-7.85

425
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA		VOLUME	
CUT	FILL	CUT	FILL
12	611		
		40	1162
31	644		
		74	1203
		114	2365

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 424+00.00 TO STA. 424+50.00

HAM-75-7.85

426
2017

FOR INFORMATION ONLY

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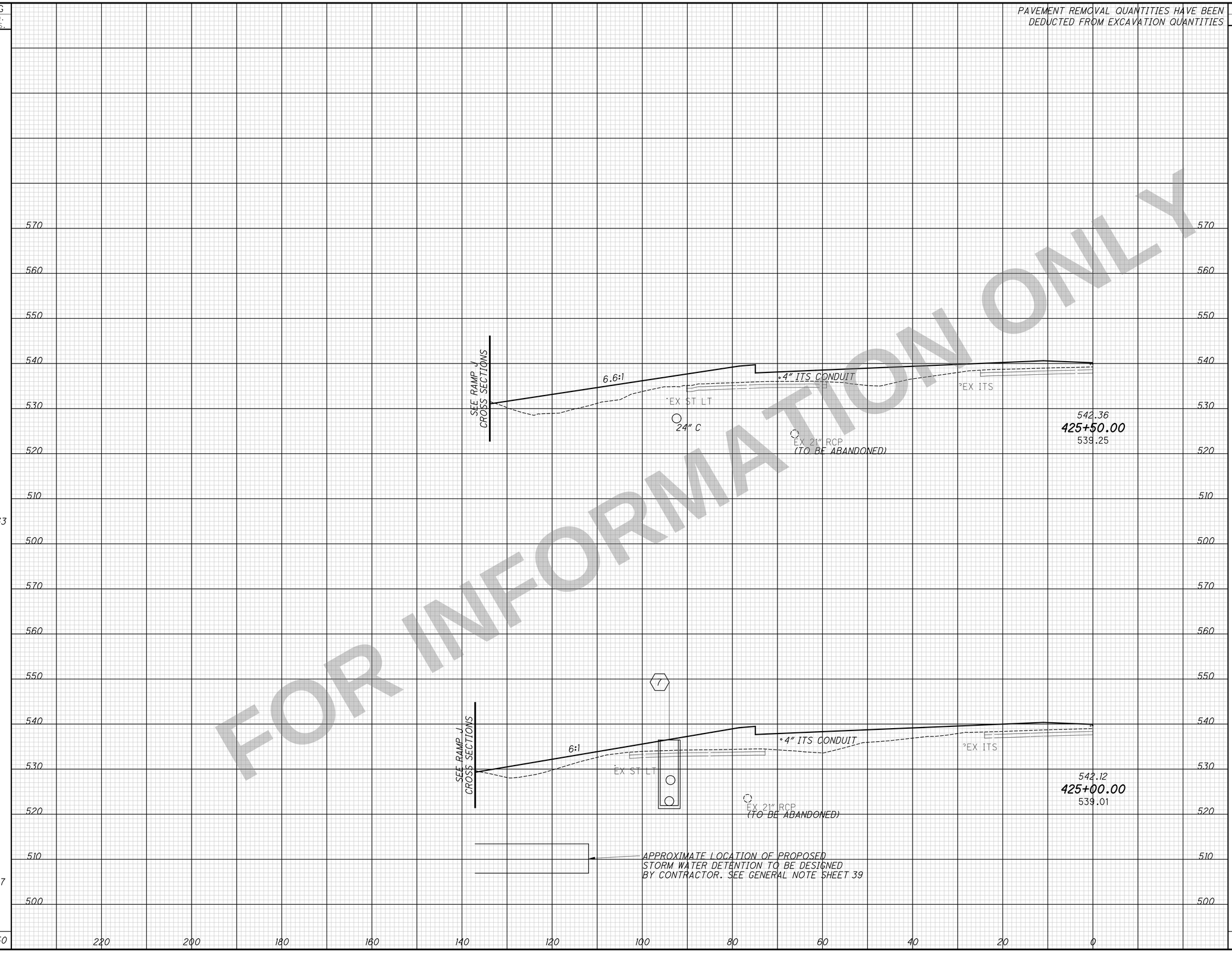
SEEDING	
END WIDTH	SQ. YDS.
115	633
112	517
	1150

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA

CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 425+00.00 TO STA. 425+50.00

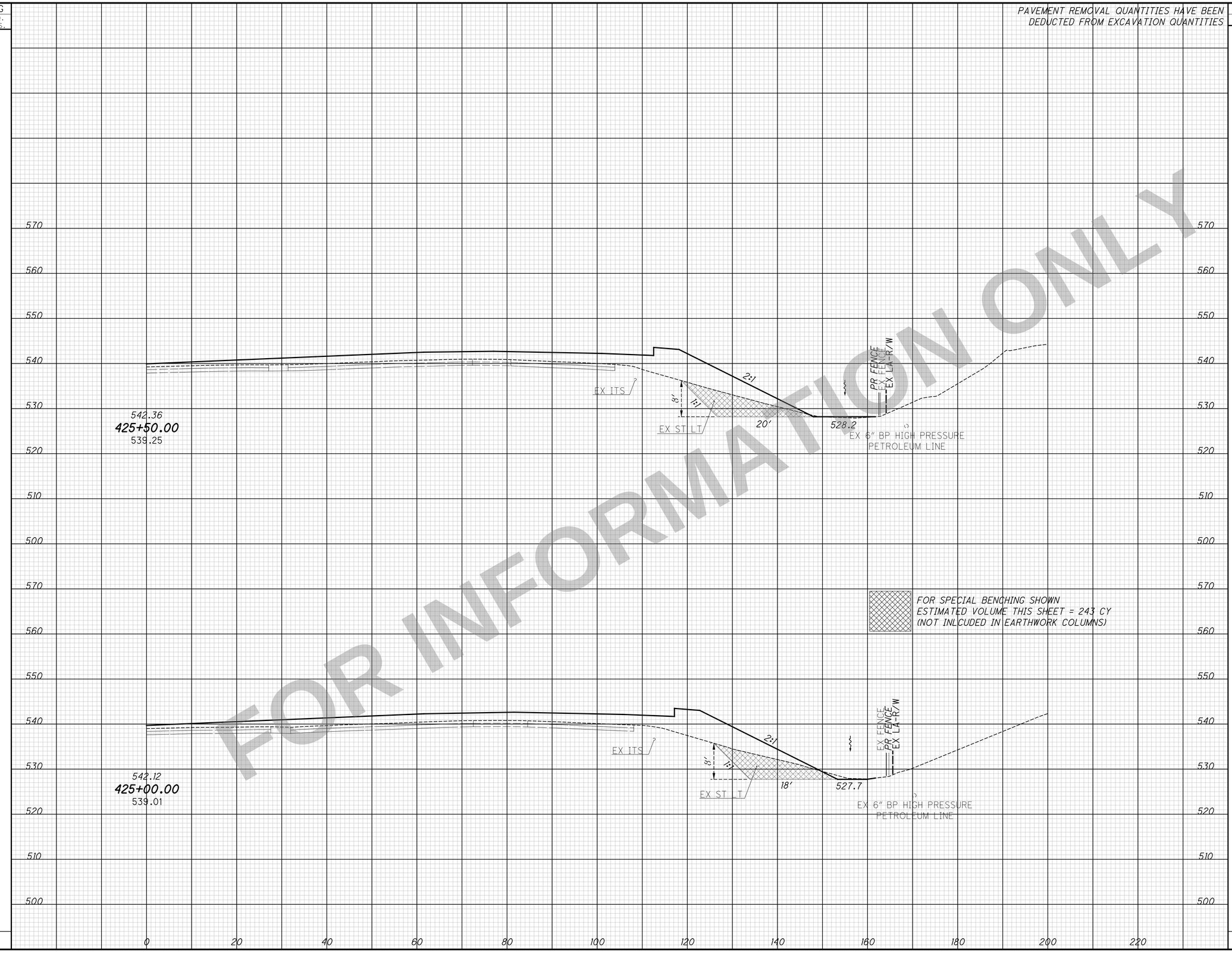
HAM-75-7.85

427
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1	889		
		4	1637
4	879		
		15	1380
		19	3017

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 425+00.00 TO STA. 425+50.00

HAM-75-7.85

428
2017

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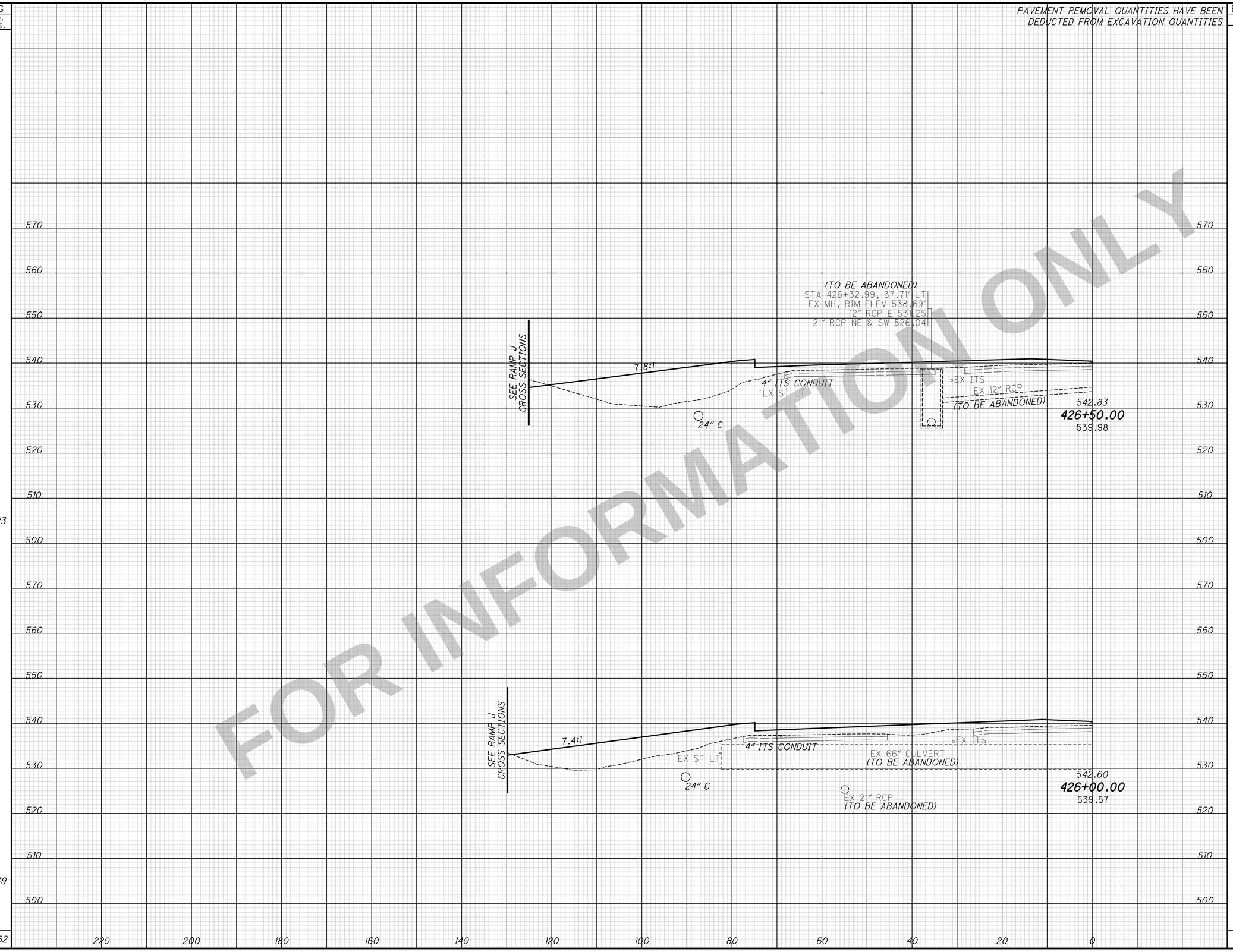
SEEDING	
END WIDTH	SQ. YDS.
108	
115	623
	639
	1262

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA

CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 426+00.00 TO STA. 426+50.00

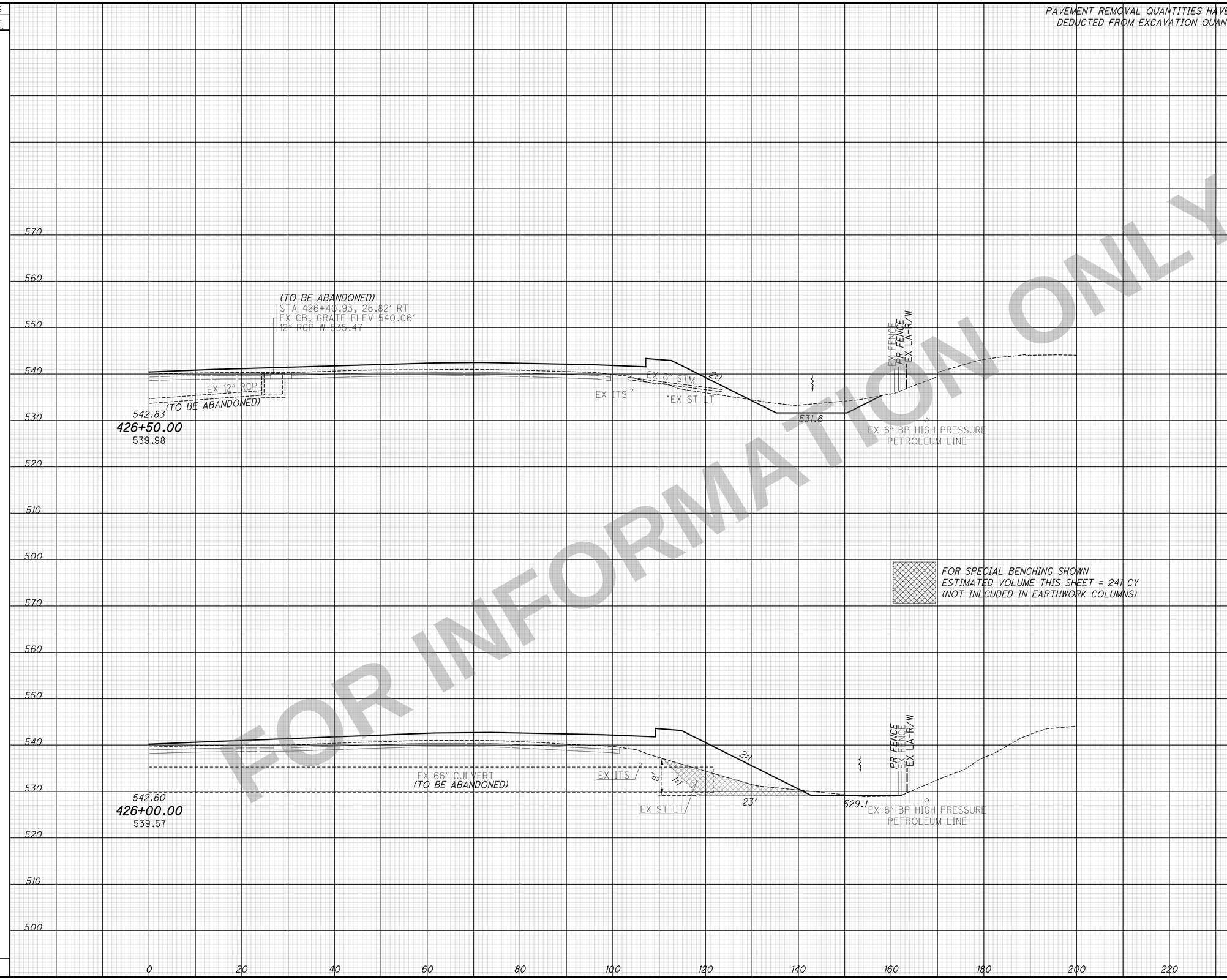
HAM-75-7.85

429
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA		VOLUME	
CUT	FILL	CUT	FILL
50	794		
		51	1550
5	880		
		5	1638
		56	3188

CALCULATED SEA

CHECKED DLR

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 426+00.00 TO STA. 426+50.00

HAM-75-7.85

430
2017

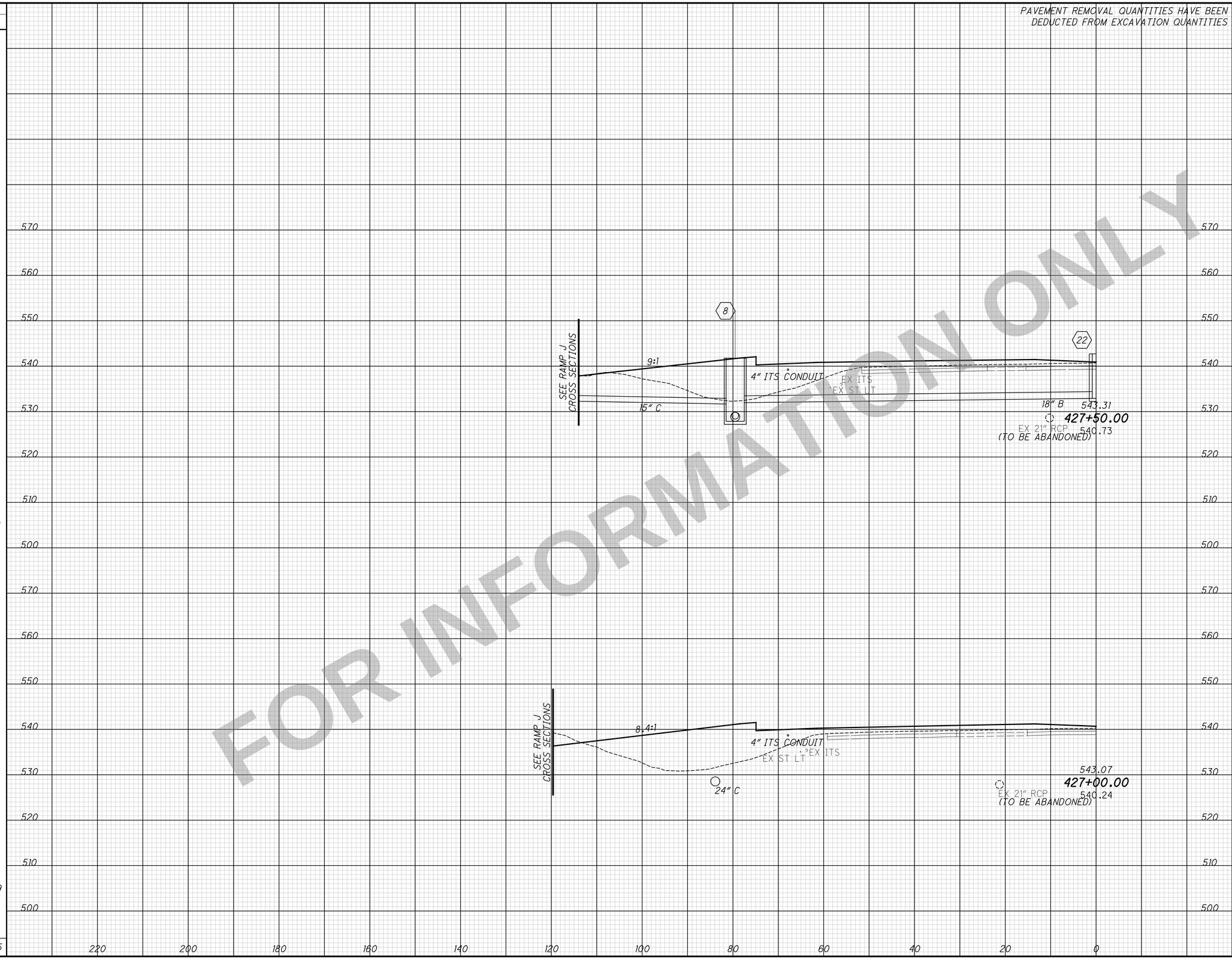
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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING	
END WIDTH	SQ. YDS.
83	516
103	589
1105	

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA
CHECKED DLR



FOR INFORMATION ONLY

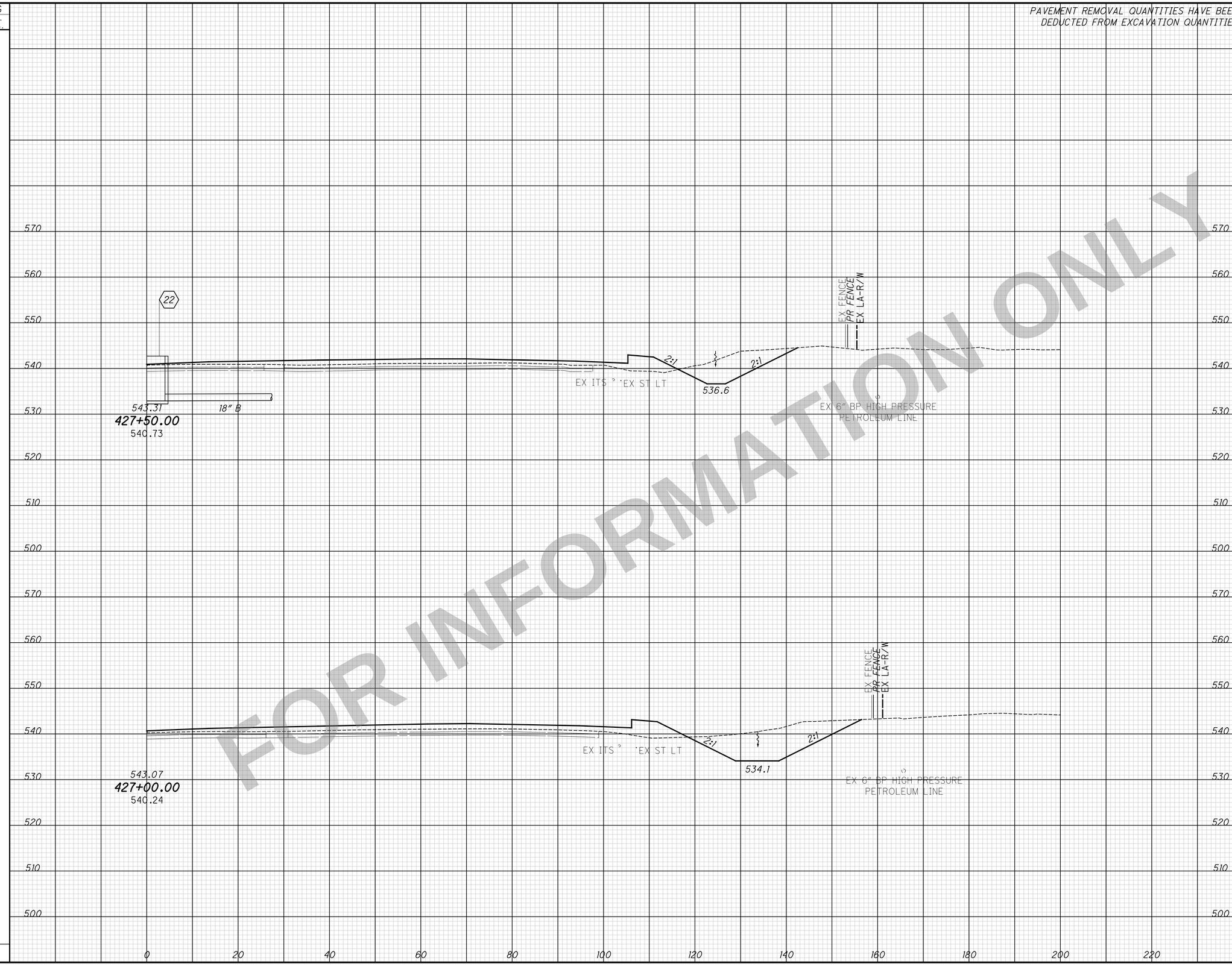
CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 427+00.00 TO STA. 427+50.00

HAM-75-7.85

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
88	641		
		242	1256
173	716		
		206	1399
		448	2655

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 427+00.00 TO STA. 427+50.00

HAM-75-7.85

432
2017

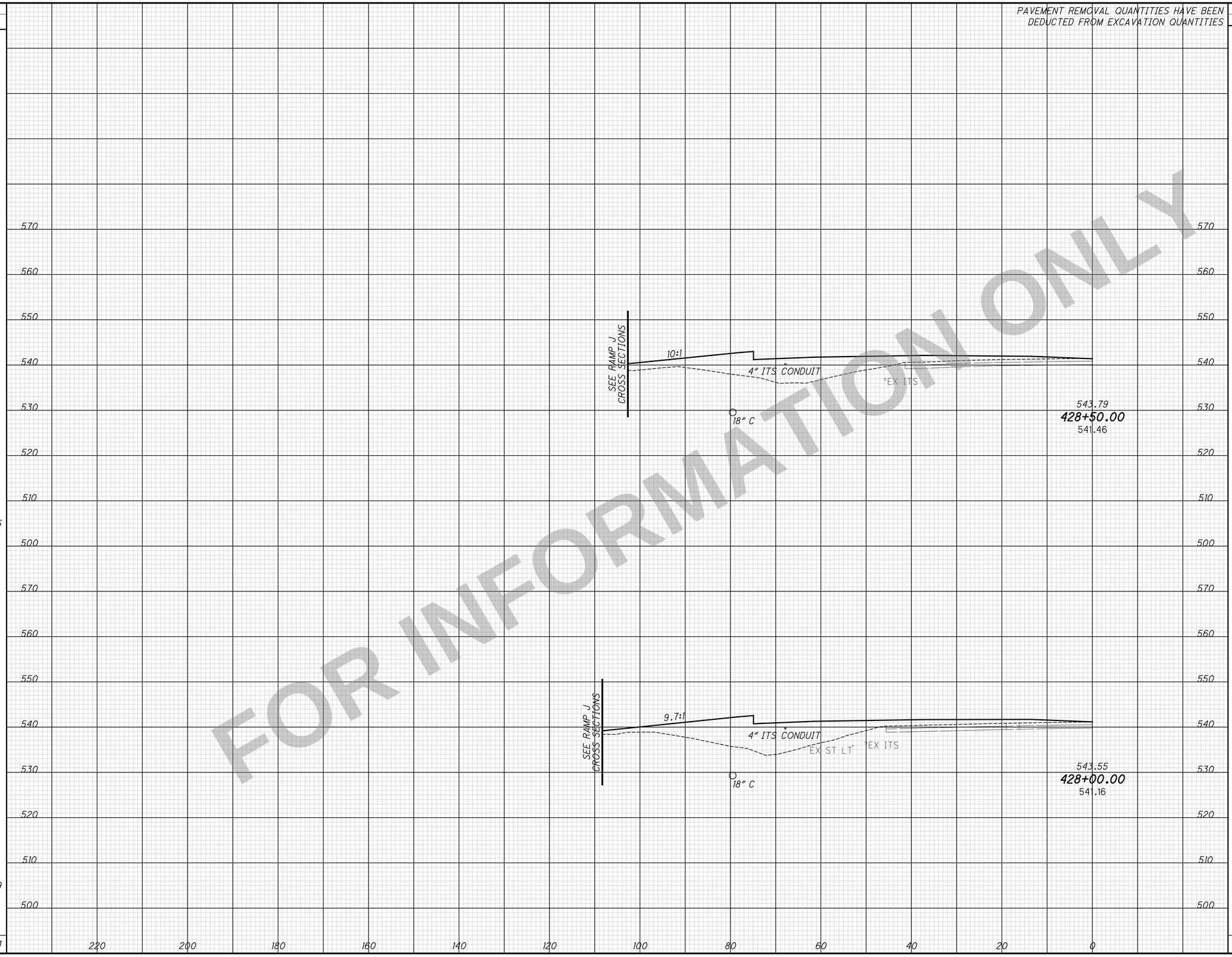
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SEEDING	
END WIDTH	SQ. YDS.
67	
	395
75	
	439
	834

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA
CHECKED DLR



FOR INFORMATION ONLY

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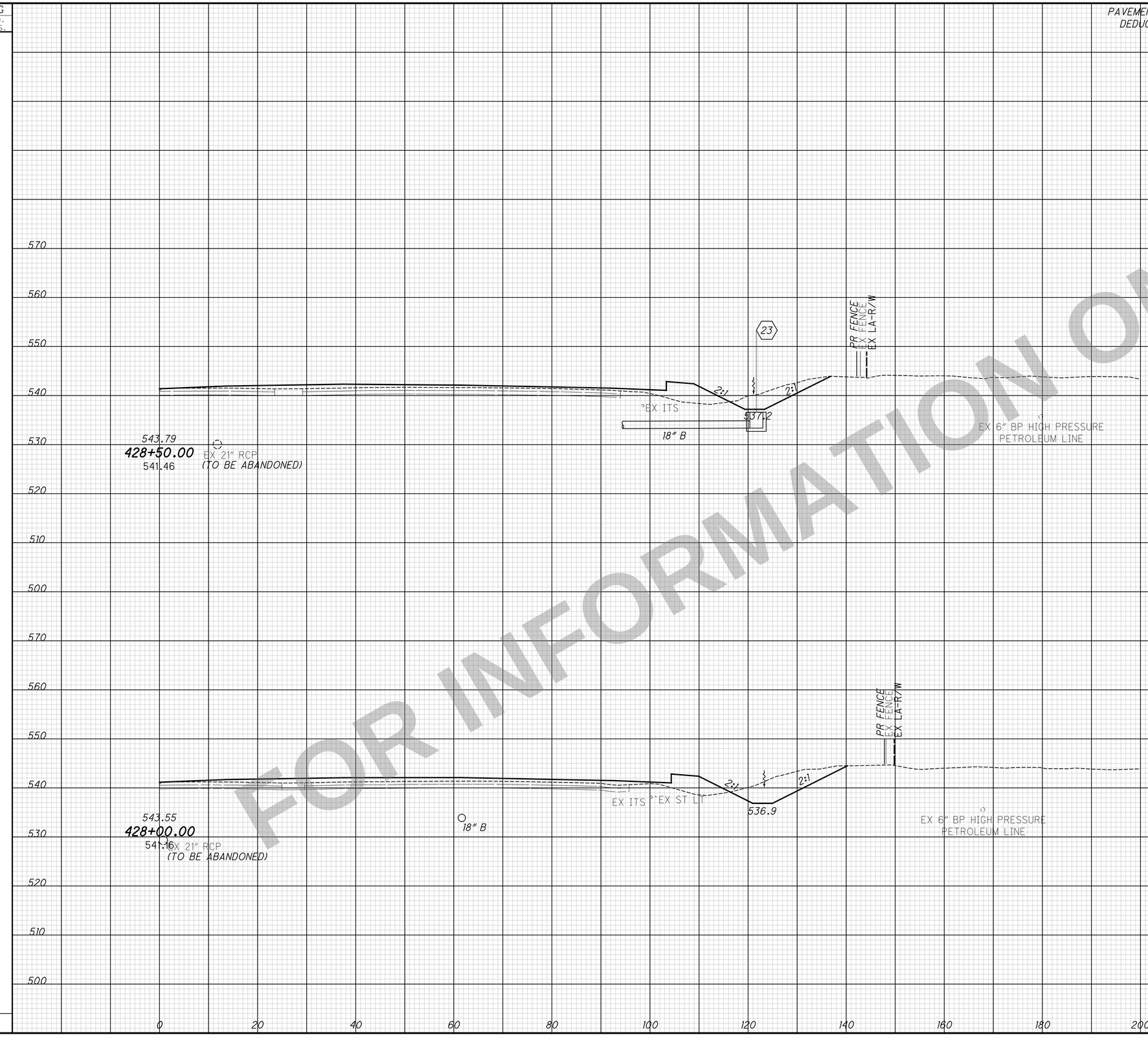
CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 428+00.00 TO STA. 428+50.00

HAM-75-7.85

433
2017

SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
43	525		
		104	1023
70	580		
		146	1130
		250	2153

CALCULATED SEA

CHECKED DLR

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 428+00.00 TO STA. 428+50.00

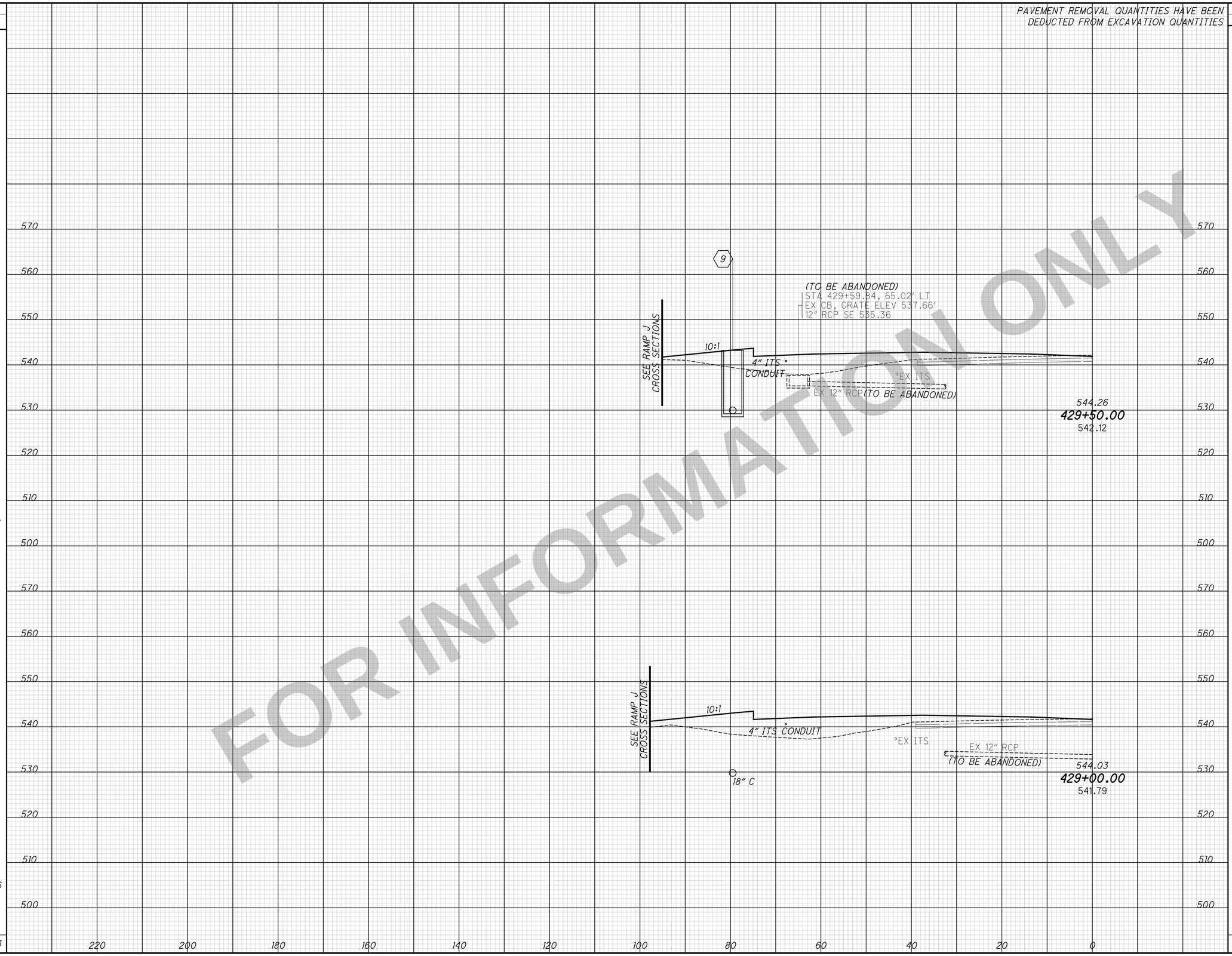
HAM-75-7.85

434
2017

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SEEDING	
END WIDTH	SQ. YDS.
55	
	317
59	
	356
	673

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA

CHECKED DLR

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 429+00.00 TO STA. 429+50.00

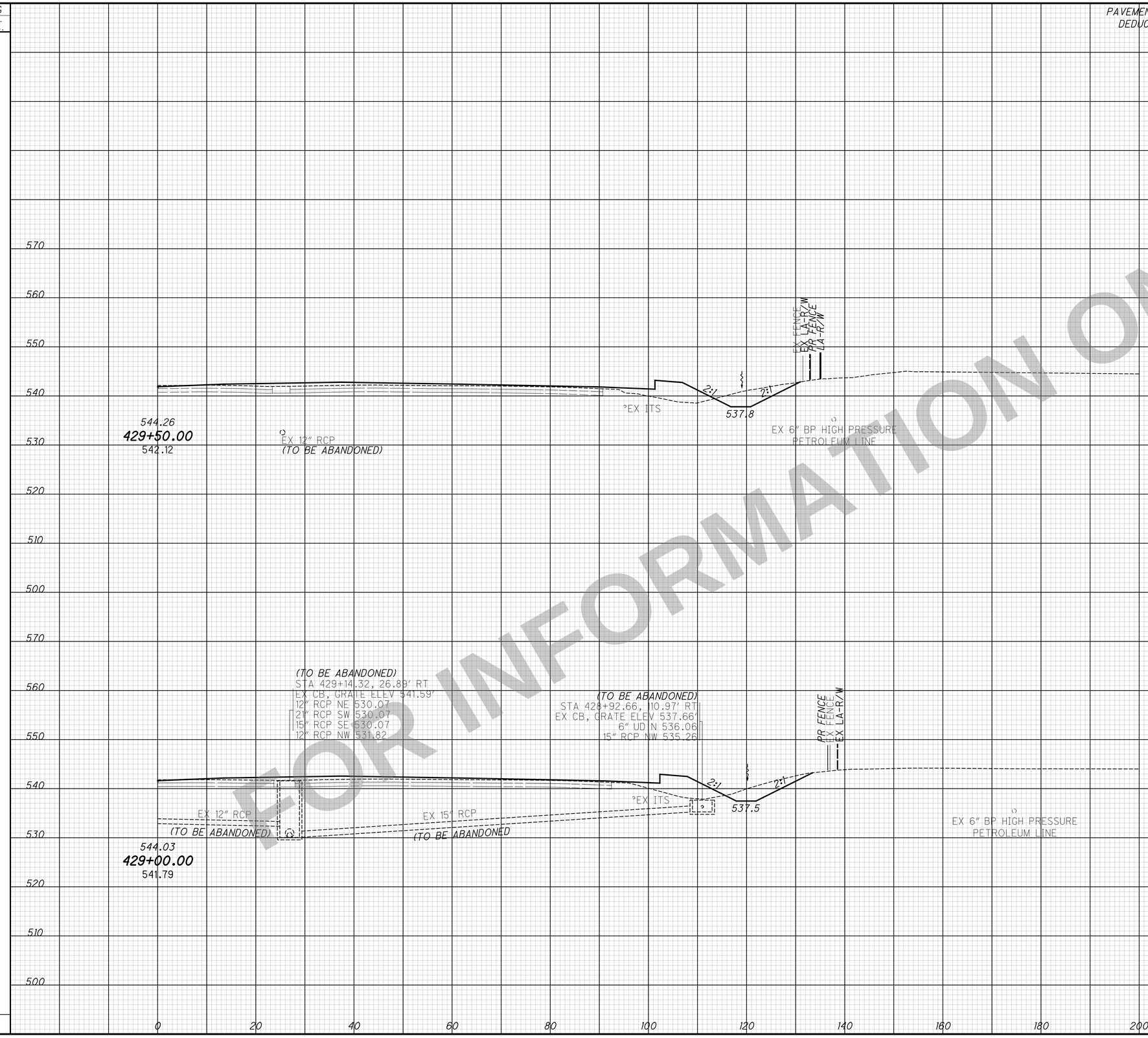
HAM-75-7.85

435
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
34	454		
		60	878
31	494		
		68	944
		128	1822

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 429+00.00 TO STA. 429+50.00

HAM-75-7.85

436
2017

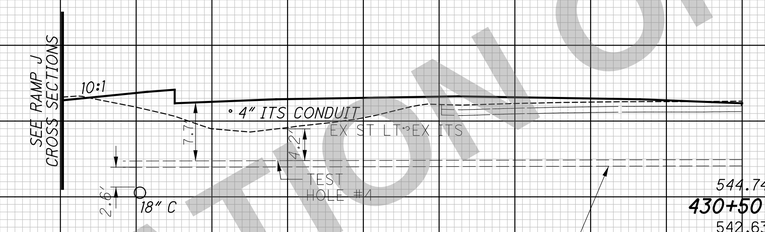
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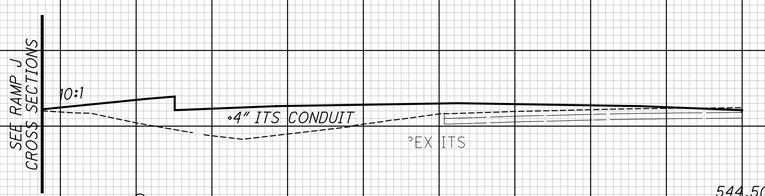
SEEDING	
END WIDTH	SQ. YDS.
46	272
51	300
572	

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA
CHECKED DLR





FOR INFORMATION ONLY

220 200 180 160 140 120 100 80 60 40 20 0

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 430+00.00 TO STA. 430+50.00

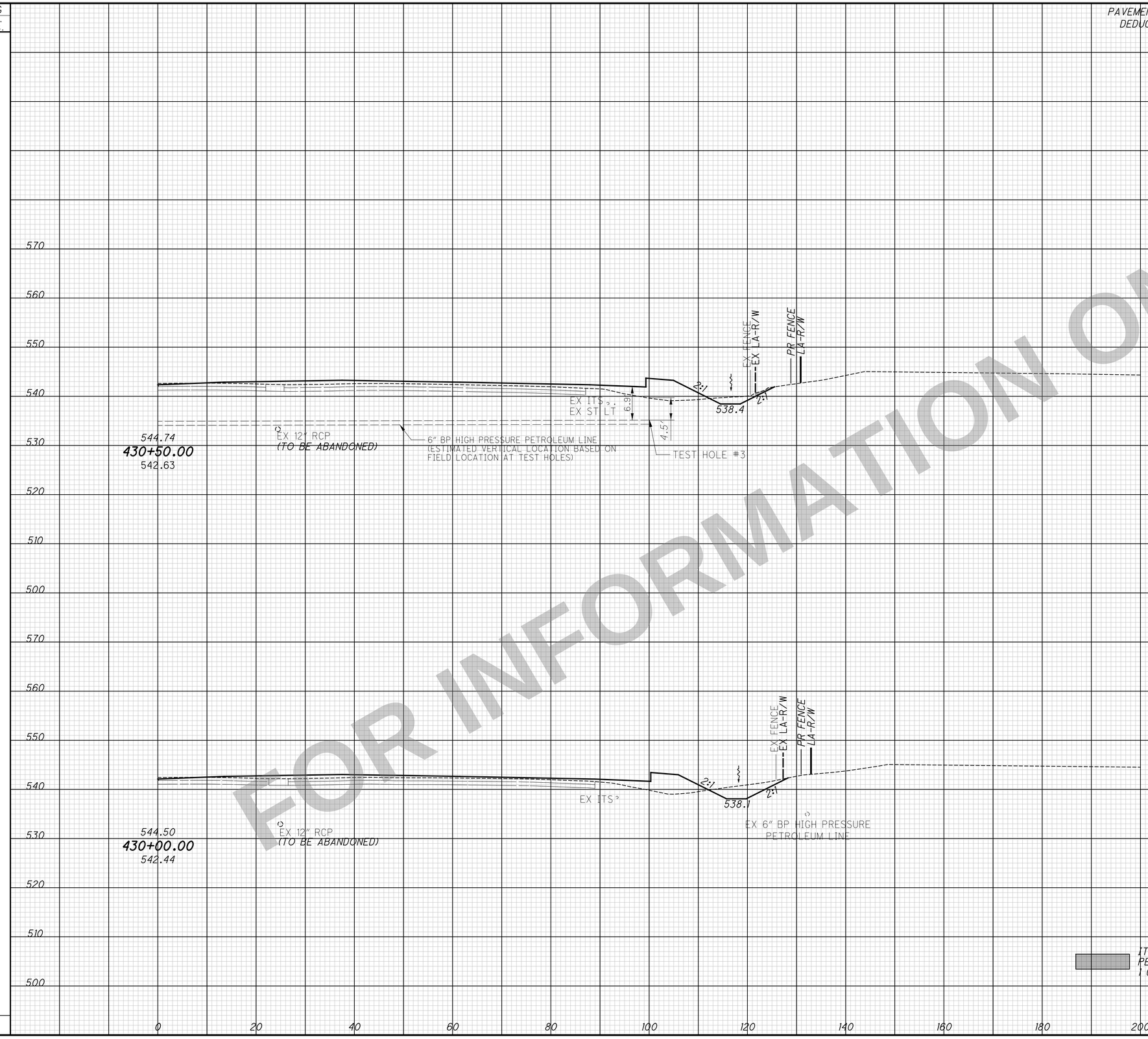
HAM-75-7.85

437
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
11	410		
26	420		
34	769		
55	810		
89	1579		

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 430+00.00 TO STA. 430+50.00

HAM-75-7.85

438
2017

J:\20110903\ODOT\HAM\77889\roadway\sheets\77889XS001.dgn 2/18/2022 1:37:26 PM efoley

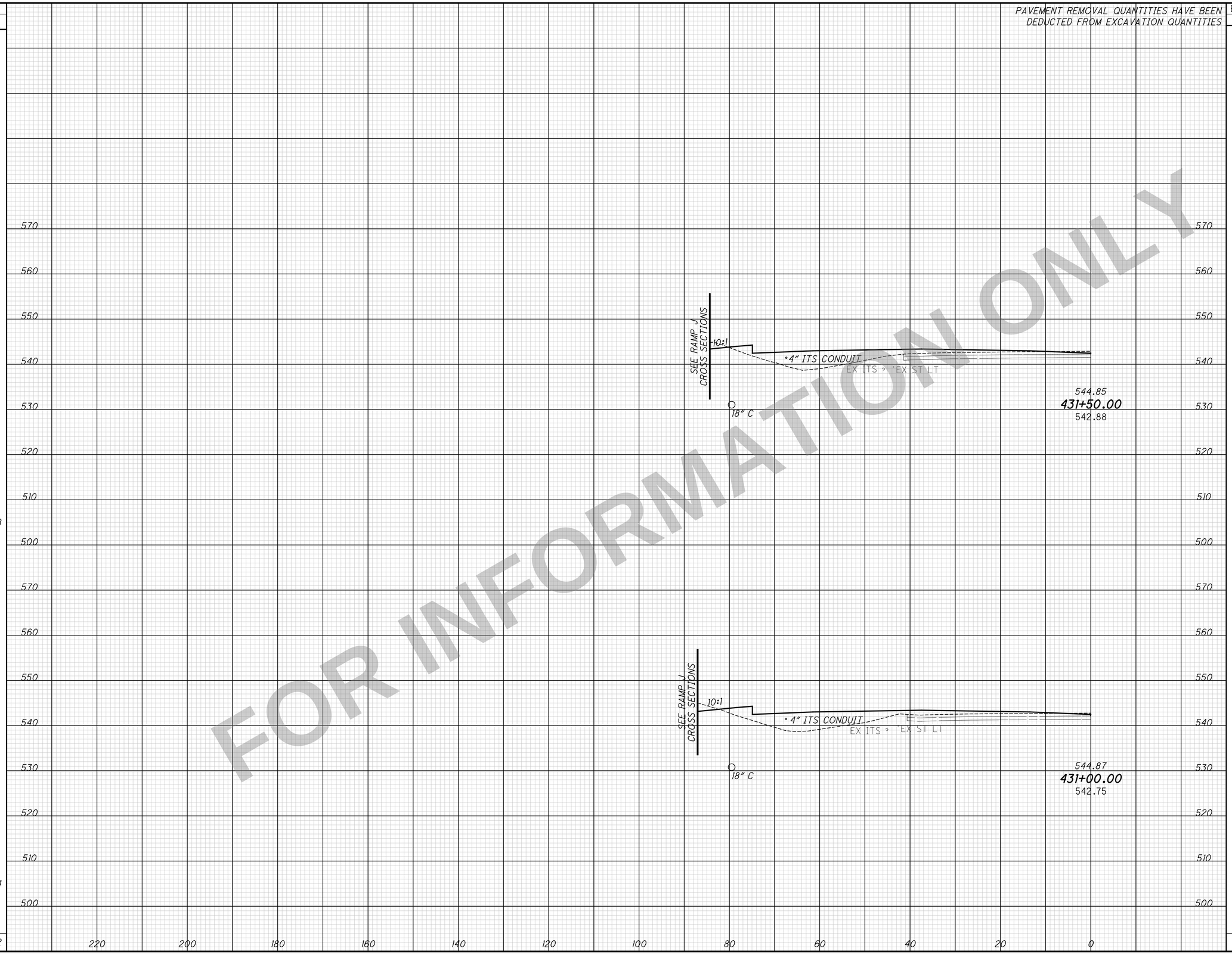
SEEDING	
END WIDTH	SQ. YDS.
38	
	228
42	
	244
472	

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA

CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 431+00.00 TO STA. 431+50.00

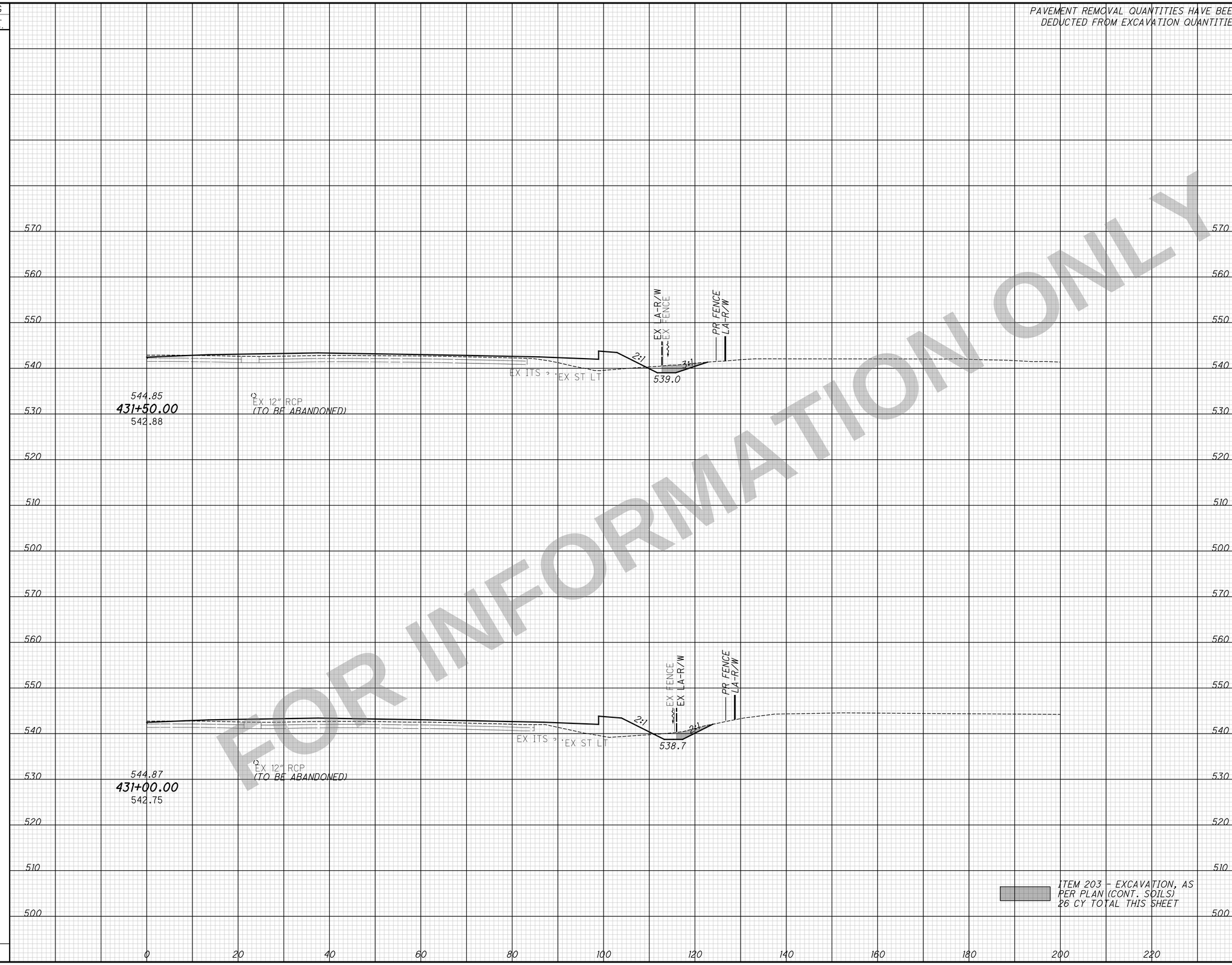
HAM-75-7.85

439
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
7	358		
		15	700
10	398		
		19	749
		34	1449

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 431+00.00 TO STA. 431+50.00

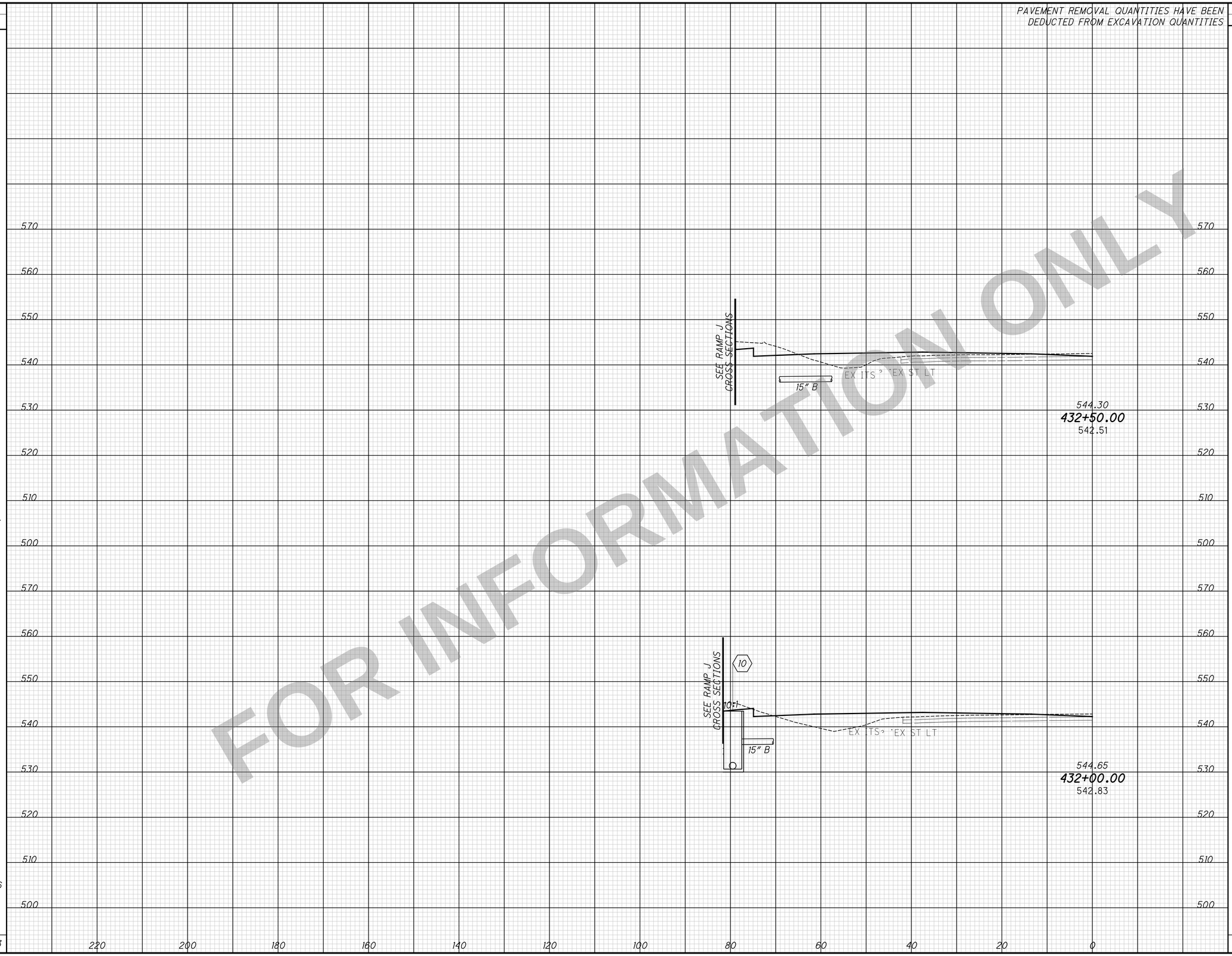
HAM-75-7.85

440
2017

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SEEDING	
END WIDTH	SQ. YDS.
25	167
34	206
	373

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 432+00.00 TO STA. 432+50.00

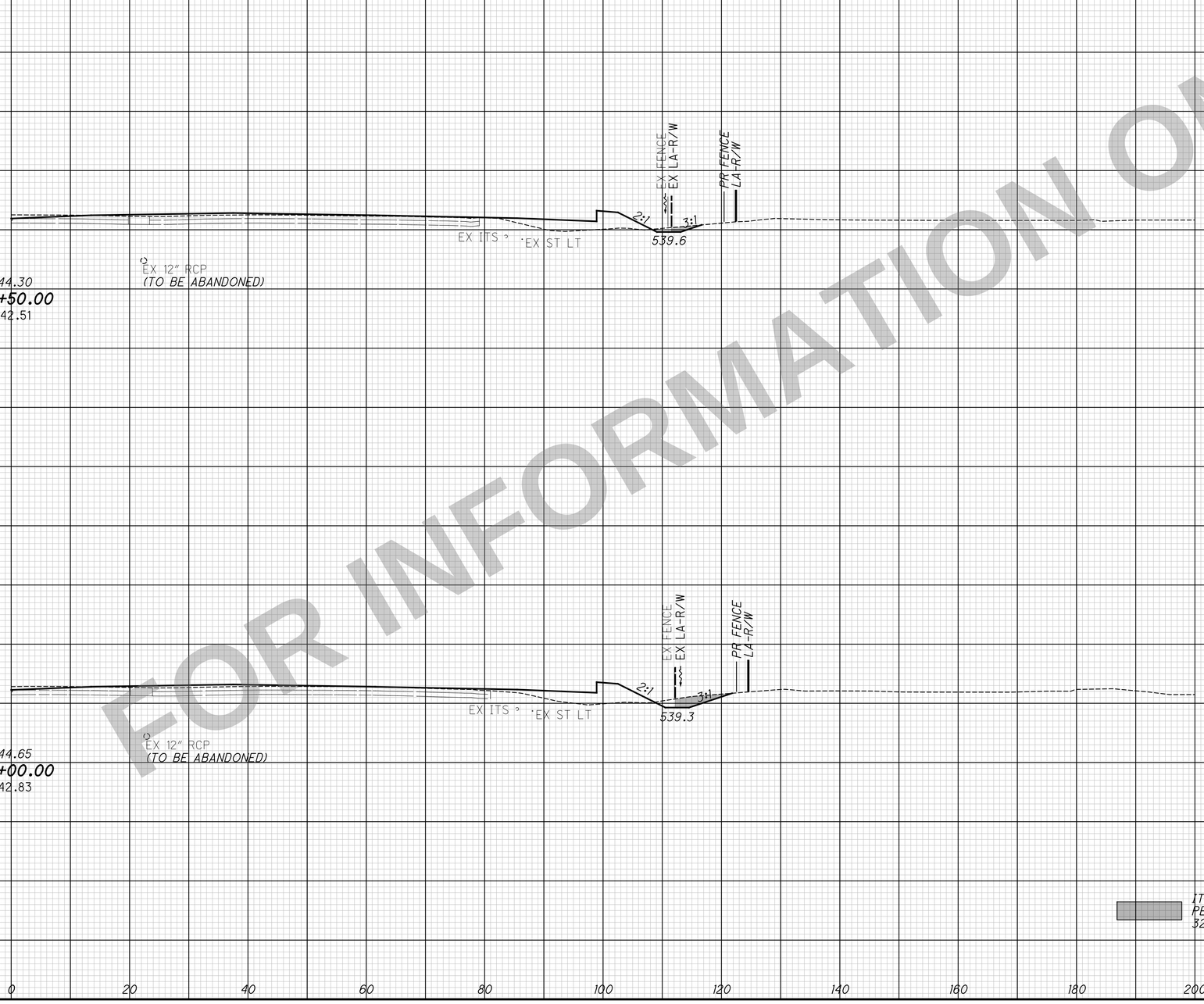
HAM-75-7.85

441
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
26	272		
		37	527
14	297		
		19	606
		56	1133

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 432+00.00 TO STA. 432+50.00

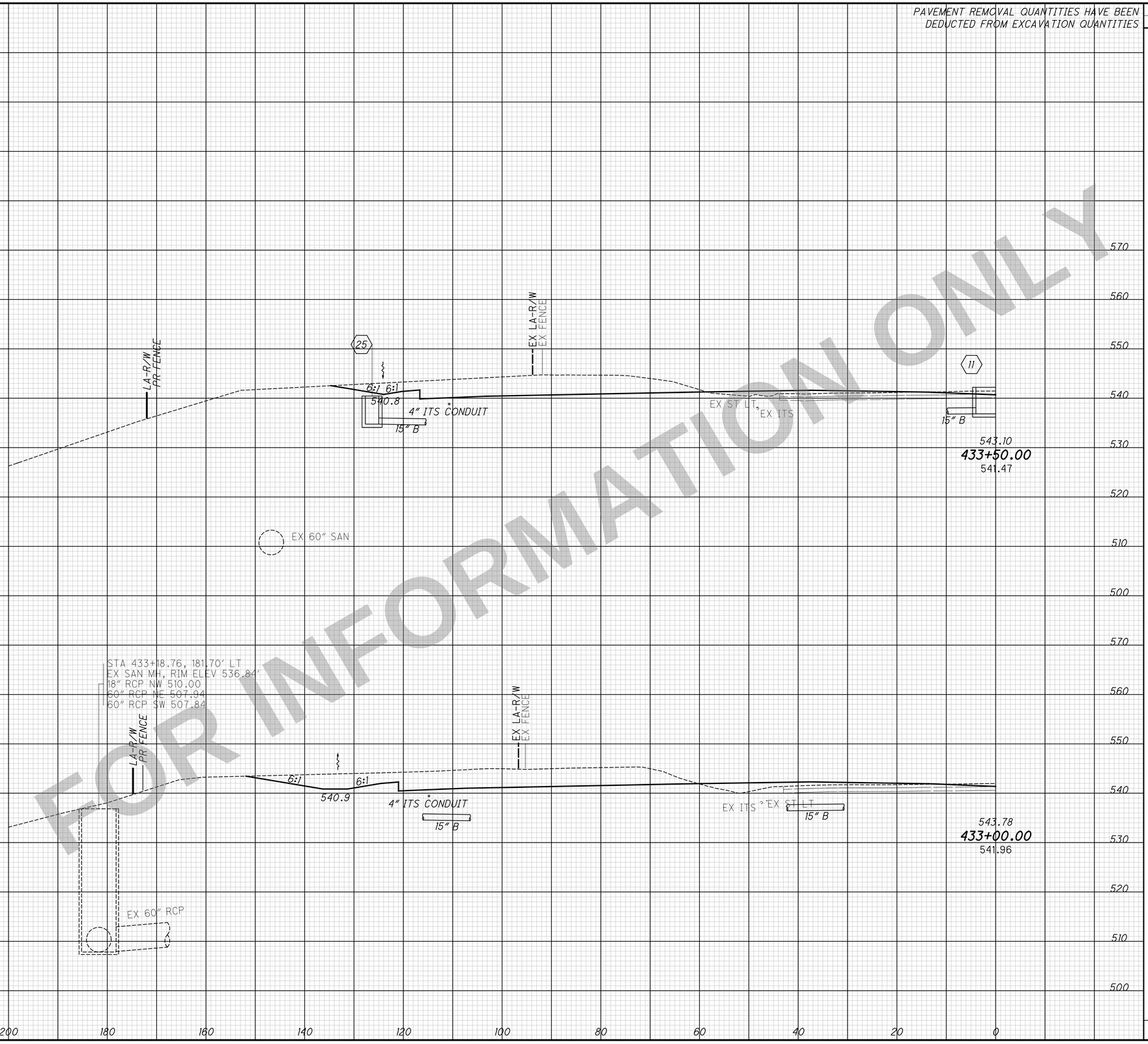
HAM-75-7.85

442
2017

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SEEDING	
END WIDTH	SQ. YDS.
35	250
53	217
	467

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA
CHECKED DLR

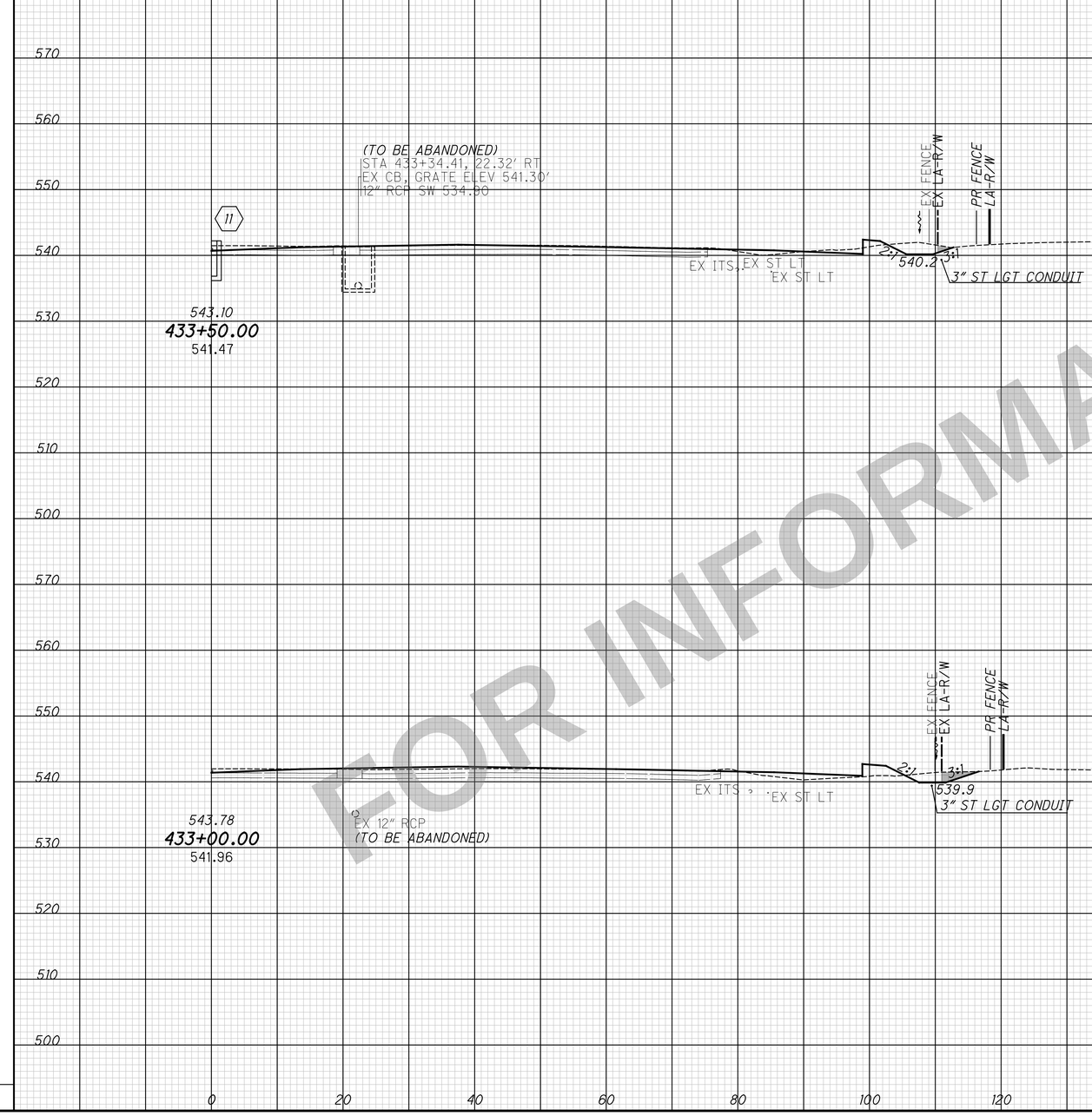
CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 433+00.00 TO STA. 433+50.00

HAM-75-7.85

443
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



ITEM 203 - EXCAVATION, AS PER PLAN (CONT. SOILS)
14 CY TOTAL THIS SHEET

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		237	179		
		274	221		
		473	370		
		278	456		
				751	826

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 433+00.00 TO STA. 433+50.00

HAM-75-7.85

444
2017

FOR INFORMATION ONLY

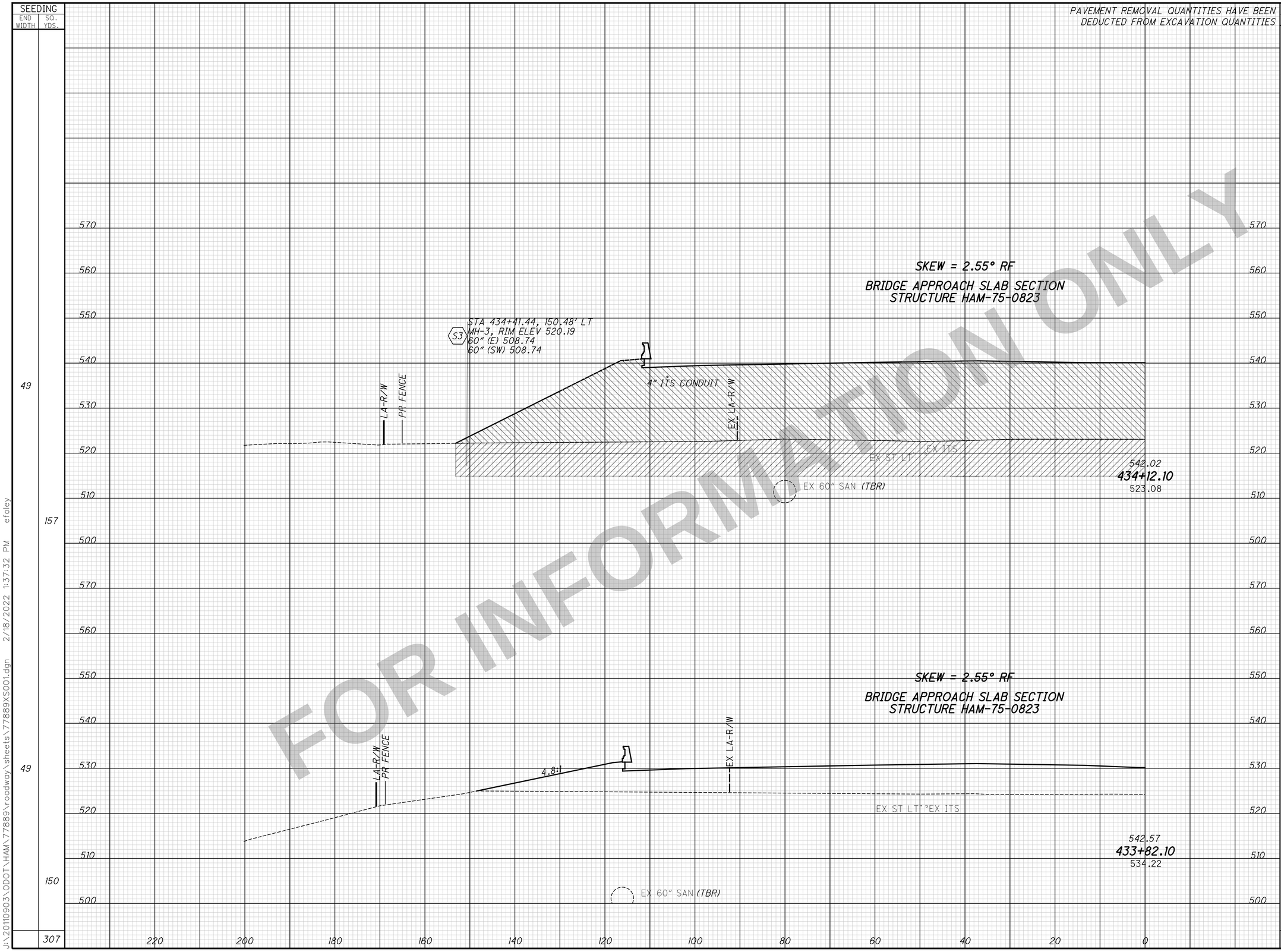
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SEEDING	
END WIDTH	SQ. YDS.
49	157
49	150
	307

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA
CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 433+82.10 TO STA. 434+12.10

HAM-75-7.85

445
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SKEW = 2.55° RF

BRIDGE APPROACH SLAB SECTION
STRUCTURE HAM-75-0823

4" ITS CONDUIT

3" ST LGT CONDUIT

PR FENCE

EMBANKMENT INCLUDED WITH MSE WALL G QUANTITIES

EXCAVATION & EMBANKMENT INCLUDED WITH MSE WALL G QUANTITIES

EX ITS EX ST LT

542.02
434+12.10
523.08

SKEW = 2.55° RF

BRIDGE APPROACH SLAB SECTION
STRUCTURE HAM-75-0823

EX LA R/W

PR FENCE
LA-R/W

3:6:1

EX ITS EX ST LT

542.57
433+82.10
534.22

570 560 550 540 530 520 510 500

0 20 40 60 80 100 120 140 160 180 200 220

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		0	0		
				0	829
		0	1493		
				141	994
				141	1823

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 433+82.10 TO STA. 434+12.10

HAM-75-7.85

446
2017

FOR INFORMATION ONLY

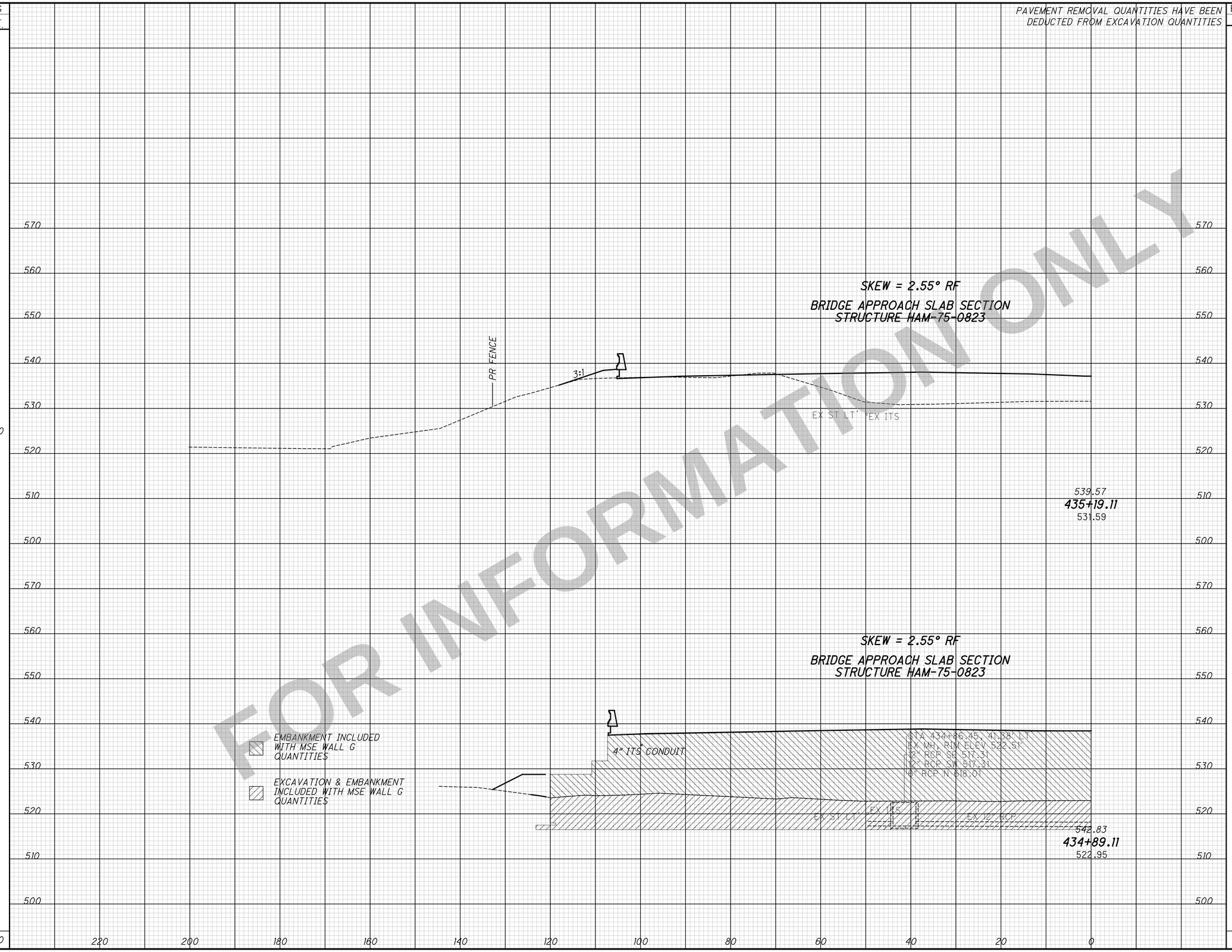
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SEEDING	
END WIDTH	SQ. YDS.
45	140
39	0
140	

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA
CHECKED DLR



SKEW = 2.55° RF

BRIDGE APPROACH SLAB SECTION
STRUCTURE HAM-75-0823

SKEW = 2.55° RF

BRIDGE APPROACH SLAB SECTION
STRUCTURE HAM-75-0823

FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 434+89.11 TO STA. 435+19.11

HAM-75-7.85

447
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SKEW = 2.55° RF

BRIDGE APPROACH SLAB SECTION
STRUCTURE HAM-75-0823

4:1

EX LA-R/W

PR FENCE
LA-R/W

EX ITS° °EX ST L°

539.57
435+19.11
531.59

SKEW = 2.55° RF

BRIDGE APPROACH SLAB SECTION
STRUCTURE HAM-75-0823

STA 434+89.40, 24.03' RT
EX MH, RIM ELEV 522.86'
18" RCP NE 517.76
12" RCP NW 517.06

EX LA-R/W

LA-R/W

EX 12" RCP

4" ITS CONDUIT°

EX ITS° EX ST L°

543.83
434+89.11
522.95

570 560 550 540 530 520 510 500

0 20 40 60 80 100 120 140 160 180 200 220

END AREA		VOLUME	
CUT	FILL	CUT	FILL
3	1181		
		2	677
0	37		
		0	0
		2	677

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 434+89.11 TO STA. 435+19.11

HAM-75-7.85

448
2017

FOR INFORMATION ONLY

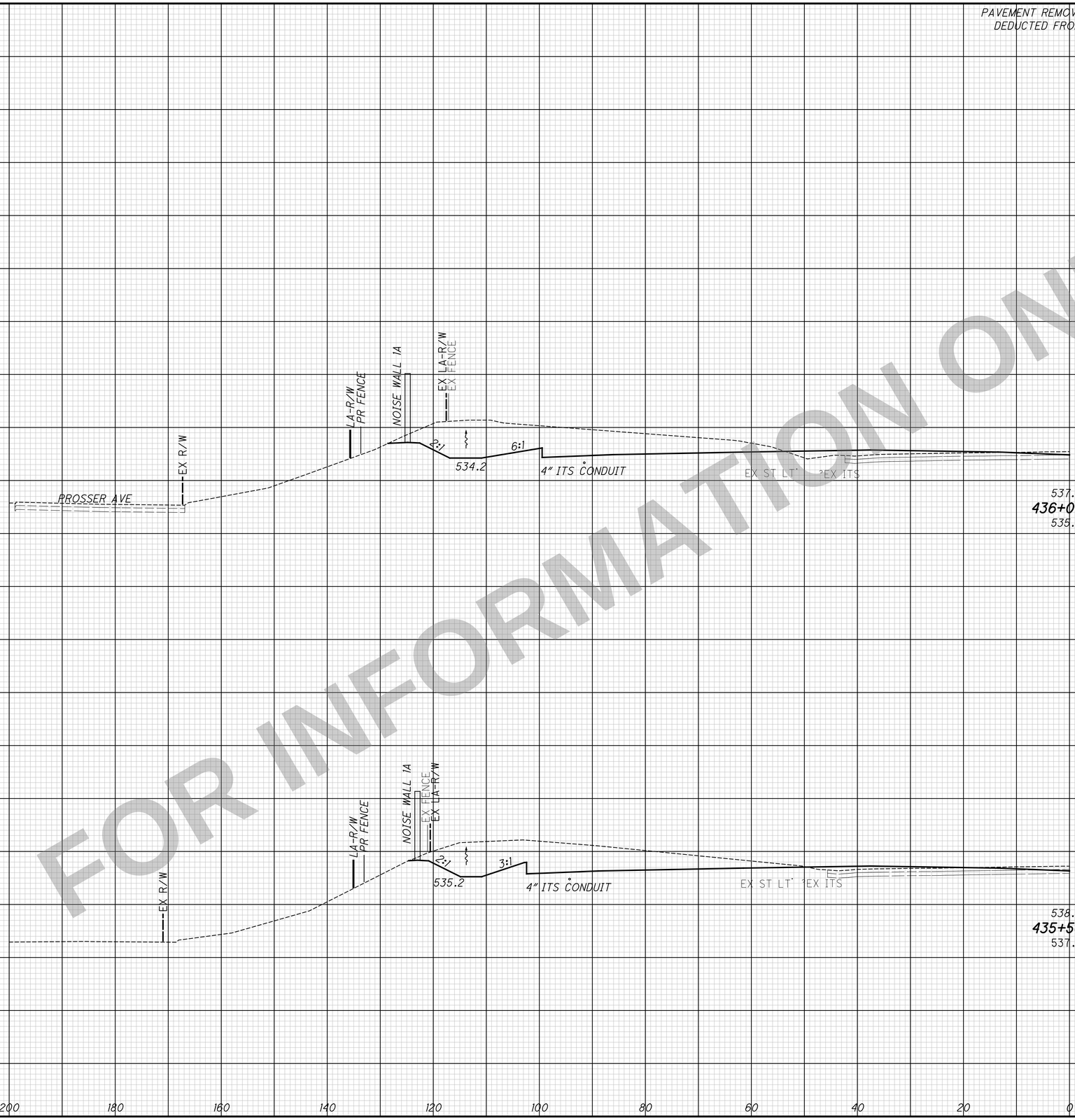
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SEEDING	
END WIDTH	SQ. YDS.
75	406
70	199
	605

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA
CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 435+50.00 TO STA. 436+00.00

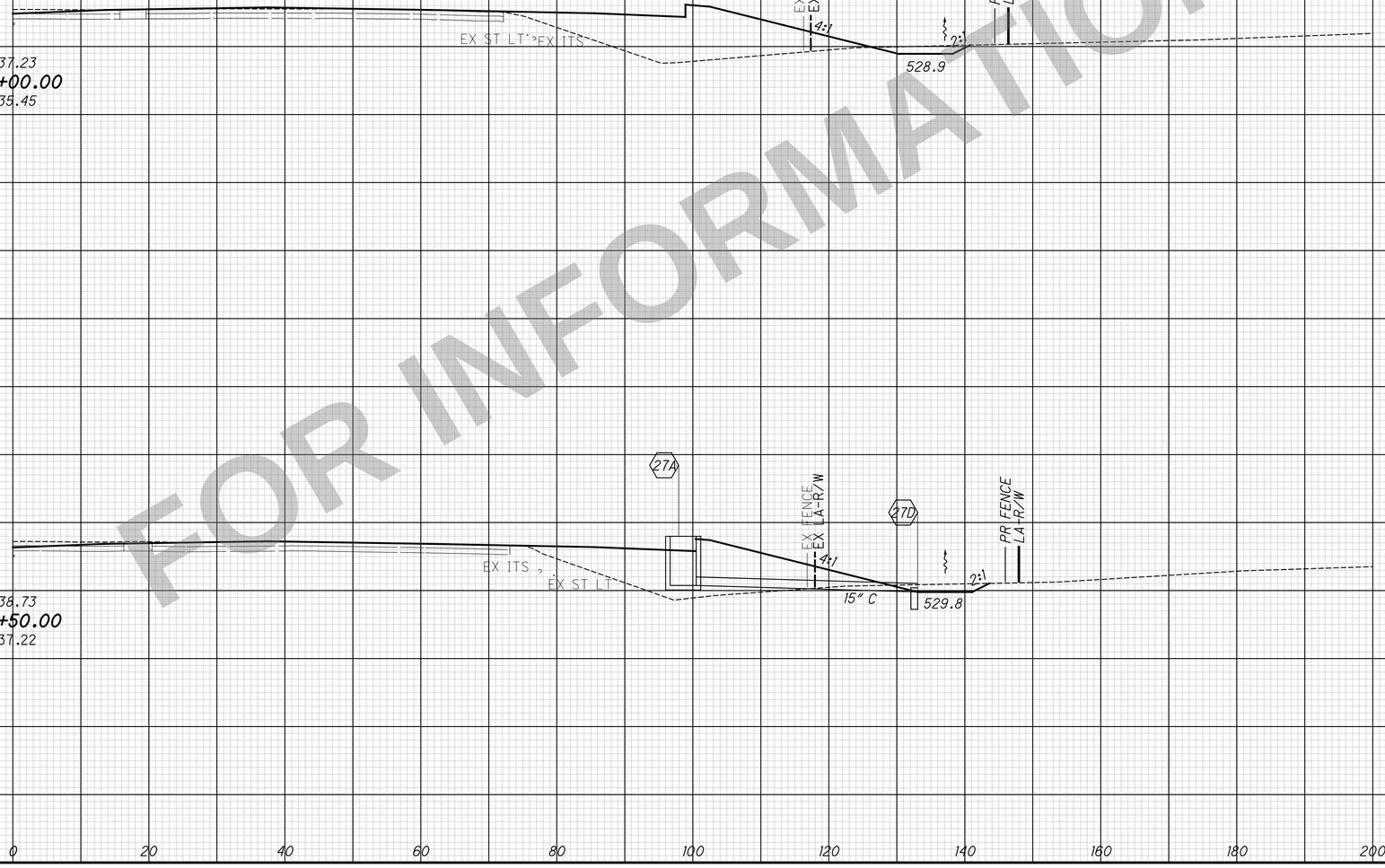
HAM-75-7.85

449
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
313	406		
272	387		
542	734		
158	897		
700	1631		

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 435+50.00 TO STA. 436+00.00

HAM-75-7.85

450
2017

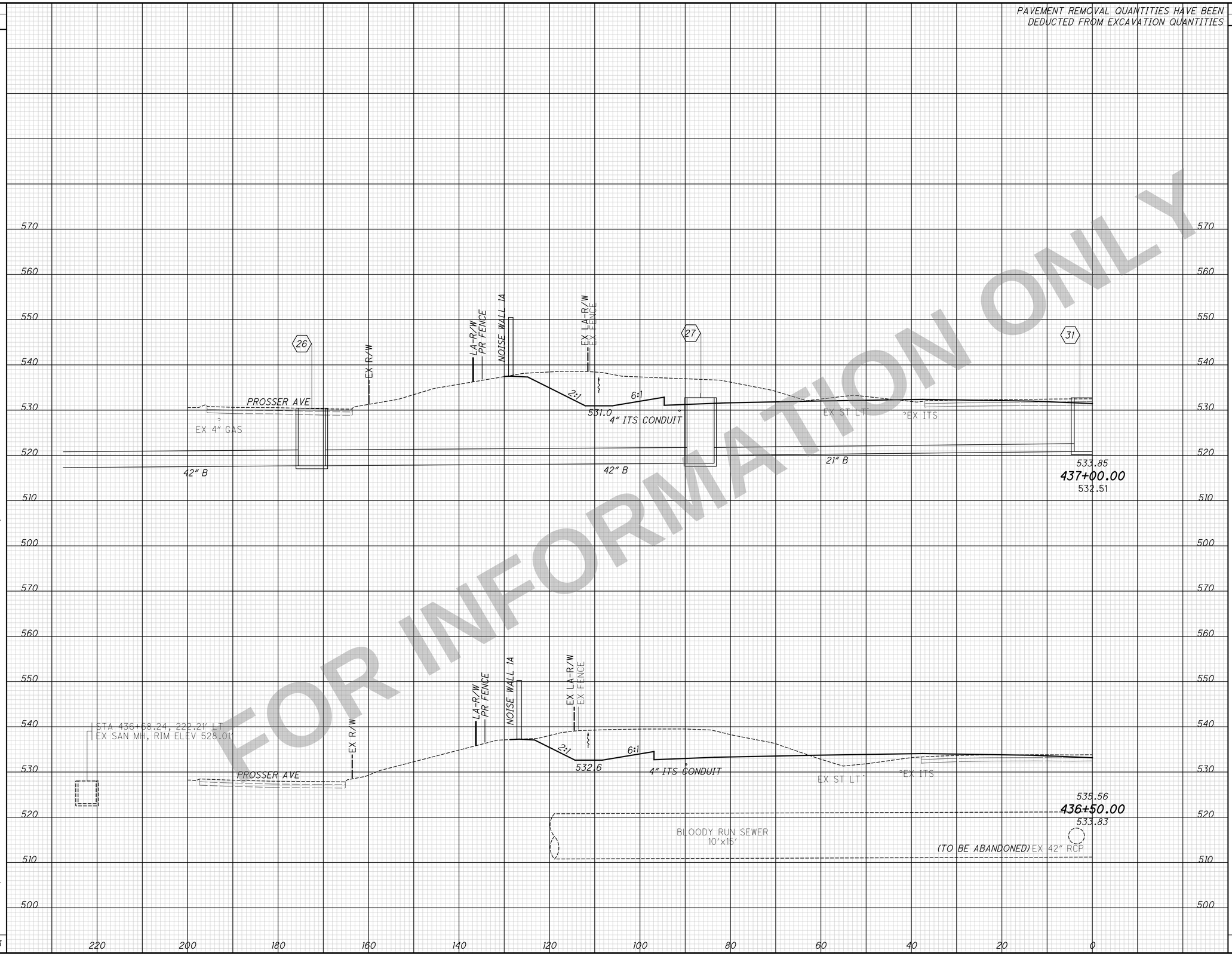
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SEEDING	
END WIDTH	SQ. YDS.
75	417
74	416
	833

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA
CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 436+50.00 TO STA. 437+00.00

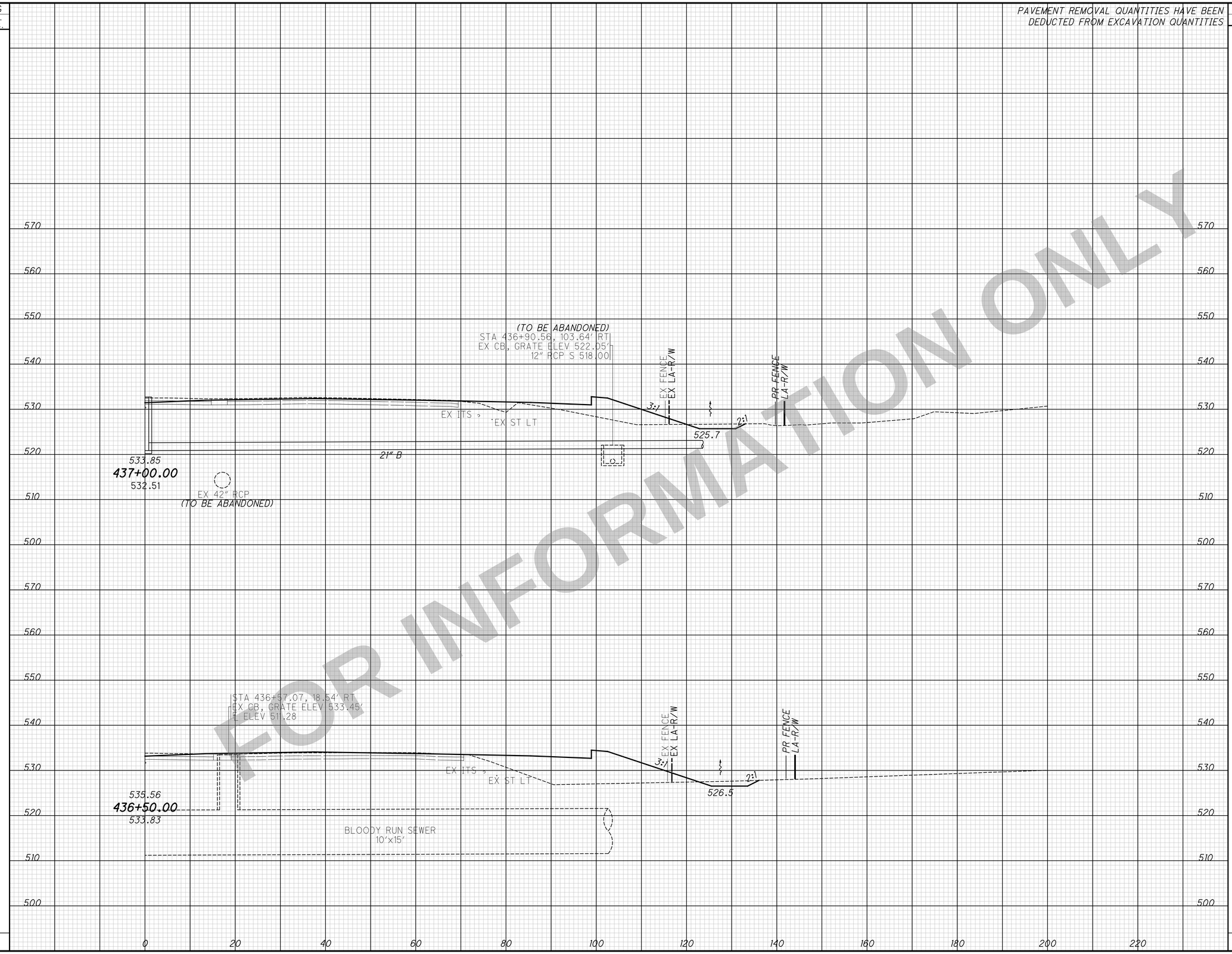
HAM-75-7.85

451
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA		VOLUME	
CUT	FILL	CUT	FILL
309	212		
		568	558
304	391		
		571	737
		1139	1295

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 436+50.00 TO STA. 437+00.00

HAM-75-7.85

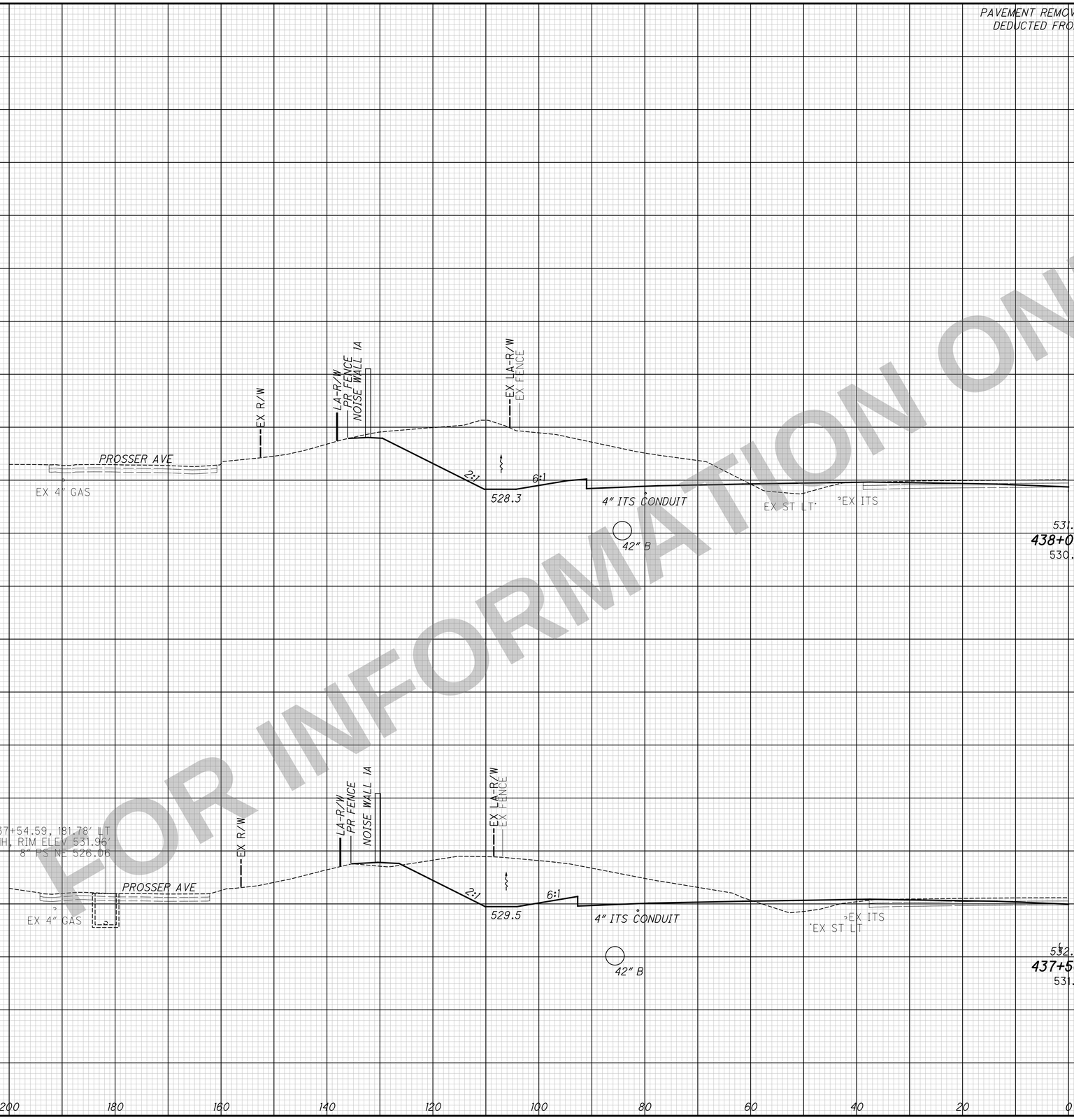
452
2017

FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SQ. YDS.
76	
	433
79	
	427
860	

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 437+50.00 TO STA. 438+00.00

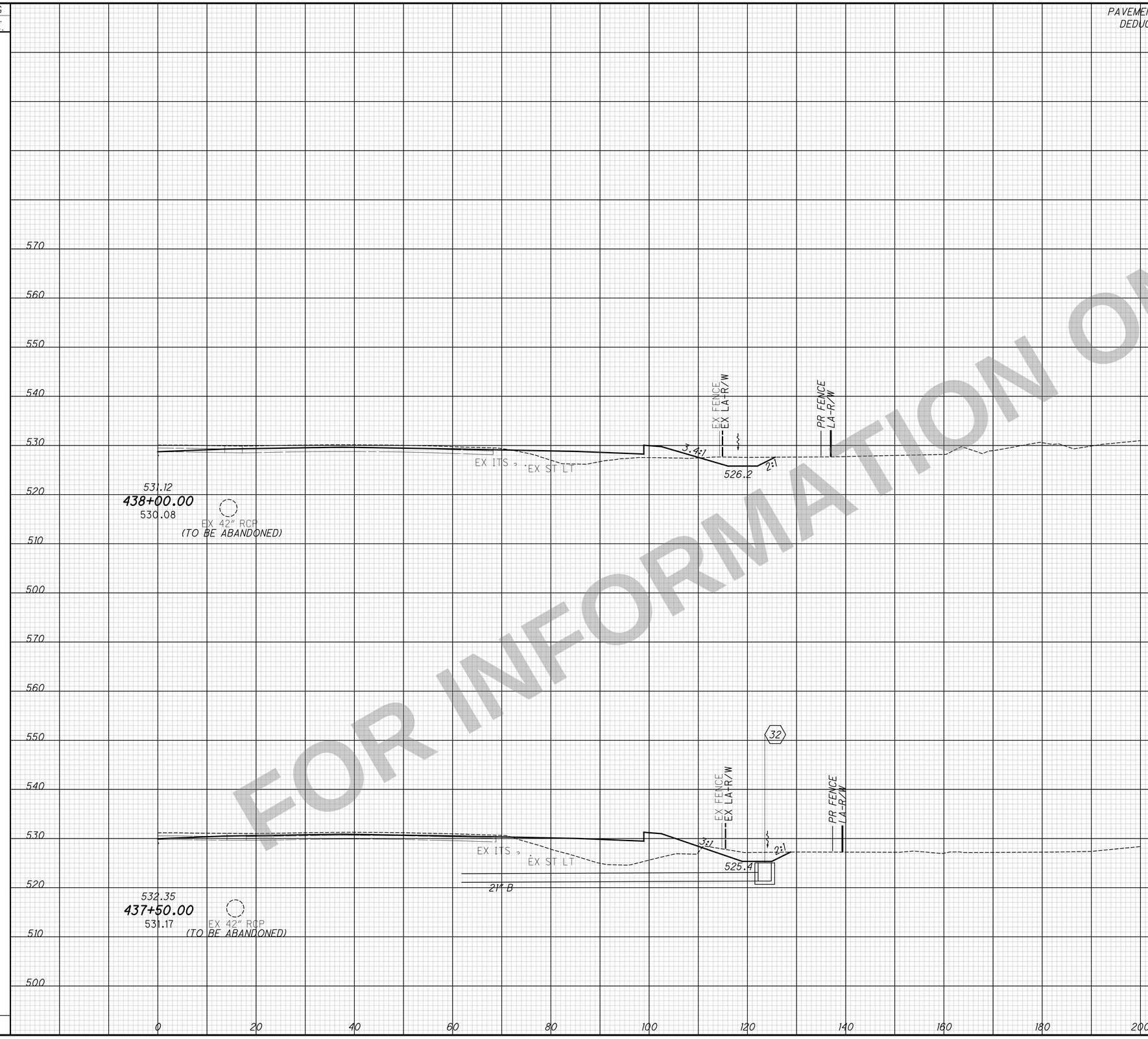
HAM-75-7.85

453
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
516	162		
378	253	828	385
		637	431
		1465	816

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 437+50.00 TO STA. 438+00.00

HAM-75-7.85

454
2017

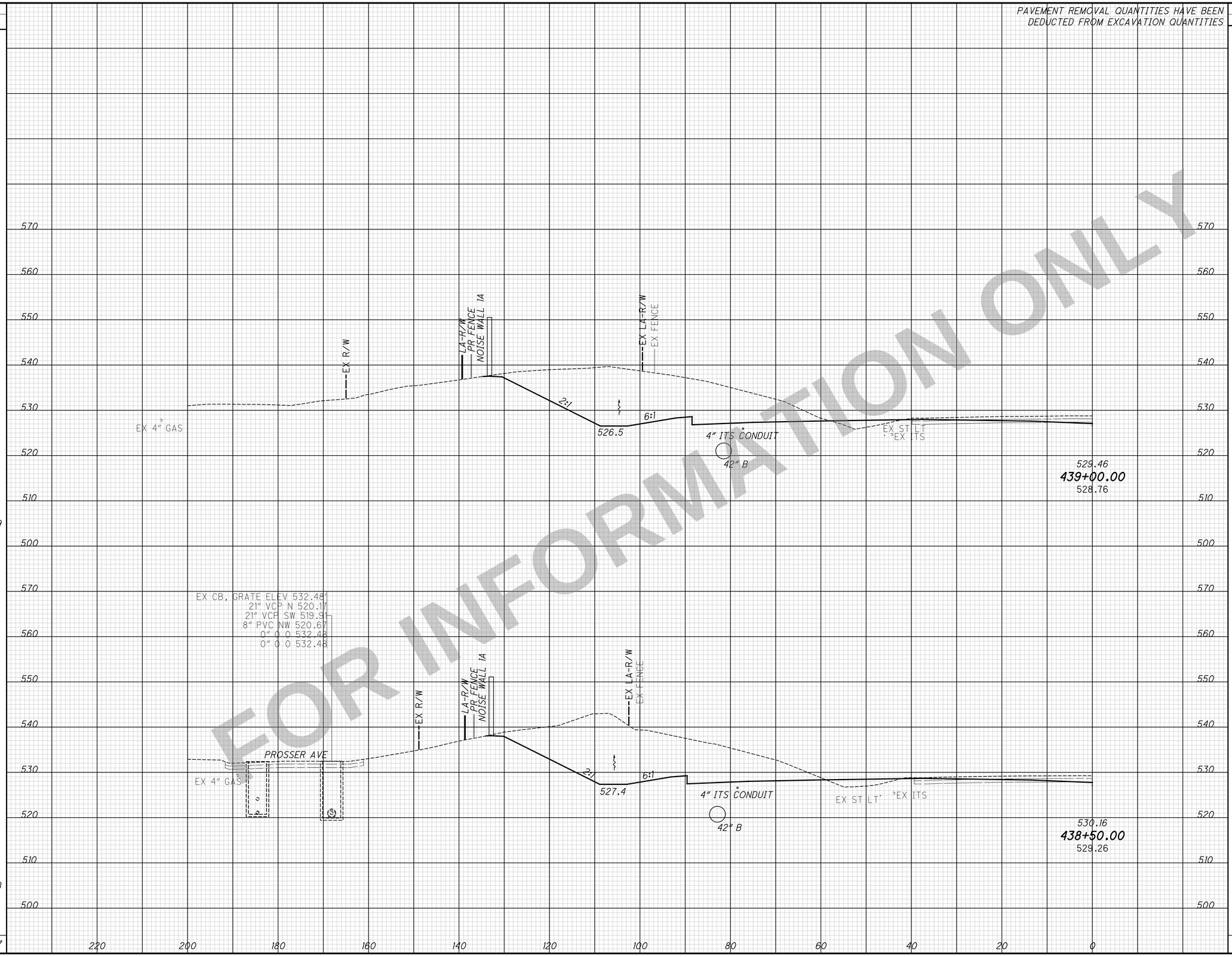
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SEEDING	
END WIDTH	SQ. YDS.
96	539
96	478
	1017

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA
CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 438+50.00 TO STA. 439+00.00

HAM-75-7.85

455
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

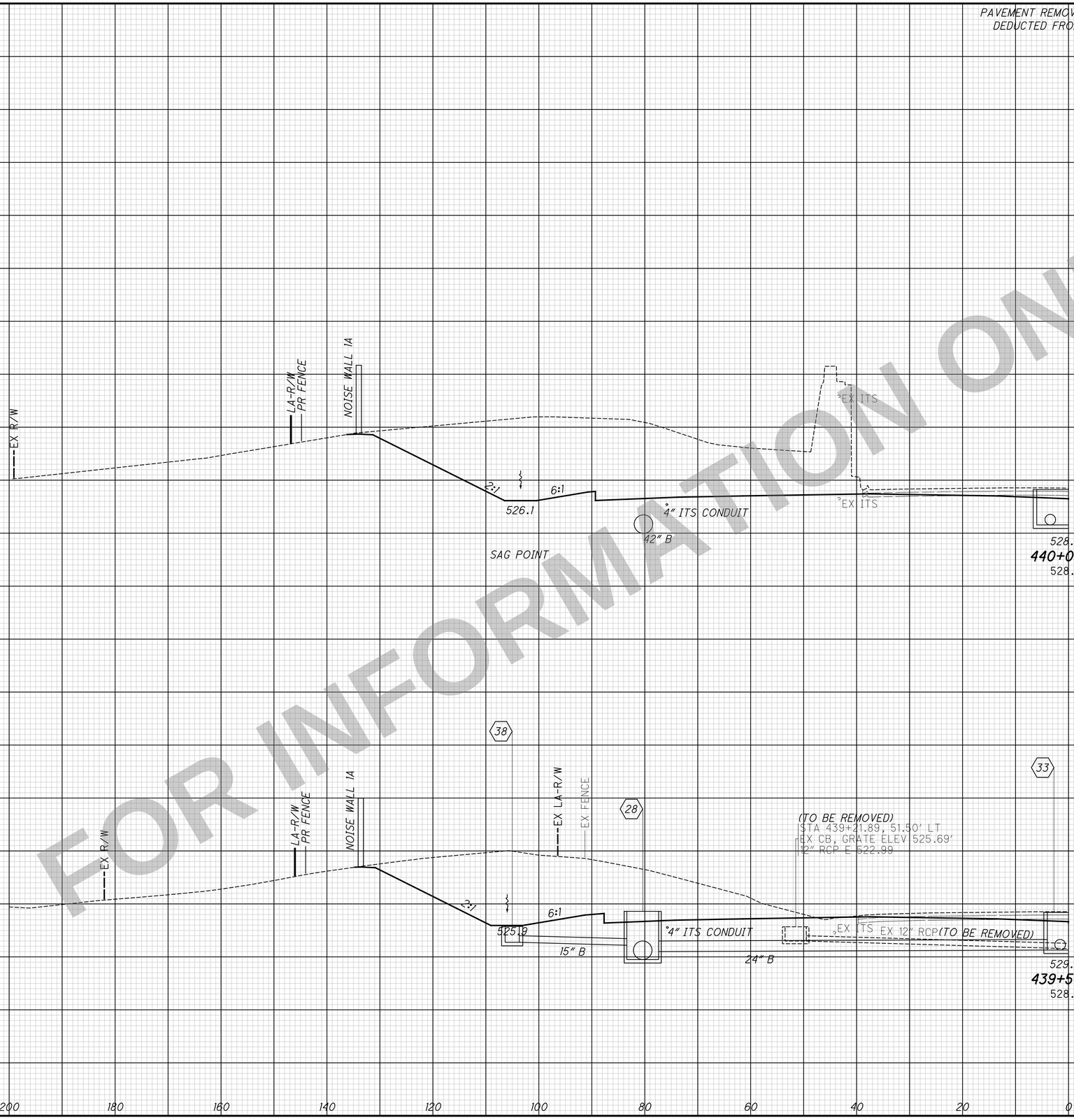
END AREA		VOLUME	
CUT	FILL	CUT	FILL

SEEDING	
END WIDTH	SQ. YDS.
54	300
52	416
	716

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA
CHECKED DLR



FOR INFORMATION ONLY

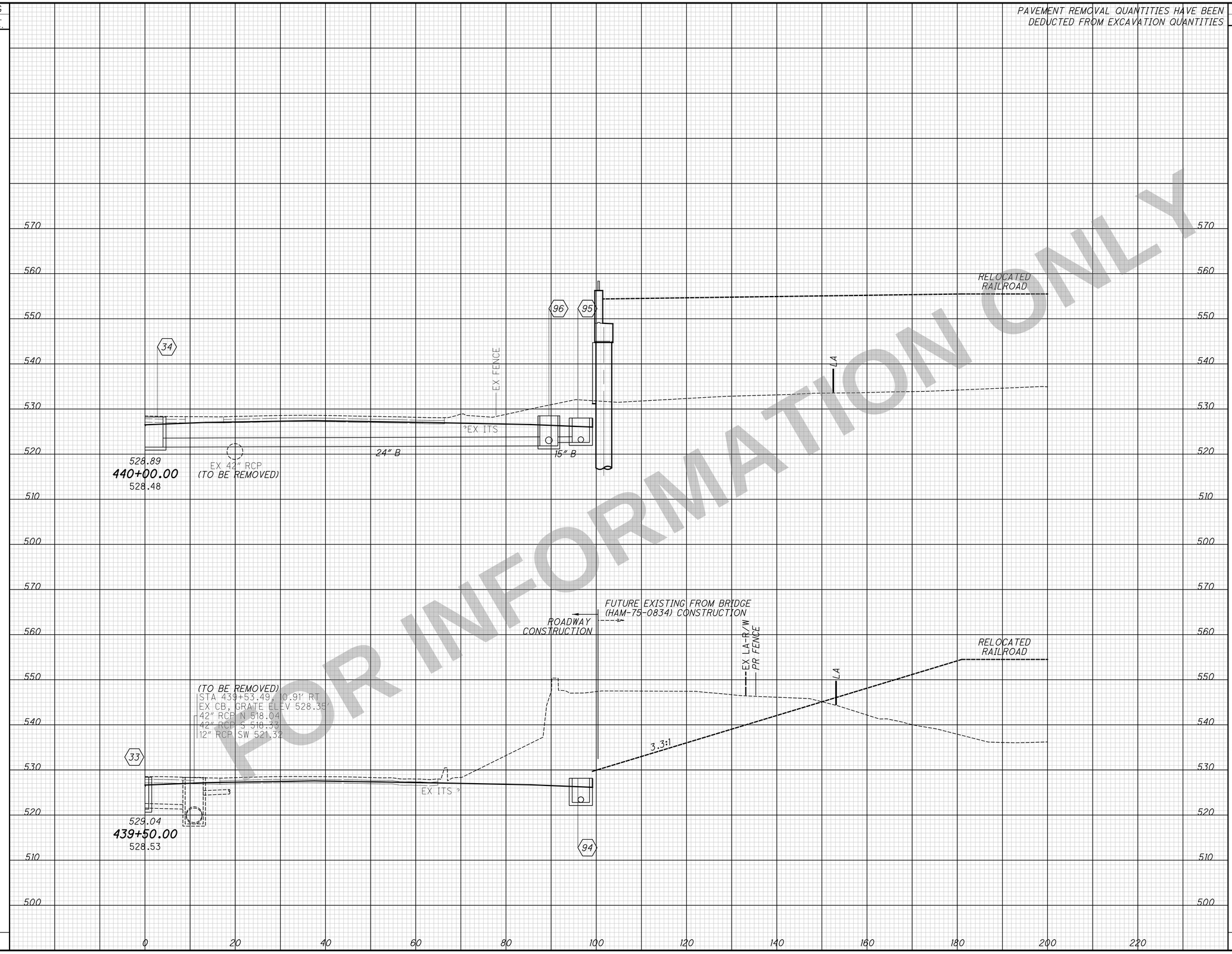
CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 439+50.00 TO STA. 440+00.00

HAM-75-7.85

457
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

SEEDING END WIDTH	SEEDING SQ. YDS.

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1079	16		
		1957	49
1035	37		
		1849	96
		3806	145

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 439+50.00 TO STA. 440+00.00

HAM-75-7.85

458
2017

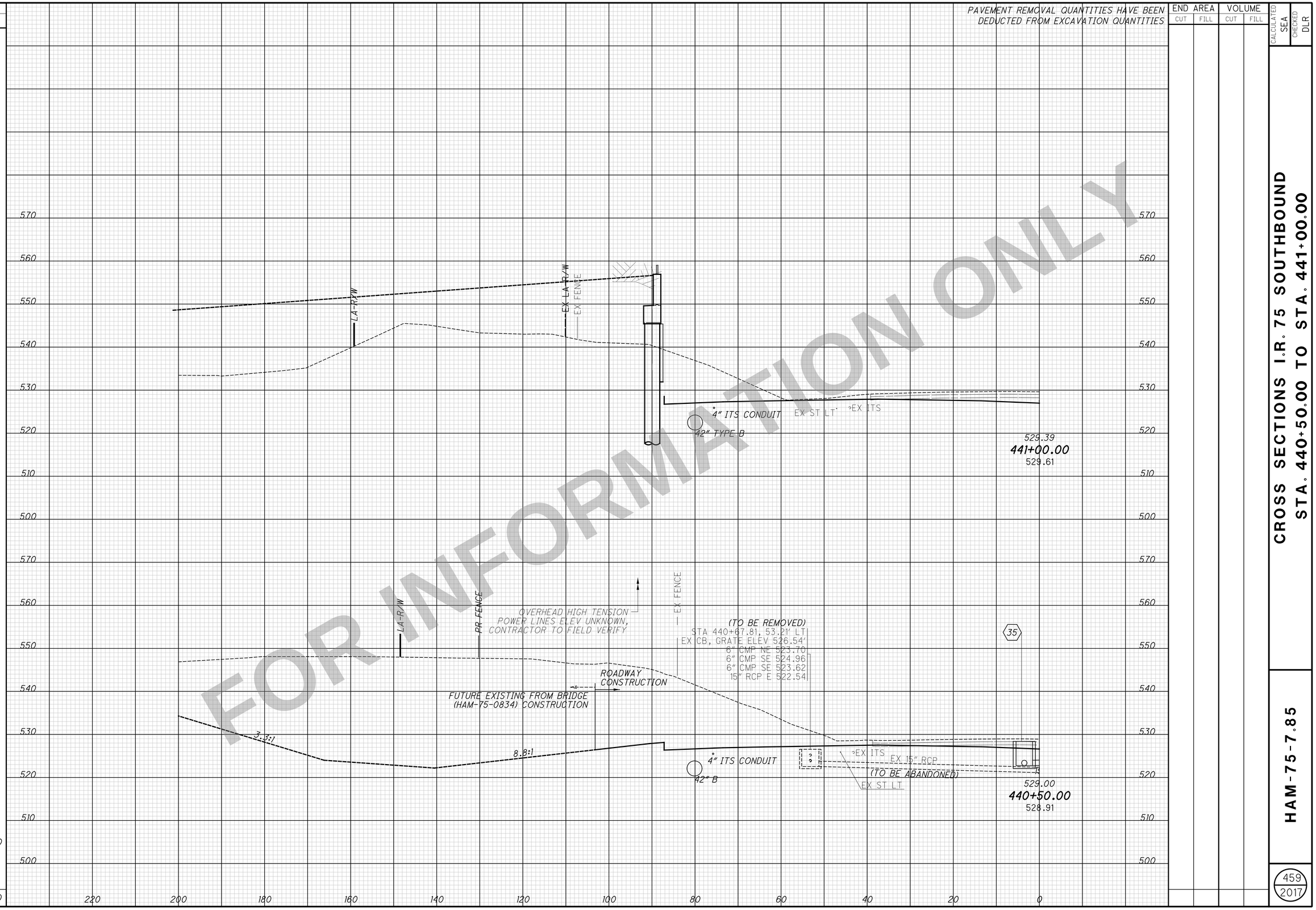
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SEEDING	
END WIDTH	SQ. YDS.
0	50
18	200
	250

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA
CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 440+50.00 TO STA. 441+00.00

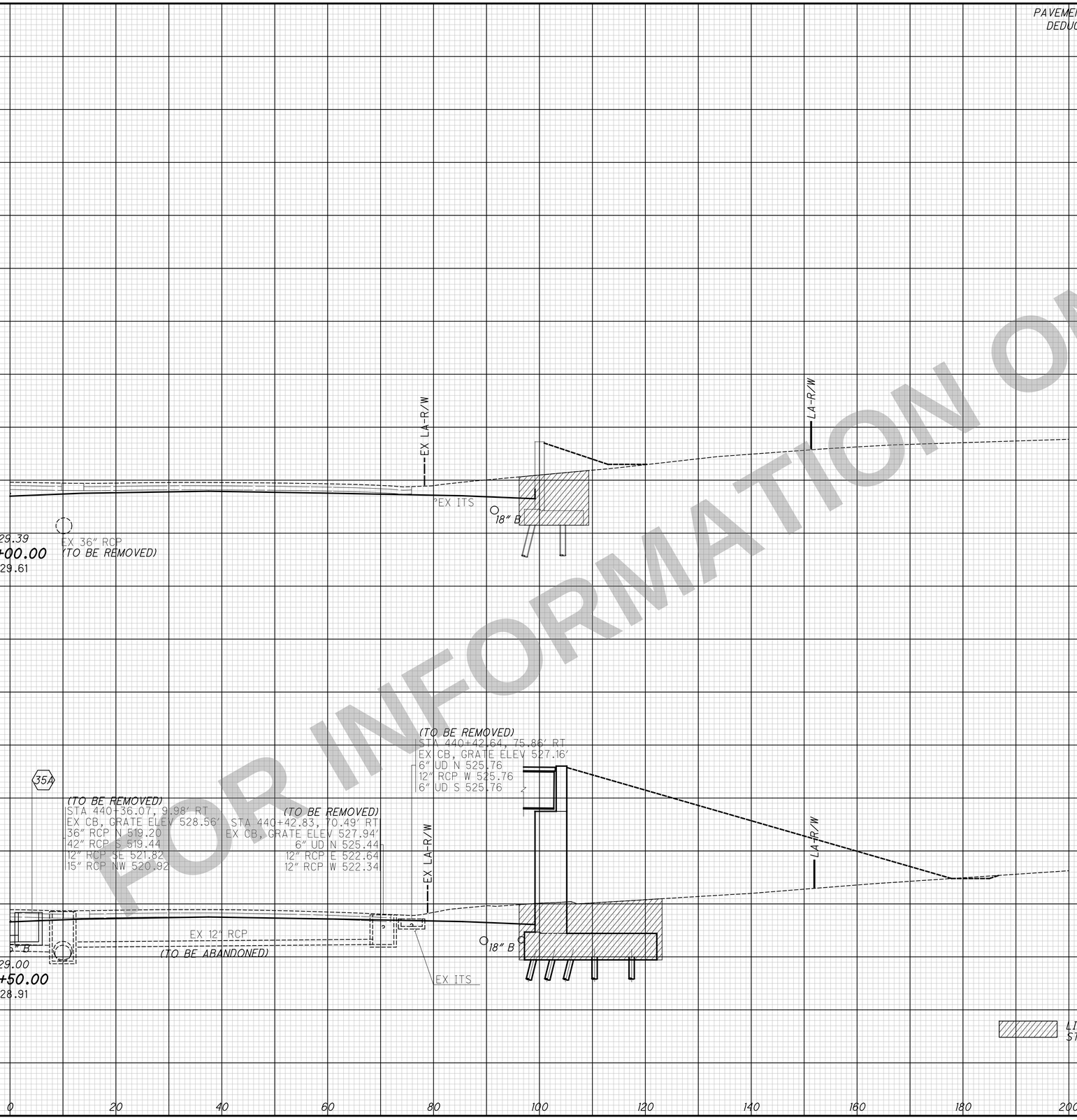
HAM-75-7.85

459
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA		VOLUME	
CUT	FILL	CUT	FILL
309	0		
		990	4
760	4		
		1703	19
		2693	23

LIMITS OF ITEM 503 - STRUCTURE EXCAVATION

CALCULATED	CHECKED
SEA	DLR

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 440+50.00 TO STA. 441+00.00

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460
2017

FOR INFORMATION ONLY

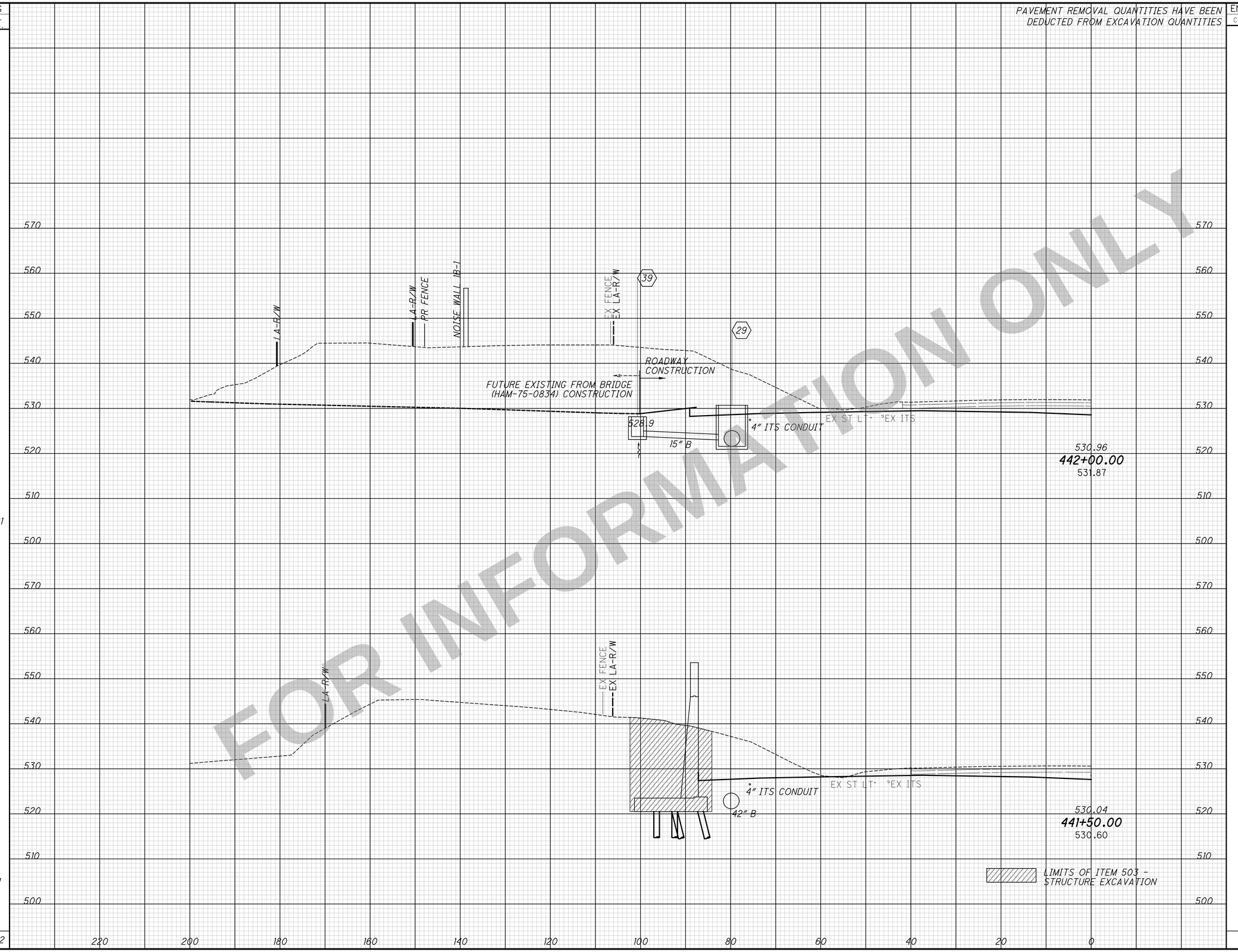
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SEEDING	
END WIDTH	SQ. YDS.
54	
	261
39	
	111
	372

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA
CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 441+50.00 TO STA. 442+00.00

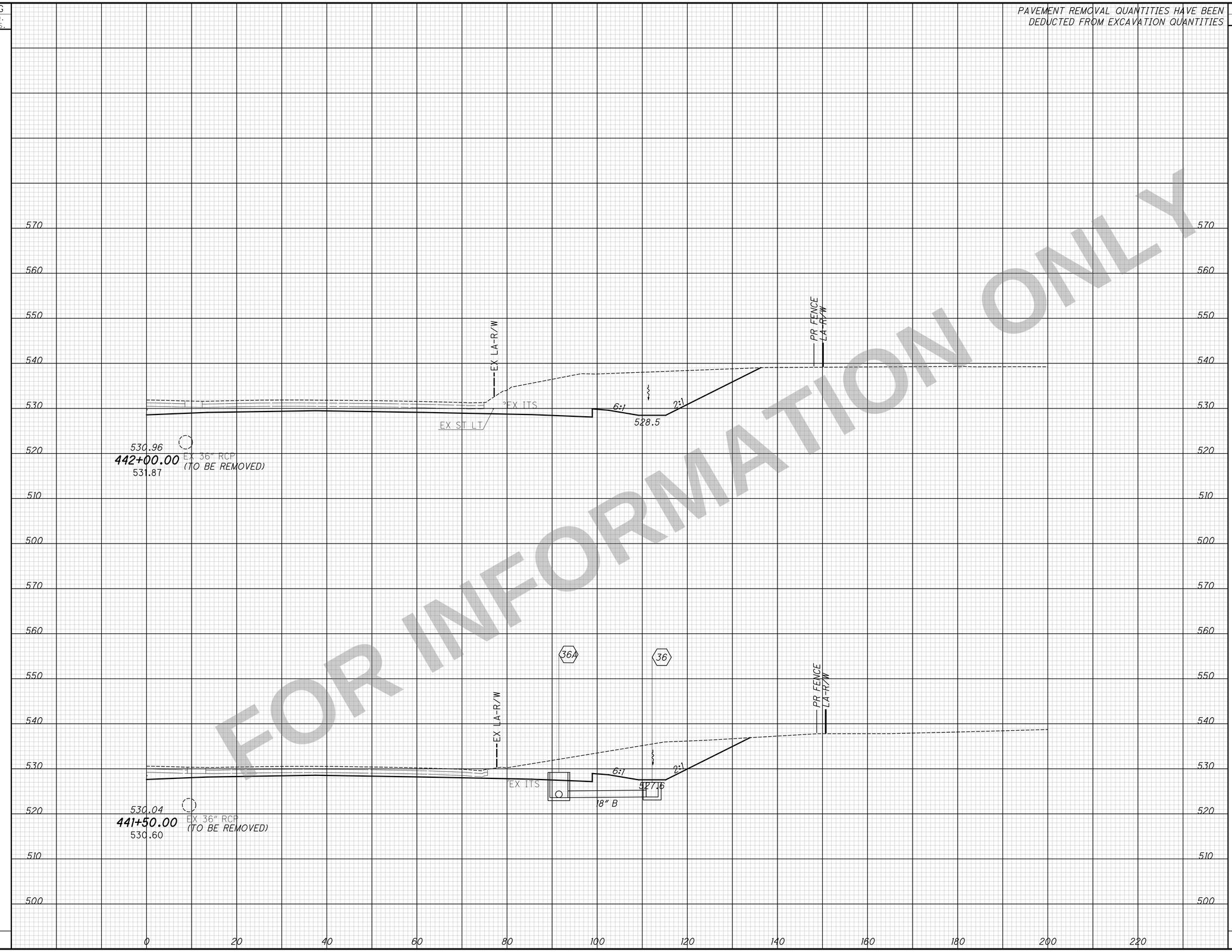
HAM-75-7.85

461
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA		VOLUME	
CUT	FILL	CUT	FILL
954	0		
		1372	0
528	1		
		775	1
		2147	1

CALCULATED SEA

CHECKED DLR

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 441+50.00 TO STA. 442+00.00

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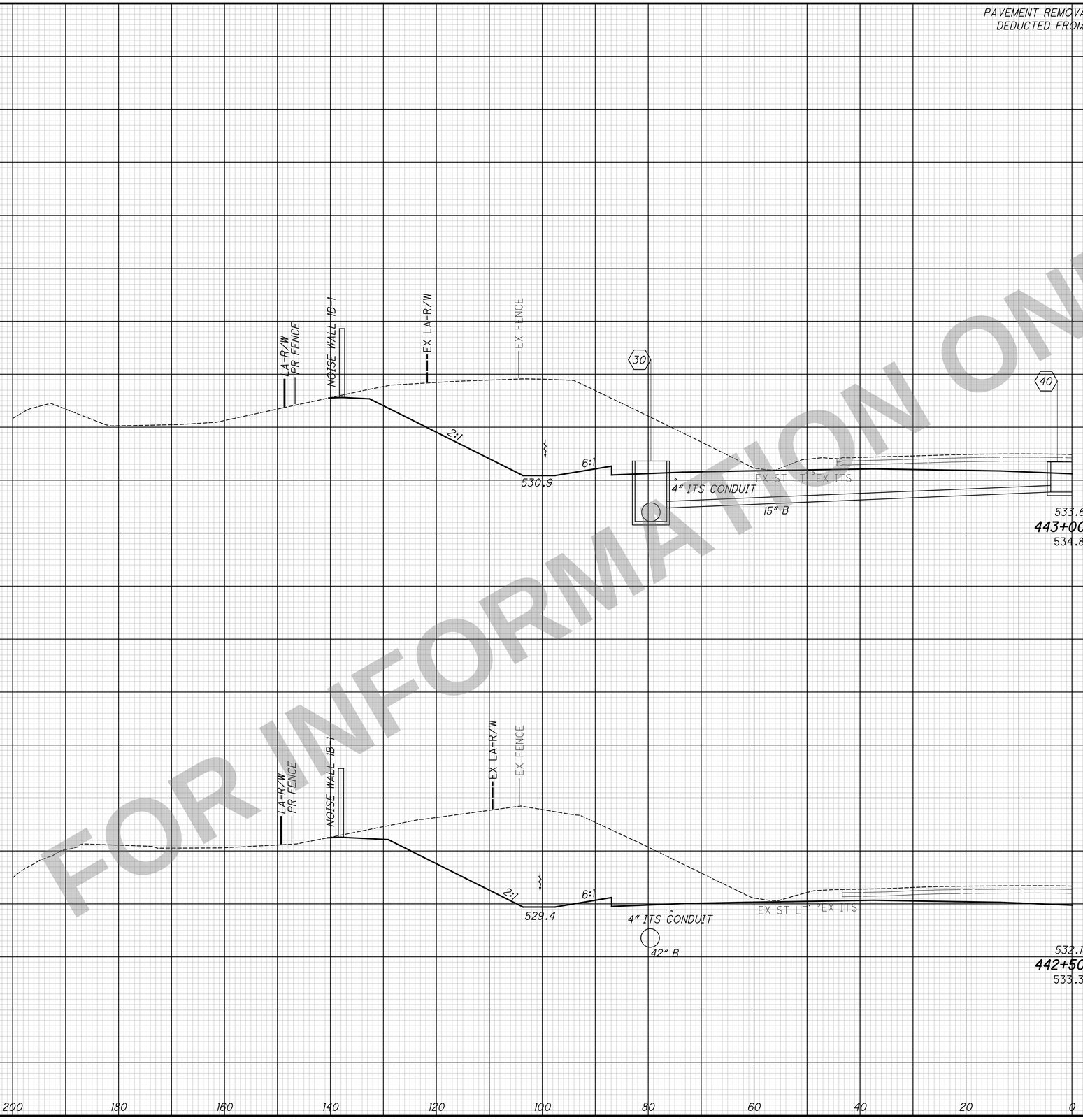
462
2017

FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SQ. YDS.
96	544
99	428
	972

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 442+50.00 TO STA. 443+00.00

HAM-75-7.85

463
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1436	0		
		2673	0
1450	0		
		2226	0
		4899	0

CALCULATED SEA
CHECKED DLR

(TO BE REMOVED)
STA 443+18.93, 7.43' RT
EX CB, GRATE ELEV 535.05'
36" RCP N 521.82
36" RCP S 522.10
12" RCP SE 527.22

(TO BE REMOVED)
STA 443+25.49, 73.37' RT
EX CB, GRATE ELEV 534.81'
12" RCP W 532.61

(TO BE REMOVED)
STA 443+24.80, 77.82' RT
EX CB, GRATE ELEV 538.02'
6" UD N 535.02
12" RCP W 532.92

EX LA-R/W

PR FENCE
LA-R/W

EX ITS
EX ST LT

EX 12" RCP
(TO BE REMOVED)

533.61
443+00.00
534.84

6:1
2:1
531.1

532.15
442+50.00 (TO BE REMOVED)
533.36

529.7

570 560 550 540 530 520 510 500

0 20 40 60 80 100 120 140 160 180 200 220

FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 442+50.00 TO STA. 443+00.00

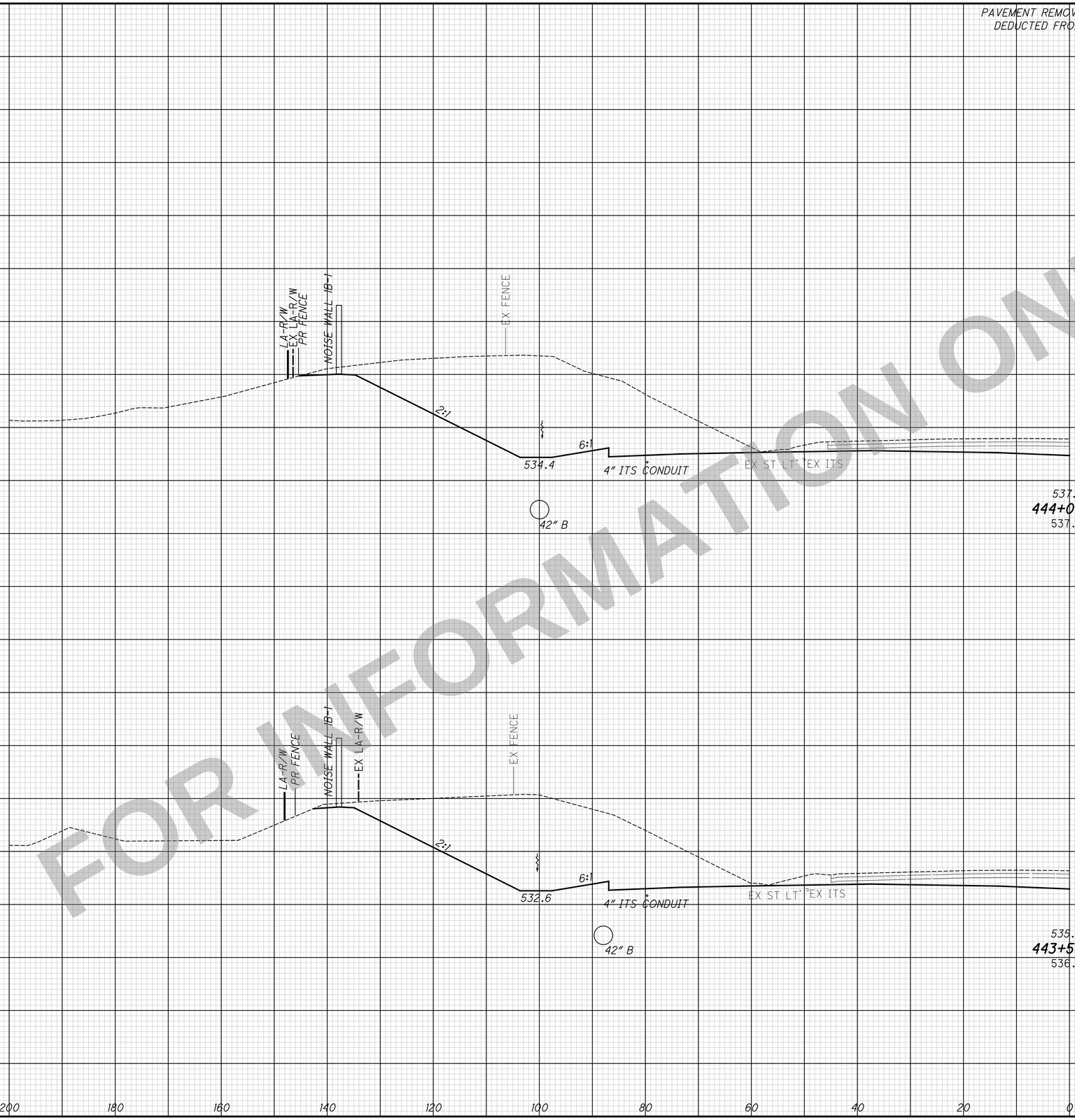
HAM-75-7.85

464
2017

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SEEDING	
END WIDTH	SQ. YDS.
107	
99	
	1122
	578
	544

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 443+50.00 TO STA. 444+00.00

HAM-75-7.85

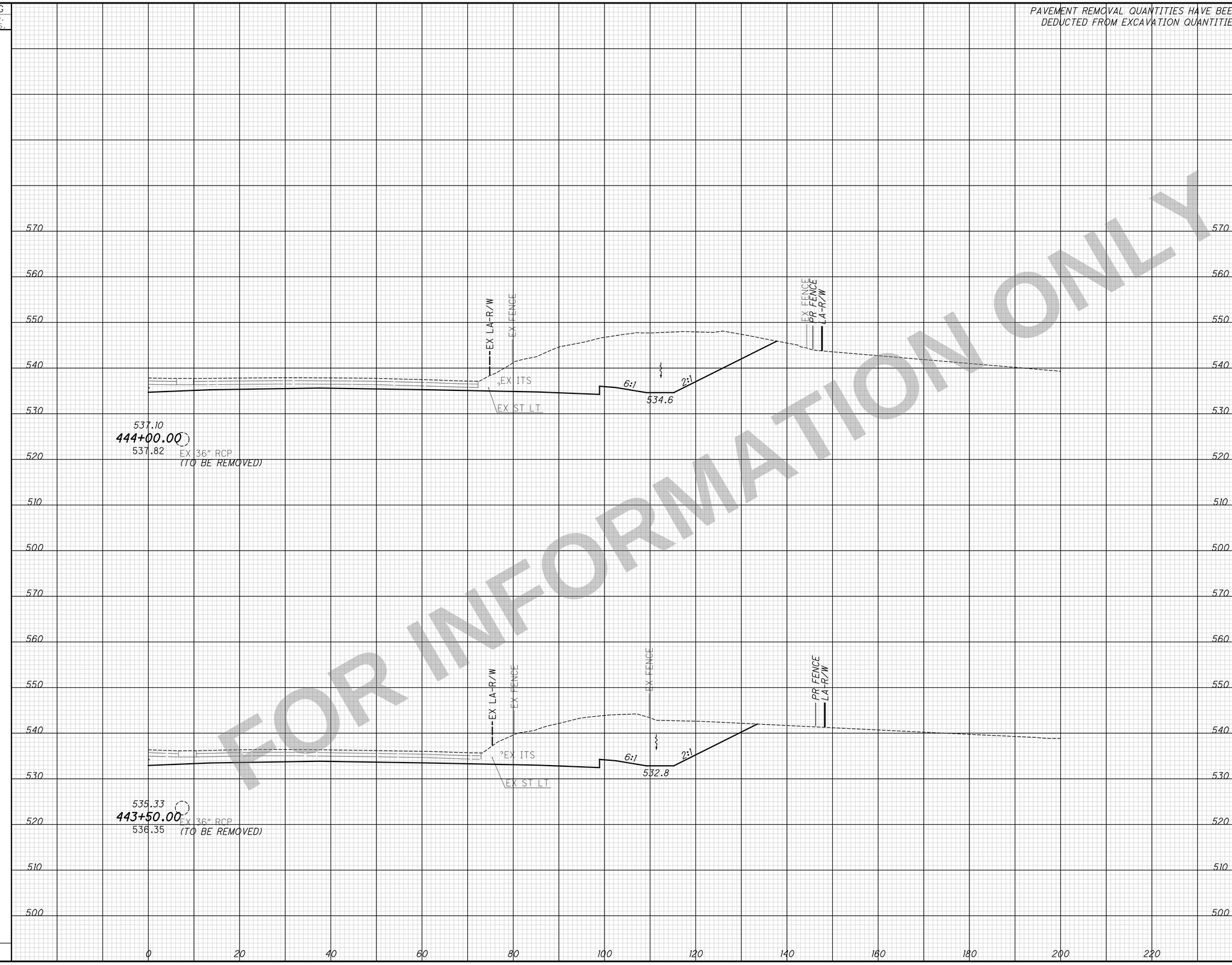
465
2017

FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1554	0		
		2747	0
1412	0		
		2637	0
		5384	0

CALCULATED SEA

CHECKED DLR

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 443+50.00 TO STA. 444+00.00

HAM-75-7.85

466
2017

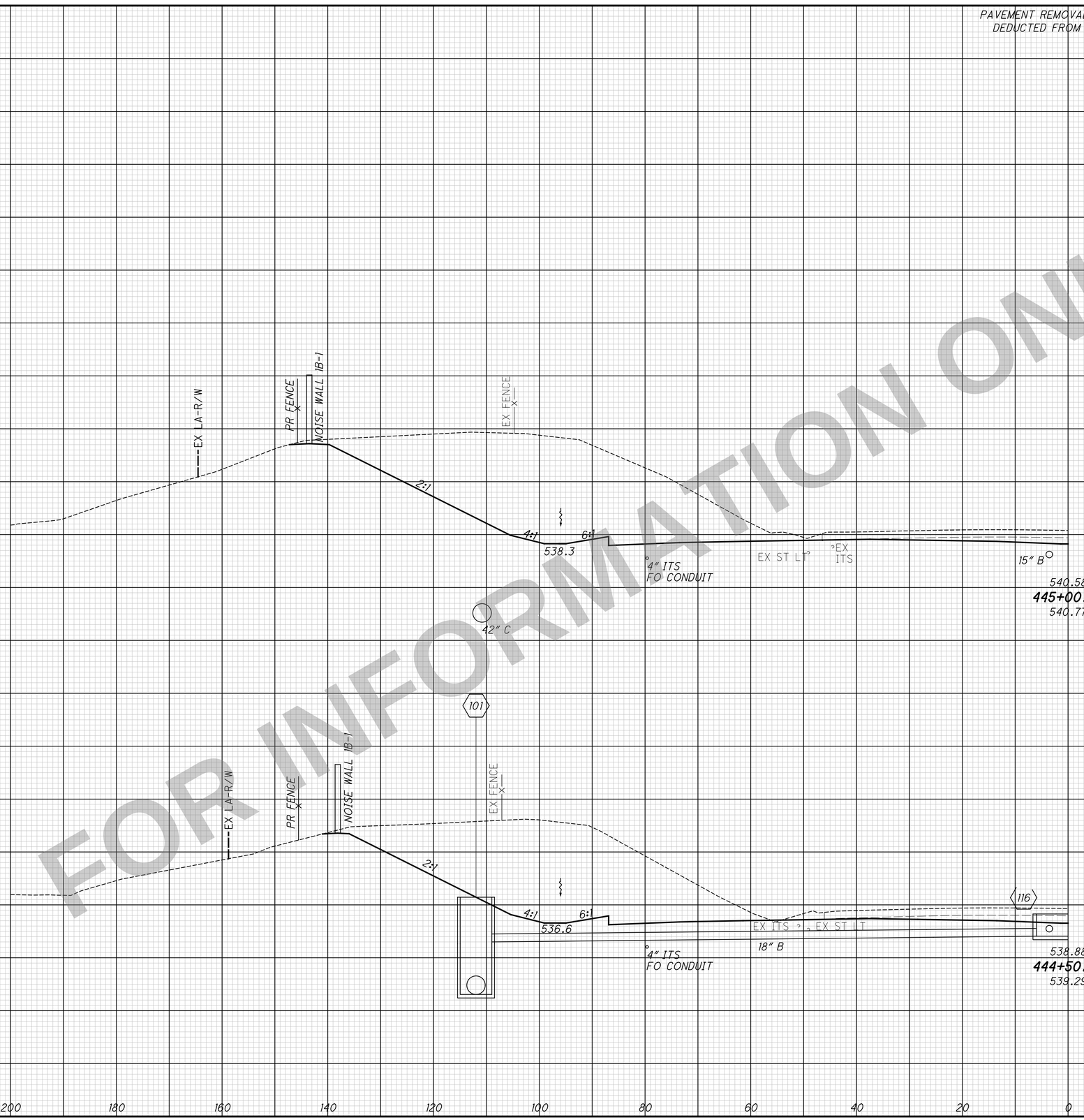
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SEEDING	
END WIDTH	SQ. YDS.
130	718
129	0
	718

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 444+50.00 TO STA. 445+00.00

HAM-75-7.85

467
2017

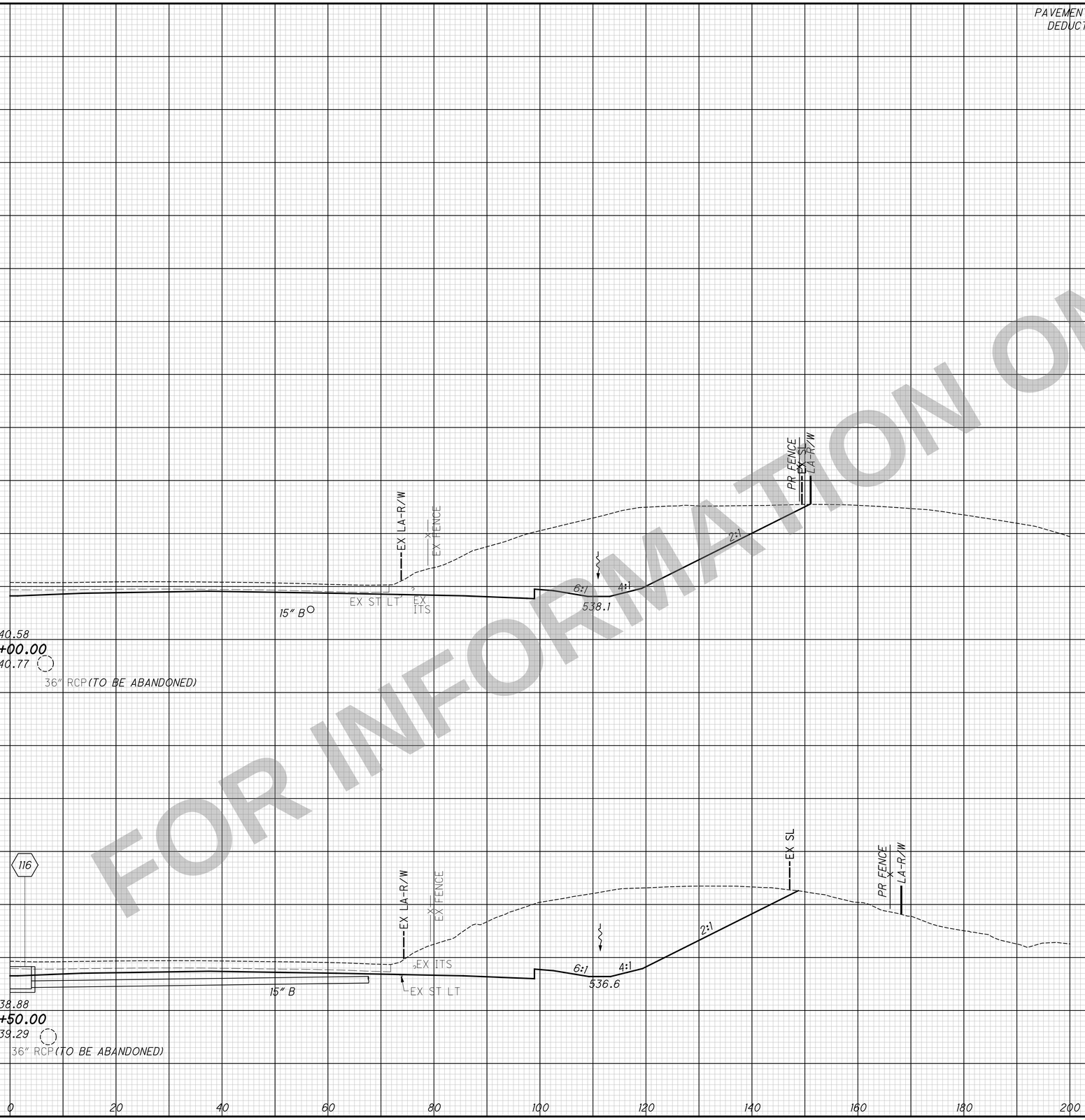
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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1819	0		
		3291	0
1736	0		
		0	0
		3291	0

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 444+50.00 TO STA. 445+00.00

HAM-75-7.85

468
2017

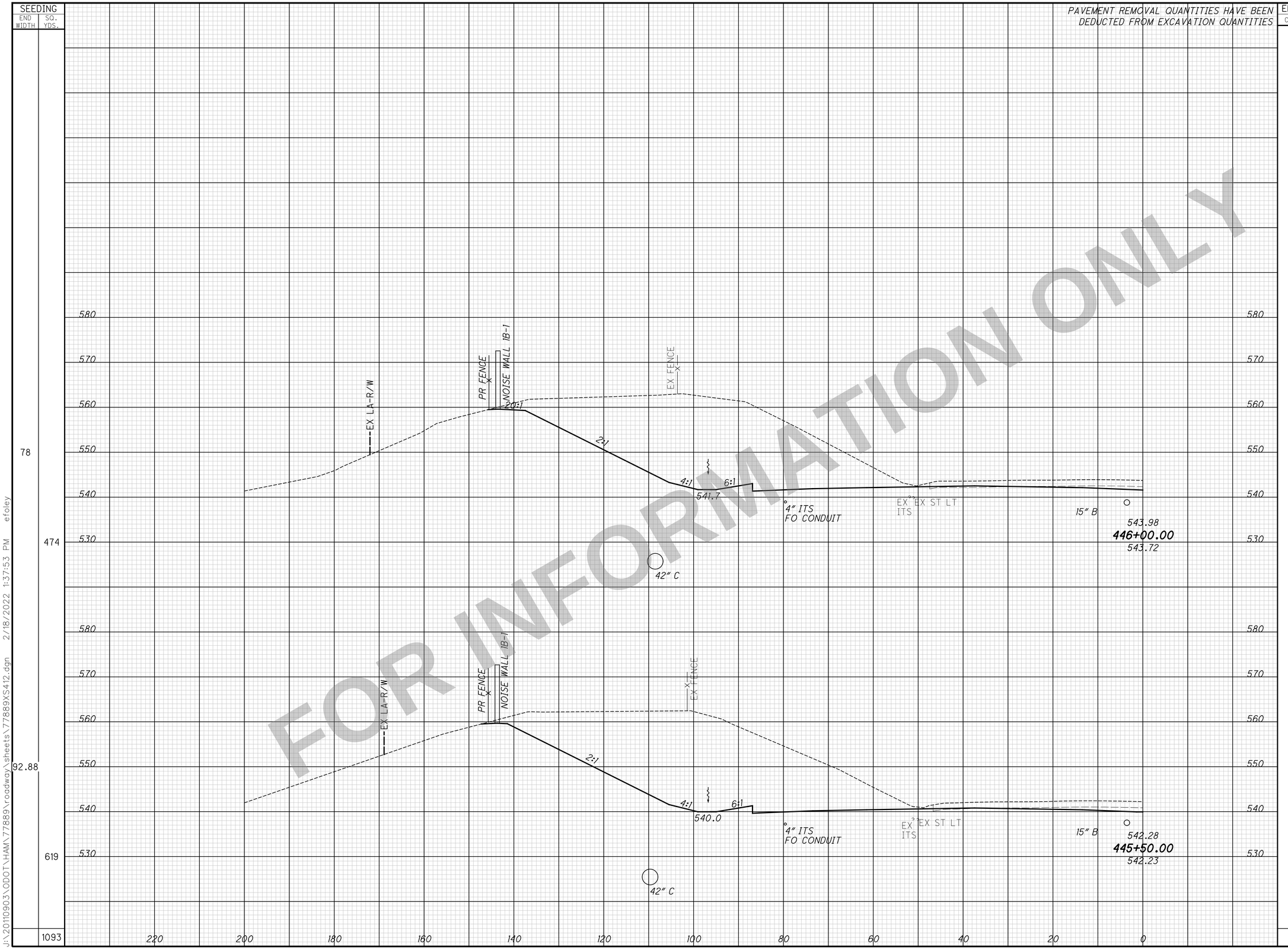
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SEEDING	
END WIDTH	SQ. YDS.
78	
	474
92.88	
	619
	1093

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 445+50.00 TO STA. 446+00.00

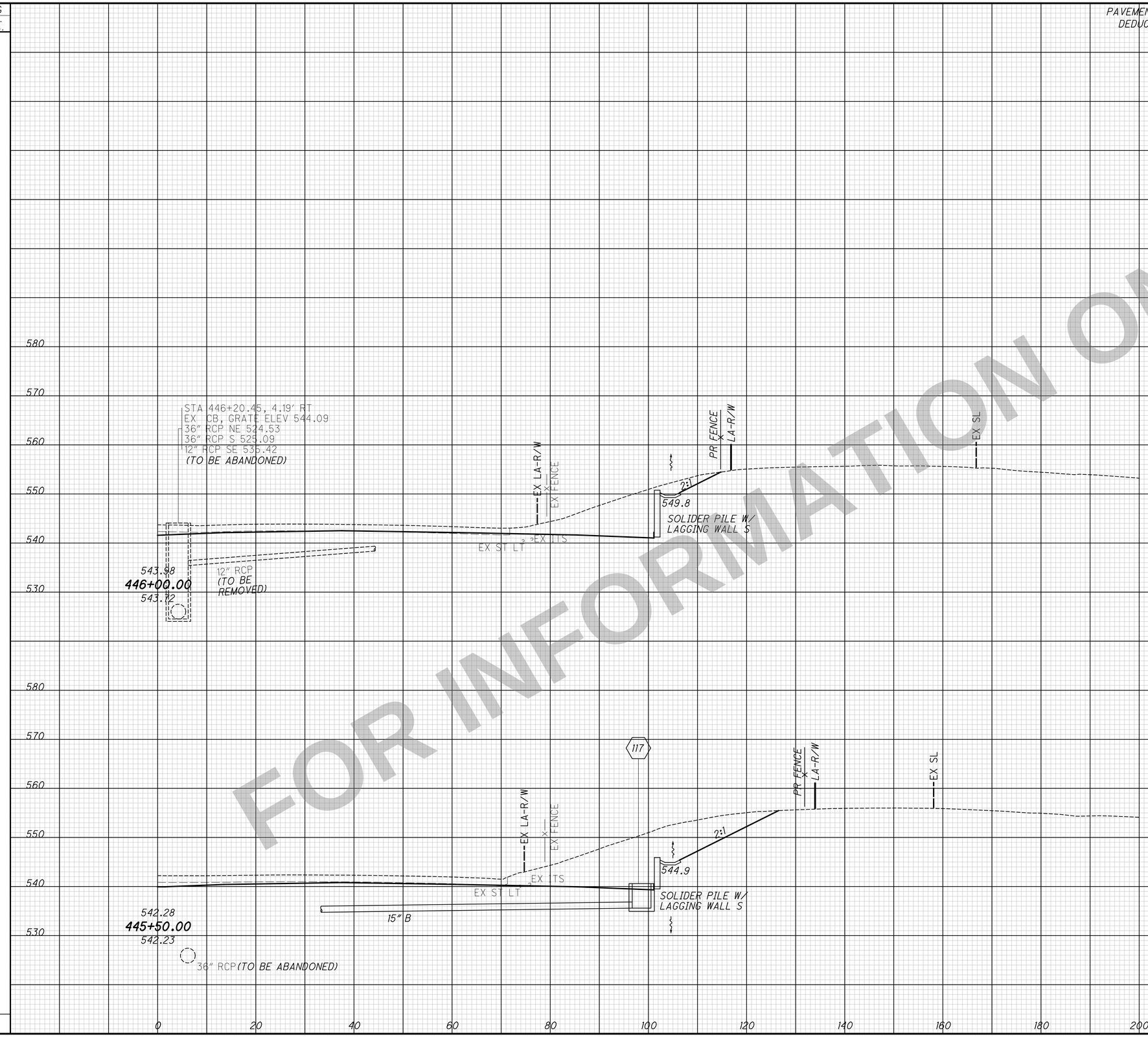
HAM-75-7.85

469
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1261	8		
		2552	10
1495	2		
		3068	2
		5620	12

CALCULATED	CHECKED
CFR	SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 445+50.00 TO STA. 446+00.00

HAM-75-7.85

470
2017

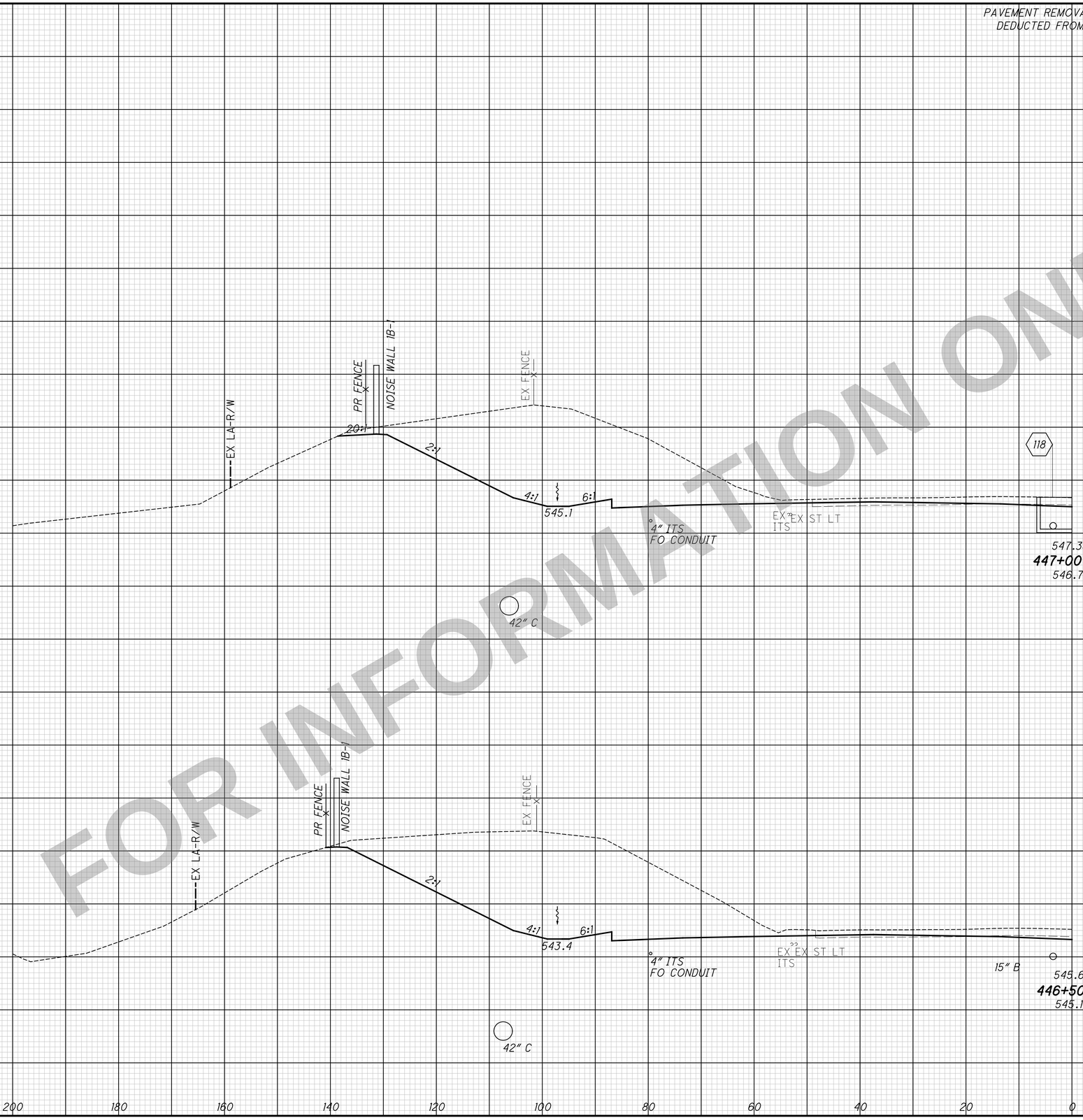
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SEEDING	
END WIDTH	SQ. YDS.
61	354
66	401
	755

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR | CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 446+50.00 TO STA. 447+00.00

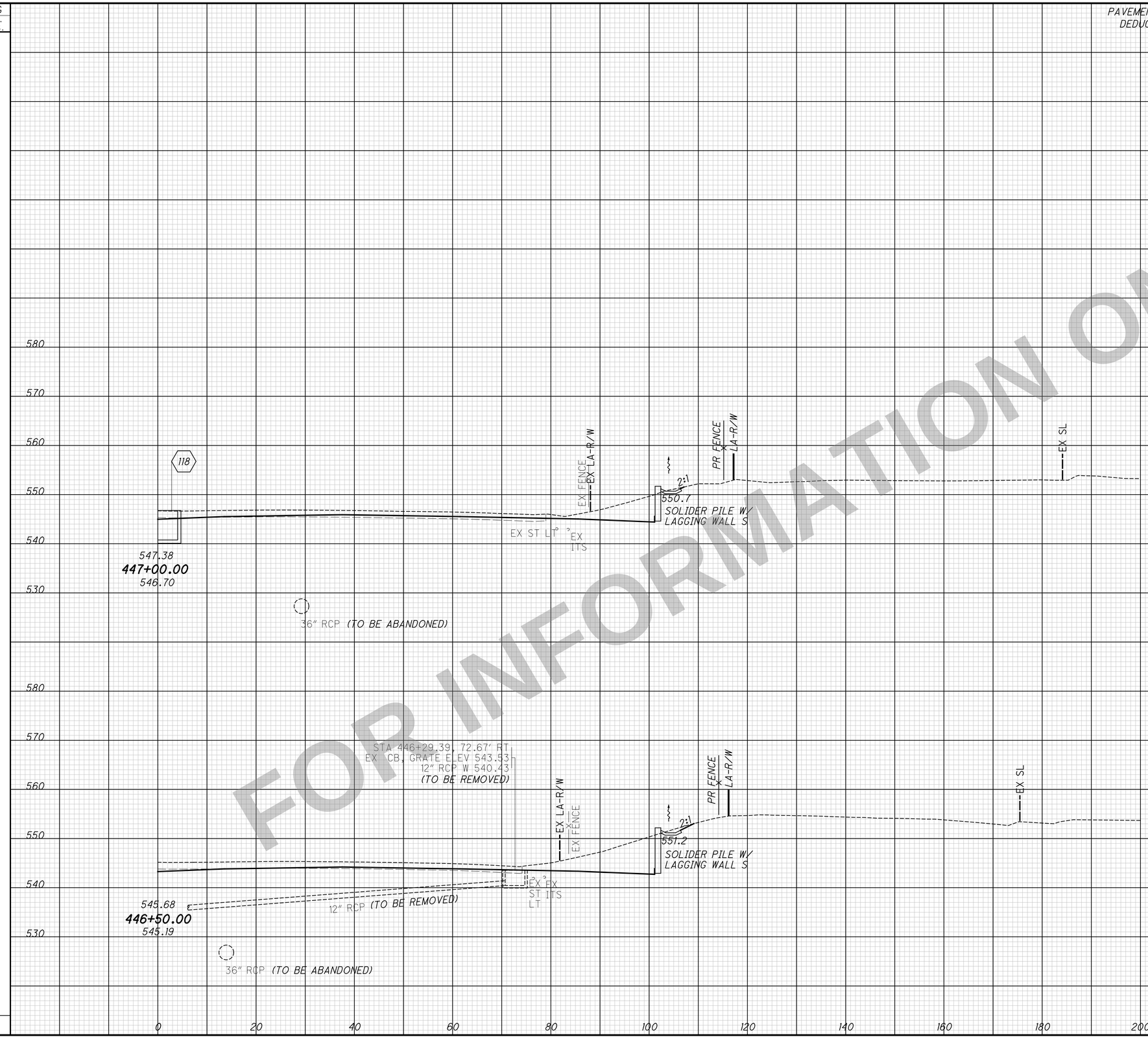
HAM-75-7.85

471
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
866	45		
		1818	66
1098	27		
		2184	32
		4002	98

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 446+50.00 TO STA. 447+00.00

HAM-75-7.85

472
2017

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SEEDING	
END WIDTH	SQ. YDS.
41	283
61	339
	622

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 447+50.00 TO STA. 448+00.00

HAM-75-7.85

473
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

STA 447+97.04, 58.91' RT
EX MH, RIM ELEV 549.18
36" RCP N 526.68
6" UD N 540.18
36" RCP SW 526.68
12" RCP SW 540.18
(TO BE REMOVED) 12" RCP NW 540.18
(TO BE ABANDONED)

EX FENCE
EX LA-R/W
PR FENCE
LA-R/W
EX SL
4:1
549.7
EX ST LT
EX ITS
9

550.78
448+00.00
549.71
36" B

2:1
550.5

549.08
447+50.00
548.20

36" RCP *(TO BE ABANDONED)*

FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
241	121		
		920	178
		1499	107
753	71		
		2419	285

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 447+50.00 TO STA. 448+00.00

HAM-75-7.85

474
2017

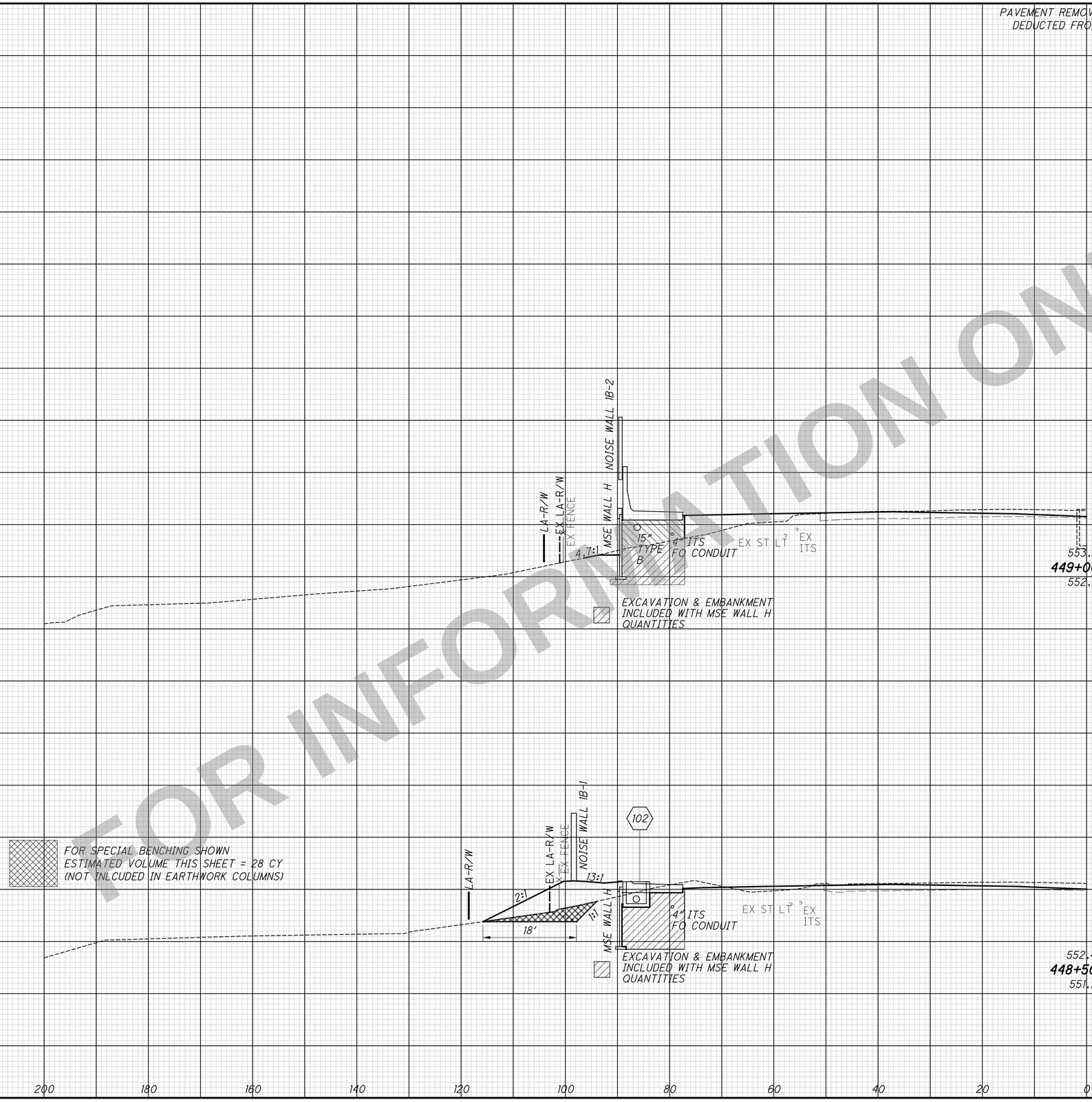
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SEEDING	
END WIDTH	SQ. YDS.
31	
50	224
	253
	477

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 448+50.00 TO STA. 449+00.00

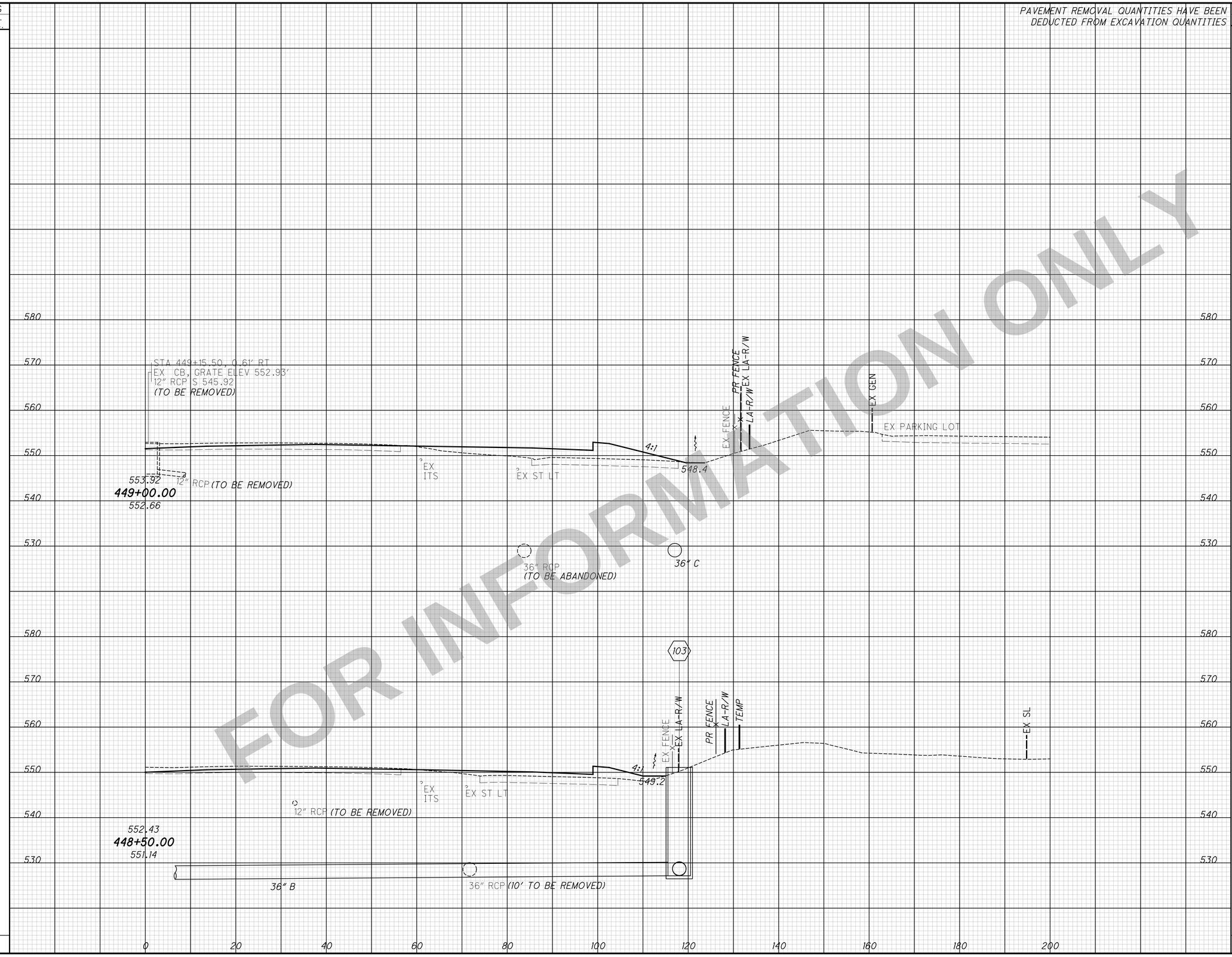
HAM-75-7.85

475
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1	298		
		8	542
8	287		
		230	378
		238	920

CALCULATED: CFR
CHECKED: SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 448+50.00 TO STA. 449+00.00

HAM-75-7.85

476
2017

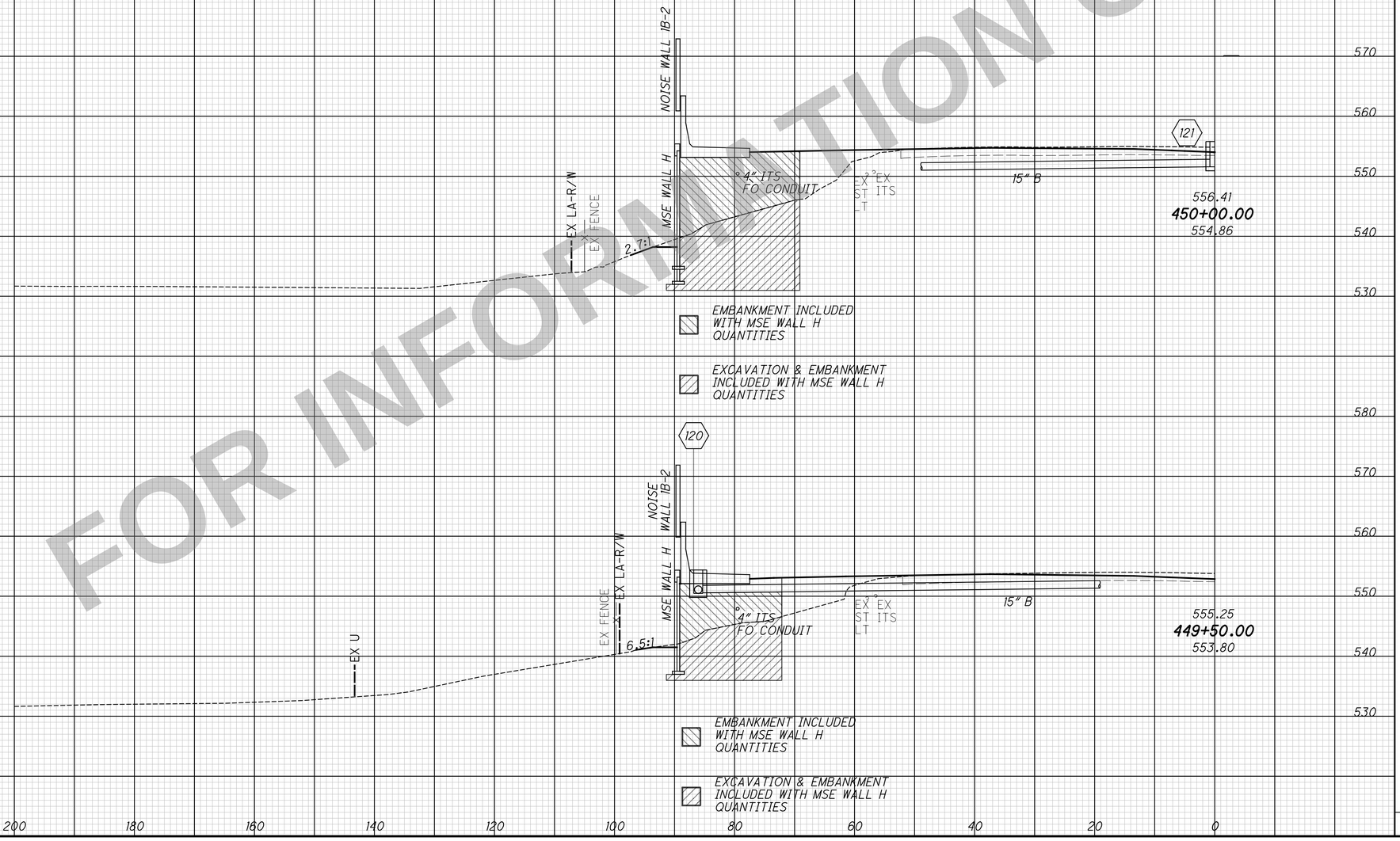
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SEEDING	
END WIDTH	SQ. YDS.
65	313
48	218
	531

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR | CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 449+50.00 TO STA. 450+00.00

HAM-75-7.85

477
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
12	535		
		16	874
5	410		
		5	655
		21	1529

CALCULATED	CHECKED
CFR	SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 449+50.00 TO STA. 450+00.00

HAM-75-7.85

478
2017

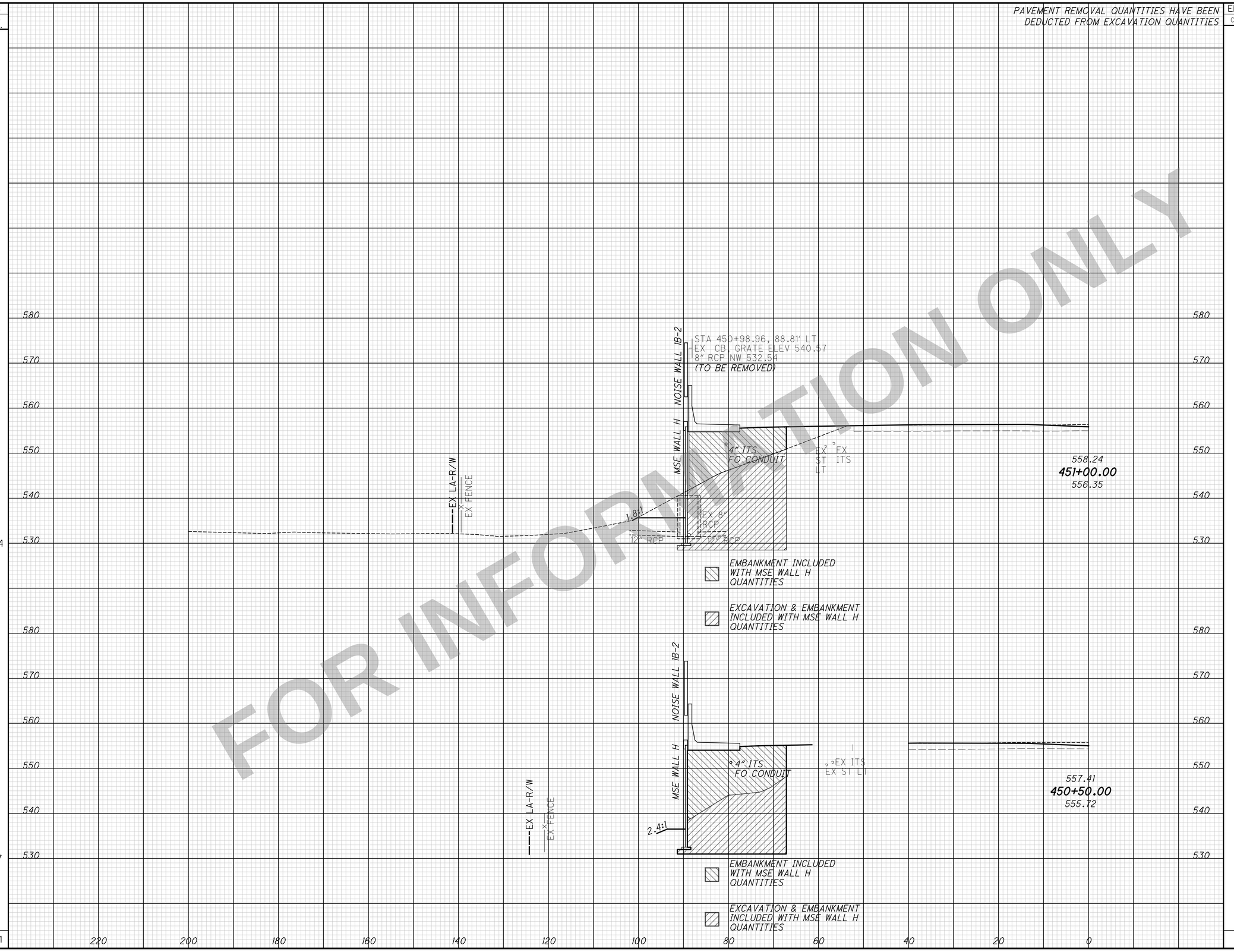
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SEEDING	
END WIDTH	SQ. YDS.
78	
85	
871	

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 450+50.00 TO STA. 451+00.00

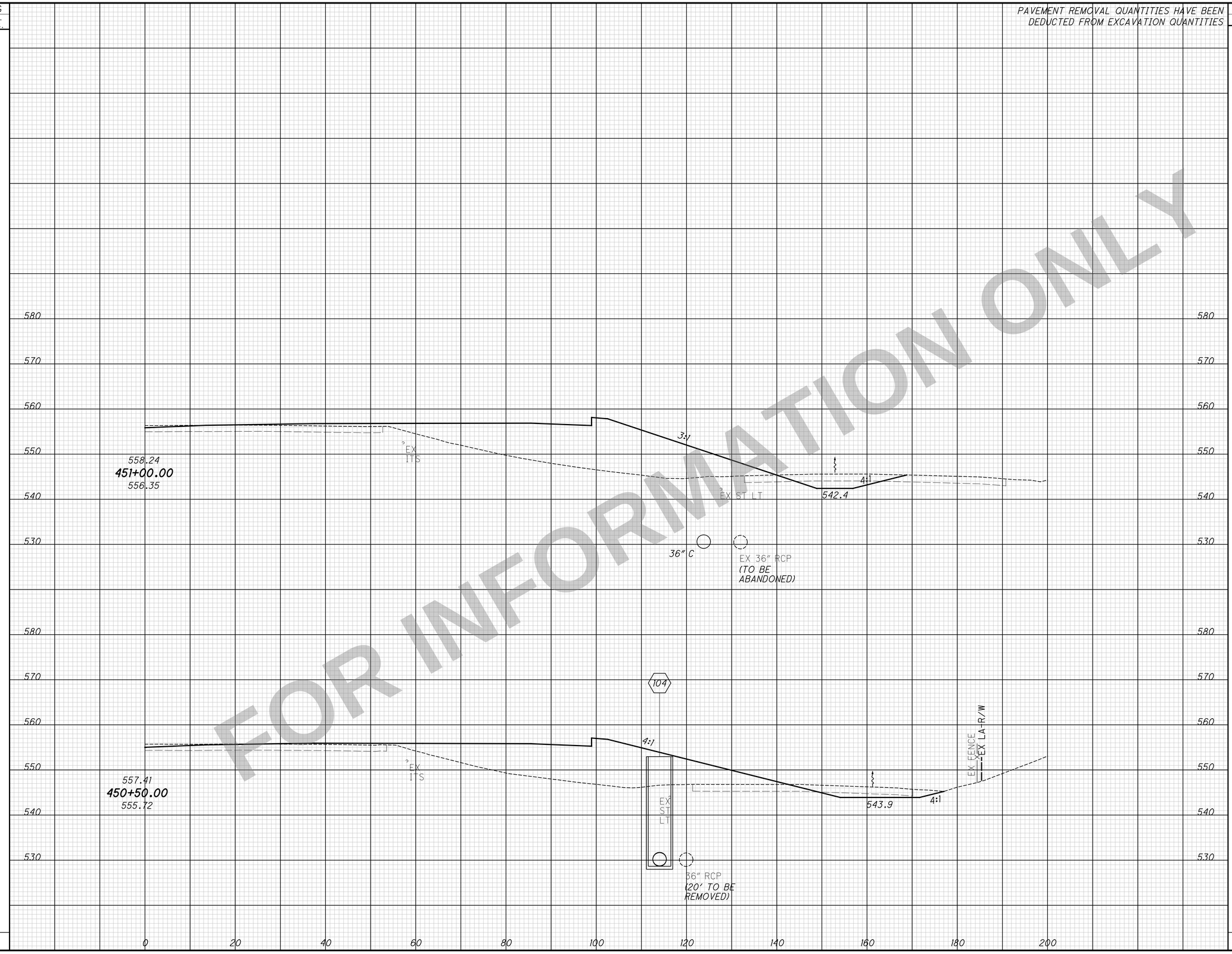
HAM-75-7.85

479
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
23	757		
		41	1339
22	690		
		32	1134
		73	2473

CALCULATED	CHECKED
CFR	SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 450+50.00 TO STA. 451+00.00

HAM-75-7.85

480
2017

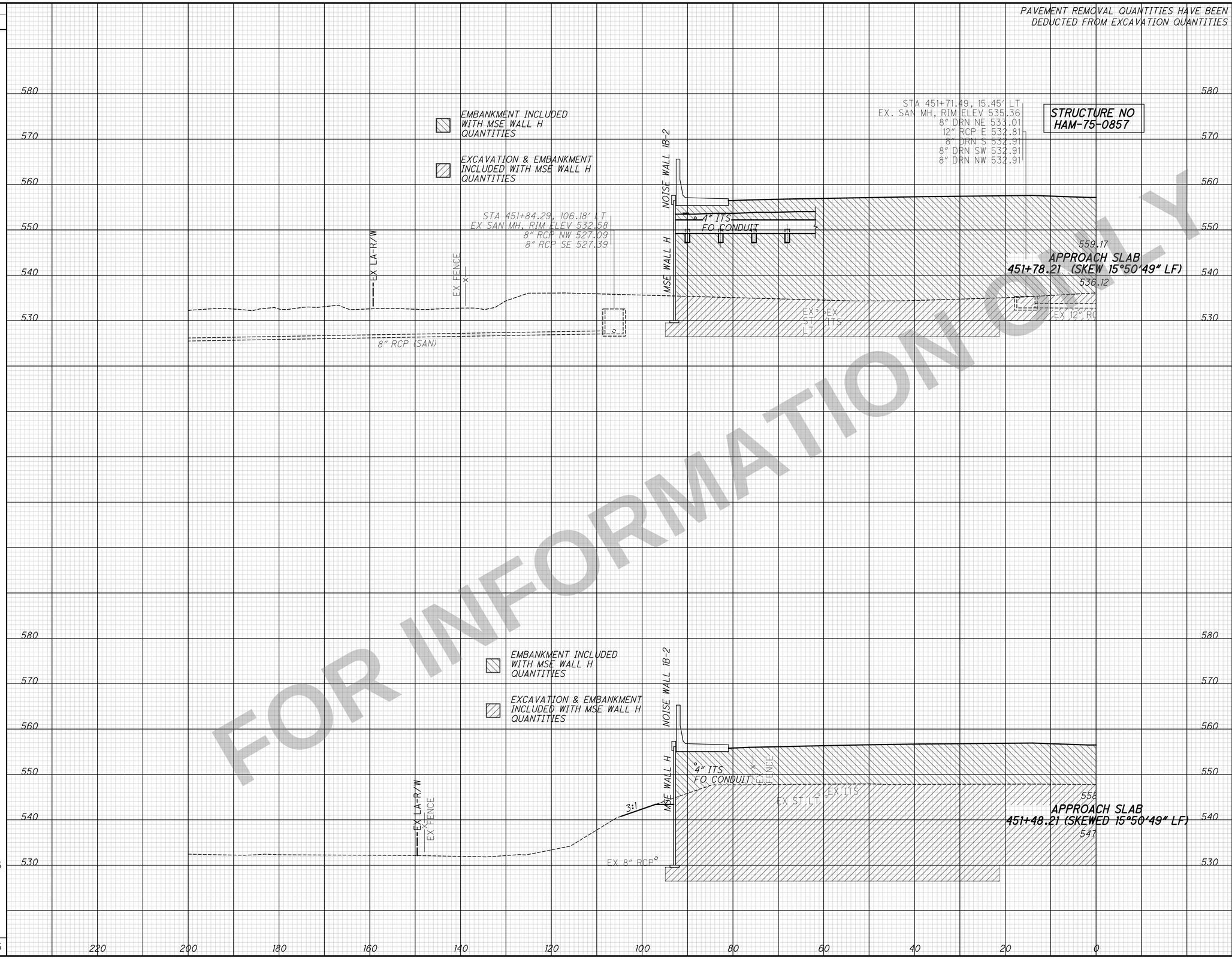
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SEEDING	
END WIDTH	SQ. YDS.
0	0
103	485
	485

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 451+48.21 TO STA. 451+78.21

HAM-75-7.85

481
2017

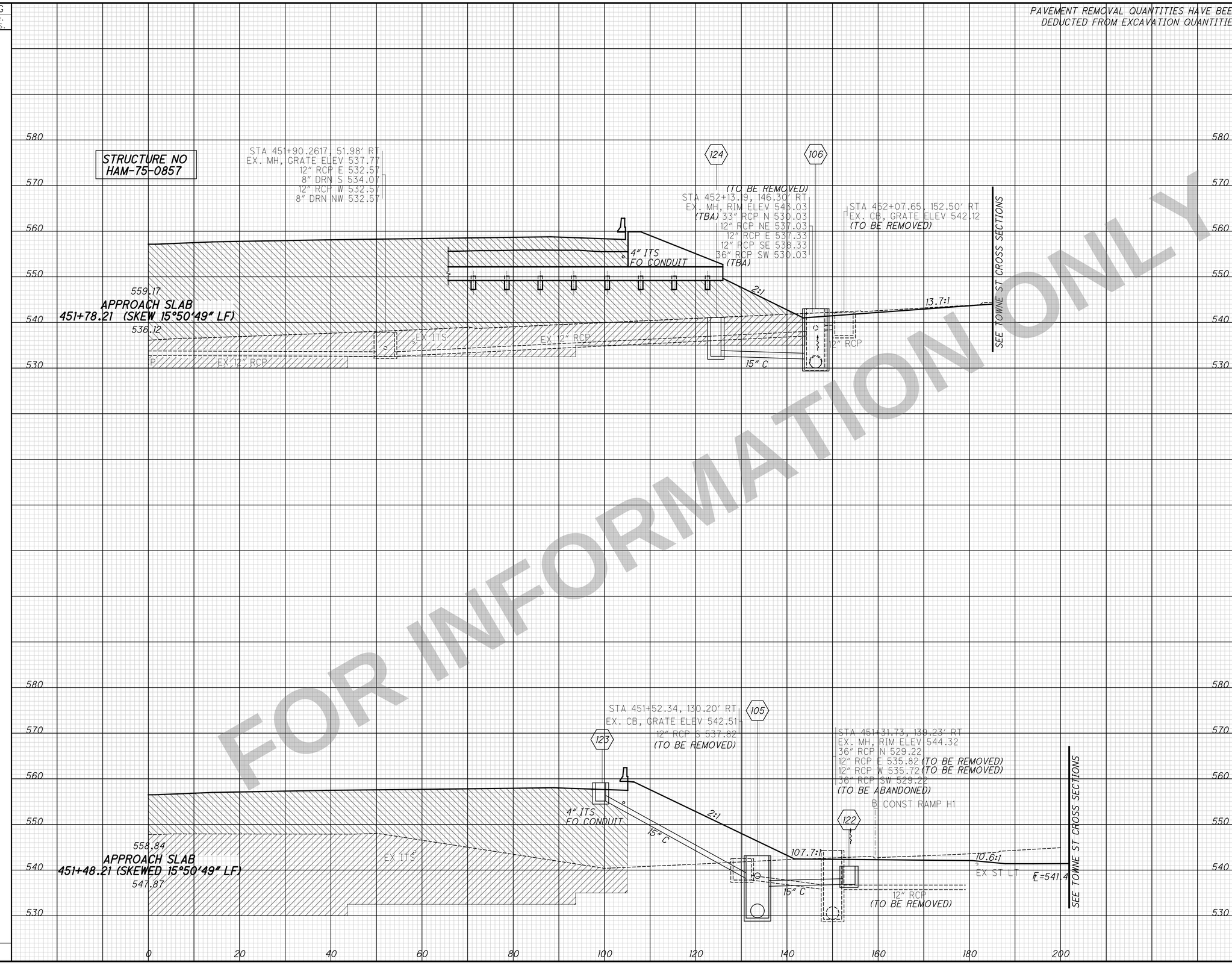
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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL
17	0		
		13	1231
6	2216		
		25	2654
		38	3885

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 451+48.21 TO STA. 451+78.21

HAM-75-7.85

482
2017

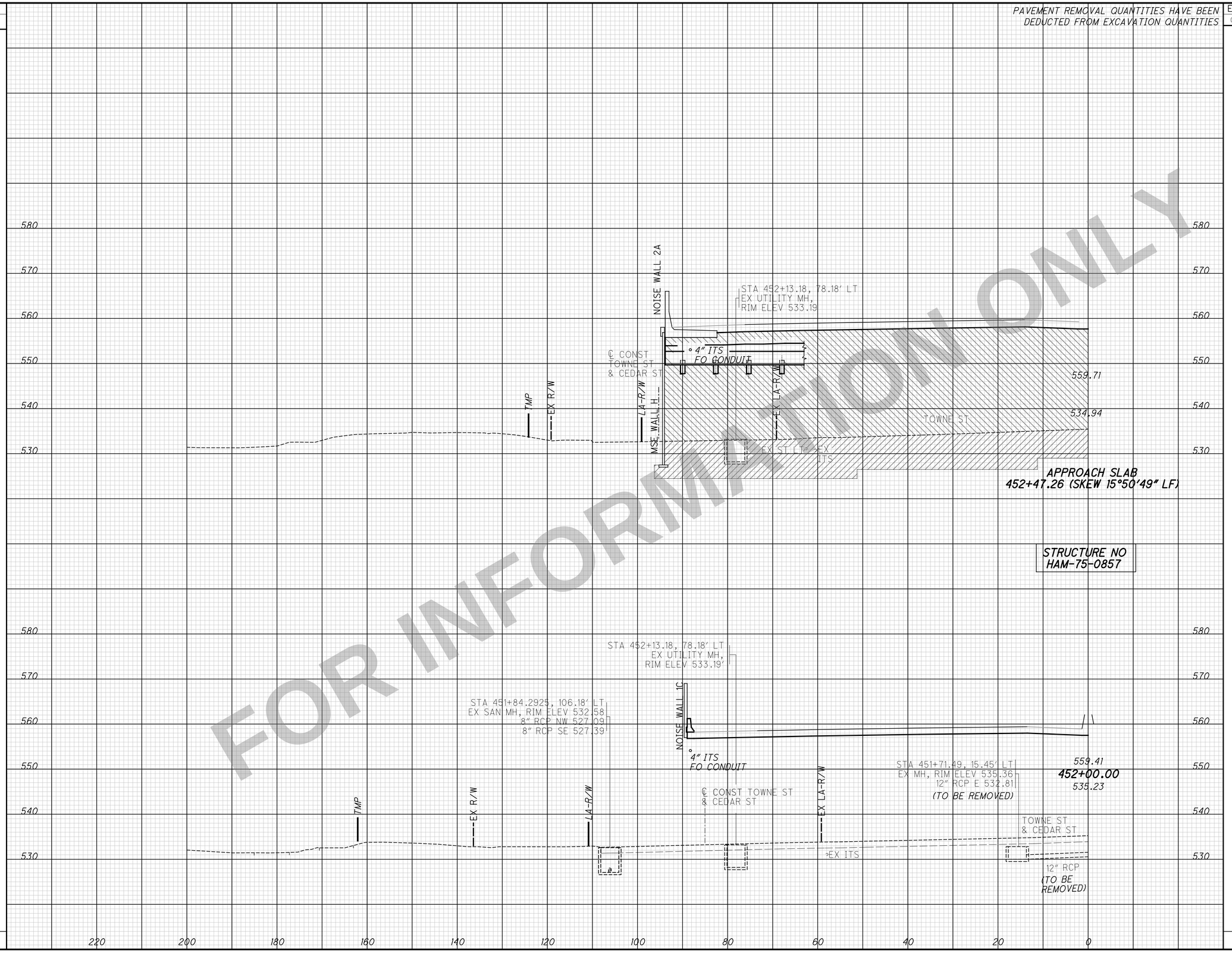
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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 452+00.00 TO STA. 452+47.26

HAM-75-7.85

483
2017

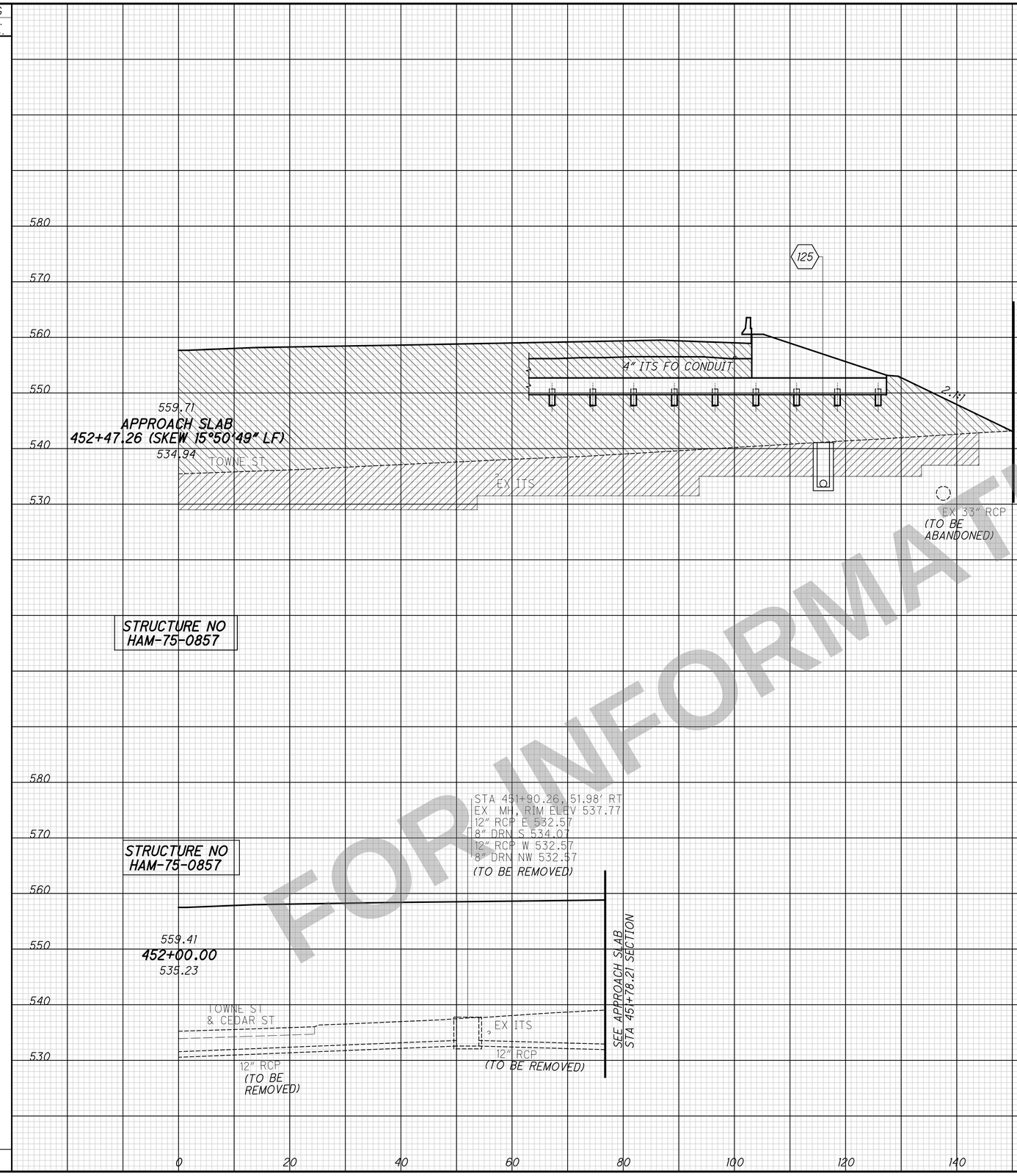
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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0		
		0	0
0	0		
		0	0
0	0		
		0	0

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 452+00.00 TO STA. 452+47.26

HAM-75-7.85

484
2017

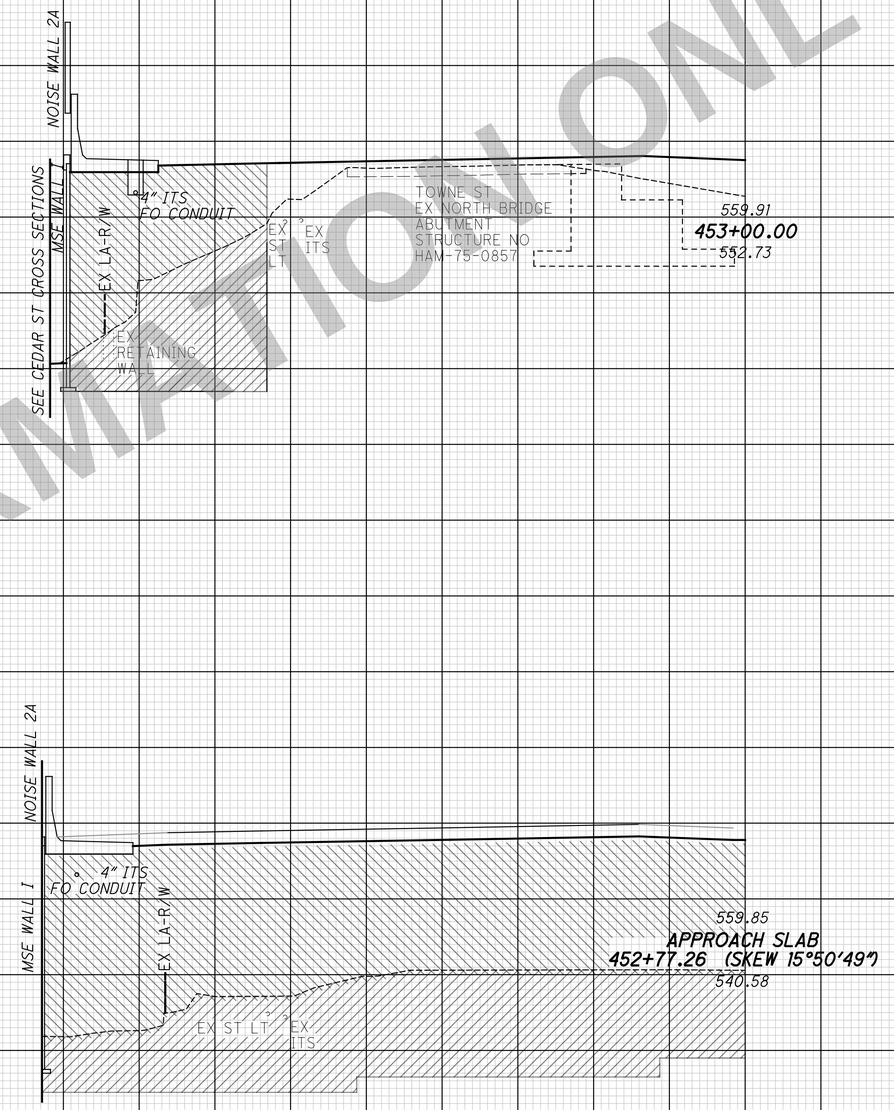
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SEEDING	
END WIDTH	SQ. YDS.
80	0

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

EMBANKMENT INCLUDED WITH MSE WALL H QUANTITIES

EXCAVATION & EMBANKMENT INCLUDED WITH MSE WALL H QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 452+77.26 TO STA. 453+00.00

HAM-75-7.85

485
2017

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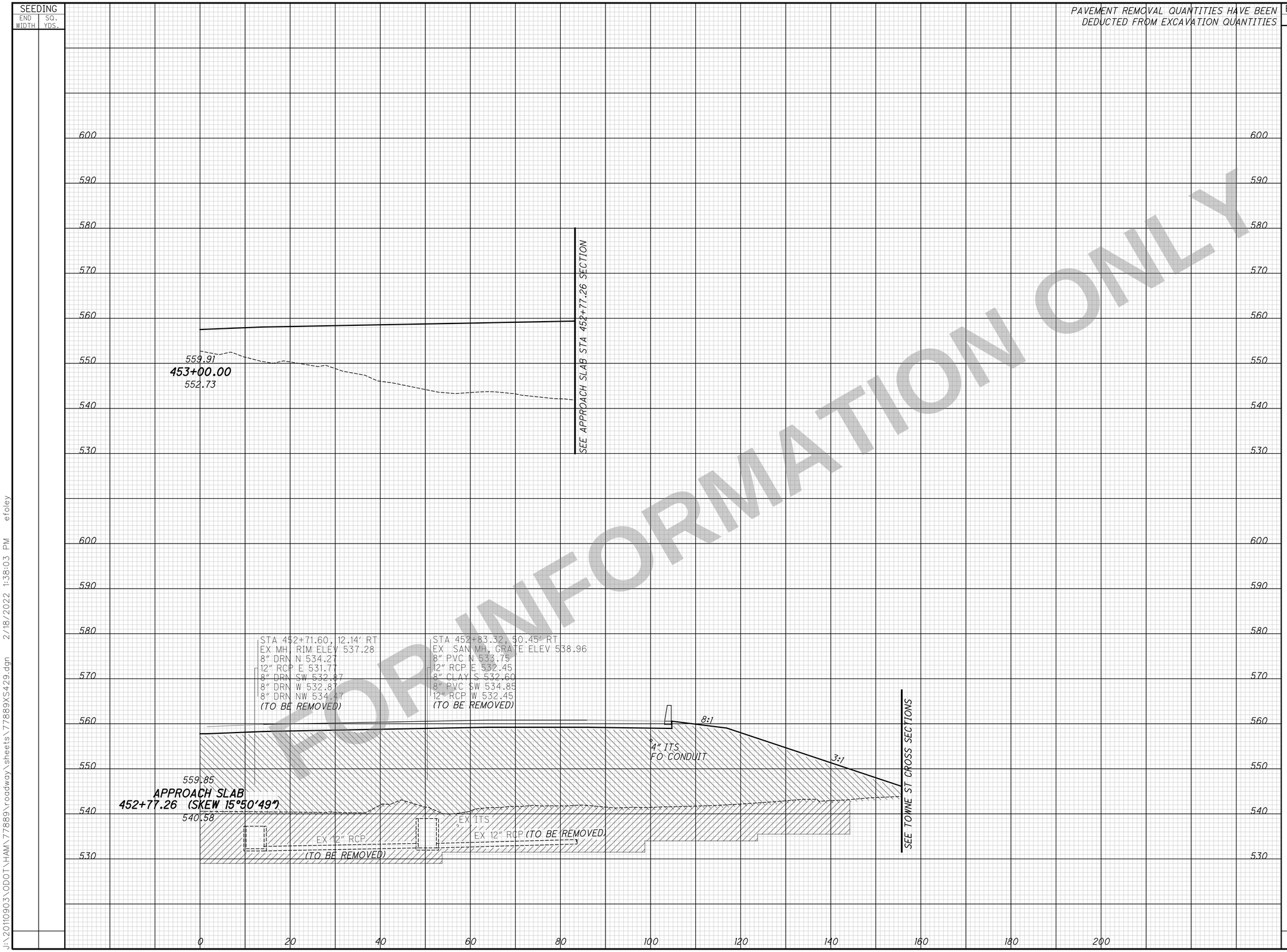
SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA	
CUT	FILL
4	2050
0	0

VOLUME	
CUT	FILL
0	0
0	0
0	0
0	0

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 452+77.26 TO STA. 453+00.00

HAM-75-7.85

486
2017

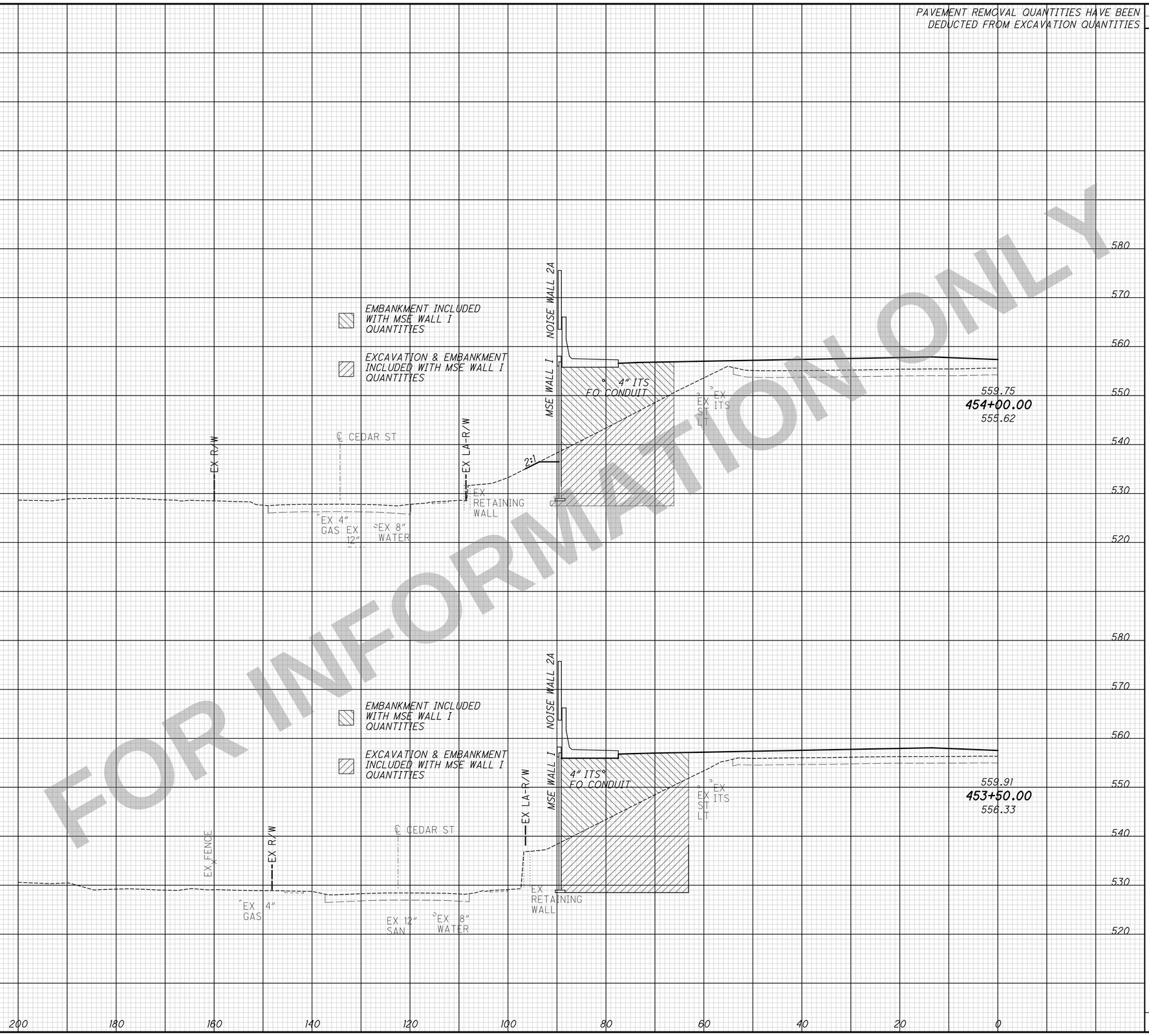
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SEEDING	
END WIDTH	SQ. YDS.
82	494
96	488
	982

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

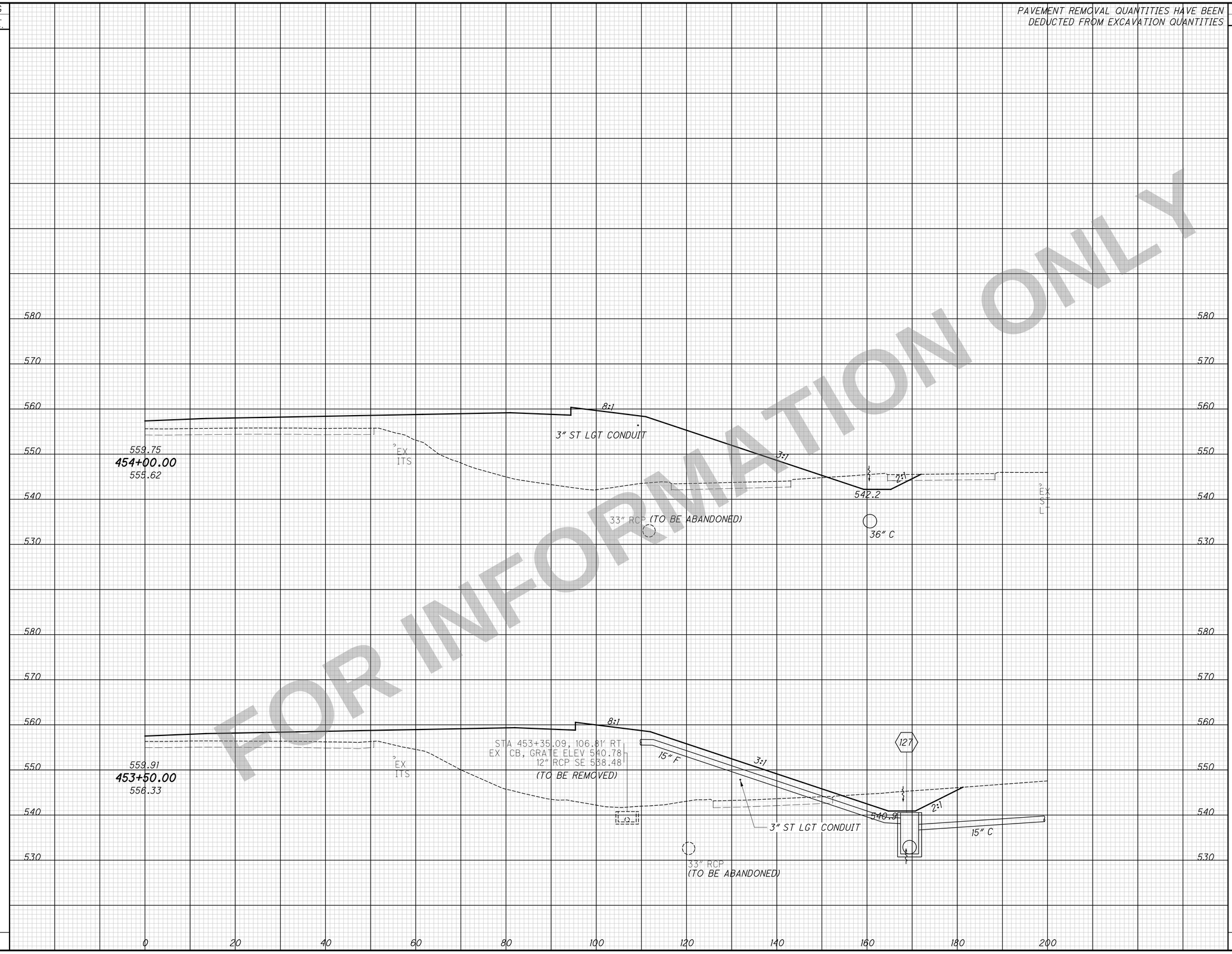
CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 453+50.00 TO STA. 454+00.00

HAM-75-7.85

487
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		28	1508		
				91	2739
		70	1451		
				68	3242
				159	5981

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 453+50.00 TO STA. 454+00.00

HAM-75-7.85

488
2017

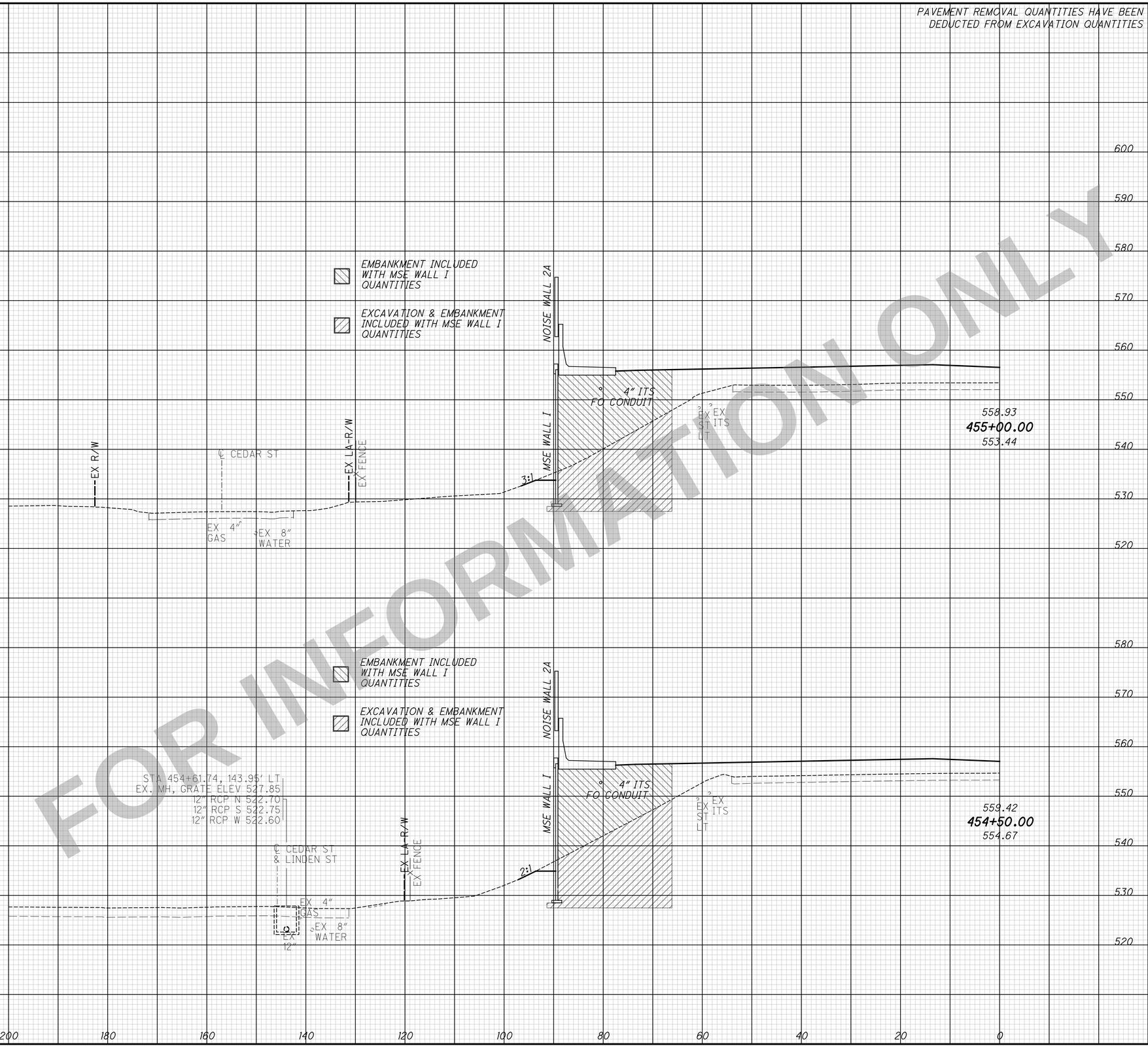
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SEEDING	
END WIDTH	SQ. YDS.
80	446
80	452
	898

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 454+50.00 TO STA. 455+00.00

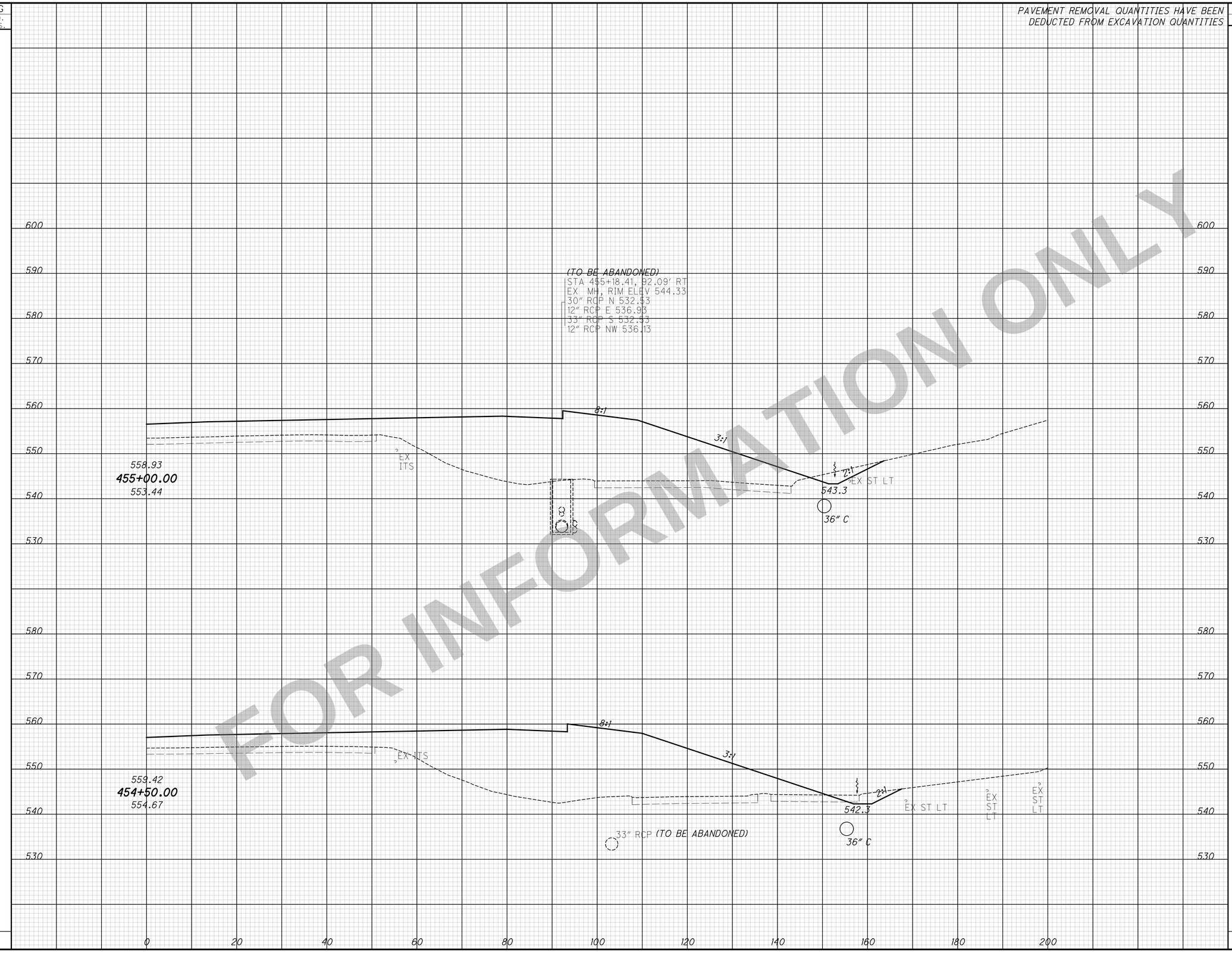
HAM-75-7.85

489
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
24	1581		
		32	2891
11	1541		
		36	2823
		68	5714

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 454+50.00 TO STA. 455+00.00

HAM-75-7.85

490
2017

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SEEDING	
END WIDTH	SQ. YDS.
63	365
69	414
	779

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

EMBANKMENT INCLUDED WITH MSE WALL H QUANTITIES

EXCAVATION & EMBANKMENT INCLUDED WITH MSE WALL H QUANTITIES

℄ CEDAR ST

EX R/W

EX LA-R/W

EX FENCE

EX 4" GAS

EX 8" WATER

MSE WALL 1

NOISE WALL 2A

3:1

4" ITS FO CONDUIT

EX EX ST ITS LT

557.58
456+00.00
550.75

STA 455+37.40, 53.27' LT
EX CB, GRATE ELEV 551.61
12" RCP SE 548.41
(TO BE ABANDONED)

STA 455+46.85, 3.22' LT
EX CB, GRATE ELEV 552.35
12" RCP E 545.71
12" RCP W 546.45
(TO BE ABANDONED)

12" RCP
(TO BE ABANDONED)

558.28
455+50.00
552.25

600 590 580 570 560 550 540 530 520

220 200 180 160 140 120 100 80 60 40 20 0

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 455+50.00 TO STA. 456+00.00

HAM-75-7.85

491
2017

FOR INFORMATION ONLY

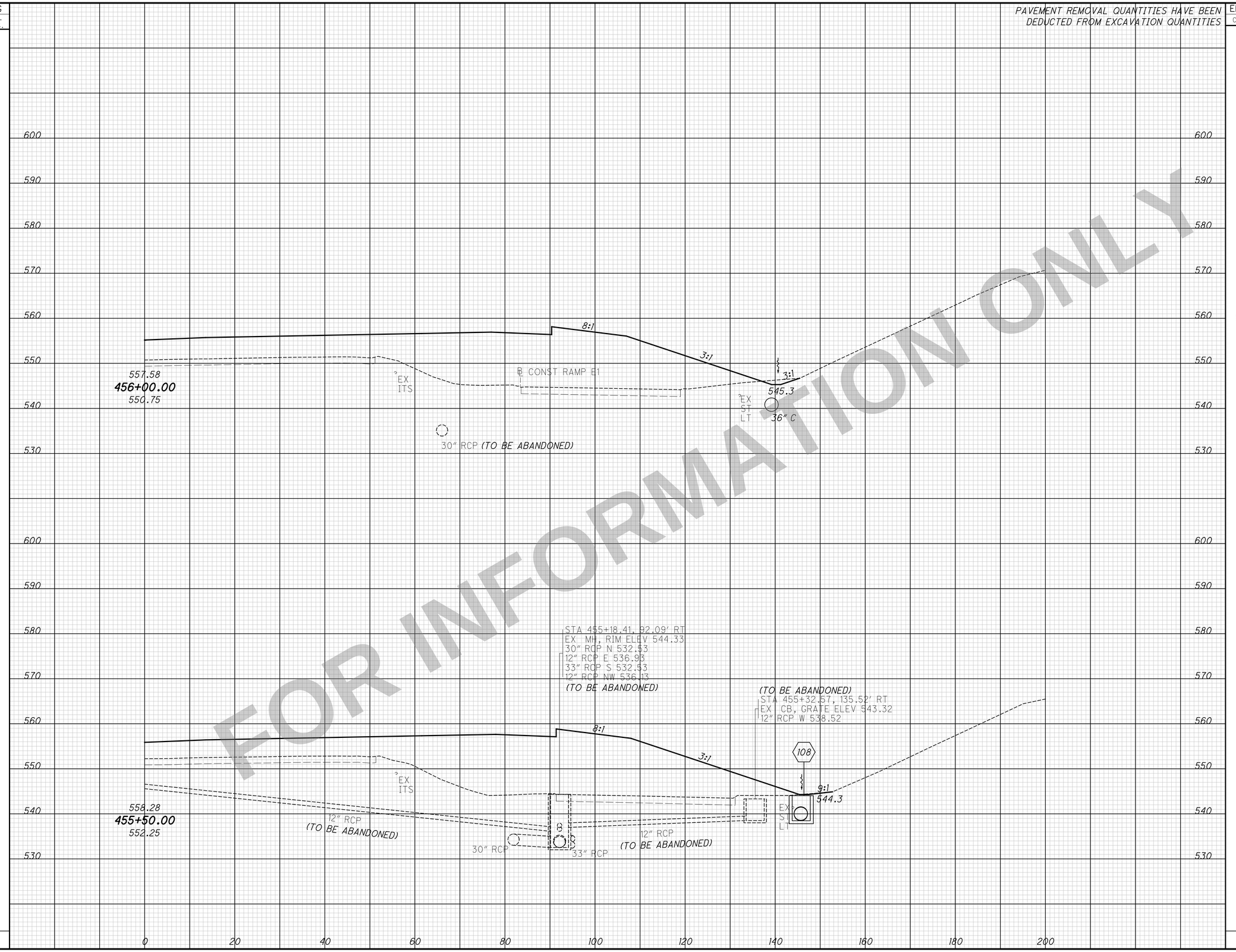
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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL
5	1552		
		5	2894
1	1573		
		23	2921
		28	5815

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 455+50.00 TO STA. 456+00.00

HAM-75-7.85

492
2017

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SEEDING	
END WIDTH	SQ. YDS.
53	312
59	338
650	

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 456+50.00 TO STA. 457+00.00

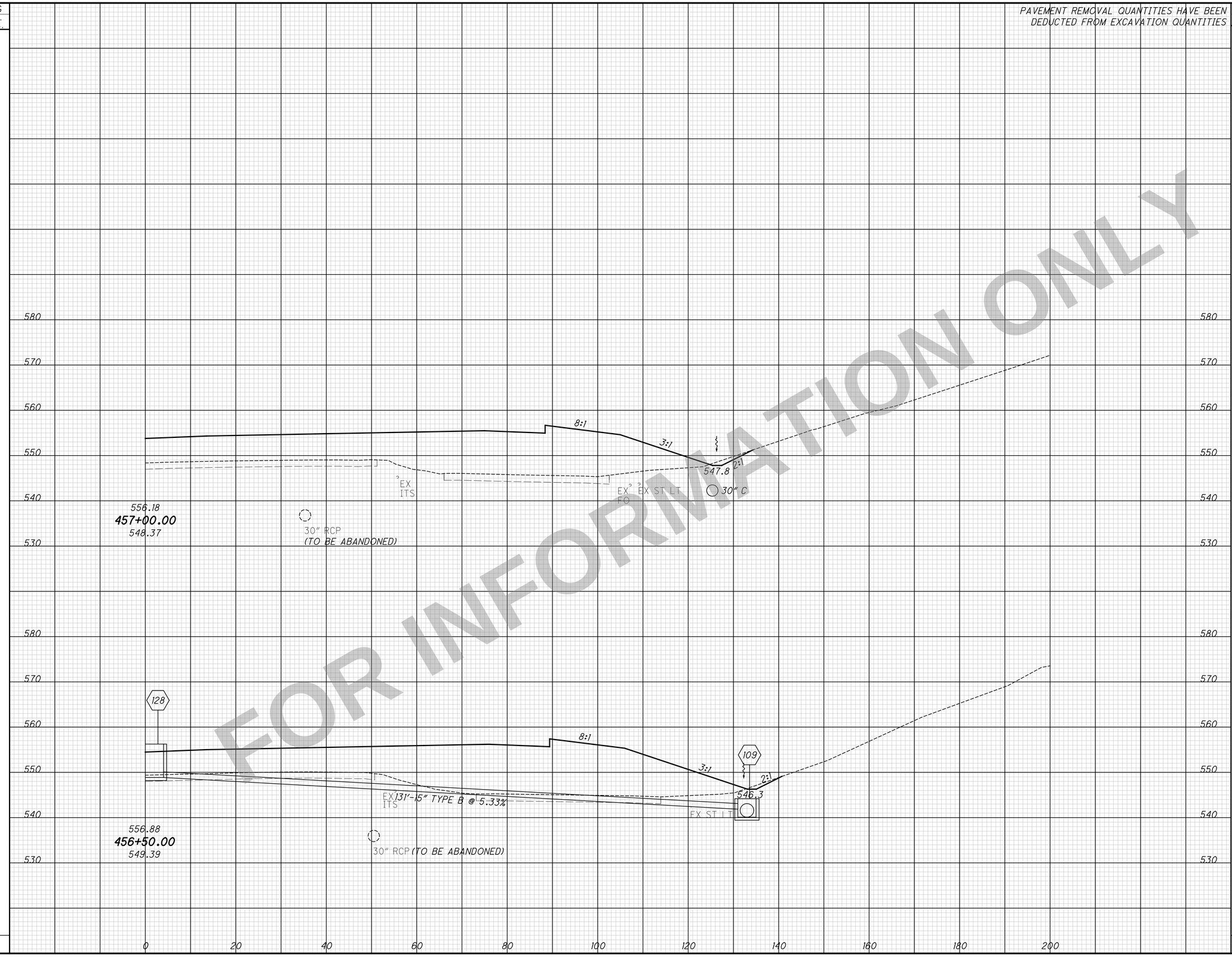
HAM-75-7.85

493
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
6	1454		
8	2777		
3	1545		
8	2868		
16	5645		

CALCULATED CFR
CHECKED SSK

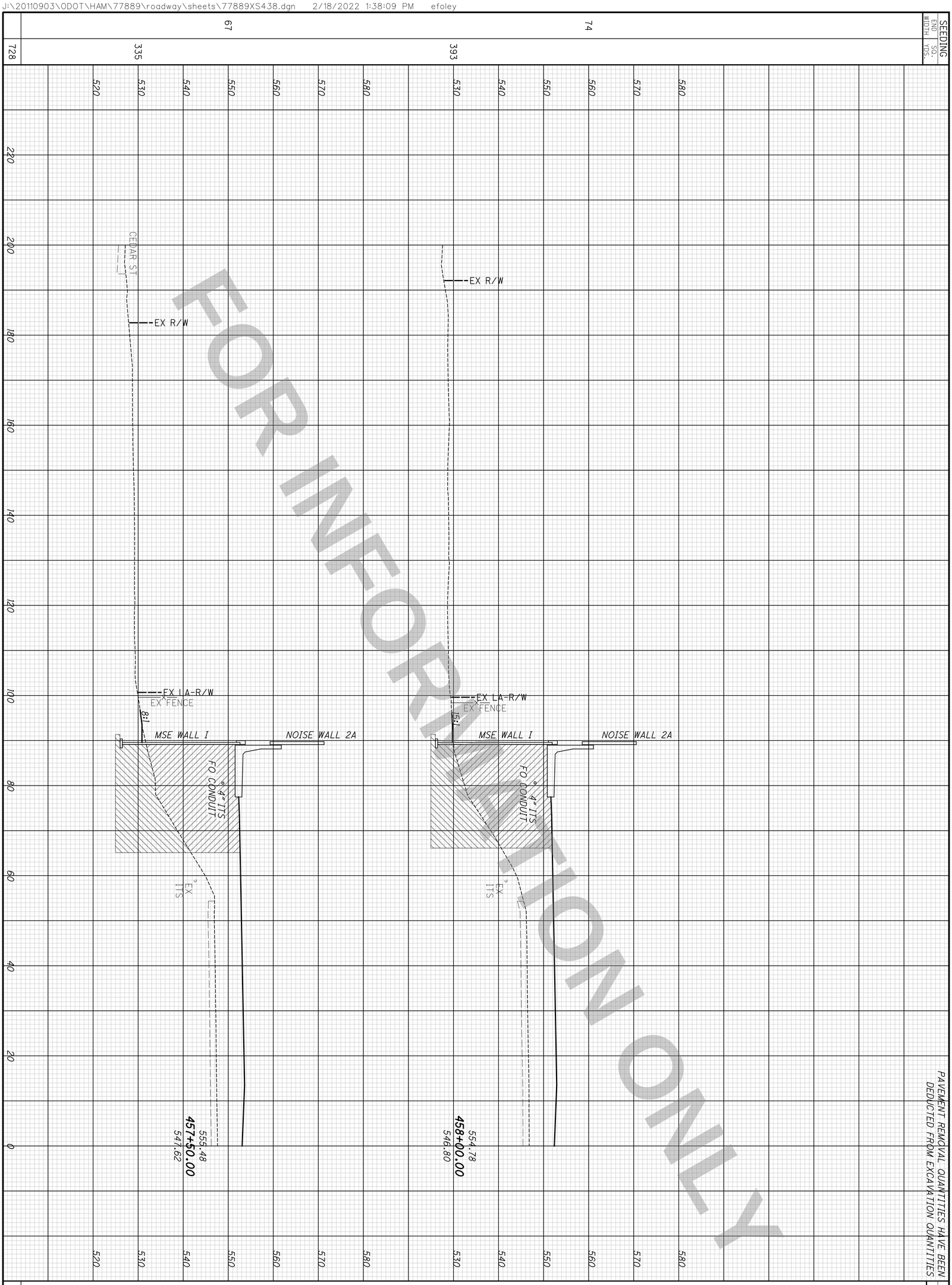
CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 456+50.00 TO STA. 457+00.00

HAM-75-7.85

494
2017

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FOR INFORMATION ONLY

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA CUT FILL
VOLUME CUT FILL

495 2017

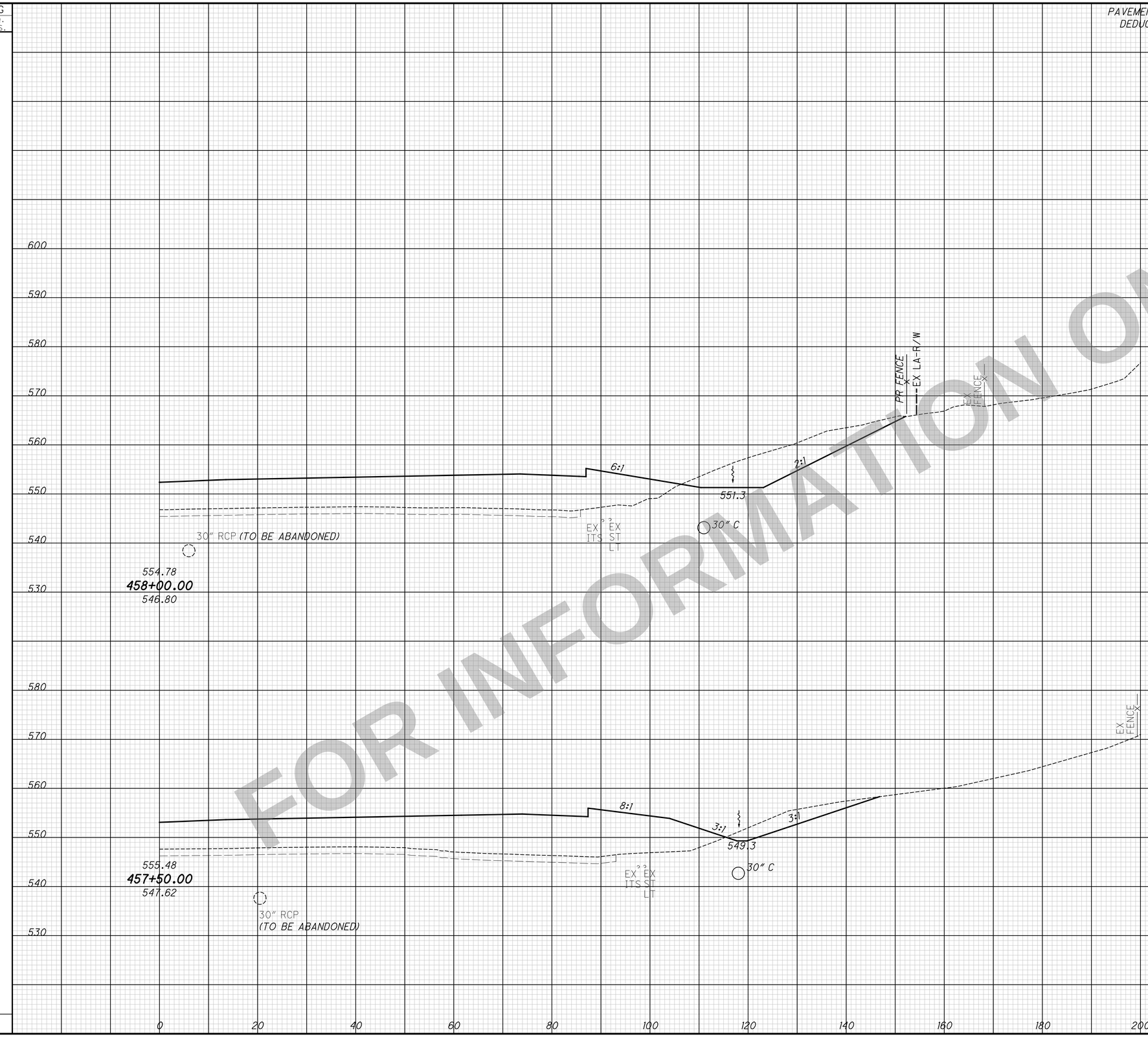
HAM-75-7.85

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 457+50.00 TO STA. 458+00.00

CALCULATED CFR
CHECKED SSK

SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
184	1269		
		229	2456
63	1383		
		64	2626
		293	5082

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 457+50.00 TO STA. 458+00.00

HAM-75-7.85

496
2017

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SEEDING	
END WIDTH	SQ. YDS.
52	276
48	338
	614

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK

EMBANKMENT INCLUDED WITH MSE WALL I QUANTITIES

EXCAVATION & EMBANKMENT INCLUDED WITH MSE WALL I QUANTITIES

NOISE WALL 2A

MSE WALL I

136

4" ITS FO CONDUIT

EX LA-R/W

EX FENCE

PR FENCE

TMP

EX ITS

27" RCP (TO BE REMOVED)

553.56

459+00.00

546.13

STA 458+35.66, 53.44' LT
EX CB, GRATE ELEV 545.41
12" RCP E 542.41
(TO BE ABANDONED)

12" RCP (TO BE ABANDONED)

554.10

458+50.00

546.26

600 590 580 570 560 550 540 530

220 200 180 160 140 120 100 80 60 40 20 0

FOR INFORMATION ONLY

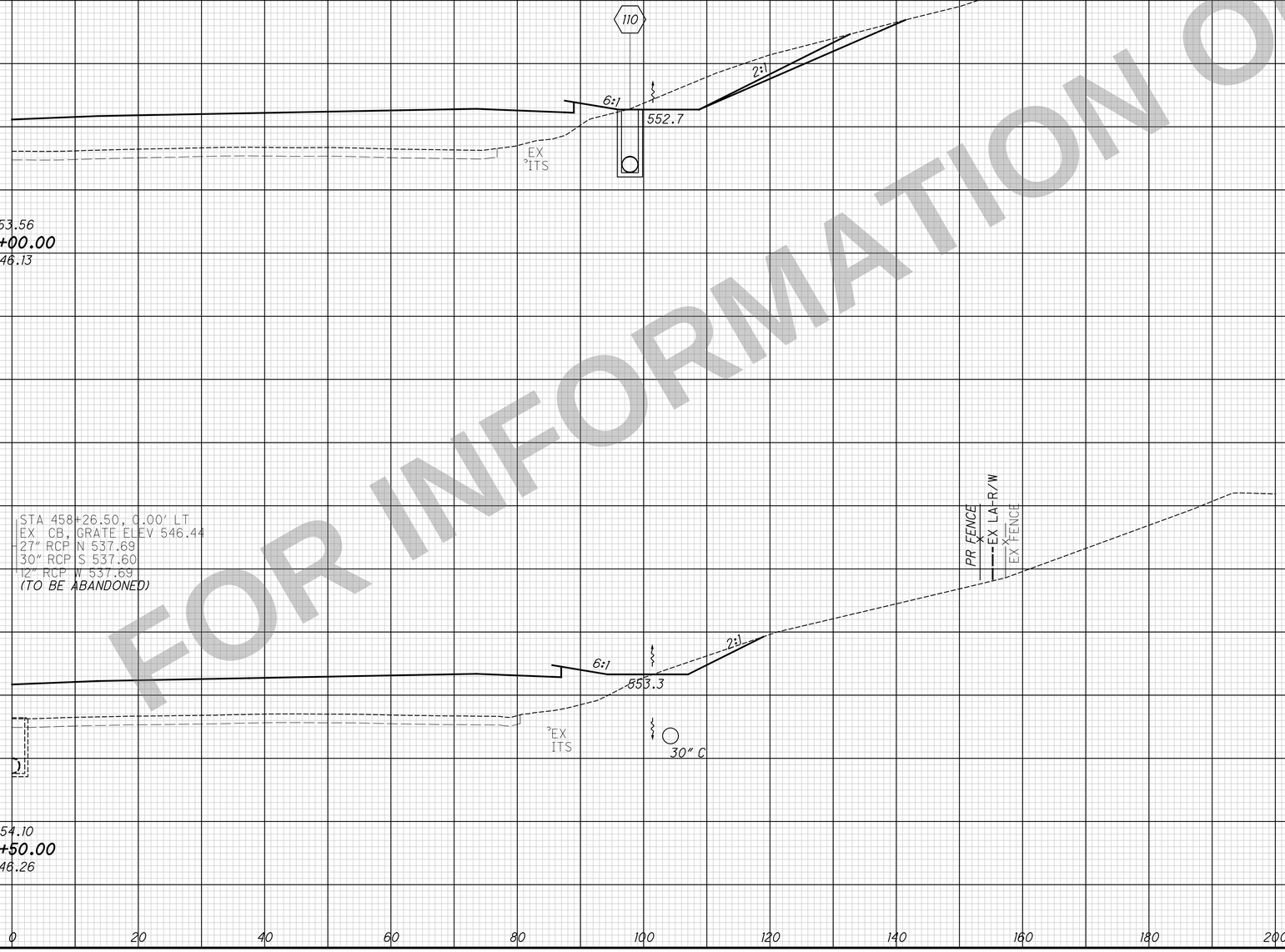
CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 458+50.00 TO STA. 459+00.00

HAM-75-7.85

497
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

SEEDING END WIDTH	SEEDING SQ. YDS.

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
90	1094		
		99	2096
17	1170		
		186	2259
		285	4355

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 458+50.00 TO STA. 459+00.00

HAM-75-7.85

498
2017

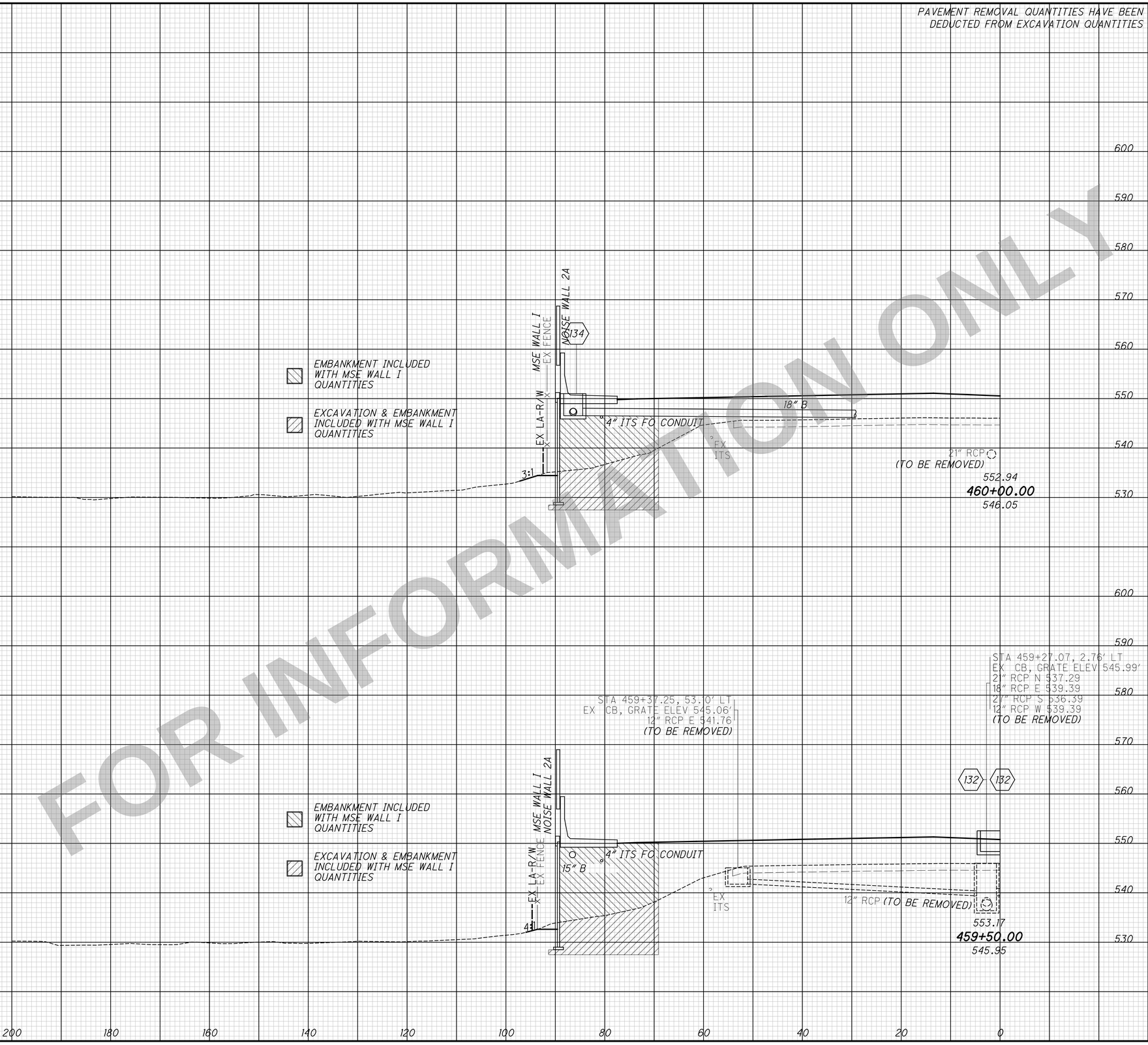
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SEEDING	
END WIDTH	SQ. YDS.
20	134
28	222
	356

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 459+50.00 TO STA. 460+00.00

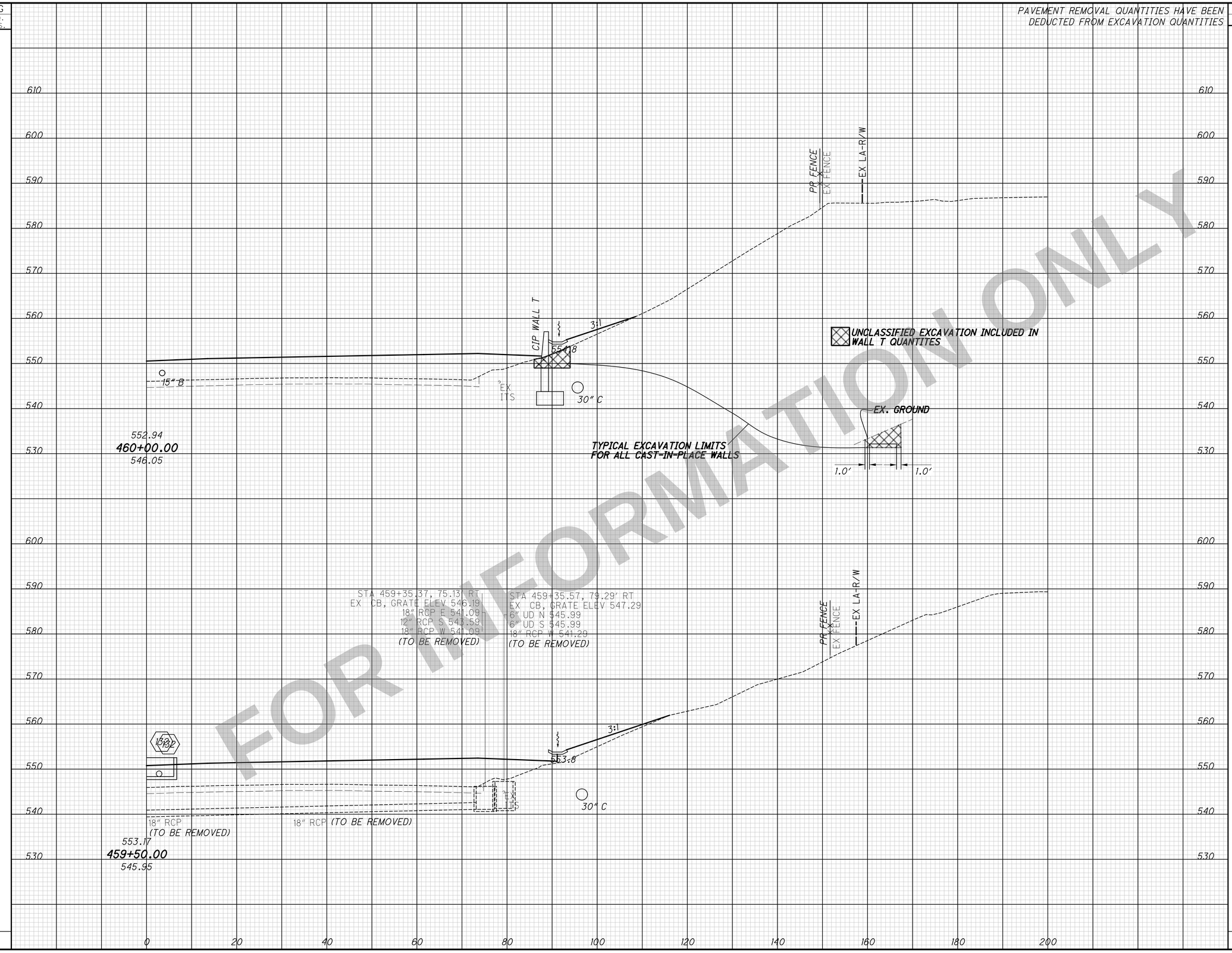
HAM-75-7.85

499
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	958		
		0	1875
0	1067		
		83	2001
		83	3876

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 459+50.00 TO STA. 460+00.00

HAM-75-7.85

500
2017

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SEEDING	
END WIDTH	SQ. YDS.
24	
	123
21	
	113
	236

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK

EMBANKMENT INCLUDED WITH MSE WALL I QUANTITIES

EXCAVATION & EMBANKMENT INCLUDED WITH MSE WALL I QUANTITIES

PROP FENCE
TMP
8:1
MSE WALL I
EX LA-R/W
EX FENCE
NOISE WALL 2A
435
4" ITS FO CONDUIT
EX ST LT
EX ITS
18" RCP (TO BE REMOVED)
552.96
461+00.00
547.02

STA 460+36.82, 53.08' LT
EX CB, GRATE ELEV 545.51
12" RCP SE 542.61
(TO BE REMOVED)

STA 460+27.70, 2.83' LT
EX CB, GRATE ELEV 546.39
18" RCP N 538.08
21" RCP S 538.08
12" RCP NW 538.08
(TO BE REMOVED)

PROP FENCE
TMP
4:1
EX LA-R/W
MSE WALL I
EX FENCE
NOISE WALL 2A
015" B
4" ITS FO CONDUIT
EX ITS
131
18" B
12" RCP (TO BE REMOVED)
552.87
460+50.00
546.44

600 590 580 570 560 550 540 530

220 200 180 160 140 120 100 80 60 40 20 0

FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 460+50.00 TO STA. 461+00.00

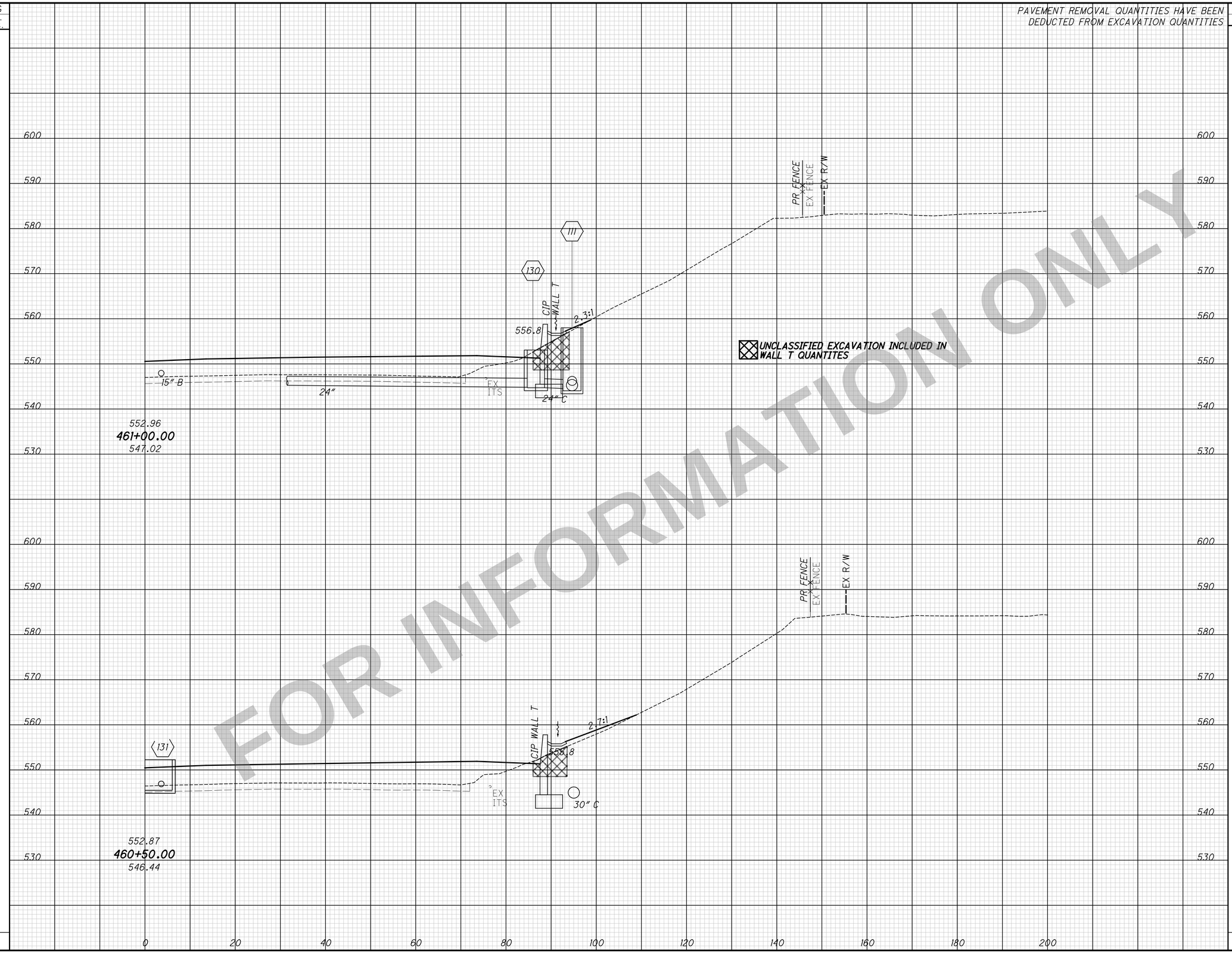
HAM-75-7.85

501
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
4	801		
		5	1527
2	848		
		1	1673
		6	3200

CALCULATED: CFR
CHECKED: SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 460+50.00 TO STA. 461+00.00

HAM-75-7.85

502
2017

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SEEDING	
END WIDTH	SQ. YDS.
67	
	205
7	
	86
	291

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

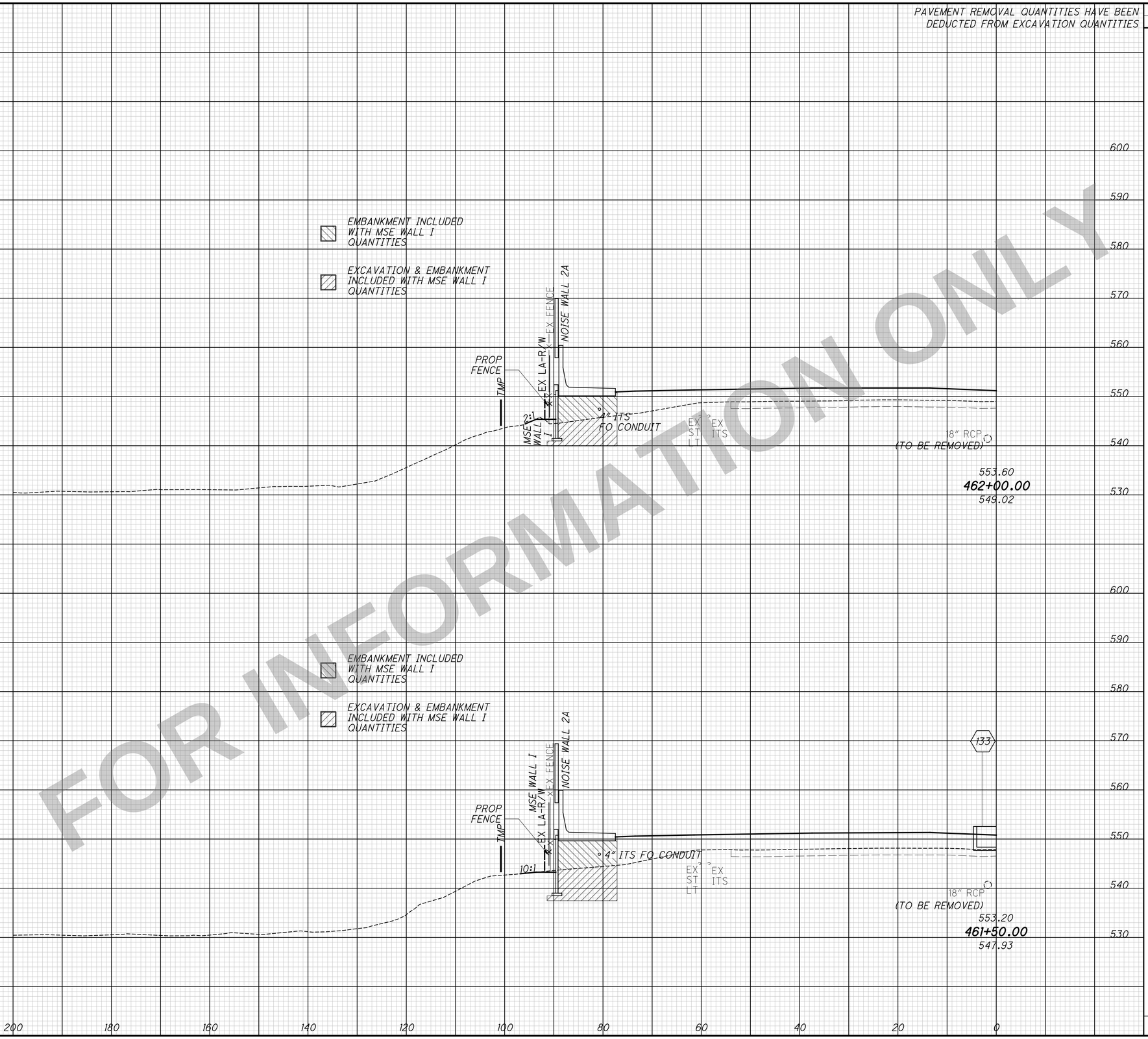
END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 461+50.00 TO STA. 462+00.00

HAM-75-7.85

503
2017



FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

GRADING DETAIL FOR CCTV WORK PAD APPLIES STA 461+95 TO 462+09

PR FENCE
EX LA-R/W
EX FENCE
2.5:1
13:1
553.4
24" C
EX ITS
553.60
462+00.00
549.02
553.20
461+50.00
547.93
CIP WALL T
2:1
15" B
TOWANDE TERRACE

UNCLASSIFIED EXCAVATION INCLUDED IN WALL T QUANTITES

FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
629	592		
		598	1189
17	692		
		19	1382
		617	2571

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 461+50.00 TO STA. 462+00.00

HAM-75-7.85

504
2017

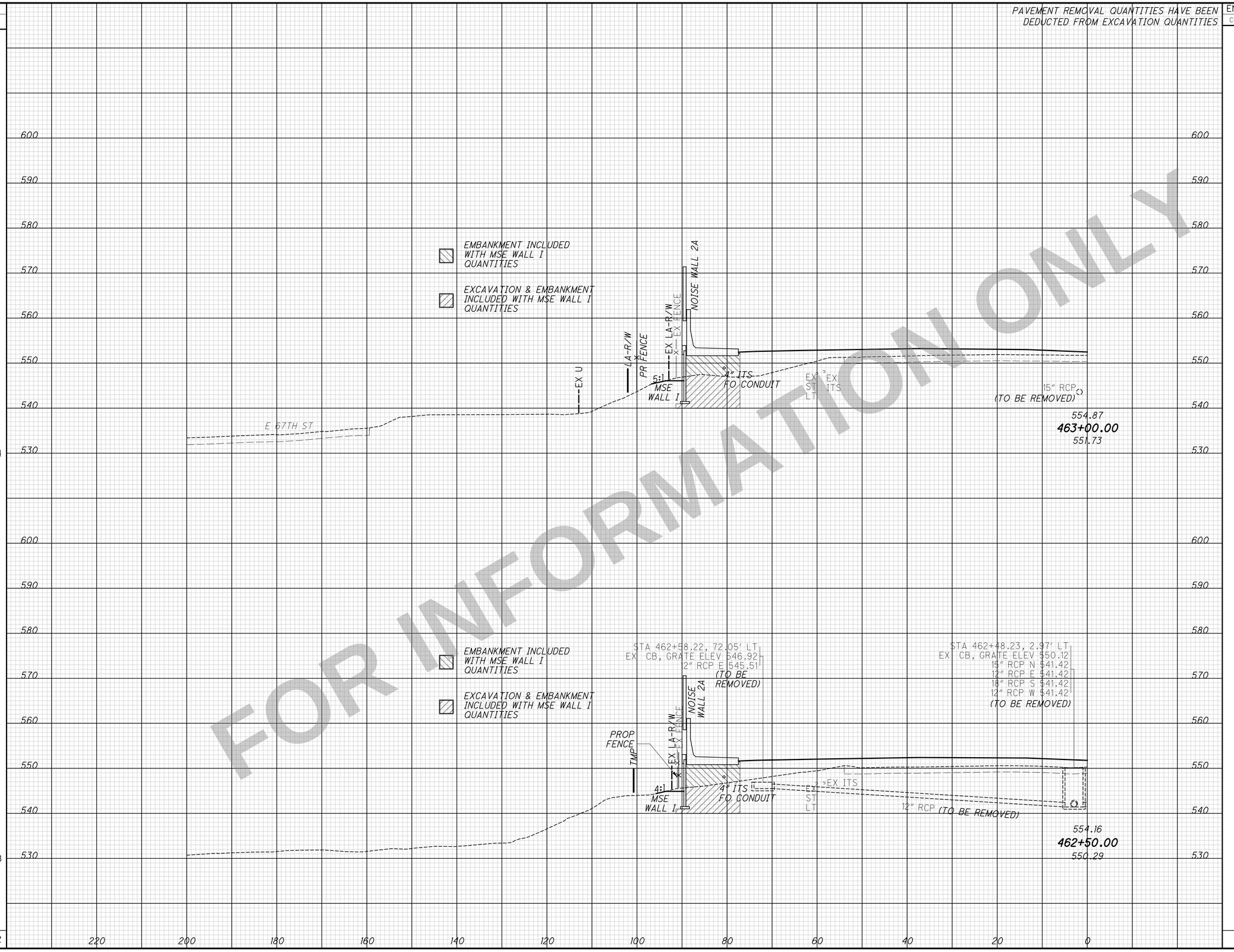
J:\20110903\ODOT\HAM\77889\roadway\sheets\77889XS447.dgn 2/18/2022 1:38:19 PM efoley

SEEDING	
END WIDTH	SQ. YDS.
55	374
80	408
	782

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 462+50.00 TO STA. 463+00.00

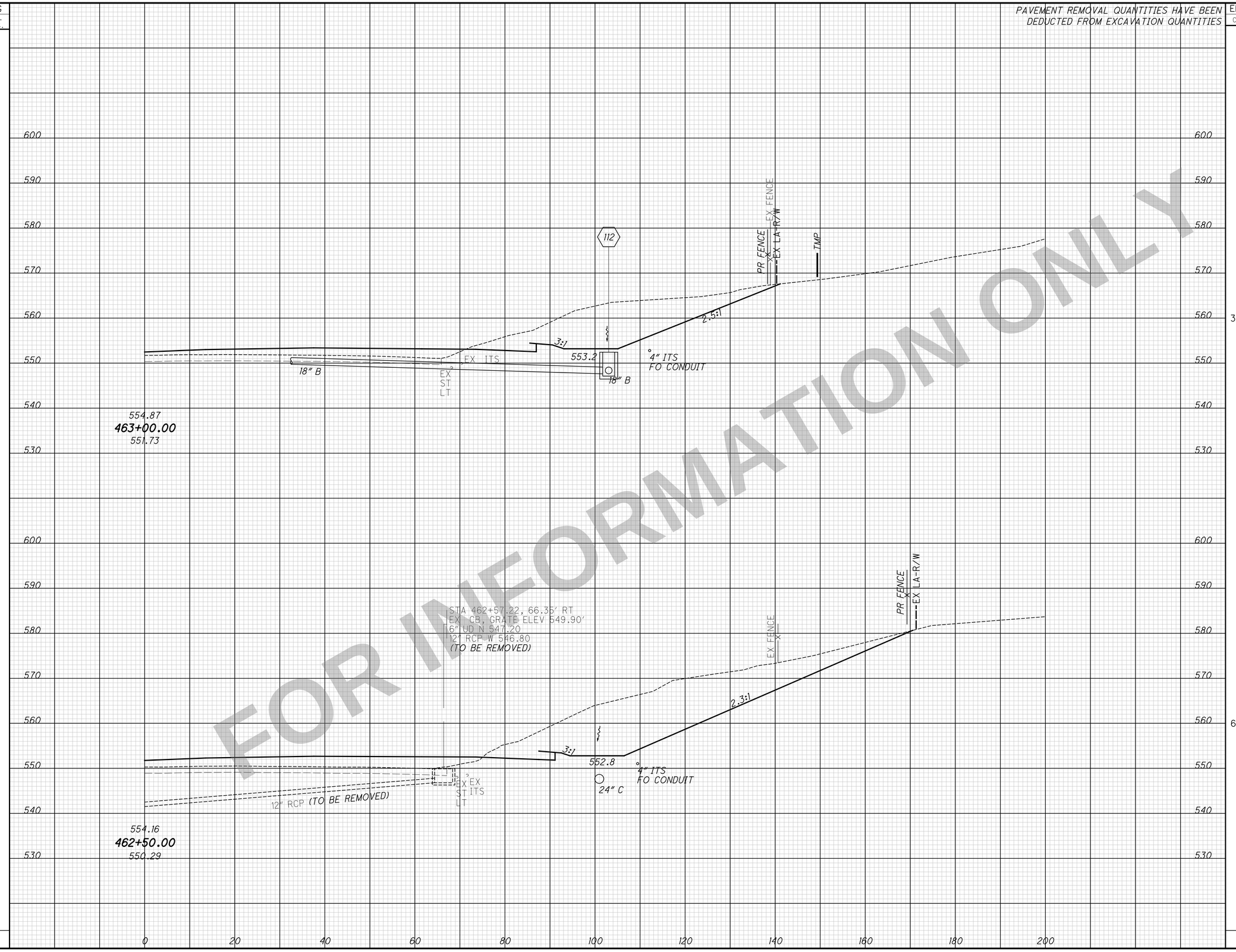
HAM-75-7.85

505
2017

J:\20110903\ODOT\HAM\77889\roadway\sheets\77889XS448.dgn 2/18/2022 1:38:20 PM efoley

SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
356	424		
		924	853
643	497		
		1177	1009
		2101	1862

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 462+50.00 TO STA. 463+00.00

HAM-75-7.85

506
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.
69	322
47	282
604	

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 463+50.00 TO STA. 464+00.00

HAM-75-7.85

507
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
323	377		
		527	655
246	331		
		557	699
		1084	1354

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 463+50.00 TO STA. 464+00.00

HAM-75-7.85

508
2017

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SEEDING	
END WIDTH	SQ. YDS.
63	375
72	391
	766

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 464+50.00 TO STA. 465+00.00

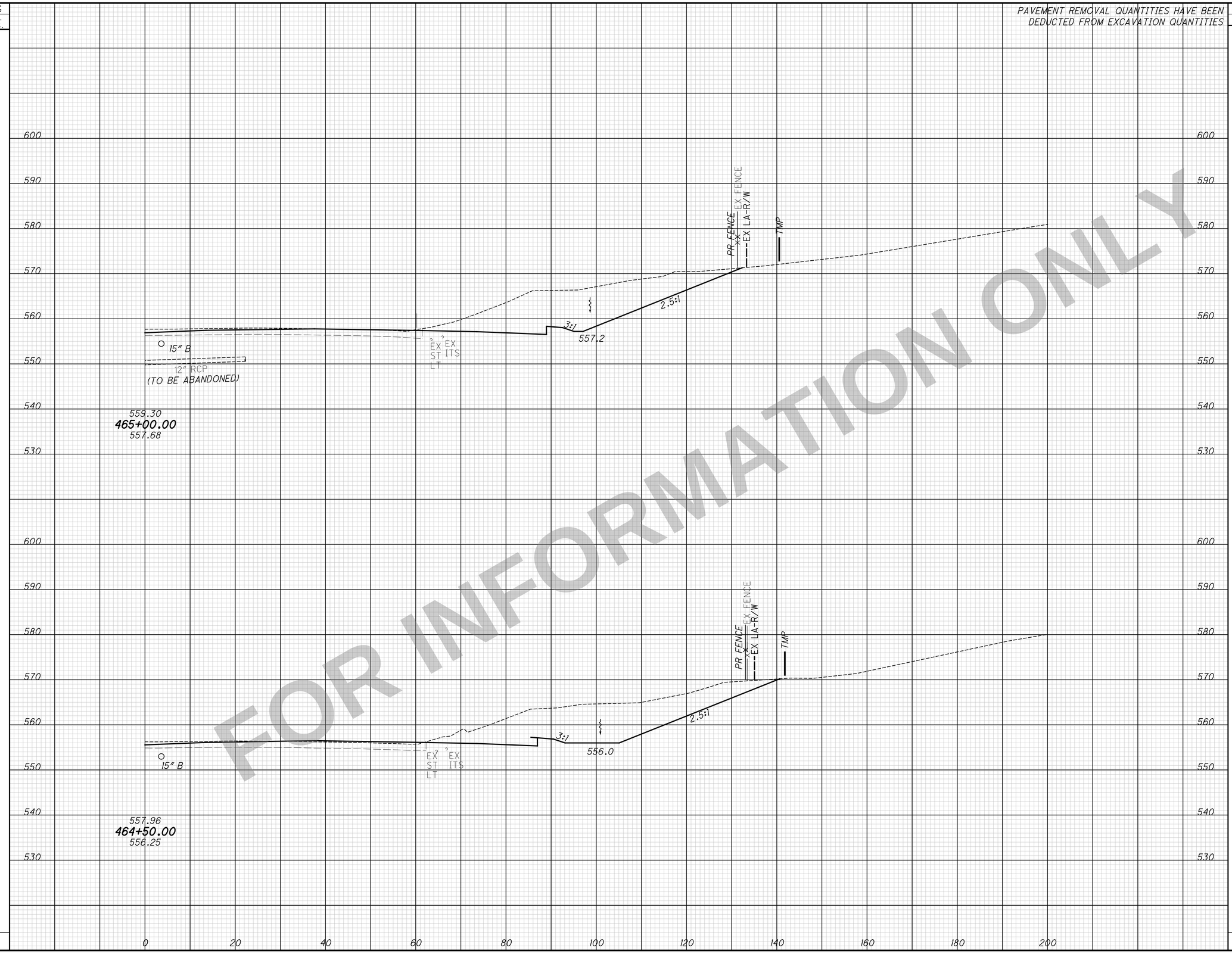
HAM-75-7.85

509
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
385	316		
		732	606
406	339		
		675	663
		1407	1269

CALCULATED CFR | CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 464+50.00 TO STA. 465+00.00

HAM-75-7.85

510
2017

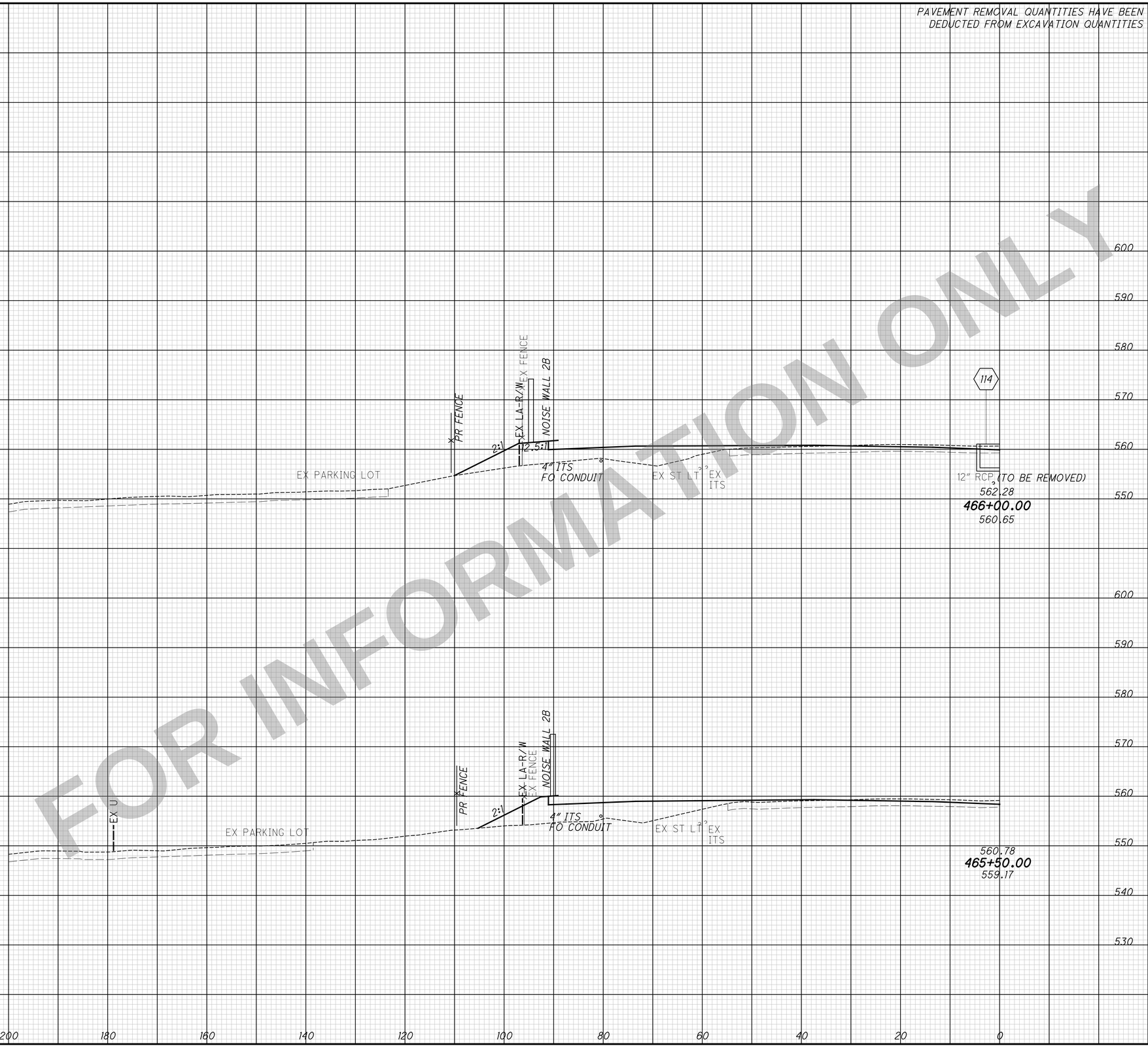
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SEEDING	
END WIDTH	SQ. YDS.
63	365
68	366
	731

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 465+50.00 TO STA. 466+00.00

HAM-75-7.85

511
2017

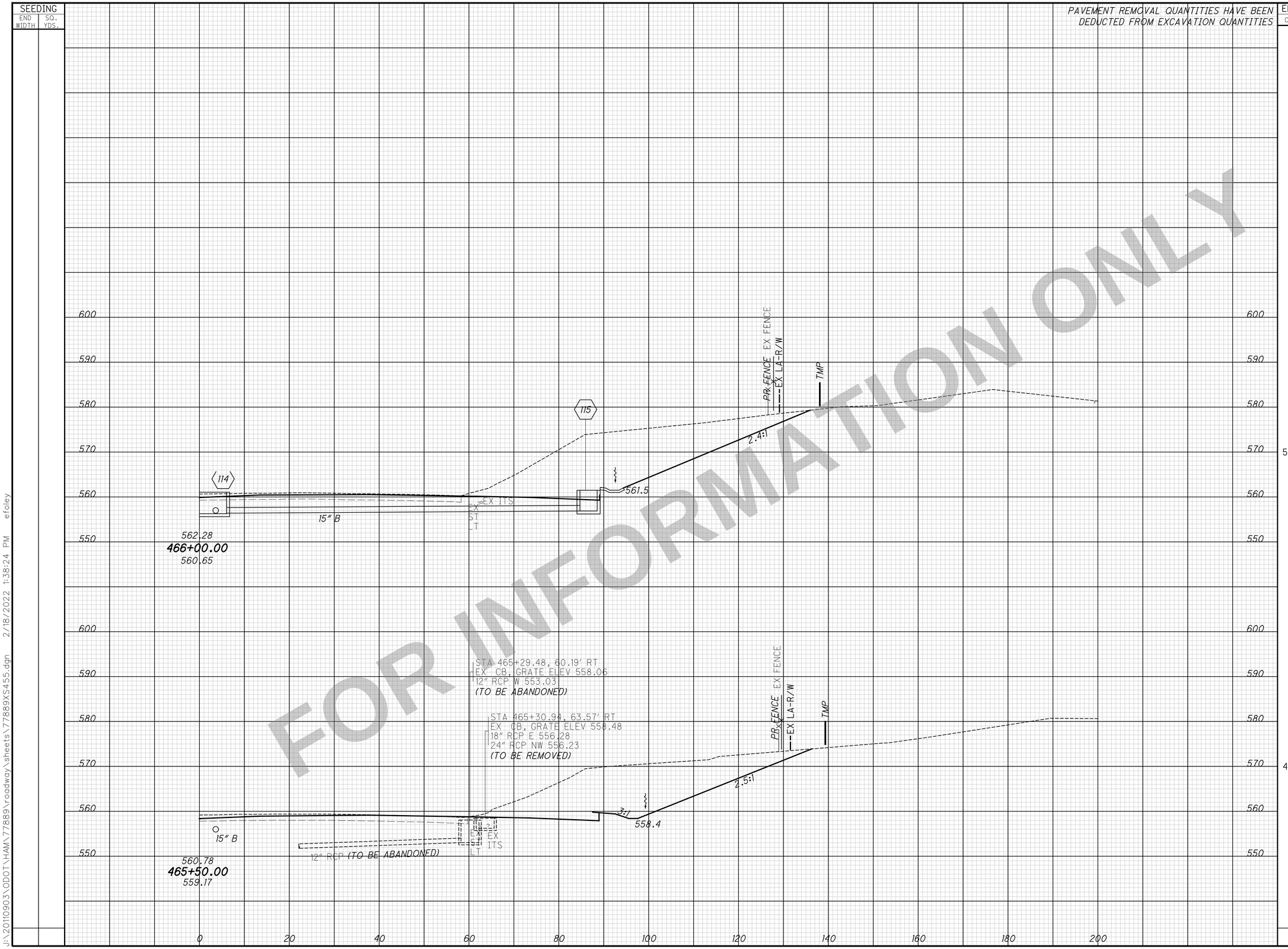
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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
556	281		
		971	529
493	290		
		813	561
		1800	1090

CALCULATED CFR | CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 465+50.00 TO STA. 466+00.00

HAM-75-7.85

512
2017

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SEEDING	
END WIDTH	SQ. YDS.
51	
58	303
	337
	640

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 466+50.00 TO STA. 467+00.00

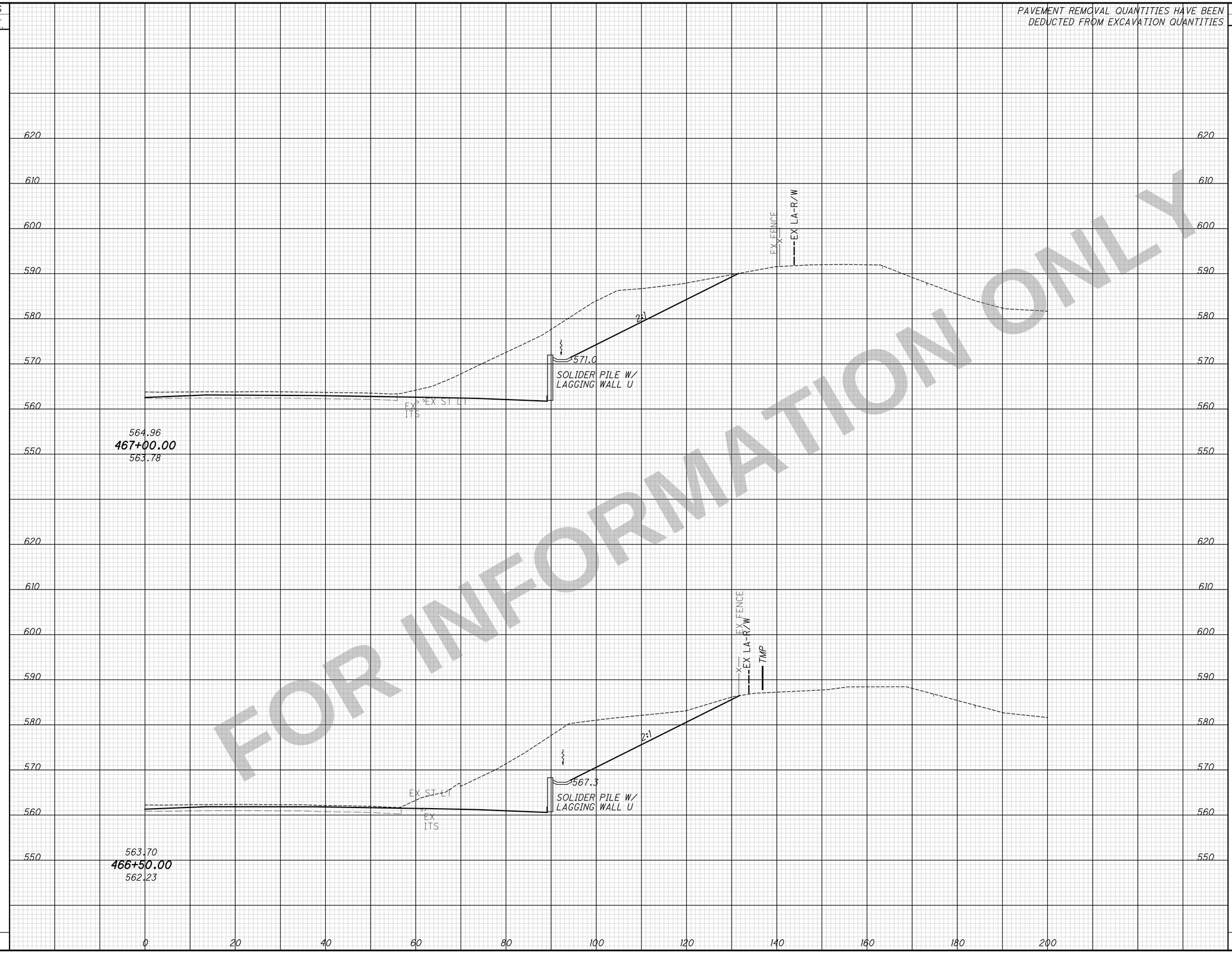
HAM-75-7.85

513
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
495	126		
		931	301
510	200		
		987	445
		1918	746

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 466+50.00 TO STA. 467+00.00

HAM-75-7.85

514
2017

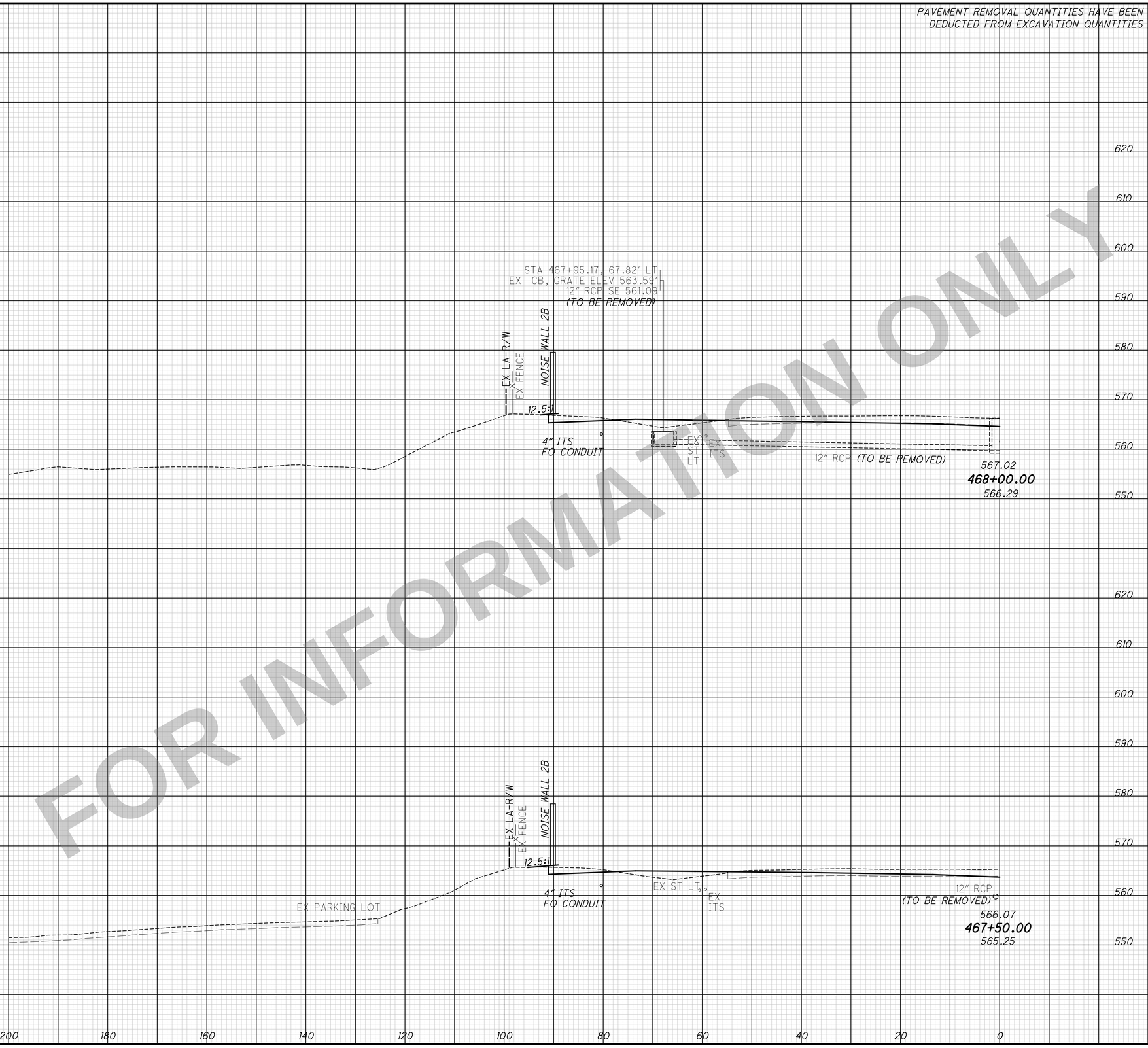
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SEEDING	
END WIDTH	SQ. YDS.
39	234
46	268
	502

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 467+50.00 TO STA. 468+00.00

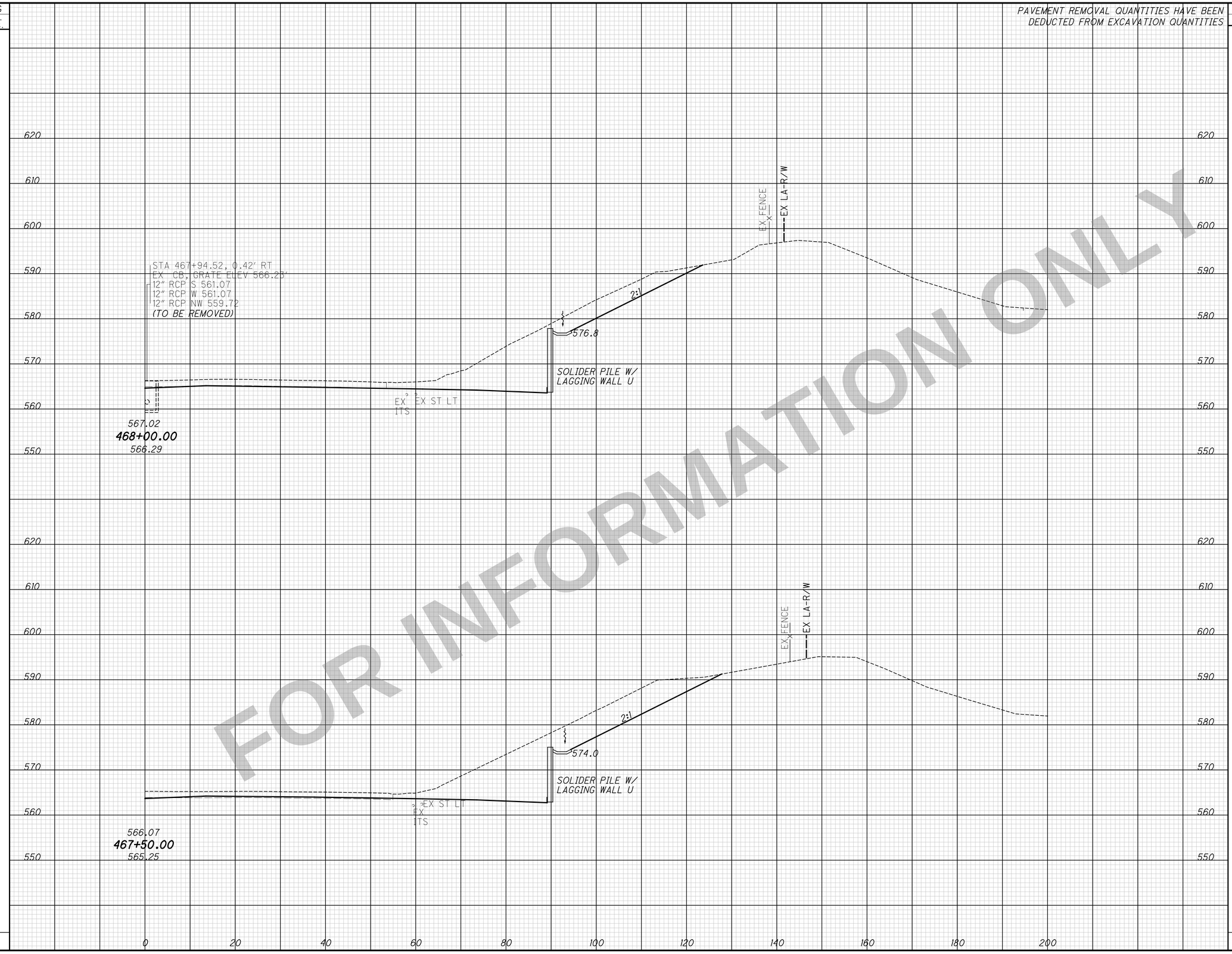
HAM-75-7.85

515
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
345	29		
		708	87
419	65		
		846	177
		1554	264

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 467+50.00 TO STA. 468+00.00

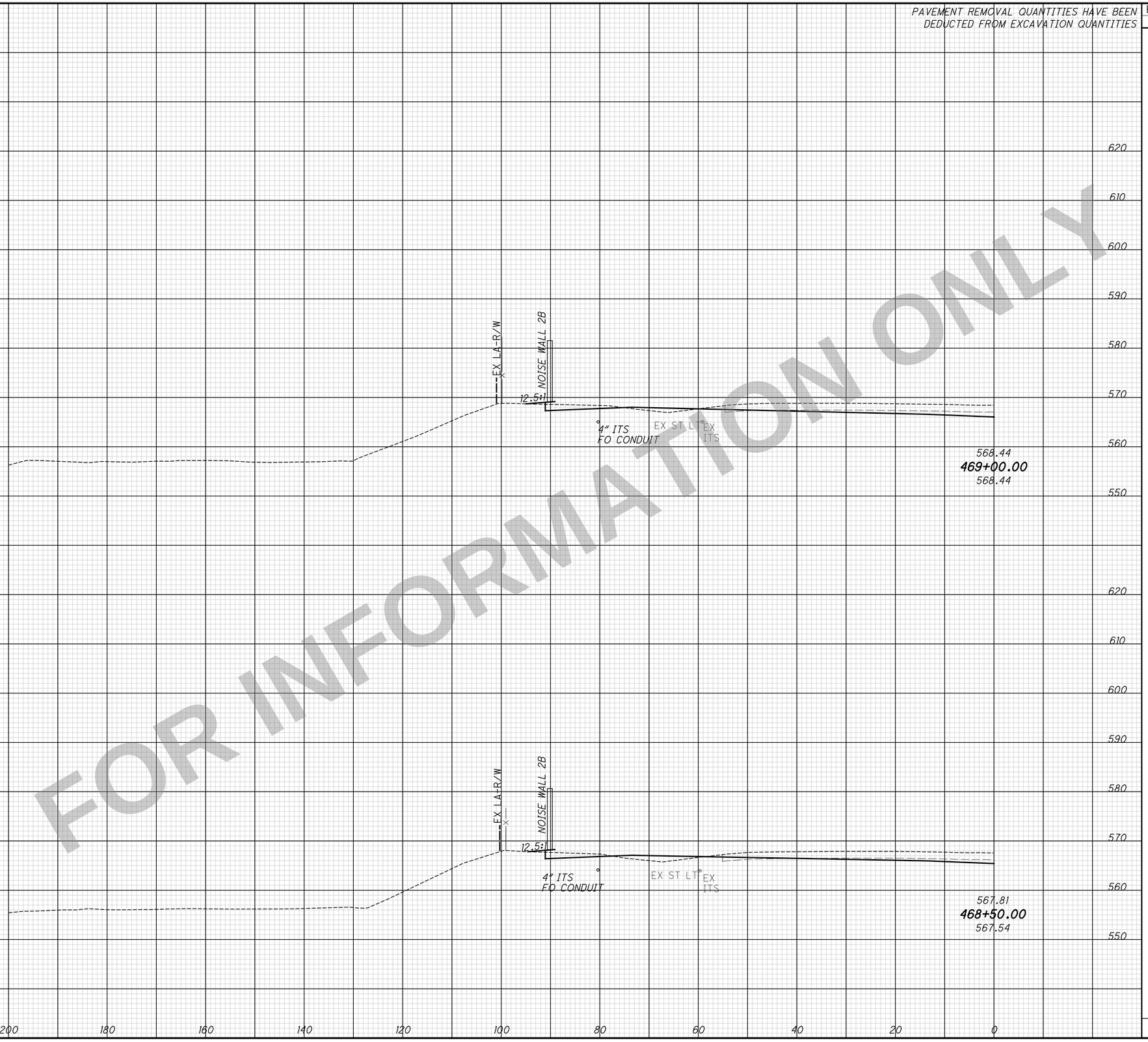
HAM-75-7.85

516
2017

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SEEDING	
END WIDTH	SQ. YDS.
44	264
51	249
	513

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 468+50.00 TO STA. 469+00.00

HAM-75-7.85

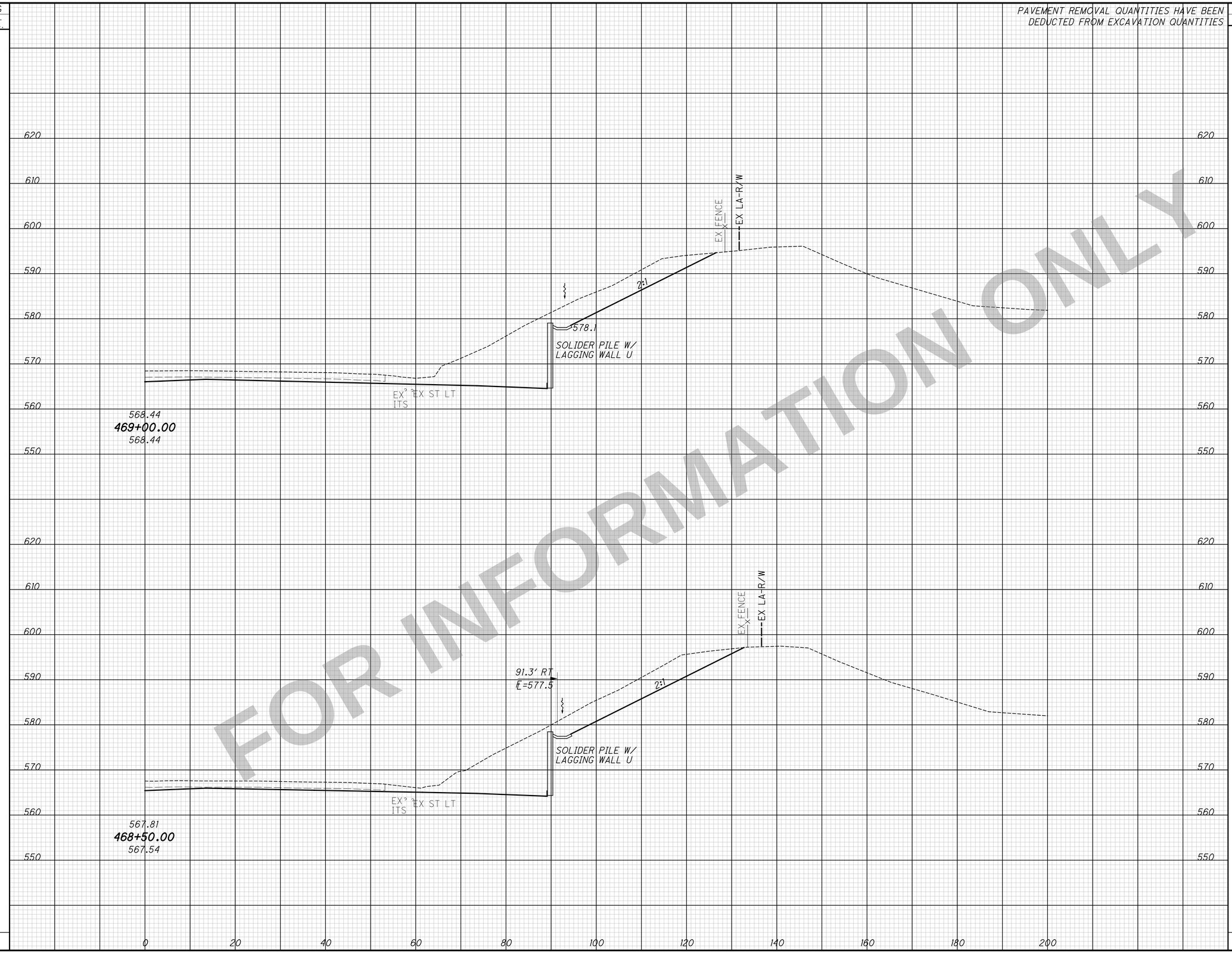
517
2017

FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
475	10		
		853	27
446	19		
		733	44
		1586	71

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 468+50.00 TO STA. 469+00.00

HAM-75-7.85

518
2017

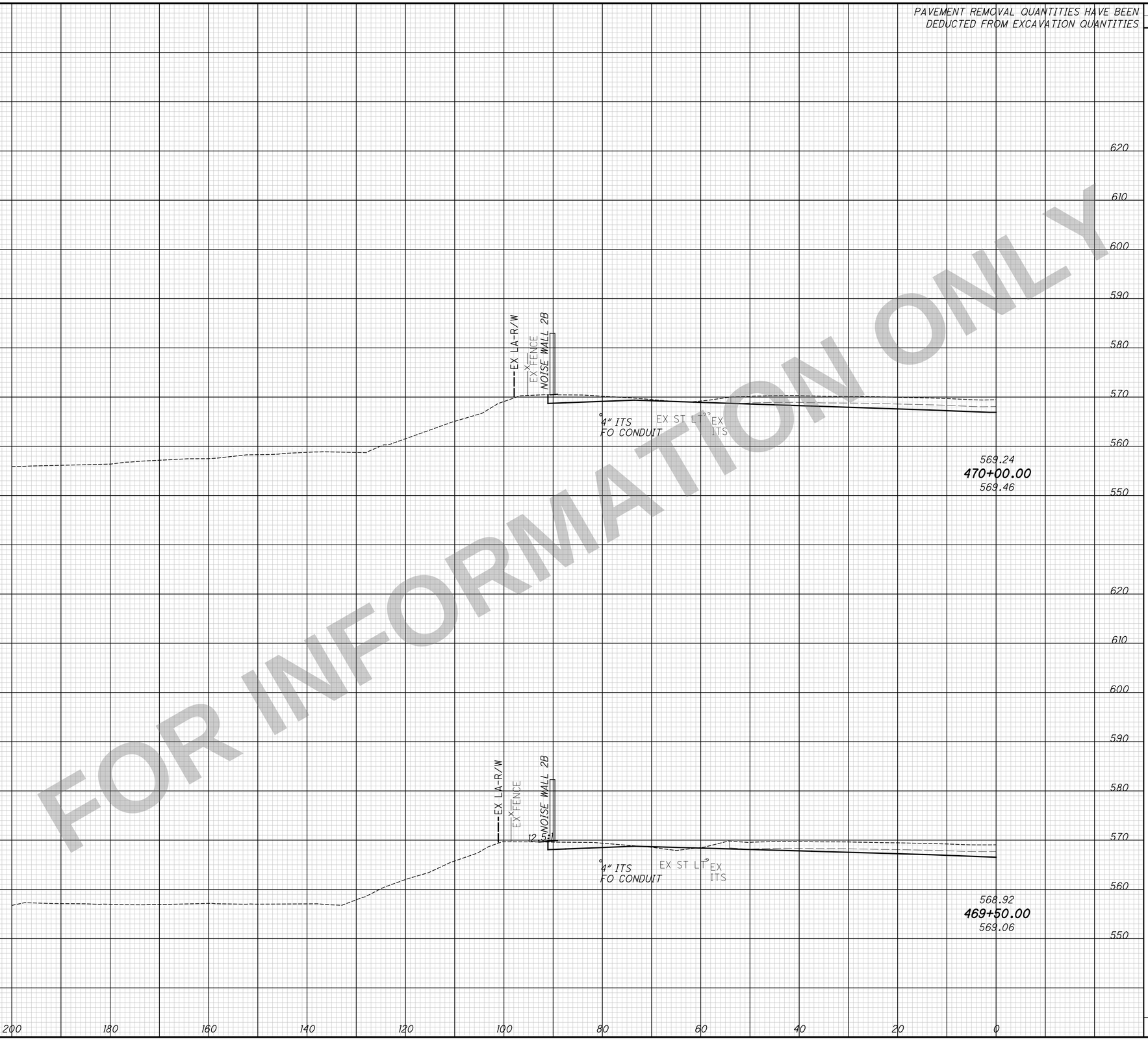
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SEEDING	
END WIDTH	SQ. YDS.
35	185
32	211
	396

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 469+50.00 TO STA. 470+00.00

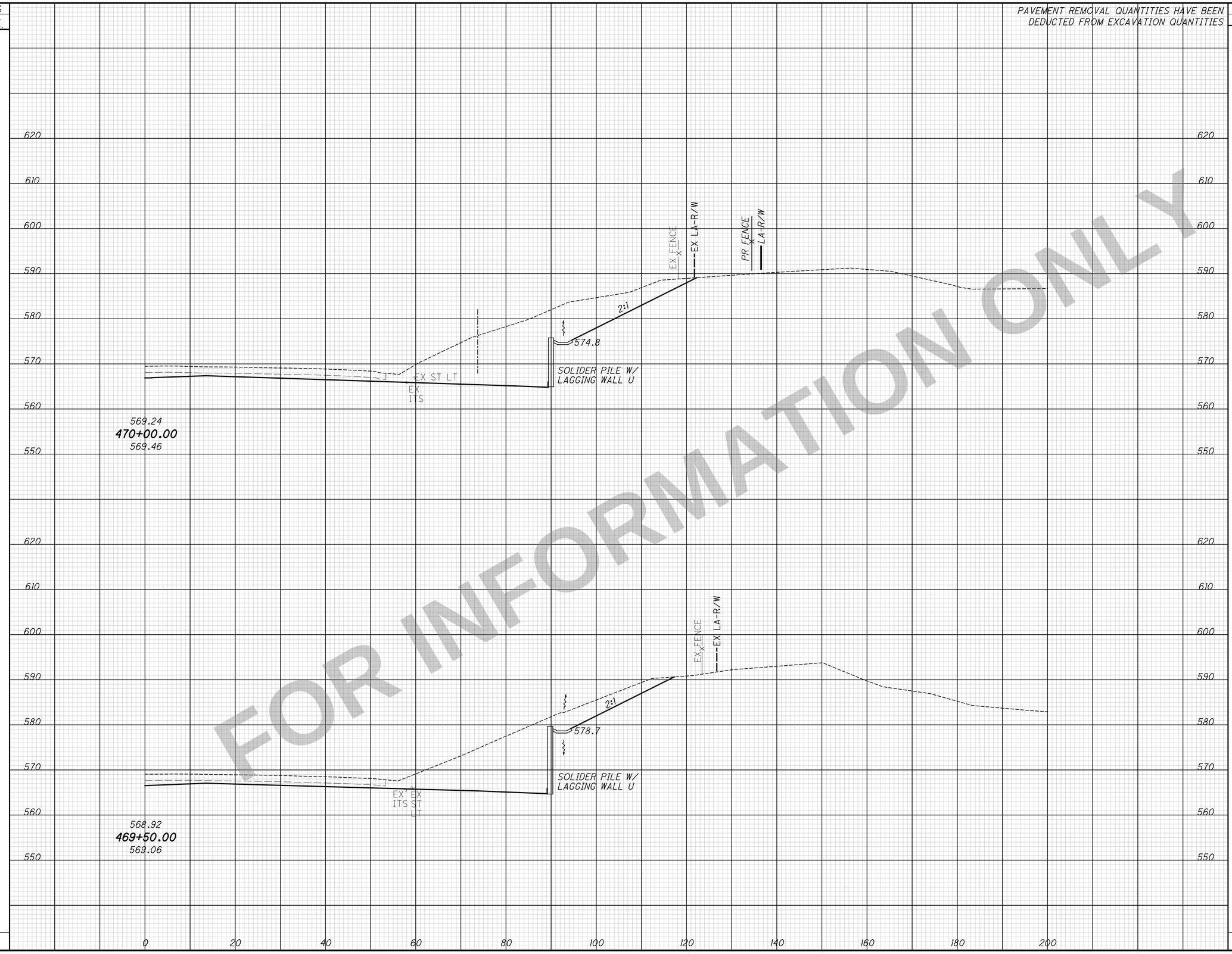
HAM-75-7.85

519
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
617	0		
		1021	3
486	4		
		890	13
		1911	16

CALCULATED	CHECKED
CFR	SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 469+50.00 TO STA. 470+00.00

HAM-75-7.85

520
2017

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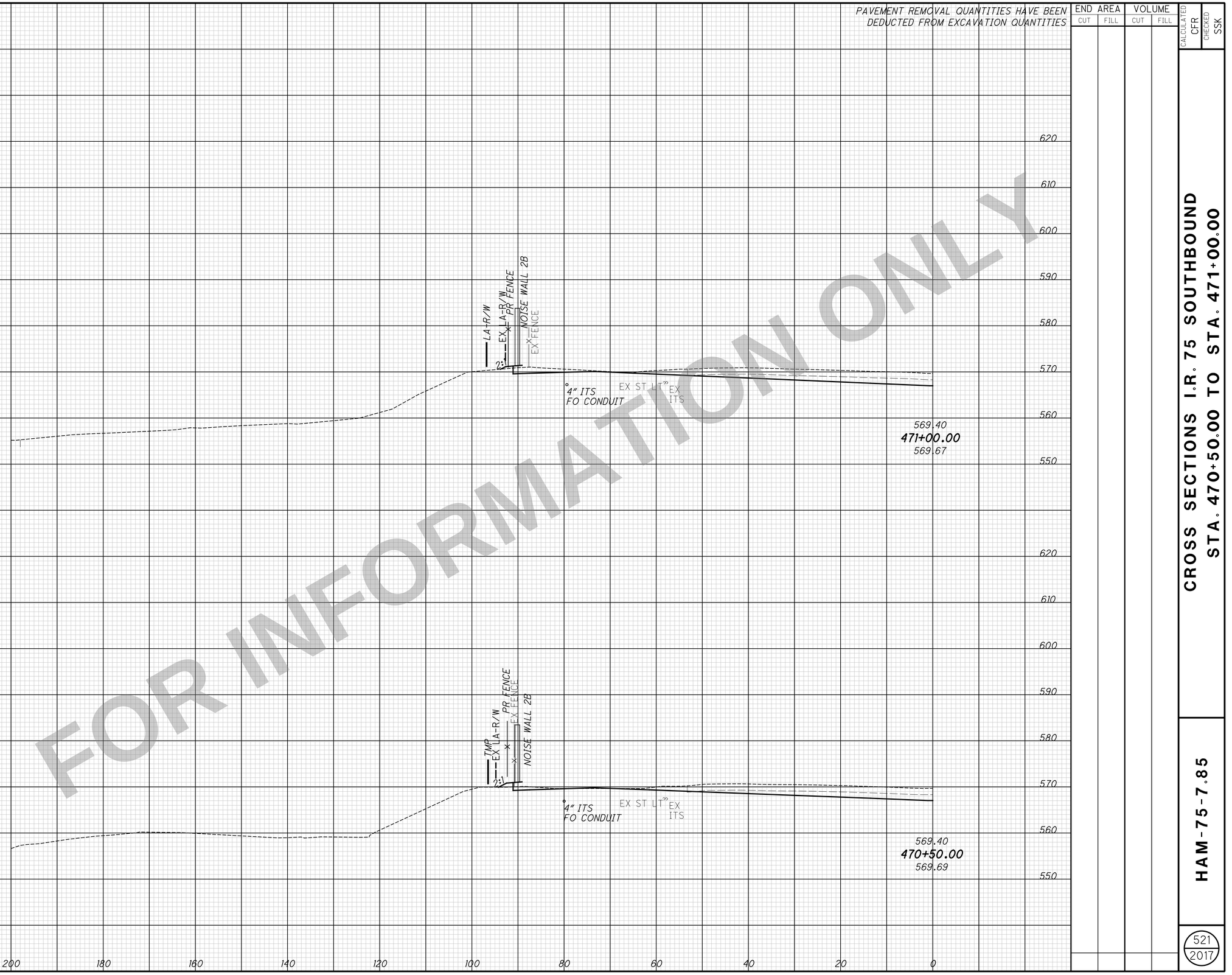
SEEDING	
END WIDTH	SQ. YDS.
46	256
46	226
	482

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR

CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 470+50.00 TO STA. 471+00.00

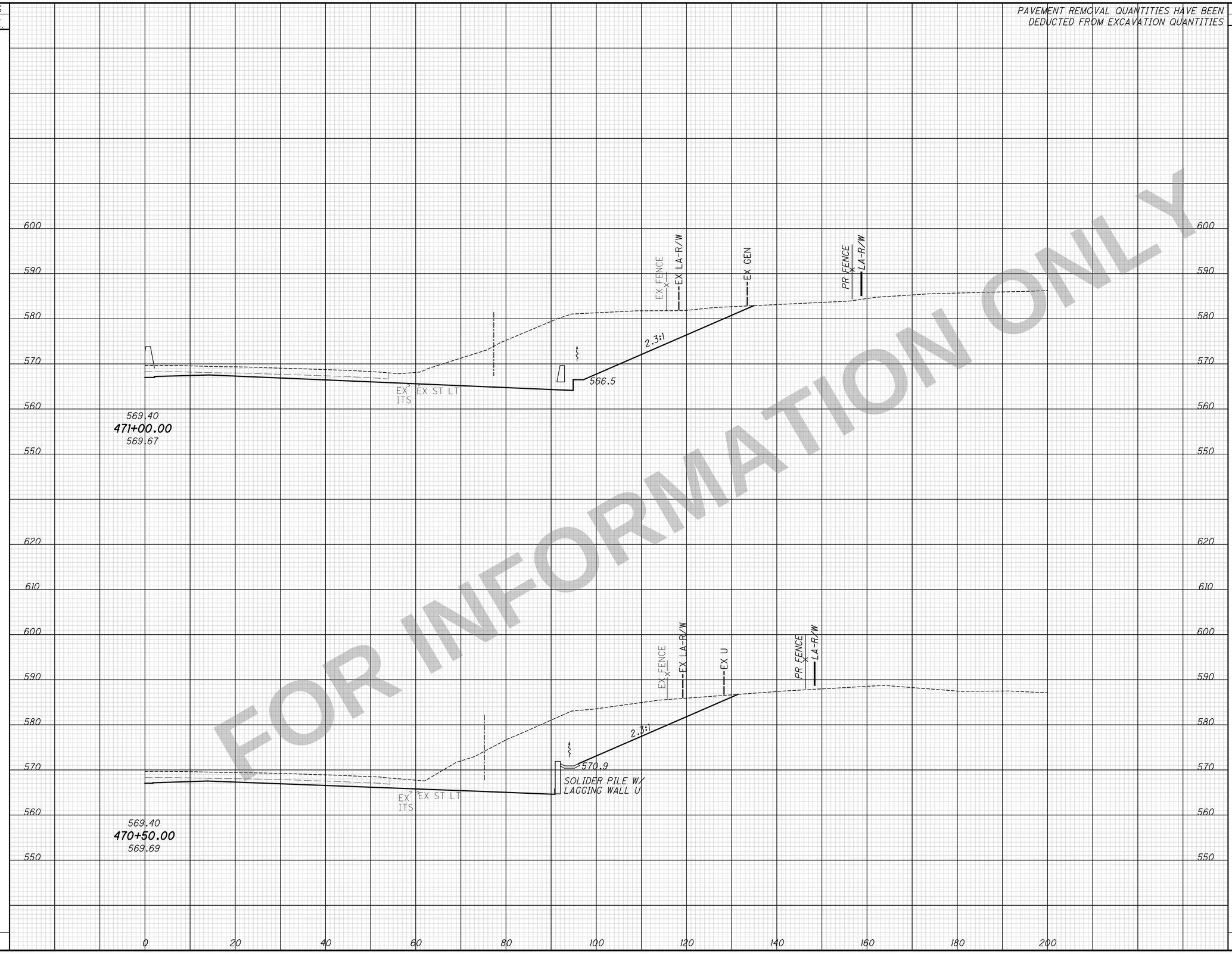
HAM-75-7.85

521
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
753	1		
		1328	4
682	3		
		1202	3
		2530	7

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 470+50.00 TO STA. 471+00.00

HAM-75-7.85

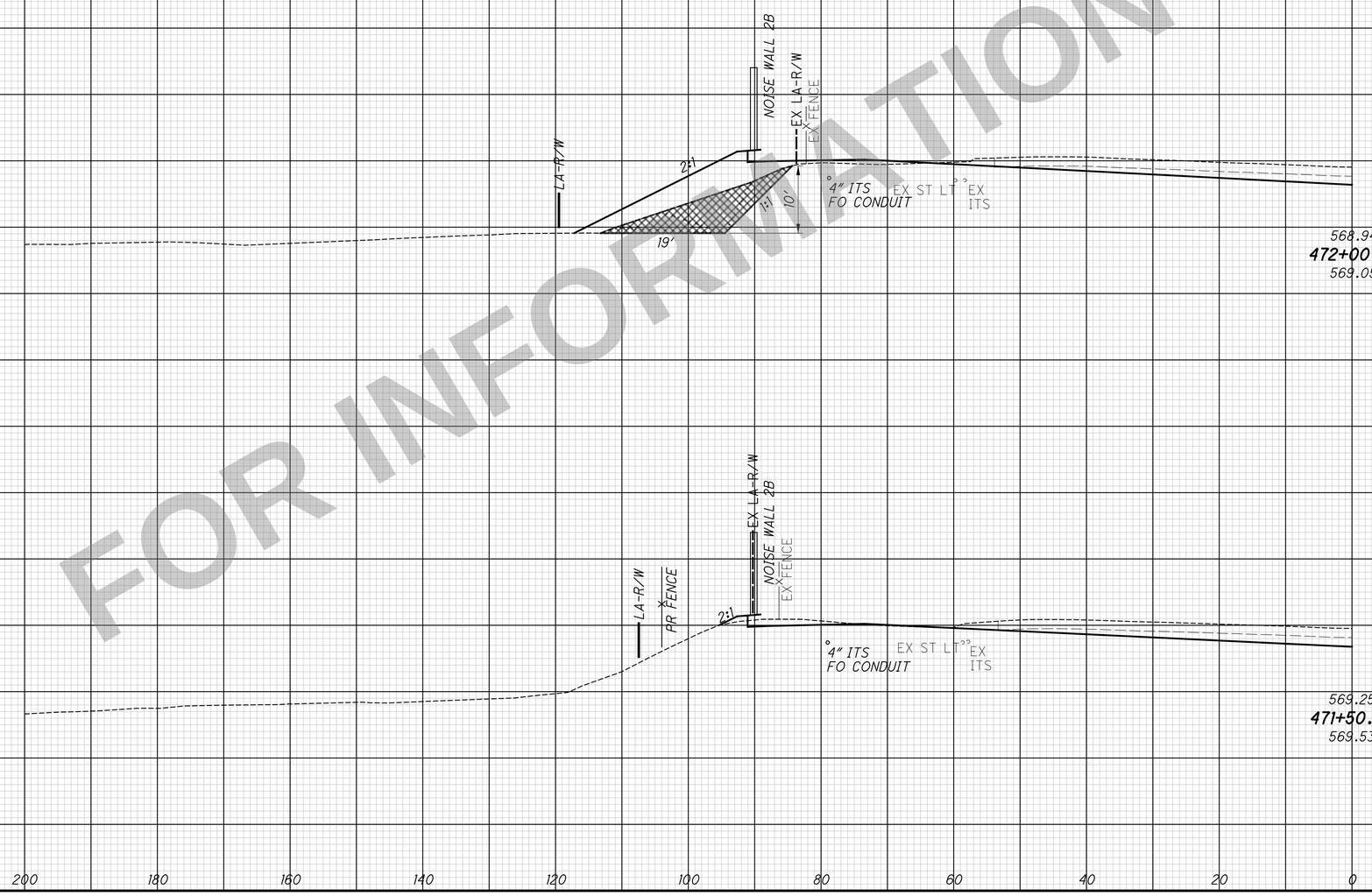
522
2017

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SEEDING	
END WIDTH	SQ. YDS.
110	
	521
78	
	343
	864

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

FOR SPECIAL BENCHING SHOWN
ESTIMATED VOLUME THIS SHEET = 172 CY
(NOT INLCUDED IN EARTHWORK COLUMNS)



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 471+50.00 TO STA. 472+00.00

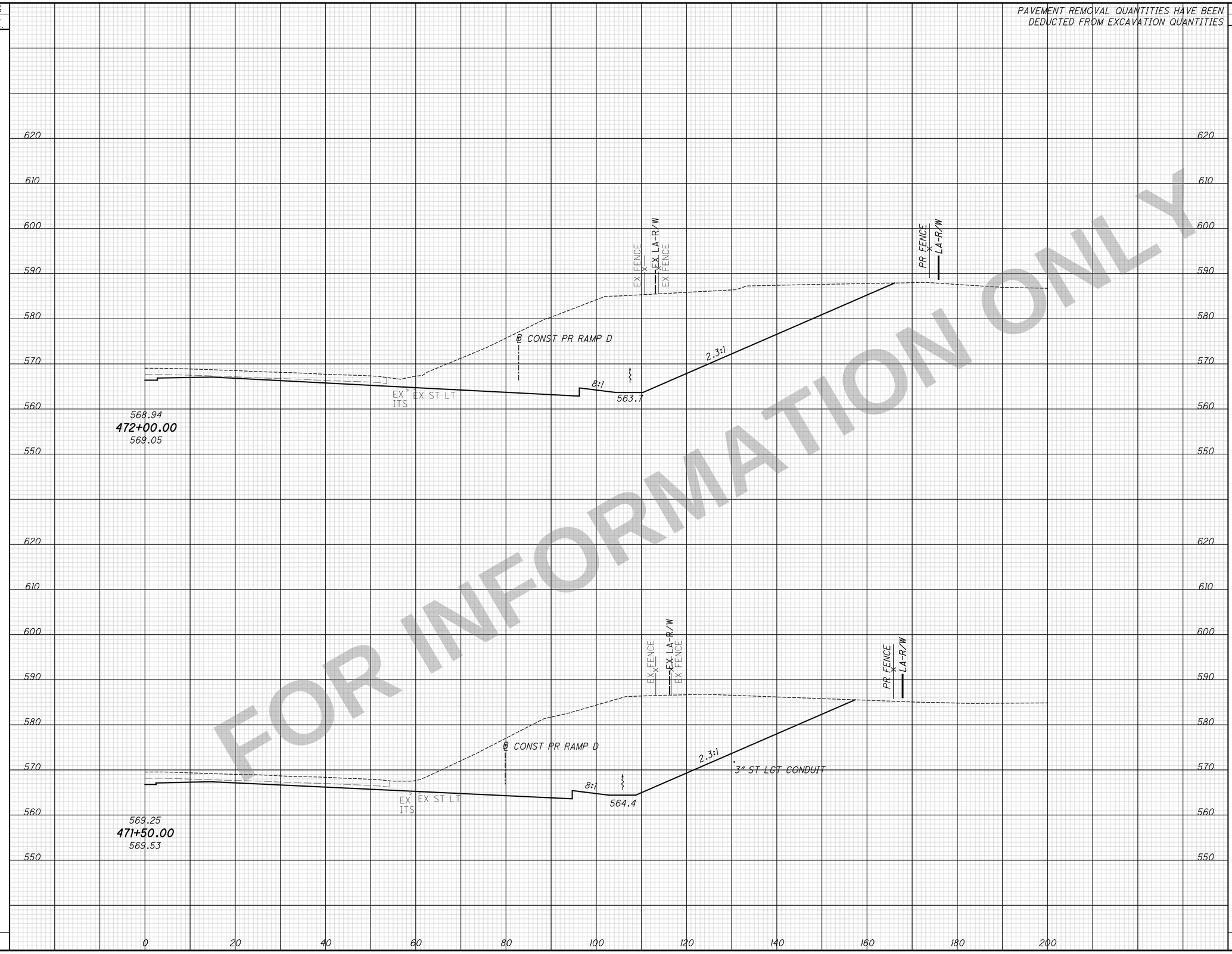
HAM-75-7.85

523
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1409	109		
		2547	104
1342	4		
		1940	4
		4487	108

CALCULATED CFR
CHECKED SSK

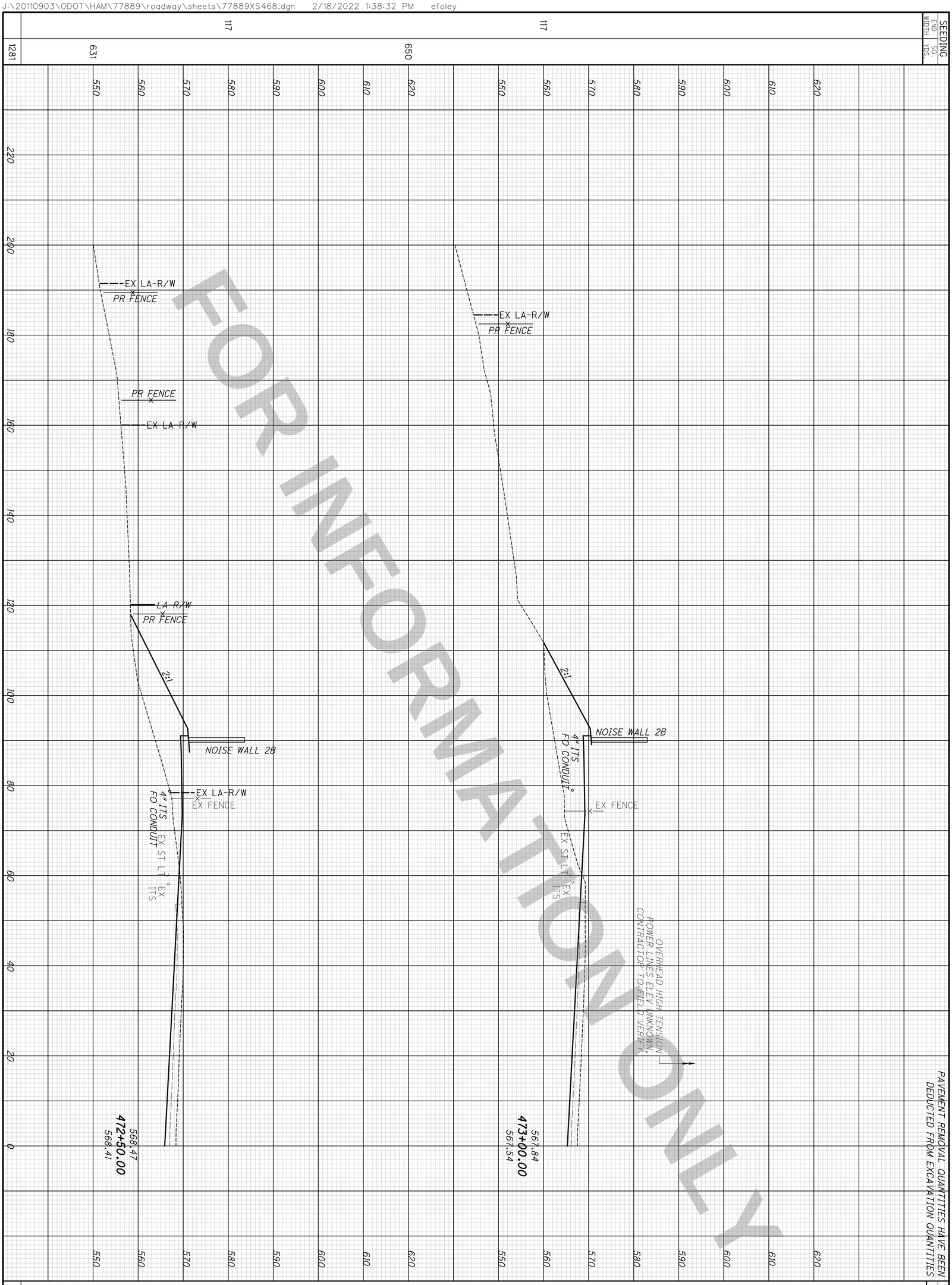
CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 471+50.00 TO STA. 472+00.00

HAM-75-7.85

524
2017

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FOR INFORMATION ONLY

END AREA CUT FILL | VOLUME CUT FILL

525 2017

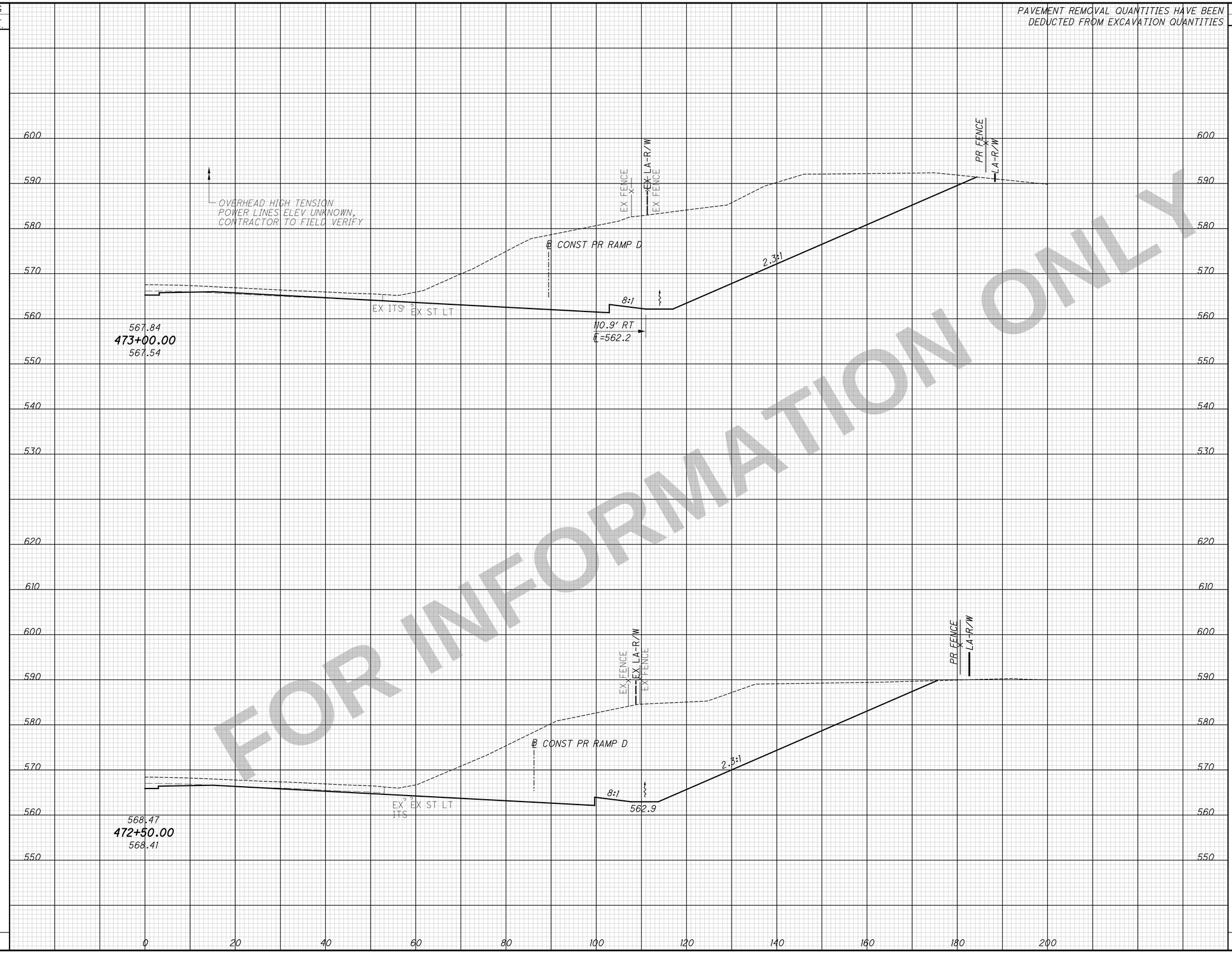
HAM-75-7.85

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 472+50.00 TO STA. 473+00.00

CALCULATED CFR
CHECKED SSK

SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1747	231		
		3069	407
1568	209		
		2757	294
		5826	701

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 472+50.00 TO STA. 473+00.00

HAM-75-7.85

526
2017

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SEEDING	
END WIDTH	SQ. YDS.
160	841
143	720
	1561

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK

FOR SPECIAL BENCHING SHOWN
ESTIMATED VOLUME THIS SHEET = 141 CY
(NOT INLCUDED IN EARTHWORK COLUMNS)

600 590 580 570 560 550 540 530

EX R/W
EX LA-R/W
PR FENCE
EX 24" WATER
2:1
1:1
5'
20'
NOISE WALL 2B
306
4" ITS FO CONDUIT
EX FENCE
EX ST LT
EX ITS
305
15" B
566.12
474+00.00
565.16

600 590 580 570 560 550 540 530

EX LA-R/W
PR FENCE
NOISE WALL 2B
4" ITS FO CONDUIT
EX FENCE
EX ST LT
EX ITS
2:1
1:1
18.12'
567.06
473+50.00
566.49

220 200 180 160 140 120 100 80 60 40 20 0

FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 473+50.00 TO STA. 474+00.00

HAM-75-7.85

527
2017

J:\20110903\ODOT\HAM\77889\roadway\sheets\77889XS470.dgn 2/18/2022 1:38:33 PM efoley

SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

STA 473+86.50, 0.31' RT
EX CB, GRATE ELEV 565.20'
12" RCP NE 558.42
(TO BE REMOVED)

EX FENCE
EX LA-R/W
EX FENCE
PROP FENCE
LA-R/W
℄ CONST PR RAMP D
305
8:1
2.3:1
EX ? EX ST LT
ITS
560.2
116.3' RT
℄=560.2
566.12
474+00.00
565.16
567.06
473+50.00
566.49
113.8' RT
℄=561.2

600 590 580 570 560 550 540 530

0 20 40 60 80 100 120 140 160 180 200

END AREA		VOLUME	
CUT	FILL	CUT	FILL
2165	760		
		3879	1021
2024	343		
		3492	531
		7371	1552

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 473+50.00 TO STA. 474+00.00

HAM-75-7.85

528
2017

FOR INFORMATION ONLY

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SEEDING END WIDTH	SEEDING SQ. YDS.
144	825
153	870
	1695

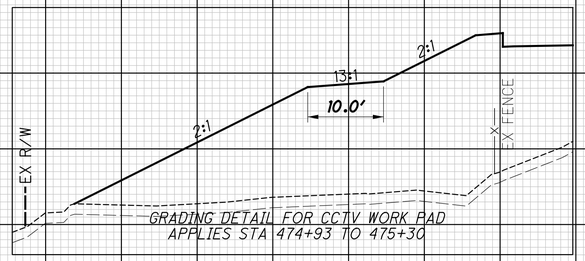
PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

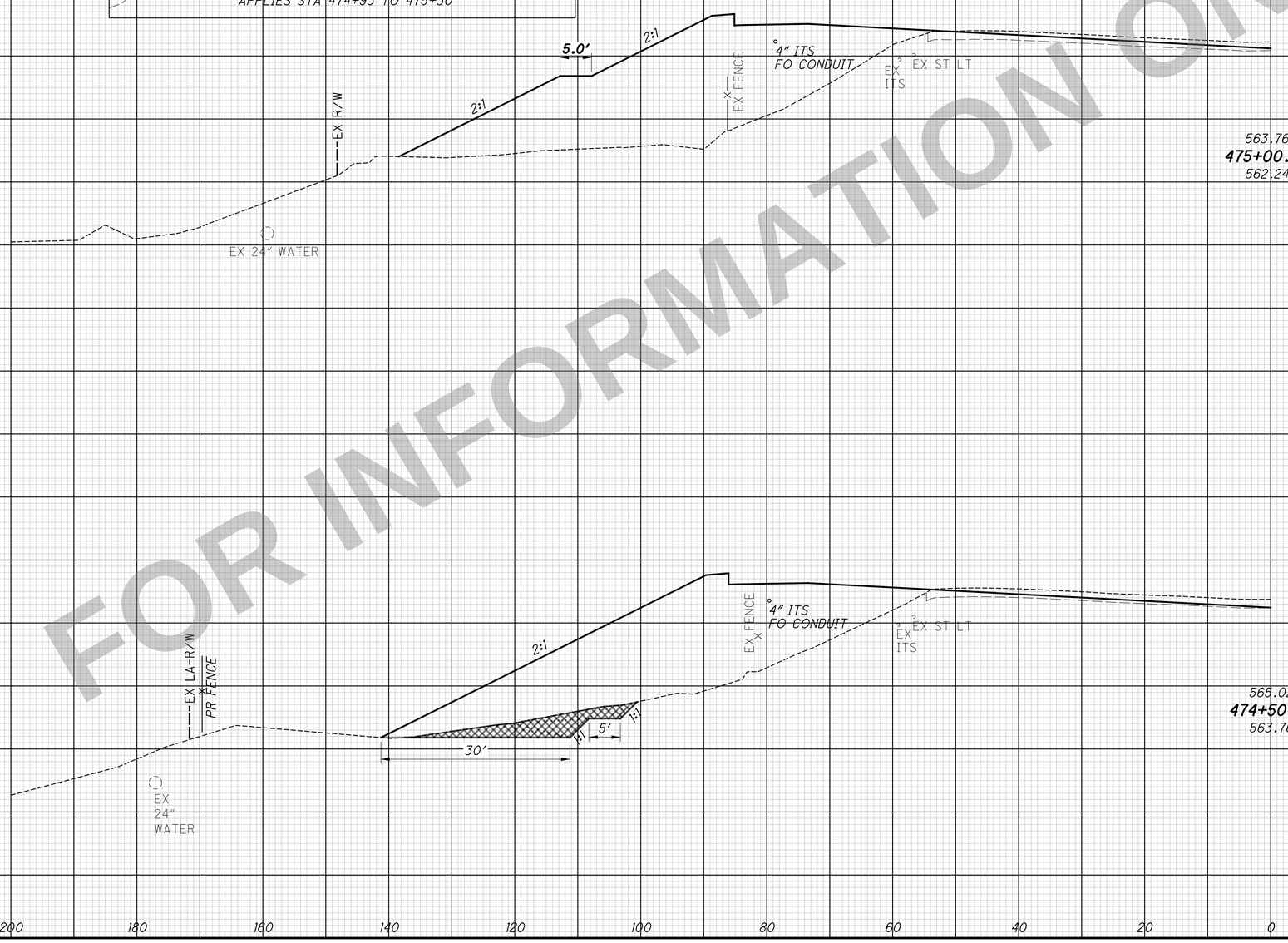
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL

CALCULATED CFR

CHECKED SSK

FOR SPECIAL BENCHING SHOWN
ESTIMATED VOLUME THIS SHEET = 56 CY
(NOT INLCUDED IN EARTHWORK COLUMNS)





FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 474+50.00 TO STA. 475+00.00

HAM-75-7.85

529
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1878	959		
		3689	1728
2106	908		
		3954	1544
		7643	3272

CALCULATED CFR | CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 474+50.00 TO STA. 475+00.00

HAM-75-7.85

530
2017

600 590 580 570 560 550 540 530

EX FENCE
EX LA-R/W
EX FENCE
℄ CONST PR RAMP D
PR FENCE
LA-R/W
2.3:1
8:1
557.6
12" RCP
(TO BE REMOVED)
EX EX ST LT
ITS
15" B
563.76
475+00.00
562.24

0 20 40 60 80 100 120 140 160 180 200

323
558.9
563.02
474+50.00
563.76

FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SQ. YDS.
26	291
79	619
	910

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK

EMBANKMENT INCLUDED WITH MSE WALL J1 QUANTITIES

EXCAVATION & EMBANKMENT INCLUDED WITH MSE WALL J1 QUANTITIES

600 590 580 570 560 550 540 530

LA R/W
2:1
549.06
EX R/W
EX FENCE
4" ITS FO CONDUIT
EX ST LT
EX ITS
304
EX UG ELEC.
EX 24" WATER
560.78
476+00.00
559.20

LA R/W
PR FENCE
EX R/W
2:1
EX FENCE
4" ITS FO CONDUIT
EX ST LT
EX ITS
EX UG ELEC.
EX 24" WATER
562.35
475+50.00
560.71

220 200 180 160 140 120 100 80 60 40 20 0

FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 475+50.00 TO STA. 476+00.00

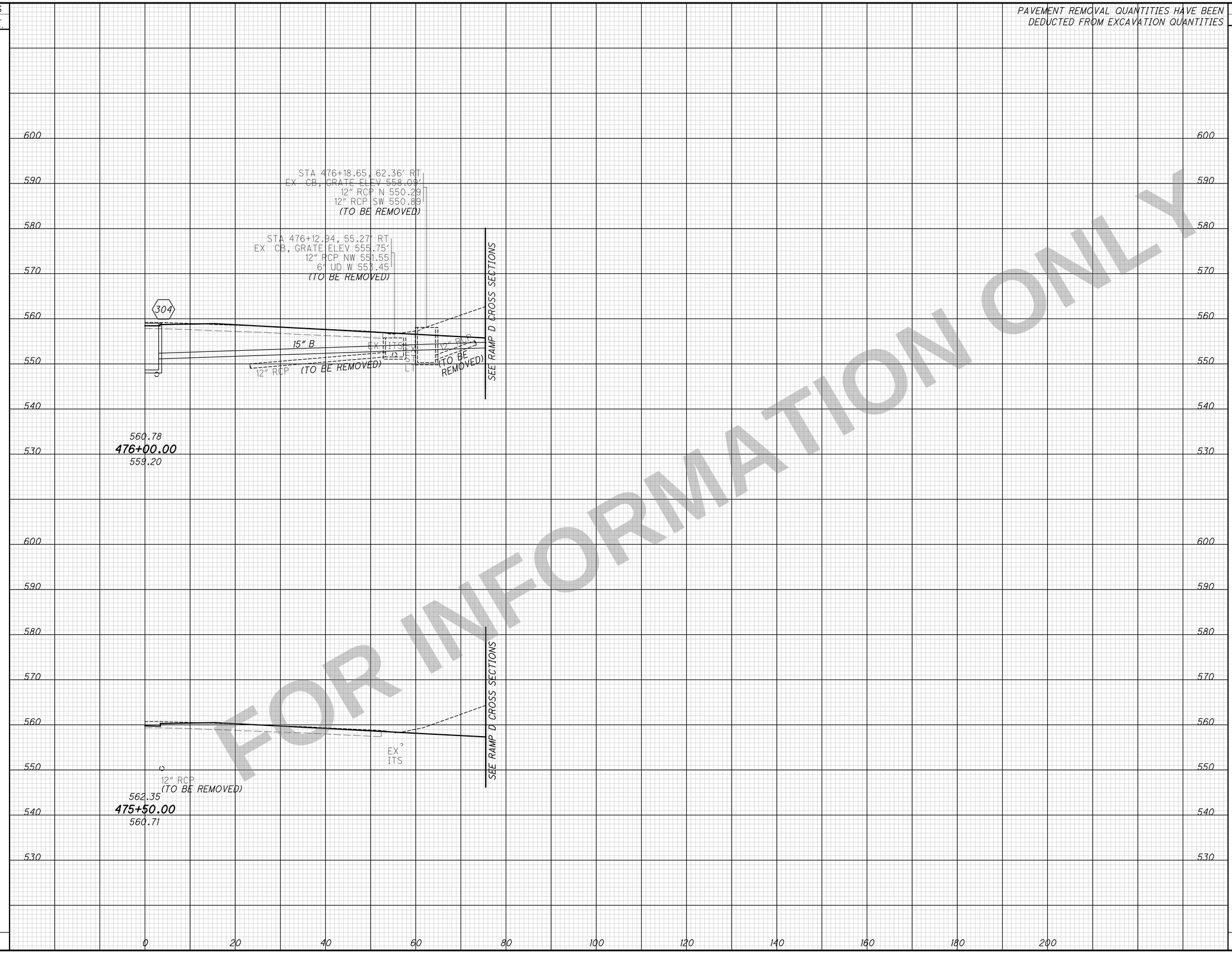
HAM-75-7.85

531
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA		VOLUME	
CUT	FILL	CUT	FILL
61	715		
		113	1527
61	934		
		1796	1753
		1909	3280

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 475+50.00 TO STA. 476+00.00

HAM-75-7.85

532
2017

FOR INFORMATION ONLY

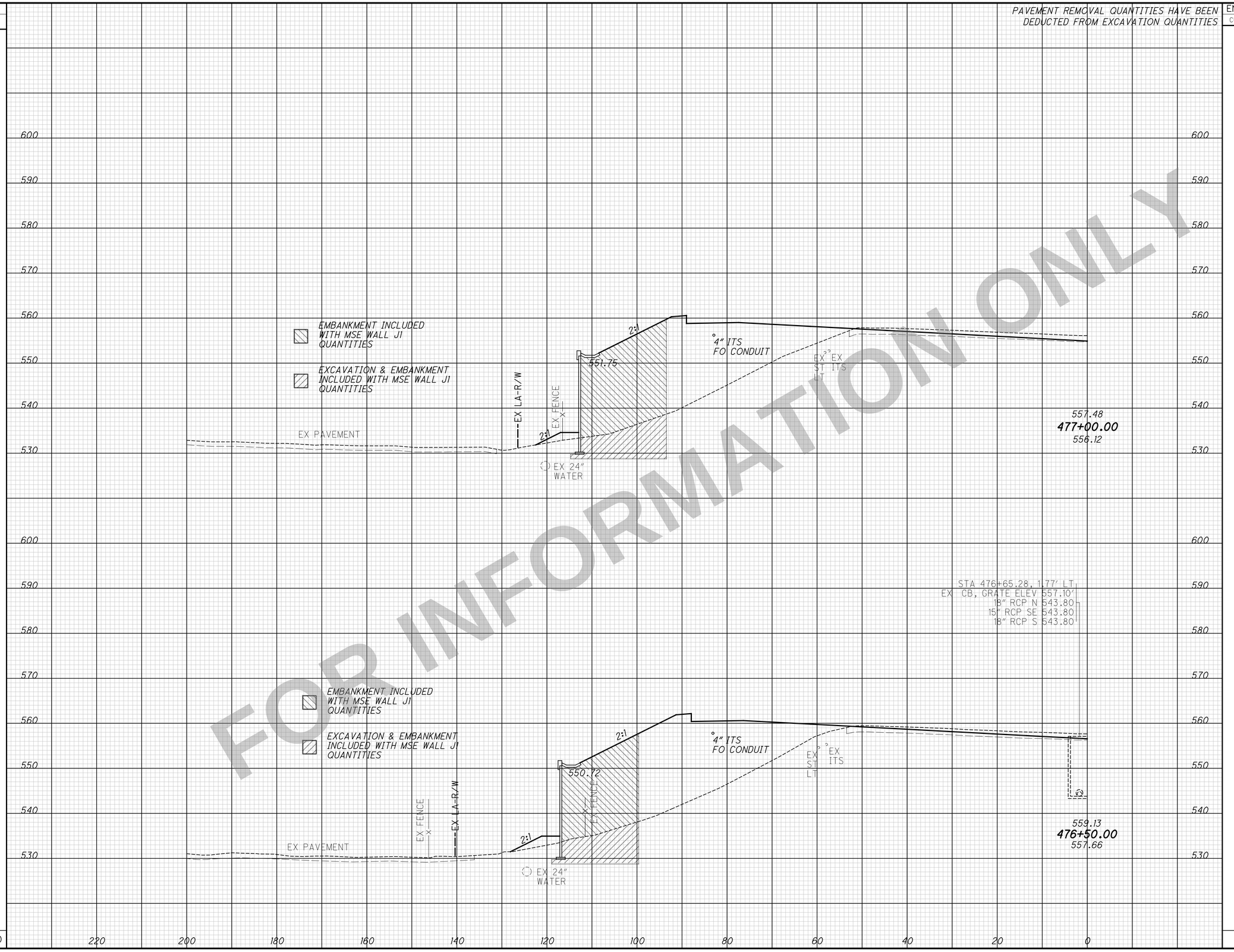
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SEEDING	
END WIDTH	SQ. YDS.
10	79
18	121
200	

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

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CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 476+50.00 TO STA. 477+00.00

HAM-75-7.85

533
2017

SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA		VOLUME	
CUT	FILL	CUT	FILL
61	506		
		119	1057
68	637		
		119	1251
		238	2308

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 476+50.00 TO STA. 477+00.00

HAM-75-7.85

534
2017

FOR INFORMATION ONLY

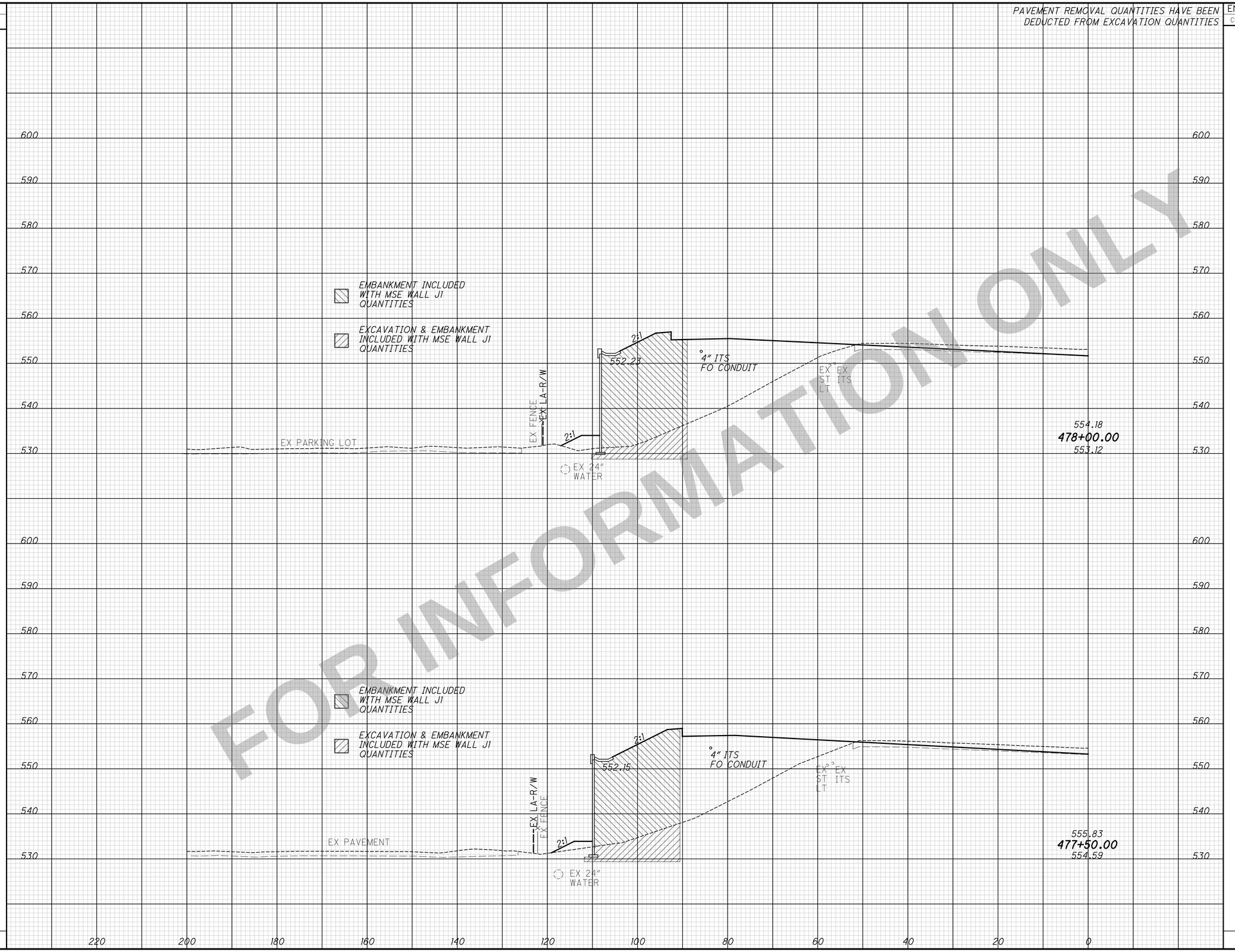
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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING	
END WIDTH	SQ. YDS.
0	
	17
6	
	45
	62

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 477+50.00 TO STA. 478+00.00

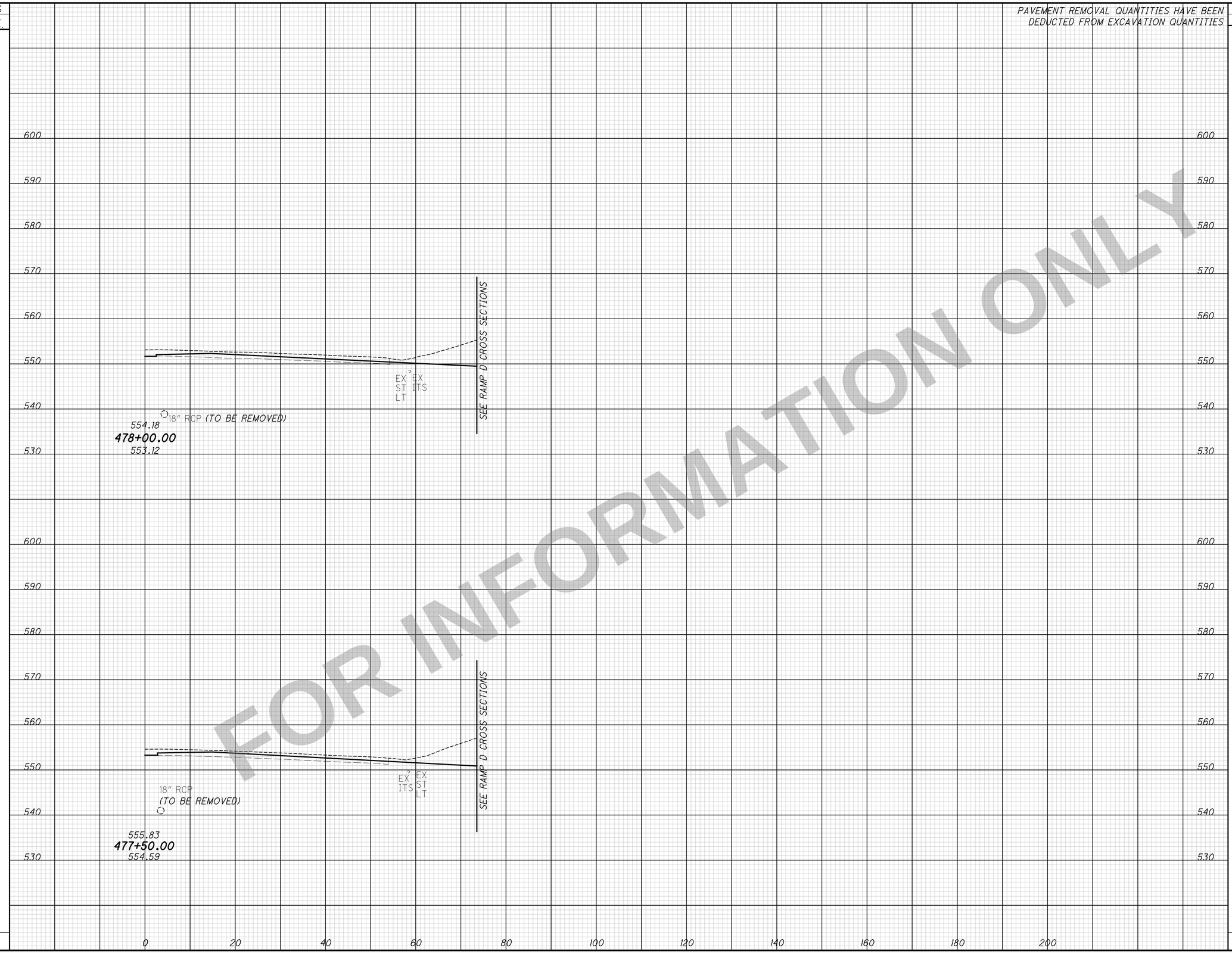
HAM-75-7.85

535
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA		VOLUME	
CUT	FILL	CUT	FILL
58	398		
		109	779
61	443		
		113	878
		222	1657

CALCULATED	CHECKED
CFR	SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 477+50.00 TO STA. 478+00.00

HAM-75-7.85

536
2017

FOR INFORMATION ONLY

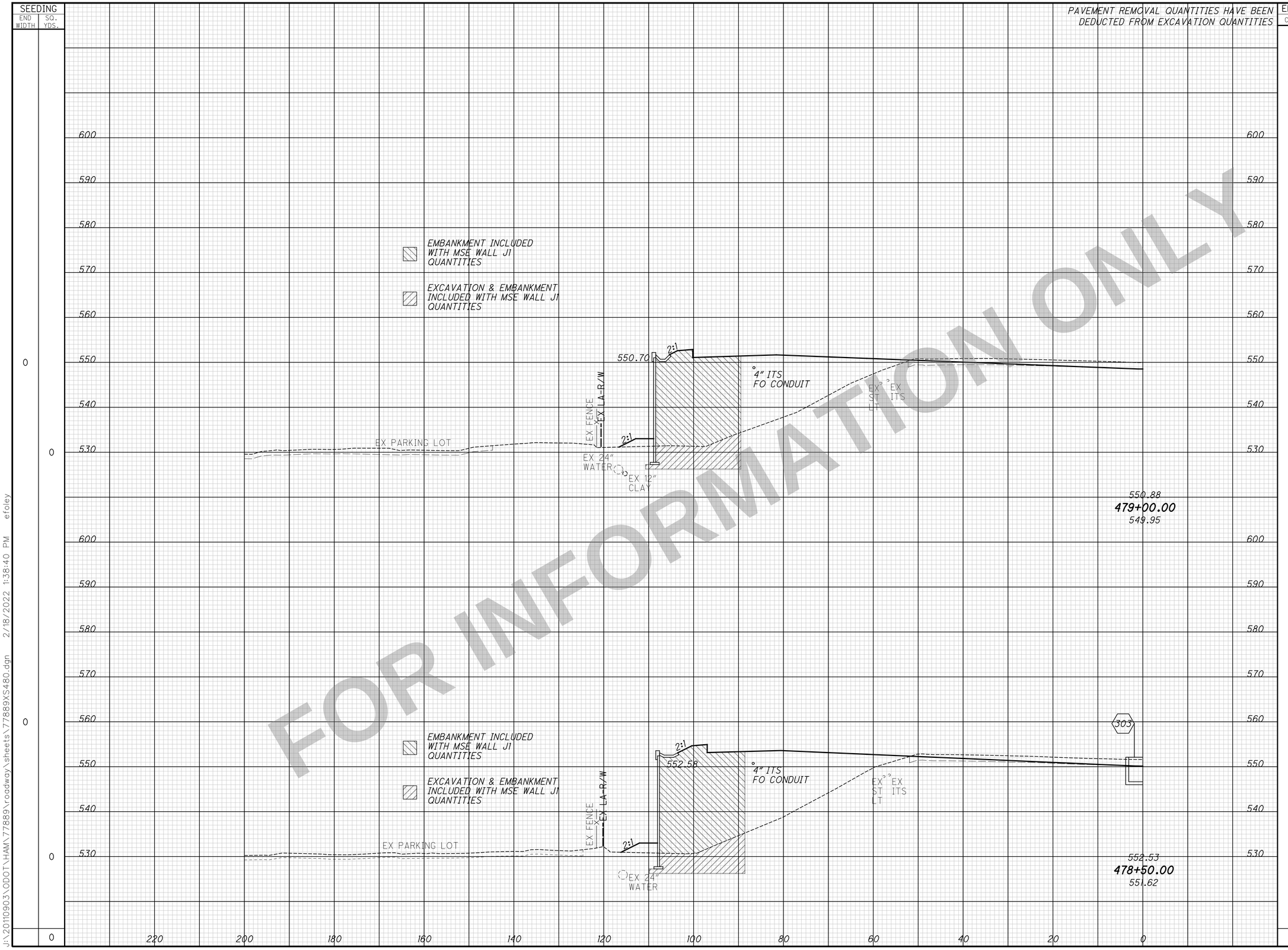
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SEEDING	
END WIDTH	SQ. YDS.
0	0
0	0
0	0

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

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CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 478+50.00 TO STA. 479+00.00

HAM-75-7.85

537
2017

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING	
END WIDTH	SQ. YDS.

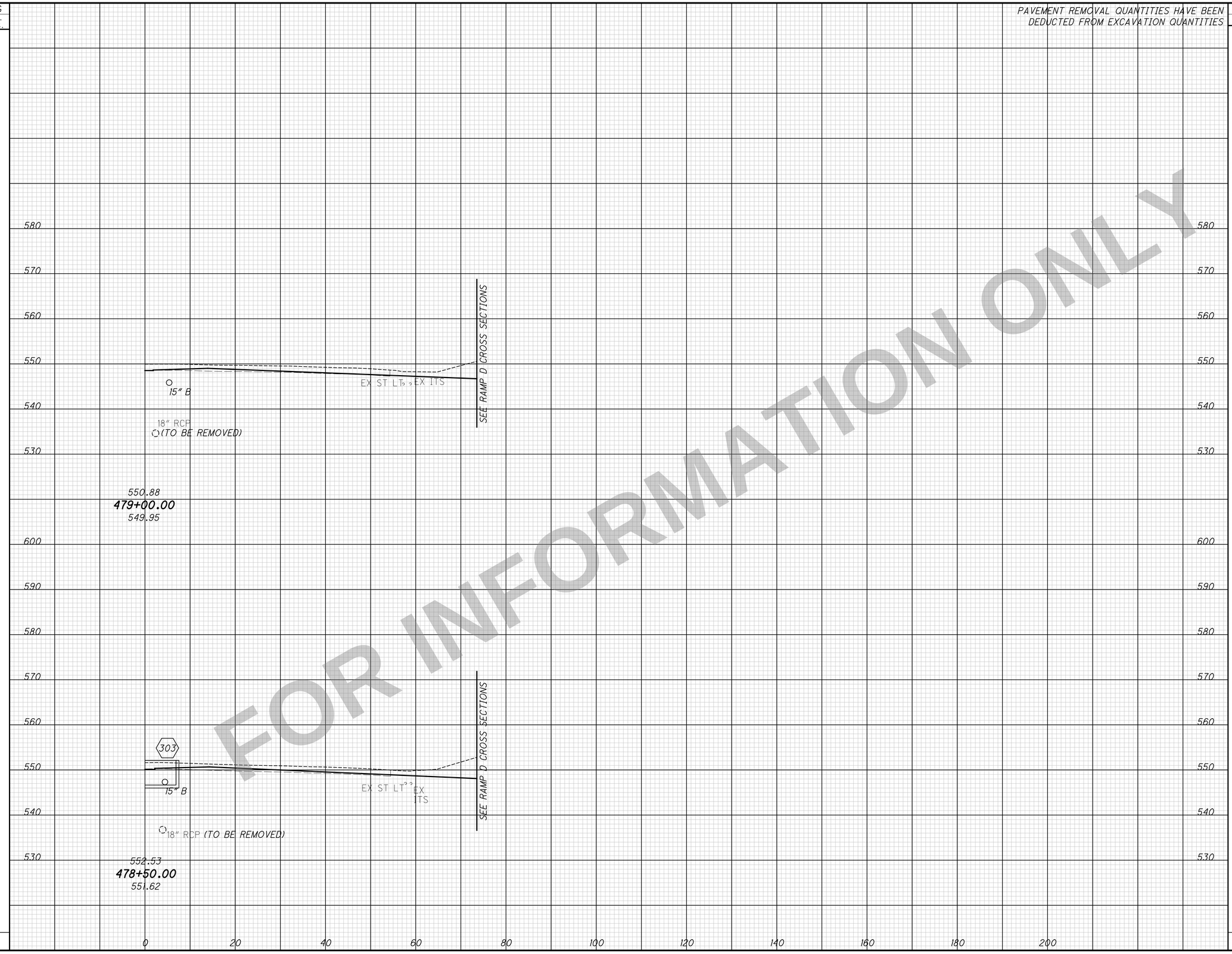
END AREA		VOLUME	
CUT	FILL	CUT	FILL
35	363		
		74	679
45	371		
		95	712
		169	1391

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 478+50.00 TO STA. 479+00.00

HAM-75-7.85

538
2017



FOR INFORMATION ONLY

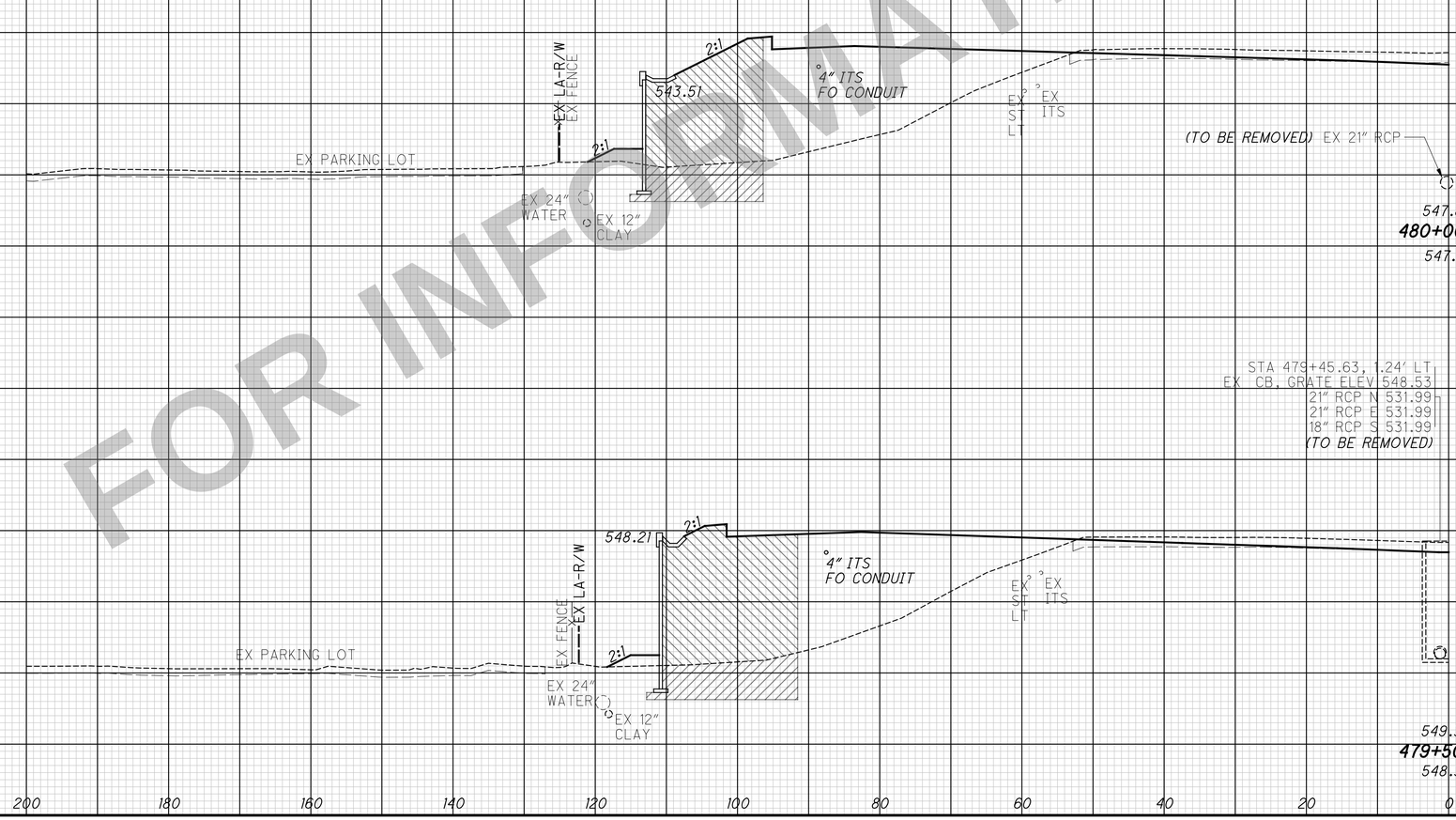
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SEEDING	
END WIDTH	SQ. YDS.
7	
19	
0	
19	

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 479+50.00 TO STA. 480+00.00

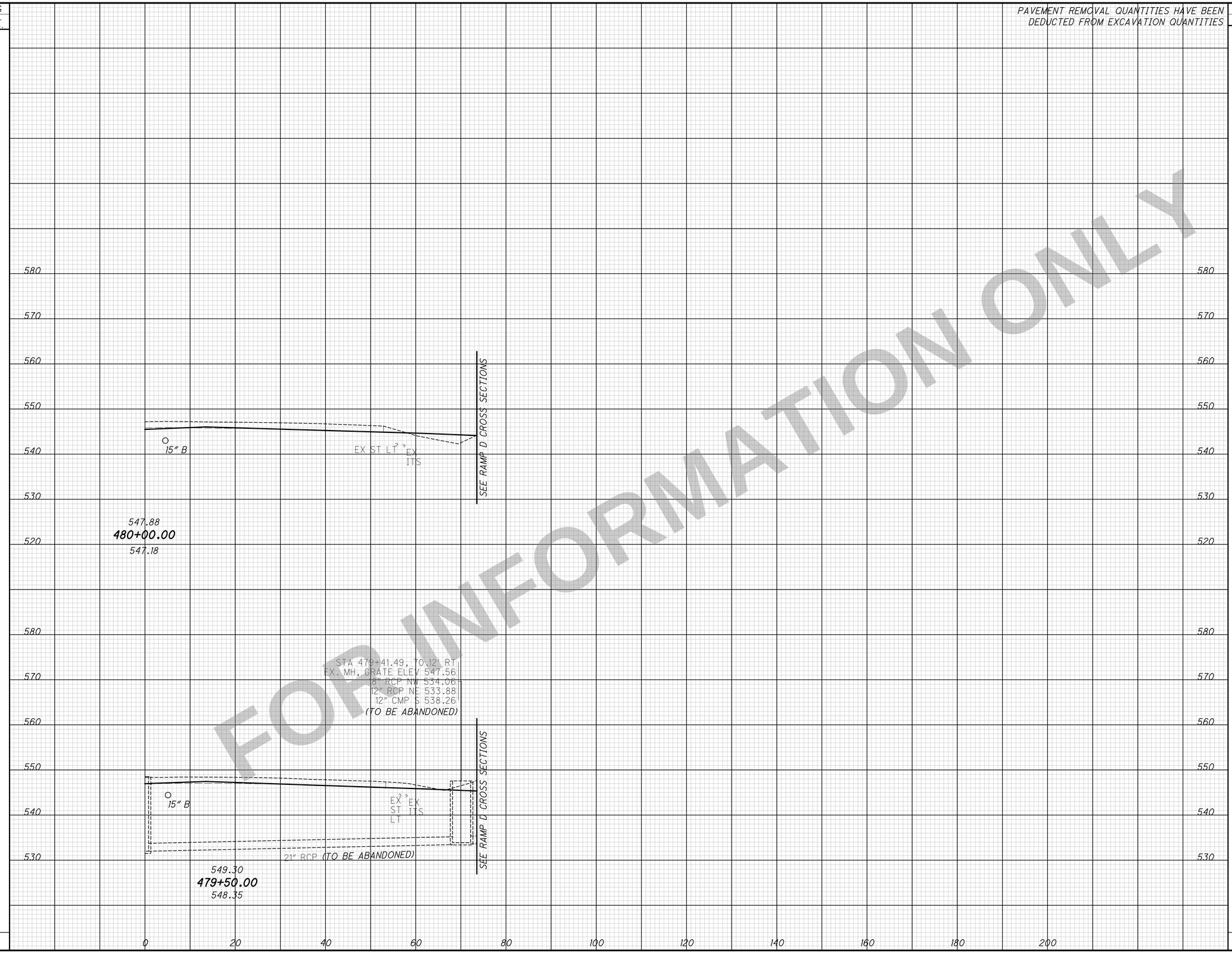
HAM-75-7.85

539
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
7	436		
		22	747
18	371		
		49	680
		71	1427

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 479+50.00 TO STA. 480+00.00

HAM-75-7.85

540
2017

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SEEDING	
END WIDTH	SQ. YDS.
0	
0	
0	
19	
19	

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED: CFR
CHECKED: SSK

STA 481+10.88, 127.72' LT
EX MH, RIM ELEV 531.28
12" CLAY N 523.28
12" RCP NE 525.88
27" BRICK E 519.68
12" CLAY S 521.18
12" CLAY SW 523.98

STA 480+91.11, 118.85' LT
EX MH, RIM ELEV 530.53
12" RCP N 519.83
12" RCP S 519.83

STA 481+14.54, 1.96' LT
EX CB, GRATE ELEV 544.44
EX 311
12" RCP N 519.59
12" RCP E 519.59
21" RCP S 519.59
30" RCP W 519.03
(TO BE REMOVED)

STA 480+95.80, 140.78' LT
EX CB, GRATE ELEV 529.33
12" BRICK NE 525.72

STA 481+24.39, 155.92' LT
EX CB, GRATE ELEV 529.12
12" RCP E 525.42

E 69TH ST & LONGVIEW ST

301
TMP
MSE WALL J1
EX FENCE
EX LA-R/W
PR FENCE
26.4:1
4" ITS FO CONDUIT
EX ST LT
EX ITS
12" CLAY
12" CLAY
EX 12" CLAY
EX 24" WATER
30" RCP *(TO REMAIN)*
545.50
481+00.00
544.92

EMBANKMENT INCLUDED WITH MSE WALL J1 QUANTITIES

EXCAVATION & EMBANKMENT INCLUDED WITH MSE WALL J1 QUANTITIES

317
302
EX LA-R/W
EX FENCE
2:1
541.24
4" ITS FO CONDUIT
EX ST LT
EX ITS
15" B
EX PARKING LOT
EX 24" WATER
EX 12" CLAY
(TO BE REMOVED) EX 21" RCP
546.61
480+50.00
545.90

580 570 560 550 540 530 520

220 200 180 160 140 120 100 80 60 40 20 0

FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 480+50.00 TO STA. 481+00.00

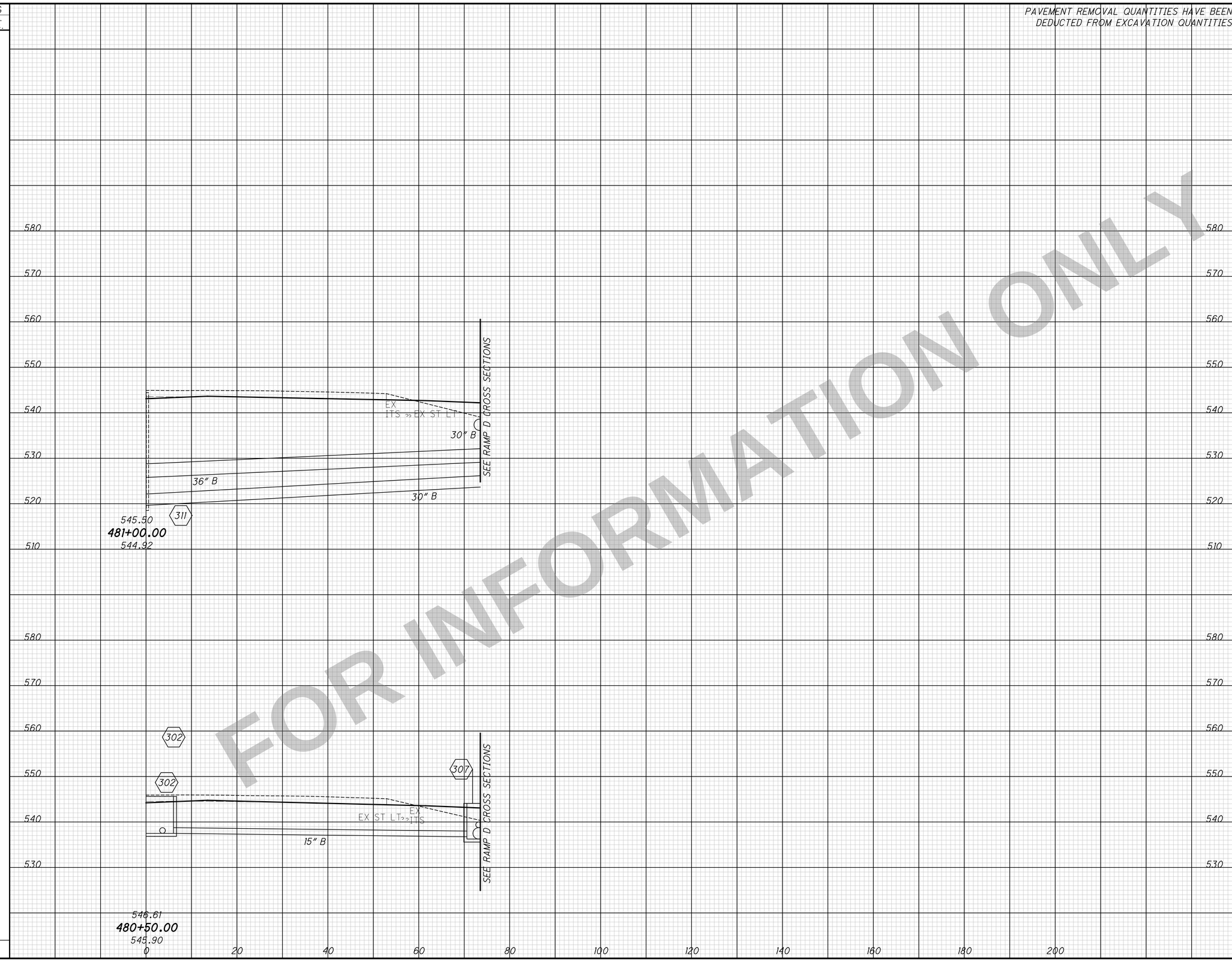
HAM-75-7.85

541
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
9	221		
		15	540
7	362		
		13	738
		28	1278

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 480+50.00 TO STA. 481+00.00

HAM-75-7.85

542
2017

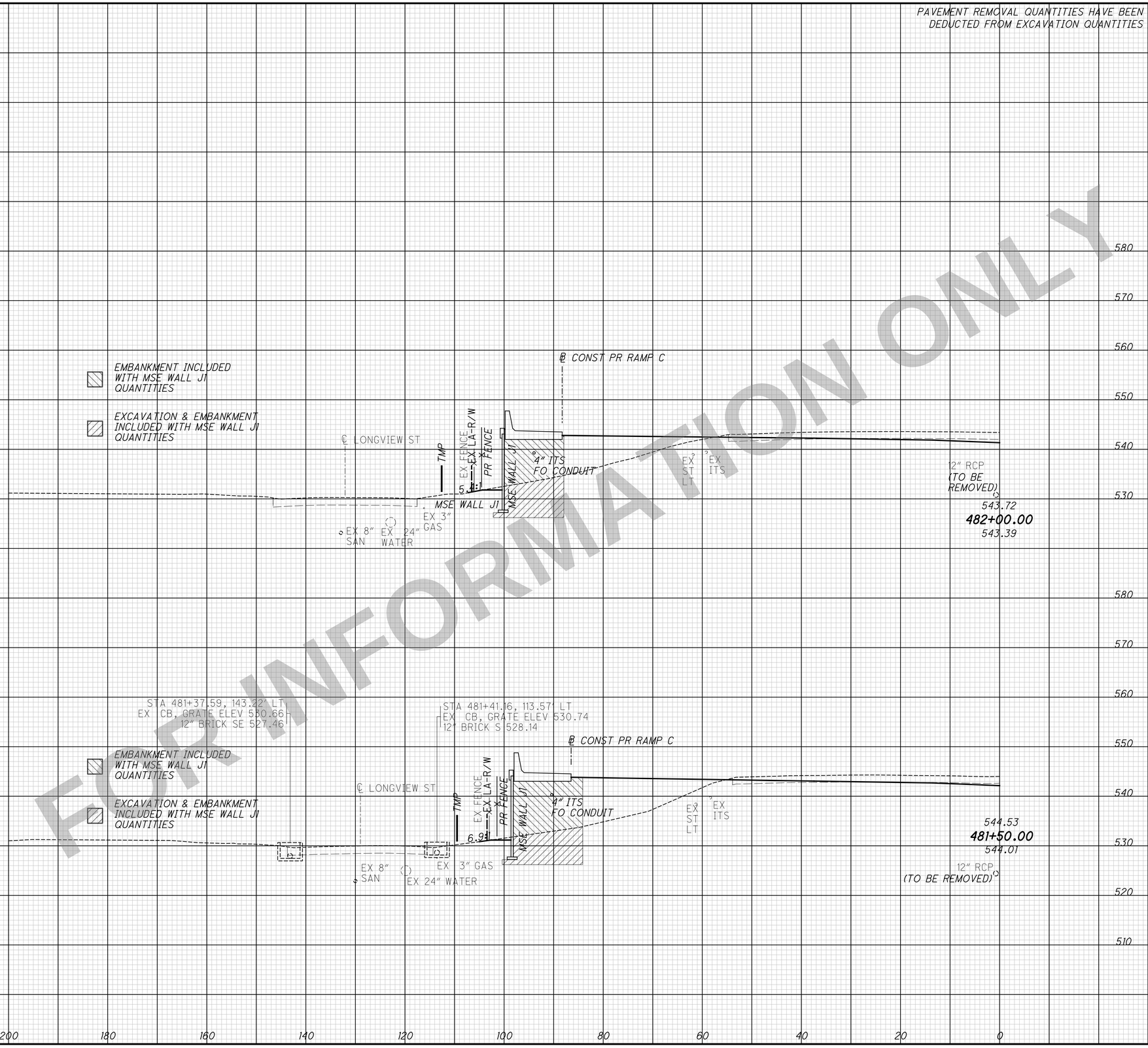
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SEEDING	
END WIDTH	SQ. YDS.
0	0
0	0

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 481+50.00 TO STA. 482+00.00

HAM-75-7.85

543
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL
29	158		
		43	336
17	204		
		24	394
		67	730

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 481+50.00 TO STA. 482+00.00

HAM-75-7.85

544
2017



FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SQ. YDS.
0	0

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK

EMBANKMENT INCLUDED WITH MSE WALL J1 QUANTITIES

EXCAVATION & EMBANKMENT INCLUDED WITH MSE WALL J1 QUANTITIES

℄ CONST PR RAMP C

℄ LONGVIEW ST

TMP

EX LA-R/W

EX FENCE

PR FENCE

MSE WALL J1

9.9:1

4" ITS FO CONDUIT

EX ST LT

EX ITS

EX 3" GAS

EX 8" SAN

EX 24" WATER

542.13
483+50.00
542.32

560 550 540 530 580 570 560 550 540 530

EMBANKMENT INCLUDED WITH MSE WALL J1 QUANTITIES

EXCAVATION & EMBANKMENT INCLUDED WITH MSE WALL J1 QUANTITIES

℄ CONST PR RAMP C

℄ LONGVIEW ST

TMP

EX LA-R/W

EX FENCE

PR FENCE

MSE WALL J1

6.5:1

4" ITS FO CONDUIT

EX ST LT

EX ITS

EX 3" GAS

EX 8" SAN

EX 24" WATER

542.56
483+00.00
542.59

560 550 540 530 580 570 560 550 540 530

STA 482+40.00, 1.91' LT
EX CB, GRATE ELEV 542.74'
12" RCP SW 535.22'
(TO BE REMOVED)

EMBANKMENT INCLUDED WITH MSE WALL J1 QUANTITIES

EXCAVATION & EMBANKMENT INCLUDED WITH MSE WALL J1 QUANTITIES

℄ CONST PR RAMP C

℄ LONGVIEW ST

TMP

EX LA-R/W

EX FENCE

PR FENCE

MSE WALL J1

5.4:1

4" ITS FO CONDUIT

EX ST LT

EX ITS

EX 3" GAS

EX 8" SAN

EX 24" WATER

543.06
482+50.00
542.88

560 550 540 530 580 570 560 550 540 530

220 200 180 160 140 120 100 80 60 40 20 0

FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 482+50.00 TO STA. 483+50.00

HAM-75-7.85

545
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
		73	100	125	195
		63	111	95	224
		40	131	64	268
				284	687

CALCULATED: CFR
CHECKED: SSK

542.13
483+50.00
542.32

542.56
483+00.00
542.59

543.06
482+50.00
542.88

EX ITS EX ST LT

SEE RAMP D CROSS SECTIONS

560 550 540 530 580 570

0 20 40 60 80 100 120 140 160 180 200

FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 482+50.00 TO STA. 483+50.00

HAM-75-7.85

546
2017

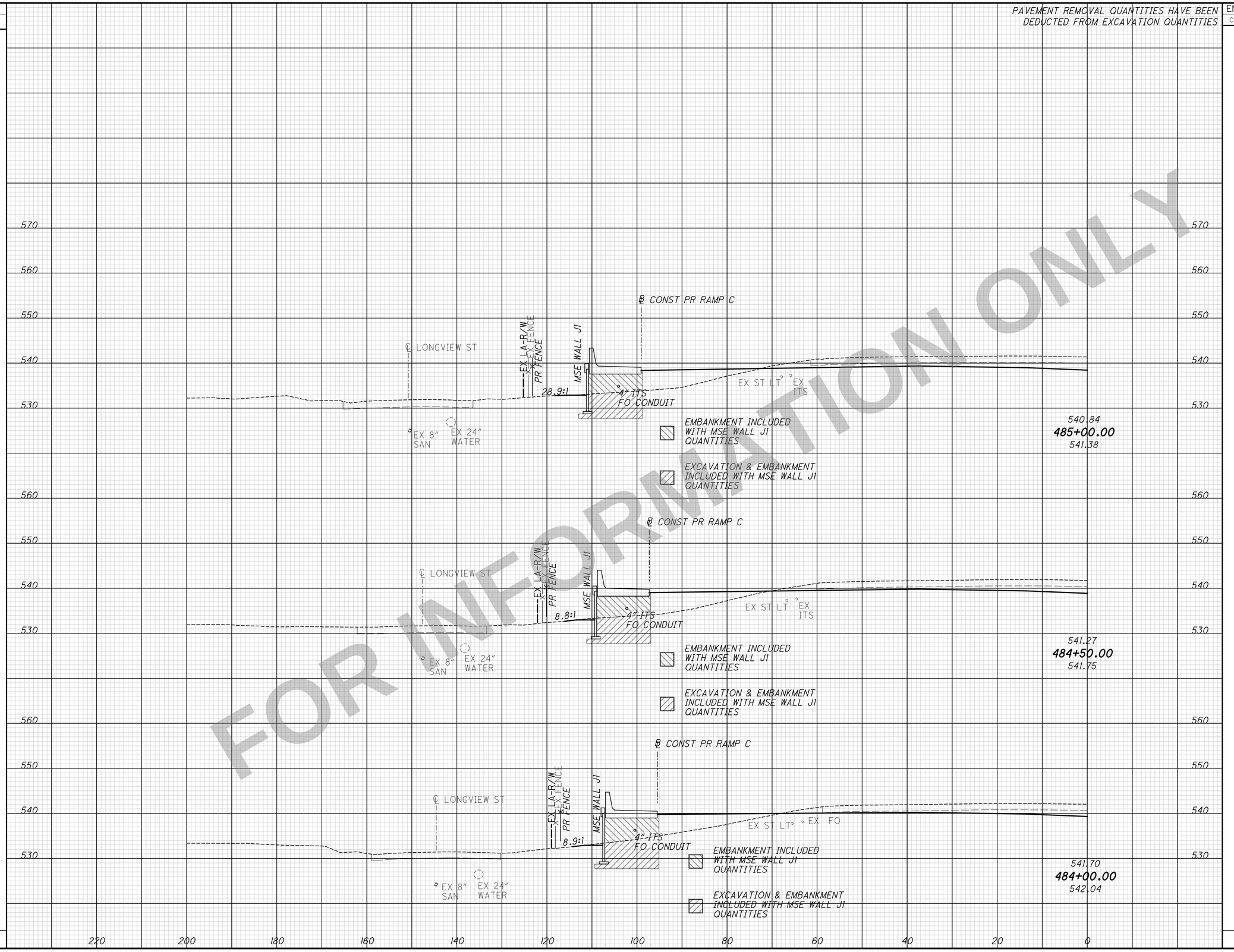
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SEEDING	
END WIDTH	SQ. YDS.
0	0
0	0
0	0
0	0
0	0

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

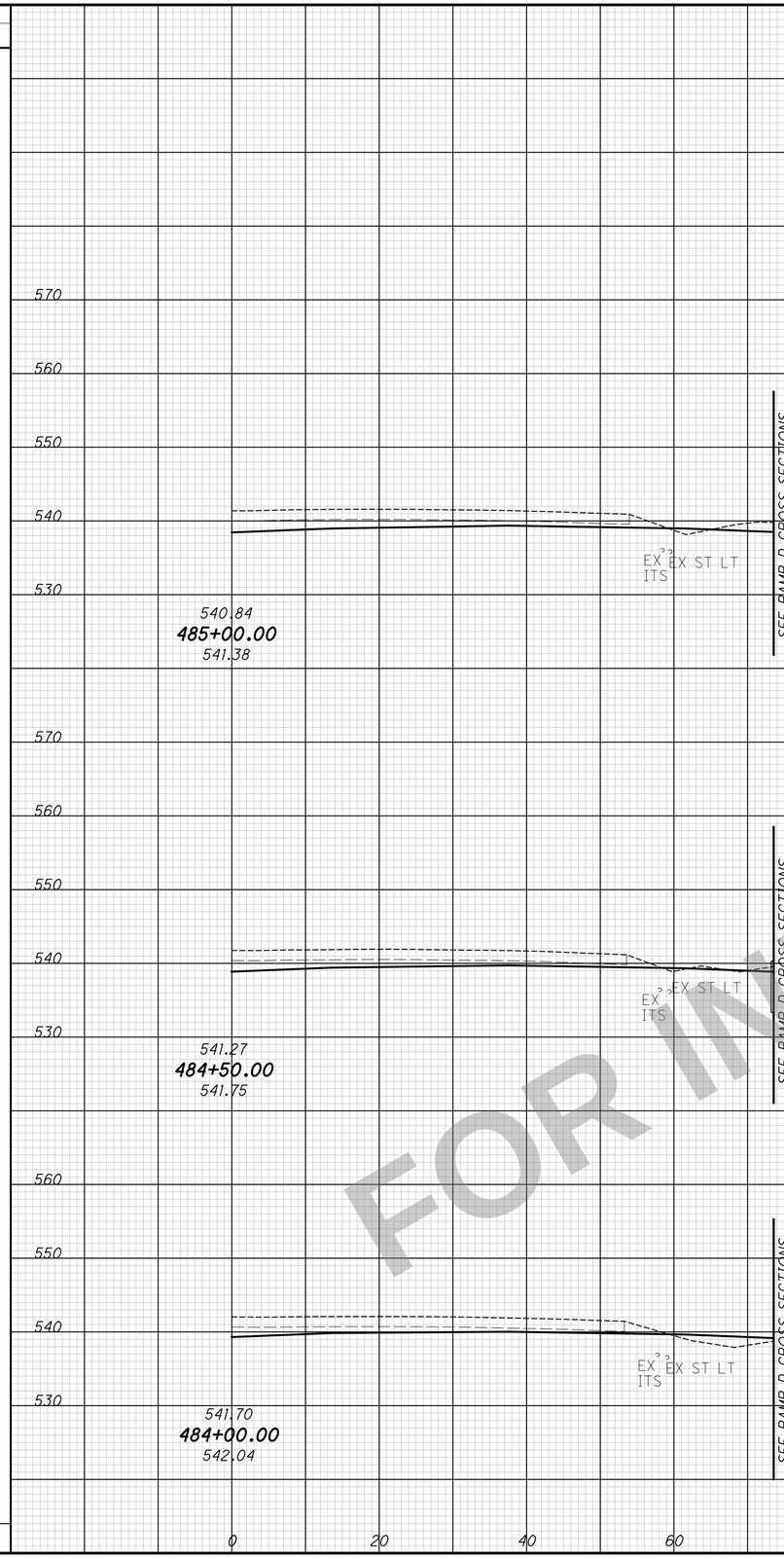
CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 484+00.00 TO STA. 485+00.00

HAM-75-7.85

547
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		133	73		
				224	136
		110	74		
				184	143
		89	81		
				149	167
				557	446

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 484+00.00 TO STA. 485+00.00

HAM-75-7.85

548
2017

FOR INFORMATION ONLY

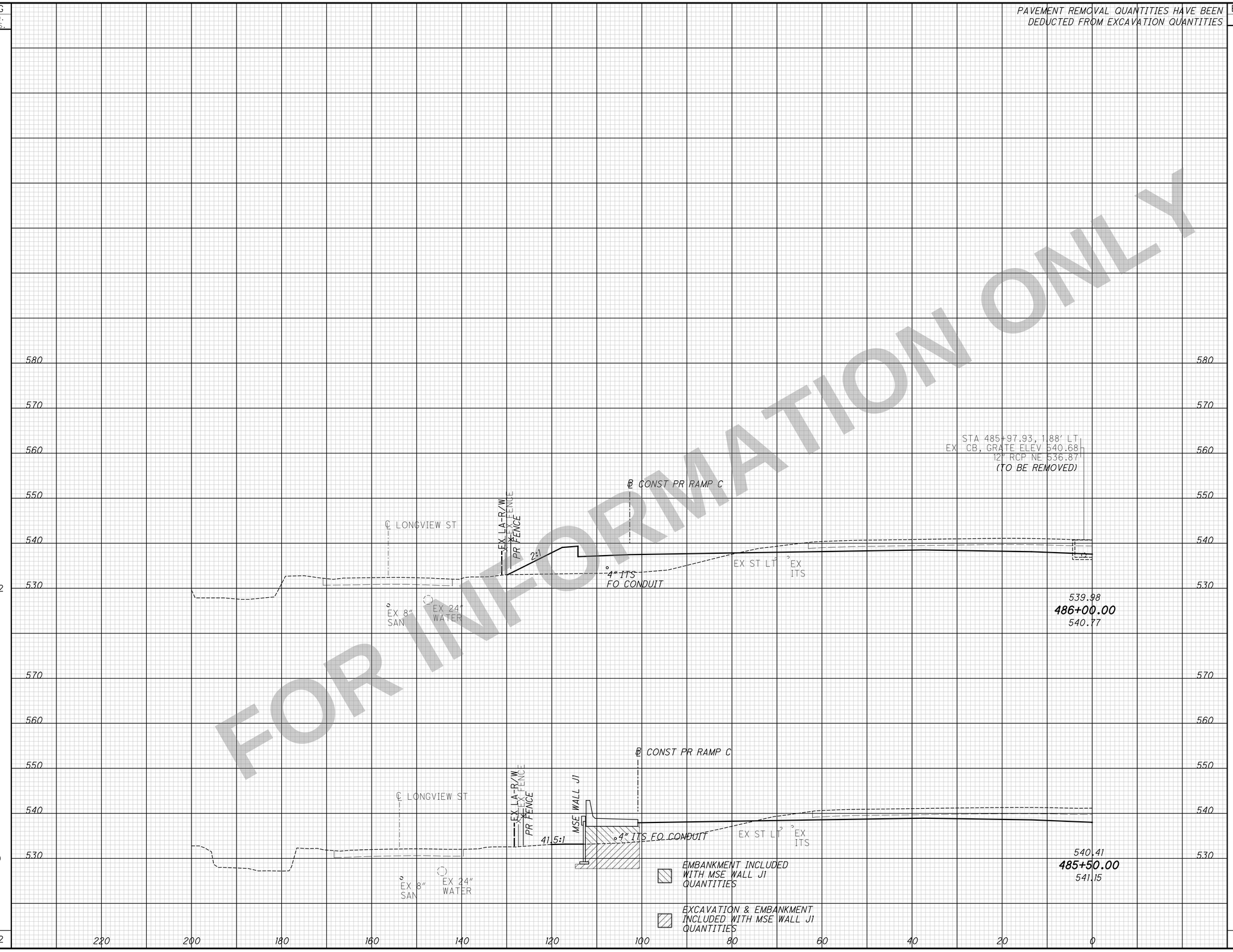
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SEEDING	
END WIDTH	SQ. YDS.
22	62
0	0
62	

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR | CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 485+50.00 TO STA. 486+00.00

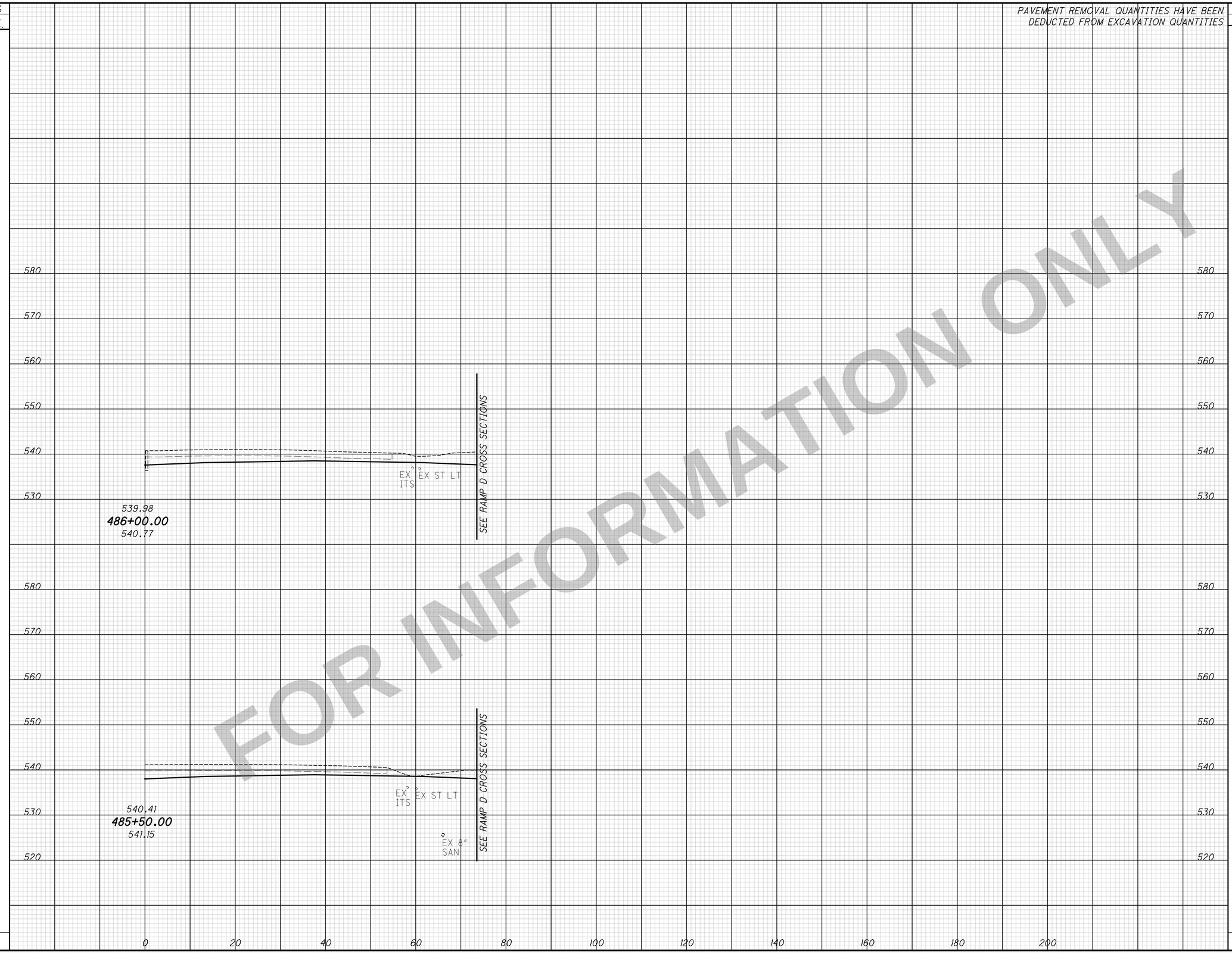
HAM-75-7.85

549
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA		VOLUME	
CUT	FILL	CUT	FILL
200	161		
		329	209
156	65		
		267	128
		596	337

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 485+50.00 TO STA. 486+00.00

HAM-75-7.85

550
2017

FOR INFORMATION ONLY

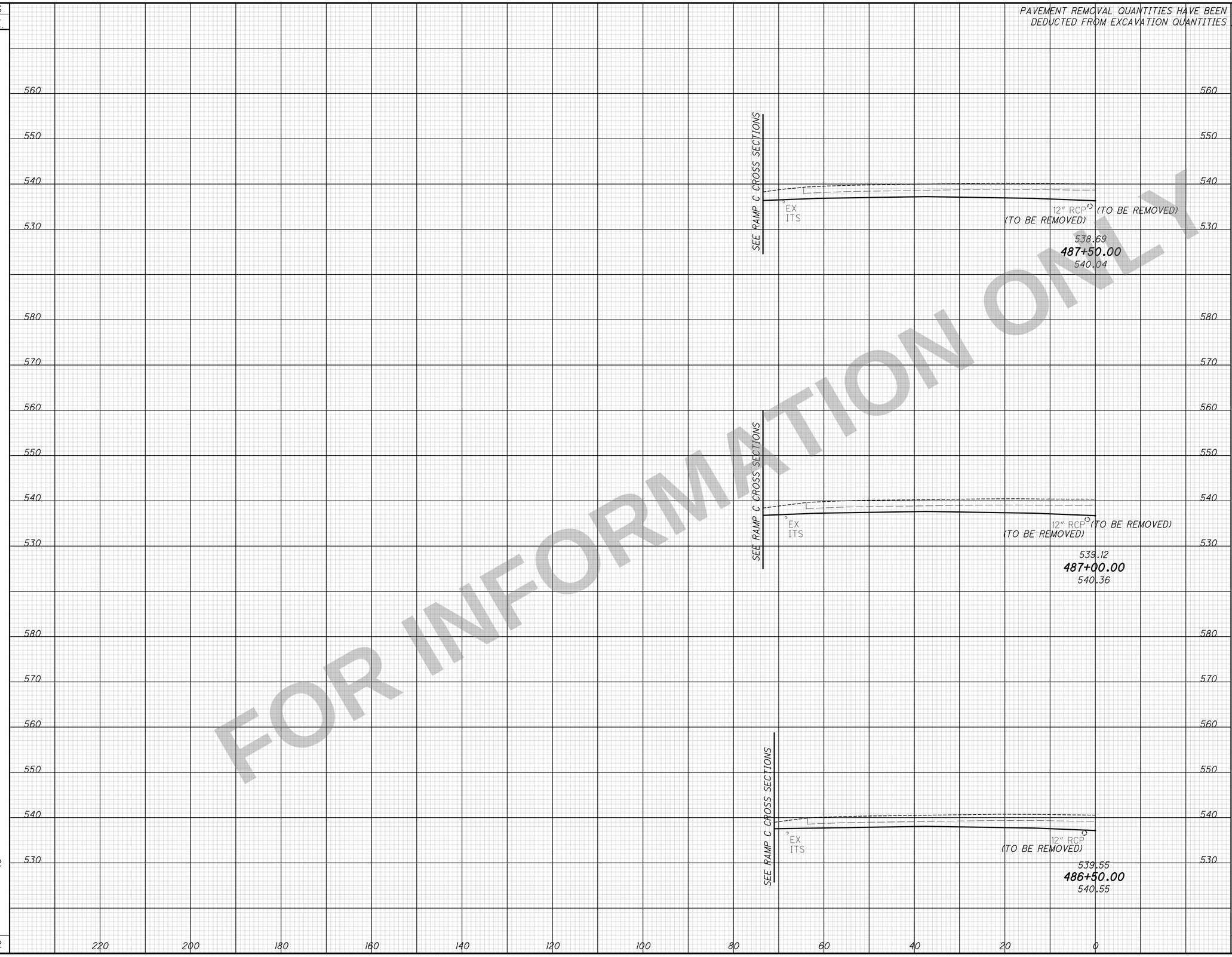
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SEEDING	
END WIDTH	SQ. YDS.
0	0
0	0
0	62
	62

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

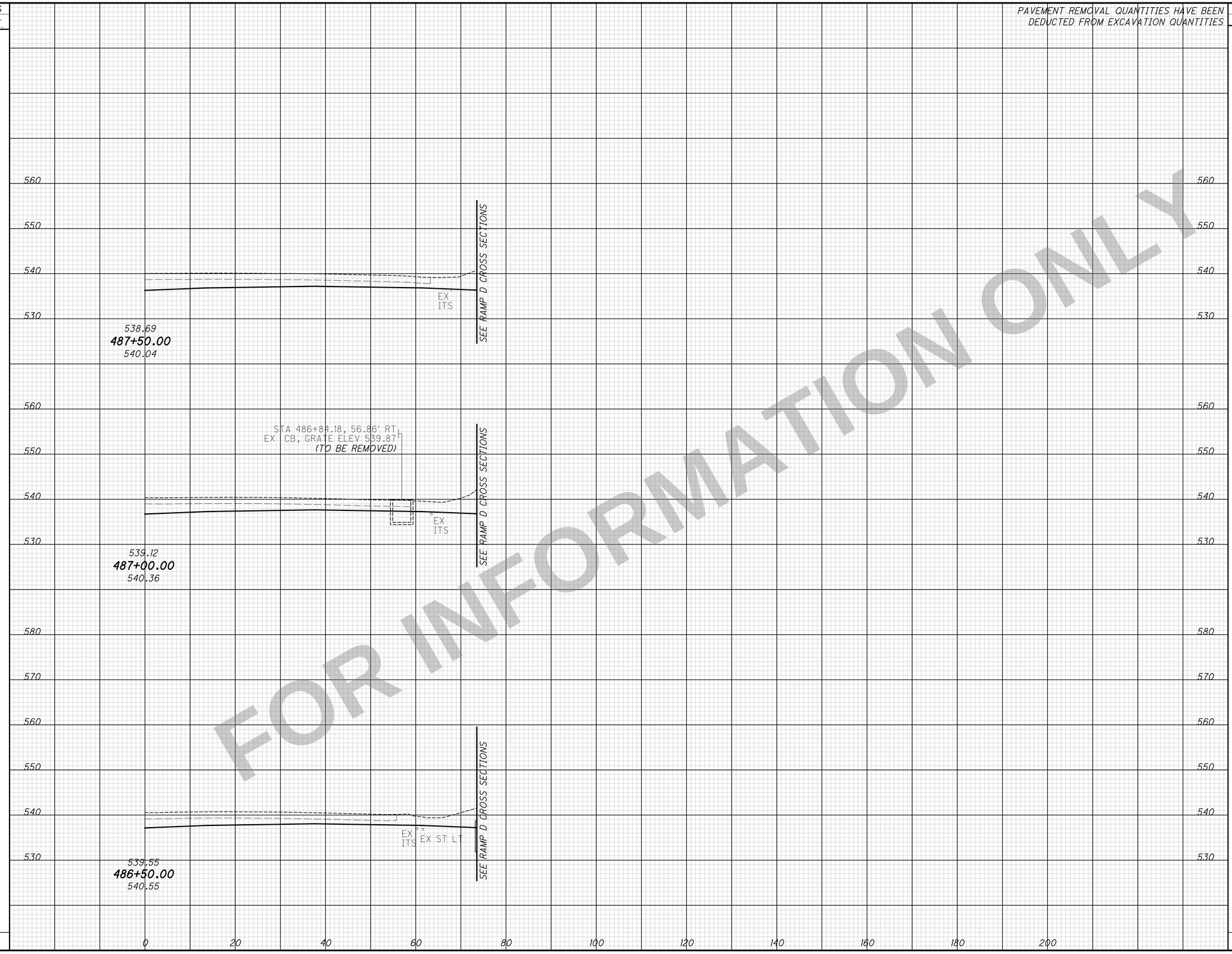
CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 486+50.00 TO STA. 487+50.00

HAM-75-7.85

551
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



SEEDING END WIDTH	SEEDING SQ. YDS.

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
260	0	469	0
246	0	433	0
221	0	390	149
		1292	149

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 486+50.00 TO STA. 487+50.00

HAM-75-7.85

552
2017

FOR INFORMATION ONLY

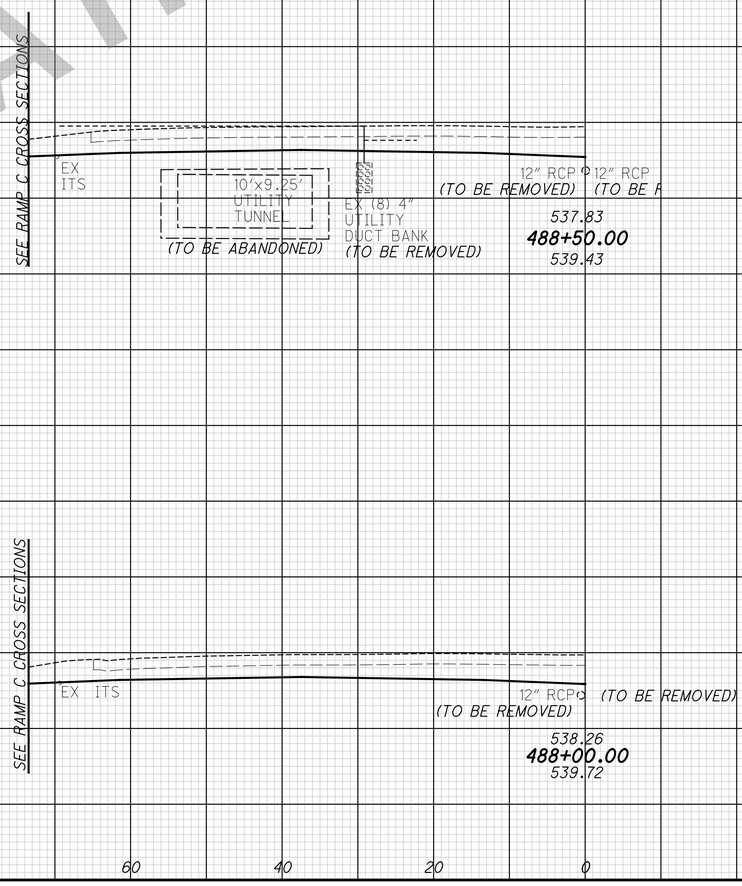
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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 488+00.00 TO STA. 488+50.00

HAM-75-7.85

553
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL
295	0		
		528	0
276	0		
		496	0
		1024	0

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 488+00.00 TO STA. 488+50.00

HAM-75-7.85

554
2017

FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SQ. YDS.
0	0
0	0
0	0

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK

FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 489+00.00 TO STA. 489+50.00

HAM-75-7.85

555
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

STA 489+25.43, 2.13" RT
EX CB, GRATE ELEV 538.98
15" RCP N 531.26
15" RCP NE 531.13
12" RCP S 532.03
12" RCP W 532.98
(TO BE REMOVED)

406

SEE RAMP D CROSS SECTIONS

536.97
489+50.00

30" B

SEE RAMP D CROSS SECTIONS

12" RCP
(TO BE REMOVED)

537.40
489+00.00
539.04

580 570 560 550 540 530

0 20 40 60 80 100 120 140 160 180 200

END AREA		VOLUME	
CUT	FILL	CUT	FILL
346	0		
		617	0
320	0		
		570	0
		1187	0

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 489+00.00 TO STA. 489+50.00

HAM-75-7.85

556
2017

FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SQ. YDS.
0	
	0
	0
	0
	0

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 490+00.00 TO STA. 490+50.00

HAM-75-7.85

557
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL
398	0		
		711	0
370	0		
		663	0
		1374	0

CALCULATED: CFR
CHECKED: SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 490+00.00 TO STA. 490+50.00

HAM-75-7.85

558
2017

FOR INFORMATION ONLY

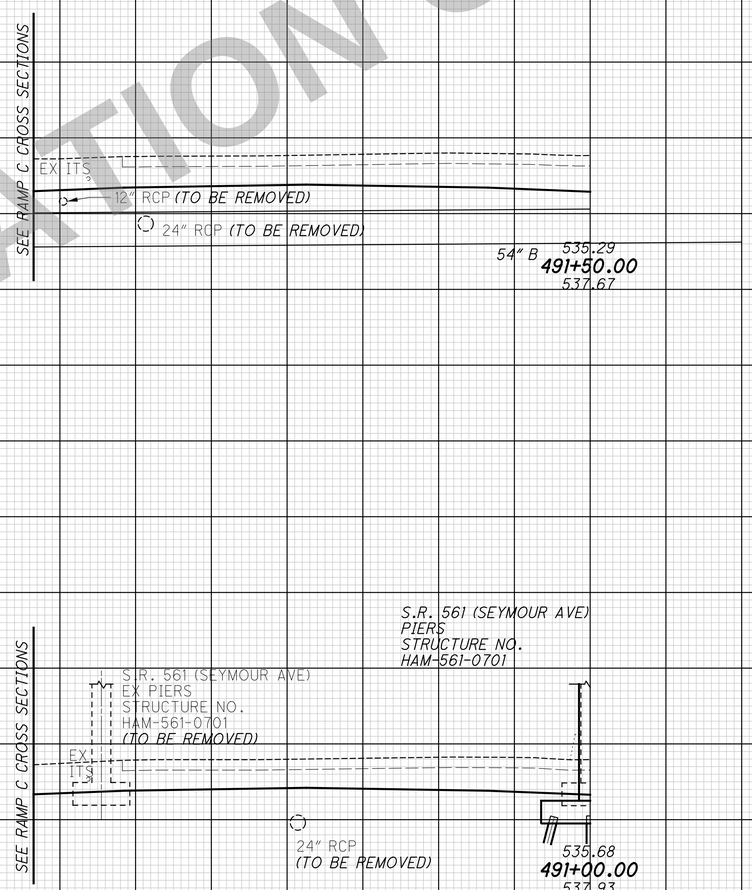
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SEEDING	
END WIDTH	SQ. YDS.
0	0
0	0
0	0

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 491+00.00 TO STA. 491+50.00

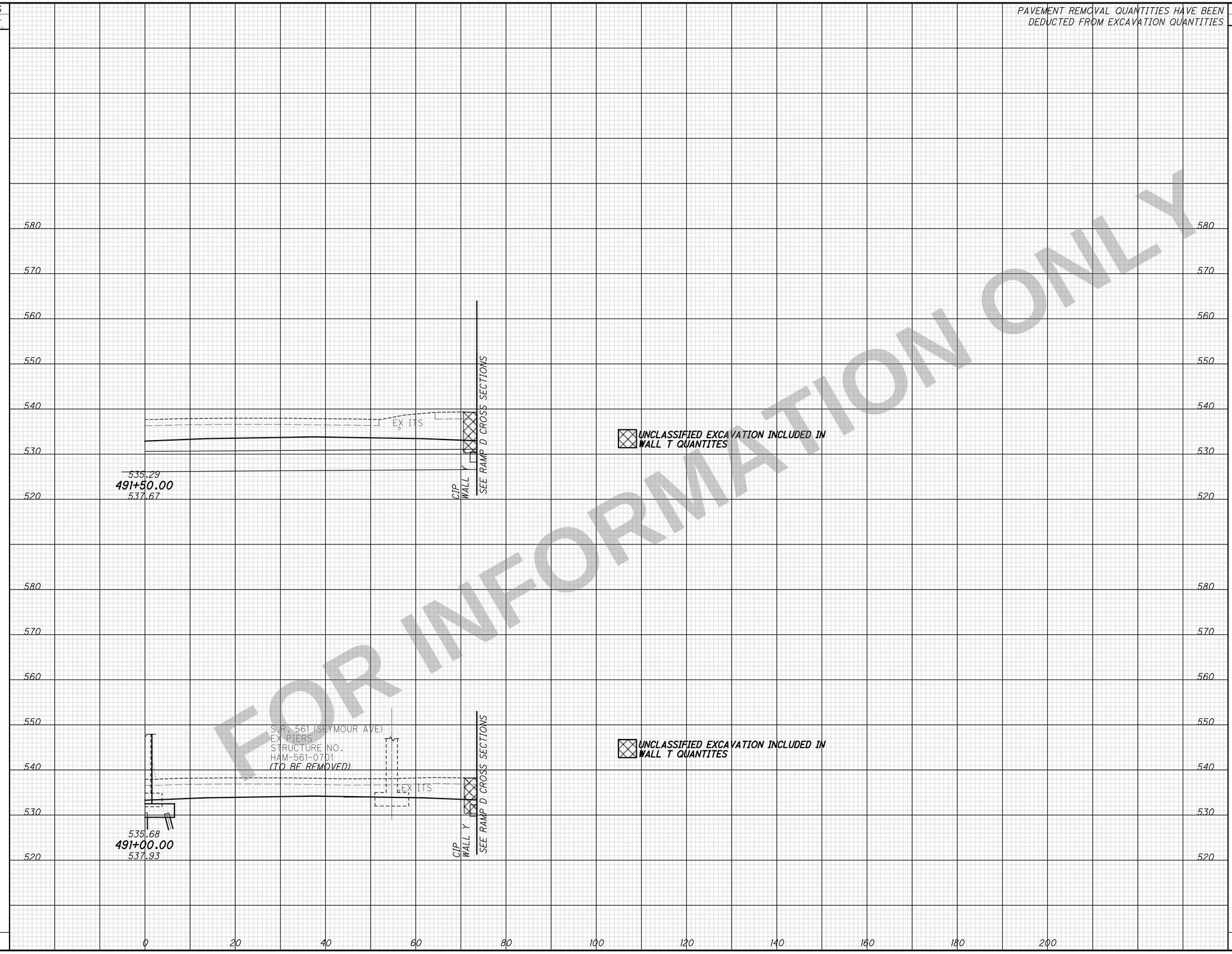
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559
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA		VOLUME	
CUT	FILL	CUT	FILL
485	0		
		849	0
432	0		
		769	0
		1618	0

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 491+00.00 TO STA. 491+50.00

HAM-75-7.85

560
2017

FOR INFORMATION ONLY

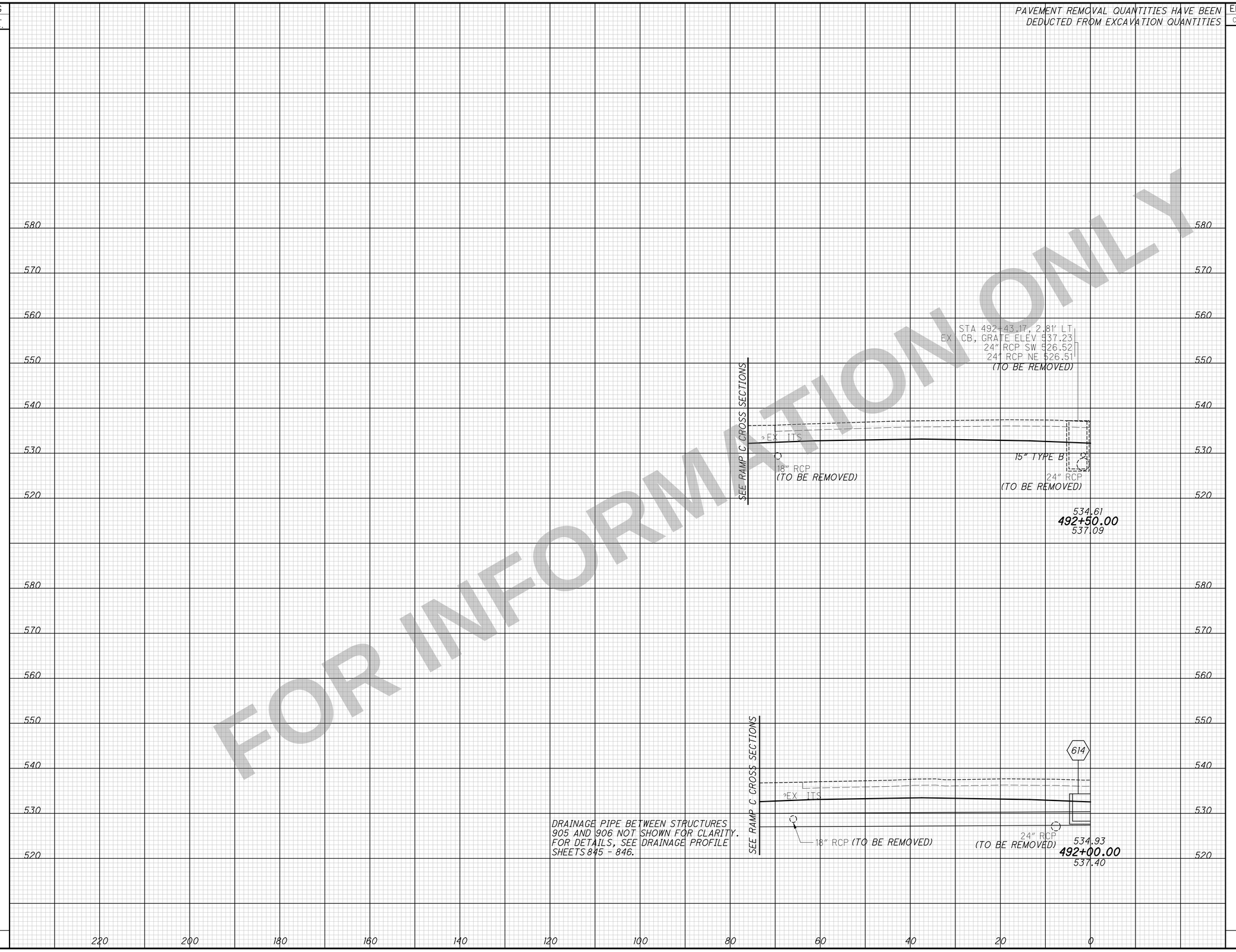
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SEEDING	
END WIDTH	SQ. YDS.
0	0
0	0
0	0

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



DRAINAGE PIPE BETWEEN STRUCTURES 905 AND 906 NOT SHOWN FOR CLARITY. FOR DETAILS, SEE DRAINAGE PROFILE SHEETS 845 - 846.

FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 492+00.00 TO STA. 492+50.00

HAM-75-7.85

561
2017

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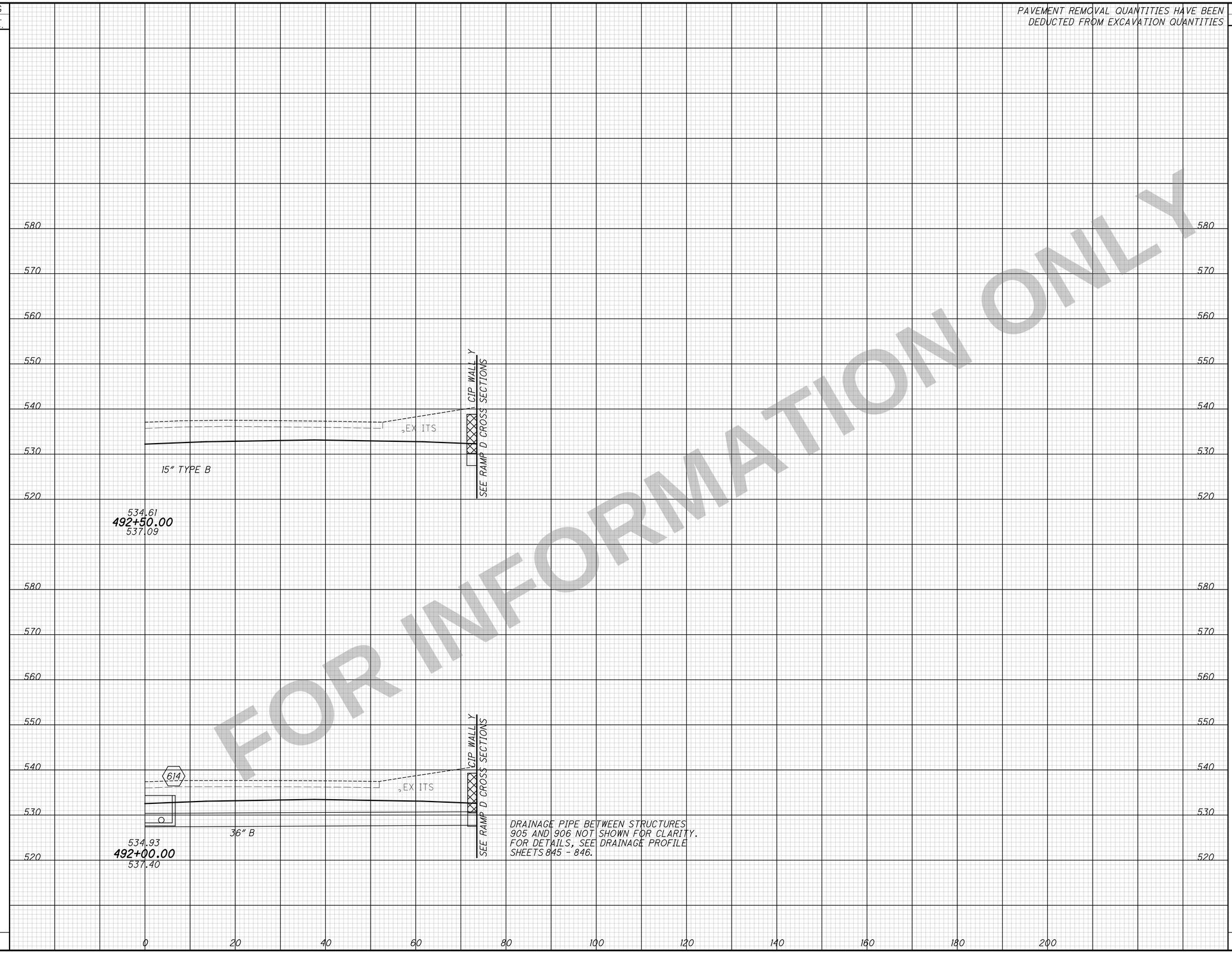
FOR INFORMATION ONLY

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING	
END WIDTH	SQ. YDS.
0	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
515	0		
		954	0
515	0		
		926	0
		1880	0

CALCULATED CFR
CHECKED SSK



CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 492+00.00 TO STA. 492+50.00

HAM-75-7.85

562
2017

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SEEDING	
END WIDTH	SQ. YDS.
77	
0	
214	
0	
214	

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR | CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 493+00.00 TO STA. 493+50.00

HAM-75-7.85

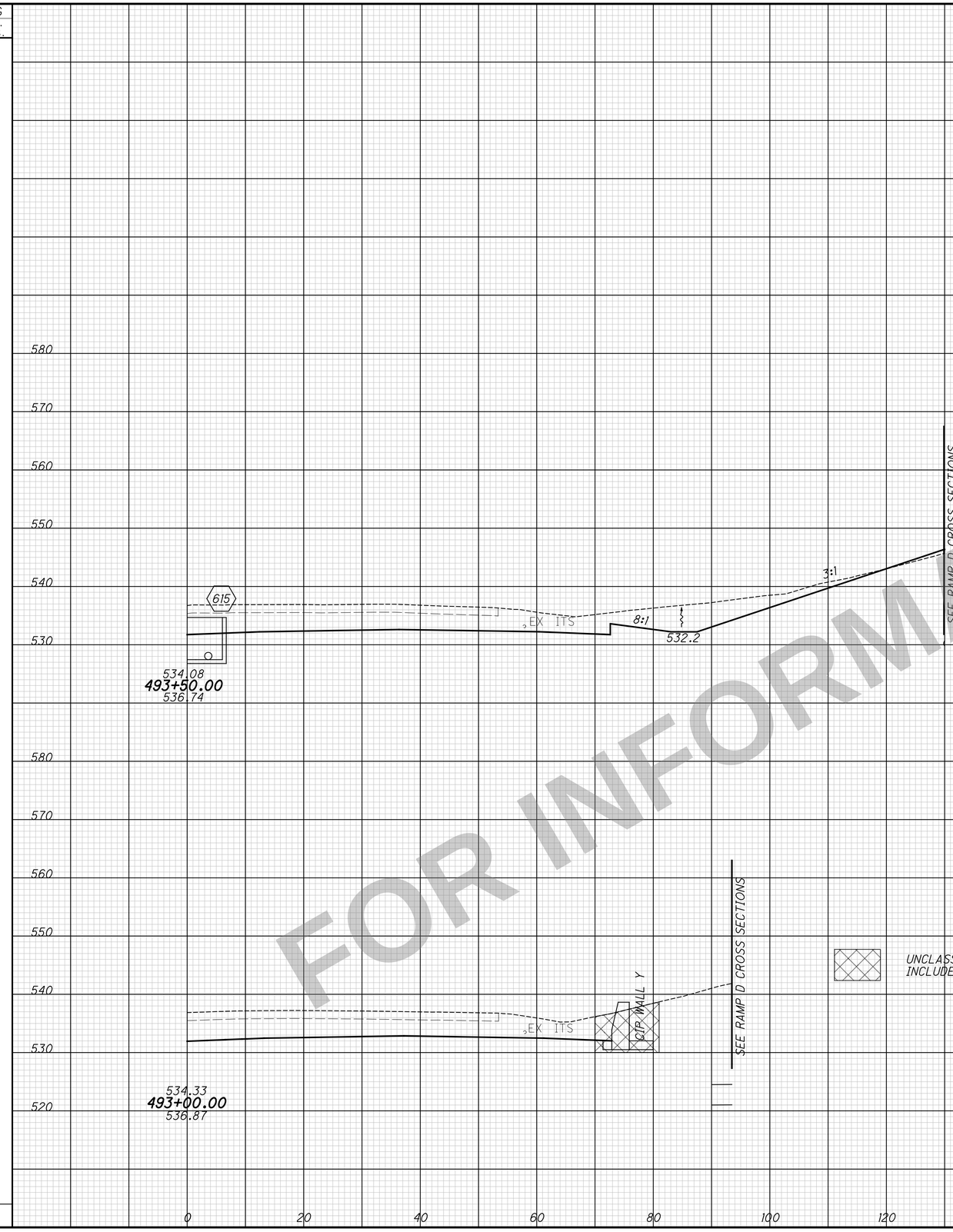
563
2017

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FOR INFORMATION ONLY

SEEDING	
END WIDTH	SQ. YDS.
	0

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA		VOLUME	
CUT	FILL	CUT	FILL
567	4		
		960	4
470	0		
		912	0
		1872	4

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 493+00.00 TO STA. 493+50.00

HAM-75-7.85

564
2017

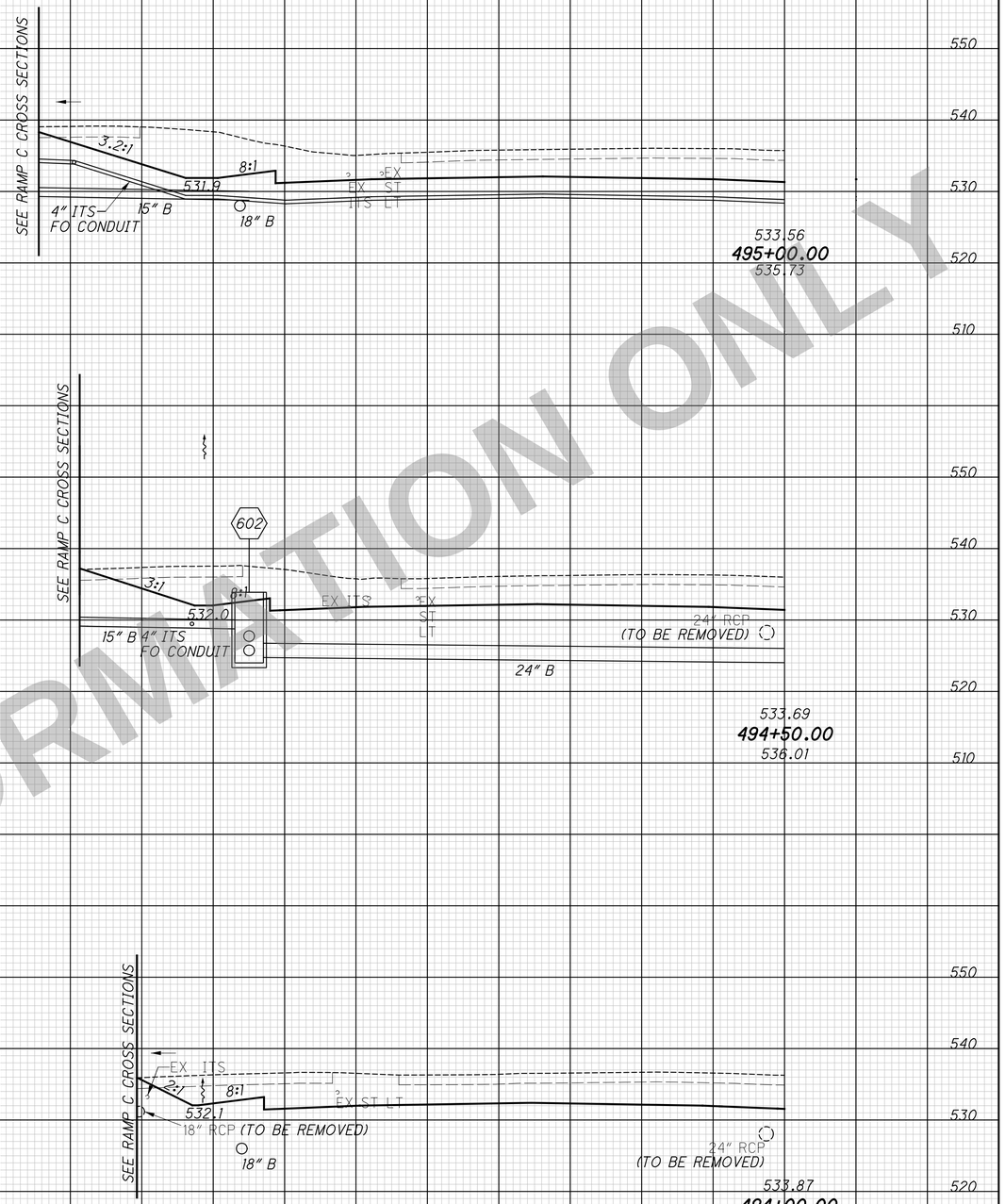
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SEEDING	
END WIDTH	SQ. YDS.
73	
66	384
	397
	781

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 494+00.00 TO STA. 494+50.00

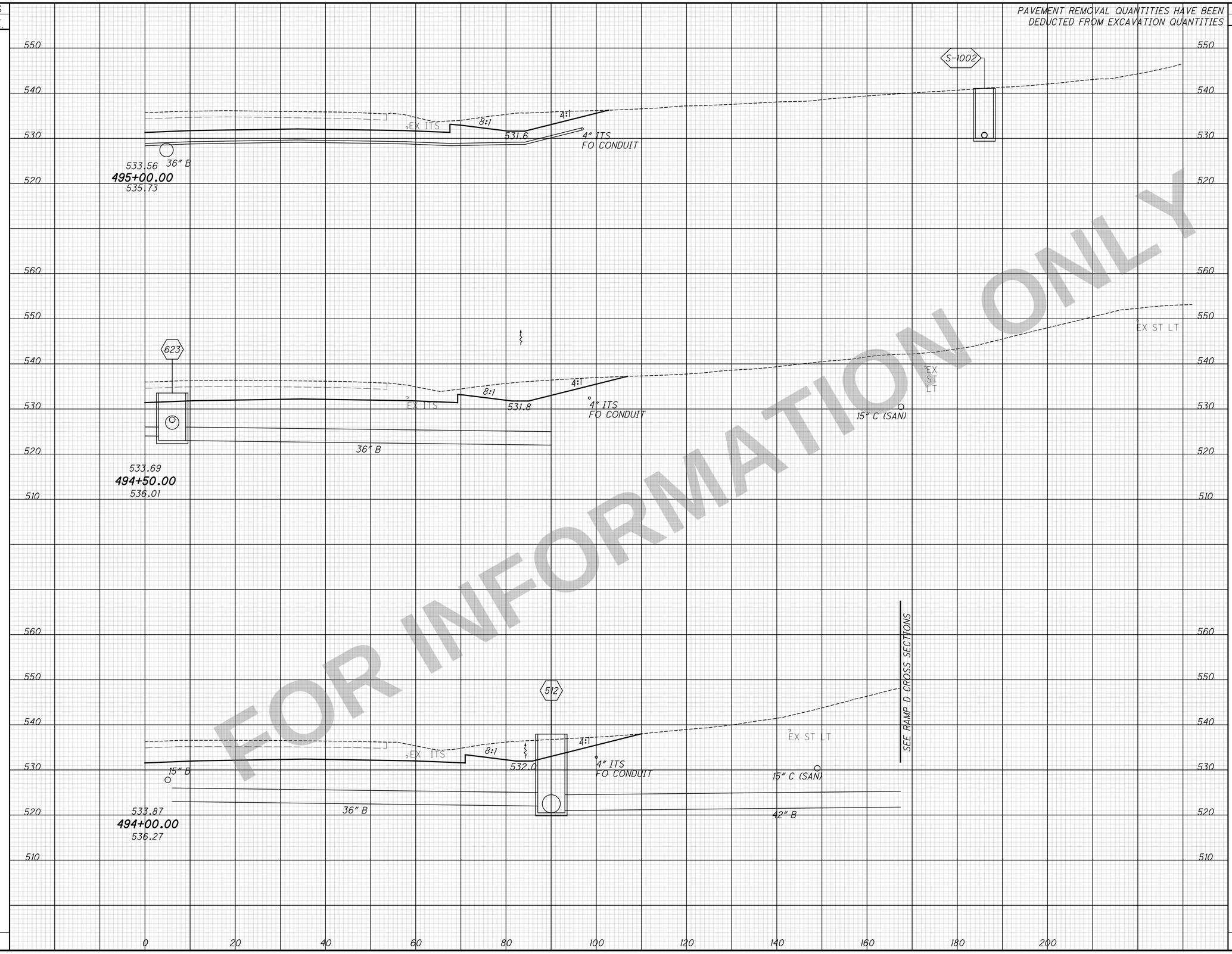
HAM-75-7.85

565
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
614	0		
		1131	2
608	2		
		1116	3
597	1		
		1078	5
		3325	10

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 494+00.00 TO STA. 494+50.00

HAM-75-7.85

566
2017

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SEEDING END WIDTH	SEEDING SQ. YDS.
82	448
80	434
	882

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL

CALCULATED CFR | CHECKED SSK

FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 495+50.00 TO STA. 496+00.00

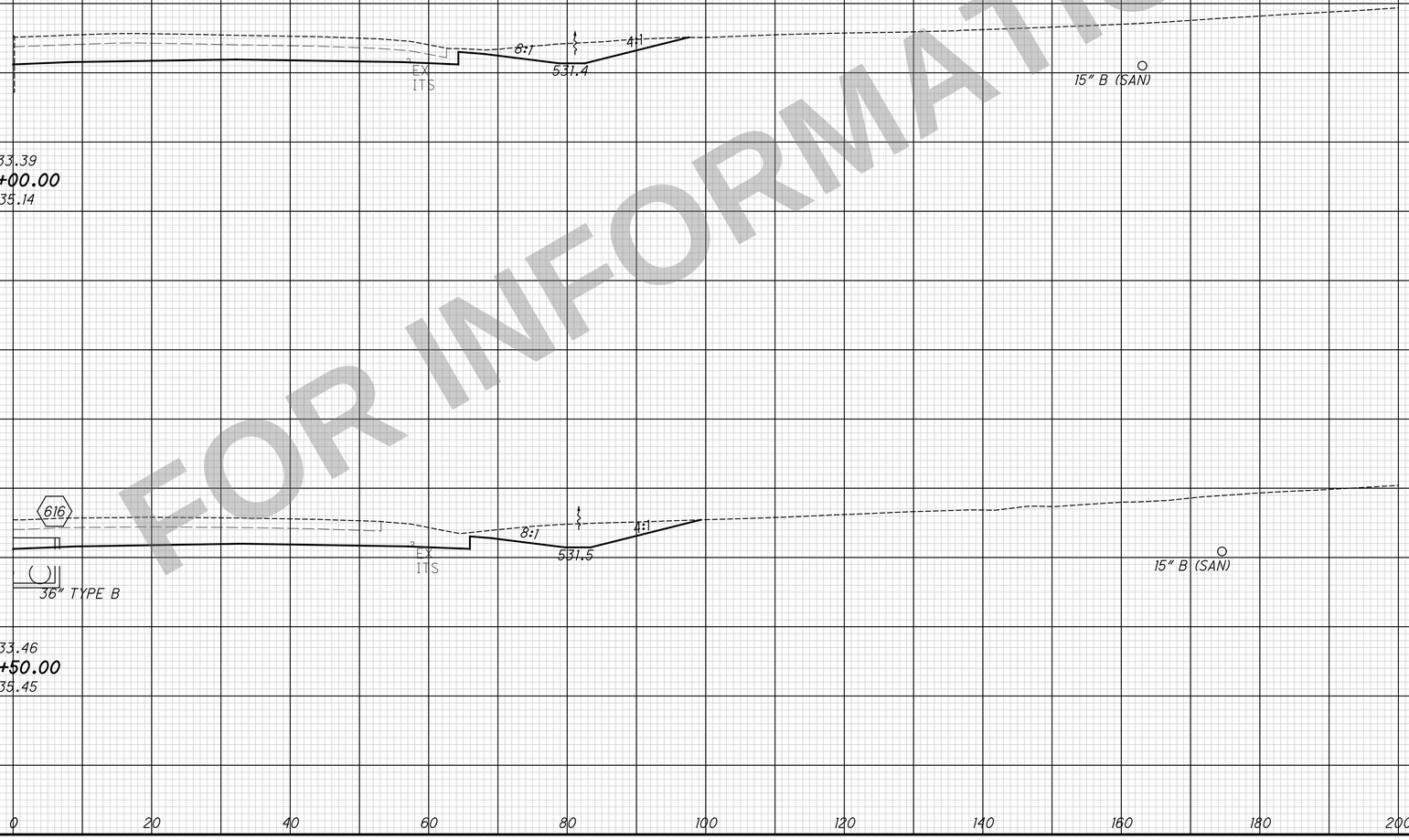
HAM-75-7.85

567
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
477	0		
		956	0
556	0		
		1083	0
		2039	0

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 495+50.00 TO STA. 496+00.00

HAM-75-7.85

568
2017

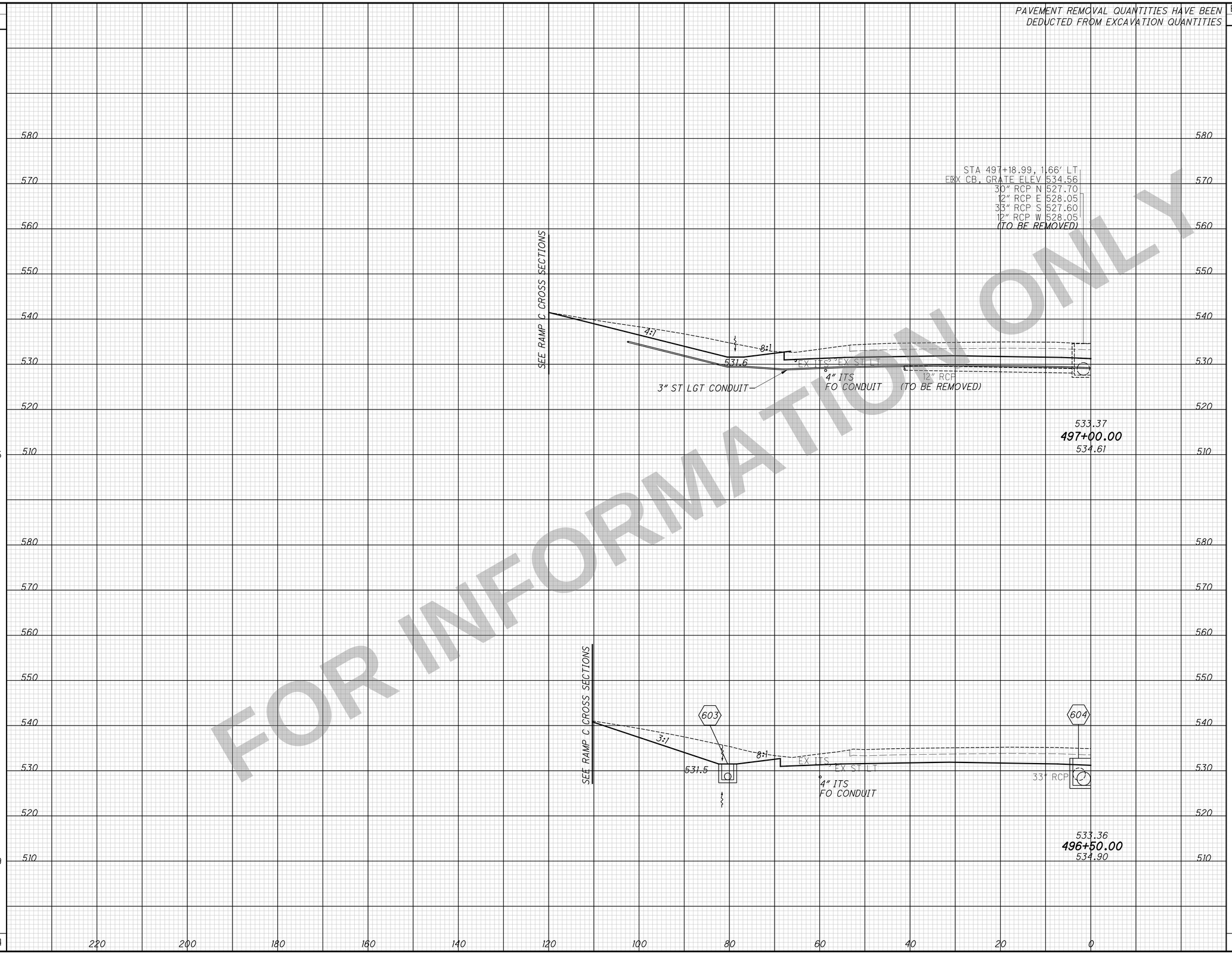
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SEEDING	
END WIDTH	SQ. YDS.
163	685
	84
	459
	1144

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED: CFR
CHECKED: SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 496+50.00 TO STA. 497+00.00

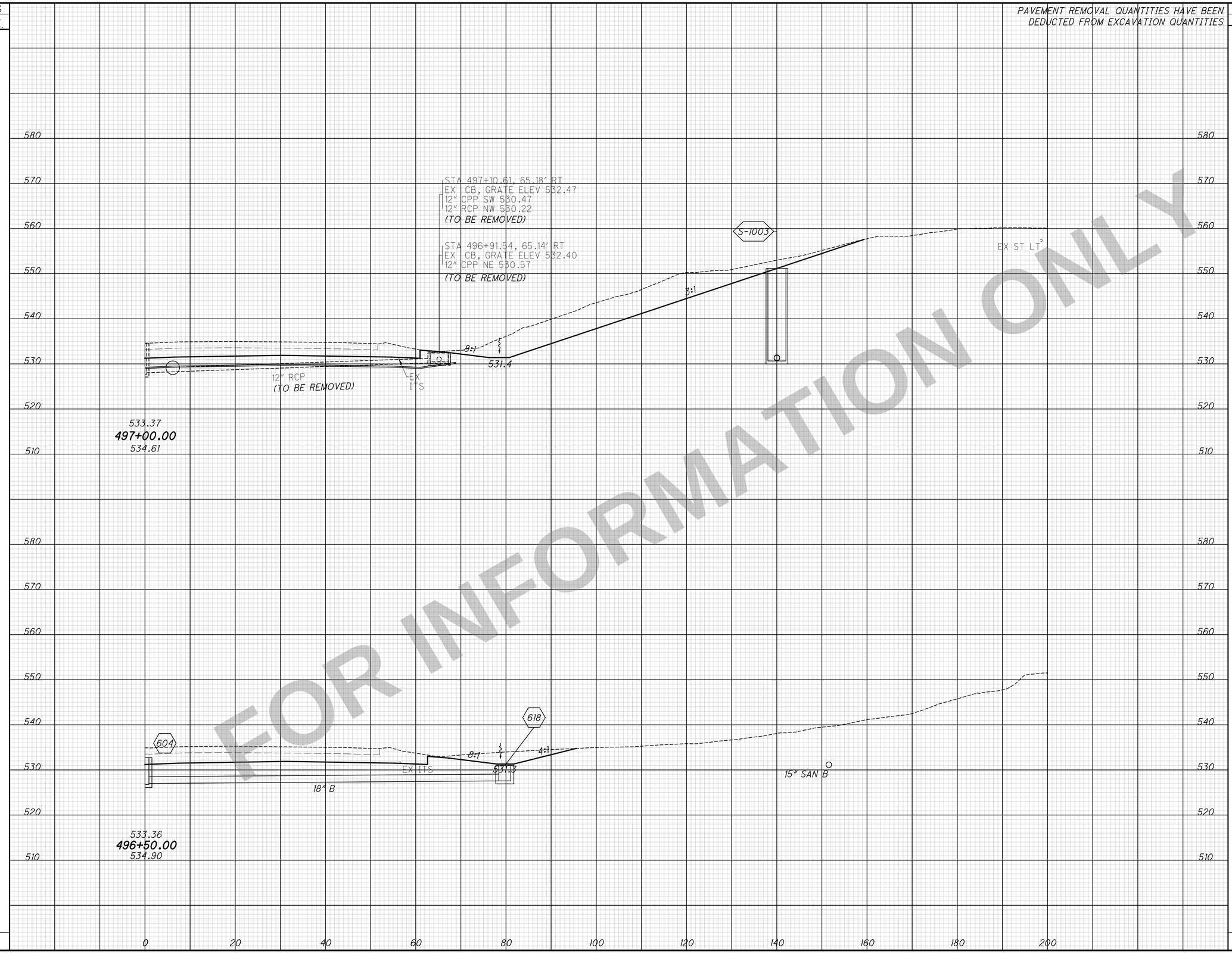
HAM-75-7.85

569
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
658	0		
		1005	0
427	0		
		837	0
		1842	0

CALCULATED	CHECKED
CFR	SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 496+50.00 TO STA. 497+00.00

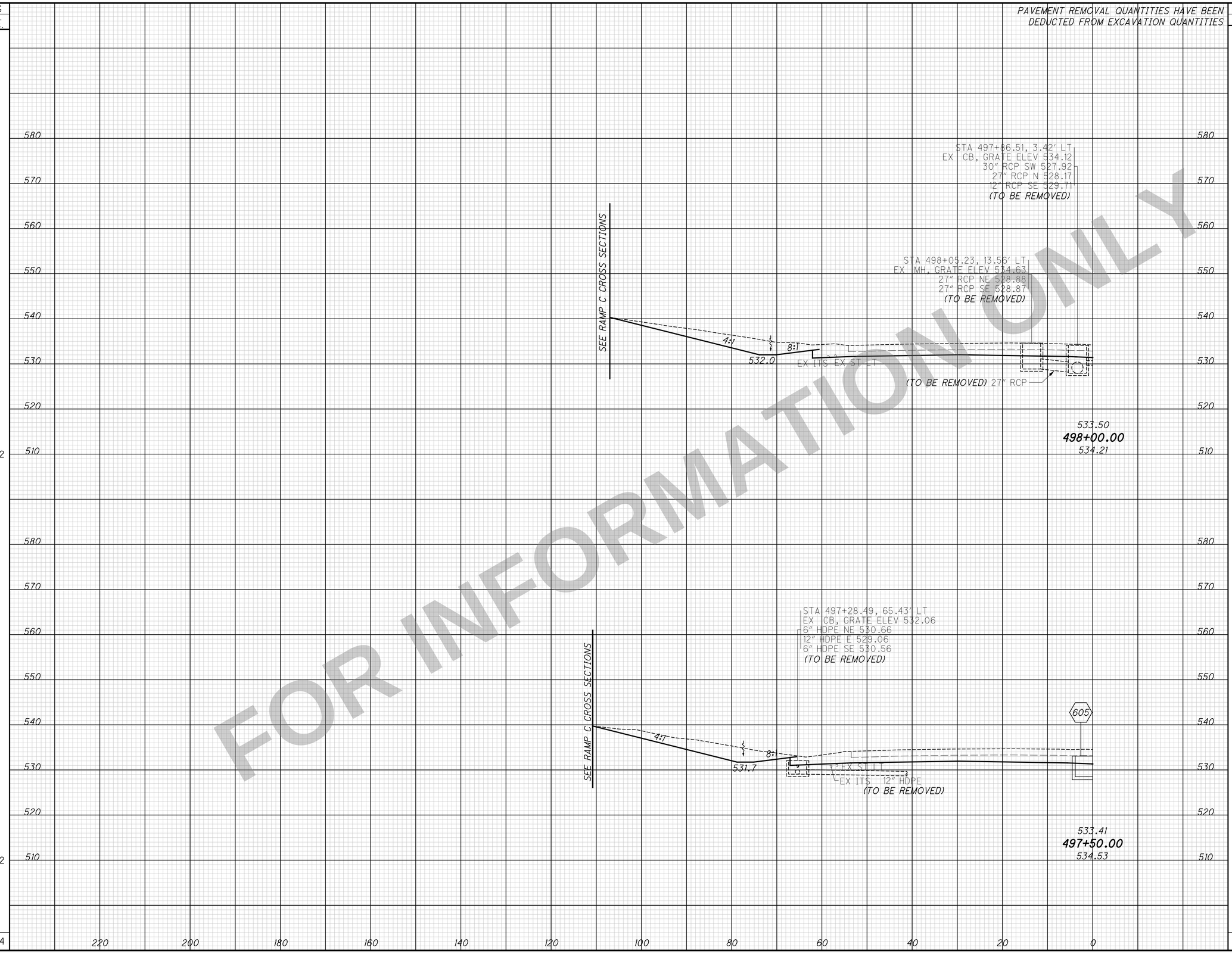
HAM-75-7.85

570
2017

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SEEDING	
END WIDTH	SQ. YDS.
51	
	282
50	
	592
	874

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 497+50.00 TO STA. 498+00.00

HAM-75-7.85

571
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

STA 498+05.75, 50.26' RT
EX CB, GRATE ELEV 534.01
12" RCP NW 530.32
8" CPP S 531.70
6" CPP SW 531.32
6" CPP NE 531.13
(TO BE REMOVED)

PADDOCK RD
STRUCTURE NO
HAM-4-0897

EX ST LT

EX
I/S

12" RCP *(TO BE REMOVED)*
x 38" TYPE B

15" B (SAN)

533.50
498+00.00
534.21

STA 497+25.77, 45.39' RT
EX CB, GRATE ELEV 534.28
12" RCP NW 529.73
12" RCP SE 529.74
(TO BE REMOVED)

STA 497+56.60, 102.55' RT
EX CB, GRATE ELEV 558.85
12" RCP S 550.71

PADDOCK RD
STRUCTURE NO
HAM-4-0897

STA 497+27.65, 153.80' RT
EX CB, GRATE ELEV 559.10
12" CPP N 553.39
12" CPP W 553.54

STA 497+62.31, 176.68' RT
EX CB, GRATE ELEV 560.09
12" CPP W 553.08

12" RCP

12" CPP

12" CPP

12" RCP

605

24" x 38" TYPE B

30" WATER

EX I/S

15" B (SAN)

533.41
497+50.00
534.53

END AREA		VOLUME	
CUT	FILL	CUT	FILL
268	0	523	0
297	0	883	0
		1406	0

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 497+50.00 TO STA. 498+00.00

HAM-75-7.85

572
2017

FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SQ. YDS.
4	22
4	154
	176

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

STA 499+03.57, 161.91' LT
EX CB, GRATE ELEV 555.16
12" CPP NW 549.17
12" CPP S 549.19

PADDOCK RD

PADDOCK RD
STRUCTURE NO
HAM-4-0897

EX ST LT

EX ST LT

EX ST LT

533.77
499+00.00
534.63

SEE RAMP C CROSS SECTIONS

STA 498+71.54, 104.44' LT
EX CB, GRATE ELEV 557.07
12" CPP N 550.96

PADDOCK RD
STRUCTURE NO
HAM-4-0897

EX ST LT

EX ST LT

EX ST LT

533.61
498+50.00
534.33

580 570 560 550 540 530 520 510

220 200 180 160 140 120 100 80 60 40 20 0

FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 498+50.00 TO STA. 499+00.00

HAM-75-7.85

573
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

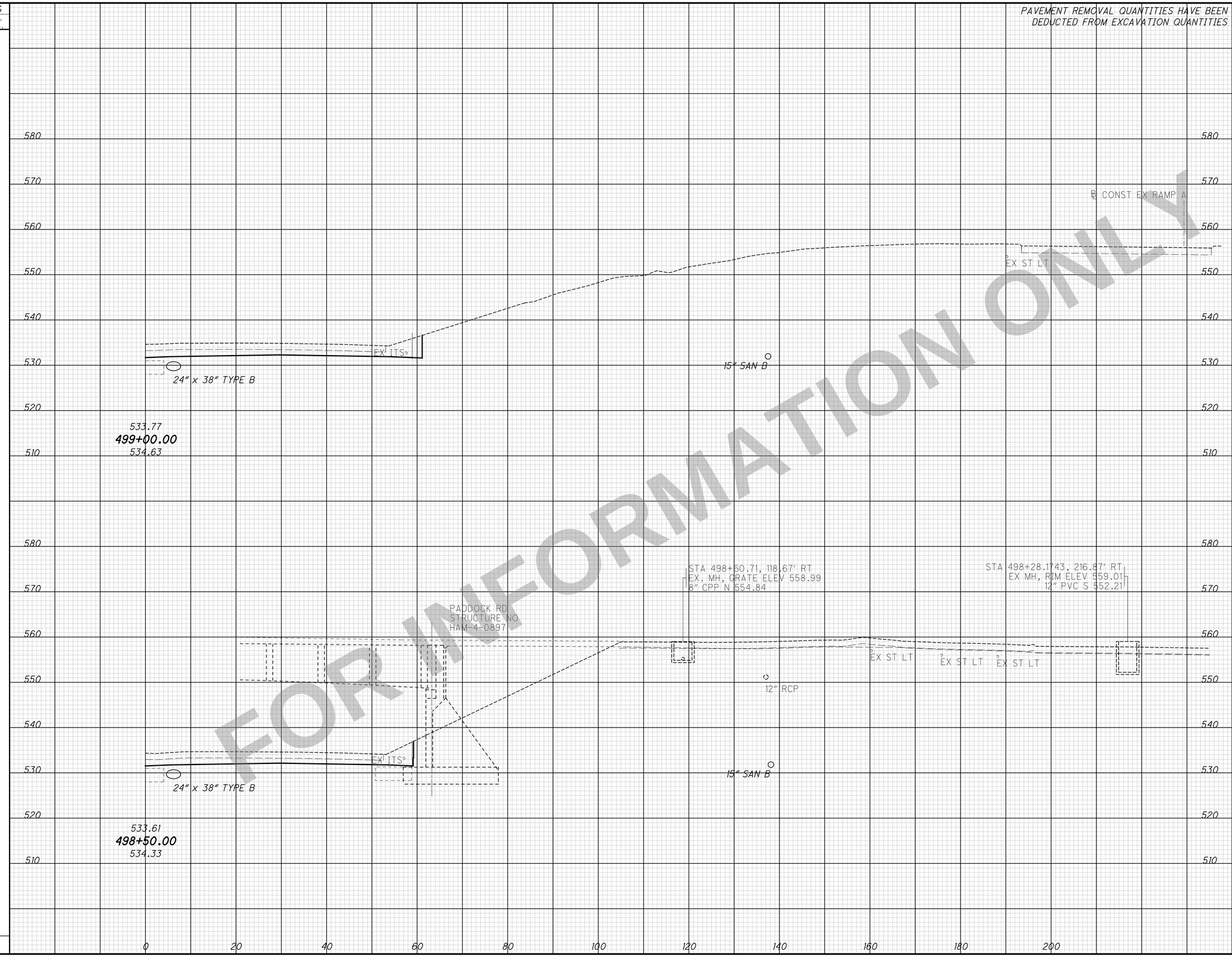
END AREA		VOLUME	
CUT	FILL	CUT	FILL
190	0		
		337	0
174	0		
		409	0
		746	0

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 498+50.00 TO STA. 499+00.00

HAM-75-7.85

574
2017



FOR INFORMATION ONLY

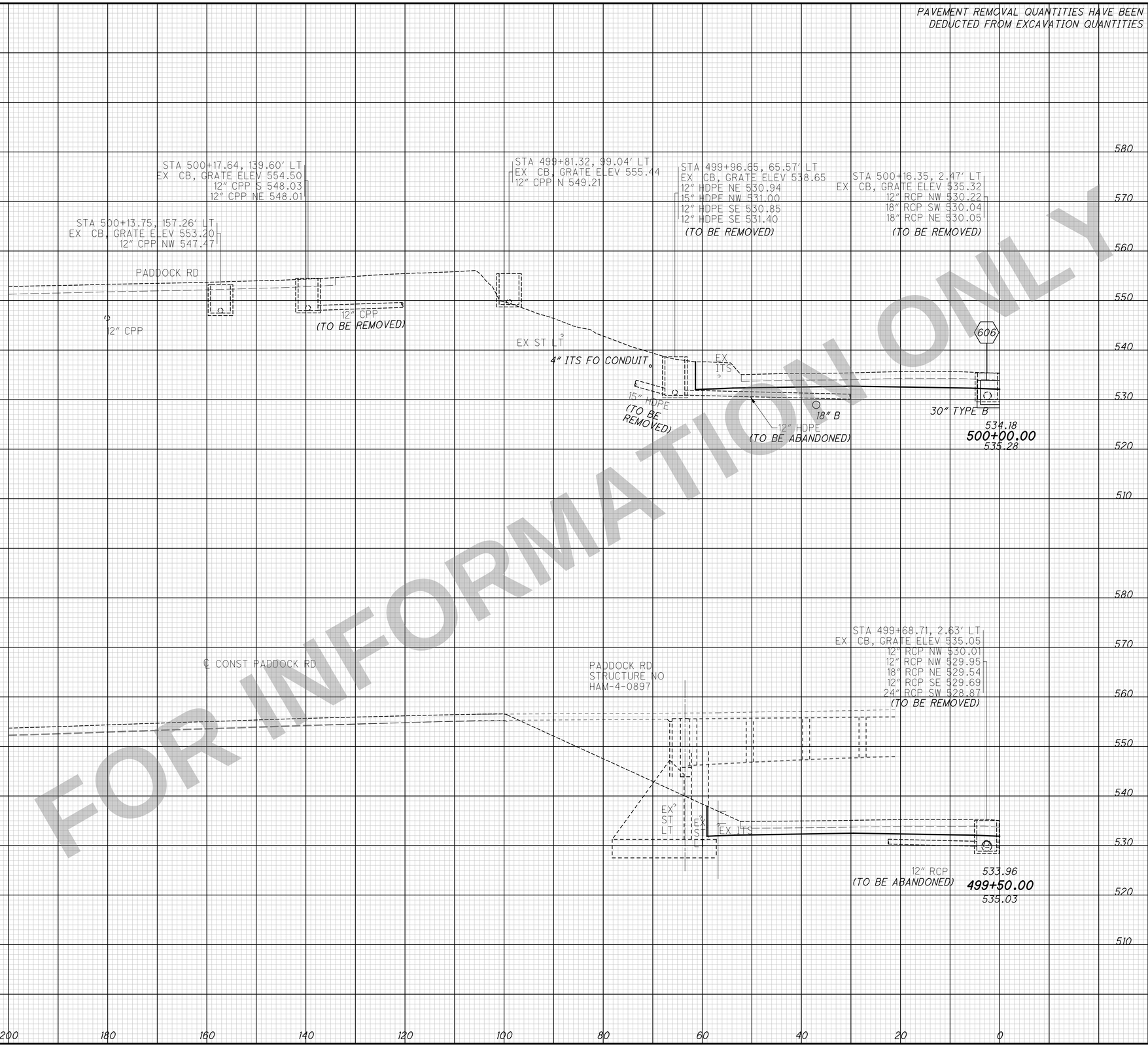
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SEEDING	
END WIDTH	SQ. YDS.
80	471
90	261
	732

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 499+50.00 TO STA. 500+00.00

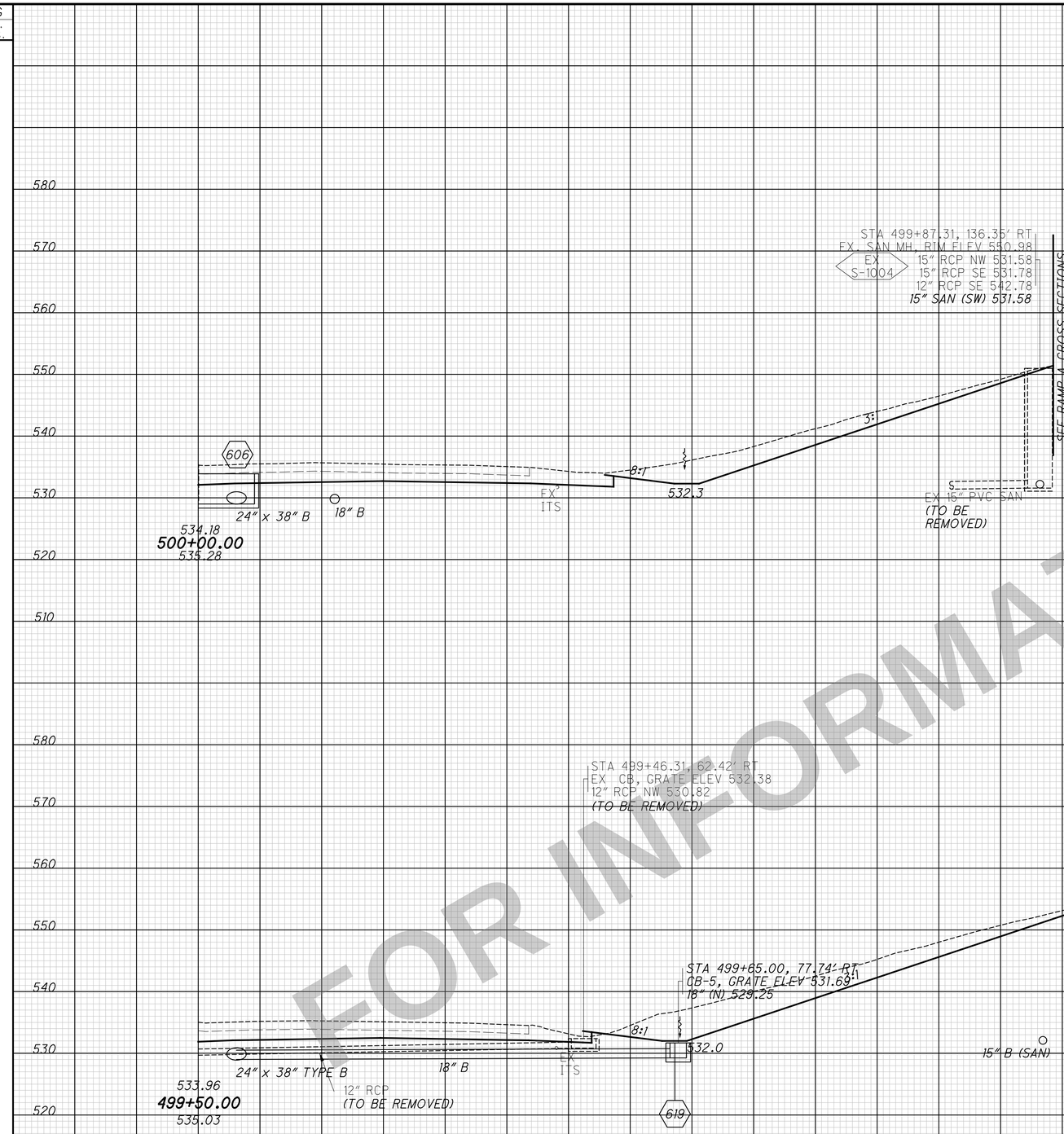
HAM-75-7.85

575
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
387	0		
		751	1
424	1		
		568	1
		1319	2

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 499+50.00 TO STA. 500+00.00

HAM-75-7.85

576
2017

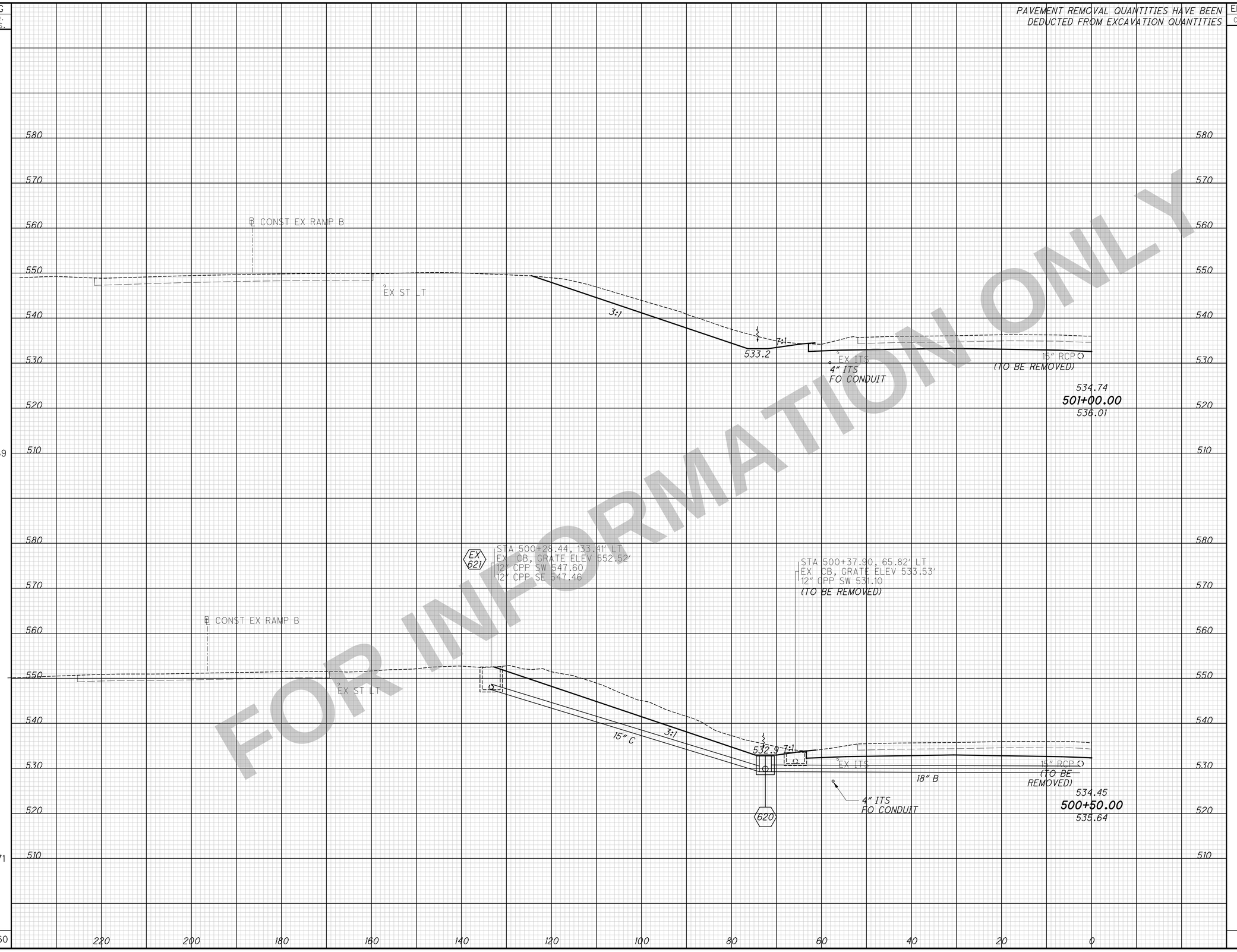
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SEEDING	
END WIDTH	SQ. YDS.
	123
	689
	126
	571
	1260

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 500+50.00 TO STA. 501+00.00

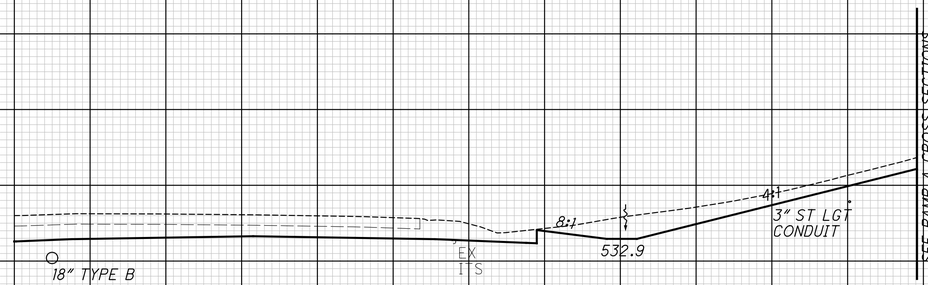
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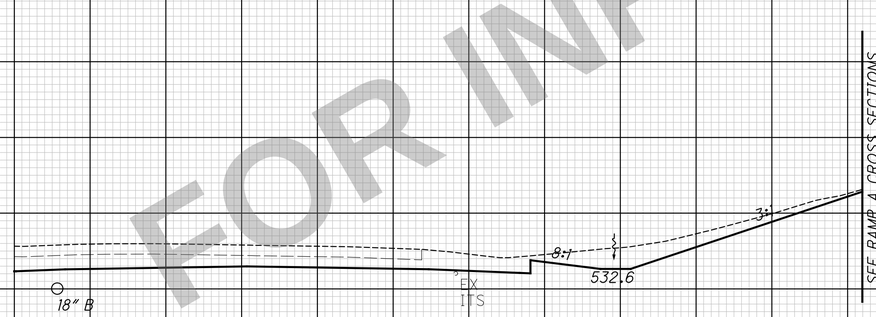
577
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES





END AREA		VOLUME	
CUT	FILL	CUT	FILL
457	0		
491	0	878	0
		813	0
		1691	0

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 500+50.00 TO STA. 501+00.00

HAM-75-7.85

578
2017

FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SQ. YDS.
49	
105	
426	
631	
1057	

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 501+50.00 TO STA. 502+00.00

HAM-75-7.85

579
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
340	0		
		715	1
432	0		
		824	0
		1539	1

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 501+50.00 TO STA. 502+00.00

HAM-75-7.85

580
2017

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SEEDING	
END WIDTH	SQ. YDS.
33	181
32	224
	405

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 502+50.00 TO STA. 503+00.00

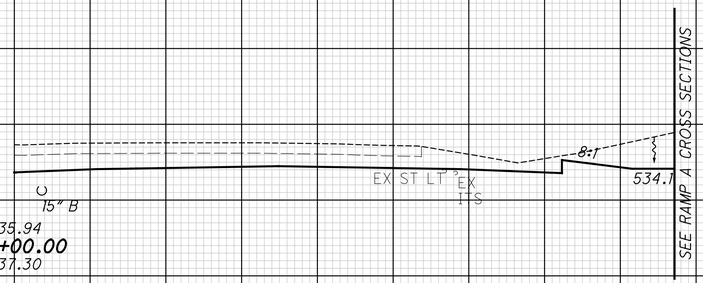
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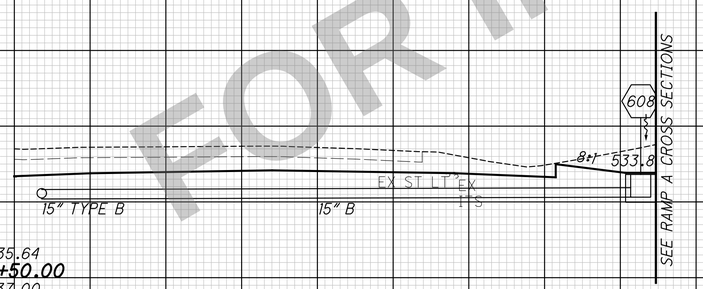
581
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES





END AREA		VOLUME	
CUT	FILL	CUT	FILL
338	0		
		597	0
307	0		
		599	0
		1196	0

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 502+50.00 TO STA. 503+00.00

HAM-75-7.85

582
2017

FOR INFORMATION ONLY

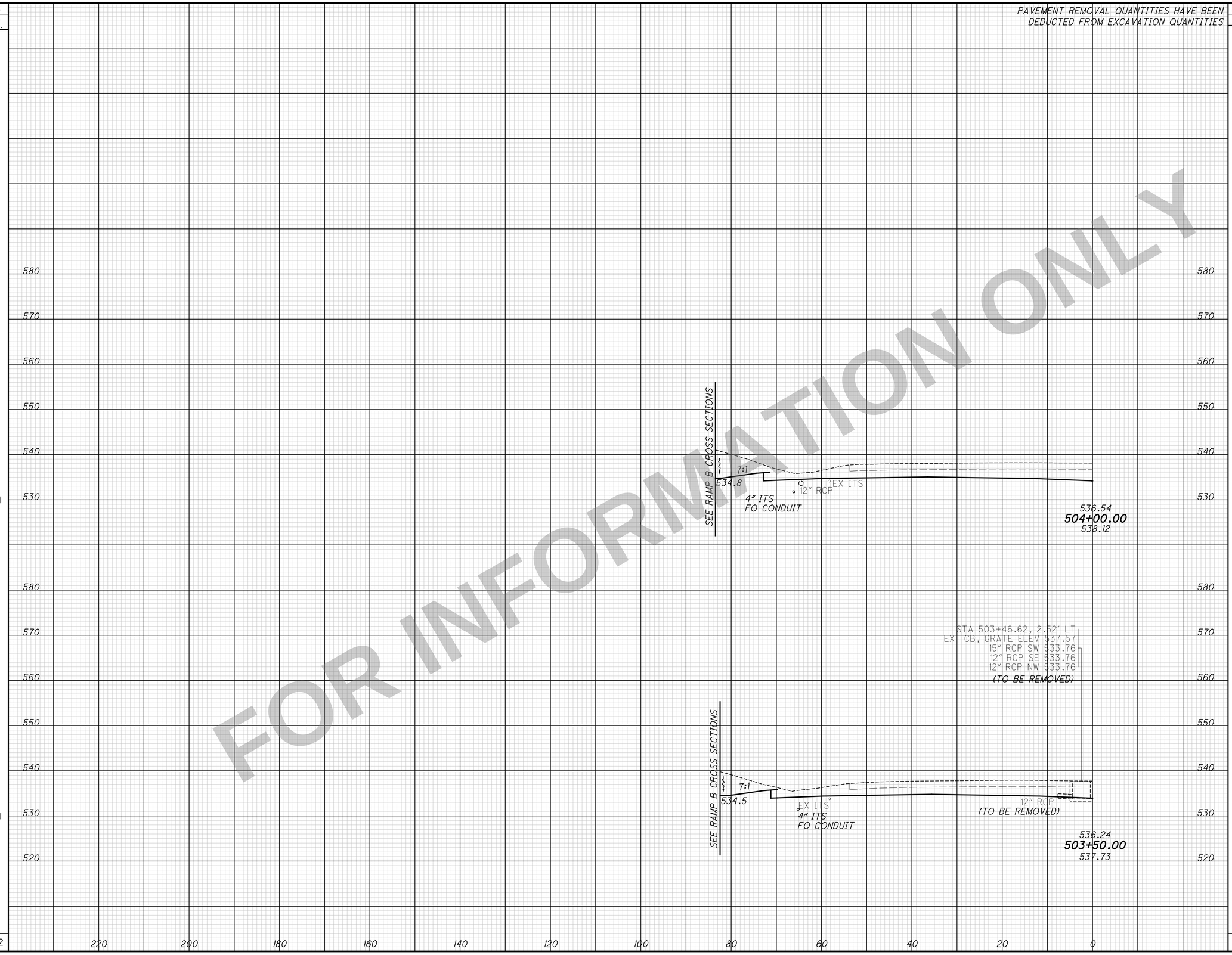
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SEEDING	
END WIDTH	SQ. YDS.
30	171
32	181
	352

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

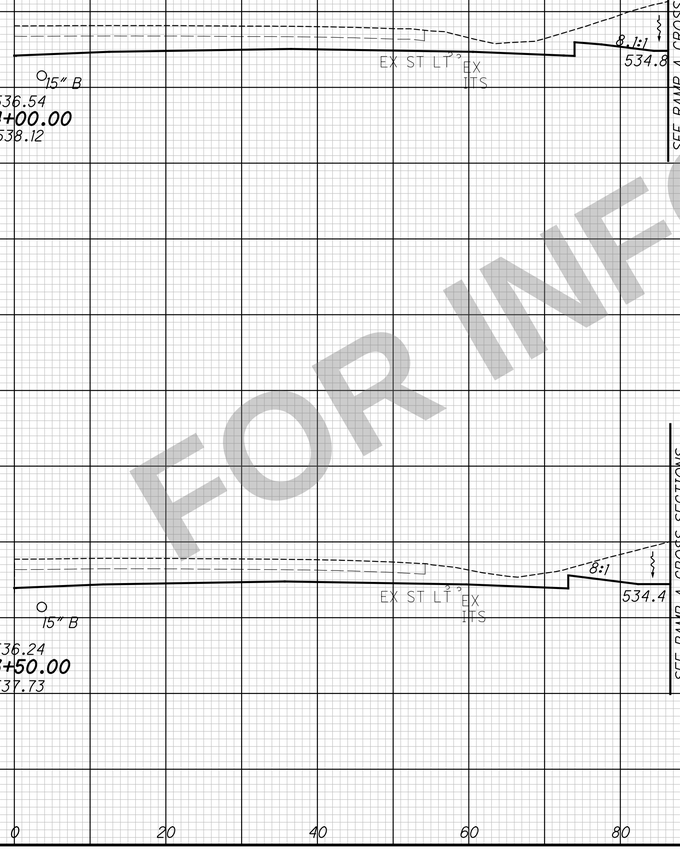
CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 503+50.00 TO STA. 504+00.00

HAM-75-7.85

583
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL

SEEDING	
END WIDTH	SQ. YDS.
18	
	109
22	
	143
	252

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

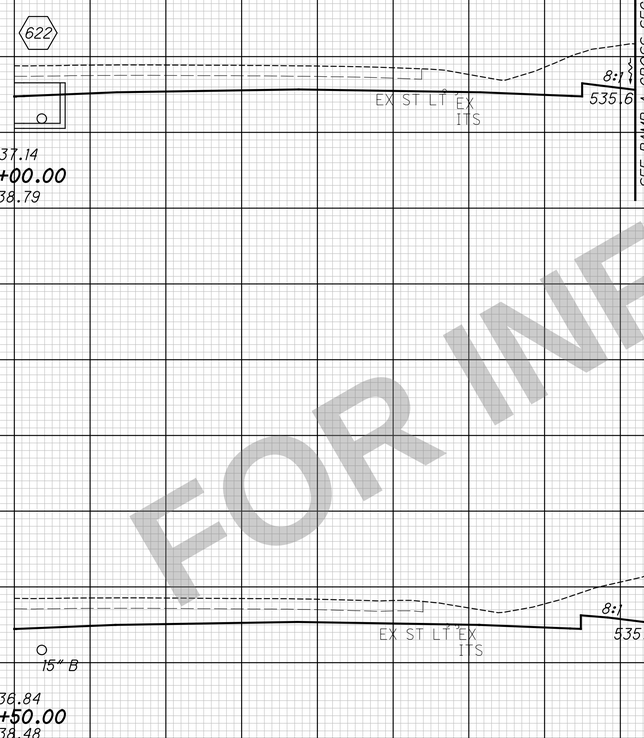
CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 504+50.00 TO STA. 505+00.00

HAM-75-7.85

585
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		404	0		
				740	0
		395	0		
				719	0
				1459	0

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 504+50.00 TO STA. 505+00.00

HAM-75-7.85

586
2017

FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SQ. YDS.
19	
	108
20	
	104
	212

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK

FOR INFORMATION ONLY

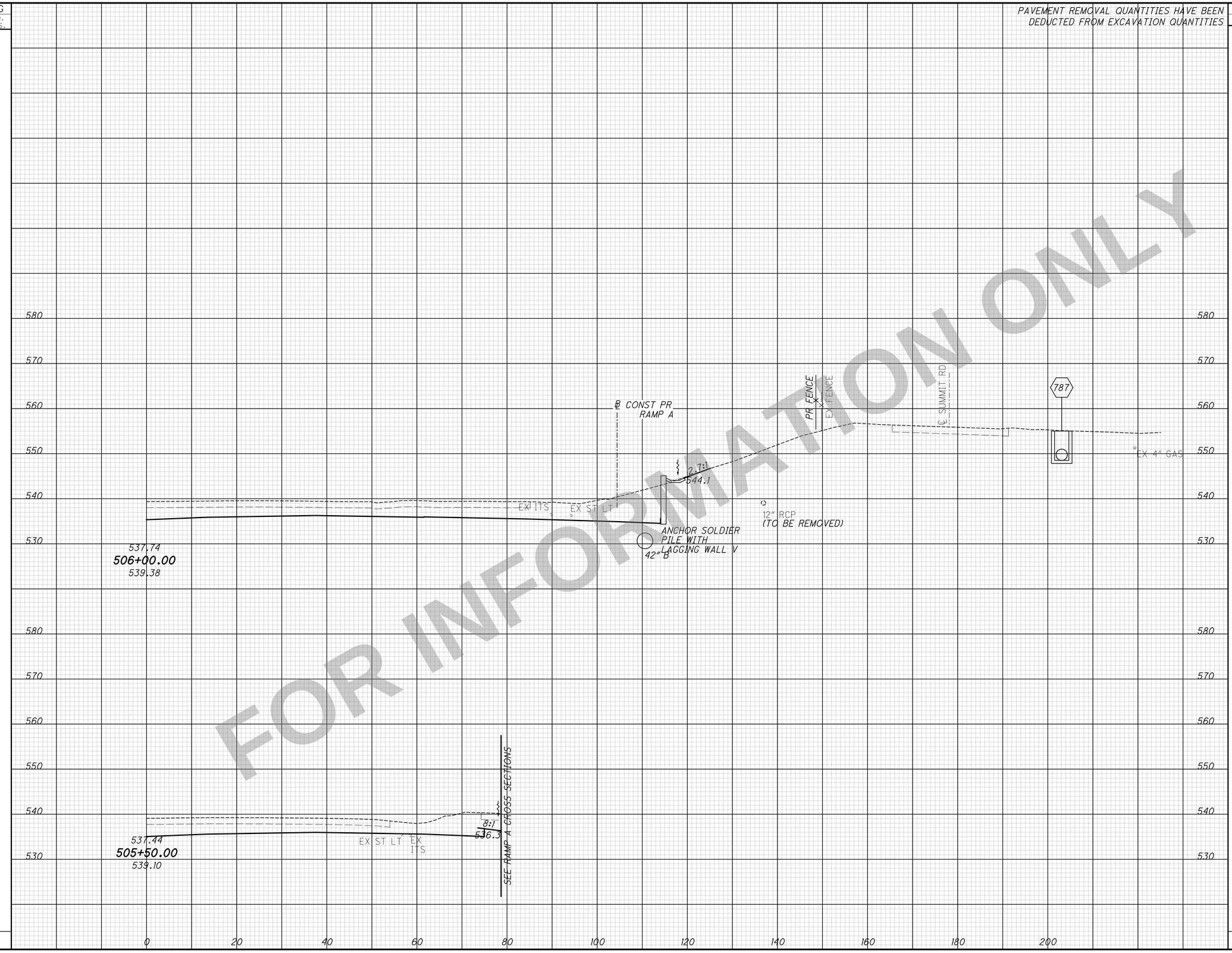
CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 505+50.00 TO STA. 506+00.00

HAM-75-7.85

587
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
495	0		
830	0		
745	0		
401	0		
		1575	0

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 505+50.00 TO STA. 506+00.00

HAM-75-7.85

588
2017

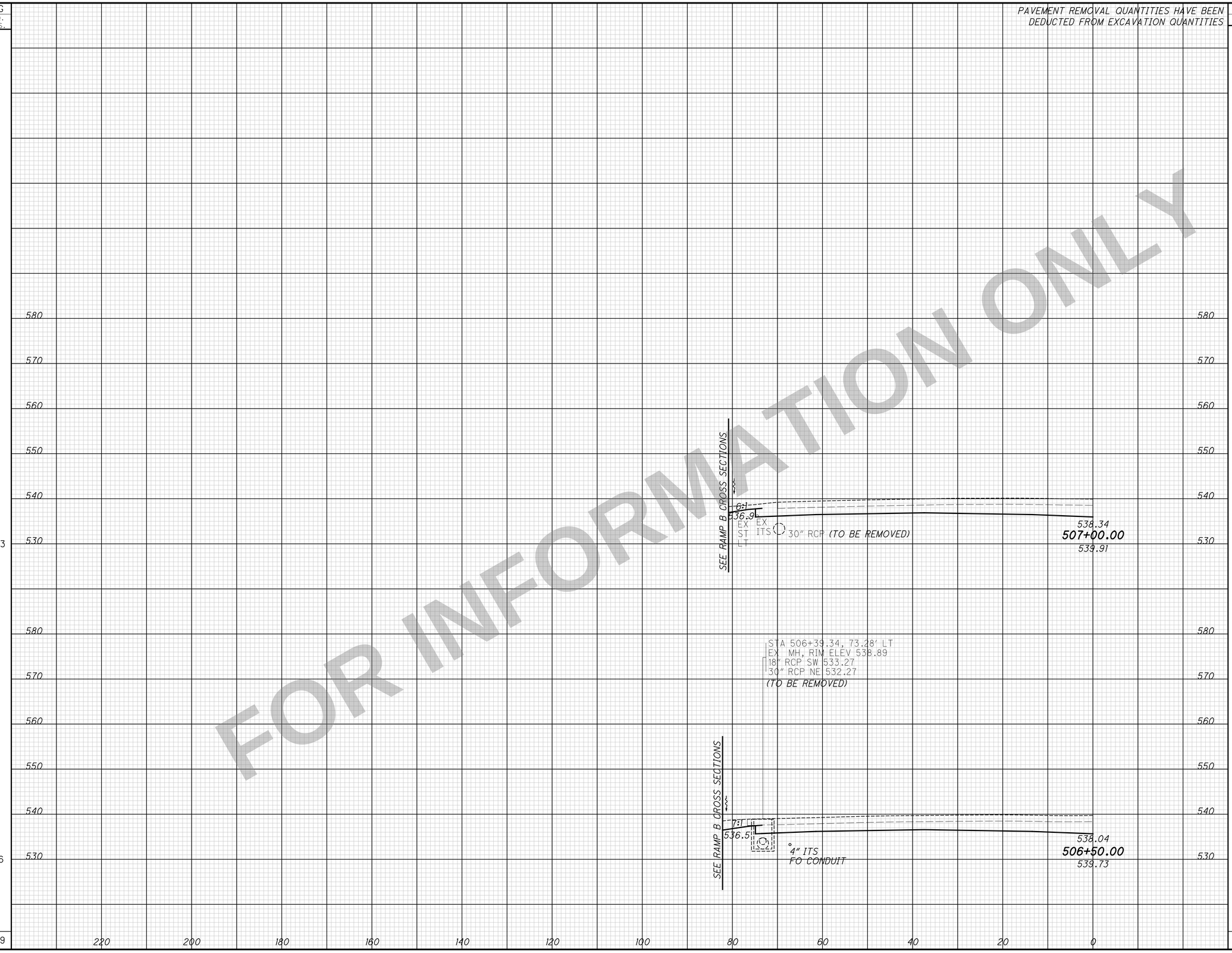
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SEEDING	
END WIDTH	SQ. YDS.
22	103
15	96
	199

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 506+50.00 TO STA. 507+00.00

HAM-75-7.85

589
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

FOR INFORMATION ONLY

SEEDING		END AREA		VOLUME		CALCULATED	CHECKED
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL	CFR	SSK
		496	0				
				892	1		
		467	1				
				891	1		
				1783	2		

(TO BE REMOVED)
STA 507+13.62, 69.74' RT
EX. CB, GRATE ELEV 538.76'
8" CPP NW 536.26
12" RCP SE 534.56

℄ CONST PR RAMP A

PR FENCE

EX FENCE

℄ SUMMIT RD

EX R/W

2:1

549.5

ANCHOR SOLDIER PILE WITH LAGGING WALL V

EX 4" GAS

30" C

538.34
507+00.00
539.91

EX ITS

EX ST LT

42" B

STA 506+63.16, 75.25' RT
EX CB, GRATE ELEV 538.47
24" RCP N 533.23
24" RCP S 533.20
(TO BE REMOVED)

STA 506+71.98, 66.27' RT
EX MH, RIM ELEV 538.79
24" RCP S 533.57
27" RCP N 533.32
(TO BE REMOVED)

STA 506+56.23, 84.15' RT
EX CB, GRATE ELEV 539.05
24" RCP N 533.54
18" RCP S 533.56
15" CPP S 533.54
(TO BE REMOVED)

STA 506+49.10, 88.68' RT
EX CB, GRATE ELEV 537.59
24" RCP N 533.80
18" RCP S 534.52
(TO BE REMOVED)

℄ CONST PR RAMP A

744

2:1

546.8

ANCHOR SOLDIER PILE WITH LAGGING WALL V

538.04
506+50.00
539.73

EX ITS

EX ST LT

24" RCP (TO BE REMOVED)

24" RCP (TO BE REMOVED)

0 20 40 60 80 100 120 140 160 180 200

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CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 506+50.00 TO STA. 507+00.00

HAM-75-7.85

590
2017

SEEDING	
END WIDTH	SQ. YDS.
41	
	196
30	
	144
	340

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 507+50.00 TO STA. 508+00.00

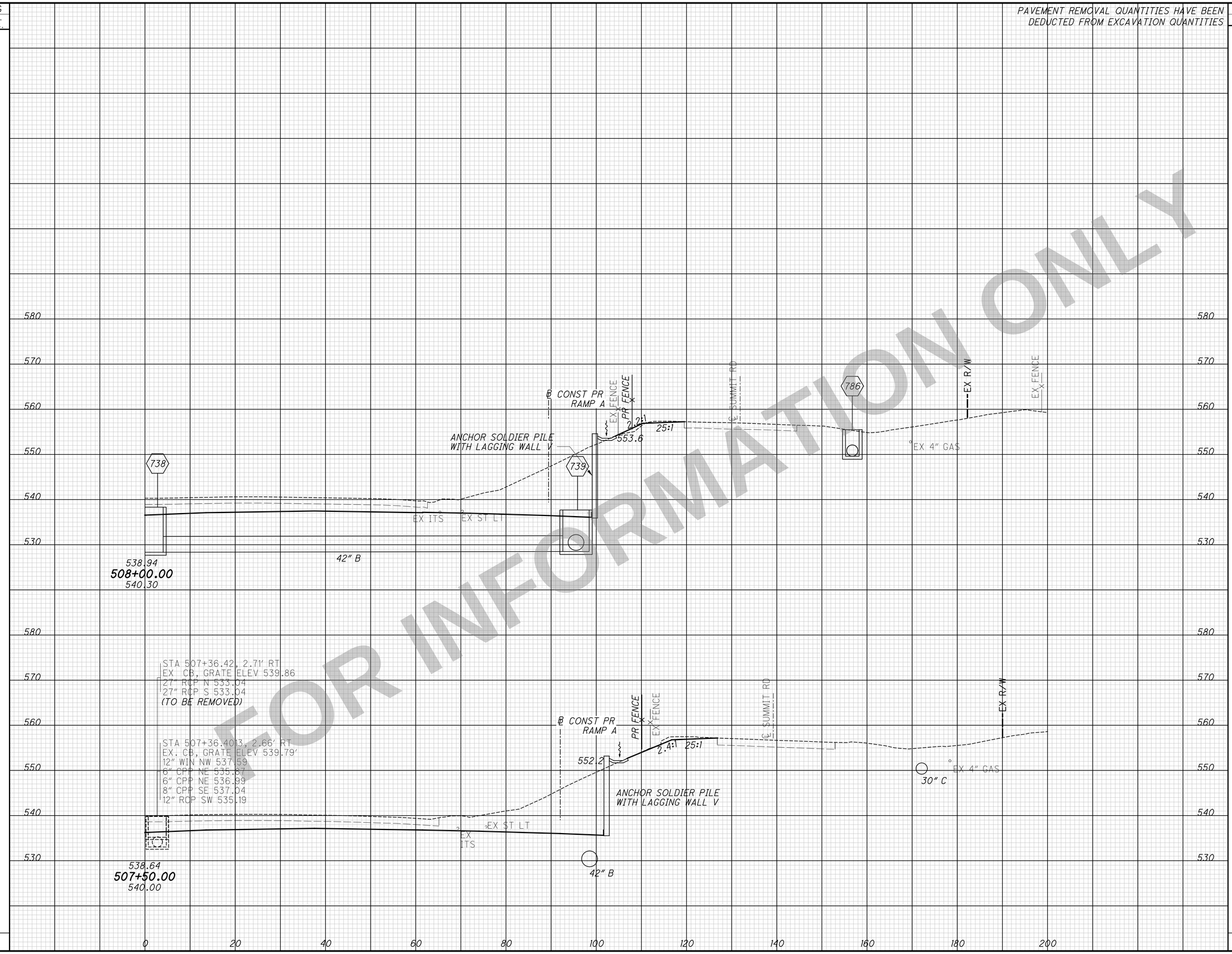
HAM-75-7.85

591
2017

FOR INFORMATION ONLY

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

SEEDING END WIDTH	SEEDING SQ. YDS.

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
535	114	980	106
524	1	944	1
		1924	107

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 507+50.00 TO STA. 508+00.00

HAM-75-7.85

592
2017

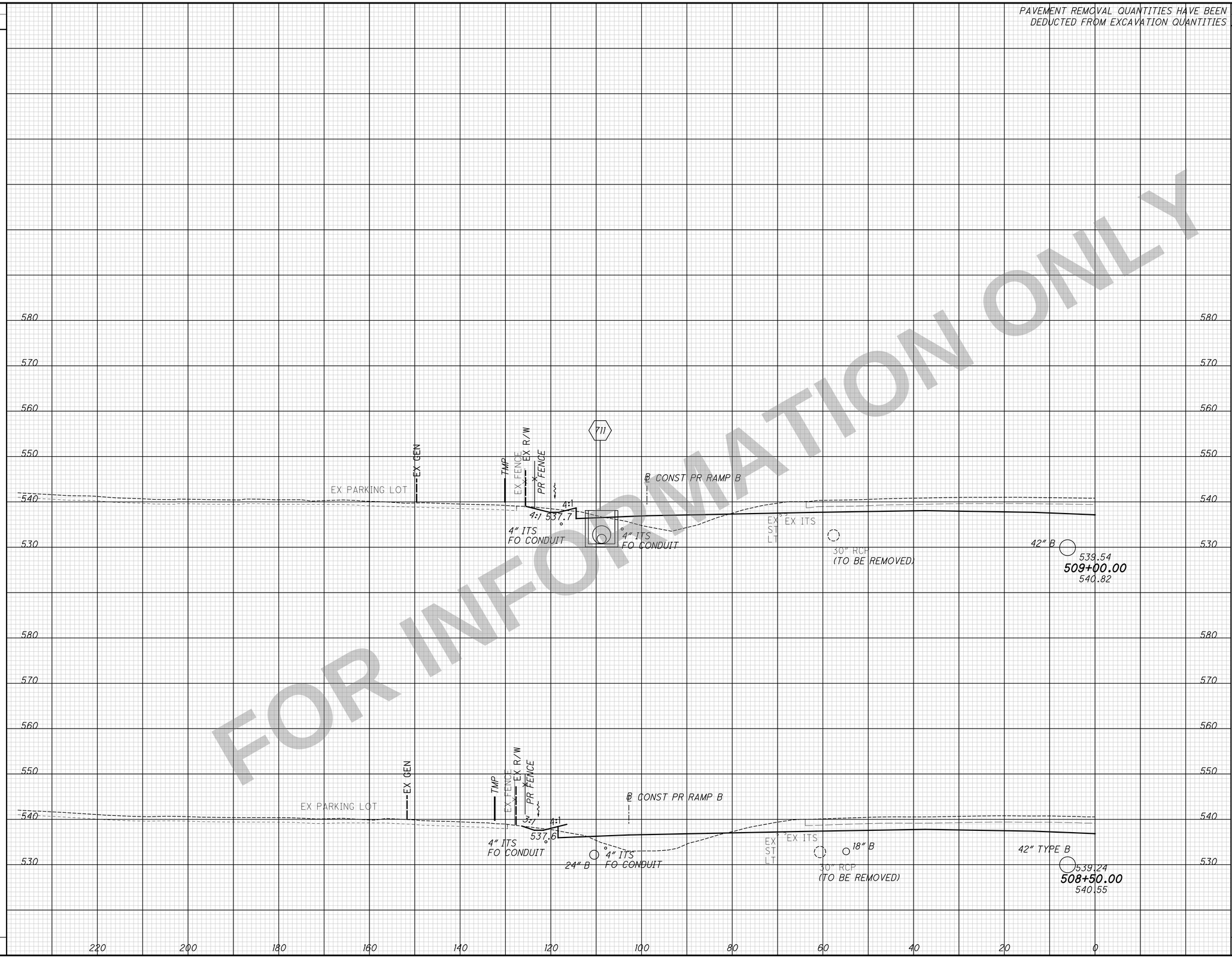
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SEEDING	
END WIDTH	SQ. YDS.
28	153
27	188
	341

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 508+50.00 TO STA. 509+00.00

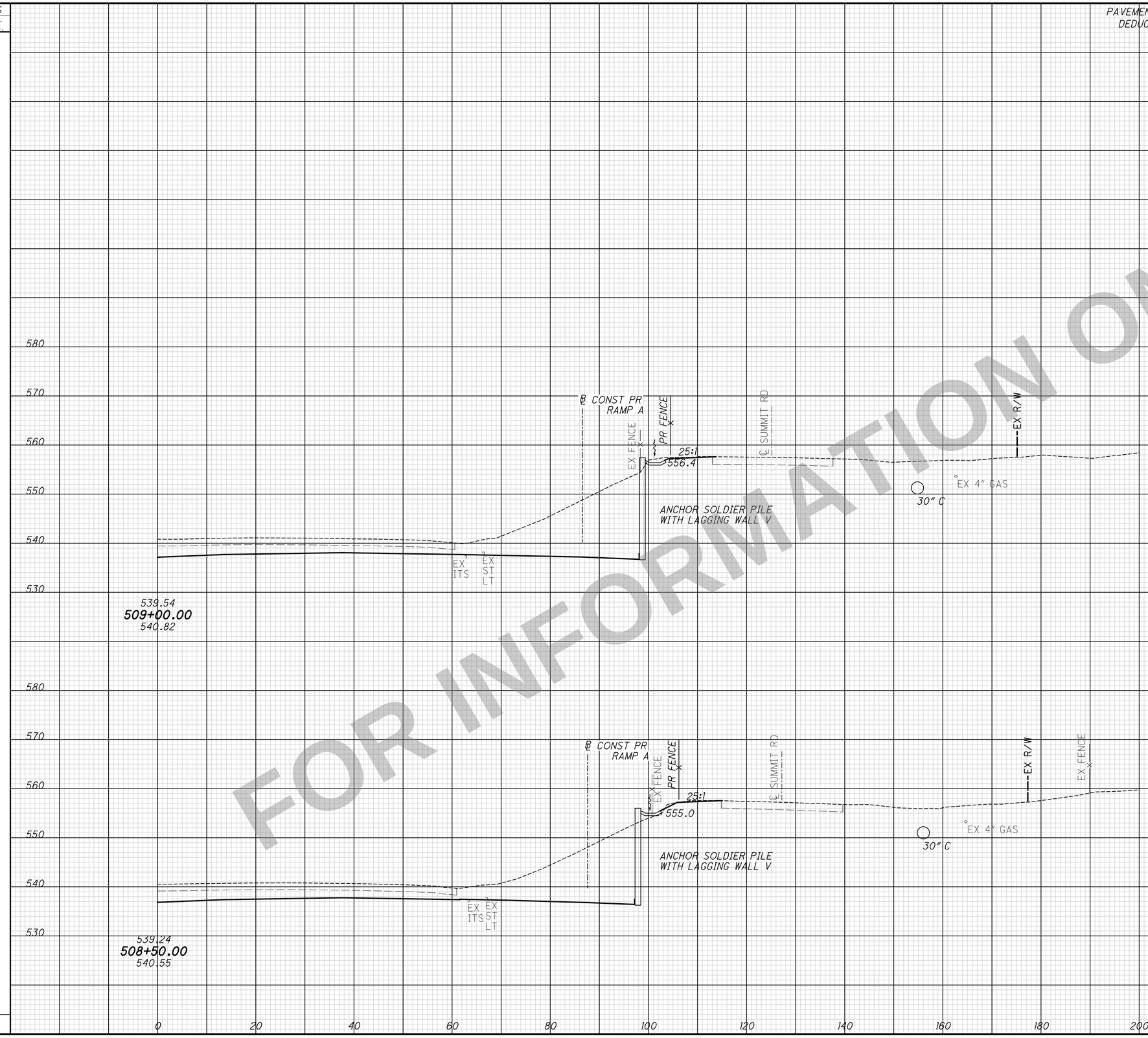
HAM-75-7.85

593
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
573	52		
		1026	117
536	74		
		991	174
		2017	291

CALCULATED CFR | CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 508+50.00 TO STA. 509+00.00

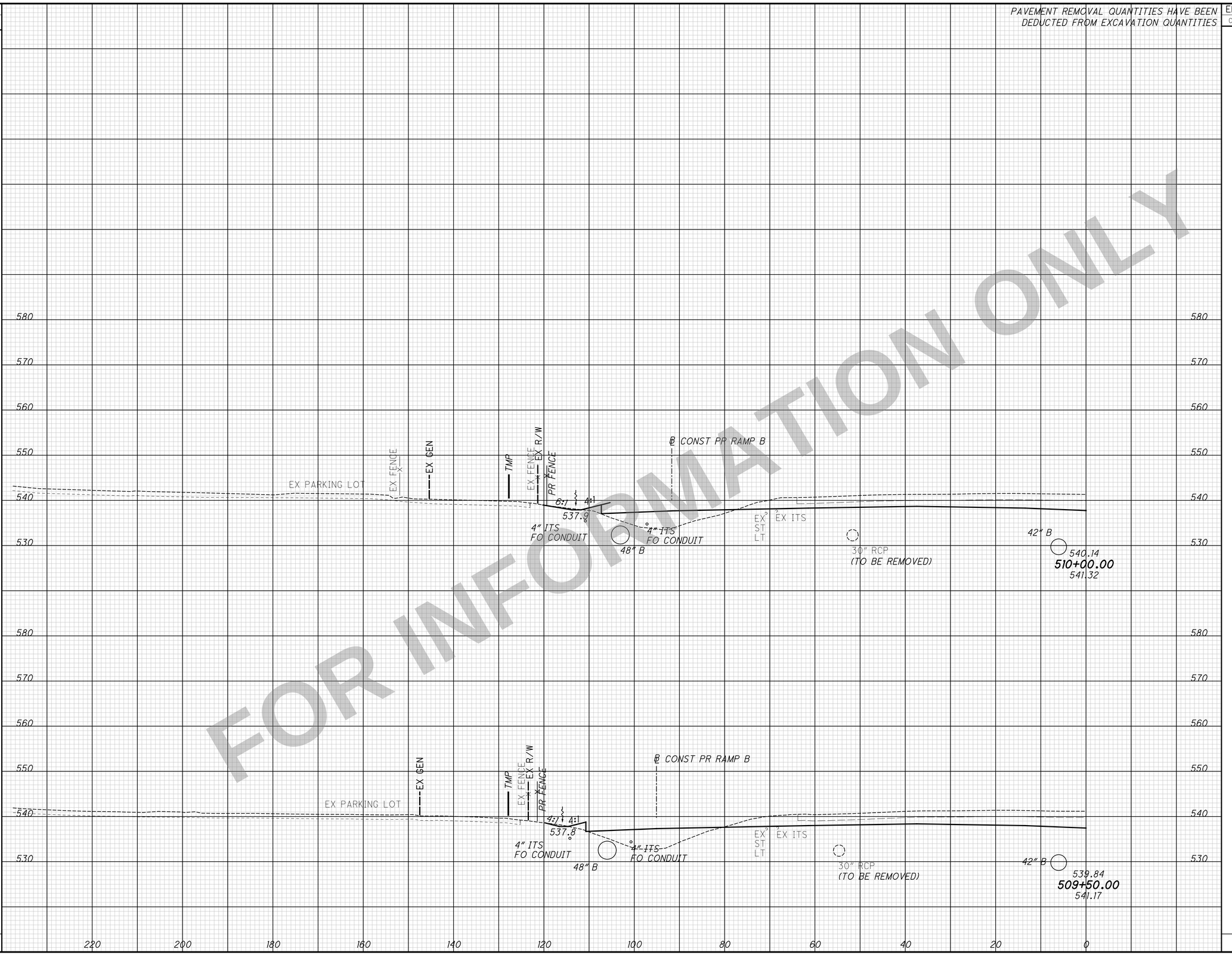
HAM-75-7.85

594
2017

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SEEDING	
END WIDTH	SQ. YDS.
30	152
25	148
	300

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED	CHECKED
CFR	SSK

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 509+50.00 TO STA. 510+00.00

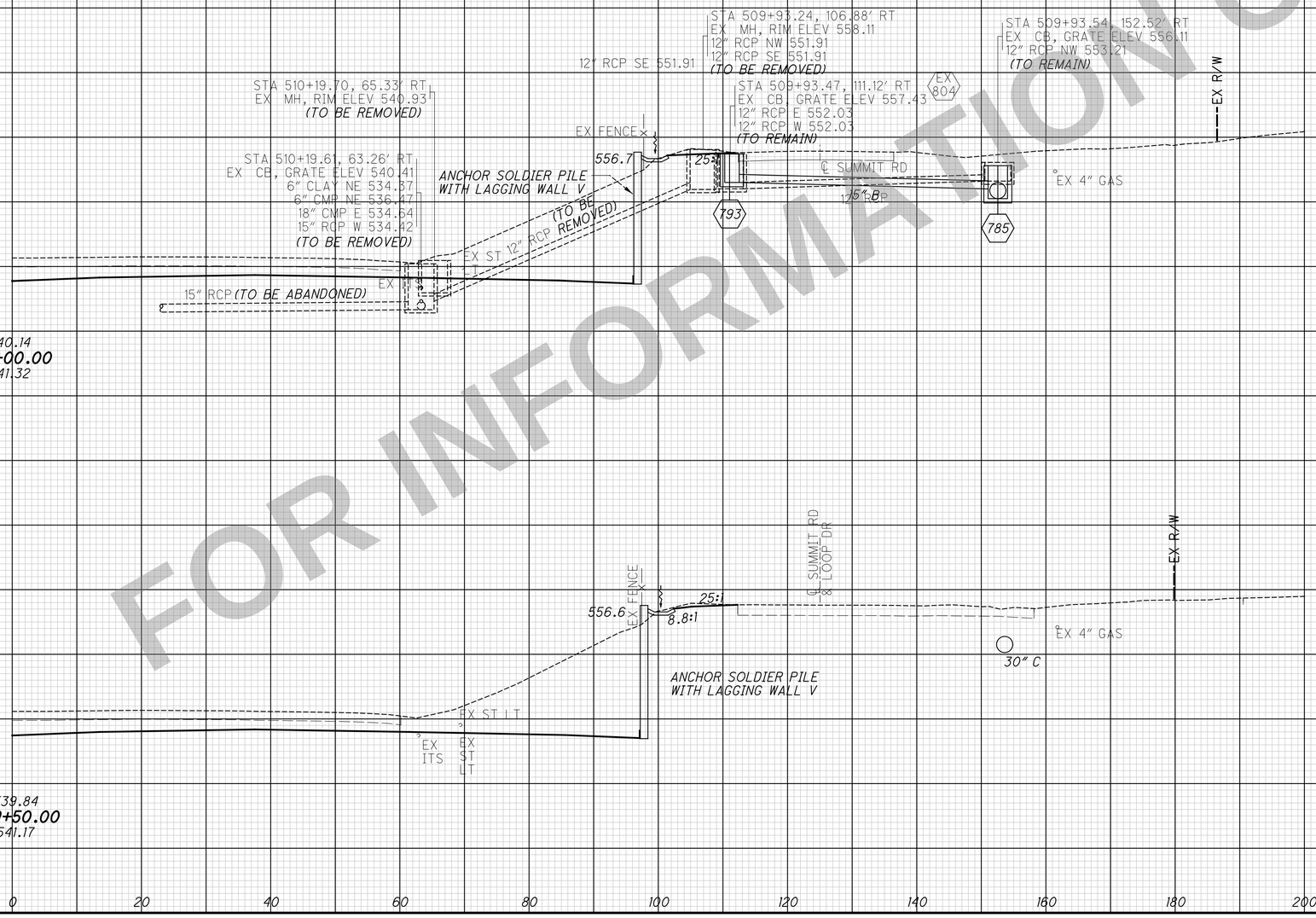
HAM-75-7.85

595
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
529	74		
		1007	144
558	81		
		1047	124
		2054	268

CALCULATED: CFR
CHECKED: SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 509+50.00 TO STA. 510+00.00

HAM-75-7.85

596
2017

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SEEDING	
END WIDTH	SQ. YDS.
33	
182	
33	
173	
	355

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 510+50.00 TO STA. 511+00.00

HAM-75-7.85

597
2017



FOR INFORMATION ONLY

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

FOR INFORMATION ONLY

SEEDING	
END WIDTH	SQ. YDS.

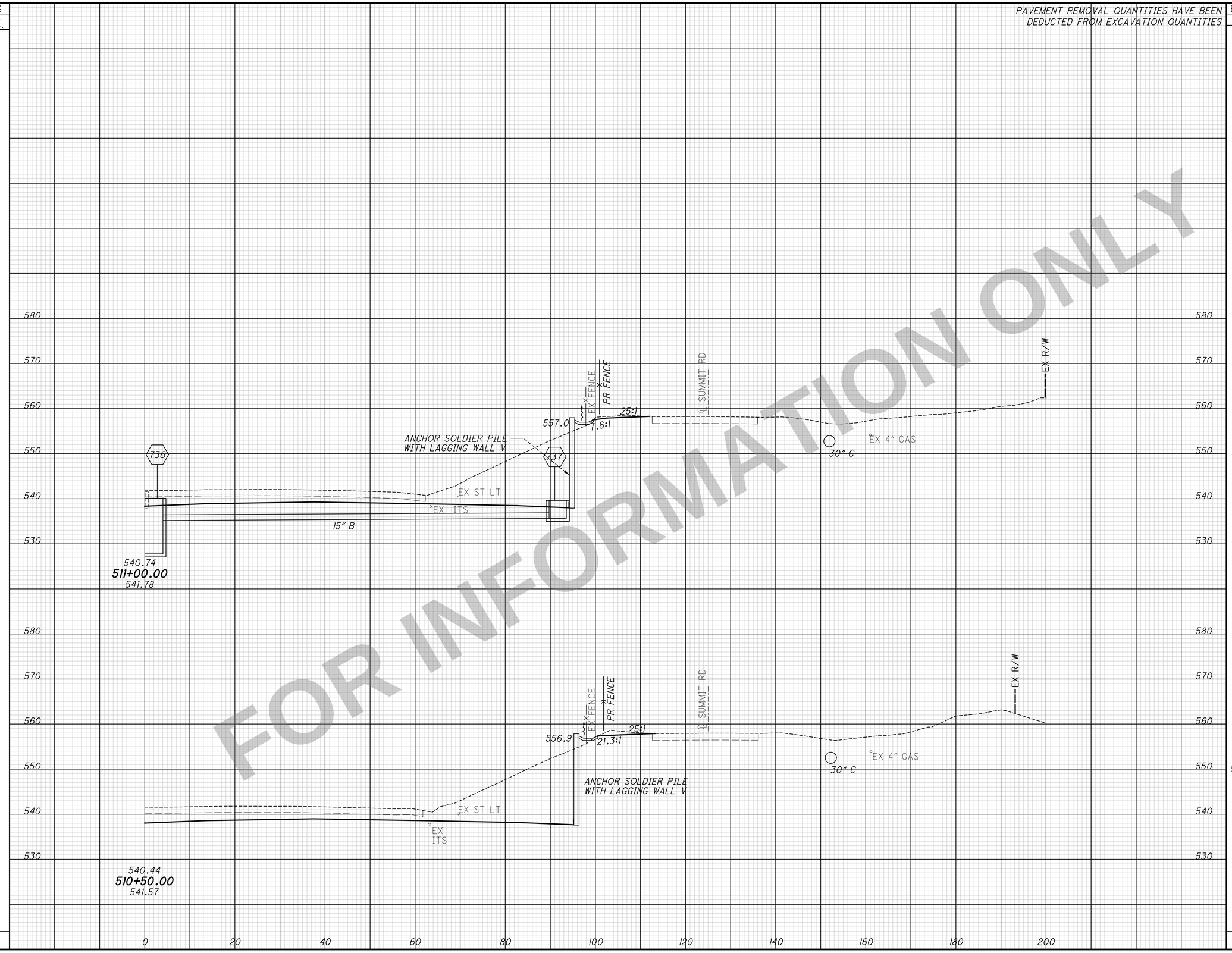
END AREA		VOLUME	
CUT	FILL	CUT	FILL
485	44		
920	96		
509	60		
961	124		
1881	220		

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 510+50.00 TO STA. 511+00.00

HAM-75-7.85

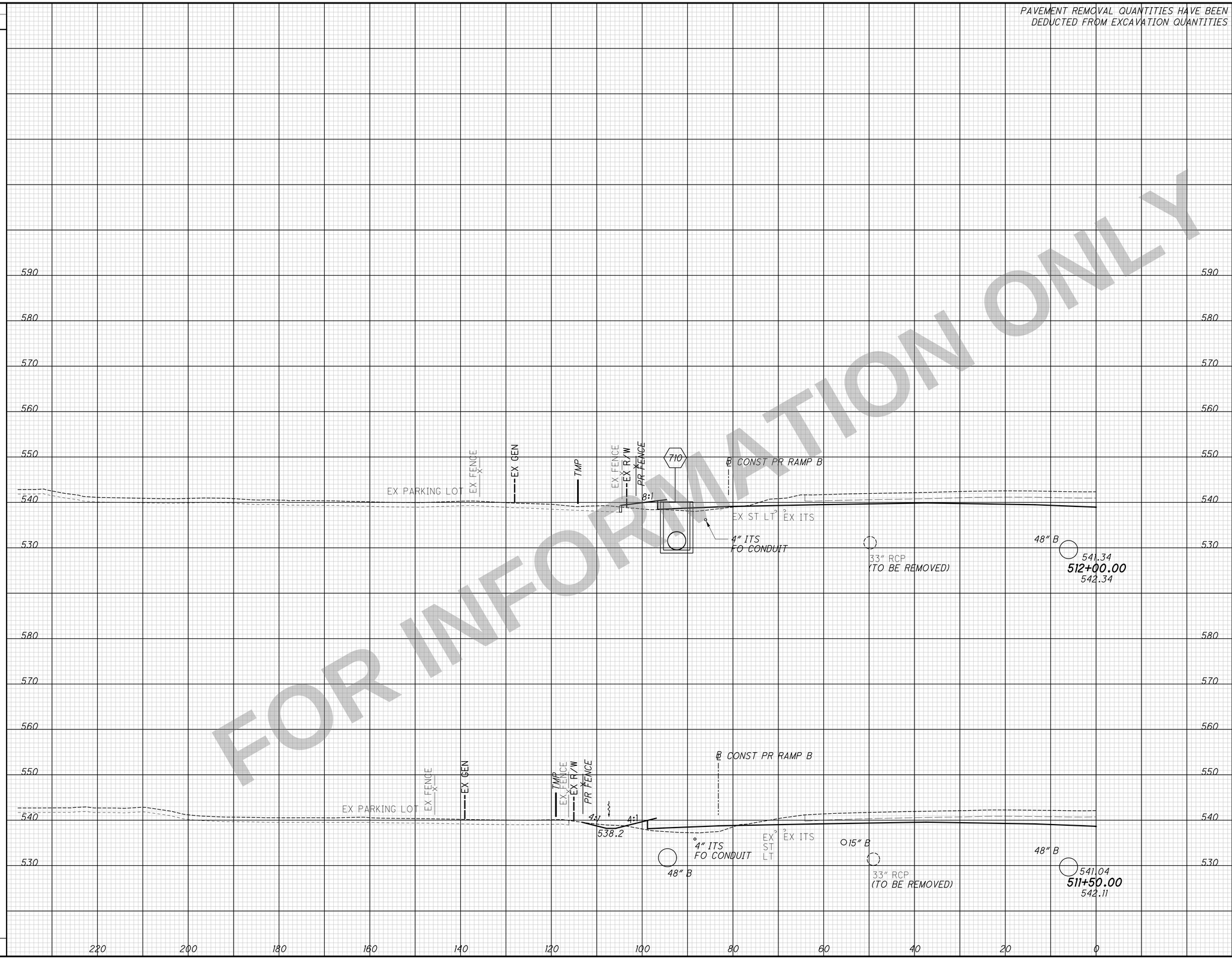
598
2017



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SEEDING	
END WIDTH	SQ. YDS.
28	174
35	187
	361

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED	CHECKED
CFR	SSK

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 511+50.00 TO STA. 512+00.00

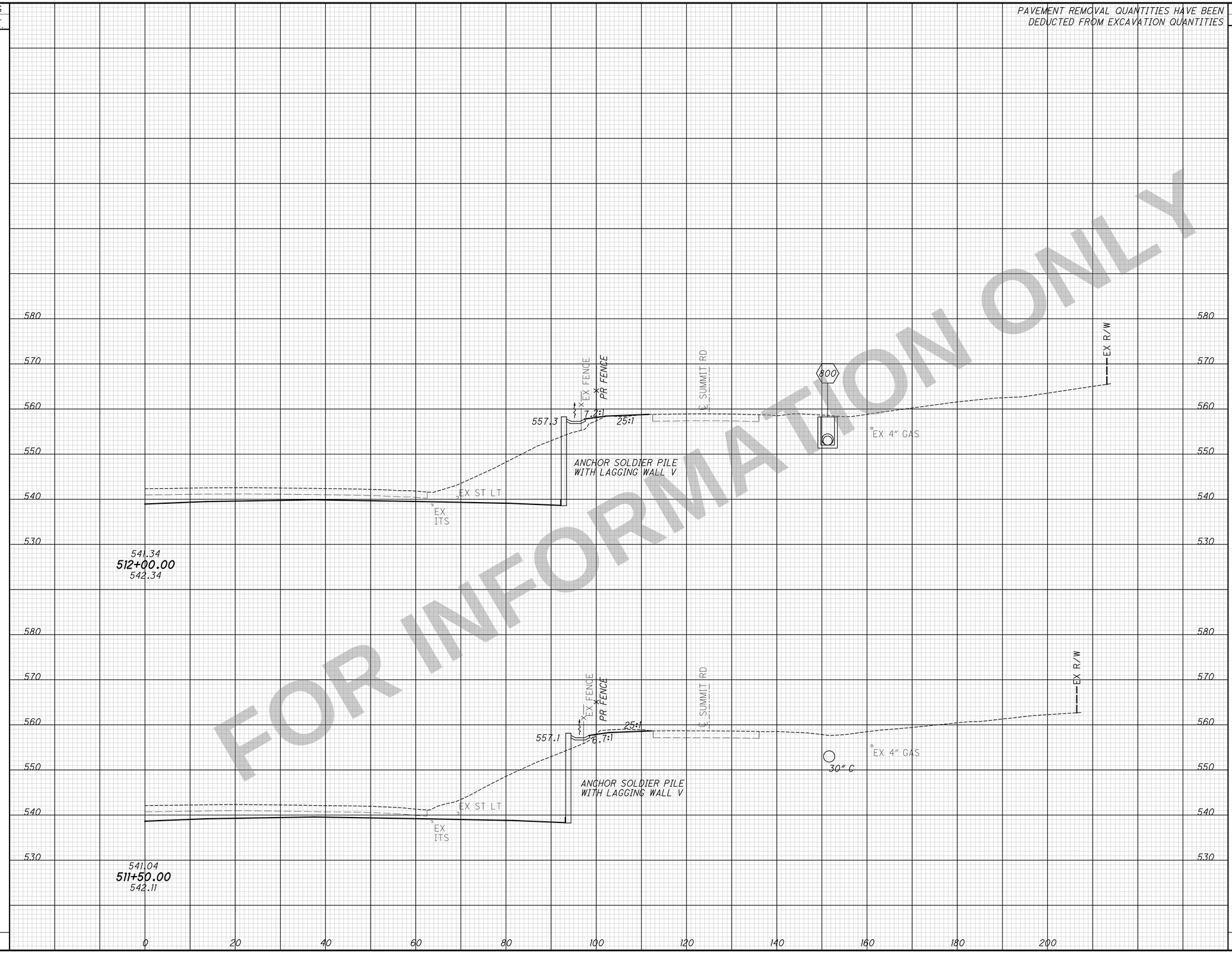
HAM-75-7.85

599
2017

J:\20110903\ODOT\HAM\77889\roadway\sheets\77889XS542.dgn 2/18/2022 1:39:18 PM efoley

SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
423	30		
		819	55
462	30		
		876	68
		1695	123

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 511+50.00 TO STA. 512+00.00

HAM-75-7.85

600
2017

J:\20110903\ODOT\HAM\77889\roadway\sheets\77889XS543.dgn 2/18/2022 1:39:18 PM efoley

SEEDING	
END WIDTH	SQ. YDS.
28	
145	
24	
145	
290	

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

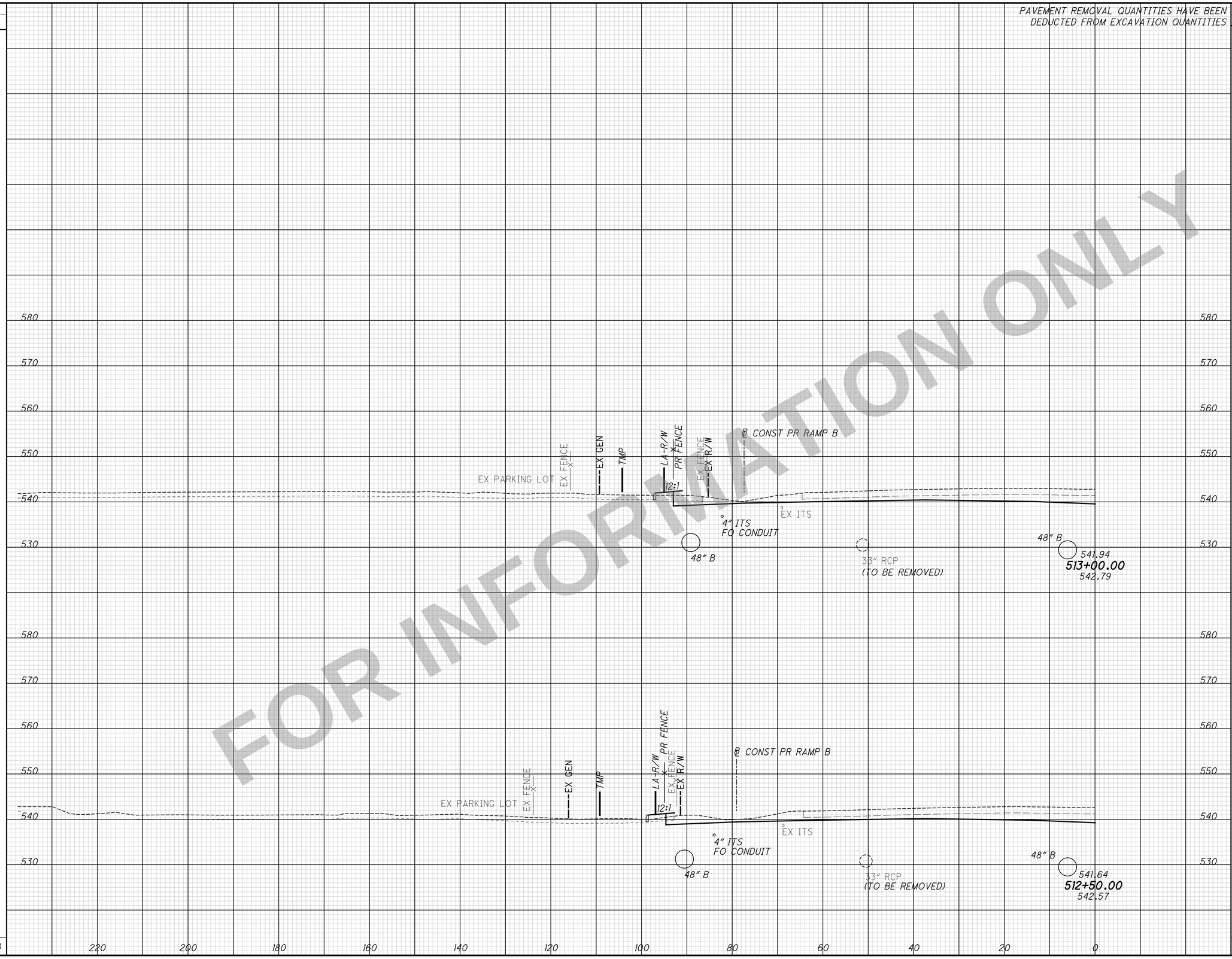
END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 512+50.00 TO STA. 513+00.00

HAM-75-7.85

601
2017

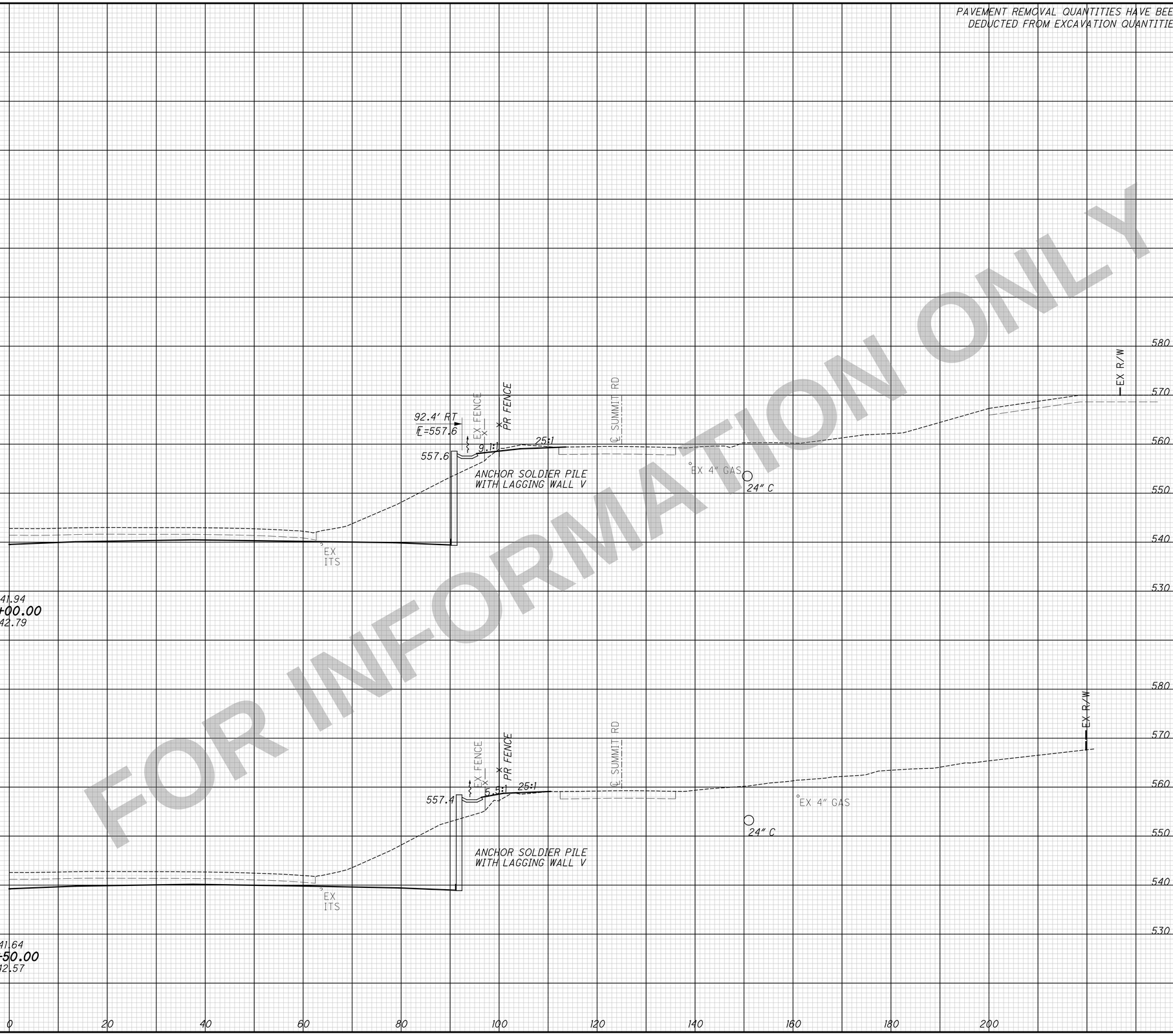


FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA		VOLUME	
CUT	FILL	CUT	FILL
391	19		
		748	40
417	25		
		777	51
		1525	91

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 512+50.00 TO STA. 513+00.00

HAM-75-7.85

602
2017

FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SQ. YDS.
28	156
28	156
312	

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 513+50.00 TO STA. 514+00.00

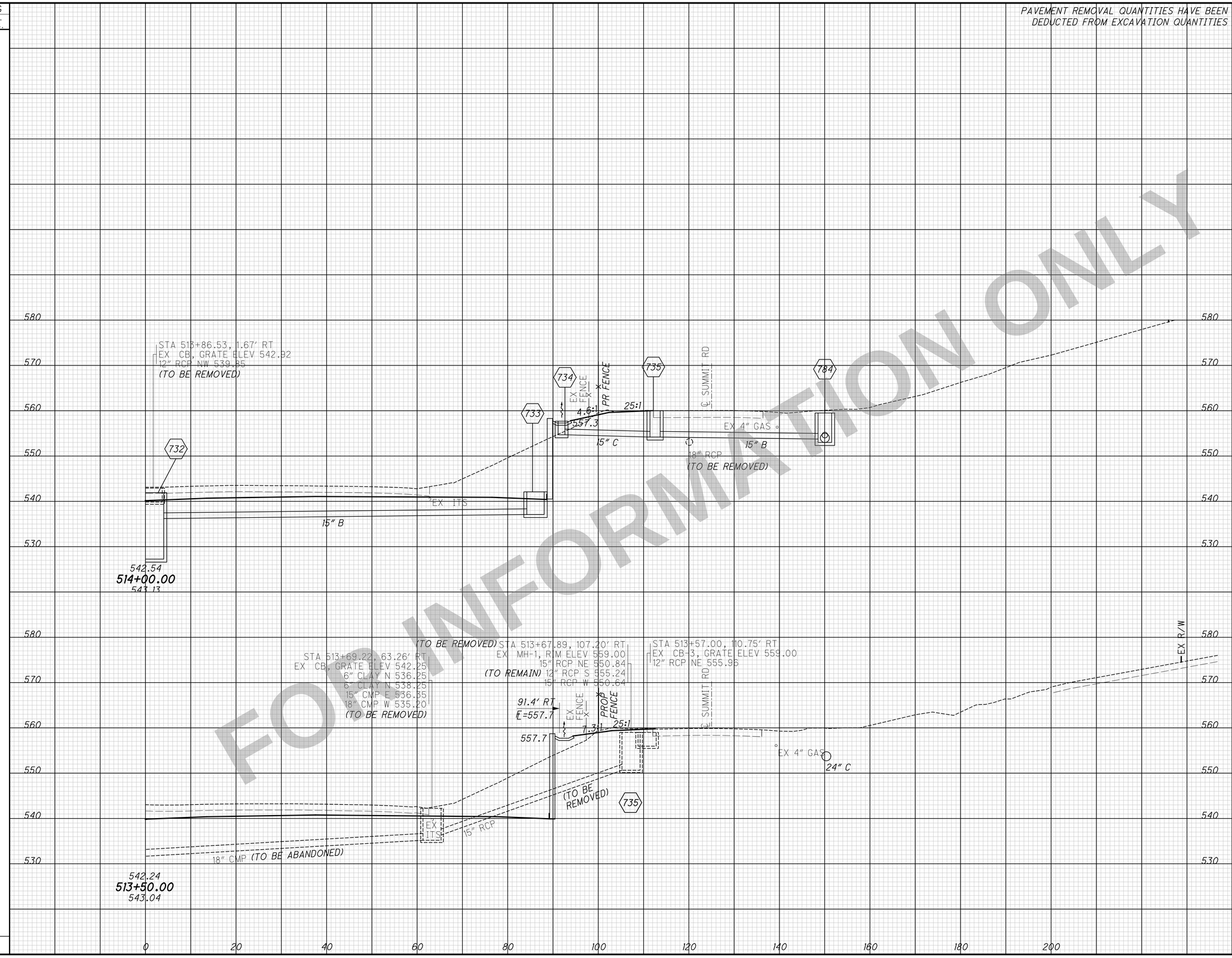
HAM-75-7.85

603
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
336	16		
		646	34
362	20		
		697	36
		1343	70

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 513+50.00 TO STA. 514+00.00

HAM-75-7.85

604
2017

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SEEDING	
END WIDTH	SQ. YDS.
27	
156	
29	
158	
314	

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 514+50.00 TO STA. 515+00.00

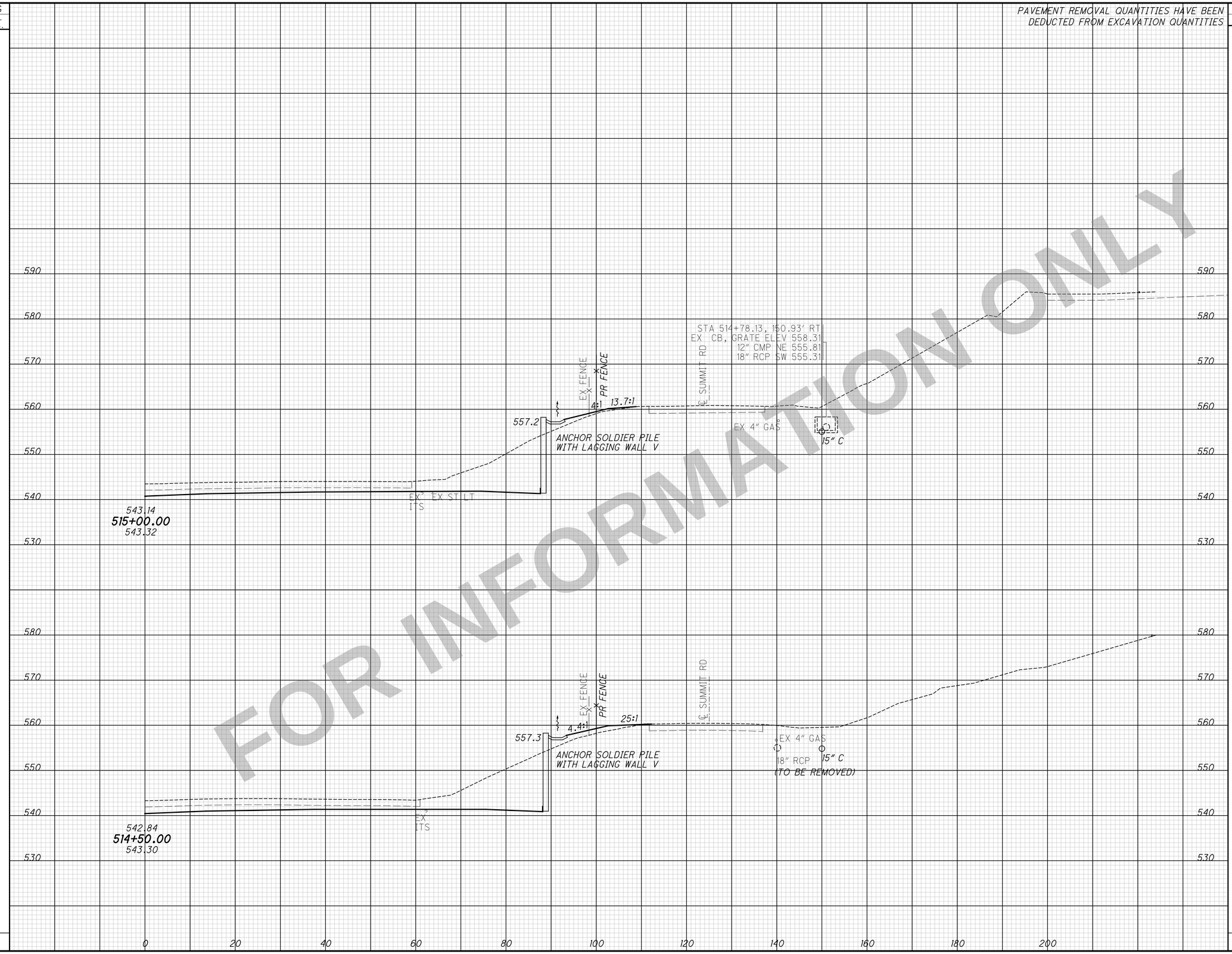
HAM-75-7.85

605
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
303	26		
		586	50
330	28		
		617	41
		1203	91

CALCULATED	CHECKED
CFR	SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 514+50.00 TO STA. 515+00.00

HAM-75-7.85

606
2017

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SEEDING	
END WIDTH	SQ. YDS.
30	171
31	163
	334

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

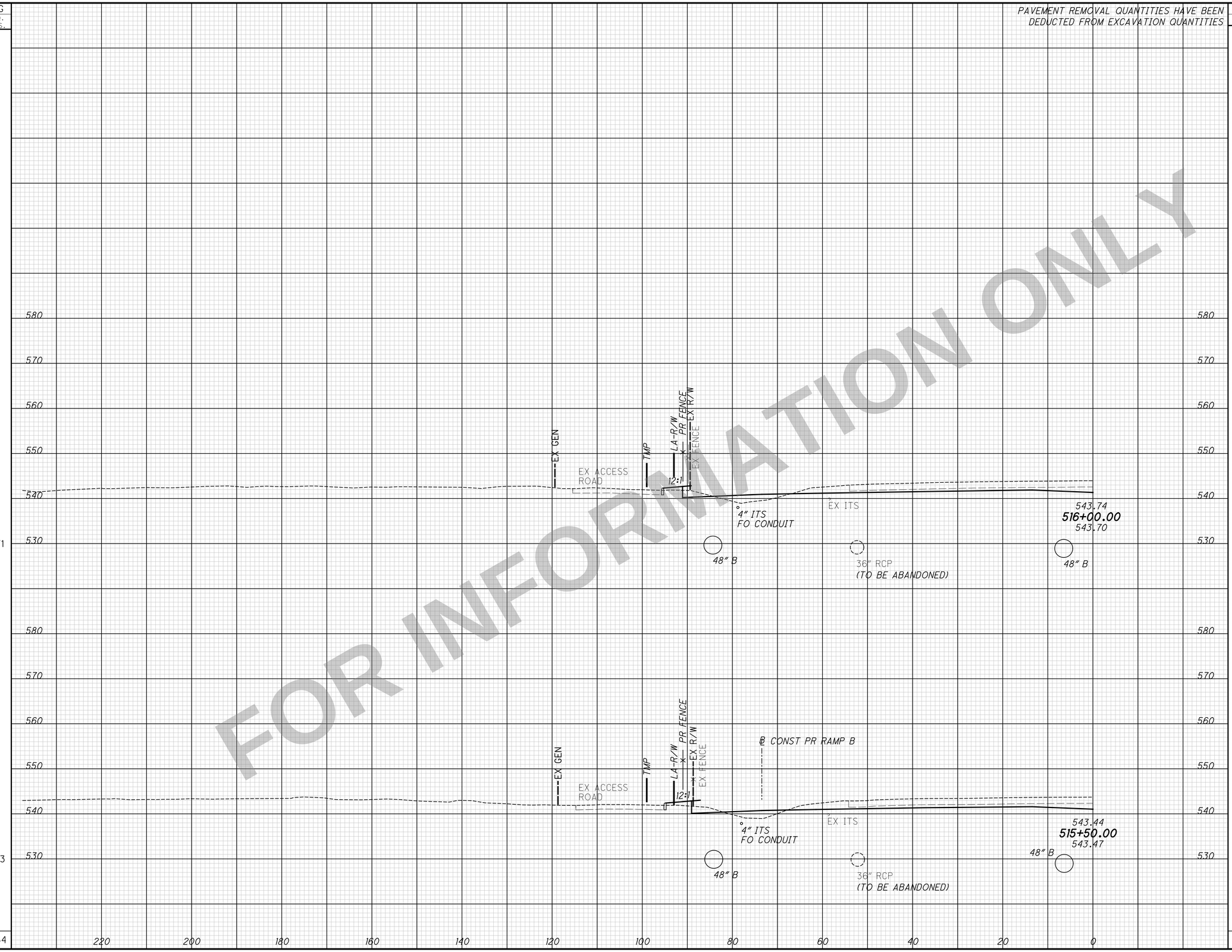
END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR | CHECKED SSK

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 515+50.00 TO STA. 516+00.00

HAM-75-7.85

607
2017

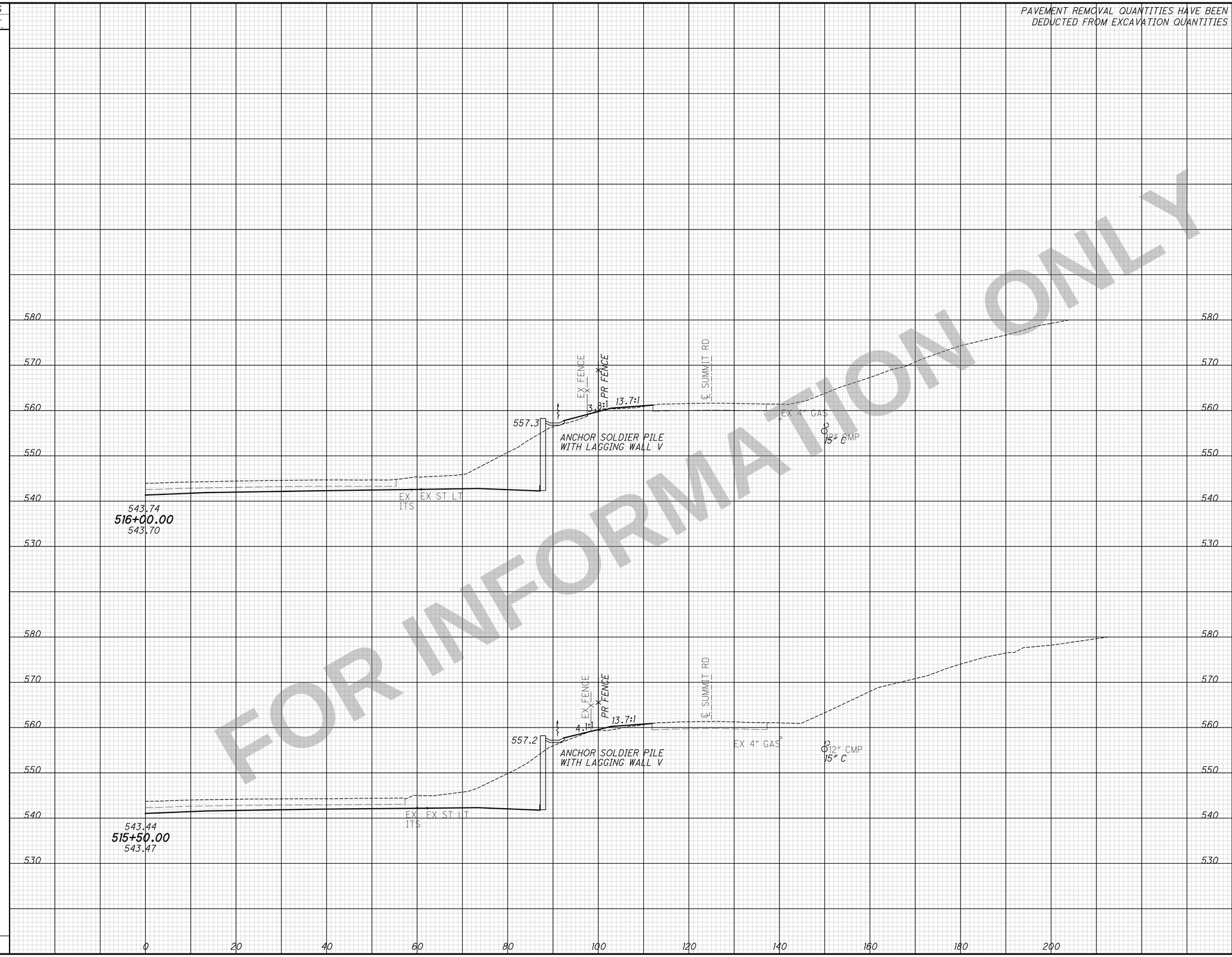


FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
283	28		
		523	53
282	29		
		541	51
		1064	104

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 515+50.00 TO STA. 516+00.00

HAM-75-7.85

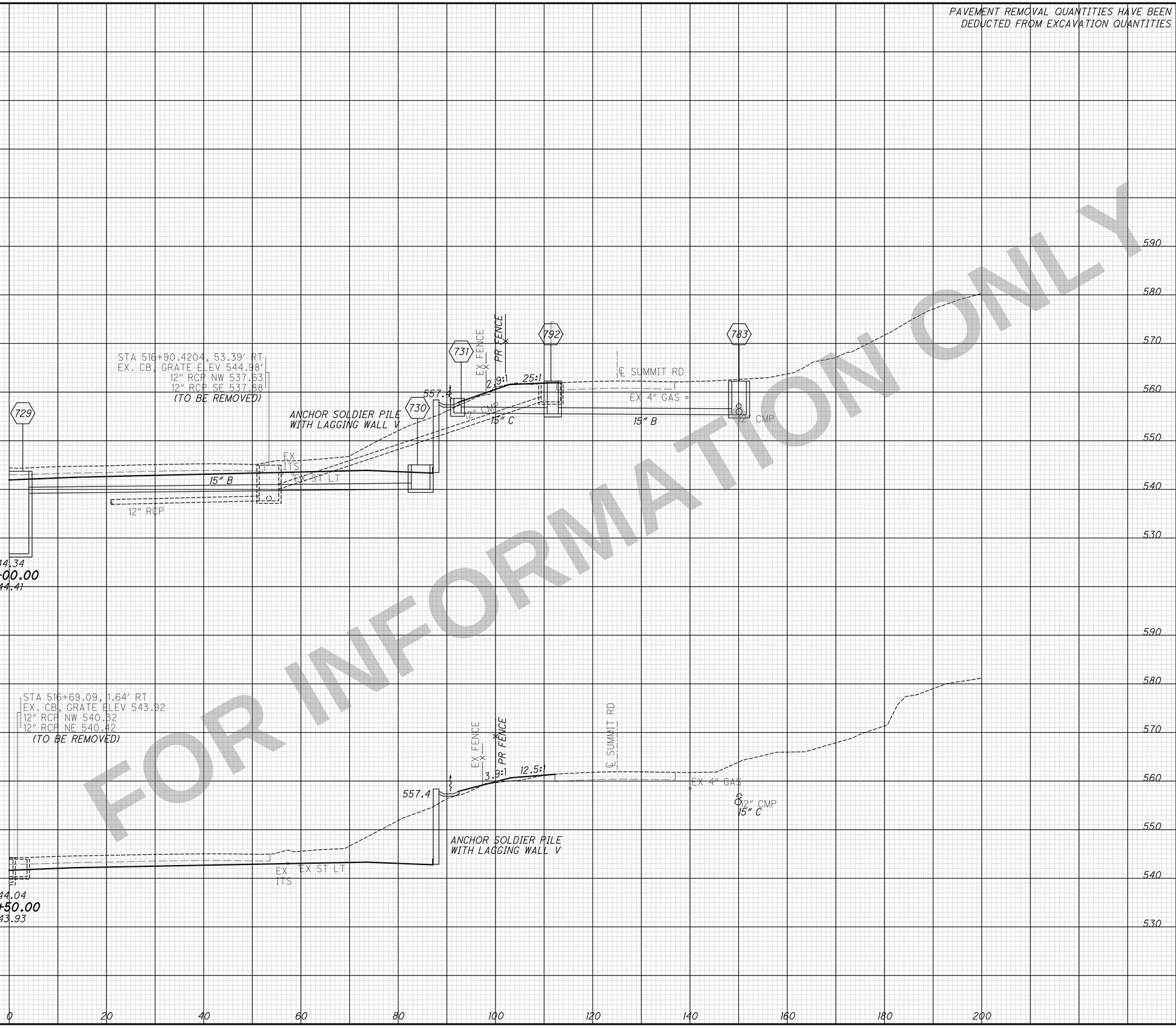
608
2017

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SEEDING	
END WIDTH	SQ. YDS.

SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
264	35		
		506	65
283	35		
		523	58
		1029	123

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 516+50.00 TO STA. 517+00.00

HAM-75-7.85

610
2017

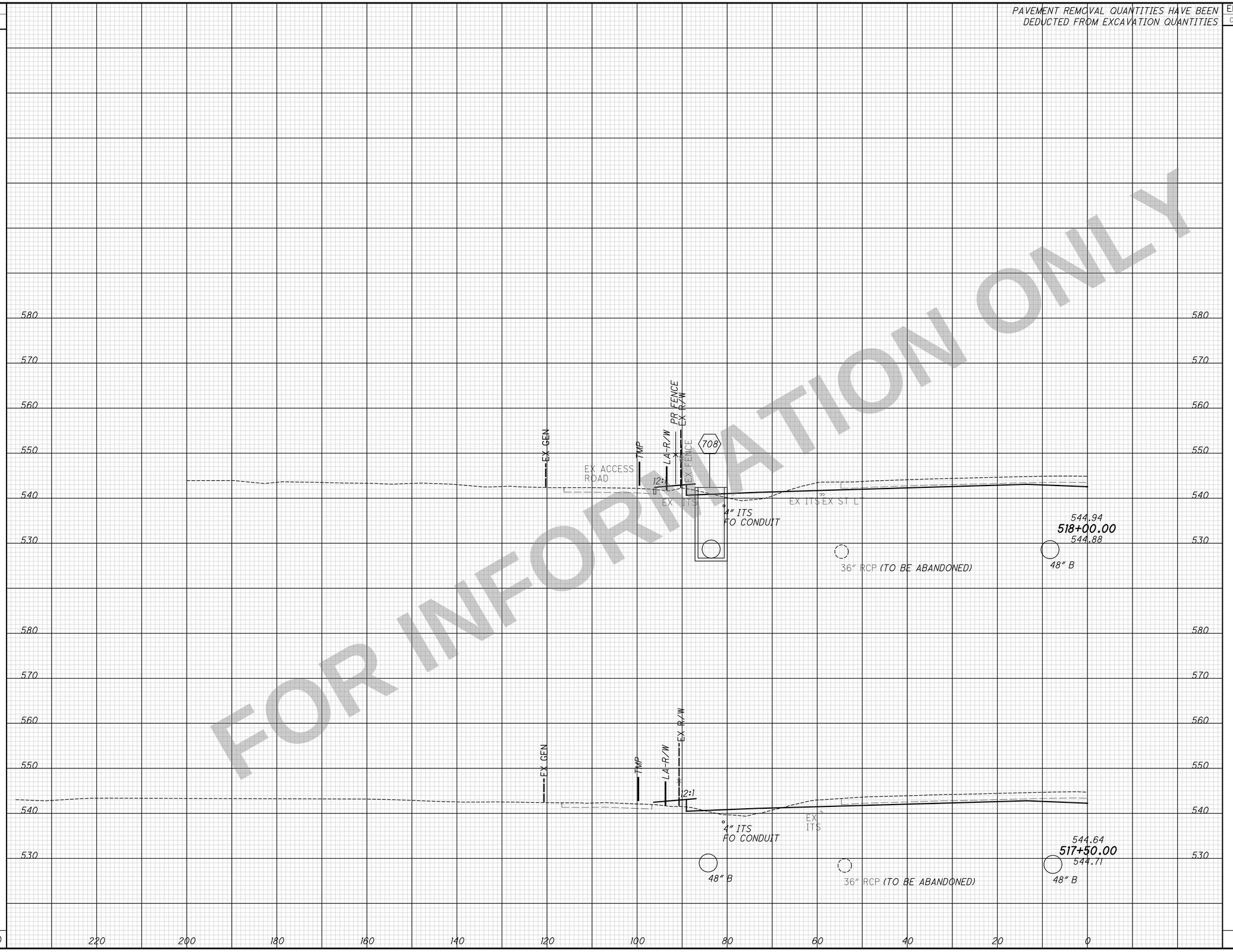
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SEEDING	
END WIDTH	SQ. YDS.
31	
176	
32	
184	
360	

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

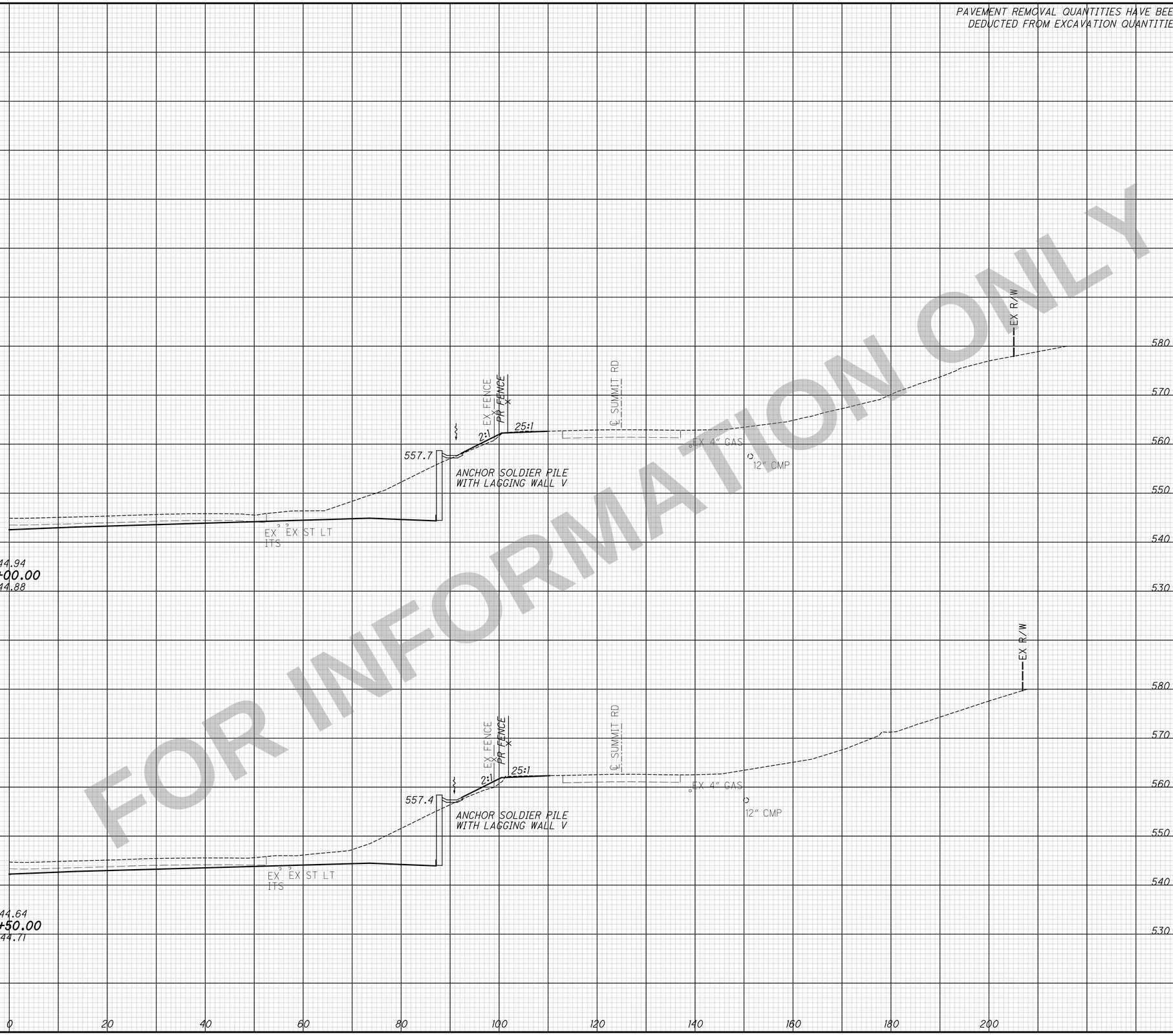
CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 517+50.00 TO STA. 518+00.00

HAM-75-7.85

611
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
238	28		
		442	56
240	33		
		466	63
		908	119

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 517+50.00 TO STA. 518+00.00

HAM-75-7.85

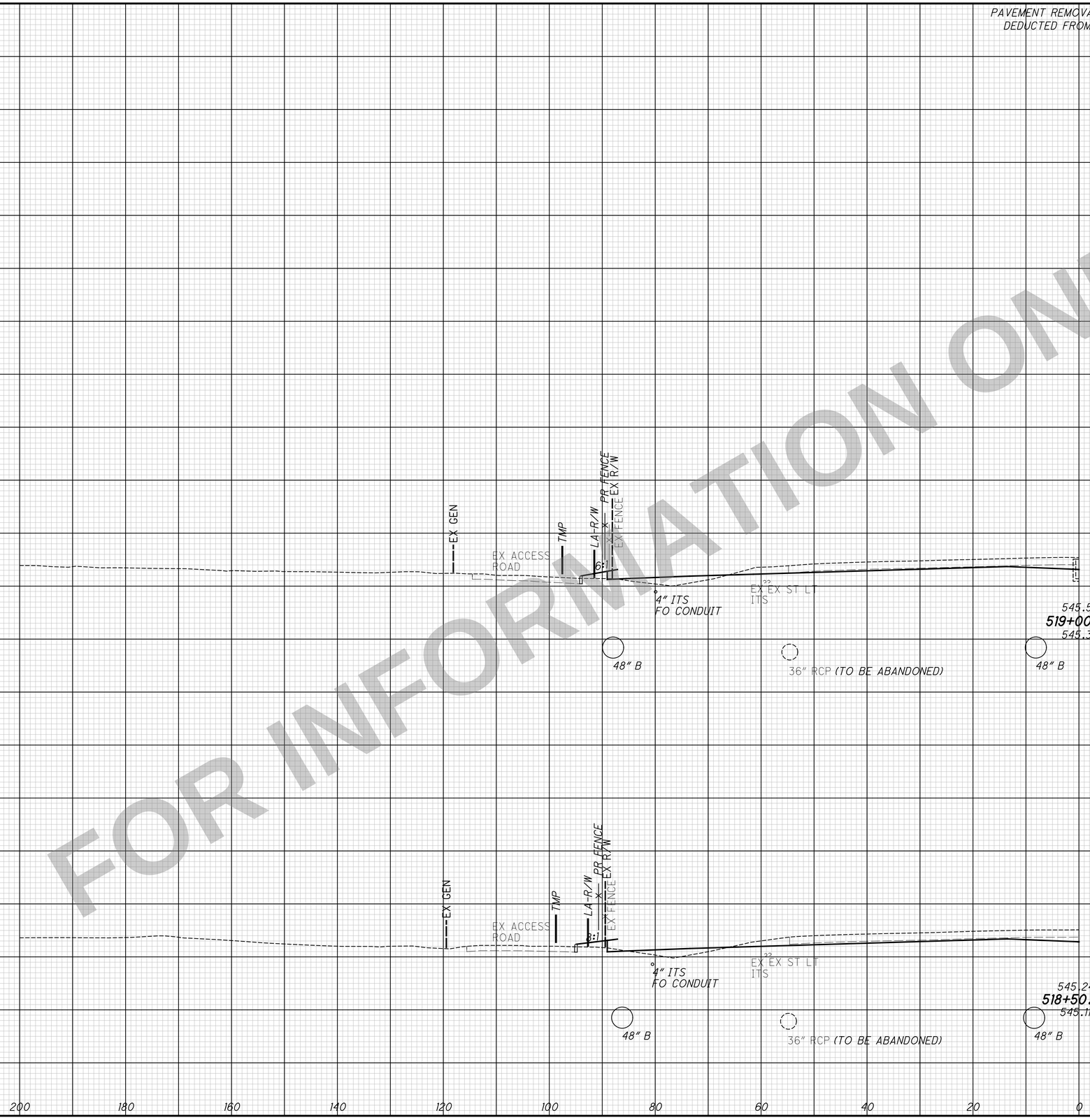
612
2017

FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SQ. YDS.
30	169
31	174
	343

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 518+50.00 TO STA. 519+00.00

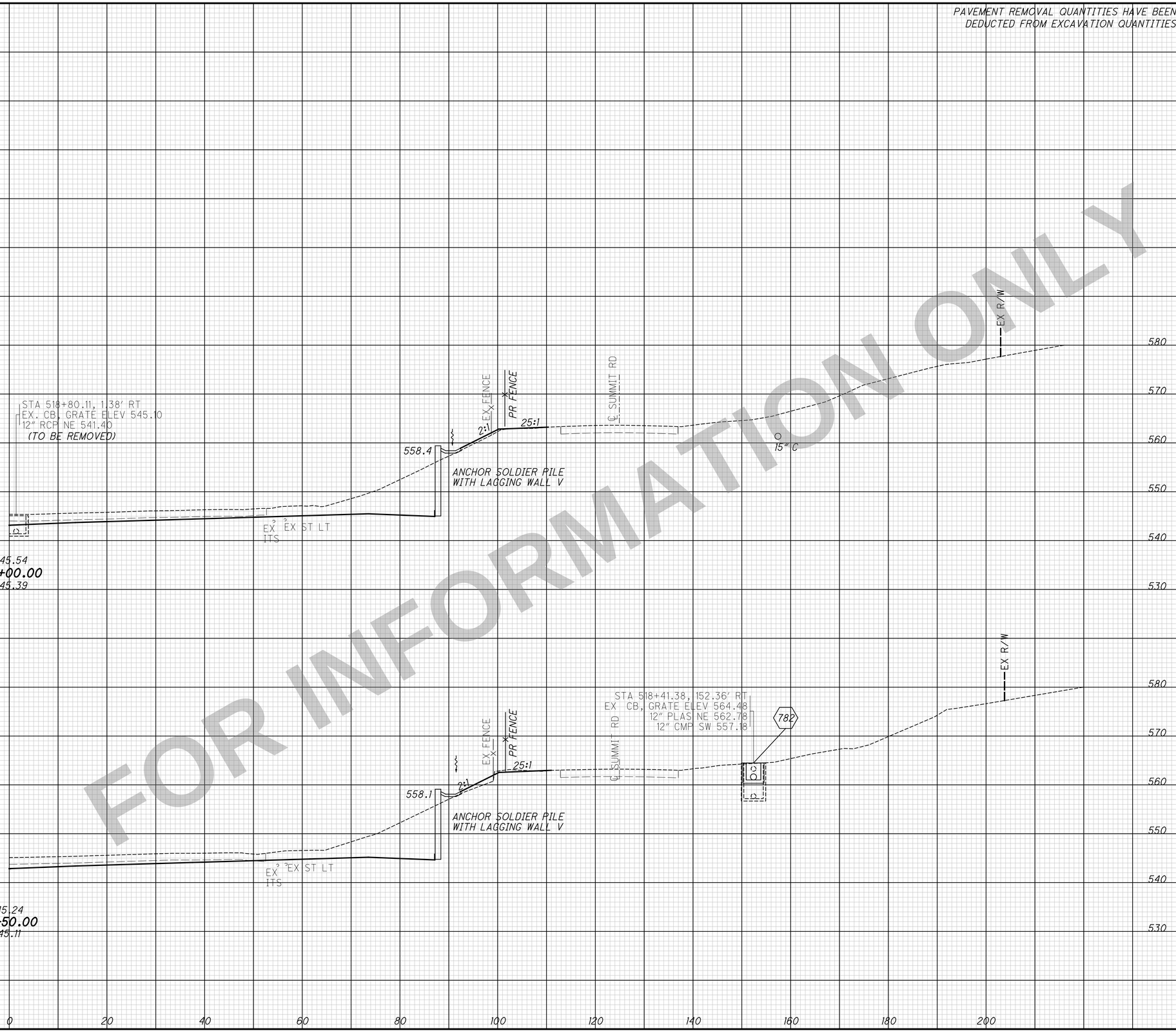
HAM-75-7.85

613
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
206	31		
		388	56
213	30		
		418	53
		806	109

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 518+50.00 TO STA. 519+00.00

HAM-75-7.85

614
2017

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SEEDING	
END WIDTH	SQ. YDS.
31	
173	
31	
169	
342	

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR | CHECKED SSK

STA 520+08.04, 52.47' LT
EX MH, GRATE ELEV 544.73
36" RCP N 525.45
12" RCP N 529.18
12" RCP E 529.18
36" RCP S 525.45
(TO BE ABANDONED)

STA 520+07.37, 5.49' LT
EX CB, GRATE ELEV 546.03
12" RCP N 540.38
12" RCP S 540.08
15" RCP W 537.83
(TO BE REMOVED)

707 728

4" ITS FO CONDUIT

EX ITS

EX ST LT

15" RCP

48" B

546.14
520+00.00
545.86

4" ITS FO CONDUIT

EX ITS

EX ST LT

36" RCP *(TO BE ABANDONED)*

48" B

545.84
519+50.00
545.61

48" B

FOR INFORMATION ONLY

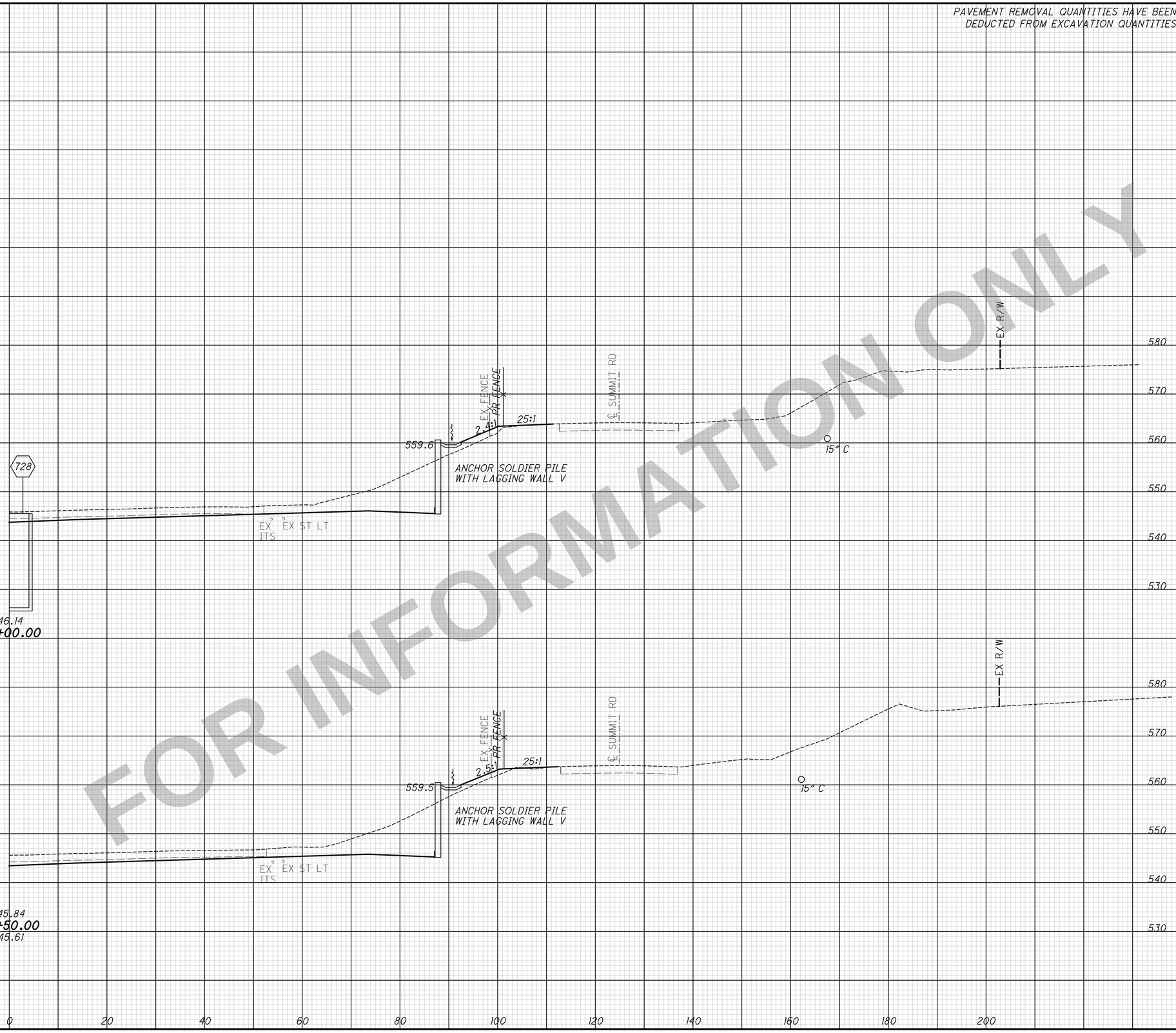
CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 519+50.00 TO STA. 520+00.00

HAM-75-7.85

615
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		193	44		
				361	81
		197	44		
				373	69
				734	150

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 519+50.00 TO STA. 520+00.00

HAM-75-7.85

616
2017

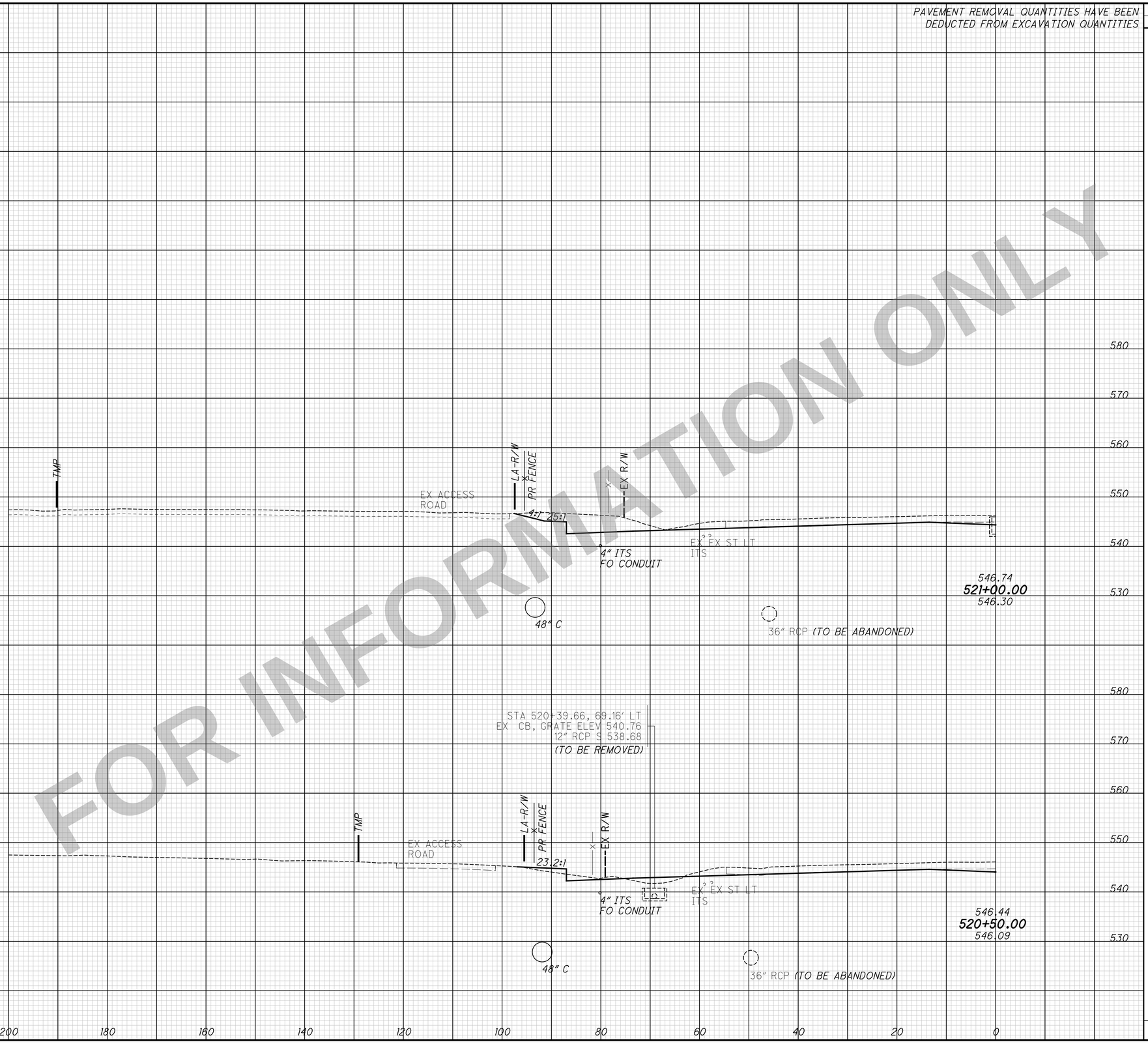
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SEEDING	
END WIDTH	SQ. YDS.
36	195
34	183
	378

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 520+50.00 TO STA. 521+00.00

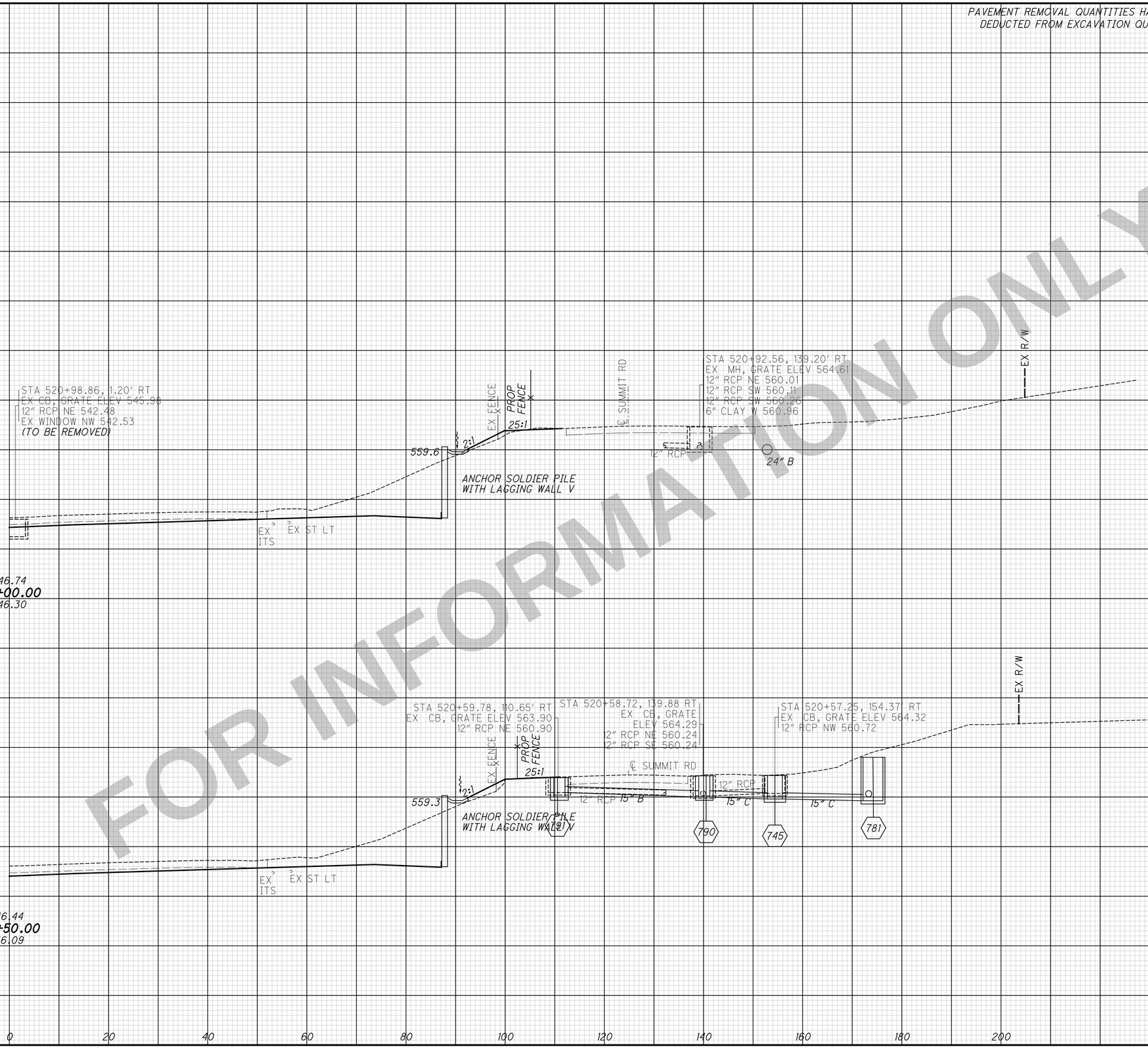
HAM-75-7.85

617
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
277	9		
449	33		
208	27		
371	65		
820	98		

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 520+50.00 TO STA. 521+00.00

HAM-75-7.85

618
2017

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SEEDING	
END WIDTH	SQ. YDS.
37	
	206
37	
	203
	409

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

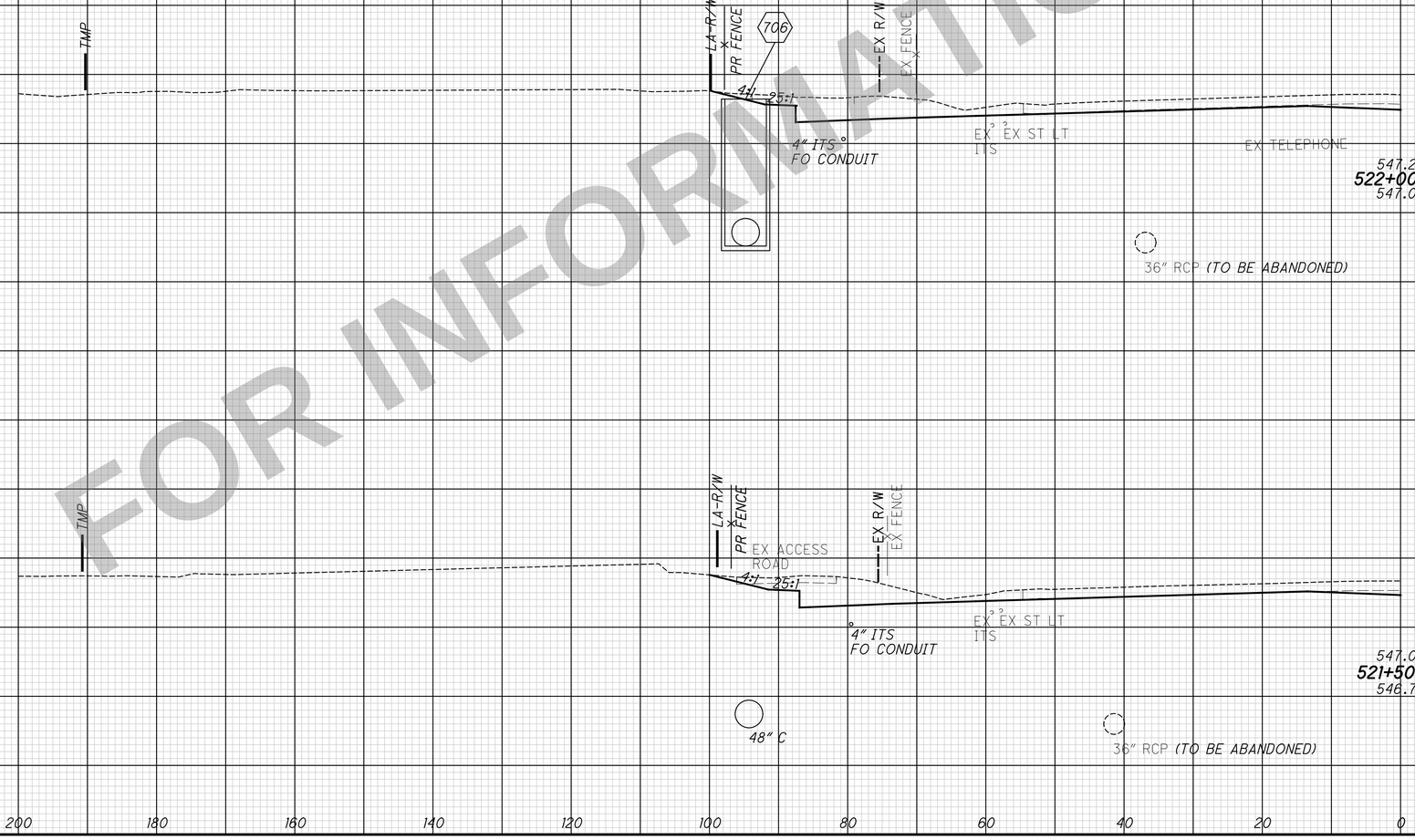
END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 521+50.00 TO STA. 522+00.00

HAM-75-7.85

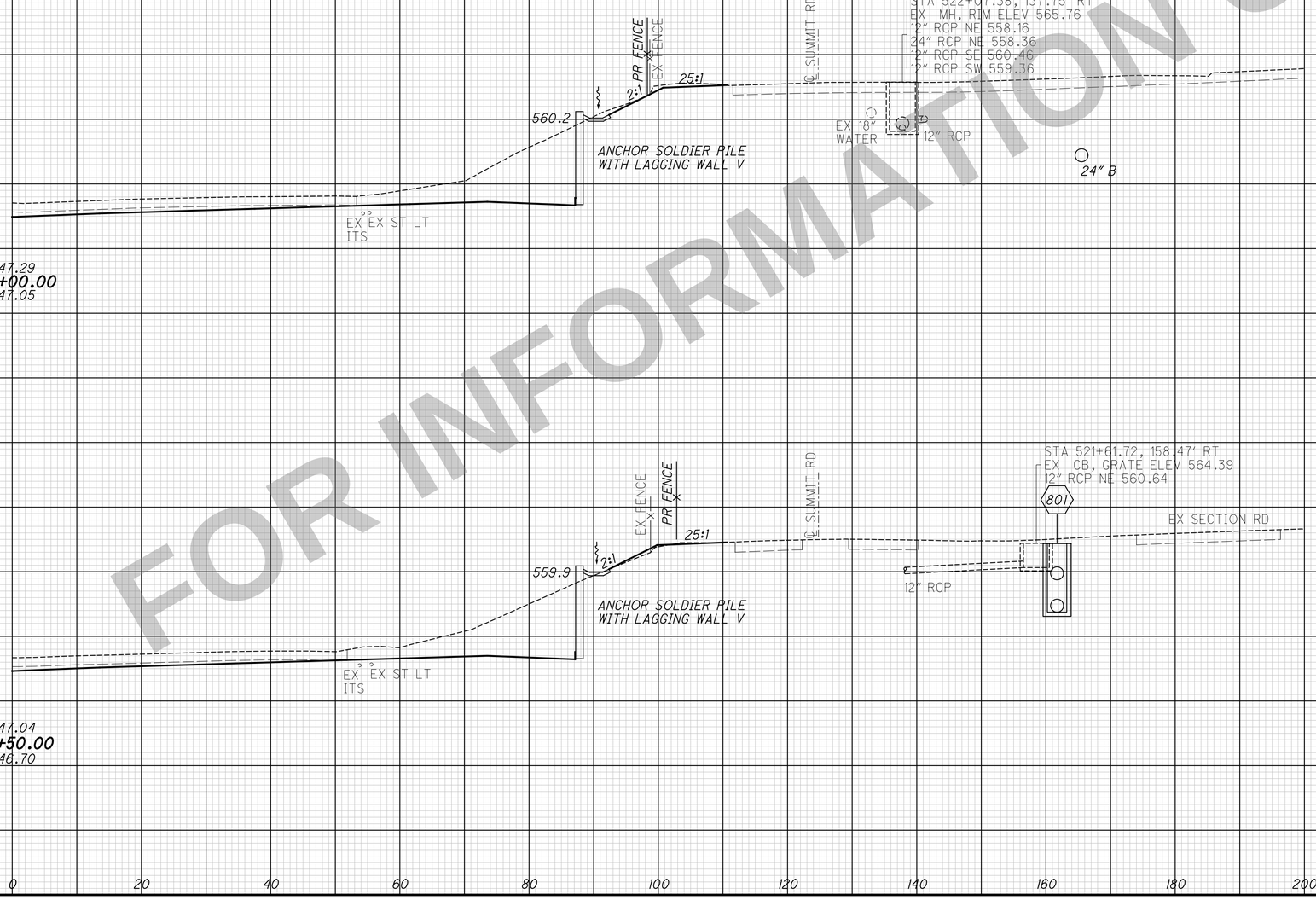
619
2017



FOR INFORMATION ONLY

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
315	0		
		550	4
279	4		
		515	12
		1065	16

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 521+50.00 TO STA. 522+00.00

HAM-75-7.85

620
2017

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SEEDING	
END WIDTH	SQ. YDS.
49	263
45	227
	490

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

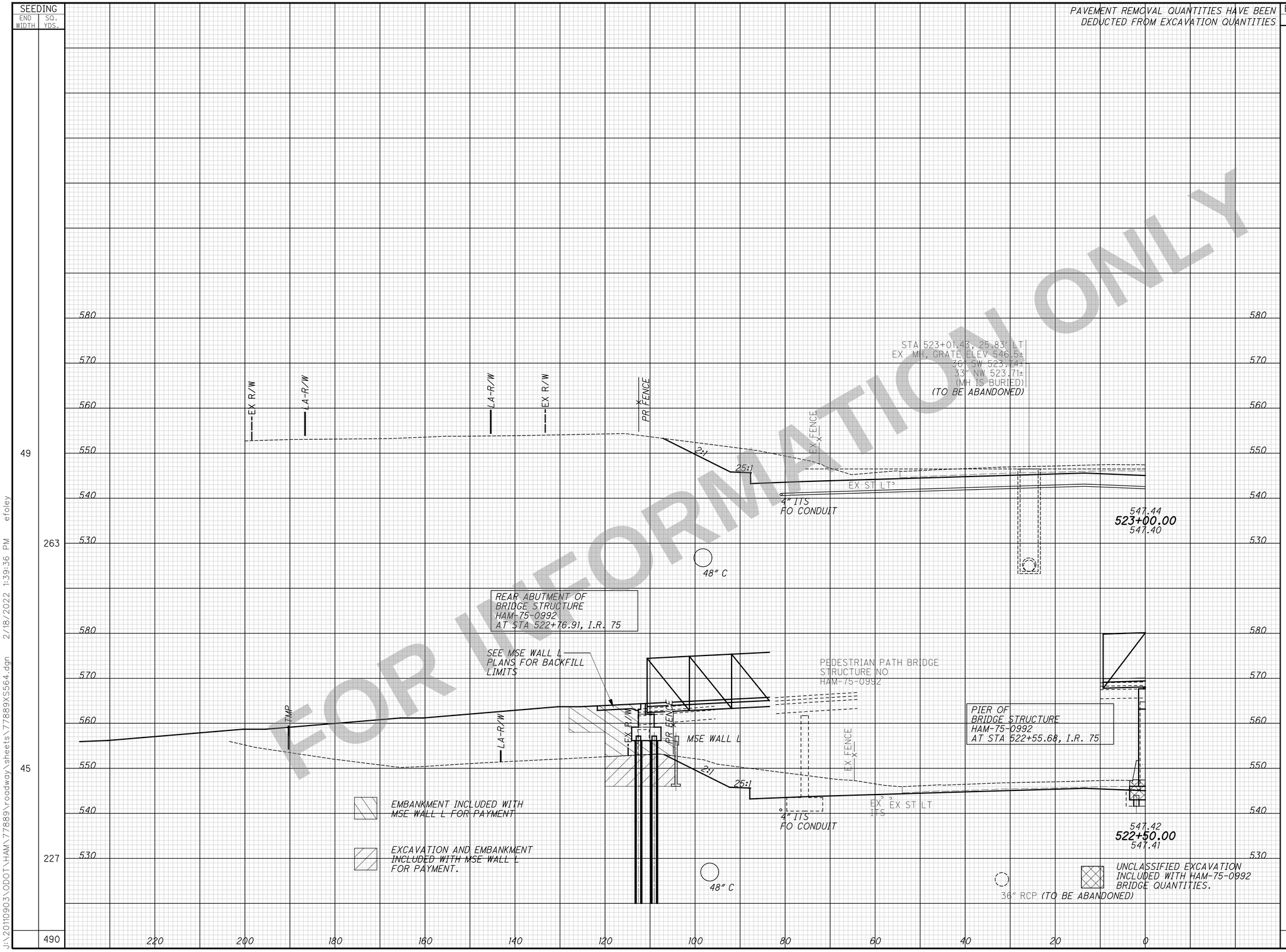
END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 522+50.00 TO STA. 523+00.00

HAM-75-7.85

621
2017

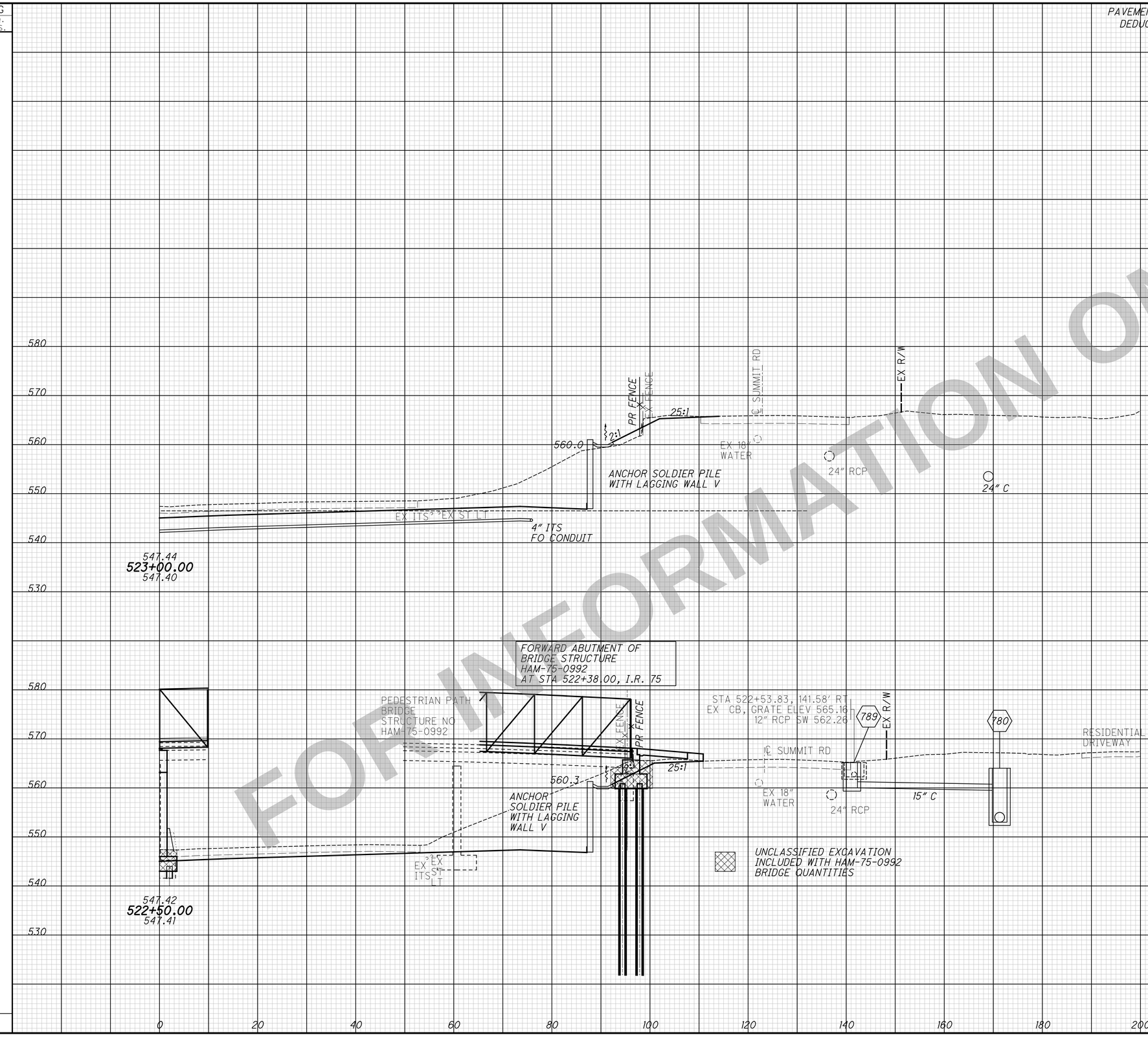


FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
437	15		
920	14		
557	0		
808	0		
		1728	14

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 522+50.00 TO STA. 523+00.00

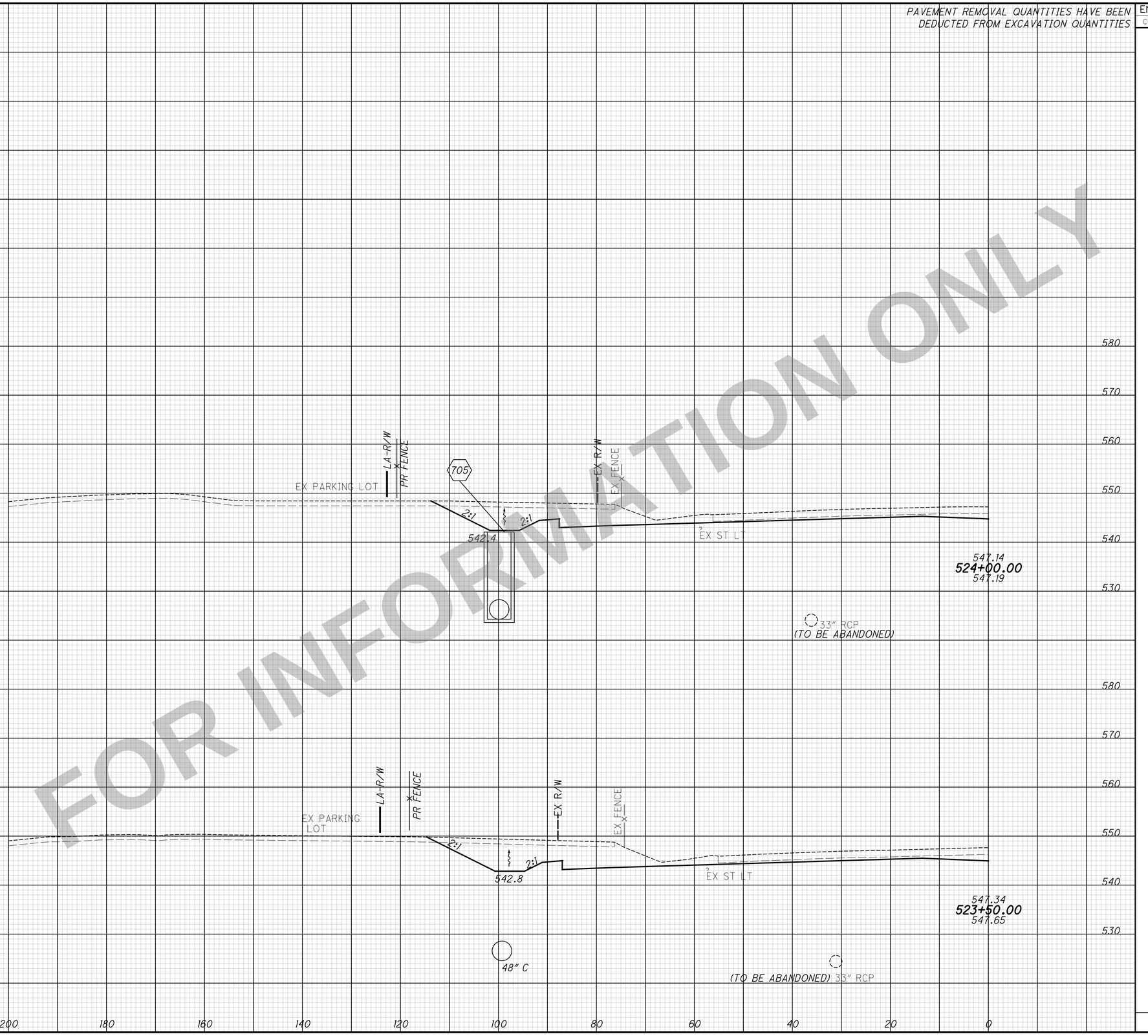
HAM-75-7.85

622
2017

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SEEDING	
END WIDTH	SQ. YDS.
53	299
54	288
	587

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED	CHECKED
CFR	SSK

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 523+50.00 TO STA. 524+00.00

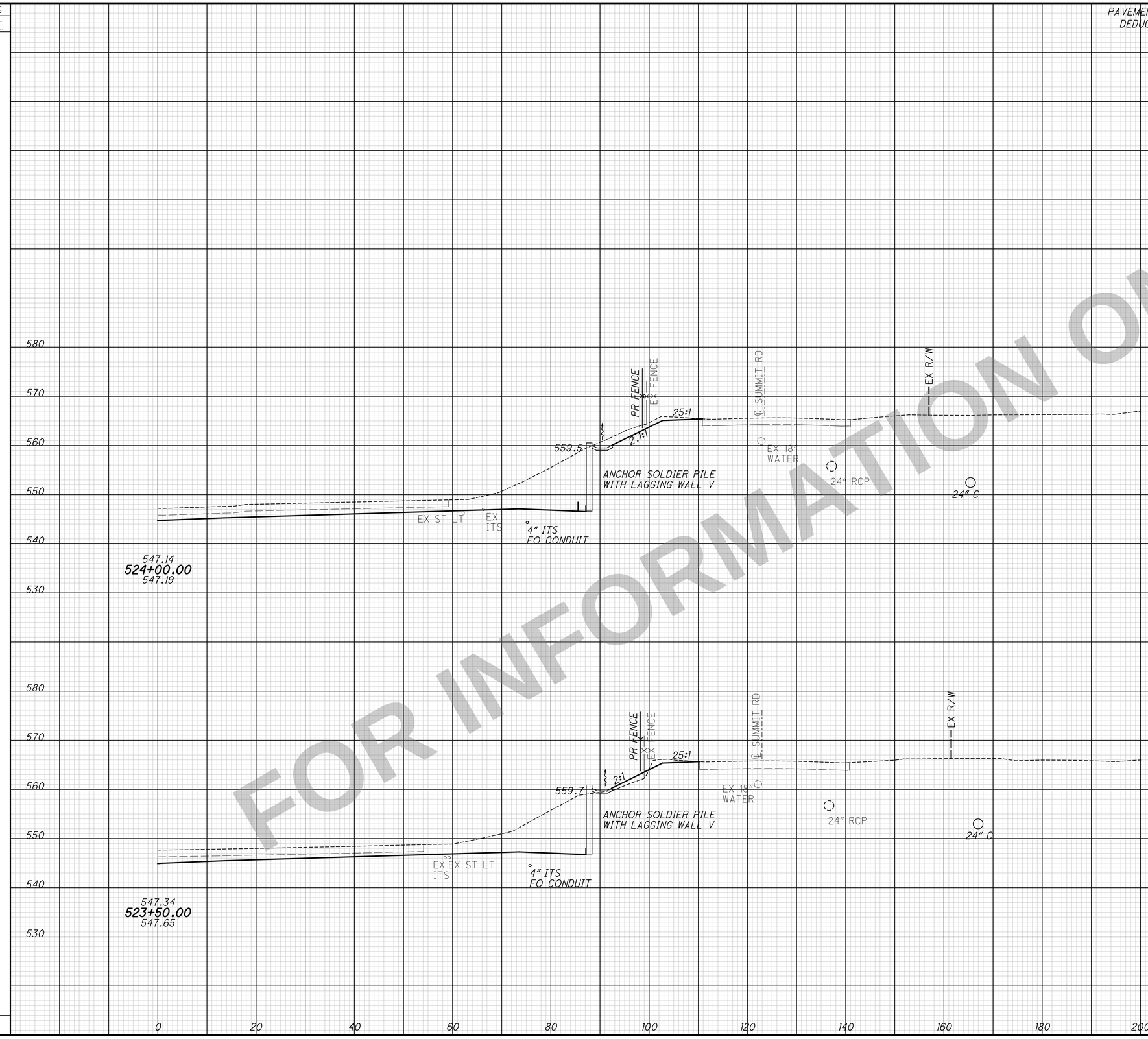
HAM-75-7.85

623
2017

FOR INFORMATION ONLY

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL

SEEDING	
END WIDTH	SQ. YDS.
58	311
54	297
608	

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 524+50.00 TO STA. 525+00.00

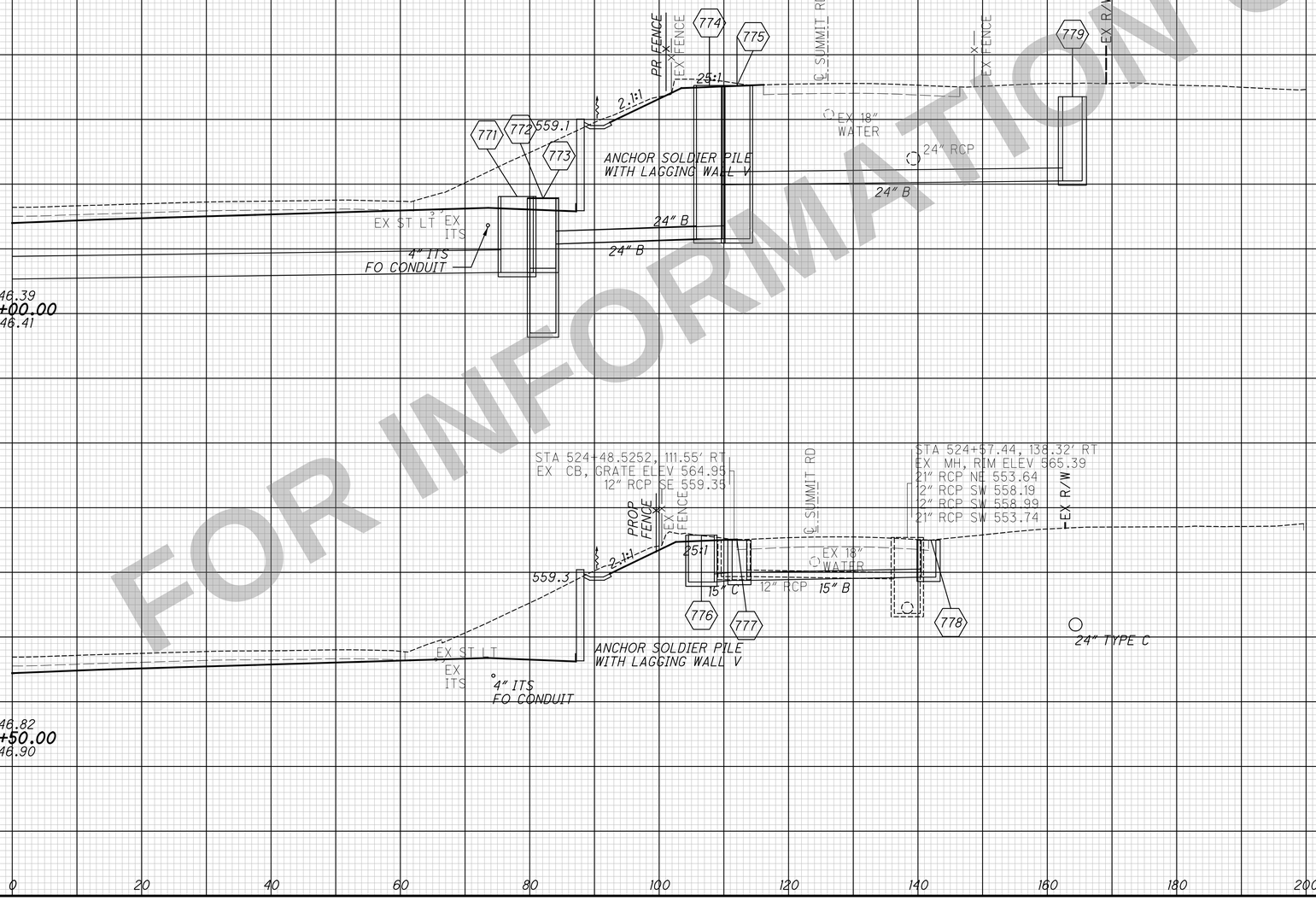
HAM-75-7.85

625
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
430	1		
		790	2
423	1		
		794	2
		1584	4

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 524+50.00 TO STA. 525+00.00

HAM-75-7.85

626
2017

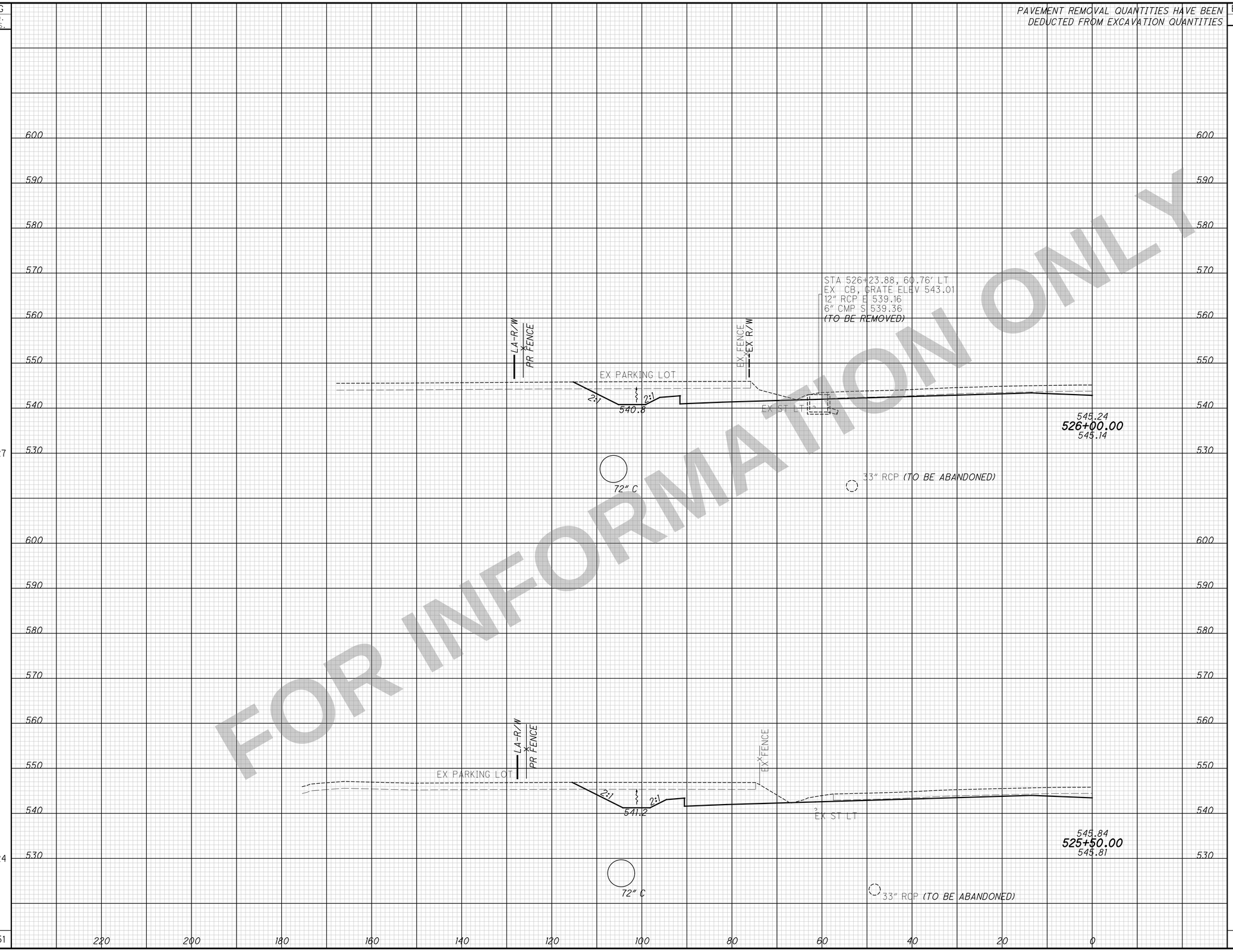
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SEEDING	
END WIDTH	SQ. YDS.
59	327
59	324
	651

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

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CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 525+50.00 TO STA. 526+00.00

HAM-75-7.85

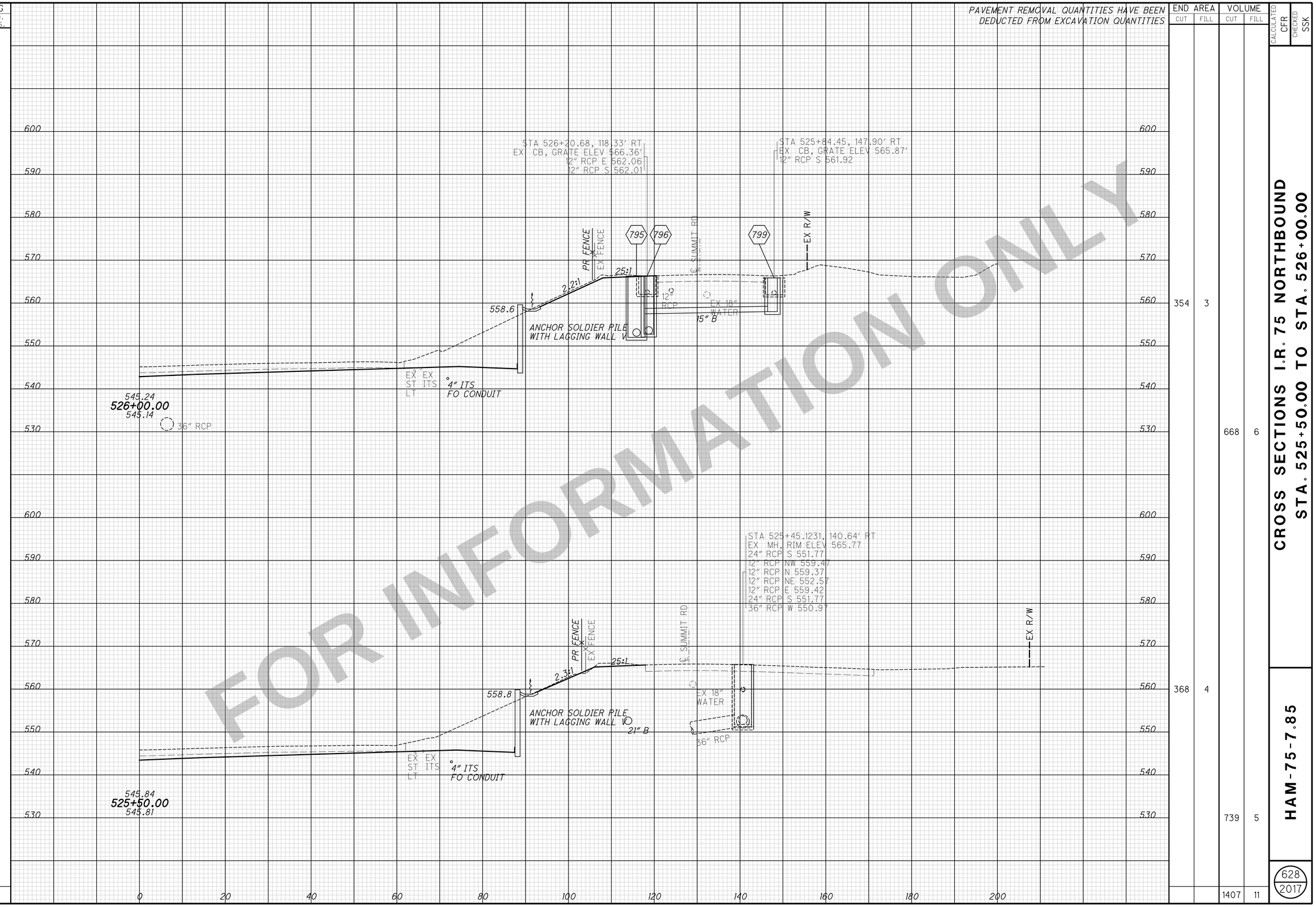
627
2017

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
354	3		
		668	6
368	4		
		739	5
		1407	11

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 525+50.00 TO STA. 526+00.00

HAM-75-7.85

628
2017

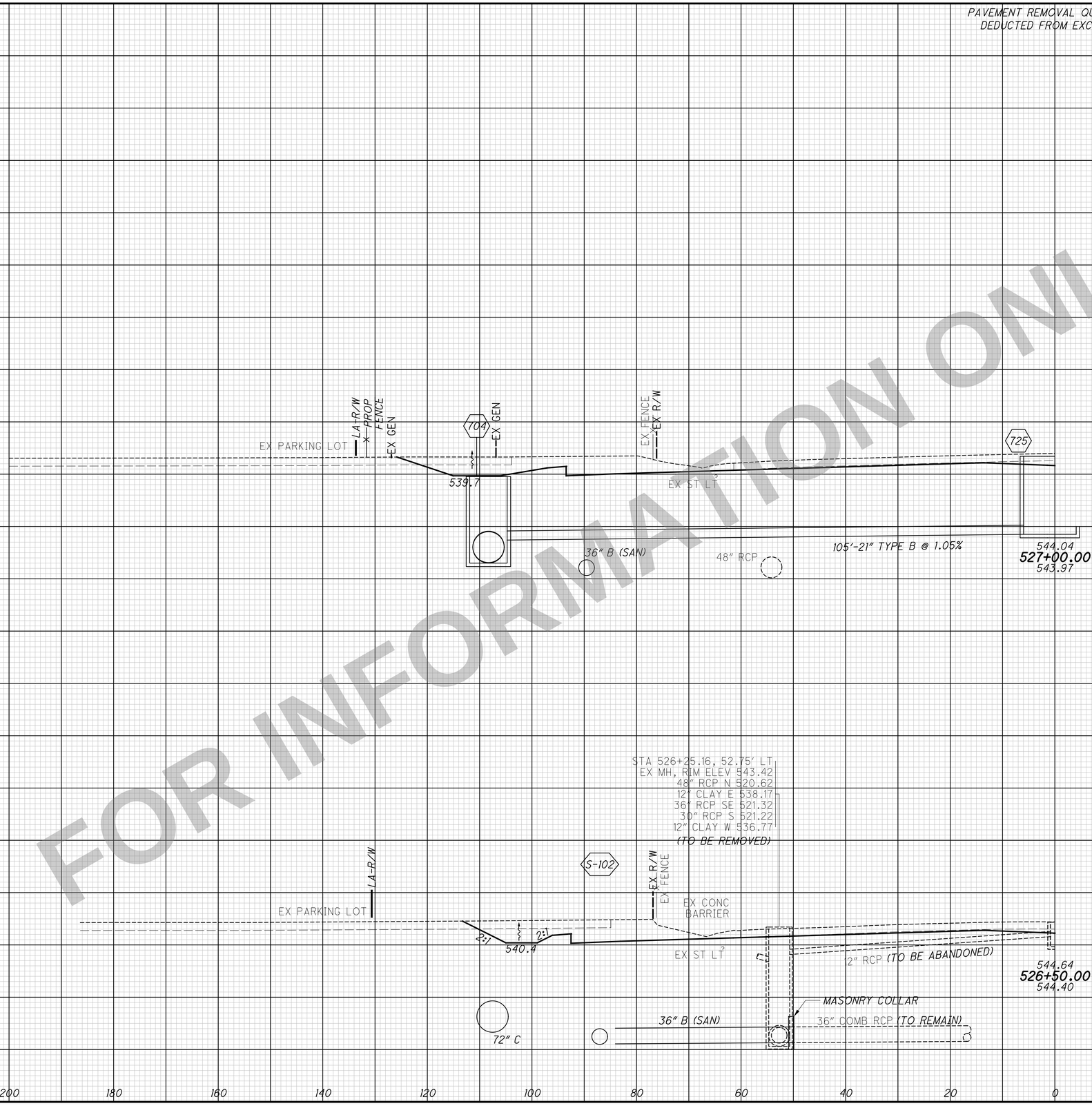
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SEEDING	
END WIDTH	SQ. YDS.
91	379
46	293
	672

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 526+50.00 TO STA. 527+00.00

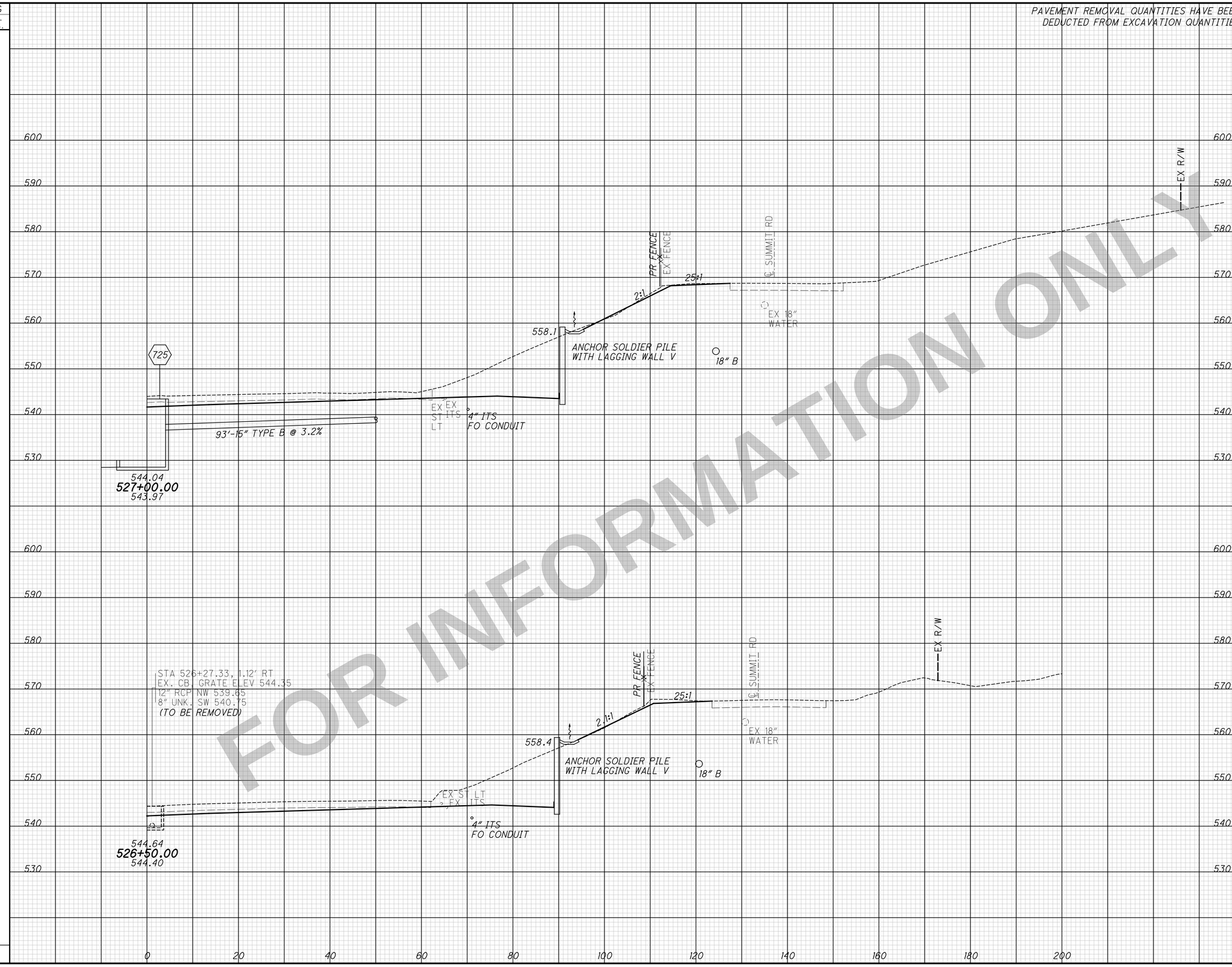
HAM-75-7.85

629
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
387	6		
		682	9
350	4		
		651	7
		1333	16

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 526+50.00 TO STA. 527+00.00

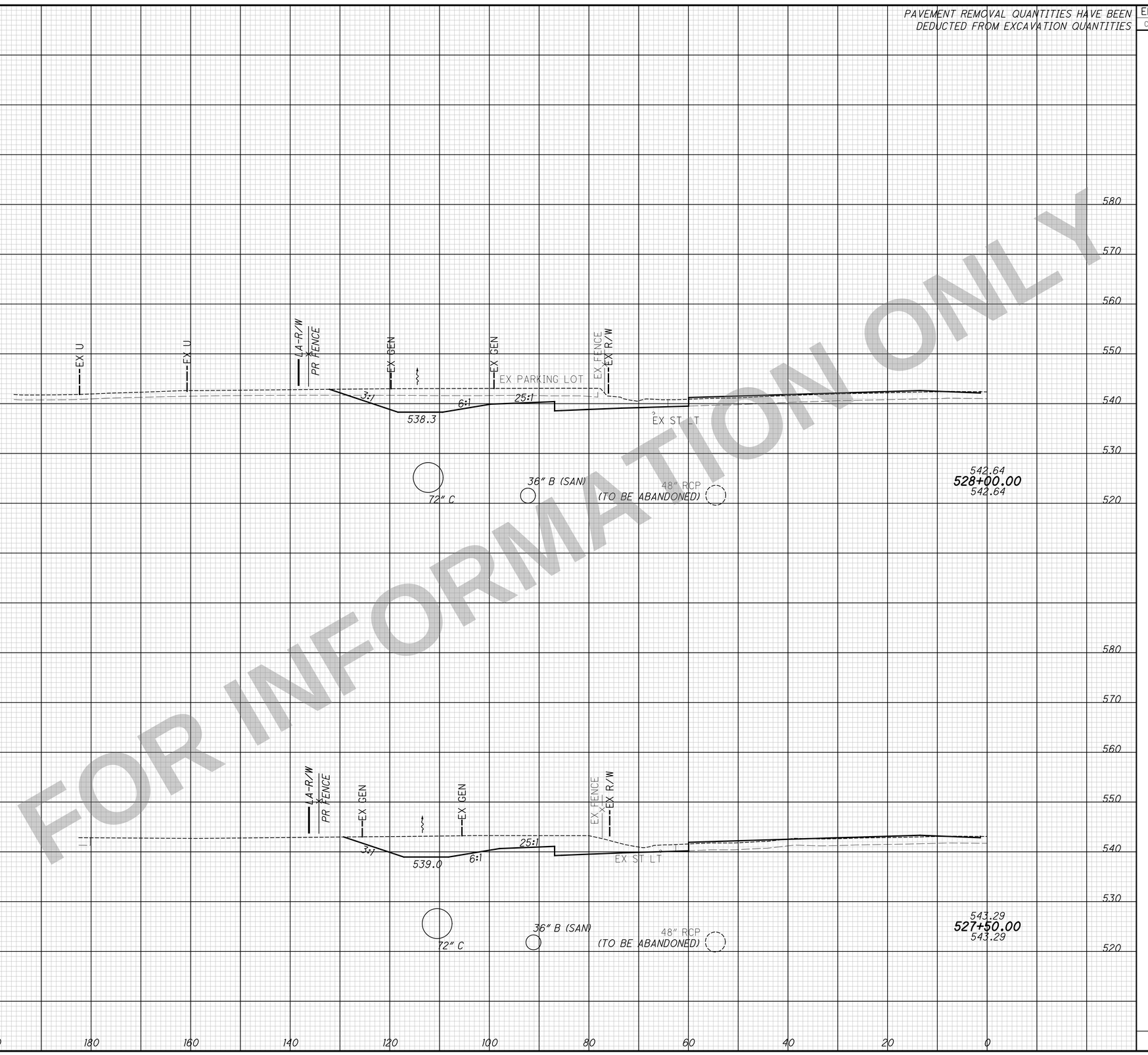
HAM-75-7.85

630
2017

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SEEDING	
END WIDTH	SQ. YDS.
112	
	548
85	
	489
	1037

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 527+50.00 TO STA. 528+00.00

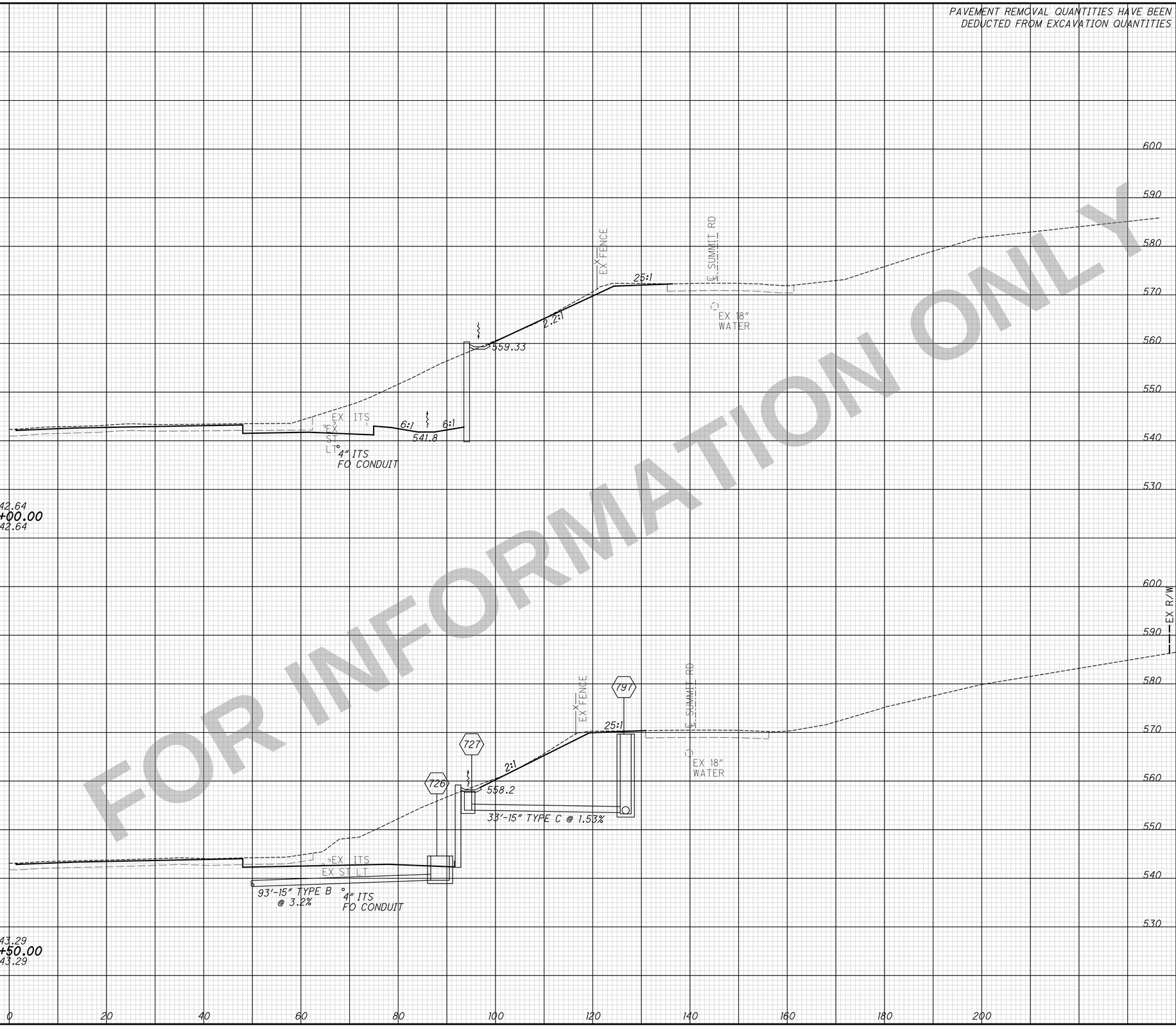
HAM-75-7.85

631
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA		VOLUME	
CUT	FILL	CUT	FILL
443	3		
		831	6
454	0		
		779	6
		1610	12

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 527+50.00 TO STA. 528+00.00

HAM-75-7.85

632
2017

FOR INFORMATION ONLY

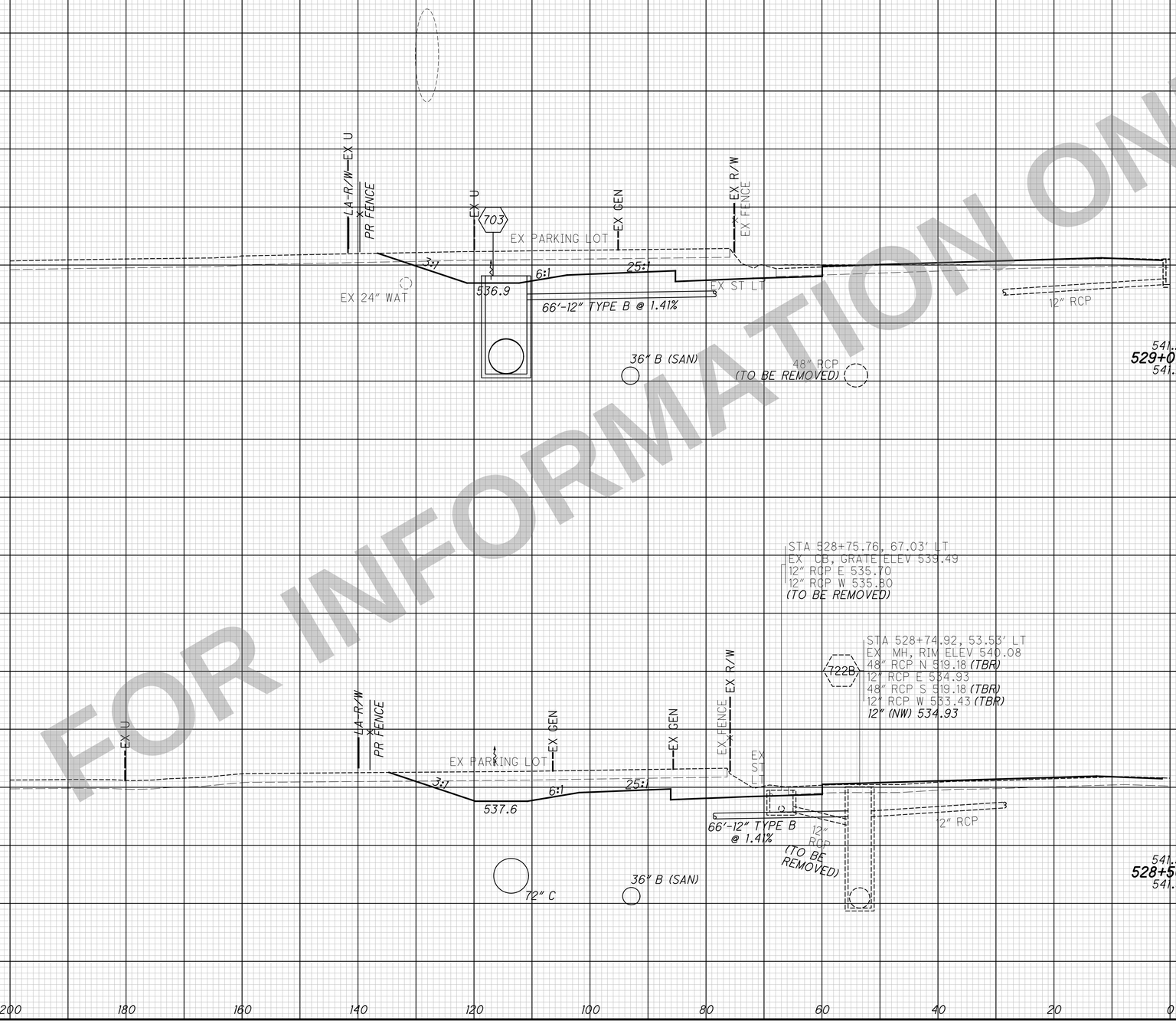
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SEEDING	
END WIDTH	SQ. YDS.
99	534
93	569
	1103

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 528+50.00 TO STA. 529+00.00

HAM-75-7.85

633
2017

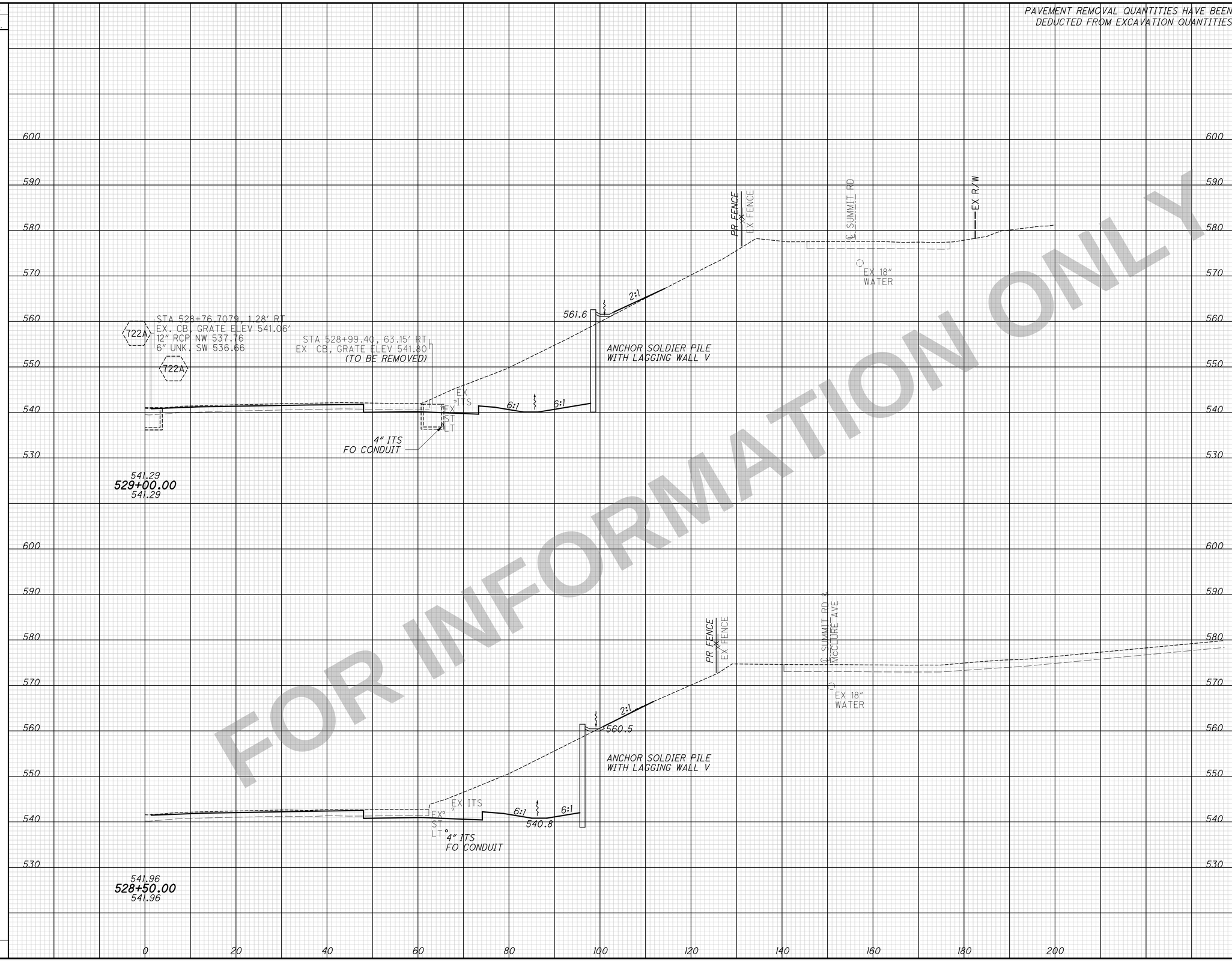
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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
546	9		
		959	13
490	5		
		864	7
		1823	20

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 528+50.00 TO STA. 529+00.00

HAM-75-7.85

634
2017

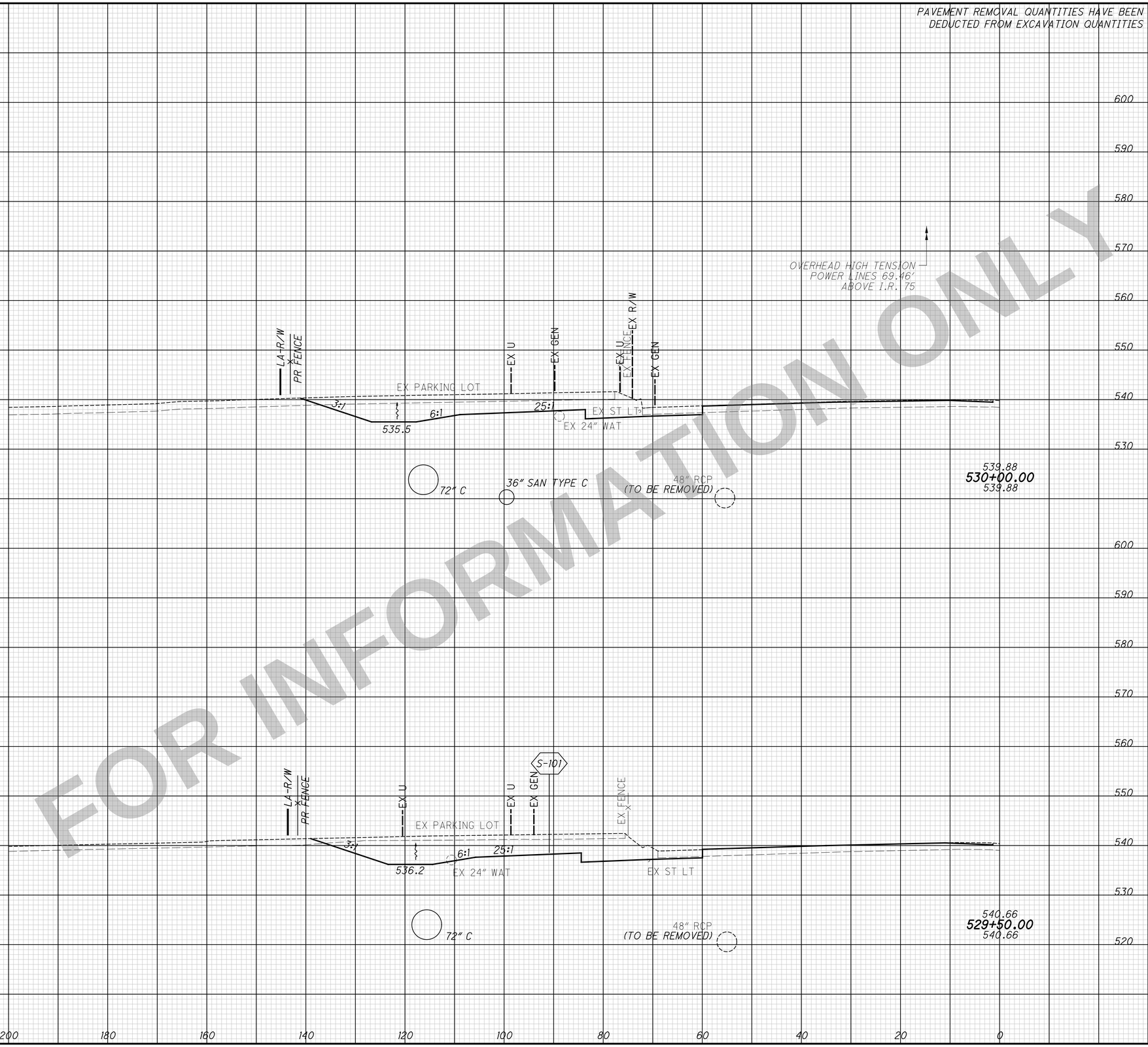
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SEEDING	
END WIDTH	SQ. YDS.
112	605
106	568
	1173

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR | CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 529+50.00 TO STA. 530+00.00

HAM-75-7.85

635
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

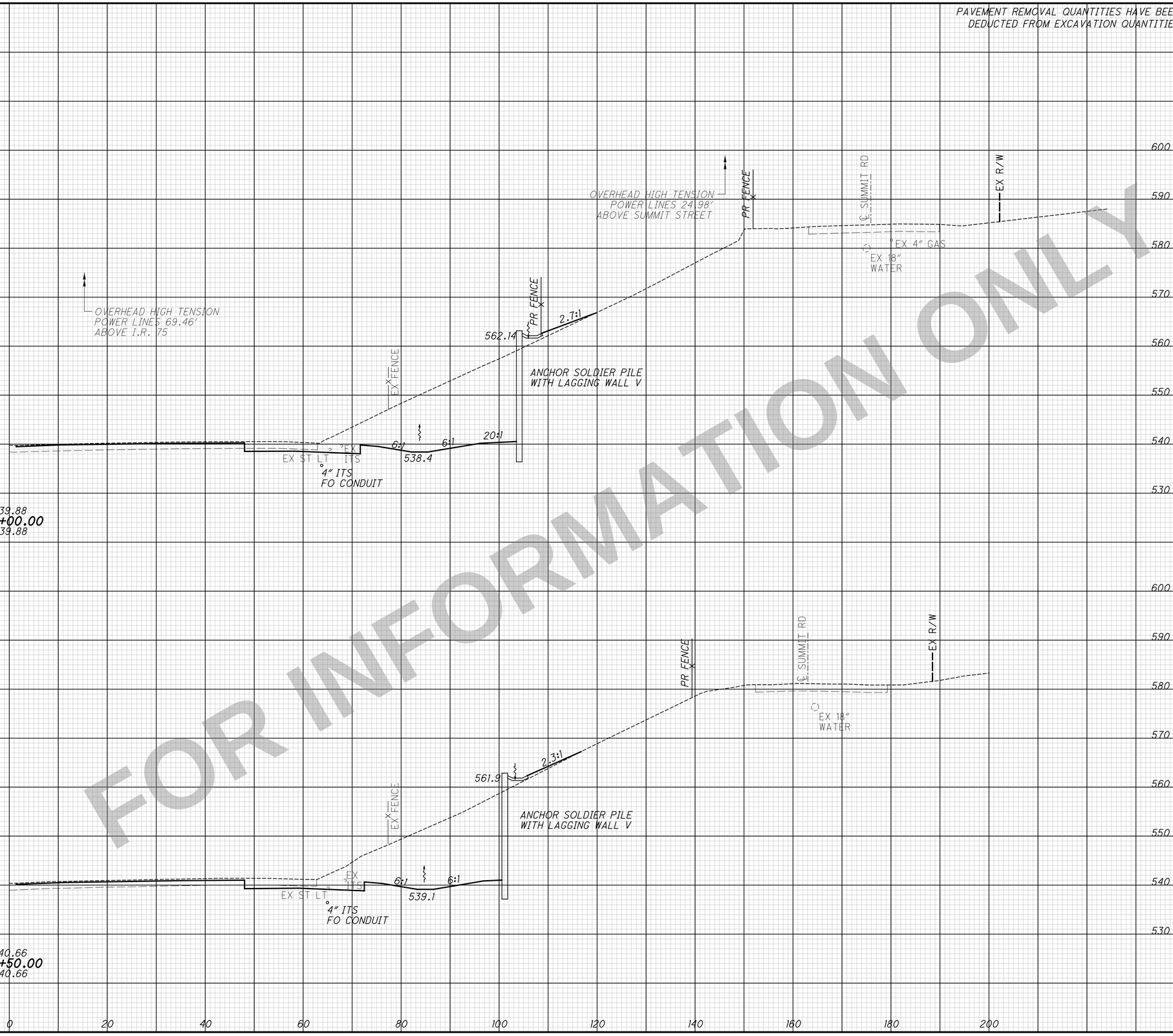
SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
		625	14		
				1172	21
		641	9		
				1099	17
				2271	38

CALCULATED CFR | CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 529+50.00 TO STA. 530+00.00

HAM-75-7.85

636
2017

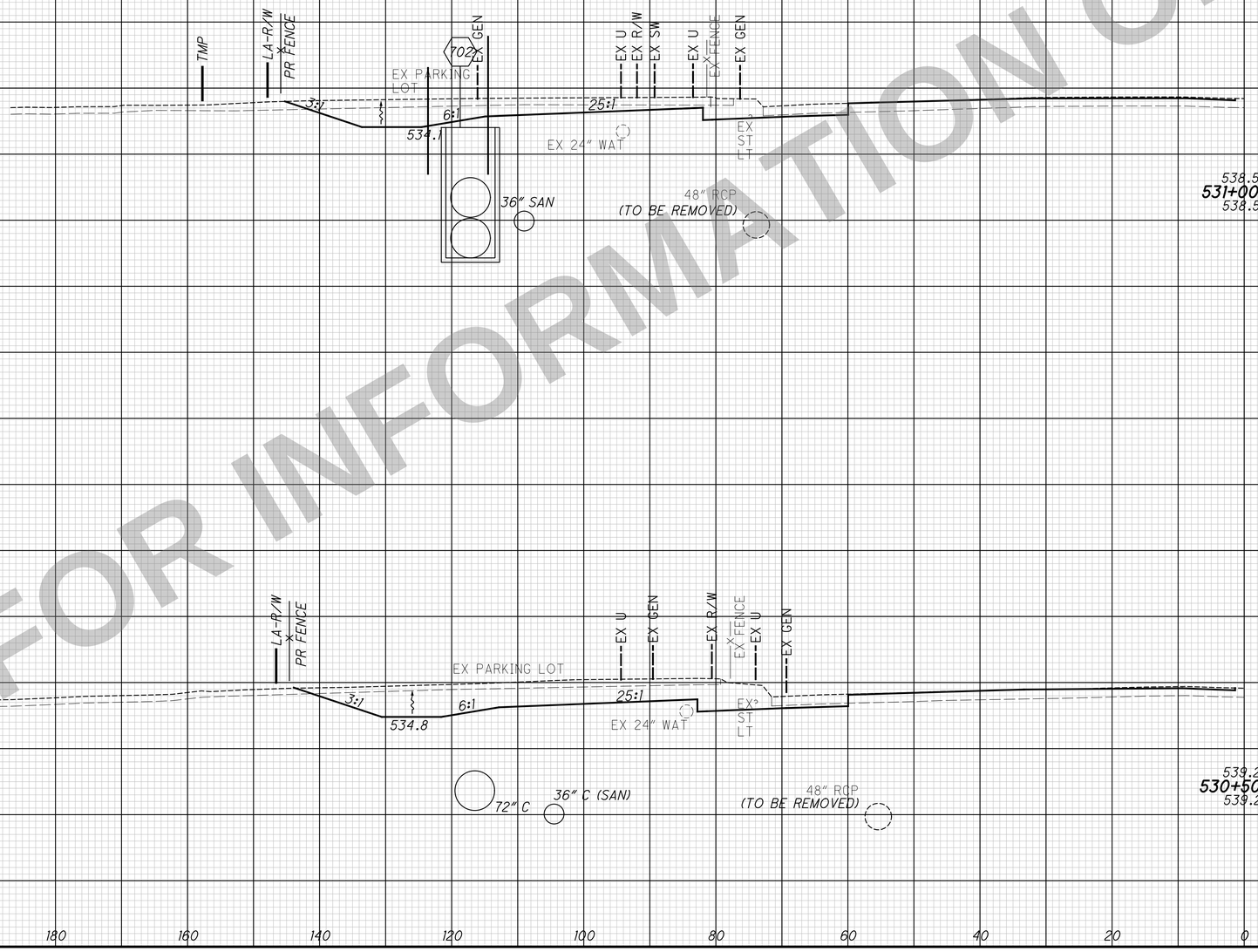


FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SQ. YDS.
136	691
113	624
	1315

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 530+50.00 TO STA. 531+00.00

HAM-75-7.85

637
2017

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

537.53
END PROJECT
END WORK
531+72.45
537.53

538.56
531+00.00
538.56

539.21
530+50.00
539.21

562.7
2.3:1
PR FENCE
EX FENCE
6:1
6:1
20:1
537.4
EX ST LT
EX ITS
4" ITS
FO CONDUIT

562.41
4.3
PR FENCE
EX FENCE
6:1
6:1
20:1
537.7
EX ITS
EX ST LT
4" ITS
FO CONDUIT
CL SUMMIT RD

600 590 580 570 560 550 540 530

0 20 40 60 80 100 120 140 160 180 200

END AREA		VOLUME	
CUT	FILL	CUT	FILL
680	6.5		
		1200	32
616	28		
		1149	39
		2349	71

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 530+50.00 TO STA. 531+00.00

HAM-75-7.85

638
2017

FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 SOUTHBOUND
STA. 531+21.35

HAM-75-7.85

639
2017

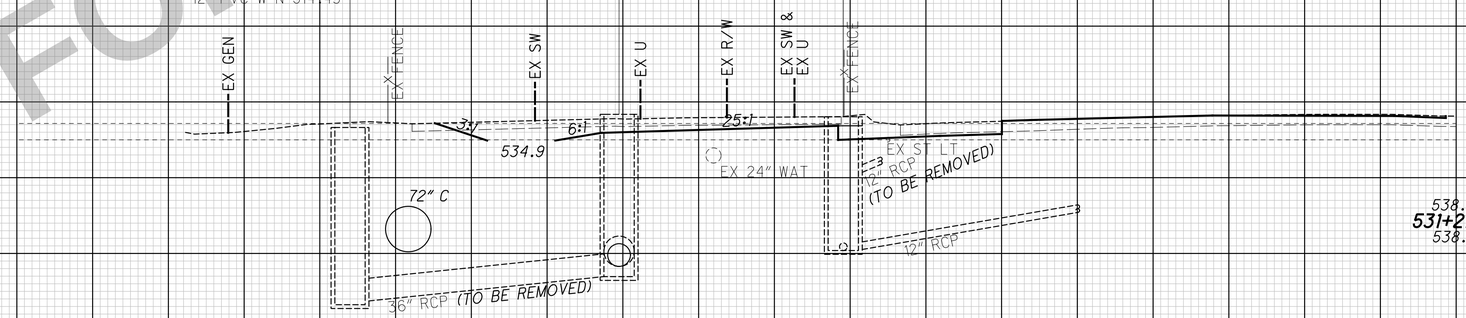
FOR INFORMATION ONLY

STA 531+17.45, 110.54' LT
EX. MH, RIM ELEV 538.38
(TO BE REMOVED) 48" RCP E 516.94
48" RCP N 518.29
36" RCP W 516.94
36" SAN (S) 518.29
(RECONSTRUCT TO GRADE)

EX S-100

STA 531+14.65, 80.21' LT
EX. MH, RIM ELEV 538.05
723B
RECONSTRUCT TO GRADE
RIM ELEV 536.86
EX. 12" RCP SW 520.39 (TBR)
EX. 12" RCP E 520.53
EX. 12" RCP NE 531.06 (TBR)
12" (NW) 520.39

(TO BE REMOVED)
STA 531+24.94, 146.05' LT
EX. MH, RIM ELEV 536.63
24" RCP NW 513.23
36" RCP SE 513.73
12" CPP W 522.73
12" PVC SW 516.03
12" PVC W N 514.43



115
298
298

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SEEDING	
END WIDTH	SQ. YDS.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

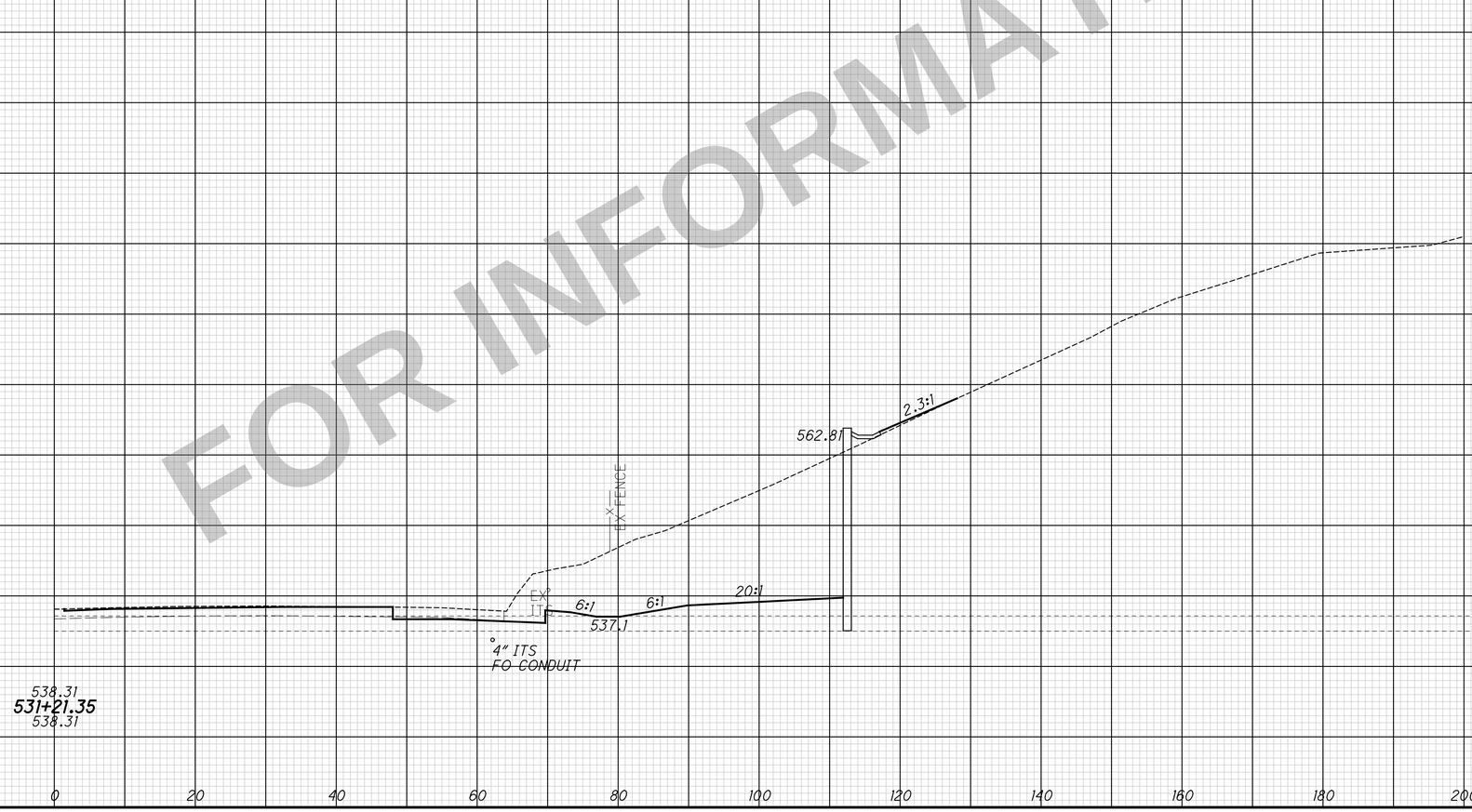
END AREA		VOLUME	
CUT	FILL	CUT	FILL
640	7		
		522	3
		522	3

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS I.R. 75 NORTHBOUND
STA. 531+21.35

HAM-75-7.85

640
2017

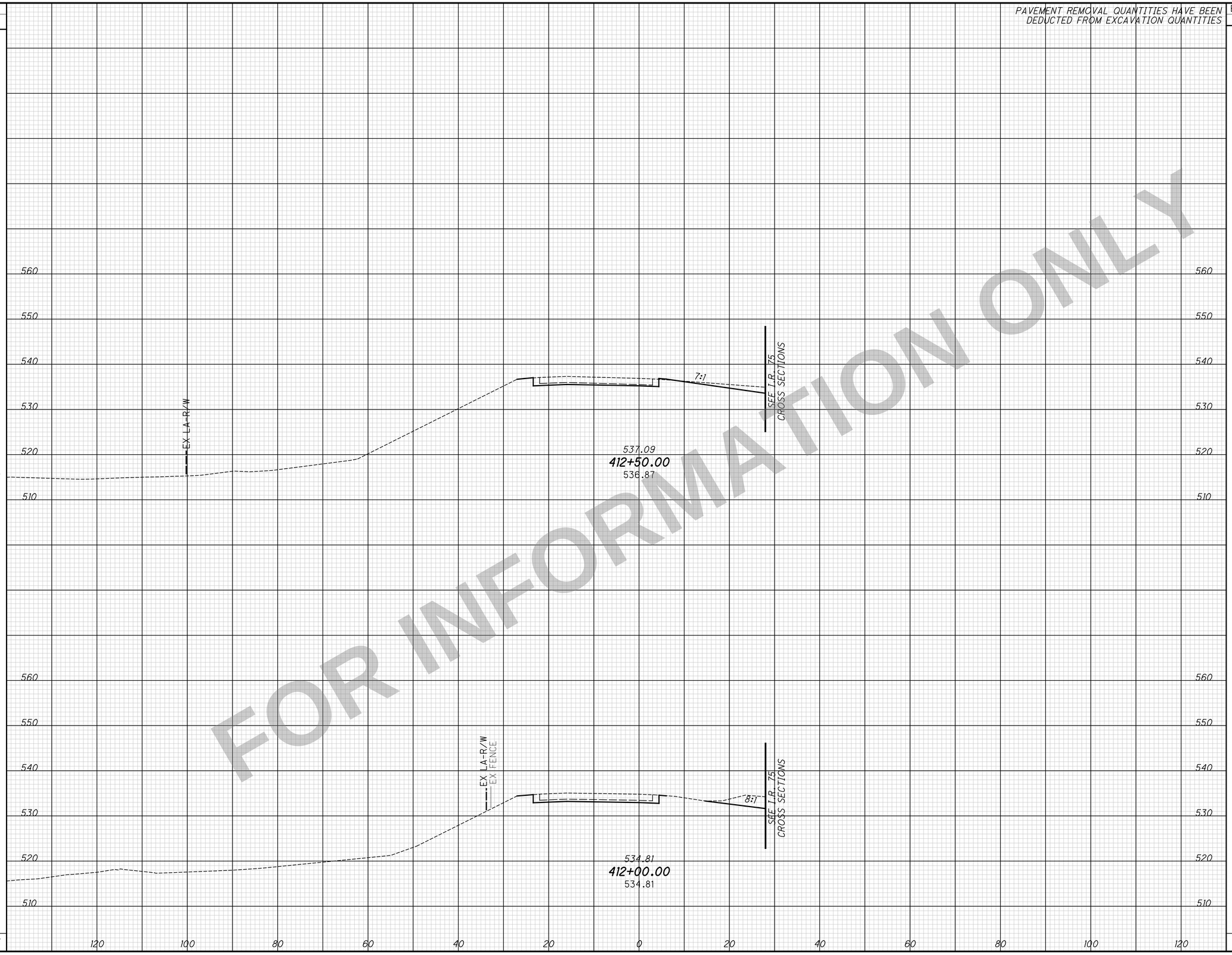


FOR INFORMATION ONLY

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
30	145	27	1	60	1
22	0	37	0	0	0
	145			60	1



FOR INFORMATION ONLY

CALCULATED SEA
CHECKED DLR

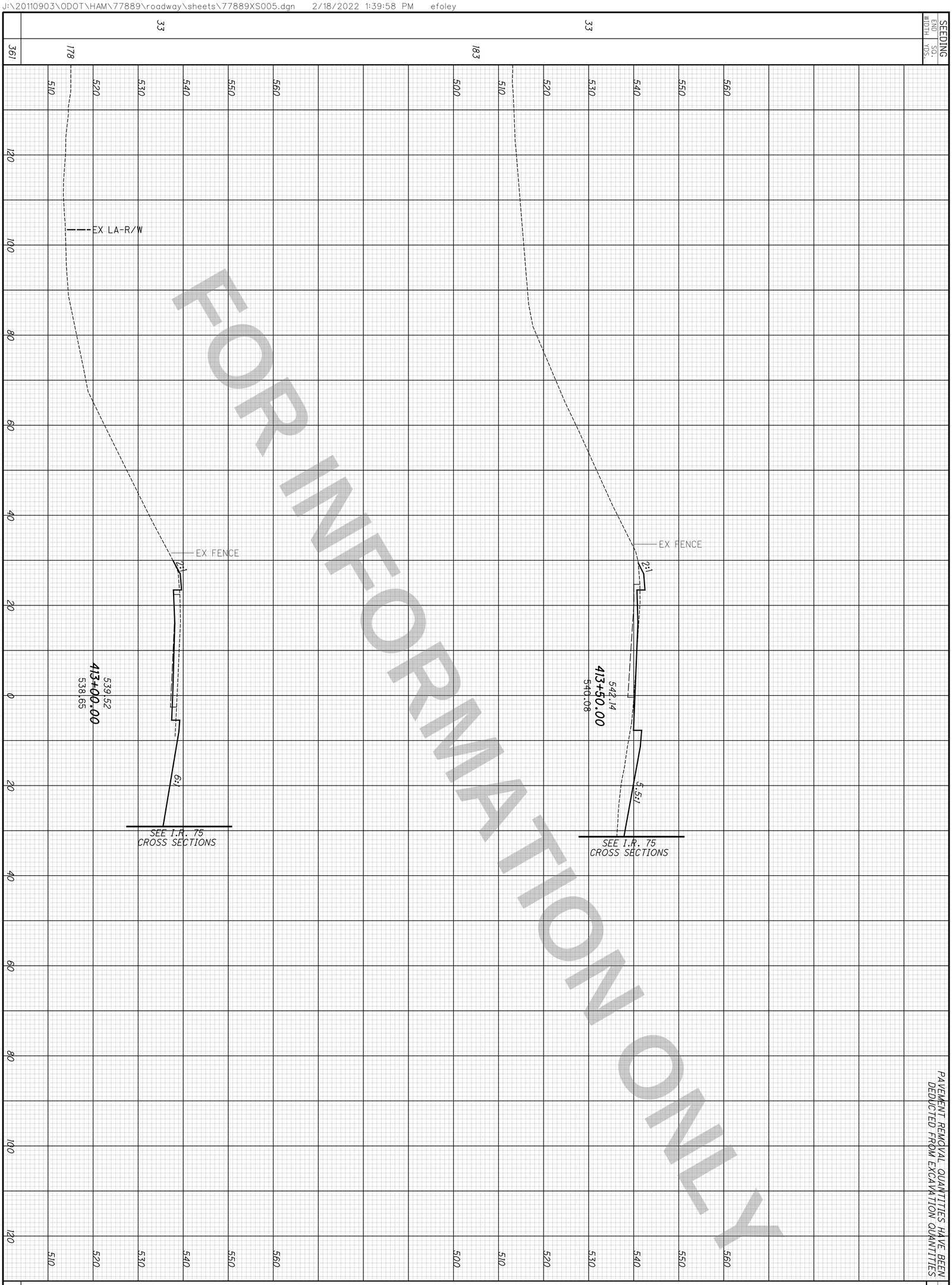
CROSS SECTIONS RAMP M
STA. 412+00.00 TO STA. 412+50.00

HAM-75-7.85

641
2017

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642
2017

HAM-75-7.85

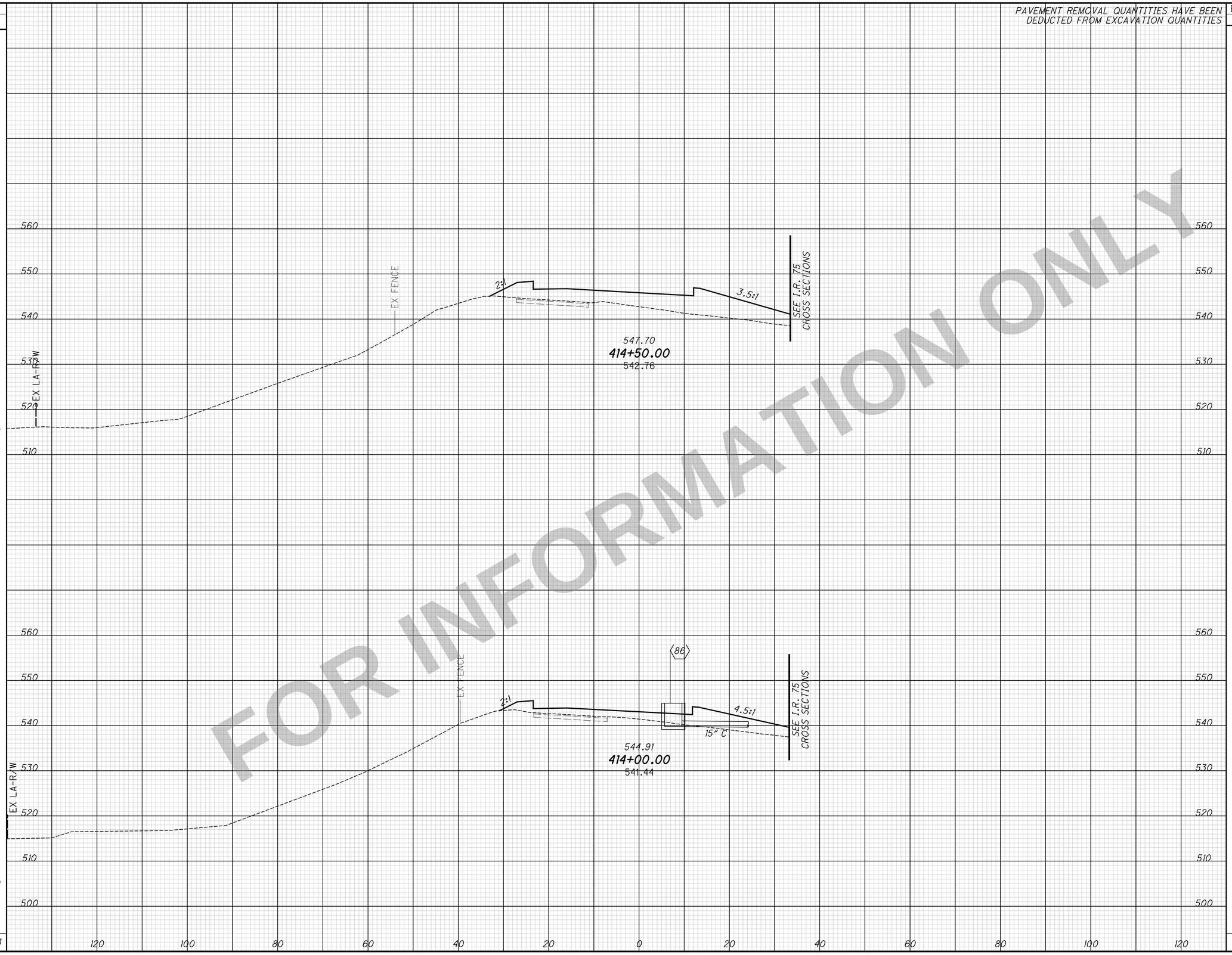
CROSS SECTIONS RAMP M
STA. 413+00.00 TO STA. 413+50.00

CALCULATED SEA
CHECKED DLR

FOR INFORMATION ONLY

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
36	194	0	237	0	363
33	189	0	154	0	233
	383			0	596



CALCULATED SEA

CHECKED DLR

CROSS SECTIONS RAMP M
STA. 414+00.00 TO STA. 414+50.00

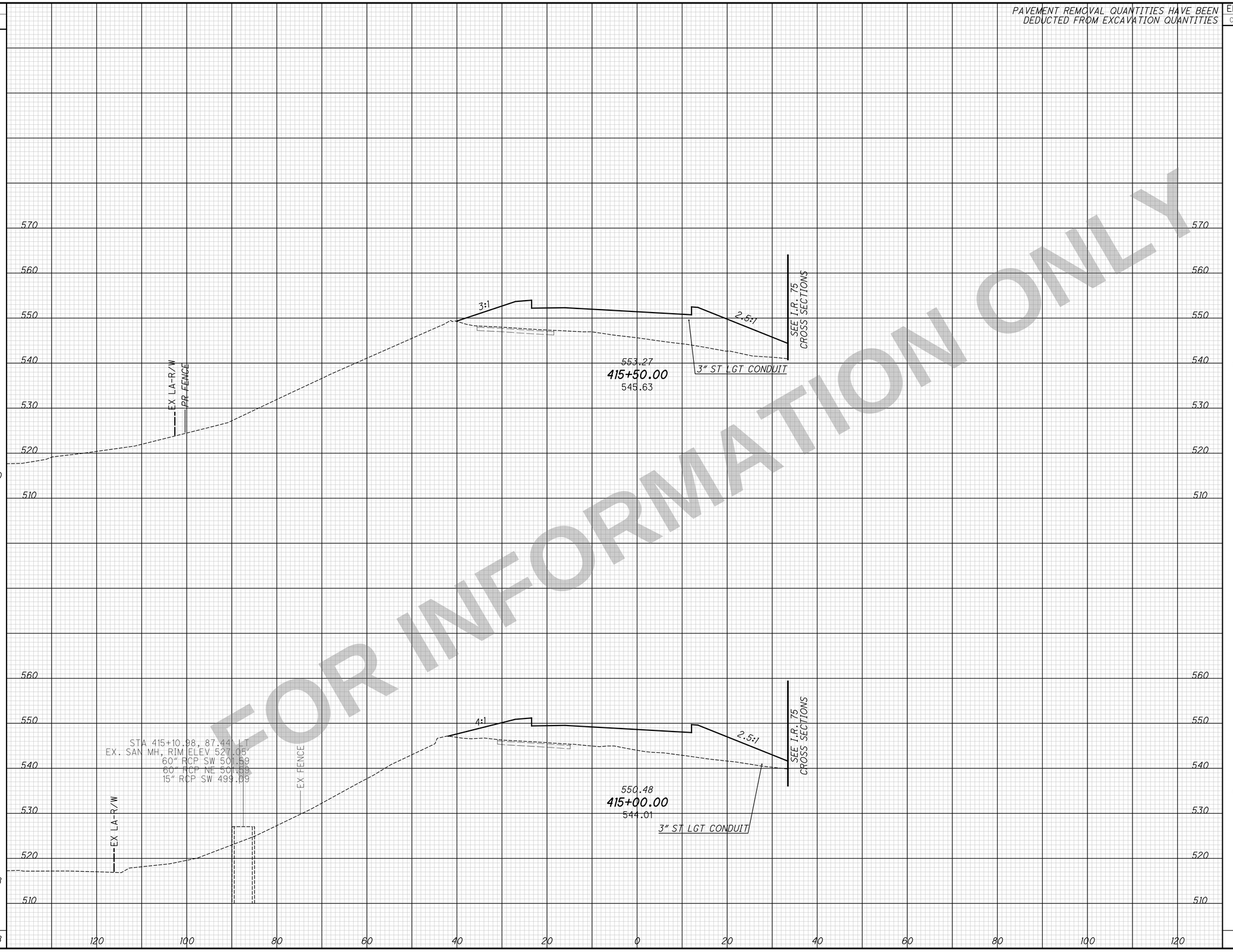
HAM-75-7.85

643
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
44	250	0	416	0	686
45	228	0	326	0	521
	478			0	1207



FOR INFORMATION ONLY

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMP M
STA. 415+00.00 TO STA. 415+50.00

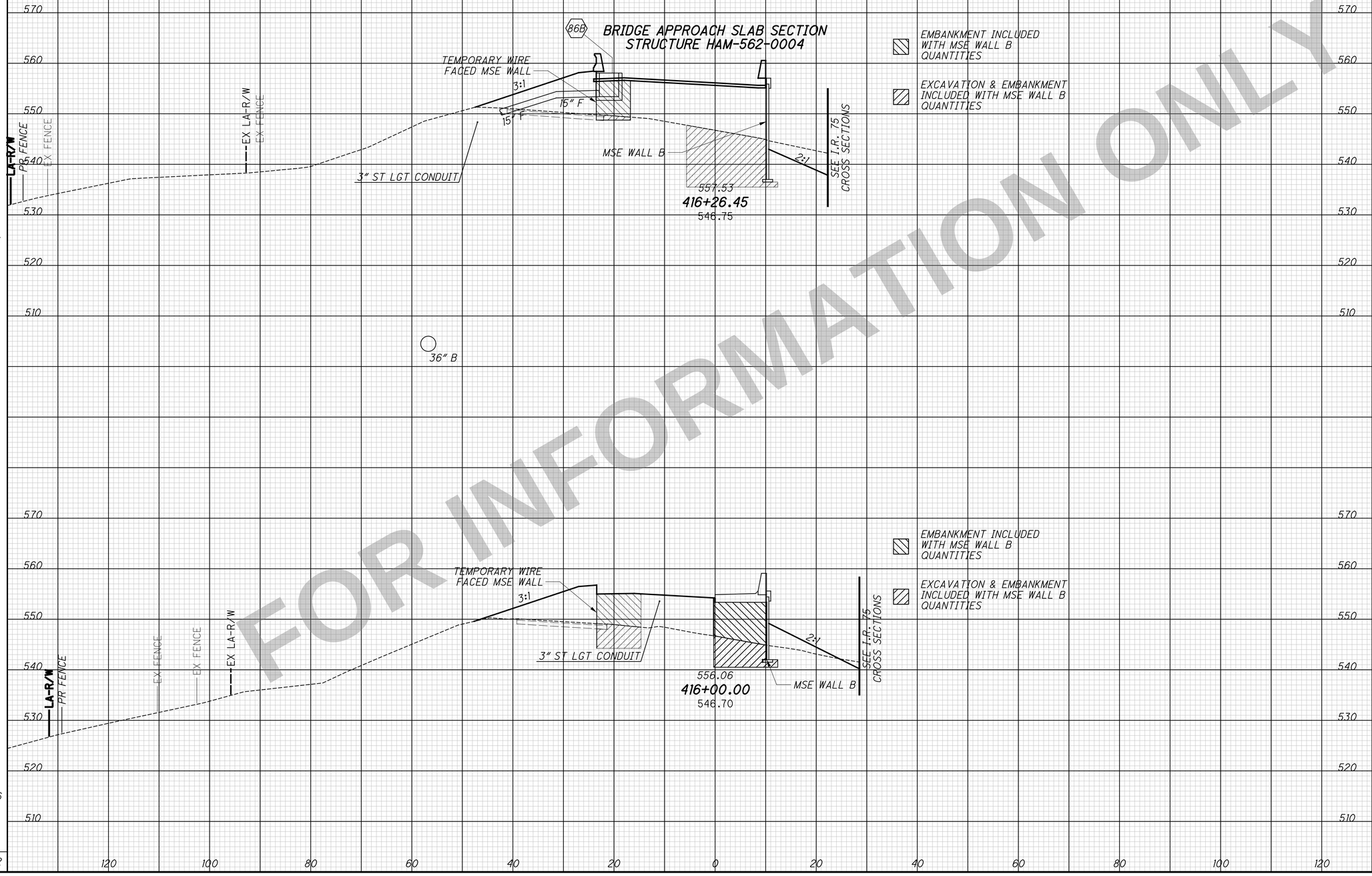
HAM-75-7.85

644
2017

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SEEDING END WIDTH	SEEDING SQ. YDS.
37	126
47	256
	382

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
35	359	19	292
3	237	2	604
		21	896

CALCULATED SEA

CHECKED DLR

CROSS SECTIONS RAMP M
STA. 416+00.00 TO STA. 416+26.45

HAM-75-7.85

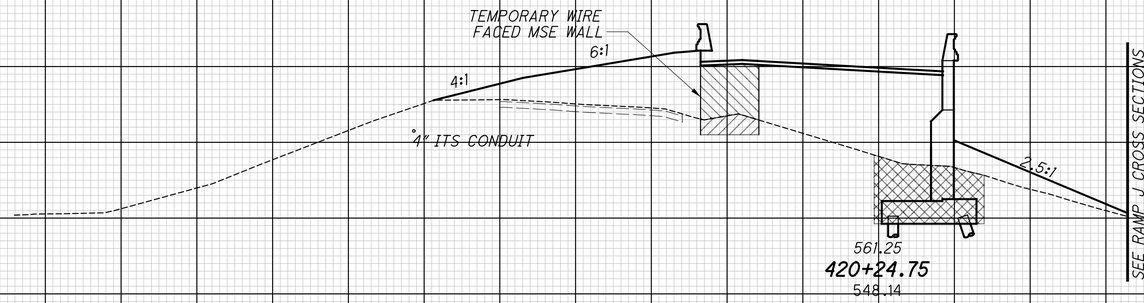
645
2017

FOR INFORMATION ONLY

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

BRIDGE APPROACH SLAB SECTION
STRUCTURE HAM-562-0004

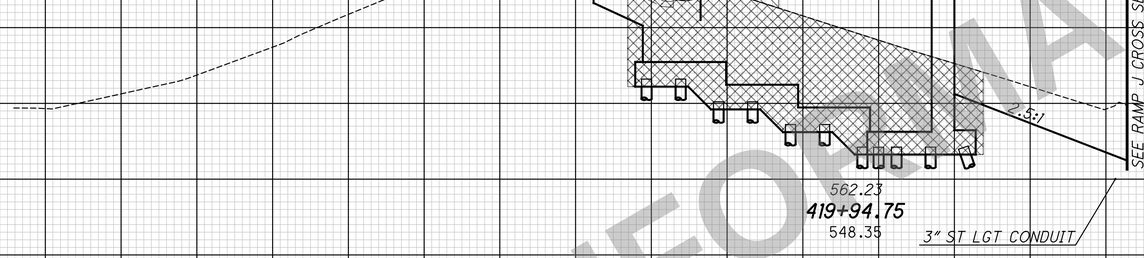


EMBANKMENT INCLUDED WITH MSE WALL B QUANTITIES

EXCAVATION & EMBANKMENT INCLUDED WITH MSE WALL B QUANTITIES

UNCLASSIFIED EXCAVATION INCLUDED WITH HAM-562-0004 BRIDGE QUANTITIES

BRIDGE APPROACH SLAB SECTION
STRUCTURE HAM-562-0004

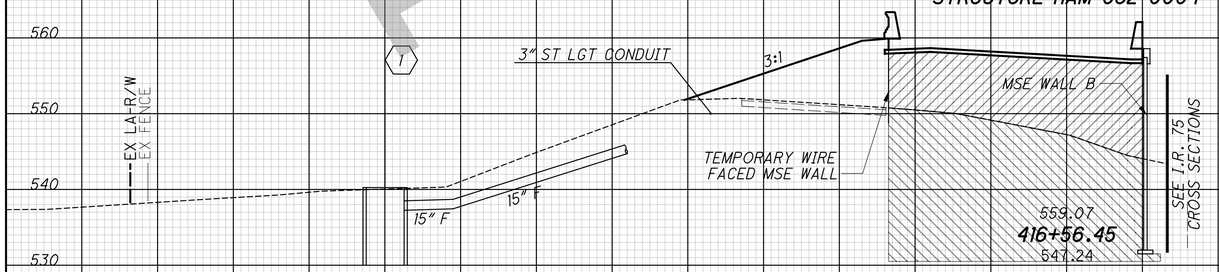


EMBANKMENT INCLUDED WITH MSE WALL B QUANTITIES

EXCAVATION & EMBANKMENT INCLUDED WITH MSE WALL B QUANTITIES

UNCLASSIFIED EXCAVATION INCLUDED WITH HAM-562-0004 BRIDGE QUANTITIES

BRIDGE APPROACH SLAB SECTION
STRUCTURE HAM-562-0004



EMBANKMENT INCLUDED WITH MSE WALL B QUANTITIES

EXCAVATION & EMBANKMENT INCLUDED WITH MSE WALL B QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
60	173	0	458	55	446
42	1391	99	345	0	0
31	114	27	146	34	280
	1678			89	726

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMP M
STA. 416+56.45 TO STA. 420+24.75

HAM-75-7.85

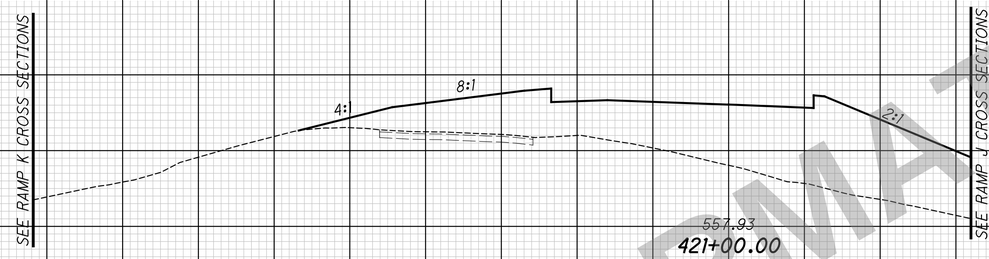
646
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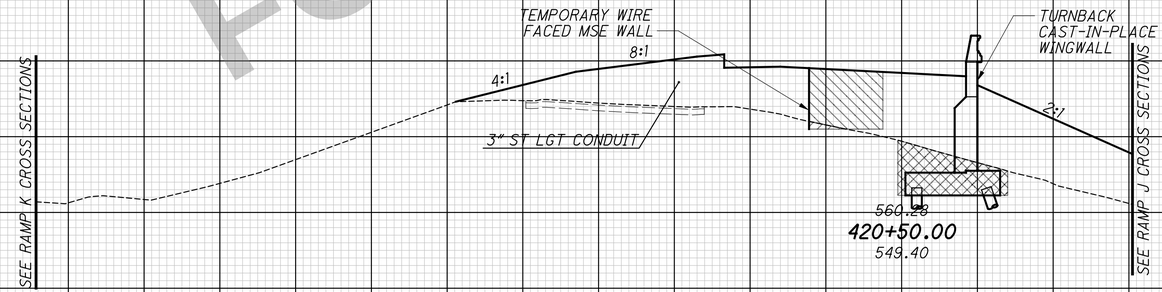
FOR INFORMATION ONLY

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES







EMBANKMENT INCLUDED WITH MSE WALL B QUANTITIES

EXCAVATION & EMBANKMENT INCLUDED WITH MSE WALL B QUANTITIES

UNCLASSIFIED EXCAVATION INCLUDED WITH HAM-562-0004 BRIDGE QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
53	311	0	466	0	980
59	328	0	592	0	1013
59	168	0	502	0	449
	807			0	2442

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMP M
STA. 420+50.00 TO STA. 421+50.00

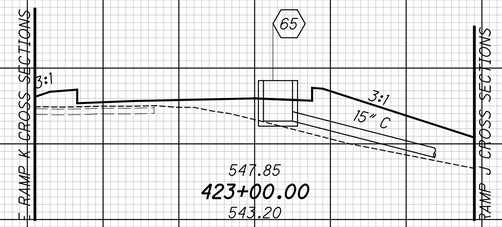
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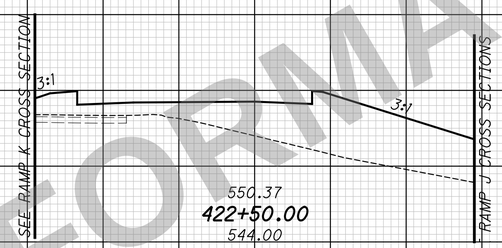
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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES







SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
31	172	0	195	0	433
31	233	0	272	18	589
52	294	19	364	18	768
	699			36	1790

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMP M
STA. 422+00.00 TO STA. 423+00.00

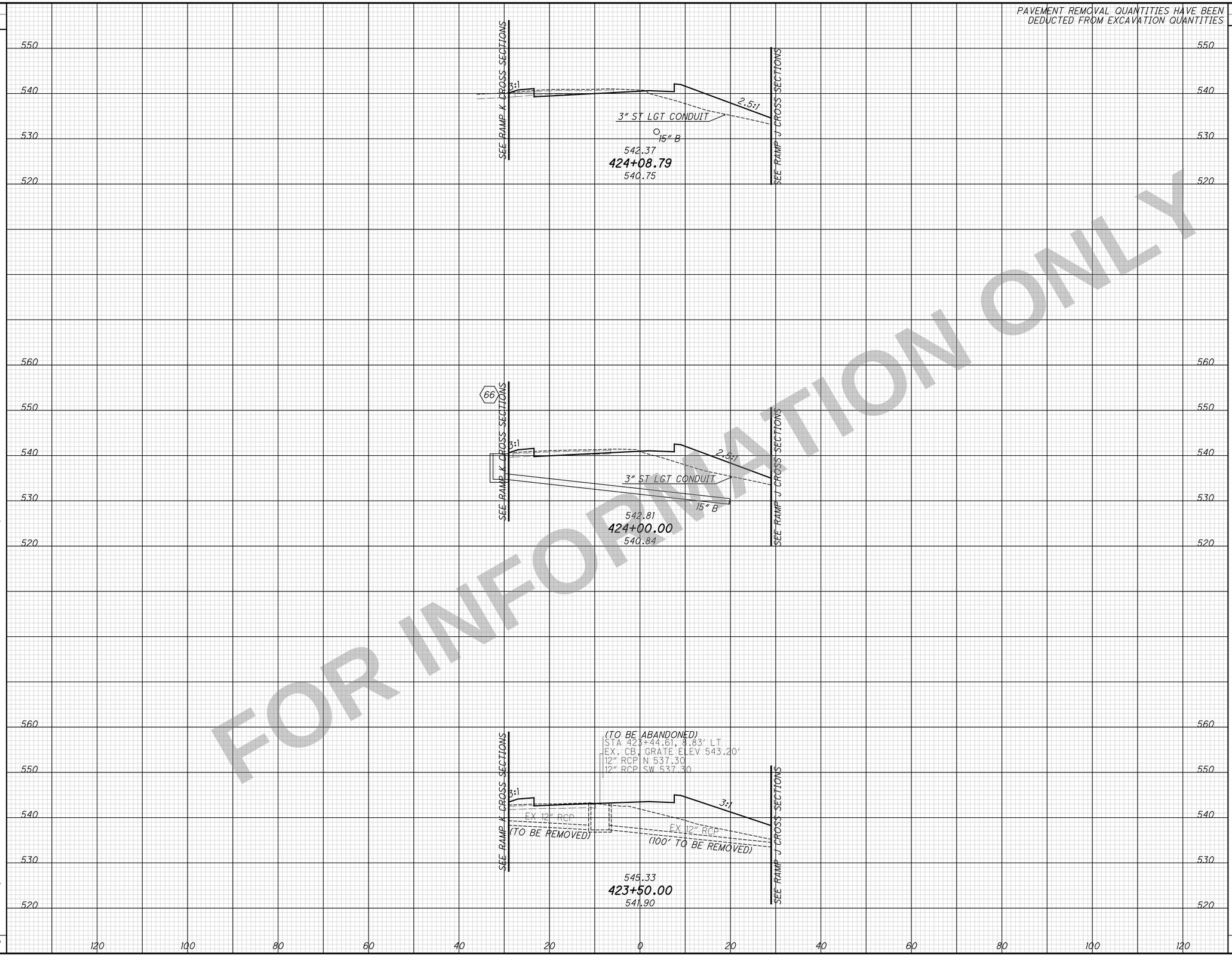
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648
2017

FOR INFORMATION ONLY

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
32	31	6	77	2	26
32	178	4	83	4	208
31	172	0	142	0	312
	381			6	546

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMP M
STA. 423+50.00 TO STA. 424+08.79

HAM-75-7.85

649
2017

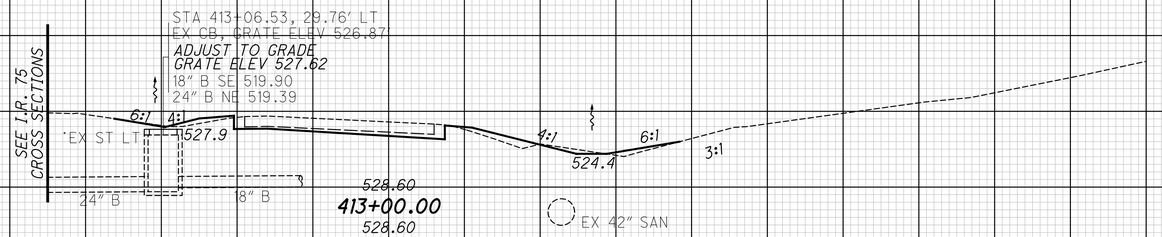
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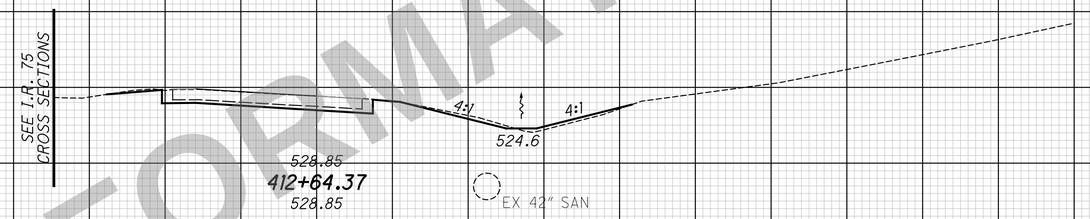
FOR INFORMATION ONLY

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
50	190	19	15	27	13
45	0	23	5	0	0
	190			27	13

CALCULATED SEA
CHECKED DLR





FOR INFORMATION ONLY

CROSS SECTIONS RAMP N
STA. 412+64.37 TO STA. 413+00.00

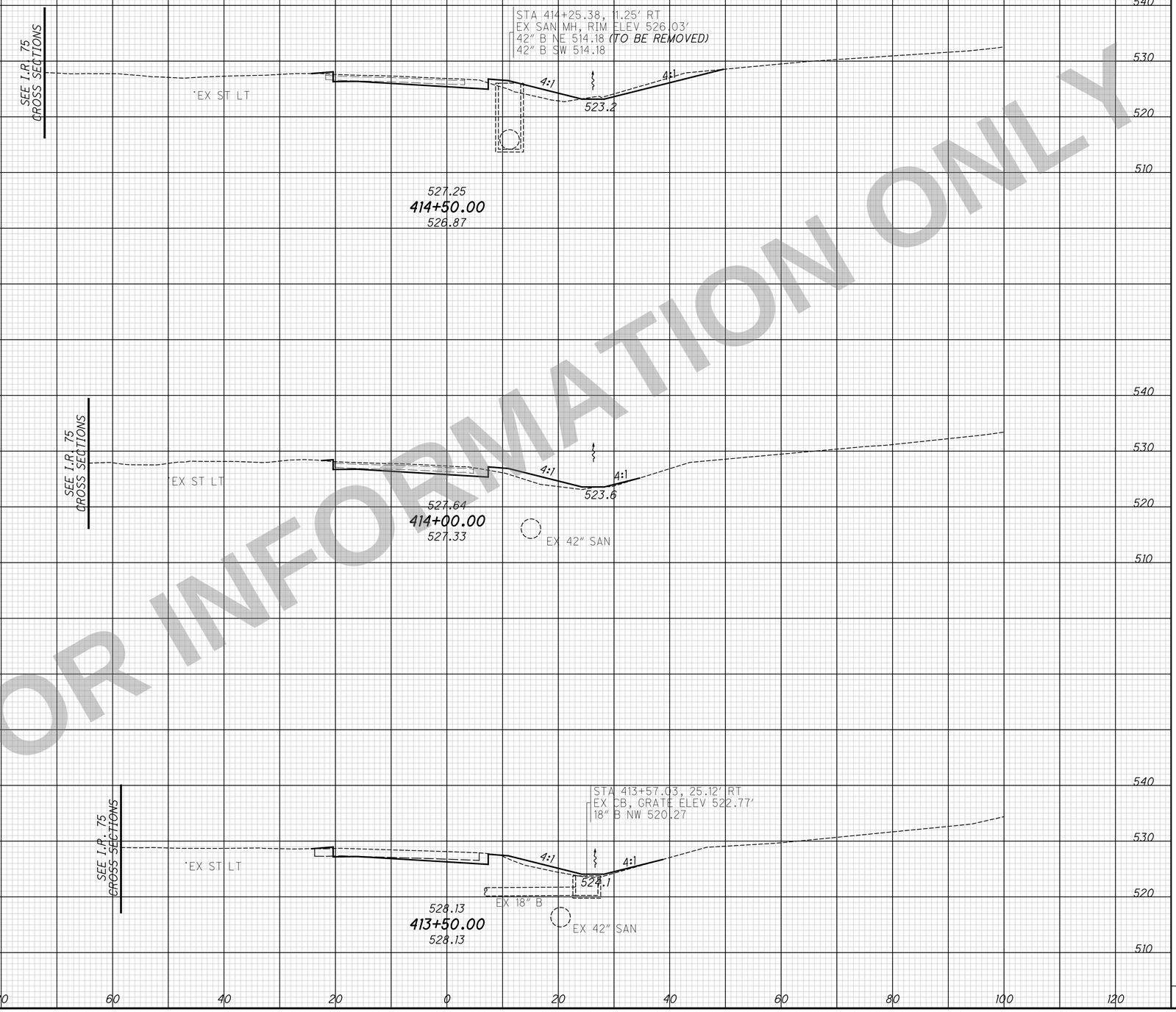
HAM-75-7.85

650
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING		END AREA		VOLUME		CALCULATED	CHECKED
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL	SEA	DLR
50	228	29	24	39	39		
32	194	14	19	23	35		
38	244	11	19	28	31		
	666			90	105		



FOR INFORMATION ONLY

CROSS SECTIONS RAMP N
STA. 413+50.00 TO STA. 414+50.00

HAM-75-7.85

651
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
47	266	10	110	26	162
48	278	18	65	41	99
50	283	27	42	51	61
	827			118	322

CALCULATED SEA
CHECKED DLR

SEE RAMP J CROSS SECTIONS

8:1 4:1 4:1

EX ST LT

523.4

527.46
416+00.00
523.78

SEE I.R. 75 CROSS SECTIONS

24" B

*EX ST LT

8:1 4:1 4:1

523.1

527.16
415+50.00
525.78

(TO BE REMOVED)
STA 414+90.89, 2.12' LT
EX SAN MH, RIM ELEV 526.41'
42" TYPE B NE 514.81
42" TYPE B SE 514.81
12" RCP E 515.71

(TO BE REMOVED)
STA 415+06.20, 18.64' RT
EX CB, GRATE ELEV 522.29'
12" RCP NE 517.81

75

SEE I.R. 75 CROSS SECTIONS

*EX ST LT

8:1 4:1 4:1

523.0

24" B

EX 42" SAN

EX 12" RCP (TO BE REMOVED)

527.09
415+00.00
526.29

540 530 520 510 500

120 100 80 60 40 20 0 20 40 60 80 100 120

FOR INFORMATION ONLY

CROSS SECTIONS RAMP N
STA. 415+00.00 TO STA. 416+00.00

HAM-75-7.85

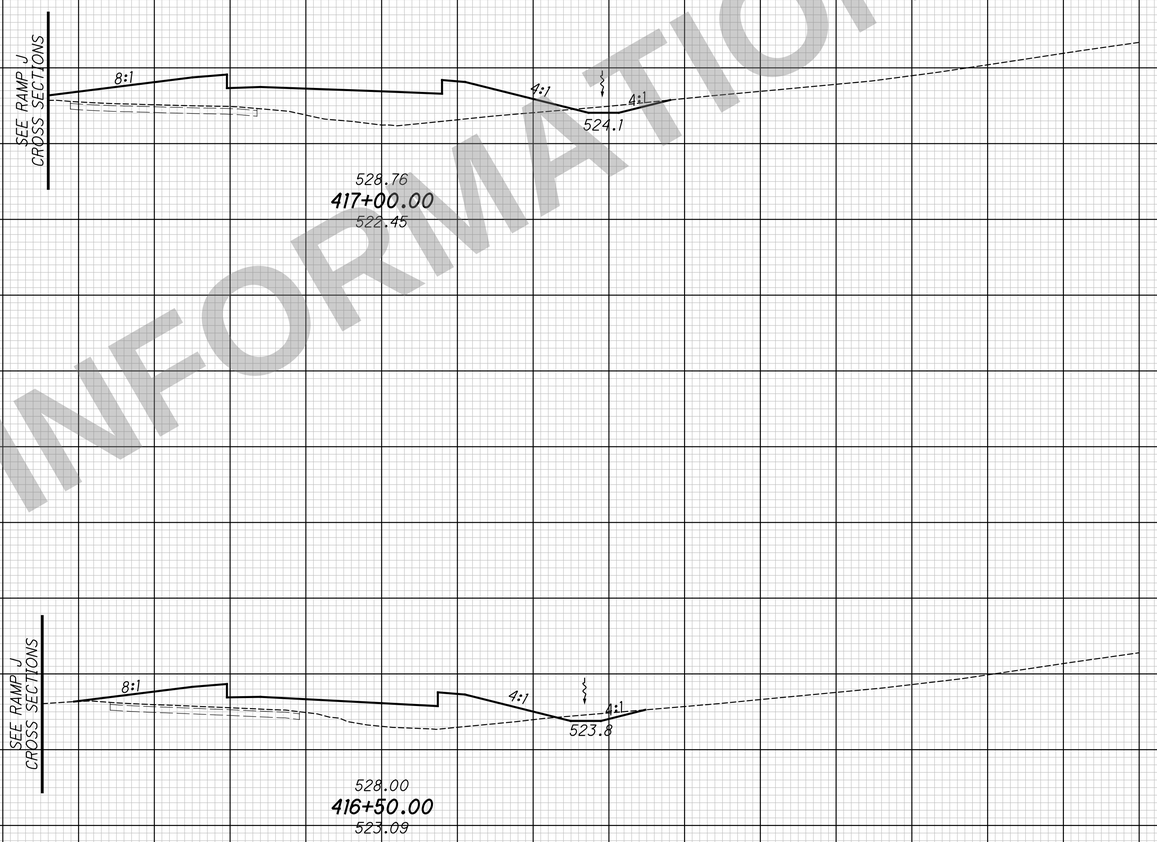
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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
57	305	7	241	13	374
51	278	7	164	16	254
	583			29	628

CALCULATED SEA
CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS RAMP N
STA. 416+50.00 TO STA. 417+00.00

HAM-75-7.85

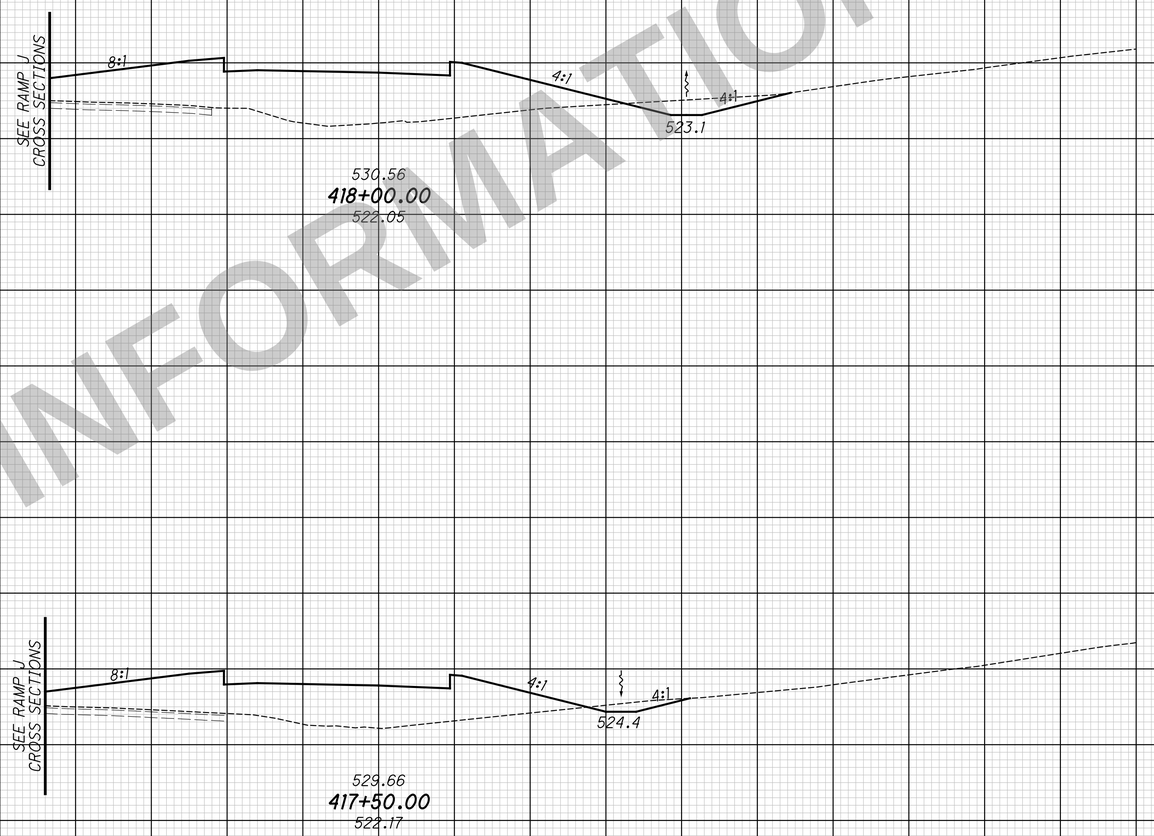
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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
73	367	25	406	33	672
59	322	10	320	16	519
	689			49	1191

CALCULATED SEA
CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS RAMP N
STA. 417+50.00 TO STA. 418+00.00

HAM-75-7.85

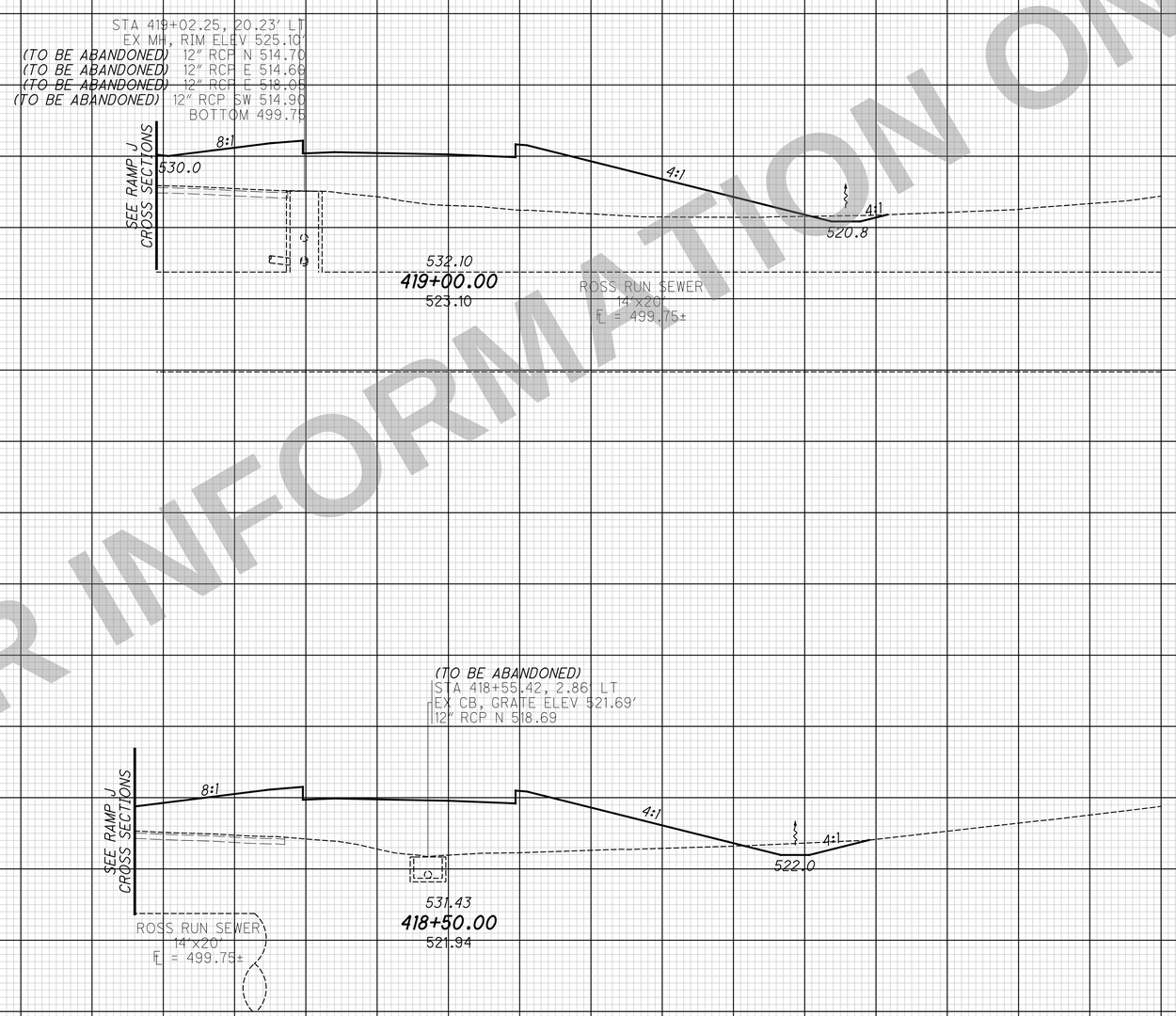
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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
77	433	6	537	22	961
77	417	17	500	40	839
	850			62	1800

CALCULATED SEA
CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS RAMP N
STA. 418+50.00 TO STA. 419+00.00

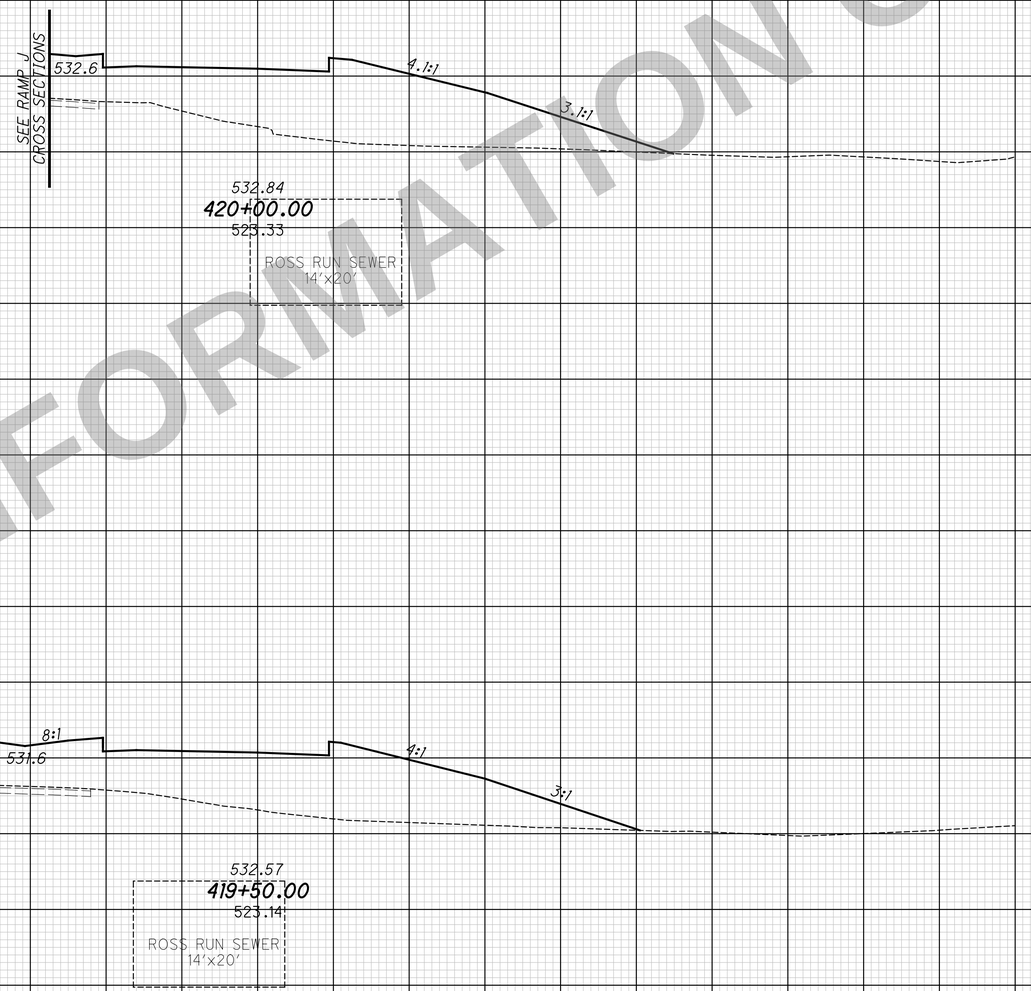
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655
2017

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SEEDING END WIDTH	SEEDING SQ. YDS.
57	328
59	384
	712

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0	532		
		0	987
0	534		
		5	992
		5	1979

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMP N
STA. 419+50.00 TO STA. 420+00.00

HAM-75-7.85

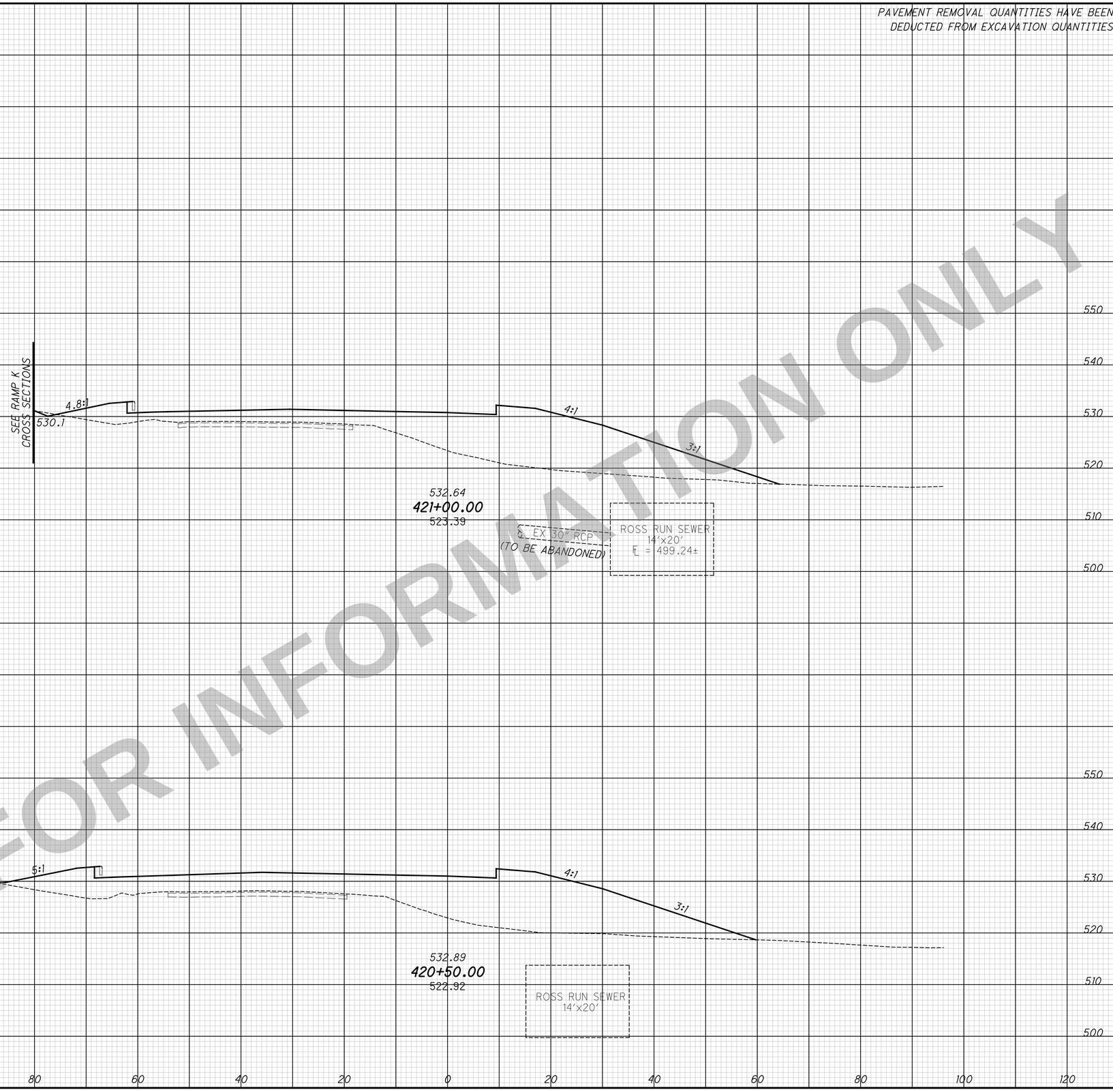
656
2017

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SEEDING END WIDTH	SEEDING SQ. YDS.
79	478
92	417
	895

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1	711		
		10	1411
9	812		
		9	1245
		19	2656

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMP N
STA. 420+50.00 TO STA. 421+00.00

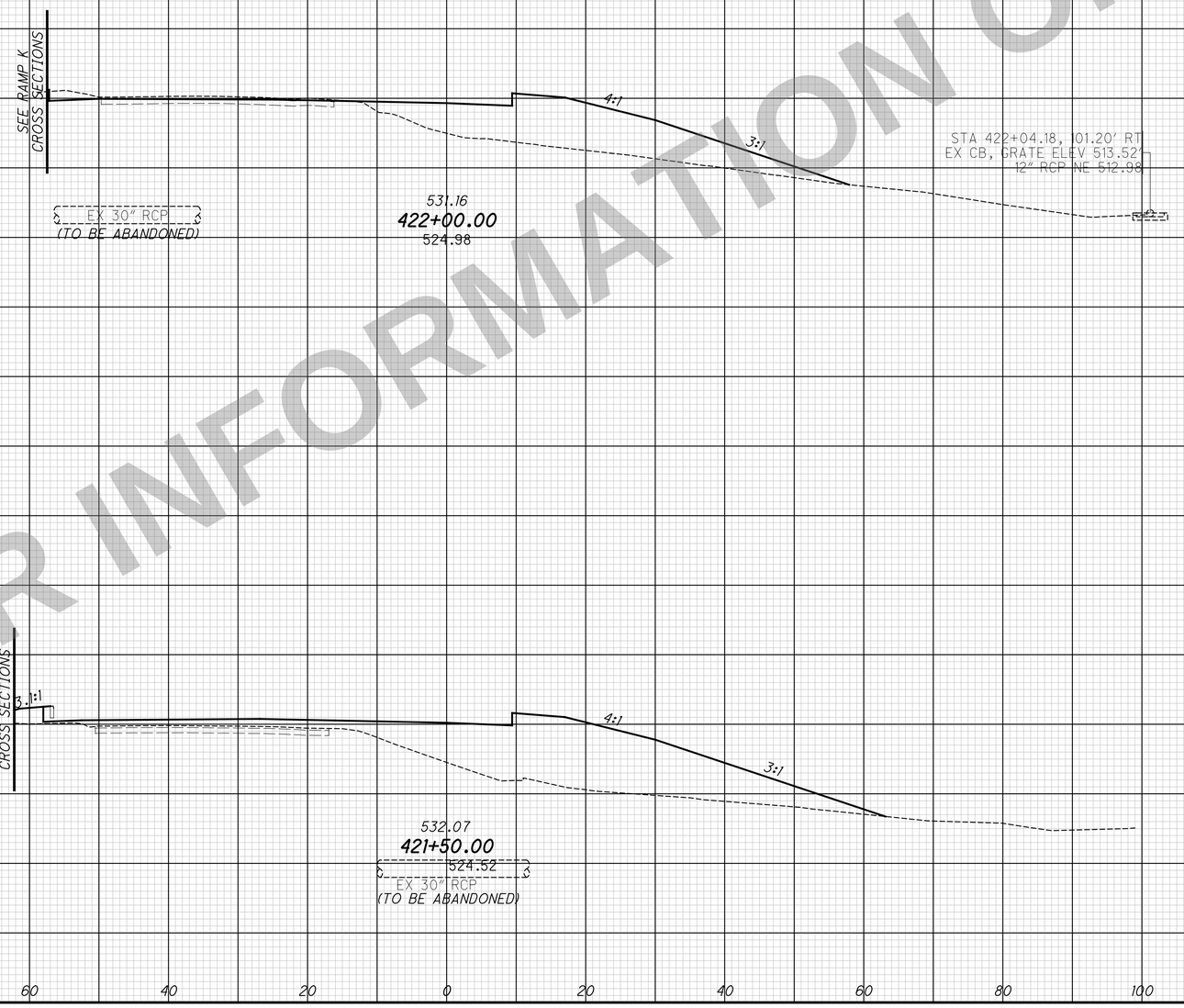
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657
2017

FOR INFORMATION ONLY

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
54	328	8	315	7	772
62	394	0	519	1	1139
	722			8	1911

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMP N
STA. 421+50.00 TO STA. 422+00.00

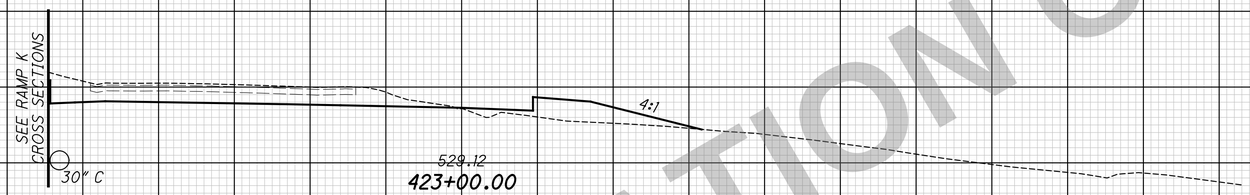
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658
2017

FOR INFORMATION ONLY

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES





SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
26	167	83	46	110	149
34	244	35	115	40	398
	411			150	547

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMP N
STA. 422+50.00 TO STA. 423+00.00

HAM-75-7.85

659
2017

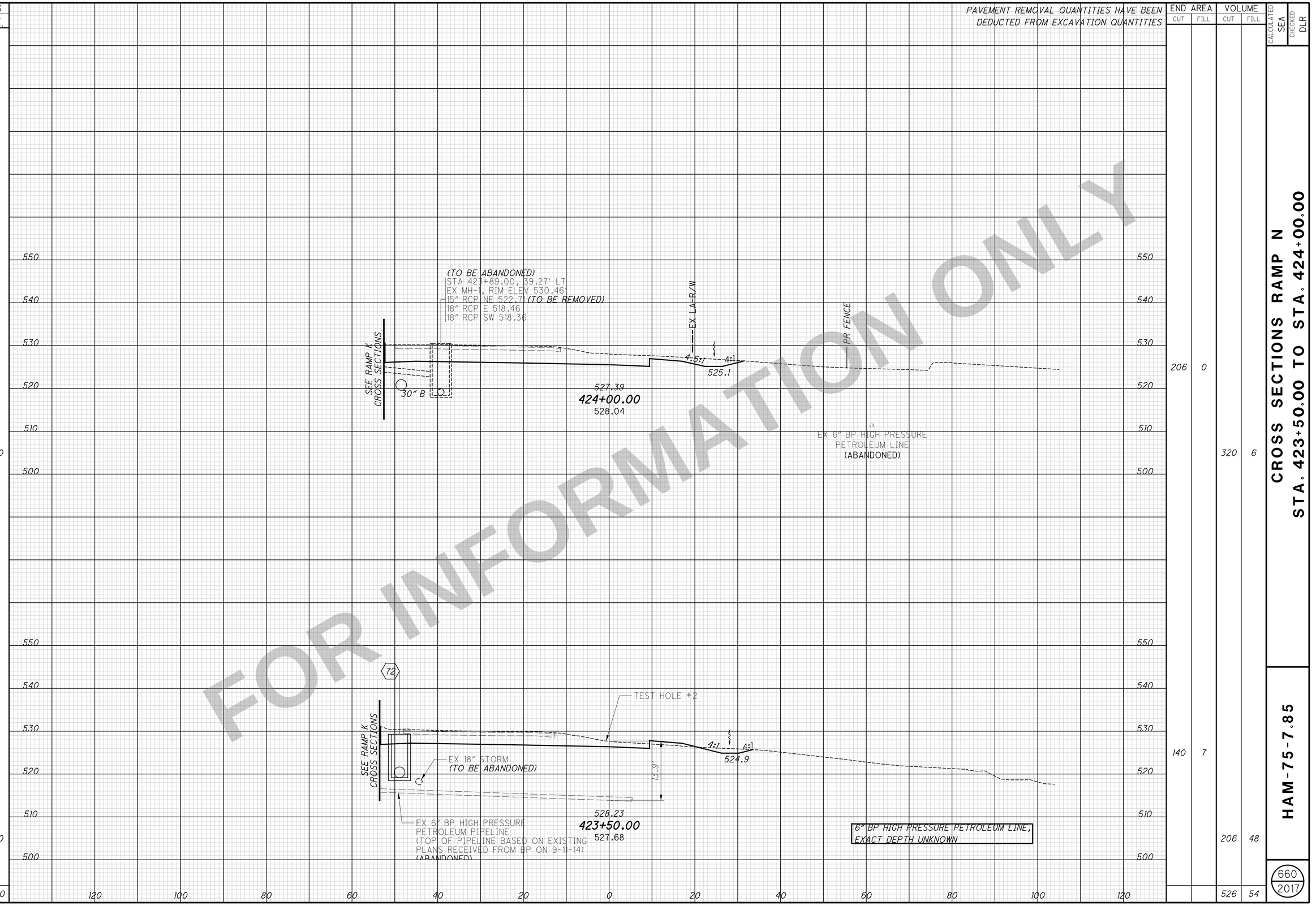
FOR INFORMATION ONLY

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SEEDING END WIDTH	SEEDING SQ. YDS.
26	150
28	150
	300

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
206	0		
		320	6
140	7		
		206	48
		526	54

CALCULATED SEA
CHECKED DLR

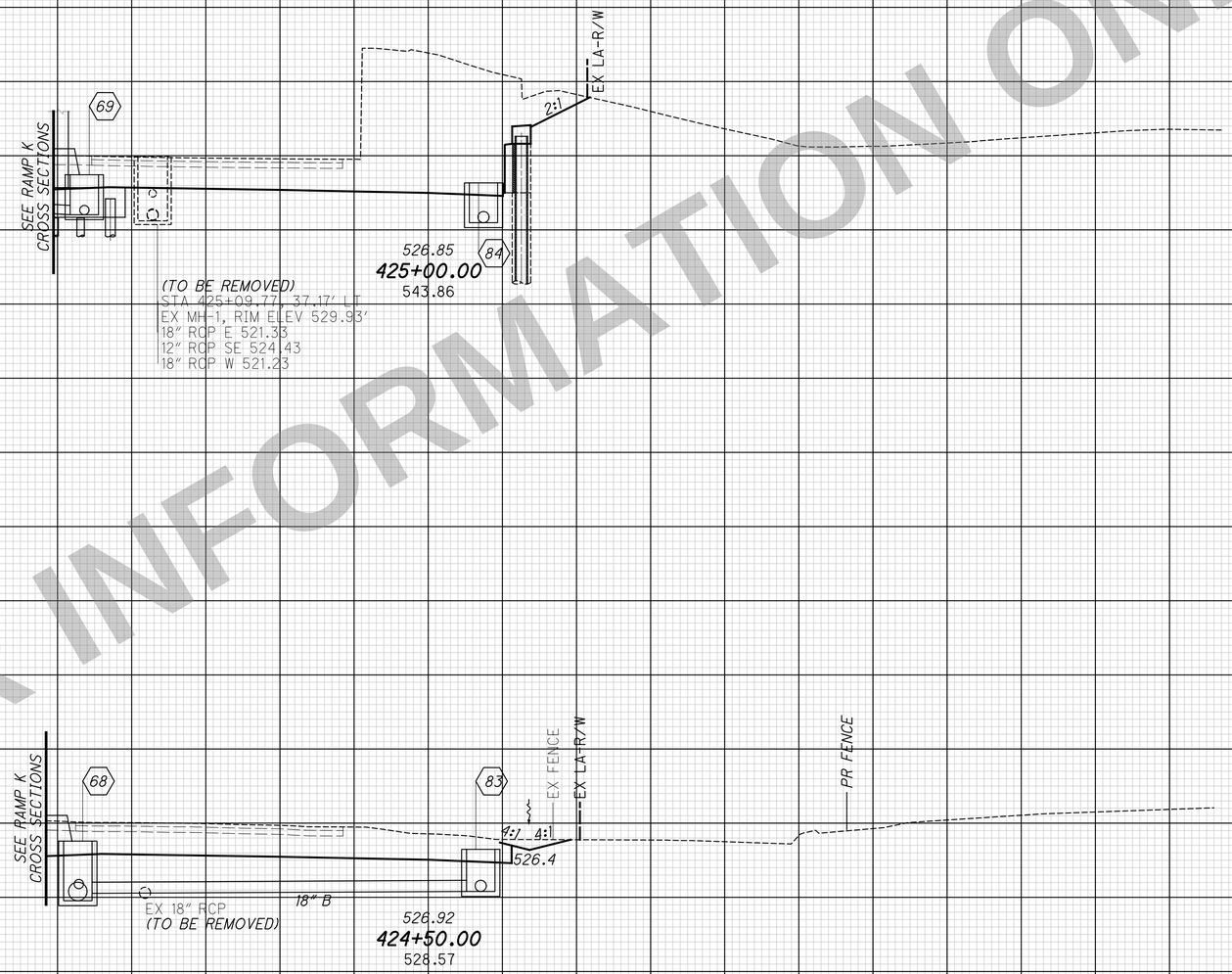
CROSS SECTIONS RAMP N
STA. 423+50.00 TO STA. 424+00.00

HAM-75-7.85

660
2017

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
9	56	491	0	651	0
10	100	212	0	387	0
	156			1038	0

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

CALCULATED SEA
CHECKED DLR

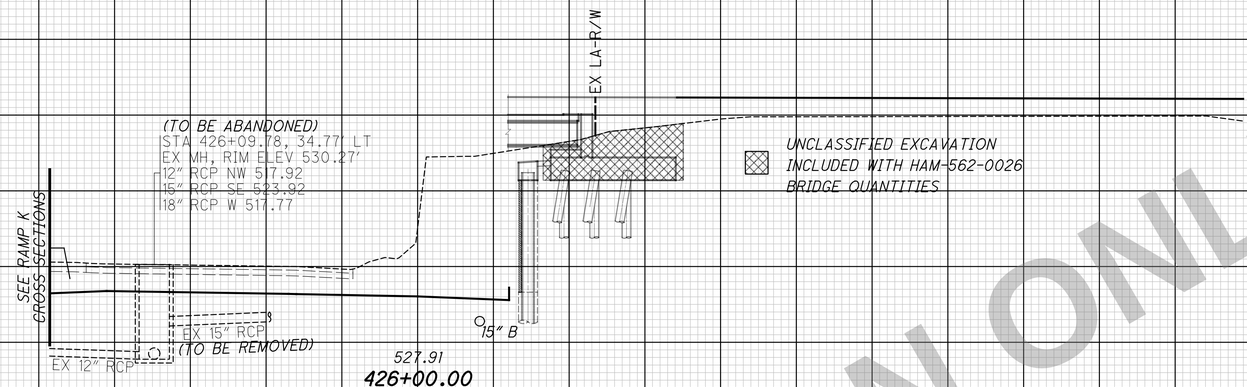
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STA. 424+50.00 TO STA. 425+00.00

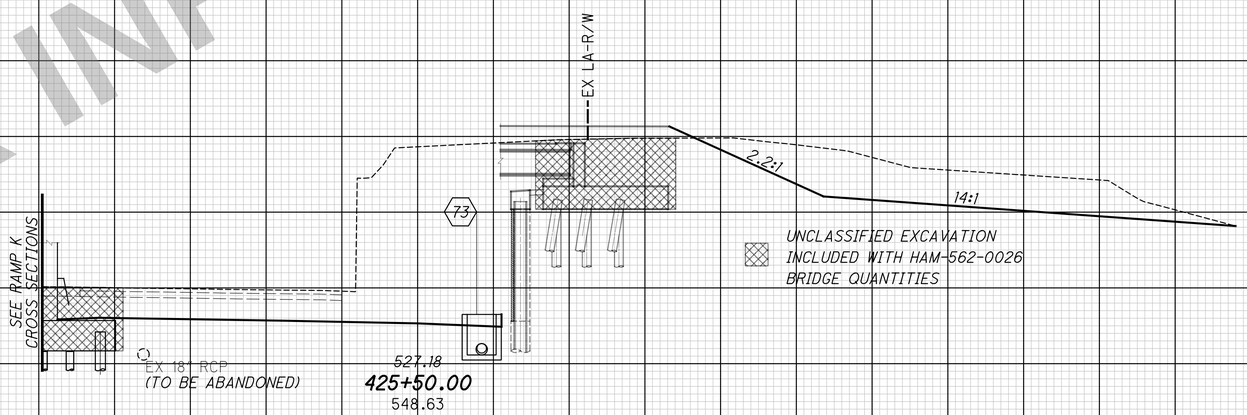
HAM-75-7.85

661
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES





FOR INFORMATION ONLY

SEEDING END WIDTH	SEEDING SQ. YDS.
0	0
0	28
28	

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
376	0		
		866	0
560	0		
		973	0
		1839	0

CALCULATED SEA
CHECKED DLR

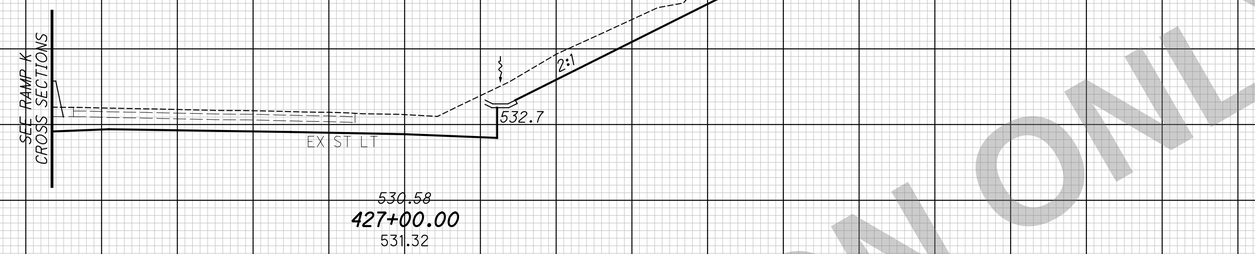
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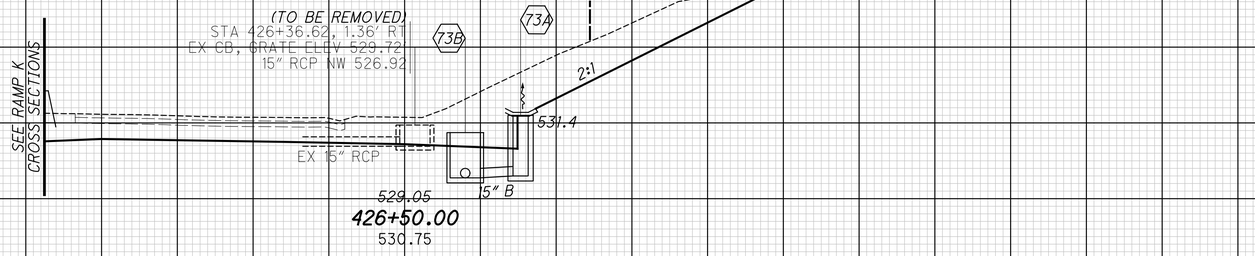
HAM-75-7.85

662
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES





FOR INFORMATION ONLY

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
33	189	210	0	511	0
34	94	343	0	665	0
	283			1176	0

CALCULATED SEA
CHECKED DLR

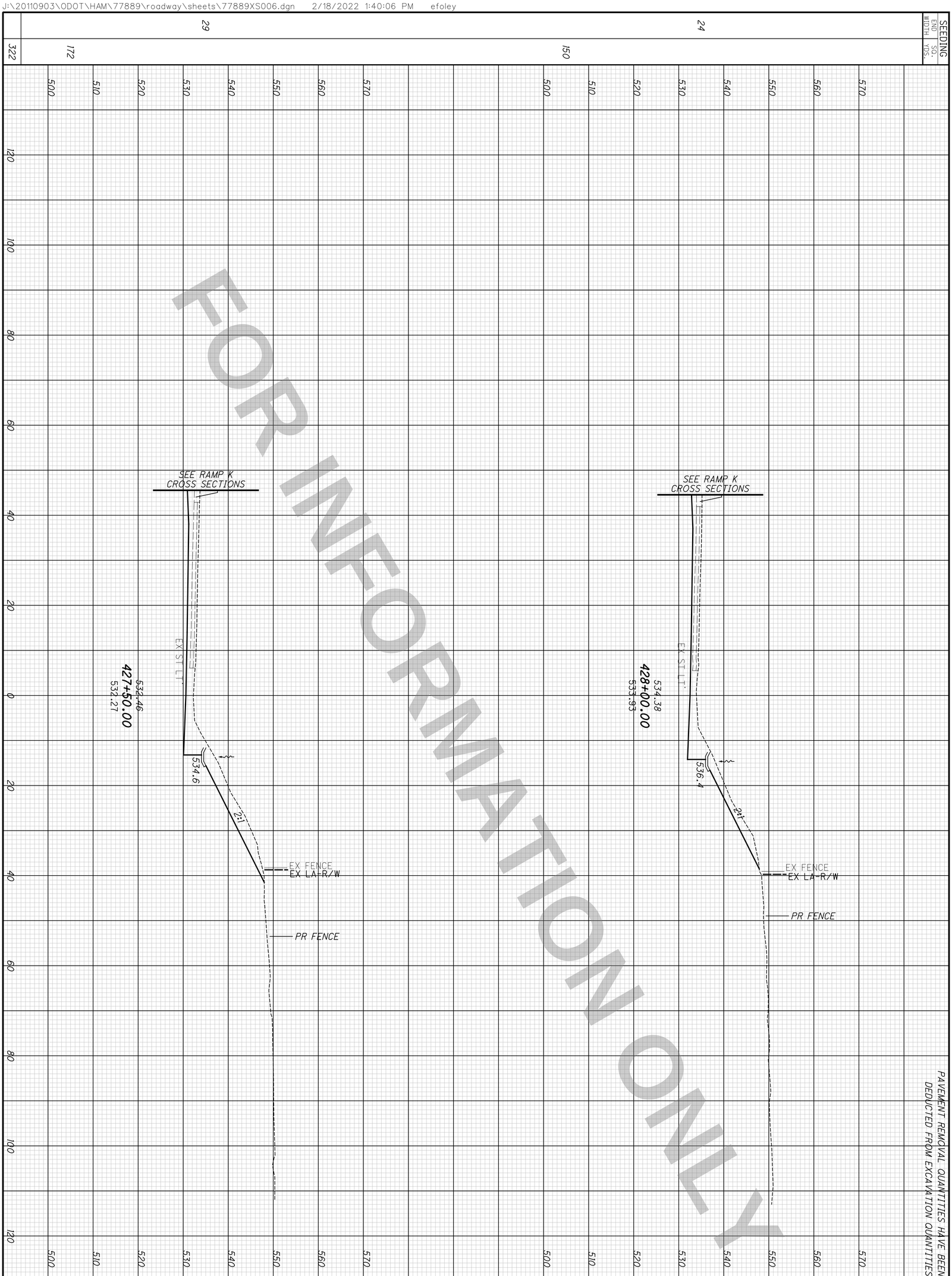
CROSS SECTIONS RAMP N
STA. 426+50.00 TO STA. 427+00.00

HAM-75-7.85

663
2017

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SEEDING			
	END WIDTH	SQ. YDS.	
29	172	322	
24	150		

	END AREA	VOLUME
	CUT	FILL
162	0	
115	0	
345	0	602
257	0	0

664 2017

HAM-75-7.85

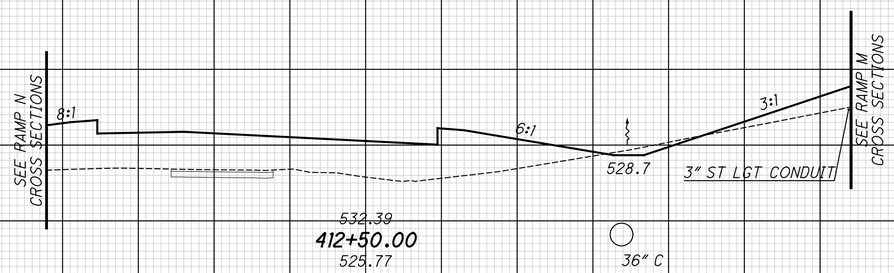
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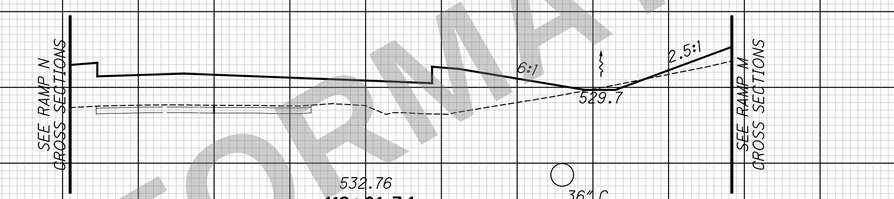
CALCULATED SEA
CHECKED DLR

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
65	308	7	373	9	607
47	0	2	301	0	0
	308			9	607

CALCULATED SEA
CHECKED DLR





FOR INFORMATION ONLY

CROSS SECTIONS RAMPJ
STA. 412+01.34 TO STA. 412+50.00

HAM-75-7.85

665
2017

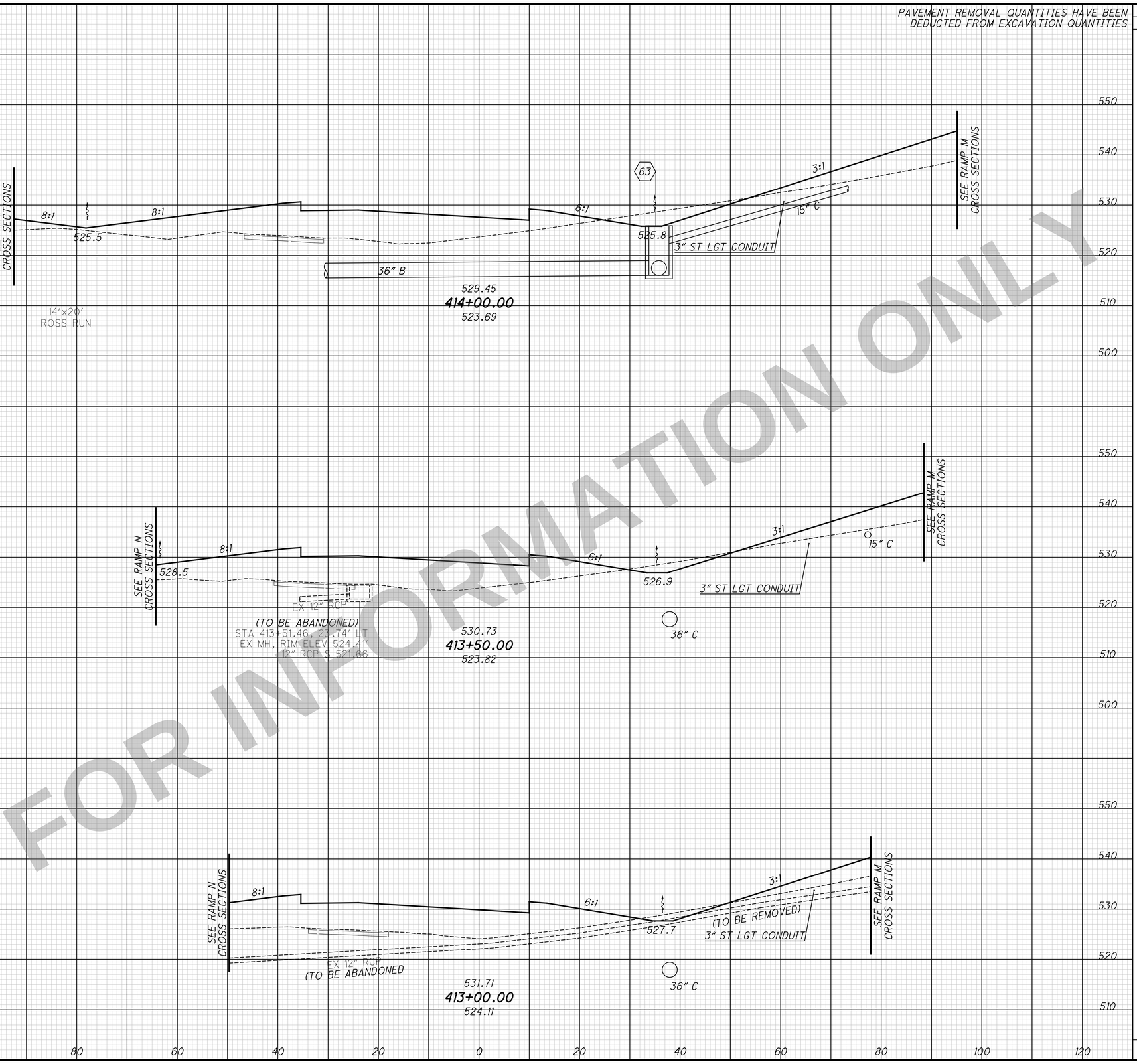
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FOR INFORMATION ONLY

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
148		46	592		
	728			63	1062
112		22	555		
	556			33	949
87		14	470		
	423			19	780
	1707			115	2791

CALCULATED SEA
CHECKED DLR



CROSS SECTIONS RAMP J
STA. 413+00.00 TO STA. 414+00.00

HAM-75-7.85

666
2017

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SEEDING END WIDTH	SEEDING SQ. YDS.
158	916
ST LT 171	994
187	934
	2844

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEE RAMP M CROSS SECTIONS

8:1 8:1 519.0 36" C

APPROXIMATE LOCATION OF PROPOSED STORM WATER DETENTION TO BE DESIGNED BY CONTRACTOR. SEE GENERAL NOTE SHEET 40

8:1 3:1 2.5:1 522.0

523.85
415+50.00
522.97

8:1 8:1 520.5 36" C

14'x20' ROSS RUN

8:1 6:1 2.5:1 523.4

3" ST LGT CONDUIT

525.96
415+00.00
523.17

SEE RAMP N CROSS SECTIONS

62

8:1 8:1 521.7

36" C 36" B

14'x20' ROSS RUN

8:1 6:1 3:1 524.8

3" ST LGT CONDUIT

527.86
414+50.00
523.71

SEE RAMP M CROSS SECTIONS

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
166	337	275	720
131	441	233	892
120	523	154	1032
		662	2644

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMP J
STA. 414+50.00 TO STA. 415+50.00

HAM-75-7.85

667
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
85	583	581	76	824	221
124	789	309	162	440	462
	1372			1264	683

CALCULATED SEA
CHECKED DLR

SEE I.R. 75 CROSS SECTIONS

APPROXIMATE LOCATION OF PROPOSED STORM WATER DETENTION TO BE DESIGNED BY CONTRACTOR. SEE GENERAL NOTE SHEET 40

8:1 4:1 517.3

12" RCP (TO BE ABANDONED)

21" C

519.60
416+50.00
524.16

8:1 3:1 2:1 517.7

SEE RAMP M CROSS SECTIONS

APPROXIMATE LOCATION OF PROPOSED STORM WATER DETENTION TO BE DESIGNED BY CONTRACTOR. SEE GENERAL NOTE SHEET 40

8:1 4:1 518.1

(TO BE ABANDONED)
STA 415+96.97, 42.31' LT
EX CB, GRATE ELEV 519.01'
12" RCP W 517.08

521.73
416+00.00
522.92

8:1 3:1 2:1 519.9

SEE RAMP M CROSS SECTION.

550 540 530 520 510 500

120 100 80 60 40 20 0 20 40 60 80 100 120

FOR INFORMATION ONLY

CROSS SECTIONS RAMPJ
STA. 416+00.00 TO STA. 416+50.00

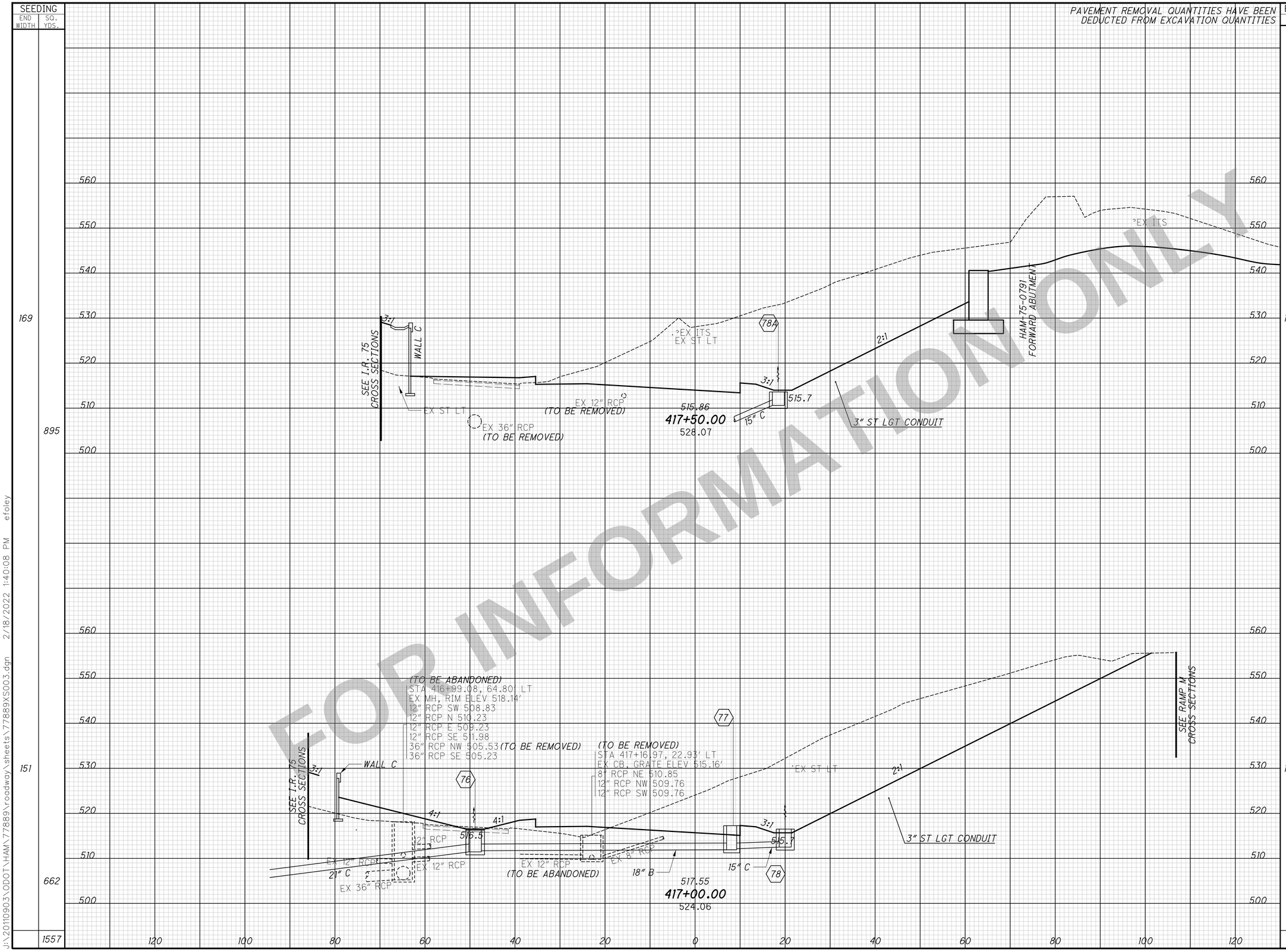
HAM-75-7.85

668
2017

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SEEDING END WIDTH	SEEDING SQ. YDS.
169	
	895
151	
	662
	1557

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1759	44		
		2825	129
1292	95		
		1735	158
		4560	287

CALCULATED SEA
CHECKED DLR

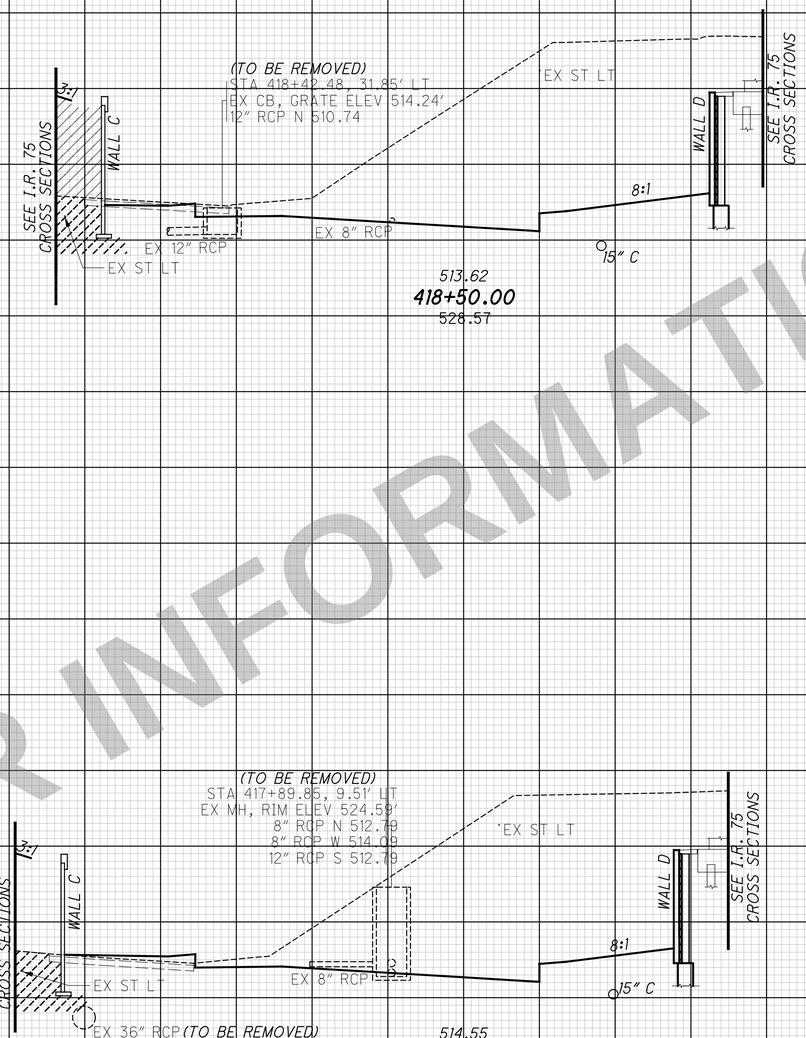
CROSS SECTIONS RAMP J
STA. 417+00.00 TO STA. 417+50.00

HAM-75-7.85

669
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
40	228	911	0	1638	24
40	583	857	26	2423	65
	811			4061	89

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMPJ
STA. 418+00.00 TO STA. 418+50.00

HAM-75-7.85

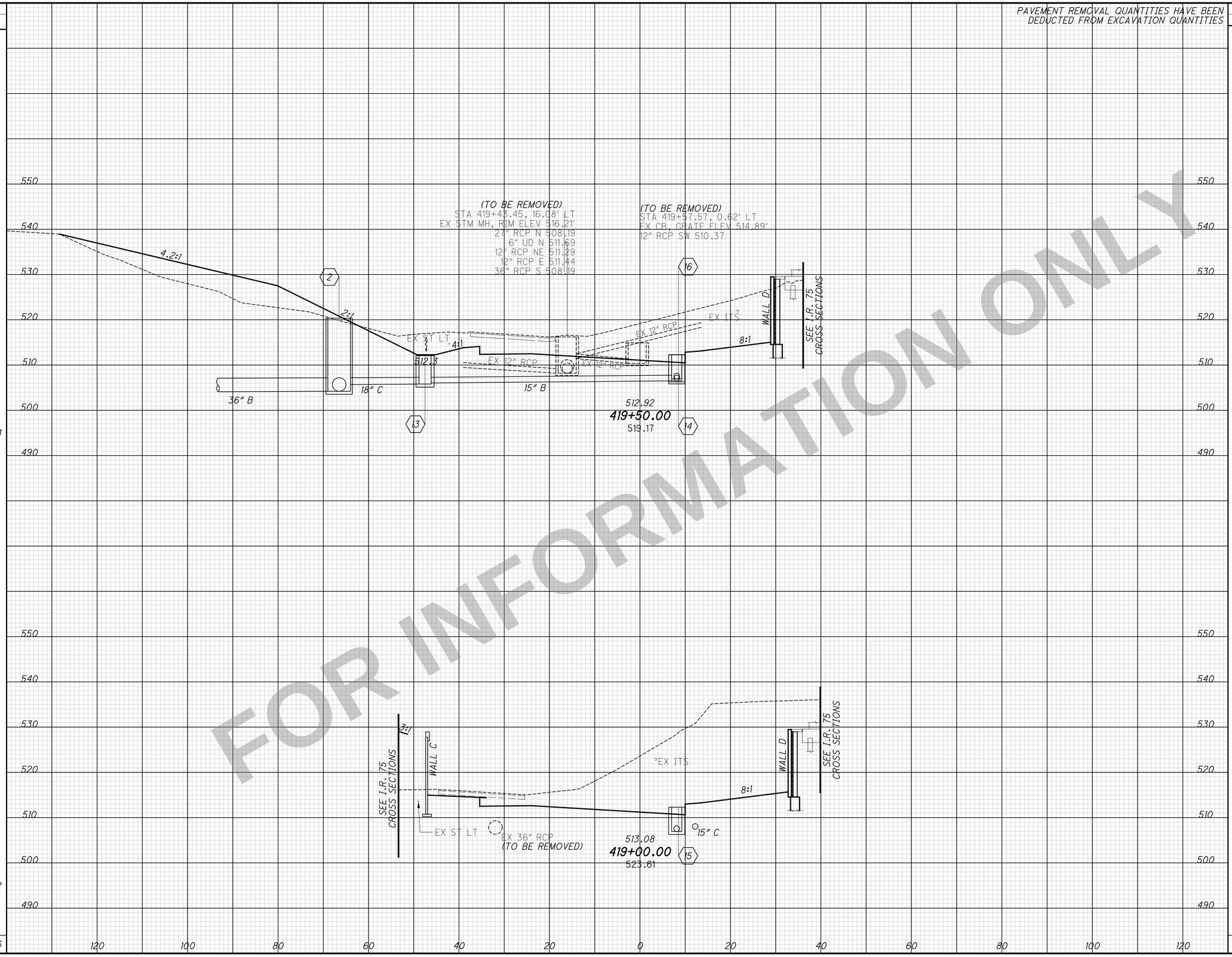
670
2017

FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SQ. YDS.
119	444
40	222
	666

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA		VOLUME	
CUT	FILL	CUT	FILL
528	210		
		1232	194
793	0		
		1578	0
		2810	194

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMPJ
STA. 419+00.00 TO STA. 419+50.00

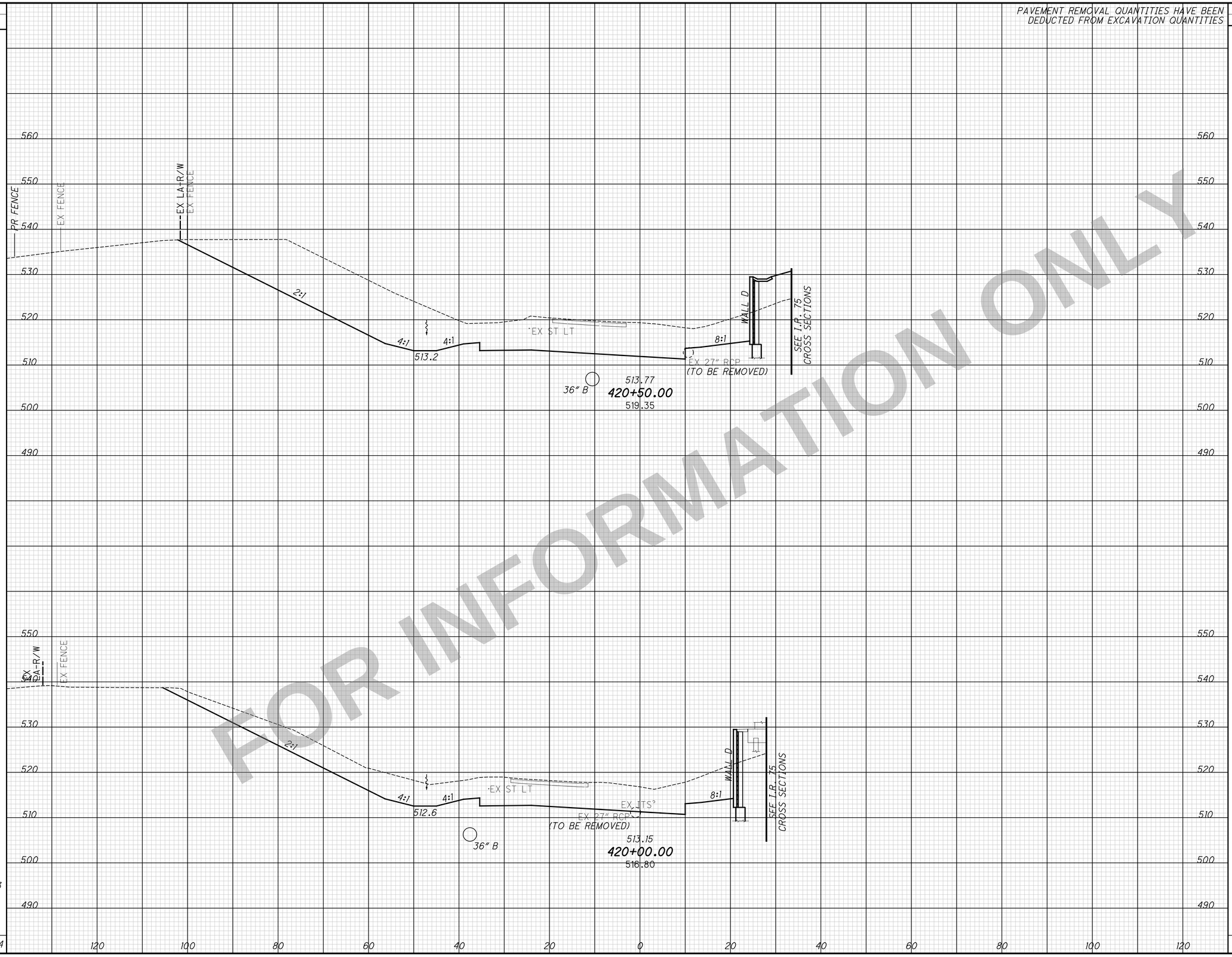
HAM-75-7.85

671
2017

FOR INFORMATION ONLY

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



SEEDING END WIDTH	SEEDING SQ. YDS.
94	511
90	583
	1094

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
964	43	1457	58
609	20	1053	213
		2510	271

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMPJ
STA. 420+00.00 TO STA. 420+50.00

HAM-75-7.85

672
2017

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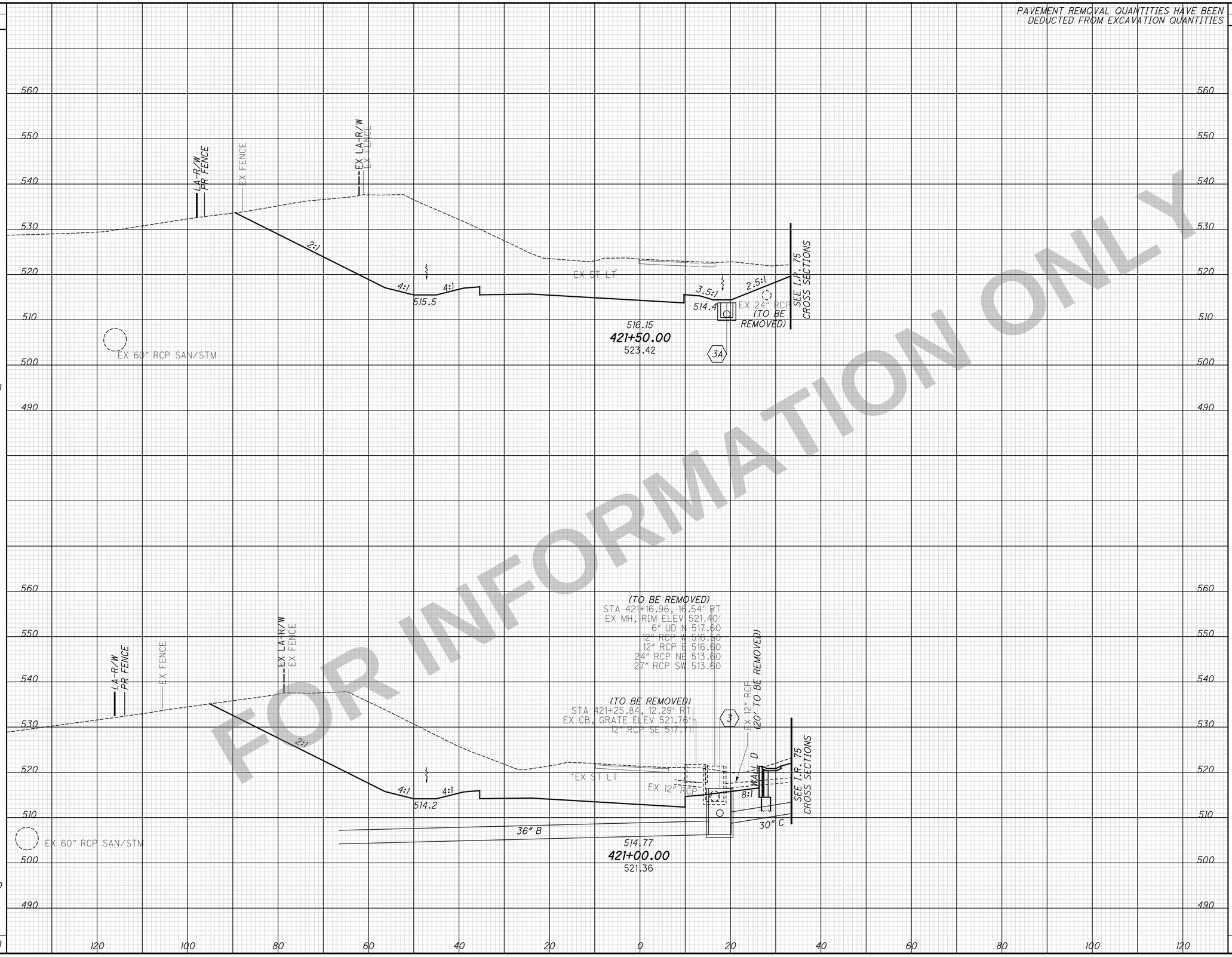
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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.
86	478
86	500
	978

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1297	0		
		2275	0
1160	0		
		1967	40
		4242	40

CALCULATED SEA
CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS RAMPJ
STA. 421+00.00 TO STA. 421+50.00

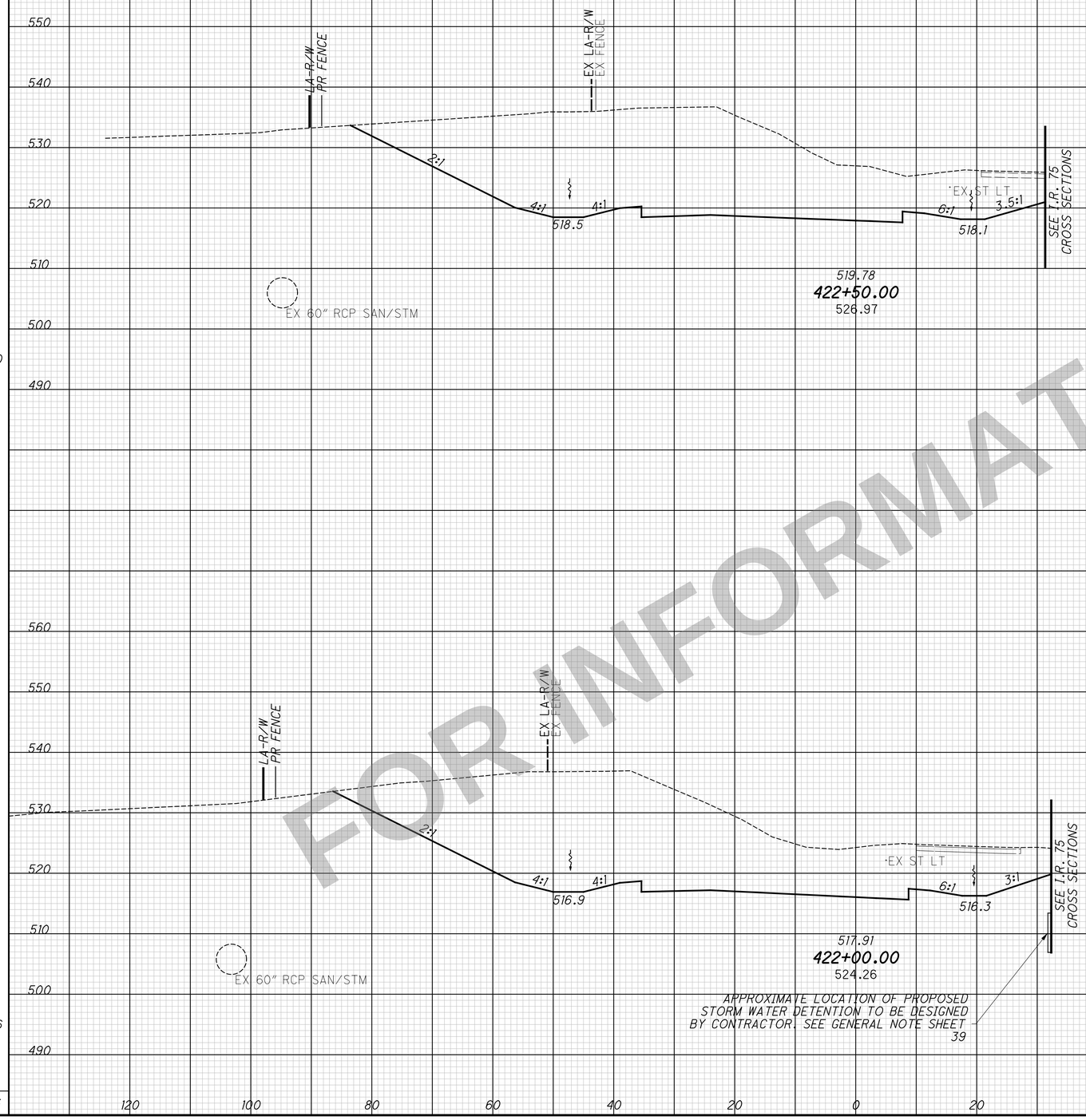
HAM-75-7.85

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

FOR INFORMATION ONLY



SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
79	450	1300	0	2431	0
82	466	1325	0	2428	0
	916			4859	0

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMPJ
STA. 422+00.00 TO STA. 422+50.00

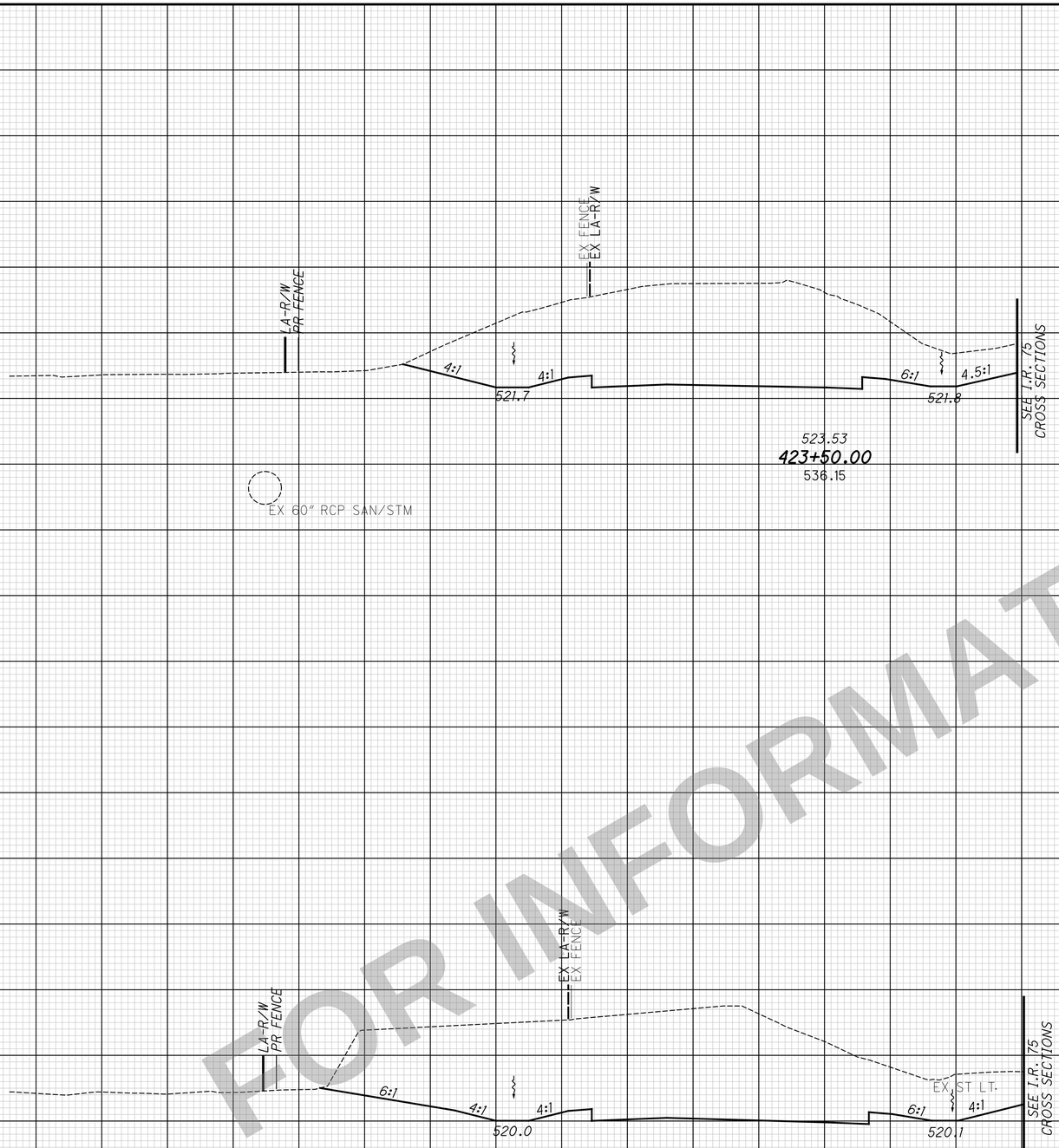
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674
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
56	345	1006	0	2113	0
68	411	1276	0	2385	0
	756			4498	0



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CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMPJ
STA. 423+00.00 TO STA. 423+50.00

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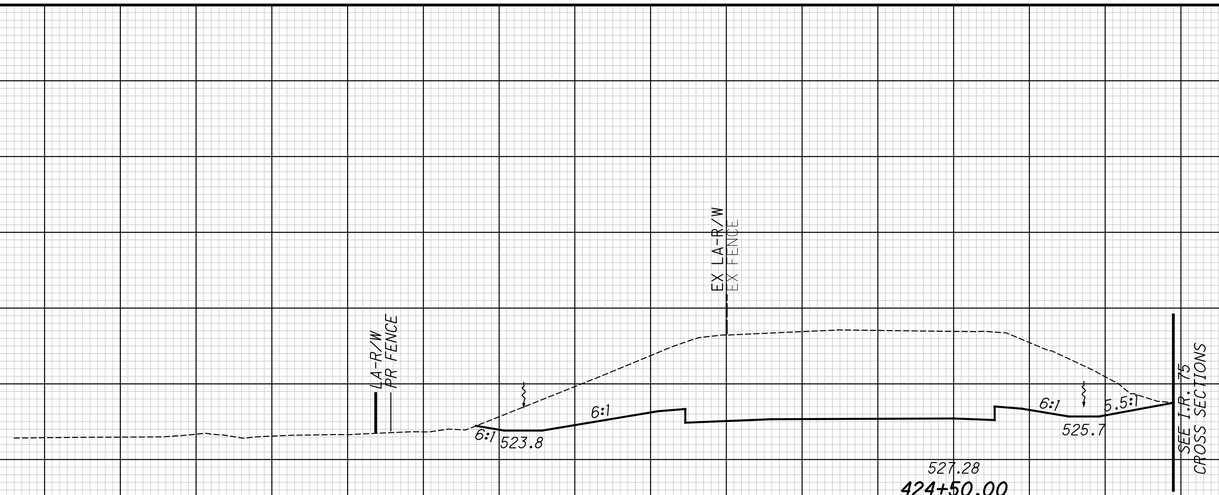
675
2017

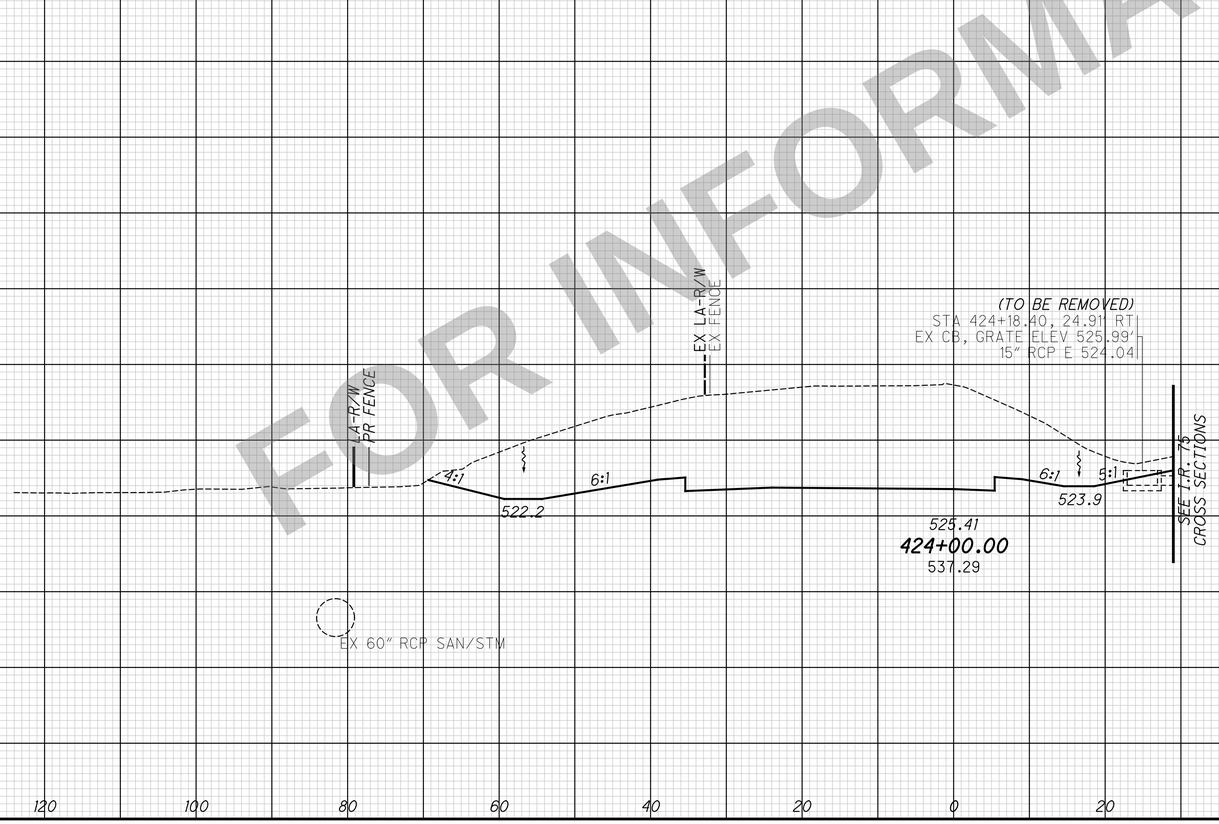
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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
54	322	745	0	1533	0
61	328	910	0	1774	0
	650			3307	0

CALCULATED SEA
CHECKED DLR





FOR INFORMATION ONLY

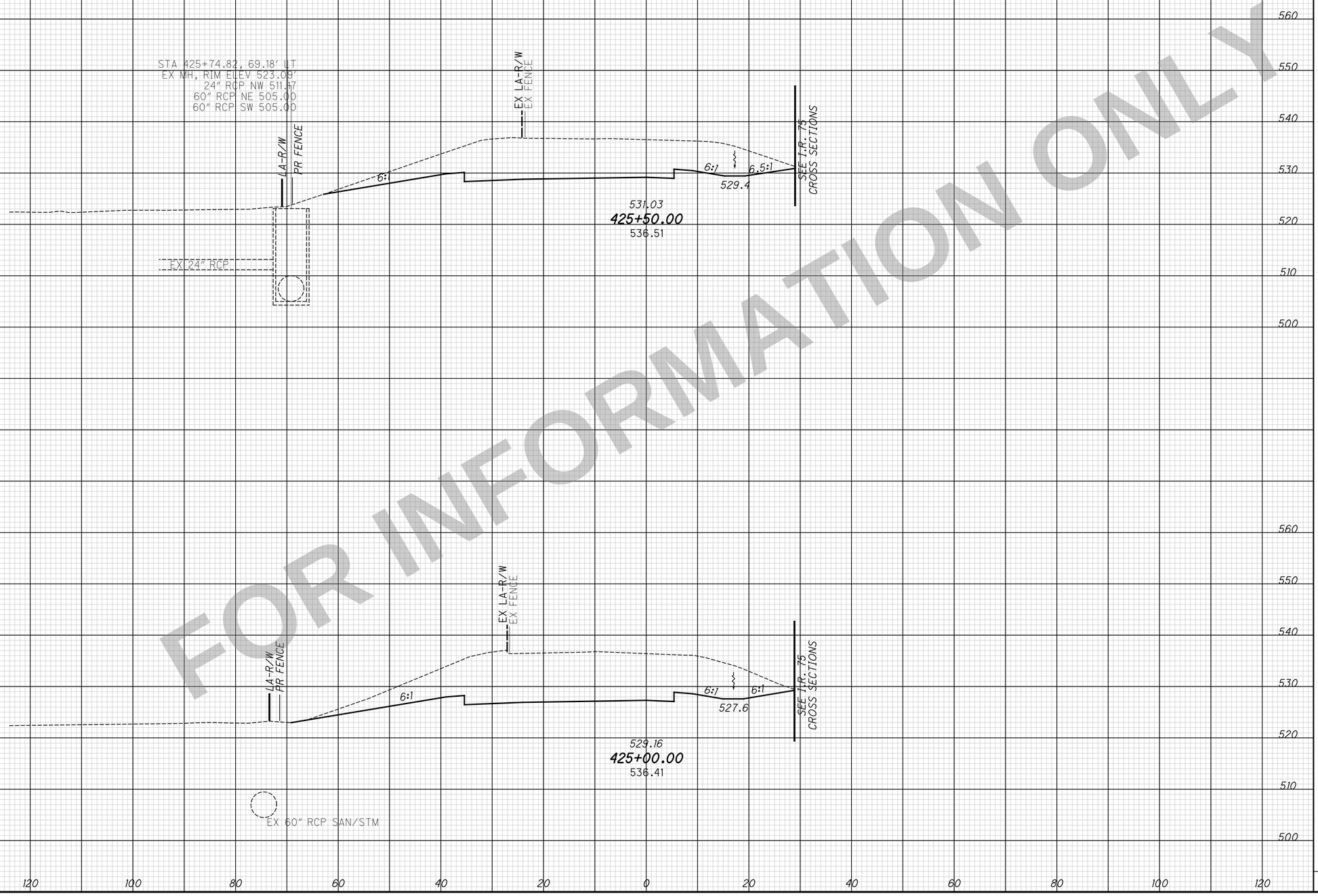
CROSS SECTIONS RAMPJ
STA. 424+00.00 TO STA. 424+50.00

HAM-75-7.85

676
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
54		490	0		
	322			1020	0
61		611	0		
	322			1256	0
	644			2276	0

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMPJ
STA. 425+00.00 TO STA. 425+50.00

HAM-75-7.85

677
2017

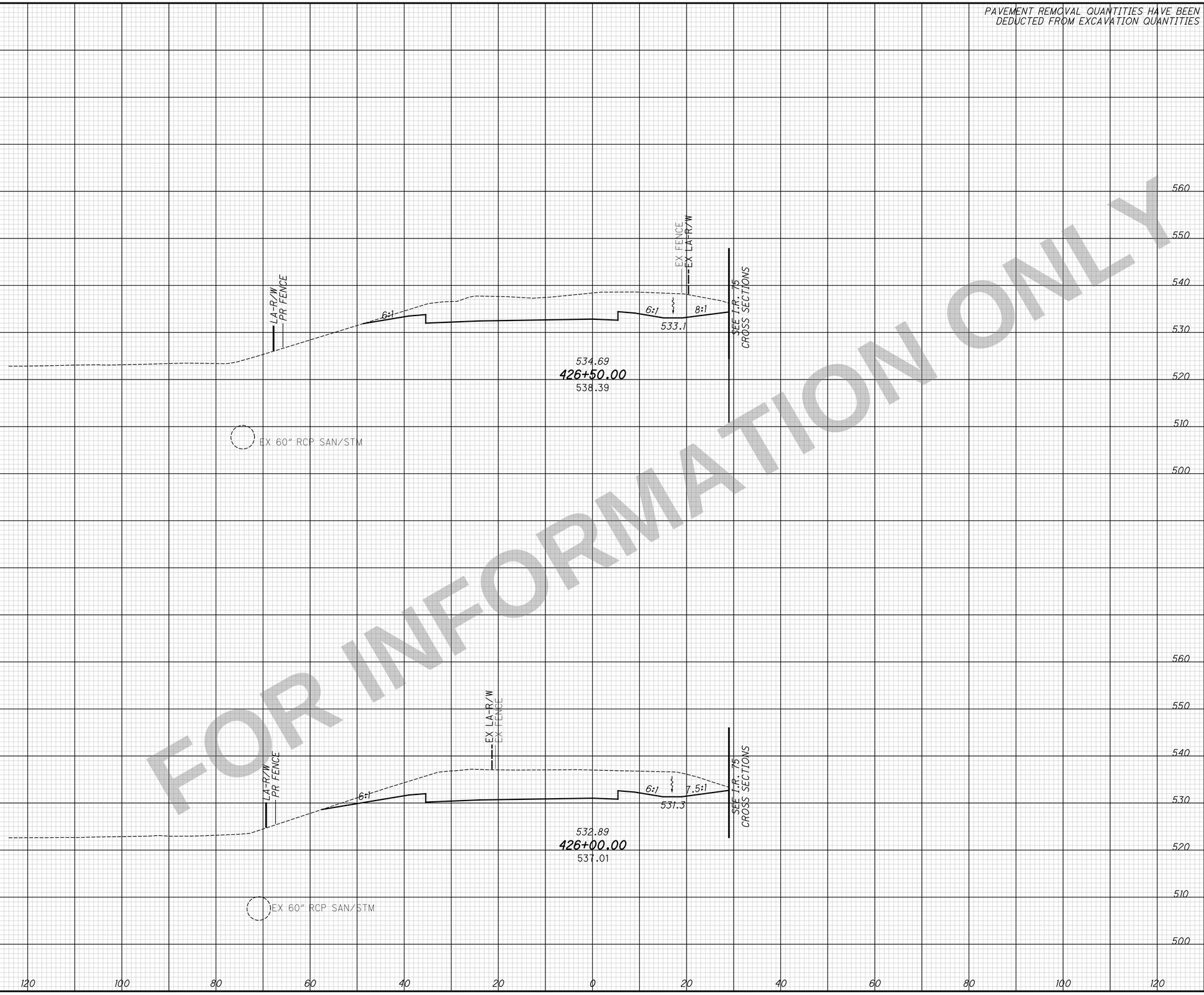
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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
40	250	319	0	655	0
49	289	389	0	814	0
	539			1469	0

CALCULATED SEA
CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS RAMPJ
STA. 426+00.00 TO STA. 426+50.00

HAM-75-7.85

678
2017

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SEEDING	
END WIDTH	SQ. YDS.
39	
35	
35	

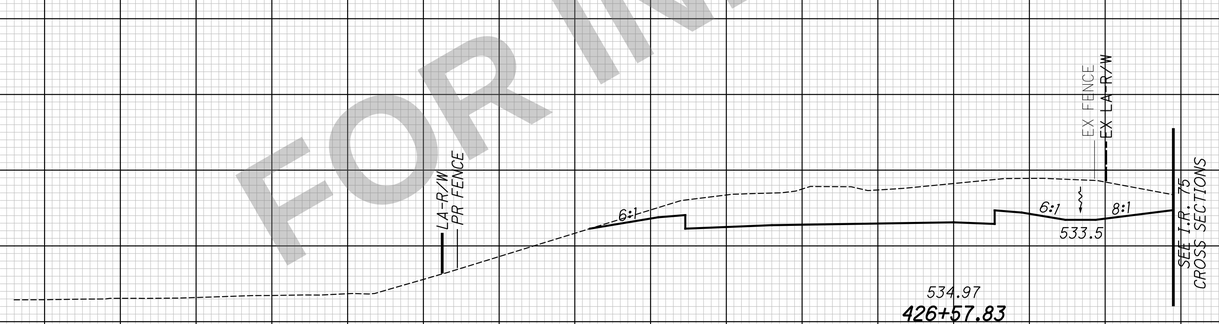
PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA	
CUT	FILL

VOLUME	
CUT	FILL
304	0
90	0
90	0

CALCULATED SEA

CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS RAMPJ

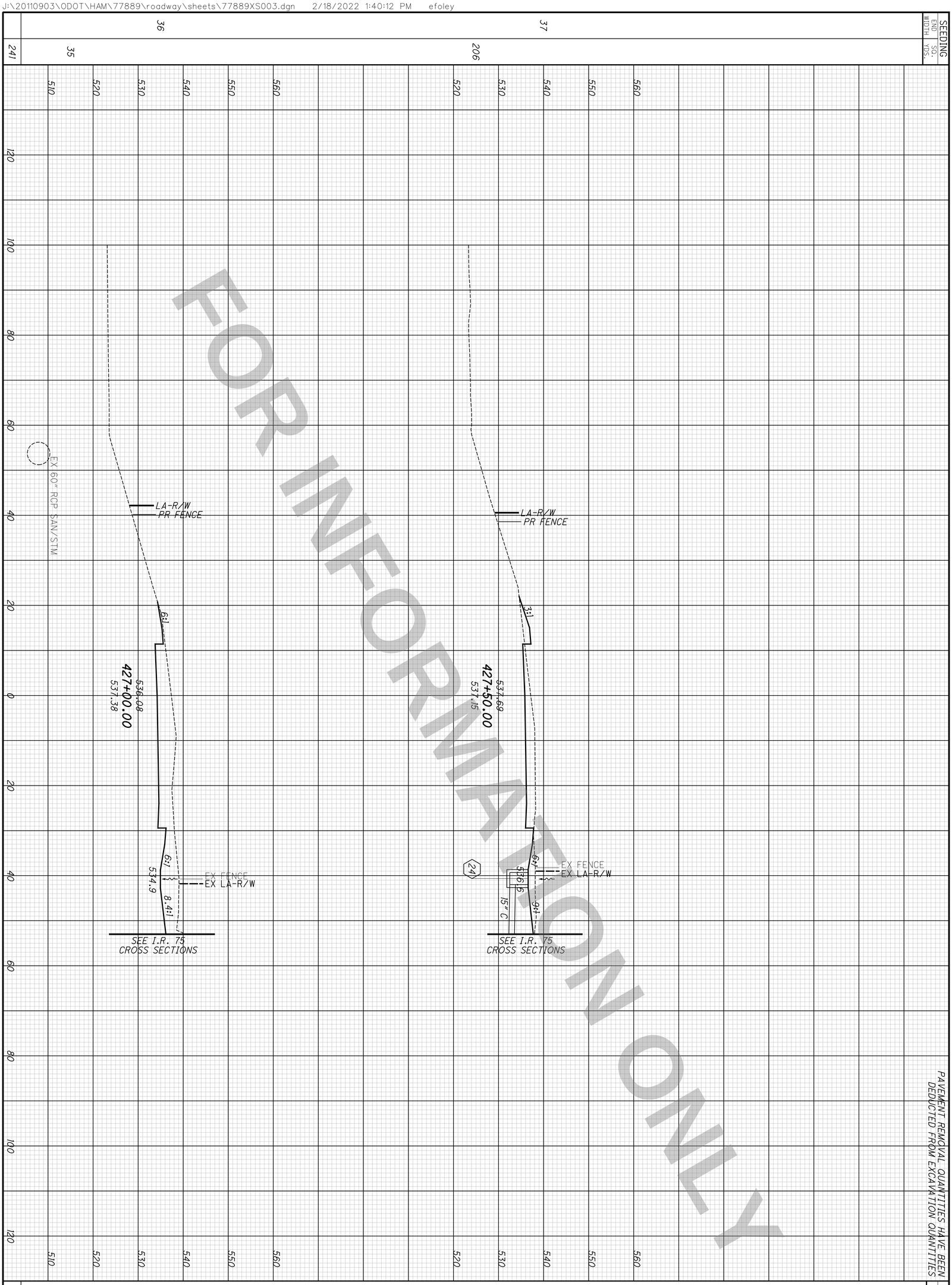
STA. 426+57.83

HAM-75-7.85

679
2017

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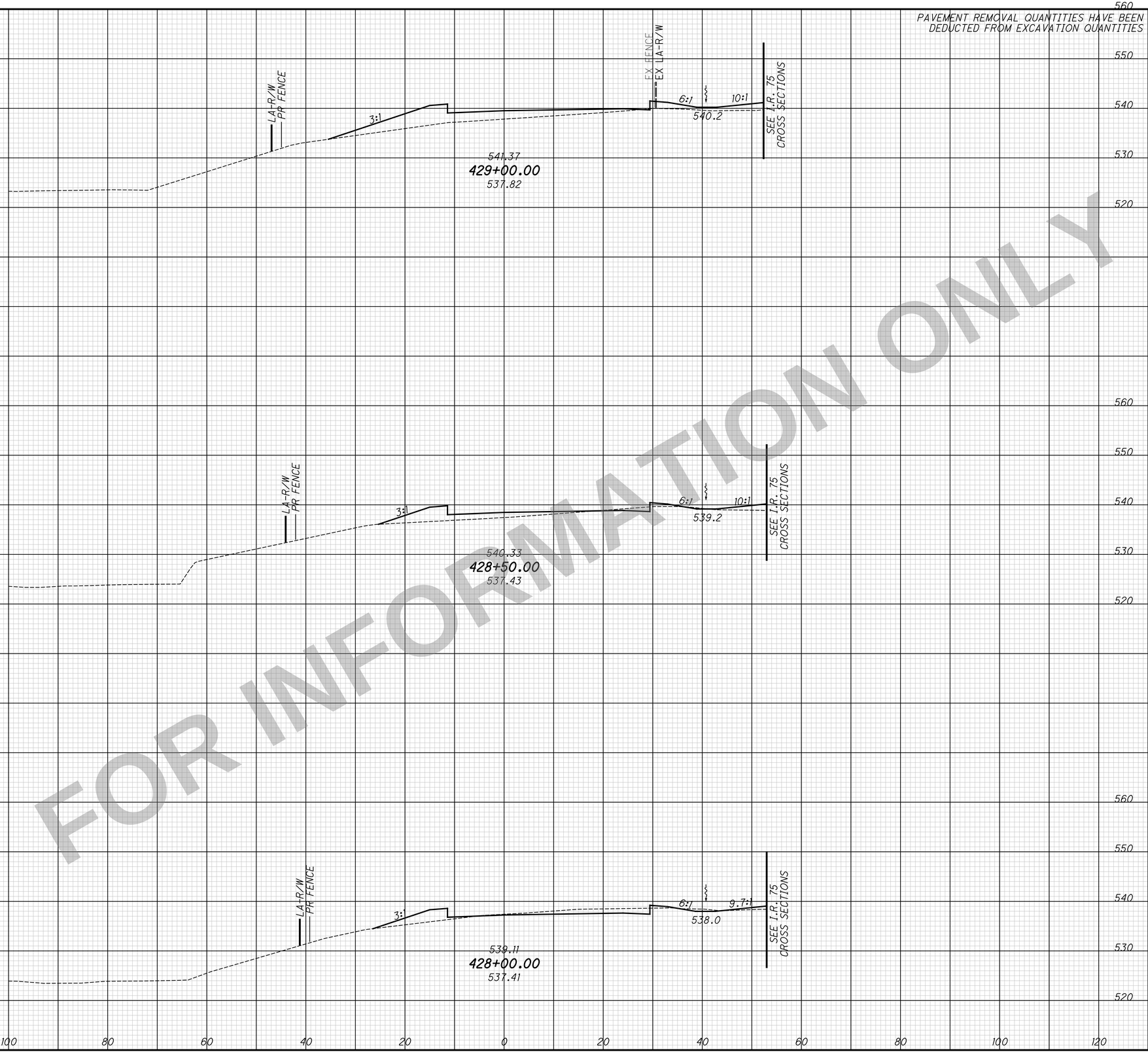
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680 2017	HAM-75-7.85	CROSS SECTIONS RAMPJ STA. 427+00.00 TO STA. 427+50.00

CALCULATED SEA
CHECKED DLR

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
52	261	0	125	5	171
41	233	5	59	27	81
42	222	25	29	106	36
	716			138	288

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMPJ
STA. 428+00.00 TO STA. 429+00.00

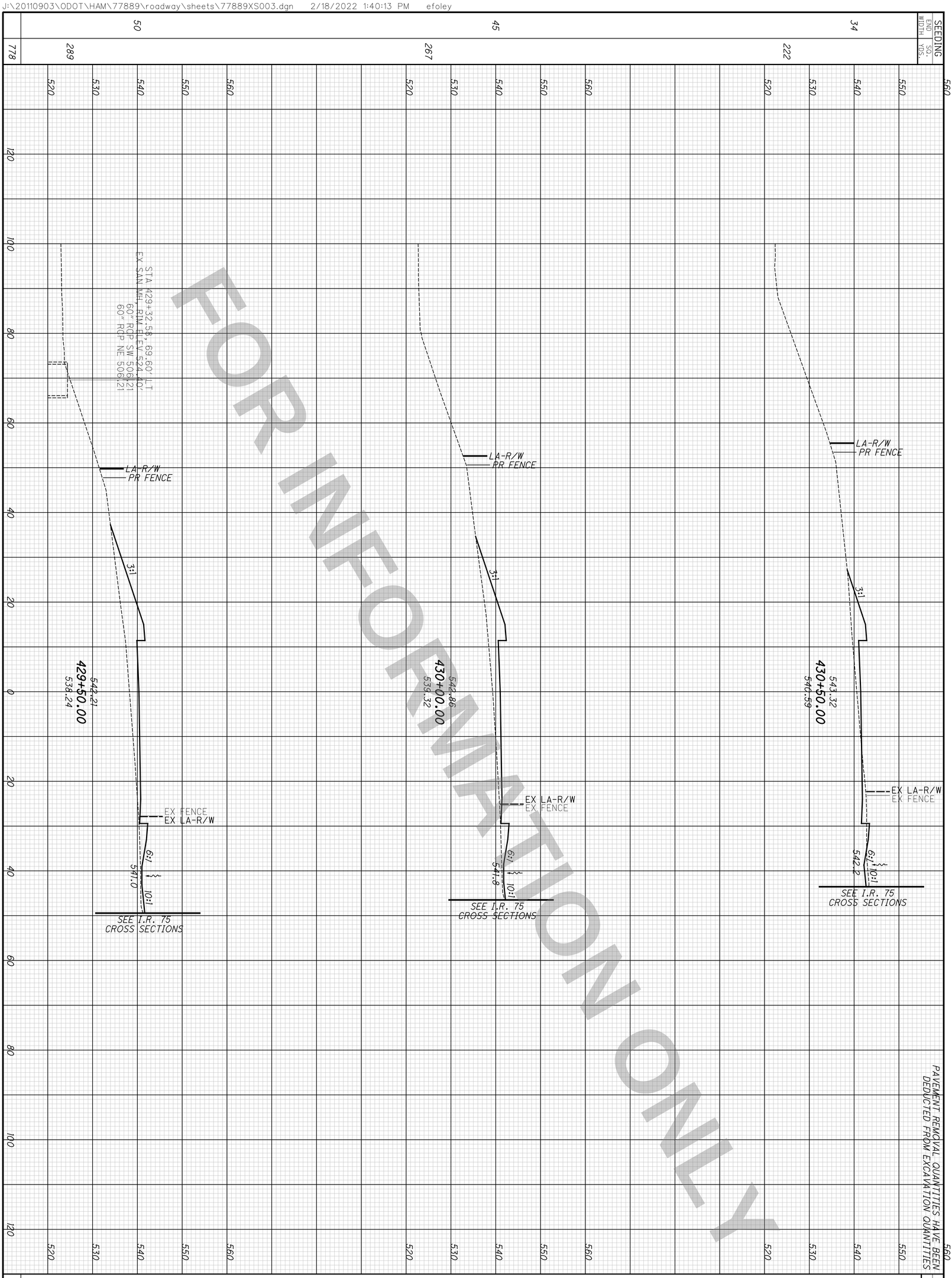
HAM-75-7.85

681
2017

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682
2017

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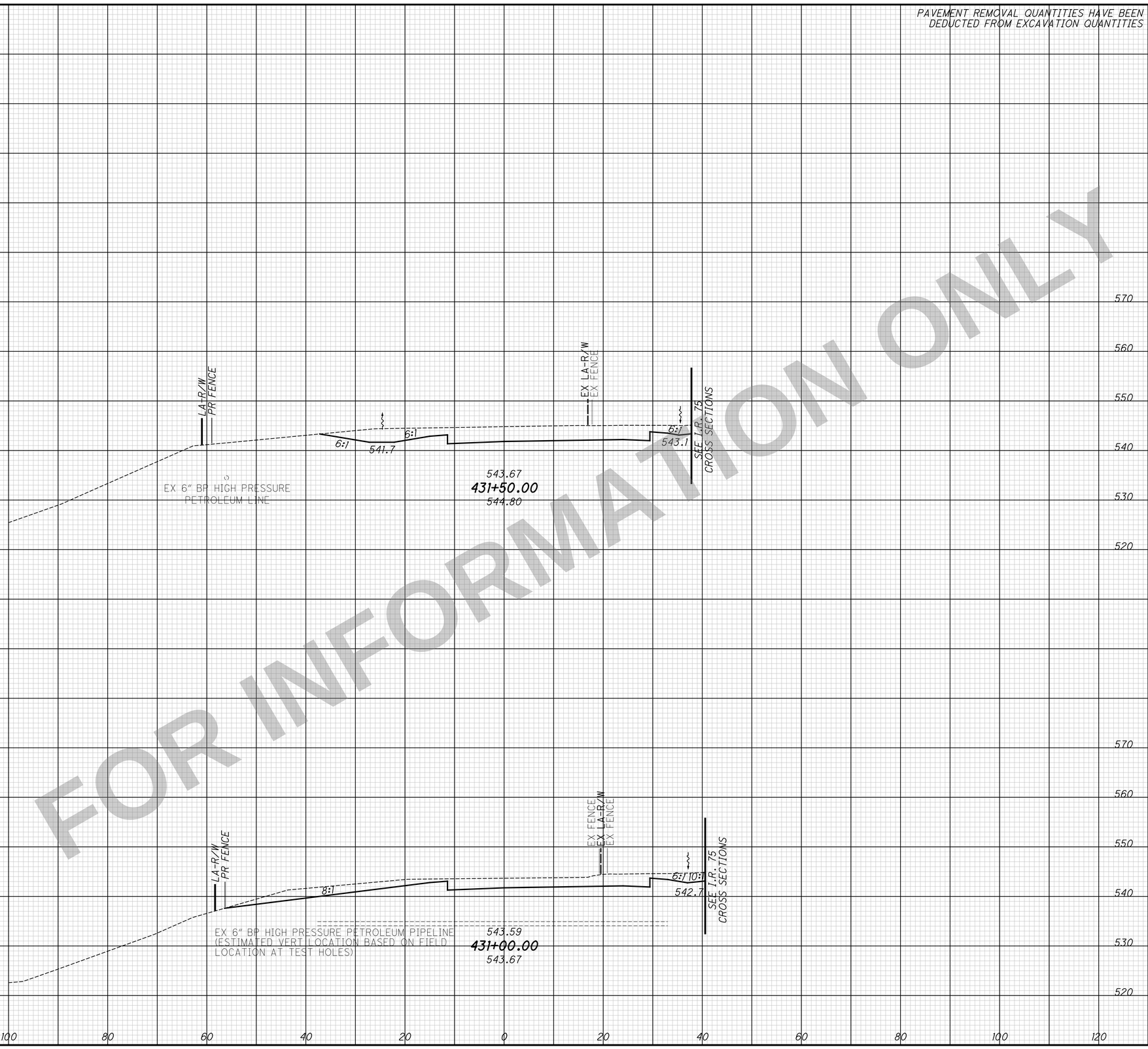
CROSS SECTIONS RAMPJ
STA. 429+50.00 TO STA. 430+50.00

CALCULATED SEA
CHECKED DLR

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
37	273	185	0	322	0
60	266	162	0	165	47
	539			487	47

CALCULATED SEA
CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS RAMPJ
STA. 431+00.00 TO STA. 431+50.00

HAM-75-7.85

683
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
35	200	185	0	340	0
37	211	182	0	340	0
	411			680	0



FOR INFORMATION ONLY

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMPJ
STA. 432+00.00 TO STA. 432+50.00

HAM-75-7.85

684
2017

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SEEDING	
END WIDTH	SQ. YDS.
36	114
	114

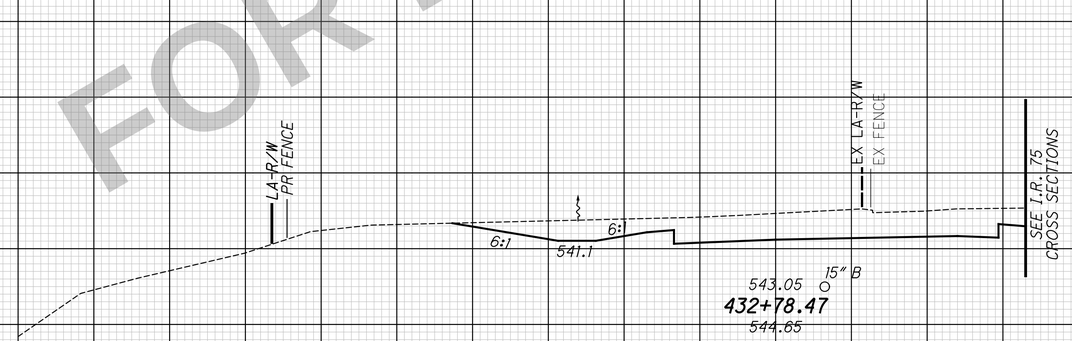
PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA	
CUT	FILL

VOLUME	
CUT	FILL
212	0
210	0
210	0

CALCULATED SEA

CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS RAMPJ

STA. 432+78.47

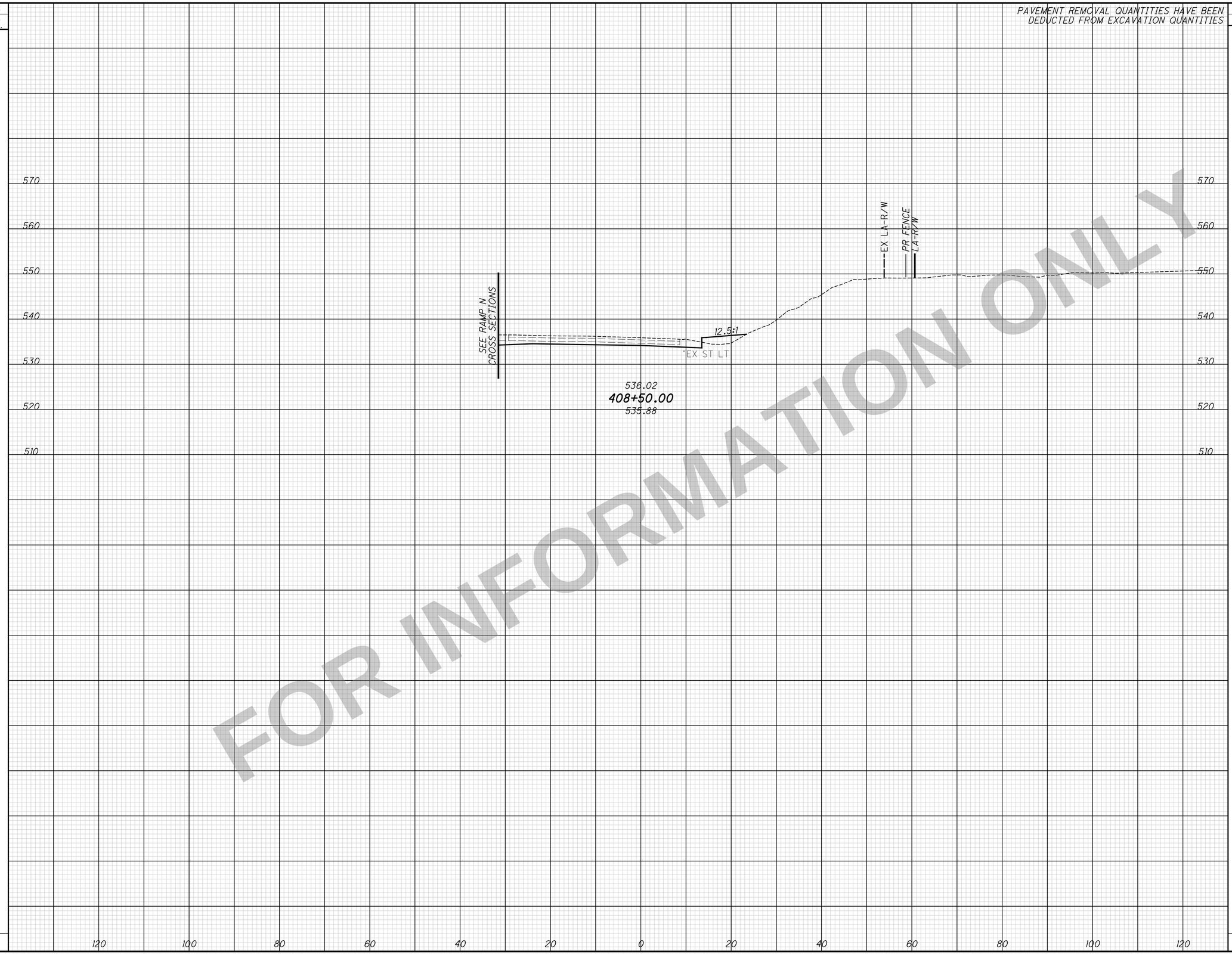
HAM-75-7.85

685
2017

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SEEDING	
END WIDTH	SQ. YDS.
11	0
0	

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA	
CUT	FILL
32	13
0	0

VOLUME	
CUT	FILL
0	0

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMP K

STA. 408+50.00

HAM-75-7.85

686
2017

FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SQ. YDS.
9	53
10	58
	111

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL
61	2	95	11
42	10	69	21
		164	32

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMP K
STA. 409+00.00 TO STA. 409+50.00

HAM-75-7.85

687
2017

FOR INFORMATION ONLY

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

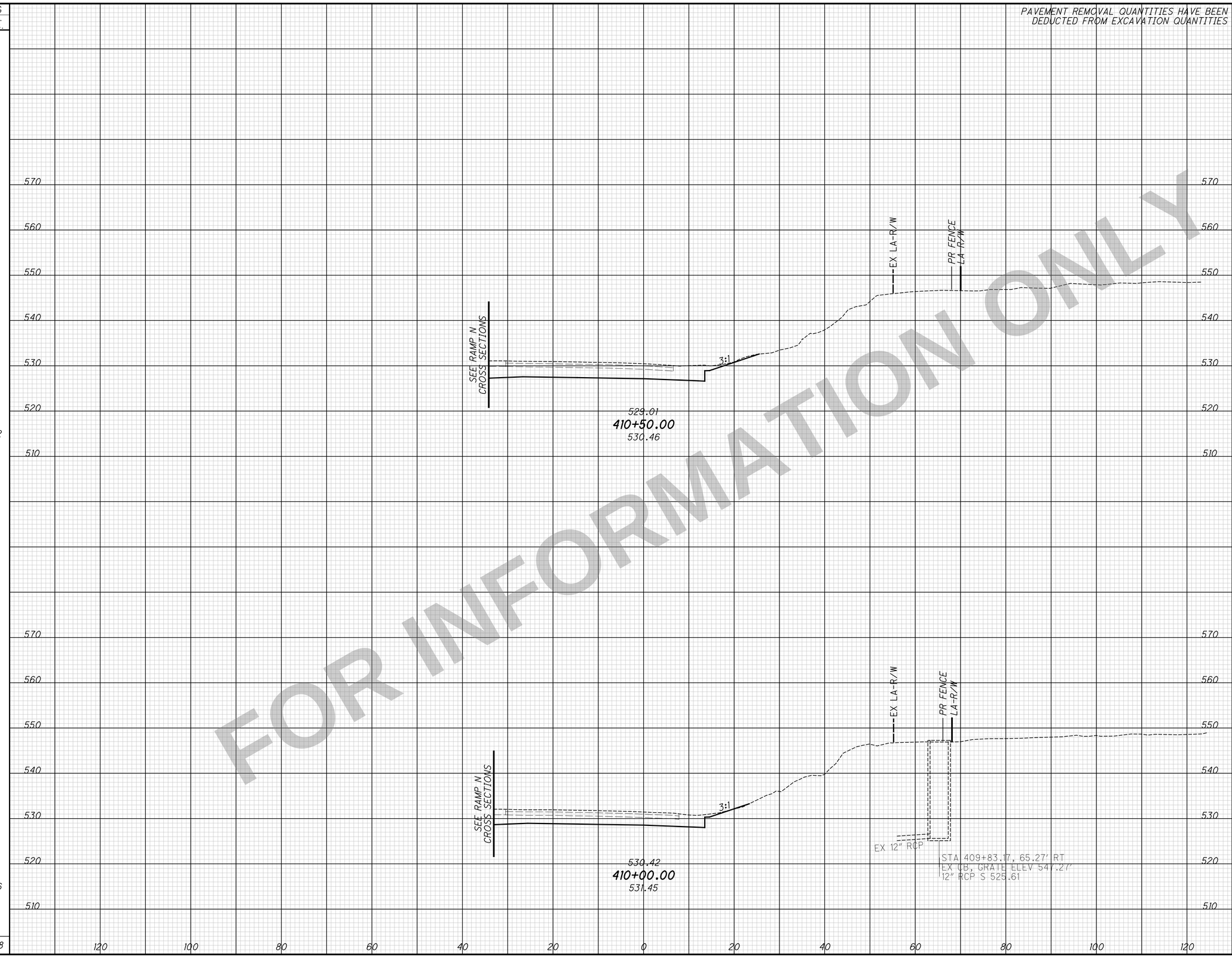
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
14	72	118	0	193	0
11	56	91	0	140	4
	128			333	4

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMP K
STA. 410+00.00 TO STA. 410+50.00

HAM-75-7.85

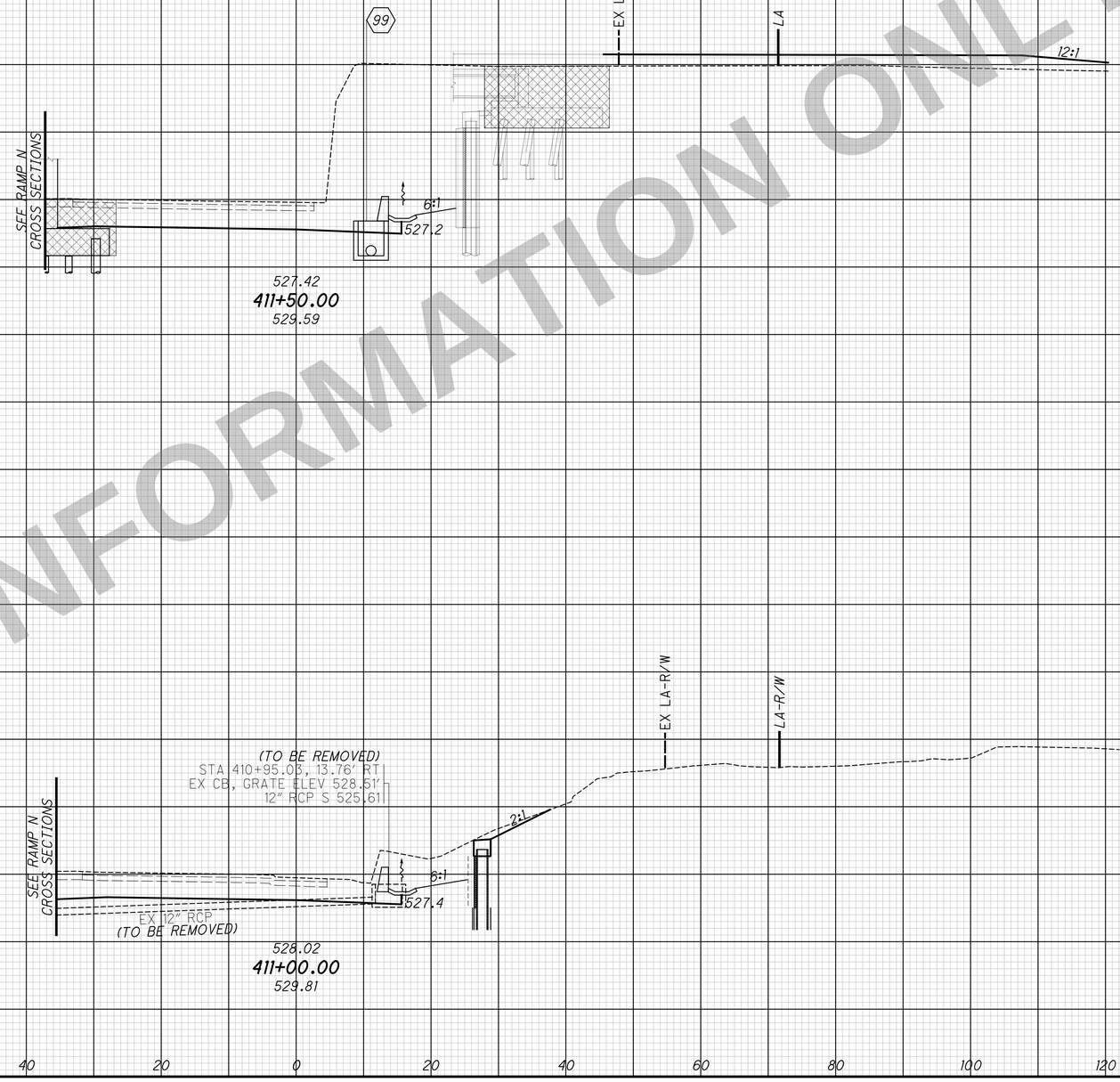
688
2017



FOR INFORMATION ONLY

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0					
	28	550	8	700	7
10		206	0		
	67			300	0
	95			1000	7

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMP K
STA. 411+00.00 TO STA. 411+50.00

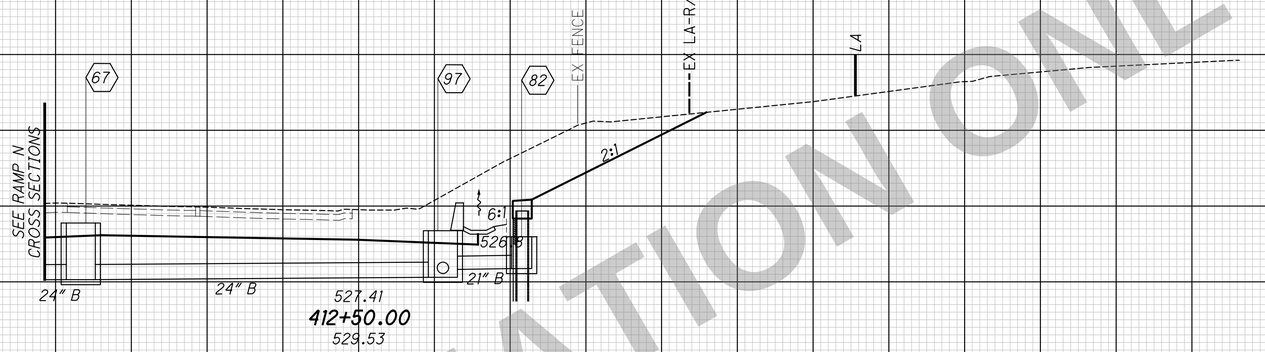
HAM-75-7.85

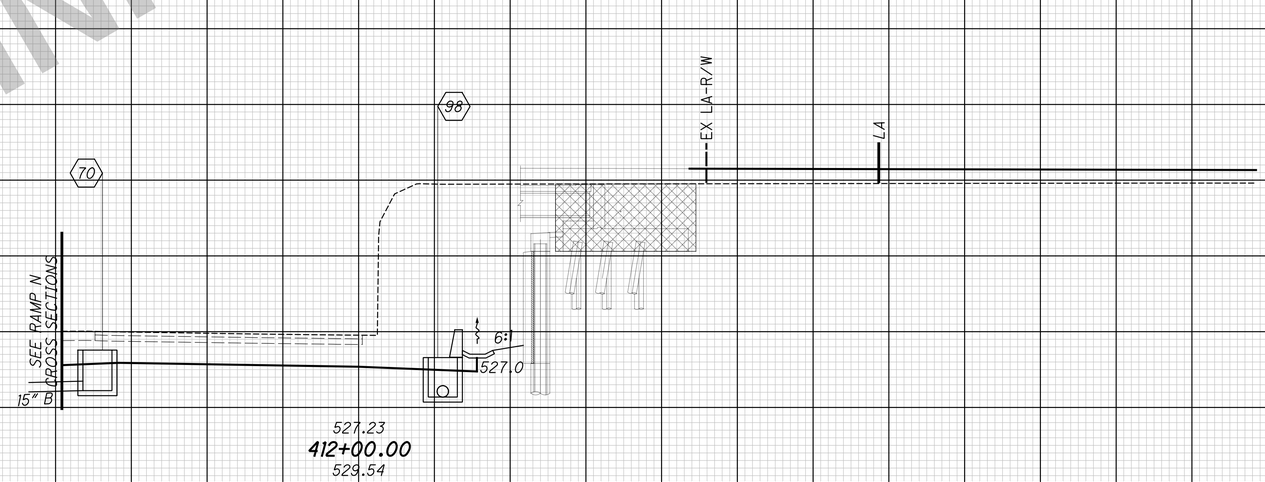
689
2017

FOR INFORMATION ONLY

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES





FOR INFORMATION ONLY

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
26	72	353	0	882	0
0	0	599	0	1065	7
	72			1947	7

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMP K
STA. 412+00.00 TO STA. 412+50.00

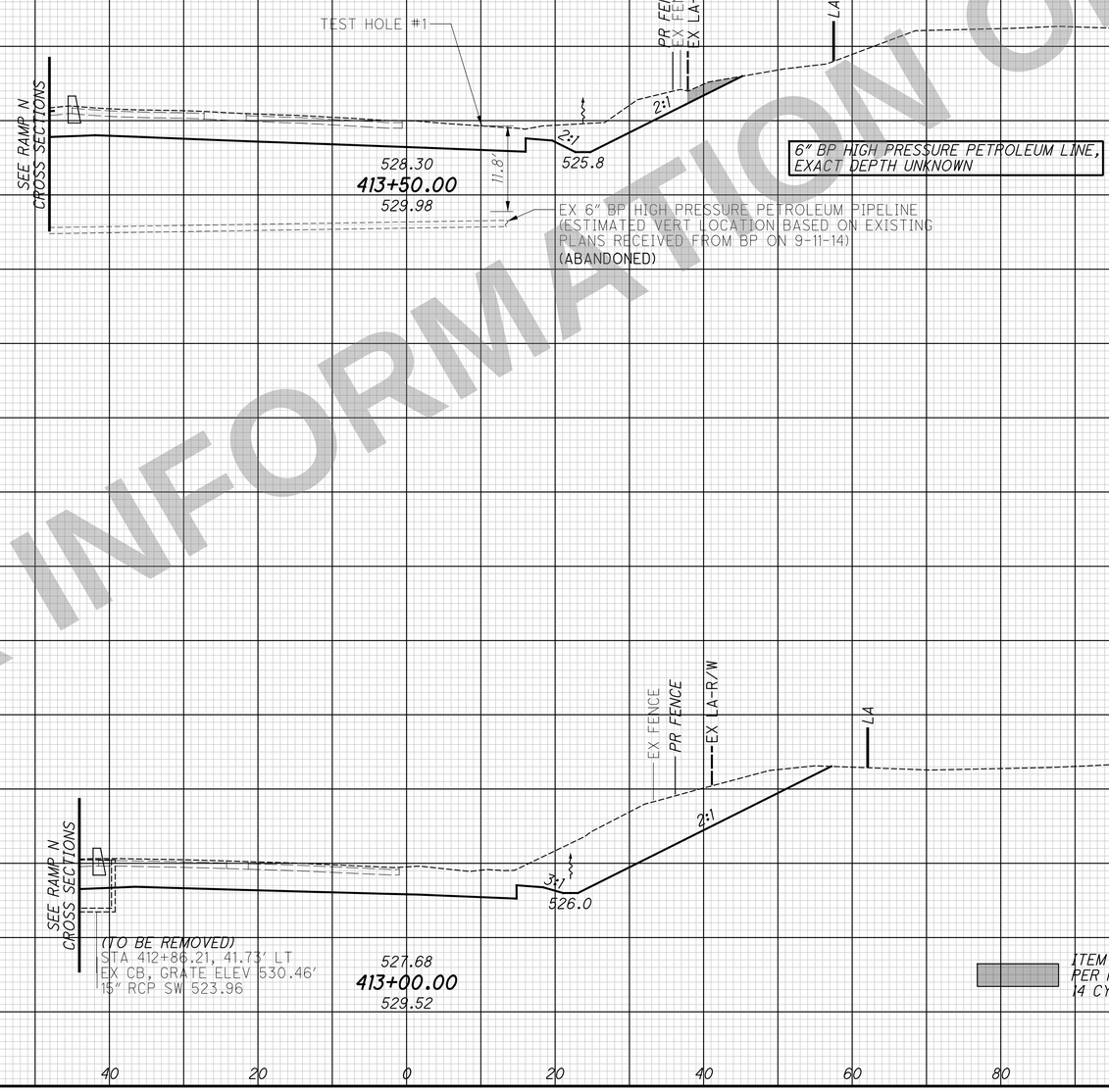
HAM-75-7.85

690
2017

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SEEDING END WIDTH	SEEDING SQ. YDS.
36	245
50	212
	457

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
247	0	591	0
391	0	689	0
		1280	0

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMP K
STA. 413+00.00 TO STA. 413+50.00

HAM-75-7.85

691
2017

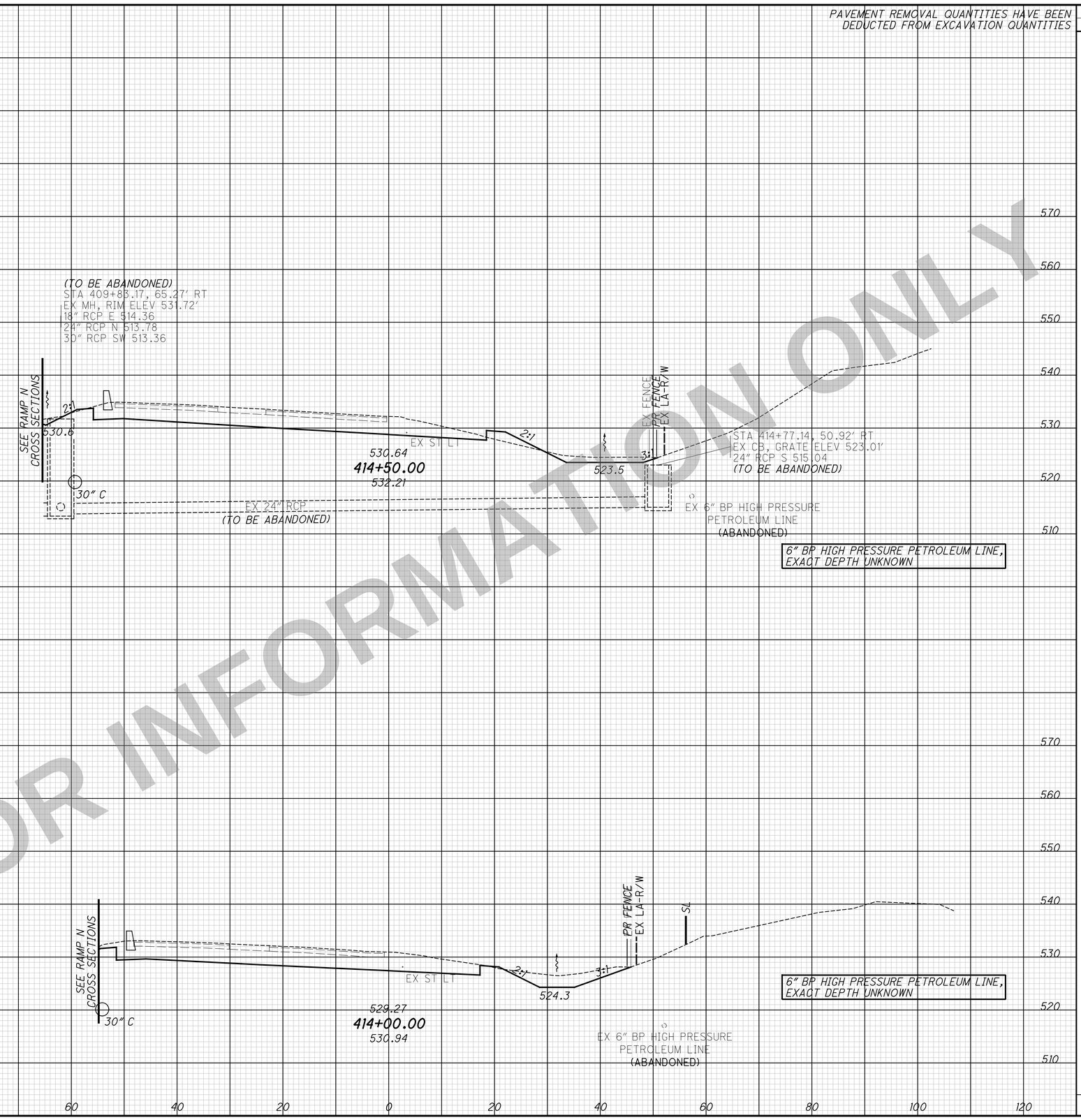
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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.
47	239
38	211
	450

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
196	13	390	12
226	0	438	0
		828	12

CALCULATED SEA
CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS RAMP K
STA. 414+00.00 TO STA. 414+50.00

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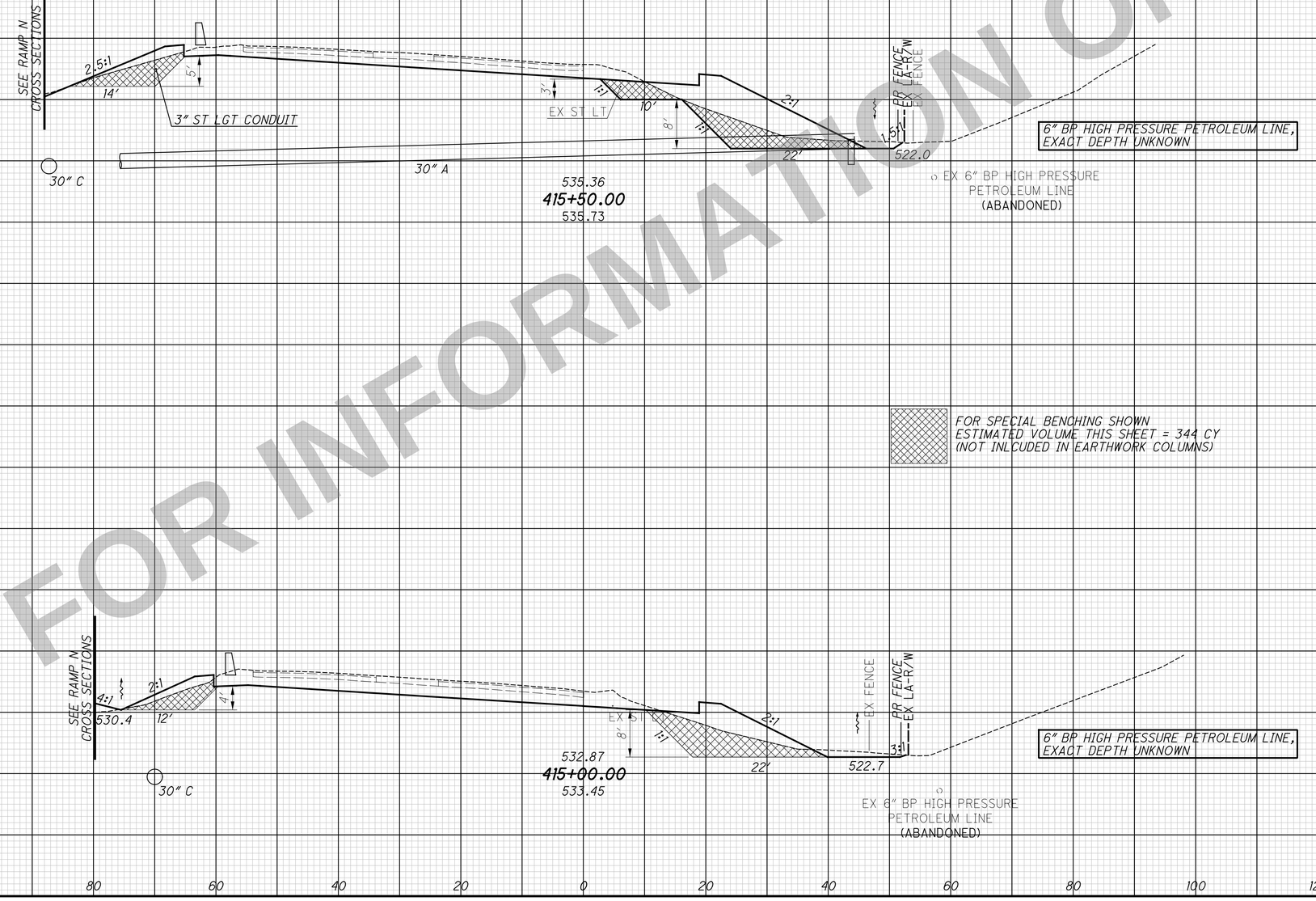
692
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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
64	350	101	137	223	196
60	300	140	74	311	80
	650			534	276

CALCULATED SEA
CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS RAMP K
STA. 415+00.00 TO STA. 415+50.00

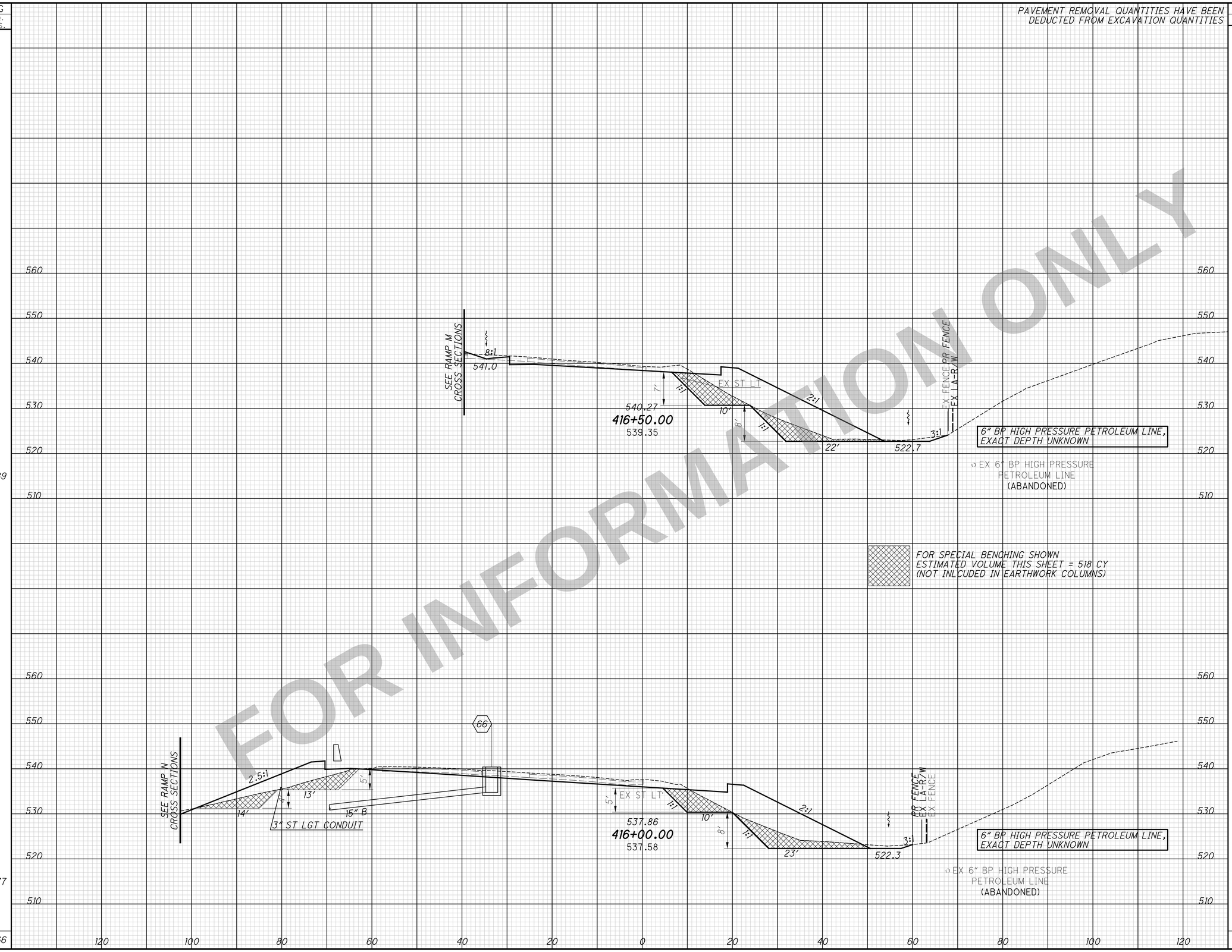
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693
2017

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SEEDING END WIDTH	SEEDING SQ. YDS.
68	389
71	377
	766

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
27	202		
		62	403
40	234		
		131	344
		193	747

CALCULATED SEA

CHECKED DLR

CROSS SECTIONS RAMP K
STA. 416+00.00 TO STA. 416+50.00

HAM-75-7.85

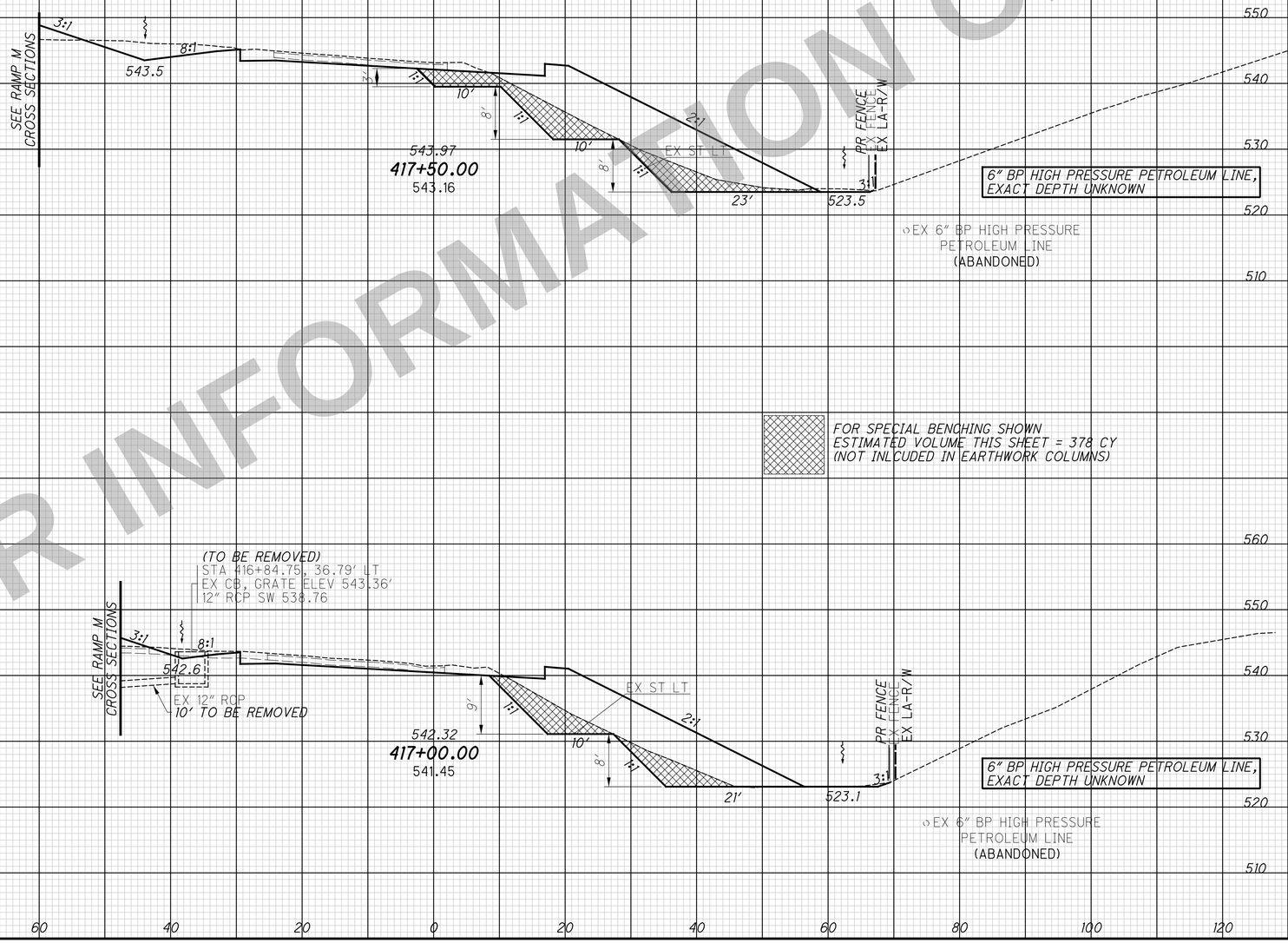
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2017

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SEEDING	
END WIDTH	SQ. YDS.
89	467
78	406
	873

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA		VOLUME	
CUT	FILL	CUT	FILL
56	255		
		71	446
21	227		
		44	397
		115	843

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMP K
STA. 417+50.00 TO STA. 417+00.00

HAM-75-7.85

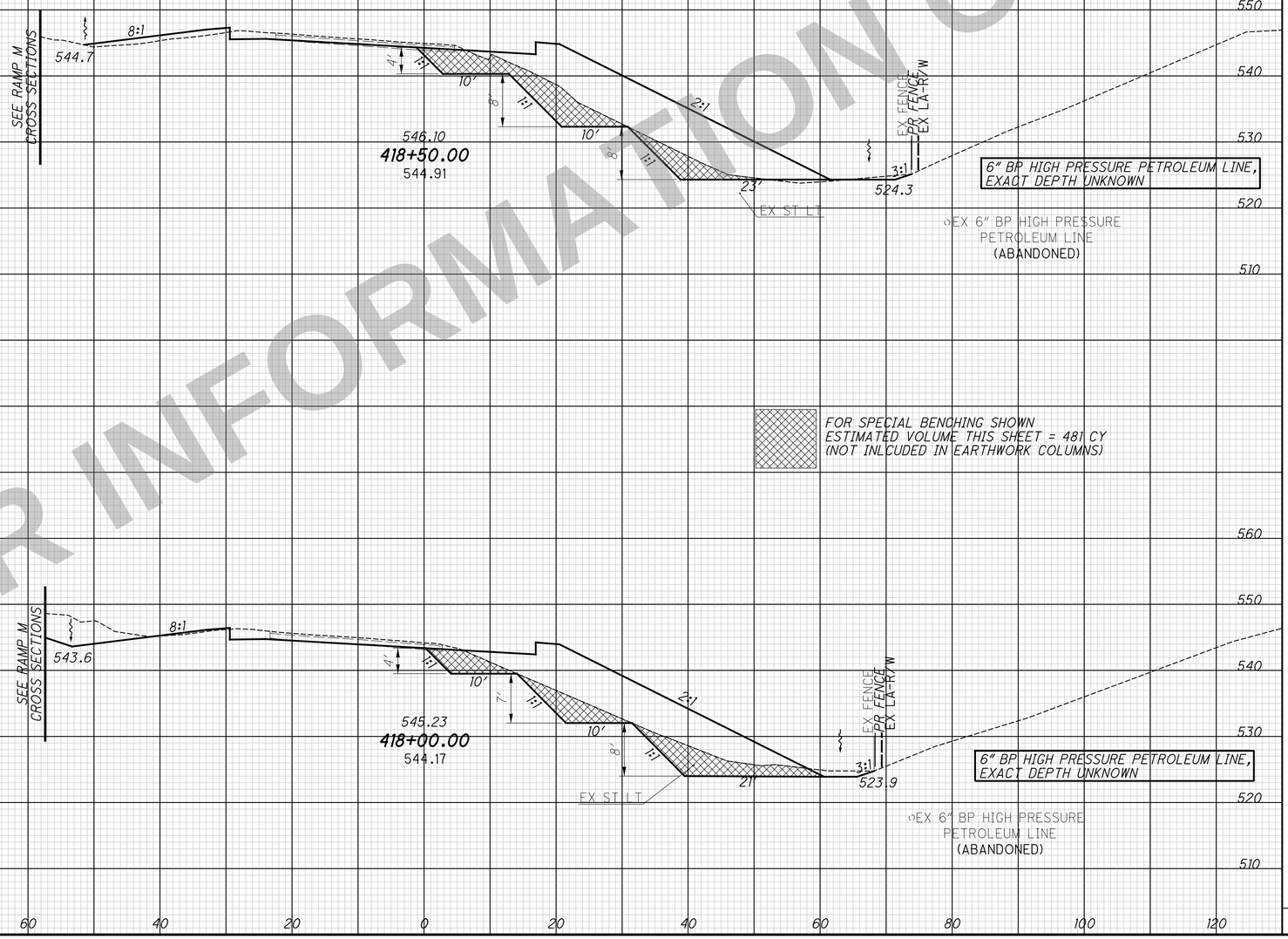
695
2017

FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SQ. YDS.
87	489
88	495
	984

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA		VOLUME	
CUT	FILL	CUT	FILL
11	304		
		65	502
59	239		
		106	457
		171	959

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMP K
STA. 418+00.00 TO STA. 418+50.00

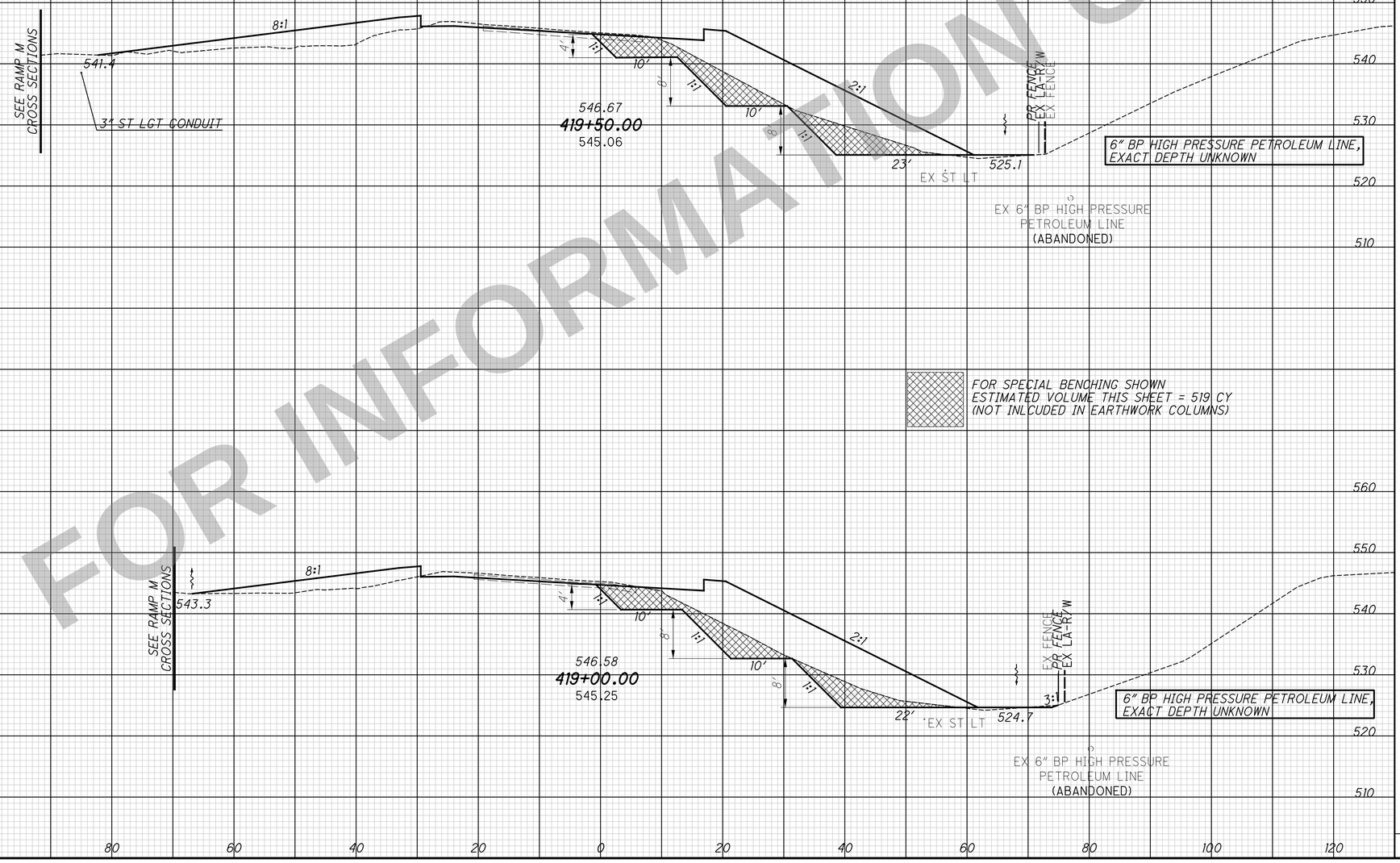
HAM-75-7.85

696
2017

FOR INFORMATION ONLY

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
115	605	6	365	11	655
103	534	6	342	16	598
	1139			27	1253

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMP K
STA. 419+00.00 TO STA. 419+50.00

HAM-75-7.85

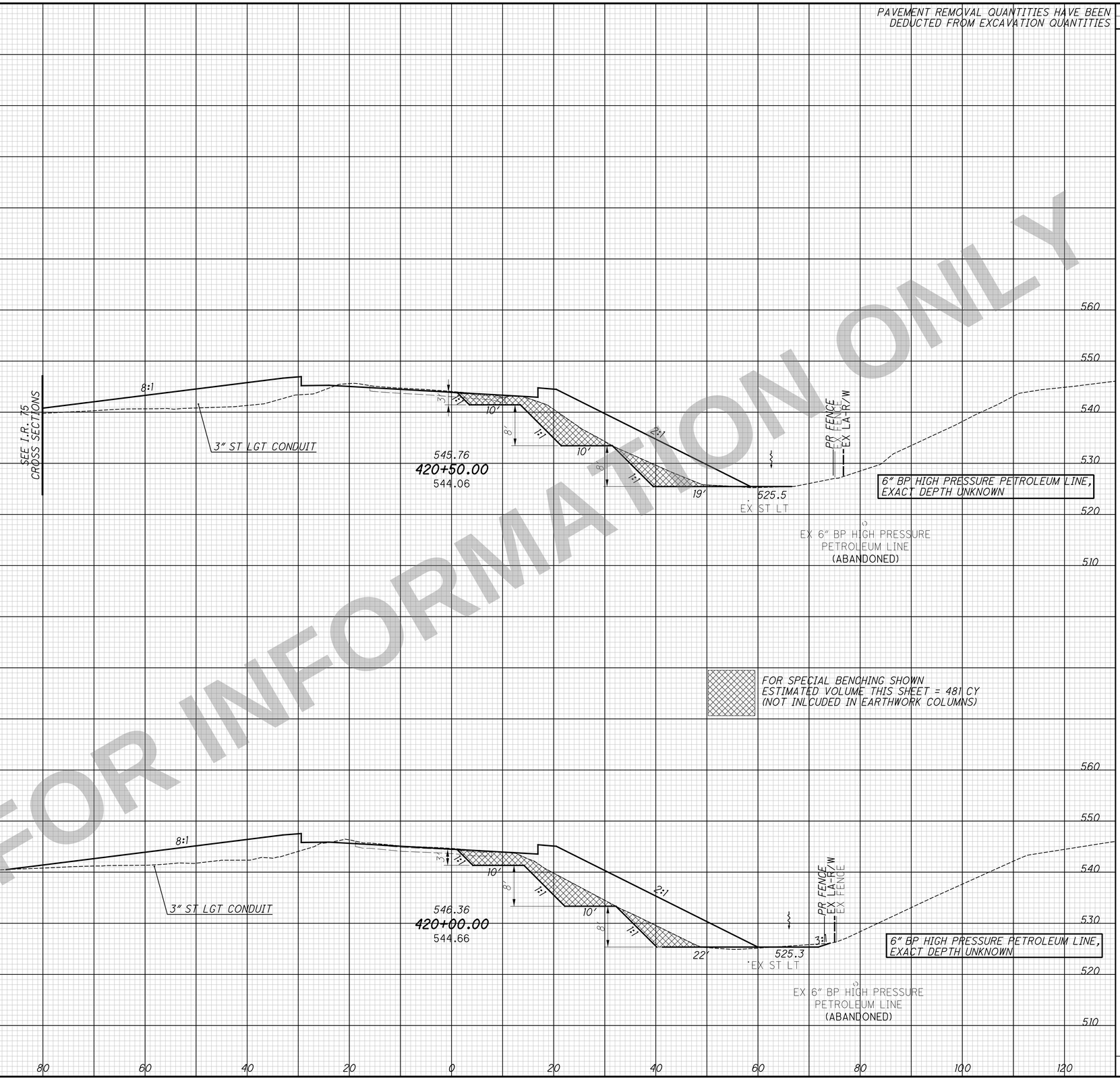
697
2017

FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SQ. YDS.
108	644
	666
123	
	1310

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA		VOLUME	
CUT	FILL	CUT	FILL
3	364		
		8	694
6	385		
		11	694
		19	1388

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMP K
STA. 420+00.00 TO STA. 420+50.00

HAM-75-7.85

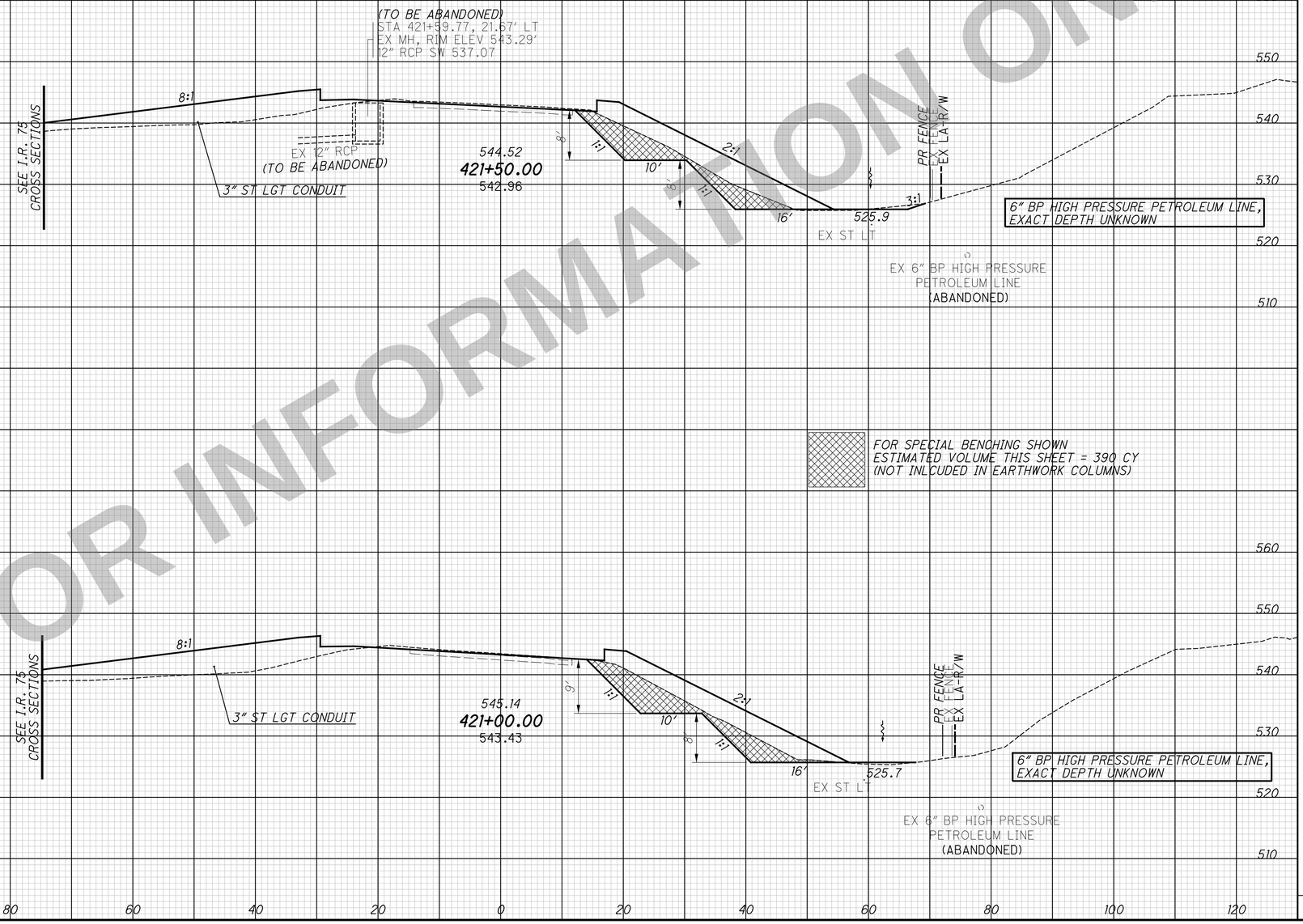
698
2017

FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SQ. YDS.
	583
	103
	589
	1172

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA		VOLUME	
CUT	FILL	CUT	FILL
5	281		
		7	548
2	311		
		5	626
		12	1174

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMP K
STA. 421+00.00 TO STA. 421+50.00

HAM-75-7.85

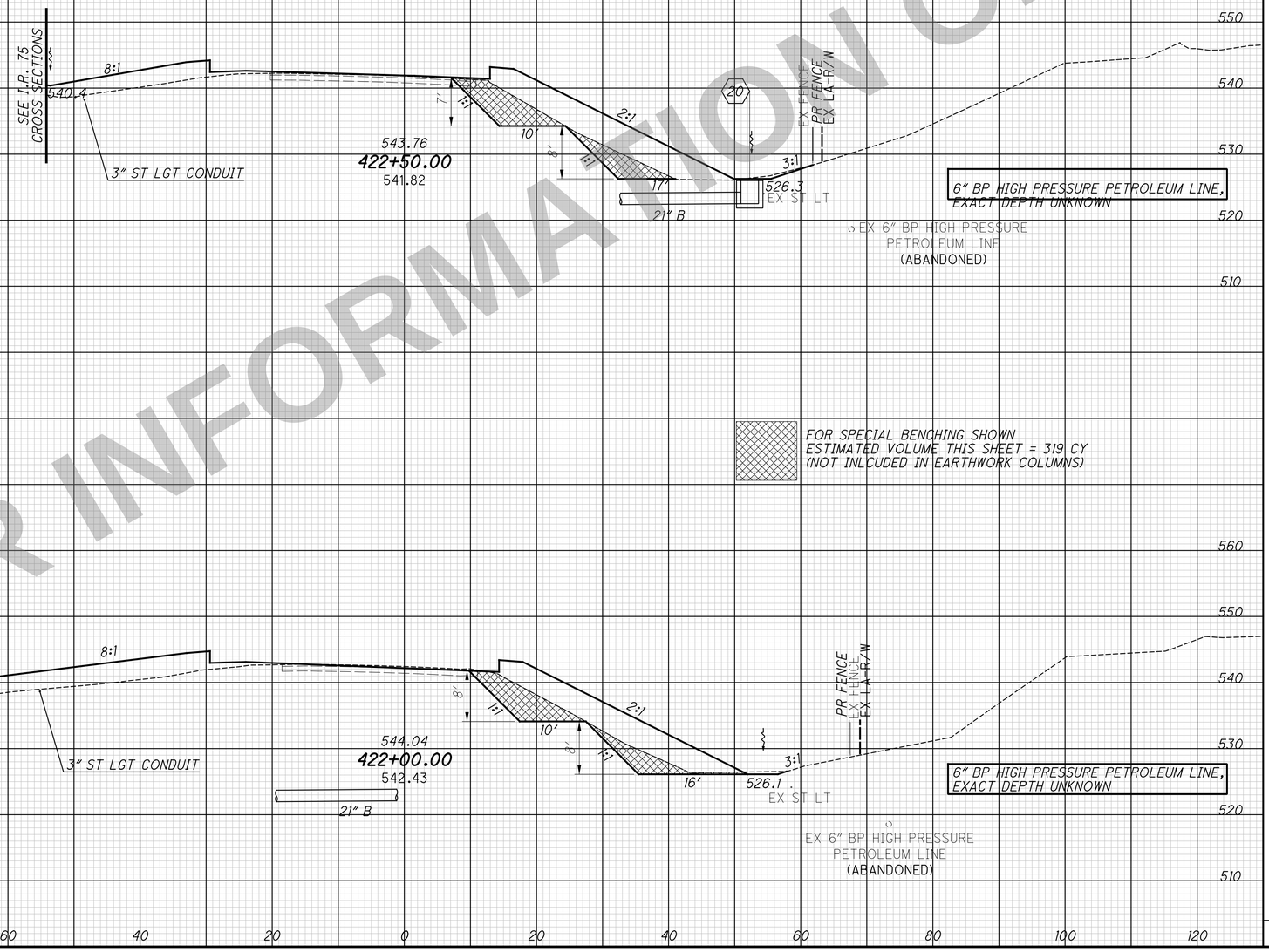
699
2017

FOR INFORMATION ONLY

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SEEDING END WIDTH	SEEDING SQ. YDS.
82	461
	510
84	528
	989

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
3	246		
4	473		
2	265		
7	505		
11	978		

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMP K
STA. 422+00.00 TO STA. 422+50.00

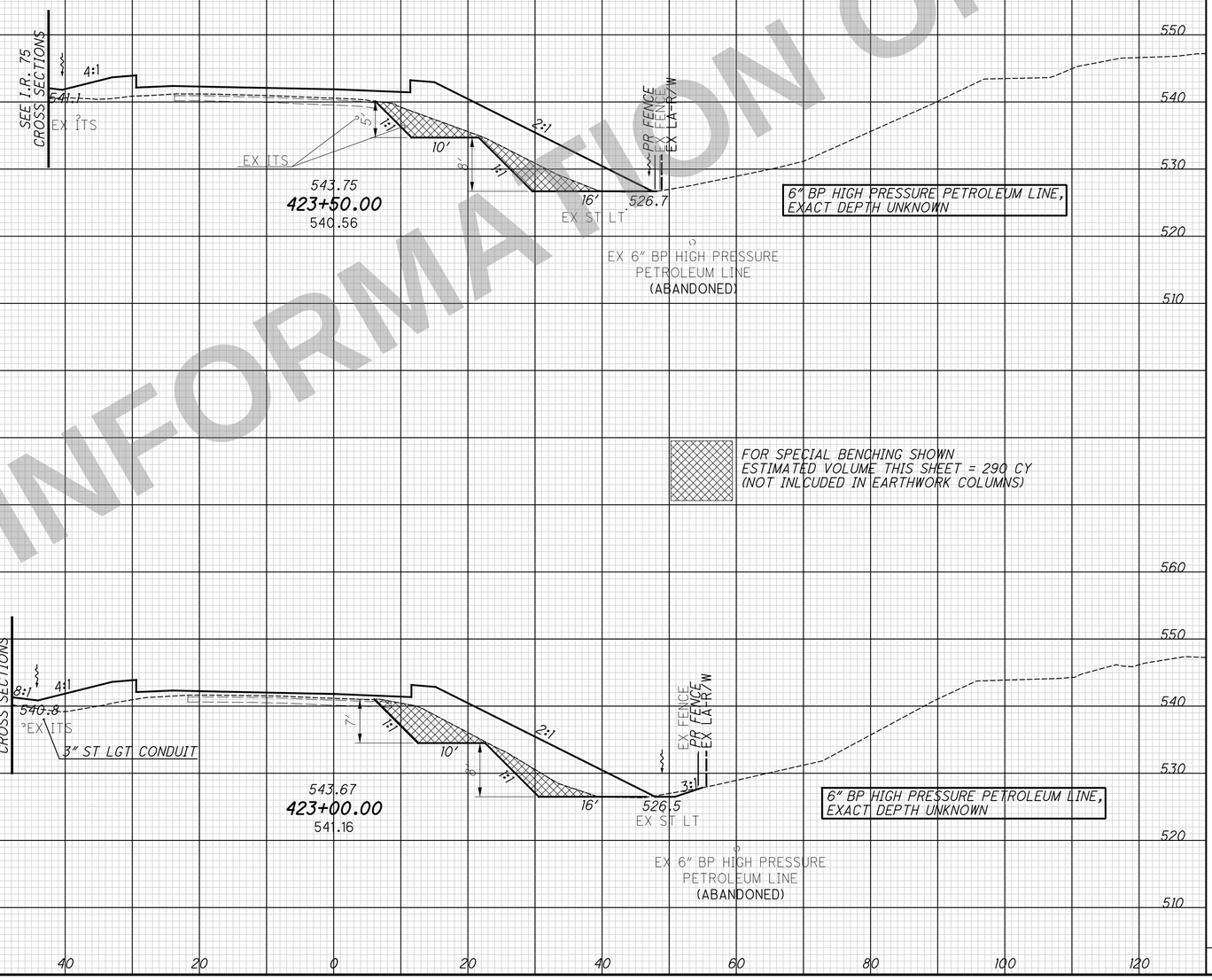
HAM-75-7.85

700
2017

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SEEDING END WIDTH	SEEDING SQ. YDS.
57	356
69	422
	778

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0	263		
		2	471
3	246		
		5	456
		7	927

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMP K
STA. 423+00.00 TO STA. 423+50.00

HAM-75-7.85

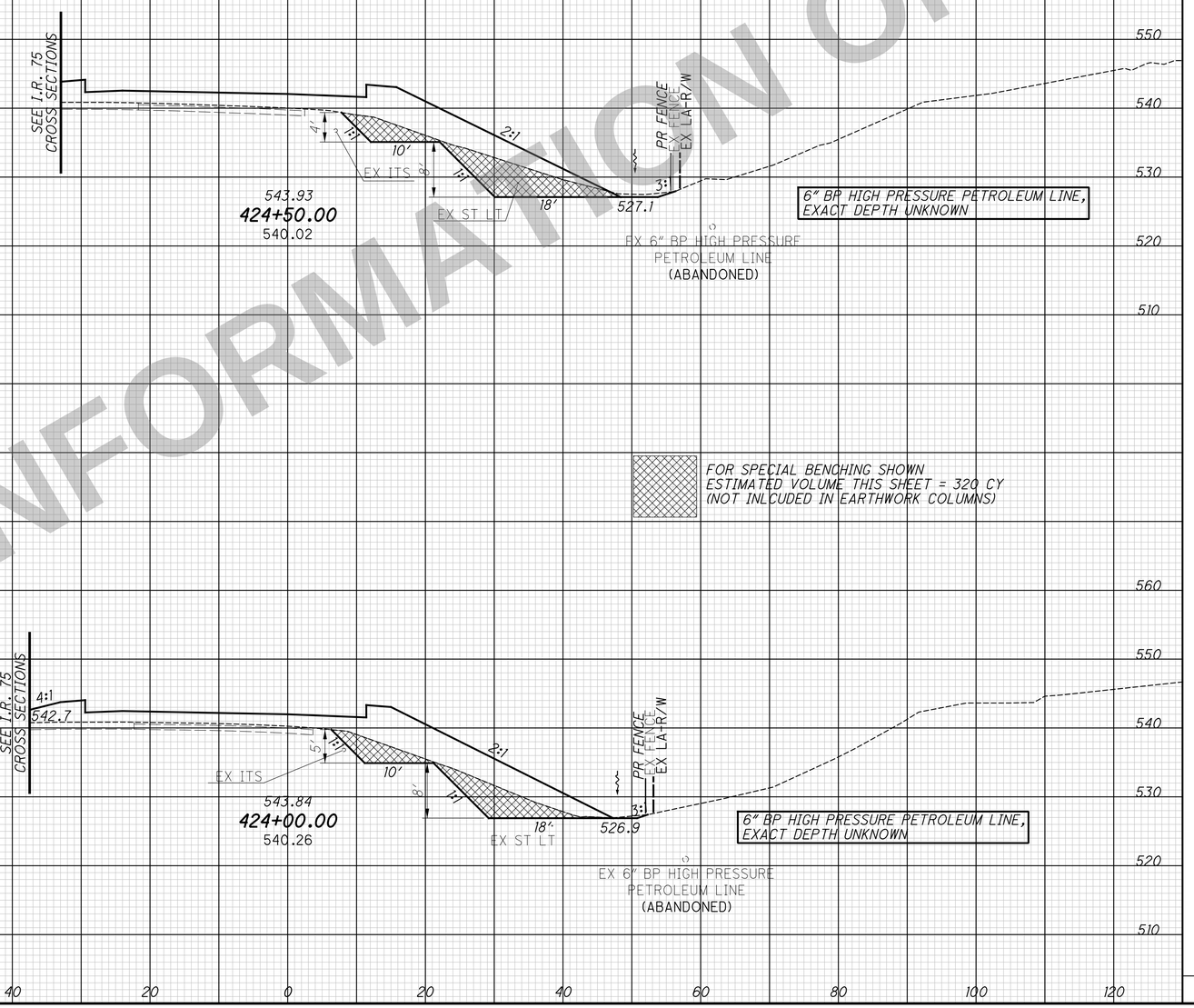
701
2017

FOR INFORMATION ONLY

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SEEDING END WIDTH	SEEDING SQ. YDS.
55	311
56	316
	627

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
3	241		
1	268		
		4	471
		1	492
		5	963

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMP K
STA. 424+00.00 TO STA. 424+50.00

HAM-75-7.85

702
2017

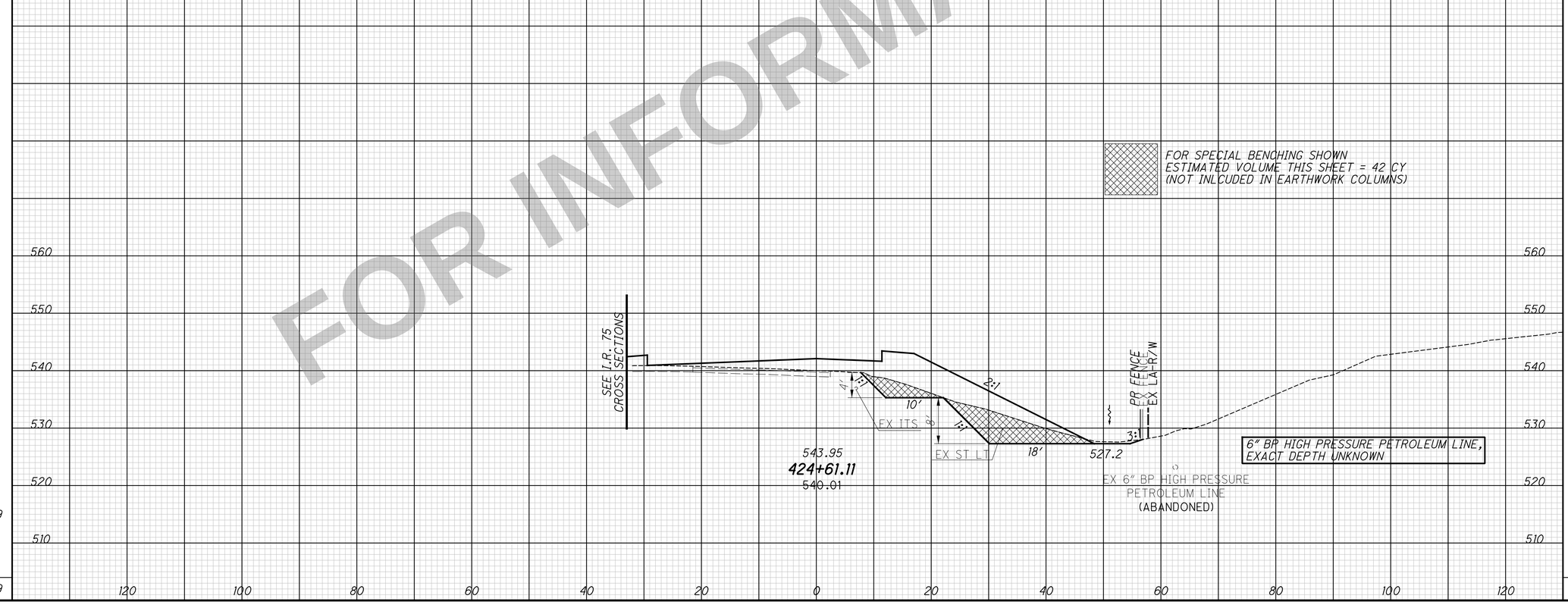
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SEEDING	
END WIDTH	SQ. YDS.
56	
69	
69	

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL
3	218		
		1	94
		1	94

CALCULATED SEA
CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS RAMP K
STA. 424+61.11

HAM-75-7.85

703
2017

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SEEDING END WIDTH	SEEDING SQ. YDS.
102	338
61	77
14	39
7	29
6	0
	483

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
406	0	444	0
73	0	105	0
41	0	70	0
35	0	51	0
39	0	0	0
		670	0

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS RAMP A
STA. 499+00.00 TO STA. 500+50.00

HAM-75-7.85

704
2017

SEE I.R. 75 NB CROSS SECTIONS

3" ST LGT CONDUIT
8:1
549.36
500+50.00
550.96
12" CPP (TBR)
8:1
4:1
546.8
EX 12" SAN

STA 499+95.74, 3.81' RT
EX. CB, GRATE ELEV 552.40
12" CPP E 547.89 (TO BE REMOVED)
STA 499+96.04, 9.90' RT
EX. MH, RIM ELEV 553.33
12" CPP W 547.82
12" CPP N 547.74
(TO BE REMOVED)
12.5:1
14:1
550.6
3" ST LGT CONDUIT
12" CPP
551.84
500+00.00
552.53
EX 12" SAN

3" ST LGT CONDUIT
554.05
499+50.00
554.11
551.4

EX 24" WATER
555.70
499+00.00
555.61
3" ST LGT CONDUIT
551.7

EX 24" WATER
556.74
498+62.58
556.73
551.8

560 / 550 / 540 / 530

120 100 80 60 40 20 0 20 40 60 80 100 120

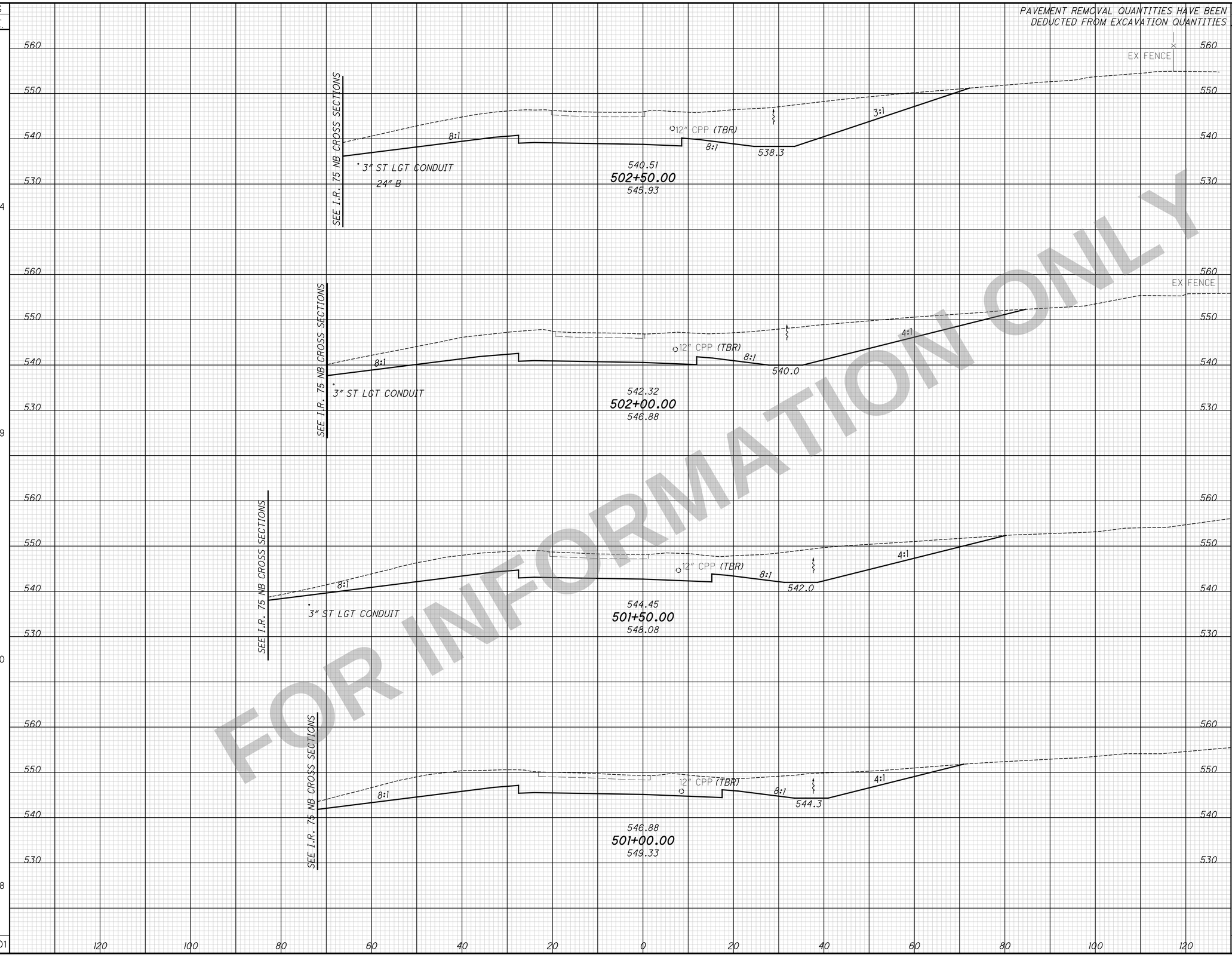
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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
111	644	791	0	1455	0
116	669	780	0	1359	0
121	620	688	0	1119	0
112	568	521	0	858	0
	2501			4791	0

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS RAMP A
STA. 501+00.00 TO STA. 502+50.00

HAM-75-7.85

705
2017

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SEEDING END WIDTH	SEEDING SQ. YDS.
56	473
85	554
100	618
111	618
	2263

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

STA 504+36.71, 93.83' RT
EX. CB, GRATE ELEV 554.99'
4" CPP N 550.68
15" CPP E 549.44
15" CPP S 549.44

EX FENCE

609

15" CPP

8:1

535.2

10:1

534.6

2:1

3" ST LGT CONDUIT

30" B

536.45

504+50.00

542.30

SEE I.R. 75 NB CROSS SECTIONS

743

℄ SUMMIT RD

15" CPP

30" B

742

788

EX FENCE

℄ SUMMIT RD

SEE I.R. 75 NB CROSS SECTIONS

6:1

534.6

4" ITS FO CONDUIT

15" CPP (TBR)

8:1

534.9

2:1

3" ST LGT CONDUIT

536.99

504+00.00

543.18

SUMMIT AVE

EX FENCE

SEE I.R. 75 NB CROSS SECTIONS

6.5:1

534.6

15" CPP (TBR)

8:1

535.7

3:1

3" ST LGT CONDUIT

4" ITS FO CONDUIT

537.84

503+50.00

544.40

STA 502+82.7819, 121.41' RT
EX. CB, GRATE ELEV 554.36
15" CPP N 550.11
12" CPP S 550.11

EX FENCE

STA 503+17.23, 0.73' LT
EX. CB, GRATE ELEV 544.52
12" CPP SE 540.86
(TO BE REMOVED)

STA 503+18.40, 5.53' RT
EX. MH, RIM ELEV 545.64
12" CPP W 540.22
12" CPP W 540.25
15" CPP E 540.14
(TO BE REMOVED)

SEE I.R. 75 NB CROSS SECTIONS

6.5:1

534.1

3" ST LGT CONDUIT

12" CPP

8:1

536.9

3:1

3" ST LGT CONDUIT

4" ITS FO CONDUIT

539.02

503+00.00

544.99

GRADING DETAIL FOR ITS WORK PAD
APPLIES STA 502+82 TO 502+91

8:1

536.9

13:1

3:1

6'

3:1

3" ST LGT CONDUIT

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		1318	0
648			
775	0		
		1515	0
861	0		
		1580	0
846	0		
		1516	0
		5929	0

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS RAMP A
STA. 503+00.00 TO STA. 504+50.00

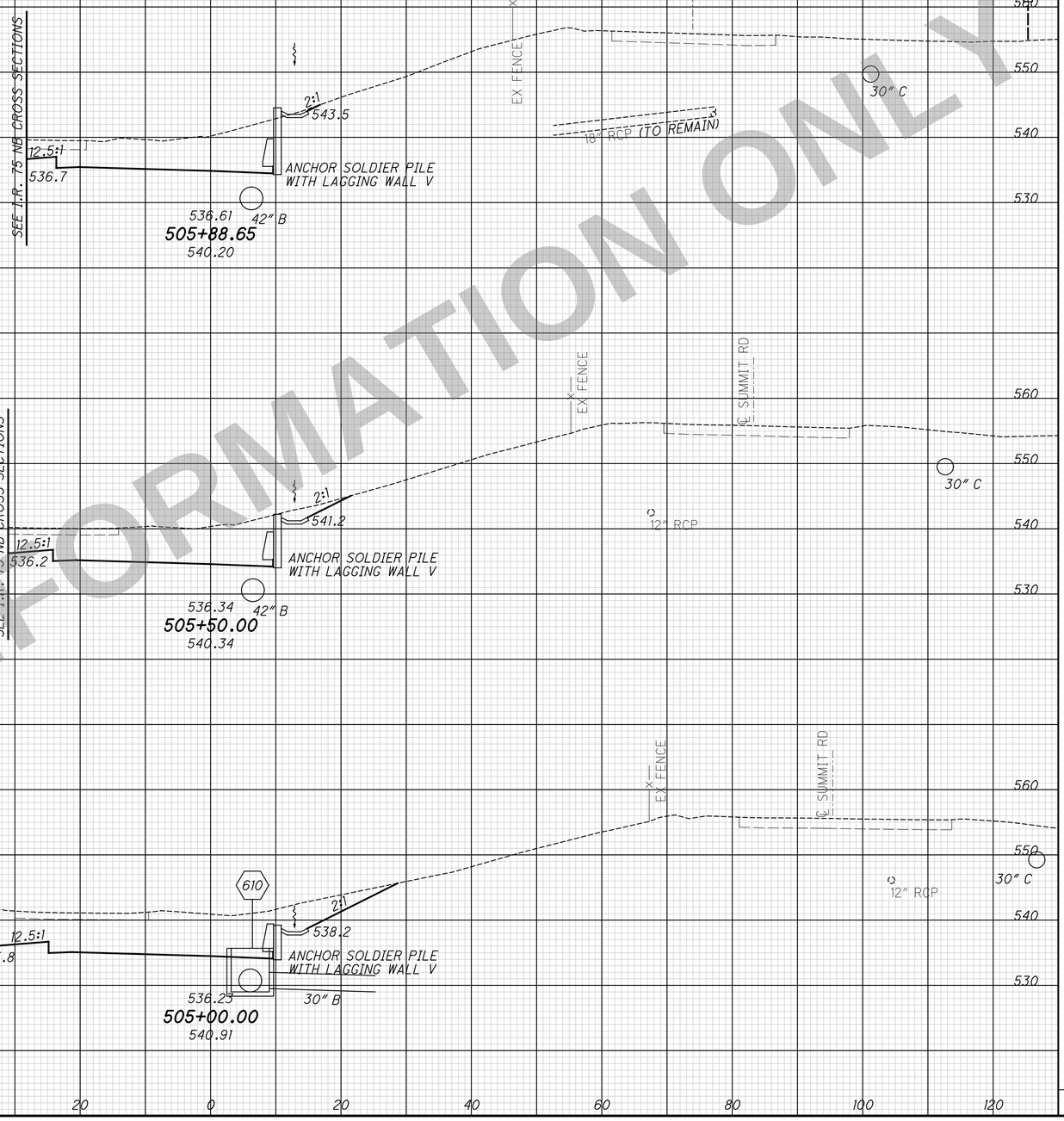
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706
2017

FOR INFORMATION ONLY

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



SEEDING END WIDTH	SEEDING SQ. YDS.
8	60
14	140
25	311
	511

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
174	2	276	1
211	0	481	0
309	0	886	0
		1643	1

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS RAMP A
STA. 505+00.00 TO STA. 505+88.65

HAM-75-7.85

707
2017

FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SQ. YDS.
11	
36	
7	
10	
46	

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

STA 506+64.7835, 22.98' LT
EX. CB, GRATE ELEV 538.47
24" RCP N 533.23
24" RCP S 533.20
(TO BE REMOVED)

STA 506+74.2462, 31.19' LT
EX. MH, RIM ELEV 538.79
24" RCP S 533.57
27" RCP N 533.32
(TO BE REMOVED)

STA 506+57.1553, 14.72' LT
EX. MH, RIM ELEV 539.05
24" RCP N 533.54
18" RCP S 533.56
15" CPP SW 533.54
(TO BE REMOVED)

STA 506+49.6747, 10.84' LT
EX. CB, GRATE ELEV 537.59
24" RCP N 533.80
18" RCP S 534.52
(TO BE REMOVED)

SEE I.R. 75 NB CROSS SECTIONS

GORE

24" RCP

24" RCP

18" RCP

1.9:1

546.8

744

ANCHOR SOLDIER PILE WITH LAGGING WALL V

537.1

506+50.00

541.46

EX FENCE

PR FENCE

℄ SUMMIT RD

EX R/W

30" C

SEE I.R. 75 NB CROSS SECTIONS

GORE

2:1

544.0

ANCHOR SOLDIER PILE WITH LAGGING WALL V

536.69

42" B

506+00.00

540.41

787

END AREA		VOLUME	
CUT	FILL	CUT	FILL
191	4		
189	2		
204	2		
43	0		
232	2		

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS RAMP A
STA. 506+00.00 TO STA. 506+50.00

HAM-75-7.85

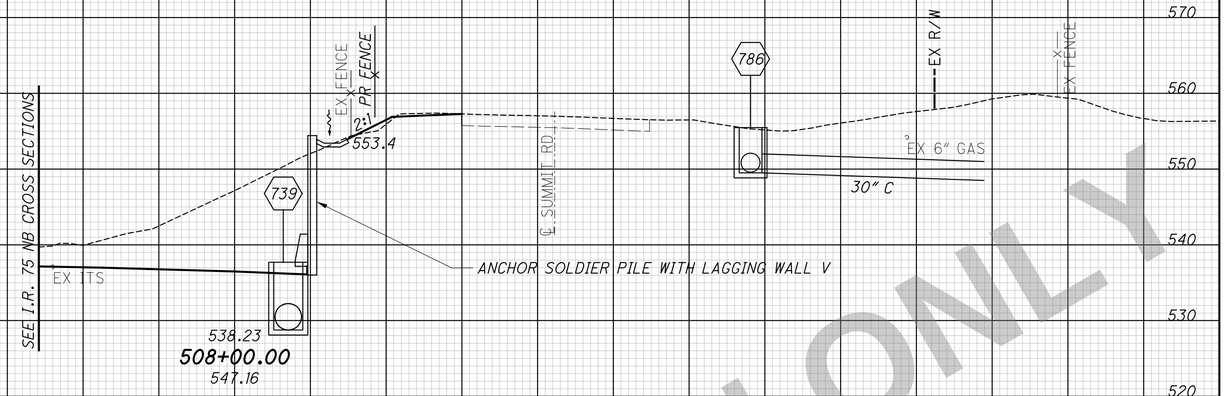
708
2017

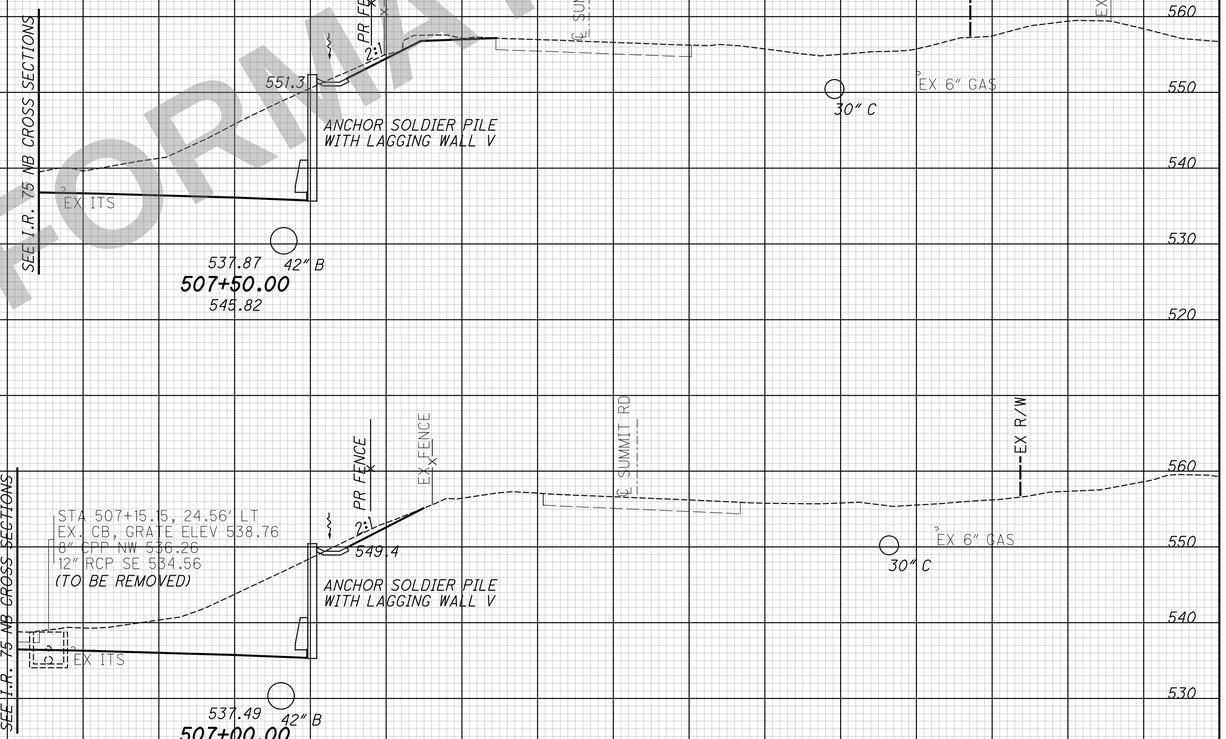
FOR INFORMATION ONLY

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FOR RAMP A SECTIONS BETWEEN
STA 508+50 TO STA 508+96.23
SEE I.R. 75 NB CROSS SECTION SHEET 594.

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES





FOR INFORMATION ONLY

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
20	124	278	6	504	7
22	112	266	4	458	4
20	61	228	2	388	6
	297			1350	17

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS RAMP A
STA. 507+00.00 TO STA. 508+00.00

HAM-75-7.85

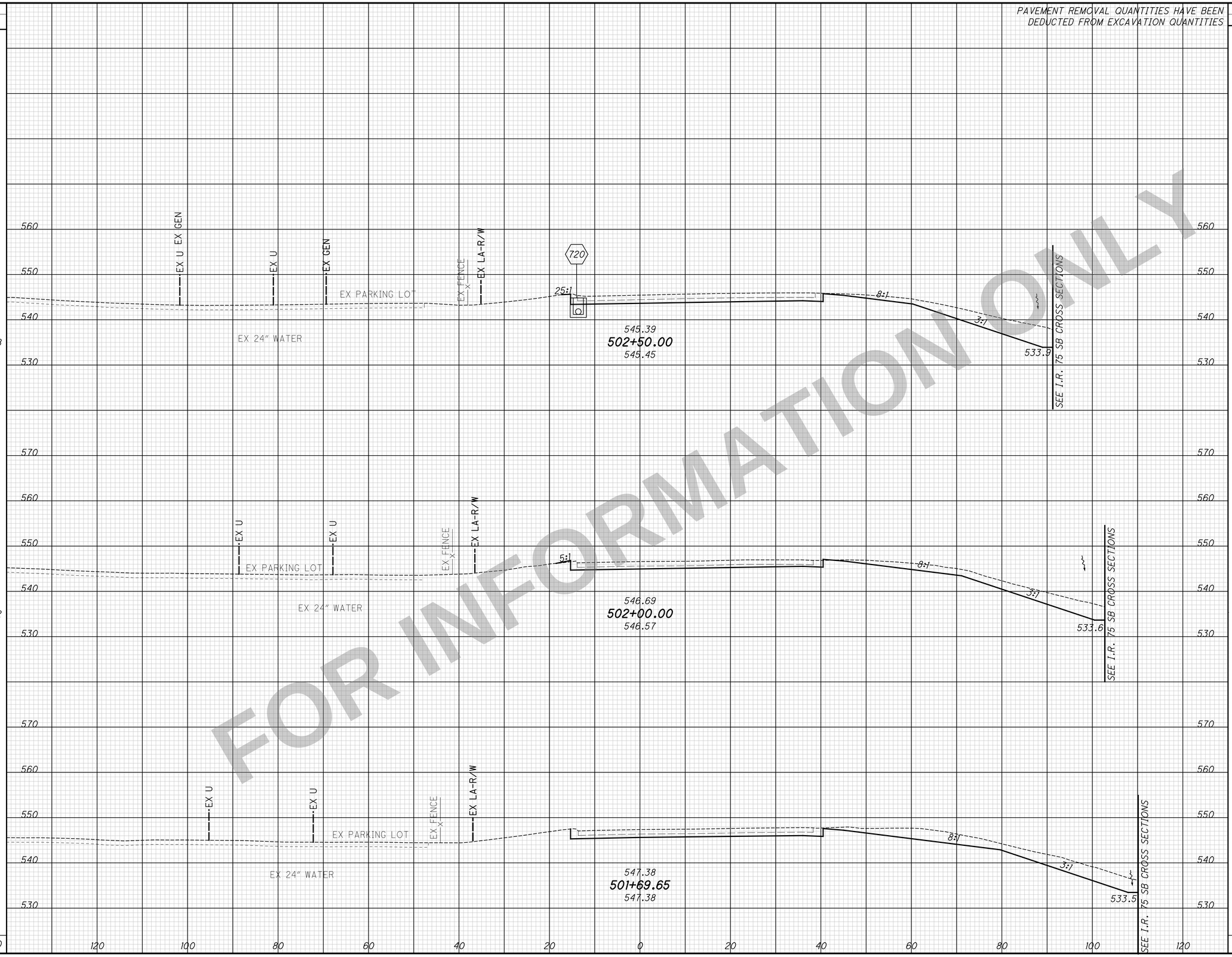
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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
60	368	154	0	274	1
73	252	142	1	187	0
77	0	191	0	0	0
	620			461	1

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS RAMP B
STA. 501+69.65 TO STA. 502+50.00

HAM-75-7.85

710
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

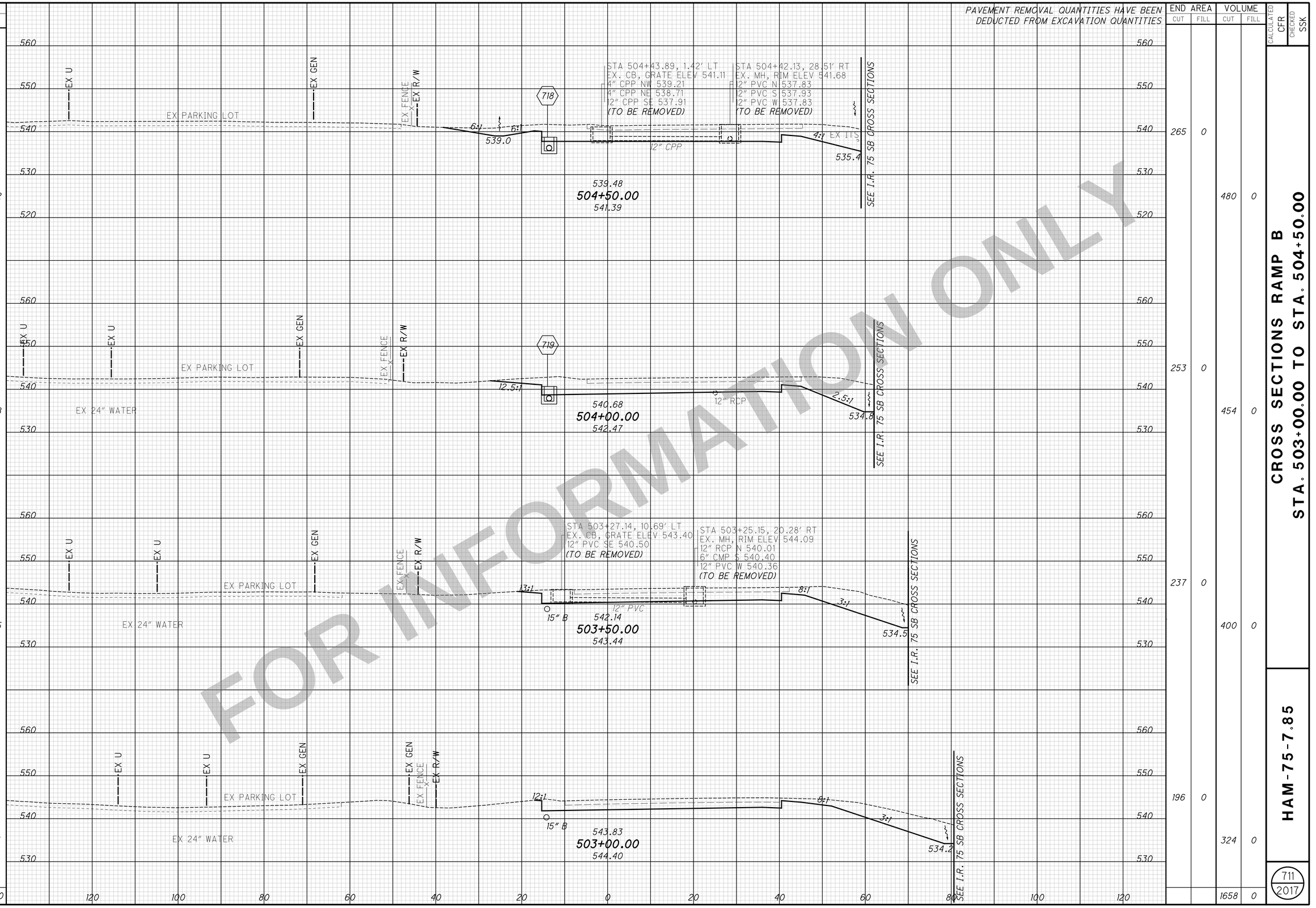
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
47	262	265	0	480	0
48	248	253	0	454	0
42	265	237	0	400	0
54	315	196	0	324	0
	1090			1658	0

CALCULATED: CFR
CHECKED: SSK

CROSS SECTIONS RAMP B
STA. 503+00.00 TO STA. 504+50.00

HAM-75-7.85

711
2017



FOR INFORMATION ONLY

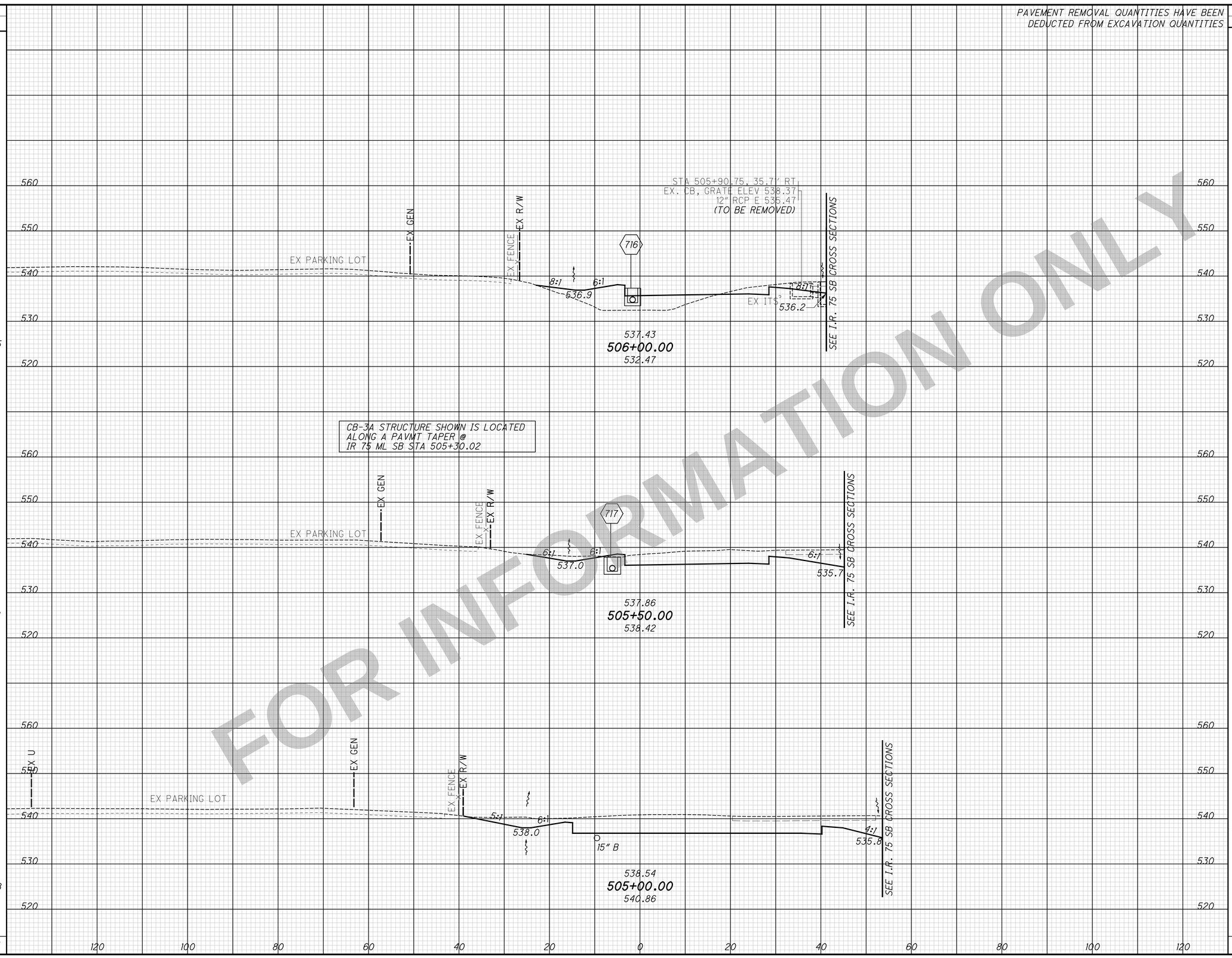
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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.
37	225
44	241
43	248
	714

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
29	105	143	99
125	2	354	2
257	0	483	0
		980	101

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS RAMP B
STA. 505+00.00 TO STA. 506+00.00

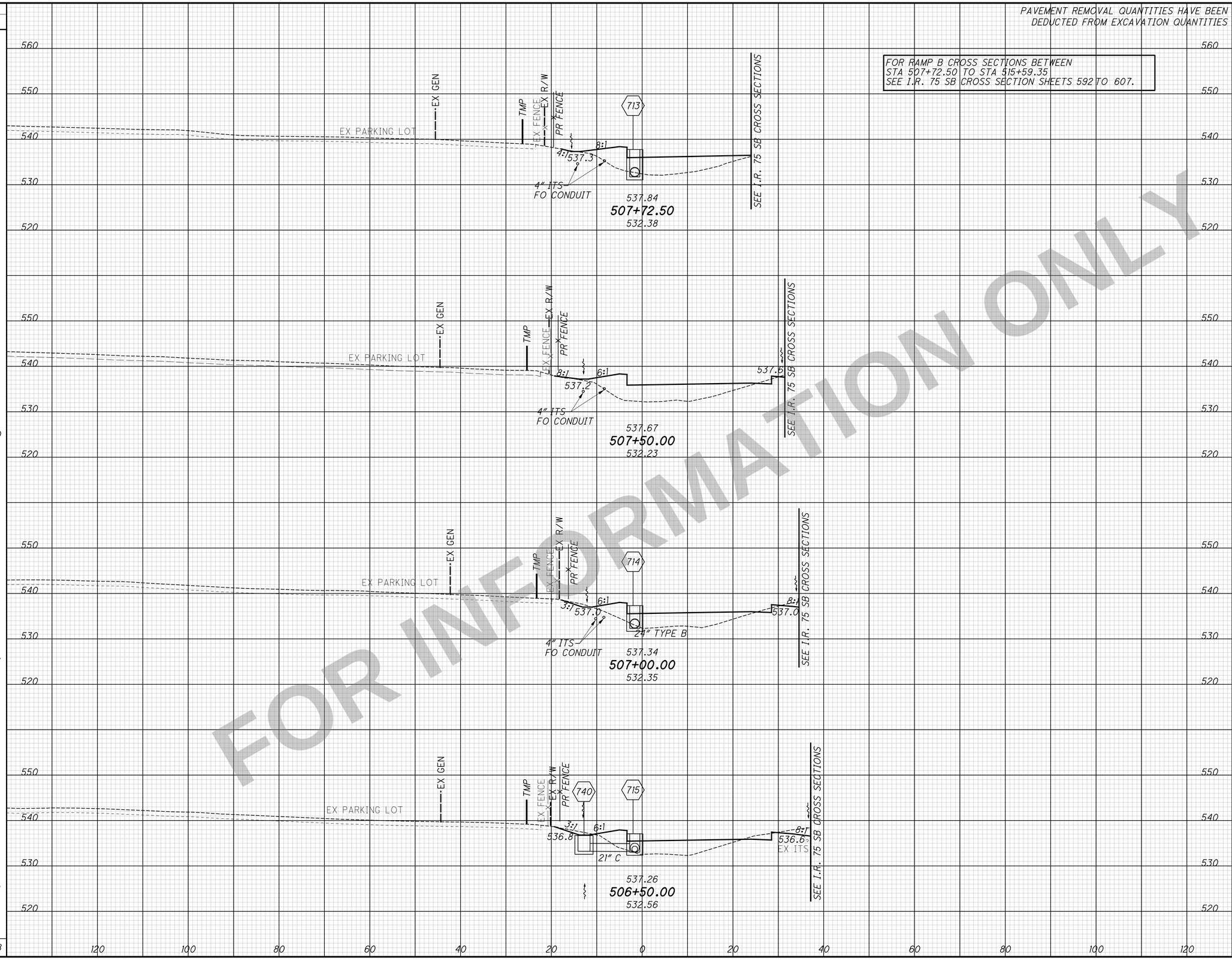
HAM-75-7.85

712
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

FOR RAMP B CROSS SECTIONS BETWEEN STA 507+72.50 TO STA 515+59.35 SEE I.R. 75 SB CROSS SECTION SHEETS 592 TO 607.



SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
19	53	0	106	1	90
24	140	2	111	8	184
26	157	6	88	20	153
30	188	16	78	41	169
	538			70	596

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS RAMP B
STA. 506+50.00 TO STA. 507+72.50

HAM-75-7.85

713
2017

FOR INFORMATION ONLY

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

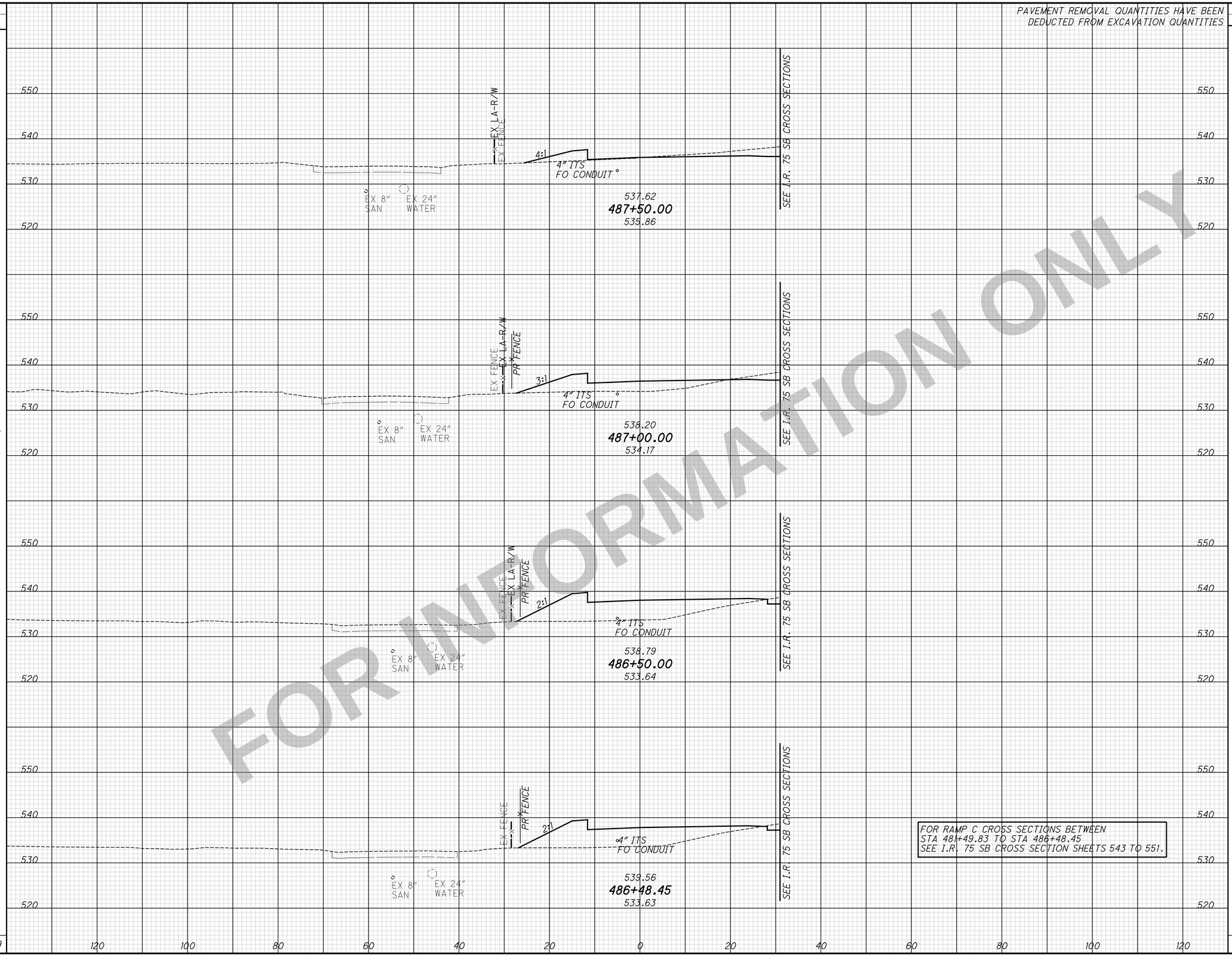
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
20	114	26	21	33	102
22	122	10	89	12	250
22	3	3	180	0	10
22	0	4	169	0	0
	239			45	362

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS RAMP C
STA. 486+48.45 TO STA. 487+50.00

HAM-75-7.85

714
2017



FOR RAMP C CROSS SECTIONS BETWEEN
STA 481+49.83 TO STA 486+48.45
SEE I.R. 75 SB CROSS SECTION SHEETS 543 TO 551.

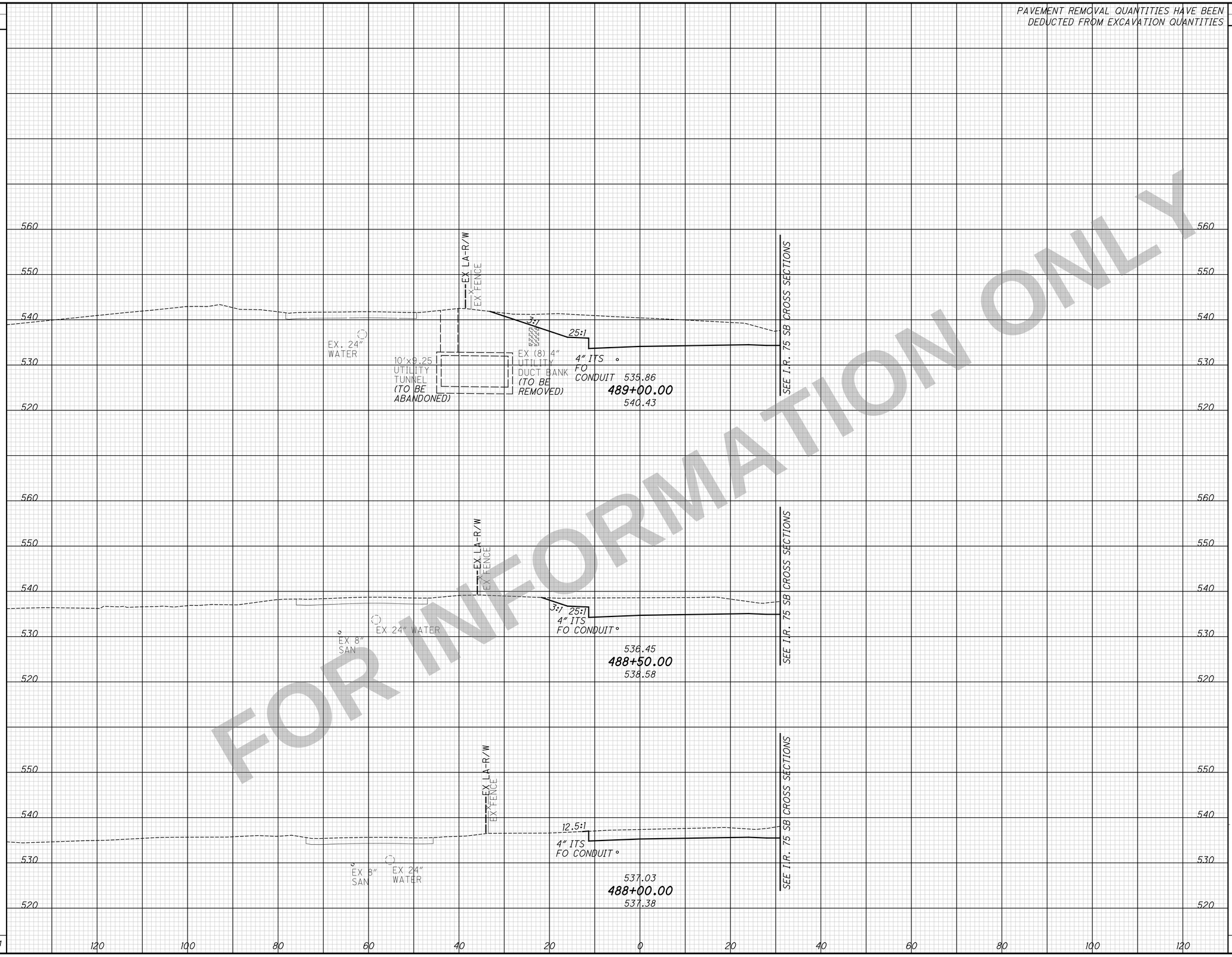
FOR INFORMATION ONLY

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
27	115	300	0	430	0
15	58	165	0	237	0
6	71	91	0	108	20
	244			775	20

CALCULATED CFR
CHECKED SSK



FOR INFORMATION ONLY

CROSS SECTIONS RAMP C
STA. 488+00.00 TO STA. 489+00.00

HAM-75-7.85

715
2017

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SEEDING END WIDTH	SEEDING SQ. YDS.
31	168
30	148
24	141
	457

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

EX LA-R/W
EX FENCE
EX 24" WATER
3:1
540.5
SOLDIER PILE W/ LAGGING WALL J3
4" ITS FO CONDUIT 534.11
490+50.00
547.01
401
SEE I.R. 75 SB CROSS SECTIONS

EX LA-R/W
EX FENCE
EX 24" WATER
2:1
535.7
4" ITS FO CONDUIT 534.69
490+00.00
545.11
405
STA 490+10.58, 28.37' RT
EX. CB, GRATE ELEV 535.18
12" RCP E 532.73
(TO BE REMOVED)
18" B
SEE I.R. 75 SB CROSS SECTIONS

EX LA-R/W
EX FENCE
EX 24" WATER
2:1
535.0
15" B
15" B
535.28
489+50.00
542.41
403
404
402
SEE I.R. 75 SB CROSS SECTIONS

570 560 550 540 530 520

120 100 80 60 40 20 0 20 40 60 80 100 120

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
648	0		
		1084	0
522	0		
		856	0
403	0		
		650	0
		2590	0

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS RAMP C
STA. 489+50.00 TO STA. 490+50.00

HAM-75-7.85

716
2017

FOR INFORMATION ONLY

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
23	65	531	0	994	0
0	0	543	0	976	0
0	0	512	0	1074	0
	65			3044	0

CALCULATED CFR
CHECKED SSK

EX SL
EX R/W
EX LA-R/W
EX FENCE
EX 8" WATER
EX 24" WATER
EX 16" WATER
CIP BARRIER WALL K
2:1
540.0
925
4" ITS CONDUIT
601
EX. ST. LT.
532.81
492+00.00
544.66
36" B
SEE I.R. 75 SB CROSS SECTIONS

DRAINAGE STRUCTURES 905, 907, 908 AND ASSOCIATED PIPES NOT SHOWN FOR CLARITY. FOR DETAILS, SEE DRAINAGE PROFILE SHEETS 845 - 846.

STA 491+54.04, 44.45' LT
EX. CB, GRATE ELEV 552.57
(TO REMAIN)

STA 491+28.58, 30.69' LT
EX. CB, GRATE ELEV 552.37
12" CPP N 549.33
(TO REMAIN)

STA 491+33.21, 26.57' RT
EX. CB, GRATE ELEV 537.51
12" RCP SW 531.49
12" RCP E 531.48
8" RCP NW 532.54
(TO BE REMOVED)

TMP
902
STRUCTURE NO. HAM-561-0701
EX. ST. LT.
4" ITS FO CONDUIT
533.01
491+50.00
547.87
54" B
54" RCP
(TO REMAIN)

STA 490+92.62, 29.78' LT
EX. CB, GRATE ELEV 552.37
12" CPP NE 549.36

℄ LONGVIEW ST
EX 24" WATER

STA 490+89.08, 26.37' RT
EX. CB, GRATE ELEV 538.05
8" RCP NW 532.81
12" RCP NE 532.16
(TO BE REMOVED)

4" ITS FO CONDUIT
533.52
491+00.00
547.46

570 560 550 540 530 520

120 100 80 60 40 20 0 20 40 60 80 100 120

FOR INFORMATION ONLY

CROSS SECTIONS RAMP C STA. 491+00.00 TO STA. 492+00.00

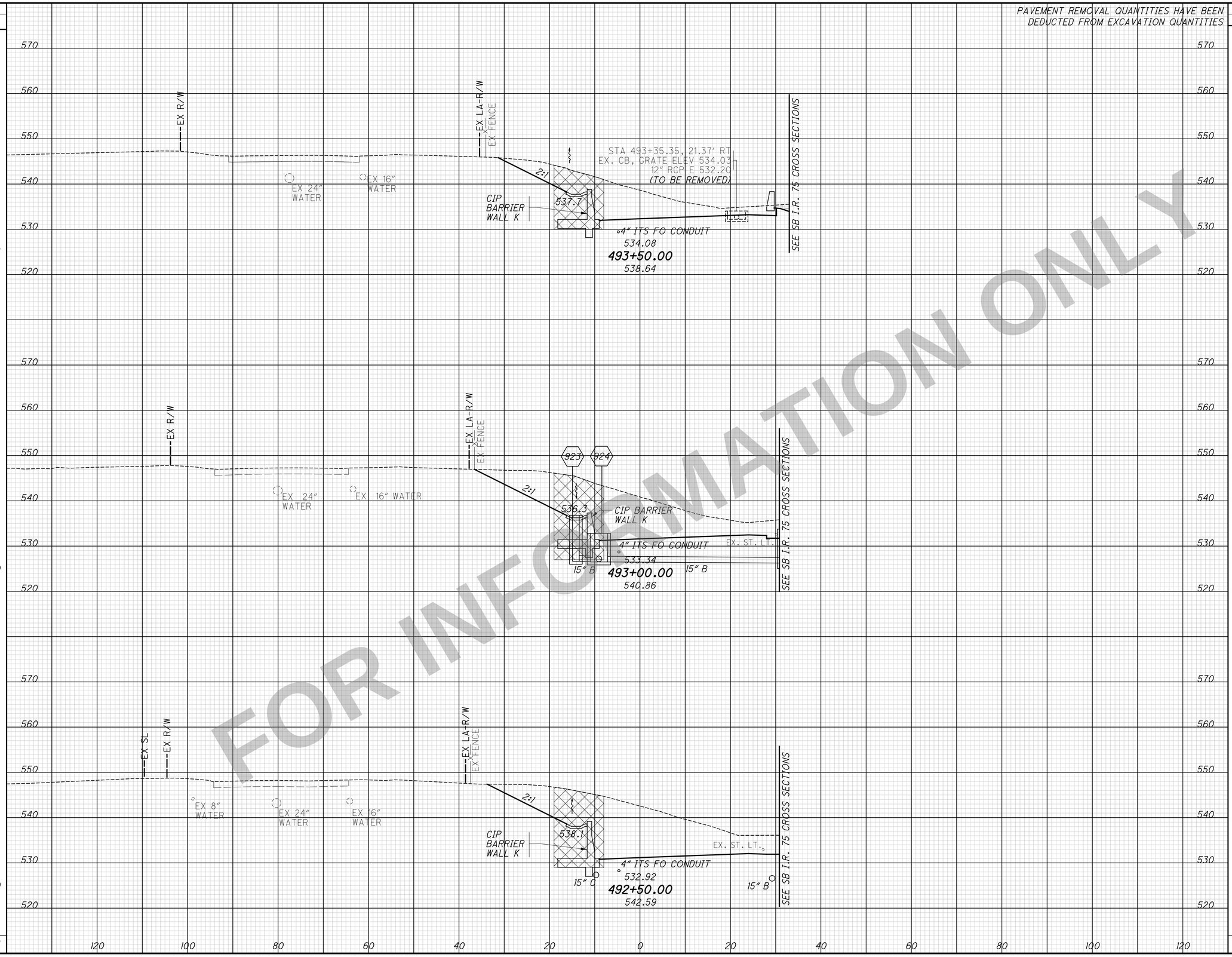
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717
2017

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SEEDING END WIDTH	SEEDING SQ. YDS.
24	143
27	140
24	130
	413

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
245	0	614	0
417	0	812	0
460	0	918	0
		2344	0

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS RAMP C
STA. 492+50.00 TO STA. 493+50.00

HAM-75-7.85

718
2017

FOR INFORMATION ONLY

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
12	79	89	2	194	5
16	105	120	4	267	6
21	127	169	3	383	2
	311			844	13

CALCULATED: CFR
CHECKED: SSK

STA 494+84.32, 41.78' LT
EX. CB, GRATE ELEV 544.75
12" RCP NW 536.10
12" RCP E 535.16
12" RCP S 536.14
12" RCP SW 535.55
(TO REMAIN)

STA 494+75.66, 28.31' RT
EX. CB, GRATE ELEV 538.07
12" RCP NE 535.75
18" RCP SW 531.25
12" RCP NW 531.25
(TO BE REMOVED)

EX LA-R/W
EX FENCE
EX 6" WATER
EX 24" WATER
12" RCP
CIP BARRIER WALL K
617
542.2
12" RCP
12" RCP
15" B
538.18
495+00.00
539.15
SEE I.R. 75 SB CROSS SECTIONS

(TO REMAIN)
STA 494+62.8485, 80.89' LT
EX. CB, GRATE ELEV 543.99
12" RCP NE 538.67

(TO REMAIN)
STA 494+58.22, 51.10' LT
EX. CB, GRATE ELEV 543.90
12" RCP NE 541.69

EX R/W
EX LA-R/W
EX FENCE
EX 24" WATER
EX 16" WATER
CIP BARRIER WALL K
540.7
EX 18" RCP (TBR)
536.50
494+50.00
539.09
SEE I.R. 75 SB CROSS SECTIONS

EX R/W
EX LA-R/W
EX FENCE
EX 24" WATER
EX 16" WATER
CIP BARRIER WALL K
539.2
EX 18" RCP (TBR)
535.13
494+00.00
538.78
SEE I.R. 75 SB CROSS SECTIONS

570 560 550 540 530 520

120 100 80 60 40 20 0 20 40 60 80 100 120

FOR INFORMATION ONLY

CROSS SECTIONS RAMP C
STA. 494+00.00 TO STA. 495+00.00

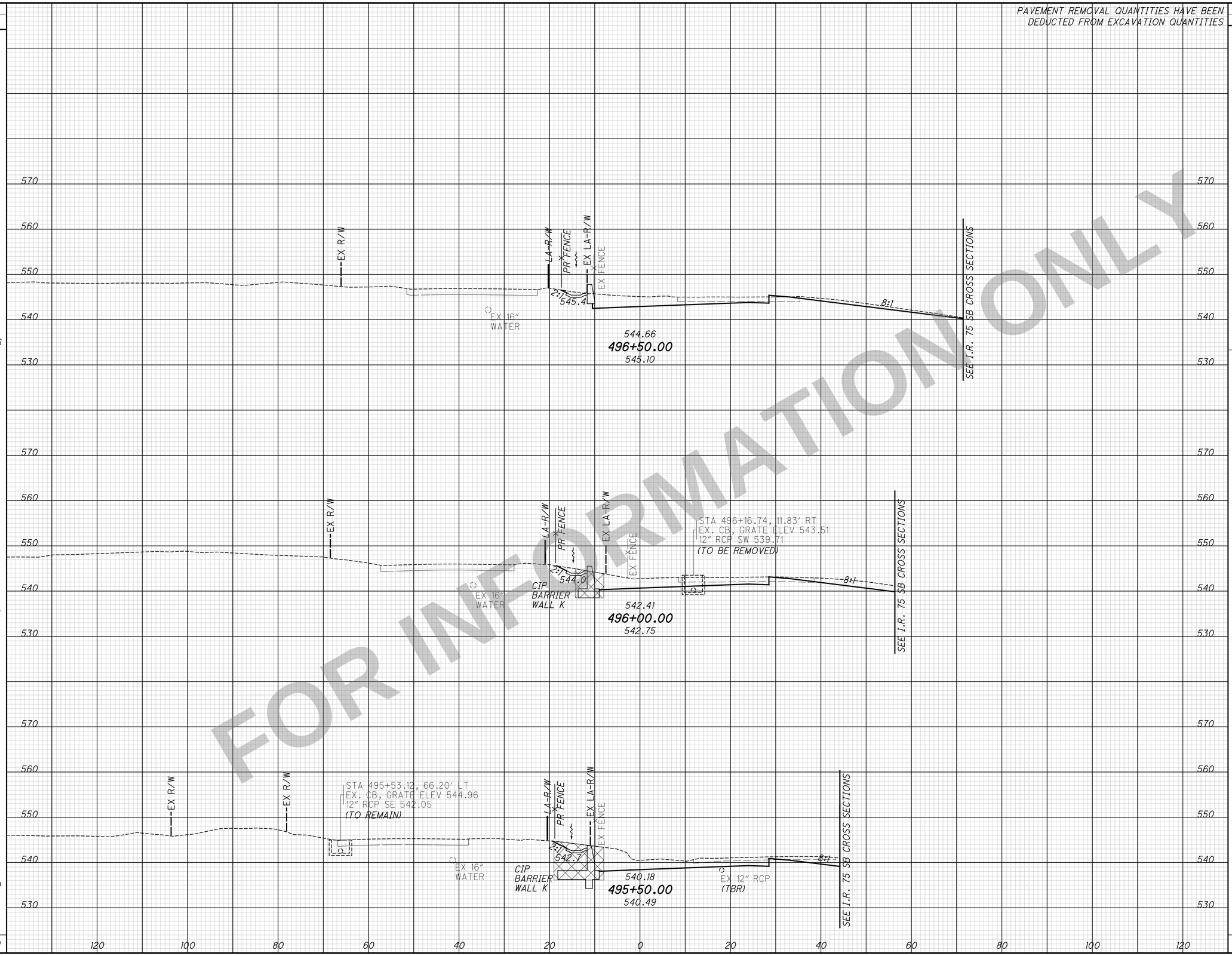
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719
2017

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SEEDING END WIDTH	SEEDING SQ. YDS.
54	246
35	164
24	100
	510

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
81	7	158	13
90	6	182	6
106	1	181	3
		521	22

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS RAMP C
STA. 495+50.00 TO STA. 496+50.00

HAM-75-7.85

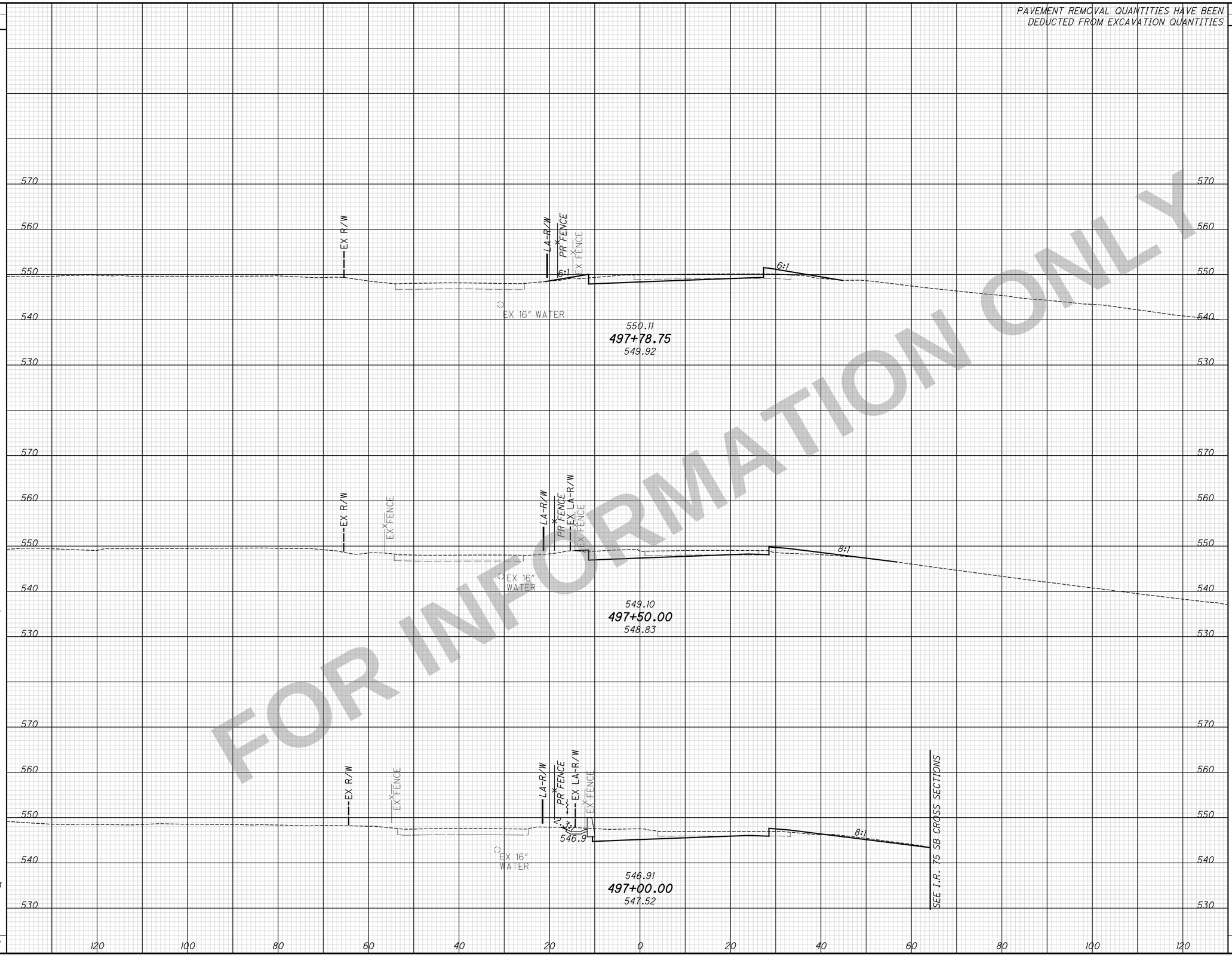
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2017

FOR INFORMATION ONLY

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SEEDING END WIDTH	SEEDING SQ. YDS.
0	0
	37
	217
	42
	264
	481

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
22	19		
31	14		
54	10		
		28	18
		78	23
		125	16
		231	57

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS RAMP C
STA. 497+00.00 TO STA. 497+78.75

HAM-75-7.85

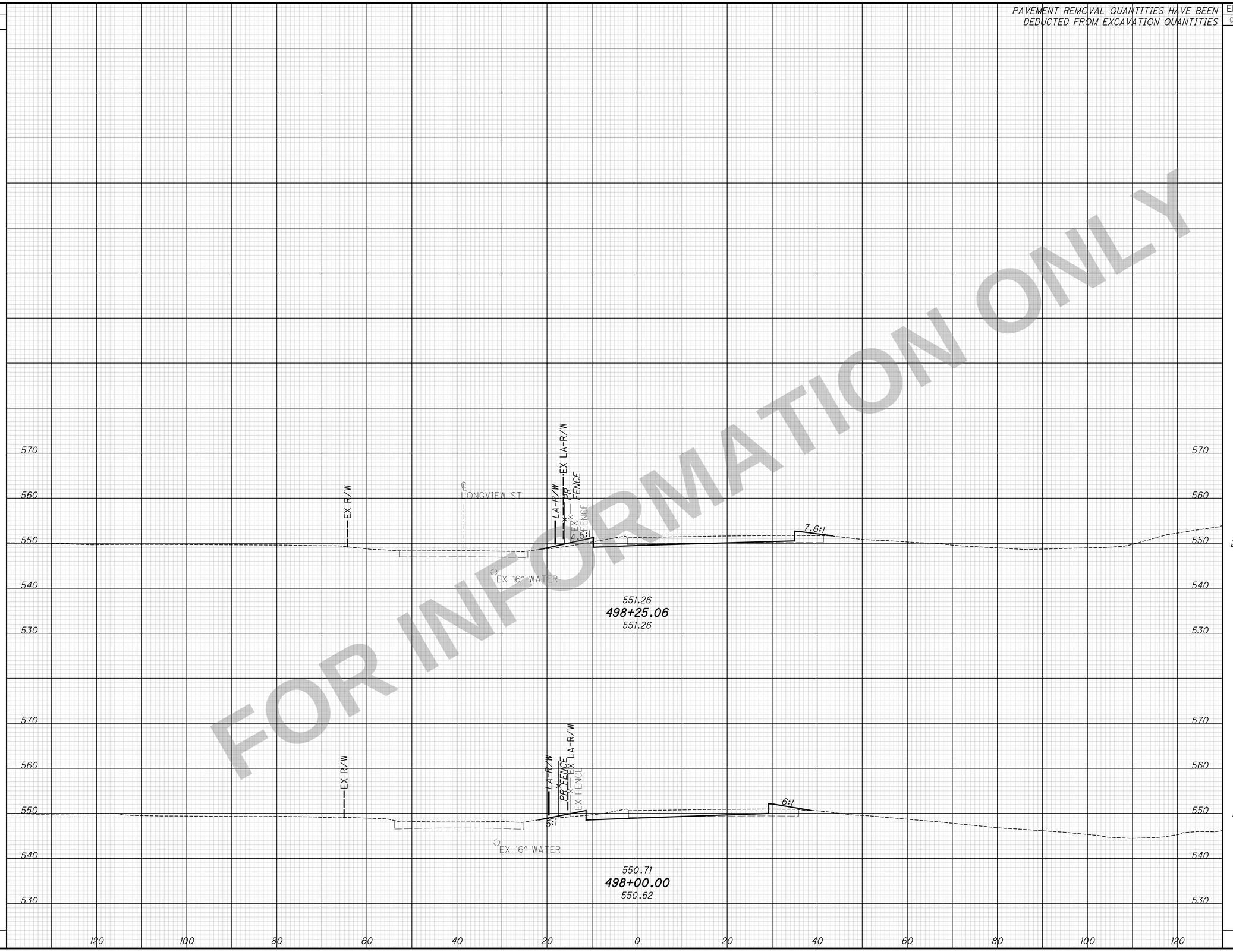
721
2017

FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SQ. YDS.
26	73
26	
26	
99	

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA		VOLUME	
CUT	FILL	CUT	FILL
28	11		
31	11	27	10
		21	12
		48	22

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS RAMP C
STA. 498+00.00 TO STA. 498+25.06

HAM-75-7.85

722
2017

FOR INFORMATION ONLY

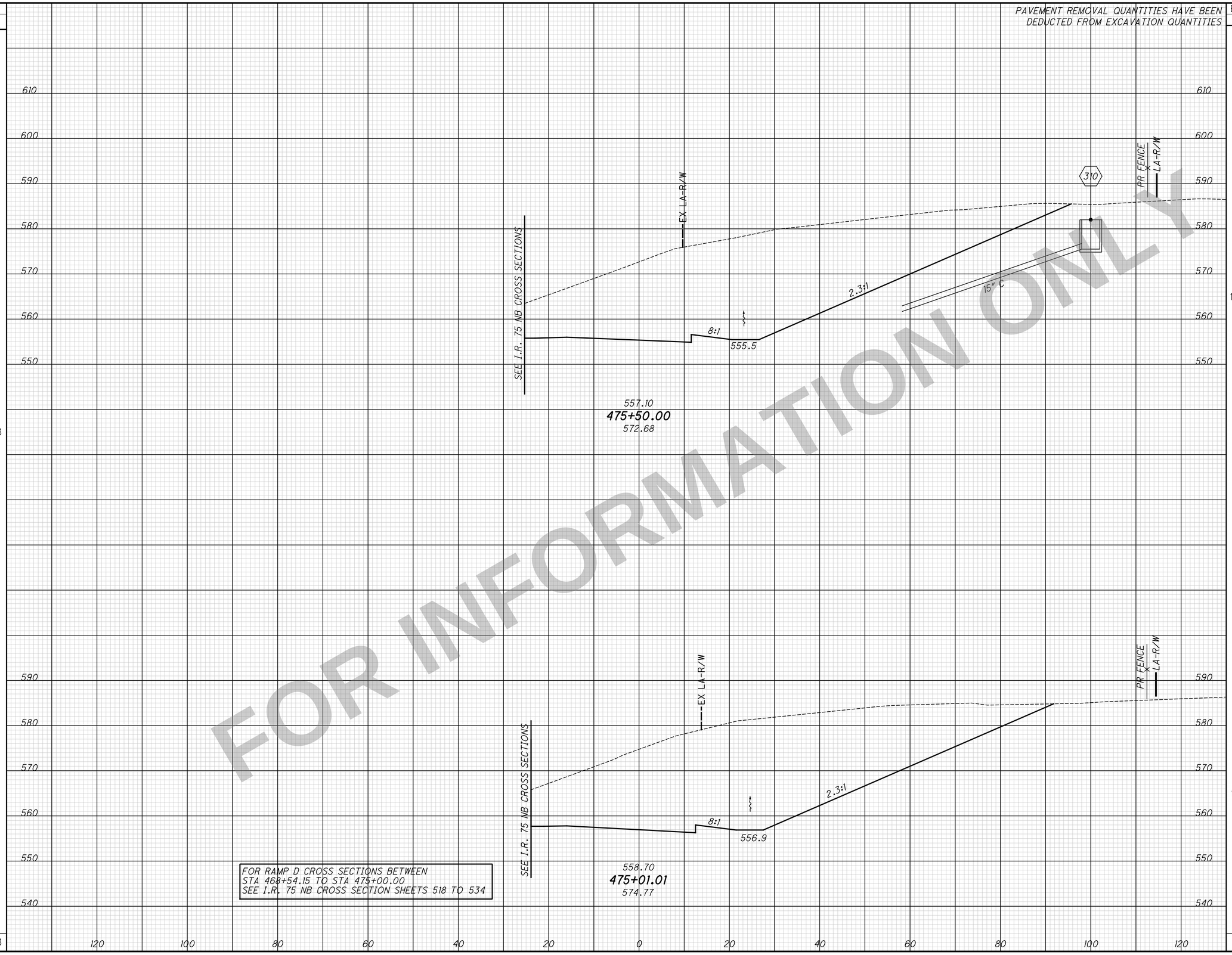
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SEEDING	
END WIDTH	SQ. YDS.
95	503
90	0
	503

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1734	0	3161	0
1751	0	0	0
		3161	0

CALCULATED: CFR
CHECKED: SSK



FOR INFORMATION ONLY

CROSS SECTIONS RAMP D
STA. 475+01.01 TO STA. 475+50.00

HAM-75-7.85

723
2017

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SEEDING END WIDTH	SEEDING SQ. YDS.
99	551
99	556
101	543
	1650

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEE I.R. 75 NB CROSS SECTIONS

EX LA-R/W

PR FENCE LA-R/W

18" B

15" C

552.42
477+00.00
567.19

8:1

2.3:1

551.0

SEE I.R. 75 NB CROSS SECTIONS

EX LA-R/W

PR FENCE LA-R/W

18" B

15" C

553.90
476+50.00
569.24

8:1

2.3:1

552.5

SEE I.R. 75 NB CROSS SECTIONS

EX LA-R/W

PROP FENCE

PR FENCE LA-R/W

EX MH STA 475+85.6043, 1.67' RT
EX MH, RIM ELEV 573.19'
12" RCP E 565.69
12" RCP W 564.49

EX MH STA 475+74.4981, 70.30' RT
EX MH, RIM ELEV 538.06'
(TBR) 12" VCP E 578.62
(TBR) 15" VCP W 578.53

EX 12" VCP (TBR)

EX 12" VCP
(TO REMAIN EAST OF 310)

322

309

5" B

18" B

15" C

8:1

2.3:1

553.9

555.47
476+00.00
571.09

120 100 80 60 40 20 0 20 40 60 80 100 120

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1511	0		
1594	0		
1712	0		
3190	0		
7626	0	2875	0
		1561	0

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS RAMP D
STA. 476+00.00 TO STA. 477+00.00

HAM-75-7.85

724
2017

FOR INFORMATION ONLY

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
93	530	1063	0	2156	
98	550	1266	0	2494	0
100	554	1428	0	2721	0
	1634			7371	0

CALCULATED CFR
CHECKED SSK

FOR INFORMATION ONLY

CROSS SECTIONS RAMP D
STA. 477+50.00 TO STA. 478+50.00

HAM-75-7.85

725
2017

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SEEDING		END AREA		VOLUME		CALCULATED	CHECKED
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL	CFR	SSK
75	447	447	19	1082	17		
86	486	722	0	1540	0		
89	505	942	0	1856	0		
	1438			4478	17		

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

FOR INFORMATION ONLY

CROSS SECTIONS RAMP D
STA. 479+00.00 TO STA. 480+00.00

HAM-75-7.85

726
2017

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SEEDING END WIDTH	SEEDING SQ. YDS.
33	174
29	225
52	323
65	387
	1109

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEE I.R. 75 NB CROSS SECTIONS

RAMP E

EX LA-R/W

PR FENCE LA-R/W

8:1

4:1

540.9

542.45

482+00.00

541.34

30" B

EX 12" RCP

SEE I.R. 75 NB CROSS SECTIONS

RAMP E

EX LA-R/W

PR FENCE LA-R/W

8:1

3:1

541.6

543.05

481+50.00

541.27

30" B

EX 12" RCP

STA 480+85.41, 17.70' LT
EX CB, GRATE ELEV 538.37
4" CPP NW 536.52
8" VCP W 534.97
12" RCP W 533.77

STA 480+87.71, 30.34' RT
EX MH, RIM ELEV 548.28
8" VCP SE 546.28

SEE I.R. 75 NB CROSS SECTIONS

EX LA-R/W

312

RAMP E

8:1

2.3:1

542.3

543.74

481+00.00

542.72

30" B

15" F

313

PR FENCE LA-R/W

STA 481+18.16, 8.42' LT
EX MH, RIM ELEV 540.77
12" RCP W 528.17

30" B

SEE I.R. 75 NB CROSS SECTIONS

EX LA-R/W

321

319

318

8:1

2.3:1

543.1

544.52

480+50.00

545.15

36" B

36"C

PR FENCE LA-R/W

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
49	25		
		77	64
34	45		
		155	88
133	51		
		368	97
265	54		
		659	67
		1259	316

CALCULATED CFR

CHECKED SSK

CROSS SECTIONS RAMP D
STA. 480+50.00 TO STA. 482+00.00

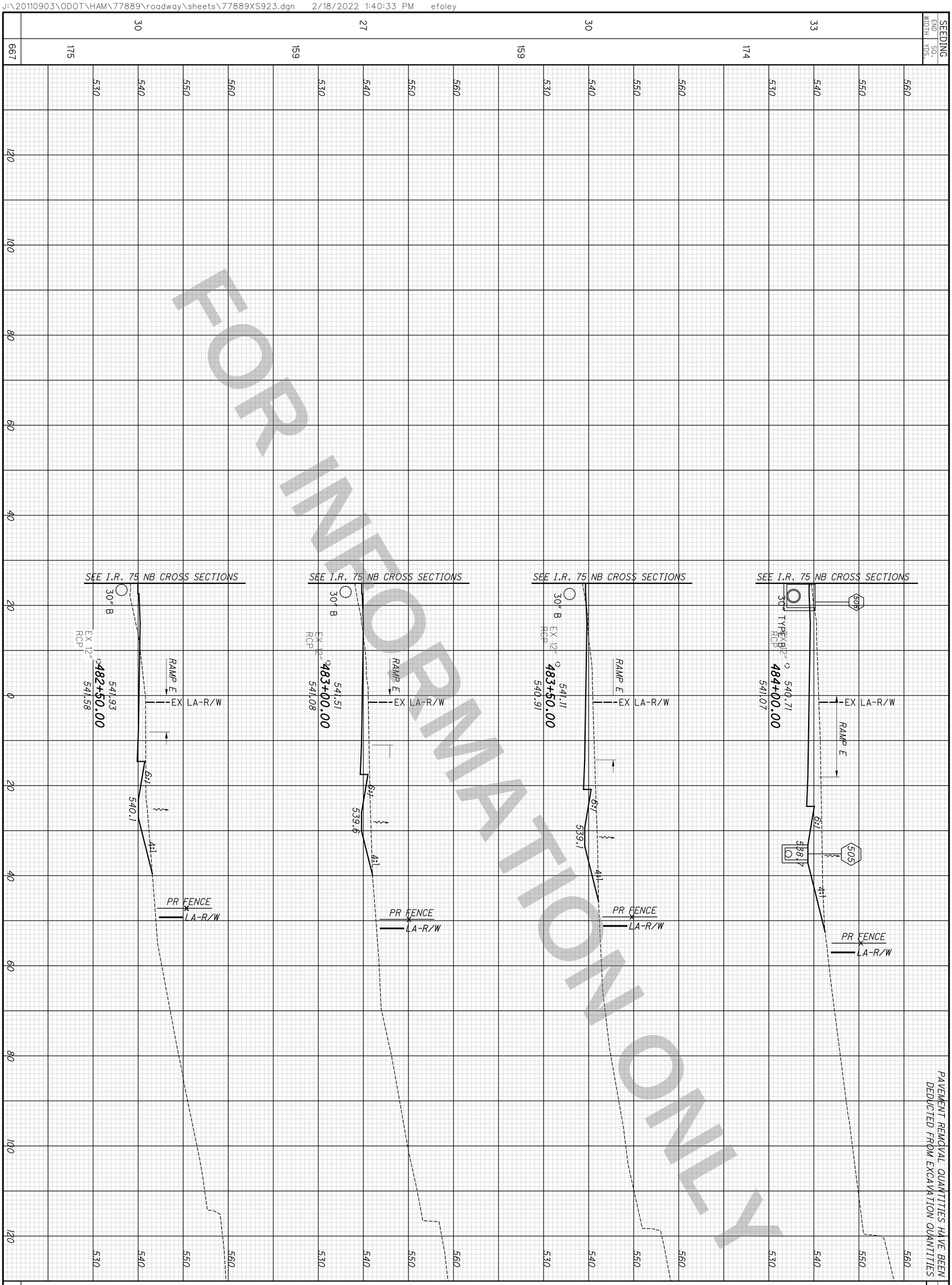
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727
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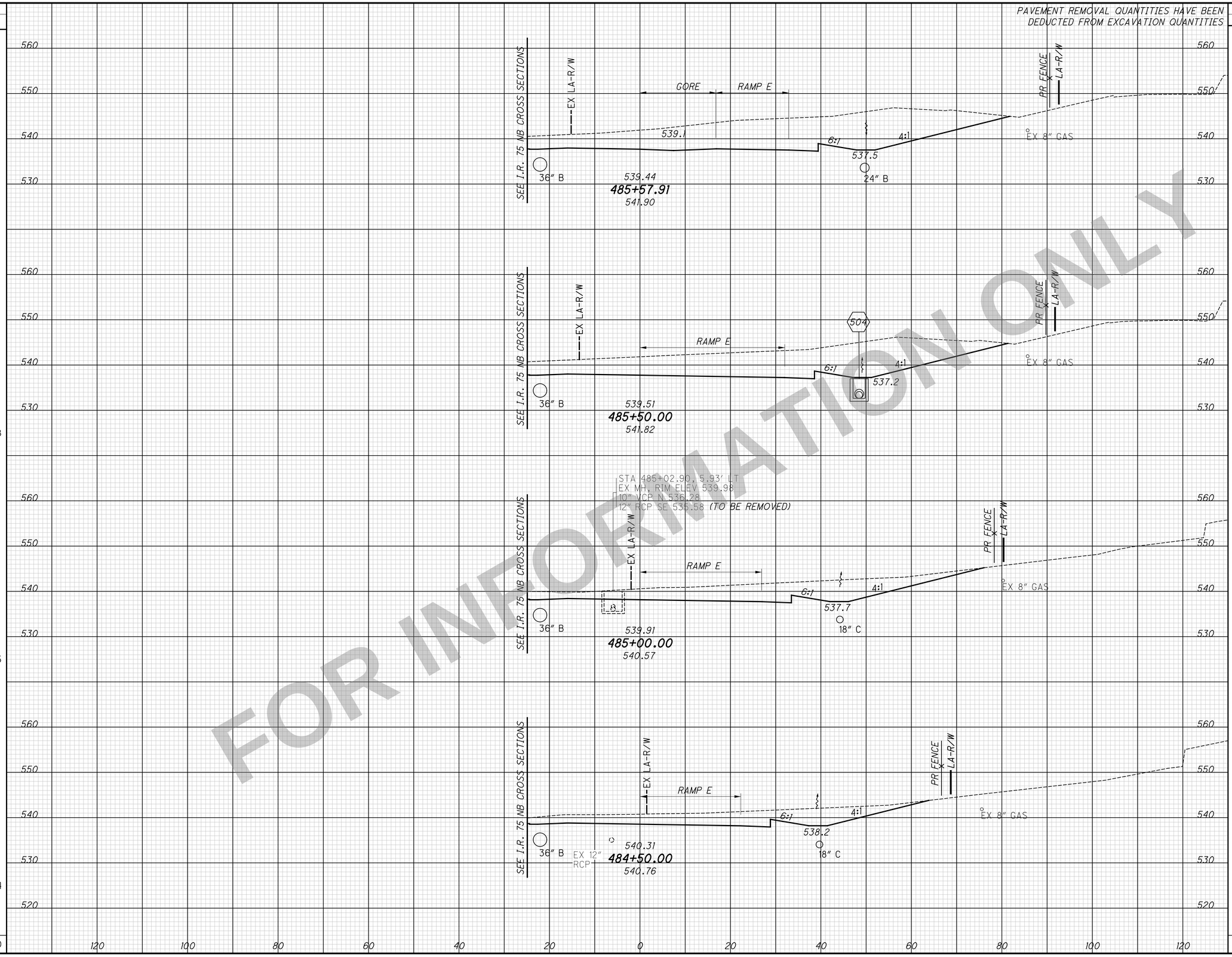
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CROSS SECTIONS RAMP D
STA. 482+50.00 TO STA. 484+00.00

CALCULATED CFR
CHECKED SSK

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
48	43	560	0	157	0
48	268	509	0	724	0
48	245	273	0	445	0
40	204	207	0	339	0
	760			1665	0

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS RAMP D
STA. 484+50.00 TO STA. 485+57.91

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729
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SEEDING END WIDTH	SEEDING SQ. YDS.
13	69
12	54
8	130
	253

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
243	0	407	0
197	0	354	0
186	0	582	0
		1343	0

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS RAMP D
STA. 486+00.00 TO STA. 487+00.00

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730
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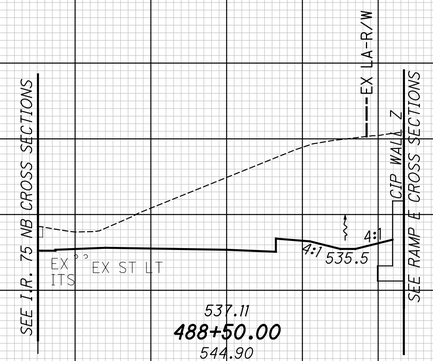
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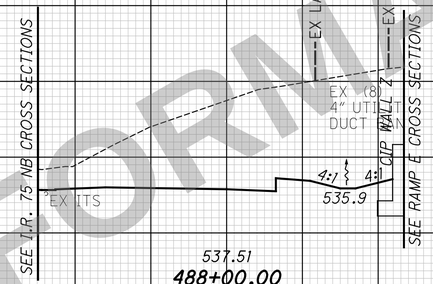
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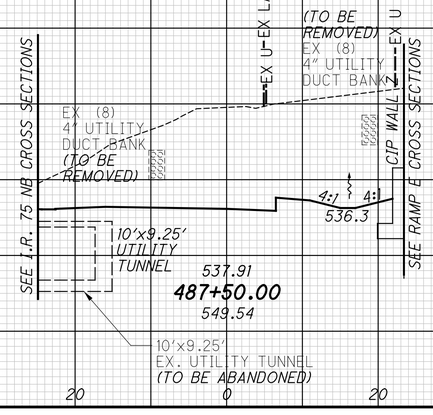
PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
20	112	412	0	829	0
20	112	484	0	954	0
20	93	547	0	731	0
	317			2514	0

CALCULATED CFR
CHECKED SSK







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CROSS SECTIONS RAMP D
STA. 487+50.00 TO STA. 488+50.00

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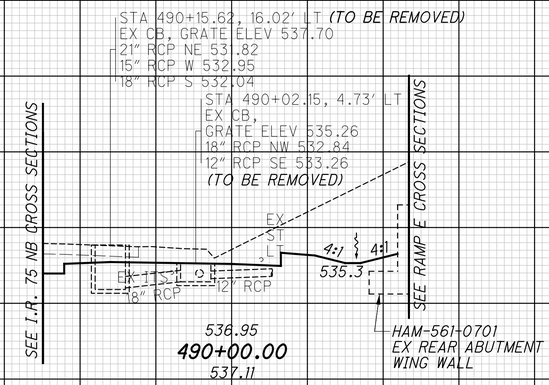
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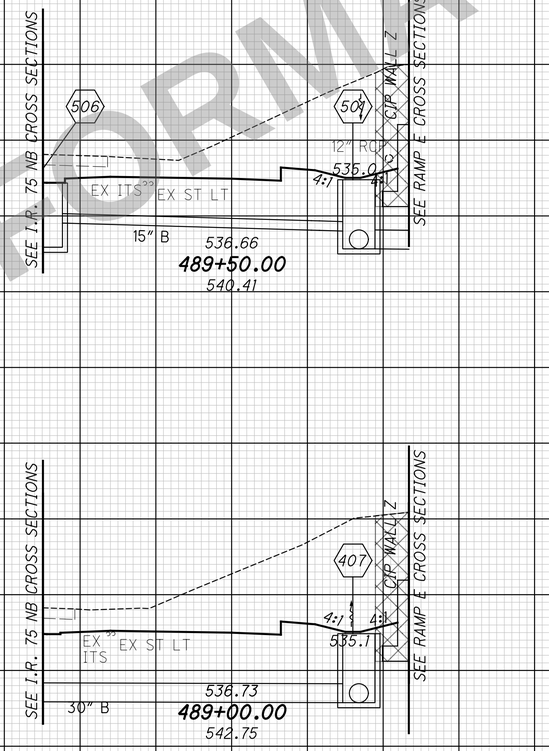
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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
20	112	196	0	455	0
20	112	296	0	615	0
20	112	368	0	722	0
	336			1792	0

CALCULATED CFR
CHECKED SSK





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CROSS SECTIONS RAMP D
STA. 489+00.00 TO STA. 490+00.00

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732
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SEEDING END WIDTH	SEEDING SQ. YDS.
110	356
19	108
20	112
	220

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

STA 491+27.41, 8.13' LT
CB, GRATE ELEV 539.27
36" RCP NW 528.70
36" RCP SE 528.92
36" RCP E 534.05
24" RCP SW 530.39
(TO BE REMOVED)

STA 491+29.83, 4.26' RT (TO BE REMOVED)
EX CB, GRATE ELEV 538.24
12" RCP NW 535.33

STA 491+58.49, 19.26' RT (TO BE REMOVED)
EX CB, GRATE ELEV 542.80
36" RCP NW 530.20
36" RCP SW 530.18
12" RCP SE 534.99

SEE I.R. 75 NB CROSS SECTIONS CIP WALL Y

80'-15" TYPE B SAN @ 0.18%

904 906 910

4:1 8:1 3:1

12" RCP 36" RCP 54" C 15" B 54" B 36" B 42" B

EX ST LT

537.9 539.97

491+50.00
539.50

S.R. 561 (SEYMOUR AVE)
STRUCTURE NO.
HAM-561-0701

STA 491+10.67, 71.32' RT
EX CB, GRATE ELEV 562.02
12" CPP NE 558.25

STA 491+16.71, 83.45' RT
EX CB, GRATE ELEV 563.01

12" CPP 12" RCP

SEE I.R. 75 NB CROSS SECTIONS CIP WALL Y

21" RCP (TO BE REMOVED) 538.60
491+00.00
538.02

536.9

STA 490+66.5521, 74.39' RT
EX CB, GRATE ELEV 562.14

EX LA-R/W EX R/W

S.R. 561 (SEYMOUR AVE)
STRUCTURE NO.
HAM-561-0701

SEE I.R. 75 NB CROSS SECTIONS CIP WALL Y

21" RCP (TO BE REMOVED) 537.59
490+50.00
537.15

536.0

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
489	5	521	5
73	0	179	0
120	0	292	0
		992	5

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS RAMP D
STA. 490+50.00 TO STA. 491+50.00

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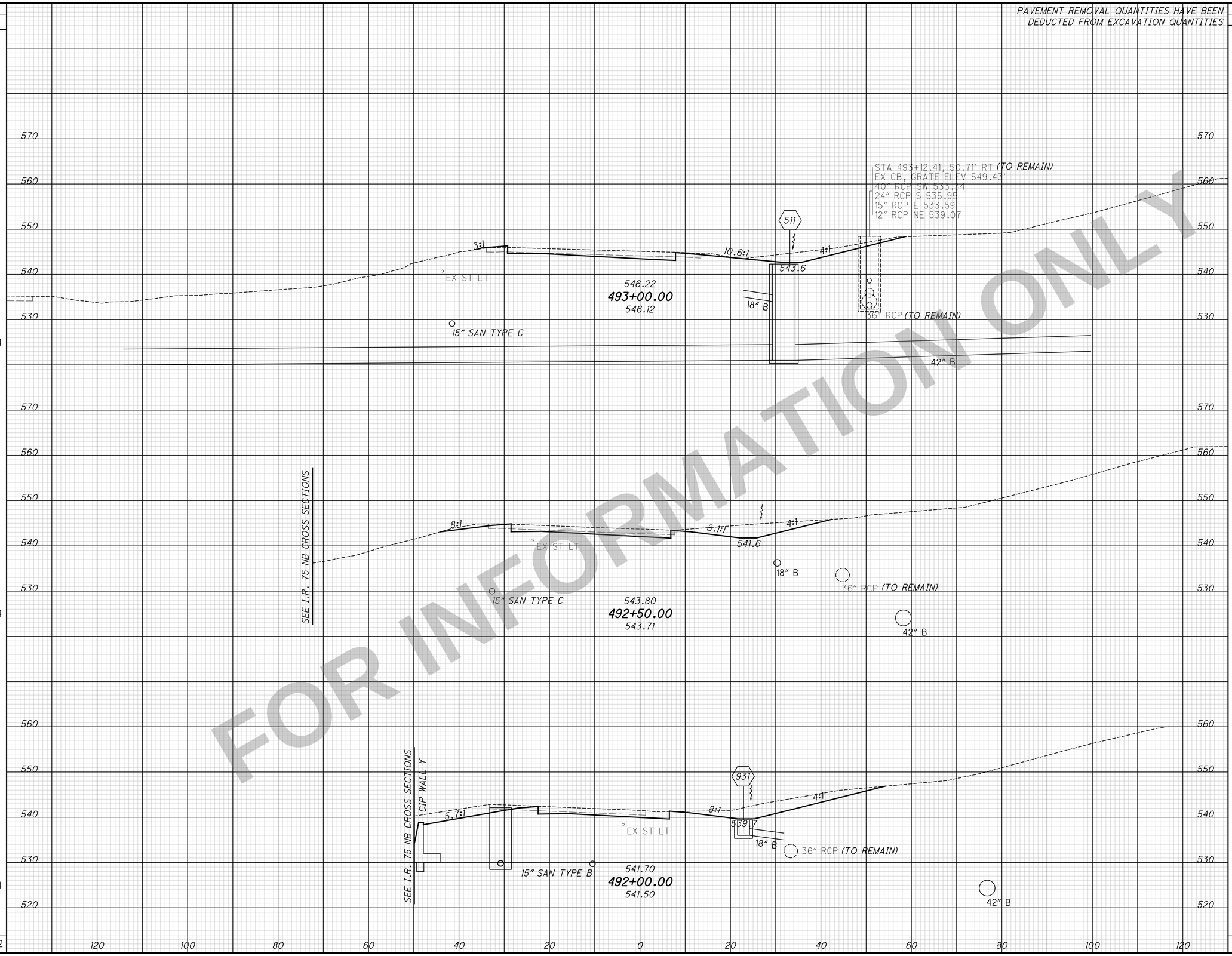
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SEEDING END WIDTH	SEEDING SQ. YDS.
54	334
66	404
79	524
	1262

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



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END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
59	10		
79	5	190	8
126	4	570	8
		888	30
		128	14

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS RAMP D
STA. 492+00.00 TO STA. 493+00.00

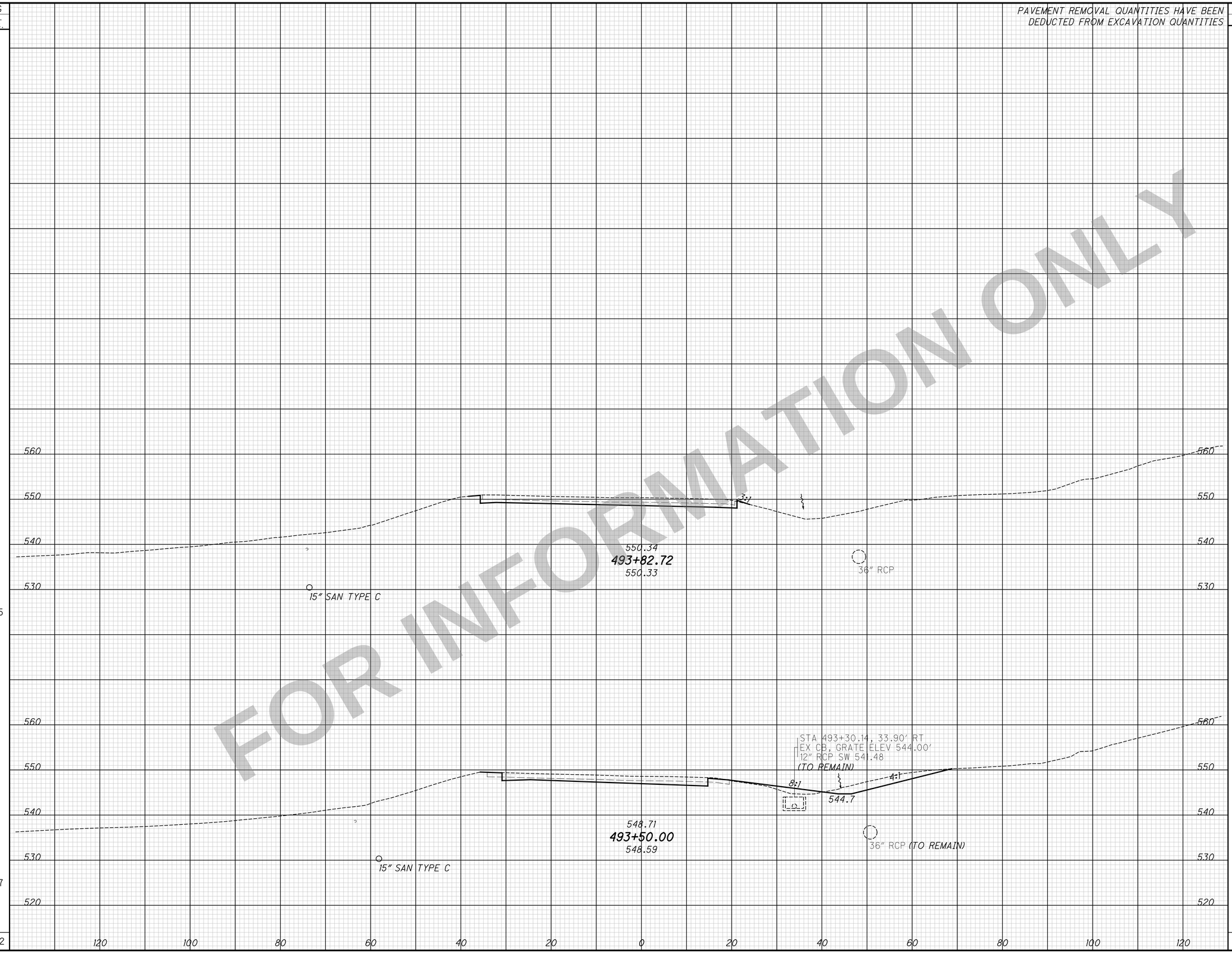
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SEEDING	
END WIDTH	SQ. YDS.
20	145
60	317
	462

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
41	0		
		64	12
65	19		
		115	27
		179	39

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS RAMP D
STA. 493+50.00 TO STA. 493+82.72

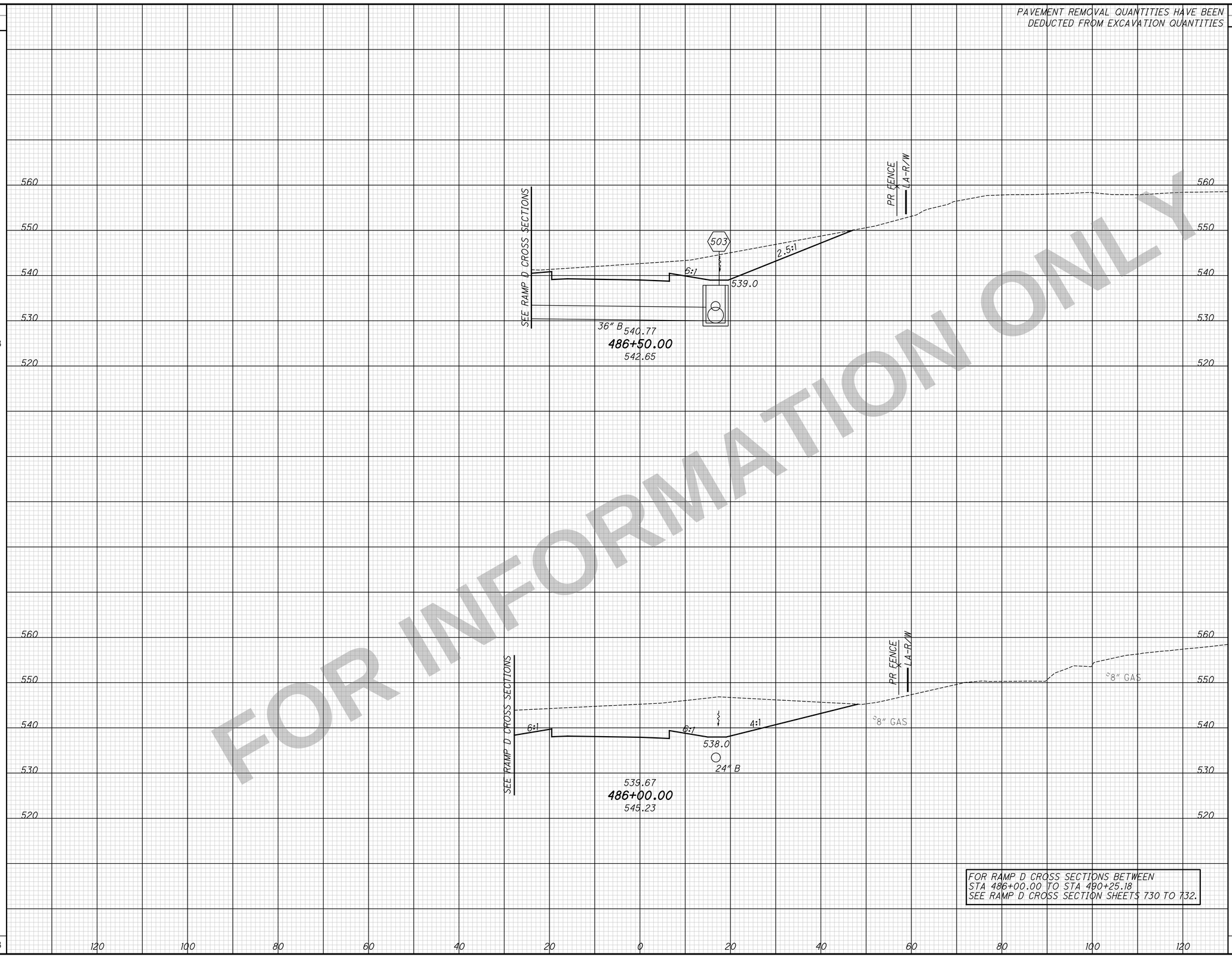
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SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
44	278	223	0	622	0
56	0	448	0	0	0
	278			622	0

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR RAMP D CROSS SECTIONS BETWEEN
STA 486+00.00 TO STA 490+25.18
SEE RAMP D CROSS SECTION SHEETS 730 TO 732.

FOR INFORMATION ONLY

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS RAMP E
STA. 486+00.00 TO STA. 486+50.00

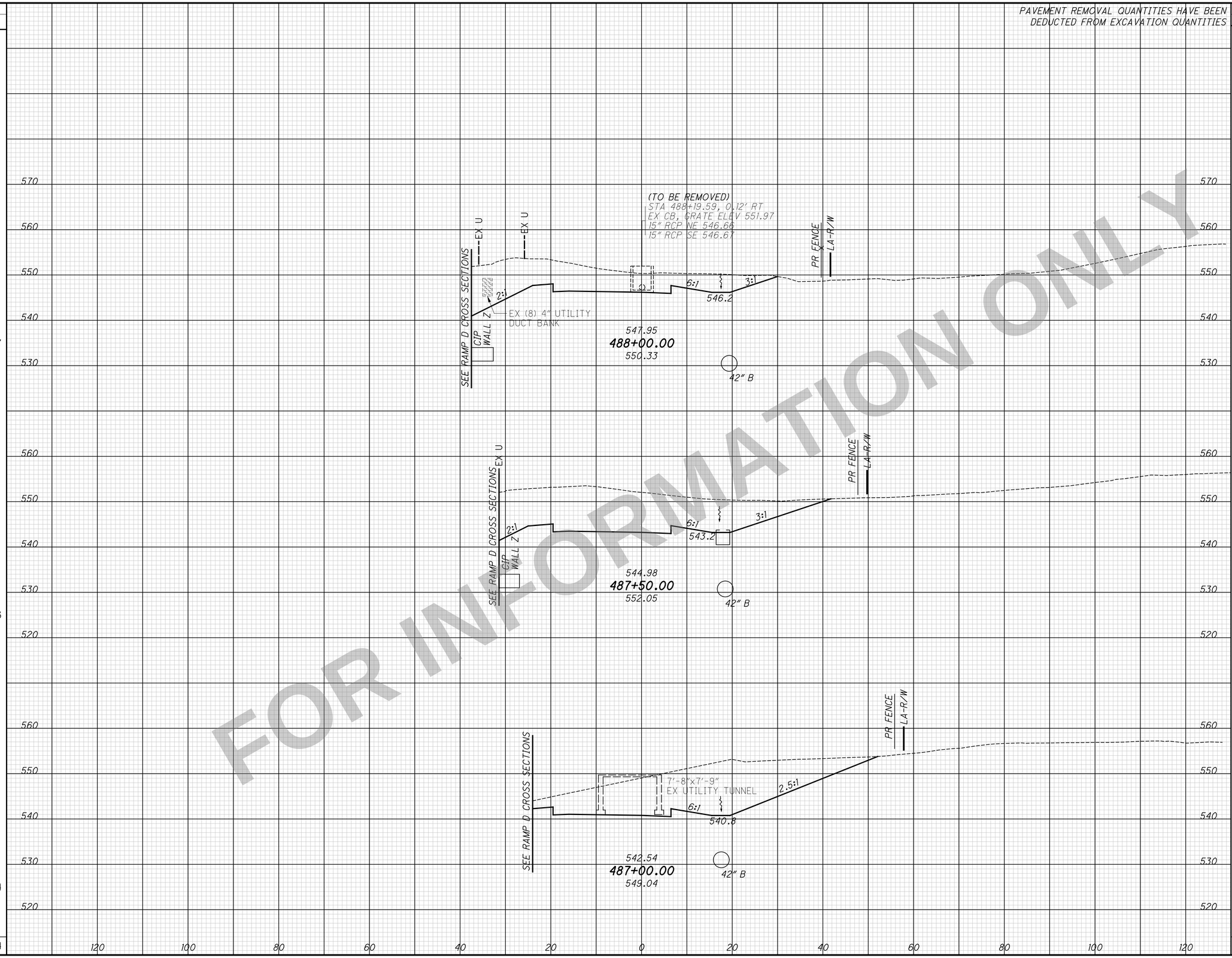
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SEEDING END WIDTH	SEEDING SQ. YDS.
49	287
54	293
51	264
	844

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
341	0	795	0
517	0	918	0
516	0	661	0
		2374	0

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS RAMP E
STA. 487+00.00 TO STA. 488+00.00

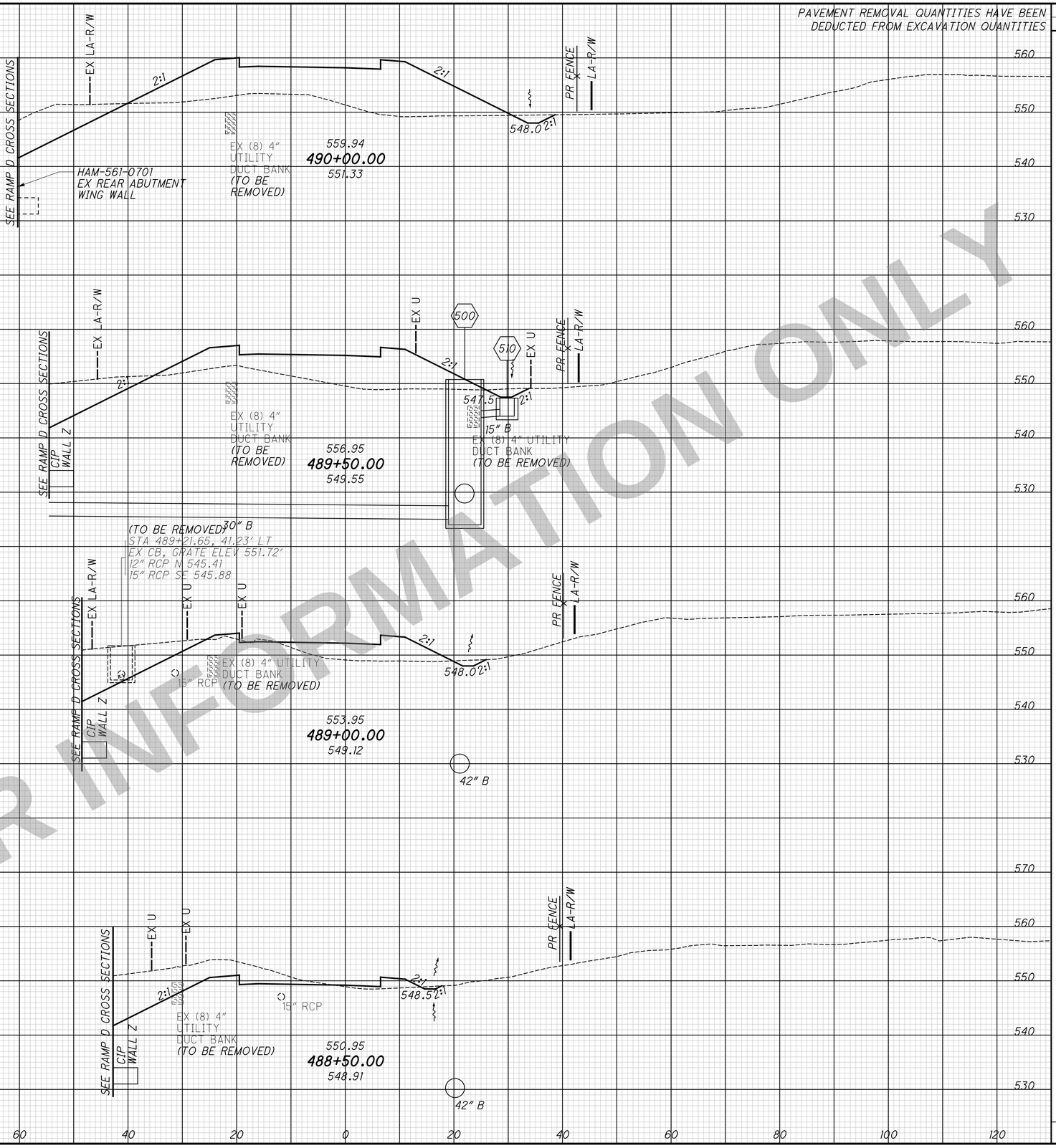
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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



SEEDING END WIDTH	SEEDING SQ. YDS.
85	440
73	364
58	278
42	253
	1335

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
96	392	171	590
88	246	189	310
116	90	251	96
155	0	459	13
		1070	1009

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS RAMP E
STA. 488+50.00 TO STA. 490+00.00

HAM-75-7.85

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SEEDING	
END WIDTH	SQ. YDS.
79	230
	230

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA	
CUT	FILL
9	382

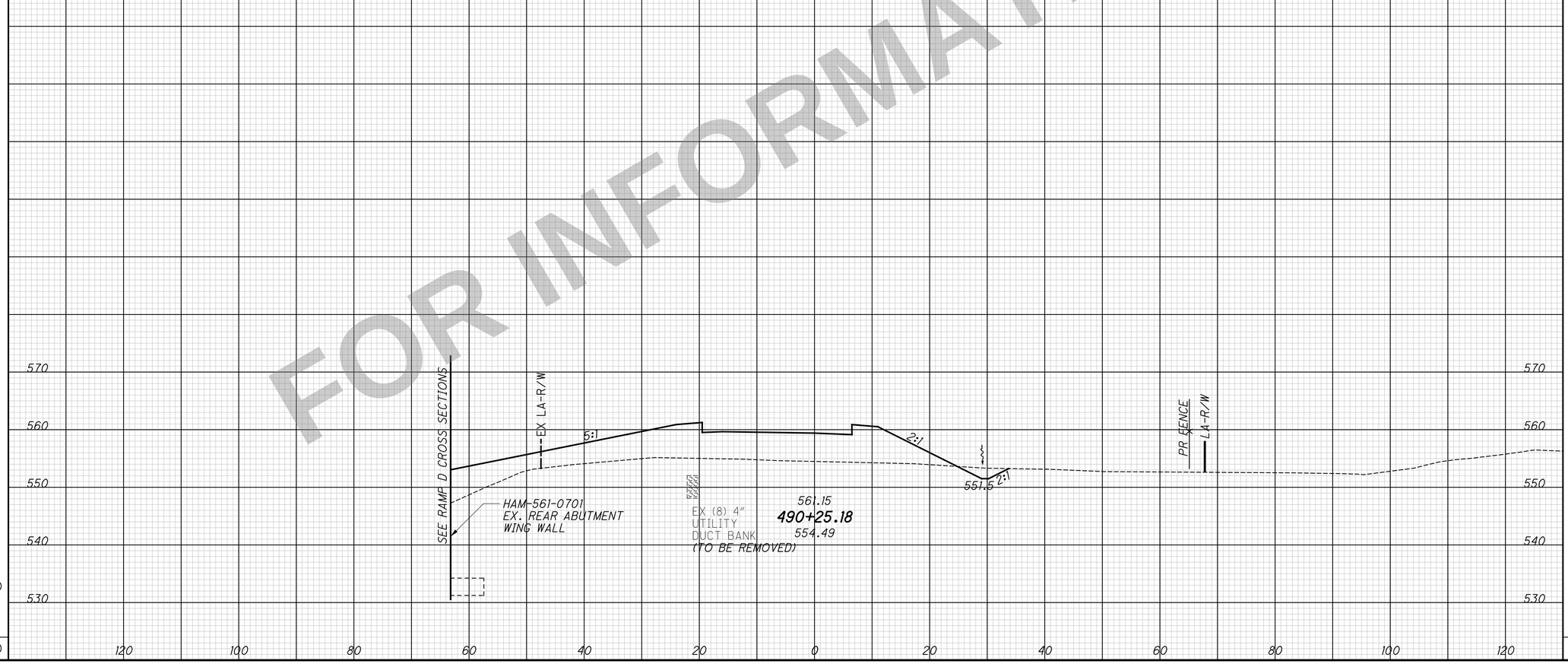
VOLUME	
CUT	FILL
49	361
49	361

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS RAMP E
STA. 490+25.18

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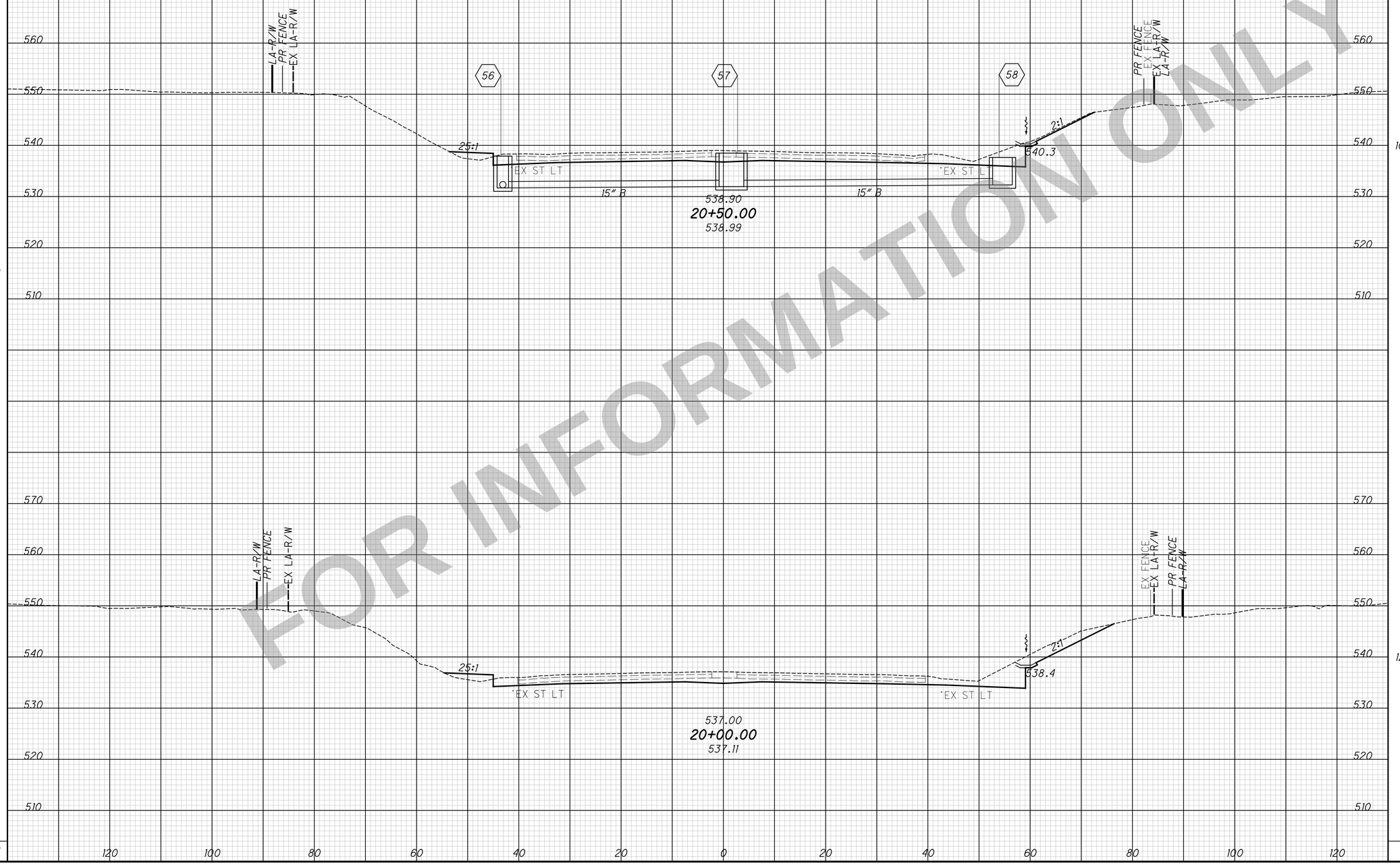
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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



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SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
23	144	100	9	212	17
28	0	129	9	0	0
	144			212	17

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS S.R. 562
STA. 20+00.00 TO STA. 20+50.00

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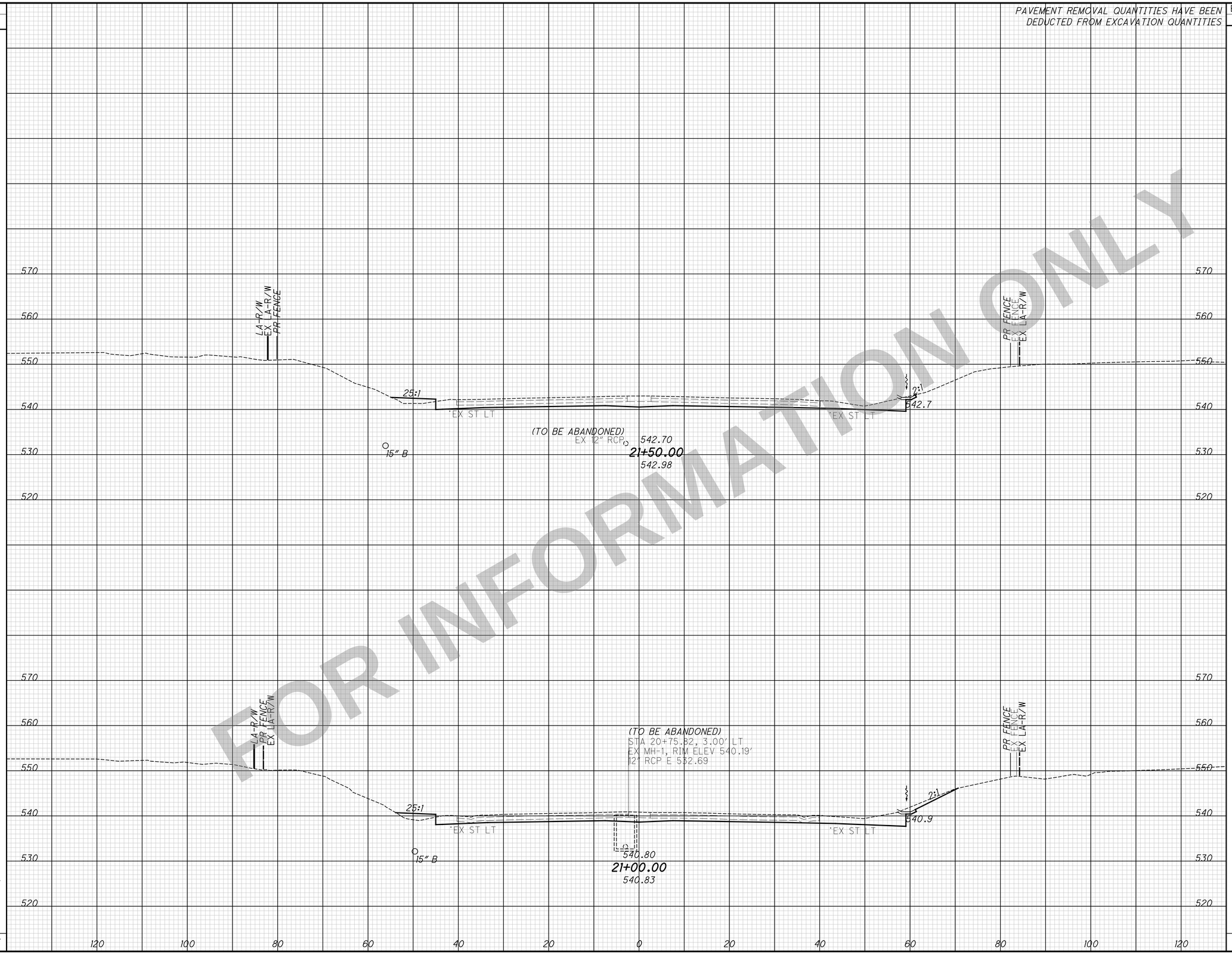
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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
11	94	101	9	185	17
21	123	99	9	184	17
	217			369	34

CALCULATED SEA
CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS S.R. 562
STA. 21+00.00 TO STA. 21+50.00

HAM-75.7.85

741
2017

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SEEDING	
END WIDTH	SQ. YDS.
22	134
25	105
	239

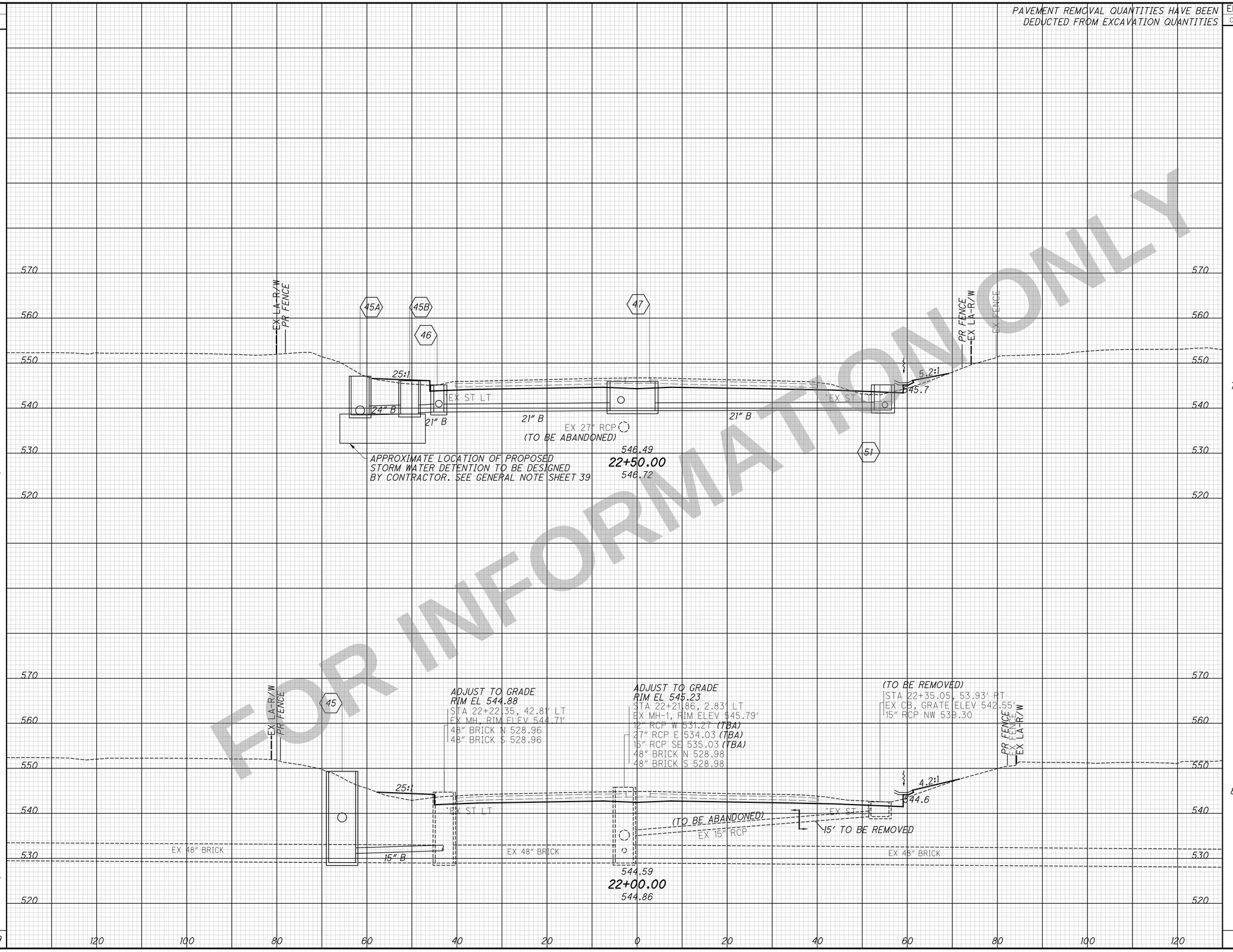
PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA	
CUT	FILL
74	20
88	20

VOLUME	
CUT	FILL
150	37
175	26
325	63

CALCULATED SEA

CHECKED DLR



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CROSS SECTIONS S.R. 562
STA. 22+00.00 TO STA. 22+50.00

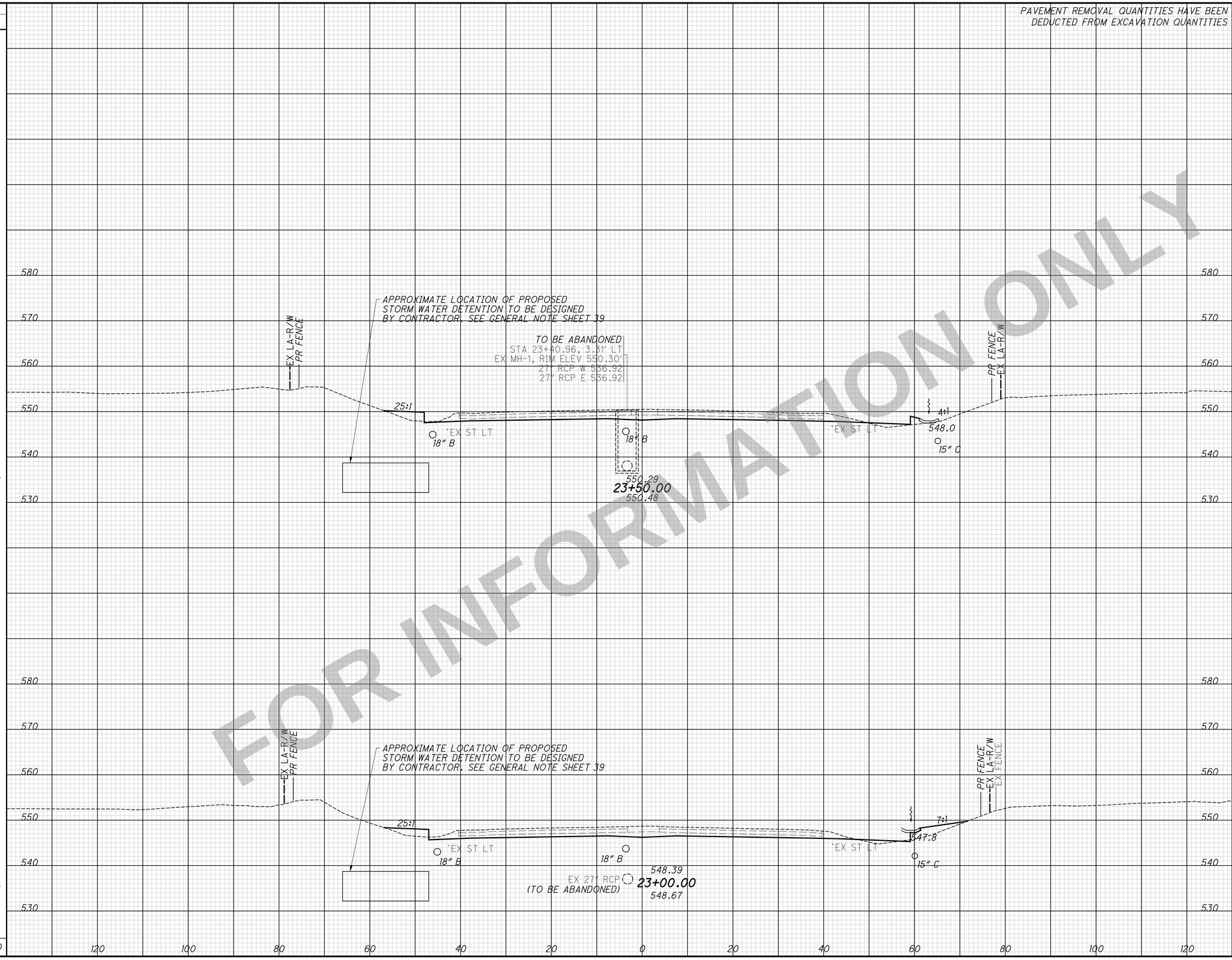
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SEEDING	
END WIDTH	SQ. YDS.
21	122
22	128
	250

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA		VOLUME	
CUT	FILL	CUT	FILL
68	22		
70	31		
128	49	261	97
133	48		

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS S.R. 562
STA. 23+00.00 TO STA. 23+50.00

HAM-75.7.85

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SEEDING END WIDTH	SEEDING SQ. YDS.
32	172
29	139
	311

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

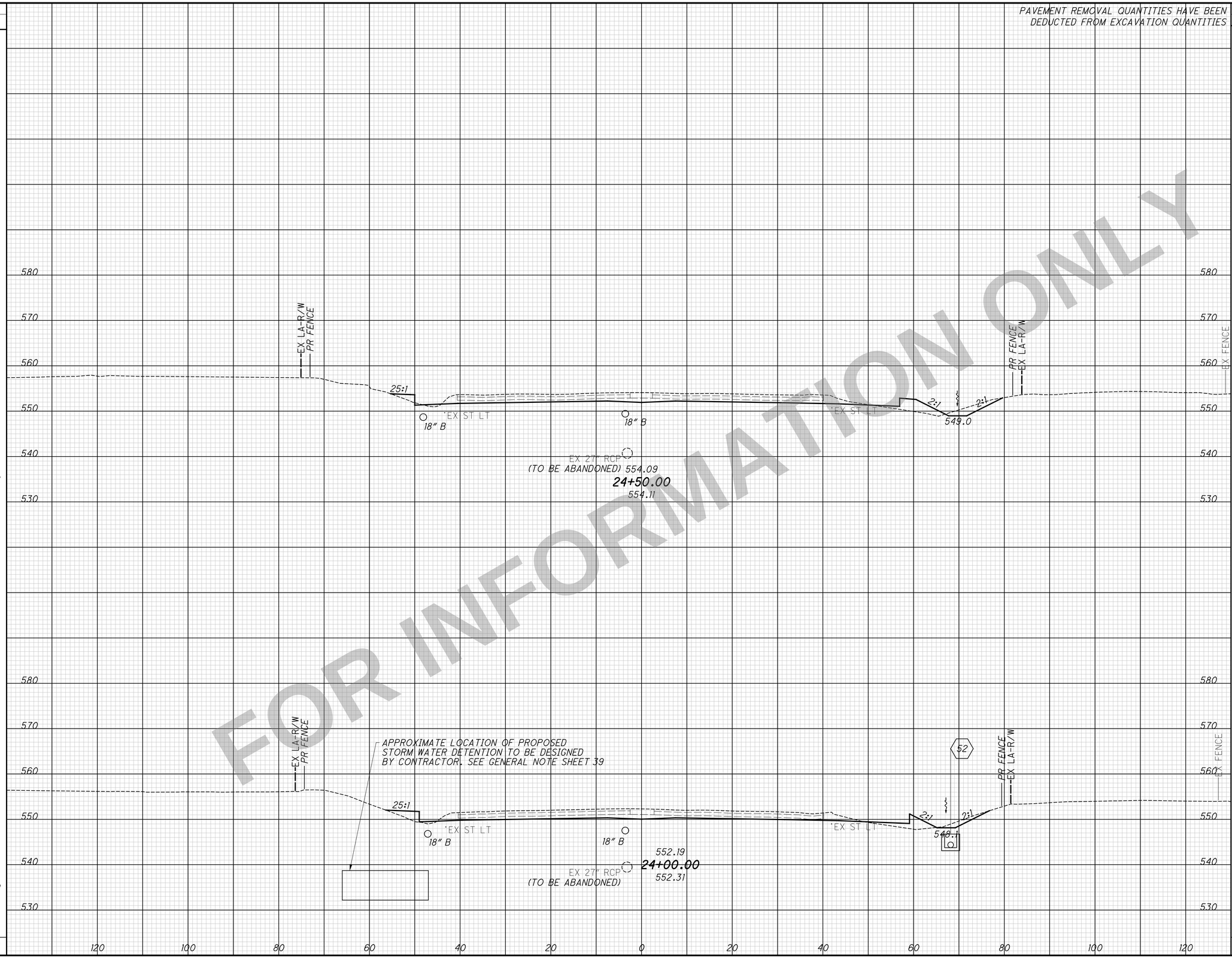
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
73	28	131	50
69	27	127	45
		258	95

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS S.R. 562
STA. 24+00.00 TO STA. 24+50.00

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SEEDING END WIDTH	SEEDING SQ. YDS.
35	172
27	166
	338

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
71	46	129	81
69	41	132	64
		261	145

CALCULATED SEA

CHECKED DLR

CROSS SECTIONS S.R. 562
STA. 25+00.00 TO STA. 25+50.00

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
35	183	85	40		
				157	56
30	183	85	21		
				144	62
	366			301	118

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS S.R. 562
STA. 26+00.00 TO STA. 26+50.00

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746
2017

(TO BE ABANDONED)
STA 26+30.03, 2.84' LT
EX MH-1, RIM ELEV 561.25'
27" RCP W 544.03
18" RCP E 544.03
21" RCP S 551.31
48

(TO BE REMOVED)
STA 26+29.74, 72.29' RT
EX CB, GRATE ELEV 553.34'
21" RCP N 549.02

EX LA-R/W
PR FENCE

25:1
2:1

EX ST LT

15" B
18" B

561.68
26+50.00
561.74
563.4
EX 21" RCP
(TO BE ABANDONED)

88
559.78
26+00.00
(TO BE ABANDONED)
EX 27" RCP
559.86
553.0

590
580
570
560
550
540

120 100 80 60 40 20 0 20 40 60 80 100 120

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

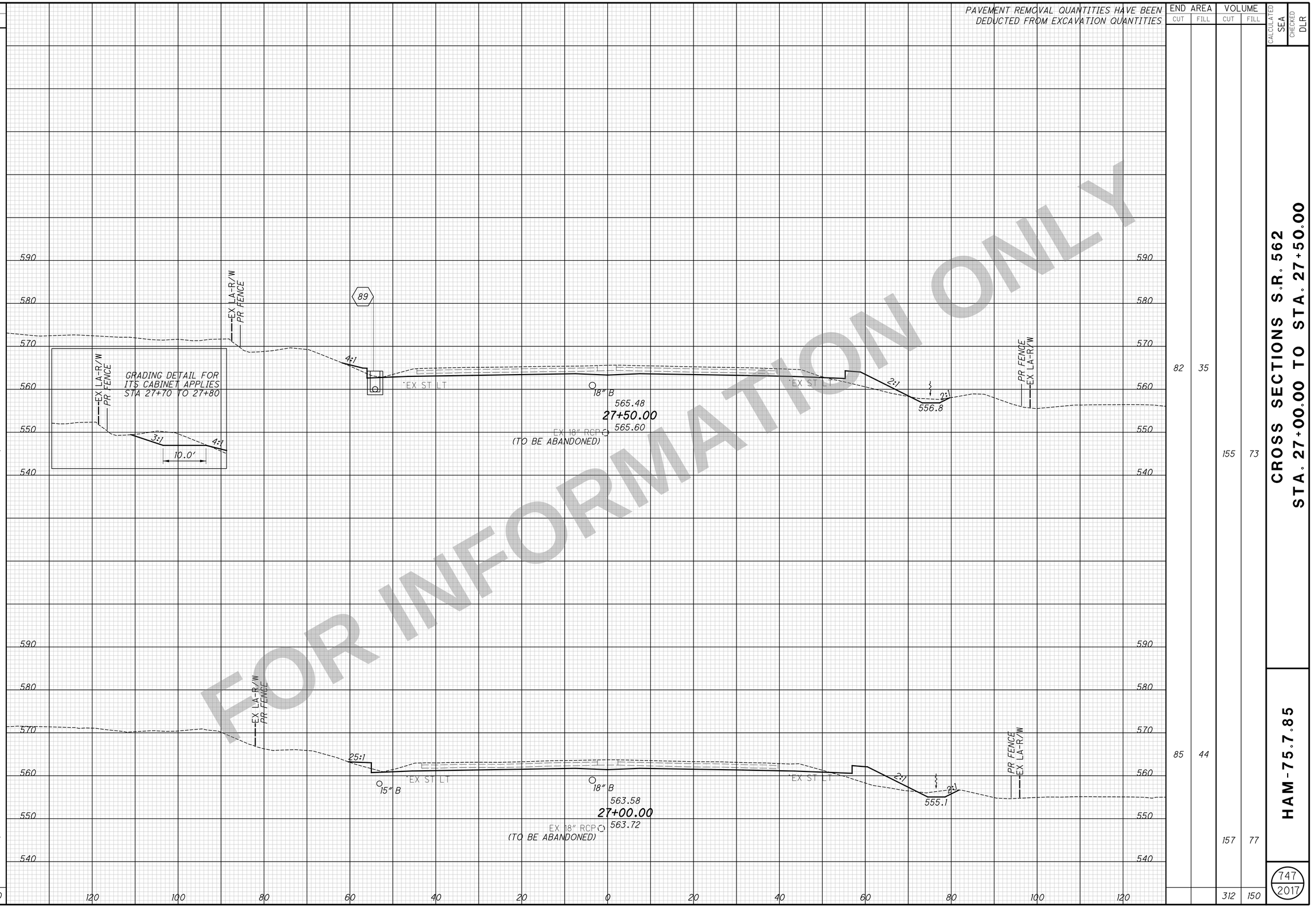
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
35	195	82	35	155	73
34	195	85	44	157	77
	390			312	150

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS S.R. 562
STA. 27+00.00 TO STA. 27+50.00

HAM-75.7.85

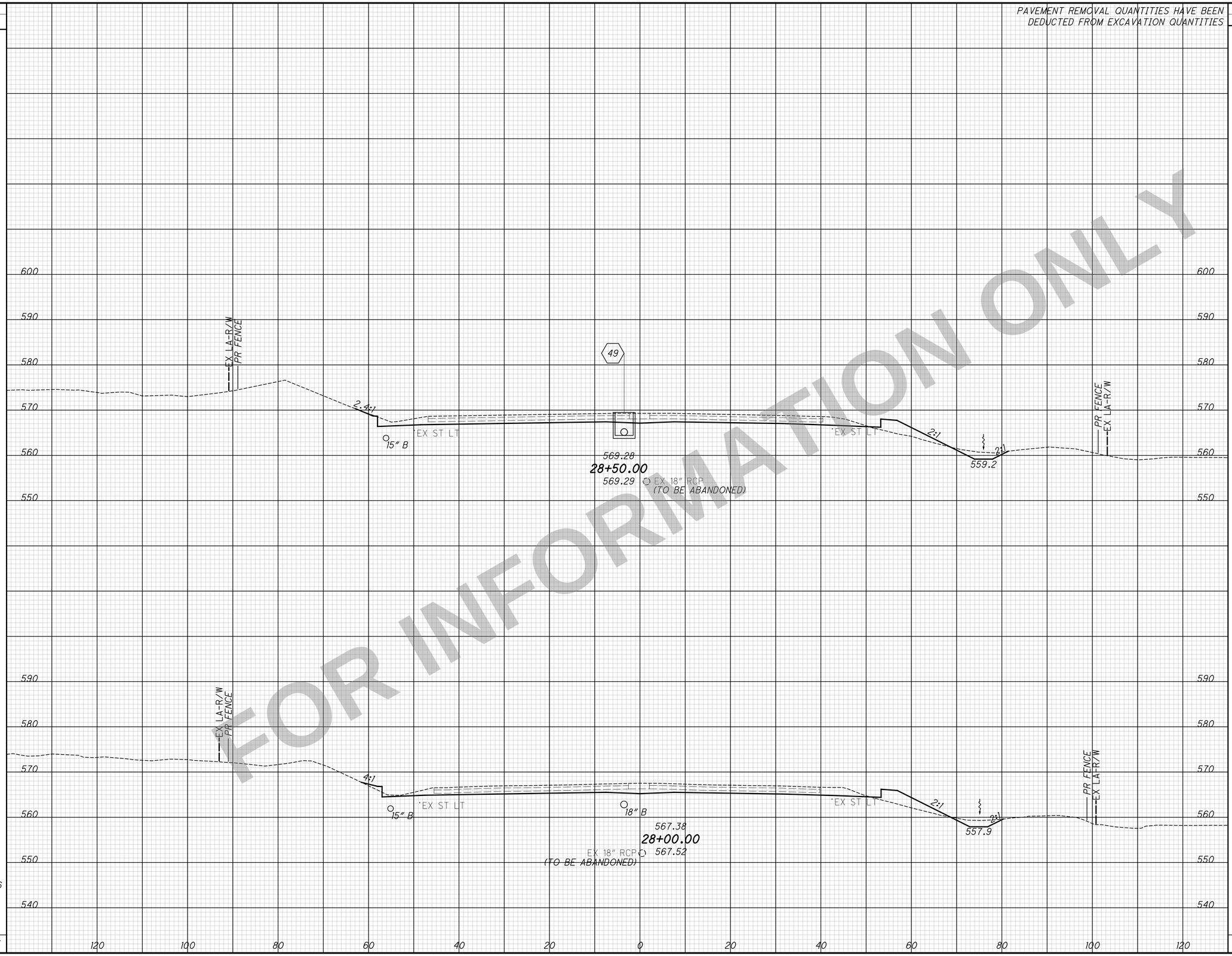
747
2017



FOR INFORMATION ONLY

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
38	211	95	27	167	54
37	206	84	31	155	61
	417			322	115

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS S.R. 562
STA. 28+00.00 TO STA. 28+50.00

HAM-75.7.85

748
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.
44	239
40	217
	456

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
98	33	188	60
105	32	186	54
		374	114

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS S.R. 562
STA. 29+00.00 TO STA. 29+50.00

HAM-75.7.85

749
2017

610
600
590
580
570
560
550

EX LA-R/W
PR FENCE
2:1
15" B
EX ST LT
18" B
573.07
29+50.00
573.09
EX 12" RCP
(TO BE ABANDONED)
562.4
PR FENCE
EX LA-R/W

90
(TO BE ABANDONED)
STA 29+19.98, 2.83' RT
EX MH-1, RIM ELEV 571.95'
18" RCP W 556.44
12" RCP E 556.44
15" RCP S 558.04
(TO BE REMOVED)
STA 29+19.41, 81.69' RT
EX CB, GRATE ELEV 563.32'
15" RCP N 561.32
EX 15" RCP
(TO BE ABANDONED)
571.17
29+00.00
571.18
560.8
15' TO BE REMOVED

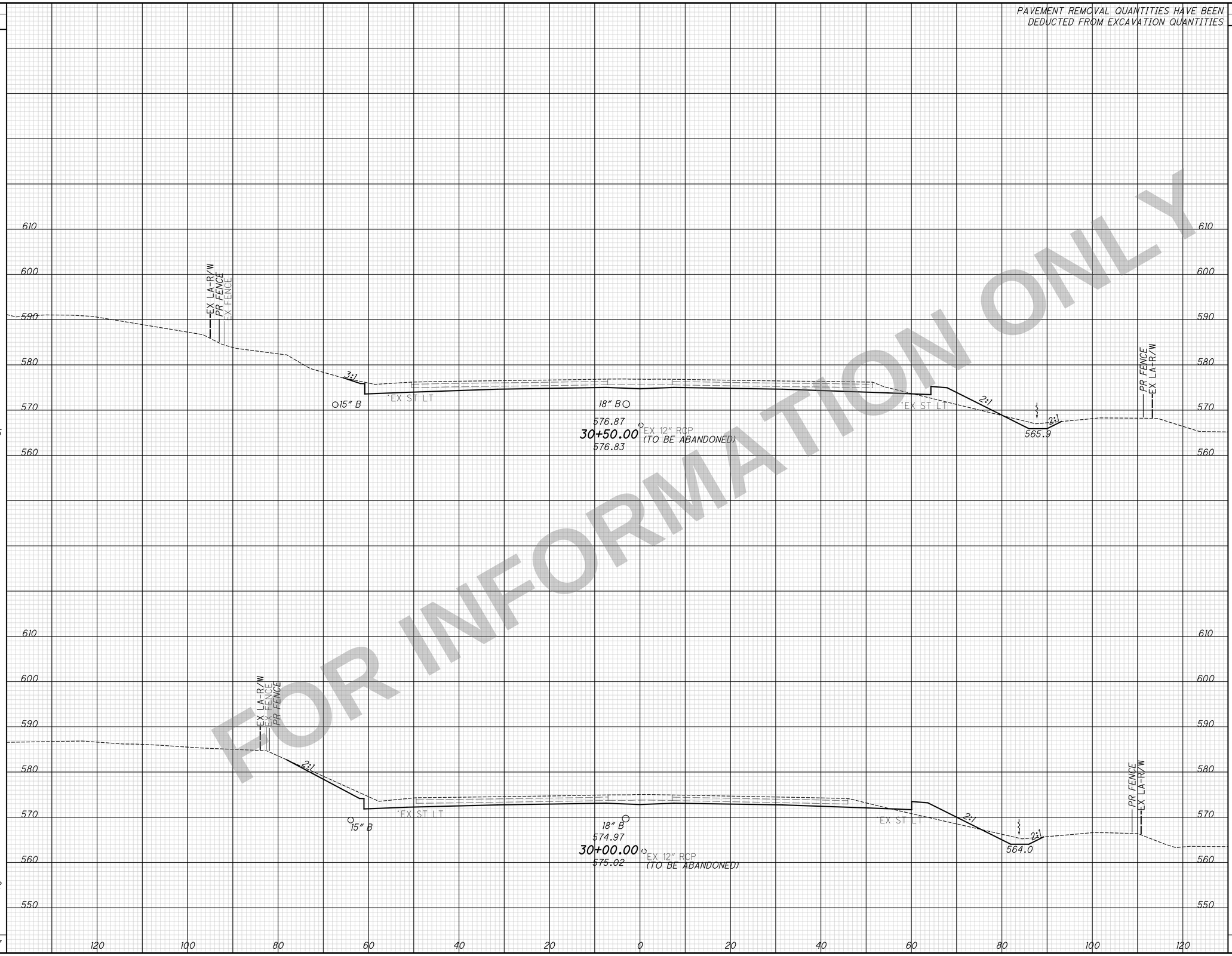
120 100 80 60 40 20 0 20 40 60 80 100 120

FOR INFORMATION ONLY

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SEEDING END WIDTH	SEEDING SQ. YDS.
39	255
53	272
	527

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
116	32	215	59
116	32	198	60
		413	119

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS S.R. 562
STA. 30+00.00 TO STA. 30+50.00

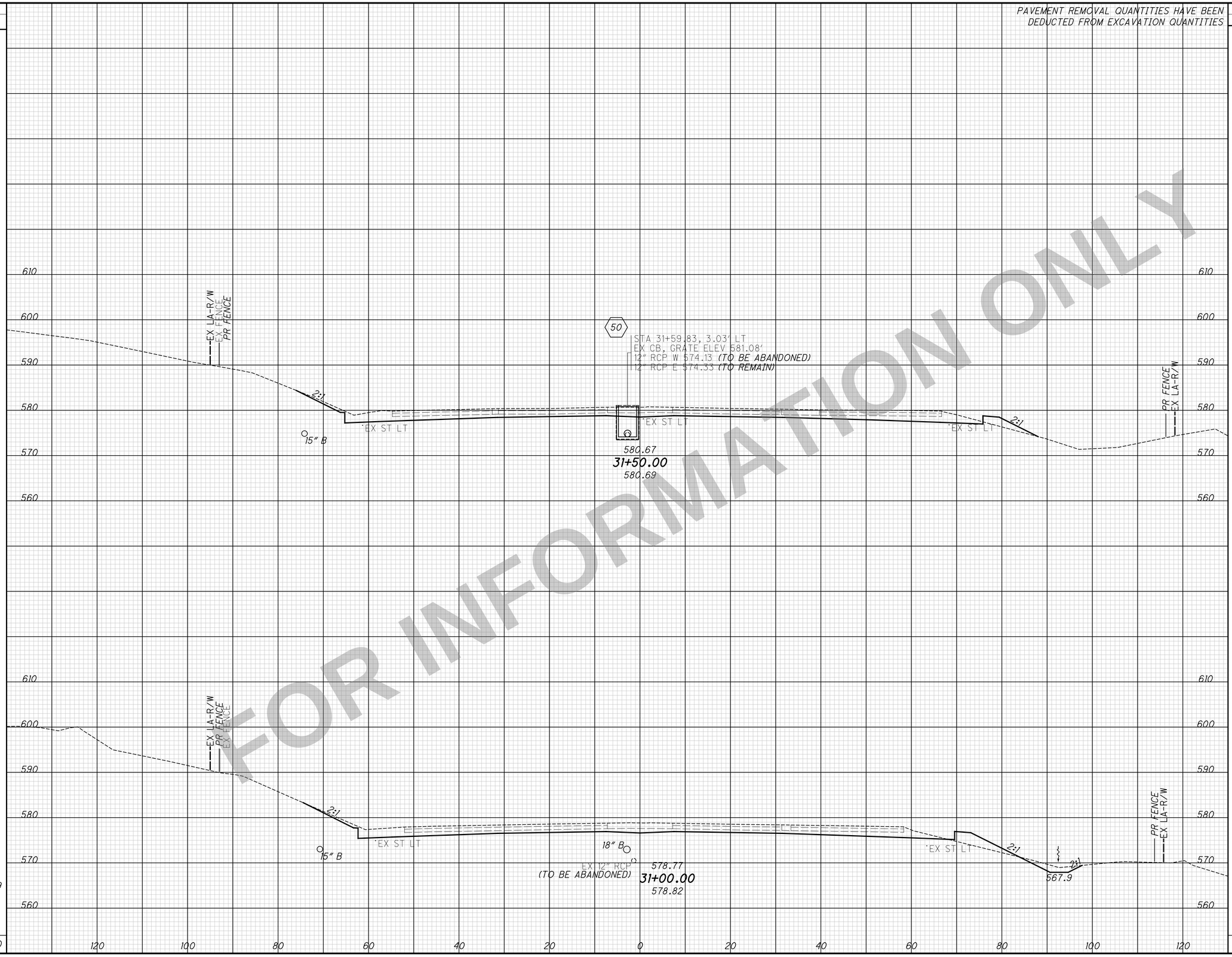
HAM-75.7.85

750
2017

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SEEDING END WIDTH	SEEDING SQ. YDS.
28	211
46	239
	450

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
133	15		
130	23		
		243	35
		227	51
		470	86

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS S.R. 562
STA. 31+00.00 TO STA. 31+50.00

HAM-75.7.85

751
2017

FOR INFORMATION ONLY

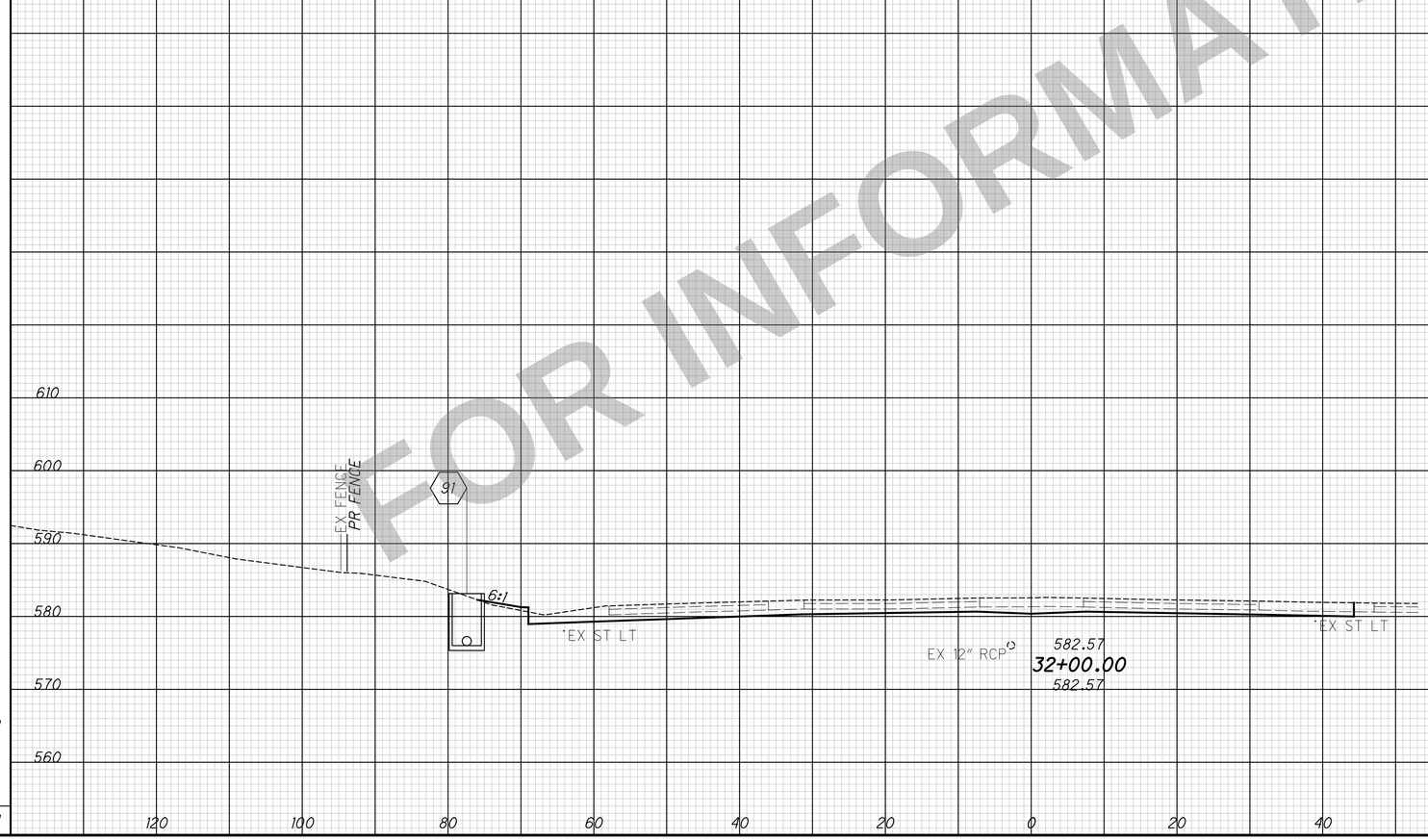
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SEEDING	
END WIDTH	SQ. YDS.
9	104
	104

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA		VOLUME	
CUT	FILL	CUT	FILL
88	3	200	16
		200	16

CALCULATED SEA
CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS S.R. 562
STA. 32+00.00

HAM-75.7.85

752
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

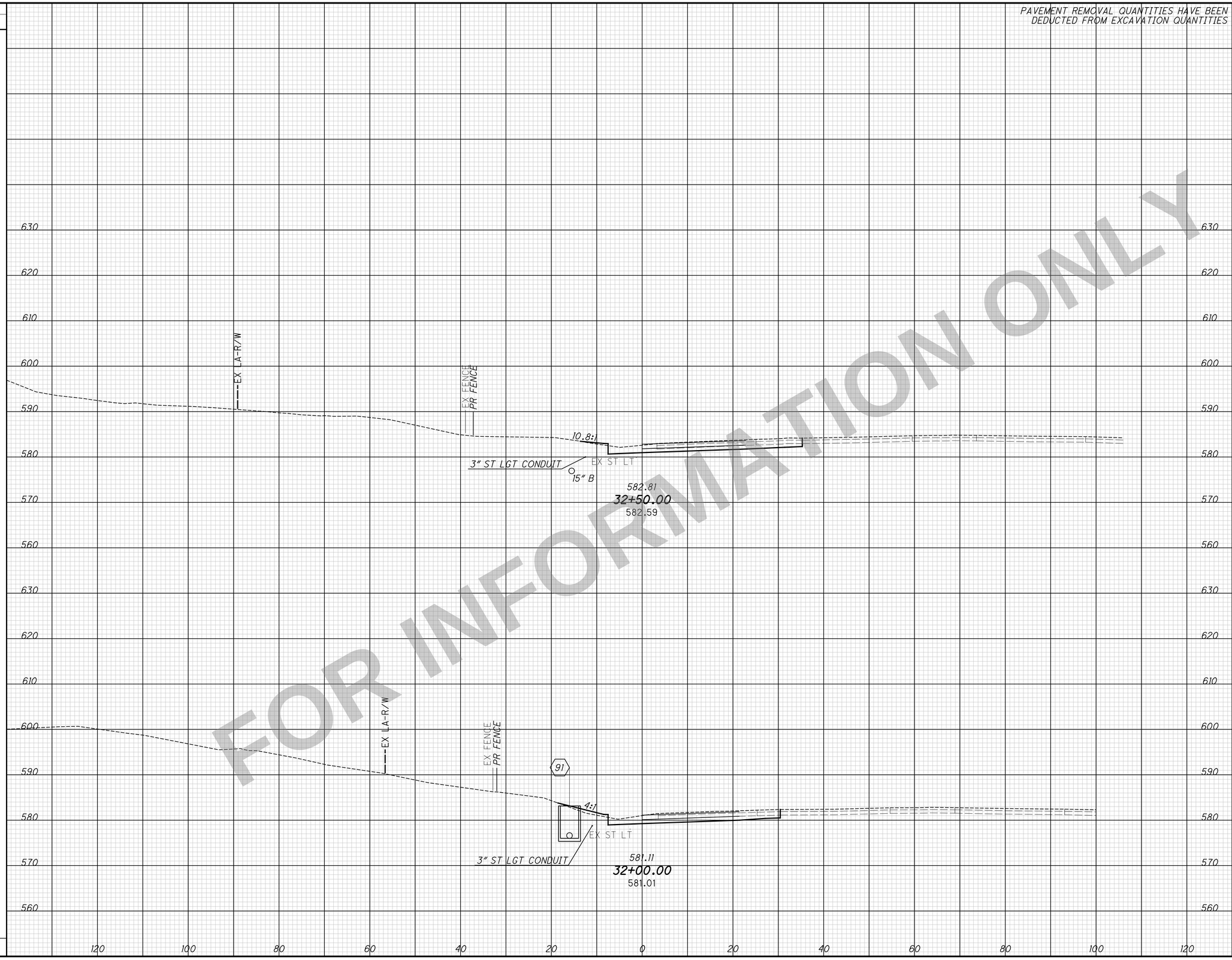
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
7	56	41	1	75	6
12	0	40	5	0	0
	56			75	6

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMP P
STA. 32+00.00 TO STA. 32+50.00

HAM-75-7.85

753
2017

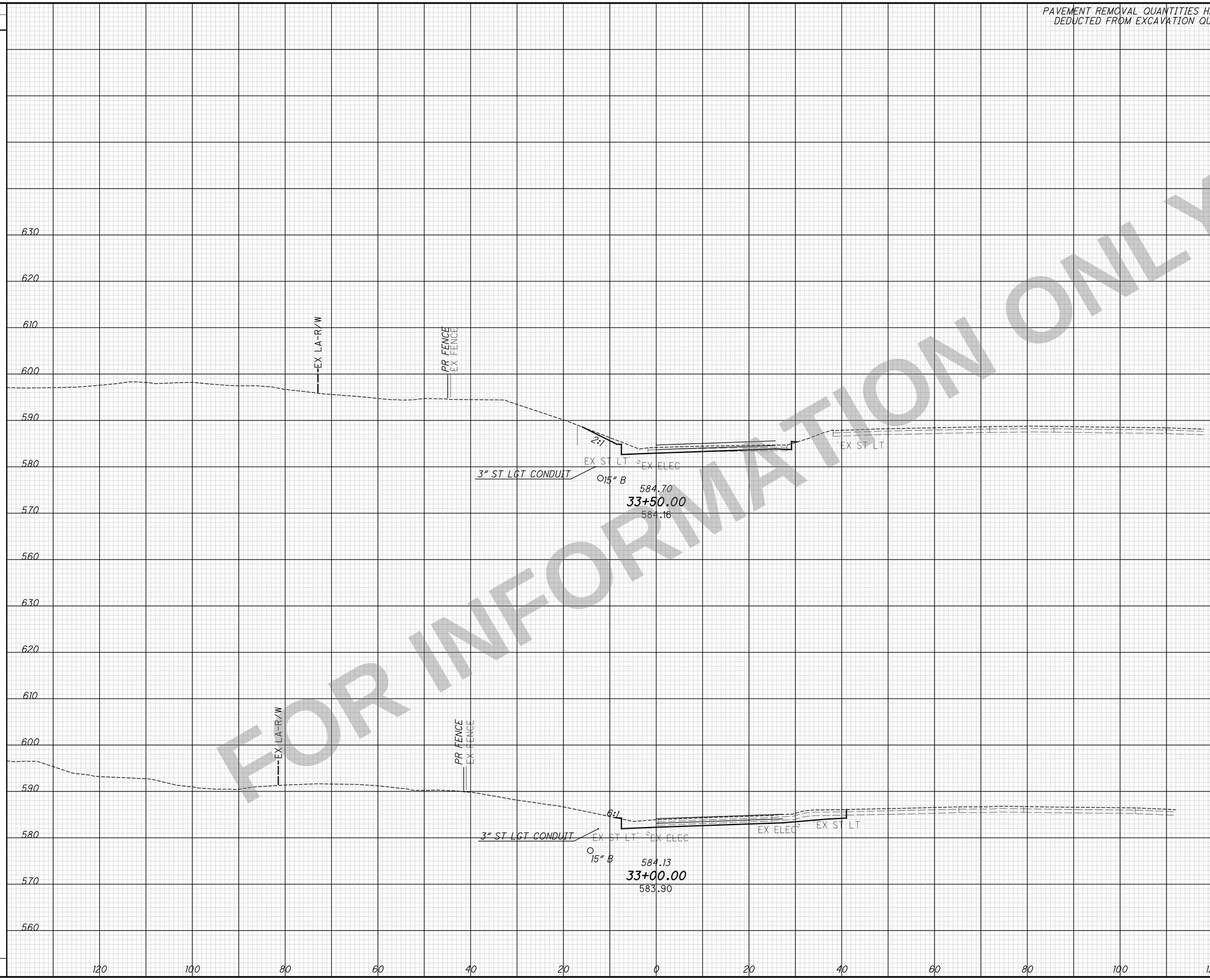


FOR INFORMATION ONLY

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SEEDING	
END WIDTH	SQ. YDS.
12	39
2	28
	67

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

END AREA		VOLUME	
CUT	FILL	CUT	FILL
14	5	45	5
35	0	70	1
		115	6

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMP P
STA. 33+00.00 TO STA. 33+50.00

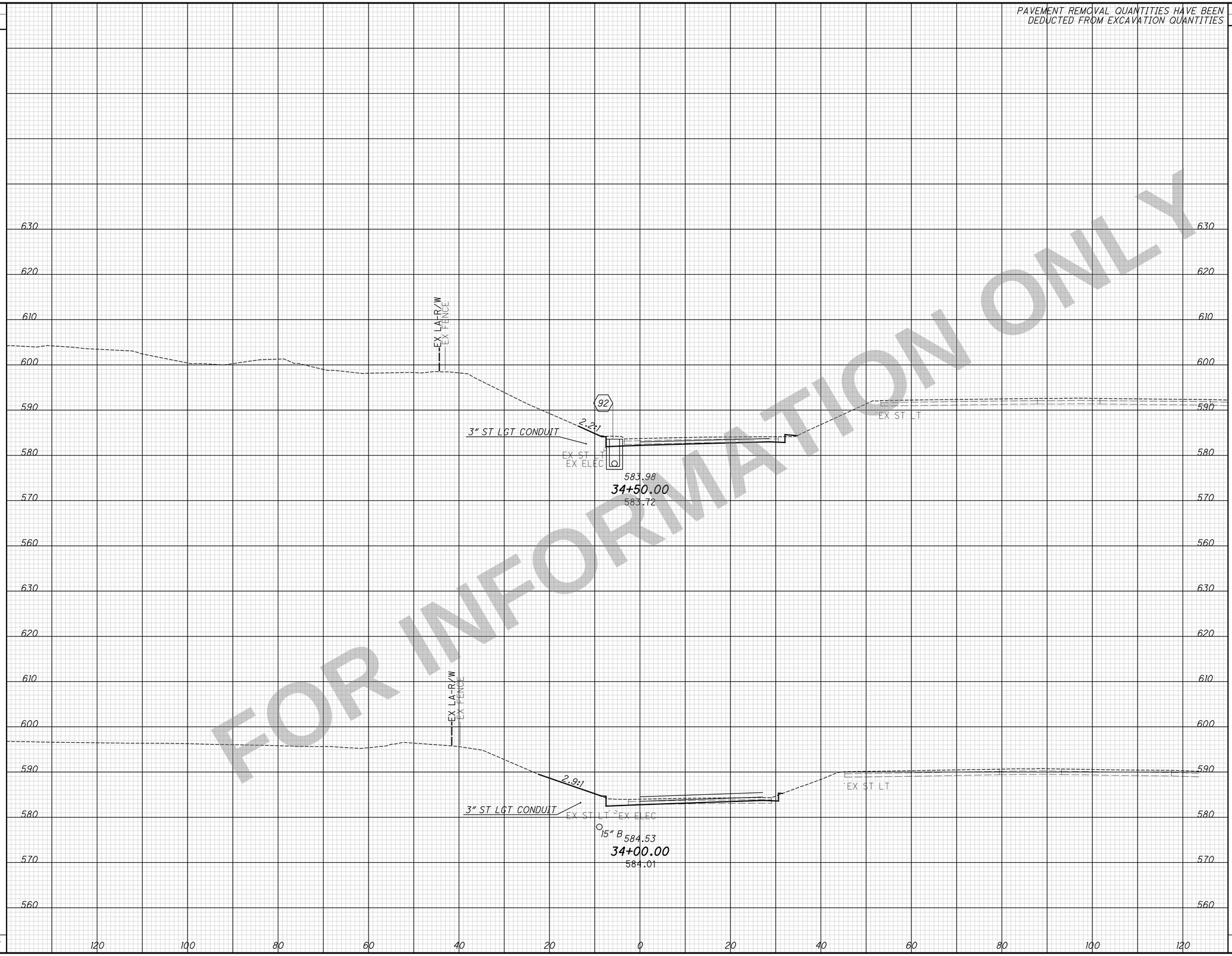
HAM-75-7.85

754
2017

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SEEDING	
END WIDTH	SQ. YDS.
11	83
18	89
	172

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA	
CUT	FILL
16	1
9	9

VOLUME	
CUT	FILL
23	10
21	13
44	23

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMP P
STA. 34+00.00 TO STA. 34+50.00

HAM-75-7.85

755
2017

FOR INFORMATION ONLY

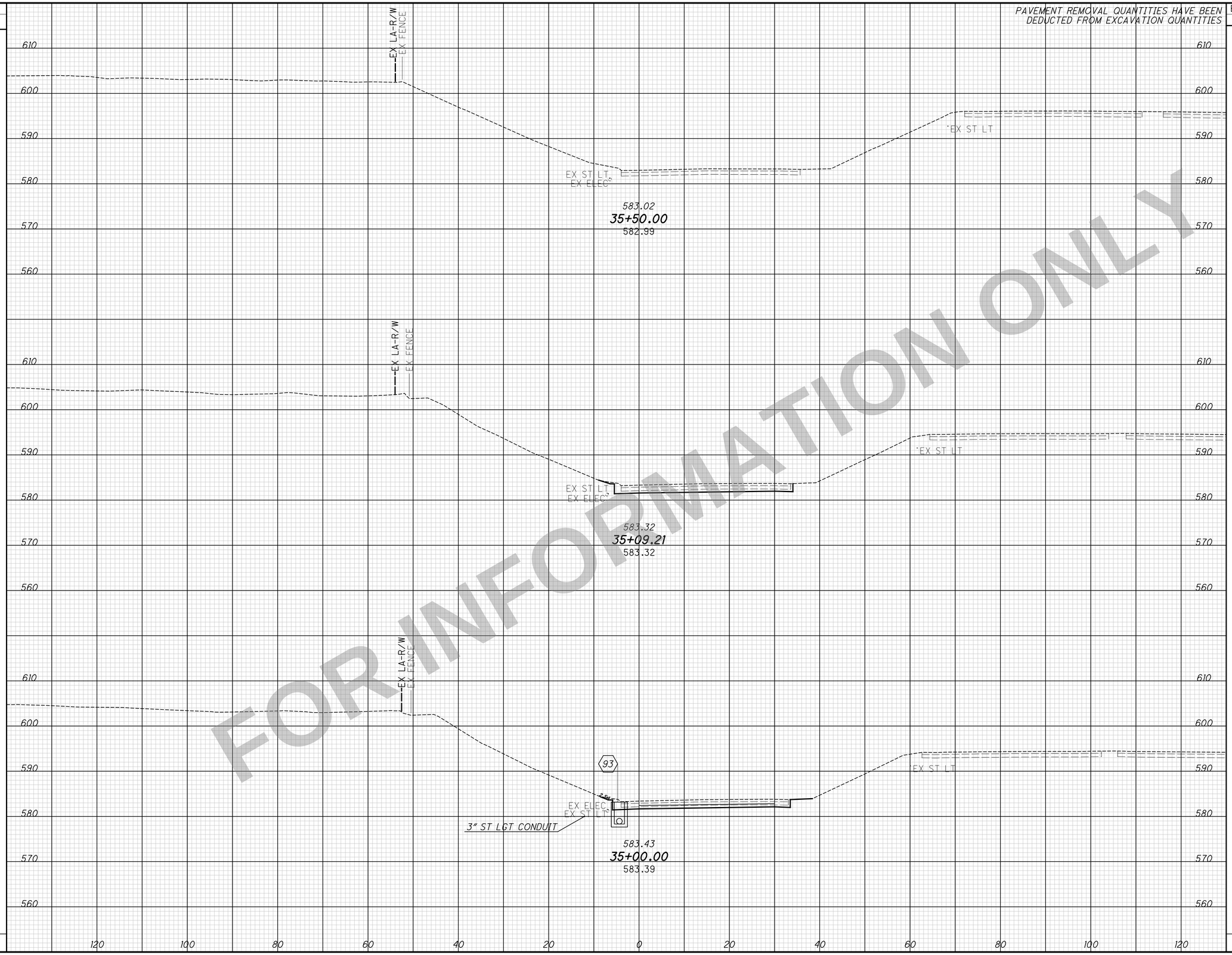
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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
6	8	26	0	9	0
9	55	25	0	38	1
63				47	1

CALCULATED SEA

CHECKED DLR



FOR INFORMATION ONLY

CROSS SECTIONS RAMP P
STA. 35+00.00 TO STA. 35+50.00

HAM-75-7.85

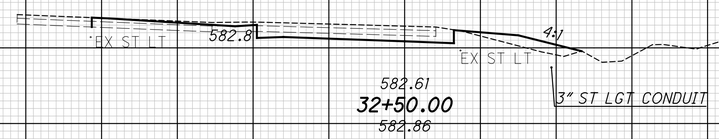
756
2017

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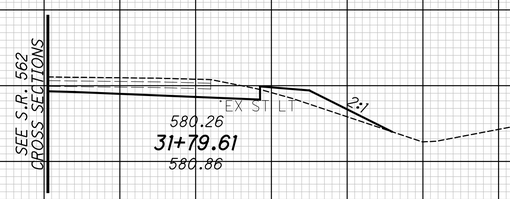
PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
40	200	22	15	48	28
31	57	30	15	23	12
19	0	32	17	0	0
	257			71	40

CALCULATED SEA
CHECKED DLR







FOR INFORMATION ONLY

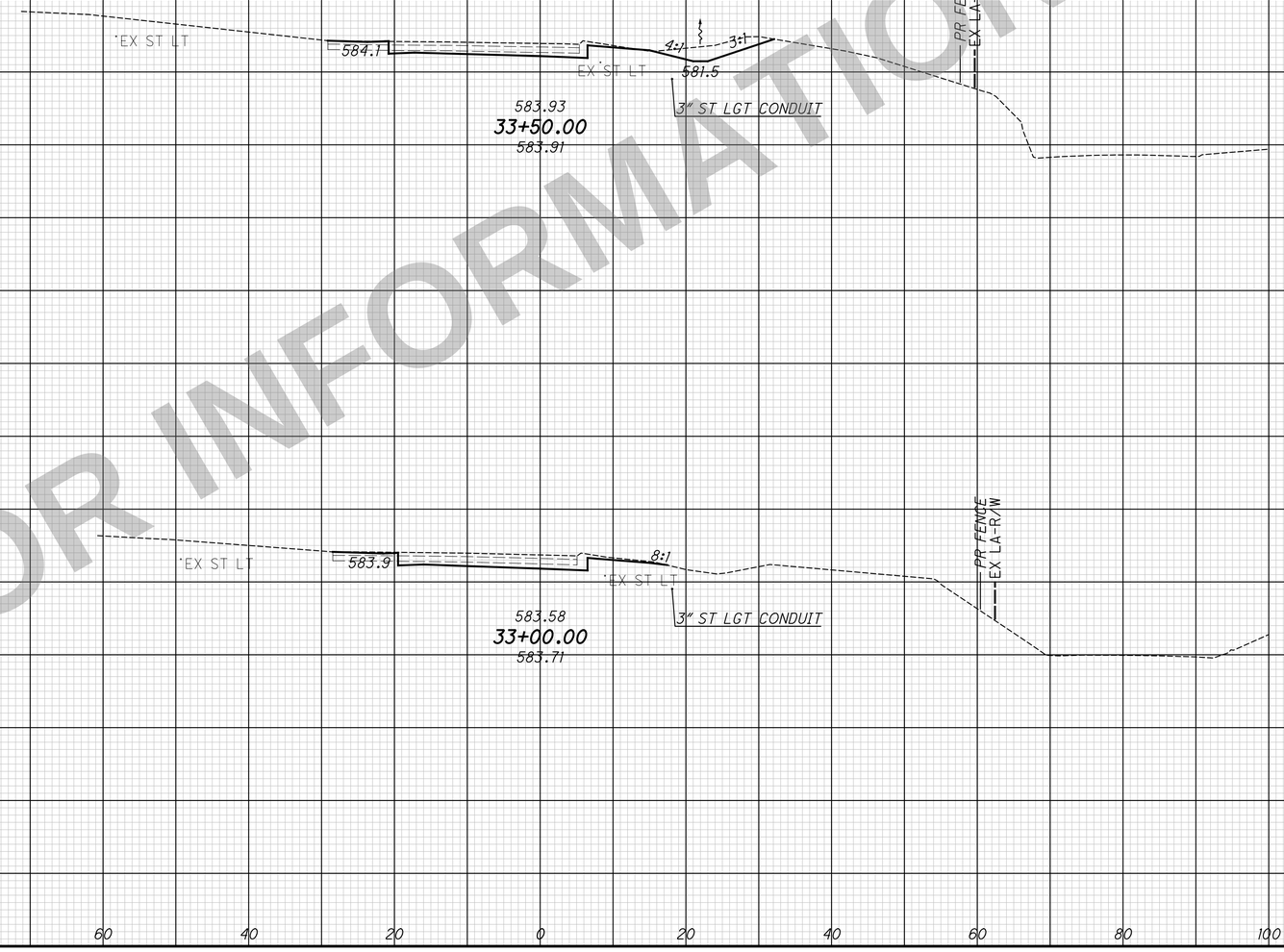
CROSS SECTIONS RAMP Q
STA. 31+79.61 TO STA. 32+50.00

HAM-75-7.85

757
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
36	156	37	0	53	0
20	172	20	0	39	14
	328			92	14

CALCULATED SEA
CHECKED DLR

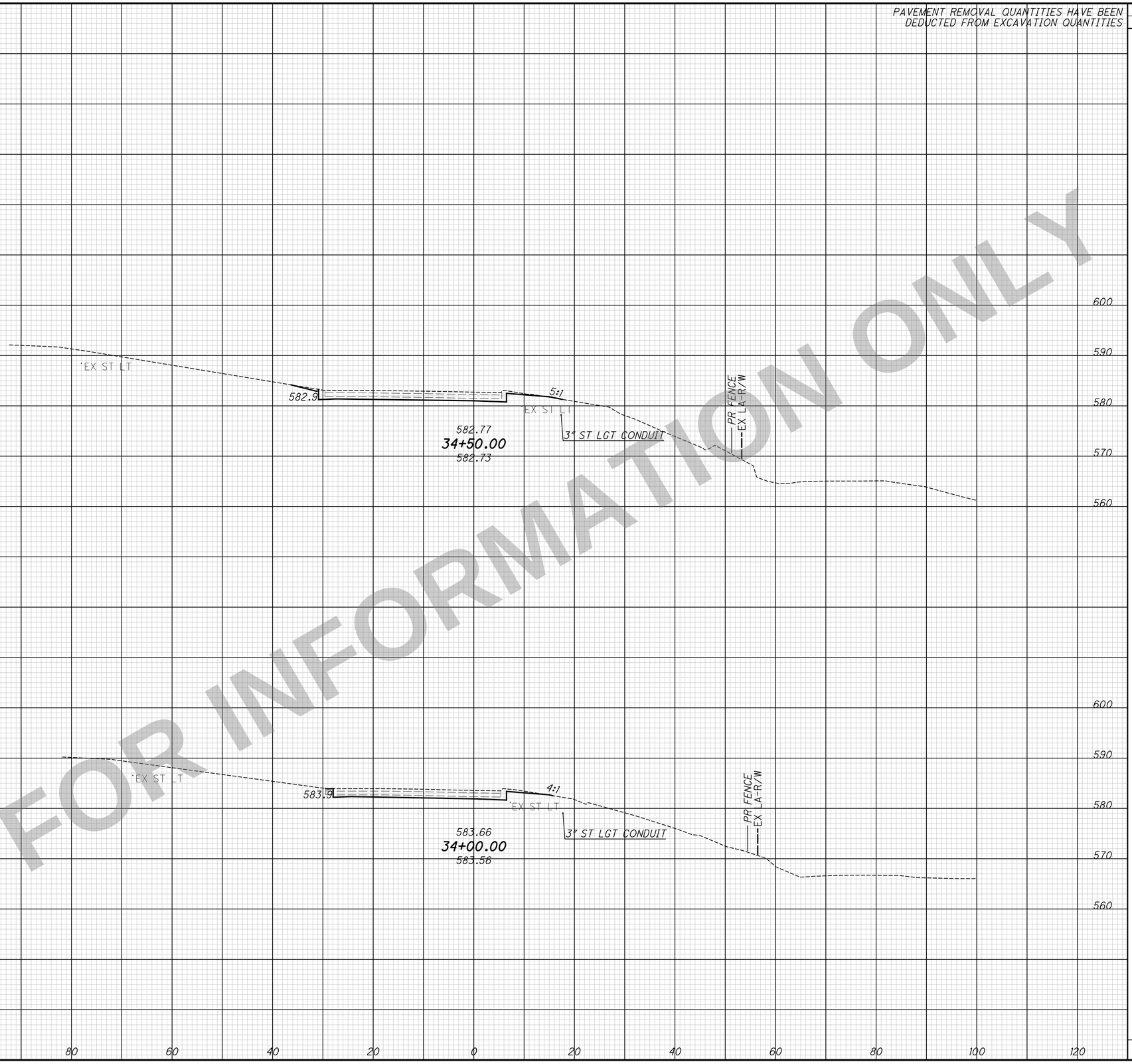
CROSS SECTIONS RAMP Q
STA. 33+00.00 TO STA. 33+50.00

HAM-75-7.85

758
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

SEEDING END WIDTH	SEEDING SQ. YDS.
18	83
12	139
	222

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
26	0	42	0
19	0	52	0
		94	0

CALCULATED SEA
CHECKED DLR

CROSS SECTIONS RAMP Q
STA. 34+00.00 TO STA. 34+50.00

HAM-75-7.85

759
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
29	144	10	4	23	6
23	35	15	2	8	1
17	0	14	1	0	0
	179			31	7

CALCULATED SSK
CHECKED JLM

590
580
570
560
550

EX SL
EX R/W
59.8:1
8.4:1
EX 12" WAT
EX 4" GAS
EX 20" GAS
6" WAT (ABANDONED)
12" RCP (TO REMAIN)
563.54
14+00.00
563.80

23.8:1
20.8:1
564.83
13+50.00
565.02

26.8:1
34:1
565.35
BEGIN WORK
13+34.18
565.35

120 100 80 60 40 20 0 20 40 60 80 100 120

FOR INFORMATION ONLY

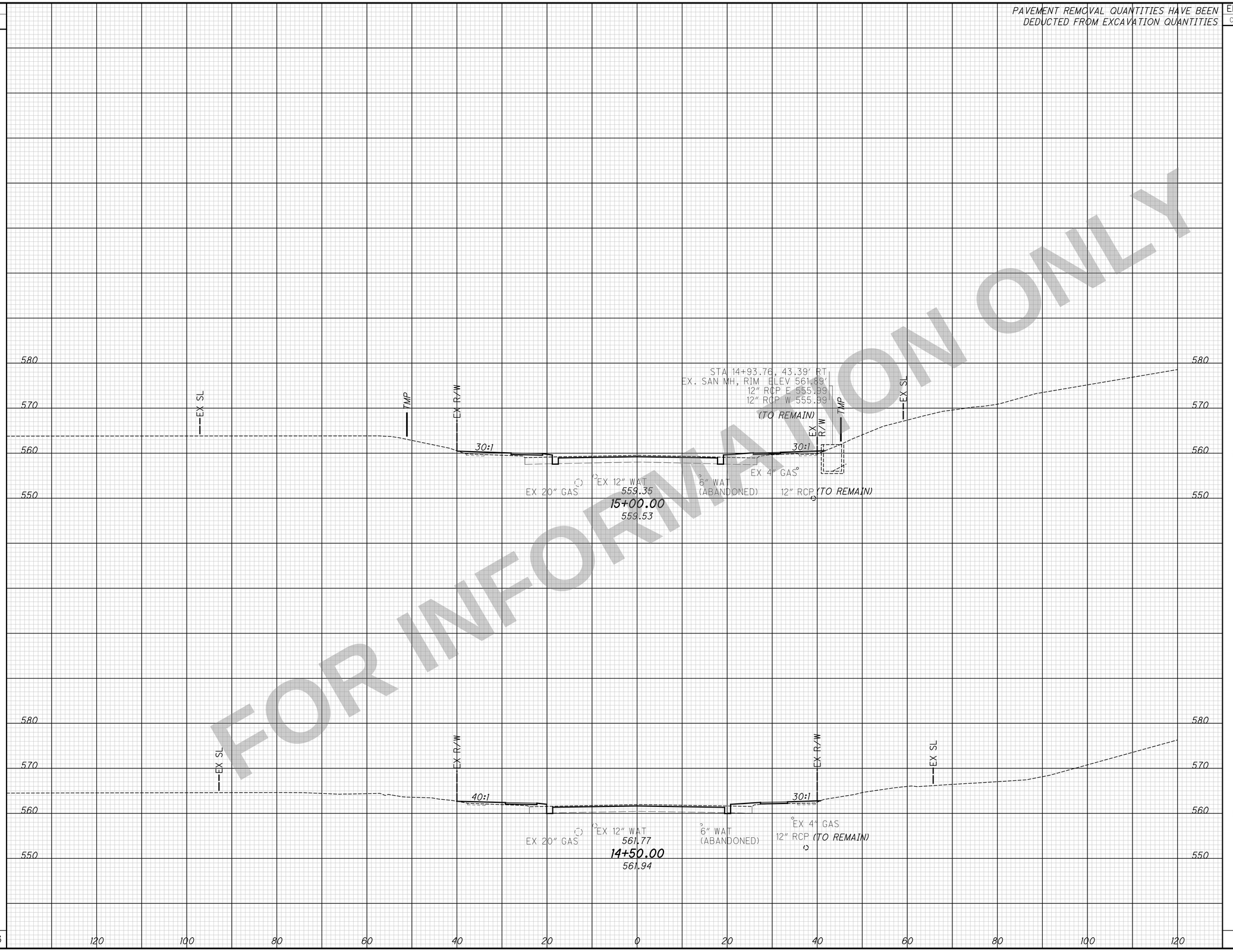
CROSS SECTIONS TOWNE ST.
STA. 13+34.18 TO STA. 14+00.00

HAM-75-7.85

760
2017

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



FOR INFORMATION ONLY

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
36		6	24		
	191			13	36
33		9	15		
	172			17	17
	363			30	53

CALCULATED SSK
CHECKED JLM

CROSS SECTIONS TOWNE ST.
STA. 14+50.00 TO STA. 15+00.00

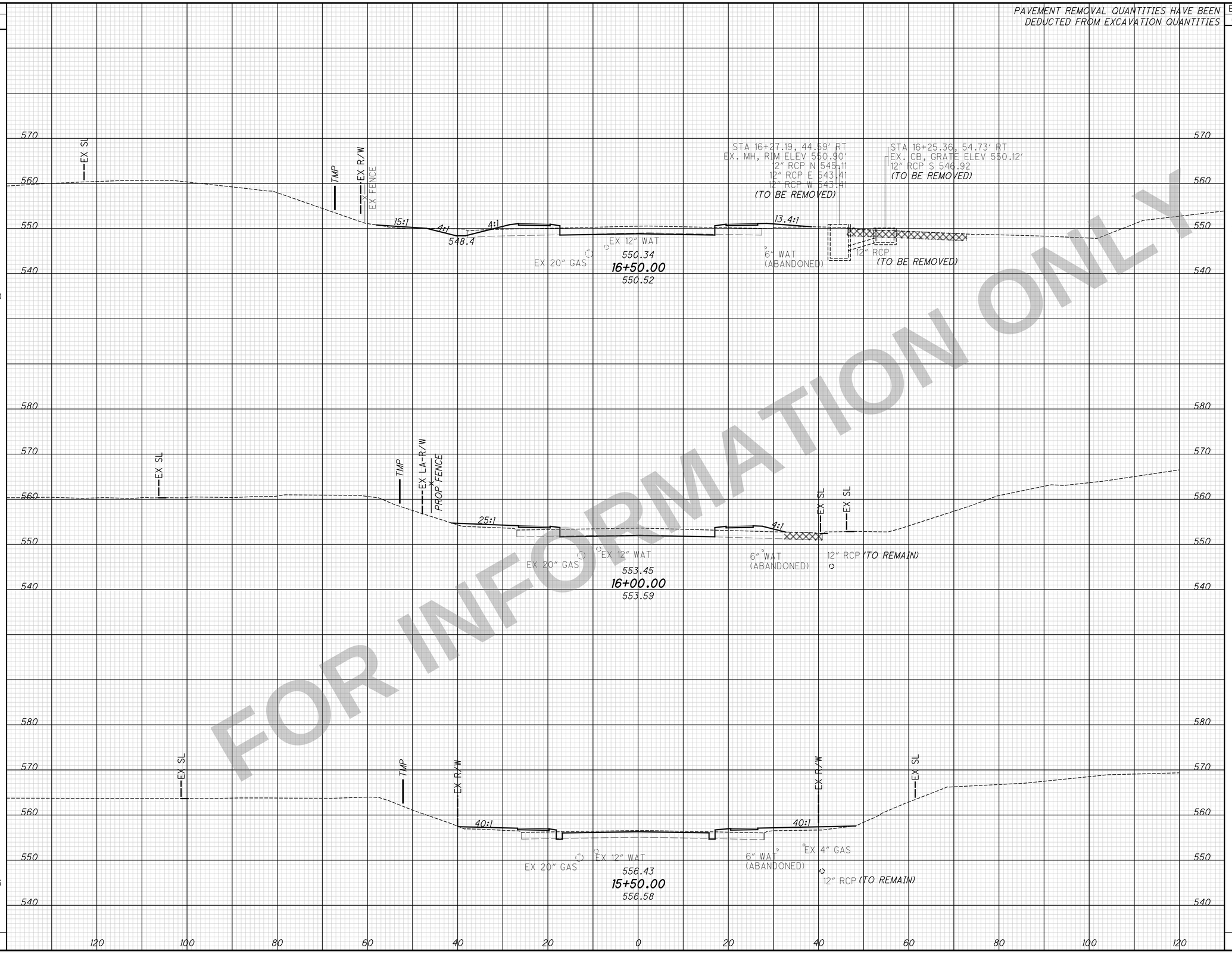
HAM-75-7.85

761
2017

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SEEDING END WIDTH	SEEDING SQ. YDS.
54	240
32	215
45	226
	681

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
23	55	35	105
15	59	15	126
1	77	6	94
		56	325

CALCULATED SSK
CHECKED JLM

CROSS SECTIONS TOWNE ST. STA. 15+50.00 TO STA. 16+50.00

HAM-75-7.85

762
2017

FOR INFORMATION ONLY

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PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
55	786	19	566	170	995
	886	165	509	214	518
91	404	66	50	83	96
	2076			467	1609

CALCULATED SSK CHECKED JLM

STA 17+84.24, 39.55' LT
EX. MH, GRATE ELEV 543.03'
30" RCP N 530.03
12" RCP NE 537.03
12" RCP E 537.33
12" RCP SE 538.33
33" RCP SW 530.03
(TO BE REMOVED)

STRUCTURE NO HAM-75-0857 REAR ABUTMENT MSE WALL H1

STRUCTURE NO HAM-75-0857 FORWARD ABUTMENT MSE WALL I1

SEE SB I.R. 75 CROSS SECTIONS

SEE NB I.R. 75 CROSS SECTIONS

106 124 125

7.3:1 2.9:1 15.5:1 7.5:1

12" RCP

EX 20" GAS EX 12" WAT

6" WAT (TO BE REMOVED)

12" RCP *(TO BE REMOVED)*

29'-15" TYPE C @ 2.02%

31'-15" TYPE B @ 1.28%

541.39

18+00.00

541.44

125'-36" TYPE B @ 1.01%

EX 33" RCP *(TO BE REMOVED)*

STA 17+56.6950, 131.72' LT *(TO BE REMOVED)*
EX. CB, GRATE ELEV 544.14'
12" RCP E 540.54
12" RCP W 537.64

STA 17+42.85, 20.80' LT
EX. CB, GRATE ELEV 544.52'
12" RCP SW 541.62
(TO BE REMOVED)

STA 17+33.97, 33.08' RT
EX. CB, GRATE ELEV 544.98'
12" RCP NW 541.28
(TO BE REMOVED)

STA 17+68.68, 65.45' RT
EX. CB, GRATE ELEV 542.61'
12" RCP SW 539.51
(TO BE REMOVED)

127

50:1 6:1 6:1 12:1 16.6:1 11.4:1 12:1

RAMP E

12" RCP

541.0

12" RCP *(TO BE REMOVED)*

EX 12" WAT

544.43

17+50.00

544.49

EX 20" GAS

6" WAT (ABANDONED)

12" RCP *(TO BE REMOVED)*

125' 36" TYPE B @ 1.01%

220'-36" TYPE C @ 3.11%

12" RCP *(TO BE REMOVED)*

TMP

EX LA R/W

EX FENCE

PROP FENCE

STA 16+75.97, 53.43' LT
EX. CB, GRATE ELEV 547.30'
12" RCP NW 544.30
(TO BE REMOVED)

50:1 6:1 6:1 33:1

RAMP E

544.0

12" RCP *(TO BE REMOVED)*

EX 20" GAS EX 12" WAT

547.45

17+00.00

547.54

6" WAT (ABANDONED)

12" RCP *(TO BE REMOVED)*

120 100 80 60 40 20 0 20 40 60 80 100 120

FOR INFORMATION ONLY

CROSS SECTIONS TOWNE ST.
STA. 17+00.00 TO STA. 18+00.00

HAM-75-7.85

763
2017

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SEEDING END WIDTH	SEEDING SQ. YDS.
10	56
10	56
10	180
	292

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

(TO BE REMOVED)
STA 19+51.017, 35.46' LT
EX. SAN MH, GRATE ELEV 535.36'
8" DRN NE 533.01
12" RCP E 532.81
8" DRN S 532.91
8" DRN SW 532.91
8" DRN NW 532.91

SEE SB I.R. 75 CROSS SECTIONS

STRUCTURE NO HAM-75-0857 REAR ABUTMENT MSE WALL H1

STRUCTURE NO HAM-75-0857 FOWARD ABUTMENT MSE WALL I1

6" WAT (TO BE REMOVED)

SEE NB I.R. 75 CROSS SECTIONS

EX 20" GAS

EX 12" WAT

534.67
19+50.00
534.69

(TO BE REMOVED)
STA 18+81.02, 35.82' LT
EX MH, RIM ELEV 537.77'
12" RCP E 532.57, 8" DRN S 534.07
12" RCP W 532.57, 8" DRN NW 532.57

SEE SB I.R. 75 CROSS SECTIONS

STRUCTURE NO HAM-75-0857 REAR ABUTMENT MSE WALL H1

STRUCTURE NO HAM-75-0857 FOWARD ABUTMENT MSE WALL I1

6" WAT (TO BE REMOVED)

SEE NB I.R. 75 CROSS SECTIONS

EX 20" GAS

EX 12" WAT

536.43
19+00.00
536.45

SEE SB I.R. 75 CROSS SECTIONS

STRUCTURE NO HAM-75-0857 REAR ABUTMENT MSE WALL H1

STRUCTURE NO HAM-75-0857 FOWARD ABUTMENT MSE WALL I1

STA 18+57.23, 54.58' RT
EX. SAN MH, RIM ELEV 538.96'
8" PVC N 533.75
12" RCP E 532.45
8" CLAY S 532.60
8" PVC SW 534.85
12" RCP W 532.45

6" WAT (TO BE REMOVED)

SEE NB I.R. 75 CROSS SECTIONS

12" RCP *(TO BE REMOVED)*

EX 20" GAS

EX 12" WAT

538.70
18+50.00
538.73

FOR INFORMATION ONLY

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
24	23	43	43
22	23	39	44
21	24	36	546
		118	633

CALCULATED SSK
CHECKED JLM

CROSS SECTIONS TOWNE ST. STA. 18+50.00 TO STA. 19+50.00

HAM-75-7.85

764
2017

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SEEDING END WIDTH	SEEDING SQ. YDS.
26	33
13.01	41
8	51
	125

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

STA 20+41.39, 85.20' LT
EX. CB, GRATE ELEV 540.57'
8" RCP N 532.54
12" RCP E 531.48
12" RCP SW 531.49
(TO BE REMOVED)

PROP FENCE
EX LA-R/W
2:1
EX. 8" RCP
EX 4" WAT
EX 20" GAS
EX R/W
TMP
6" WAT (ABANDONED)

532.32
20+50.00
532.34

STA 20+34.75, 1.54' RT
EX. SAN MH, RIM ELEV 532.58
15" RCP E 527.29
15" RCP W 527.29
8" RCP S 527.39

PROP FENCE
EX LA-R/W
EX 20" GAS
EX 6" WAT
EX R/W

532.55
20+34.41
532.60

SEE S&BR J.75 CROSS SECTIONS
STRUCTURE NO HAM-75-0857 REAR ABUTMENT MSE WALL H1
EX LA-R/W
STA 19+99.97, 21.77' RT
EX. MH, RIM ELEV 533.19'
(TO BE REMOVED)
STRUCTURE NO HAM-75-0857 REAR ABUTMENT MSE WALL I1
SEE NBR J.75 CROSS SECTIONS
STA 20+04.46, 90.64' RT
EX. SAN MH, RIM ELEV 531.16'
12" STEEL N 523.91
12" STEEL S 523.31
EX 20" GAS
EX 12" WAT
6" WAT (ABANDONED)

533.38
20+00.00
533.40

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
14	25		
62	1		
11	41	23	62
		81	1
		33	60
		137	123

CALCULATED SSK
CHECKED JLM

CROSS SECTIONS TOWNE ST.
STA. 20+00.00 TO STA. 20+50.00

HAM-75-7.85

765
2017

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SEEDING	
END WIDTH	SQ. YDS.
7	
	14
8	
	92
	106

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

END AREA	
CUT	FILL
4	48
3	48
2	29
16	67

VOLUME	
CUT	FILL
18	96

CALCULATED SSK
CHECKED JLM

CROSS SECTIONS TOWNE ST.
STA. 21+00.00 TO STA. 21+50.00

HAM-75-7.85

766
2017

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SEEDING END WIDTH	SEEDING SQ. YDS.
11	61
12	16
9	0
	77

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES

EMBANKMENT INCLUDED WITH MSE WALL I QUANTITIES

EXCAVATION & EMBANKMENT INCLUDED WITH MSE WALL I QUANTITIES

NOISE WALL NO 2
COMBINATION TRAFFIC
NOISE WALL BARRIER
MSE WALL I

SEE SB I.R. 75 CROSS SECTIONS

EX LA-R/W

EX RETAINING WALL
(TO BE REMOVED)

2.68' RT
V 543.09
W 532.81
E 532.16
(TO BE REMOVE)

EX FO

EX RCP

EX WAT

STA 0+55.95, 111.92' RT
EX. SAN MH, RIM ELEV 537.28'
8" DRN N 534.27
12" RCP E 531.77
8" DRN SW 532.87
8" DRN W 532.87
8" DRN NW 534.47

(TO BE REMOVED)
STA 0+22.00, 9.97' RT
EX MH, RIM ELEV 533.19

580 570 560 550 540 530 520

120 100 80 60 40 20 0 20 40 60 80 100 120

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
14	5	19	12
7	8	3	3
7	5	0	0
		22	15

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS CEDAR ST
STA. 0+36.40 TO STA. 1+00.00

HAM-75-7.85

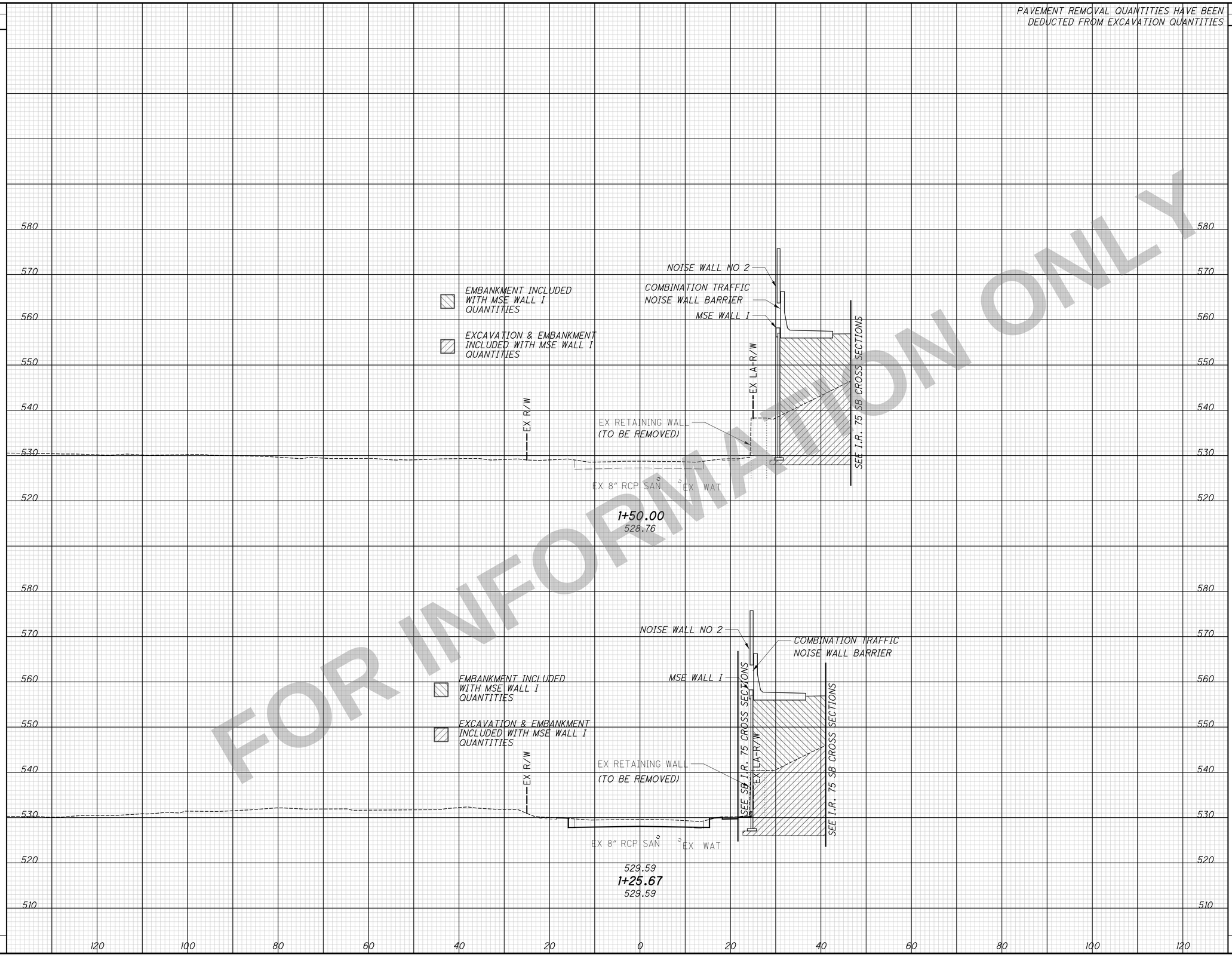
767
2017

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SEEDING END WIDTH	SEEDING SQ. YDS.
11	31
11	31
	62

PAVEMENT REMOVAL QUANTITIES HAVE BEEN DEDUCTED FROM EXCAVATION QUANTITIES



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0	0		
		14	6
19	0		
		16	2
		30	8

CALCULATED CFR
CHECKED SSK

CROSS SECTIONS CEDAR ST
STA. 1+25.67 TO STA. 1+50.00

HAM-75-7.85

768
2017

FOR INFORMATION ONLY

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SUPERELEVATION TABLE - I.R. 75 - CURVE NO 75-2

PI STA 420+66.70 | Dc = 1° 45′ 0″

REMARKS	OUTSIDE EDGE OF TRAVELED WAY					CENTERLINE OF LANES					INSIDE EDGE (PROFILE GRADE)		STATION	INSIDE EDGE (PROFILE GRADE)		CENTERLINE OF LANES					OUTSIDE EDGE OF TRAVELED WAY					REMARKS
	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	OFFSET		OFFSET	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	
HF	528.80	-0.38	-0.0160		24.00	529.18	0.00	0.0000	229:1	24.00	529.18	13.50	410+00.00	13.50	529.18	24.00		0.0160	0.38	529.56	24.00	229:1	0.0000	0.00	529.56	HF
	529.24	-0.38	-0.0160		24.00	529.62	0.11	0.0046	↕	24.00	529.51	13.50	410+25.00	13.50	529.51	24.00		0.0160	0.38	529.89	24.00	↕	-0.0046	-0.11	529.78	
	529.69	-0.38	-0.0160		24.00	530.08	0.22	0.0091	↕	24.00	529.86	13.50	410+50.00	13.50	529.86	24.00		0.0160	0.38	530.24	24.00	↕	-0.0091	-0.22	530.03	
	530.19	-0.38	-0.0160		24.00	530.58	0.33	0.0137	↕	24.00	530.25	13.50	410+75.00	13.50	530.25	24.00		0.0160	0.38	530.63	24.00	↕	-0.0137	-0.33	530.31	
NC	530.46	-0.38	-0.0160		24.00	530.84	0.38	0.0160	229:1	24.00	530.46	13.50	410+87.87	13.50	530.46	24.00		0.0160	0.38	530.84	24.00	229:1	-0.0160	-0.38	530.46	NC
NC	532.56	-0.38	-0.0160		24.00	532.94	0.38	0.0160	222:1	24.00	532.56	13.50	412+26.87	13.50	532.56	24.00		0.0160	0.38	532.94	24.00	222:1	-0.0160	-0.38	532.56	NC
	532.79	-0.38	-0.0160		24.00	533.17	0.28	0.0117	↕	24.00	532.89	13.50	412+50.00	13.50	532.89	24.00		0.0160	0.38	533.27	24.00	↕	-0.0117	-0.28	532.99	
	533.03	-0.38	-0.0160		24.00	533.42	0.17	0.0070	↕	24.00	533.25	13.50	412+75.00	13.50	533.25	24.00		0.0160	0.38	533.63	24.00	↕	-0.0070	-0.17	533.47	
	533.28	-0.38	-0.0160		24.00	533.66	0.05	0.0023	↕	24.00	533.61	13.50	413+00.00	13.50	533.61	24.00		0.0160	0.38	533.99	24.00	↕	-0.0023	-0.05	533.94	
HF	533.40	-0.38	-0.0160		24.00	533.78	0.00	0.0000	↕	24.00	533.78	13.50	413+12.12	13.50	533.78	24.00		0.0160	0.38	534.16	24.00	↕	0.0000	0.00	534.16	FLAT
	533.50	-0.40	-0.0160		25.00	533.90	-0.06	-0.0024	↕	24.00	533.96	13.50	413+25.00	13.50	533.96	24.00		0.0160	0.38	534.34	24.00	↕	0.0024	0.06	534.40	
	533.77	-0.38	-0.0160		24.00	534.15	-0.17	-0.0071	↕	24.00	534.32	13.50	413+50.00	13.50	534.32	24.00		0.0160	0.38	534.70	24.00	↕	0.0071	0.17	534.87	
	534.01	-0.38	-0.0160		24.00	534.40	-0.28	-0.0118	↕	24.00	534.68	13.50	413+75.00	13.50	534.68	24.00		0.0160	0.38	535.06	24.00	↕	0.0118	0.28	535.35	
RC	534.22	-0.38	-0.0160	222:1	24.00	534.61	-0.38	-0.0160	↕	24.00	534.99	13.50	413+97.37	13.50	534.99	24.00	222:1	0.0160	0.38	535.37	24.00	↕	0.0160	0.38	535.76	RC
	534.24	-0.40	-0.0165	↕	24.00	534.63	-0.40	-0.0165	↕	24.00	535.03	13.50	414+00.00	13.50	535.03	24.00	↕	0.0165	0.40	535.43	24.00	↕	0.0165	0.40	535.82	
	534.37	-0.51	-0.0212	↕	24.00	534.88	-0.51	-0.0212	↕	24.00	535.39	13.50	414+25.00	13.50	535.39	24.00	↕	0.0212	0.51	535.90	24.00	↕	0.0212	0.51	536.41	
PC	534.48	-0.60	-0.0252	↕	24.00	535.09	-0.60	-0.0252	↕	24.00	535.69	13.50	414+46.39	13.50	535.69	24.00	↕	0.0252	0.60	536.29	24.00	↕	0.0252	0.60	536.90	PC
	534.51	-0.62	-0.0259	↕	24.00	535.13	-0.62	-0.0259	↕	24.00	535.75	13.50	414+50.00	13.50	535.75	24.00	↕	0.0259	0.62	536.37	24.00	↕	0.0259	0.62	536.99	
	534.63	-0.73	-0.0306	↕	24.00	535.37	-0.73	-0.0306	↕	24.00	536.10	13.50	414+75.00	13.50	536.10	24.00	↕	0.0306	0.73	536.83	24.00	↕	0.0306	0.73	537.57	
	534.74	-0.85	-0.0353	↕	24.00	535.58	-0.85	-0.0353	↕	24.00	536.43	13.50	415+00.00	13.50	536.43	24.00	↕	0.0353	0.85	537.28	24.00	↕	0.0353	0.85	538.12	
	534.82	-0.96	-0.0400	↕	24.00	535.78	-0.96	-0.0400	↕	24.00	536.74	13.50	415+25.00	13.50	536.74	24.00	↕	0.0400	0.96	537.70	24.00	↕	0.0400	0.96	538.66	
FS	534.85	-1.01	-0.0420	222:1	24.00	535.86	-1.01	-0.0420	222:1	24.00	536.87	13.50	415+35.90	13.50	536.87	24.00	222:1	0.0420	1.01	537.88	24.00	222:1	0.0420	1.01	538.89	FS
	535.01	-1.01	-0.0420		24.00	536.02	-1.01	-0.0420		24.00	537.03	13.50	415+50.00	13.50	537.03	24.00		0.0420	1.01	538.04	24.00		0.0420	1.01	539.05	
	535.27	-1.01	-0.0420		24.00	536.28	-1.01	-0.0420		24.00	537.29	13.50	415+75.00	13.50	537.29	24.00		0.0420	1.01	538.30	24.00		0.0420	1.01	539.31	
	535.52	-1.01	-0.0420		24.00	536.53	-1.01	-0.0420		24.00	537.54	13.50	416+00.00	13.50	537.54	24.00		0.0420	1.01	538.55	24.00		0.0420	1.01	539.56	
	535.74	-1.01	-0.0420		24.00	536.75	-1.01	-0.0420		24.00	537.76	13.50	416+25.00	13.50	537.76	24.00		0.0420	1.01	538.77	24.00		0.0420	1.01	539.78	
	535.94	-1.01	-0.0420		24.00	536.95	-1.01	-0.0420		24.00	537.96	13.50	416+50.00	13.50	537.96	24.00		0.0420	1.01	538.97	24.00		0.0420	1.01	539.98	
	536.11	-1.01	-0.0420		24.00	537.12	-1.01	-0.0420		24.00	538.13	13.50	416+75.00	13.50	538.13	24.00		0.0420	1.01	539.14	24.00		0.0420	1.01	540.15	
	536.27	-1.01	-0.0420		24.00	537.28	-1.01	-0.0420		24.00	538.29	13.50	417+00.00	13.50	538.29	24.00		0.0420	1.01	539.30	24.00		0.0420	1.01	540.31	
	536.40	-1.01	-0.0420		24.00	537.41	-1.01	-0.0420		24.00	538.42	13.50	417+25.00	13.50	538.42	24.00		0.0420	1.01	539.43	24.00		0.0420	1.01	540.44	
	536.52	-1.01	-0.0420		24.00	537.53	-1.01	-0.0420		24.00	538.54	13.50	417+50.00	13.50	538.54	24.00		0.0420	1.01	539.55	24.00		0.0420	1.01	540.56	
	536.64	-1.01	-0.0420		24.00	537.65	-1.01	-0.0420		24.00	538.66	13.50	417+75.00	13.50	538.66	24.00		0.0420	1.01	539.67	24.00		0.0420	1.01	540.68	
	536.76	-1.01	-0.0420		24.00	537.77	-1.01	-0.0420		24.00	538.78	13.50	418+00.00	13.50	538.78	24.00		0.0420	1.01	539.79	24.00		0.0420	1.01	540.80	
	536.88	-1.01	-0.0420		24.00	537.89	-1.01	-0.0420		24.00	538.90	13.50	418+25.00	13.50	538.90	24.00		0.0420	1.01	539.91	24.00		0.0420	1.01	540.92	
	537.00	-1.01	-0.0420		24.00	538.01	-1.01	-0.0420		24.00	539.02	13.50	418+50.00	13.50	539.02	24.00		0.0420	1.01	540.03	24.00		0.0420	1.01	541.04	
	537.12	-1.01	-0.0420		24.00	538.13	-1.01	-0.0420		24.00	539.14	13.50	418+75.00	13.50	539.14	24.00		0.0420	1.01	540.15	24.00		0.0420	1.01	541.16	
	537.24	-1.01	-0.0420		24.00	538.25	-1.01	-0.0420		24.00	539.26	13.50	419+00.00	13.50	539.26	24.00		0.0420	1.01	540.27	24.00		0.0420	1.01	541.28	
	537.36	-1.01	-0.0420		24.00	538.37	-1.01	-0.0420		24.00	539.38	13.50	419+25.00	13.50	539.38	24.00		0.0420	1.01	540.39	24.00		0.0420	1.01	541.40	
	537.48	-1.01	-0.0420		24.00	538.49	-1.01	-0.0420		24.00	539.50	13.50	419+50.00	13.50	539.50	24.00		0.0420	1.01	540.51	24.00		0.0420	1.01	541.52	
	537.60	-1.01	-0.0420		24.00	538.61	-1.01	-0.0420		24.00	539.62	13.50	419+75.00	13.50	539.62	24.00		0.0420	1.01	540.63	24.00		0.0420	1.01	541.64	
	537.72	-1.01	-0.0420		24.00	538.73	-1.01	-0.0420		24.00	539.74	13.50	420+00.00	13.50	539.74	24.00		0.0420	1.01	540.75	24.00		0.0420	1.01	541.76	
	537.83	-1.01	-0.0420		24.00	538.84	-1.01	-0.0420		24.00	539.85	13.50	420+25.00	13.50	539.85	24.00		0.0420	1.01	540.86	24.00		0.0420	1.01	541.87	
	537.95	-1.01	-0.0420		24.00	538.96	-1.01	-0.0420		24.00	539.97	13.50	420+50.00	13.50	539.97	24.00		0.0420	1.01	540.98	24.00		0.0420	1.01	541.99	
	538.07	-1.01	-0.0420		24.00	539.08	-1.01	-0.0420		24.00	540.09	13.50	420+75.00	13.50	540.09	24.00		0.0420	1.01	541.10	24.00		0.0420	1.01	542.11	
	538.19	-1.01	-0.0420		24.00	539.20	-1.01	-0.0420		24.00	540.21	13.50	421+00.00	13.50	540.21	24.00		0.0420	1.01	541.22	24.00		0.0420	1.01	542.23	
	538.31	-1.01	-0.0420		24.00	539.32	-1.01	-0.0420		24.00	540.33	13.50	421+25.00	13.50	540.33	24.00		0.0420	1.01	541.34	24.00		0.0420	1.01	542.35	
	538.43	-1.01	-0.0420		24.00	539.44	-1.01	-0.0420		24.00	540.45	13.50	421+50.00	13.50	540.45	24.00		0.0420	1.01	541.46	24.00		0.0420	1.01	542.47	
	538.55	-1.01	-0.0420		24.00	539.56	-1.01	-0.0420		24.00	540.57	13.50	421+75.00	13.50	540.57	24.00		0.0420	1.01	541.58	24.00		0.0420	1.01	542.59	
	538.67	-1.01	-0.0420		24.00	539.68	-1.01	-0.0420		24.00	540.69	13.50	422+00.00	13.50	540.69	24.00		0.0420	1.01	541.70	24.00		0.0420	1.01	542.71	
	538.79	-1.01	-0.0420		24.00	539.80	-1.01	-0.0420		24.00	540.81	13.50	422+25.00	13.50	540.81	24.00		0.0420	1.01	541.82	24.00		0.0420	1.01	542.83	
	538.91	-1.01	-0.0420		24.00	539.92	-1.01	-0.0420		24.00	540.93	13.50	422+50.00	13.50	540.93	24.00		0.0420	1.01	541.94	24.00		0.0420	1.01	542.95	
	539.03	-1.01	-0.0420		24.00	540.04	-1.01	-0.0420		24.00	541.05	13.50	422+75.00	13.50	541.05	24.00		0.0420	1.01	542.06	24.00		0.0420	1.01	543.07	
	539.15	-1.01	-0.0420		24.00	540.16	-1.01	-0.0420		24.00	541.17	13.50	423+00.00	13.50	541.17	24.00		0.0420	1.01	542.18	24.00		0.0420	1.01	543.19	

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CALCULATED SEA | CHECKED DLR

SUPERELEVATION TABLE - I.R. 75 - CURVE NO 2

HAM-75-7.85

769 2017

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SUPERELEVATION TABLE - I.R. 75 - CURVE NO 75-2

PI STA 420+66.70 | Dc = 1° 45′ 0″

REMARKS	OUTSIDE EDGE OF TRAVELED WAY					CENTERLINE OF LANES					INSIDE EDGE (PROFILE GRADE)		STATION	INSIDE EDGE (PROFILE GRADE)		CENTERLINE OF LANES					OUTSIDE EDGE OF TRAVELED WAY					REMARKS
	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	OFFSET		OFFSET	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	
	539.26	-1.01	-0.0420		24.00	540.27	-1.01	-0.0420		24.00	541.28	13.50	423+25.00	13.50	541.28	24.00		0.0420	1.01	542.29	24.00		0.0420	1.01	543.30	
	539.38	-1.01	-0.0420		24.00	540.39	-1.01	-0.0420		24.00	541.40	13.50	423+50.00	13.50	541.40	24.00		0.0420	1.01	542.41	24.00		0.0420	1.01	543.42	
	539.50	-1.01	-0.0420		24.00	540.51	-1.01	-0.0420		24.00	541.52	13.50	423+75.00	13.50	541.52	24.00		0.0420	1.01	542.53	24.00		0.0420	1.01	543.54	
	539.62	-1.01	-0.0420		24.00	540.63	-1.01	-0.0420		24.00	541.64	13.50	424+00.00	13.50	541.64	24.00		0.0420	1.01	542.65	24.00		0.0420	1.01	543.66	
	539.74	-1.01	-0.0420		24.00	540.75	-1.01	-0.0420		24.00	541.76	13.50	424+25.00	13.50	541.76	24.00		0.0420	1.01	542.77	24.00		0.0420	1.01	543.78	
	539.86	-1.01	-0.0420		24.00	540.87	-1.01	-0.0420		24.00	541.88	13.50	424+50.00	13.50	541.88	24.00		0.0420	1.01	542.89	24.00		0.0420	1.01	543.90	
	539.98	-1.01	-0.0420		24.00	540.99	-1.01	-0.0420		24.00	542.00	13.50	424+75.00	13.50	542.00	24.00		0.0420	1.01	543.01	24.00		0.0420	1.01	544.02	
	540.10	-1.01	-0.0420		24.00	541.11	-1.01	-0.0420		24.00	542.12	13.50	425+00.00	13.50	542.12	24.00		0.0420	1.01	543.13	24.00		0.0420	1.01	544.14	
	540.22	-1.01	-0.0420		24.00	541.23	-1.01	-0.0420		24.00	542.24	13.50	425+25.00	13.50	542.24	24.00		0.0420	1.01	543.25	24.00		0.0420	1.01	544.26	
	540.34	-1.01	-0.0420		24.00	541.35	-1.01	-0.0420		24.00	542.36	13.50	425+50.00	13.50	542.36	24.00		0.0420	1.01	543.37	24.00		0.0420	1.01	544.38	
	540.46	-1.01	-0.0420		24.00	541.47	-1.01	-0.0420		24.00	542.48	13.50	425+75.00	13.50	542.48	24.00		0.0420	1.01	543.49	24.00		0.0420	1.01	544.50	
FS	540.49	-1.01	-0.0420	222:1	24.00	541.50	-1.01	-0.0420	222:1	24.00	542.51	13.50	425+82.98	13.50	542.51	24.00	222:1	0.0420	1.01	543.52	24.00	222:1	0.0420	1.01	544.53	FS
	540.74	-0.93	-0.0388	↕	24.00	541.67	-0.93	-0.0388	↕	24.00	542.60	13.50	426+00.00	13.50	542.60	24.00	↕	0.0388	0.93	543.53	24.00	↕	0.0388	0.93	544.46	
	541.08	-0.82	-0.0341		24.00	541.90	-0.82	-0.0341		24.00	542.72	13.50	426+25.00	13.50	542.72	24.00		0.0341	0.82	543.54	24.00		0.0341	0.82	544.36	
	541.42	-0.71	-0.0294		24.00	542.12	-0.71	-0.0294		24.00	542.83	13.50	426+50.00	13.50	542.83	24.00		0.0294	0.71	543.54	24.00		0.0294	0.71	544.24	
PC	541.73	-0.60	-0.0252		24.00	542.34	-0.60	-0.0252		24.00	542.94	13.50	426+72.49	13.50	542.94	24.00		0.0252	0.60	543.54	24.00		0.0252	0.60	544.15	PT
	541.76	-0.59	-0.0247		24.00	542.36	-0.59	-0.0247		24.00	542.95	13.50	426+75.00	13.50	542.95	24.00		0.0247	0.59	543.54	24.00		0.0247	0.59	544.14	
	542.11	-0.48	-0.0200		24.00	542.59	-0.48	-0.0200		24.00	543.07	13.50	427+00.00	13.50	543.07	24.00		0.0200	0.48	543.55	24.00		0.0200	0.48	544.03	
RC	542.41	-0.38	-0.0160	222:1	24.00	542.80	-0.38	-0.0160		24.00	543.18	13.50	427+21.51	13.50	543.18	24.00	222:1	0.0160	0.38	543.56	24.00		0.0160	0.38	543.95	RC
	542.44	-0.38	-0.0160		24.00	542.82	-0.37	-0.0153		24.00	543.19	13.50	427+25.00	13.50	543.19	24.00		0.0160	0.38	543.57	24.00		0.0153	0.37	543.94	
	542.67	-0.38	-0.0160		24.00	543.05	-0.26	-0.0107		24.00	543.31	13.50	427+50.00	13.50	543.31	24.00		0.0160	0.38	543.69	24.00		0.0107	0.26	543.95	
	542.90	-0.38	-0.0160		24.00	543.29	-0.14	-0.0060		24.00	543.43	13.50	427+75.00	13.50	543.43	24.00		0.0160	0.38	543.81	24.00		0.0060	0.14	543.96	
	543.14	-0.38	-0.0160		24.00	543.52	-0.03	-0.0013		24.00	543.55	13.50	428+00.00	13.50	543.55	24.00		0.0160	0.38	543.93	24.00		0.0013	0.03	543.96	
HF	543.20	-0.38	-0.0160		24.00	543.58	0.00	0.0000		24.00	543.58	13.50	428+06.76	13.50	543.58	24.00		0.0160	0.38	543.96	24.00		0.0000	0.00	543.96	FLAT
	543.37	-0.38	-0.0160		24.00	543.75	0.08	0.0034		24.00	543.67	13.50	428+25.00	13.50	543.67	24.00		0.0160	0.38	544.05	24.00		-0.0034	-0.08	543.97	
	543.60	-0.38	-0.0160		24.00	543.98	0.19	0.0081		24.00	543.79	13.50	428+50.00	13.50	543.79	24.00		0.0160	0.38	544.17	24.00		-0.0081	-0.19	543.98	
	543.83	-0.38	-0.0160		24.00	544.22	0.31	0.0128		24.00	543.91	13.50	428+75.00	13.50	543.91	24.00		0.0160	0.38	544.29	24.00		-0.0128	-0.31	543.99	
NC	543.99	-0.38	-0.0160		24.00	544.37	0.38	0.0160	222:1	24.00	543.99	13.50	428+92.01	13.50	543.99	24.00		0.0160	0.38	544.37	24.00	222:1	-0.0160	-0.38	543.99	NC

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SUPERELEVATION TABLE - I.R. 75 - CURVE NO 2

HAM-75-7.85

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SUPERELEVATION TABLE - I.R. 75 SB - CURVE 75-3

P.I. STA. 456+41.20	Dc = 0°40' 00"

REMARKS	LEFT SIDE															INSIDE EDGE (PROFILE GRADE)		STATION
	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	OFFSET	
NC	553.92	-0.24	-0.0200		12	554.16	-0.38	-0.0160		24	554.54	0.38	0.0160	1:222	24	554.16		449+08.29
	554.33	-0.24	-0.0200		12	554.57	-0.38	-0.0160		24	554.96	0.35	0.0144		24	554.61		449+25.00
	554.92	-0.24	-0.0200		12	555.16	-0.38	-0.0160		24	555.54	0.29	0.0121		24	555.25		449+50.00
	555.46	-0.24	-0.0200		12	555.70	-0.38	-0.0160		24	556.08	0.23	0.0098		24	555.85		449+75.00
	555.96	-0.24	-0.0200		12	556.20	-0.38	-0.0160		24	556.59	0.18	0.0074		24	556.41		450+00.00
	556.43	-0.24	-0.0200		12	556.67	-0.38	-0.0160		24	557.05	0.12	0.0051		24	556.93		450+25.00
	556.85	-0.24	-0.0200		12	557.09	-0.38	-0.0160		24	557.48	0.07	0.0027		24	557.41		450+50.00
	557.24	-0.24	-0.0200		12	557.48	-0.38	-0.0160		24	557.86	0.01	0.0004		24	557.85		450+75.00
HF	557.30	-0.24	-0.0200		12	557.54	-0.38	-0.0160		24	557.92	0.00	0.0000		24	557.92		450+79.24
	557.57	-0.24	-0.0200		12	557.81	-0.38	-0.0160		24	558.19	-0.05	-0.0019		24	558.24		451+00.00
	557.87	-0.24	-0.0200		12	558.11	-0.38	-0.0160		24	558.50	-0.10	-0.0043		24	558.60		451+25.00
	558.13	-0.24	-0.0200		12	558.37	-0.38	-0.0160		24	558.75	-0.16	-0.0066		24	558.91		451+50.00
	558.34	-0.24	-0.0200		12	558.58	-0.38	-0.0160		24	558.96	-0.22	-0.0090		24	559.18		451+75.00
	558.51	-0.24	-0.0200		12	558.75	-0.38	-0.0160		24	559.14	-0.27	-0.0113		24	559.41		452+00.00
PC	558.59	-0.24	-0.0200		12	558.83	-0.38	-0.0160		24	559.22	-0.30	-0.0127		24	559.52		452+14.57
	558.65	-0.24	-0.0200		12	558.89	-0.38	-0.0160		24	559.27	-0.33	-0.0136		24	559.60		452+25.00
	558.73	-0.24	-0.0200		12	558.97	-0.38	-0.0160		24	559.36	-0.38	-0.0160		24	559.74		452+50.00
RC	558.73	-0.24	-0.0200		12	558.97	-0.38	-0.0160	1:222	24	559.36	-0.38	-0.0160		24	559.74		452+50.19
	558.74	-0.24	-0.0200	1:222	12	558.98	-0.43	-0.0180		24	559.41	-0.43	-0.0180		24	559.84		452+71.56
	558.73	-0.24	-0.0197		12	558.97	-0.44	-0.0183		24	559.41	-0.44	-0.0183		24	559.85		452+75.00
BEGIN FS	558.73	-0.23	-0.0190	1:222	12	558.96	-0.46	-0.0190	1:222	24	559.41	-0.46	-0.0190	1:222	24	559.87		452+82.24
	558.77	-0.23	-0.0190		12	559.00	-0.46	-0.0190		24	559.45	-0.46	-0.0190		24	559.91		453+00.00
	558.79	-0.23	-0.0190		12	559.02	-0.46	-0.0190		24	559.47	-0.46	-0.0190		24	559.93		453+25.00
	558.77	-0.23	-0.0190		12	559.00	-0.46	-0.0190		24	559.45	-0.46	-0.0190		24	559.91		453+50.00
	558.71	-0.23	-0.0190		12	558.94	-0.46	-0.0190		24	559.39	-0.46	-0.0190		24	559.85		453+75.00
	558.61	-0.23	-0.0190		12	558.84	-0.46	-0.0190		24	559.29	-0.46	-0.0190		24	559.75		454+00.00
	558.47	-0.23	-0.0190		12	558.70	-0.46	-0.0190		24	559.15	-0.46	-0.0190		24	559.61		454+25.00
	558.28	-0.23	-0.0190		12	558.51	-0.46	-0.0190		24	558.96	-0.46	-0.0190		24	559.42		454+50.00
	558.06	-0.23	-0.0190		12	558.29	-0.46	-0.0190		24	558.74	-0.46	-0.0190		24	559.20		454+75.00
	557.79	-0.23	-0.0190		12	558.02	-0.46	-0.0190		24	558.47	-0.46	-0.0190		24	558.93		455+00.00
	557.48	-0.23	-0.0190		12	557.71	-0.46	-0.0190		24	558.16	-0.46	-0.0190		24	558.62		455+25.00
	557.14	-0.23	-0.0190		12	557.37	-0.46	-0.0190		24	557.82	-0.46	-0.0190		24	558.28		455+50.00
	556.79	-0.23	-0.0190		12	557.02	-0.46	-0.0190		24	557.47	-0.46	-0.0190		24	557.93		455+75.00
	556.44	-0.23	-0.0190		12	556.67	-0.46	-0.0190		24	557.12	-0.46	-0.0190		24	557.58		456+00.00
	556.09	-0.23	-0.0190		12	556.32	-0.46	-0.0190		24	556.77	-0.46	-0.0190		24	557.23		456+25.00
	555.74	-0.23	-0.0190		12	555.97	-0.46	-0.0190		24	556.42	-0.46	-0.0190		24	556.88		456+50.00
	555.39	-0.23	-0.0190		12	555.62	-0.46	-0.0190		24	556.07	-0.46	-0.0190		24	556.53		456+75.00
	555.04	-0.23	-0.0190		12	555.27	-0.46	-0.0190		24	555.72	-0.46	-0.0190		24	556.18		457+00.00
	554.69	-0.23	-0.0190		12	554.92	-0.46	-0.0190		24	555.37	-0.46	-0.0190		24	555.83		457+25.00
	554.34	-0.23	-0.0190		12	554.57	-0.46	-0.0190		24	555.02	-0.46	-0.0190		24	555.48		457+50.00
	553.99	-0.23	-0.0190		12	554.22	-0.46	-0.0190		24	554.67	-0.46	-0.0190		24	555.13		457+75.00
	553.64	-0.23	-0.0190		12	553.87	-0.46	-0.0190		24	554.32	-0.46	-0.0190		24	554.78		458+00.00
	553.29	-0.23	-0.0190		12	553.52	-0.46	-0.0190		24	553.97	-0.46	-0.0190		24	554.43		458+25.00
	552.96	-0.23	-0.0190		12	553.19	-0.46	-0.0190		24	553.64	-0.46	-0.0190		24	554.10		458+50.00
	552.67	-0.23	-0.0190		12	552.90	-0.46	-0.0190		24	553.35	-0.46	-0.0190		24	553.81		458+75.00
	552.42	-0.23	-0.0190		12	552.65	-0.46	-0.0190		24	553.10	-0.46	-0.0190		24	553.56		459+00.00
	552.20	-0.23	-0.0190		12	552.43	-0.46	-0.0190		24	552.88	-0.46	-0.0190		24	553.34		459+25.00
	552.03	-0.23	-0.0190		12	552.26	-0.46	-0.0190		24	552.71	-0.46	-0.0190		24	553.17		459+50.00
	551.90	-0.23	-0.0190		12	552.13	-0.46	-0.0190		24	552.58	-0.46	-0.0190		24	553.04		459+75.00
END FS	551.80	-0.23	-0.0190	1:222	12	552.03	-0.46	-0.0190	1:222	24	552.48	-0.46	-0.0190	1:222	24	552.94		459+99.47
	551.80	-0.23	-0.0190		12	552.03	-0.46	-0.0190		24	552.49	-0.45	-0.0190		24	552.94		460+00.00
	551.80	-0.24	-0.0200	1:222	12	552.04	-0.43	-0.0181		24	552.48	-0.43	-0.0180		24	552.91		460+10.15
	551.85	-0.24	-0.0200		12	552.09	-0.40	-0.0167		24	552.49	-0.40	-0.0166		24	552.89		460+25.00
RC	551.87	-0.24	-0.0200		12	552.11	-0.39	-0.0161	1:222	24	552.50	-0.38	-0.0160		24	552.88		460+31.52
	551.90	-0.24	-0.0200		12	552.14	-0.39	-0.0161		24	552.53	-0.34	-0.0143		24	552.87		460+50.00
PT	551.95	-0.24	-0.0200		12	552.19	-0.39	-0.0161		24	552.58	-0.30	-0.0127		24	552.88		460+67.13
	551.98	-0.24	-0.0200		12	552.22	-0.39	-0.0161		24	552.60	-0.29	-0.0119		24	552.89		460+75.00
	552.10	-0.24	-0.0200		12	552.34	-0.39	-0.0161		24	552.73	-0.23	-0.0096		24	552.96		461+00.00
	552.26	-0.24	-0.0200		12	552.50	-0.39	-0.0161		24	552.89	-0.17	-0.0073		24	553.06		461+25.00
	552.46	-0.24	-0.0200		12	552.70	-0.39	-0.0161		24	553.08	-0.12	-0.0049		24	553.20		461+50.00
	552.69	-0.24	-0.0200		12	552.93	-0.39	-0.0161		24	553.32	-0.06	-0.0026		24	553.38		461+75.00

CALCULATED CT | CHECKED SSK

SUPERELEVATION TABLE - I.R. 75 - CURVE NO 3

HAM-75-7.85

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SUPERELEVATION TABLE - I.R. 75 SB - CURVE 75-3

P.I. STA. 456+41.20	Dc = 0°40' 00"

REMARKS	LEFT SIDE															INSIDE EDGE (PROFILE GRADE)		STATION
	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	OFFSET	
	552.97	-0.24	-0.02		12	553.21	-0.39	-0.0161		24	553.59	-0.01	-0.0002		24	553.60		462+00.00
HF	552.99	-0.24	-0.02		12	553.23	-0.39	-0.0161		24	553.62	0.00	0.0000			553.62		462+02.50
	553.28	-0.24	-0.02		12	553.52	-0.39	-0.0161		24	553.91	0.05	0.0021			553.86		462+25.00
	553.64	-0.24	-0.02		12	553.88	-0.39	-0.0161		24	554.27	0.11	0.0044			554.16		462+50.00
	554.03	-0.24	-0.02		12	554.27	-0.39	-0.0161		24	554.65	0.16	0.0068			554.49		462+75.00
	554.46	-0.24	-0.02		12	554.70	-0.39	-0.0161		24	555.09	0.22	0.0091			554.87		463+00.00
	554.94	-0.24	-0.02		12	555.18	-0.39	-0.0161		24	555.57	0.28	0.0115			555.29		463+25.00
	555.44	-0.24	-0.02		12	555.68	-0.39	-0.0161		24	556.07	0.33	0.0138			555.74		463+50.00
NC	555.96	-0.24	-0.02		12	556.20	-0.39	-0.0161		24	556.58	0.38	0.0160	1:222		556.20		463+73.42

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CALCULATED CT
CHECKED SSK

SUPERELEVATION TABLE - I.R. 75 - CURVE NO 3

HAM-75-7.85

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SUPERELEVATION TABLE - I.R. 75 NB - CURVE 75-3

P.I. STA. 456+41.20	Dc = 0° 40' 00"

STATION	INSIDE EDGE (PROFILE GRADE)		RIGHT SIDE																		REMARKS
	OFFSET	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	
449+08.29		554.16	24		0.0160	0.38	554.54	24	1:222	-0.0160	-0.38	554.16	12	1:222	-0.0160	-0.19	553.97	12	1:222	-0.0160	-0.19	553.78	NC
449+25.00		554.61	24		0.0160	0.38	554.99	24	↕	-0.0144	-0.35	554.65	12	↕	-0.0144	-0.17	554.47	12	↕	-0.0144	-0.17	554.30	
449+50.00		555.25	24		0.0160	0.38	555.63	24		-0.0121	-0.29	555.34	12		-0.0121	-0.15	555.20	12		-0.0121	-0.15	555.05	
449+75.00		555.85	24		0.0160	0.38	556.23	24		-0.0098	-0.23	556.00	12		-0.0098	-0.12	555.88	12		-0.0098	-0.12	555.77	
450+00.00		556.41	24		0.0160	0.38	556.79	24		-0.0074	-0.18	556.62	12		-0.0074	-0.09	556.53	12		-0.0074	-0.09	556.44	
450+25.00		556.93	24		0.0160	0.38	557.31	24		-0.0051	-0.12	557.19	12		-0.0051	-0.06	557.13	12		-0.0051	-0.06	557.07	
450+50.00		557.41	24		0.0160	0.38	557.79	24		-0.0027	-0.07	557.73	12		-0.0027	-0.03	557.70	12		-0.0027	-0.03	557.66	
450+75.00		557.85	24		0.0160	0.38	558.23	24		-0.0004	-0.01	558.22	12		-0.0004	0.00	558.22	12		-0.0004	0.00	558.21	
450+79.24		557.92	24		0.0160	0.38	558.30	24		0.0000	0.00	558.30	12		0.0000	0.00	558.30	12		0.0000	0.00	558.30	HF
451+00.00		558.24	24		0.0160	0.38	558.62	24		0.0019	0.05	558.67	12		0.0019	0.02	558.69	12		0.0019	0.02	558.72	
451+25.00		558.60	24		0.0160	0.38	558.98	24		0.0043	0.10	559.09	12		0.0043	0.05	559.14	12		0.0043	0.05	559.19	
451+50.00		558.91	24		0.0160	0.38	559.29	24		0.0066	0.16	559.45	12		0.0066	0.08	559.53	12		0.0066	0.08	559.61	
451+75.00		559.18	24		0.0160	0.38	559.56	24		0.0090	0.22	559.78	12		0.0090	0.11	559.89	12		0.0090	0.11	559.99	
452+00.00		559.41	24		0.0160	0.38	559.79	24		0.0113	0.27	560.07	12		0.0113	0.14	560.20	11.5		0.0113	0.13	560.33	
452+14.57		559.52	24		0.0160	0.38	559.90	24		0.0127	0.30	560.21	12		0.0127	0.15	560.36	11.3		0.0127	0.14	560.50	PC
452+25.00		559.60	24		0.0160	0.38	559.98	24		0.0136	0.33	560.31	12		0.0136	0.16	560.48	11.1		0.0136	0.15	560.62	
452+50.00		559.74	24		0.0160	0.38	560.12	24		0.0160	0.38	560.51	12		0.0160	0.19	560.70	10.7		0.0160	0.17	560.87	
452+50.19		559.74	24	1:222	0.0160	0.38	560.12	24		0.0160	0.38	560.51	12		0.0160	0.19	560.70	10.7		0.0160	0.17	560.87	RC
452+75.00		559.85	24	↕	0.0183	0.44	560.29	24		0.0183	0.44	560.73	12		0.0183	0.22	560.95	10.3		0.0183	0.19	561.13	
452+82.24		559.87	24	1:222	0.0190	0.46	560.33	24	1:222	0.0190	0.46	560.78	12	1:222	0.0190	0.23	561.01	10.1	1:222	0.0190	0.19	561.20	BEGIN FS
453+00.00		559.91	24		0.0190	0.46	560.37	24		0.0190	0.46	560.82	12		0.0190	0.23	561.05	9.8		0.0190	0.19	561.23	
453+25.00		559.93	24		0.0190	0.46	560.39	24		0.0190	0.46	560.84	12		0.0190	0.23	561.07	9.4		0.0190	0.18	561.24	
453+50.00		559.91	24		0.0190	0.46	560.37	24		0.0190	0.46	560.82	12		0.0190	0.23	561.05	9.0		0.0190	0.17	561.21	
453+75.00		559.85	24		0.0190	0.46	560.31	24		0.0190	0.46	560.76	12		0.0190	0.23	560.99	8.6		0.0190	0.16	561.14	
454+00.00		559.75	24		0.0190	0.46	560.21	24		0.0190	0.46	560.66	12		0.0190	0.23	560.89	8.2		0.0190	0.16	561.03	
454+25.00		559.61	24		0.0190	0.46	560.07	24		0.0190	0.46	560.52	12		0.0190	0.23	560.75	7.8		0.0190	0.15	560.88	
454+50.00		559.42	24		0.0190	0.46	559.88	24		0.0190	0.46	560.33	12		0.0190	0.23	560.56	7.3		0.0190	0.14	560.68	
454+75.00		559.20	24		0.0190	0.46	559.66	24		0.0190	0.46	560.11	12		0.0190	0.23	560.34	6.9		0.0190	0.13	560.45	
455+00.00		558.93	24		0.0190	0.46	559.39	24		0.0190	0.46	559.84	12		0.0190	0.23	560.07	6.5		0.0190	0.12	560.17	
455+25.00		558.62	24		0.0190	0.46	559.08	24		0.0190	0.46	559.53	12		0.0190	0.23	559.76	6.1		0.0190	0.12	559.85	
455+50.00		558.28	24		0.0190	0.46	558.74	24		0.0190	0.46	559.19	12		0.0190	0.23	559.42	5.7		0.0190	0.11	559.50	
455+75.00		557.93	24		0.0190	0.46	558.39	24		0.0190	0.46	558.84	12		0.0190	0.23	559.07	5.3		0.0190	0.10	559.14	
456+00.00		557.58	24		0.0190	0.46	558.04	24		0.0190	0.46	558.49	12		0.0190	0.23	558.72	4.8		0.0190	0.09	558.78	
456+25.00		557.23	24		0.0190	0.46	557.69	24		0.0190	0.46	558.14	12		0.0190	0.23	558.37	4.4		0.0190	0.08	558.43	
456+50.00		556.88	24		0.0190	0.46	557.34	24		0.0190	0.46	557.79	12		0.0190	0.23	558.02	4.0		0.0190	0.08	558.07	
456+75.00		556.53	24		0.0190	0.46	556.99	24		0.0190	0.46	557.44	12		0.0190	0.23	557.67	3.6		0.0190	0.07	557.71	
457+00.00		556.18	24		0.0190	0.46	556.64	24		0.0190	0.46	557.09	12		0.0190	0.23	557.32	3.2		0.0190	0.06	557.35	
457+25.00		555.83	24		0.0190	0.46	556.29	24		0.0190	0.46	556.74	12		0.0190	0.23	556.97	2.8		0.0190	0.05	556.92	
457+50.00		555.48	24		0.0190	0.46	555.94	24		0.0190	0.46	556.39	12		0.0190	0.23	556.62	2.3		0.0190	0.04	556.58	
457+75.00		555.13	24		0.0190	0.46	555.59	24		0.0190	0.46	556.04	12		0.0190	0.23	556.27	1.9		0.0190	0.04	556.23	
458+00.00		554.78	24		0.0190	0.46	555.24	24		0.0190	0.46	555.69	12		0.0190	0.23	555.92	1.5		0.019	0.03	555.89	
458+25.00		554.43	24		0.0190	0.46	554.89	24		0.0190	0.46	555.34	12		0.0190	0.23	555.57	1.1		0.019	0.02	555.55	
458+50.00		554.10	24		0.0190	0.46	554.56	24		0.0190	0.46	555.01	12		0.0190	0.23	555.24	0.7		0.019	0.01	555.23	
458+75.00		553.81	24		0.0190	0.46	554.27	24		0.0190	0.46	554.72	12		0.0190	0.23	554.95	0.3		0.019	0.00	554.95	
459+00.00		553.56	24		0.0190	0.46	554.02	24		0.0190	0.46	554.47	12		0.0190	0.23	554.70						
459+25.00		553.34	24		0.0190	0.46	553.80	24		0.0190	0.46	554.25	12		0.0190	0.23	554.48						
459+50.00		553.17	24		0.0190	0.46	553.63	24		0.0190	0.46	554.08	12		0.0190	0.23	554.31						
459+75.00		553.04	24		0.0190	0.46	553.50	24		0.0190	0.46	553.95	12		0.0190	0.23	554.18						
459+99.47		552.94	24	1:222	0.0190	0.46	553.40	24	1:222	0.0190	0.46	553.85	12	1:222	0.0190	0.23	554.08						END FS
460+00.00		552.94	24	↕	0.0190	0.45	553.39	24	↕	0.0190	0.45	553.85	12	↕	0.0190	0.23	554.08						
460+25.00		552.89	24		0.0166	0.40	553.29	24		0.0166	0.40	553.69	12		0.0166	0.20	553.89						
460+31.52		552.88	24	1:222	0.0160	0.38	553.26	24		0.0160	0.38	553.65	12		0.0160	0.19	553.84						RC
460+50.00		552.87	24		0.0160	0.38	553.25	24		0.0143	0.34	553.60	12		0.0143	0.17	553.77						
460+67.13		552.88	24		0.0160	0.38	553.26	24		0.0127	0.30	553.57	12		0.0127	0.15	553.72						PT
460+75.00		552.89	24		0.0160	0.38	553.27	24		0.0119	0.29	553.56	12		0.0119	0.14	553.70						
461+00.00		552.96	24		0.0160	0.38	553.34	24		0.0096	0.23	553.57	12		0.0096	0.12	553.69						
461+25.00		553.06	24		0.0160	0.38	553.44	24		0.0073	0.17	553.62	12		0.0073	0.09	553.71						
461+50.00		553.20	24		0.0160	0.38	553.58	24		0.0049	0.12	553.70	12		0.0049	0.06	553.76						
461+75.00		553.38	24		0.0160	0.38	553.76	24		0.0026	0.06	553.83	12		0.0026	0.03	553.86						
462+00.00		553.60	24		0.0160	0.38	553.98	24		0.0002	0.01	553.99	12		0.0002	0.00	553.99						
462+02.50		553.62	24		0.0160	0.38	554.00	24		0.0000	0.00	554.00	12		0.0000	0.00	554.00						HF

FOR INFORMATION ONLY

CALCULATED CT | CHECKED SSK

SUPERELEVATION TABLE - I.R. 75 - CURVE NO 3

HAM-75-7.85

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2017

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SUPERELEVATION TABLE - I.R. 75 NB - CURVE 75-3

P.I. STA. 456+41.20	Dc = 0° 40' 00"

STATION	INSIDE EDGE (PROFILE GRADE)		RIGHT SIDE																			REMARKS
	OFFSET	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	
462+25.00		553.86	24		0.0160	0.38	554.24	24		-0.0021	-0.05	554.19	12		-0.0021	-0.03	554.17						
462+50.00		554.16	24		0.0160	0.38	554.54	24		-0.0044	-0.11	554.44	12		-0.0044	-0.05	554.38						
462+75.00		554.49	24		0.0160	0.38	554.87	24		-0.0068	-0.16	554.71	12		-0.0068	-0.08	554.63						
463+00.00		554.87	24		0.0160	0.38	555.25	24		-0.0091	-0.22	555.03	12		-0.0091	-0.11	554.93						
463+25.00		555.29	24		0.0160	0.38	555.67	24		-0.0115	-0.28	555.40	12		-0.0115	-0.14	555.26						
463+50.00		555.74	24		0.0160	0.38	556.12	24		-0.0138	-0.33	555.79	12		-0.0138	-0.17	555.63						
463+73.42		556.20	24		0.0160	0.38	556.58	24	1:222	-0.0160	-0.38	556.20	12	1:222	-0.0160	-0.19	556.01						NC

FOR INFORMATION ONLY

CALCULATED CT
CHECKED SSK

SUPERELEVATION TABLE - I.R. 75 - CURVE NO 3

HAM-75-7.85

774
2017

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SUPERELEVATION TABLE - I.R. 75 SB - CURVE 75-4

P.I. STA. 474+88.06	Dc = 2° 45' 00"

REMARKS	LEFT SIDE															INSIDE EDGE (PROFILE GRADE)		STATION
	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	OFFSET	
NC	558.45	-0.19	-0.0160	1:222	12	558.64	-0.38	-0.0160	1:222	24	559.02	0.38	0.0160		24	558.64		464+76.22
	559.19	-0.17	-0.0138		12	559.35	-0.33	-0.0138		24	559.68	0.38	0.0160		24	559.30		465+00.00
	560.00	-0.14	-0.0114		12	560.14	-0.27	-0.0114		24	560.41	0.38	0.0160		24	560.03		465+25.00
	560.84	-0.11	-0.0091		12	560.94	-0.22	-0.0091		24	561.16	0.38	0.0160		24	560.78		465+50.00
	561.67	-0.08	-0.0067		12	561.75	-0.16	-0.0067		24	561.91	0.38	0.0160		24	561.53		465+75.00
	562.50	-0.05	-0.0044		12	562.56	-0.11	-0.0044		24	562.66	0.38	0.0160		24	562.28		466+00.00
	563.32	-0.02	-0.0020		12	563.34	-0.05	-0.0020		24	563.39	0.38	0.0160		24	563.01		466+25.00
HF	564.00	0.00	0.0000		12	564.00	0.00	0.0000		24	564.00	0.38	0.0160		24	563.61		466+46.79
	564.09	0.00	0.0003		12	564.09	0.01	0.0003		24	564.08	0.38	0.0160		24	563.70		466+50.00
	564.83	0.03	0.0026		12	564.80	0.06	0.0026		24	564.74	0.38	0.0160		24	564.35		466+75.00
	565.53	0.06	0.0050		12	565.47	0.12	0.0050		24	565.35	0.38	0.0160		24	564.96		467+00.00
	566.18	0.09	0.0073		12	566.10	0.18	0.0073		24	565.92	0.38	0.0160		24	565.54		467+25.00
	566.80	0.12	0.0097		12	566.69	0.23	0.0097		24	566.45	0.38	0.0160		24	566.07		467+50.00
	567.38	0.14	0.0120		12	567.24	0.29	0.0120		24	566.95	0.38	0.0160		24	566.56		467+75.00
	567.92	0.17	0.0144		12	567.75	0.34	0.0144		24	567.40	0.38	0.0160		24	567.02		468+00.00
RC	568.27	0.19	0.0160		12	568.08	0.38	0.0160		24	567.69	0.38	0.0160	1:222	24	567.31		468+17.36
	568.44	0.20	0.0167		12	568.24	0.40	0.0167		24	567.83	0.40	0.0167		24	567.43		468+25.00
	568.95	0.23	0.0191		12	568.72	0.46	0.0191		24	568.27	0.46	0.0191		24	567.81		468+50.00
	569.43	0.26	0.0214		12	569.17	0.51	0.0214		24	568.66	0.51	0.0214		24	568.15		468+75.00
	569.87	0.29	0.0238		12	569.58	0.57	0.0238		24	569.01	0.57	0.0238		24	568.44		469+00.00
	570.27	0.31	0.0261		12	569.95	0.63	0.0261		24	569.33	0.63	0.0261		24	568.70		469+25.00
	570.63	0.34	0.0284		12	570.28	0.68	0.0284		24	569.60	0.68	0.0284		24	568.92		469+50.00
	570.95	0.37	0.0308		12	570.58	0.74	0.0308		24	569.84	0.74	0.0308		24	569.10		469+75.00
	571.23	0.40	0.0331		12	570.83	0.80	0.0331		24	570.03	0.80	0.0331		24	569.24		470+00.00
PC	571.45	0.42	0.0353		12	571.03	0.85	0.0353		24	570.18	0.85	0.0353		24	569.33		470+23.46
	571.47	0.43	0.0355		12	571.04	0.85	0.0355		24	570.19	0.85	0.0355		24	569.34		470+25.00
	571.67	0.45	0.0378		12	571.22	0.91	0.0378		24	570.31	0.91	0.0378		24	569.40		470+50.00
	571.83	0.48	0.0402		12	571.35	0.96	0.0402		24	570.39	0.96	0.0402		24	569.42		470+75.00
	571.95	0.51	0.0425		12	571.44	1.02	0.0425		24	570.42	1.02	0.0425		24	569.40		471+00.00
	572.04	0.54	0.0449		12	571.50	1.08	0.0449		24	570.42	1.08	0.0449		24	569.35		471+25.00
	572.08	0.57	0.0472		12	571.52	1.13	0.0472		24	570.38	1.13	0.0472		24	569.25		471+50.00
	572.09	0.59	0.0495		12	571.49	1.19	0.0495		24	570.30	1.19	0.0495		24	569.11		471+75.00
	572.05	0.62	0.0519		12	571.43	1.25	0.0519		24	570.18	1.25	0.0519		24	568.94		472+00.00
BEGIN FS	572.02	0.64	0.0530	1:222	12	571.39	1.27	0.0530	1:222	24	570.11	1.27	0.0530	1:222	24	568.84		472+11.79
	571.90	0.64	0.0530		12	571.27	1.27	0.0530		24	570.00	1.27	0.0530		24	568.72		472+25.00
	571.65	0.64	0.0530		12	571.01	1.27	0.0530		24	569.74	1.27	0.0530		24	568.47		472+50.00
	571.36	0.64	0.0530		12	570.72	1.27	0.0530		24	569.45	1.27	0.0530		24	568.18		472+75.00
	571.02	0.64	0.0530		12	570.39	1.27	0.0530		24	569.12	1.27	0.0530		24	567.84		473+00.00
	570.65	0.64	0.0530		12	570.02	1.27	0.0530		24	568.74	1.27	0.0530		24	567.47		473+25.00
	570.24	0.64	0.0530		12	569.60	1.27	0.0530		24	568.33	1.27	0.0530		24	567.06		473+50.00
	569.79	0.64	0.0530		12	569.15	1.27	0.0530		24	567.88	1.27	0.0530		24	566.61		473+75.00
	569.30	0.64	0.0530		12	568.66	1.27	0.0530		24	567.39	1.27	0.0530		24	566.12		474+00.00
	568.77	0.64	0.0530		12	568.13	1.27	0.0530		24	566.86	1.27	0.0530		24	565.59		474+25.00
	568.20	0.64	0.0530		12	567.56	1.27	0.0530		24	566.29	1.27	0.0530		24	565.02		474+50.00
	567.59	0.64	0.0530		12	566.96	1.27	0.0530		24	565.68	1.27	0.0530		24	564.41		474+75.00
	566.94	0.64	0.0530		12	566.31	1.27	0.0530		24	565.04	1.27	0.0530		24	563.76		475+00.00
	566.27	0.65	0.0530		12.23	565.62	1.27	0.0530		24	564.35	1.27	0.0530		24	563.08		475+25.00
	565.57	0.68	0.0530		12.75	564.89	1.27	0.0530		24	563.62	1.27	0.0530		24	562.35		475+50.00
	564.83	0.70	0.0530		13.28	564.13	1.27	0.0530		24	562.86	1.27	0.0530		24	561.58		475+75.00
	564.05	0.73	0.0530		13.8	563.32	1.27	0.0530		24	562.05	1.27	0.0530		24	560.78		476+00.00
	563.26	0.76	0.0530		14.33	562.50	1.27	0.0530		24	561.23	1.27	0.0530		24	559.95		476+25.00
	562.46	0.79	0.0530		14.85	561.67	1.27	0.0530		24	560.40	1.27	0.0530		24	559.13		476+50.00
	561.66	0.82	0.0530		15.38	560.85	1.27	0.0530		24	559.58	1.27	0.0530		24	558.30		476+75.00
	560.87	0.84	0.0530		15.91	560.02	1.27	0.0530		24	558.75	1.27	0.0530		24	557.48		477+00.00
	560.07	0.87	0.0530		16.43	559.20	1.27	0.0530		24	557.93	1.27	0.0530		24	556.65		477+25.00
END FS	559.29	0.90	0.0530	1:222	16.94	558.39	1.27	0.0530	1:222	24	557.12	1.27	0.0530	1:222	24	555.85		477+49.38
	559.27	0.90	0.0529		17.00	558.37	1.27	0.0529		24	557.10	1.27	0.0529		24	555.83		477+50.00
	558.32	0.89	0.0506		17.53	557.43	1.21	0.0506		24	556.22	1.21	0.0506		24	555.00		477+75.00
	557.37	0.87	0.0483		18.05	556.49	1.16	0.0483		24	555.34	1.16	0.0483		24	554.18		478+00.00
	556.41	0.85	0.0459		18.57	555.56	1.10	0.0459		24	554.46	1.10	0.0459		24	553.35		478+25.00
	555.45	0.83	0.0436		19.09	554.62	1.05	0.0436		24	553.57	1.05	0.0436		24	552.53		478+50.00

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SUPERELEVATION TABLE - I.R. 75 - CURVE NO 4

HAM-75-7.85

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SUPERELEVATION TABLE - I.R. 75 SB - CURVE 75-4

P.I. STA. 474+88.06	Dc = 2° 45' 00"

REMARKS	LEFT SIDE															INSIDE EDGE (PROFILE GRADE)		STATION
	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	OFFSET	
	554.49	0.81	0.0412		19.61	553.68	0.99	0.0412		24	552.69	0.99	0.0412		24	551.70		478+75.00
	553.53	0.78	0.0389		20.13	552.74	0.93	0.0389		24	551.81	0.93	0.0389		24	550.88		479+00.00
	552.58	0.75	0.0365		20.64	551.83	0.88	0.0365		24	550.95	0.88	0.0365		24	550.07		479+25.00
PT	552.11	0.74	0.0353		20.90	551.37	0.85	0.0353		24	550.53	0.85	0.0353		24	549.68		479+37.71
	551.67	0.72	0.0342		21.14	550.95	0.82	0.0342		24	550.12	0.82	0.0342		24	549.30		479+50.00
	550.79	0.69	0.0318		21.60	550.10	0.76	0.0318		24	549.34	0.76	0.0318		24	548.57		479+75.00
	549.95	0.65	0.0295		22.10	549.30	0.71	0.0295		24	548.59	0.71	0.0295		24	547.88		480+00.00
	549.15	0.61	0.0271		22.59	548.53	0.65	0.0271		24	547.88	0.65	0.0271		24	547.23		480+25.00
	548.38	0.57	0.0248		23.07	547.80	0.60	0.0248		24	547.21	0.60	0.0248		24	546.61		480+50.00
	547.64	0.53	0.0225		23.55	547.12	0.54	0.0225		24	546.58	0.54	0.0225		24	546.04		480+75.00
	546.95	0.48	0.0201		24.03	546.46	0.48	0.0201		24	545.98	0.48	0.0201		24	545.50		481+00.00
	546.29	0.44	0.0178		24.51	545.85	0.43	0.0178		24	545.42	0.43	0.0178		24	545.00		481+25.00
RC	545.81	0.40	0.0160		24.88	545.41	0.38	0.0160		24	545.03	0.38	0.0160	1:222	24	544.65		481+43.81
	545.67	0.39	0.0154		25.00	545.29	0.37	0.0154		24	544.92	0.38	0.0160		24	544.53		481+50.00
	545.15	0.34	0.0131		25.91	544.81	0.31	0.0131		24	544.49	0.38	0.0160		24	544.11		481+75.00
	544.65	0.29	0.0107		26.81	544.36	0.26	0.0107		24	544.11	0.38	0.0160		24	543.72		482+00.00
	544.19	0.23	0.0084		27.71	543.96	0.20	0.0084		24	543.76	0.38	0.0160		24	543.37		482+25.00
	543.77	0.17	0.0060		28.61	543.59	0.14	0.0060		24	543.45	0.38	0.0160		24	543.06		482+50.00
	543.37	0.11	0.0037		29.51	543.26	0.09	0.0037		24	543.18	0.38	0.0160		24	542.79		482+75.00
	543.02	0.04	0.0013		30.41	542.97	0.03	0.0013		24	542.94	0.38	0.0160		24	542.56		483+00.00
HF	542.82	0.00	0.0000		30.92	542.82	0.00	0.0000		24	542.82	0.38	0.0160		24	542.43		483+14.38
	542.67	-0.03	-0.0010		31.31	542.70	-0.02	-0.0010		24	542.73	0.38	0.0160		24	542.34		483+25.00
	542.32	-0.11	-0.0033		32.21	542.43	-0.08	-0.0033		24	542.51	0.38	0.0160		24	542.13		483+50.00
	541.97	-0.19	-0.0057		33.11	542.16	-0.14	-0.0057		24	542.30	0.38	0.0160		24	541.91		483+75.00
	541.62	-0.27	-0.0080		34.01	541.89	-0.19	-0.0080		24	542.08	0.38	0.0160		24	541.70		484+00.00
	541.26	-0.36	-0.0104		34.91	541.62	-0.25	-0.0104		24	541.87	0.38	0.0160		24	541.48		484+25.00
	540.89	-0.46	-0.0127		35.81	541.35	-0.31	-0.0127		24	541.65	0.38	0.0160		24	541.27		484+50.00
	540.52	-0.55	-0.0151		36.71	541.08	-0.36	-0.0151		24	541.44	0.38	0.0160		24	541.05		484+75.00
NC	540.37	-0.59	-0.0160	1:222	37.07	540.97	-0.38	-0.0160	1:222	24	541.35	0.38	0.0160		24	540.97		484+84.95

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SUPERELEVATION TABLE - I.R. 75 - CURVE NO 4

HAM-75-7.85

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SUPERELEVATION TABLE - I.R. 75 NB - CURVE 75-4

P.I. STA. 474+88.06 | Dc = 2° 45' 00"

STATION	INSIDE EDGE (PROFILE GRADE)		RIGHT SIDE														REMARKS
	OFFSET	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	
464+76.22		558.64	24	1:222	0.0160	0.38	559.02	24		-0.0160	-0.38	558.64	12.00		-0.0200	-0.24	558.40	NC
465+00.00		559.30	24		0.0138	0.33	559.63	24		-0.0160	-0.38	559.24	12.00		-0.0200	-0.24	559.00	
465+25.00		560.03	24		0.0114	0.27	560.30	24		-0.0160	-0.38	559.92	12.00		-0.0200	-0.24	559.68	
465+50.00		560.78	24		0.0091	0.22	561.00	24		-0.0160	-0.38	560.61	12.00		-0.0200	-0.24	560.37	
465+75.00		561.53	24		0.0067	0.16	561.69	24		-0.0160	-0.38	561.31	12.00		-0.0200	-0.24	561.07	
466+00.00		562.28	24		0.0044	0.11	562.38	24		-0.0160	-0.38	562.00	12.00		-0.0200	-0.24	561.76	
466+25.00		563.01	24		0.0020	0.05	563.06	24		-0.0160	-0.38	562.67	12.00		-0.0200	-0.24	562.43	
466+46.79		563.61	24		0.0000	0.00	563.61	24		-0.0160	-0.38	563.23	12.00		-0.0200	-0.24	562.99	HF
466+50.00		563.70	24		-0.0003	-0.01	563.69	24		-0.0160	-0.38	563.31	12.00		-0.0200	-0.24	563.07	
466+75.00		564.35	24		-0.0026	-0.06	564.29	24		-0.0160	-0.38	563.90	12.00		-0.0200	-0.24	563.66	
467+00.00		564.96	24		-0.0050	-0.12	564.84	24		-0.0160	-0.38	564.46	12.00		-0.0200	-0.24	564.22	
467+25.00		565.54	24		-0.0073	-0.18	565.36	24		-0.0160	-0.38	564.98	12.00		-0.0200	-0.24	564.74	
467+50.00		566.07	24		-0.0097	-0.23	565.84	24		-0.0160	-0.38	565.45	12.00		-0.0200	-0.24	565.21	
467+75.00		566.56	24		-0.0120	-0.29	566.27	24		-0.0160	-0.38	565.89	12.00		-0.0200	-0.24	565.65	
468+00.00		567.02	24		-0.0144	-0.34	566.67	24		-0.0160	-0.38	566.29	12.00		-0.0200	-0.24	566.05	
468+17.36		567.31	24		-0.0160	-0.38	566.93	24	1:222	-0.0160	-0.38	566.54	12.00		-0.0200	-0.24	566.30	RC
468+25.00		567.43	24		-0.0167	-0.40	567.03	24		-0.0167	-0.40	566.63	12.00		-0.0200	-0.24	566.39	
468+50.00		567.81	24		-0.0191	-0.46	567.35	24		-0.0191	-0.46	566.89	12.00		-0.0200	-0.24	566.65	
468+60.00		567.95	24		-0.0200	-0.48	567.47	24		-0.0200	-0.48	566.99	12.00	1:222	-0.0200	-0.24	566.75	
468+75.00		568.15	24		-0.0214	-0.51	567.63	24		-0.0214	-0.51	567.12	12.00		-0.0214	-0.26	566.86	
469+00.00		568.44	24		-0.0238	-0.57	567.87	24		-0.0238	-0.57	567.30	12.00		-0.0238	-0.29	567.02	
469+25.00		568.70	24		-0.0261	-0.63	568.07	24		-0.0261	-0.63	567.45	12.00		-0.0261	-0.31	567.14	
469+50.00		568.92	24		-0.0284	-0.68	568.24	24		-0.0284	-0.68	567.55	12.00		-0.0284	-0.34	567.21	
469+75.00		569.10	24		-0.0308	-0.74	568.36	24		-0.0308	-0.74	567.62	12.00		-0.0308	-0.37	567.25	
469+76.37		569.11	24		-0.0309	-0.74	568.37	24		-0.0309	-0.74	567.62	12.00		-0.0309	-0.37	567.25	
470+00.00		569.24	24		-0.0331	-0.80	568.44	24		-0.0331	-0.80	567.65	12.19		-0.0331	-0.40	567.24	
470+23.46		569.33	24		-0.0353	-0.85	568.49	24		-0.0353	-0.85	567.64	12.69		-0.0353	-0.45	567.19	PC
470+25.00		569.34	24		-0.0355	-0.85	568.49	24		-0.0355	-0.85	567.64	12.74		-0.0355	-0.45	567.18	
470+50.00		569.40	24		-0.0378	-0.91	568.49	24		-0.0378	-0.91	567.58	13.41		-0.0378	-0.51	567.08	
470+75.00		569.42	24		-0.0402	-0.96	568.46	24		-0.0402	-0.96	567.49	14.23		-0.0402	-0.57	566.92	
471+00.00		569.40	24		-0.0425	-1.02	568.38	24		-0.0425	-1.02	567.36	15.18		-0.0425	-0.65	566.72	
471+25.00		569.35	24		-0.0449	-1.08	568.27	24		-0.0449	-1.08	567.19	16.27		-0.0449	-0.73	566.46	
471+50.00		569.25	24		-0.0472	-1.13	568.12	24		-0.0472	-1.13	566.98	17.50		-0.0472	-0.83	566.16	
471+75.00		569.11	24		-0.0495	-1.19	567.92	24		-0.0495	-1.19	566.74	18.87		-0.0495	-0.93	565.80	
472+00.00		568.94	24		-0.0519	-1.25	567.69	24		-0.0519	-1.25	566.45	20.37		-0.0519	-1.06	565.39	
472+11.79		568.84	24	1:222	-0.0530	-1.27	567.57	24	1:222	-0.0530	-1.27	566.30	20.68	1:222	-0.0530	-1.10	565.20	BEGIN FS
472+25.00		568.72	24		-0.0530	-1.27	567.45	24		-0.0530	-1.27	566.18	21.52		-0.0530	-1.14	565.04	
472+50.00		568.47	24		-0.0530	-1.27	567.20	24		-0.0530	-1.27	565.93	23.14		-0.0530	-1.23	564.70	
472+75.00		568.18	24		-0.0530	-1.27	566.90	24		-0.0530	-1.27	565.63	24.70		-0.0530	-1.31	564.32	
473+00.00		567.84	24		-0.0530	-1.27	566.57	24		-0.0530	-1.27	565.30	26.19		-0.0530	-1.39	563.91	
473+25.00		567.47	24		-0.0530	-1.27	566.20	24		-0.0530	-1.27	564.93	27.60		-0.0530	-1.46	563.46	
473+50.00		567.06	24		-0.0530	-1.27	565.79	24		-0.0530	-1.27	564.52	28.93		-0.0530	-1.53	562.98	
473+75.00		566.61	24		-0.0530	-1.27	565.34	24		-0.0530	-1.27	564.06	30.18		-0.0530	-1.60	562.47	
474+00.00		566.12	24		-0.0530	-1.27	564.85	24		-0.0530	-1.27	563.57	31.36		-0.0530	-1.66	561.91	
474+25.00		565.59	24		-0.0530	-1.27	564.32	24		-0.0530	-1.27	563.04	32.47		-0.0530	-1.72	561.32	
474+50.00		565.02	24		-0.0530	-1.27	563.75	24		-0.0530	-1.27	562.48	33.49		-0.0530	-1.77	560.70	
474+75.00		564.41	24		-0.0530	-1.27	563.14	24		-0.0530	-1.27	561.87	34.44		-0.0530	-1.83	560.04	
475+00.00		563.76	24		-0.0530	-1.27	562.49	24		-0.0530	-1.27	561.22	35.31		-0.0530	-1.87	559.35	
475+21.64		563.17	24		-0.0530	-1.27	561.90	24		-0.0530	-1.27	560.63	36.01		-0.0530	-1.91	558.72	RAMP D - GORE
475+25.00		563.08	24		-0.0530	-1.27	561.80	24		-0.0530	-1.27	560.53						
475+50.00		562.35	24		-0.0530	-1.27	561.08	24		-0.0530	-1.27	559.81						
475+75.00		561.58	24		-0.0530	-1.27	560.31	24		-0.0530	-1.27	559.04	SEE RAMP D SUPER ELEVATION TABLE					
476+00.00		560.78	24		-0.0530	-1.27	559.51	24		-0.0530	-1.27	558.23						
476+25.00		559.95	24		-0.0530	-1.27	558.68	24		-0.0530	-1.27	557.41						
476+50.00		559.13	24		-0.0530	-1.27	557.86	24		-0.0530	-1.27	556.58						
476+50.41		559.11	24		-0.0530	-1.27	557.84	24		-0.0530	-1.27	556.57						
476+75.00		558.30	24		-0.0530	-1.27	557.03	24		-0.0530	-1.27	555.76						
477+00.00		557.48	24		-0.0530	-1.27	556.21	24		-0.0530	-1.27	554.93						
477+25.00		556.65	24		-0.0530	-1.27	555.38	24		-0.0530	-1.27	554.11						
477+49.38		555.85	24	1:222	-0.0530	-1.27	554.58	24	1:222	-0.0530	-1.27	553.30						END FS
477+50.00		555.83	24		-0.0529	-1.27	554.56	24		-0.0529	-1.27	553.29						

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SUPERELEVATION TABLE - I.R. 75 - CURVE NO 4

HAM-75-7.85

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SUPERELEVATION TABLE - I.R. 75 NB - CURVE 75-4

P.I. STA. 474+88.06 | Dc = 2° 45' 00"

STATION	INSIDE EDGE (PROFILE GRADE)		RIGHT SIDE														REMARKS
	OFFSET	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	
477+75.00		555.00	24		-0.0506	-1.21	553.79	24		-0.0506	-1.21	552.57						
478+00.00		554.18	24		-0.0483	-1.16	553.02	24		-0.0483	-1.16	551.86	SEE RAMP D SUPER ELEVATION TABLE					
478+25.00		553.35	24		-0.0459	-1.10	552.25	24		-0.0459	-1.10	551.15						
478+50.00		552.53	24		-0.0436	-1.05	551.48	24		-0.0436	-1.05	550.44						
478+75.00		551.70	24		-0.0412	-0.99	550.71	24		-0.0412	-0.99	549.72						
479+00.00		550.88	24		-0.0389	-0.93	549.95	24		-0.0389	-0.93	549.01						
479+25.00		550.07	24		-0.0365	-0.88	549.20	24		-0.0365	-0.88	548.32						
479+37.71		549.68	24		-0.0353	-0.85	548.83	24		-0.0353	-0.85	547.98						PT
479+50.00		549.30	24		-0.0342	-0.82	548.48	24		-0.0342	-0.82	547.66						
479+75.00		548.57	24		-0.0318	-0.76	547.81	24		-0.0318	-0.76	547.05						
480+00.00		547.88	24		-0.0295	-0.71	547.18	24		-0.0295	-0.71	546.47						
480+25.00		547.23	24		-0.0271	-0.65	546.58	24		-0.0271	-0.65	545.93						
480+50.00		546.61	24		-0.0248	-0.60	546.02	24		-0.0248	-0.60	545.42						
480+75.00		546.04	24		-0.0225	-0.54	545.50	24		-0.0225	-0.54	544.96						
481+00.00		545.50	24		-0.0201	-0.48	545.02	24		-0.0201	-0.48	544.53						
481+25.00		545.00	24		-0.0178	-0.43	544.57	24		-0.0178	-0.43	544.14						
481+43.81		544.65	24		-0.0160	-0.38	544.26	24	1:222	-0.0160	-0.38	543.88						RC
481+50.00		544.53	24		-0.0154	-0.37	544.16	24		-0.0160	-0.38	543.78						
481+75.00		544.11	24		-0.0131	-0.31	543.80	24		-0.0160	-0.38	543.41						
482+00.00		543.72	24		-0.0107	-0.26	543.47	24		-0.0160	-0.38	543.08						
482+25.00		543.37	24		-0.0084	-0.20	543.17	24		-0.0160	-0.38	542.79						
482+50.00		543.06	24		-0.0060	-0.14	542.92	24		-0.0160	-0.38	542.54						
482+75.00		542.79	24		-0.0037	-0.09	542.70	24		-0.0160	-0.38	542.32						
483+00.00		542.56	24		-0.0013	-0.03	542.53	24		-0.0160	-0.38	542.14						
483+14.38		542.43	24		0.0000	0.00	542.43	24		-0.0160	-0.38	542.05						HF
483+25.00		542.34	24		0.0010	0.02	542.37	24		-0.0160	-0.38	541.98						
483+50.00		542.13	24		0.0033	0.08	542.21	24		-0.0160	-0.38	541.82						
483+75.00		541.91	24		0.0057	0.14	542.05	24		-0.0160	-0.38	541.67						
484+00.00		541.70	24		0.0080	0.19	541.89	24		-0.0160	-0.38	541.51						
484+25.00		541.48	24		0.0104	0.25	541.73	24		-0.0160	-0.38	541.35						
484+50.00		541.27	24		0.0127	0.31	541.57	24		-0.0160	-0.38	541.19						
484+75.00		541.05	24		0.0151	0.36	541.41	24		-0.0160	-0.38	541.03						
484+84.95		540.97	24	1:222	0.0160	0.38	541.35	24		-0.0160	-0.38	540.97						NC

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SUPERELEVATION TABLE - I.R. 75 - CURVE NO 4

HAM-75-7.85

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SUPERELEVATION TABLE - I.R. 75 SB - CURVE 75-5

P.I. STA. 523+96.89	Dc = 1° 06' 00"

REMARKS	LEFT SIDE															INSIDE EDGE (PROFILE GRADE)		STATION
	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	OFFSET	
NC	541.48	-0.33	-0.0200		16.59	541.82	-0.38	-0.0160		24	542.20	0.38	0.0160	1:222	24	541.82		512+78.83
	541.58	-0.32	-0.0200		15.91	541.90	-0.38	-0.0160		24	542.28	0.34	0.0140		24	541.94		513+00.00
	541.69	-0.30	-0.0200		15.20	541.99	-0.38	-0.0160		24	542.37	0.28	0.0117		24	542.09		513+25.00
	541.79	-0.29	-0.0200		14.55	542.08	-0.38	-0.0160		24	542.47	0.22	0.0093		24	542.24		513+50.00
	541.90	-0.28	-0.0200		13.98	542.18	-0.38	-0.0160		24	542.56	0.17	0.0070		24	542.39		513+75.00
	542.00	-0.27	-0.0200		13.48	542.27	-0.38	-0.0160		24	542.65	0.11	0.0046		24	542.54		514+00.00
	542.10	-0.26	-0.0200		13.05	542.36	-0.38	-0.0160		24	542.75	0.05	0.0023		24	542.69		514+25.00
HF	542.20	-0.25	-0.0200		12.70	542.46	-0.38	-0.0160		24	542.84	0.00	0.0000		24	542.84		514+49.50
	542.20	-0.25	-0.0200		12.70	542.46	-0.38	-0.0160		24	542.84	0.00	-0.0001		24	542.84		514+50.00
	542.30	-0.25	-0.0200		12.41	542.55	-0.38	-0.0160		24	542.94	-0.06	-0.0024		24	542.99		514+75.00
	542.40	-0.24	-0.0200		12.20	542.65	-0.38	-0.0160		24	543.03	-0.11	-0.0047		24	543.14		515+00.00
	542.50	-0.24	-0.0200		12.07	542.74	-0.38	-0.0160		24	543.12	-0.17	-0.0071		24	543.29		515+25.00
	542.59	-0.24	-0.0200		12.01	542.83	-0.38	-0.0160		24	543.22	-0.23	-0.0094		24	543.44		515+50.00
	542.69	-0.24	-0.0200		12.00	542.93	-0.38	-0.0160		24	543.31	-0.28	-0.0118		24	543.59		515+75.00
	542.78	-0.24	-0.0200		12.00	543.02	-0.38	-0.0160		24	543.40	-0.34	-0.0141		24	543.74		516+00.00
RC	542.86	-0.24	-0.0200		12.00	543.10	-0.38	-0.0160	1:222	24	543.48	-0.38	-0.0160		24	543.86		516+20.17
	542.86	-0.24	-0.0200		12.00	543.10	-0.39	-0.0165		24	543.50	-0.40	-0.0165		24	543.89		516+25.00
	542.90	-0.24	-0.0200		12.00	543.14	-0.45	-0.0188		24	543.59	-0.45	-0.0188		24	544.04		516+50.00
PC	542.92	-0.24	-0.0200	1:222	12.00	543.16	-0.48	-0.0200		24	543.64	-0.48	-0.0200		24	544.12		516+62.83
	542.92	-0.25	-0.0211		12.00	543.18	-0.51	-0.0211		24	543.69	-0.51	-0.0212		24	544.19		516+75.00
	542.93	-0.28	-0.0235		12.00	543.22	-0.56	-0.0235		24	543.78	-0.56	-0.0235		24	544.34		517+00.00
	542.94	-0.31	-0.0258		12.00	543.25	-0.62	-0.0258		24	543.87	-0.62	-0.0259		24	544.49		517+25.00
	542.95	-0.34	-0.0282		12.00	543.29	-0.68	-0.0282		24	543.97	-0.68	-0.0282		24	544.64		517+50.00
BEGIN FS	542.96	-0.36	-0.0300	1:222	12.00	543.32	-0.72	-0.0300	1:222	24	544.04	-0.72	-0.0300	1:222	24	544.76		517+69.50
	542.99	-0.36	-0.0300		12.00	543.35	-0.72	-0.0300		24	544.07	-0.72	-0.0300		24	544.79		517+75.00
	543.14	-0.36	-0.0300		12.00	543.50	-0.72	-0.0300		24	544.22	-0.72	-0.0300		24	544.94		518+00.00
	543.29	-0.36	-0.0300		12.00	543.65	-0.72	-0.0300		24	544.37	-0.72	-0.0300		24	545.09		518+25.00
	543.44	-0.36	-0.0300		12.00	543.80	-0.72	-0.0300		24	544.52	-0.72	-0.0300		24	545.24		518+50.00
	543.59	-0.36	-0.0300		12.00	543.95	-0.72	-0.0300		24	544.67	-0.72	-0.0300		24	545.39		518+75.00
	543.74	-0.36	-0.0300		12.00	544.10	-0.72	-0.0300		24	544.82	-0.72	-0.0300		24	545.54		519+00.00
	543.89	-0.36	-0.0300		12.00	544.25	-0.72	-0.0300		24	544.97	-0.72	-0.0300		24	545.69		519+25.00
	544.04	-0.36	-0.0300		12.00	544.40	-0.72	-0.0300		24	545.12	-0.72	-0.0300		24	545.84		519+50.00
	544.19	-0.36	-0.0300		12.00	544.55	-0.72	-0.0300		24	545.27	-0.72	-0.0300		24	545.99		519+75.00
	544.34	-0.36	-0.0300		12.00	544.70	-0.72	-0.0300		24	545.42	-0.72	-0.0300		24	546.14		520+00.00
	544.49	-0.36	-0.0300		12.00	544.85	-0.72	-0.0300		24	545.57	-0.72	-0.0300		24	546.29		520+25.00
	544.64	-0.36	-0.0300		12.00	545.00	-0.72	-0.0300		24	545.72	-0.72	-0.0300		24	546.44		520+50.00
	544.79	-0.36	-0.0300		12.00	545.15	-0.72	-0.0300		24	545.87	-0.72	-0.0300		24	546.59		520+75.00
	544.94	-0.36	-0.0300		12.00	545.30	-0.72	-0.0300		24	546.02	-0.72	-0.0300		24	546.74		521+00.00
	545.09	-0.36	-0.0300		12.00	545.45	-0.72	-0.0300		24	546.17	-0.72	-0.0300		24	546.89		521+25.00
	545.24	-0.36	-0.0300		12.00	545.60	-0.72	-0.0300		24	546.32	-0.72	-0.0300		24	547.04		521+50.00
	545.38	-0.36	-0.0300		12.00	545.74	-0.72	-0.0300		24	546.46	-0.72	-0.0300		24	547.18		521+75.00
	545.49	-0.36	-0.0300		12.00	545.85	-0.72	-0.0300		24	546.57	-0.72	-0.0300		24	547.29		522+00.00
	545.57	-0.36	-0.0300		12.00	545.93	-0.72	-0.0300		24	546.65	-0.72	-0.0300		24	547.37		522+25.00
	545.62	-0.36	-0.0300		12.00	545.98	-0.72	-0.0300		24	546.70	-0.72	-0.0300		24	547.42		522+50.00
	545.64	-0.36	-0.0300		12.00	546.00	-0.72	-0.0300		24	546.72	-0.72	-0.0300		24	547.44		522+75.00
	545.64	-0.36	-0.0300		12.00	546.00	-0.72	-0.0300		24	546.72	-0.72	-0.0300		24	547.44		523+00.00
	545.60	-0.36	-0.0300		12.00	545.96	-0.72	-0.0300		24	546.68	-0.72	-0.0300		24	547.40		523+25.00
	545.54	-0.36	-0.0300		12.00	545.90	-0.72	-0.0300		24	546.62	-0.72	-0.0300		24	547.34		523+50.00
	545.45	-0.36	-0.0300		12.00	545.81	-0.72	-0.0300		24	546.53	-0.72	-0.0300		24	547.25		523+75.00
	545.34	-0.36	-0.0300		12.00	545.70	-0.72	-0.0300		24	546.42	-0.72	-0.0300		24	547.14		524+00.00
	545.19	-0.36	-0.0300		12.00	545.55	-0.72	-0.0300		24	546.27	-0.72	-0.0300		24	546.99		524+25.00
	545.02	-0.36	-0.0300		12.00	545.38	-0.72	-0.0300		24	546.10	-0.72	-0.0300		24	546.82		524+50.00
	544.82	-0.36	-0.0300		12.00	545.18	-0.72	-0.0300		24	545.90	-0.72	-0.0300		24	546.62		524+75.00
	544.59	-0.36	-0.0300		12.00	544.95	-0.72	-0.0300		24	545.67	-0.72	-0.0300		24	546.39		525+00.00
	544.33	-0.36	-0.0300		12.00	544.69	-0.72	-0.0300		24	545.41	-0.72	-0.0300		24	546.13		525+25.00
	544.04	-0.36	-0.0300		12.00	544.40	-0.72	-0.0300		24	545.12	-0.72	-0.0300		24	545.84		525+50.00
	543.74	-0.36	-0.0300		12.00	544.10	-0.72	-0.0300		24	544.82	-0.72	-0.0300		24	545.54		525+75.00
	543.44	-0.36	-0.0300		12.00	543.80	-0.72	-0.0300		24	544.52	-0.72	-0.0300		24	545.24		526+00.00
	543.14	-0.36	-0.0300		12.00	543.50	-0.72	-0.0300		24	544.22	-0.72	-0.0300		24	544.94		526+25.00
	542.84	-0.36	-0.0300		12.00	543.20	-0.72	-0.0300		24	543.92	-0.72	-0.0300		24	544.64		526+50.00
	542.54	-0.36	-0.0300		12.00	542.90	-0.72	-0.0300		24	543.62	-0.72	-0.0300		24	544.34		526+75.00

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SUPERELEVATION TABLE - I.R. 75 - CURVE NO 5

HAM-75-7.85

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SUPERELEVATION TABLE - I.R. 75 SB - CURVE 75-5

P.I. STA. 523+96.89	Dc = 1° 06' 00"

REMARKS	LEFT SIDE															INSIDE EDGE (PROFILE GRADE)		STATION
	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	OFFSET	
	542.28	-0.36	-0.0300		12	542.64	-0.72	-0.0300		24	543.36	-0.72	-0.0300		24	544.08		526+96.72
	542.24	-0.36	-0.0300		12	542.60	-0.72	-0.0300		24	543.32	-0.72	-0.0300		24	544.04		527+00.00
	541.94	-0.36	-0.0300		12	542.30	-0.72	-0.0300		24	543.02	-0.72	-0.0300		24	543.74		527+25.00
	541.64	-0.36	-0.0300		12	542.00	-0.72	-0.0300		24	542.72	-0.72	-0.0300		24	543.44		527+50.00
	541.29	-0.36	-0.0300		12	541.65	-0.72	-0.0300		24	542.38	-0.72	-0.0300		24	543.10		527+75.00
	540.95	-0.36	-0.0300		12	541.31	-0.72	-0.0300		24	542.03	-0.72	-0.0300		24	542.75		528+00.00
	540.60	-0.36	-0.0300		12	540.96	-0.72	-0.0300		24	541.68	-0.72	-0.0300		24	542.40		528+25.00
	540.25	-0.36	-0.0300		12	540.61	-0.72	-0.0300		24	541.33	-0.72	-0.0300		24	542.05		528+50.00
	539.90	-0.36	-0.0300		12	540.26	-0.72	-0.0300		24	540.99	-0.72	-0.0300		24	541.71		528+75.00
END FS	539.56	-0.36	-0.0300		12	539.92	-0.72	-0.0300		24	540.64	-0.72	-0.0300	1:222	24	541.36		529+00.00
	539.30	-0.36	-0.0300		12	539.66	-0.72	-0.0300		24	540.38	-0.63	-0.0264		24	541.01		529+25.00
	539.04	-0.36	-0.0300		12	539.40	-0.72	-0.0300		24	540.12	-0.55	-0.0227		24	540.66		529+50.00
	538.78	-0.36	-0.0300		12	539.14	-0.72	-0.0300		24	539.86	-0.46	-0.0191		24	540.32		529+75.00
	538.52	-0.36	-0.0300		12	538.88	-0.72	-0.0300		24	539.60	-0.37	-0.0154		24	539.97		530+00.00
						538.62	-0.72	-0.0300		24	539.34	-0.28	-0.0118		24	539.62		530+25.00
						538.36	-0.72	-0.0300	1:222	24	539.08	-0.19	-0.0081		24	539.27		530+50.00
						538.14	-0.68	-0.0283		24	538.82	-0.11	-0.0045		24	538.93		530+75.00
						537.92	-0.64	-0.0265		24	538.56	-0.02	-0.0008		24	538.58		531+00.00
PT						537.74	-0.60	-0.0250	1:222	24	538.34	0.06	0.0023		24	538.28		531+21.35
						537.69	-0.60	-0.0250		24	538.29	0.06	0.0026	1:222	24	538.23		531+25.00
						SEE SHEET 803					SEE SHEET 803							

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SUPERELEVATION TABLE - I.R. 75 - CURVE NO 5

HAM-75-7.85

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SUPERELEVATION TABLE - I.R. 75 NB - CURVE 75-5

P.I. STA. 523+96.89 | Dc = 1° 06' 00"

STATION	INSIDE EDGE (PROFILE GRADE)		RIGHT SIDE														REMARKS
	OFFSET	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	
512+78.83		541.82	24		0.0160	0.38	542.20	24	1:222	-0.0160	-0.38	541.82	17.40	1:222	-0.0160	-0.28	541.54	NC
513+00.00		541.94	24		0.0160	0.38	542.33	24		-0.0140	-0.34	541.99	16.98		-0.0140	-0.24	541.75	
513+25.00		542.09	24		0.0160	0.38	542.48	24		-0.0117	-0.28	542.20	16.49		-0.0117	-0.19	542.00	
513+50.00		542.24	24		0.0160	0.38	542.63	24		-0.0093	-0.22	542.40	16.00		-0.0093	-0.15	542.25	
513+75.00		542.39	24		0.0160	0.38	542.78	24		-0.0070	-0.17	542.61	16.00		-0.0070	-0.11	542.50	
514+00.00		542.54	24		0.0160	0.38	542.93	24		-0.0046	-0.11	542.82	15.02		-0.0046	-0.07	542.75	
514+25.00		542.69	24		0.0160	0.38	543.08	24		-0.0023	-0.05	543.02	14.53		-0.0023	-0.03	542.99	
514+49.50		542.84	24		0.0160	0.38	543.22	24		0.0000	0.00	543.22	14.05		0.0000	0.00	543.22	HF
514+50.00		542.84	24		0.0160	0.38	543.23	24		0.0001	0.00	543.23	14.04		0.0001	0.00	543.23	
514+75.00		542.99	24		0.0160	0.38	543.38	24		0.0024	0.06	543.43	13.55		0.0024	0.03	543.47	
515+00.00		543.14	24		0.0160	0.38	543.53	24		0.0047	0.11	543.64	13.06		0.0047	0.06	543.70	
515+25.00		543.29	24		0.0160	0.38	543.68	24		0.0071	0.17	543.85	12.57		0.0071	0.09	543.94	
515+50.00		543.44	24		0.0160	0.38	543.83	24		0.0094	0.23	544.05	12.08		0.0094	0.11	544.17	
515+75.00		543.59	24		0.0160	0.38	543.98	24		0.0118	0.28	544.26	12.08		0.0118	0.14	544.40	
516+00.00		543.74	24		0.0160	0.38	544.13	24		0.0141	0.34	544.47	12.00		0.0141	0.17	544.64	
516+20.17		543.86	24	1:222	0.0160	0.38	544.25	24		0.0160	0.38	544.63	12.00		0.0160	0.19	544.82	RC
516+25.00		543.89	24		0.0165	0.39	544.29	24		0.0165	0.40	544.68	12.00		0.0165	0.20	544.88	
516+50.00		544.04	24		0.0188	0.45	544.49	24		0.0188	0.45	544.95	12.00		0.0188	0.23	545.17	
516+62.83		544.12	24		0.0200	0.48	544.60	24		0.0200	0.48	545.08	12.00		0.0200	0.24	545.32	PC
516+75.00		544.19	24		0.0211	0.51	544.70	24		0.0212	0.51	545.21	12.00		0.0212	0.25	545.46	
517+00.00		544.34	24		0.0235	0.56	544.91	24		0.0235	0.56	545.47	12.00		0.0235	0.28	545.75	
517+25.00		544.49	24		0.0258	0.62	545.11	24		0.0259	0.62	545.73	12.00		0.0259	0.31	546.04	
517+50.00		544.64	24		0.0282	0.68	545.32	24		0.0282	0.68	546.00	12.00		0.0282	0.34	546.33	
517+69.50		544.76	24	1:222	0.0300	0.72	545.48	24	1:222	0.0300	0.72	546.20	12.00	1:222	0.0300	0.36	546.56	BEGIN FS
517+75.00		544.79	24		0.0300	0.72	545.51	24		0.0300	0.72	546.23	12.00		0.0300	0.36	546.59	
518+00.00		544.94	24		0.0300	0.72	545.66	24		0.0300	0.72	546.38	12.00		0.0300	0.36	546.74	
518+25.00		545.09	24		0.0300	0.72	545.81	24		0.0300	0.72	546.53	12.00		0.0300	0.36	546.89	
518+50.00		545.24	24		0.0300	0.72	545.96	24		0.0300	0.72	546.68	12.00		0.0300	0.36	547.04	
518+75.00		545.39	24		0.0300	0.72	546.11	24		0.0300	0.72	546.83	12.00		0.0300	0.36	547.19	
519+00.00		545.54	24		0.0300	0.72	546.26	24		0.0300	0.72	546.98	12.00		0.0300	0.36	547.34	
519+25.00		545.69	24		0.0300	0.72	546.41	24		0.0300	0.72	547.13	12.00		0.0300	0.36	547.49	
519+50.00		545.84	24		0.0300	0.72	546.56	24		0.0300	0.72	547.28	12.00		0.0300	0.36	547.64	
519+75.00		545.99	24		0.0300	0.72	546.71	24		0.0300	0.72	547.43	12.00		0.0300	0.36	547.79	
520+00.00		546.14	24		0.0300	0.72	546.86	24		0.0300	0.72	547.58	12.00		0.0300	0.36	547.94	
520+25.00		546.29	24		0.0300	0.72	547.01	24		0.0300	0.72	547.73	12.00		0.0300	0.36	548.09	
520+50.00		546.44	24		0.0300	0.72	547.16	24		0.0300	0.72	547.88	12.00		0.0300	0.36	548.24	
520+75.00		546.59	24		0.0300	0.72	547.31	24		0.0300	0.72	548.03	12.00		0.0300	0.36	548.39	
521+00.00		546.74	24		0.0300	0.72	547.46	24		0.0300	0.72	548.18	11.67		0.0300	0.35	548.53	
521+25.00		546.89	24		0.0300	0.72	547.61	24		0.0300	0.72	548.33	11.25		0.0300	0.34	548.67	
521+50.00		547.04	24		0.0300	0.72	547.76	24		0.0300	0.72	548.48	10.83		0.0300	0.33	548.81	
521+75.00		547.18	24		0.0300	0.72	547.90	24		0.0300	0.72	548.62	10.42		0.0300	0.31	548.93	
522+00.00		547.29	24		0.0300	0.72	548.01	24		0.0300	0.72	548.73	10.00		0.0300	0.30	549.03	
522+25.00		547.37	24		0.0300	0.72	548.09	24		0.0300	0.72	548.81	9.58		0.0300	0.29	549.10	
522+50.00		547.42	24		0.0300	0.72	548.14	24		0.0300	0.72	548.86	9.17		0.0300	0.28	549.13	
522+75.00		547.44	24		0.0300	0.72	548.16	24		0.0300	0.72	548.88	8.75		0.0300	0.26	549.15	
523+00.00		547.44	24		0.0300	0.72	548.16	24		0.0300	0.72	548.88	8.33		0.0300	0.25	549.13	
523+25.00		547.40	24		0.0300	0.72	548.12	24		0.0300	0.72	548.85	7.92		0.0300	0.24	549.08	
523+50.00		547.34	24		0.0300	0.72	548.06	24		0.0300	0.72	548.78	7.08		0.0300	0.21	549.00	
523+75.00		547.25	24		0.0300	0.72	547.97	24		0.0300	0.72	548.70	6.67		0.0300	0.20	548.90	
524+00.00		547.14	24		0.0300	0.72	547.86	24		0.0300	0.72	548.58	6.25		0.0300	0.19	548.77	
524+25.00		546.99	24		0.0300	0.72	547.71	24		0.0300	0.72	548.43	6.25		0.0300	0.19	548.62	
524+50.00		546.82	24		0.0300	0.72	547.54	24		0.0300	0.72	548.26	5.83		0.0300	0.18	548.43	
524+75.00		546.62	24		0.0300	0.72	547.34	24		0.0300	0.72	548.06	5.42		0.0300	0.16	548.22	
525+00.00		546.39	24		0.0300	0.72	547.11	24		0.0300	0.72	547.83	5.00		0.0300	0.15	547.98	
525+25.00		546.13	24		0.0300	0.72	546.85	24		0.0300	0.72	547.57	4.58		0.0300	0.14	547.71	
525+50.00		545.84	24		0.0300	0.72	546.56	24		0.0300	0.72	547.28	4.17		0.0300	0.13	547.41	
525+75.00		545.54	24		0.0300	0.72	546.26	24		0.0300	0.72	546.98	3.75		0.0300	0.11	547.10	
526+00.00		545.24	24		0.0300	0.72	545.96	24		0.0300	0.72	546.68	3.33		0.0300	0.10	546.78	
526+25.00		544.94	24		0.0300	0.72	545.66	24		0.0300	0.72	546.38	2.92		0.0300	0.09	546.47	
526+50.00		544.64	24		0.0300	0.72	545.36	24		0.0300	0.72	546.08	2.50		0.0300	0.08	546.16	
526+75.00		544.34	24		0.0300	0.72	545.06	24		0.0300	0.72	545.78	2.09		0.0300	0.06	545.85	

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SUPERELEVATION TABLE - I.R. 75 - CURVE NO 5

HAM-75-7.85

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SUPERELEVATION TABLE - I.R. 75 NB - CURVE 75-5

P.I. STA. 523+96.89 | Dc = 1° 06' 00"

STATION	INSIDE EDGE (PROFILE GRADE)		RIGHT SIDE															REMARKS
	OFFSET	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	
526+96.72		544.08	24	1:222	0.0300	0.72	544.80	24	1:222	0.0300	0.72	545.52	2.09	1:222	0.0300	0.06	545.59	
527+00.00		544.04	24		0.0294	0.71	544.75	24		0.0294	0.71	545.45	1.67		0.0294	0.05	545.50	
527+25.00		543.74	24		0.0247	0.59	544.34	24		0.0247	0.59	544.93	1.25		0.0247	0.03	544.96	
527+50.00		543.44	24		0.0200	0.48	543.92	24		0.0200	0.48	544.40	1.25		0.0200	0.03	544.43	
527+75.00		543.10	24		0.0194	0.47	543.56	24		0.0185	0.44	544.00	0.84		0.0185	0.02	544.02	
528+00.00		542.75	24		0.0188	0.45	543.20	24		0.0169	0.41	543.61	0.01	1:222	0.0169	0.00	543.61	
528+25.00		542.40	24		0.0182	0.44	542.84	12		0.0154	0.18	543.02						
528+50.00		542.05	24		0.0176	0.42	542.48	12		0.0138	0.17	542.64						
528+75.00		541.71	24		0.0170	0.41	542.11	12		0.0123	0.15	542.26						
529+00.00		541.36	24		0.0165	0.40	541.75	12		0.0107	0.13	541.88						
529+25.00		541.01	24		0.0159	0.38	541.39	12		0.0092	0.11	541.50						
529+50.00		540.66	24		0.0153	0.37	541.03	12		0.0076	0.09	541.12						
529+75.00		540.32	24		0.0147	0.35	540.67	12		0.0061	0.07	540.74						
530+00.00		539.97	24		0.0141	0.34	540.31	12		0.0045	0.05	540.36						
530+25.00		539.62	24		0.0135	0.33	539.95	12		0.0030	0.04	539.98						
530+50.00		539.27	24		0.0130	0.31	539.58	12		0.0014	0.02	539.60						
530+75.00		538.93	24		0.0124	0.30	539.22	12		-0.0001	0.00	539.22						
531+00.00		538.58	24		0.0118	0.28	538.86	12		-0.0017	-0.02	538.84						
531+21.35		538.28	24		0.0113	0.27	538.55	12	1:222	-0.0030	-0.04	538.52						PT
531+25.00		538.23	24		0.0110	0.00	0.00											
			SEE SHEET 803															

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SUPERELEVATION TABLE - I.R. 75 - CURVE NO 5

HAM-75-7.85

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SUPERELEVATION TABLE - RAMP K - CURVE NO 562-K2

PI STA 419+50.81 | Dc = 11° 45′ 00″

LEFT SIDE					BASELINE CONTROL		RIGHT SIDE					REMARKS
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
FOR STA 412+42.98 TO 416+00.00, SEE SUPERELEVATION TABLE - RAMP M - CURVE NO. 562-M2					412+42.98							
					412+50.00							
					412+75.00							
					413+00.00							
					413+25.00							
					413+50.00							
					413+75.00							
					414+00.00							
					414+25.00							
					414+50.00							
					414+67.98							
					414+75.00							
					415+00.00							
					415+25.00							
					415+50.00							
					415+75.00							
					416+00.00							
539.88		1.37	0.0570	24.00	416+13.15	538.51	5.50	-0.0570	-0.31		538.20	
540.47		1.37	0.0570	24.00	416+25.00	539.10	5.50	-0.0570	-0.31		538.79	
541.64		1.37	0.0570	24.00	416+50.00	540.27	5.50	-0.0570	-0.31		539.96	
542.71		1.37	0.0570	24.00	416+75.00	541.34	5.50	-0.0570	-0.31		541.03	
543.69		1.37	0.0570	24.00	417+00.00	542.32	5.50	-0.0570	-0.31		542.01	
544.56		1.37	0.0570	24.00	417+25.00	543.19	5.50	-0.0570	-0.31		542.88	
545.34		1.37	0.0570	24.00	417+50.00	543.97	5.50	-0.0570	-0.31		543.66	
546.02		1.37	0.0570	24.00	417+75.00	544.65	5.50	-0.0570	-0.31		544.34	
546.60		1.37	0.0570	24.00	418+00.00	545.23	5.50	-0.0570	-0.31		544.92	
547.09		1.37	0.0570	24.00	418+25.00	545.72	5.50	-0.0570	-0.31		545.41	
547.47		1.37	0.0570	24.00	418+50.00	546.10	5.50	-0.0570	-0.31		545.79	
547.76		1.37	0.0570	24.00	418+75.00	546.39	5.50	-0.0570	-0.31		546.08	
547.95		1.37	0.0570	24.00	419+00.00	546.58	5.50	-0.0570	-0.31		546.27	
548.04		1.37	0.0570	24.00	419+25.00	546.67	5.50	-0.0570	-0.31		546.36	
548.04		1.37	0.0570	24.00	419+50.00	546.67	5.50	-0.0570	-0.31		546.36	
547.94		1.37	0.0570	24.00	419+75.00	546.57	5.50	-0.0570	-0.31		546.26	
547.73		1.37	0.0570	24.00	420+00.00	546.36	5.50	-0.0570	-0.31		546.05	
547.44		1.37	0.0570	24.00	420+25.00	546.07	5.50	-0.0570	-0.31		545.76	
547.13		1.37	0.0570	24.00	420+50.00	545.76	5.50	-0.0570	-0.31		545.45	
546.82		1.37	0.0570	24.00	420+75.00	545.45	5.50	-0.0570	-0.31		545.14	
546.51		1.37	0.0570	24.00	421+00.00	545.14	5.50	-0.0570	-0.31		544.83	
546.44	225:1	1.37	0.0570	24.00	421+05.87	545.07	5.50	-0.0570	-0.31	983:1	544.76	CS / FS
546.11	↑	1.28	0.0535	24.00	421+25.00	544.83	4.97	-0.0535	-0.27	1088:1	544.56	
545.69	↕	1.17	0.0488	24.00	421+50.00	544.52	4.29	-0.0488	-0.21	1260:1	544.31	
545.32	↕	1.06	0.0442	24.00	421+75.00	544.26	3.60	-0.0442	-0.16	1502:1	544.10	
544.99	↕	0.95	0.0396	24.00	422+00.00	544.04	2.91	-0.0396	-0.12	1858:1	543.92	
544.72	↕	0.84	0.0350	24.00	422+25.00	543.88	2.22	-0.0350	-0.08	2435:1	543.80	
544.49	↕	0.73	0.0303	24.00	422+50.00	543.76	1.54	-0.0303	-0.05	3510:1	543.71	
544.31	↕	0.62	0.0257	24.00	422+75.00	543.69	0.85	-0.0257	-0.02	6359:1	543.67	
544.18	↕	0.51	0.0211	24.00	423+00.00	543.67	0.16	-0.0211	0.00	33784:1	543.67	
544.16	225:1	0.48	0.0200	24.00	423+05.87	543.68	0.00	-0.0200	0.00	N/A	543.68	SC / NC

SUPERELEVATION TABLE - RAMP N - CURVE NO 562-N1

PI STA 414+98.05 | Dc = 6° 45′ 24″

LEFT SIDE					BASELINE CONTROL		RIGHT SIDE					REMARKS
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
529.81		0.96	0.0600	16.00	412+64.37	528.85						FS
529.74		0.96	0.0600	16.00	412+75.00	528.78						
529.56		0.96	0.0600	16.00	413+00.00	528.60						
529.53		0.96	0.0600	16.00	413+03.58	528.57						PC
529.34		0.96	0.0600	16.00	413+25.00	528.38						
529.09		0.96	0.0600	16.00	413+50.00	528.13						
528.85		0.96	0.0600	16.00	413+75.00	527.89						
528.60		0.96	0.0600	16.00	414+00.00	527.64						
528.38		0.96	0.0600	16.00	414+25.00	527.42						
528.21		0.96	0.0600	16.00	414+50.00	527.25						
528.10		0.96	0.0600	16.00	414+75.00	527.14						
528.05		0.96	0.0600	16.00	415+00.00	527.09						
528.06		0.96	0.0600	16.00	415+25.00	527.10						
528.12		0.96	0.0600	16.00	415+50.00	527.16						
528.24		0.96	0.0600	16.00	415+75.00	527.28						
528.42		0.96	0.0600	16.00	416+00.00	527.46						
528.66		0.96	0.0600	16.00	416+25.00	527.70						
528.68	185:1	0.96	0.0600	16.00	416+26.70	527.72						FS
528.83	↑	0.83	0.0521	16.00	416+50.00	528.00						
529.05	↕	0.70	0.0437	16.00	416+75.00	528.35						
529.17	↕	0.64	0.0400	16.00	416+85.90	528.53						PT
529.32	↕	0.56	0.0352	16.00	417+00.00	528.76						
529.64	↕	0.43	0.0268	16.00	417+25.00	529.21						
529.90	185:1	0.32	0.0200	16.00	417+45.10	529.58						

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SUPERELEVATION TABLE - RAMP K AND RAMP N

HAM-75-7.85

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SUPERELEVATION TABLE - RAMP J - CURVE NO 562-J1

PI STA 420+13.05 | Dc = 10° 15' 00"

LEFT EOP					LEFT BREAKLINE #2 (GORE)					LEFT BREAKLINE #1					BASELINE CONTROL		RIGHT SIDE					REMARKS
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
530.07		-0.320	-0.020	16.00	530.39		-0.162	-0.020	8.10	530.55	167:1	-0.38	-0.0160	24.00	409+84.33	530.94	0.00	0.0160	0.00	N/A	530.94	TS / NC
530.45		-0.320	-0.020	16.00	530.77		-0.168	-0.020	8.41	530.93		-0.29	-0.0121	24.00	410+00.00	531.22	0.25	0.0121	0.00	16000:1	531.23	
531.03		-0.320	-0.020	16.01	531.35		-0.180	-0.020	8.98	531.53		-0.14	-0.0058	24.00	410+25.00	531.67	0.64	0.0058	0.00	6250:1	531.68	
531.55		-0.320	-0.020	16.01	531.87		-0.194	-0.020	9.70	532.07		0.01	0.0004	24.00	410+50.00	532.06	1.02	-0.0004	0.00	3922:1	532.06	
531.99		-0.320	-0.020	16.02	532.31		-0.214	-0.020	10.68	532.52		0.16	0.0067	24.00	410+75.00	532.36	1.39	-0.0067	-0.01	2878:1	532.35	
532.34		-0.321	-0.020	16.03	532.66		-0.240	-0.020	12.01	532.91		0.31	0.0129	24.00	411+00.00	532.60	1.76	-0.0129	-0.02	2273:1	532.57	
532.61		-0.321	-0.020	16.05	532.94		-0.276	-0.020	13.79	533.21		0.46	0.0192	24.00	411+25.00	532.75	2.13	-0.0192	-0.04	1878:1	532.71	
532.80		-0.322	-0.020	16.08	533.12		-0.323	-0.020	16.13	533.44		0.61	0.0254	24.00	411+50.00	532.83	2.50	-0.0254	-0.06	1600:1	532.77	
532.89		-0.323	-0.020	16.13	533.21		-0.383	-0.020	19.14	533.59		0.76	0.0317	24.00	411+75.00	532.83	2.87	-0.0317	-0.09	1394:1	532.74	
										533.67		0.91	0.0379	24.00	412+00.00	532.76	3.24	-0.0379	-0.12	1235:1	532.64	
										533.67		1.06	0.0442	24.00	412+25.00	532.61	3.62	-0.0442	-0.16	1105:1	532.45	
										533.60		1.21	0.0504	24.00	412+50.00	532.39	3.99	-0.0504	-0.20	1003:1	532.19	
										533.45		1.36	0.0567	24.00	412+75.00	532.09	4.36	-0.0567	-0.25	917:1	531.84	
										533.37	167:1	1.42	0.0590	24.00	412+84.33	531.96	4.50	-0.0590	-0.27	889:1	531.69	SC / FS
										533.13		1.42	0.0590	24.00	413+00.00	531.71	4.50	-0.0590	-0.27		531.45	
										532.68		1.42	0.0590	24.00	413+25.00	531.26	4.50	-0.0590	-0.27		530.99	
										532.15		1.42	0.0590	24.00	413+50.00	530.73	4.50	-0.0590	-0.27		530.47	
										531.54		1.42	0.0590	24.00	413+75.00	530.13	4.50	-0.0590	-0.27		529.86	
										530.86		1.42	0.0590	24.00	414+00.00	529.45	4.50	-0.0590	-0.27		529.18	
										530.11		1.42	0.0590	24.00	414+25.00	528.69	4.50	-0.0590	-0.27		528.42	
										529.27		1.42	0.0590	24.00	414+50.00	527.86	4.50	-0.0590	-0.27		527.59	
										528.37		1.42	0.0590	24.00	414+75.00	526.95	4.50	-0.0590	-0.27		526.68	
										527.38		1.42	0.0590	24.00	415+00.00	525.96	4.50	-0.0590	-0.27		525.69	
										526.33		1.42	0.0590	24.00	415+25.00	524.91	4.50	-0.0590	-0.27		524.65	
										525.27		1.42	0.0590	24.00	415+50.00	523.85	4.50	-0.0590	-0.27		523.58	
										524.21		1.42	0.0590	24.00	415+75.00	522.79	4.50	-0.0590	-0.27		522.52	
										523.15		1.42	0.0590	24.00	416+00.00	521.73	4.50	-0.0590	-0.27		521.46	
										522.08		1.42	0.0590	24.00	416+25.00	520.66	4.50	-0.0590	-0.27		520.39	
										521.02		1.42	0.0590	24.00	416+50.00	519.60	4.50	-0.0590	-0.27		519.33	
										519.96		1.42	0.0590	24.00	416+75.00	518.54	4.50	-0.0590	-0.27		518.27	
										518.97		1.42	0.0590	24.00	417+00.00	517.55	4.50	-0.0590	-0.27		517.28	
										518.07		1.42	0.0590	24.00	417+25.00	516.65	4.50	-0.0590	-0.27		516.38	
										517.28		1.42	0.0590	24.00	417+50.00	515.86	4.50	-0.0590	-0.27		515.59	
										516.57		1.42	0.0590	24.00	417+75.00	515.15	4.50	-0.0590	-0.27		514.88	
										515.97		1.42	0.0590	24.00	418+00.00	514.55	4.50	-0.0590	-0.27		514.28	
										515.46		1.42	0.0590	24.00	418+25.00	514.04	4.50	-0.0590	-0.27		513.77	
										515.04		1.42	0.0590	24.00	418+50.00	513.62	4.50	-0.0590	-0.27		513.35	
										514.72		1.42	0.0590	24.00	418+75.00	513.30	4.50	-0.0590	-0.27		513.03	
										514.50		1.42	0.0590	24.00	419+00.00	513.08	4.50	-0.0590	-0.27		512.81	
										514.37		1.42	0.0590	24.00	419+25.00	512.95	4.50	-0.0590	-0.27		512.68	
										514.34		1.42	0.0590	24.00	419+50.00	512.92	4.50	-0.0590	-0.27		512.65	
										514.41		1.42	0.0590	24.00	419+75.00	512.99	4.50	-0.0590	-0.27		512.72	
										514.57		1.42	0.0590	24.00	420+00.00	513.15	4.50	-0.0590	-0.27		512.88	
										514.83		1.42	0.0590	24.00	420+25.00	513.41	4.50	-0.0590	-0.27		513.14	
										515.19		1.42	0.0590	24.00	420+50.00	513.77	4.50	-0.0590	-0.27		513.50	
										515.64		1.42	0.0590	24.00	420+75.00	514.22	4.50	-0.0590	-0.27		513.95	
										516.19		1.42	0.0590	24.00	421+00.00	514.77	4.50	-0.0590	-0.27		514.50	
										516.83		1.42	0.0590	24.00	421+25.00	515.41	4.50	-0.0590	-0.27		515.14	
										517.28	218:1	1.42	0.0590	24.00	421+40.56	515.86	4.50	-0.0590	-0.27	1163:1	515.59	CS / FS
										517.52		1.37	0.0572	24.00	421+50.00	516.15	4.31	-0.0572	-0.25	1214:1	515.90	
										518.24		1.26	0.0524	24.00	421+75.00	516.98	3.82	-0.0524	-0.20	1370:1	516.78	
										519.05		1.14	0.0476	24.00	422+00.00	517.91	3.32	-0.0476	-0.16	1576:1	517.75	
										519.87		1.03	0.0429	24.00	422+25.00	518.84	2.82	-0.0429	-0.12	1855:1	518.72	
										520.69		0.91	0.0381	24.00	422+50.00	519.78	2.32	-0.0381	-0.09	2255:1	519.69	
										521.52		0.80	0.0333	24.00	422+75.00	520.72	1.83	-0.0333	-0.06	2859:1	520.66	
										522.34		0.68	0.0285	24.00	423+00.00	521.66	1.33	-0.0285	-0.04	3934:1	521.62	
										523.16		0.57	0.0237	24.00	423+25.00	522.59	0.83	-0.0237	-0.02	6304:1	522.57	
										523.99		0.46	0.0190	24.00	423+50.00	523.53	0.33	-0.0190	-0.01	15856:1	523.52	
										524.49	218:1	0.38	0.0160	24.00	423+65.55	524.11	0.00	-0.0160	0.00	N/A	524.11	ST / NC
										524.80	175:1	0.33	0.0138	24.00	423+75.00	524.47						
										525.60		0.19	0.0078	24.00	424+00.00	525.41						
										526.38		0.04	0.0019	24.00	424+25.00	526.34						
										527.18		-0.10	-0.0041	24.00	424+50.00	527.28						
										527.98		-0.24	-0.0100	24.00	424+75.00	528.22						
										528.78	175:1	-0.38	-0.0160	24.00	425+00.00	529.16						RC

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SUPERELEVATION TABLE - RAMP J

HAM-75-7.85

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SUPERELEVATION TABLE - RAMP M - CURVE NO 562-M1

PI STA 418+44.83 | Dc = 11° 44′ 43″

LEFT SIDE					BASELINE CONTROL	
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE
536.88	273:1	0.26	0.0160	16.00	412+39.90	536.62
537.38	↕	0.29	0.0183	16.00	412+50.00	537.09
538.66		0.38	0.0240	16.00	412+75.00	538.28
540.00		0.48	0.0297	16.00	413+00.00	539.52
541.37		0.57	0.0355	16.00	413+25.00	540.80
542.80		0.66	0.0412	16.00	413+50.00	542.14
544.27		0.75	0.0469	16.00	413+75.00	543.52
545.75		0.84	0.0526	16.00	414+00.00	544.91
546.64	273:1	0.90	0.0560	16.00	414+14.90	545.74
547.20		0.90	0.0560	16.00	414+25.00	546.30
548.60		0.90	0.0560	16.00	414+50.00	547.70
549.99		0.90	0.0560	16.00	414+75.00	549.09
551.38		0.90	0.0560	16.00	415+00.00	550.48
552.78		0.90	0.0560	16.00	415+25.00	551.88
554.17		0.90	0.0560	16.00	415+50.00	553.27
555.57		0.90	0.0560	16.00	415+75.00	554.67
556.96		0.90	0.0560	16.00	416+00.00	556.06
558.35		0.90	0.0560	16.00	416+25.00	557.45
559.65		0.90	0.0560	16.00	416+50.00	558.75
560.81		0.90	0.0560	16.00	416+75.00	559.91
561.83		0.90	0.0560	16.00	417+00.00	560.93
562.70		0.90	0.0560	16.00	417+25.00	561.80
563.44		0.90	0.0560	16.00	417+50.00	562.54
564.03		0.90	0.0560	16.00	417+75.00	563.13
564.48		0.90	0.0560	16.00	418+00.00	563.58
564.79		0.90	0.0560	16.00	418+25.00	563.89
564.95		0.90	0.0560	16.00	418+50.00	564.05
564.98		0.90	0.0560	16.00	418+75.00	564.08
564.86		0.90	0.0560	16.00	419+00.00	563.96
564.60		0.90	0.0560	16.00	419+25.00	563.70
564.20		0.90	0.0560	16.00	419+50.00	563.30
563.66		0.90	0.0560	16.00	419+75.00	562.76
562.97		0.90	0.0560	16.00	420+00.00	562.07
562.15		0.90	0.0560	16.00	420+25.00	561.25
561.87	216:1	0.90	0.0560	16.00	420+32.40	560.97
561.09	↕	0.81	0.0509	16.00	420+50.00	560.28
559.87		0.70	0.0437	16.00	420+75.00	559.17
558.51		0.58	0.0364	16.00	421+00.00	557.93
557.14		0.47	0.0292	16.00	421+25.00	556.67
555.76		0.35	0.0219	16.00	421+50.00	555.41
554.38		0.23	0.0147	16.00	421+75.00	554.15
553.01		0.12	0.0074	16.00	422+00.00	552.89
552.60	216:1	0.08	0.0053	16.00	422+07.38	552.52

SUPERELEVATION TABLE - RAMP M - CURVE NO 562-M2

PI STA 425+16.31 | Dc = 10° 00′ 00″

LEFT EOP							LEFT BREAKLINE #2 (GORE)						LEFT BREAKLINE #1					BASELINE CONTROL		
REMARKS	EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	REMARKS	EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	REMARKS
												552.60		0.08	0.0053	16.00	422+07.38	552.52	ST
												551.60	216:1	0.00	0.0000	16.00	422+25.65	551.60	RC
												551.63	↕	0.00	0.0002	16.00	422+25.00	551.63	
												550.26		-0.11	-0.0071	16.00	422+50.00	550.37	
												550.03		-0.13	-0.0083	16.00	422+54.25	550.16	TS
												548.88		-0.23	-0.0143	16.00	422+75.00	549.11	
												547.51		-0.34	-0.0215	16.00	423+00.00	547.85	
												547.40		-0.35	-0.0221	16.00	423+02.00	547.75	NC
												546.13		-0.46	-0.0288	16.00	423+25.00	546.59	
												544.75		-0.58	-0.0360	16.00	423+50.00	545.33	
												543.38		-0.69	-0.0433	16.00	423+75.00	544.07	
												542.00		-0.81	-0.0505	16.00	424+00.00	542.81	
							540.15	144:1	-1.37	-0.0570	24.00	541.52		-0.85	-0.0531	16.00	424+08.79	542.37	
FS	538.32	116:1	-1.69	-0.0570	29.67		540.01	145:1	-1.36	-0.0573	23.74	541.37		-0.86	-0.0539	16.00	424+11.56	542.23	
	537.62	↕	-1.69	-0.0570	29.66		539.31	154:1	-1.32	-0.0586	22.45	540.63		-0.92	-0.0578	16.00	424+25.00	541.55	
	537.40		-1.69	-0.0570	29.66	FS	539.10	156:1	-1.30	-0.0590	22.05	540.40	216:1	-0.94	-0.0590	16.00	424+29.25	541.34	SC/FS
	537.28		-1.69	-0.0570	29.66		538.97	158:1	-1.29	-0.0590	21.80	540.26		-0.94	-0.0590	16.00	424+31.94	541.20	
	536.47		-1.69	-0.0570	29.66		538.16	171:1	-1.19	-0.0590	20.12	539.35		-0.94	-0.0590	16.00	424+50.00	540.29	
	535.34		-1.69	-0.0570	29.65		537.03	193:1	-1.05	-0.0590	17.84	538.09		-0.94	-0.0590	16.00	424+75.00	539.03	
	534.22		-1.69	-0.0570	29.64		535.91	221:1	-0.92	-0.0590	15.61	536.83		-0.94	-0.0590	16.00	425+00.00	537.77	
	533.08		-1.69	-0.0570	29.63		534.77	257:1	-0.79	-0.0590	13.44	535.57		-0.94	-0.0590	16.00	425+25.00	536.51	
	531.95		-1.69	-0.0570	29.62		533.64	305:1	-0.67	-0.0590	11.32	534.31		-0.94	-0.0590	16.00	425+50.00	535.25	
FS	531.02		-1.69	-0.0570	29.6		532.70	361:1	-0.56	-0.0590	9.55	533.27		-0.94	-0.0590	16.00	425+71.74	534.21	
	530.91	117:1	-1.66	-0.0564	29.51		532.57	371:1	-0.55	-0.0590	9.31	533.12		-0.94	-0.0590	16.00	425+75.00	534.06	
	530.34	119:1	-1.55	-0.0534	29.08	FS	531.90	432:1	-0.47	-0.0590	7.99	532.37	307:1	-0.94	-0.0590	16.00	425+92.03	533.31	CS/FS
	530.14	119:1	-1.50	-0.0520	28.9		531.64	473:1	-0.42	-0.0574	7.30	532.06	↕	-0.92	-0.0574	16.00	426+00.00	532.98	
	529.53	121:1	-1.35	-0.0476	28.42		530.88	665:1	-0.27	-0.0523	5.19	531.16		-0.84	-0.0523	16.00	426+25.00	531.99	
	529.00	123:1	-1.21	-0.0432	27.94		530.21	1082:1	-0.15	-0.0472	3.19	530.36		-0.76	-0.0472	16.00	426+50.00	531.11	
	528.54	126:1	-1.06	-0.0388	27.35		529.60	2696:1	-0.05	-0.0422	1.28	529.66		-0.67	-0.0421	16.00	426+75.00	530.33	
	528.27	129:1	-0.96	-0.0357	26.79							529.22	307:1	-0.62	-0.0385	16.00	426+92.80	529.84	
	528.16	132:1	-0.90	-0.0344	26.22							529.07	310:1	-0.59	-0.0370	15.88	427+00.00	529.65	
	527.86	140:1	-0.74	-0.0300	24.59							528.59	324:1	-0.49	-0.0320	15.20	427+25.00	529.08	
	527.62	148:1	-0.60	-0.0256	23.39							528.22	345:1	-0.38	-0.0269	14.26	427+50.00	528.61	
	527.51	152:1	-0.51	-0.0226	22.74							528.03	363:1	-0.32	-0.0234	13.55	427+67.01	528.34	ST
	527.47	153:1	-0.48	-0.0212	22.48							527.95	372:1	-0.29	-0.0218	13.21	427+75.00	528.24	
	527.40	159:1	-0.37	-0.0168	21.73							527.76	405:1	-0.20	-0.0167	12.15	428+00.00	527.97	
	527.40	160:1	-0.35	-0.0162	21.63							527.75	410:1	-0.19	-0.0160	12.00	428+03.50	527.94	NC
NC	527.39	160:1	-0.34	-0.0160	21.56							527.74	410:1	-0.19	-0.0160	12.00	428+04.50	527.93	

CALCULATED SEA
CHECKED DLR

SUPERELEVATION TABLE - RAMP M

HAM-75-7.85

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2017

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SUPERELEVATION TABLE - RAMP A - CURVE NO 75-A1

P.I. STA. 506+00.96	Dc = 1° 45' 00"

REMARKS	LEFT SIDE					INSIDE EDGE (PROFILE GRADE)		STATION
	ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	ELEVATION	OFFSET	
N.C.	546.00	0.41	0.017		24.00	545.59		501+25.97
	544.86	0.41	0.017		24.00	544.45		501+50.00
	543.76	0.41	0.017		24.00	543.35		501+75.00
	542.73	0.41	0.017		24.00	542.32		502+00.00
	541.78	0.41	0.017		24.00	541.38		502+25.00
	540.92	0.41	0.017		24.00	540.51		502+50.00
	540.13	0.41	0.017		24.00	539.72		502+75.00
R.C.	539.73	0.41	0.017	1:200	24.00	539.32		502+88.85
	539.48	0.46	0.019	↕	24.00	539.02		503+00.00
P.C.	539.48	0.46	0.019		24.00	539.01		503+00.12
	538.97	0.58	0.025		23.67	538.39		503+25.00
BEGIN F.S.	538.60	0.68	0.029	1:200	23.38	537.92		503+46.45
	538.52	0.68	0.029		23.33	537.84		503+50.00
	538.04	0.67	0.029		23.00	537.38		503+75.00
	537.65	0.66	0.029		22.67	536.99		504+00.00
	537.33	0.65	0.029		22.34	536.68		504+25.00
	537.09	0.64	0.029		22.00	536.45		504+50.00
	536.93	0.63	0.029		21.67	536.30		504+75.00
	536.85	0.62	0.029		21.34	536.23		505+00.00
	536.86	0.61	0.029		21.00	536.25		505+25.00
	536.94	0.60	0.029		20.67	536.34		505+50.00
	537.10	0.59	0.029		20.34	536.51		505+75.00
	537.27	0.58	0.029		20.00	536.69		506+00.00
	537.47	0.57	0.029		19.67	536.90		506+25.00
	537.67	0.56	0.029		19.33	537.11		506+50.00
	537.84	0.55	0.029		19.00	537.29		506+75.00
	538.03	0.54	0.029		18.67	537.49		507+00.00
	538.21	0.53	0.029		18.33	537.68		507+25.00
	538.39	0.52	0.029		18.00	537.87		507+50.00
	538.56	0.51	0.029		17.67	538.05		507+75.00
	538.73	0.50	0.029		17.33	538.23		508+00.00
	538.89	0.49	0.029		17.00	538.40		508+25.00
	539.05	0.48	0.029		16.67	538.57		508+50.00
END F.S.	539.07	0.48	0.029	1:200	16.62	538.59		508+53.79
	539.20	0.40	0.025	↕	16.33	538.80		508+75.00
N.C.	539.34	0.32	0.020		16.04	539.02		508+96.92
	539.35	0.31	0.019		16.00	539.04		509+00.00
I.R. 75 M.L.	539.35	0.31	0.019	1:200	16.00	539.04		509+00.12

SUPERELEVATION TABLE - RAMP C - CURVE NO 75-C1

P.I. STA. 494+97.83	Dc = 3° 30' 00"

STATION	INSIDE EDGE (PROFILE GRADE)		RIGHT SIDE										REMARKS
	OFFSET	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	
490+49.24		534.12	24.00		0.0160	0.38	534.50						N.C.
490+50.00		534.11	24.00		0.0170	0.41	534.52						
490+75.00		533.82	24.00		0.0160	0.38	534.20						
491+00.00		533.52	24.00		0.0160	0.38	533.90						
491+25.00		533.24	24.00		0.0160	0.38	533.62						
491+37.46		533.12	24.00	1:172	0.0160	0.38	533.50						R.C.
491+50.00		533.01	24.00	↕	0.0205	0.49	533.50						
491+61.35		532.94	24.00		0.0247	0.59	533.53						P.C.
491+75.00		532.87	24.00		0.0296	0.71	533.58						
491+95.35		532.81	24.00	1:172	0.0370	0.89	533.70						BEGIN F.S.
492+00.00		532.81	24.00		0.0370	0.89	533.70						
492+25.00		532.82	24.00		0.0370	0.89	533.71						
492+50.00		532.92	24.00		0.0370	0.89	533.81						
492+75.00		533.09	24.00		0.0370	0.89	533.98						
493+00.00		533.34	24.00		0.0370	0.89	534.23						
493+25.00		533.67	24.00		0.0370	0.89	534.56						
493+50.00		534.08	24.00		0.0370	0.89	534.97						
493+75.00		534.56	24.00		0.0370	0.89	535.45						
494+00.00		535.13	24.00		0.0370	0.89	536.02						
494+25.00		535.77	24.00		0.0370	0.89	536.66						
494+50.00		536.50	24.00		0.0370	0.89	537.39						
494+75.00		537.30	24.00		0.0370	0.89	538.19						
495+00.00		538.18	24.00		0.0370	0.89	539.07						
495+25.00		539.14	24.00		0.0370	0.89	540.03						
495+50.00		540.18	24.00		0.0370	0.89	541.07						
495+75.00		541.29	24.00		0.0370	0.89	542.18						
496+00.00		542.41	24.00		0.0370	0.89	543.30						
496+25.00		543.54	24.00		0.0370	0.89	544.43						
496+50.00		544.66	24.00		0.0370	0.89	545.55						
496+75.00		545.79	24.00		0.0370	0.89	546.68						
497+00.00		546.91	24.00		0.0370	0.89	547.80						
497+25.00		548.04	24.00		0.0370	0.89	548.93						
497+50.00		549.10	24.00		0.0370	0.89	549.99						
497+75.00		549.99	24.00		0.0370	0.89	550.88						
497+91.06		550.48	24.00	1:172	0.0370	0.89	551.37	2.38		0.0370	0.09	551.40	CS END F.S.
498+00.00		550.71	22.37	↕	0.0350	0.78	551.49	3.51		0.0349	0.12	551.53	
498+25.00		551.26	22.37		0.0295	0.66	551.92	9.20		0.0289	0.27	551.95	
498+25.06		551.26	22.37		0.0295	0.66	551.92	9.20		0.0288	0.27	551.94	P.T.
498+48.95		551.61	22.37		0.0242	0.54	552.15	18.14		0.0231	0.42	552.18	
498+50.00		551.63	22.37		0.0240	0.54	552.17	18.61		0.0229	0.43	552.19	
498+64.48		551.76	22.37	1:172	0.0208	0.47	552.23	23.77		0.0194	0.46	552.24	EX PAVMT

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CALCULATED CT | CHECKED SSK

SUPERELEVATION TABLE - RAMP A & C

HAM-75-7.85

786
2017

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SUPERELEVATION TABLE - RAMP D - CURVE NO 75-D2

P.I. STA. 476+07.13 | Dc = 2° 00' 00"

REMARKS	LEFT SIDE ELEVATION	LEFT SIDE ELEVATION CORRECTION	LEFT SIDE CROSS SLOPE	LEFT SIDE TRANSITION RATE	LEFT SIDE WIDTH	INSIDE EDGE (PROFILE GRADE) ELEVATION	INSIDE EDGE (PROFILE GRADE) OFFSET	STATION
RAMP D GORE	559.55	0.85	0.0530	1:185	16.00	558.70		475+01.01
	558.67	0.75	0.0468	↕	16.00	557.92		475+25.00
	557.74	0.64	0.0403	↕	16.00	557.10		475+50.00
	556.82	0.54	0.0338	↕	16.00	556.28		475+75.00
BEGIN F.S.	556.28	0.48	0.0300	1:185	16.00	555.80		475+89.79
	555.95	0.48	0.0300		16.00	555.47		476+00.00
	555.16	0.48	0.0300		16.00	554.68		476+25.00
	554.38	0.48	0.0300		16.00	553.90		476+50.00
	553.63	0.48	0.0300		16.00	553.15		476+75.00
	552.90	0.48	0.0300		16.00	552.42		477+00.00
	552.20	0.48	0.0300		16.00	551.72		477+25.00
	551.51	0.48	0.0300		16.00	551.03		477+50.00
	550.85	0.48	0.0300		16.00	550.37		477+75.00
	550.20	0.48	0.0300		16.00	549.72		478+00.00
	549.58	0.48	0.0300		16.00	549.10		478+25.00
	548.99	0.48	0.0300		16.00	548.51		478+50.00
	548.41	0.48	0.0300		16.00	547.93		478+75.00
	547.86	0.48	0.0300		16.00	547.38		479+00.00
	547.65	0.48	0.0300		16.00	547.17		479+09.60
	547.33	0.48	0.0300		16.00	546.85		479+25.00
	546.82	0.48	0.0300		16.00	546.34		479+50.00
END F.S.	546.74	0.48	0.0300	1:185	16.00	546.26		479+53.79
	546.22	0.37	0.0228	↕	16.00	545.85		479+75.00
PT	546.01	0.32	0.0200	↕	16.00	545.69		479+83.46
R.C.	545.73	0.26	0.0160	1:185	16.00	545.47		479+95.32
	545.64	0.26	0.0160		16.00	545.38		480+00.00
	545.20	0.26	0.0160		16.00	544.94		480+25.00
N.C.	544.89	0.26	0.0160		16.00	544.64		480+42.79

SUPERELEVATION TABLE - RAMP D - CURVE NO 75-D3

P.I. STA. 492+32.30 | Dc = 14° 30' 09"

REMARKS	LEFT SIDE ELEVATION	LEFT SIDE ELEVATION CORRECTION	LEFT SIDE CROSS SLOPE	LEFT SIDE TRANSITION RATE	LEFT SIDE WIDTH	INSIDE EDGE (PROFILE GRADE) ELEVATION	INSIDE EDGE (PROFILE GRADE) OFFSET	STATION	RIGHT SIDE WIDTH	RIGHT SIDE TRANSITION RATE	RIGHT SIDE CROSS SLOPE	RIGHT SIDE ELEVATION CORRECTION	RIGHT SIDE ELEVATION	REMARKS
N.C.	536.91	0.26	0.0160		16.00	536.65		489+45.06						N.C.
	536.92	0.26	0.0160		16.00	536.66		489+50.00						
	537.01	0.26	0.0160		16.00	536.76		489+75.00						
	537.20	0.26	0.0160		16.00	536.95		490+00.00						
R.C.	537.45	0.26	0.0160	1:152	16.00	537.19		490+22.34						R.C.
	537.50	0.27	0.0171	↕	16.00	537.23		490+25.00						
	538.03	0.44	0.0275	↕	16.00	537.59		490+50.00						
P.C.	538.47	0.57	0.0353	↕	16.00	537.90		490+69.03						P.C.
	538.66	0.60	0.0378	↕	16.00	538.05		490+75.00						
	539.37	0.77	0.0482	↕	16.00	538.60		491+00.00						
BEGIN F.S.	539.74	0.85	0.0530	1:152	16.00	538.89		491+11.70						BEGIN F.S.
	540.09	0.85	0.0530		16.00	539.24		491+25.00						
	540.82	0.85	0.0530		16.00	539.97		491+50.00						
	541.64	0.85	0.0530		16.00	540.79		491+75.00						
	542.55	0.85	0.0530		16.00	541.70		492+00.00						
	542.61	0.85	0.0530		16.00	541.76		492+01.36	0.00		-0.0530	0.00	541.76	
	543.65	0.94	0.0530		17.80	542.71		492+25.00	0.07		-0.0530	0.00	542.70	
	544.96	1.16	0.0530		21.89	543.80		492+50.00	0.31		-0.0530	-0.15	543.65	
	546.21	1.23	0.0530		23.28	544.98		492+75.00	0.72		-0.0530	-0.32	544.66	
	547.43	1.20	0.0530		22.72	546.22		493+00.00	1.29		-0.0530	-0.50	545.72	
END F.S.	547.79	1.19	0.0530	1:152	22.52	546.60		493+07.57	1.49	1:152	-0.0530	-0.55	546.05	END F.S.
	548.47	1.01	0.0458	↕	22.00	547.47		493+25.00	2.02	↕	-0.0458	-0.59	546.88	
	549.58	0.87	0.0355	↕	24.58	548.71		493+50.00	7.94	↕	-0.0355	-0.55	548.17	
	550.72	0.76	0.0252	↕	30.20	549.96		493+75.00	14.60	↕	-0.0252	-0.39	549.57	
P.T.	550.88	0.74	0.0237	↕	31.18	550.14		493+78.68	15.43	↕	-0.0237	-0.39	549.75	P.T.
EX PAVT	551.05	0.71	0.0220	1:152	32.20	550.34		493+82.72	16.36	1:152	-0.0220	-0.36	549.98	EX PAVT

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CALCULATED CT | CHECKED SSK

SUPERELEVATION TABLE - RAMP D

HAM-75-7.85

787
2017

SUPERELEVATION TABLE - RAMP Q - CURVE NO 562-Q1

PI STA 30+76.85 | Dc = 2° 14′ 49″

LEFT SIDE					BASELINE CONTROL		RIGHT SIDE					REMARKS
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
567.36	581:1	0.36	0.0300	12.00	28+09.58	567.00						PC
567.95		0.39	0.0322	12.05	28+25.00	567.56						
568.69	569:1	0.43	0.0350	12.24	28+44.56	568.26						FS
568.89		0.43	0.0350	12.32	28+50.00	568.46						
569.84		0.45	0.0350	12.84	28+75.00	569.39						
570.79		0.48	0.0350	13.61	29+00.00	570.31						
571.74		0.51	0.0350	14.63	29+25.00	571.23						
572.69		0.56	0.0350	16.00	29+50.00	572.13						
573.59		0.56	0.0350	16.00	29+75.00	573.03						
574.47		0.56	0.0350	16.00	30+00.00	573.91						
574.75		0.56	0.0350	16.00	30+08.00	574.19						
575.35		0.56	0.0350	16.00	30+25.00	574.79						
576.22		0.56	0.0350	16.00	30+50.00	575.66						
577.08		0.56	0.0350	16.00	30+75.00	576.52						
577.92		0.56	0.0350	16.00	31+00.00	577.36						
578.81		0.56	0.0350	16.00	31+25.00	578.25						
579.73		0.56	0.0350	16.00	31+50.00	579.17						
580.65		0.56	0.0350	16.00	31+75.00	580.09						
581.58		0.56	0.0350	16.00	32+00.00	581.02						
582.44		0.56	0.0350	16.00	32+25.00	581.88						
583.17		0.56	0.0350	16.00	32+50.00	582.61						
583.73		0.56	0.0350	16.00	32+75.00	583.17						
584.14		0.56	0.0350	16.00	33+00.00	583.58						
584.24	407:1	0.56	0.0350	16.00	33+08.00	583.68						FS
584.34		0.51	0.0319	16.00	33+25.00	583.83						
584.38		0.46	0.0288	16.00	33+42.17	583.92						PT
584.40		0.47	0.0273	17.25	33+50.00	583.93						
584.35		0.48	0.0228	21.25	33+75.00	583.87						
584.10		0.44	0.0182	24.46	34+00.00	583.66						
583.91		0.40	0.0160	25.15	34+12.00	583.51						
583.68		0.39	0.0150	25.91	34+25.00	583.29						
583.13	238:1	0.36	0.0132	27.36	34+50.00	582.77						ME

SUPERELEVATION TABLE RAMP P - CURVE NO 562-P1

PI STA 32+57.73 | Dc = 1° 58′ 33″

LEFT SIDE					CENTERLINE CONTROL		RIGHT SIDE					REMARKS
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
					29+58.47	572.67	16.00	0.016	0.26	276:1	572.93	
					29+75.00	573.25	16.00	0.020	0.32	276:1	573.57	
					30+00.00	574.07	16.00	0.025	0.40	276:1	574.47	
					30+13.47	574.51	16.00	0.028	0.45	276:1	574.96	PC
					30+25.00	574.89	16.35	0.031	0.51	270:1	575.40	
					30+42.47	575.48	16.85	0.035	0.59	262:1	576.07	FS
					30+50.00	575.74	17.06	0.035	0.60		576.34	
					30+75.00	576.65	17.78	0.035	0.62		577.27	
					31+00.00	577.56	18.50	0.035	0.65		578.21	
					31+25.00	578.46	19.21	0.035	0.67		579.13	
					31+50.00	579.35	19.93	0.035	0.70		580.05	
					31+75.00	580.24	20.66	0.035	0.72		580.96	
					32+00.00	581.11	21.37	0.035	0.75		581.86	
					32+25.00	581.96	22.09	0.035	0.77		582.73	
					32+50.00	582.81	22.82	0.035	0.80		583.61	
					32+75.00	583.56	23.52	0.035	0.82		584.38	
					33+00.00	584.13	24.24	0.035	0.85		584.98	
					33+25.00	584.51	24.96	0.035	0.87		585.38	
					33+50.00	584.70	25.68	0.035	0.90		585.60	
					33+75.00	584.71	26.39	0.035	0.92		585.63	
					34+00.00	584.52	27.11	0.035	0.95		585.47	
					34+16.83	584.34	27.59	0.035	0.97	152:1	585.31	FS
					34+25.00	584.25	27.83	0.033	0.92	151:1	585.17	
					34+50.00	583.98	28.55	0.027	0.77	147:1	584.75	
					34+75.00	583.70	29.26	0.021	0.62	144:1	584.32	
					35+00.00	583.43	29.98	0.015	0.46	140:1	583.89	
					35+00.83	583.42	30.00	0.015	0.45	140:1	583.87	PT
					35+09.21	583.32	30.00	0.013	0.39	140:1	583.71	ME

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SUPERELEVATION TABLE - RAMP Q & P

HAM-75-7.85

788
2017

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POT Sta. 410+00.00

TYPE B1 SINGLE SLOPE BARRIER

℄ IR 75

N 45° 57′ 32″ E

409 410 411 412 413 414

IR 75

529.56 529.78 530.03 530.31 530.65 531.05 531.45 531.82 532.18 532.54 533.00 533.47 533.94 534.40 534.87 535.34 535.82 E/P

+71.15
531.15

12′

10′

531.34 531.70 532.06 532.52 532.99 E/S 533.46 533.93 534.39 534.86 535.34

EX529.08 EX529.16 EX529.27 EX529.31 EX529.49 EX529.64 EX529.74 EX529.90 EX530.07 EX530.05 EX529.96 EX529.58 EX529.92 EX529.09 EX529.04 EX529.10 EX529.11 EX529.13 EX529.66 EX529.85 EX530.04 EX530.02 EX530.02 EX529.93 EX529.85

EX528.82 EX528.83 EX528.89 EX528.94 EX528.98 EX528.85 EX528.46 EX528.51 EX528.53 EX528.57 EX528.60 EX528.61 EX528.61 EX528.74 EX528.74 EX528.77 EX528.73 EX528.68 EX528.56

410 411 412

N 50° 32′ 45″ E

PT Sta. 409+51.45

PC Sta. 410+95.11

+64.37
529.81

+64.37
529.78

529.71 529.74 529.53 529.56 529.31 529.34 529.06 529.09

3′

E/S

E/P

+64.37
528.85

528.78 528.42 528.60 528.24 528.38 528.02 528.13 527.77

413

RAMP N

18′

9′

E/P E/S

414

℄ CONST RAMP N

PCC Sta. 413+03.58

EX
529.11 EX
528.27 EX
529.39

RESURFACING

NOTE:
ELEVATIONS SHOWN AT 25′ INTERVALS UNLESS OTHERWISE NOTED

ELEVATIONS STATIONED ALONG RAMP BASELINES

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

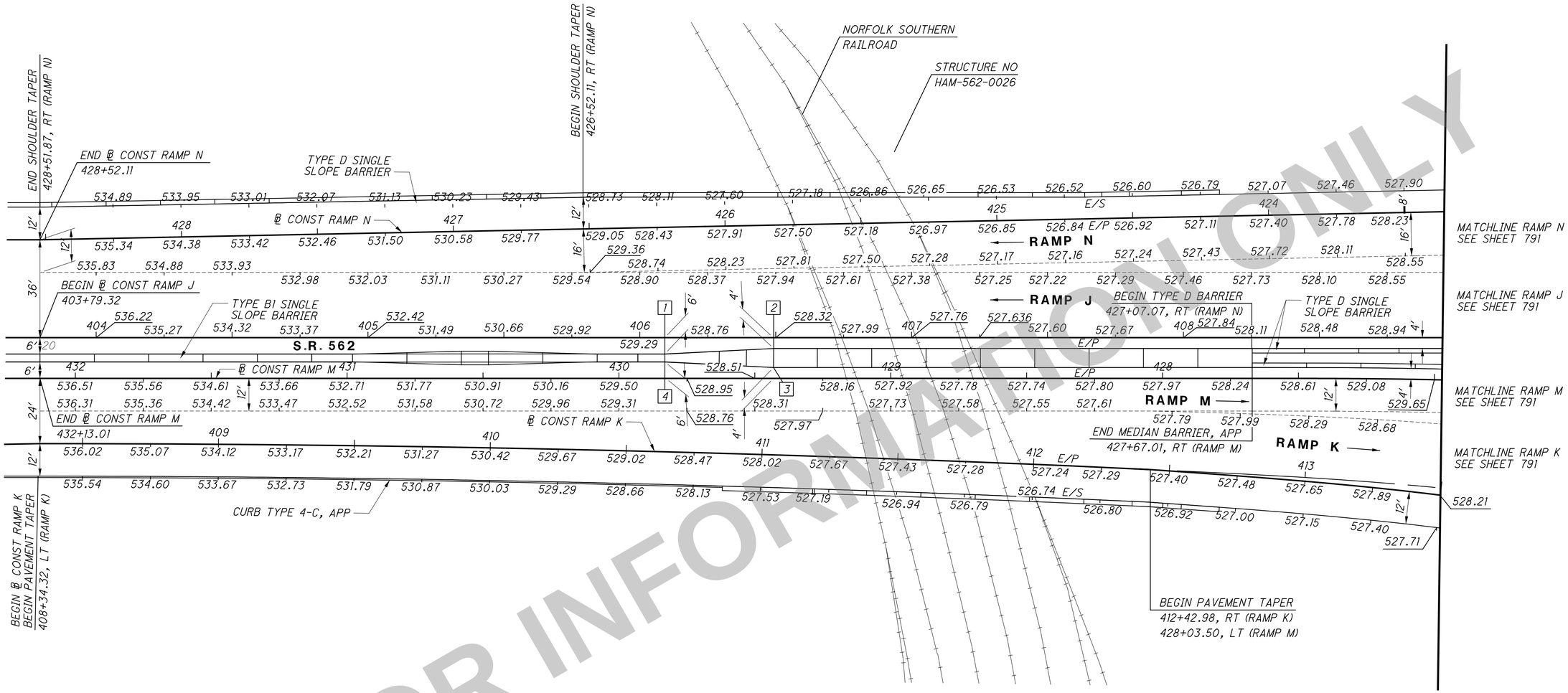
CALCULATED DLR
CHECKED EDK

PAVEMENT DETAIL - I.R. 75 INTERCHANGE
RAMP N

HAM-75-7.85

789
2017

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1 BEGIN SHOULDER TAPER & END MEDIAN BARRIER
406+09.23, RT (RAMP J)
426+23.09, LT (RAMP N)

2 END SHOULDER TAPER
406+49.26, RT (RAMP J)
425+83.02, LT (RAMP N)

3 BEGIN SHOULDER TAPER
BEGIN MEDIAN BARRIER, APP
429+43.13, RT (RAMP M)

4 END SHOULDER TAPER
429+83.10, RT (RAMP M)

NOTE:
ELEVATIONS SHOWN AT 25' INTERVALS UNLESS OTHERWISE NOTED

ELEVATIONS STATIONED ALONG RAMP BASELINES

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

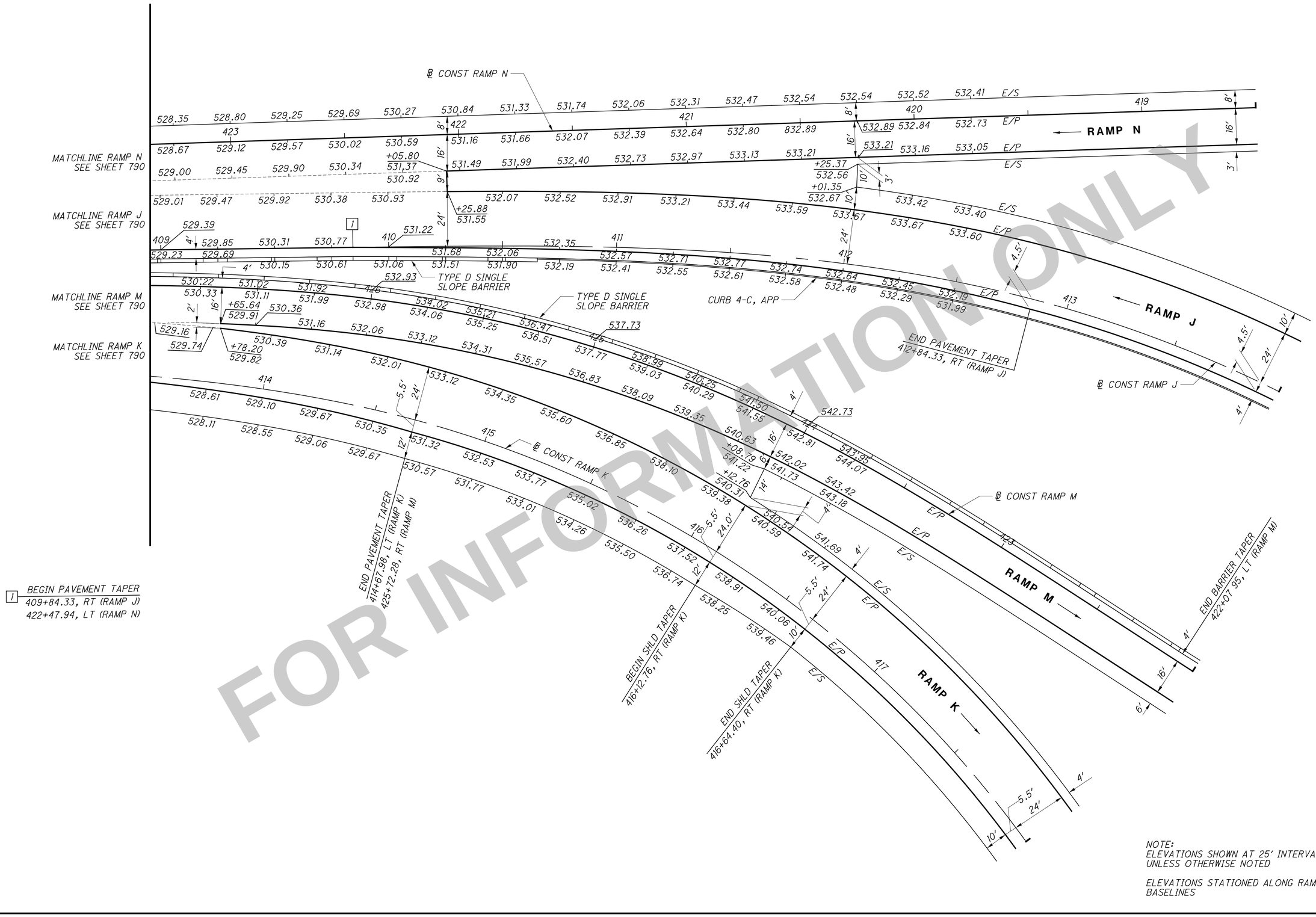
CALCULATED DLR
CHECKED EDK

PAVEMENT DETAIL - S.R. 562 INTERCHANGE
RAMPS K, J, M & N

HAM-75-7.85

790
2017

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FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

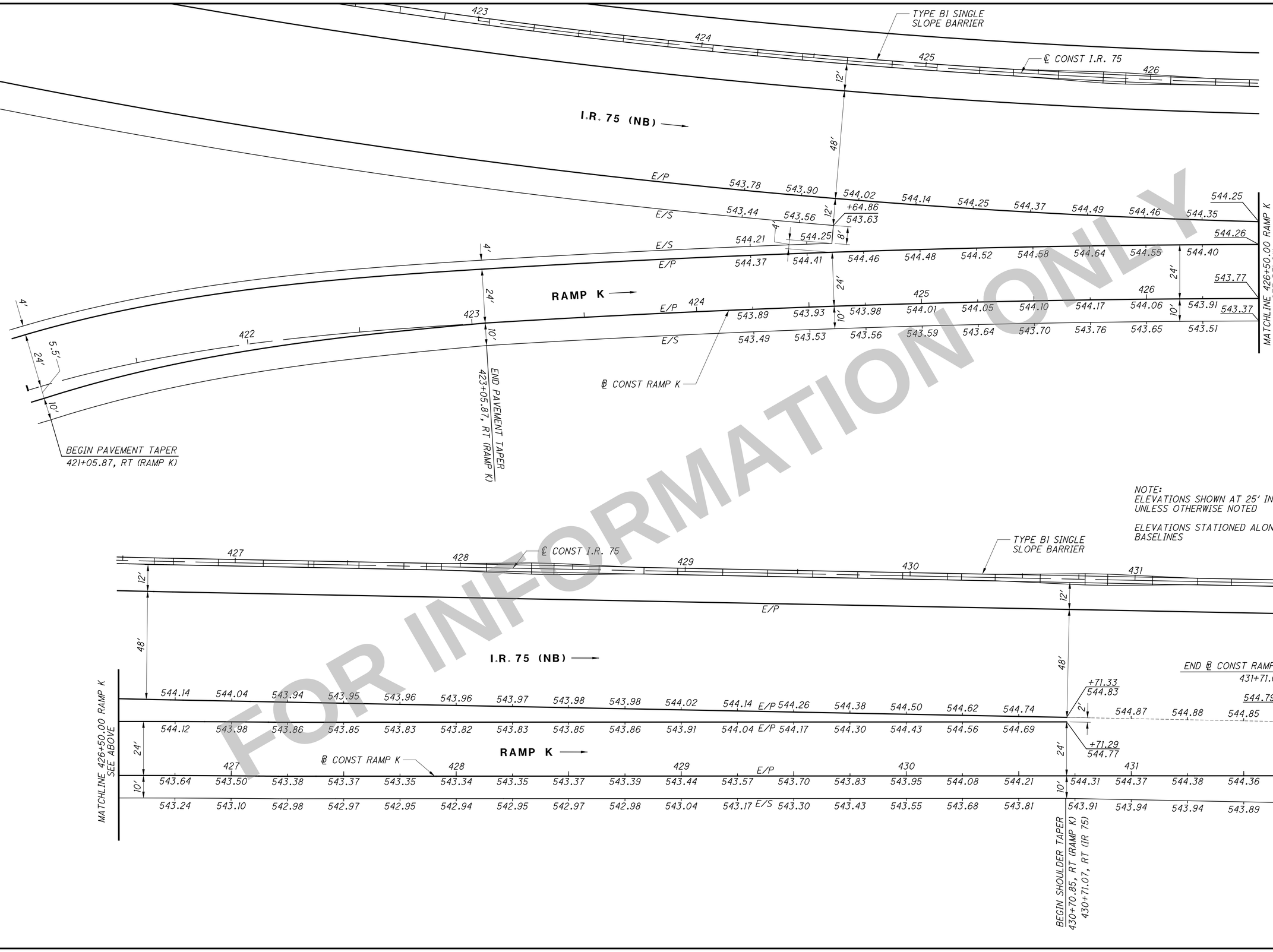
CALCULATED DLR
CHECKED EDK

PAVEMENT DETAIL - S.R. 562 INTERCHANGE RAMPS K, J, M & N

HAM-75-7.85

791
2017

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FOR INFORMATION ONLY

NOTE:
ELEVATIONS SHOWN AT 25' INTERVALS
UNLESS OTHERWISE NOTED

ELEVATIONS STATIONED ALONG RAMP BASELINES

HORIZONTAL SCALE IN FEET
0 10 20 40

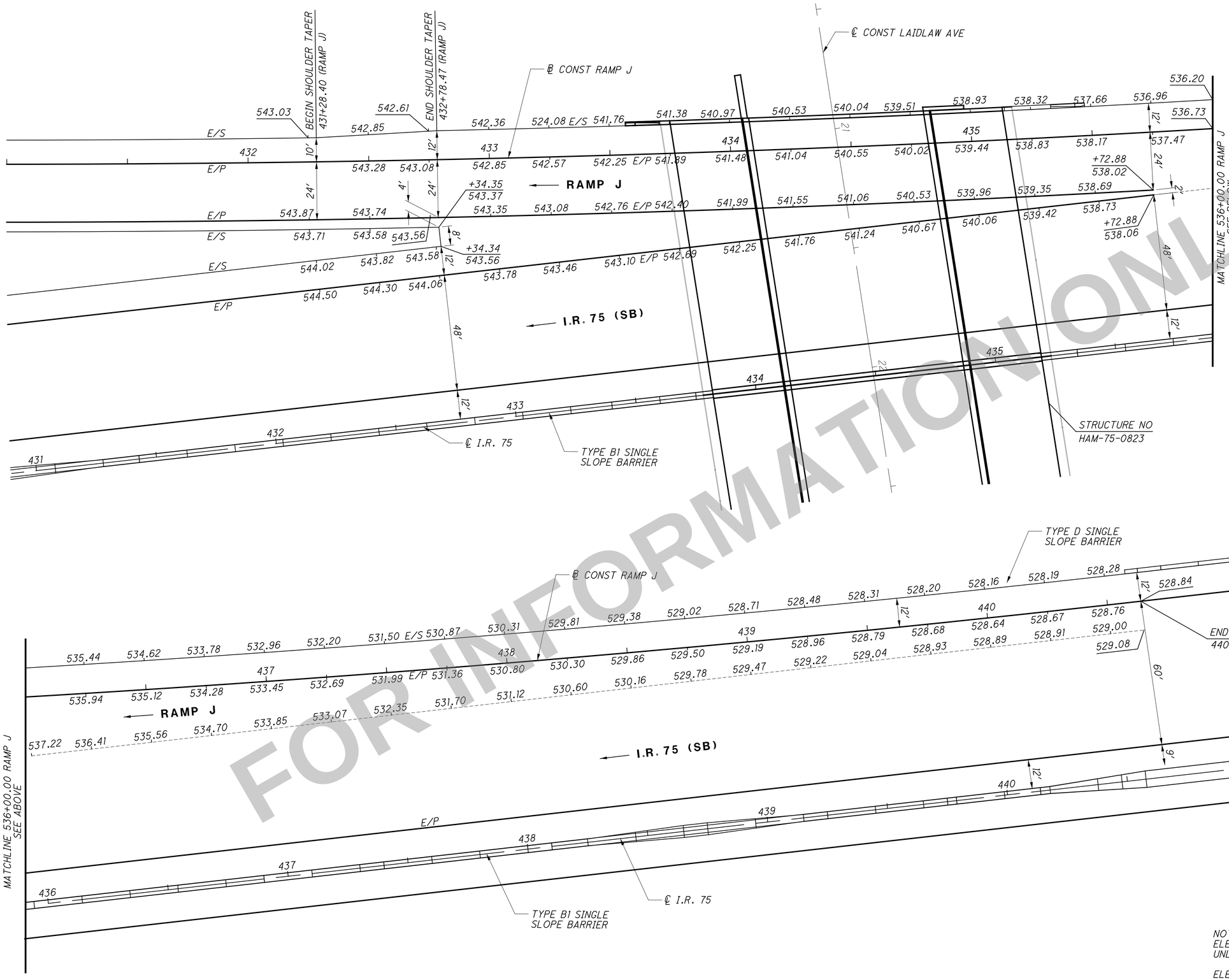
CALCULATED DLR
CHECKED EDK

PAVEMENT DETAIL - I.R. 75 INTERCHANGE RAMP K

HAM-75-7.85

792
2017

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FOR INFORMATION ONLY

NOTE:
ELEVATIONS SHOWN AT 25' INTERVALS UNLESS OTHERWISE NOTED

ELEVATIONS STATIONED ALONG RAMP BASELINES

HORIZONTAL SCALE IN FEET
0 10 20 40

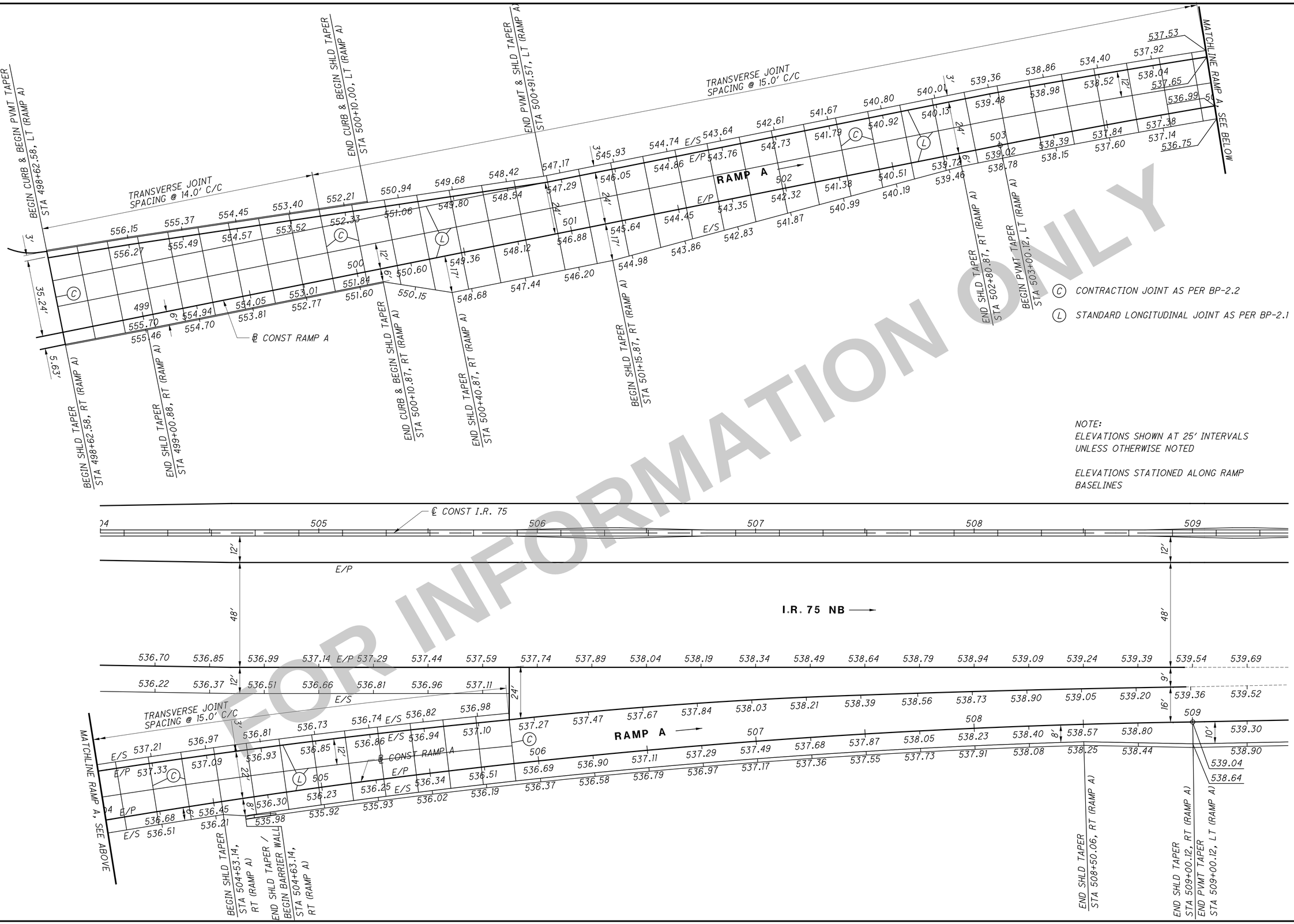
CALCULATED DLR
CHECKED EDK

PAVEMENT DETAIL - I.R. 75 INTERCHANGE RAMP J

HAM-75-7.85

793
2017

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FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

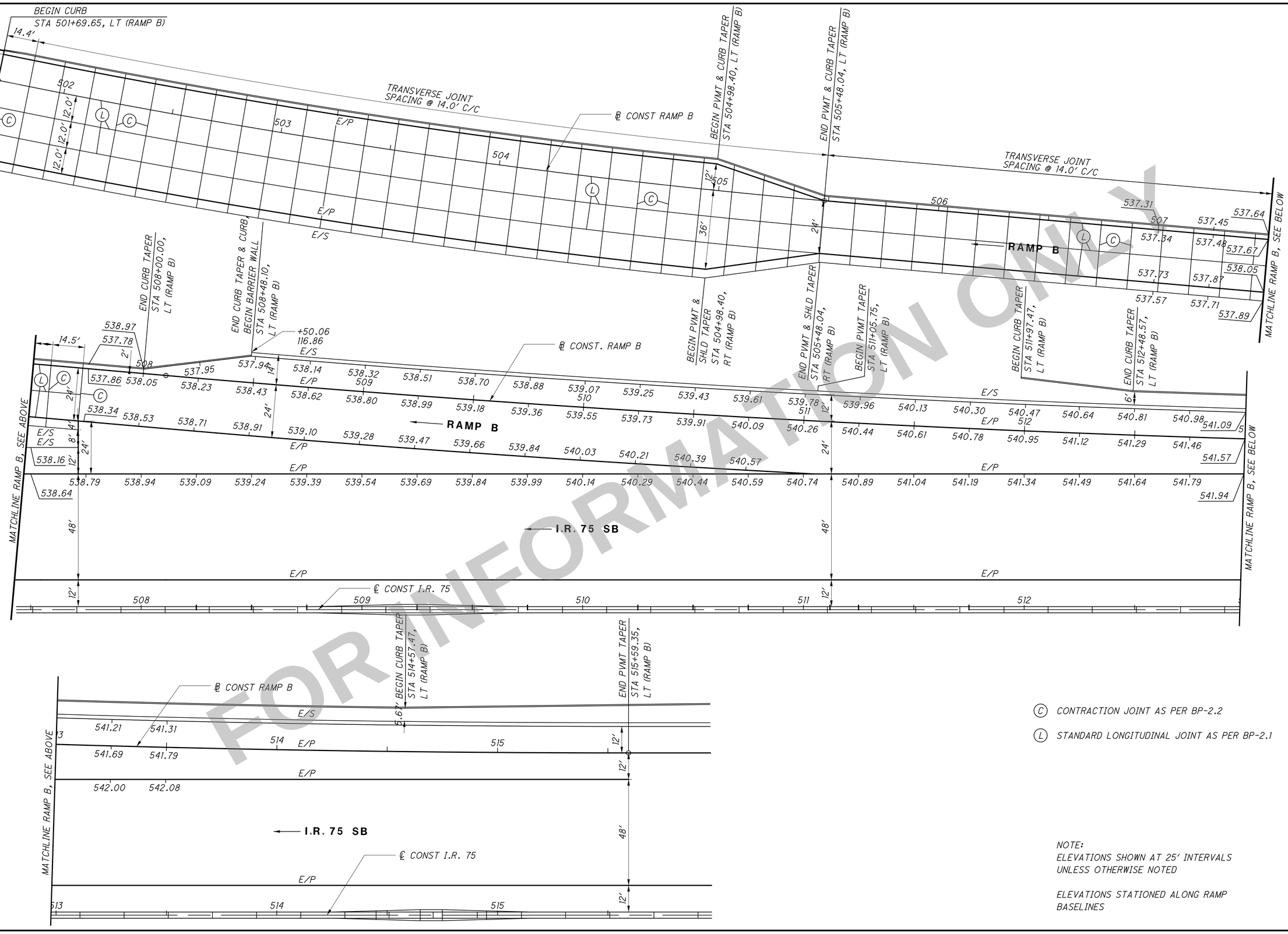
CALCULATED JLM
CHECKED SSK

PAVEMENT DETAIL - I.R. 75 INTERCHANGE RAMP A

HAM-75-7.85

794
2017

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Ⓒ CONTRACTION JOINT AS PER BP-2.2

Ⓛ STANDARD LONGITUDINAL JOINT AS PER BP-2.1

NOTE:
ELEVATIONS SHOWN AT 25' INTERVALS
UNLESS OTHERWISE NOTED

ELEVATIONS STATIONED ALONG RAMP
BASELINES

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 20 40 80

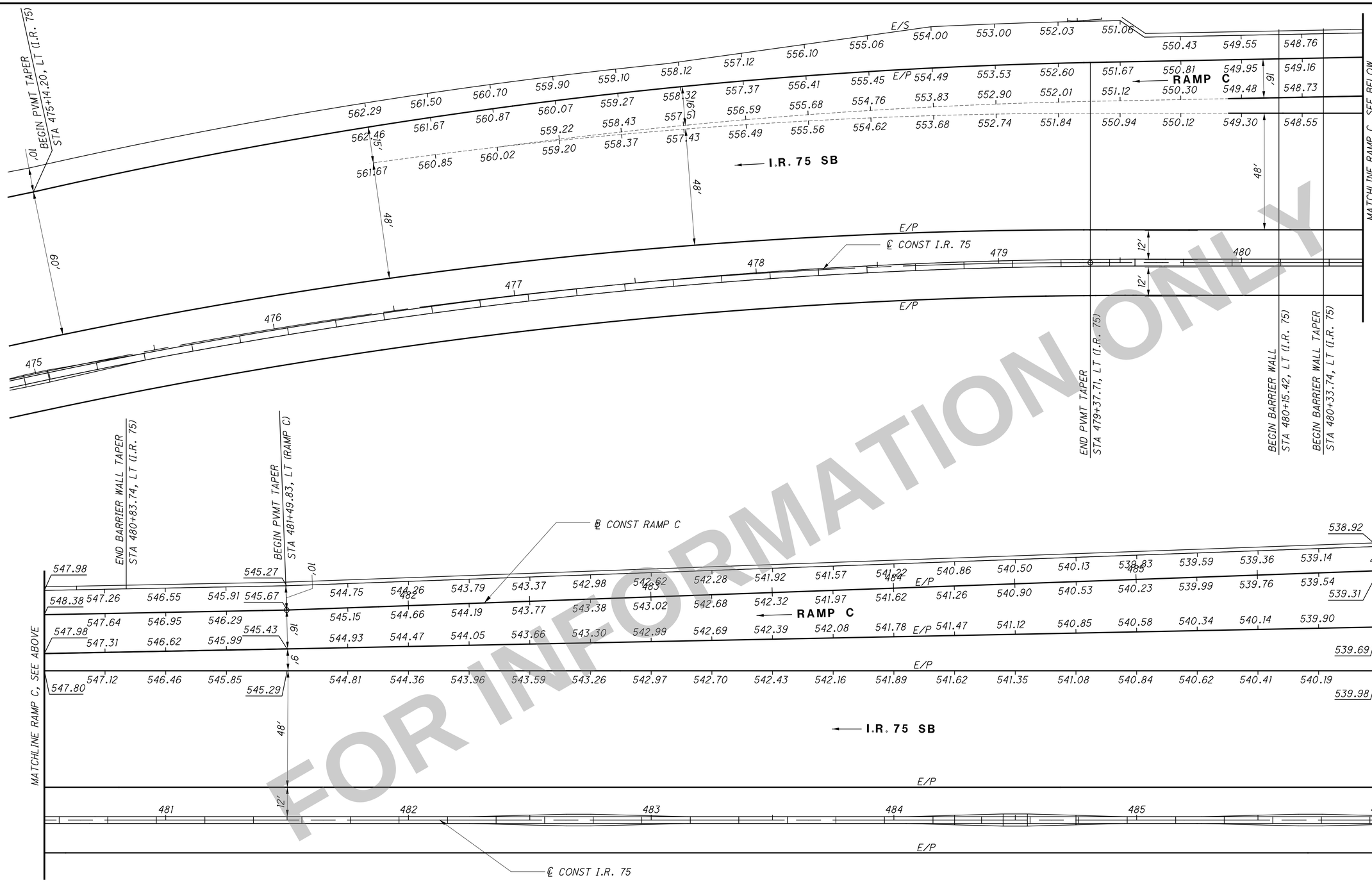
CALCULATED JLM
CHECKED SSK

PAVEMENT DETAIL - I.R. 75 INTERCHANGE
RAMP B

HAM-75-7.85

795
2017

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FOR INFORMATION ONLY

NOTE:
ELEVATIONS SHOWN AT 25' INTERVALS
UNLESS OTHERWISE NOTED

ELEVATIONS STATIONED ALONG RAMP
BASELINES

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JLM
CHECKED SSK

PAVEMENT DETAIL - I.R. 75 INTERCHANGE RAMP C

HAM-75-7.85

796
2017

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END BARRIER WALL / BEGIN CURB
STA 486+00.72, LT (RAMP C)

TRANSVERSE JOINT
SPACING @ 14.0' C/C

END CURB / BEGIN BARRIER WALL
STA 489+50.00, LT (RAMP C)

TRANSVERSE JOINT
SPACING @ 15.0' C/C

MATCHLINE RAMP C, SEE SHEET 796

MATCHLINE RAMP C, SEE BELOW

℄ CONST RAMP C

RAMP C

℄ CONST I.R. 75

I.R. 75 SB

END PVMT TAPER /
BEGIN MEDIAN BARRIER
STA 486+49.31, RT (RAMP C)

MATCHLINE RAMP C, SEE ABOVE

END MEDIAN BARRIER /
BEGIN BARRIER WALL
STA 492+98.87, RT (RAMP C)

END BARRIER WALL /
STA 493+96.52, RT (RAMP C)

MATCHLINE RAMP C, SEE BELOW

END BARRIER WALL / BEGIN CURB
STA 497+25.00, LT (RAMP C)

BEGIN CURB TAPER
STA 498+14.37, LT (RAMP C)

END CURB TAPER & CURB
STA 498+64.47, LT (RAMP C)

BEGIN SHLD TAPER
STA 497+54.06, RT (RAMP C)

END SHLD TAPER / BEGIN CURB
STA 497+78.70, RT (RAMP C)

END CURB
STA 498+62.56, RT (RAMP C)

(C) CONTRACTION JOINT AS PER BP-2.2

(L) STANDARD LONGITUDINAL JOINT AS PER BP-2.1

NOTE:
ELEVATIONS SHOWN AT 25' INTERVALS
UNLESS OTHERWISE NOTED

ELEVATIONS STATIONED ALONG RAMP
BASELINES

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

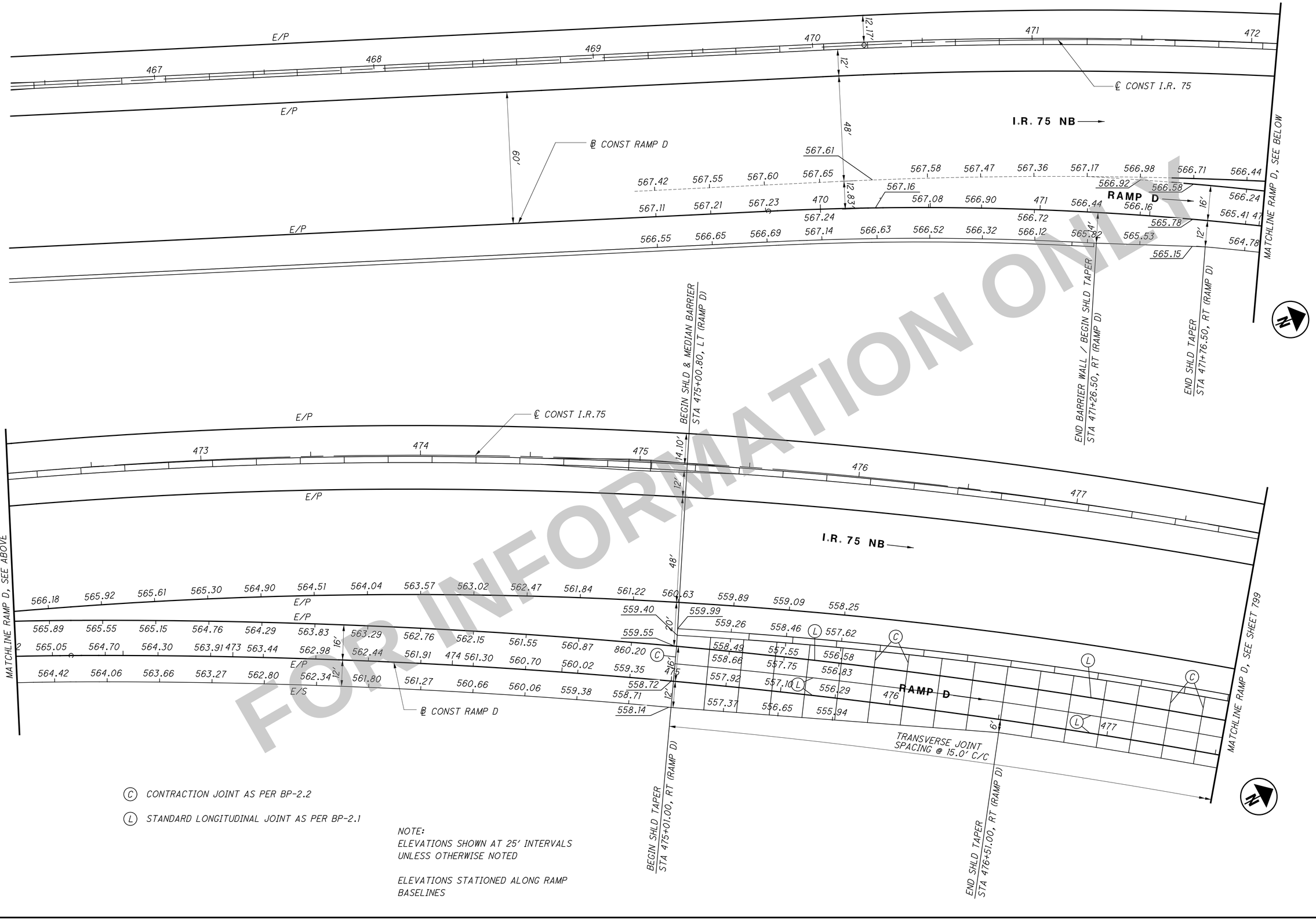
CALCULATED JLM
CHECKED SSK

PAVEMENT DETAIL - I.R. 75 INTERCHANGE RAMP C

HAM-75-7.85

797
2017

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(C) CONTRACTION JOINT AS PER BP-2.2

(L) STANDARD LONGITUDINAL JOINT AS PER BP-2.1

NOTE:
ELEVATIONS SHOWN AT 25' INTERVALS
UNLESS OTHERWISE NOTED

ELEVATIONS STATIONED ALONG RAMP
BASELINES

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

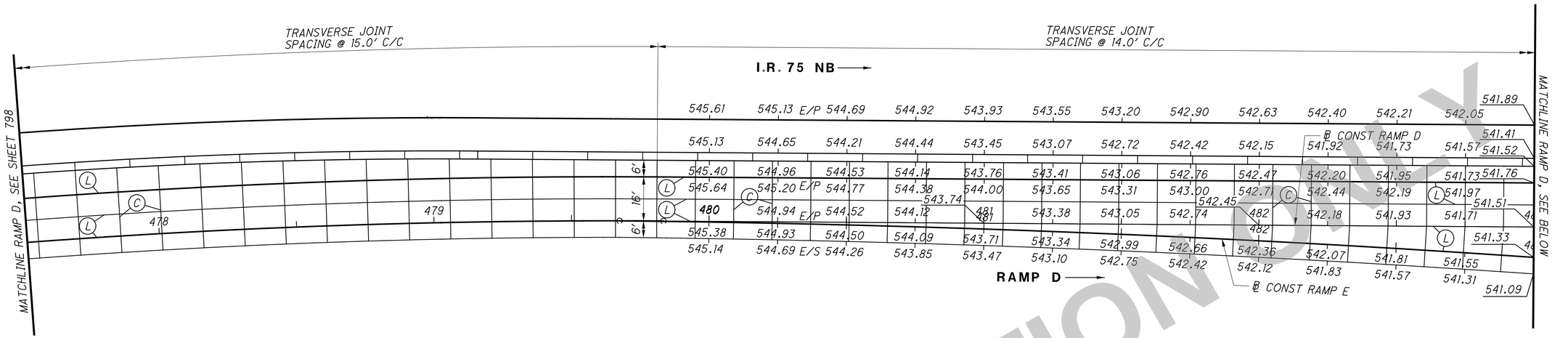
CALCULATED JLM
CHECKED SSK

PAVEMENT DETAIL - I.R. 75 INTERCHANGE RAMP D

HAM-75-7.85

798
2017

hbrendlinger
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FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

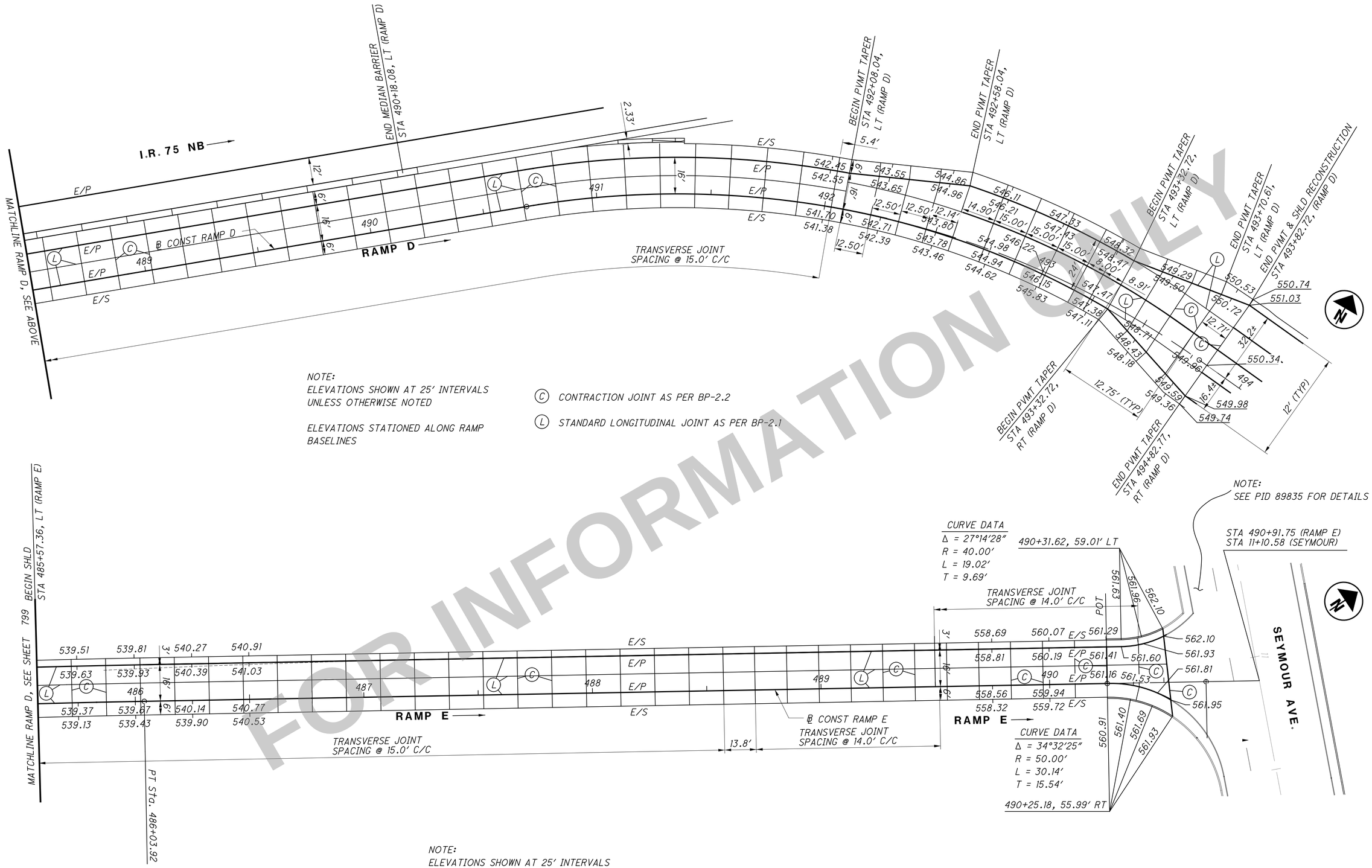
CALCULATED JLM
CHECKED SSK

PAVEMENT DETAIL - I.R. 75 INTERCHANGE
RAMP D

HAM-75-7.85

799
2017

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FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

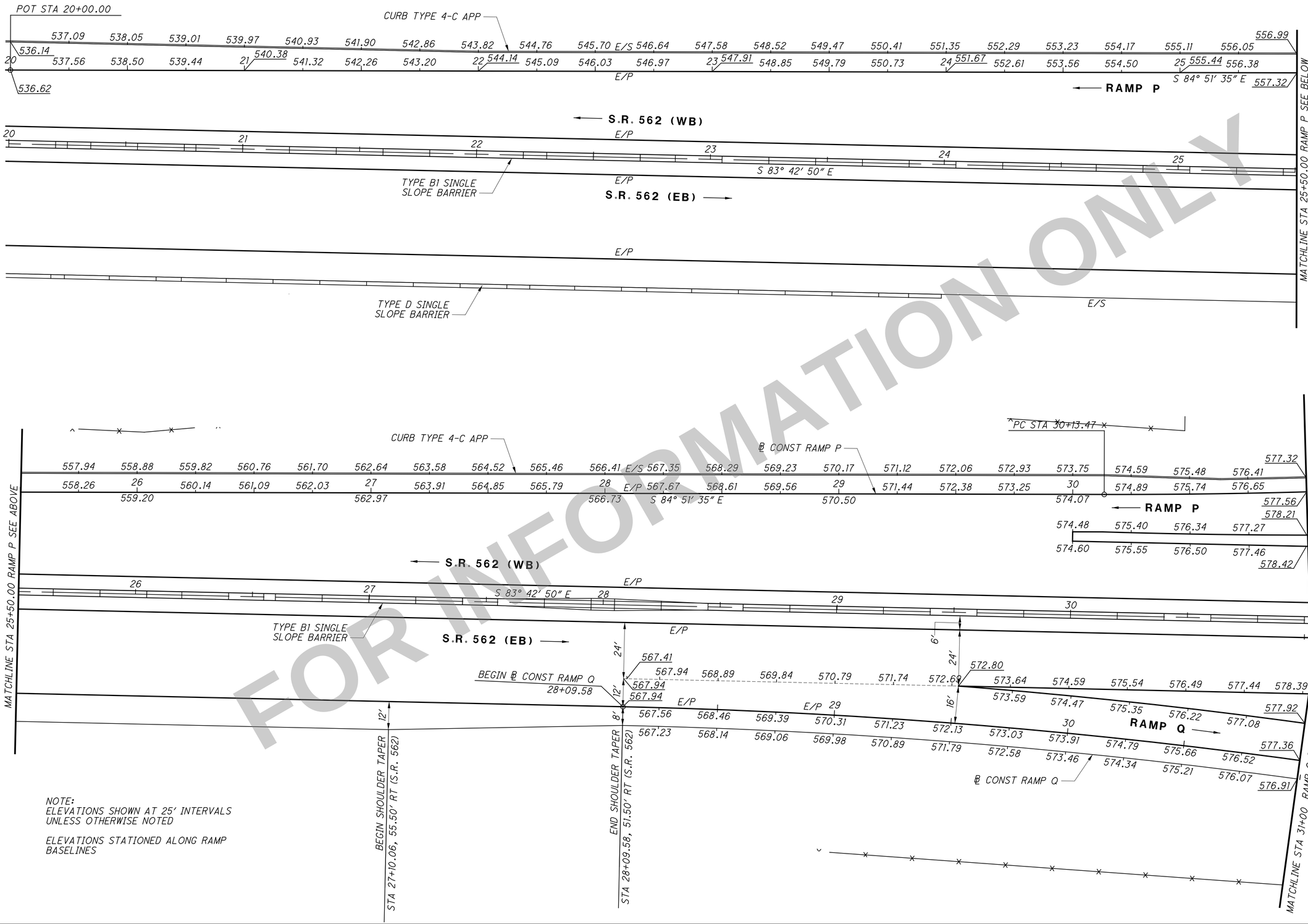
CALCULATED JLM
CHECKED SSK

PAVEMENT DETAIL - I.R. 75 INTERCHANGE RAMP E

HAM-75-7.85

800
2017

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008



NOTE:
ELEVATIONS SHOWN AT 25′ INTERVALS
UNLESS OTHERWISE NOTED

ELEVATIONS STATIONED ALONG RAMP
BASELINES

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

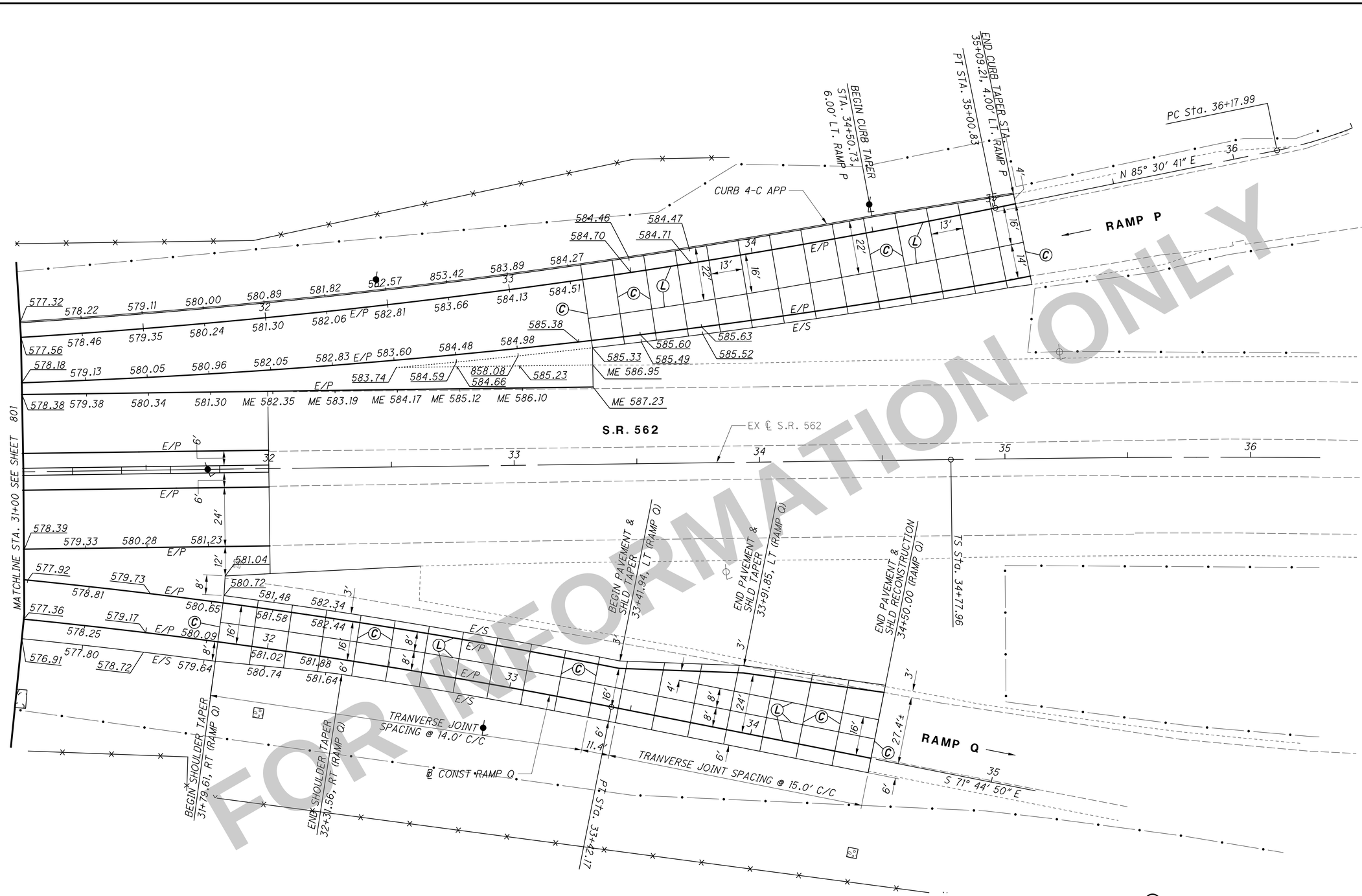
CALCULATED DLR
CHECKED EDK

PAVEMENT DETAIL - S.R. 562 INTERCHANGE RAMP P & RAMP Q

HAM-75-7.85

801
2017

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FOR INFORMATION ONLY

Ⓒ CONTRACTION JOINT AS PER BP-2.2

Ⓛ STANDARD LONGITUDINAL JOINT AS PER BP-2.1

NOTE:
ELEVATIONS SHOWN AT 25' INTERVALS
UNLESS OTHERWISE NOTED

ELEVATIONS STATIONED ALONG RAMP
BASELINES

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DLR
CHECKED EDK

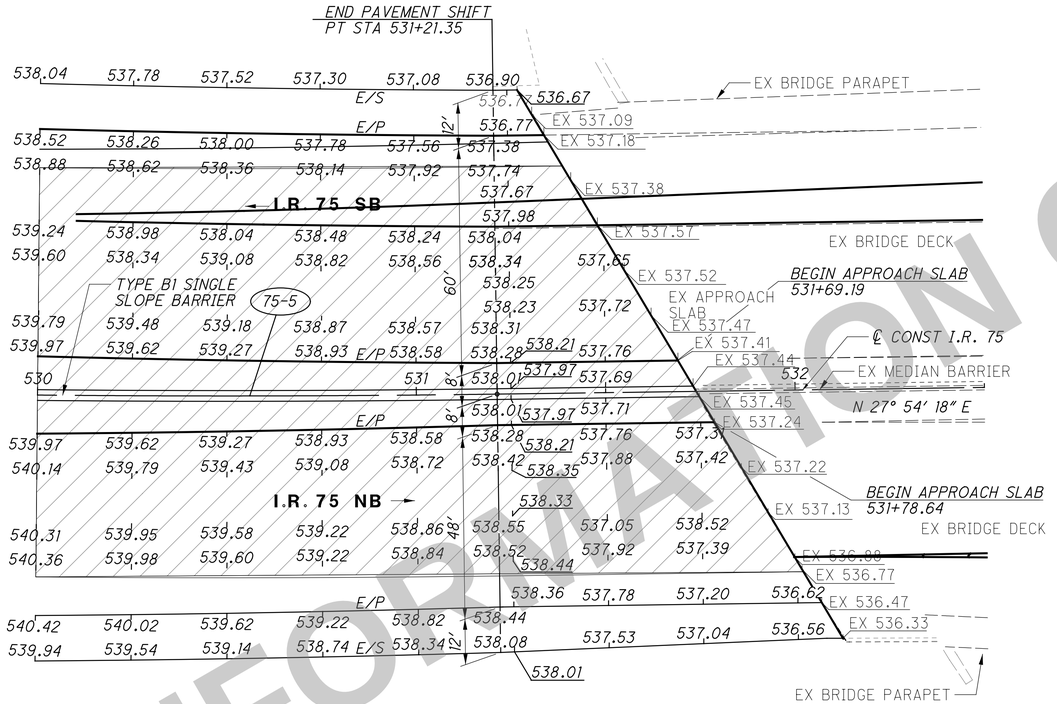
PAVEMENT DETAIL - S.R. 562 INTERCHANGE RAMP Q

HAM-75-7.85

802
2017

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MILL AND OVERLAY AREA



FOR INFORMATION ONLY

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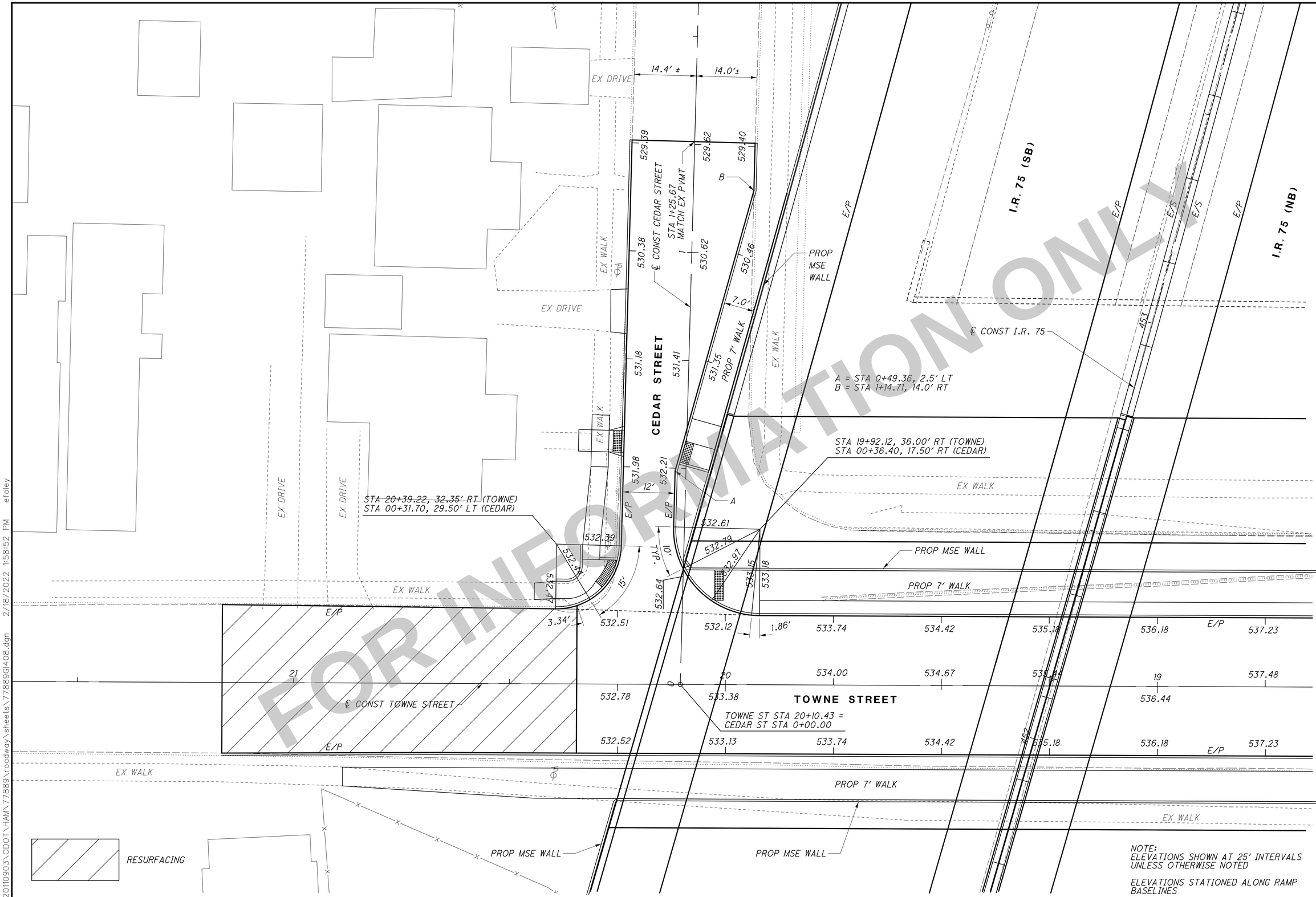
HORIZONTAL SCALE IN FEET
0 10 20 40

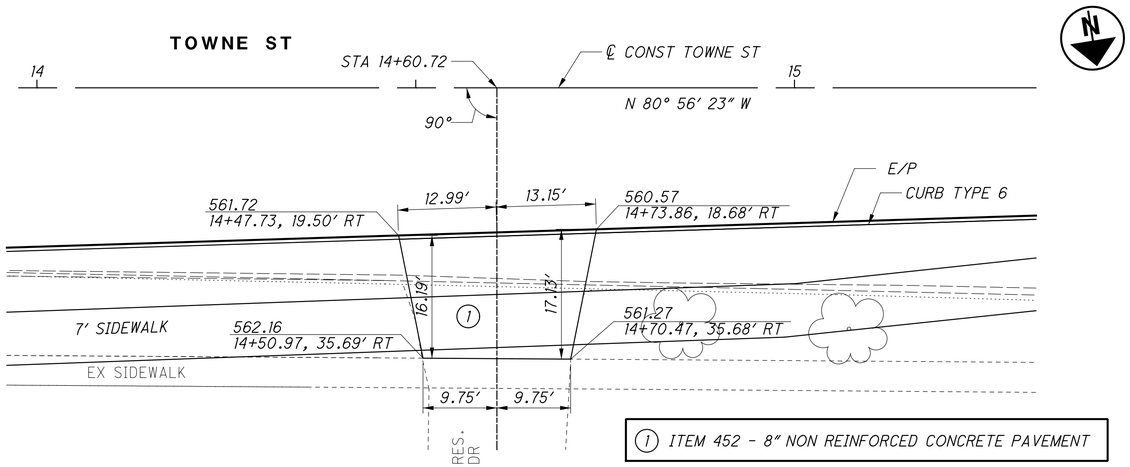
CALCULATED CFR
CHECKED SSK

PAVEMENT ELEVATION DETAIL - I.R. 75
STA. 531+21.35

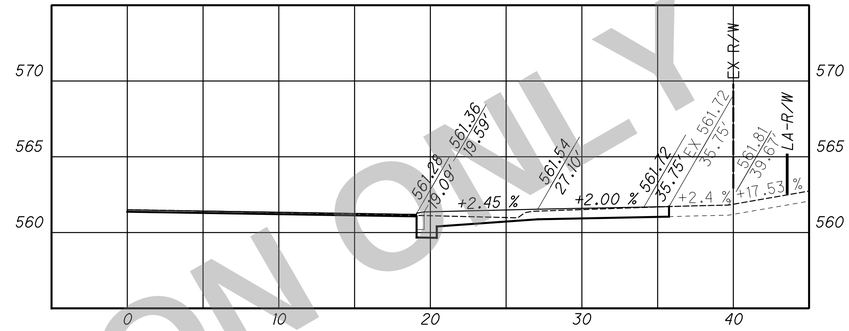
HAM-75-7.85

803
2017

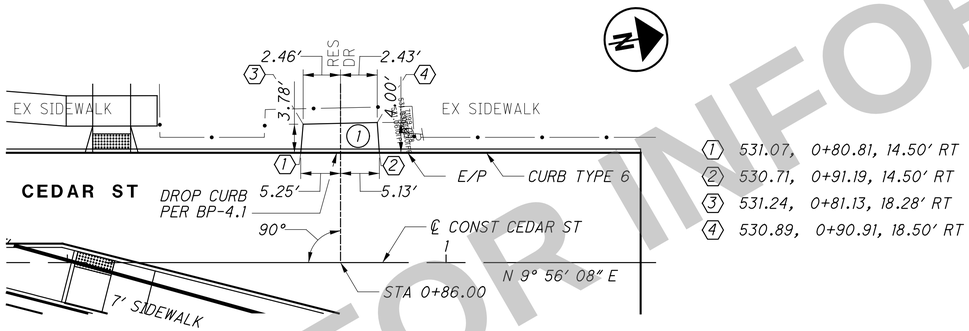

EX DRIVE
14.4' ±
14.0'±
529.39
529.62
529.40
B
℄ CONST CEDAR STREET
STA 1+25.67
MATCH EX PVMT
530.38
530.62
530.46
EX WALK
EX DRIVE
PROP MSE WALL
7.0'
PROP 7' WALK
E/P
I.R. 75 (SB)
I.R. 75 (NB)
E/S
℄ CONST I.R. 75
453
531.18
531.41
531.35
CEDAR STREET
A = STA 0+49.36, 2.5' LT
B = STA 1+14.71, 14.0' RT
STA 19+92.12, 36.00' RT (TOWNE)
STA 00+36.40, 17.50' RT (CEDAR)
531.98
532.21
12'
A
EX WALK
EX DRIVE
EX DRIVE
STA 20+39.22, 32.35' RT (TOWNE)
STA 00+31.70, 29.50' LT (CEDAR)
532.61
532.39
532.79
10' TYP.
532.97
533.15
533.18
532.64
532.47
532.41
15'
EX WALK
PROP MSE WALL
PROP 7' WALK
3.34'
532.51
532.12
1.86'
533.74
534.42
535.18
536.18
E/P
537.23
21
20
534.00
534.67
535.33
19
537.48
℄ CONST TOWNE STREET
532.78
533.38
TOWNE STREET
536.44
TOWNE ST STA 20+10.43 =
CEDAR ST STA 0+00.00
532.52
533.13
533.74
534.42
452
535.18
536.18
E/P
537.23
EX WALK
PROP 7' WALK
EX WALK
PROP MSE WALL
PROP MSE WALL
RESURFACING
NOTE:
ELEVATIONS SHOWN AT 25' INTERVALS
UNLESS OTHERWISE NOTED
ELEVATIONS STATIONED ALONG RAMP
BASELINES
FOR INFORMATION ONLY
N
0
5
10
20
HORIZONTAL
SCALE IN FEET
CALCULATED
JLM
CHECKED
SSK
INTERSECTION DETAILS
TOWNE STREET AND CEDAR STREET
HAM-75-7.85
804
2017
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TOWNE ST STA 14+60.72



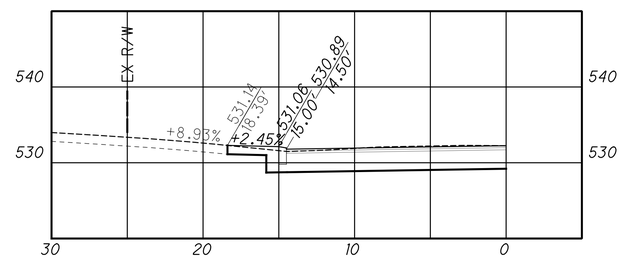
TOWNE ST STA 14+60.72 RT
SCALE 1″=5′



CEDAR ST 0+86.00

1 531.07, 0+80.81, 14.50′ RT
2 530.71, 0+91.19, 14.50′ RT
3 531.24, 0+81.13, 18.28′ RT
4 530.89, 0+90.91, 18.50′ RT

1 ITEM 452 - 8″ NON REINFORCED CONCRETE PAVEMENT



CEDAR ST 0+86.00 LT
SCALE 1″=5′

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED CFR
CHECKED SSK

DRIVEWAY DETAILS
TOWNE ST & CEDAR ST

HAM-75-7.85

805
2017

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FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED RSH CHECKED

DRIVEWAY DETAILS

HAM-75-7.85

806
2017

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POT Sta. 36+95.90

37

SUMMIT ROAD

N 36° 44′ 22″ E

SECTION ROAD

10.0′

ME 565.26±

565.76

ME 565.36±

565.86

10.0′

565.86

565.96

ME 565.50±

566.00

6.5′

ME 565.65±

566.10

ME 565.61±

36+96.38

31.23′ RT

ME 566.01±

5.0′

EX SIDEWALK

FACE OF CURB
CURVE DATA
Δ = 23° 23′ 10″
R = 24.50′
L = 26.49′

Ex R/W

SUMMIT ROAD STA. 37+18.00, 42.75′ RT

PROP 5′ SIDEWALK

CURB RAMP, TYPE C1, SUMMIT ROAD
STA. 37+49.50, 18.25′ RT
ME 565.45±

ME 565.36±

ME 565.38±

ME 565.42±

ME 565.47±

ME 565.50±

ME 565.51±

ME 565.51±

565.86

565.88

565.61

565.66

565.94

565.96

565.69

565.74

566.00

566.01

565.57±
ME

566.08

566.09

565.82±
ME

EX SIDEWALK

5.0′

7.0′

5.0′

4.0′

5.5′

5.0′

6.0′

4.0′

4.0′

4.9′

2.0′

3.0′

2.0′

4.91%

7.66%

1.56%

5.66%

1.00%

4.91%

5.66%

Ex R/W

Ex LA-R/W

PEDESTRIAN PUSH BUTTON LOCATION

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 1:5 3 6

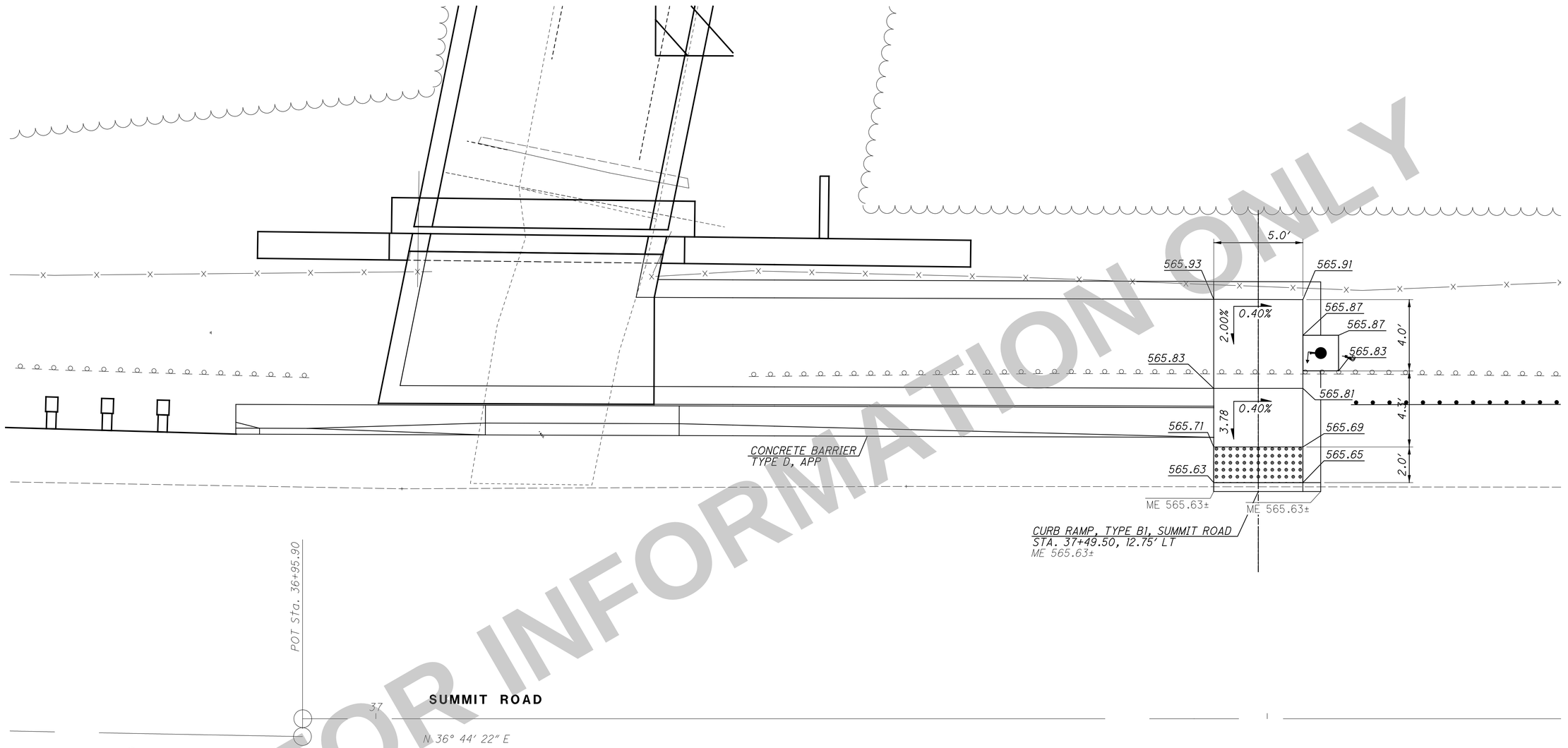
CALCULATED RSH
CHECKED DLR

CURB RAMP DETAILS
SUMMIT ROAD AND SECTION ROAD

HAM-75-7.85

807
2017

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FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 1.5 3 6

CALCULATED RSH
CHECKED DLR

CURB RAMP DETAILS
SUMMIT ROAD AND SECTION ROAD

HAM-75-7.85

808
2017

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DRAINAGE PLANS - I.R. 75
STA 410+00 TO STA 421+00

HAM-75-7.85

809
2017

CALCULATED RSH
CHECKED DLR

HORIZONTAL SCALE IN FEET
0 25 50 100

FOR INFORMATION ONLY

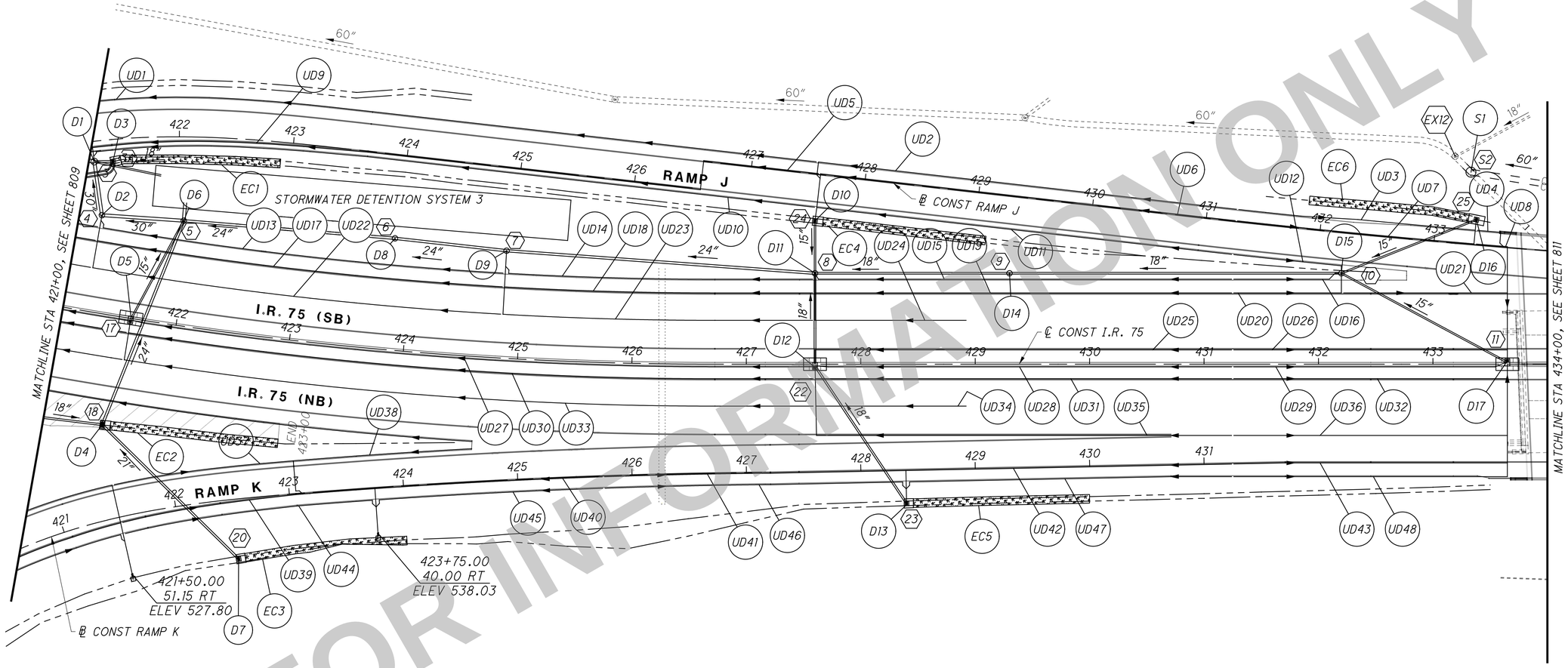
ROSS RUN SEWER
SEE PID 82286
SEE PID 82286
I.R. 75 (SB)
I.R. 75 (NB)
℄ CONST I.R. 75
RAMP M
℄ CONST RAMP M
℄ CONST RAMP N
℄ R/W S.R. 562
RAMP J
℄ CONST RAMP J
RAMP K
℄ CONST RAMP K
RAMP N
STORMWATER DETENTION SYSTEM 1
410+00.06
103.45 RT
419+16.35
110.00 RT
BEGIN 413+00
END 415+00
BEGIN 419+00
END 420+00
MATCHLINE STA 421+00, SEE SHEET 810
MATCHLINE, SEE SHEET 819
MATCHLINE, SEE SHEET 819
VFS1
VFS2
VFS3
VFS4
VFS5

CROSS REFERENCES	
SHEET NO	DESCRIPTION
37 - 58	GENERAL NOTES
299 - 341	ESTIMATED QUANTITIES
821 - 860	STORM SEWER PROFILES
861	CULVERT DETAIL
862 - 868	STORMWATER DETENTION SYSTEM DETAILS
883 - 933	PUMP STATION PLANS

CRUSHED AGGREGATE SLOPE PROTECTION

ITEM 670 - SLOPE EROSION PROTECTION

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FOR INFORMATION ONLY

CROSS REFERENCES	
SHEET NO	DESCRIPTION
37 - 58	GENERAL NOTES
299 - 341	ESTIMATED QUANTITIES
821 - 860	STORM SEWER PROFILES
861	CULVERT DETAIL
862 - 868	STORMWATER DETENTION SYSTEM DETAILS
883 - 933	PUMP STATION PLANS

HORIZONTAL SCALE IN FEET
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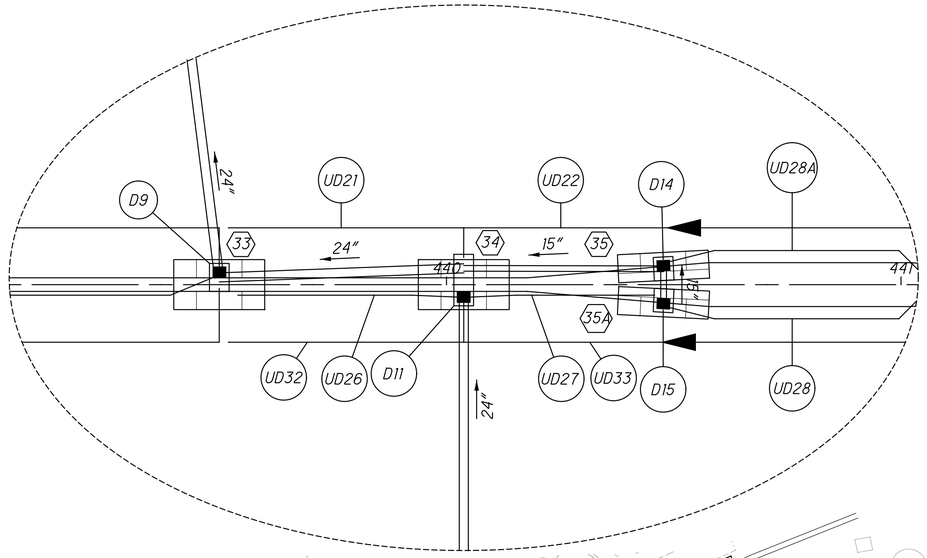
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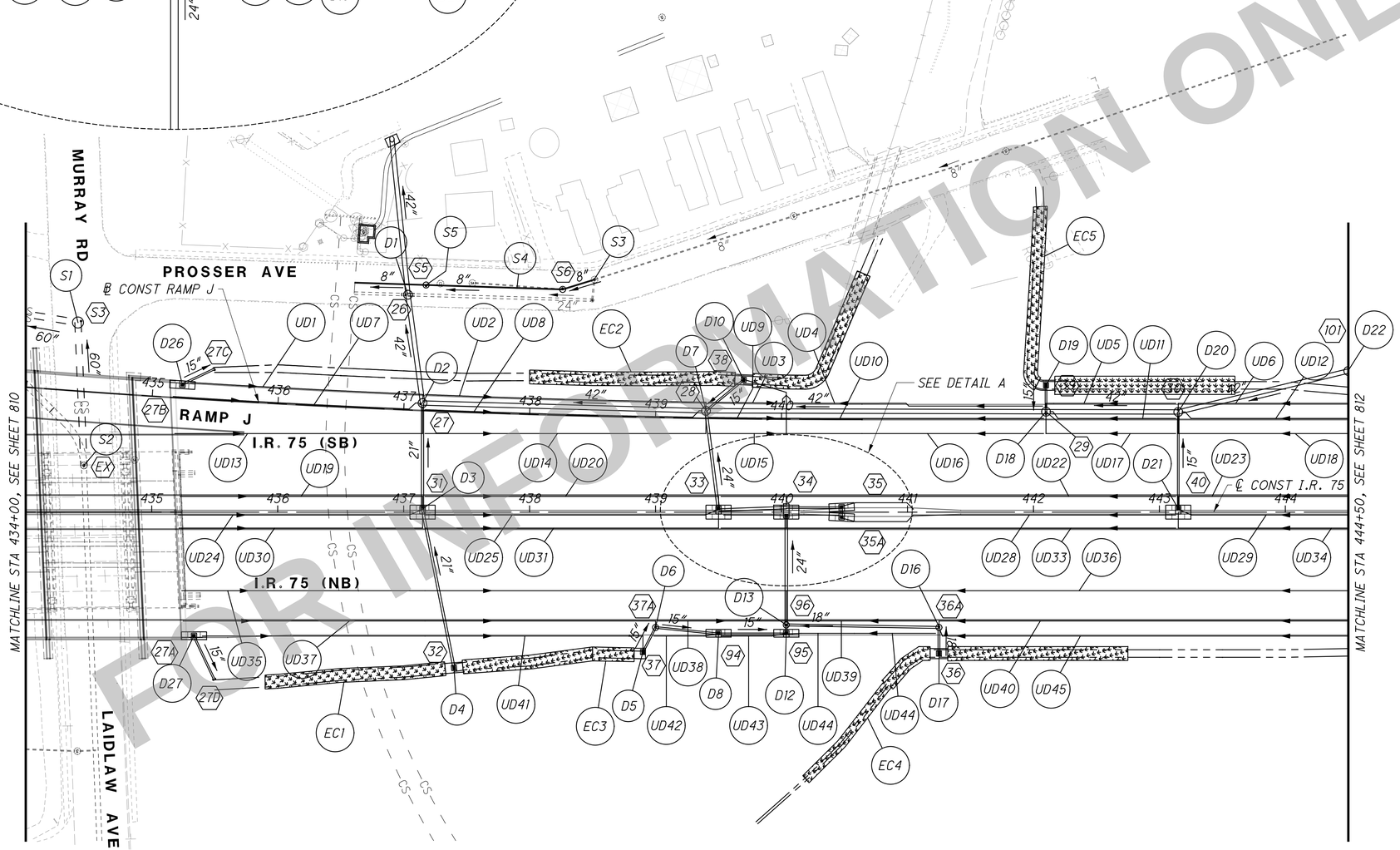
DRAINAGE PLANS - I.R. 75
STA 421+00 TO STA 434+00

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FOR INFORMATION ONLY

CROSS REFERENCES	
SHEET NO	DESCRIPTION
37 - 58	GENERAL NOTES
299 - 341	ESTIMATED QUANTITIES
821 - 860	STORM SEWER PROFILES
861	CULVERT DETAIL
862 - 868	STORMWATER DETENTION SYSTEM DETAILS
883 - 933	PUMP STATION PLANS

HORIZONTAL SCALE IN FEET
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CALCULATED RSH
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DRAINAGE PLANS - I.R. 75
STA 434+00 TO STA 444+50

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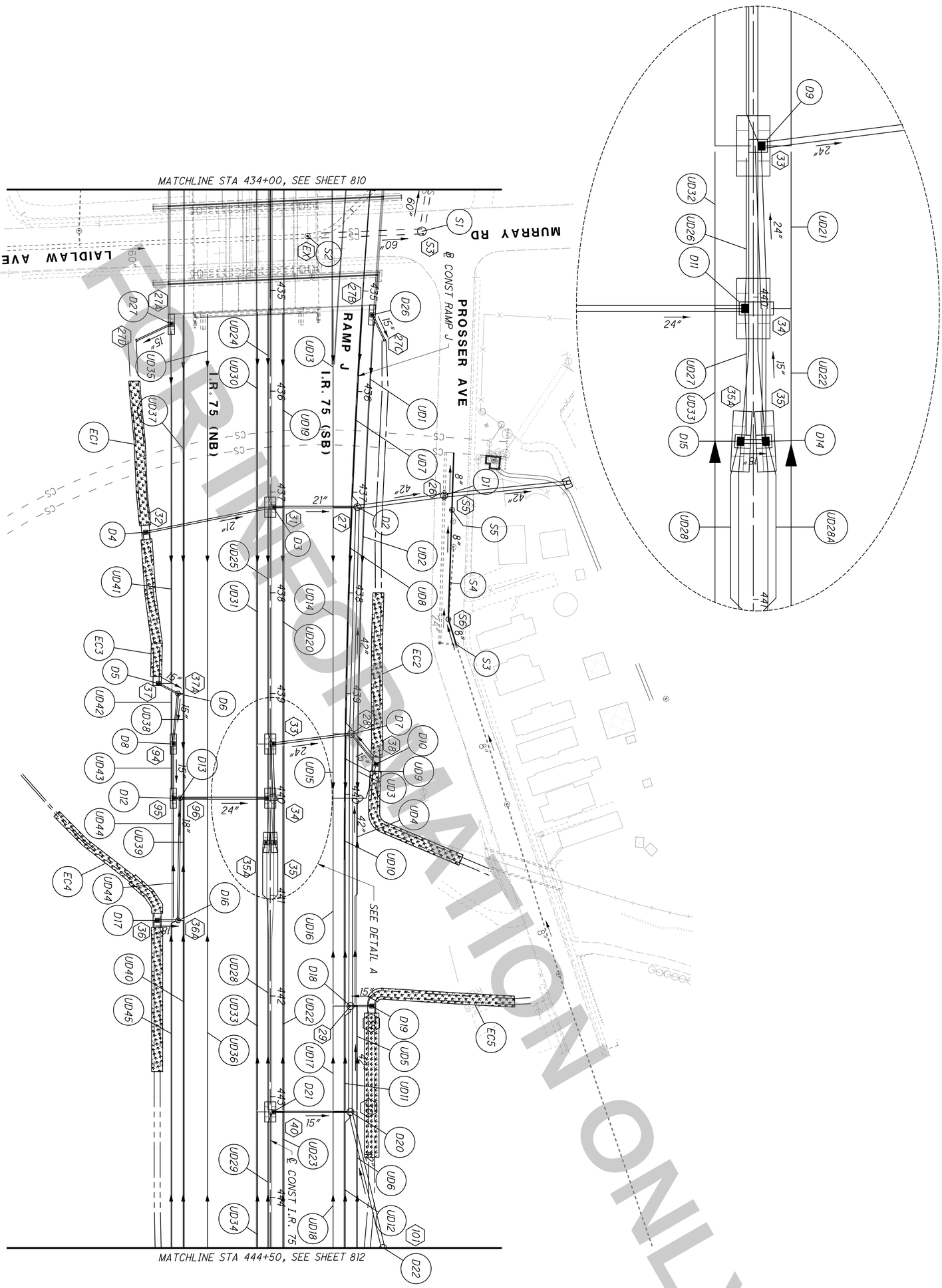
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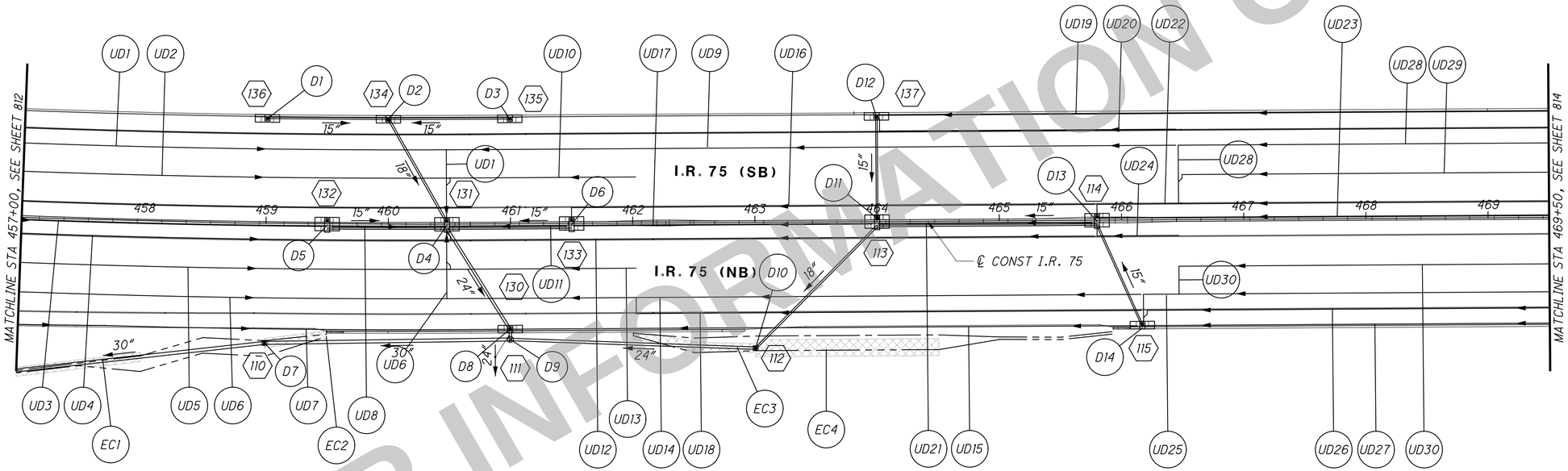
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CROSS REFERENCES

SHEET NO	DESCRIPTION
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299 - 341	ESTIMATED QUANTITIES
821 - 860	STORM SEWER PROFILES
861	CULVERT DETAIL
862 - 868	STORMWATER DETENTION SYSTEM DETAILS
883 - 933	PUMP STATION PLANS



FOR INFORMATION ONLY



CROSS REFERENCES	
SHEET NO	DESCRIPTION
37 - 58	GENERAL NOTES
299 - 341	ESTIMATED QUANTITIES
821 - 860	STORM SEWER PROFILES
861	CULVERT DETAIL
862 - 868	STORMWATER DETENTION SYSTEM DETAILS
883 - 933	PUMP STATION PLANS

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
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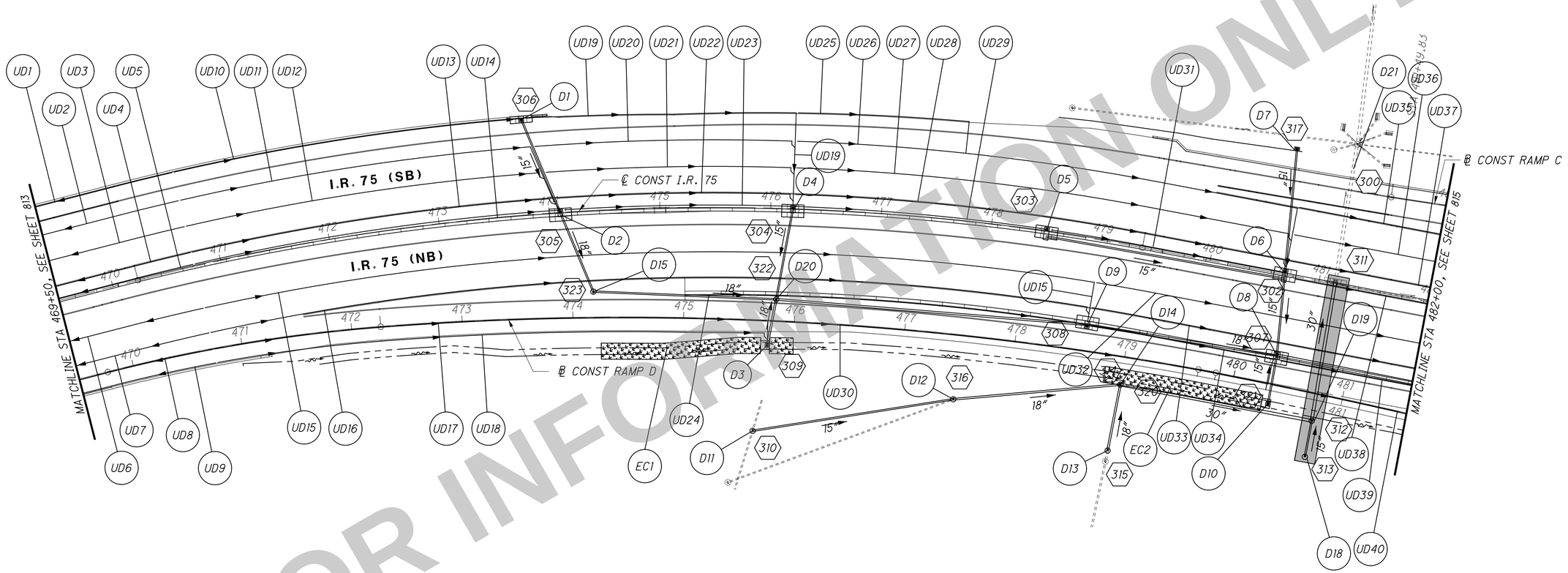
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DRAINAGE PLANS - I.R. 75
STA 457+00 TO STA 469+50

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FOR INFORMATION ONLY

CROSS REFERENCES	
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299 - 341	ESTIMATED QUANTITIES
821 - 860	STORM SEWER PROFILES
861	CULVERT DETAIL
862 - 868	STORMWATER DETENTION SYSTEM DETAILS
883 - 933	PUMP STATION PLANS

LEGEND

DRAINAGE ALTERNATE 1

NOTE: SHEETS 814 AND 814A ARE IDENTICAL WITH THE EXCEPTION OF THE SHADED DRAINAGE ALTERNATE

HORIZONTAL SCALE IN FEET
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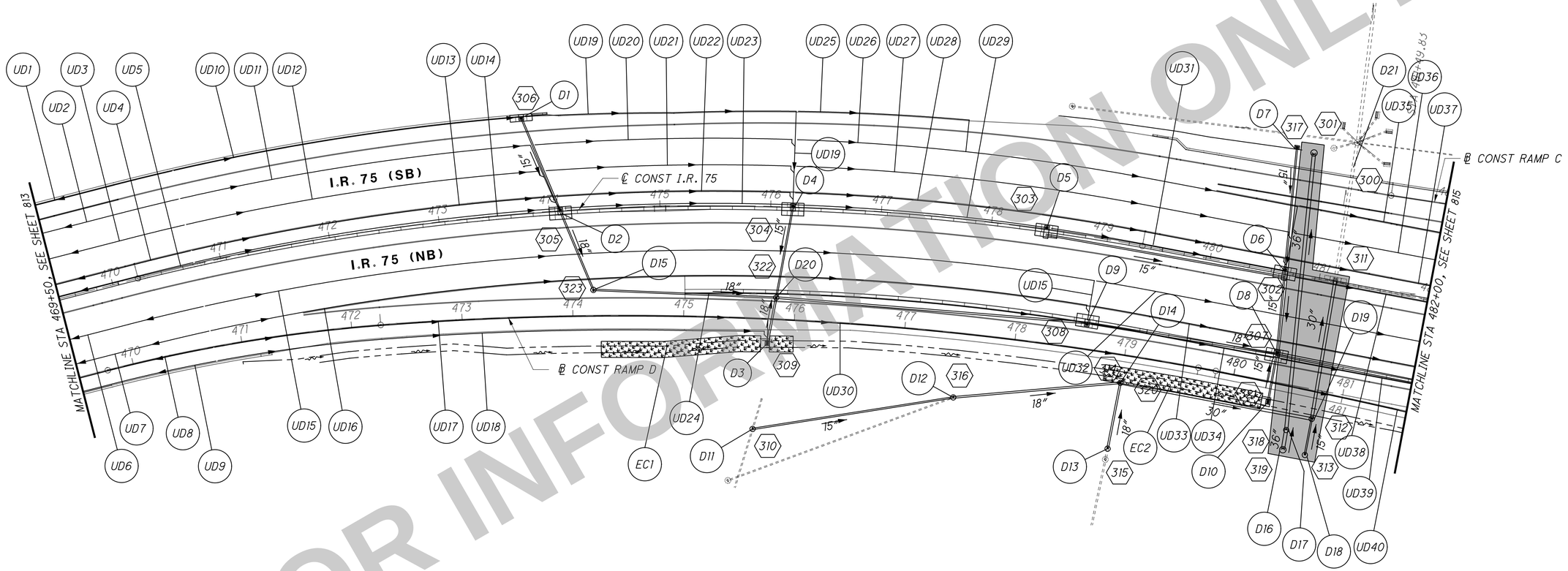
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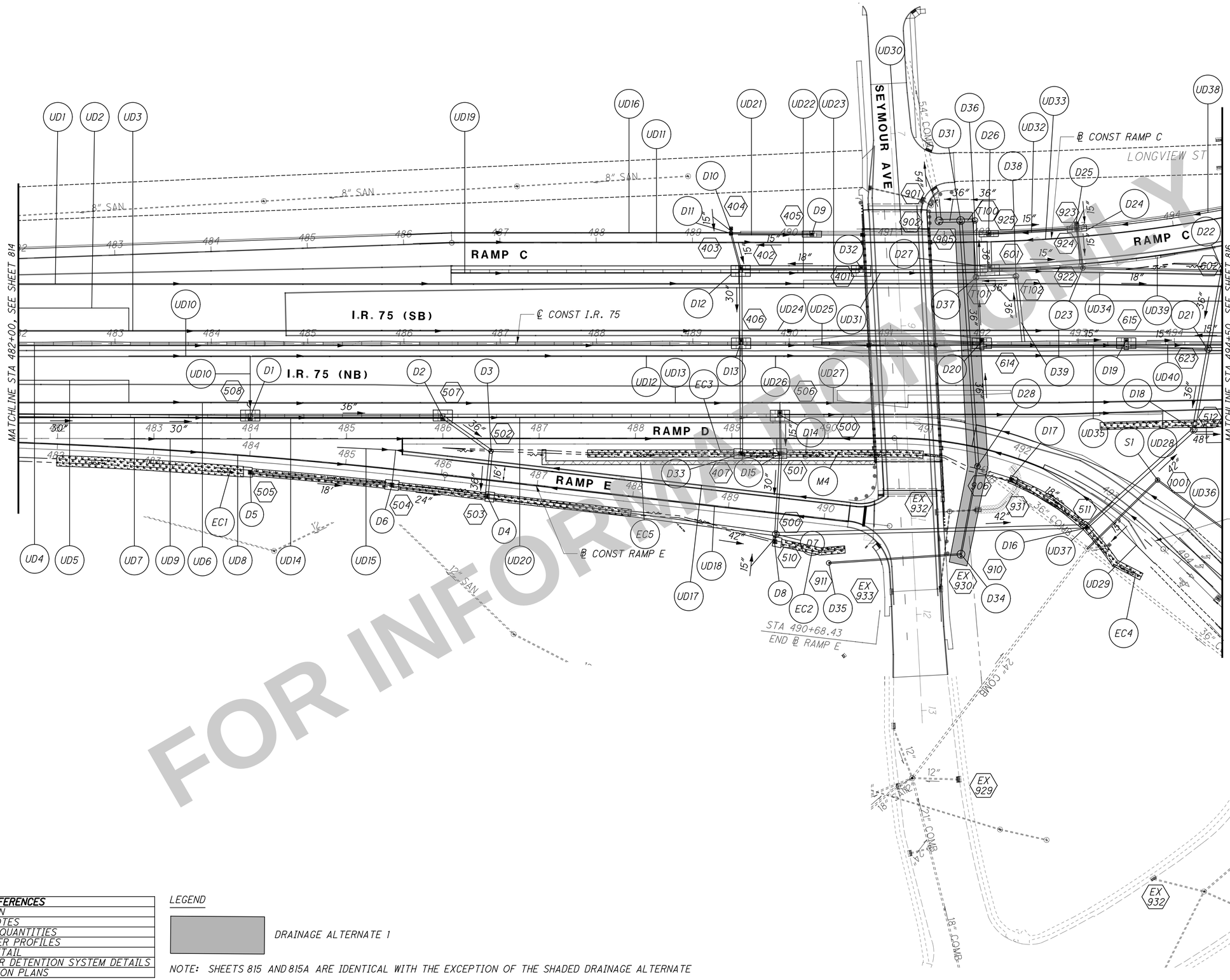
DRAINAGE PLANS - I.R. 75
STA 469+50 TO STA 482+00

HAM-75-7.85

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CROSS REFERENCES	
SHEET NO	DESCRIPTION
37 - 58	GENERAL NOTES
299 - 341	ESTIMATED QUANTITIES
821 - 860	STORM SEWER PROFILES
861	CULVERT DETAIL
862 - 868	STORMWATER DETENTION SYSTEM DETAILS
883 - 933	PUMP STATION PLANS

LEGEND

DRAINAGE ALTERNATE 1

NOTE: SHEETS 815 AND 815A ARE IDENTICAL WITH THE EXCEPTION OF THE SHADED DRAINAGE ALTERNATE

HORIZONTAL SCALE IN FEET
0 25 50 100

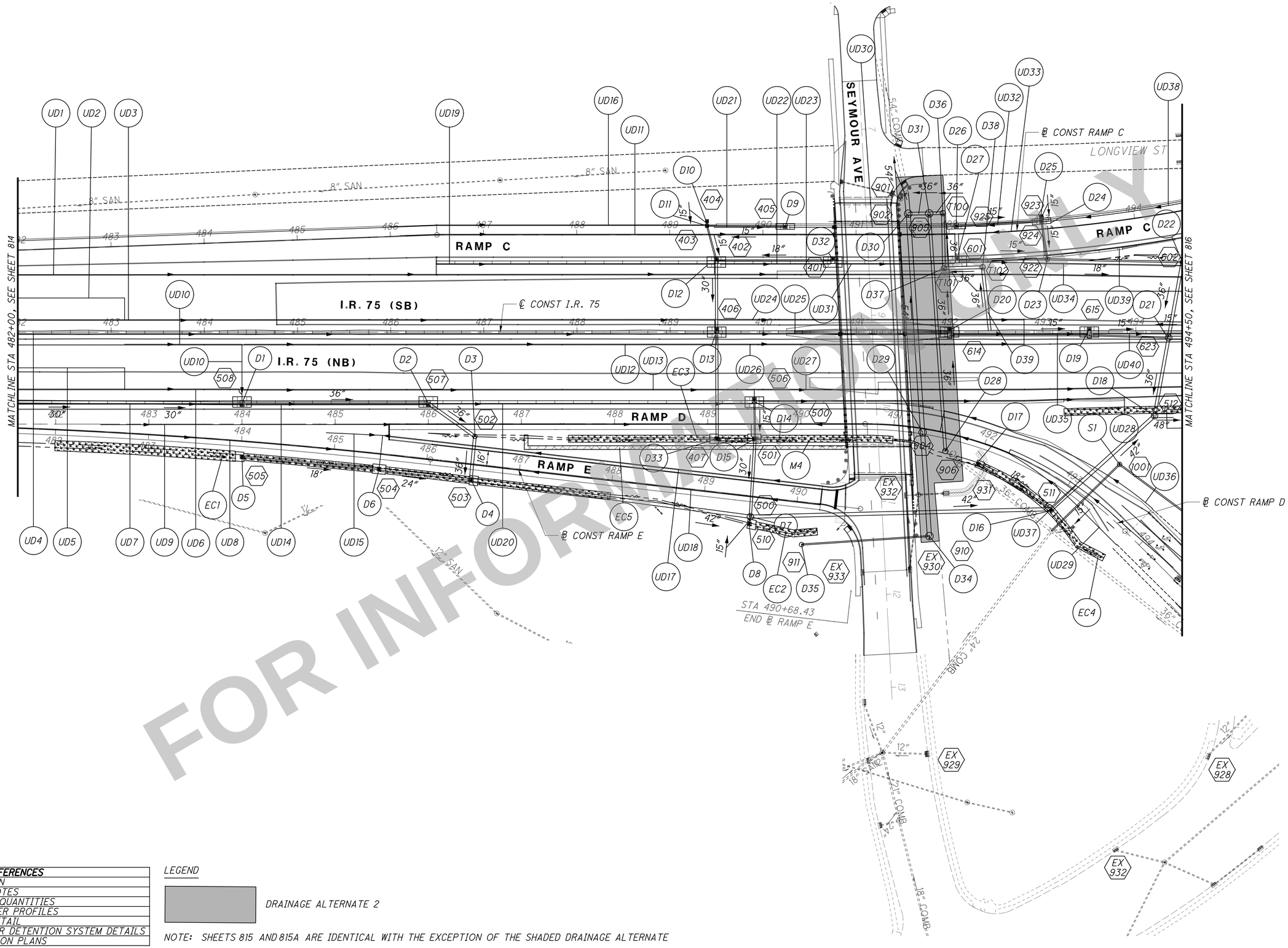
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DRAINAGE PLANS - I.R. 75
STA 482+00 TO STA 494+50

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CROSS REFERENCES	
SHEET NO	DESCRIPTION
37 - 58	GENERAL NOTES
299 - 341	ESTIMATED QUANTITIES
821 - 860	STORM SEWER PROFILES
861	CULVERT DETAIL
862 - 868	STORMWATER DETENTION SYSTEM DETAILS
883 - 933	PUMP STATION PLANS

LEGEND

DRAINAGE ALTERNATE 2

NOTE: SHEETS 815 AND 815A ARE IDENTICAL WITH THE EXCEPTION OF THE SHADED DRAINAGE ALTERNATE

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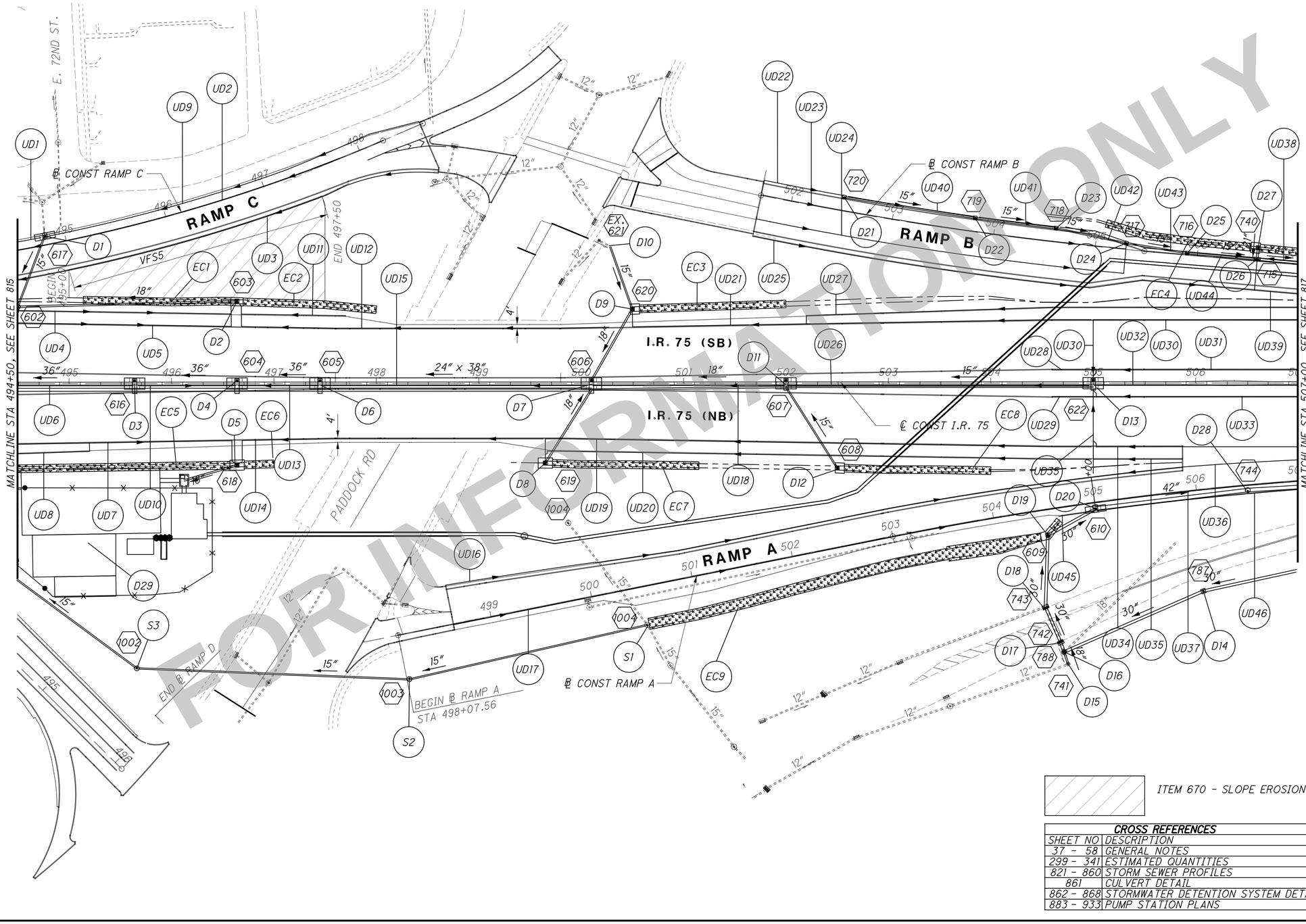
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DRAINAGE PLANS - I.R. 75
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ITEM 670 - SLOPE EROSION PROTECTION

CROSS REFERENCES	
SHEET NO	DESCRIPTION
37 - 58	GENERAL NOTES
299 - 341	ESTIMATED QUANTITIES
821 - 860	STORM SEWER PROFILES
861	CULVERT DETAIL
862 - 868	STORMWATER DETENTION SYSTEM DETAILS
883 - 933	PUMP STATION PLANS

HORIZONTAL SCALE IN FEET
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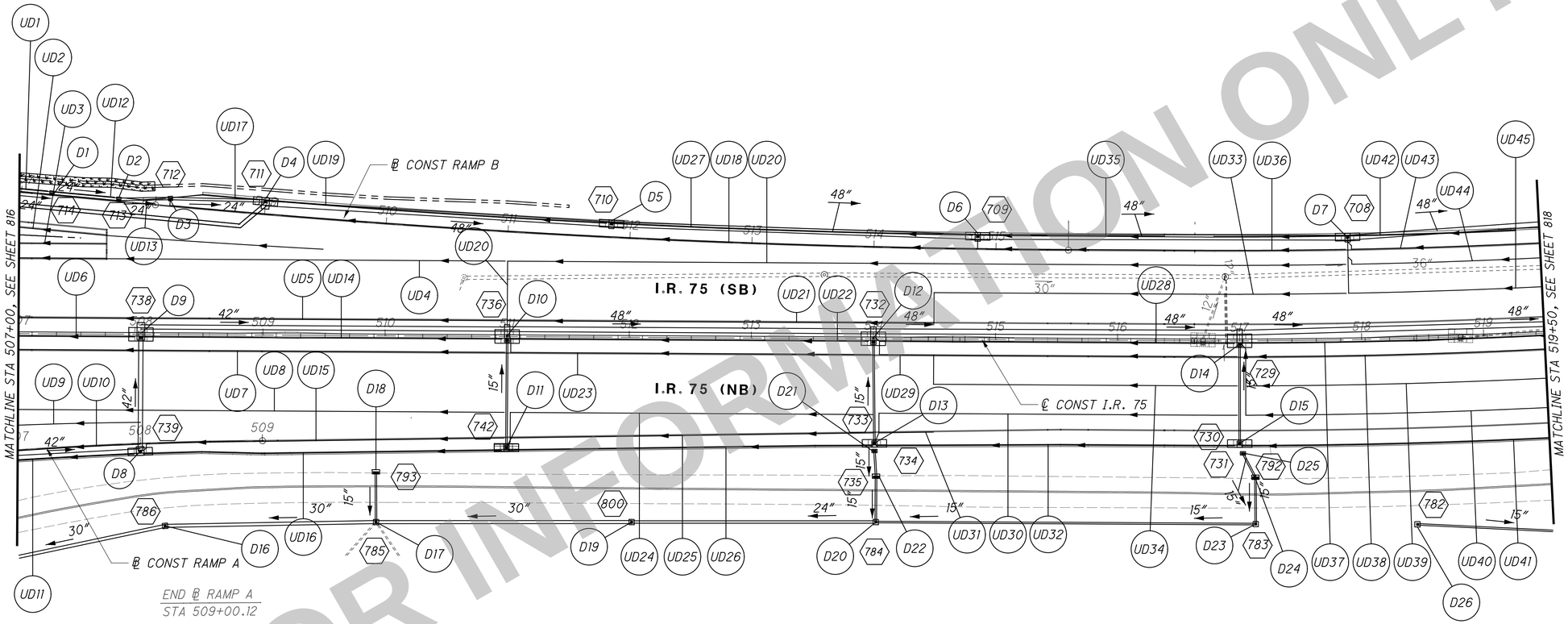
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DRAINAGE PLANS - I.R. 75
STA 494+50 TO STA 507+00

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FOR INFORMATION ONLY

CROSS REFERENCES	
SHEET NO	DESCRIPTION
37 - 58	GENERAL NOTES
299 - 341	ESTIMATED QUANTITIES
821 - 860	STORM SEWER PROFILES
861	CULVERT DETAIL
862 - 868	STORMWATER DETENTION SYSTEM DETAILS
883 - 933	PUMP STATION PLANS

HORIZONTAL SCALE IN FEET
0 25 50 100

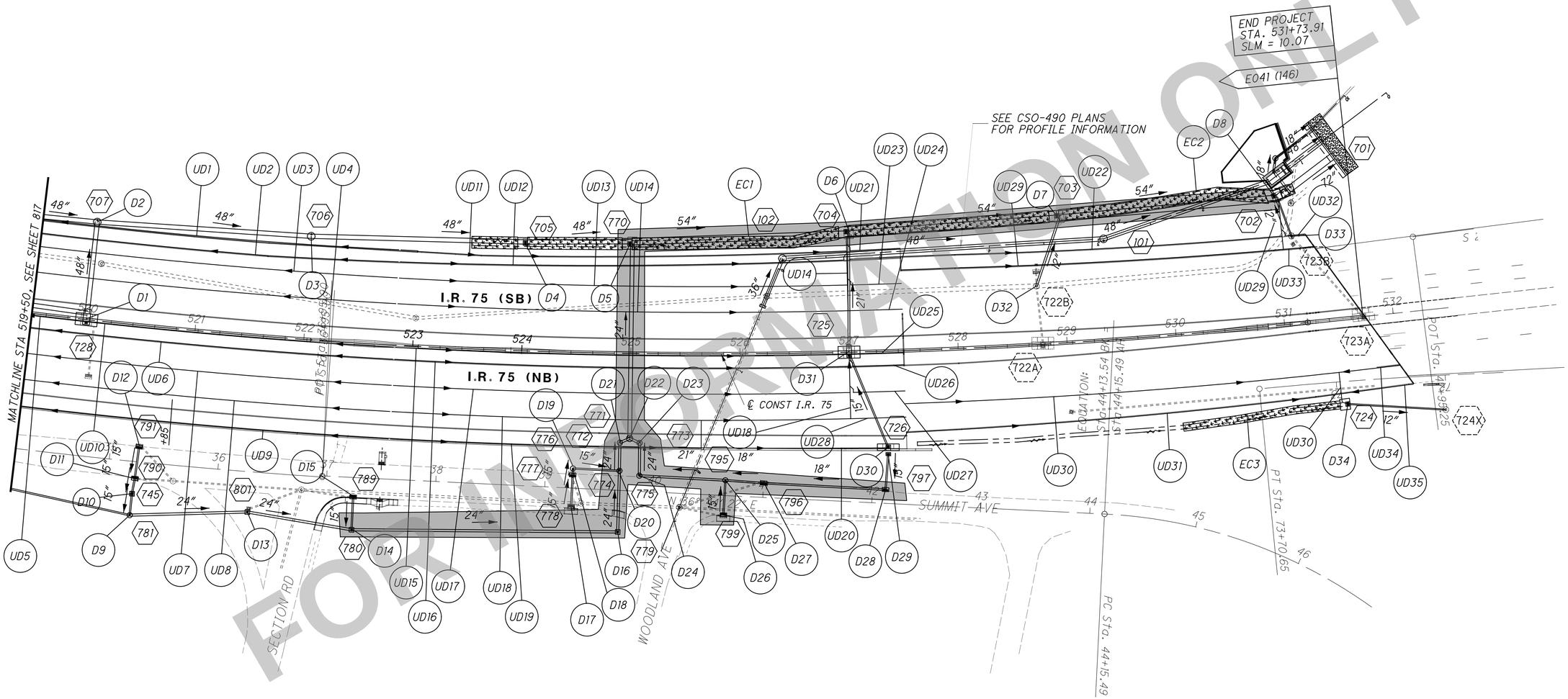
CALCULATED CT
CHECKED SSK

DRAINAGE PLANS - I.R. 75
STA 507+00 TO STA 519+50

HAM-75-7.85

817
2017

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FOR INFORMATION ONLY

CROSS REFERENCES	
SHEET NO	DESCRIPTION
37 - 58	GENERAL NOTES
299 - 341	ESTIMATED QUANTITIES
821 - 860	STORM SEWER PROFILES
861	CULVERT DETAIL
862 - 868	STORMWATER DETENTION SYSTEM DETAILS
883 - 933	PUMP STATION PLANS

LEGEND

DRAINAGE ALTERNATE 1

NOTE: SHEETS 818 AND 818A ARE IDENTICAL WITH THE EXCEPTION OF THE SHADED DRAINAGE ALTERNATE

HORIZONTAL SCALE IN FEET
0 25 50 100

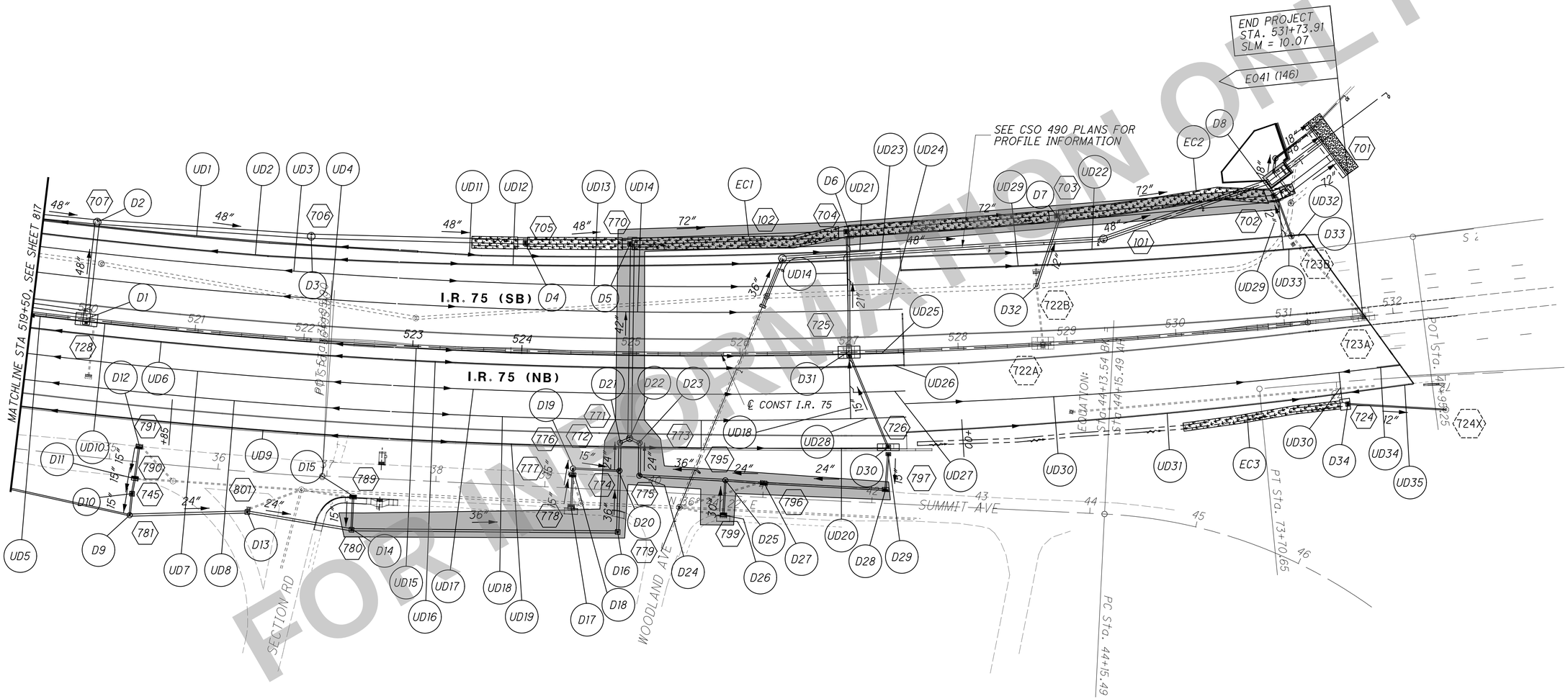
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CHECKED SSK

DRAINAGE PLANS - I.R. 75
STA 519+50 TO STA 531+73.91

HAM-75-7.85

818
2017

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CROSS REFERENCES	
SHEET NO	DESCRIPTION
37 - 58	GENERAL NOTES
299 - 341	ESTIMATED QUANTITIES
821 - 860	STORM SEWER PROFILES
861	CULVERT DETAIL
862 - 868	STORMWATER DETENTION SYSTEM DETAILS
883 - 933	PUMP STATION PLANS

LEGEND

DRAINAGE ALTERNATE 2

NOTE: SHEETS 818 AND 818A ARE IDENTICAL WITH THE EXCEPTION OF THE SHADED DRAINAGE ALTERNATE

HORIZONTAL SCALE IN FEET
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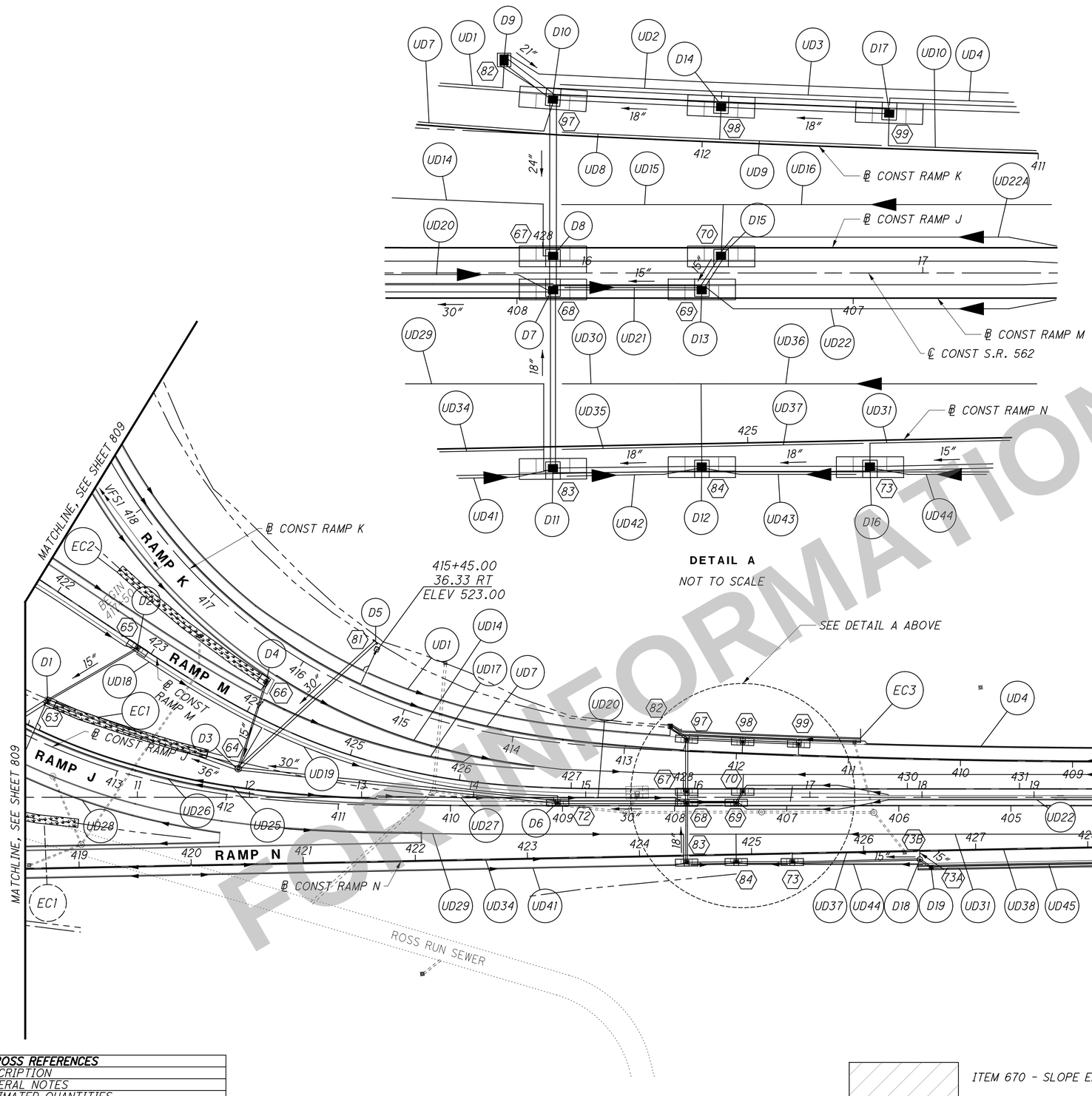
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DRAINAGE PLANS - I.R. 75
STA 519+50 TO STA 531+73.91

HAM-75-7.85

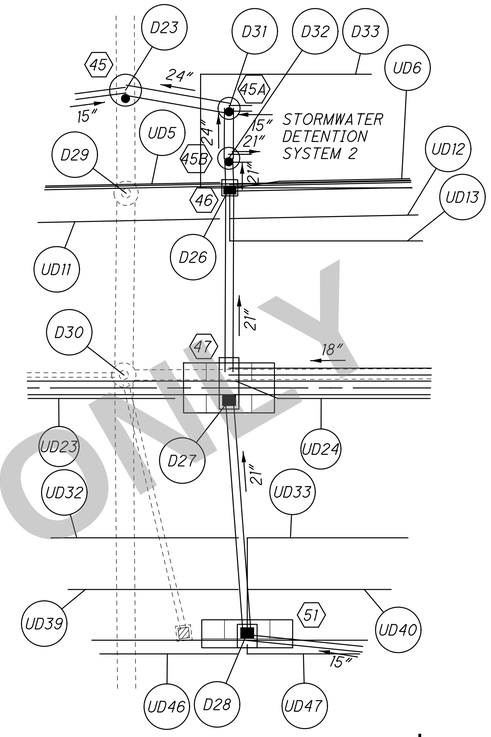
818A
2017

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DETAIL A

NOT TO SCALE



DETAIL B

NOT TO SCALE

STORMWATER DETENTION SYSTEM 2

SEE DETAIL B ABOVE

SEE DETAIL A ABOVE

℄ CONST S.R. 562

MATCHLINE STA 23+00, SEE SHEET 820

CROSS REFERENCES	
SHEET NO	DESCRIPTION
37 - 58	GENERAL NOTES
299 - 341	ESTIMATED QUANTITIES
821 - 860	STORM SEWER PROFILES
861	CULVERT DETAIL
862 - 868	STORMWATER DETENTION SYSTEM DETAILS
883 - 933	PUMP STATION PLANS

ITEM 670 - SLOPE EROSION PROTECTION

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED RSH
CHECKED DLR

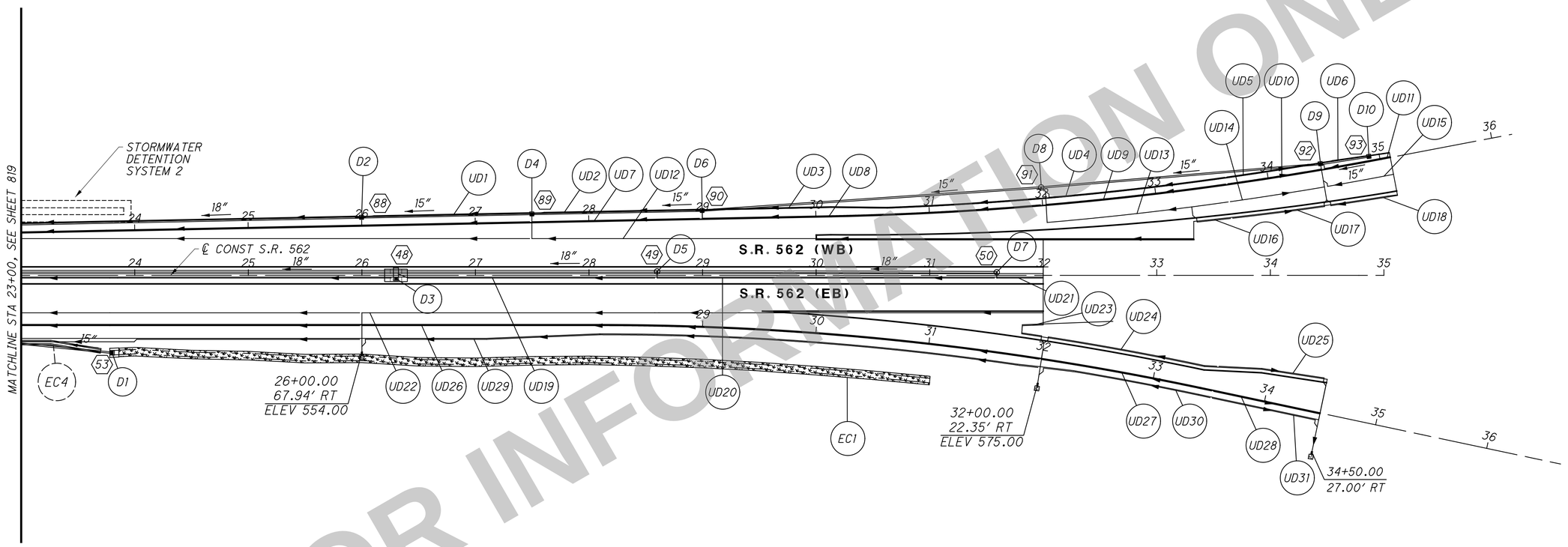
DRAINAGE PLANS - S.R. 562
STA 10+00 TO STA 23+00

HAM-75-7.85

819
2017

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CROSS REFERENCES	
SHEET NO	DESCRIPTION
37 - 58	GENERAL NOTES
299 - 341	ESTIMATED QUANTITIES
821 - 860	STORM SEWER PROFILES
861	CULVERT DETAIL
862 - 868	STORMWATER DETENTION SYSTEM DETAILS
883 - 933	PUMP STATION PLANS

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED RSH
CHECKED DLR

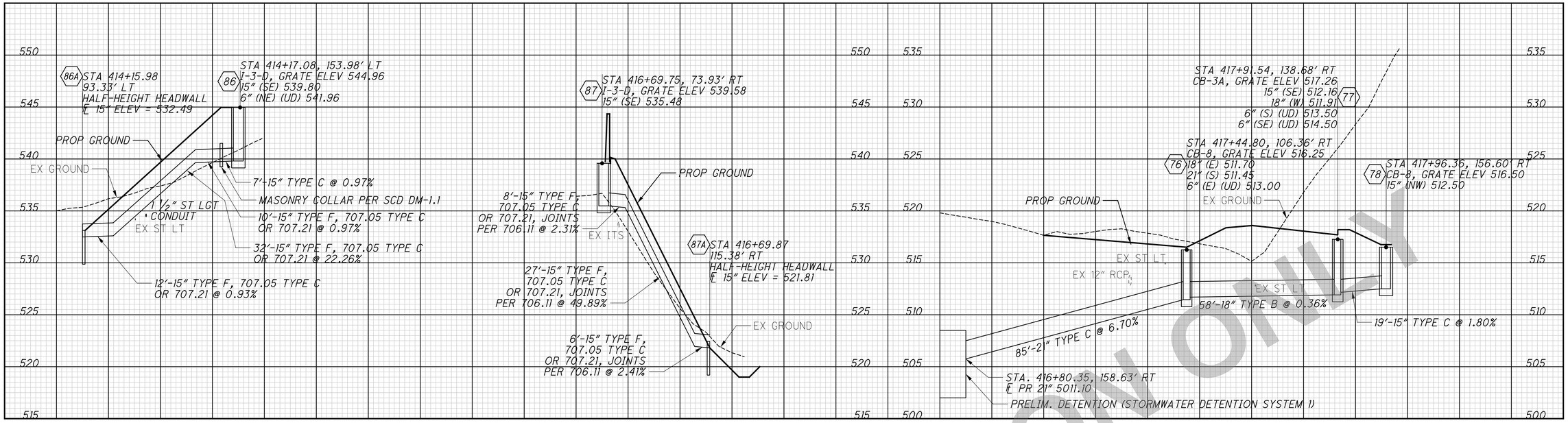
DRAINAGE PLANS - S.R. 562
STA 23+00 TO STA 35+00

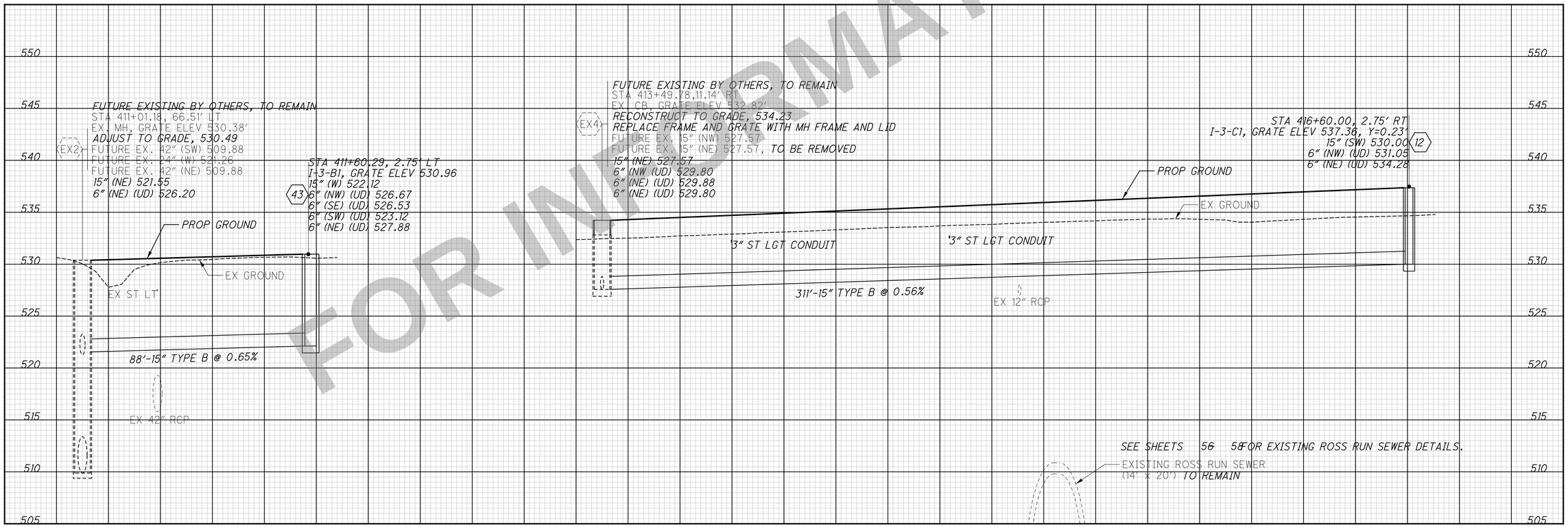
HAM-75-7.85

820
2017

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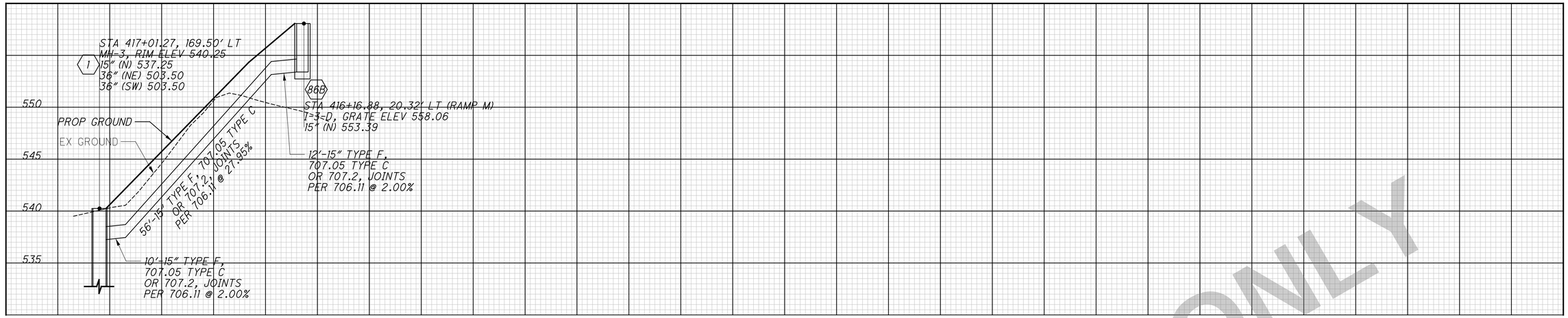
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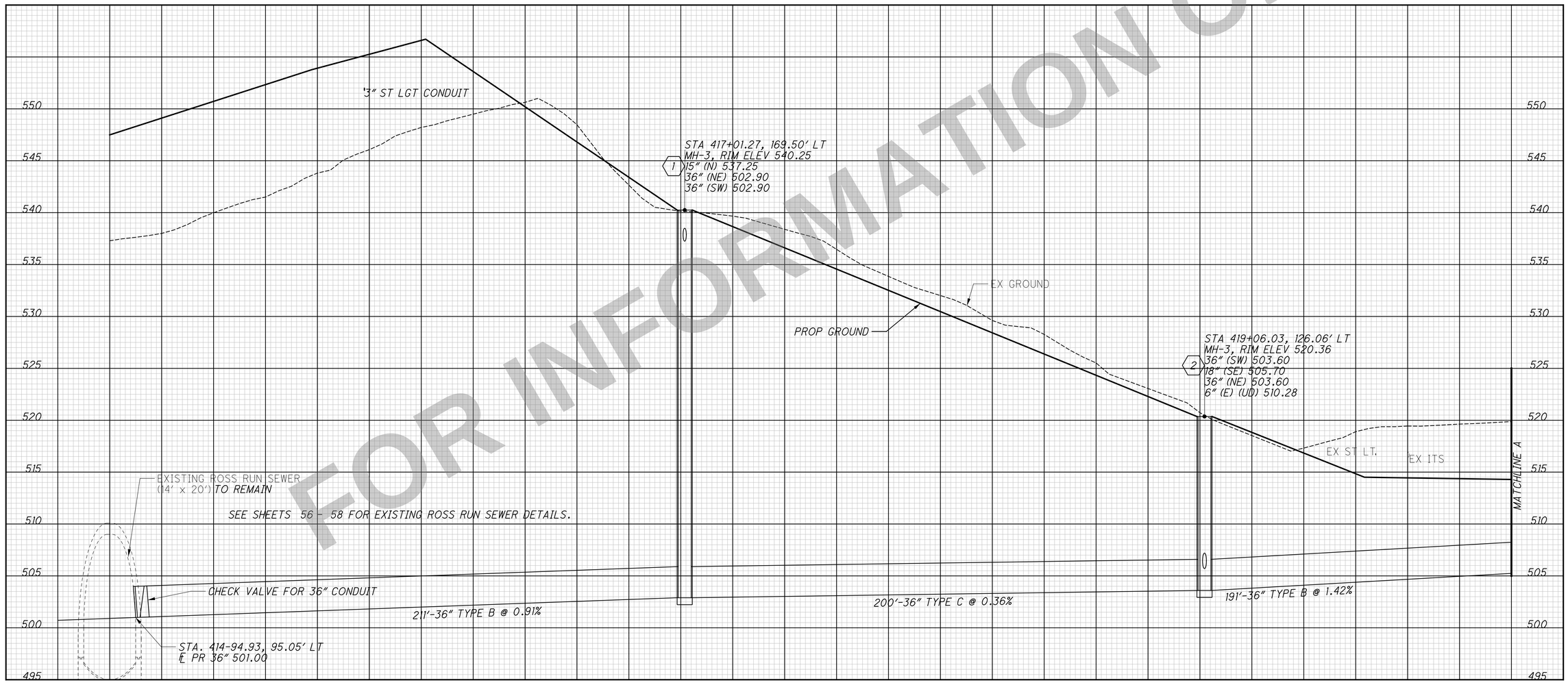
STORM SEWER PROFILES

HAM-75-7.85

821
2017

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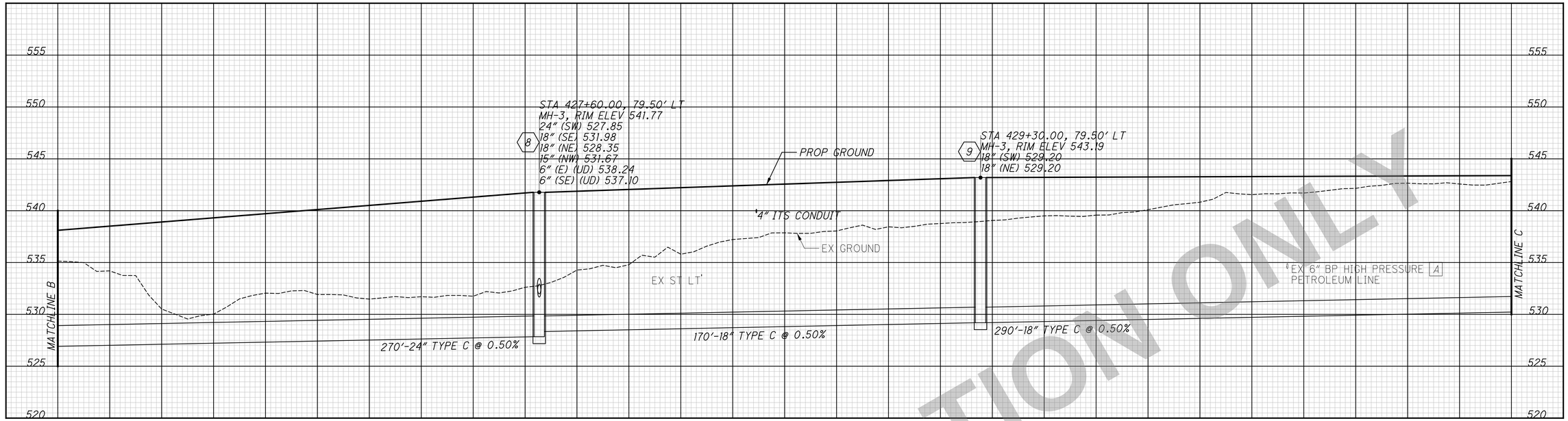
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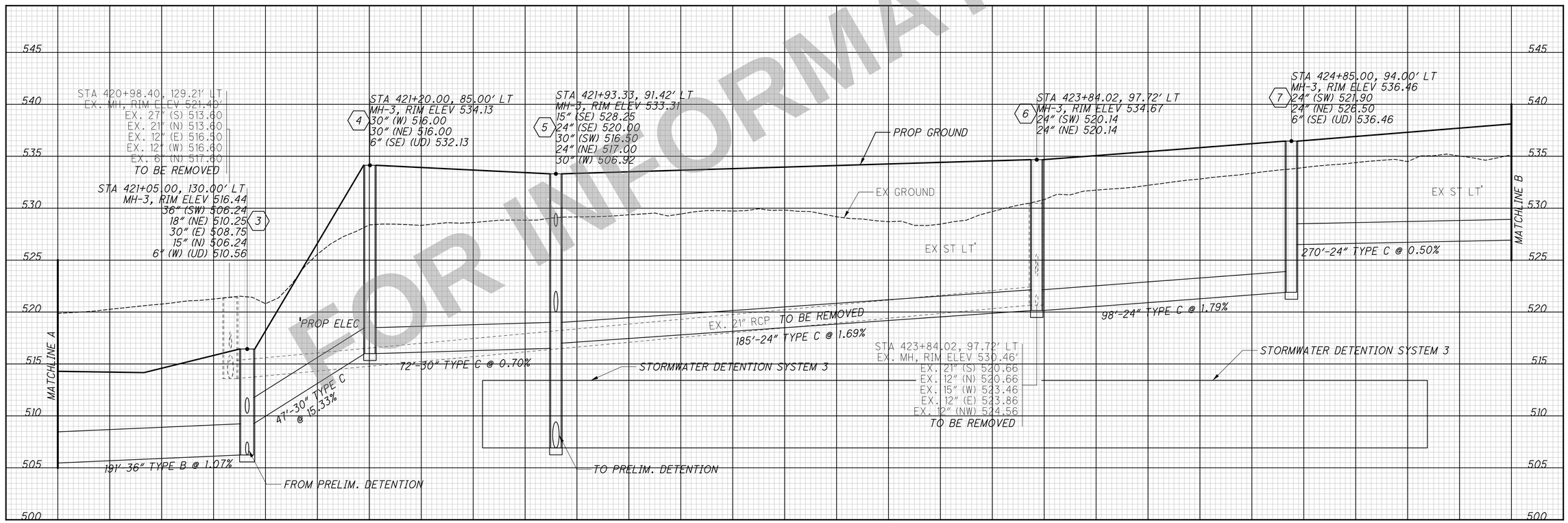
HAM-75-7.85

822
2017

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A PIPE DEPTH CONFIRMED PER SUE IN MAY, 2013





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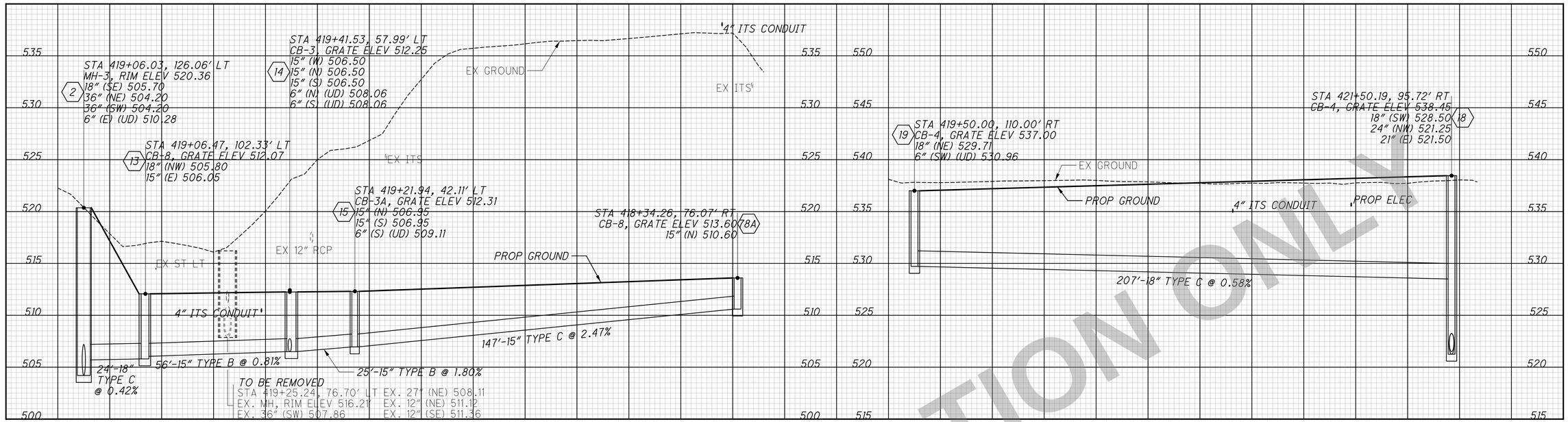
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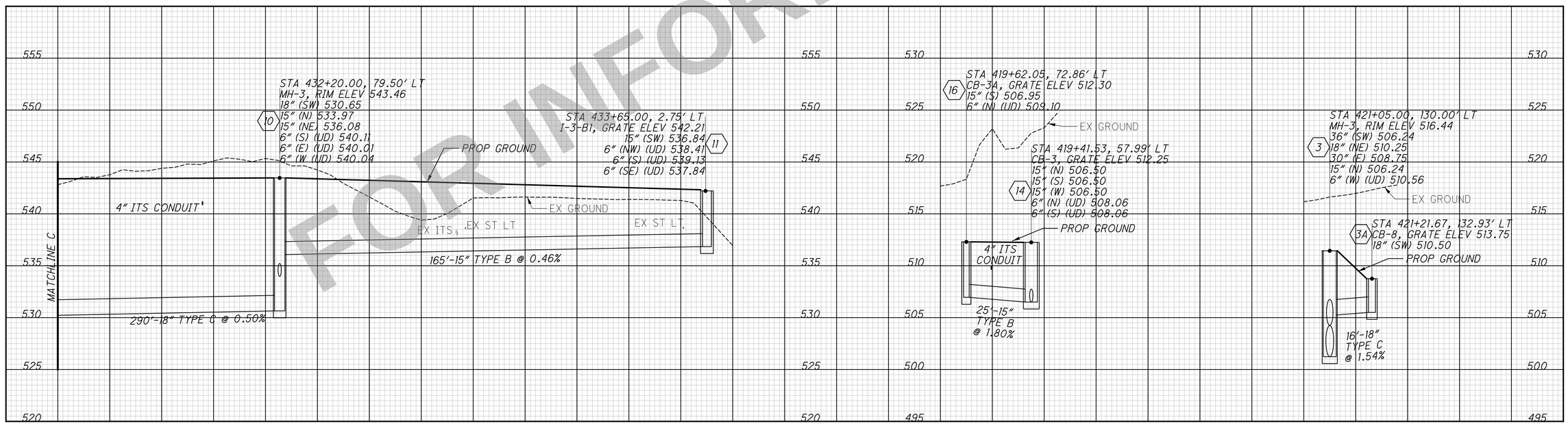
STORM SEWER PROFILES

HAM-75-7.85

823
2017

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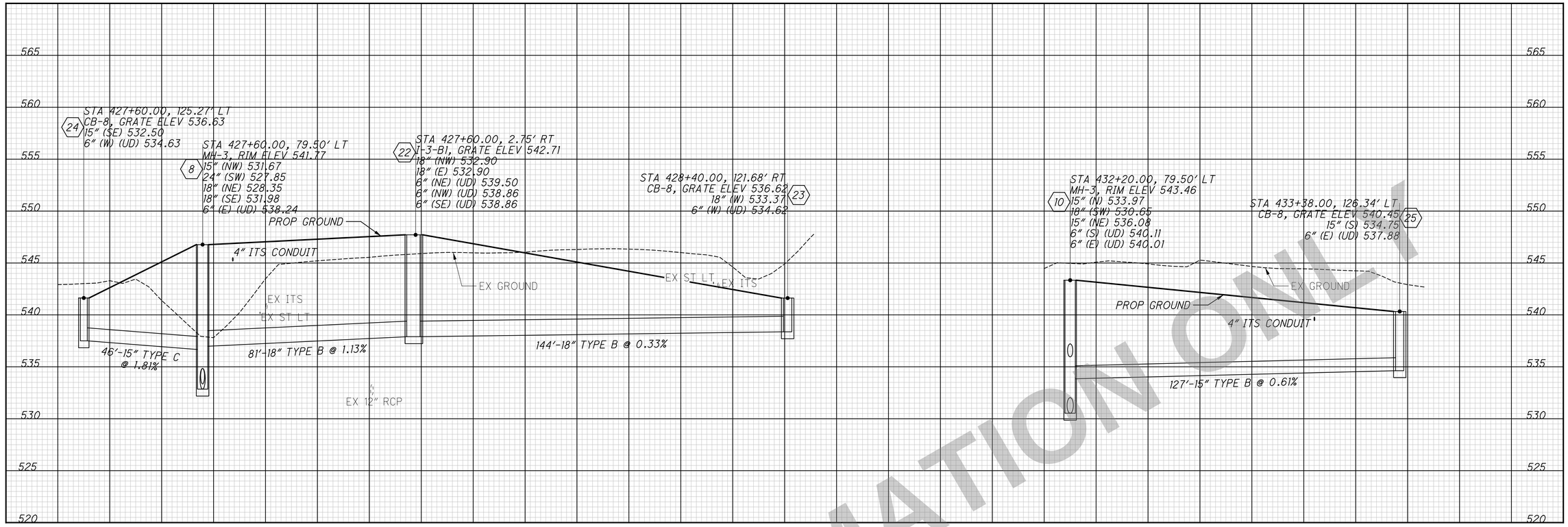
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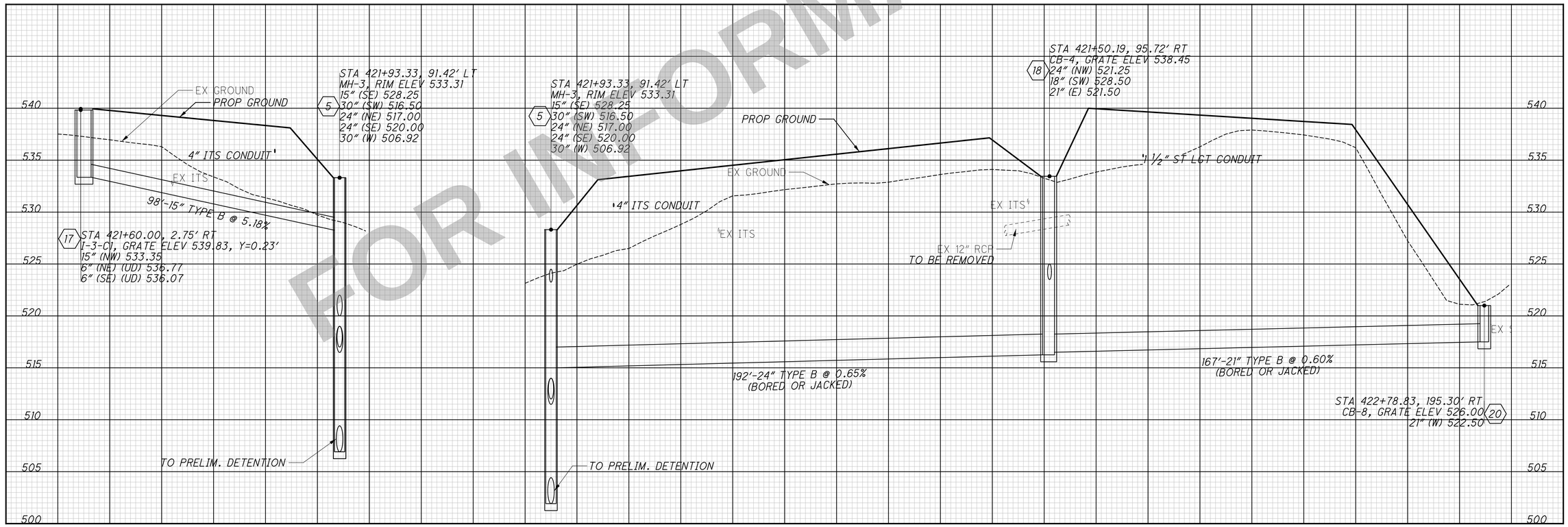
STORM SEWER PROFILES

HAM-75-7.85

824
2017

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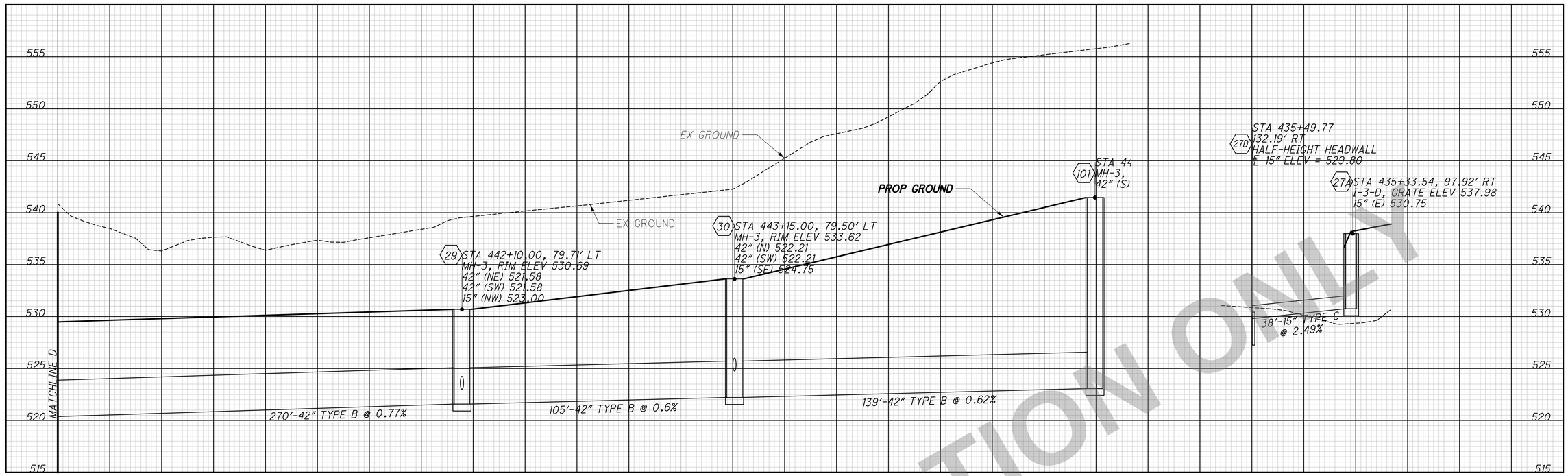
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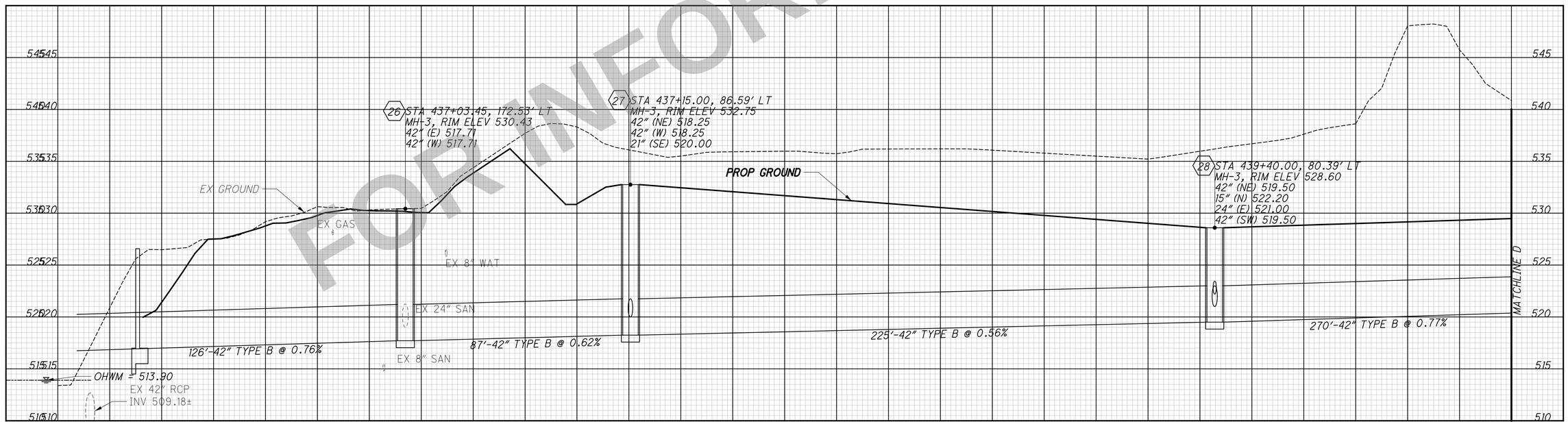
STORM SEWER PROFILES

HAM-75-7.85

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2017

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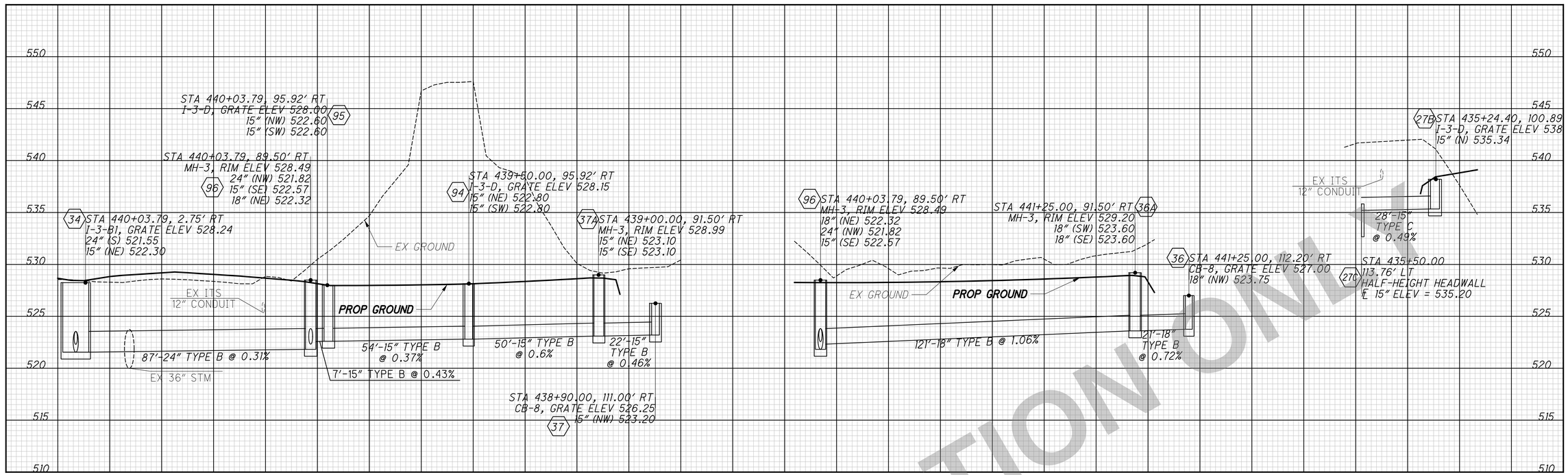
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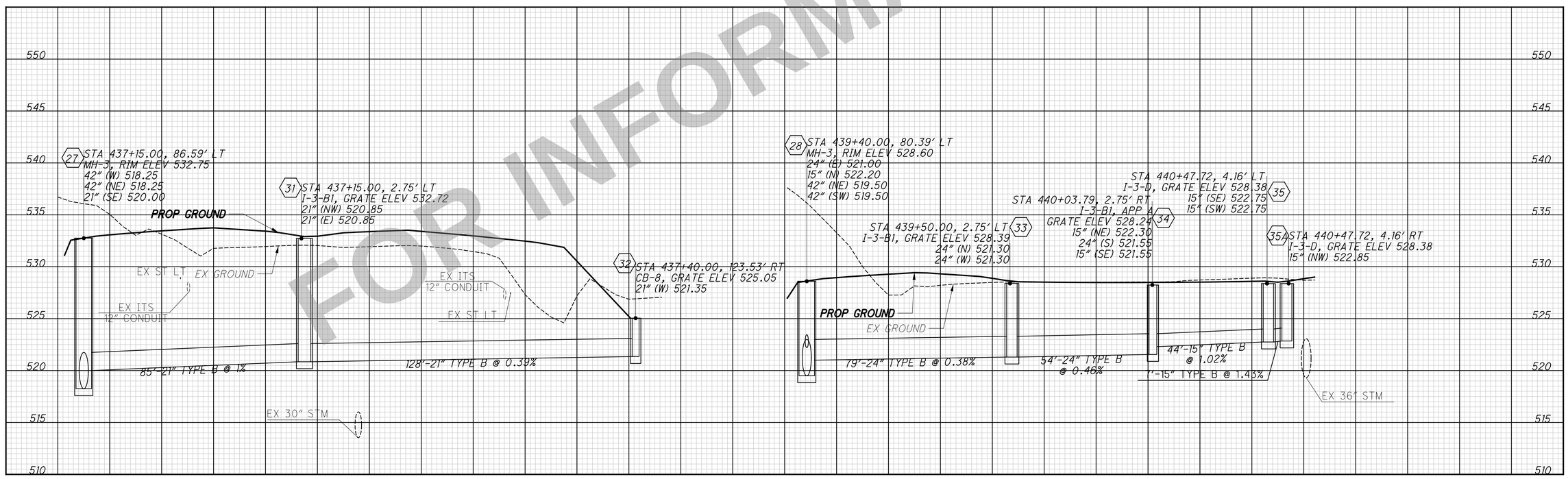
HAM-75-7.85

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2017

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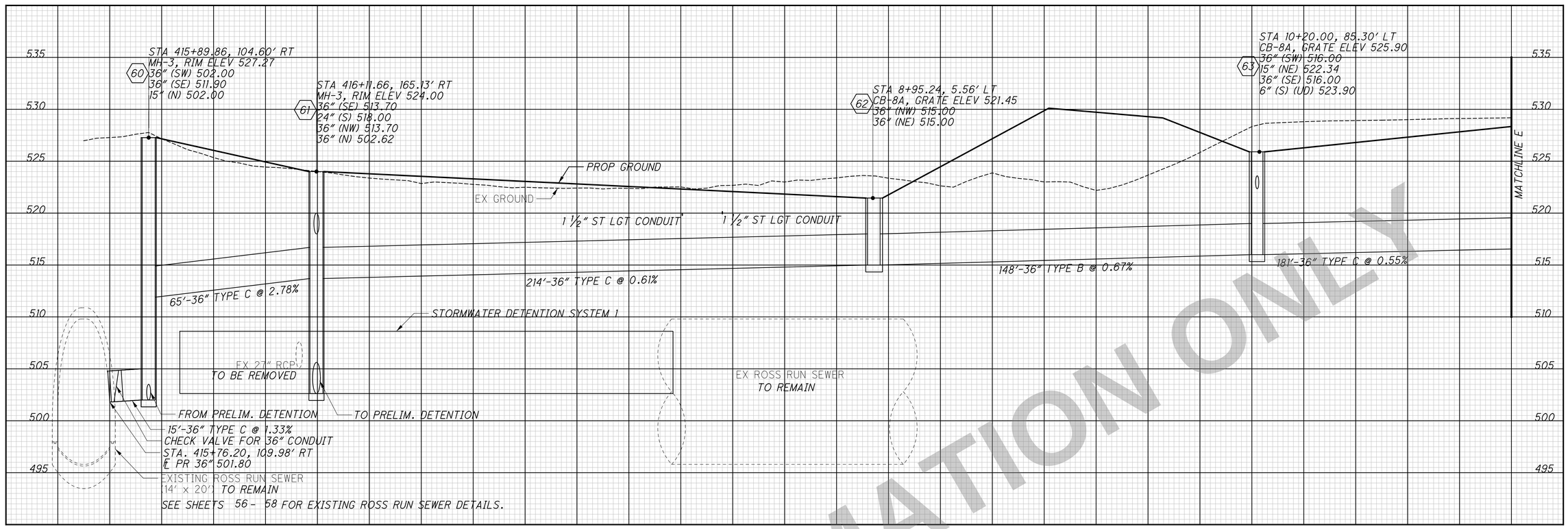
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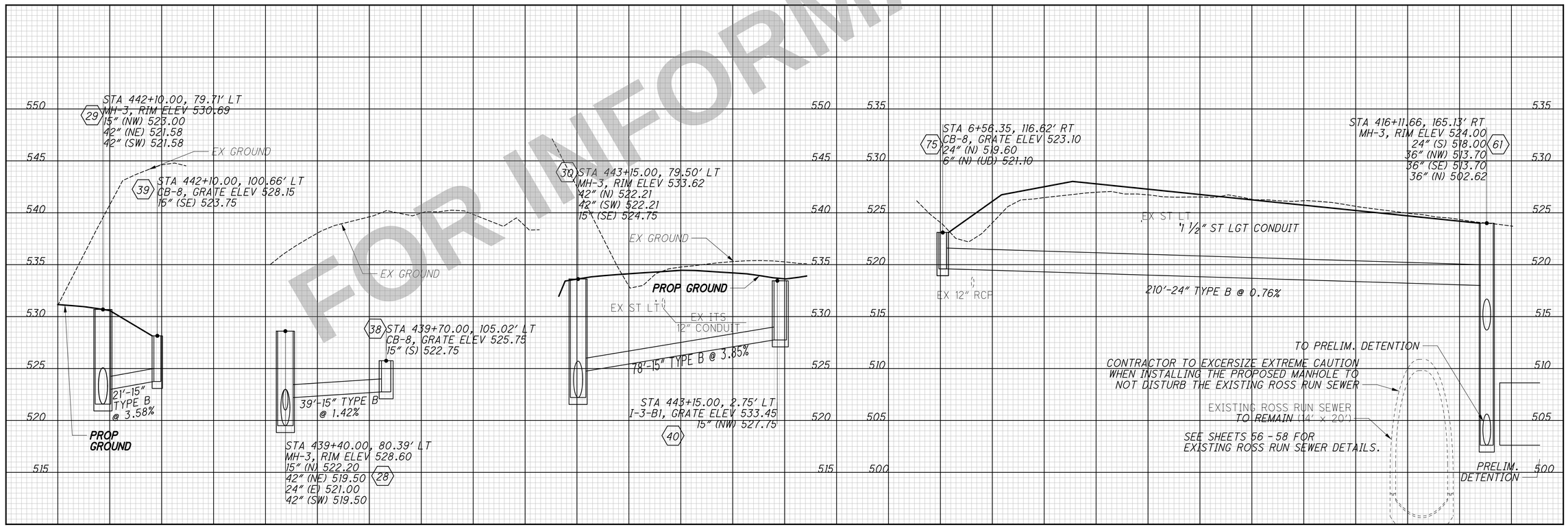
STORM SEWER PROFILES

HAM-75-7.85

827
2017

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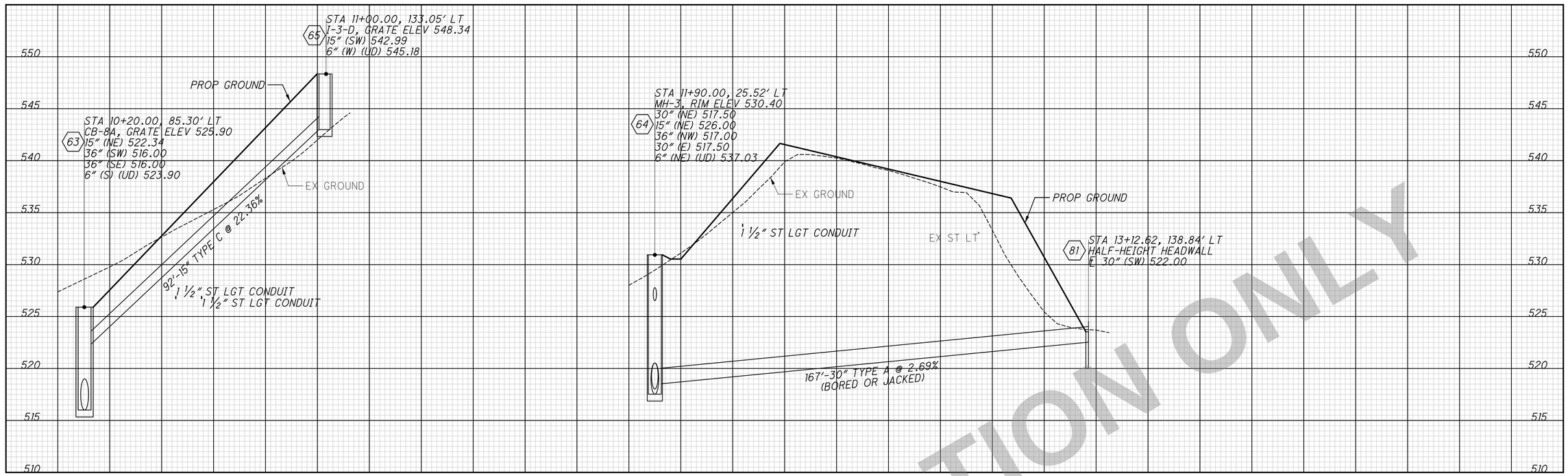
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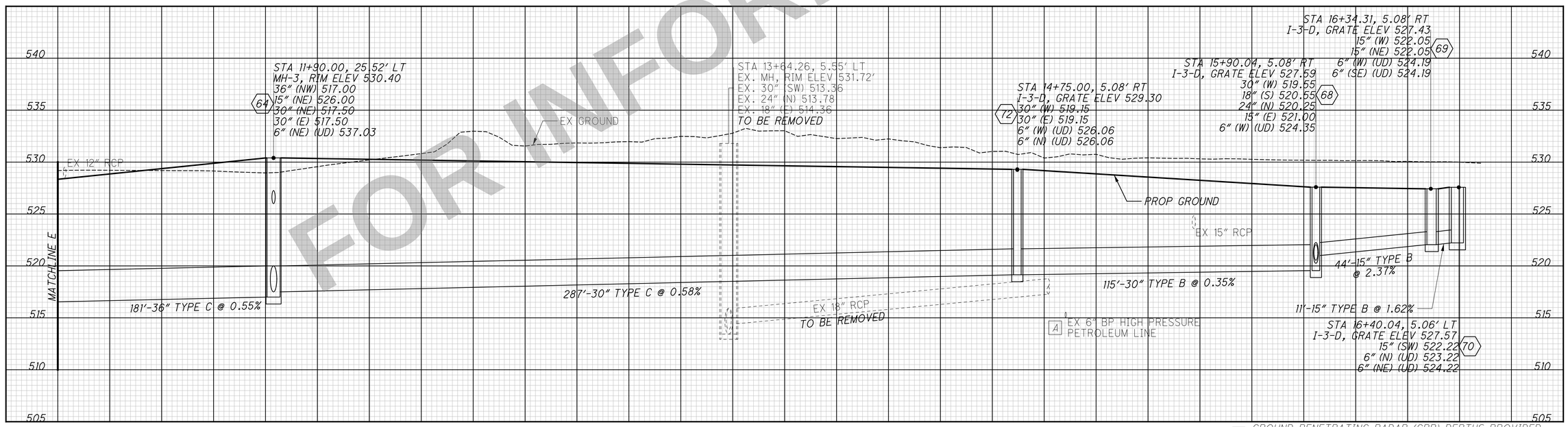
STORM SEWER PROFILES

HAM-75-7.85

828
2017

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A GROUND PENETRATING RADAR (GPR) DEPTHS PROVIDED BY BP ON 5/27/14 ARE APPROXIMATE BASED ON FIELD OBSERVATIONS.

ACTUAL PIPE ELEVATIONS SHOWN BASED ON EXISTING PLANS PROVIDED BY BP ON 9/11/14.

FOR INFORMATION ONLY

CALCULATED RSH
CHECKED EDK

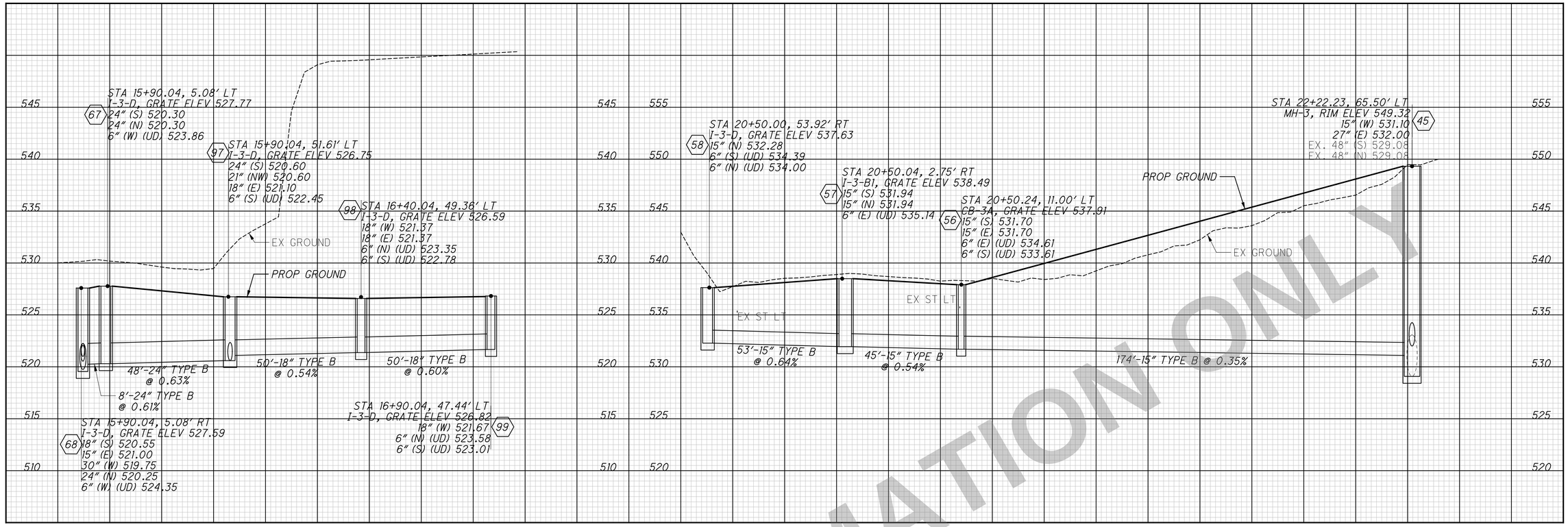
STORM SEWER PROFILES

HAM-75-7.85

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2017

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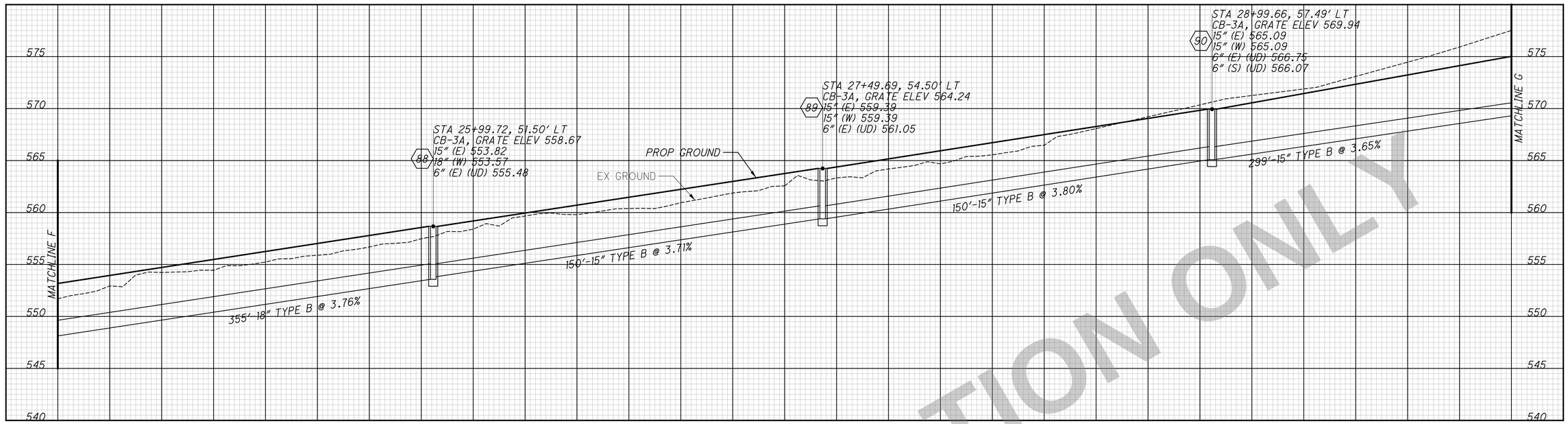
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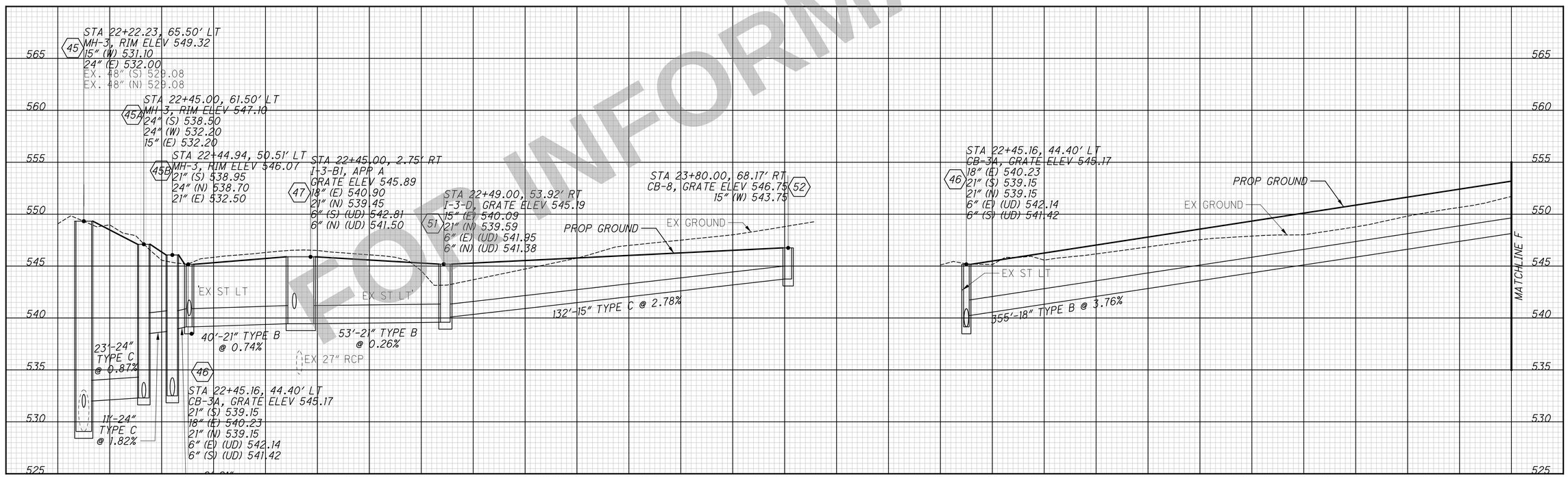
STORM SEWER PROFILES

HAM-75-7.85

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2017

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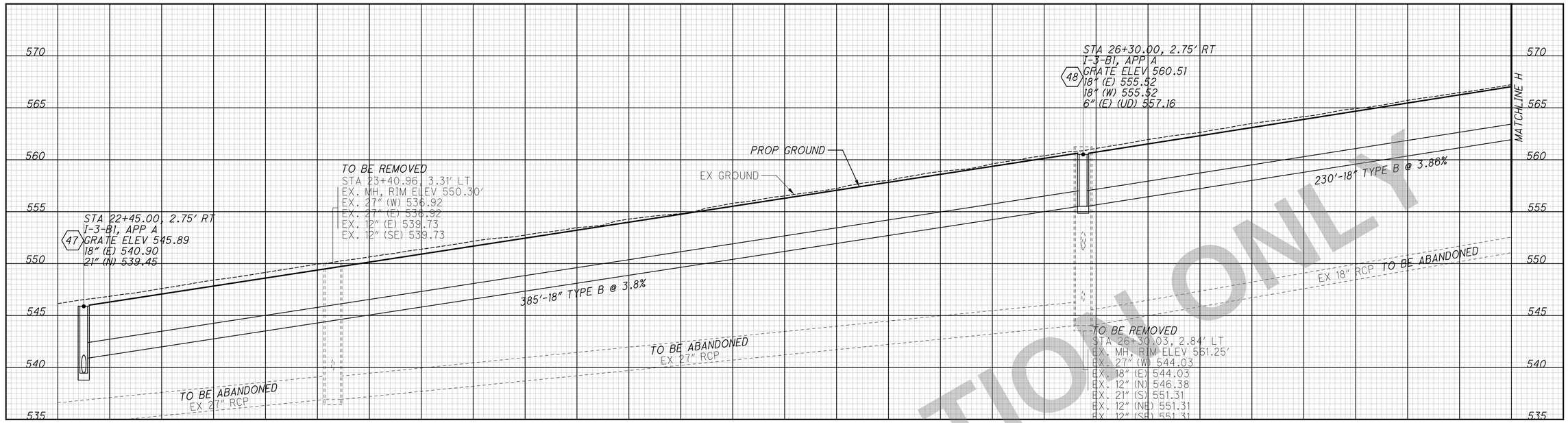
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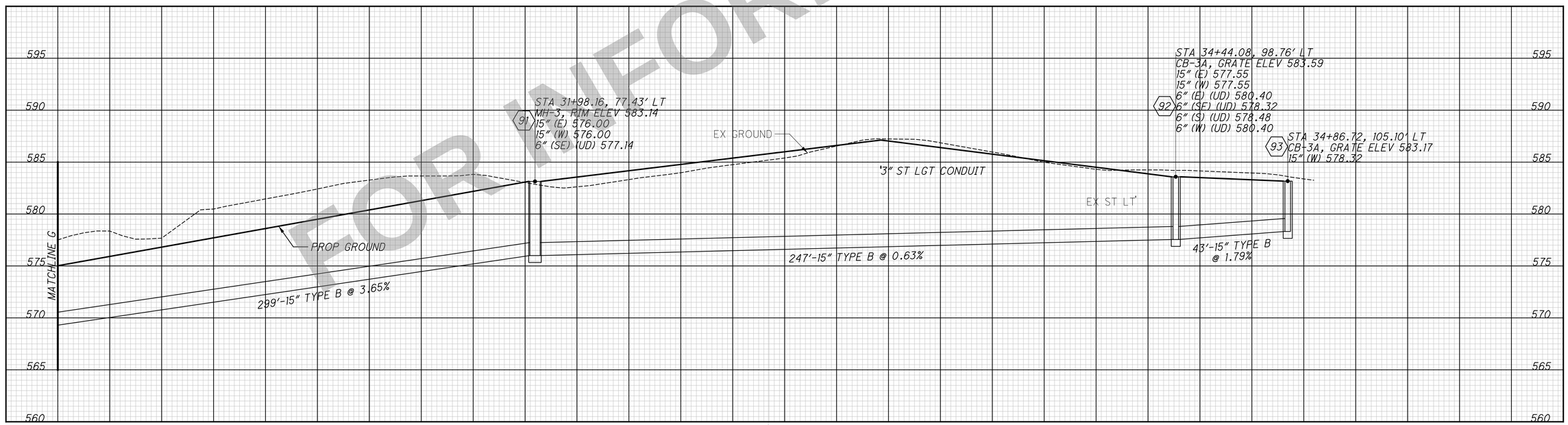
STORM SEWER PROFILES

HAM-75-7.85

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2017

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FOR INFORMATION ONLY

CALCULATED RSH
CHECKED EDK

STORM SEWER PROFILES

HAM-75-7.85

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2017

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CALCULATED RSH
CHECKED EDK

STORM SEWER PROFILES

HAM-75-7.85

833
2017

FOR INFORMATION ONLY

590
585
580
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570
565
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555

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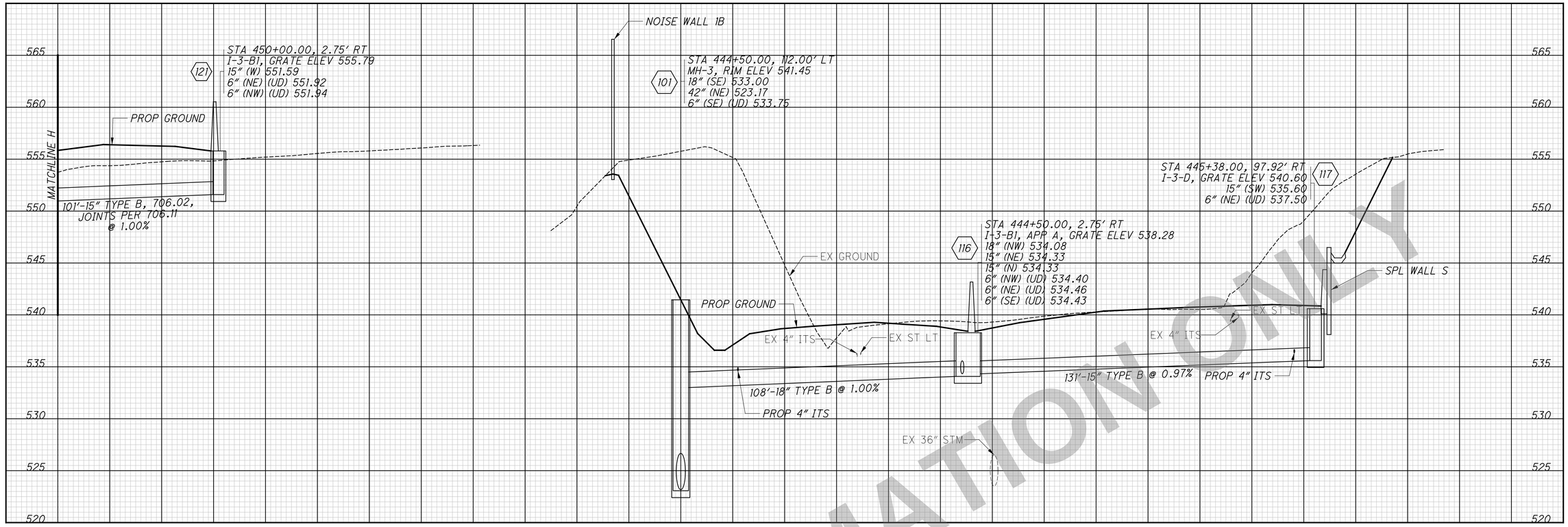
49 STA 28+60.00, 3.50' LT
MH-3, RIM ELEV 569.50
18" (E) 564.40
18" (W) 564.40
6" (S) (UD) 566.15

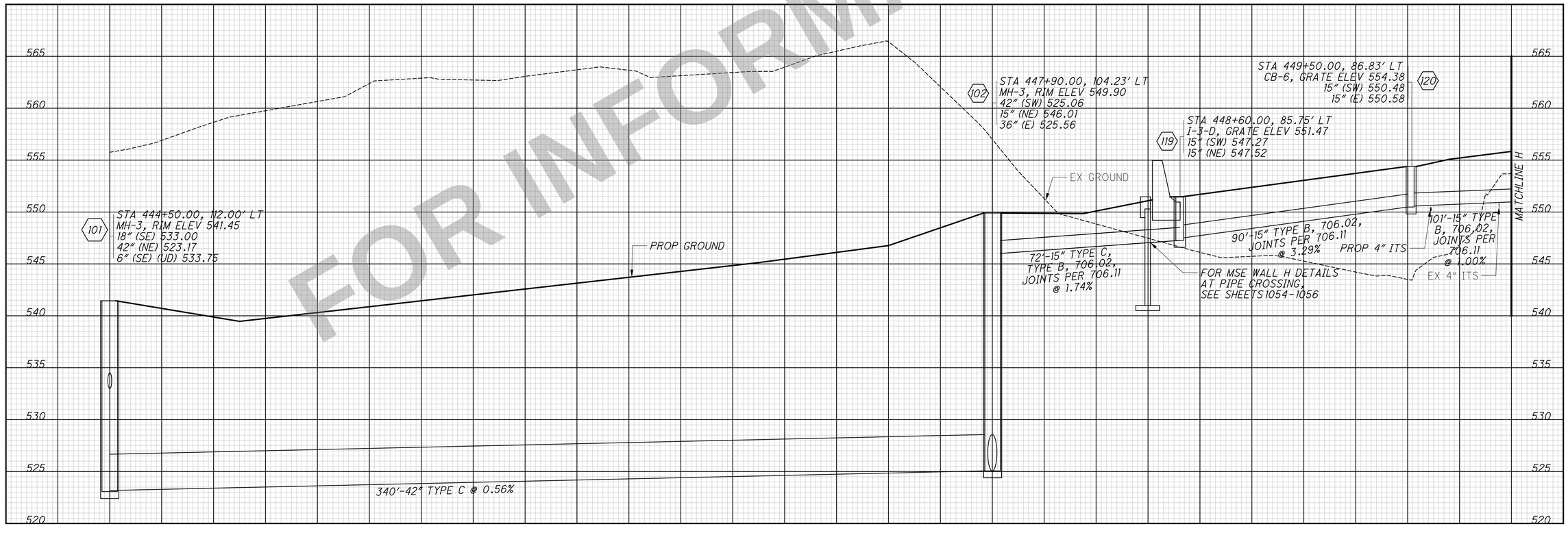
TO BE REMOVED
STA 29+19.98, 2.83' RT
EX MH-1, GRATE ELEV 571.95'
18" RCP W 556.44
12" RCP E 556.44
12" RCP N 558.04
15" RCP S 558.04
12" RCP NE 563.04

EX GROUND
PROP GROUND
EX ST LT

299'-18" TYPE B @ 3.25%
230'-18" TYPE B @ 3.86%
EX 12" RCP
EX 12" RCP
EX 18" RCP TO BE ABANDONED

50 STA 31+59.10, 2.75' LT
MH-3, RIM ELEV 581.08
ADJUST TO GRADE
RIM ELEV 580.82
EX. 18" (W) 574.13, TO BE R
EX. 18" (E) 574.33
18" (W) 574.13
6" (S) (UD) 577.47





FOR INFORMATION ONLY

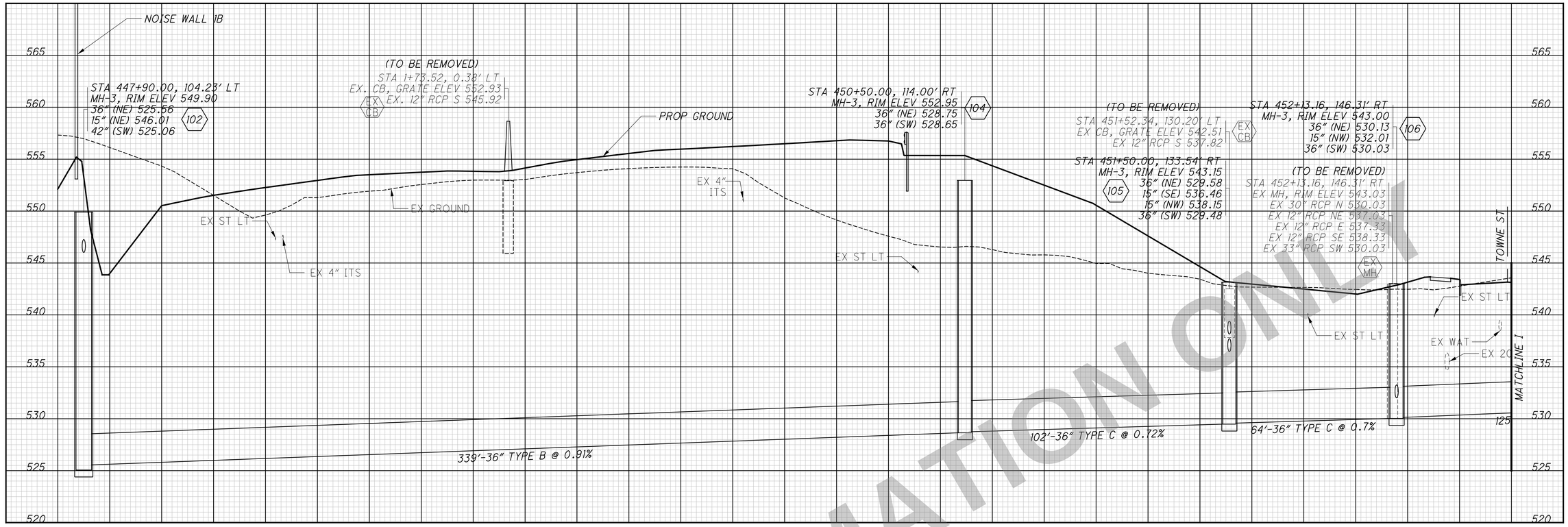
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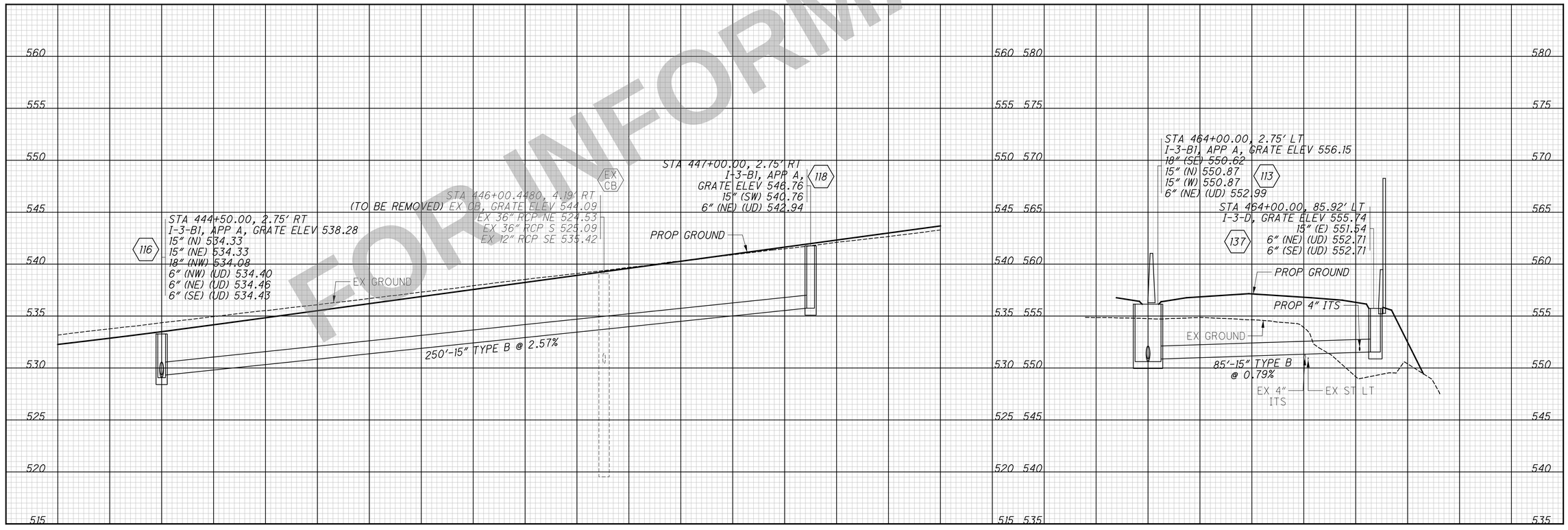
STORM SEWER PROFILES

HAM-75-7.85

834
2017

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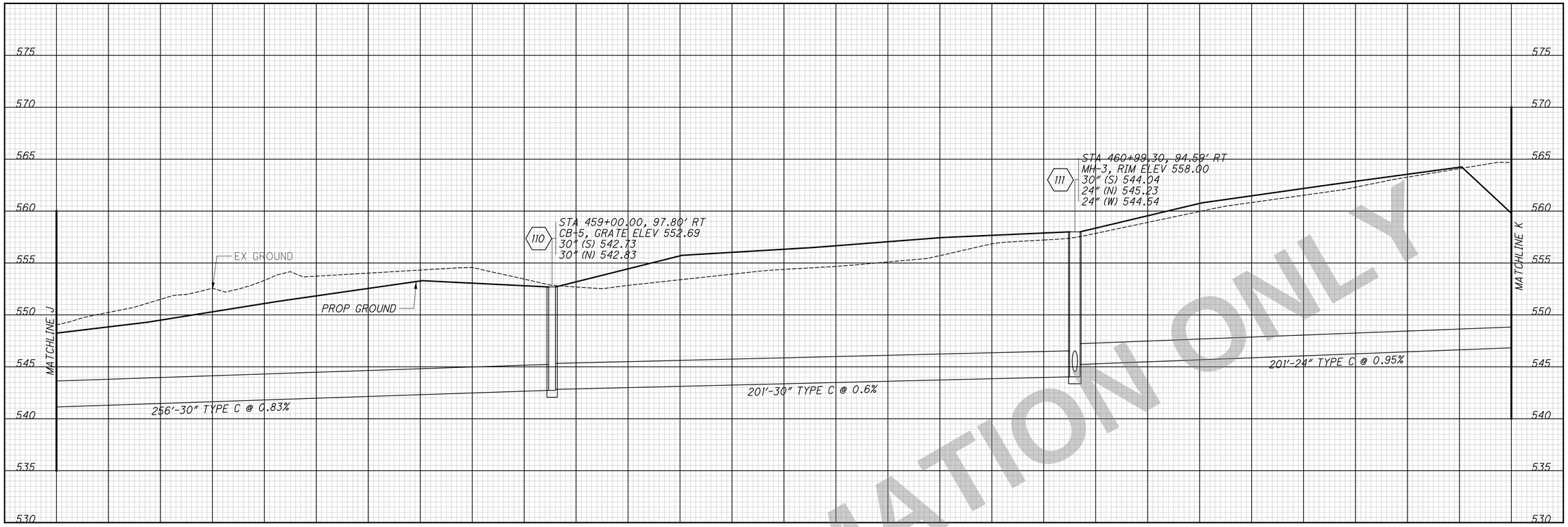
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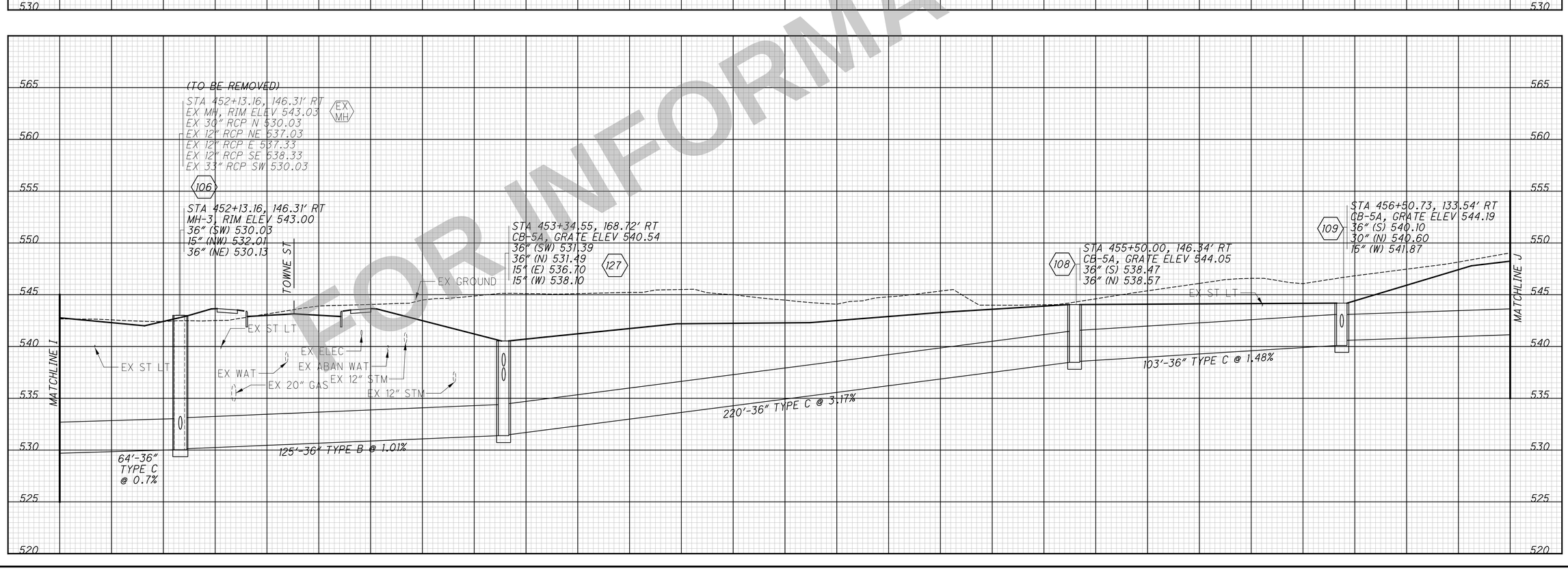
STORM SEWER PROFILES

HAM-75-7.85

835
2017

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FOR INFORMATION ONLY

CALCULATED ECH
CHECKED SSK

STORM SEWER PROFILES

HAM-75-7.85

836
2017

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FOR INFORMATION ONLY

STA 0+11.51, 0.00' RT
EX. MH, GRATE ELEV 543.03
EX. 30" RCP N 530.03
EX. 12" RCP NE 537.03
EX. 12" RCP E 537.33
EX. 12" RCP SE 538.33
EX. 33" RCP SW 530.03
(TO BE REMOVED)

STA 452+13.16, 146.31' RT
MH-3, RIM ELEV 543.00
15" (NW) 532.01
36" (NE) 530.13
36" (SW) 530.03

PROP GROUND

STA 18+00.00, 16.00' LT
CB-3A, GRATE ELEV 541.09
15" (N) 532.69
15" (SE) 532.59

TOWNE ST

MSE WALL II

EX. 12" RCP

EX ST LT

EX GROUND

29'-15" TYPE C @ 2.02%

31'-15" TYPE B @ 1.28%

STA 18+00.00, 16.00' RT
CB-3A, GRATE ELEV 541.09
15" (S) 533.09

STA 453+14.15, 97.13' RT
I-3-D, GRATE ELEV 560.59
15" (E) 555.63

MASONRY COLLAR PER SCD DM-1.1

PROP GROUND

5'-15" TYPE C @ 2.80%

11'-15" TYPE F,707.05 TYPE C, OR 707.21 @ 2.80%

INV ELEV 555.49

56'-15" TYPE F, 707.05 TYPE C, OR 707.21 @ 30.11%

INV ELEV 538.29

EX 12" STM

EX 33" STM

11'-15" TYPE F, 707.05 TYPE C, OR 707.21 @ 2.64%

STA 453+34.55, 168.72' RT
CB-5A, GRATE ELEV 540.54
15" (W) 538.00
36" (N) 531.49
36" (SW) 531.39
15" (SE) 536.70

EX GROUND

EX ST LT

EX 12" STM

EX 12" STM

103'-15" TYPE C @ 6.51%

STA 453+37.16, 272.54' RT
EX MH, RIM ELEV 550.90
EX 12" RCP N 545.11
EX 12" RCP E 543.41
EX 12" RCP W 543.41
15" (NW) 543.41

STA 466+16.59, 85.92' RT
I-3-D, GRATE ELEV 561.48
15" (W) 556.88
6" (NE) (UD) 558.44
6" (NW) (UD) 557.46

EX GROUND

STA 465+80.00, 2.75' LT
I-3-B1, APP A
GRATE ELEV 561.06
15" (S) 556.27
15" (E) 556.37

PROP GROUND

EX ST LT

EX 4" ITS

91'-15" TYPE B @ 0.56%

PROP 4" ITS

EX 12" STM

MATCHLINE K

STA 463+00.00, 103.00' RT
CB-5, GRATE ELEV 552.44
24" (S) 547.13
18" (NW) 547.63

EX GROUND

PROP GROUND

EX 4" ITS

EX ST LT

141'-18" TYPE B @ 2.12%

PROP 4" ITS

STA 464+00.00, 2.75' LT
I-3-B1, APP A
GRATE ELEV 556.15
18" (SE) 550.62
15" (N) 550.87

(TO BE REMOVED)
STA 465+18.94, 2.80' LT
EX CB, GRATE ELEV 558.09
EX 12" RCP E 549.68
EX 12" RCP N 549.68
EX 15" RCP S 549.68

STA 465+80.00, 2.75' LT
I-3-B1, APP A
GRATE ELEV 561.06
15" (S) 556.27
15" (E) 556.37

180'-15" TYPE B @ 3%

EX 12" STM

EX 15" STM

STA 451+66.45, 97.75' RT
I-3-D, GRATE ELEV 560.18
15" (SE) 555.18

STA 451+52.34, 130.20' RT
EX CB, GRATE ELEV 542.51
12" RCP S 537.82
(TO BE REMOVED)

STA 451+50.00, 133.54' RT
MH-3, RIM ELEV 543.15
15" (NW) 538.15
36" (SW) 529.48
36" (NE) 529.58
15" (SE) 536.46

PROP 4" ITS

STA 451+50.00, 153.60' RT
CB-5, GRATE ELEV 540.86
15" (NW) 536.86

39'-15" TYPE F, 707.05 TYPE C OR 707.21 @ 43.91%

EX GROUND

PROP GROUND

20'-15" TYPE C @ 1.99%

EX 33" STM

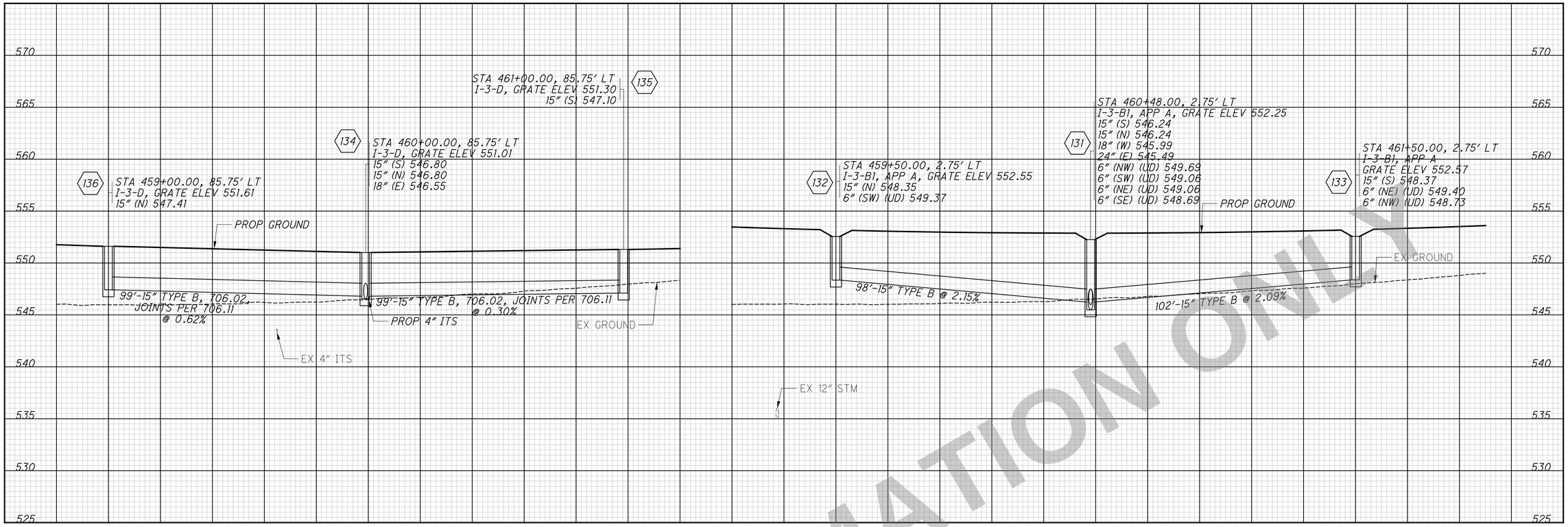
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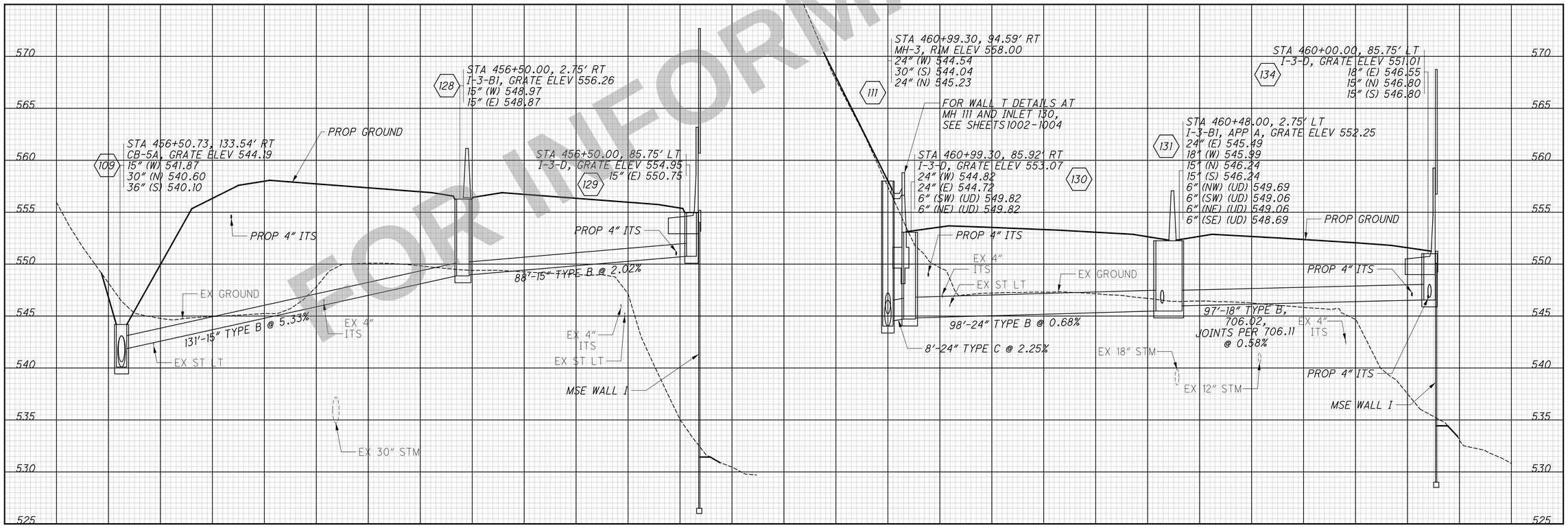
STORM SEWER PROFILES

HAM-75-7.85

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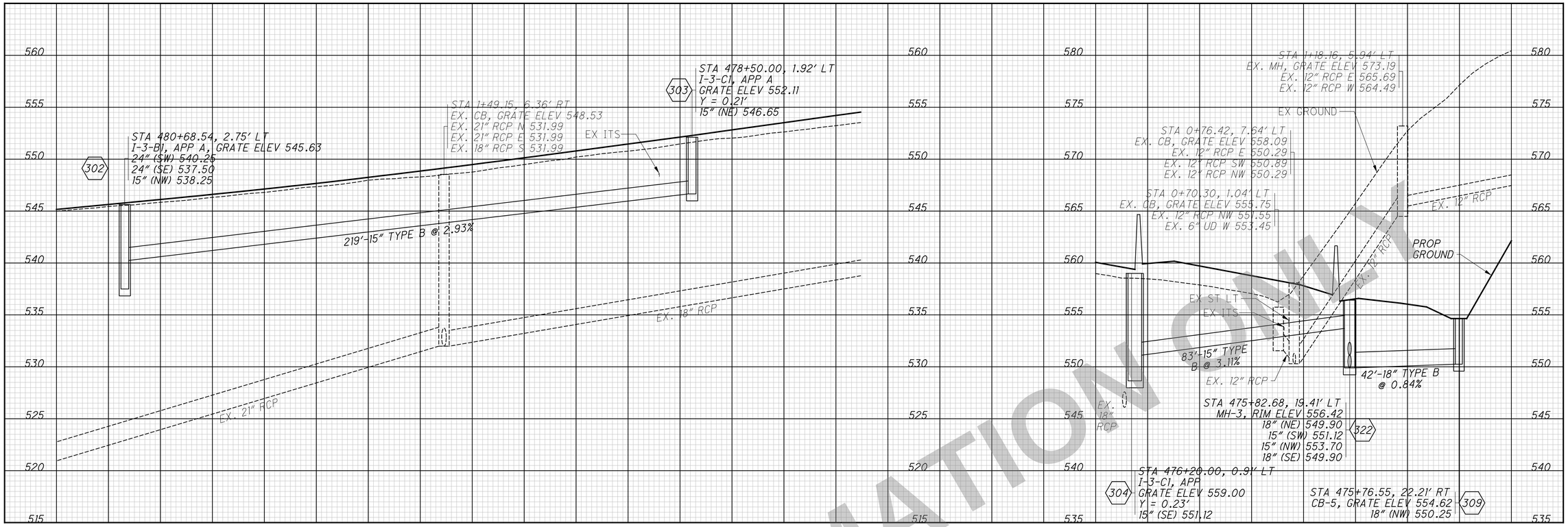
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STORM SEWER PROFILES

HAM-75-7.85

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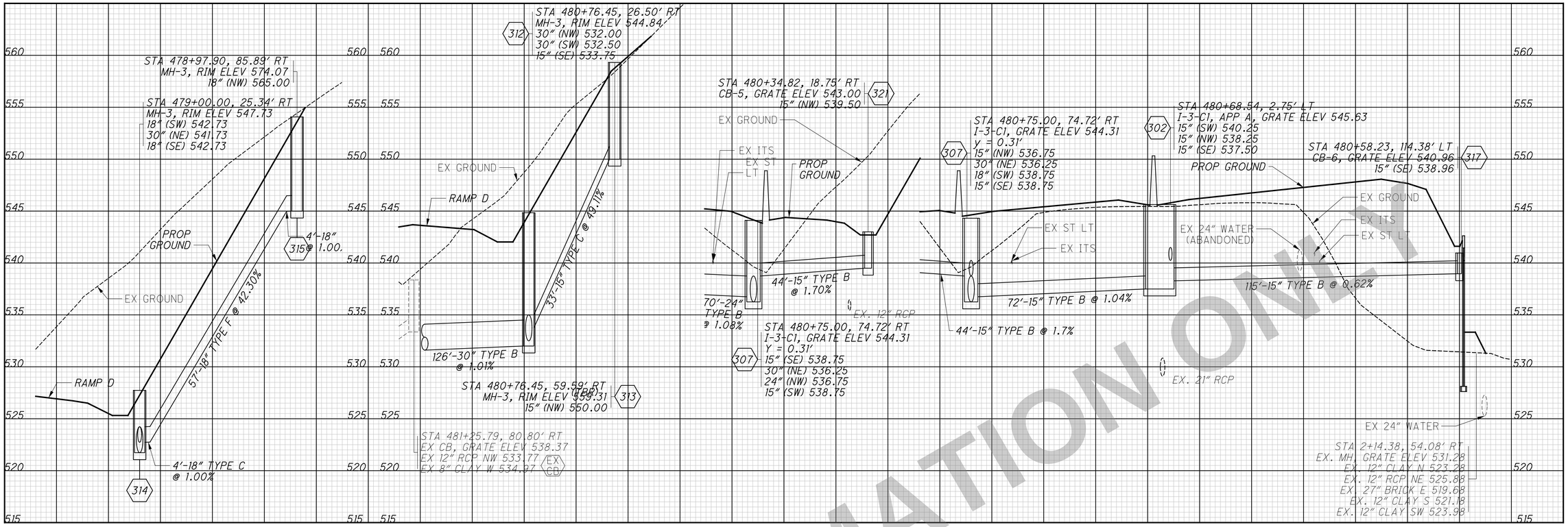
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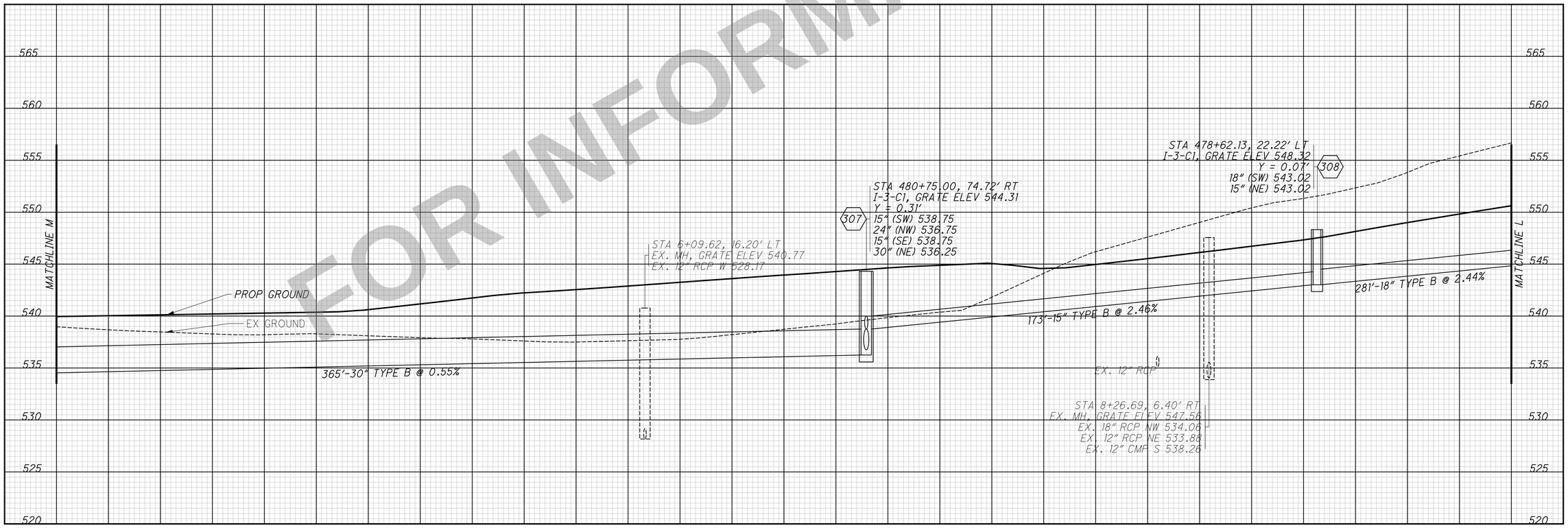
STORM SEWER PROFILES

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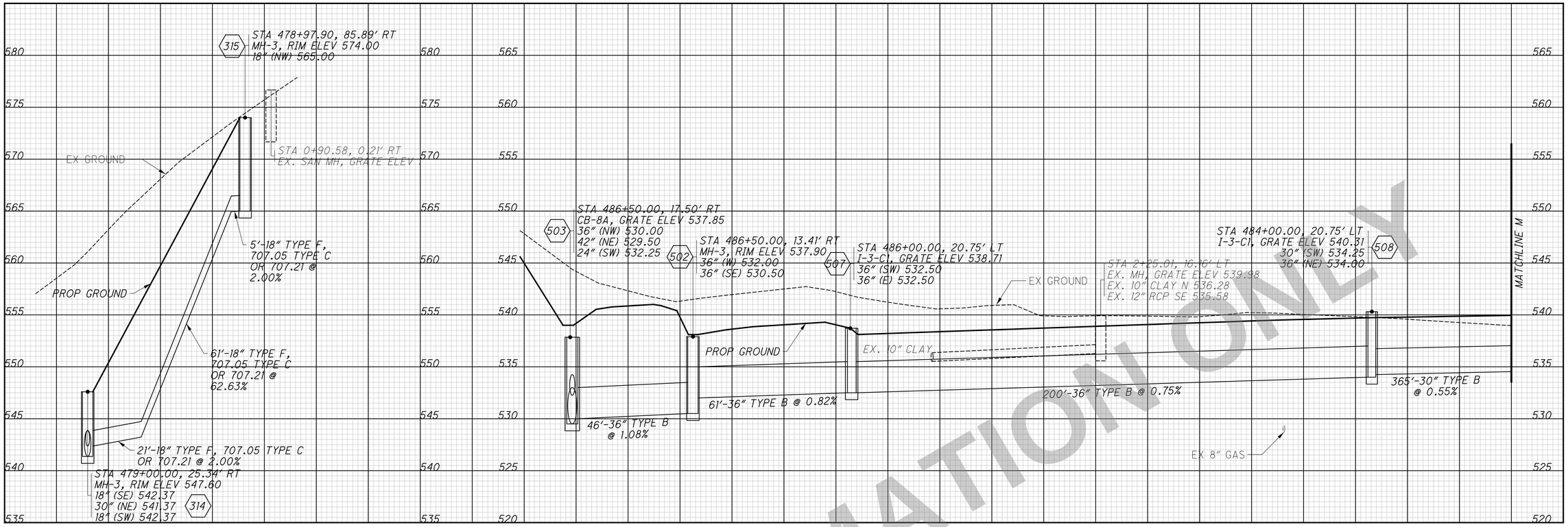
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STORM SEWER PROFILES

HAM-75-7.85

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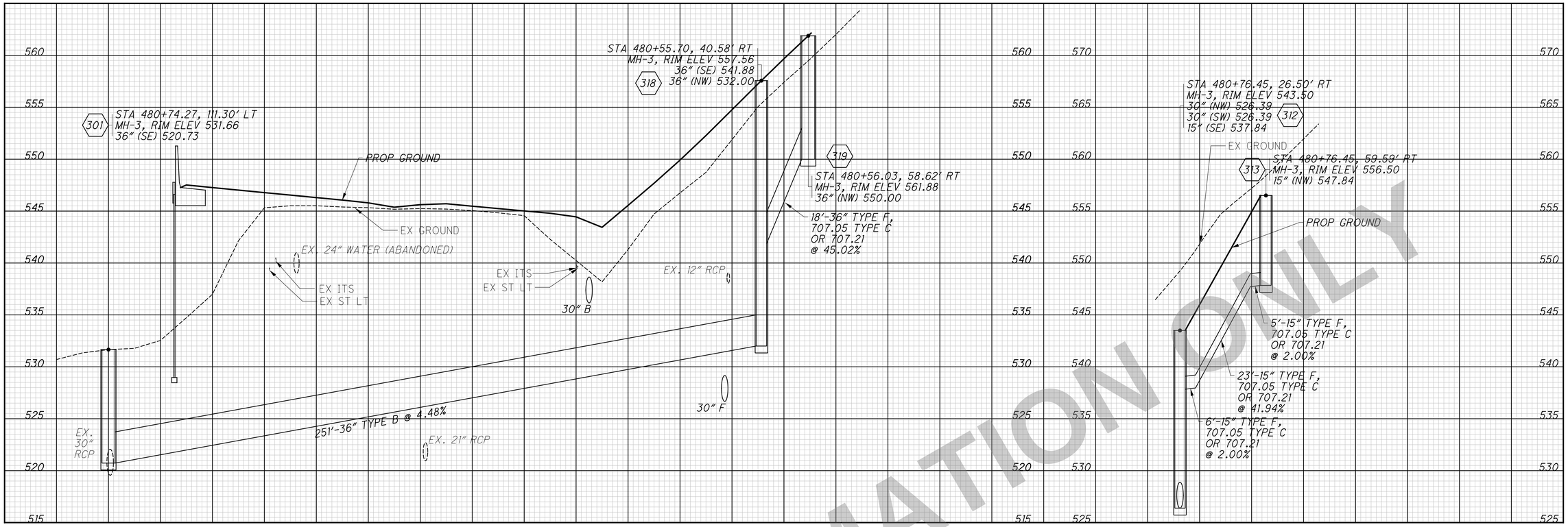
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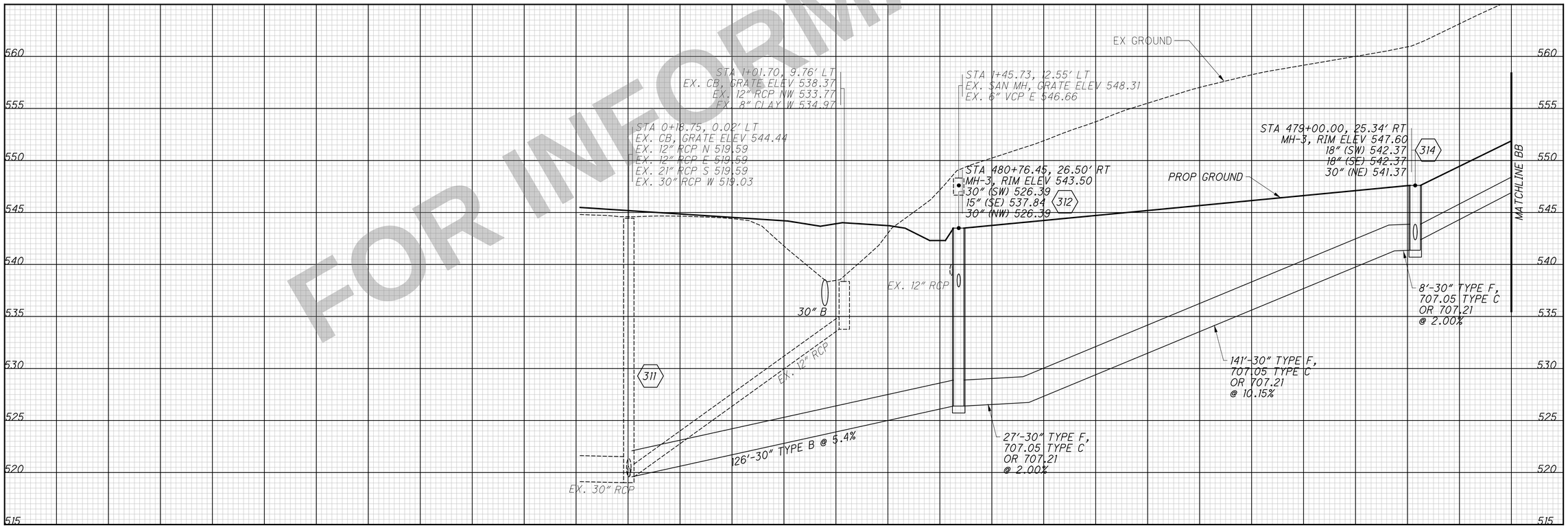
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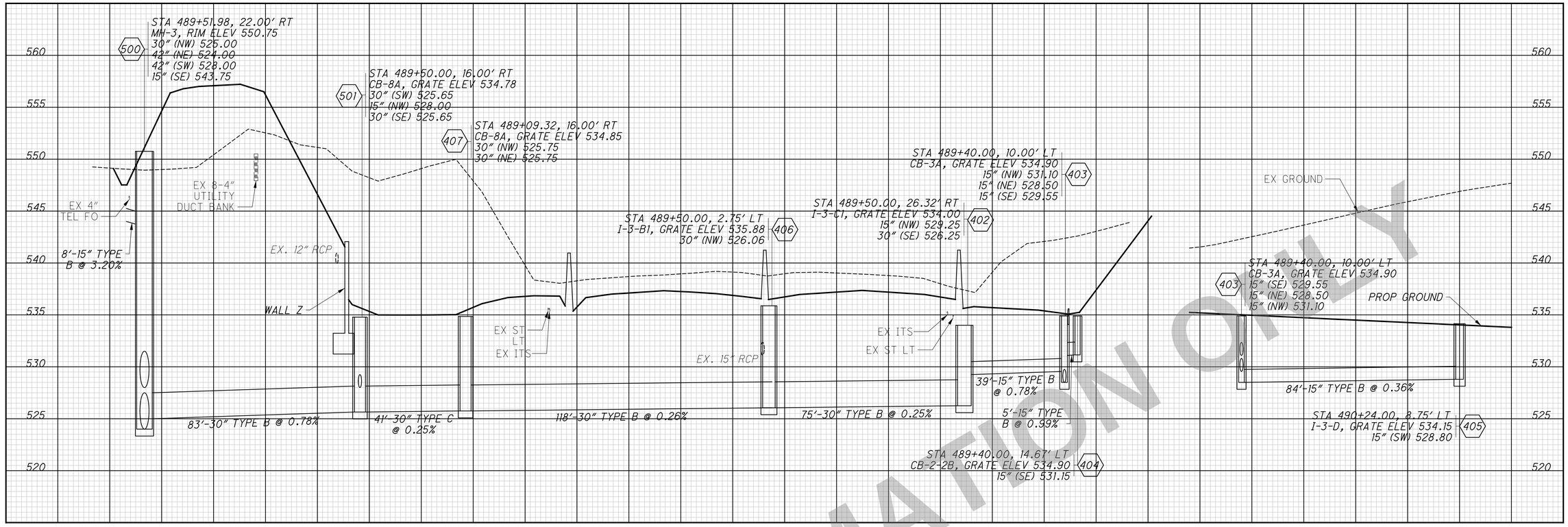
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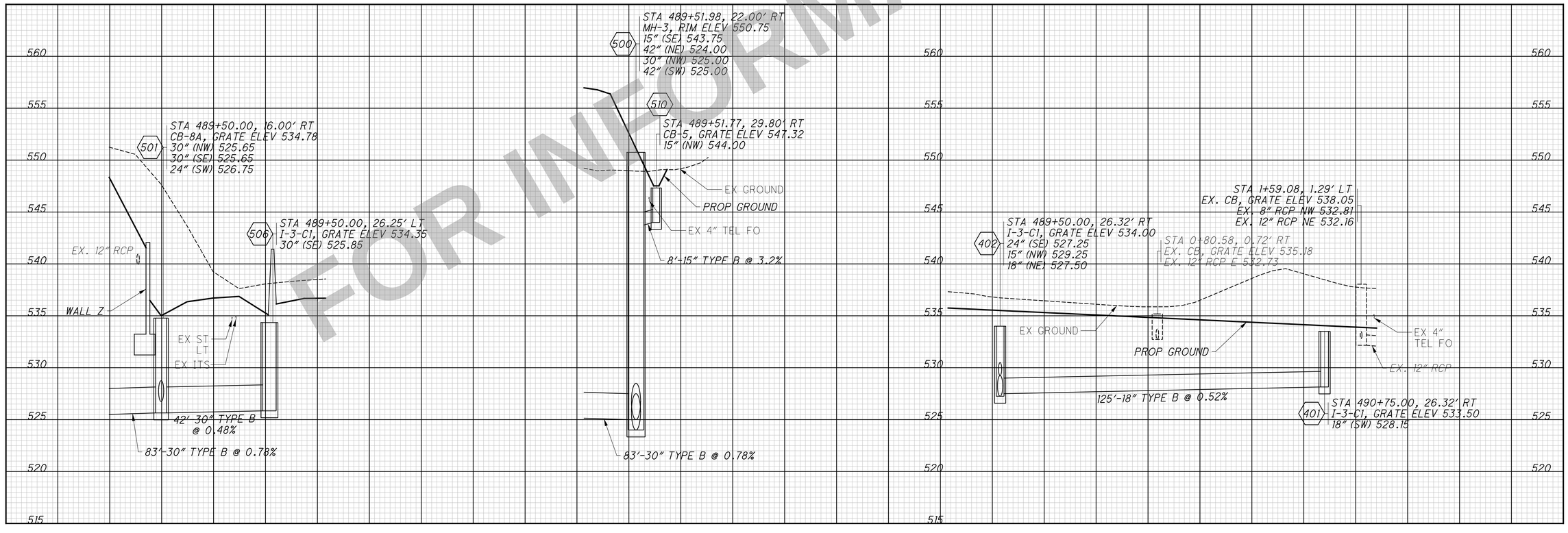
STORM SEWER PROFILES

HAM-75-7.85

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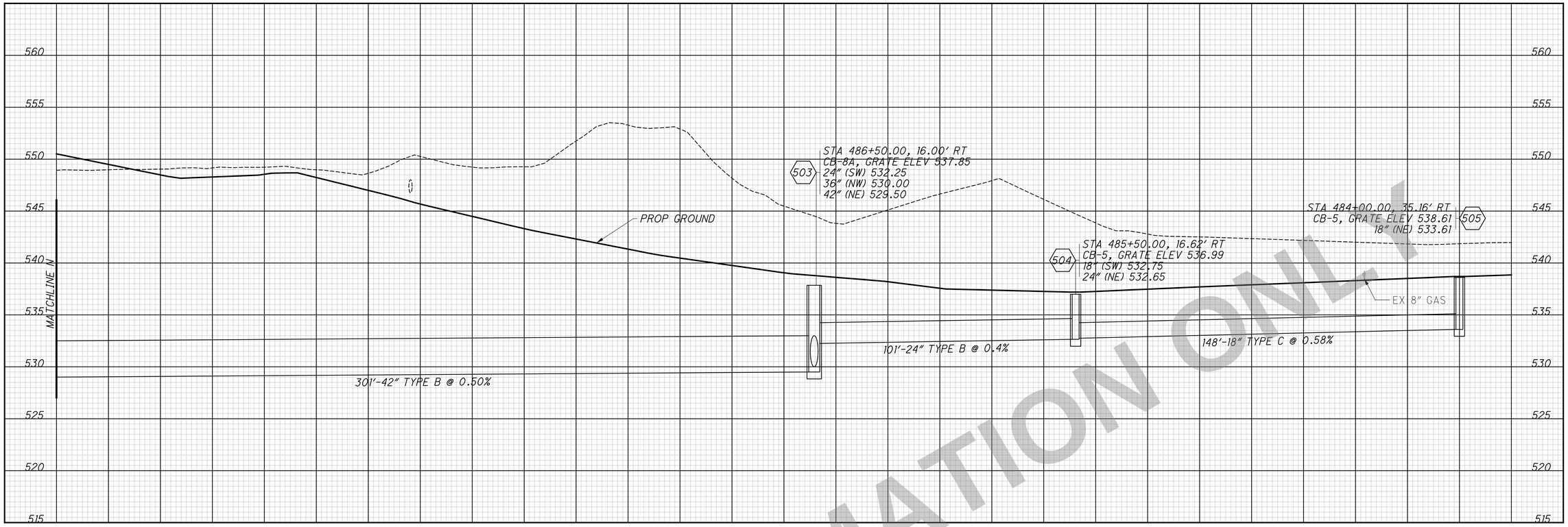
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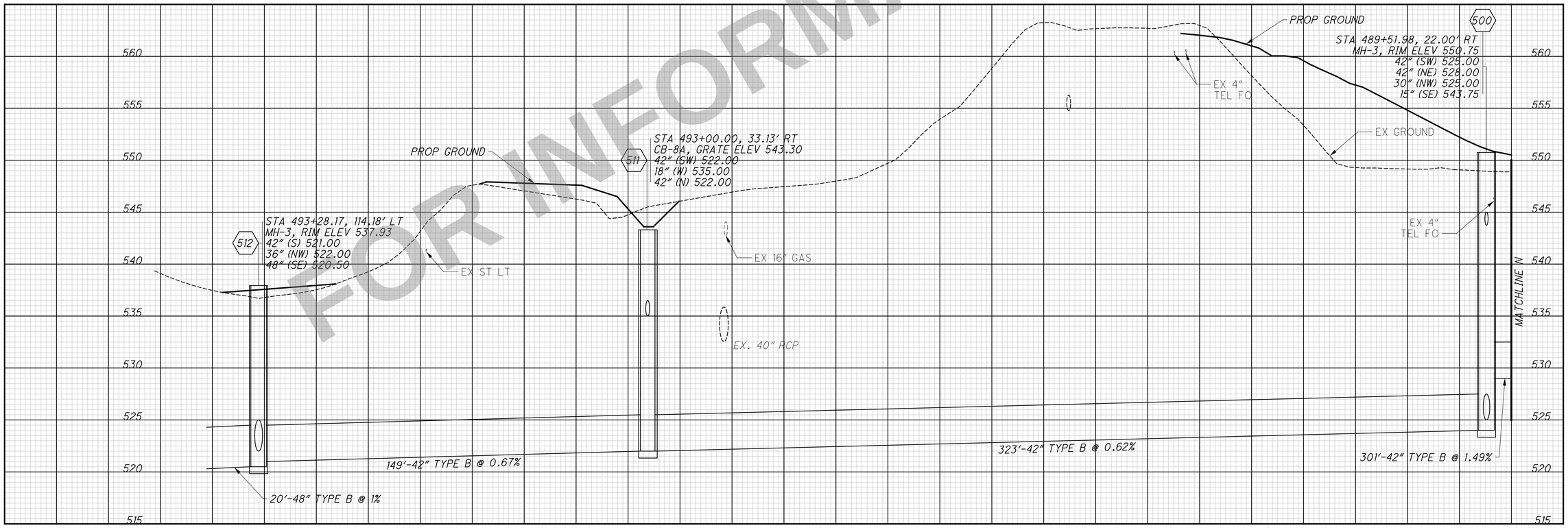
STORM SEWER PROFILES

HAM-75-7.85

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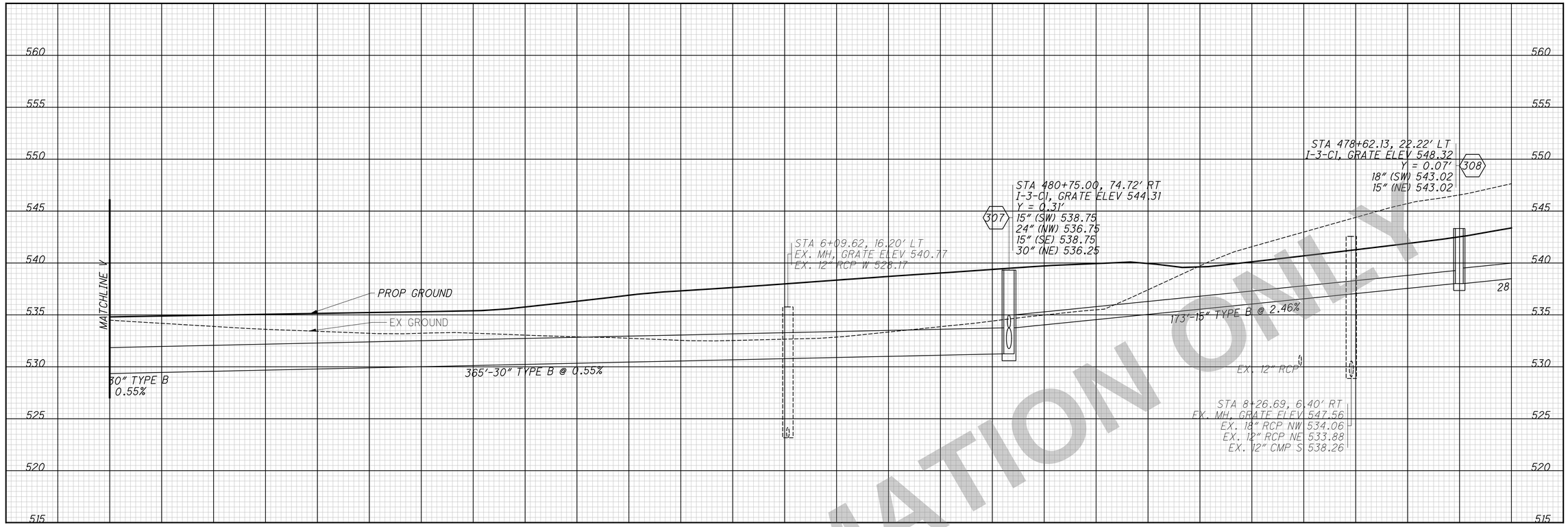
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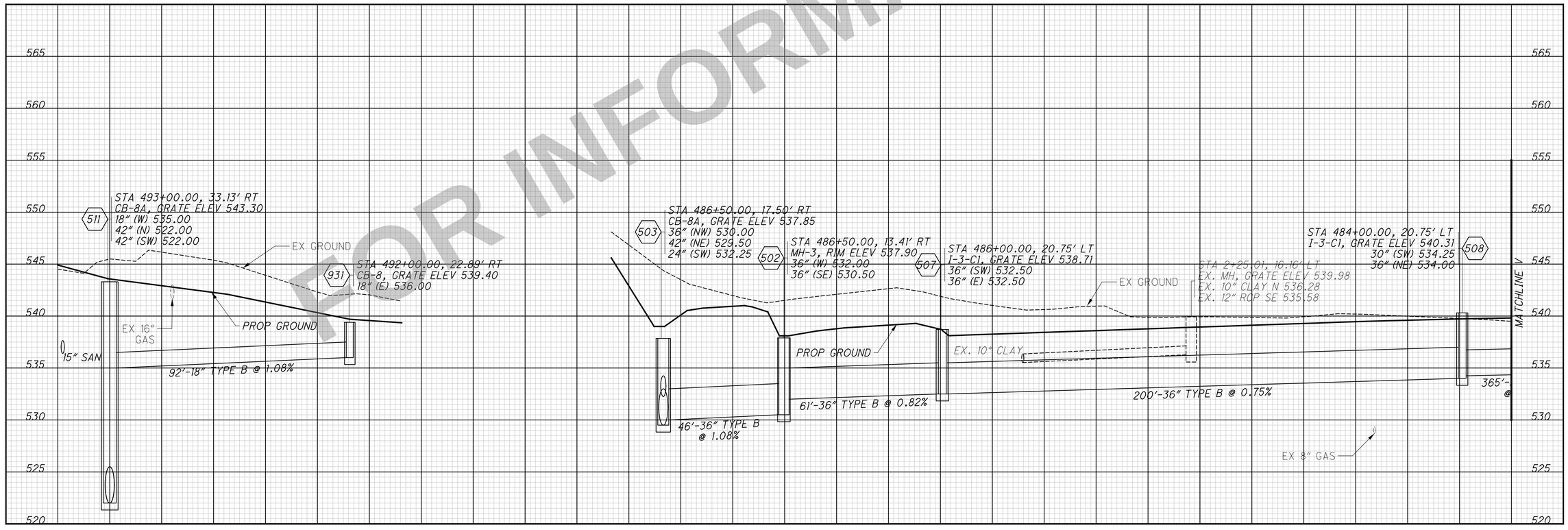
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HAM-75-7.85

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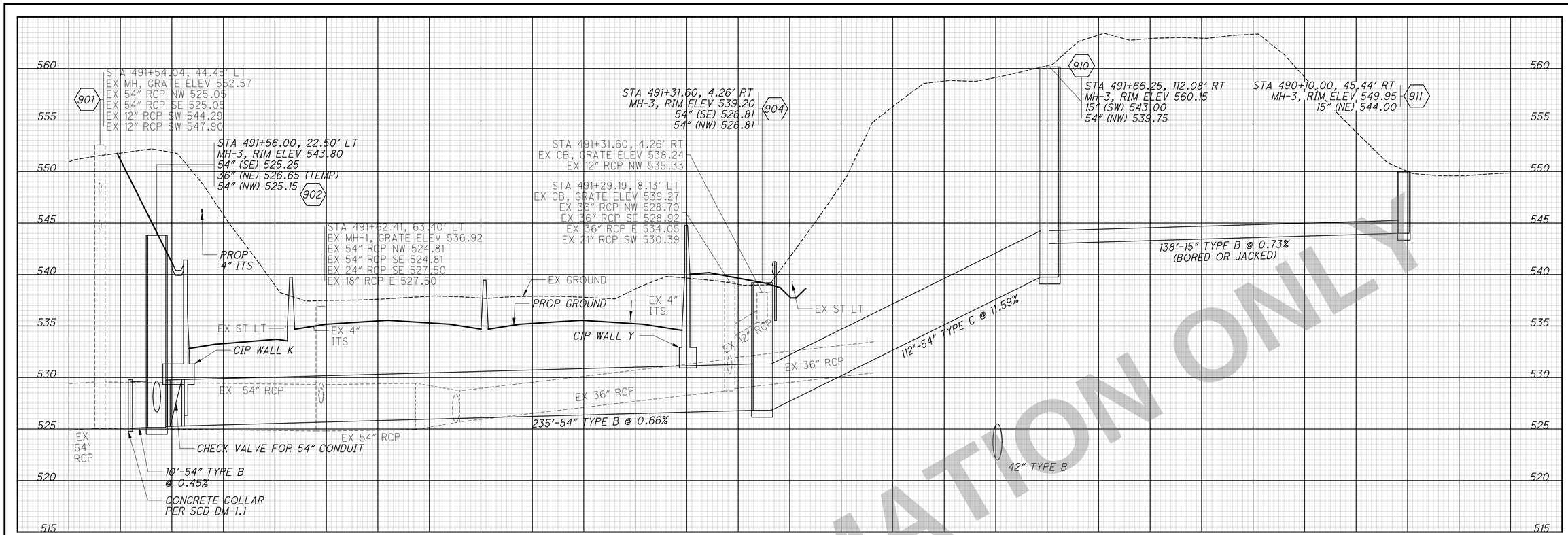
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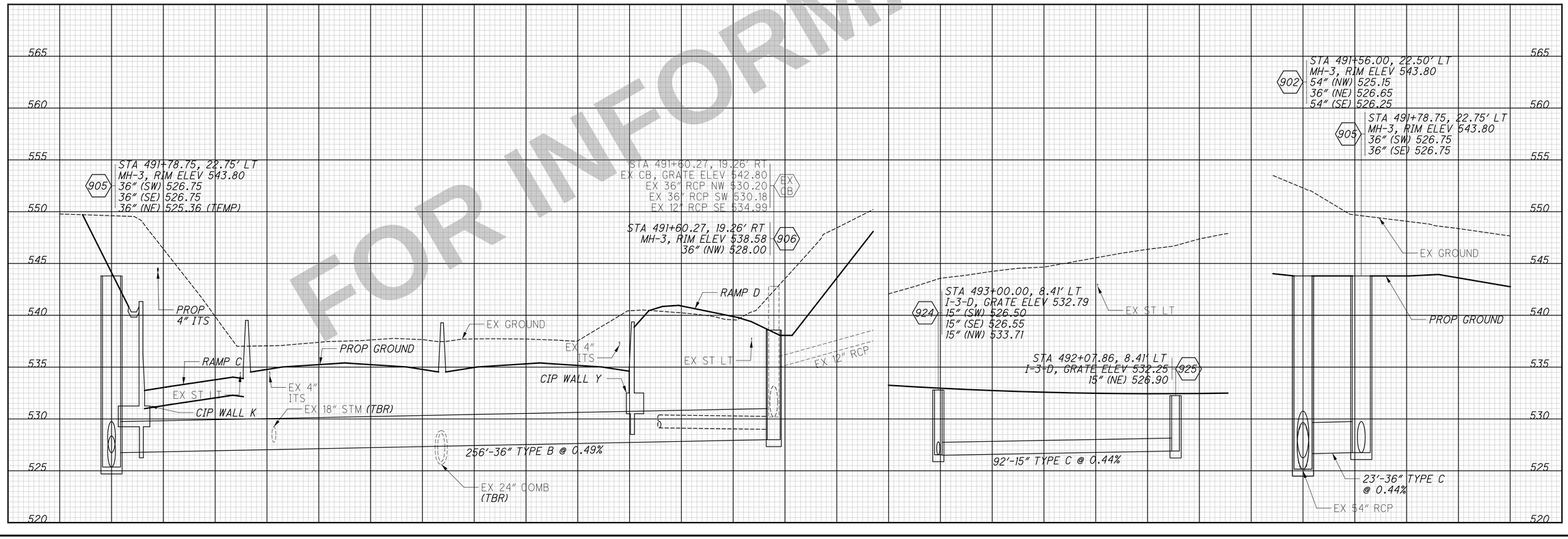
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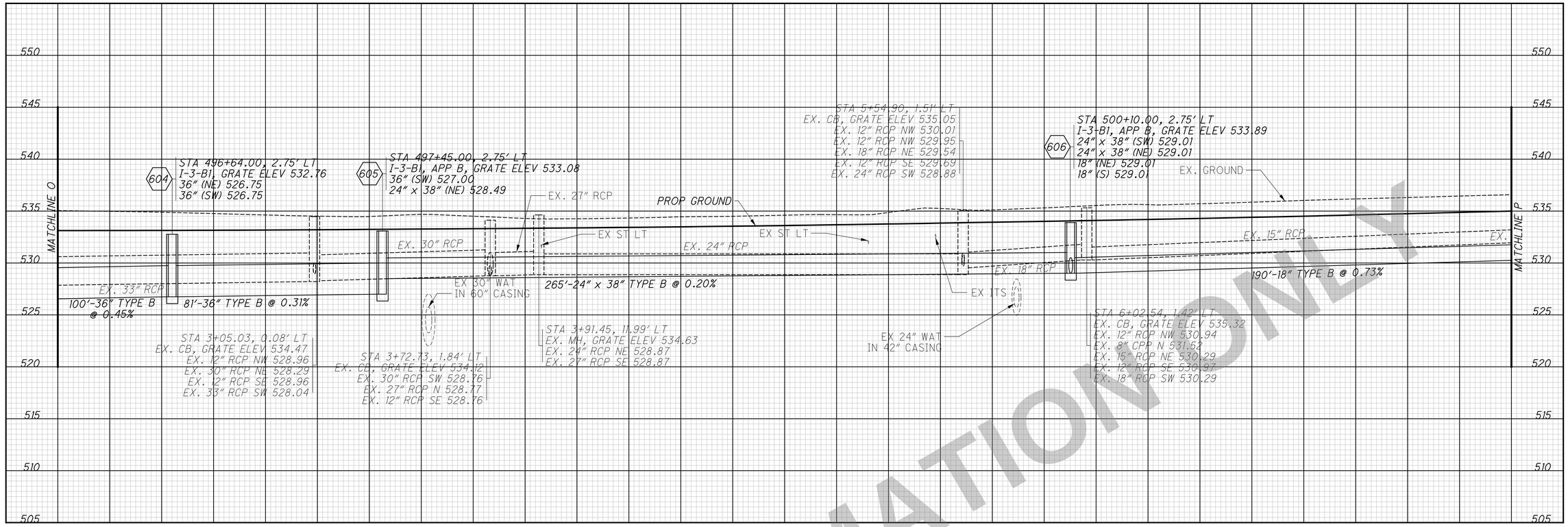
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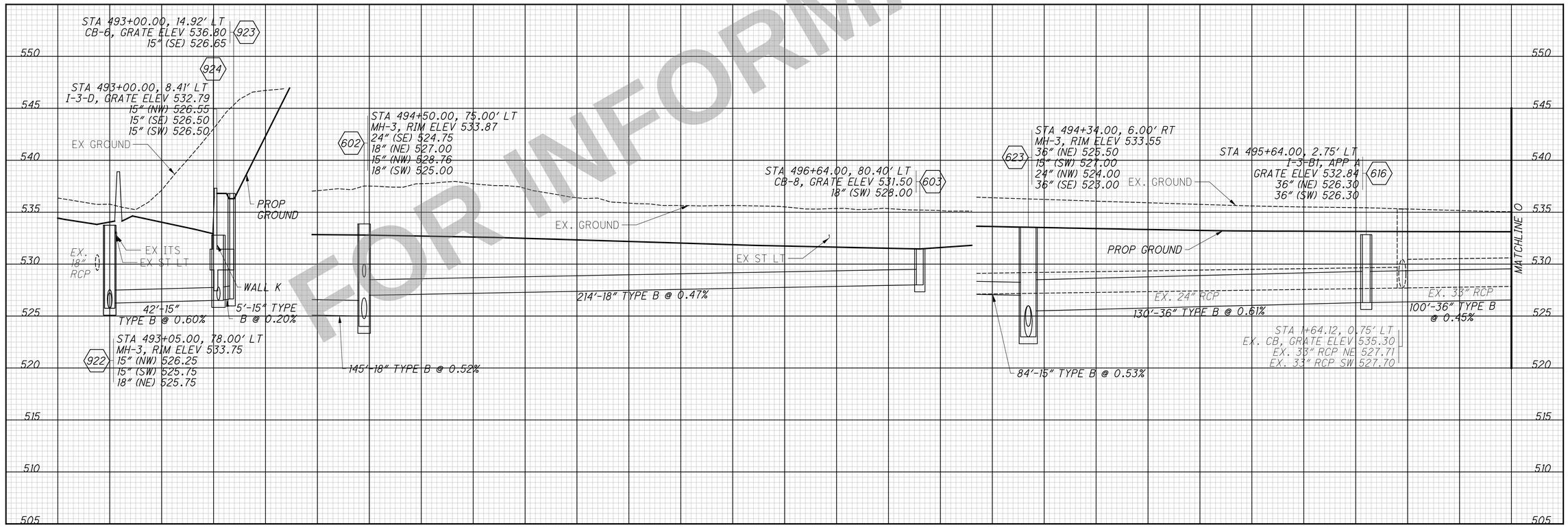
STORM SEWER PROFILES

HAM-75-7.85

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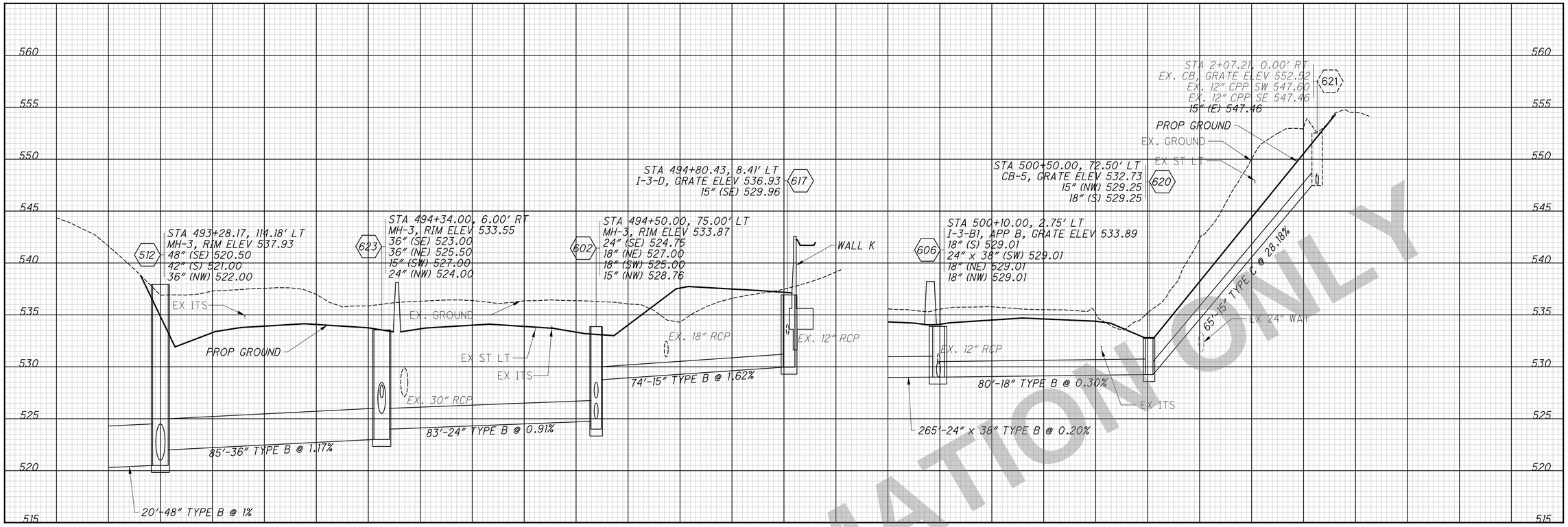
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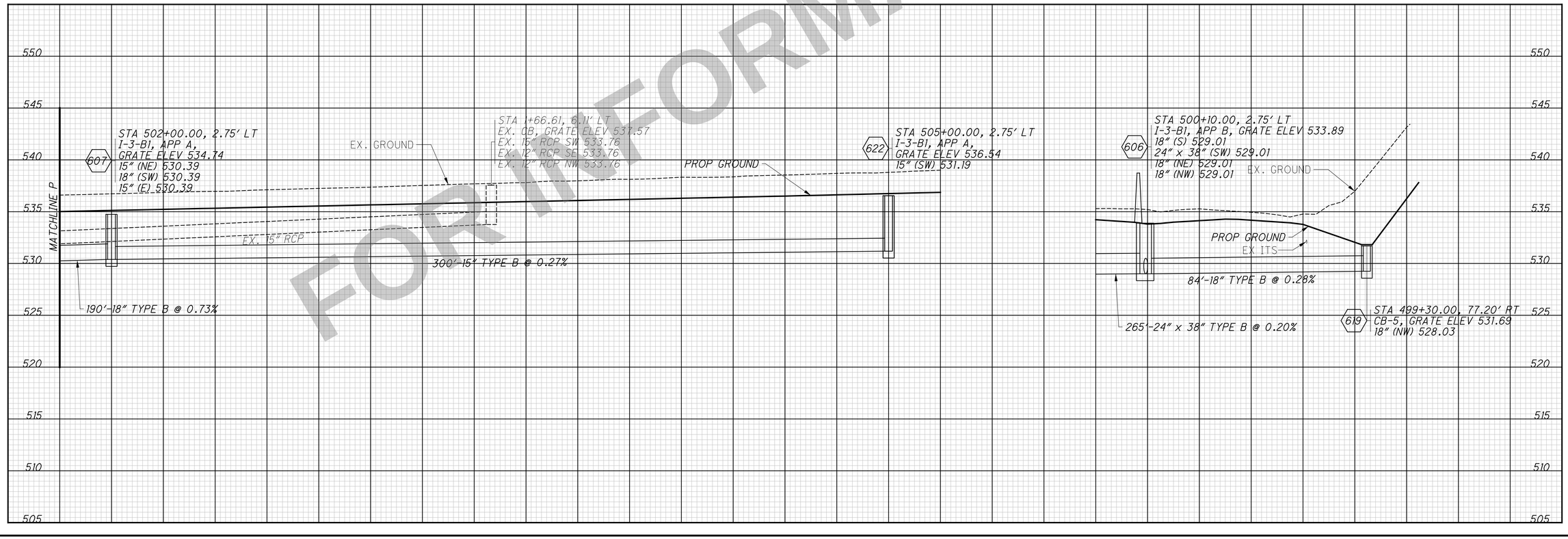
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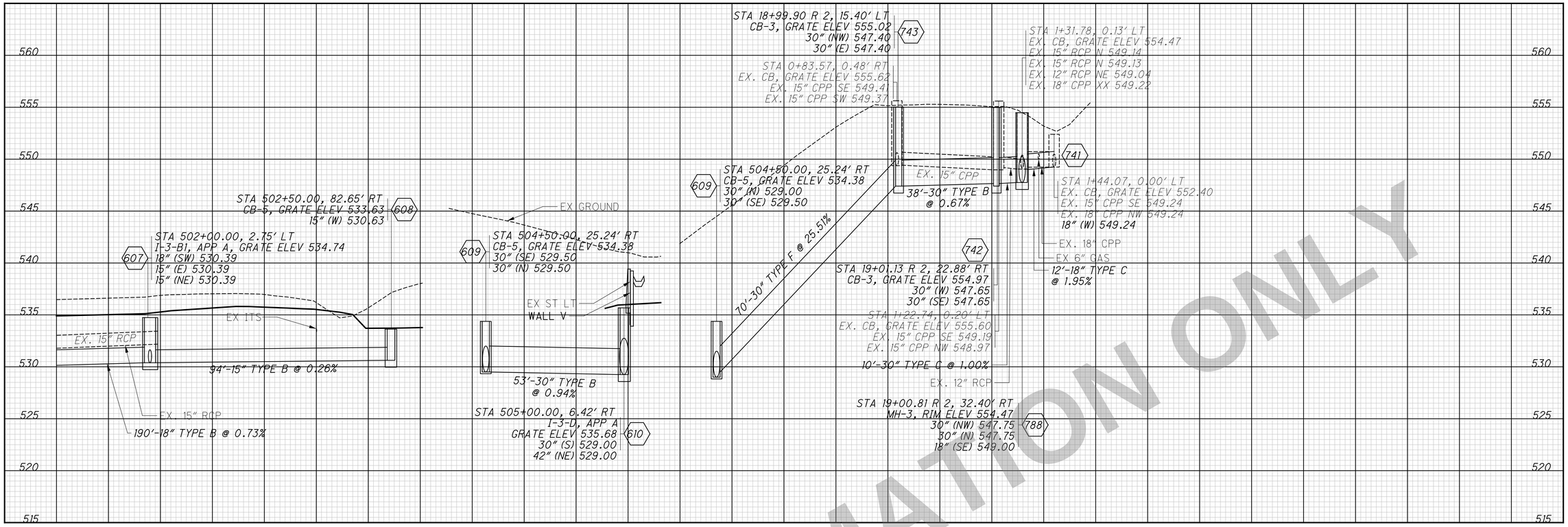
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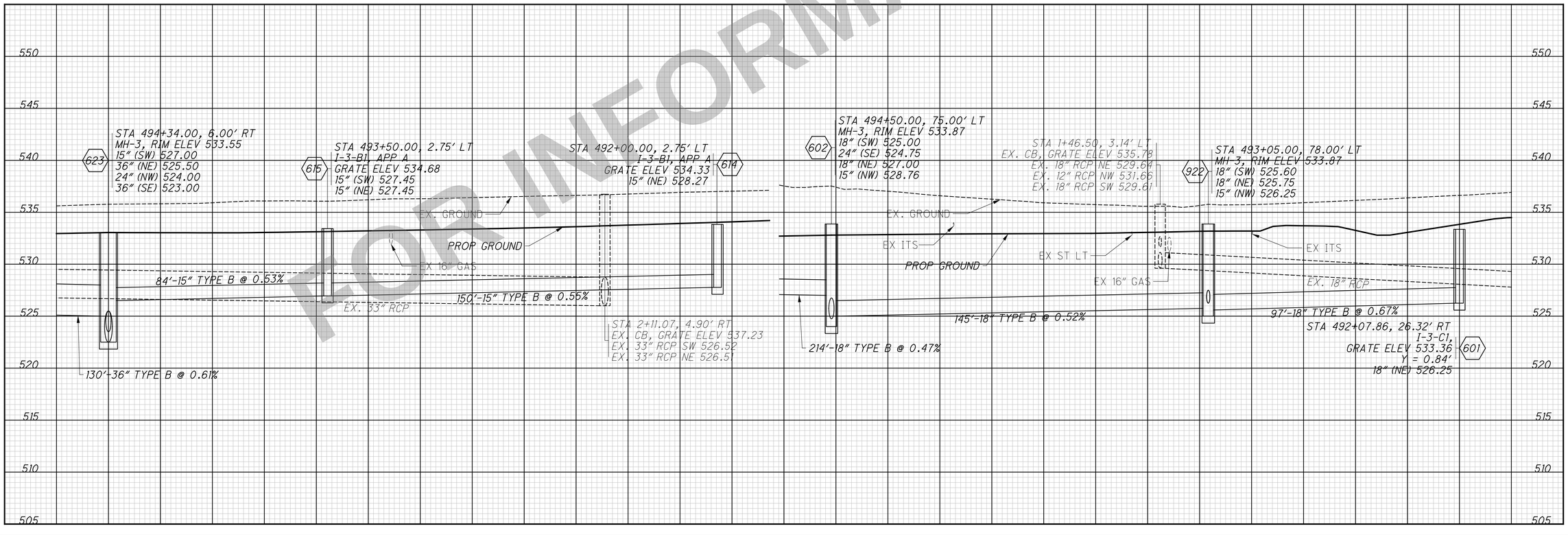
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HAM-75-7.85

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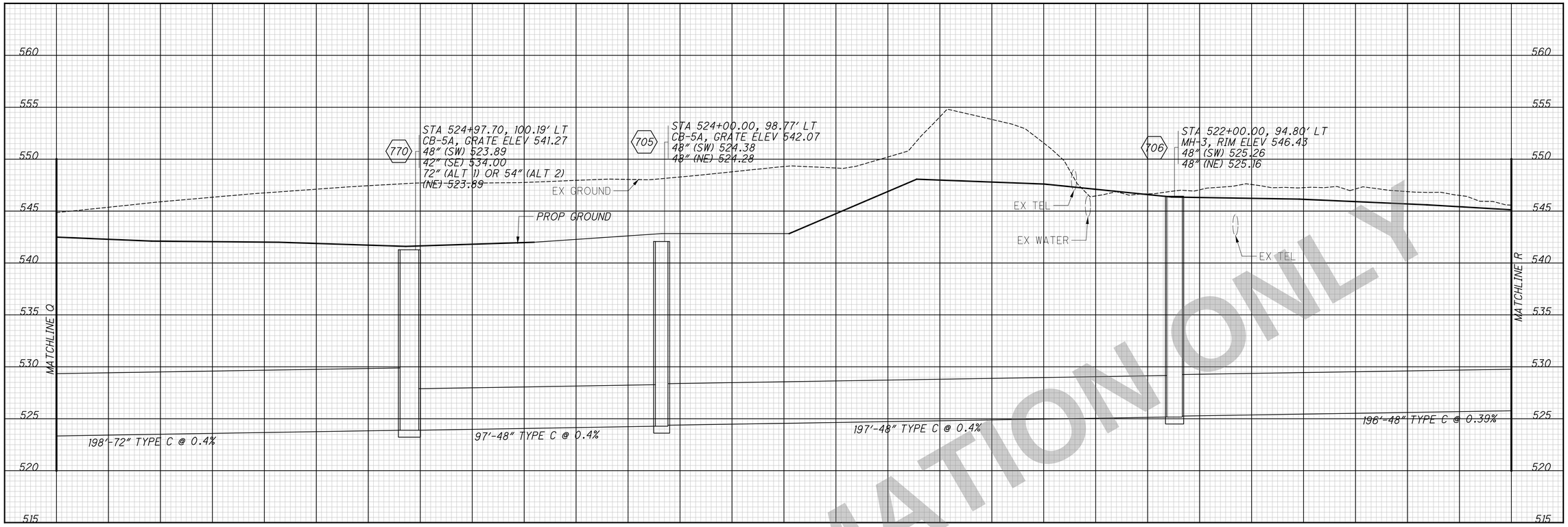
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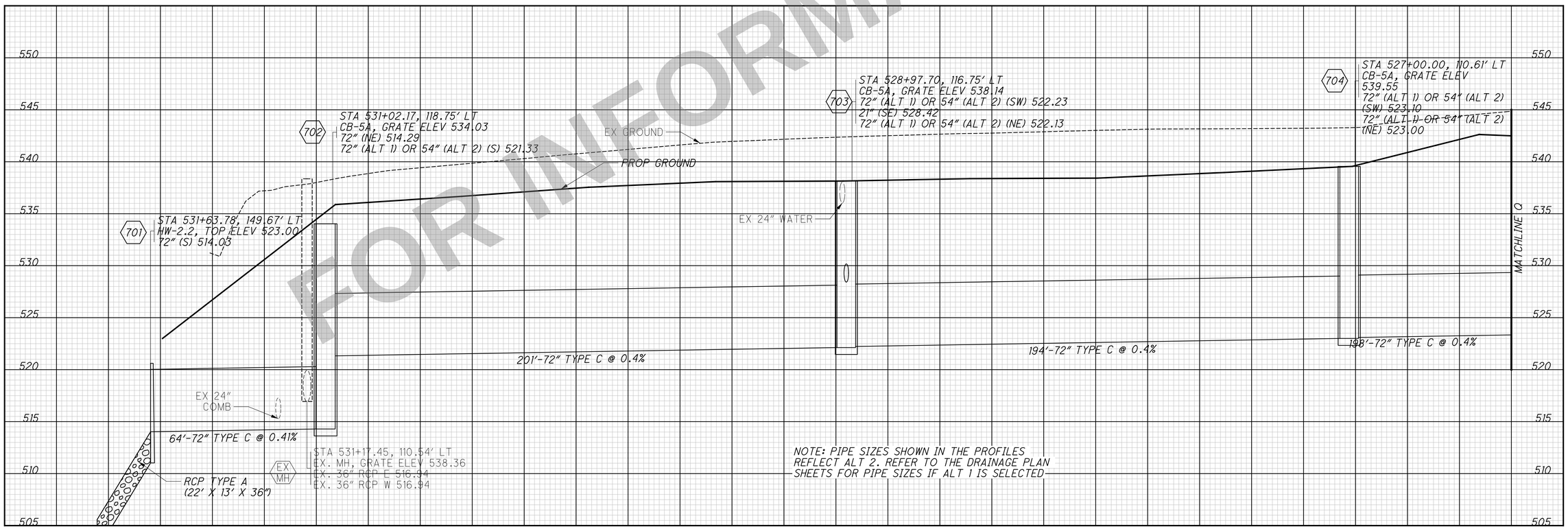
STORM SEWER PROFILES

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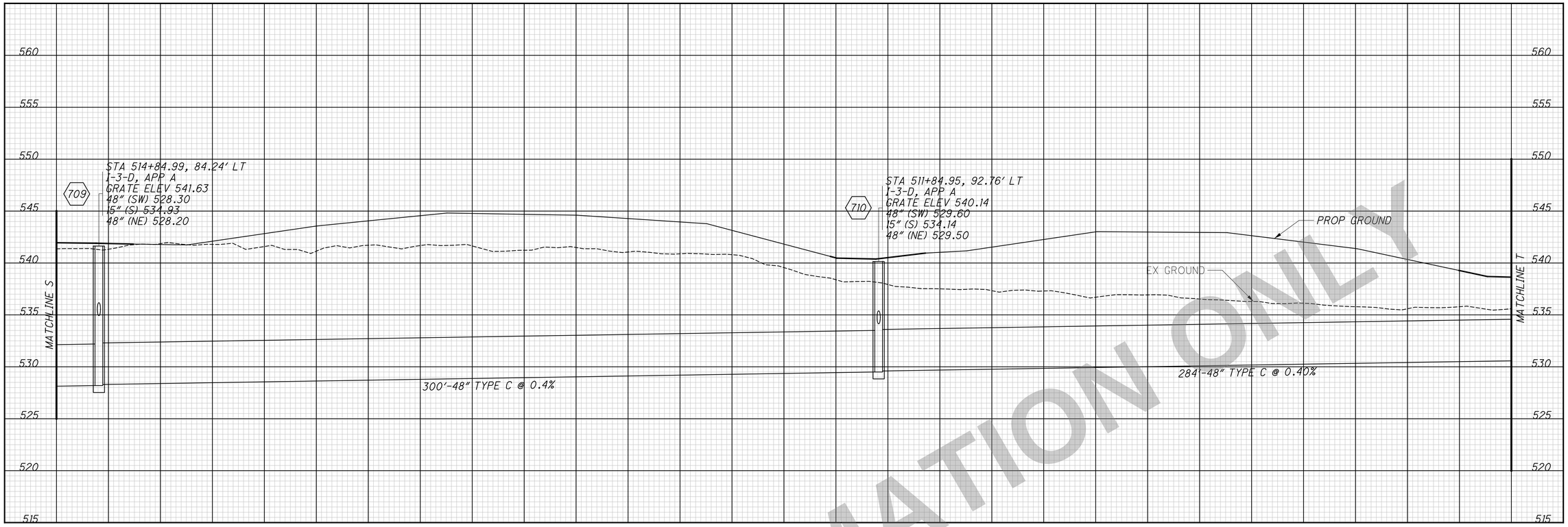
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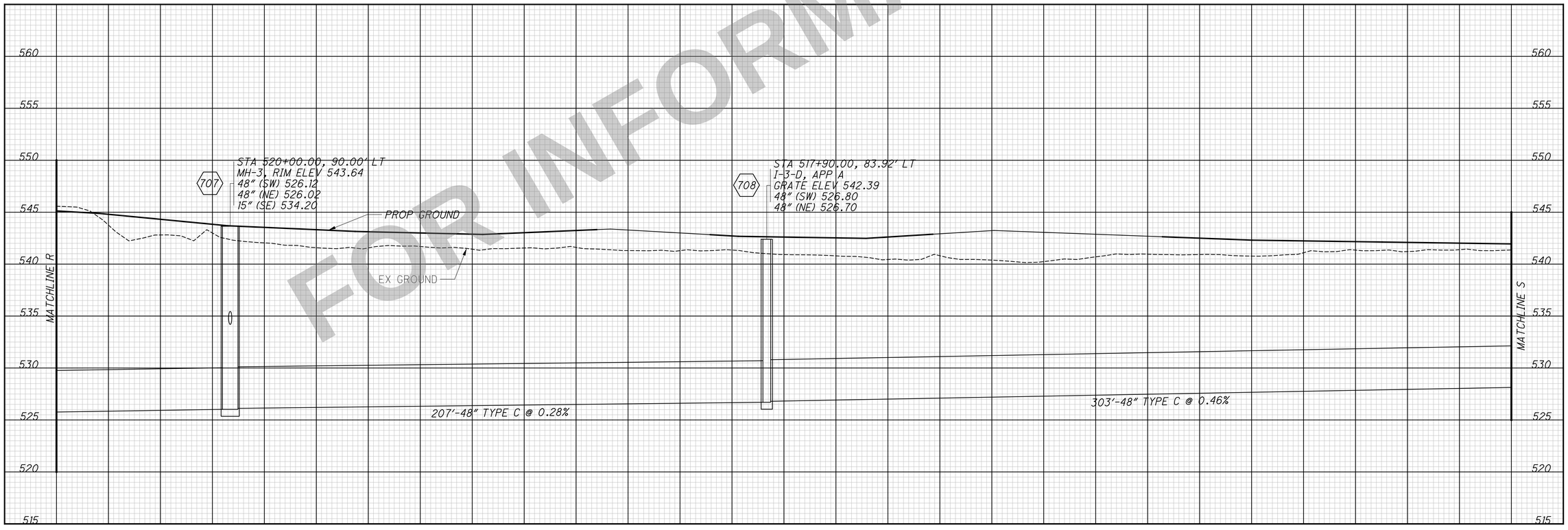
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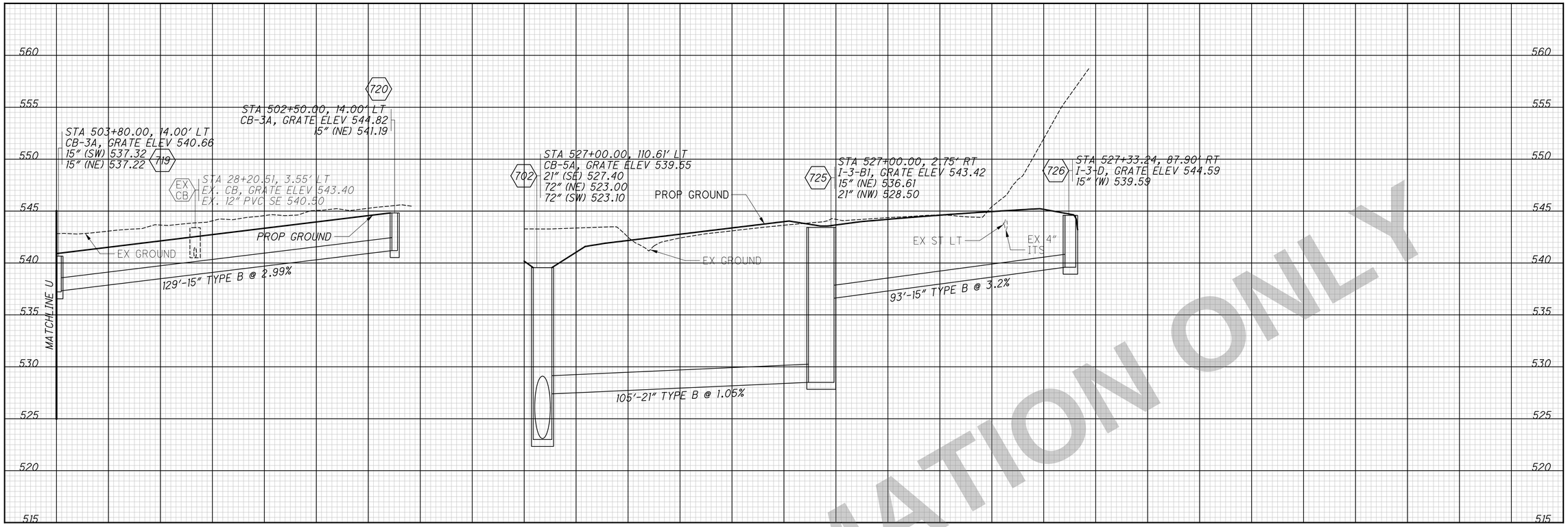
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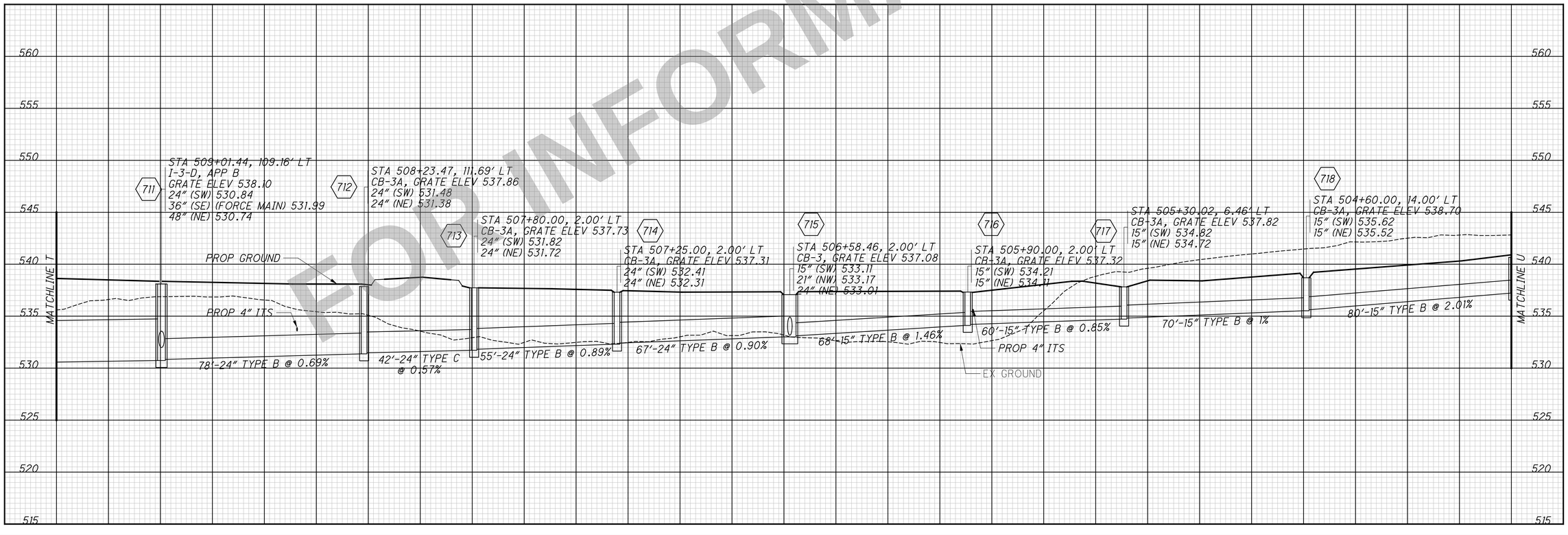
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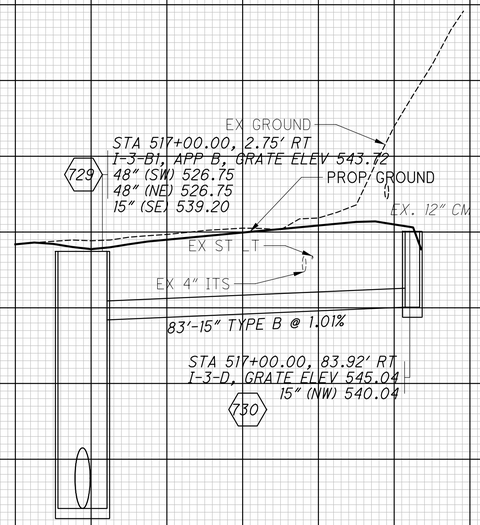
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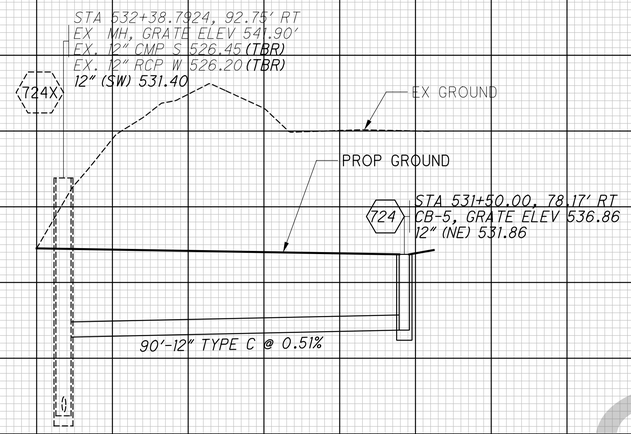
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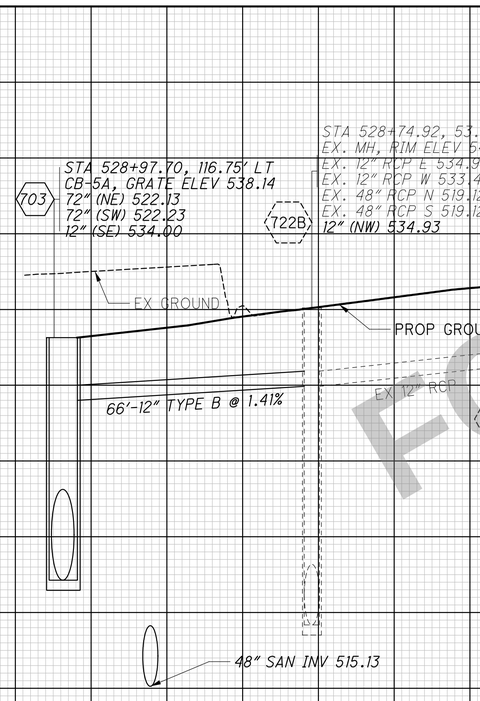
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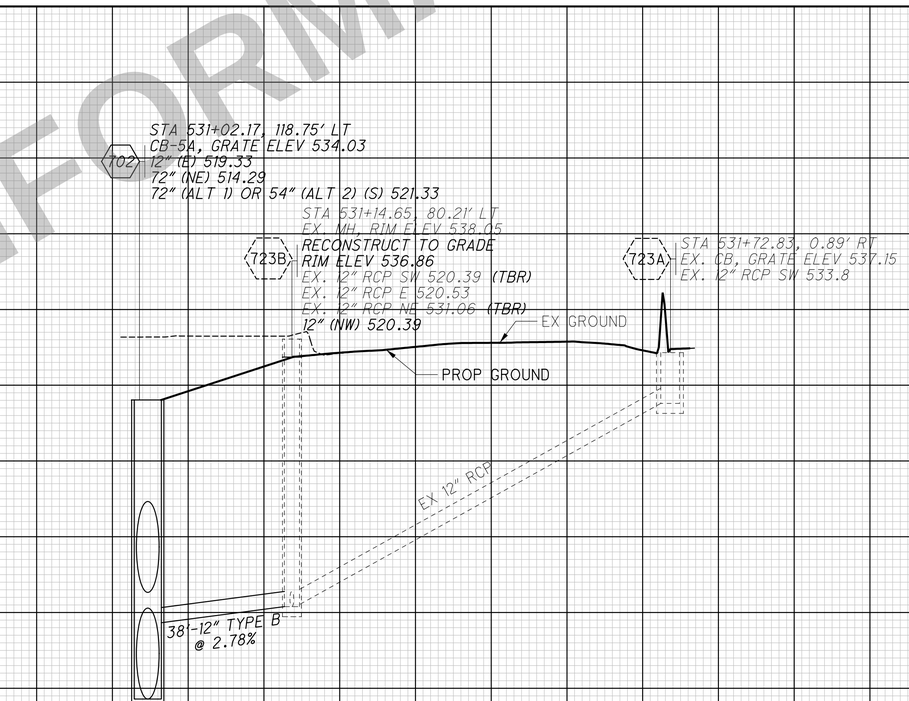
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FOR INFORMATION ONLY









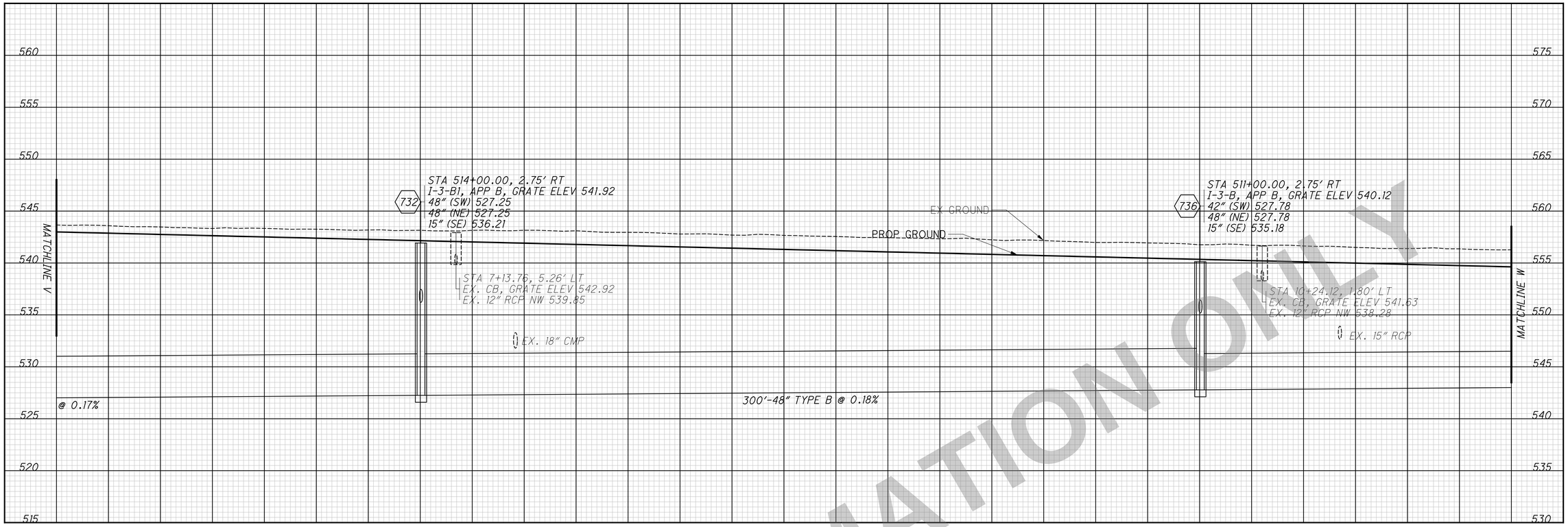
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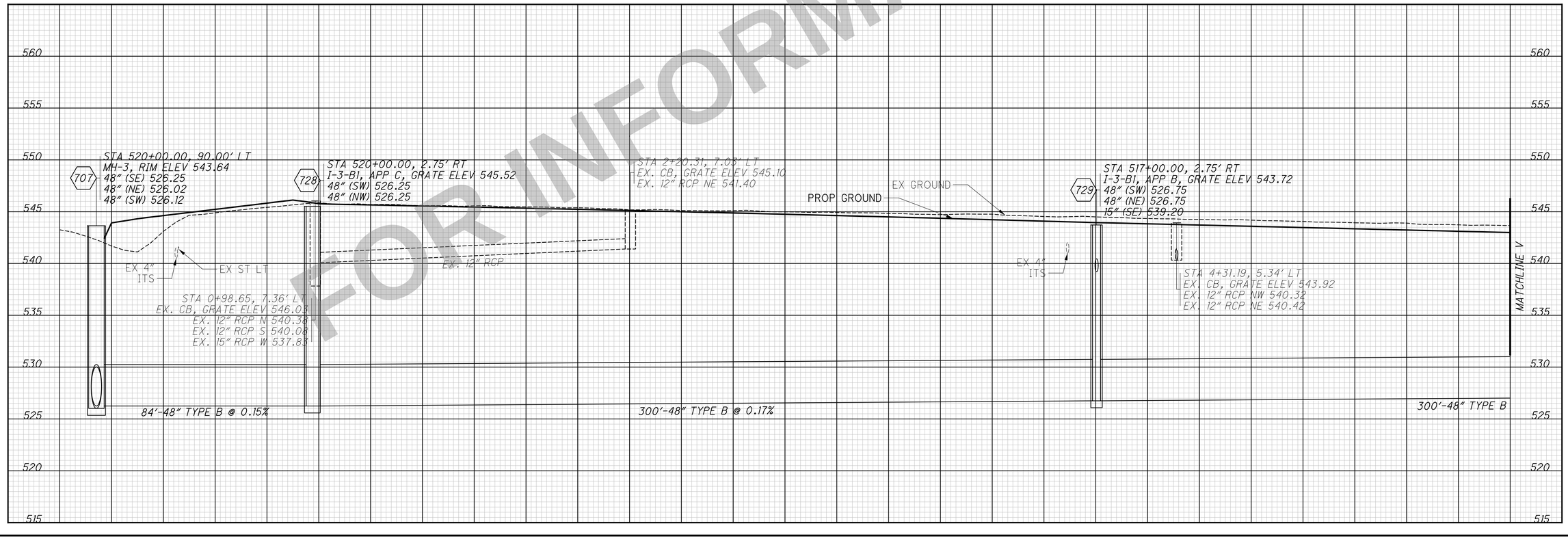
STORM SEWER PROFILES

HAM-75-7.85

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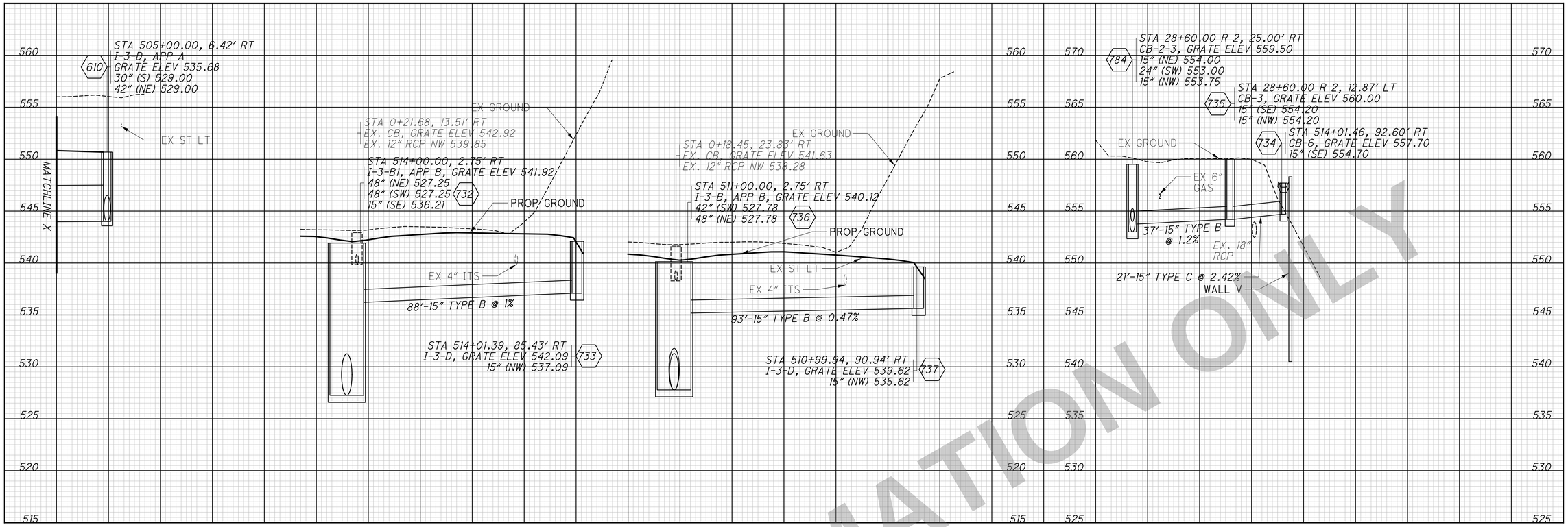
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STORM SEWER PROFILES

HAM-75-7.85

854
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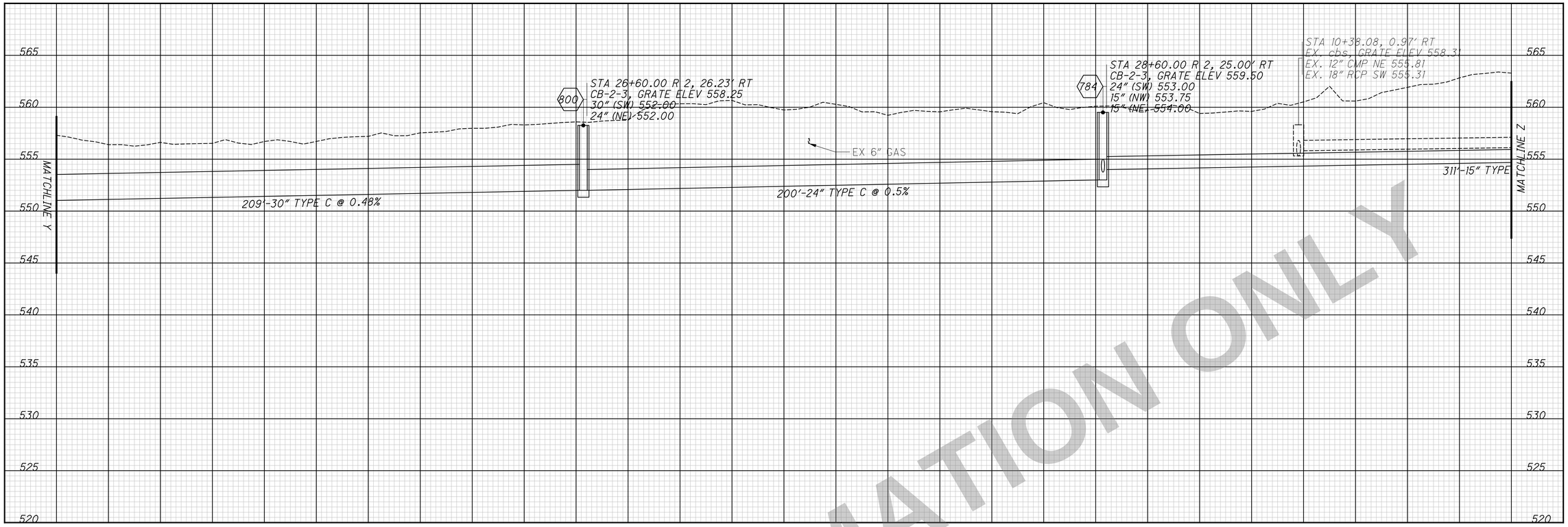
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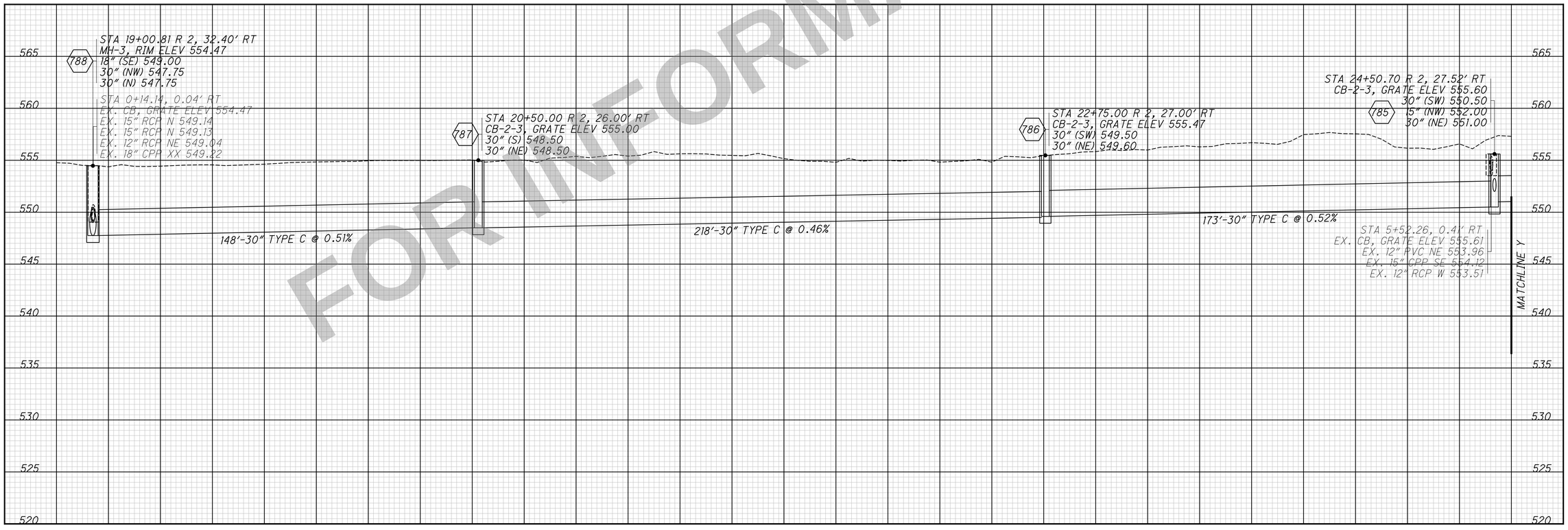
STORM SEWER PROFILES

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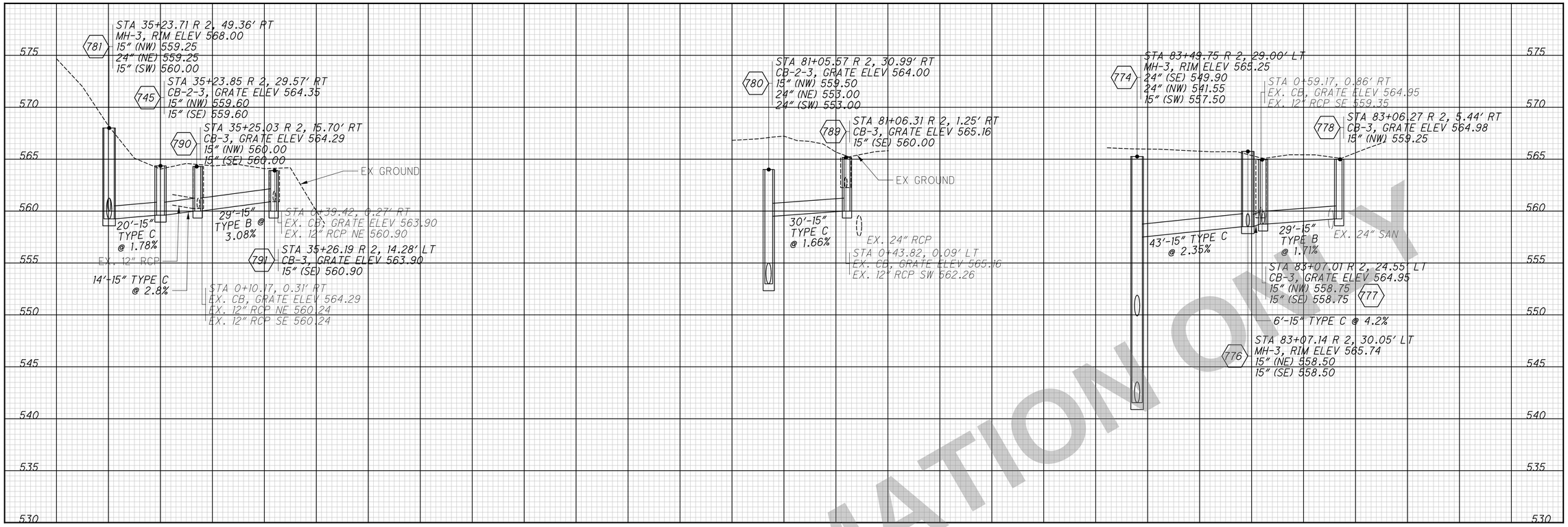
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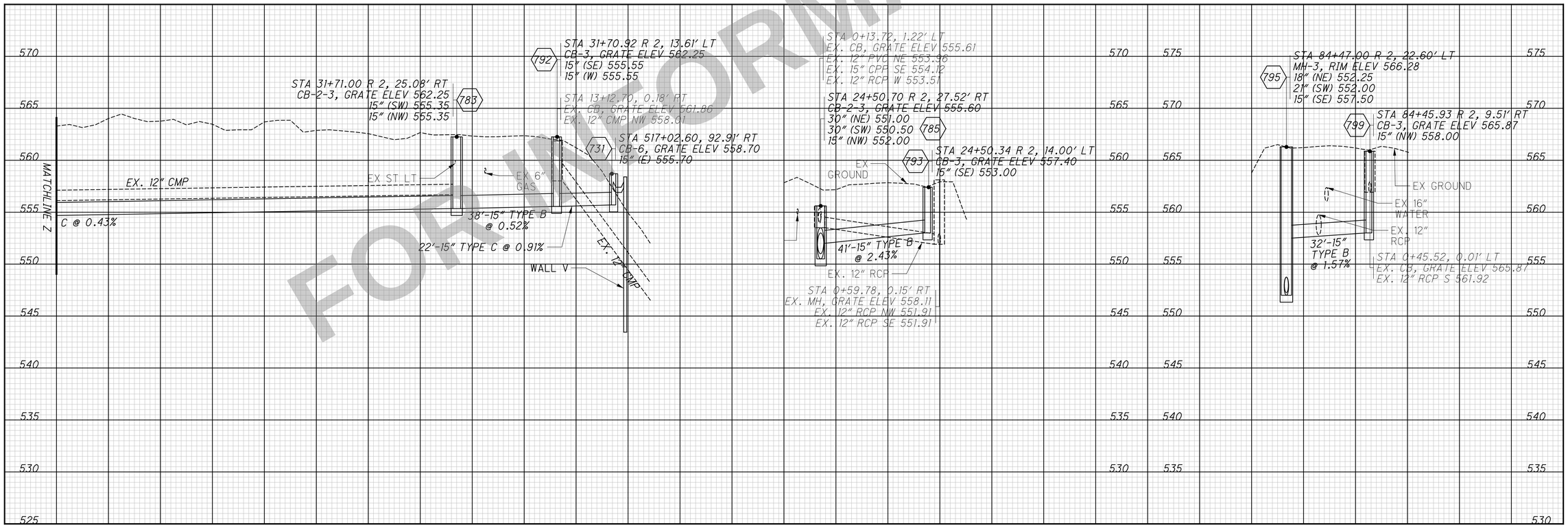
STORM SEWER PROFILES

HAM-75-7.85

856
2017

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FOR INFORMATION ONLY

CALCULATED ECH
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STORM SEWER PROFILES

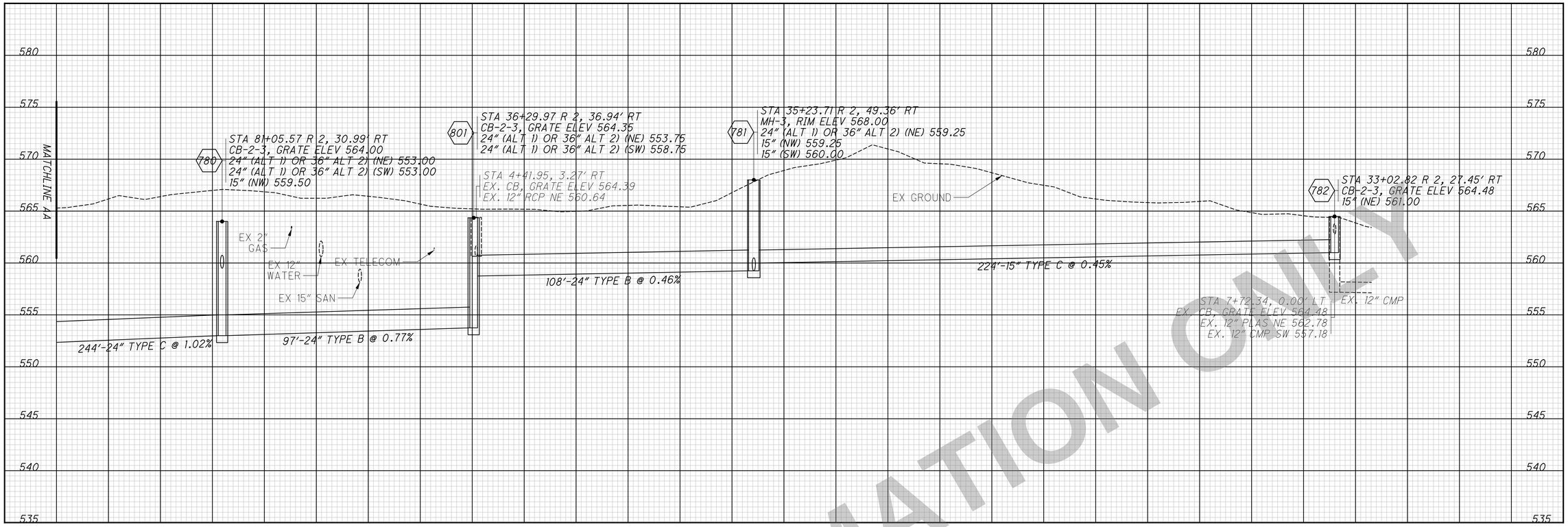
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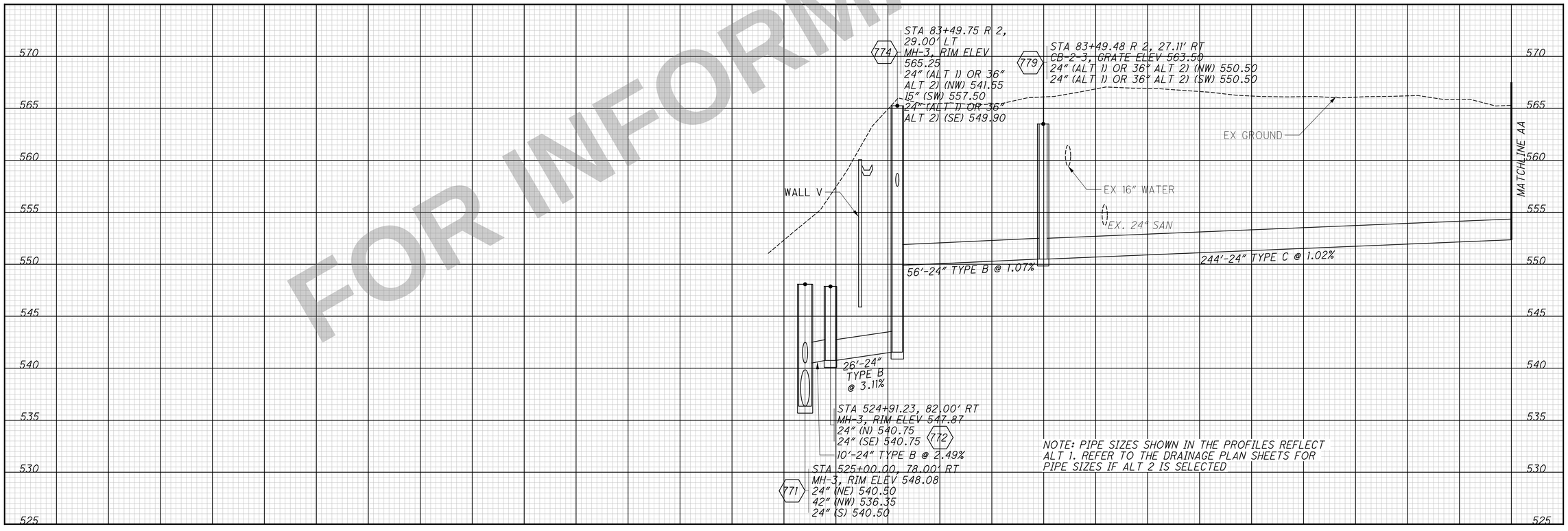
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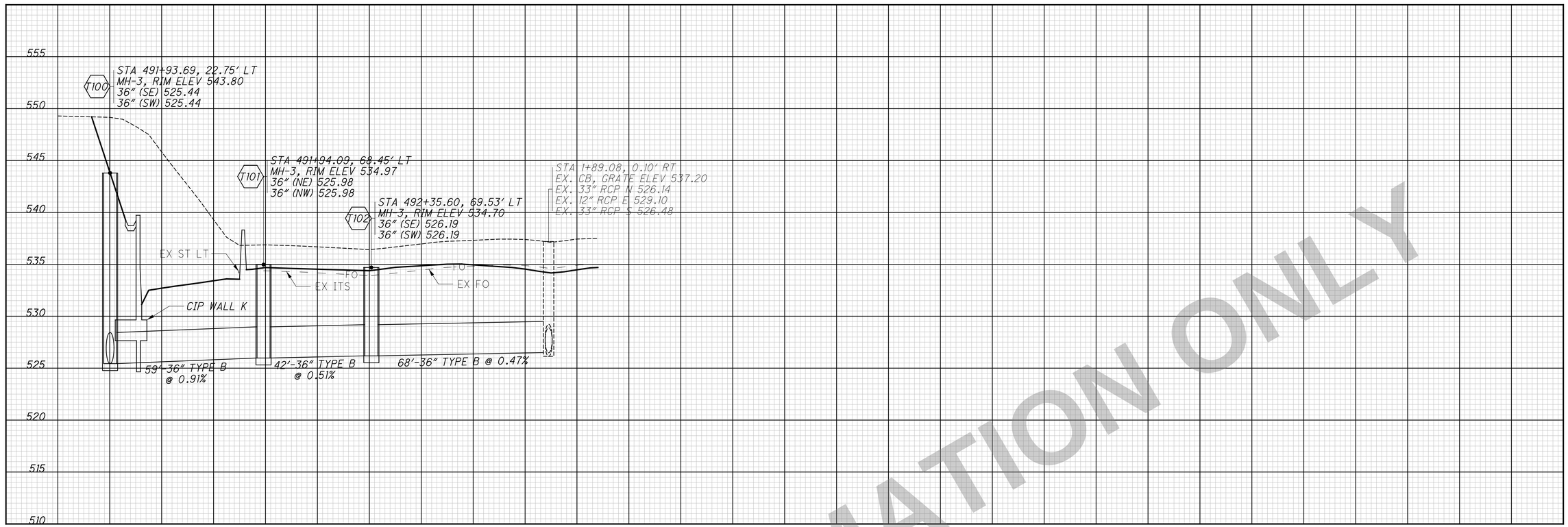


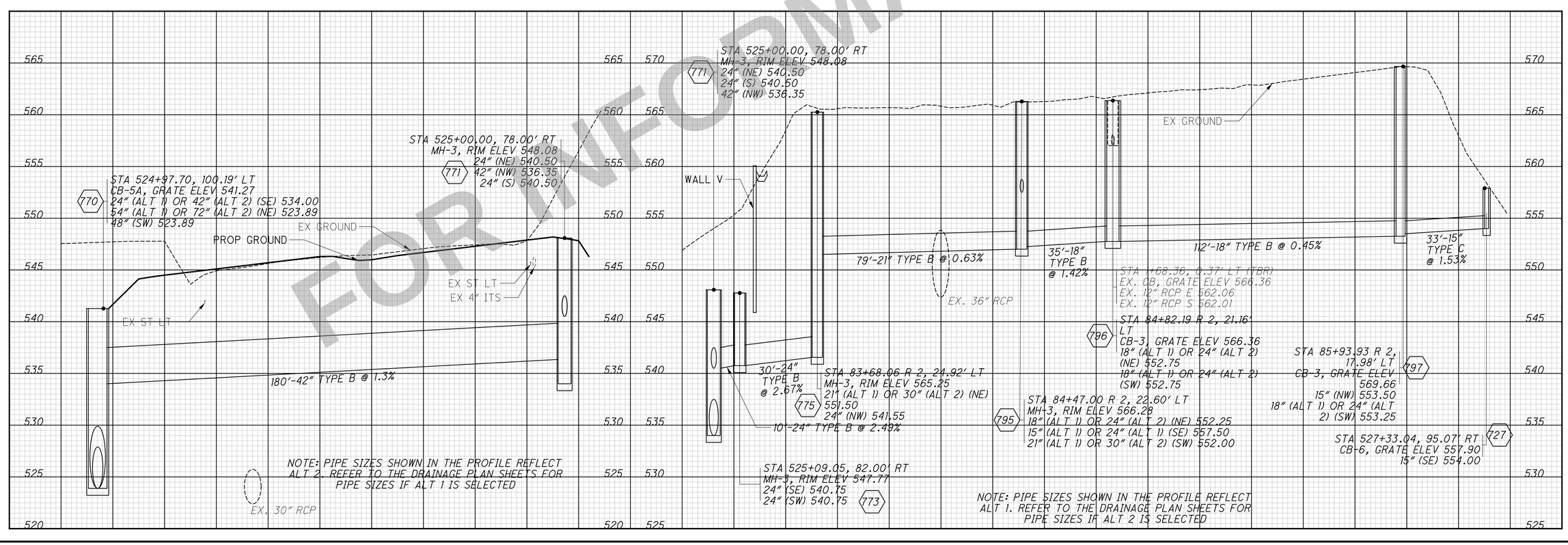
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STORM SEWER PROFILES

HAM-75-7.85

858
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FOR INFORMATION ONLY

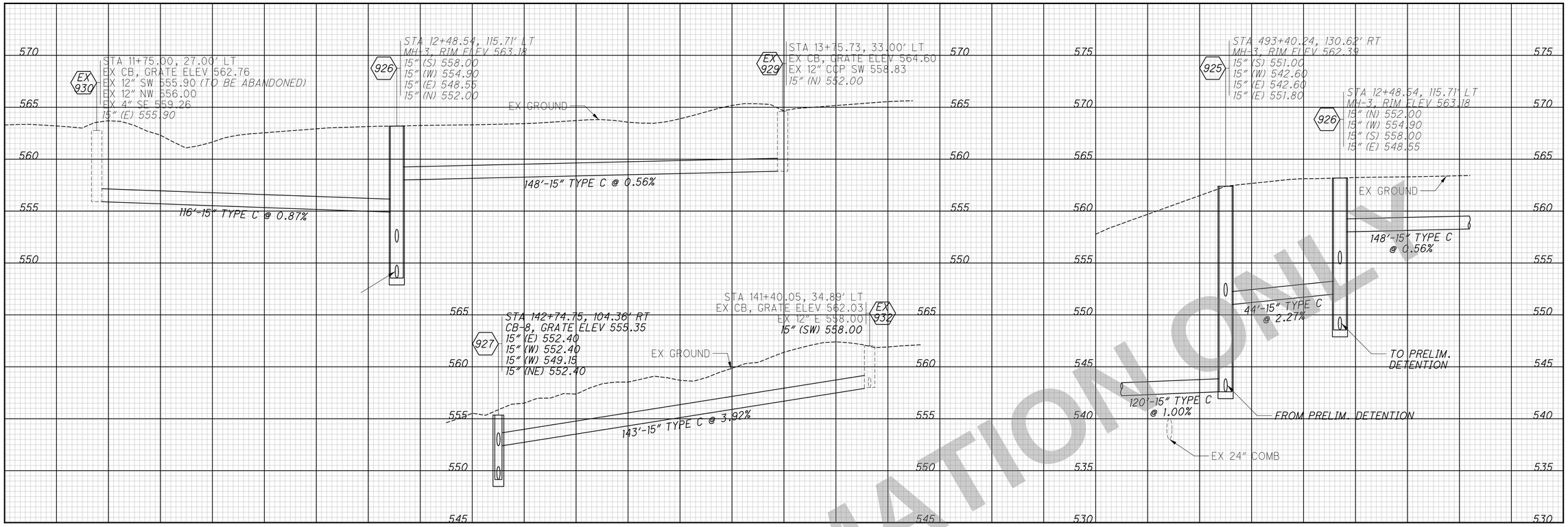
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STORM SEWER PROFILES

HAM-75-7.85

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FOR INFORMATION ONLY

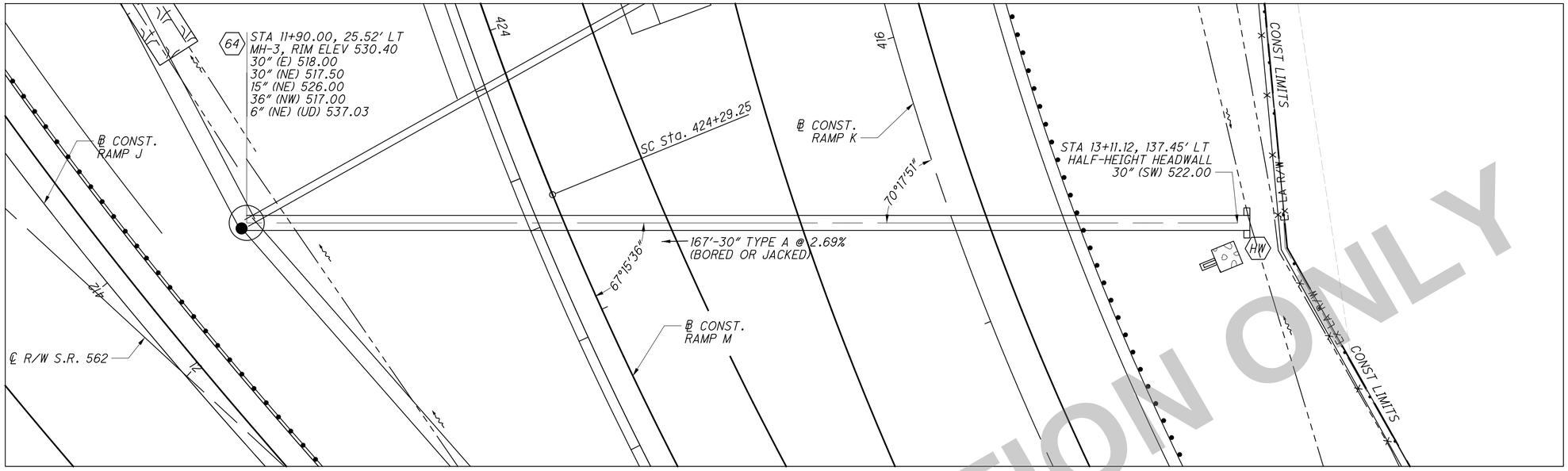
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STORM SEWER PROFILES

HAM-75-7.85

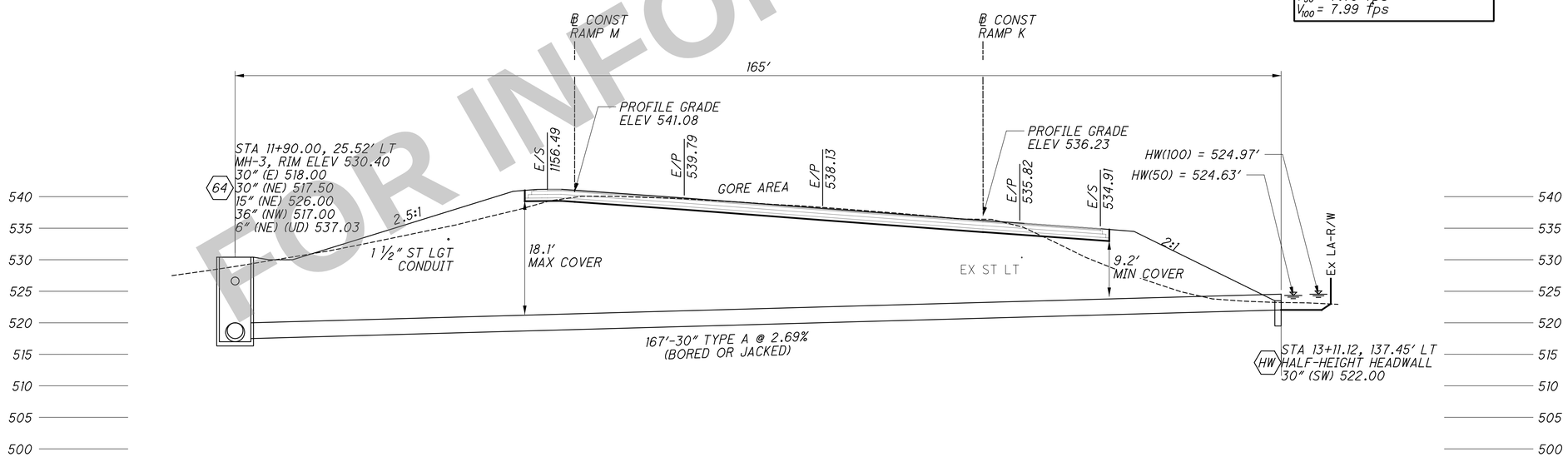
860
2017

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PLAN

HYDRAULIC DESIGN DATA
DRAINAGE AREA = 5.20 AC
Q_{50} = 23.03 cfs
Q_{100} = 26.34 cfs
HW_{50} = 524.63'
HW_{100} = 524.97'
V_{50} = 7.76 fps
V_{100} = 7.99 fps



CULVERT AT STA 415+67.54

PROFILE

FOR INFORMATION ONLY

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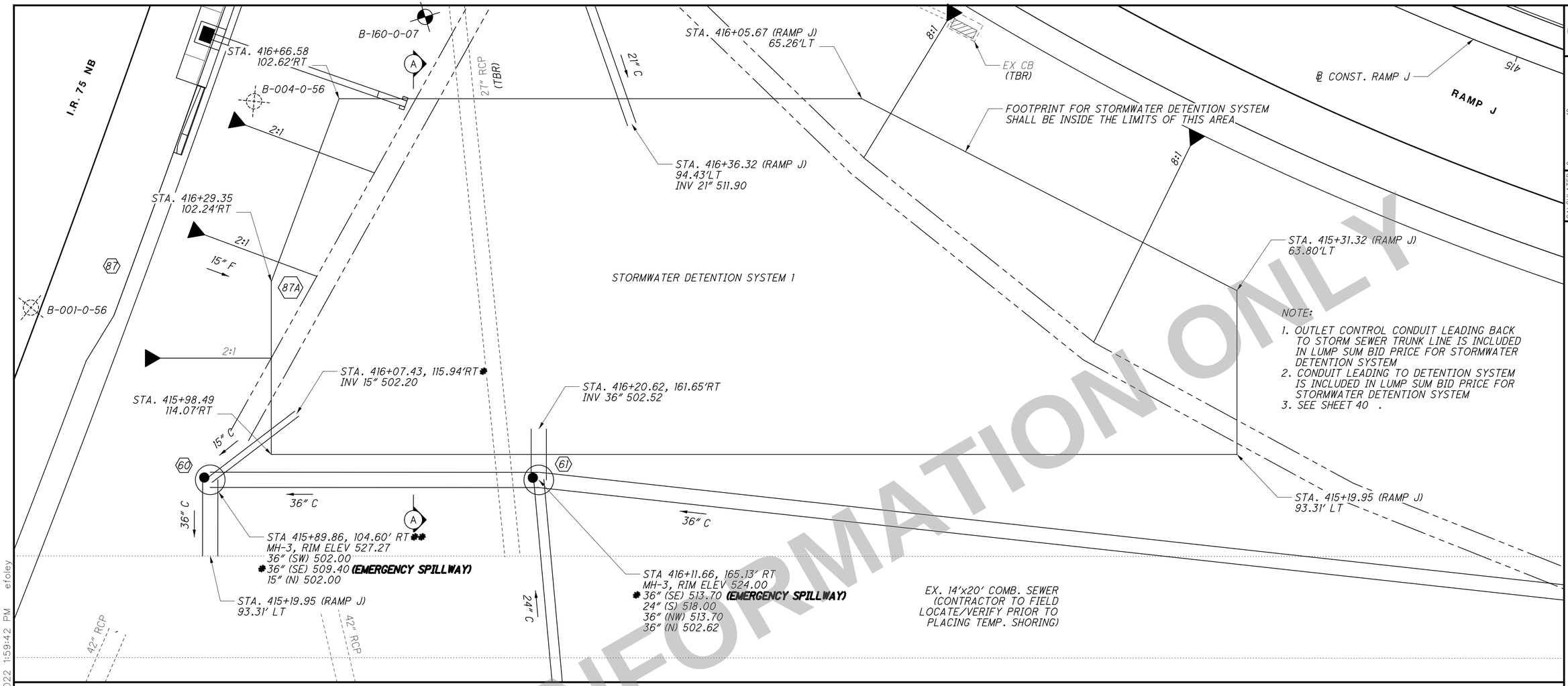
HORIZONTAL SCALE IN FEET
0 5 10 20

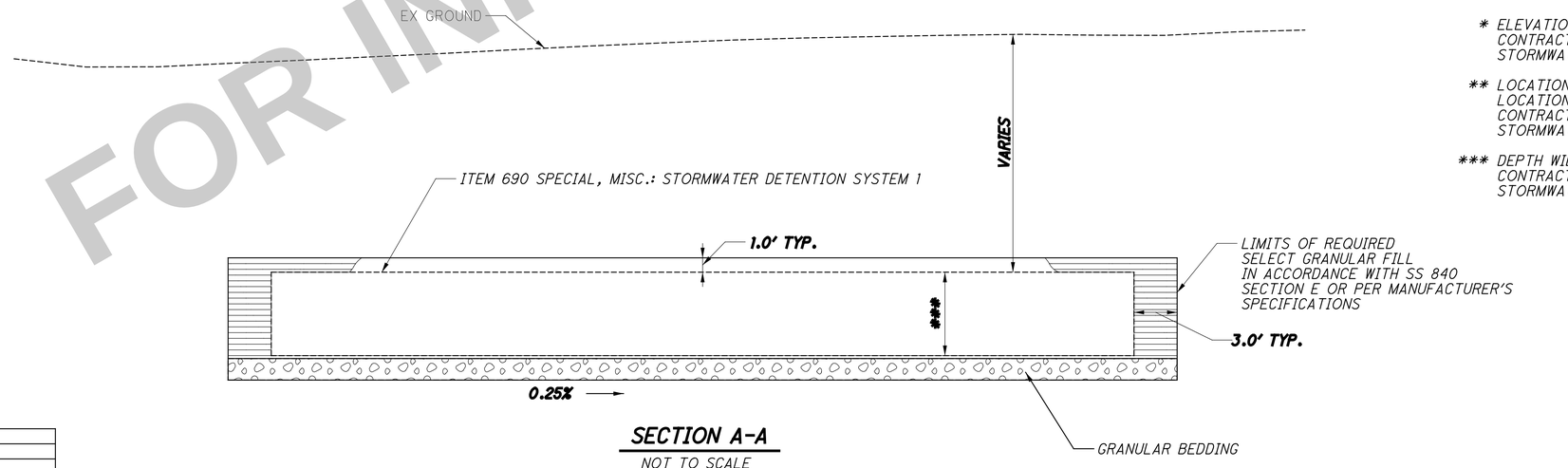
CALCULATED RSH
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CULVERT DETAIL - RAMP K
STA 415+67.54

HAM-75-7.85

861
2017





SECTION A-A

NOT TO SCALE

* ELEVATION MAY VARY BASED ON CONTRACTOR/MANUFACTURER DESIGN OF STORMWATER DETENTION SYSTEM.

** LOCATION IS APPROXIMATE. FINAL LOCATION TO BE DETERMINED BY CONTRACTOR/MANUFACTURER OF STORMWATER DETENTION SYSTEM.

*** DEPTH WILL BE BASED ON CONTRACTOR/MANUFACTURER DESIGN OF STORMWATER DETENTION SYSTEM.

CROSS REFERENCES	
SHEET NO	DESCRIPTION
40	GENERAL NOTE
809 - 820	DRAINAGE PLANS
821 - 860	STORM SEWER PROFILES
1092 - 1095	SANITARY SEWER PROFILES

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED RSH
CHECKED DLR

STORMWATER DETENTION SYSTEM DETAILS
STORMWATER DETENTION SYSTEM 1

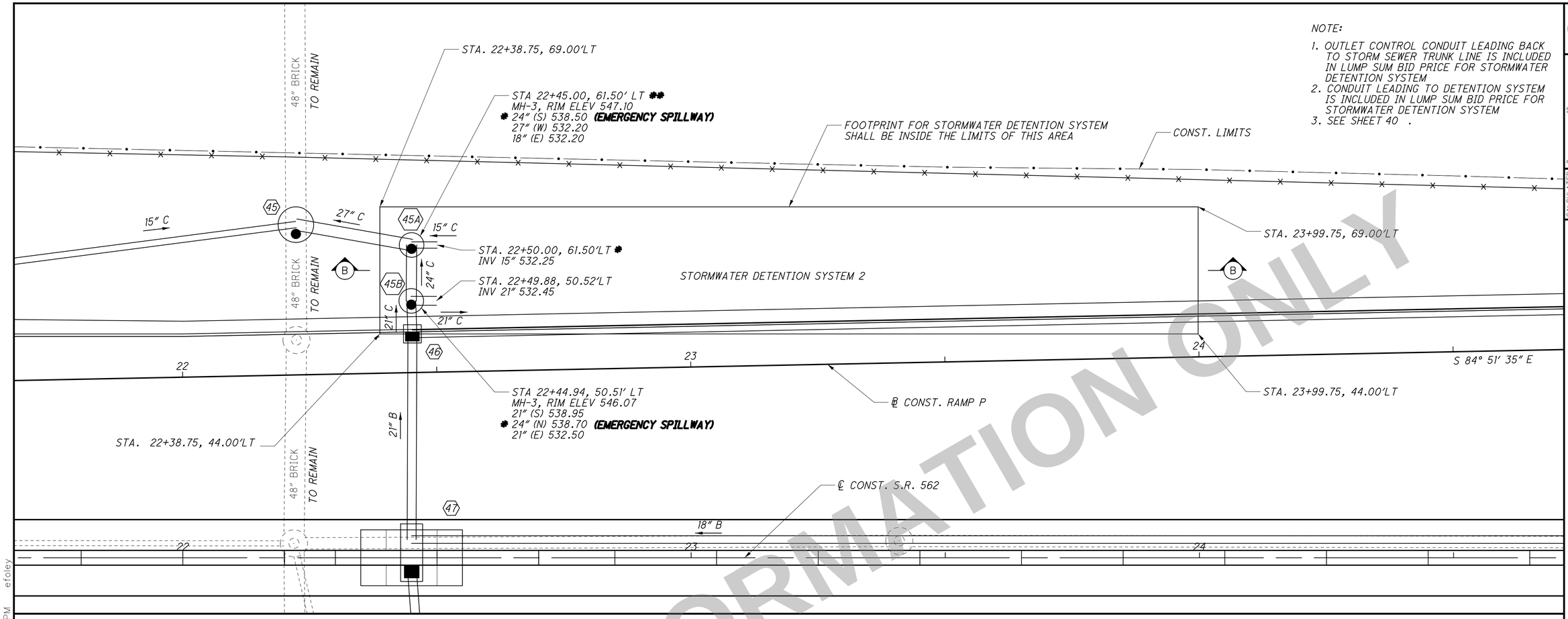
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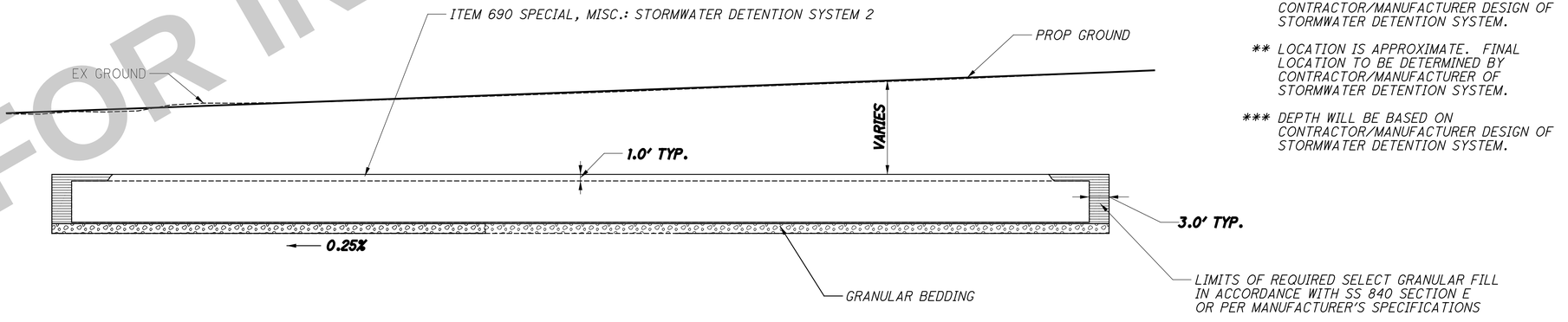
862
2017

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NOTE:

1. OUTLET CONTROL CONDUIT LEADING BACK TO STORM SEWER TRUNK LINE IS INCLUDED IN LUMP SUM BID PRICE FOR STORMWATER DETENTION SYSTEM
2. CONDUIT LEADING TO DETENTION SYSTEM IS INCLUDED IN LUMP SUM BID PRICE FOR STORMWATER DETENTION SYSTEM
3. SEE SHEET 40 .





* ELEVATION MAY VARY BASED ON CONTRACTOR/MANUFACTURER DESIGN OF STORMWATER DETENTION SYSTEM.

** LOCATION IS APPROXIMATE. FINAL LOCATION TO BE DETERMINED BY CONTRACTOR/MANUFACTURER OF STORMWATER DETENTION SYSTEM.

*** DEPTH WILL BE BASED ON CONTRACTOR/MANUFACTURER DESIGN OF STORMWATER DETENTION SYSTEM.

SECTION B-B

NOT TO SCALE

CROSS REFERENCES	
SHEET NO	DESCRIPTION
40	GENERAL NOTE
809 - 820	DRAINAGE PLANS
821 - 860	STORM SEWER PROFILES
1092 - 1099	SANITARY SEWER PROFILES

HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED RSH CHECKED DLR

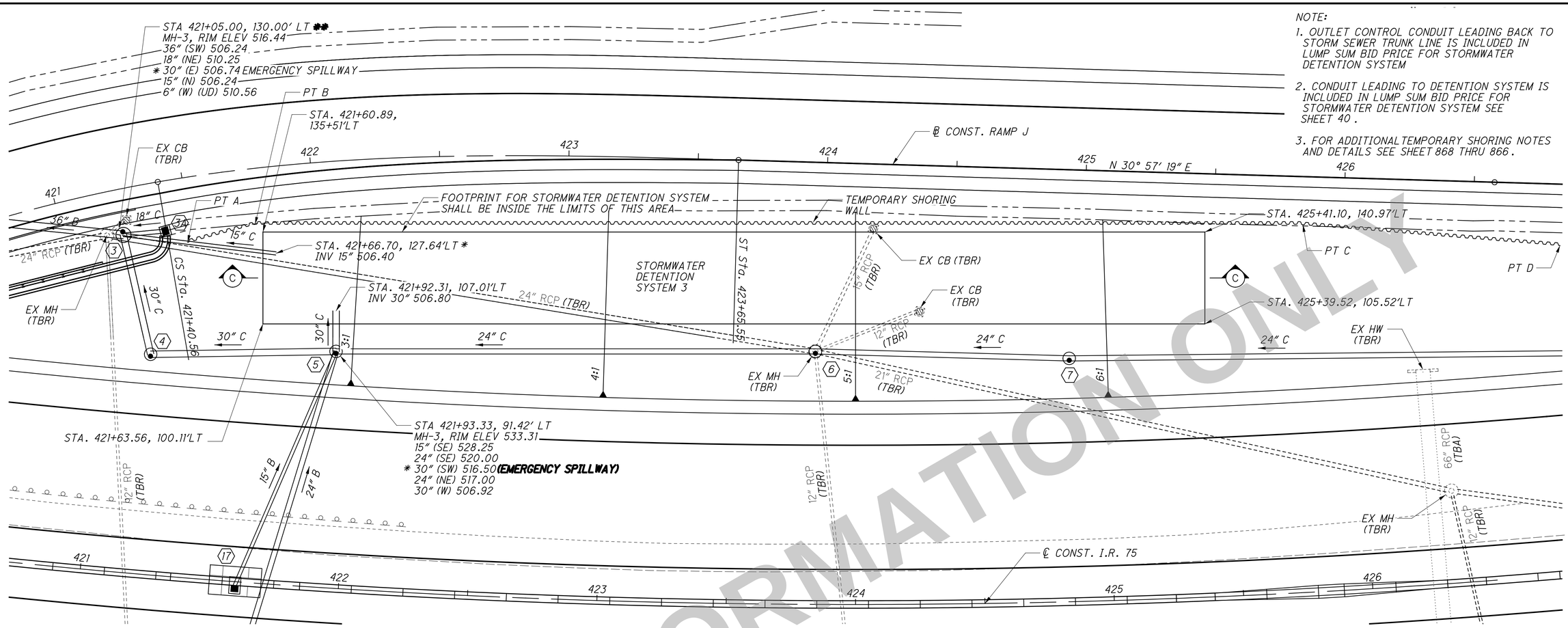
STORMWATER DETENTION SYSTEM DETAILS
STORMWATER DETENTION SYSTEM 2

HAM-75-7.85

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FOR INFORMATION ONLY

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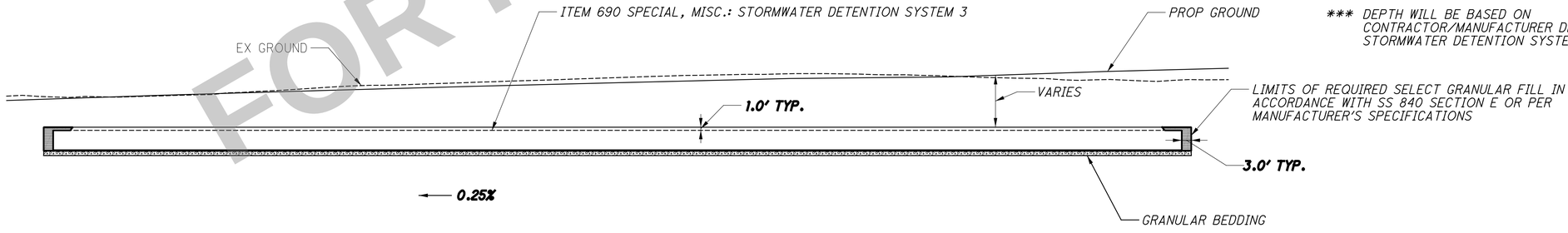
NOTE:

1. OUTLET CONTROL CONDUIT LEADING BACK TO STORM SEWER TRUNK LINE IS INCLUDED IN LUMP SUM BID PRICE FOR STORMWATER DETENTION SYSTEM
2. CONDUIT LEADING TO DETENTION SYSTEM IS INCLUDED IN LUMP SUM BID PRICE FOR STORMWATER DETENTION SYSTEM SEE SHEET 40 .
3. FOR ADDITIONAL TEMPORARY SHORING NOTES AND DETAILS SEE SHEET 868 THRU 866 .

* ELEVATION MAY VARY BASED ON CONTRACTOR/MANUFACTURER DESIGN OF STORMWATER DETENTION SYSTEM.

** LOCATION IS APPROXIMATE. FINAL LOCATION TO BE DETERMINED BY CONTRACTOR/MANUFACTURER OF STORMWATER DETENTION SYSTEM.

*** DEPTH WILL BE BASED ON CONTRACTOR/MANUFACTURER DESIGN OF STORMWATER DETENTION SYSTEM.



SECTION C-C

NOT TO SCALE

POINT	REFERENCE ALIGNMENT	STATION	OFFSET	DESCRIPTION
A	℄ CONST RAMP J	421+48.29	24.93' RT	BEGIN TEMP SHORING WALL
B	℄ CONST RAMP J	421+76.12	21.52' RT	BEND PT #1
C	℄ CONST RAMP J	425+84.28	18.55' RT	BEND PT #2
D	℄ CONST RAMP J	426+57.83	23.68' RT	END TEMP SHORING WALL

CROSS REFERENCES	
SHEET NO	DESCRIPTION
40	GENERAL NOTE
809 - 820	DRAINAGE PLANS
821 - 860	STORM SEWER PROFILES
1092 - 1099	SANITARY SEWER PROFILES

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET: 0, 10, 20, 40

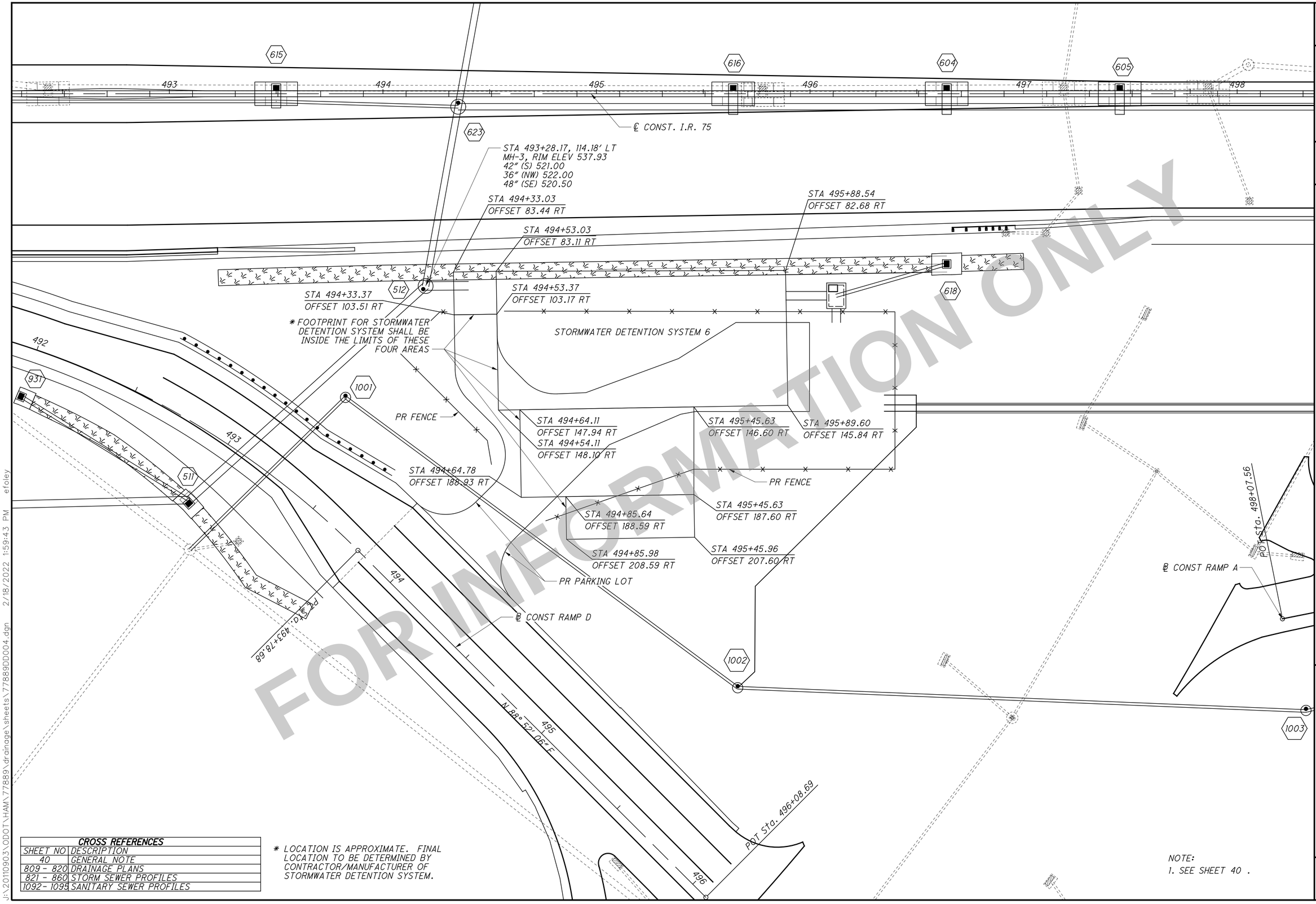
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STORMWATER DETENTION SYSTEM DETAILS
STORMWATER DETENTION SYSTEM 3

HAM-75-7.85

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2017

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FOR INFORMATION ONLY

CROSS REFERENCES	
SHEET NO	DESCRIPTION
40	GENERAL NOTE
809 - 820	DRAINAGE PLANS
821 - 860	STORM SEWER PROFILES
1092 - 1095	SANITARY SEWER PROFILES

* LOCATION IS APPROXIMATE. FINAL LOCATION TO BE DETERMINED BY CONTRACTOR/MANUFACTURER OF STORMWATER DETENTION SYSTEM.

NOTE:
1. SEE SHEET 40 .

HORIZONTAL SCALE IN FEET
0 10 20 40

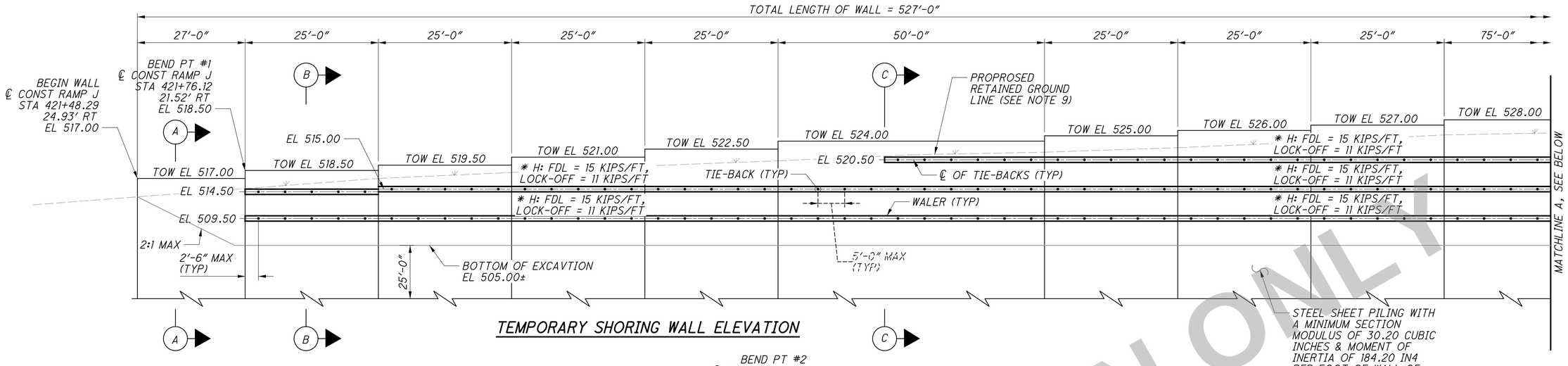
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STORMWATER DETENTION SYSTEM DETAILS
STORMWATER DETENTION SYSTEM 6

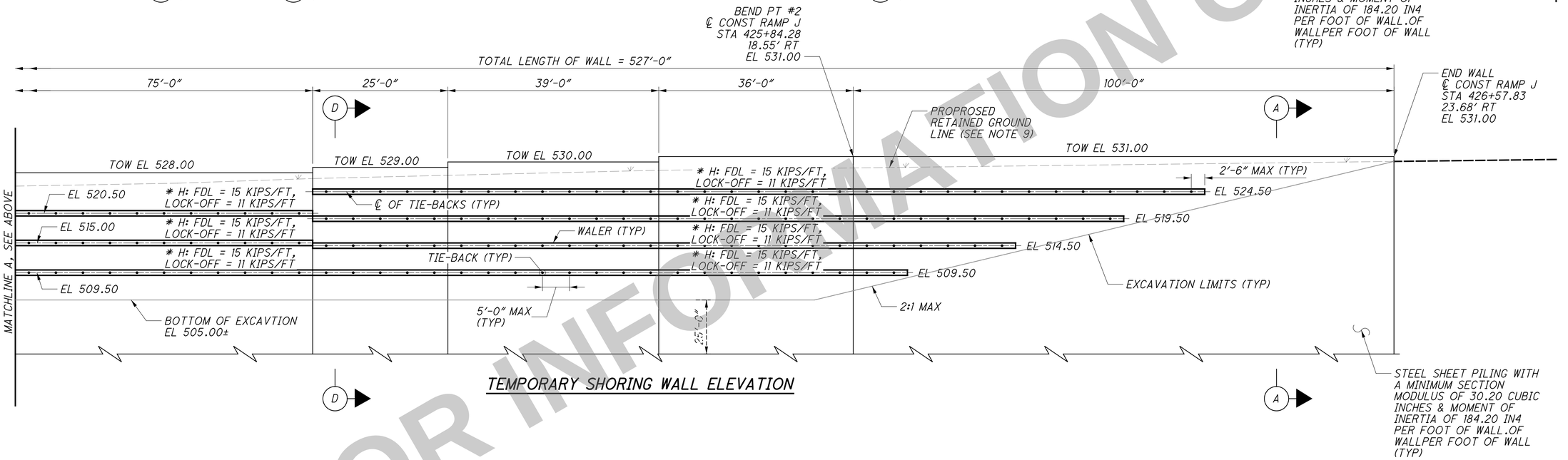
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TEMPORARY SHORING WALL ELEVATION



TEMPORARY SHORING WALL ELEVATION

FOR INFORMATION ONLY

LEGEND

* = LENGTH OF TIE-BACKS TO BE DETERMINED BY CONTRACTOR.

H = HORIZONTAL COMPONENT OF REQUIRED TIE-BACK DESIGN LOAD PER FOOT OF WALER.

FDL = FACTORED DESIGN LOAD.

NOTES

1. FOR SHEET PILING LOCATIONS, SEE SITE PLAN ON SHEET 864
2. FOR SECTIONS A-A, B-B, C-C AND D-D, SEE SHEET 867
3. SHEET PILING SHALL MEET THE REQUIREMENTS OF CMS 711.03. MINIMUM YIELD STRENGTH SHALL BE 50 KSI.
4. THE MAXIMUM SPACING OF THE TIE-BACKS IS 5'-0" AND MINIMUM OF 3 TIE-BACKS PER WALER IS REQUIRED.
5. INSTALL AND TEST TIE-BACKS IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 866, GROUND ANCHORS, 2017, ODOT.
6. TEMPORARY TIE-BACKS DO NOT REQUIRE CORROSION PROTECTION.
7. FILL THE VOID BETWEEN THE DRILL HOLE AND THE SHEATHING OF THE UNBOUNDED LENGTH WITH GROUT.
8. PAYMENT FOR SHEET PILING, TIE-BACKS, WALERS, EXPANSION ANCHORS, STEEL ANGLES, REMOVAL OF ALL COMPONENTS AFTER NO LONGER NECESSARY FOR SPECIFIC CONSTRUCTION PHASE, AND ALL OTHER ITEMS ASSOCIATED WITH TEMPORARY SHORING WILL BE INCLUDING IN THE CONTRACT LUMP SUM PRICE FOR "COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, STORMWATER DETENTION #3.
9. PROPOSED GROUND LINE REPRESENTS PROPOSED RAMP J CONSTRUCTION UPON DURING MOT PHASE 2. GROUND LINE SHALL BE CONSIDERED APPROXIMATE.

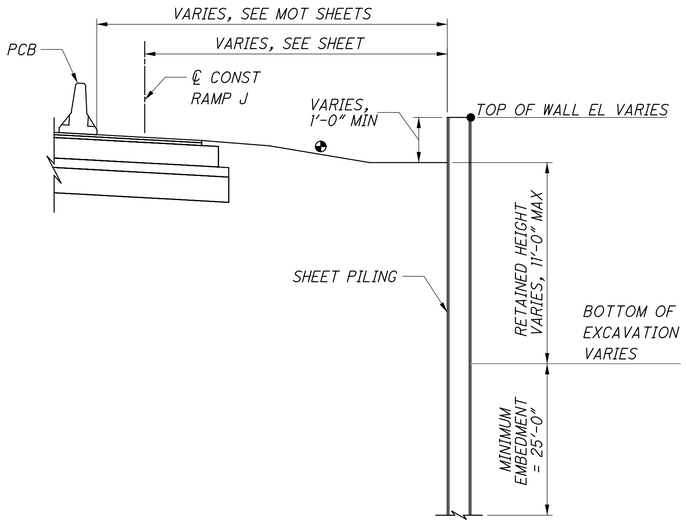
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TEMPORARY SHORING DETAILS

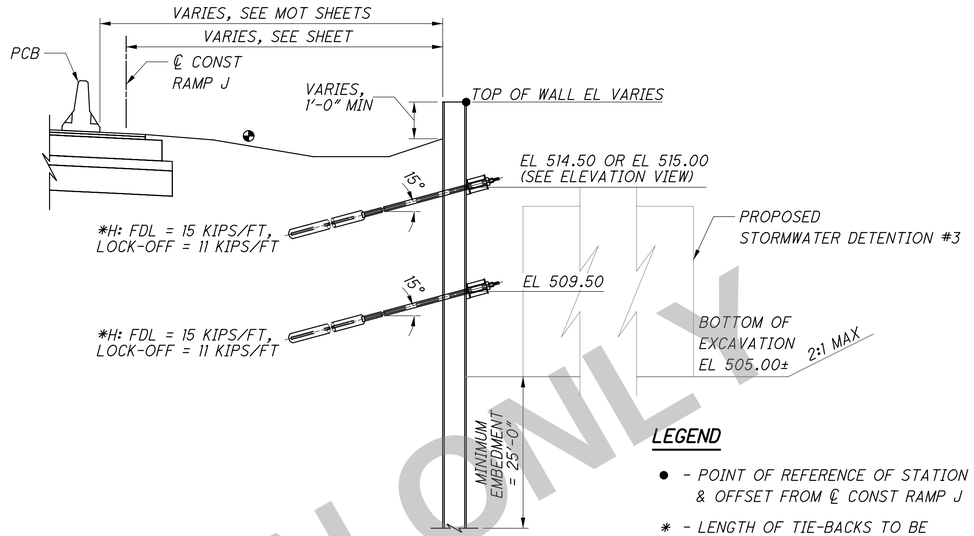
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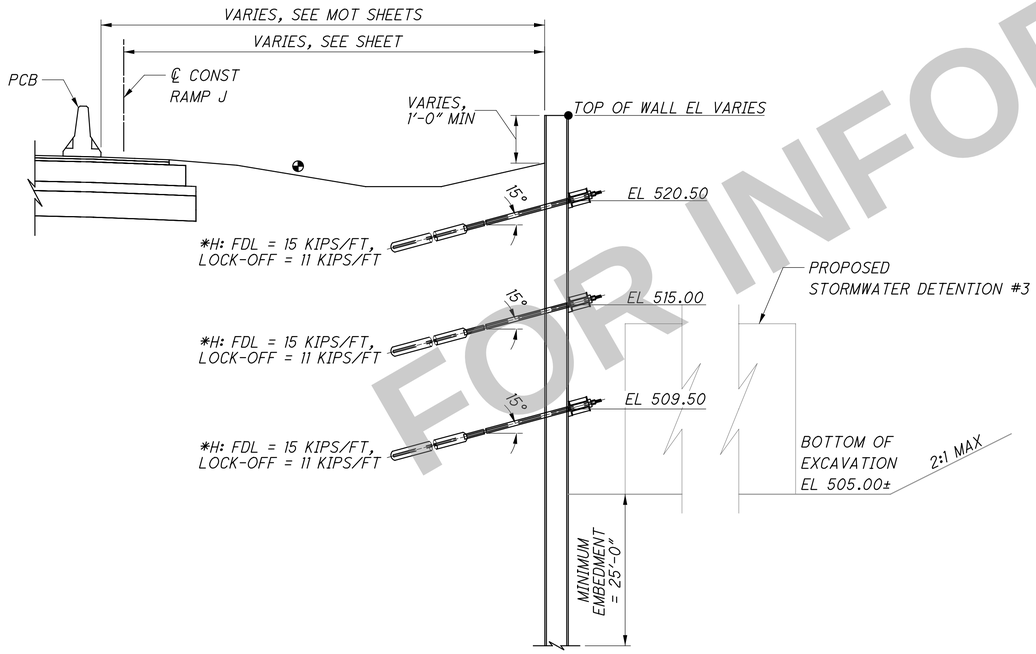
SECTION A-A



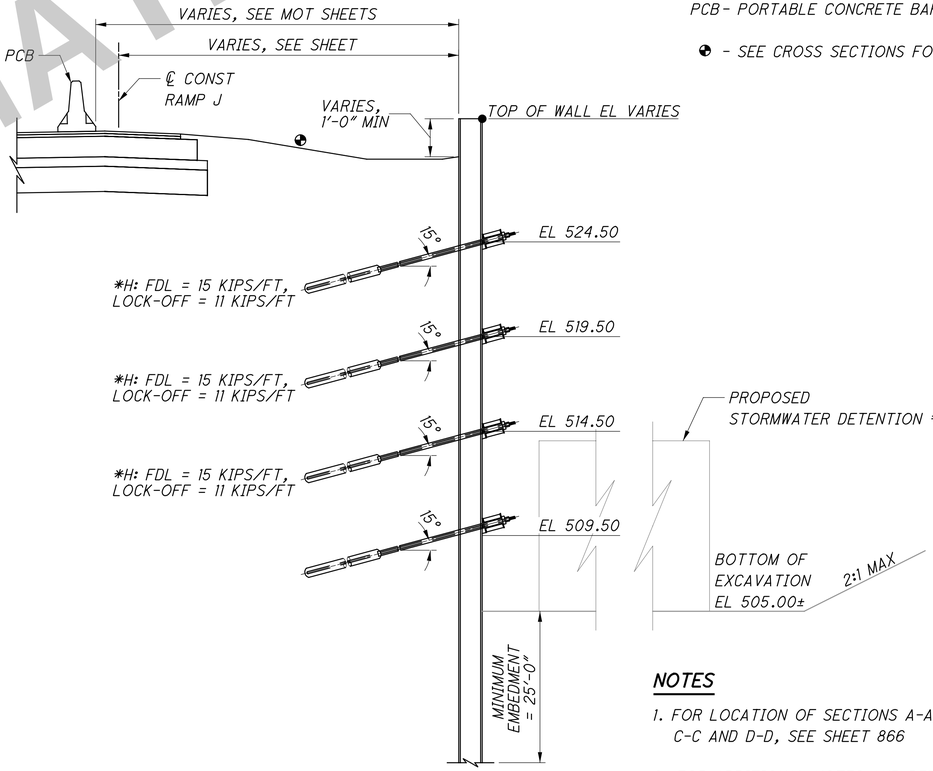
SECTION B-B

LEGEND

- ● - POINT OF REFERENCE OF STATION & OFFSET FROM ℄ CONST RAMP J
- * - LENGTH OF TIE-BACKS TO BE DETERMINED BY CONTRACTOR.
- H - HORIZONTAL COMPONENT OF REQUIRED TIE-BACK DESIGN LOAD PER FOOT OF WALER.
- FDL - FACTORED DESIGN LOAD
- PCB - PORTABLE CONCRETE BARRIER
- ◓ - SEE CROSS SECTIONS FOR GRADING



SECTION C-C



SECTION D-D

NOTES

1. FOR LOCATION OF SECTIONS A-A, B-B, C-C AND D-D, SEE SHEET 866
2. FOR ADDITIONAL NOTES AND DETAILS, SEE SHEET 866 AND SHEET 868
3. FOR SITE PLAN, SEE SHEET 864

FOR INFORMATION ONLY

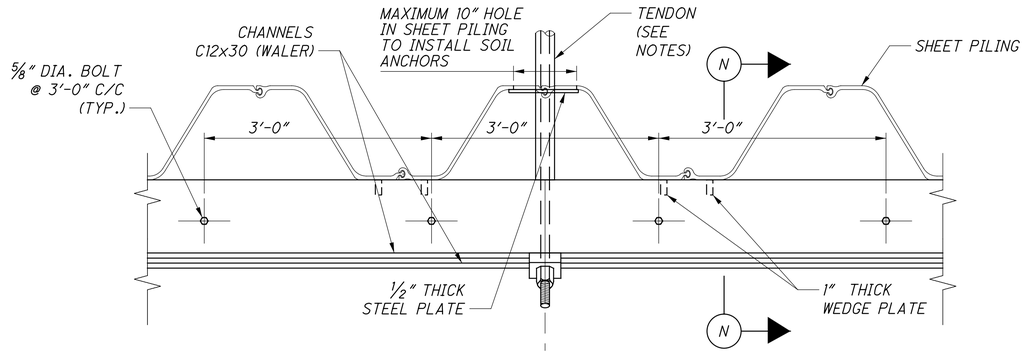
CALCULATED MJR
CHECKED RMW

TEMPORARY SHORING DETAILS

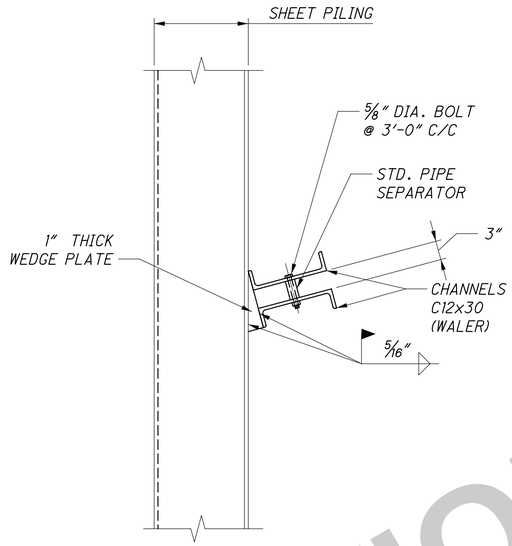
HAM-75-7.85

867
2017

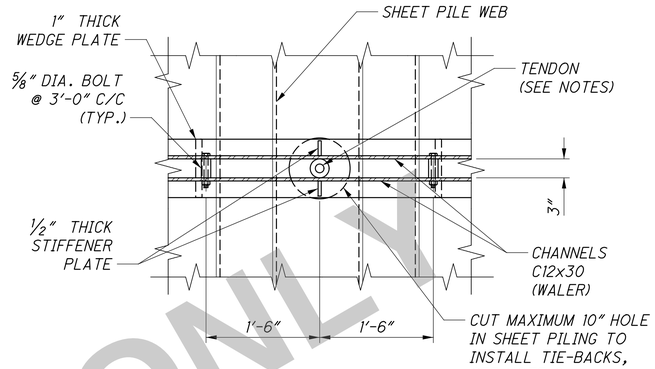
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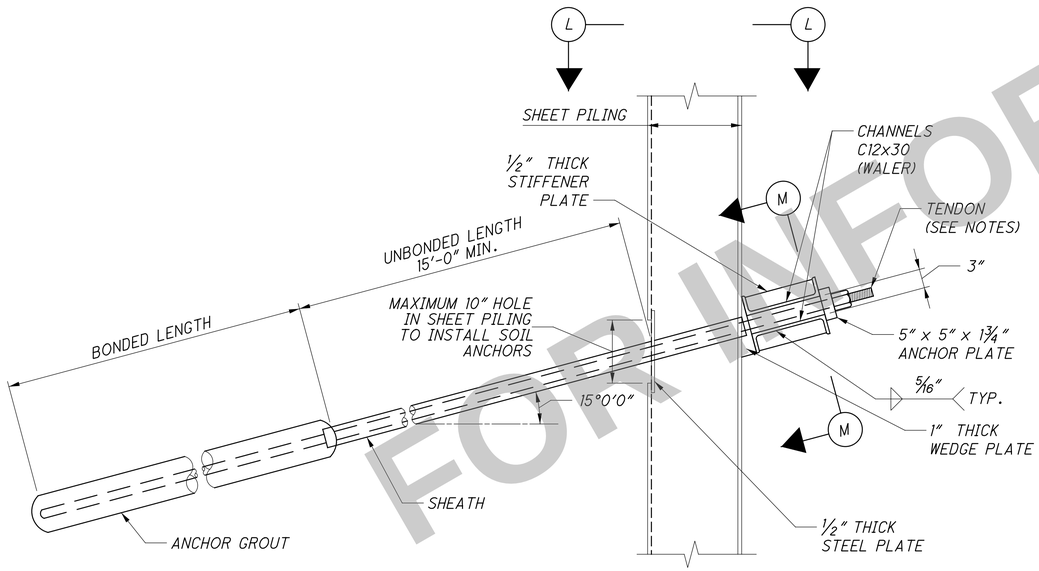
VIEW L-L



SECTION N-N



SECTION M-M



TYPICAL TIE-BACK DETAIL

NOTES

1. TENDON SHALL BE EITHER A 1 3/8" DIAMETER THREADED BAR (ASTM A722 GRADE 150) OR A LOW RELAXATION FOUR-STRAND (ASTM A416 GRADE 270) SEVEN-WIRE UNCOATED STRAND.

2. ALL STEEL SHALL BE GRADE 50. ALL BOLTS SHALL BE 5/8" DIA. HIGH STRENGTH BOLTS ASTM A325.

3. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

4. THE HOLES FOR THE ANCHORS WILL NOT BE CUT UNTIL AFTER DRIVING IS COMPLETE.

5. INSTALL AND TEST TIE-BACKS IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 866.

FOR INFORMATION ONLY

CALCULATED MJR
CHECKED RMW

TEMPORARY SHORNG DETAILS

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THE METROPOLITAN SEWER DISTRICT
OF GREATER CINCINNATI
HAMILTON COUNTY

HAM-75-7.85 (PID 77889)
COMBINED SEWER RELOCATION
SOUTHBOUND I-75 AT MILL CREEK

FOR INFORMATION ONLY

NOTES:

MANHOLES: ALL PROPOSED MANHOLES AND DROP MANHOLES SHALL BE TYPE "T" ON SEWERS 48" OR LARGER AND TYPE "S" ON SEWERS 42" AND SMALLER. THE MODIFIED TYPE "S" MANHOLE SHALL BE USED ON SEWERS 24" TO 42" WHEN NOT LOCATED IN PAVED AREAS. ALL MANHOLES LOCATED OUTSIDE OF ROAD RIGHT-OF-WAY AND OUTSIDE OF MAINTAINED RESIDENTIAL YARDS SHALL HAVE MANHOLE TOPS 18" ABOVE GROUND. THE STANDARD PRECAST MANHOLE BASE WITH FLEXIBLE MANHOLE JOINTS SHALL BE USED WITH P.V.C. PIPE. IF THE CONTRACTOR PROVIDES PRECAST MANHOLES, THE CONTRACTOR SHALL ASSUME ANY RISK OF MAKING FIELD MODIFICATIONS TO THE PRECAST MANHOLES, DUE TO FIELD CONDITIONS

PIPE JOINTS: ALL PROPOSED CONDUIT SHALL HAVE RESILIENT AND FLEXIBLE JOINTS.

HOUSE CONNECTIONS: ALL HOUSE CONNECTIONS SHALL BE TYPE "I" CONDUIT WITH RESILIENT AND FLEXIBLE JOINTS, EITHER P.V.C. OR ABS CONDUIT, SDR35 WITH ASTM D-3212 FLEXIBLE ELASTOMERIC SEALS.

UNDERGROUND STRUCTURES: LOCATION OF UNDERGROUND STRUCTURES ARE NOT GUARANTEED. APPROXIMATE LOCATION OF GAS, WATER & ELECTRIC SERVICE LATERALS ARE SHOWN IN PLAN VIEW ONLY. ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.

THE CONTRACTOR SHALL FURNISH ALL MANHOLE FRAMES AND COVERS AS PER THE METROPOLITAN SEWER DISTRICT (MSD) OF GREATER CINCINNATI STD ACC. NO. 49005.

OVERHEAD UTILITY LINES: LOCATION OF ABOVEGROUND UTILITY LINES ARE NOT SHOWN ON THE DRAWINGS. CONTRACTOR SHALL VISIT PROJECT SITE PRIOR TO BIDDING TO VERIFY OVERHEAD UTILITIES.

ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEMS ARE PROHIBITED.

THE CONTRACTOR SHALL FURNISH ALL MANHOLE FRAMES AND COVERS.

ALL FENCING DAMAGED BY SEWER CONSTRUCTION SHALL BE REPLACED IN KIND BY THE CONTRACTOR AND ALL ASSOCIATED COSTS SHOULD BE INCLUDED WITH VARIOUS CONTRACT ITEMS.
ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEMS ARE PROHIBITED.

THE CONTRACTOR SHALL FURNISH ALL MANHOLE FRAMES AND COVERS AS PER THE METROPOLITAN SEWER DISTRICT (MSD) OF GREATER CINCINNATI STD ACC. NO. 49005.

BENCH MARKS:

REFER TO HAM-75-7.85 PAGE 13 OF 1716 FOR PROJECT CONTROL POINTS AND BENCHMARK INFORMATION.

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Cincinnati OH 45246
tel 513 942 3141 fax 513 881 2263
ibigroup.com



VICINITY MAP
NO SCALE

STANDARDS:
(SEE MSDGC STANDARD DRAWINGS)

DESCRIPTION	ACCESSION NO.
TYPICAL INVERTS	49004
STANDARD CASTINGS FOR MANHOLES	49005
STANDARD CONCRETE COLLARS ON CONDUITS	49031
CONTROL DIMENSIONS FOR TYPICAL TRENCHES FOR CONDUITS	49032
TYPICAL BUILDING SEWERS AND STACKS	49033
STANDARD, (TYPE "S") MANHOLE	49037
STANDARD, (TYPE "T") MANHOLE	49040
STANDARD CONCRETE CRADLE AND ENCASEMENT	49044
MODIFIED, (TYPE "T") MANHOLE	49048
MODIFIED, (TYPE "S") MANHOLE	49049
WATERTIGHT MANHOLE	49051
STANDARD PRECAST CONCRETE MANHOLE BASE	49056
TYPICAL INSTALLATION OF BUILDING SEWER LATERAL	49060
STANDARD SYMBOLS	49072 TO 49076
STANDARD TWO WAY CLEANOUT FOR BUILDING SEWERS	61979
STANDARD CASTINGS OVER TWO WAY CLEANOUT	61979-A

CONTENTS:

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	SCHEMATIC PLAN
3	SHEET INDEX
4-5	COMBINED SEWER (CS) PLAN AND PROFILE
6	STORM SEWER PLAN AND PROFILE
7	COMBINED SEWER OUTLET SITE PLAN
8-9	COMBINED SEWER OUTLET (CSO) CONTROL STRUCTURE DETAILS
10-11	HEADWALL DETAILS
12-14	NOTES

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig
OHIO811.org Before You Dig
OHIO811, 8-1-1, or 1-800-362-2764
(Non-members must be called directly)

MSD WASTEWATER ENGINEERING

STATE OF OHIO
JEFFREY B. KOEHN
E-83480
REGISTERED
PROFESSIONAL ENGINEER
12-20-04-11
ENGINEERS SEAL

SUBMITTED: _____
SEWERS CHIEF ENGINEER

APPROVED: _____
DIRECTOR OF SEWERS

DATE: _____

869
2017

PATH: J:\PRE-INT\TS\06\06-386_HAM-75\HAM\88124\UTILITIES_MSD\SHEETS\88124_MSDUT001.DGN
DATE: MONDAY, NOVEMBER 25, 2019 11:05:32 AM
PLOTTED BY: TIM WILLIAMS

DESIGNED BY: JBK
DRAWN BY: TW

ACAD DRAWING NAME: 88124_MSDUT001.DGN

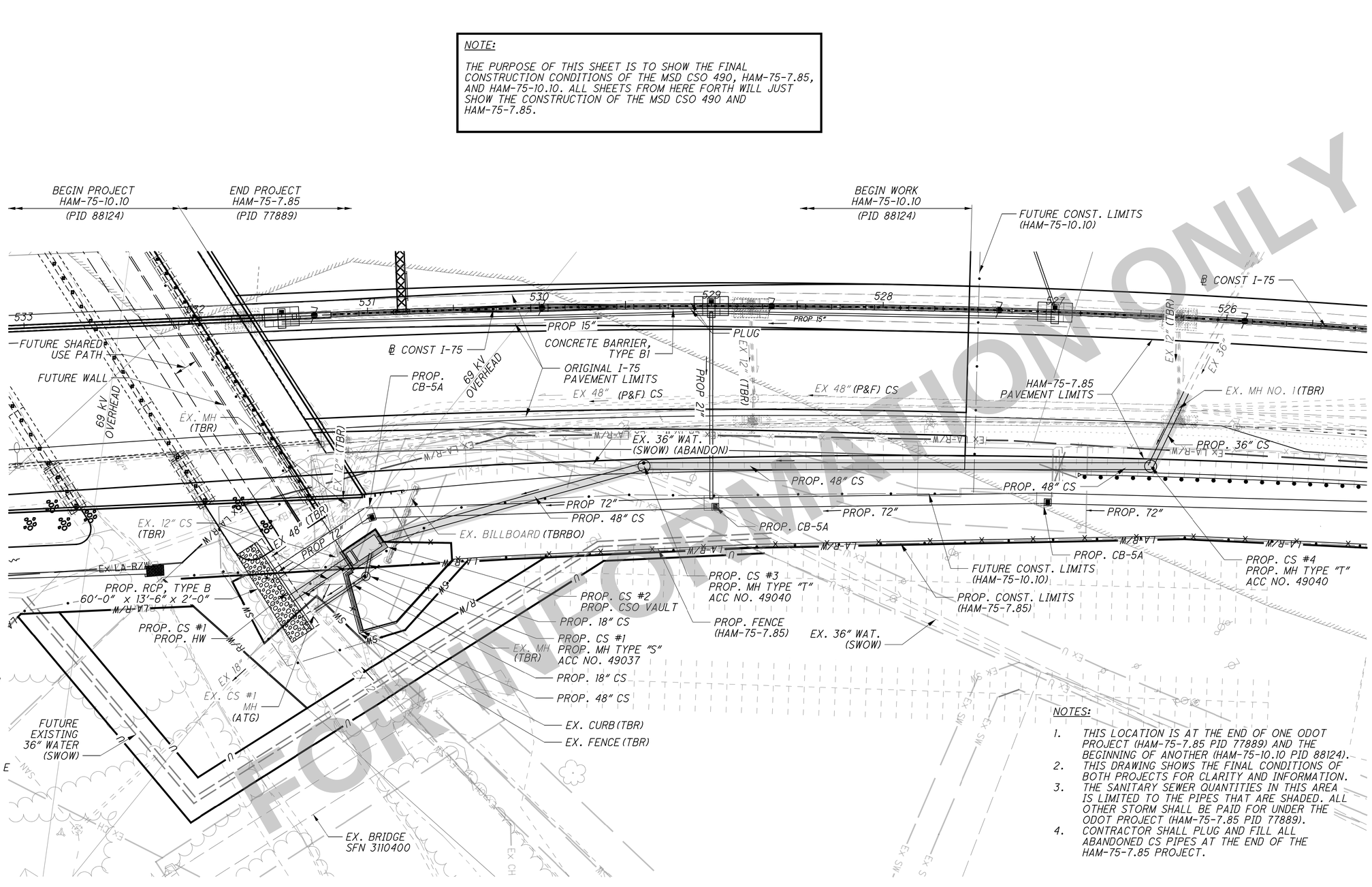
ACC. NO. _____

SHEET 1 OF 14

SS# _____

NOTE:

THE PURPOSE OF THIS SHEET IS TO SHOW THE FINAL CONSTRUCTION CONDITIONS OF THE MSD CSO 490, HAM-75-7.85, AND HAM-75-10.10. ALL SHEETS FROM HERE FORTH WILL JUST SHOW THE CONSTRUCTION OF THE MSD CSO 490 AND HAM-75-7.85.



FOR INFORMATION ONLY

I-75 CURVE DATA
P.I. Sta. 523+96.89
Δ = 16° 02' 37" (LT)
Dc = 1° 06' 00"
R = 5,208.71'
T = 734.06'
L = 1,458.52'
E = 51.47'
C = 1,453.75'
C.B. = N 35° 56' 18" E
e_{max} = 0.029

ABBREVIATIONS:

THESE FOLLOWING ABBREVIATIONS ARE USED THROUGHOUT THESE PLANS:

℄ = BASELINE
℄ = CENTERLINE
℄ = FLOW LINE
℄ = PLATE
EL. = ELEVATION
EX. = EXISTING
PROP. = PROPOSED
BOTT. = BOTTOM
E.F. = EACH FACE
B.F. = BACK FACE
F.F. = FRONT FACE
FTG. = FOOTING
PEJF = PREFORMED EXPANSION JOINT FILLER
SPA. = SPACES
ATG = ADJUST TO GRADE
DND = DO NOT DISTURB
TBR = TO BE REMOVED
TBRO = TO BE REMOVED BY OTHERS
TBRR = TO BE REMOVED AND REPLACED
TYP. = TYPICAL
P&F = PLUG & FILL

NOTES:

1. THIS LOCATION IS AT THE END OF ONE ODOT PROJECT (HAM-75-7.85 PID 77889) AND THE BEGINNING OF ANOTHER (HAM-75-10.10 PID 88124).
2. THIS DRAWING SHOWS THE FINAL CONDITIONS OF BOTH PROJECTS FOR CLARITY AND INFORMATION.
3. THE SANITARY SEWER QUANTITIES IN THIS AREA IS LIMITED TO THE PIPES THAT ARE SHADED. ALL OTHER STORM SHALL BE PAID FOR UNDER THE ODOT PROJECT (HAM-75-7.85 PID 77889).
4. CONTRACTOR SHALL PLUG AND FILL ALL ABANDONED CS PIPES AT THE END OF THE HAM-75-7.85 PROJECT.

870
2017

PATH: J:\PRE-INT\TS\06\06-386_HAM-75\HAM\88124\UTILITIES_MSD\SHEETS\88124_MSDUB001.DGN
DATE: MONDAY, APRIL 6, 2020 11:30:14 AM
PLOTTED BY: Zach.Weekend

DESIGNED BY: JBK
DRAWN BY: TW

REVISIONS		
BY:	DATE:	DESCRIPTION:

THE METROPOLITAN SEWER DISTRICT OF GREATER CINCINNATI
HAMILTON COUNTY, OHIO

M S D
WASTEWATER ENGINEERING

HAM-75-7.85 (PID 77889)
NORTH OF PADDOCK ROAD INTERCHANGE ALONG I-75 SOUTHBOUND
SOUTH OF STRUCTURE OVER MILL CREEK AND RONALD REAGAN CROSS COUNTY HIGHWAY
CITY OF CINCINNATI SEC.1 E.R.1 T.3
SCALE: HORIZ. 1"=30'
0 30 60

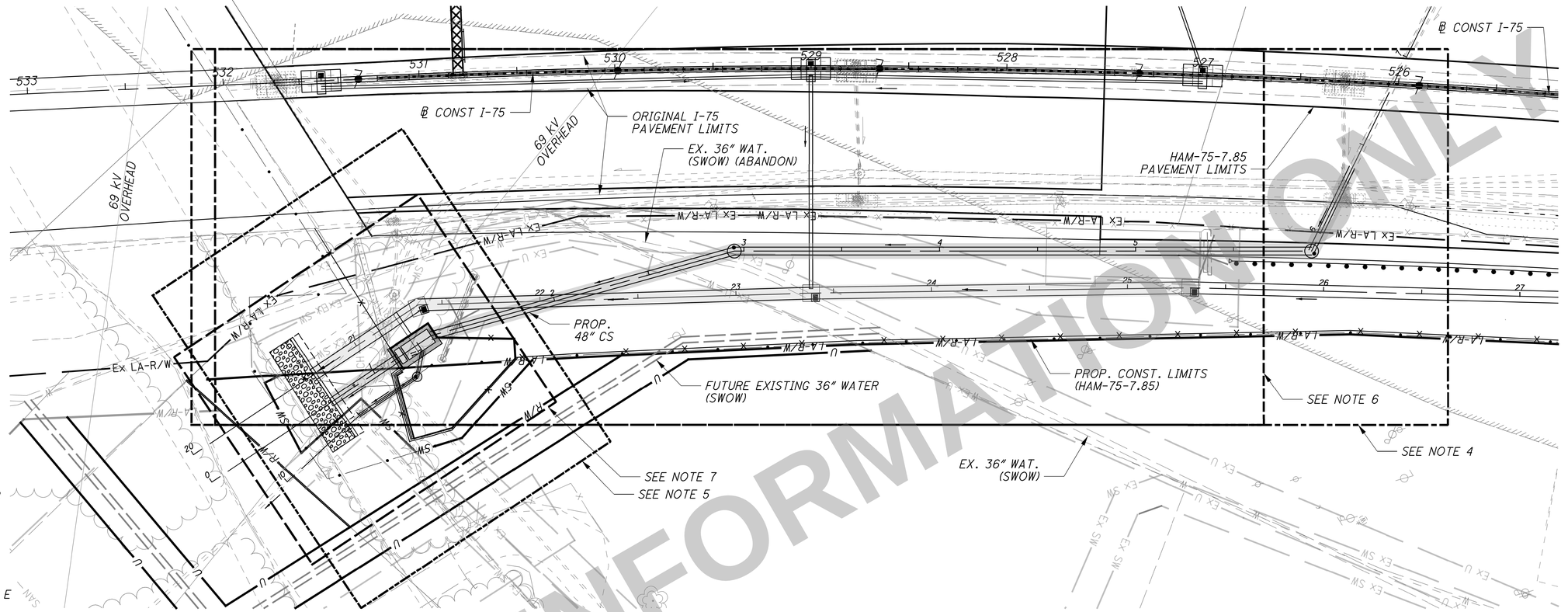
COMBINED SEWER RELOCATION SOUTHBOUND I-75 AT MILL CREEK HAM-75-7.85 (PID 77889)

SCHEMATIC PLAN

ACAD DRAWING NAME: 88124_MSDUB001.DGN

ACC. NO. _____

SHEET 2 OF 14 SS# _____



I-75 CURVE DATA
P.I. Sta. 523+96.89
Δ = 16° 02' 37" (LT)
Dc = 1° 06' 00"
R = 5,208.71'
T = 734.06'
L = 1,458.52'
E = 51.47'
C = 1,453.75'
C.B. = N 35° 56' 18" E
e_{max} = 0.029

FOR INFORMATION ONLY

NOTES:

1. THIS LOCATION IS AT THE END OF ONE ODOT PROJECT (HAM-75-7.85 PID 77889) AND THE BEGINNING OF ANOTHER (HAM-75-10.10 PID 88124).
2. THIS DRAWING SHOWS THE ITEM CONSTRUCTED WITH ODOT PROJECT (HAM-75-7.85 PID 77889) FOR CLARITY AND INFORMATION.
3. THE SANITARY SEWER QUANTITIES IN THIS AREA IS LIMITED TO THE PIPES THAT ARE SHADED. ALL OTHER STORM SEWER SHALL BE PAID FOR UNDER THE ODOT PROJECT (HAM-75-7.85 PID 77889).
4. SEE SHEET 4 OF 14 FOR DETAILS OF PROP. COMBINED SEWER SYSTEM OVERFLOW AND OUTFALL.
5. SEE SHEET 5 OF 14 FOR DETAILS OF PROP. COMBINED SEWER CONNECTION TO EXISTING COMBINED SEWER SYSTEM.
6. SEE SHEET 6 OF 14 FOR DETAILS OF PROP. STORM SEWER SYSTEM.
7. SEE SHEET 7-9 OF 14 FOR ADDITIONAL DETAILS FOR THE COMBINED SEWER OUTLET STRUCTURE.

871
2017

DESIGNED BY: JBK
DRAWN BY: TW

REVISIONS		
BY:	DATE:	DESCRIPTION:

THE METROPOLITAN SEWER DISTRICT
OF GREATER CINCINNATI
HAMILTON COUNTY, OHIO

MSD WASTEWATER ENGINEERING

HAM-75-7.85 (PID 77889)

NORTH OF PADDOCK ROAD INTERCHANGE ALONG I-75 SOUTHBOUND
SOUTH OF STRUCTURE OVER MILL CREEK AND RONALD REAGAN CROSS COUNTY HIGHWAY
CITY OF CINCINNATI SEC.1 E.R.1 T.3

SCALE: HORIZ. 1"=30'

0 30 60

COMBINED SEWER RELOCATION SOUTHBOUND I-75 AT MILL CREEK HAM-75-7.85 (PID 77889)

SHEET INDEX

ACAD DRAWING NAME: 88124_MSDUB002.DGN

ACC. NO. _____

SHEET 3 OF 14 SS# _____

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DATE: MONDAY, NOVEMBER 25, 2019 10:37:50 AM
PLOTTED BY: TIM.WILLIAMS

PROP. 48" CONDUIT, TYPE B, CLASS I BEDDING

PROP. 48" CONDUIT, TYPE C, CLASS II BEDDING

PROP. 36" CONDUIT, TYPE C, CLASS II BEDDING

50.87' @ 0.33%

170.47' @ 0.33%

294.78' @ 0.33%

47.33' @ 14.13%

EX. GROUND

PROP. GRADE

2.95:1 TO 1.8

MILL CREEK

OHWM = 513.32

PROP. RCP, TYPE B 51'-3" X13'-6" X2'-0"

3.05'± CLR

PROP. 72" STM.

EX. 36" WATER (TBRBO)

STA. 2+79.71

FUTURE 21" STM.

FUTURE UNDERDRAIN

PROP. CS #1
PROP. HW
STA. 0+73.82
PROP. 48" INV = 514.03
W/FLAP GATE
CHECK VALVE

PROP. CS #2
PROP. CSO VAULT
STA. 1+24.27
T.C. = 538.81
PROP. 48" INV = 514.30
PROP. 48" INV = 514.20
PROP. 18" INV = 514.20

PROP. CS #3
PROP. MH TYPE "T"
ACC. NO. 49040
STA. 2+95.11
T.C. = 539.10
PROP. 48" INV = 514.97
PROP. 48" INV = 514.87

PROP. CS #4
PROP. MH TYPE "T"
ACC. NO. 49040
STA. 5+89.89
T.C. = 545.04
PROP. 36" INV = 516.05
PROP. 48" INV = 515.95
(TBR) EX. CS #2
EX. MH
STA. 6+27.22
EX. 12" INV = 538.17±
EX. 12" INV = 536.77±
EX. 36" INV = 521.32±
EX. 36" INV = 521.22±
EX. 48" INV = 520.62±
PROP. CONCRETE COLLAR ON CONDUITS
ACC. NO. 49031
STA. 6+37.22
PROP. 36" INV = 522.74±

℄ CONST I-75

PROP. 15"

PROP. CB-5A

PROP. CS #2
PROP. CSO VAULT
PROP. 48" INV = 514.30
PROP. 48" INV = 514.20
PROP. 18" INV = 514.20

69 KV OVERHEAD

ORIGINAL I-75 PAVEMENT LIMITS

CONCRETE BARRIER, TYPE B1

PLUG

PROP. 21"

EX 12" (TBR)

PROP. CONCRETE COLLAR ON CONDUITS
ACC. NO. 49031
PROP. 36" INV = 522.74±

(TBR) EX. CS #2
EX. MH
EX. 12" INV = 538.17±
EX. 12" INV = 536.77±
EX. 36" INV = 521.32±
EX. 36" INV = 521.22±
EX. 48" INV = 520.62±
END FILL AND PLUG (SEE NOTE 4)

EX 48" (P&G) CS

PT Sta. 531+21.35

VARIES

BEGIN FILL AND PLUG (SEE NOTE 4)

EX. MH
EX. 48" INV = 518.29±
EX. 48" INV = 516.94±
EX. 36" INV = 516.94±
(TBR)

EX. 36" WAT. (SWOW) (ABANDON)

PROP. 48" CS

EX. BILLBOARD (TBRBO)

PROP 72"

FUTURE EXISTING 36" WATER (SWOW)

PROP. CS #3
PROP. MH TYPE "T"
ACC. NO. 49040
PROP. 48" INV = 514.97
PROP. 48" INV = 514.87

PROP. CB-5A

PROP. FENCE (HAM-75-7.85)

EX. 36" WAT. (SWOW)

PROP. 72"

PROP. CS #4
PROP. MH TYPE "T"
ACC. NO. 49040
PROP. 36" INV = 516.05
PROP. 48" INV = 515.95

EX. 12" CSO (TBR)

(TBR) EX 48"

PROP 72"

PROP. RCP TYPE B 60'-0"X13'-6" X2'-0"

PROP. CS #1
PROP. HW
PROP. 48" INV = 514.03
W/FLAP GATE
CHECK VALVE

EX. FENCE (TBR)

EX. CURB (TBR)

EX. MH (TBR)
EX. 8" INV = 522.73±
EX. 24" INV = 513.73±
EX. 36" INV = 513.23±

FOR INFORMATION ONLY

NOTES:

1. SEE SHEET 5 OF 14 FOR DETAILS OF PROP. COMBINED SEWER CONNECTION TO EXISTING COMBINED SEWER SYSTEM.
2. SEE SHEET 6 OF 14 FOR DETAILS OF PROP. STORM SEWER SYSTEM.
3. SEE SHEET 7 OF 14 FOR ADDITIONAL DETAILS FOR THE COMBINED SEWER OUTLET STRUCTURE.
4. CONTRACTOR SHALL PLUG AND FILL ALL ABANDONED CS PIPES AT THE END OF THE HAM-75-7.85 PROJECT. THIS ITEM IS PAID FOR WITH ITEM 202, SPECIAL - FILL AND PLUG EXISTING CONDUIT.

872
2017

DESIGNED BY: JBK
DRAWN BY: TW

REVISIONS

BY:	DATE:	DESCRIPTION:

THE METROPOLITAN SEWER DISTRICT OF GREATER CINCINNATI
HAMILTON COUNTY, OHIO

M S D
WASTEWATER ENGINEERING

HAM-75-7.85 (PID 77889)

NORTH OF PADDOCK ROAD INTERCHANGE ALONG I-75 SOUTHBOUND
SOUTH OF STRUCTURE OVER MILL CREEK AND RONALD REAGAN CROSS COUNTY HIGHWAY
CITY OF CINCINNATI SEC.1 E.R.1 T.3

SCALE: HORIZ. 1"=20'
VERT. 1"=10'

0 20 40

COMBINED SEWER RELOCATION SOUTHBOUND I-75 AT MILL CREEK HAM-75-7.85 (PID 77889)

COMBINED SEWER PLAN AND PROFILE

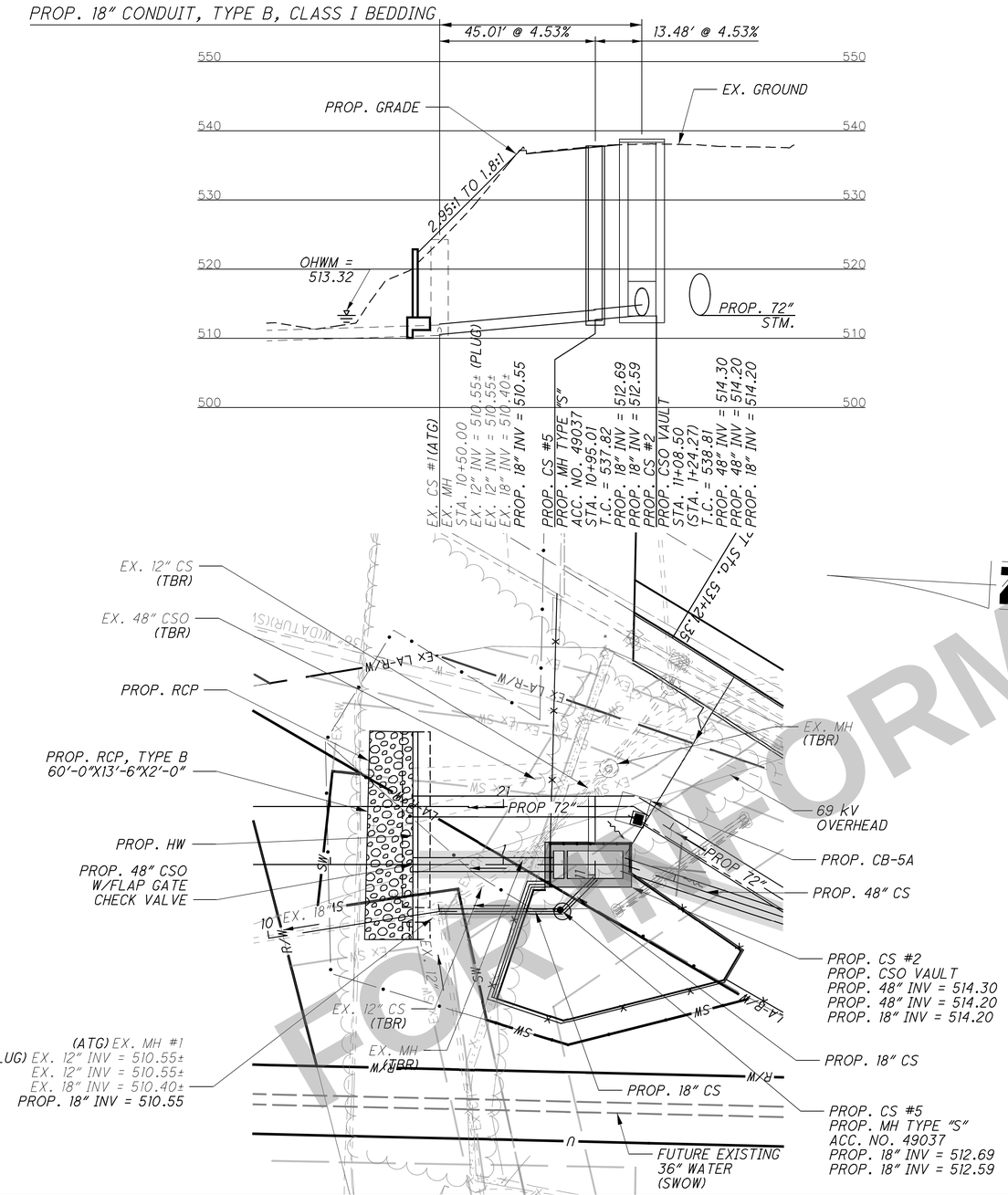
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PLOTTED BY: TIM.WILLIAMS

ACAD DRAWING NAME: 88124_MSDUP001.DGN

ACC. NO. _____

SHEET 4 OF 14

SS# _____



FOR INFORMATION ONLY

NOTES:

1. SEE SHEET 4 OF 14 FOR DETAILS OF PROP. COMBINED SEWER SYSTEM OVERFLOW AND OUTFALL.
2. SEE SHEET 6 OF 14 FOR DETAILS OF PROP. STORM SEWER SYSTEM.
3. SEE SHEET 7 OF 14 FOR ADDITIONAL DETAILS FOR THE COMBINED SEWER OUTLET STRUCTURE.

873
2017

DESIGNED BY: JBK
DRAWN BY: TW

REVISIONS

BY:	DATE:	DESCRIPTION:

THE METROPOLITAN SEWER DISTRICT OF GREATER CINCINNATI
HAMILTON COUNTY, OHIO

M S D
WASTEWATER ENGINEERING

HAM-75-7.85 (PID 77889)

NORTH OF PADDOCK ROAD INTERCHANGE ALONG I-75 SOUTHBOUND
SOUTH OF STRUCTURE OVER MILL CREEK AND RONALD REAGAN CROSS COUNTY HIGHWAY
CITY OF CINCINNATI SEC.1 E.R.1 T.3

SCALE: HORIZ. 1"=20'
VERT. 1"=10'

0 20 40

COMBINED SEWER RELOCATION SOUTHBOUND I-75 AT MILL CREEK HAM-75-7.85 (PID 77889)

COMBINED SEWER PLAN AND PROFILE

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PLOTTED BY: TIM WILLIAMS

ACAD DRAWING NAME: 88124_MSDUP002.DGN

ACC. NO. _____

SHEET 5 OF 14

SS# _____

PROP. 72" CONDUIT (SEE HAM-75-7.85 PLANS FOR ADDITIONAL DETAILS & QUANTITIES)

PROP. 72" CONDUIT (SEE HAM-75-7.85 PLANS FOR ADDITIONAL DETAILS & QUANTITIES)

63.91' @ 0.40%

200.81' @ 0.40%

PROP. 193.42' @ 0.40%

SEE HAM-75-7.85 PLANS FOR ADDITIONAL DETAILS

550 540 530 520 510 500

PROP. GRADE

2.0% MIN.

2.95:1 TO 1.8:1

PROP. RCP 51'-3" x13'-6"x2'-0"

OHWM = 513.32

PROP. 48" CS

3.05'± CLR

PROP. HW
TOP ELEV = 523.00
STA. 531+63.78, 149.67' LT.
72" INV = 514.03
(STATION, OFFSET, & INVERTS MODIFIED FOR CSO 490)

PROP. CB-5A
GRATE ELEV = 534.03
STA. 531+02.17, 118.75' LT.
72" INV = 521.33
72" INV = 514.29
(STATION, OFFSET, & INVERTS MODIFIED FOR CSO 490)

PROP. CB-5A
RIM ELEV = 538.14
STA. 528+97.70, 116.75' LT.
21" INV = 528.42
72" INV = 522.23
72" INV = 522.13
(INVERTS MODIFIED FOR CSO 490)

(PER HAM-75-7.85)
PROP. CB-5A
GRATE ELEV = 539.55
STA. 527+00.00, 110.61' LT.
6" (UD) INV = 537.31
36" INV = 523.10
72" INV = 523.00

532 531 530 529 528

PROP. 15"

℄ CONST I-75

CONCRETE BARRIER, TYPE B1

PLUG

PROP. CB-5A
GRATE ELEV = 534.03
72" INV = 521.33
72" INV = 514.29

69 kV OVERHEAD

ORIGINAL I-75 PAVEMENT LIMITS

PROP. 21" (DND)

EX 72" (TBR)*

EX 48" (P&F) CS

EX. MH
EX. 48" INV = 518.29±
EX. 48" INV = 516.94±
EX. 36" INV = 516.94±
(TBR)

EX LA-R/W

PROP. MH NO. 1

PROP. 48" CS

EX. BILLBOARD (TBRBO)

PROP 72"

APPOX. PROP. ℄ DITCH (HAM-75-7.85)

EX. 36" WAT. (SWOW) (ABANDON)

PROP. CSO VAULT

PROP. 18" CS

PROP. FENCE (HAM-75-7.85)

PROP. RCP, TYPE B
60'-0" X 13'-6" X 2'-0"

PROP. MH NO. 3

PROP. HW
72" INV = 514.03

EX. MH NO. 1
(ATG)

PROP. 18" CS

EX. FENCE (TBR&R)

EX. CURB (TBR&R)

PROP. 36" WAT. (SWOW)

PROP. CONST. LIMITS (HAM-75-7.85)

PROP. CB-5A
RIM ELEV = 538.14
21" INV = 528.42
72" INV = 522.23
72" INV = 522.13

EX. 36" WAT. (SWOW) (DND)

(PER HAM-75-7.85)
PROP. CB-5A
GRATE ELEV = 539.55
6" (UD) INV = 537.31
36" INV = 523.10
72" INV = 523.00

N

NOTES:

1. SEE SHEET 4 OF 14 FOR DETAILS OF PROP. COMBINED SEWER SYSTEM OVERFLOW AND OUTFALL.
2. SEE SHEET 5 OF 14 FOR DETAILS OF PROP. COMBINED SEWER CONNECTION TO EXISTING COMBINED SEWER SYSTEM.
3. SEE SHEET 7 OF 14 FOR ADDITIONAL DETAILS FOR THE COMBINED SEWER OUTLET STRUCTURE.
4. CONTRACTOR SHALL PLUG AND FILL ALL ABANDONED CS PIPES.

874
2017

FOR INFORMATION ONLY

PATH: J:\PRE-INT\TS\06\06-386_HAM-75\HAM\88124\UTILITIES_MSD\SHEETS\88124_MSDUP003.DGN
DATE: MONDAY, NOVEMBER 25, 2019 11:23:52 AM
PLOTTED BY: TIM.WILLIAMS

DESIGNED BY: JBK
DRAWN BY: TW

REVISIONS

BY:	DATE:	DESCRIPTION:

THE METROPOLITAN SEWER DISTRICT OF GREATER CINCINNATI
HAMILTON COUNTY, OHIO

M S D WASTEWATER ENGINEERING

HAM-75-7.85 (PID 77889)

NORTH OF PADDOCK ROAD INTERCHANGE ALONG I-75 SOUTHBOUND
SOUTH OF STRUCTURE OVER MILL CREEK AND RONALD REAGAN CROSS COUNTY HIGHWAY
CITY OF CINCINNATI SEC.1 E.R.1 T.3

SCALE: HORIZ. 1"=20'
VERT. 1"=10'

0 20 40

COMBINED SEWER RELOCATION SOUTHBOUND I-75 AT MILL CREEK HAM-75-7.85 (PID 77889)

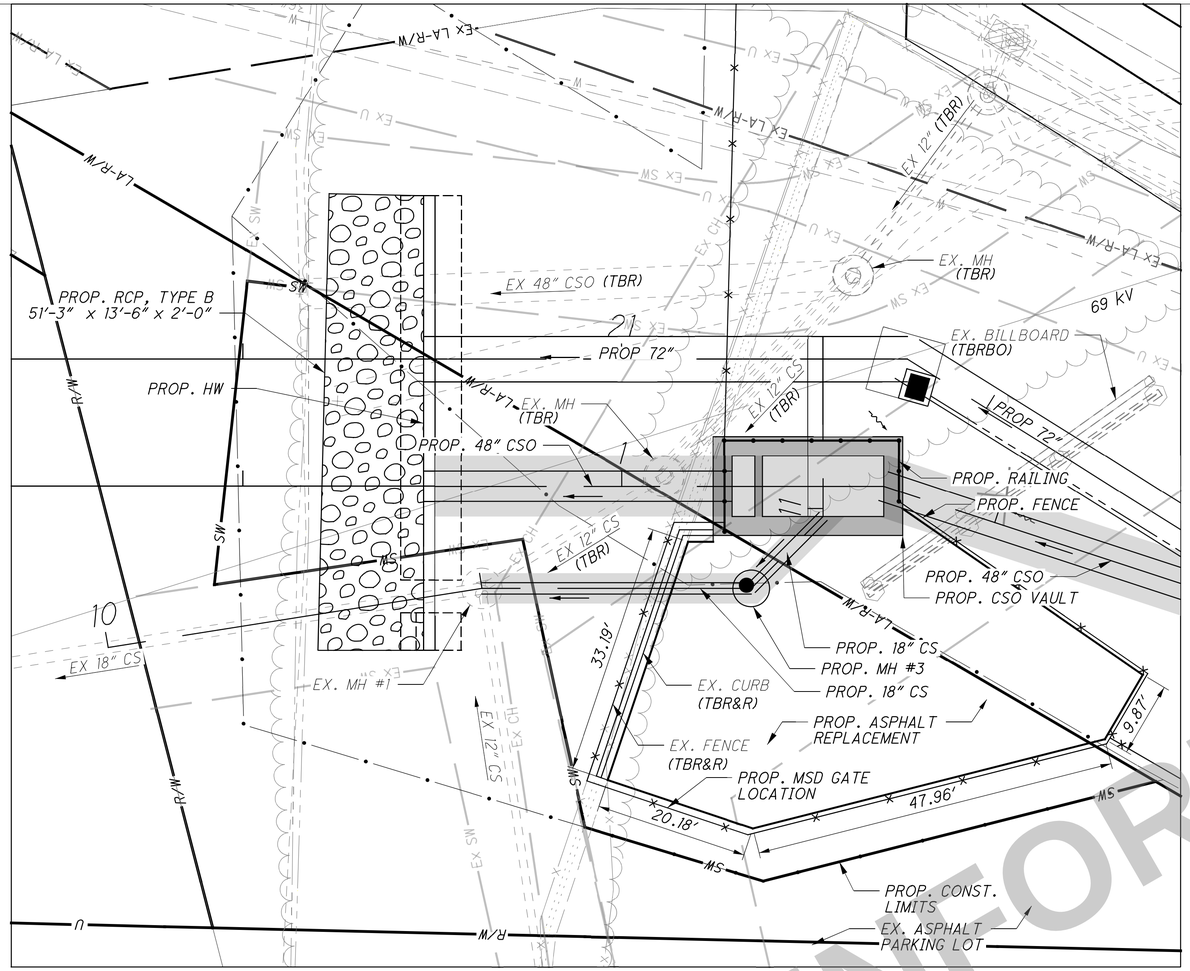
STORM SEWER PLAN AND PROFILE

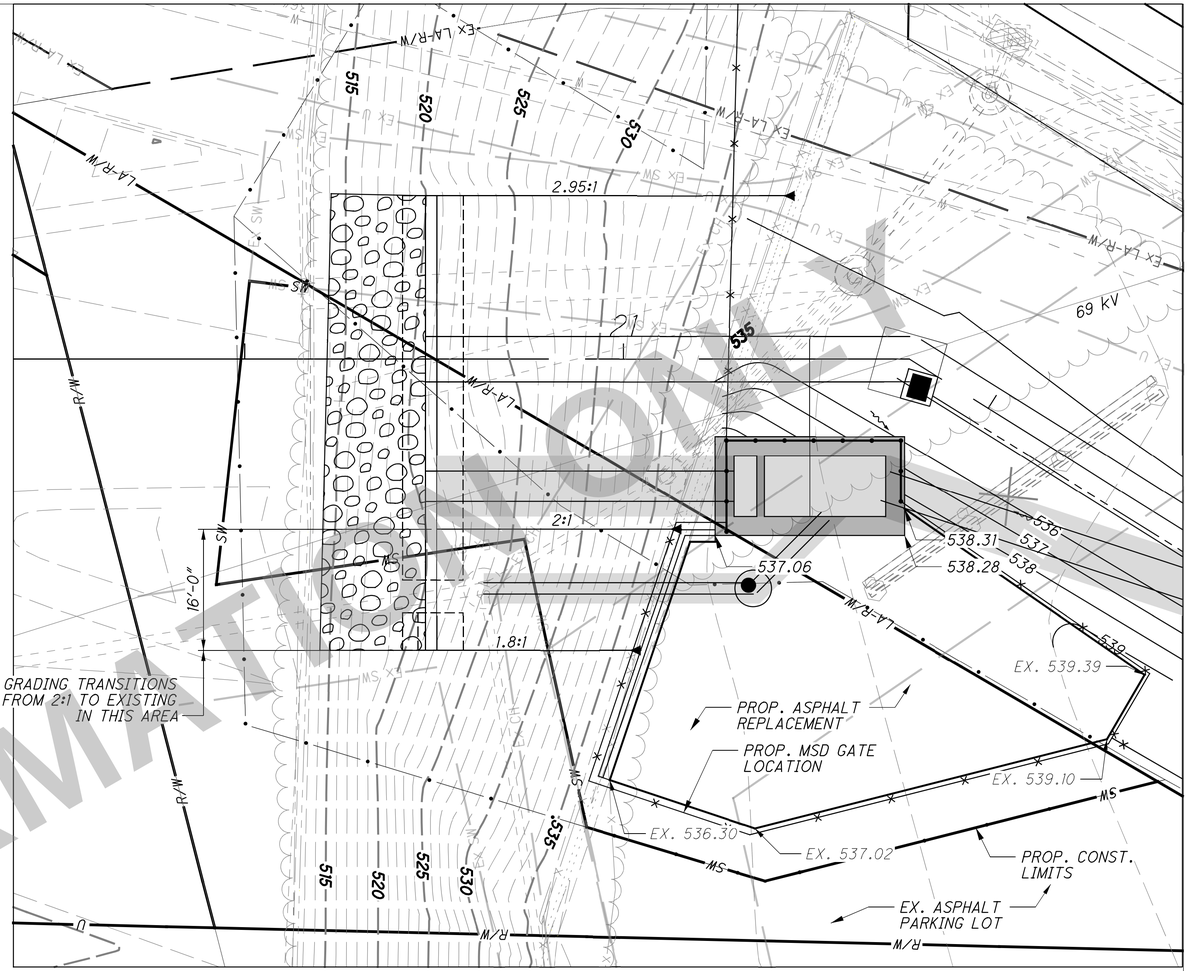
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ACC. NO. _____

SHEET 6 OF 14

SS# _____





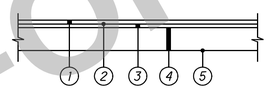
FOR INFORMATION ONLY

NOTES:

1. ITEM 253 PAVEMENT REPAIR, AS PER PLAN: PRIOR TO REPLACING THE EXISTING ASPHALT PARKING LOT PAVEMENT, THE CONTRACTOR SHALL VERIFY THE EXISTING PAVEMENT THICKNESSES WITH THE ODOT PROJECT ENGINEER. MODIFICATION OF THE PROPOSED PAVEMENT BUILD-UP SHOWN ON THIS SHEET MAY BE NECESSARY AS A RESULT OF THE VERIFIED PARKING LOT THICKNESSES. PAYMENT FOR ALL WORK NECESSARY TO VERIFY THE PAVEMENT THICKNESS AND IF NECESSARY TO INCREASE THE PAVEMENT BUILD UP THICKNESSES TO MATCH EXISTING CONDITIONS WILL BE PAID FOR BY ITEM 253 PAVEMENT REPAIR, AS PER PLAN.
2. CONTRACTOR SHALL ENSURE THE FINAL GRADES DRAIN AWAY FROM MSD CSO STRUCTURE.

SITE PLAN
SCALE 1"=10'

GRADING PLAN
SCALE 1"=10'



COMMERCIAL ASPHALT DRIVEWAY PAVEMENT SECTION

LEGEND

(1) ITEM 441 - 1.25" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), (DRIVEWAYS)
(2) ITEM 407 - NON-TRACKING TACK COAT (APPLIED AT A RATE OF 0.06 GAL./SQ. YD.)
(3) ITEM 441 - 1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), (DRIVEWAYS)
(4) ITEM 304 - 8" AGGREGATE BASE
(5) ITEM 204 - SUBGRADE COMPACTION

875
2017

DESIGNED BY: JBK
DRAWN BY: TW

REVISIONS

BY:	DATE:	DESCRIPTION:

THE METROPOLITAN SEWER DISTRICT OF GREATER CINCINNATI
HAMILTON COUNTY, OHIO

M S D
WASTEWATER ENGINEERING

HAM-75-7.85 (PID 77889)
NORTH OF PADDOCK ROAD INTERCHANGE ALONG I-75 SOUTHBOUND
SOUTH OF STRUCTURE OVER MILL CREEK AND RONALD REAGAN CROSS COUNTY HIGHWAY
CITY OF CINCINNATI SEC.1 E.R.1 T.3
SCALE: HORIZ. 1"=10'
0 10 20

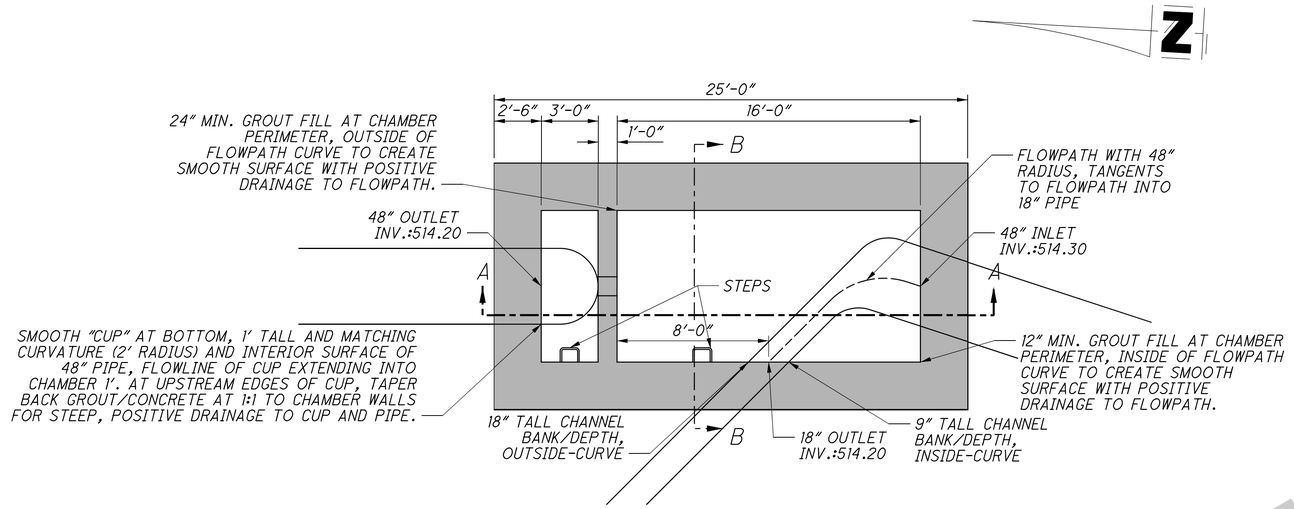
COMBINED SEWER RELOCATION
SOUTHBOUND I-75 AT MILL CREEK
HAM-75-7.85 (PID 77889)
COMBINED SEWER OUTLET SITE PLAN

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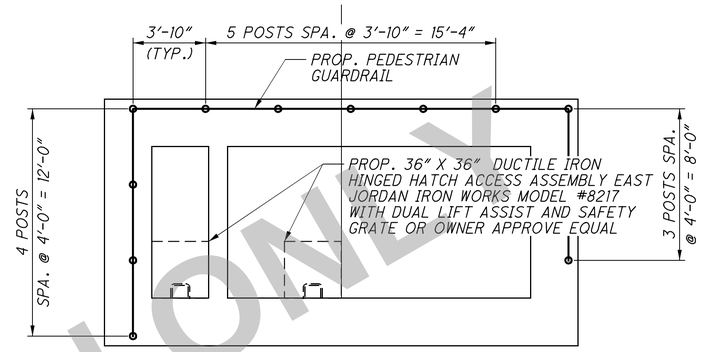
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SHEET 7 OF 14 SS# _____

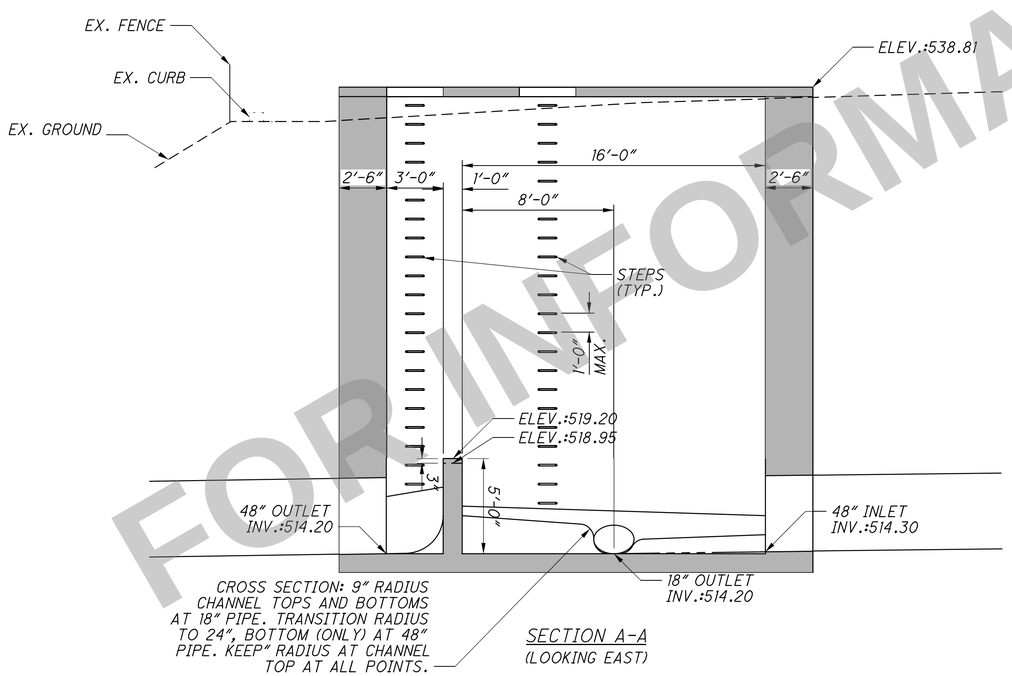
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PLOTTED BY: TIM.WILLIAMS



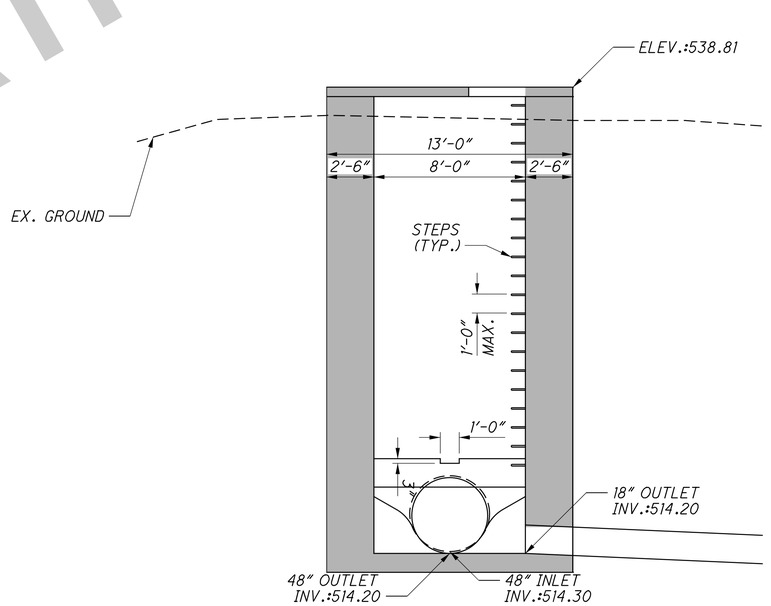
PLAN



LID DETAIL



SECTION A-A
(LOOKING EAST)



SECTION B-B
(LOOKING SOUTH)

NOTES:

1. THE CSO VAULT SHALL HAVE A MINIMUM STRUCTURAL DESIGN LOADING PER ASTM C 857.
2. THE CSO VAULT SHALL MEET ALL SPECIFICATIONS PER ASTM C 858.
3. THE CSO VAULT SHALL BE INSTALLED PER ASTM C 891.

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DRAWN BY: TW	BY:	DATE:	DESCRIPTION:

IBI
IBI GROUP
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Cincinnati OH 45246
tel 513 942 3141 fax 513 881 2263
ibigroup.com

THE METROPOLITAN SEWER DISTRICT OF GREATER CINCINNATI
HAMILTON COUNTY, OHIO

M S D
WASTEWATER ENGINEERING

HAM-75-7.85 (PID 77889)

NORTH OF PADDOCK ROAD INTERCHANGE ALONG I-75 SOUTHBOUND
SOUTH OF STRUCTURE OVER MILL CREEK AND RONALD REAGAN CROSS COUNTY HIGHWAY
CITY OF CINCINNATI SEC.1 E.R.1 T.3

SCALE: HORIZ. 1"=4'
VERT. 1"=4'

COMBINED SEWER RELOCATION SOUTHBOUND I-75 AT MILL CREEK HAM-75-7.85 (PID 77889)

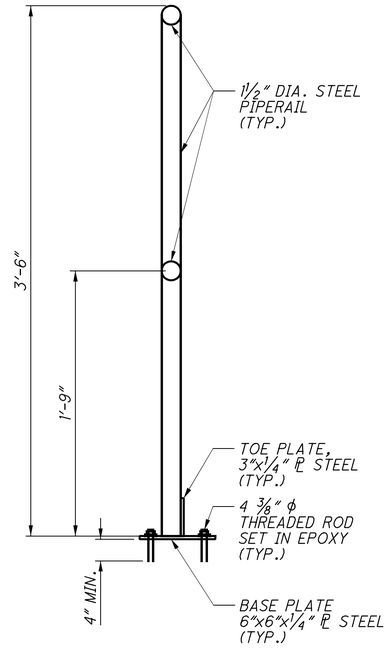
COMBINED SEWER OUTLET DETAILS

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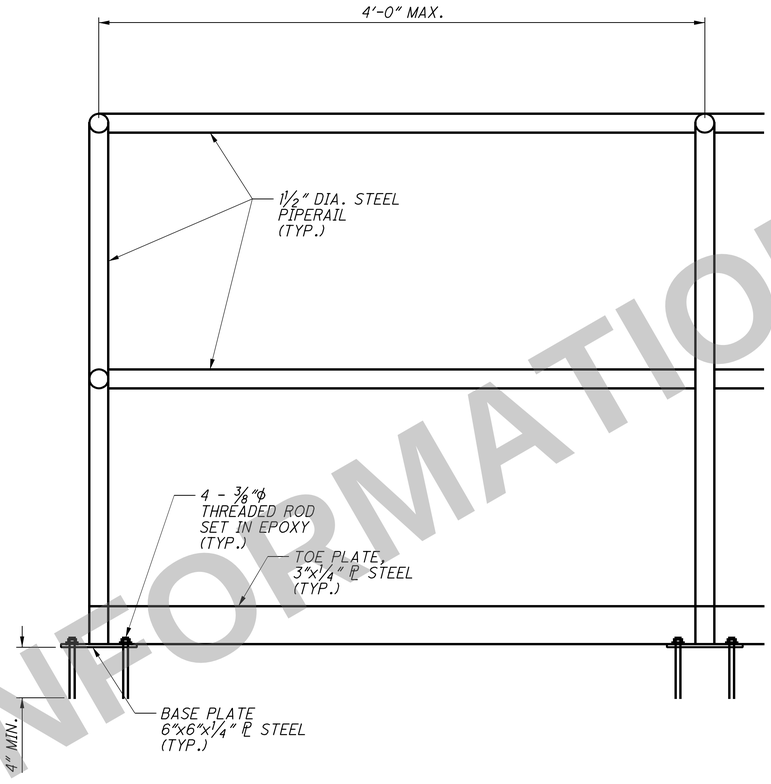
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ACC. NO. _____

SHEET 8 OF 14 SS# _____



PEDESTRIAN GUARDRAIL SECTION



TYPICAL PEDESTRIAN GUARDRAIL ELEVATION

NOTES:

1. THE PEDESTRIAN GUARDRAIL SHALL BE HOT-DIPPED GALVANIZED PER ODOT CMS 711.02 (ASTM A123) FOLLOWED BY POWDER COATING FOR HOT-DIPPED GALVANIZED SURFACES PER ASTM D 7803.
2. ALL FASTENERS FOR THE PEDESTRIAN GUARDRAIL SHALL BE HOT-DIPPED GALVANIZED PER ASTM A 125.
3. ALL LABOR, MATERIALS AND APPURTENANCES FOR THE INSTALLATION IS PAID FOR UNDER ITEM 517, RAILING, PIPE, AS PER PLAN.

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BY:	DATE:	DESCRIPTION:

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CITY OF CINCINNATI SEC.1 E.R.1 T.3

SCALE: HORIZ. 1"=1/2'
VERT. 1"=1/2'

COMBINED SEWER RELOCATION SOUTHBOUND I-75 AT MILL CREEK HAM-75-7.85 (PID 77889)

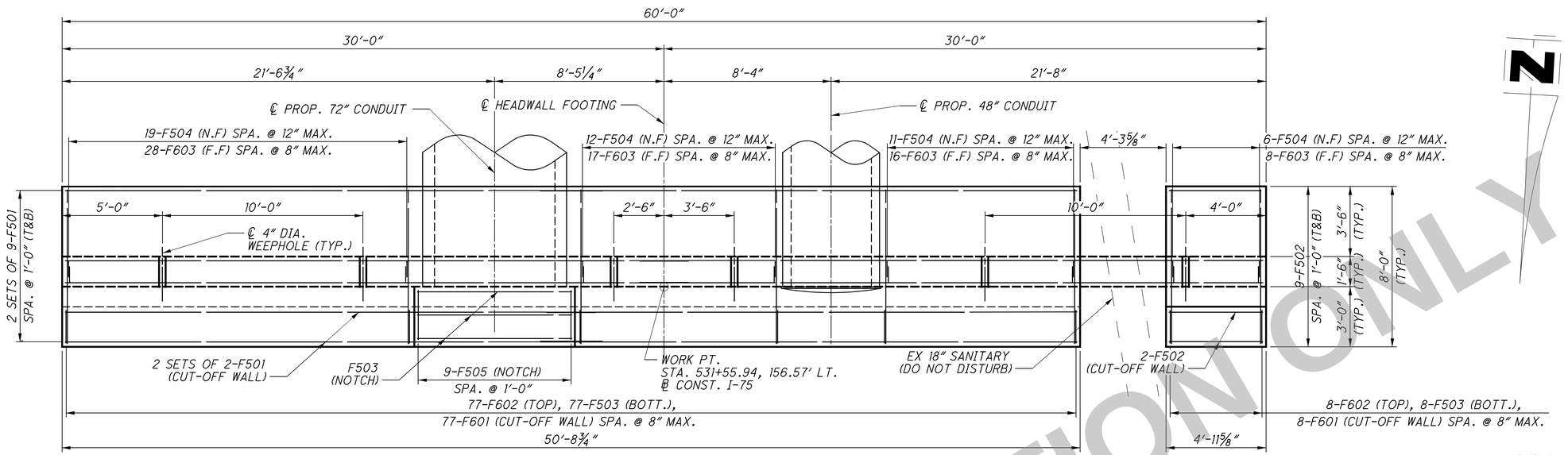
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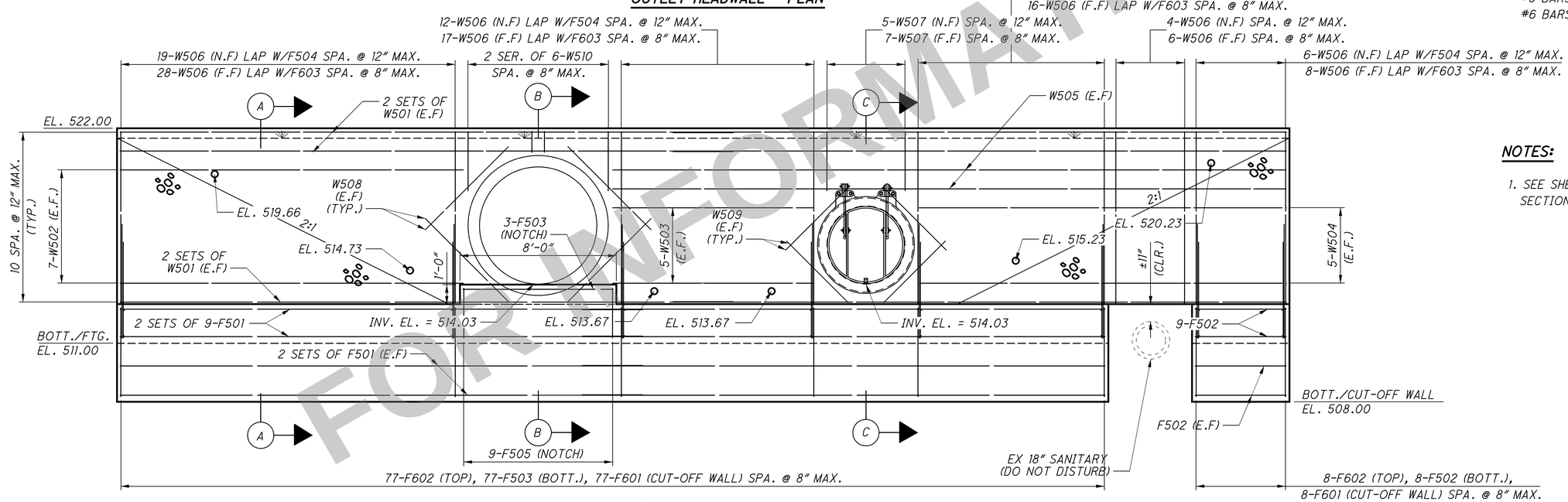
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SHEET 9 OF 14 SS# _____



OUTLET HEADWALL - PLAN



OUTLET HEADWALL - ELEVATION

(LOOKING SOUTH)

MINIMUM LAP LENGTH:

#5 BARS - 37"
#6 BARS - 48"

NOTES:

1. SEE SHEET 11 OF 14 FOR SECTION A-A, B-B AND C-C

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BY:	DATE:	DESCRIPTION:

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CITY OF CINCINNATI SEC.1 E.R.1 T.3

SCALE: HORIZ. 1"=3'
VERT. 1"=3'

COMBINED SEWER RELOCATION SOUTHBOUND I-75 AT MILL CREEK HAM-75-7.85 (PID 77889)

HEADWALL DETAILS

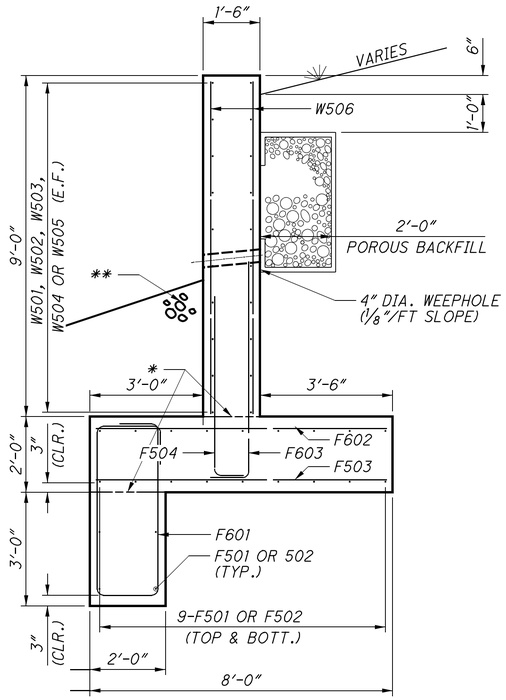
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SHEET 10 OF 14

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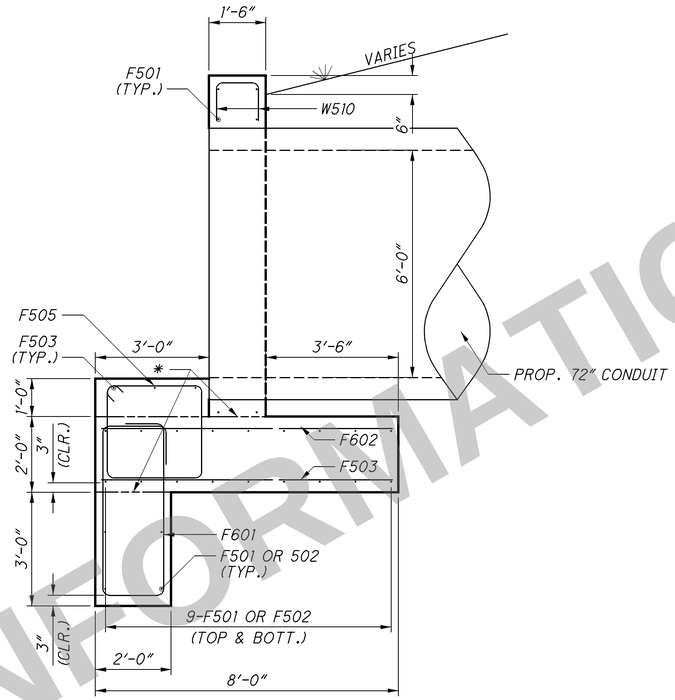
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SECTION A-A

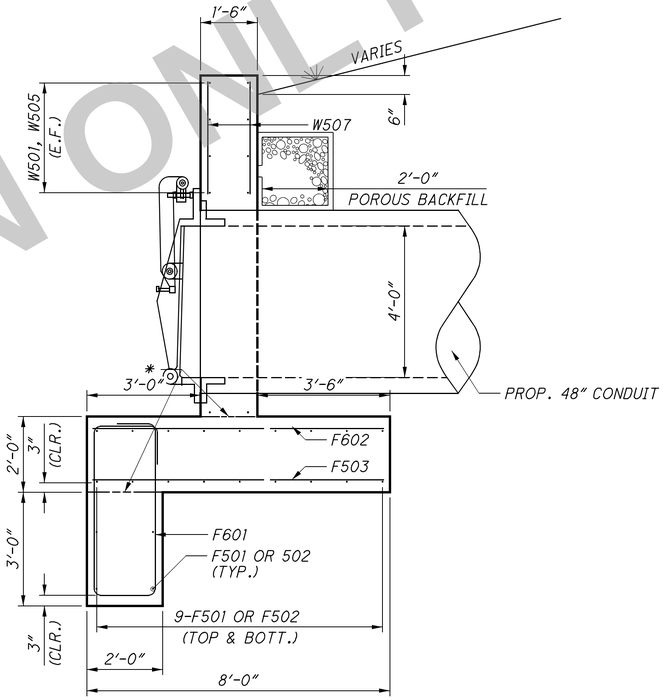
* = CONST. JT.

** = ROCK CHANNEL PROTECTION TYPE B
W/GEOTEXTILE FABRIC (2'-6" THICK TYP.)



SECTION B-B

* = CONST. JT.



SECTION C-C

* = CONST. JT.

NOTES:

1. SEE SHEET 10 OF 14 FOR LOCATION OF SECTION A-A, B-B AND C-C

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2017

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DRAWN BY: TW

REVISIONS		
BY:	DATE:	DESCRIPTION:

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Cincinnati OH 45246
tel 513 942 3141 fax 513 881 2263
ibigroup.com

THE METROPOLITAN SEWER DISTRICT
OF GREATER CINCINNATI
HAMILTON COUNTY, OHIO

M S D
WASTEWATER ENGINEERING

HAM-75-7.85 (PID 77889)
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CITY OF CINCINNATI SEC.1 E.R.1 T.3

SCALE: HORIZ. 1"=2'
VERT. 1"=2'

COMBINED SEWER RELOCATION SOUTHBOUND I-75 AT MILL CREEK HAM-75-7.85 (PID 77889)

HEADWALL DETAILS

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PLOTTED BY: TIM.WILLIAMS

ACAD DRAWING NAME: 88124_MSDUM005.DGN

ACC. NO. _____

SHEET 11 OF 14

SS# _____

UTILITY CONTACT INFORMATION

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

UTILITY CONTACT INFORMATION

GAS: DUKE ENERGY
139 E. 4TH STREET, ROOM 460A
CINCINNATI, OH 45202
MR. RICHARD HACKER
(513) 287–1232
richard.hacker@duke–energy.com

ELECTRIC: DUKE ENERGY
139 E. 4TH STREET, ROOM 467A
CINCINNATI, OH 45202
MR. AARON WRIGHT
(513) 287–3674
aaron.wright@duke–energy.com

ELECTRIC POLES: DUKE ENERGY
139 E. 4TH STREET, ROOM 552A
CINCINNATI, OH 45202
MR. TIM MEYER
(513) 287–1266
tim.meyer@duke–energy.com

TELEPHONE: CINCINNATI BELL
221 E. 4TH STREET, BLDG 121–900
CINCINNATI, OH 45201
MR. MARK CONNER
(513) 565–7043
mark.connor@cinbell.com

CABLE: SPECTRUM
11252 CORNELL PARK DRIVE. SUITE 4308
CINCINNATI, OH 45242
MR. KENT RIEGER
(513) 386–5499
kent.reiger@cinbell.com

WATER: GREATER CINCINNATI WATER WORKS
1600 GEST STREET
CINCINNATI, OH 45204
MR. JOHN HUNDSEDER
(513) 557–5799
john.hundseder@gcww.cincinnati–oh.gov

WATER: SOUTHWESTERN OHIO WATER COMPANY (SOWC)
600 SHEPHERD AVE., SUITE 1
CINCINNATI, OH 45215
MR. MICHAEL C. FLAVIN, PE
(513) 489–4844
mike.flavin@fuse.net

ROAD R/W MAINTENANCE: ODOT CENTRAL OFFICE OF TRAFFIC ENGINEERING
1980 WEST BROAD STREET
COLUMBUS, OH 43223
MR. JASON M. YERAY, P.E.
(614) 466–2168
.

MSD NOTIFICATION

ONE MONTH OF NOTICE AND SUBSEQUENT COORDINATION, AS NECESSARY, BEFORE CONSTRUCTION IS REQUIRED FOR REMOVAL OF EQUIPMENT WITHIN EXISTING CSO. NOTICE IS TO BE PROVIDED TO: TODD TRABERT, MSD COLLECTIONS DIVISION 513–352–4228 AND JASON DURDEN, MSD WATERSHED OPERATIONS, 513–557–3593. THE CONTRACTOR SHALL ENSURE EQUIPMENT IS REMOVED BY MSD PRIOR TO CONSTRUCTION AND IS TO MAKE SUBSEQUENT CALLS AND NOTICES AS NECESSARY UNTIL SUCH EQUIPMENT IS REMOVED.

MAINTAINING FLOWS DURING CONSTRUCTION

CONTRACTOR IS REQUIRED TO PROVIDE BYPASS PUMPING/TEMPORARY CONVEYANCE FACILITIES FOR SANITARY, COMBINED AND STORM WATER FACILITIES DURING THE DURATION OF THE CONSTRUCTION OF THIS PROJECT.

UTILITY NOTIFICATION

THE OHIO DEPARTMENT OF TRANSPORTATION HAS UTILITY FACILITIES (HIGHWAY LIGHTING, TRAFFIC SIGNALS, AND ITS) WITHIN THE LIMITS OF THIS PROJECT.

IN ADDITION TO THE INFORMATION OUTLINED IN THE UTILITY NOTE OF THIS CONTRACT, THE CONTRACTOR SHALL TAKE THE FOLLOWING ACTION TO PROTECT ODOT'S FACILITIES DURING CONSTRUCTION:

HIGHWAY LIGHTING AND TRAFFIC SIGNALS:

EVEN THOUGH ODOT IS LISTED AS A MEMBER OF THE OHIO UTILITIES PROTECTION SERVICE (OUPS), THE CONTRACTOR ON THIS PROJECT IS REQUIRED TO CONTACT ODOT, DISTRICT 8 TRAFFIC MAINTENANCE DEPARTMENT DIRECTLY SO THAT THE ODOT UTILITIES LOCATED WITHIN THIS PROJECT ARE MARKED. THE CONTRACTOR SHALL NOTIFY DISTRICT 8 TRAFFIC MAINTENANCE AT 513–933–6689 AND THE PROJECT ENGINEER, FOURTEEN (14) CALENDAR DAYS IN ADVANCE OF ANY WORK, FOR THE NEED TO MARK ODOT OWNED UTILITIES.

ITS:

ITS FACILITIES AREN'T LISTED WITH OUPS, SO THE CONTRACTOR IS REQUIRED TO CONTACT ODOT CENTRAL OFFICE ITS LAB DIRECTLY SO THAT THE ODOT UTILITIES LOCATED WITHIN THIS PROJECT ARE MARKED. THE CONTRACTOR SHALL NOTIFY ODOT CENTRAL OFFICE ITS LAB AT THE CONTACT INFORMATION LISTED BELOW AND THE PROJECT ENGINEER, FOURTEEN (14) CALENDAR DAYS IN ADVANCE OF ANY WORK FOR THE NEED TO MARK ODOT OWNED UTILITIES.

CENTRAL OFFICE ITS LAB
614–387–4113 – PHONE (ITS LOCAL LINE)
614–887–4134 – FAX
CEN.ITS.LAB@DOT.STATE.OH.US – EMAIL

THE ABOVE REQUIREMENTS ARE IN ADDITION TO SECTION 105.07 & 107.16 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND THE UTILITY PROPOSAL NOTE.

THE CONTRACTOR SHALL NOTIFY OTHER UTILITIES THROUGH OUPS OR DIRECTLY A MINIMUM OF FORTY–EIGHT (48) HOURS IN ADVANCE OF ANY WORK.

THE COST FOR THE ABOVE DESCRIBED WORK IS INCIDENTAL TO THE OVERALL BID PRICE

MSD SANITARY SEWER NOTES

1. ALL PLANS AND CONSTRUCTION WITHIN HAMILTON COUNTY SHALL COMPLY WITH THE LATEST EDITION OF THE "RULES AND REGULATIONS" MANUAL GOVERNING THE DESIGN, CONSTRUCTION, MAINTENANCE, OPERATION, AND USE OF SANITARY AND COMBINED SEWERS IN THE METROPOLITAN SEWER DISTRICT OF GREATER CINCINNATI, HAMILTON COUNTY, OHIO, EFFECTIVE MARCH 1, 2001. COPIES MAY BE OBTAINED FROM THE DIVISION OF WASTEWATER ENGINEERING MSD, 1600 GEST STREET, CINCINNATI, OHIO 45204.
2. ALL SANITARY SEWERS SHALL BE CONSTRUCTED UNDER THE INSPECTION OF THE SEWERS CHIEF ENGINEER, MSD.
3. THE OWNERS OF ALL PROPERTIES SHOWN ON THIS IMPROVEMENT PLAN SHALL BE SUBJECT TO ALL APPLICABLE SEWER SERVICE CHARGES, ASSESSMENTS, TAP–IN CHARGES OR FEES WHICH HAVE BEEN OR MAY BE ESTABLISHED BY THE BOARD OF COUNTY COMMISSIONERS.
4. APPROPRIATE UTILITY COMPANIES SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO BREAKING GROUND FOR THE PURPOSE OF VERIFYING BY FIELD INSPECTION THE EXACT LOCATION OF UNDERGROUND UTILITIES.
5. ALL SANITARY SEWER PIPE SHALL BE PVC, SDR35, ASTM D–3034 IN ACCORDANCE WITH MSD RULES AND REGULATIONS, EXCEPT WHERE NOTED, OR APPROVED EQUAL.
6. ALL MANHOLES ON SANITARY SEWERS SHALL BE TYPE "T" MSD ACCESSION NO. 49040, OR APPROVED EQUAL.
7. SANITARY MANHOLES SHALL BE TEMPORARILY CONSTRUCTED TO AN ELEVATION OF TWO FEET ABOVE THE SURROUNDING GRADE BY MEANS OF AN ADDITIONAL MANHOLE SECTION OR BRICK MASONRY ON TOP OF THE CONE.

MSD SANITARY SEWER NOTES CONT.

8. SANITARY BUILDING SEWERS FOR PUBLIC AND PRIVATE SEWERS SHALL NOT BE EXTENDED MORE THAN TEN (10) FEET BEYOND THE PROPOSED RIGHT–OF–WAY LINE, EASEMENT LINE OR, IN CASES OF PRIVATE SEWERS, NO MORE THAN TEN (10) FEET BEYOND THE MAIN LINE SEWER PRIOR TO ISSUANCE OF TAP PERMITS.
9. TWO–WAY CLEANOUTS SHALL BE INSTALLED AT THE RIGHT–OF–WAY LINE OR SANITARY SEWER EASEMENT, WHERE APPLICABLE, IN ACCORDANCE TO MSD ACCESSION NO. 61979.
10. ALL LOWEST FINISHED FLOOR ELEVATIONS SHALL BE AT LEAST 36 INCHES ABOVE THE CROWN OF THE SEWER AT THE POINT OF TAP CONNECTION TO SAID SEWER, WHETHER PUBLIC OR PRIVATE, AND/OR IN ACCORDANCE WITH CITY OF CINCINNATI SUPPLEMENT CC–51–49. ANY BUILDING TO BE SERVED BY MEANS OTHER THAN GRAVITY MUST BE SO NOTED ON THE PLANS.
11. ALL MANHOLES ON PUBLIC SANITARY SEWERS SHALL HAVE STANDARD LIDS AND FRAMES, MSD ACCESSION. NO 49005, EXCEPT WHERE NOTED. THE FRAME SHALL BE SECURELY FASTENED TO THE TOP MANHOLE SECTION BY FOUR 3/4–INCH STAINLESS STEEL CINCH ANCHORS.
12. CONTRACTOR'S LICENSE – ALL WORK DONE ON SANITARY AND/OR COMBINED SEWERS WITHIN THE JURISDICTION OF THE METROPOLITAN SEWER DISTRICT MUST BE DONE BY A CONTRACTOR WHO IS AN APPROVED SEWER TAPPER PROPERLY LICENSED BY THE DEPARTMENT AND BONDED.
13. SANITARY BUILDING SEWERS SHALL BE CONNECTED TO THE MAIN LINE WITH WYES. TEE FITTINGS ARE TO BE USED ONLY WHERE SHOWN ON THE APPROVED PLAN.
14. A TAP PERMIT IS REQUIRED FOR EACH BUILDING. BOND OR FINAL APPROVAL OF THE MAIN LINE IS REQUIRED PRIOR TO ISSUANCE OF A TAP PERMIT.
15. SANITARY SEWER CONSTRUCTION MUST COMMENCE WITHIN 12 MONTHS AND BE COMPLETED WITHIN 36 MONTHS OF THE DATE OF APPROVAL SHOWN HEREON OR THESE PLANS BECOME VOID.
16. FOR SANITARY SEWER MANHOLES CONSTRUCTED IN PARKING LOTS, THE RIM ELEVATION SHALL BE 1" HIGHER THAN THE SURROUNDING GRADE AND THE PAVEMENT SHALL BE FEATHERED AWAY FROM THE MANHOLE RIM AT A GRADUAL SLOPE.
17. FOR SANITARY MANHOLES CONSTRUCTED IN GRASS AREAS, THE RIM ELEVATION SHALL BE 3" HIGHER THAN THE SURROUNDING GRADE, AND THE FILL SHALL BE FEATHERED AWAY FROM THE MANHOLE RIM AT A GRADUAL SLOPE.
18. ROOF DRAINS, FOUNDATION DRAINS, COOLING WATER, SWIMMING POOL WATER OR OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED.
19. TO ASSURE THAT STORMWATER DOES NOT ENTER THE SANITARY SEWER SYSTEM, A SCHEMATIC PLAN OF THE FOOTING AND FOUNDATION DRAINAGE SYSTEM, INCLUDING THE POINT OF DISCHARGE, IS NECESSARY.
20. THE CONTRACTOR SHALL TEST ALL MANHOLES LEAKAGE BY MEANS OF VACUUM TESTING. THE VACUUM TESTING CANNOT BE DONE UNTIL AFTER THE MANHOLES ARE SET TO FINAL GRADE AND THE MANHOLE CASTINGS ARE BOLTED DOWN. ALL LIFT HOLES SHALL BE PLUGGED. ANY OTHER OPENINGS, SUCH AS FOR PRESSURE RELIEF VALVES, SHALL BE TEMPORARILY PLUGGED TO ALLOW THE VACUUM TEST. ALL PIPES ENTERING THE MANHOLE SHALL BE PLUGGED AND CARE SHALL BE TAKEN TO SECURELY BRACE THE PLUGS FROM BEING DRAWN INTO THE MANHOLE. THE VACUUM EQUIPMENT TEST HEAD SHALL BE PLACED IN THE OPENING OF THE CASTING ONLY, AND THE SEAL INFLATED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. VACUUM TESTING SHALL BE IN ACCORDANCE WITH ASTM C1244. A VACUUM OF 10 INCHES MERCURY (10" HG) SHALL BE DRAWN AND THE VACUUM PUMP SHUT OFF. WITH THE VALVES CLOSED, THE TIME SHALL BE MEASURED FOR THE VACUUM TO DROP TO NINE INCHES MERCURY (9" HG). THE MANHOLE SHALL PASS IF THE TIME MEETS OR EXCEEDS THE ALLOWABLE TIMES AS CALCULATED FROM ASTIM C1244, OR AS APPROVED BY THE ENGINEER. ALL MANHOLE REPAIR AND RETESTING REQUIRED BECAUSE OF THE FAILURE TO MEET THE TESTING REQUIREMENTS SHALL BE BORNE BY THE CONTRACTOR AT HIS COST.
21. INSTALLATION OF A PRIVATE FORCE MAIN REQUIRES A PERMIT FROM THE HAMILTON COUNTY BOARD OF HEALTH. CONTACT THE BOARD OF HEALTH AT 946–7852 REGARDING PERMIT AND INSPECTION.
22. ALL SANITARY SEWERS WITHIN THIS DEVELOPMENT TO BE PRIVATE ARE TO BE MAINTAINED BY THE OWNER.

ITEM 611, DRAINAGE STRUCTURE, MISC.: FLAP GATE

PART 1 - GENERAL

1.01 REFERENCES

A. THE FOLLOWING IS A LIST OF STANDARDS WHICH IS REFERENCED IN THIS SECTION:

1. ASTM INTERNATIONAL (ASTM):

a. ASTM A126 STANDARD SPECIFICATION FOR GRAY IRON CASTINGS FOR VALVES, FLANGES AND PIPE FITTINGS.
b. ASTM A276, STANDARD SPECIFICATION FOR STAINLESS AND HEAT-RESISTING STEEL BARS AND SHAPES.
c. ASTM A436, STANDARD SPECIFICATION FOR AUSTENITIC GRAY IRON CASTINGS
d. ASTM A536 STANDARD SPECIFICATION FOR DUCTILE IRON CASTINGS
e. ASTM B21, STANDARD SPECIFICATION FOR NAVAL BRASS ROD, BAR AND SHAPES
f. ASTM B98, STANDARD SPECIFICATION FOR COPPER-SILICON ALLOY ROD, BAR AND SHAPES
g. ASTM B584, STANDARD SPECIFICATION FOR COPPER ALLOY SAND CASTINGS FOR GENERAL APPLICATION.
h. ASTM D2000, STANDARD CLASSIFICATION SYSTEM FOR RUBBER PRODUCTS IN AUTOMOTIVE APPLICATIONS

1.02 SUBMITTALS

A. ACTION SUBMITTALS:

1. SHOP DRAWINGS SHALL INCLUDE:

a. MAKE, MODEL AND WEIGHT OF EACH EQUIPMENT ASSEMBLY.
b. MANUFACTURER'S CATALOG INFORMATION, DESCRIPTIVE LITERATURE, SPECIFICATIONS, AND IDENTIFICATION OF MATERIALS OF CONSTRUCTION.
c. DETAILED DRAWINGS SHOWING THE EQUIPMENT FABRICATIONS AND INTERFACE WITH OTHER ITEMS. INCLUDE DIMENSIONS, SIZE, AND LOCATIONS OF CONNECTIONS TO OTHER WORK, AND WEIGHTS OF ASSOCIATED EQUIPMENT ASSOCIATED THEREWITH.

B. INFORMATIONAL SUBMITTALS:

1. SPECIAL SHIPPING, STORAGE AND PROTECTION, AND HANDLING INSTRUCTIONS.
2. MANUFACTURER'S WRITTEN/PRINTED INSTALLATION INSTRUCTIONS.
3. ROUTINE MAINTENANCE REQUIREMENTS PRIOR TO OPERATION.
4. MANUFACTURER'S CERTIFICATE OF PROPER INSTALLATION IN ACCORDANCE WITH MANUFACTURER'S PRODUCT WARRANTIES.
5. OPERATION AND MAINTENANCE DATA.
6. SERVICE RECORDS FOR MAINTENANCE PERFORMED DURING CONSTRUCTION.

1.03 QUALITY ASSURANCE

A. MANUFACTURER'S QUALIFICATIONS.

1. SHALL HAVE 5 YEARS EXPERIENCE AND 10 SIMILAR INSTALLATIONS.

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DRAWN BY: TW	BY:	DATE:	DESCRIPTION:

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THE METROPOLITAN SEWER DISTRICT OF GREATER CINCINNATI
HAMILTON COUNTY, OHIO

M S D
WASTEWATER ENGINEERING

HAM–75–7.85 (PID 77889)
NORTH OF PADDOCK ROAD INTERCHANGE ALONG I-75 SOUTHBOUND
SOUTH OF STRUCTURE OVER MILL CREEK AND RONALD REAGAN CROSS COUNTY HIGHWAY
CITY OF CINCINNATI SEC.1 E.R.1 T.3

COMBINED SEWER RELOCATION
SOUTHBOUND I–75 AT MILL CREEK
HAM–75–7.85 (PID 77889)

NOTES

PATH: J:\PRE-INT\TS\06\06-386_HAM-75\HAM\88124\UTILITIES_MSD\SHEETS\88124_MSDUN001.DGN
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PLOTTED BY: TIM.WILLIAMS

ACAD DRAWING NAME: 88124_MSDUN001.DGN

ACC. NO._____

SS#_____

ITEM 611, DRAINAGE STRUCTURE, MISC.: FLAP GATE – CONT.

1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. HANDLING:

1. HANDLE ALL SLUICE GATES AND APPURTENANCES VERY CAREFULLY.

2. FLAP GATES WHICH ARE CRACKED, CHIPPED, DISTORTED OR OTHERWISE DAMAGED OR DROPPED WILL NOT BE ACCEPTABLE.

3. PROTECT ALL THREADS, SEATS, ENDS, ETC. FROM DAMAGE AND CORROSION.

B. STORAGE:

1. STORE ALL FLAP GATES AND APPURTENANCES OFF THE GROUND IN ENCLOSED SHELTER UNLESS OTHERWISE APPROVED BY ENGINEER.

PART 2 PRODUCTS

2.01 SUPPLEMENT

A. SEE SUPPLEMENT TO THIS SECTION FOR ADDITIONAL PRODUCT INFORMATION.

2.02 PERFORMANCE REQUIREMENTS

A. THE FLAP GATE SHALL BE INSTALLED TO OPEN WHEN THERE IS A DIFFERENTIAL HEAD ACROSS THE GATE OF 0.2 FEET OR LESS.
B. THE SEATING HEAD SHALL BE 50 FEET.
C. THE FLAP GATE SHALL PROVIDE A WATER TIGHT SEAL TO PREVENT BACKWATER FROM ENTERING THE UPSTREAM SIDE OF THE FLAP GATE.
D. THE MAXIMUM HEADLOSS THROUGH THE GATE VALVE SHALL NOT EXCEED 0.4 FEET.

2.03 FLAP GATES

A. GENERAL:

1. THE FLAP GATE SHALL BE OF THE SIZE INDICATED ON THE DRAWINGS AND SHALL BE FLANGE FRAME WITH BRONZE SEAT IN THE COVER AND RESILIENT SEAT IN THE SEAT, SUITABLE FOR MOUNTING TO THE WALL WITH ADHESIVE STYLE ANCHOR BOLTS AS RECOMMENDED BY THE MANUFACTURER

2. THE FLAP GATE SHALL BE HEAVILY CONSTRUCTED TO WITHSTAND THE SERVICE FOR WHICH IT IS INTENDED.

3. SIMILAR INSTALLATIONS SHALL HAVE OPERATED SUCCESSFULLY FOR FIVE YEARS OR MORE.

4. ALL COMPONENT PARTS SHALL BE OF THE TYPE MATERIAL SHOWN IN THE "MATERIALS" SECTION OF THIS SPECIFICATION.

ITEM 611, DRAINAGE STRUCTURE, MISC.: FLAP GATE – CONT.

B. ALL FLAP GATES TO BE FLANGE FRAMED WITH BRONZE SEATS. THE BODY WILL BE CAST IRON, ASTM A126 CLASS B. THE ANGLE OF THE COVER TO THE VERTICAL, WHEN SEATED SHALL BE BETWEEN 2 DEGREES AND 5 DEGREES FROM THE VERTICAL AND BE CONSISTENT WITH THE PROPER OPERATION OF THE GATE. BRONZE SEATS, SHALL BE ASTM B21 C464 OR ASTM B133 C110, PNEUMATICALLY IMPACTED INTO DOVETAILED GROOVES MACHINED IN THE CAST IRON BODY AND COVER AND MACHINED TO A 63 MICRO-INCH FINISH FOR MAXIMUM WATER TIGHTNESS. THE COVER, OR FLAP, WILL BE CAST IRON, ASTM A126 CLASS B, WITH SPHERICALLY DISHED DESIGN TO WITHSTAND MAXIMUM OPERATING LOADS. COVER SHALL BE EQUIPPED WITH A LIFTING EYE TO ALLOW FOR THE REMOVAL OF ENTRAPPED DEBRIS. THE HINGE ARMS WILL BE NO. 1 MANGANESE BRONZE, ASTM B584 C865. THE HINGE PINS, DESIGNED IN DOUBLE SHEAR, WILL BE TYPE 304 STAINLESS STEEL. EACH HINGE PIN SHALL BE SECURED TO THE GATE IN SOME FASHION TO PREVENT LARCENY. EACH HINGE ARM WILL HAVE TWO PIVOT POINTS, AN ADJUSTABLE LOWER PIVOT WITH LIMITED ROTATION AND A THREADED UPPER HINGE POST TO ADJUST FLAP VALVE SENSITIVITY. A STAINLESS STEEL LUBRICATION FITTING WILL BE SUPPLIED FOR EACH PIVOT. THE FLAP GATE SHALL BE FACTORY LUBRICATED PRIOR TO DELIVERY TO THE SITE. A TWO YEAR SUPPLY OF LUBRICANT SHALL BE SUPPLIED WITH EACH GATE TO PROVIDE FOR FIELD LUBRICATION AT SIX MONTH INTERVALS.

C. BASIS OF DESIGN MANUFACTURER:

1. HYDRO GATE HEAVY-DUTY FLAP GATES

2. RODNEY HUNT SERIES FV-AC.

3. OR ENGINEER APPROVED EQUAL.

2.04 SHOP/FACTORY FINISHING

A. SHOP PAINTING:

1. STAINLESS STEEL AND MACHINED SURFACES SHALL NOT BE PAINTED. COMPLETELY COVER MACHINED SURFACES INCLUDING DRILLED AND TAPPED HOLES WITH A HEAVY COAT OF PROTECTIVE GREASE.

2. SURFACE PREPARATION:

a. ALL CAST IRON PARTS SHALL BE SHOP BLAST CLEANED AND COATED WITH A CORROSION RESISTANT COATING SYSTEM.
b. THE PARTS SHALL BE WHITE METAL BLAST CLEANED WITH THE BLAST PROFILE NOT EXCEEDING FIFTY PERCENT OF THE TOTAL DRY FILM THICKNESS.
c. BLASTED SURFACES SHALL BE COATED AS SOON AS PRACTICAL AFTER EXPOSURE.
d. IN NO CASE SHALL A BLAST CLEANED SURFACE BE LEFT OVERNIGHT PRIOR TO APPLYING ANY PAINTS.
e. WELD AREAS SHALL BE WASHED WITH A MILD SOLUTION OF PHOSPHORIC ACID PRIOR TO APPLYING ANY PAINTS.
f. REMOVE OIL, DIRT, GREASE, MILL SCALE AND ALL FOREIGN MATERIALS FROM ALL SURFACES BEFORE APPLYING PAINTS.

3. COATINGS:

a. THE PRIME COAT SHALL BE TNEMEC 66-1211 EPOXILINE PRIMER OR APPROVED EQUAL WITH A DRY FILM THICKNESS OF 3 MILS.
b. THE FINISH COATS SHALL CONSIST OF TWO (2) COATS OF TNEMEC 46-413 TNEMEC TAR OR APPROVED EQUAL. EACH FINISH COAT SHALL HAVE A DRY FILM THICKNESS OF 8 MILS. THE TOTAL DRY FILM THICKNESS FOR THE PAINTING SYSTEM SHALL BE 19 MILS.

ITEM 611, DRAINAGE STRUCTURE, MISC.: FLAP GATE – CONT.

2.05 SPARE PARTS

A. PROVIDE ONE FULL SET OF RESILIENT GATE SEALS FOR EACH GATE SPECIFIED HEREIN.

PART 3 - EXECUTION

3.01 INSTALLATION

A. IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.

1. INSTALLATION OF ALL PARTS SHALL BE DONE BY THE CONTRACTOR IN A WORK MAN LIKE MANNER AND IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HANDLE, STORE AND INSTALL THE GATE IN STRICT ACCORD WITH THE MANUFACTURER'S DRAWINGS AND RECOMMENDATIONS.

3.02 FIELD QUALITY CONTROL

A. FUNCTIONAL TESTS: CONDUCT ON EACH FLAP GATE.
B. PERFORMANCE TEST:

1. CONDUCT ON EACH FLAP GATE.

2. PERFORM UNDER ACTUAL OR APPROVED SIMULATED OPERATING CONDITIONS.

3. TEST FOR A CONTINUOUS 3-HOUR PERIOD WITHOUT MALFUNCTION.

4. IF ANY FLAP GATE MALFUNCTIONS OR DOES NOT DEMONSTRATE COMPLIANCE WITH THESE SPECIFICATIONS DURING TESTING THE CONTRACTOR SHALL, AT NO ADDITIONAL COST TO ODOT, ADJUST, REALIGN, OR MODIFY UNITS AND RETEST IF NECESSARY, AS MANY TIMES AS REQUIRED TO DEMONSTRATE COMPLIANCE WITH THESE SPECIFICATIONS DURING TESTING.

3.03 MANUFACTURER'S SERVICES

A. PROVIDE THE SERVICE OF A QUALIFIED, FACTORY-TRAINED REPRESENTATIVE OF THE MANUFACTURER TO CHECK AND ADJUST EACH PART OF THE INSTALLATION BEFORE IT IS PLACED IN OPERATION. THIS INDIVIDUAL SHALL COMPLETE A MANUFACTURER'S CERTIFICATE OF PROPER INSTALLATION.
B. TRAINING SERVICES:

1. TRAINING SHALL BE PROVIDED AS CALLED FOR BELOW.

2. THE MANUFACTURER SHALL PROVIDE TRAINING IN THE OPERATION AND MAINTENANCE FOR THE EQUIPMENT UNDER THIS SECTION.

3. TRAINING SHALL "HANDS-ON" INSTRUCTION DESIGNED TO COMPLETELY FAMILIARIZE OPERATING PERSONNEL WITH THE THEORY; STANDARD OPERATING PROCEDURES SAFETY FEATURES AND EMERGENCY PROCEDURES; AND GENERAL MAINTENANCE OF ALL COMPONENTS.

4. ALL TRAINING SHALL BE TARGETED AT JOURNEYMAN OPERATORS AND MAINTENANCE PERSONNEL.

ITEM 611, DRAINAGE STRUCTURE, MISC.: FLAP GATE – CONT.

3.04 SUPPLEMENT

A. THE SUPPLEMENT LISTED BELOW, FOLLOWING "END OF SECTION," IS A PART OF THIS SPECIFICATION.

1. FLAP GATES SCHEDULE.

SCHEDULE					
FLAP GATE					
NO. REQ'D	SIZE WXH	MOUNTING TYPE	OPERATING HEAD		CSO
			SEATING	UNSEATING	
1	48"	DIRECT WALL MOUNT	50'	0.2'	490

ITEM SPECIAL – SANITARY SEWER, MSD SANITARY SEWER PROTECTION

THE CONTRACTOR SHALL BE REQUIRED TO PROTECT ALL MSD SANITARY SEWER FACILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS. SPECIAL CARE MUST BE TAKEN TO ASSURE NO HARM TO THE MSD SEWER SYSTEM OCCURS DURING ALL CONSTRUCTION ACTIVITES.

IN ADDITION, THE CONTRACTOR SHALL BE REQUIRED TO VIDEO INSPECT ALL SANITARY SEWER FACILITIES BOTH PRE AND POST CONSTRUCTION. ONE (1) COPY OF THE VIDEO INSPECTION SHALL BE PROVIDED TO THE PROJECT ENGINEER AND MSD FOR REVIEW. THE PRE AND POST CONSTRUCTION VIDEOS SHALL BE CODED TO THE PACP (VERSION 6 OR LATER) STANDARD ACCORDING TO NASSCO. IF DAMAGE IS FOUND IN THE PRECONSTRUCTION VIDEO, THE CONTRACTOR SHALL DOCUMENT THE DAMAGE AND PROVIDE THE DOCUMENTATION TO THE PROJECT ENGINEER. IF DAMAGE IS FOUND IN THE POST CONSTRUCTION VIDEO, THEN REPAIRS TO THE SATISFACTION OF THE DEPARTMENT AND MSD SHALL BE PERFORMED BY THE CONTRACTOR AT CONTRACTOR EXPENSE.

ALL LABOR, MATERIAL AND INCIDENTALS FOR THE ABOVE WORK SHALL BE PAID FOR BY LUMP SUM, ITEM SPECIAL - SANITARY SEWER, MSD SANITARY SEWER PROTECTION.

SUPPLEMENTAL NOTES AND REQUIREMENTS

ALL PROPOSED COMBINED SEWER AND SANITARY PIPING AND RELATED APPURTENANCES WORK TO BE PROVIDED TO THE METROPOLITAN SEWER DISTRICT MUST BE INSTALLED AND TESTED IN ACCORDANCE WITH MSD RULES AND REGULATIONS, POLICIES, AND STANDARD DRAWINGS. ALL MATERIALS MUST CONFORM TO MSD RULES AND REGULATIONS, POLICIES AND STANDARD DRAWINGS. SEPARATE SANITARY PLANS MUST BE SUBMITTED AND APPROVED BY MSD. MSD MUST BE CONTACTED FOR INSPECTION 48 HOURS PRIOR TO THE BEGINNING OF ANY MSD WORK. THE PERMIT TO INSTALL FOR THE SANITARY AND COMBINED SEWER WORK MUST BE OBTAINED FROM OEPA PRIOR TO THE START OF ANY WORK, AND IT MUST BE PROCESSED THROUGH MSD'S DEVELOPMENT SERVICES OFFICE. ALL STORMWATER CONNECTIONS TO THE COMBINED SEWER REQUIRE A STORMWATER CONNECTION PERMIT FROM MSD'S DEVELOPMENT SERVICES OFFICE. ALL EXISTING SEWERS TO REMAIN IN SERVICE MUST BE DIGITALLY VIDEOTAPED PRE- AND POST-CONSTRUCTION AND A COPY PROVIDED TO THE MSD INSPECTOR. ANY DAMAGE CAUSED TO THE SEWERS DURING CONSTRUCTION MUST BE REPAIRED TO THE SATISFACTION OF MSD. ACCESS TO SEWERS MUST BE MAINTAINED AT ALL TIMES.

ALL SEWER WORK MUST BE VERIFIED AND LOCATED WITH AS-BUILTS PERFORMED BY A SURVEYOR TO INCLUDE RIM ELEVATIONS, INVERT ELEVATIONS OF ALL CONNECTIONS AT STRUCTURES (ALONG WITH THE DIRECTION OF CONNECTION AND DESIGNATION MATERIALS AND DIMENSIONS, STRUCTURE TYPES WITH HORIZONTAL COORDINATE LOCATION, GRATE AND LID SIZES/DIMENSIONS, AND NOTE PERTINENT "FLOW IN" OR "FLOW OUT" OF THE STRUCTURE), PIPE RESPECT TO OTHER UTILITIES (WATER, GAS, STORM, ETC.), STRUCTURES (MANHOLES, INLETS, PIERS, FOOTINGS, WALLS, ETC.), AND FINAL COVER SHALL ALSO BE VERIFIED AND INDICATED WHERE DEVIATIONS FROM PLANS OCCUR. DATUM (HORIZONTAL AND VERTICAL) FOR THE SURVEY SHALL BE NOTED AND PER MSD STANDARDS OR THE ORIGINAL PLANS. THE AS-BUILT SHALL BE SIGNED, SEALED, AND DATED BY A SURVEYOR LICENSED IN OHIO.

UNLESS OTHERWISE NOTED IN THE PLAN SET, THE COST OF THE ABOVE WORK IS INCIDENTAL TO THE OVERALL BID PRICE.

881
2017

FOR INFORMATION ONLY

PATH: J:\PRE-INT\TS\06\06-386_HAM-75\HAM\88124\UTILITIES_MSD\SHEETS\88124_MSDUN002.DGN
DATE: MONDAY, NOVEMBER 25, 2019 12:18:19 PM
PLOTTED BY: TIM.WILLIAMS

DESIGNED BY: JBK
DRAWN BY: TW

REVISIONS		
BY:	DATE:	DESCRIPTION:

IBI GROUP
23 Triangle Park Drive
Cincinnati OH 45246
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THE METROPOLITAN SEWER DISTRICT
OF GREATER CINCINNATI
HAMILTON COUNTY, OHIO

MSD WASTEWATER ENGINEERING

HAM–75–7.85 (PID 77889)
NORTH OF PADDOCK ROAD INTERCHANGE ALONG I-75 SOUTHBOUND
SOUTH OF STRUCTURE OVER MILL CREEK AND RONALD REAGAN CROSS COUNTY HIGHWAY
CITY OF CINCINNATI SEC.1 E.R.1 T.3

COMBINED SEWER RELOCATION
SOUTHBOUND I–75 AT MILL CREEK
HAM–75–7.85 (PID 77889)
NOTES

ACAD DRAWING NAME: 88124_MSDUN002.DGN

ACC. NO. _____

SS# _____

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC.
HEADWALL REINFORCING STEEL											
F501	44	26′ - 9″	1,228	STR.							
F502	22	4′ - 8″	108	STR.							
F503	88	7′ - 8″	704	STR.							
F504	48	5′ - 10″	293	1	10″	5′ - 1″					
F505	9	11′ - 1″	105	3	2′ - 8″	2′ - 7″					
F601	85	13′ - 8″	1,745	33	1′ - 8″	4′ - 7″					
F602	85	7′ - 8″	979	STR.							
F603	69	6′ - 10″	709	1	1′ - 0″	6′ - 0″					
W501	12	31′ - 5″	394	STR.							
W502	14	17′ - 8″	258	STR.							
W503	10	10′ - 5″	109	STR.							
W504	10	18′ - 11″	198	STR.							
W505	4	34′ - 6″	144	STR.							
W506	127	8′ - 9″	1,160	STR.							
W507	12	3′ - 3″	41	STR.							
W508	8	6′ - 0″	51	STR.							
W509	8	4′ - 6″	38	STR.							
W510	2 SER. OF 6	3′ - 0″ TO 7′ - 4″	65	2	1′ - 0 5/8″ TO 3′ - 2 5/8″	1′ - 2″	1′ - 0 5/8″ TO 3′ - 2 5/8″				5 1/4″
		SUB-TOTAL	8,329								

ESTIMATED QUANTITIES

COMPUTED BY: SS/TDW DATED: 10-23-19
CHECKED BY: AIS/JAG DATED: 10-25-19

ITEM	ITEM EXTENSION	TOTAL	UNIT	DESCRIPTION	REF. SHEET
				CSO 490 & INCIDENTALS	
202	32000	48	FT	CURB REMOVED	
202	58000	1	EACH	MANHOLE REMOVED	
202	70000	531	FT	SPECIAL - FILL AND PLUG EXISTING CONDUIT	
202	75200	48	FT	FENCE REMOVED FOR REUSE	
253	01001	216	SY	PAVEMENT REPAIR, AS PER PLAN	7 / 14
503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
517	73501	44	FT	RAILING, PIPE, AS PER PLAN	8-9 / 14
602	20000	0.14	CY	CONCRETE MASONRY	
607	22000	42	FT	FENCE REBUILT, TYPE CL	
609	26000	39	FT	CURB, TYPE 6	
611	07400	59	FT	18″ CONDUIT, TYPE B	
611	16600	48	FT	36″ CONDUIT, TYPE C, WITH CLASS II BEDDING	
611	20900	51	FT	48″ CONDUIT, TYPE B, WITH CLASS I BEDDING	
611	21100	466	FT	48″ CONDUIT, TYPE C, WITH CLASS II BEDDING	
611	99690	1	EACH	MANHOLE, MISC.: SANITARY MANHOLE PER MSD STD ACC. NO. 49037	
611	99690	2	EACH	MANHOLE, MISC.: SANITARY MANHOLE PER MSD STD ACC. NO. 49040	
611	99690	1	EACH	MANHOLE, MISC.: SANITARY MANHOLE ADJUST TO GRADE PER MSD STD ACC. NO. 49058-A	
611	99900	1	EACH	DRAINAGE STRUCTURE, MISC.: FLAP GATE	10-13 / 14
611	99920	LS		DRAINAGE STRUCTURE, MISC.: CSO VAULT 25′ L x13′ W, AS PER PLAN	8 / 14
SPECIAL	61197910	LS		SANITARY SEWER, MSD SANITARY SEWER PROTECTION	13 / 14
				HEADWALL	
503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
503	21300	LS		UNCLASSIFIED EXCAVATION	
509	10000	8,329	LB	EPOXY COATED REINFORCING STEEL	
511	46010	27	CY	CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING	
511	46510	47	CY	CLASS QC1 CONCRETE, FOOTING	
512	10100	63	SY	SEALING OF CONCRETE SUFACES (EPOXY-URETHANE)	
518	21201	28	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC, AS PER PLAN	
601	32104	78	CY	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC	

DESIGN SPECIFICATIONS:

THESE STRUCTURES CONFORM TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO), 7TH EDITION, AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN DATA:

THE FOLLOWING DESIGN DATA IS ASSUMED:

INTERNAL ANGLE OF FRICTION OF BACKFILL SOIL = 30°
TOTAL UNIT WEIGHT OF BACKFILL SOIL = 120 PCF
INTERNAL ANGLE OF FRICTION (DRAINED),
FOUNDATION SOIL = 30°
UNIT WEIGHT OF CONCRETE = 150 PCF
SLOPE BACKFILL = 1.8:1
HEIGHT OF LIVE LOAD SURCHARGE = 2 FT

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4000 PSI (FOOTING, WINGWALL AND FORESLOPE WALL)

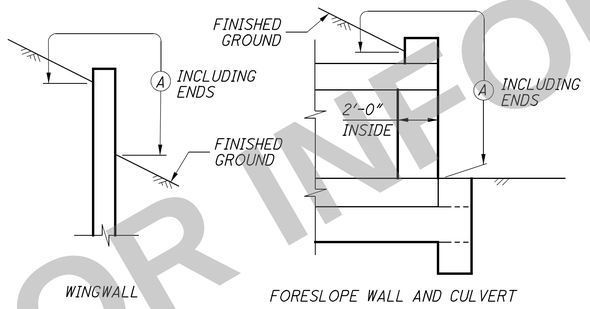
REINFORCING STEEL - ASTM A615 OR A996 GRADE 60 MINIMUM YIELD STRENGTH 60,000 PSI (ALL REINFORCING SHALL BE EPOXY COATED)

POROUS BACKFILL WITH FILTER FABRIC:

2′-0″ THICK SHALL BE PLACED BEHIND THE HEADWALL AND SHALL EXTEND TO 12″ BELOW THE EMBANKMENT SURFACE. GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE POROUS BACKFILL AND REPLACED EXCAVATION ADJACENT TO THE STRUCTURE. IT SHALL TURN UNDER THE BOTTOM OF THE POROUS BACKFILL AND RETURN 6″ ABOVE THE TOP ELEVATION OF THE WEEPHOLE. WEEPHOLES SHALL BE PLACED 6″ TO 12″ ABOVE THE NORMAL WATER ELEVATION OR GROUND LINE AND SHALL HAVE A MAXIMUM SPACING OF 10′-0″. A MINIMUM OF TWO WEEPHOLES SHALL BE PROVIDED PER WINGWALL.

SEALING OF FORESLOPE WALL AND WINGWALLS:

ALL EXPOSED FORESLOPE WALL AND WINGWALL CONCRETE SHALL BE SEALED WITH EPOXY-URETHANE SEALER. THE LIMITS SHALL BE AS SHOWN IN THE DIAGRAMS BELOW. PAYMENT FOR THE EPOXY-URETHANE SEALER SHALL BE PER ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).



LIMITS OF ITEM 512 - SEALING CONCRETE SURFACES

(A) - SEAL ENTIRE CONCRETE SURFACE AREA

FOUNDATION BEARING RESISTANCE:

THE HEADWALL FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM SERVICE LOAD PRESSURE OF 2.98 KIPS PER SQUARE FOOT AND MAXIMUM STRENGTH LOAD PRESSURE OF 2.76 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 3.7 KIPS PER SQUARE FOOT.

ABBREVIATIONS:

THE FOLLOWING ABBREVIATIONS ARE USED THROUGHOUT THESE PLANS:

℄ = BASELINE
B.F. = BACK FACE
CIP = CAST IN PLACE
CLR. = CLEARANCE
BOTT. = BOTTOM
℄ = CENTERLINE
C.J. = CONSTRUCTION JOINT

CMP = CORRUGATED METAL PIPE
CMS = CONSTRUCTION AND MATERIAL SPECIFICATIONS
CONST. JT. = CONSTRUCTION JOINT

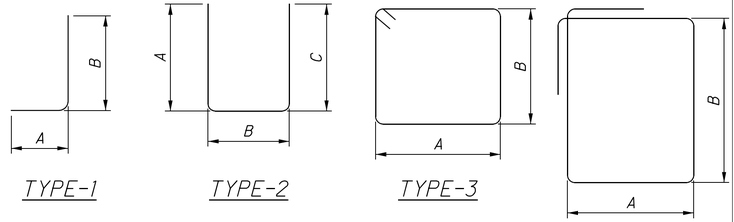
CU YD = CUBIC YARD
E.F. = EACH FACE
EL. = ELEVATION
FTG. = FOOTING
MAX. = MAXIMUM
N.F. = NEAR FACE
DWG. = DRAWING
E.J. = EXPANSION JOINT
EX. = EXISTING
F.F. = FRONT FACE
MIN. = MINIMUM

PEJF = PREFORMED EXPANSION JOINT FILLER

PROP. = PROPOSED
SPA. = SPACES
STD. = STANDARD
SER. = SERIES
STR. = STRAIGHT
TYP. = TYPICAL

RETAINING WALL AND FOOTING:

RETAINING WALL AND FOOTING SHALL BE CAST-IN-PLACE AND CONFORM TO CMS 511. THE USE OF PRECAST RETAINING WALL AND/OR PRECAST FOOTING SHALL NOT BE ALLOWED



REINFORCING STEEL NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, S501 IS A NO. 5 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE NOTED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED.
2. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
3. "STR" IN THE TYPE COLUMN INDICATES STRAIGHT BARS.
4. "SER" DENOTES SERIES.
5. REFER TO C.M.S. SECTION 509.05 FOR STANDARD BEND DIMENSIONS.
6. ALL REINFORCING STEEL CLEARANCES ARE 2" UNLESS OTHERWISE NOTED.

FOR INFORMATION ONLY

882
2017

DESIGNED BY: JBK
DRAWN BY: TW

REVISIONS BY:	DATE:	DESCRIPTION:

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THE METROPOLITAN SEWER DISTRICT OF GREATER CINCINNATI
HAMILTON COUNTY, OHIO

M S D WASTEWATER ENGINEERING

HAM-75-7.85 (PID 77889)
NORTH OF PADDOCK ROAD INTERCHANGE ALONG I-75 SOUTHBOUND
SOUTH OF STRUCTURE OVER MILL CREEK AND RONALD REAGAN CROSS COUNTY HIGHWAY
CITY OF CINCINNATI SEC.1 E.R.1 T.3

COMBINED SEWER RELOCATION SOUTHBOUND I-75 AT MILL CREEK HAM-75-7.85 (PID 77889)

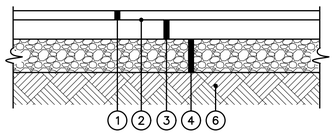
REINFORCING STEEL LIST

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PLOTTED BY: TIM.WILLIAMS

ACAD DRAWING NAME: 88124_MSDUL001.DGN

ACC. NO. _____

SHEET 14 OF 14 SS# _____

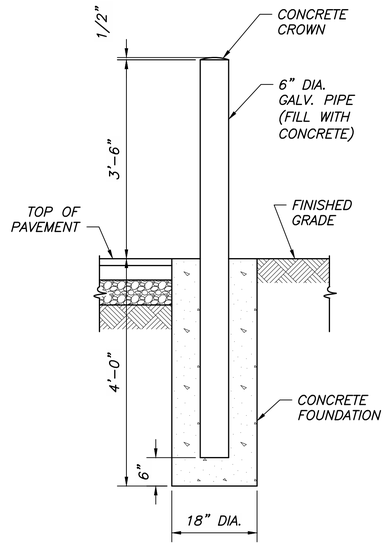


PAVEMENT ITEMS

1. ITEM 441, 1.5–IN ASPHALT CONCRETE SURFACE COURSE, TYPE I, (448), PG64–22
2. ITEM 407, NON–TRACKING TACK COAT @ 0.1 GAL/SY
3. ITEM 301, 3–IN ASPHALT CONCRETE BASE
4. ITEM 304, 6–IN AGGREGATE BASE
5. ITEM 204, SUBGRADE COMPACTION

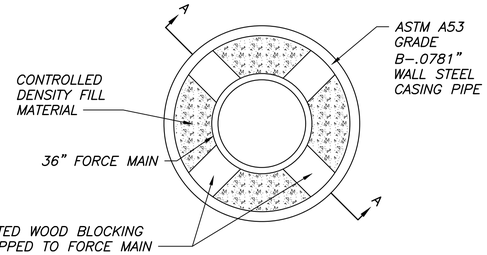
DETAIL – DRIVEWAY PAVEMENT SECTION

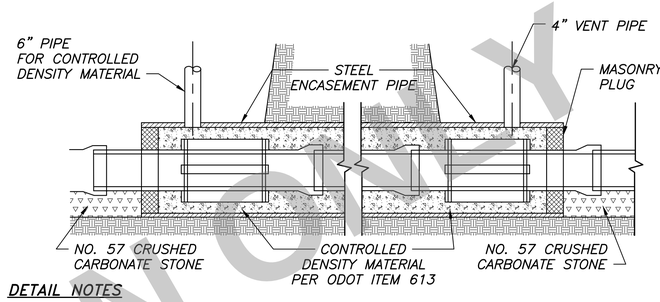
NOT TO SCALE



DETAIL – BOLLARD

NOT TO SCALE



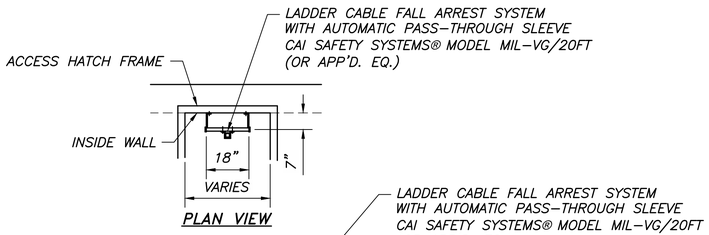


DETAIL NOTES

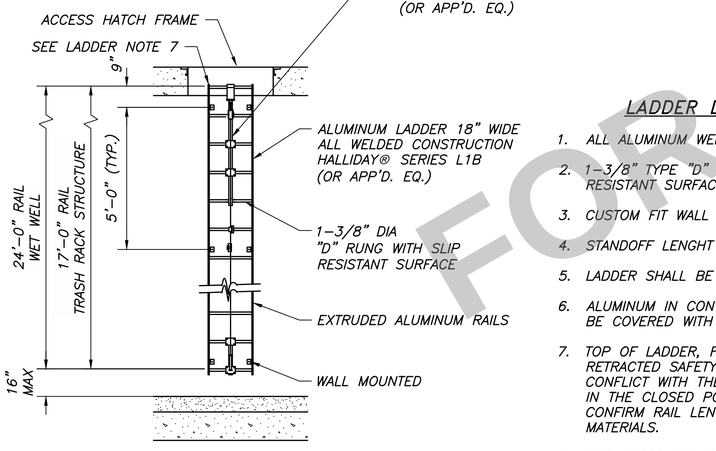
1. TREATED WOOD BLOCKING TO BE 6 INCHES LONG BANDED TO EACH LENGTH OF PIPE, 6'–0" MAXIMUM C/C. ALLOW 1 INCH MAXIMUM CLEARANCE BETWEEN BLOCKS AND CASING PIPE.
2. STEEL CASING PIPE TO BE 54–IN DIAMETER UNLESS APPROVED IN WRITING BY THE ENGINEER. MINIMUM YIELD STRENGTH=35,000 PSI; NOMINAL WALL THICKNESS = 0.781–IN UNLESS CALCULATIONS ARE SUBMITTED THAT JUSTIFY OTHER WALL THICKNESSES.
3. TREATED WOOD BLOCKING TO BE 6 INCHES LONG.
4. WELD ALL ENCASEMENT PIPE JOINTS.

DETAIL – JACK CASING AND BORING SECTION

NOT TO SCALE



PLAN VIEW

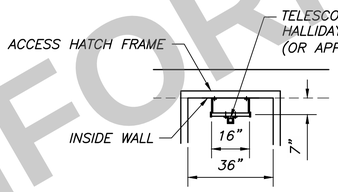


ELEVATION VIEW

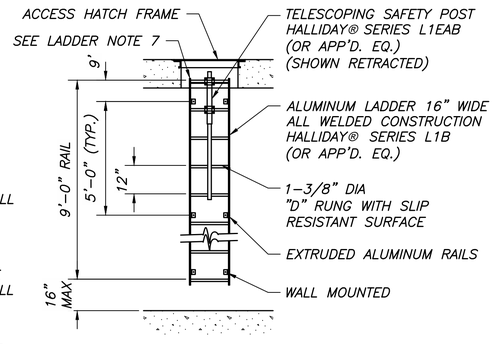
WET WELL & TRASH RACK STRUCTURE LADDERS

LADDER DETAIL NOTES

1. ALL ALUMINUM WELDED CONSTRUCTION.
2. 1–3/8" TYPE "D" RUNG WITH FLAT SLIP RESISTANT SURFACE.
3. CUSTOM FIT WALL MOUNTED STANDOFFS.
4. STANDOFF LENGHT SHALL BE 7" MIN.
5. LADDER SHALL BE FLAT WALL MOUNTED.
6. ALUMINUM IN CONTACT WITH CONCRETE SHALL BE COVERED WITH A BITUMINOUS MATERIAL.
7. TOP OF LADDER, FALL ARREST SYSTEM, OR RETRACTED SAFETY POST SHALL NOT CONFLICT WITH THE ACCESS HATCHES WHILE IN THE CLOSED POSITION. CONTRACTOR SHALL CONFIRM RAIL LENGTH PRIOR TO ORDERING MATERIALS.
8. SEE SHEET 901 FOR ADDITIONAL NOTES AND DESIGN AND CONSTRUCTION REQUIREMENTS.



PLAN VIEW



ELEVATION VIEW

VALVE VAULT LADDER

DETAIL – ALUMINUM LADDERS

NOT TO SCALE

HYDROSTATIC TEST NOTE

PERFORM HYDROSTATIC TESTING TO THE PROPOSED 36–INCH FORCE MAIN PER ODOT CMS SECTION 638.09 WITH THE FOLLOWING EXCEPTION: THE TEST PRESSURE SHALL BE 60 POUNDS PER SQUARE INCH.

PIPE SCHEDULE

PIPE SIZE (INCHES)	ALLOWABLE PIPE MATERIALS	LOCATION	PIPE CLASS (MIN.)	INTERNAL WORKING PRESSURE (PSI)
4	DIP	LOW FLOW PUMPS INSIDE PUMP STATION	52	26.54
6	DIP	LOW FLOW EFFLUENT	52	26.54
20	DIP	DUTY PUMPS INSIDE PUMP STATION	52	20.61
36	DIP	DUTY PUMPS EFFLUENT	52	20.61
48	RCP	PUMP STATION INFLUENT	IV	N/A

FOR INFORMATION ONLY

CALCULATED CDS CHECKED RMA

STORMWATER PUMP STATION - PADDOCK ROAD INTERCHANGE PROJECT DETAILS

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SHEET NOTES

1. PROPOSED UNDERGROUND STORMWATER STORAGE AREA DISPLAYS THE MAXIMUM ALLOWABLE LIMITS OF THE STORAGE. ACTUAL STORAGE NEEDED WILL NOT REQUIRE THE TOTAL LIMITS SHOWN ON THE PLANS.

I.R. 75 (NB)

PROP. 36" STM.

EX. E.P.

EX. SHLDR.

PROP. TRASH RACK STRUCTURE (SEE DETAILS, SHEET 894)

PROP. E.P.

PROP. SHLDR.

PROP. G.R.

PROP. U.G. LTG.

PROP. SWALE

PROP. 48" STM.

PROP. C.B.

EX. C.B.

PROP. STM. M.H.

20'

135.5'

Ex. CH

PROP. 18" STM.

PROP. LTG. P.B.

PROP. 42" STM.

PROPOSED UNDERGROUND STORMWATER STORAGE

PROP. 48" STM. (SEE SHEET 895)

PROPOSED STORMWATER PUMP STATION

PROP. U.G. LTG.

EX. BRIDGE FOOTER

EX. BRIDGE ABUTMENT

EX. U.G. LTG.

EX. 12" STM.

PADDOCK ROAD (S.R. 4)

PROPOSED ACCESS DRIVE

PROPOSED ELECTRICAL & CONTROL BUILDING

PROP. U.G. ELEC. SERVICE

EX. 30" W.M.

PROP. 36" STM. F.M. (SEE SHEETS 896–898)

EX. U.G. LTG.

EX. HWY. LTG.

75'

PROP. SAN. M.H.

PROP. 15" SAN.

EX. LTG. P.B.

SAN

PROPOSED BOLLARD (TYP.) (SEE DETAIL, SHEET 883)

83.1'

PROPOSED UNDERGROUND STORMWATER STORAGE

PROPOSED GENERATOR

PROPOSED ACCESS DRIVE

PROPOSED TRANSFORMER

PROP. LTG. P.B.

EX. TR.

EX. P.B.

PROP. U.G. LTG.

EX. 36" COMB.

EX. LANDSCAPED AREA

EX. CONC. S.W.

EX. E.P.

EX. 30" W.M.

RAMP A

PROPOSED DUKE ENERGY UNDERGROUND PRIMARY DISTRIBUTION (2) 4" COND. (SEE SHEET 899)

EX. 24" COMB.

EX. COMB. M.H.

EX. 36" COMB.

RAMP D

N 88° 52' 06" W

EX. LTG. P.B.

EX. ST. LT.

EX. U.G. LTG.

EX. SIGN

PROP. SAN. M.H.

PROP. SHLDR.

PROP. E.P.

FOR INFORMATION ONLY

CALCULATED CDS
CHECKED RMA

STORMWATER PUMP STATION - PADDOCK ROAD INTERCHANGE
UTILITY PLAN

HAM-75-7.85

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SHEET NOTES

1. EXISTING & PROPOSED UNDERGROUND UTILITIES, AND PROPOSED UNDERGROUND STORMWATER STORAGE AREAS ARE NOT SHOWN. REFER TO UTILITY PLAN SHEET 869 FOR THESE FEATURES.

I.R. 75 (NB)

EX. E.P.
EX. SHLDR.
PROP. E.P.
PROP. SHLDR.
PROP. G.R.
PROP. SWALE
PROP. TRASH RACK STRUCTURE
PROP. LTG. P.B.
EX. C.B.
PROP. C.B.
PROP. STM. M.H.
35.3'
20'
111.9'
34.5'
44.2'
45'
PROPOSED STORMWATER PUMP STATION
PROPOSED CONCRETE WALK
PROPOSED ACCESS DRIVE
PROPOSED ELECTRICAL & CONTROL BUILDING
41.7'
44.5' TOP SLAB
35' TOP SLAB
25'
25.6'
15.3'
26'
EX. HWY. LTG.
EX. LTG. P.B.
R20' (TYP.)
R20'
25'
83.1'
PROPOSED BOLLARD (TYP.)
PROPOSED ACCESS DRIVE
PROPOSED GENERATOR
PROPOSED TRANSFORMER
PROP. CHAIN LINK FENCE (PER ODOT F-1.1)
EX. LANDSCAPED AREA
PROPOSED DUKE ENERGY UTILITY POLE
EX. CONC. S.W.
EX. E.P.
PROPOSED BOLLARD (TYP.)
PROP. SAN. M.H.
EX. LTG. P.B.
EX. ST. LT.
EX. SIGN
PROP. SHLDR.
PROP. E.P.
PROPOSED DUKE ENERGY UTILITY POLE
EX. BRIDGE FOOTER
EX. BRIDGE ABUTMENT
PADDOCK ROAD (S.R. 4)
RAMP A
RAMP D
N 88° 52' 06" E
493
494
495
496
497
492
147
146
145
17
15
14

FOR INFORMATION ONLY

Horiz: 1 inch = 20 feet

CALCULATED CDS
CHECKED RMA

STORMWATER PUMP STATION - PADDOCK ROAD INTERCHANGE
SITE PLAN

HAM-75-7.85

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SHEET NOTES

1. PROPOSED UNDERGROUND STORMWATER STORAGE AREA DISPLAYS THE MAXIMUM ALLOWABLE LIMITS OF THE STORAGE. ACTUAL STORAGE LIMITS WILL BE DETERMINED BY THE CONTRACTOR.
2. HIGHWAY IMPROVEMENTS WILL RESULT IN A 2:1 SLOPE FROM THE PROPOSED HIGHWAY CROSS SECTION TO TIE INTO EXISTING GROUND ON THE NORTHWEST CORNER OF THE PUMP STATION SITE. PROPOSED GRADING SHOWN ON THE NORTHWEST CORNER OF THIS SHEET SHALL TIE INTO SAID HIGHWAY GRADING.

I.R. 75 (NB)

PROP PERIMETER FENCE

PROPOSED STORMWATER STORAGE

PROP TRASH RACK STRUCTURE

PROPOSED STORMWATER PUMP STATION (TOP ELEVATION 537.00)

PADDOCK ROAD (S.R. 4)

PROPOSED ACCESS DRIVE

PROPOSED UNDERGROUND STORMWATER STORAGE

PROPOSED ELECTRICAL BUILDING (FF=538.50)

PROPOSED BOLLARD (TYP.)

PROPOSED GENERATOR

PROPOSED GENERATOR PAD (ELEV=537.00)

PROPOSED ACCESS DRIVE

PROP PERIMETER FENCE

RAMP A

RAMP D

24" Combined

18" Storm

SAN

FOR INFORMATIONAL PURPOSES ONLY

CALCULATED CDS
CHECKED RMA

0 10 20 40
Sheet: 1 inch = 20 feet

STORMWATER PUMP STATION - PADDOCK ROAD INTERCHANGE
GRADING PLAN

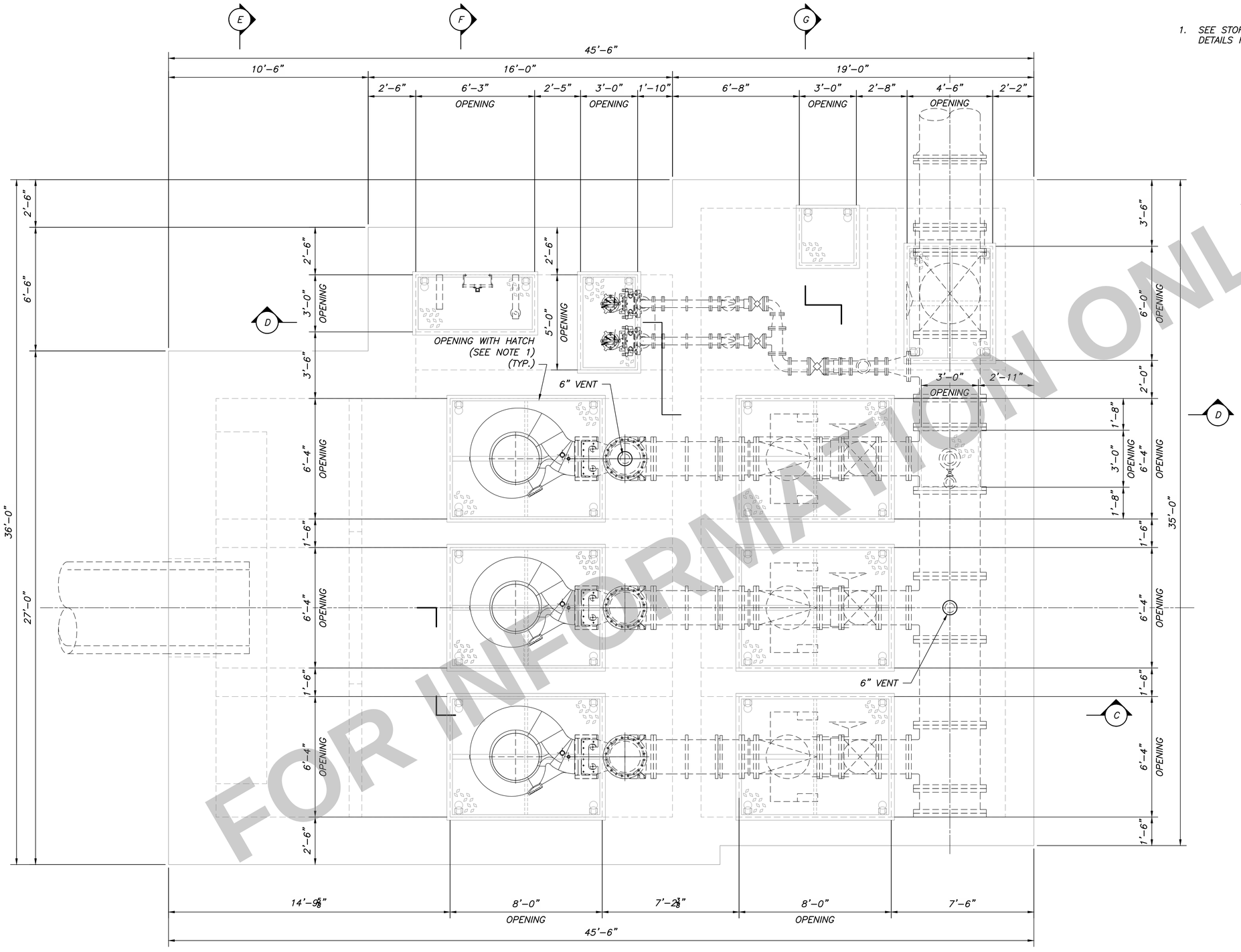
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SHEET NOTES

1. SEE STORMWATER PUMP STATION STRUCTURAL DETAILS FOR ADDITIONAL INFORMATION.



E F G

PLAN VIEW – A (TOP SLAB ELEV. 537.00)
Scale: 3/8" = 1'–0"

FOR INFORMATION ONLY

Horz: 3/8 inch = 1 foot

CALCULATED CDS
CHECKED RMA

STORMWATER PUMP STATION - PADDOCK ROAD INTERCHANGE
MECHANICAL DETAILS - PLAN VIEW A

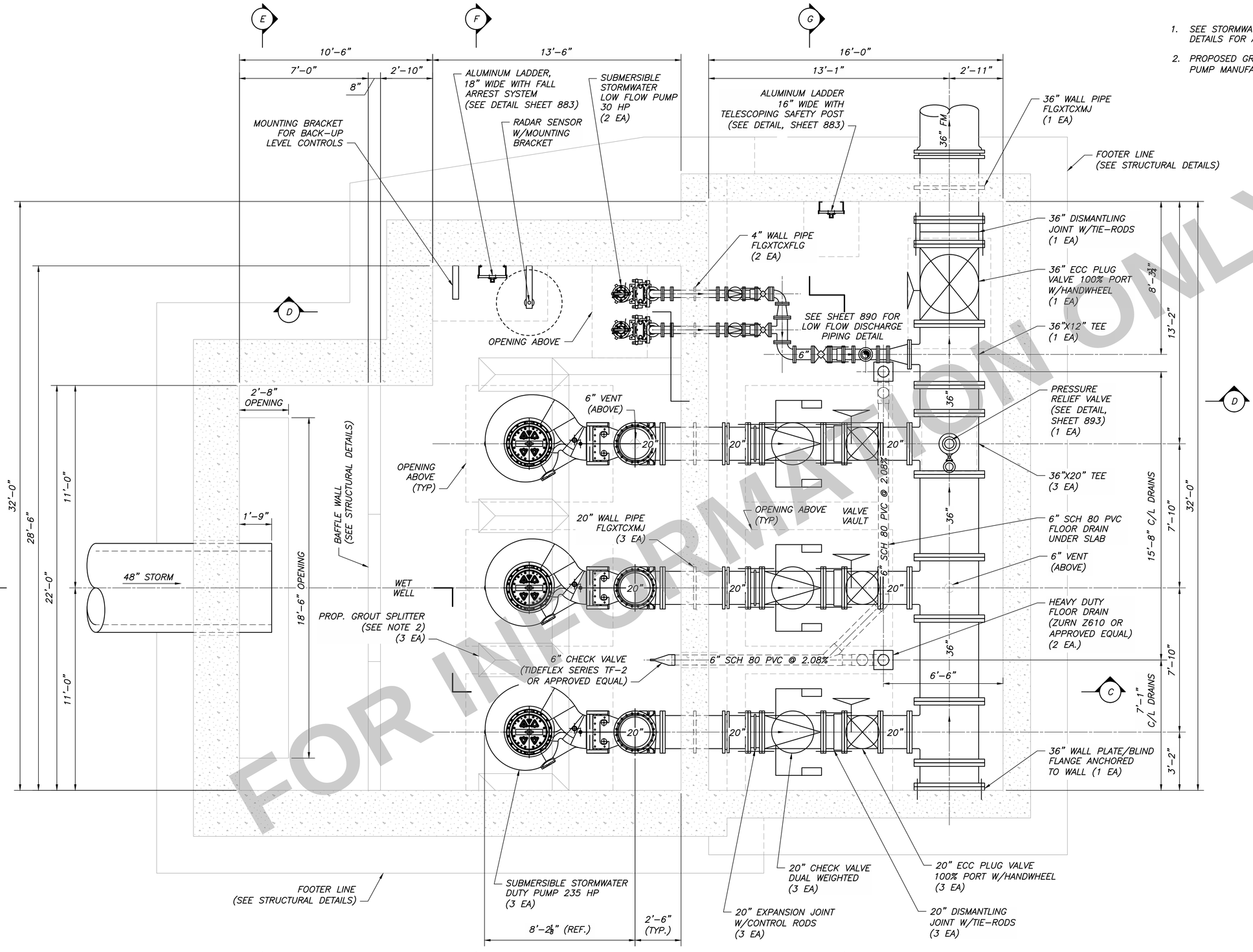
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SHEET NOTES

1. SEE STORMWATER PUMP STATION STRUCTURAL DETAILS FOR ADDITIONAL INFORMATION.
2. PROPOSED GROUT SPLITTERS SHALL BE SIZED PER PUMP MANUFACTURER'S RECOMMENDATIONS



SECTION – B (ELEV. 533.00)

Scale: 3/8" = 1'–0"

FOR INFORMATION ONLY

Horz: 3/8 inch = 1 foot

CALCULATED CDS | CHECKED RMA

STORMWATER PUMP STATION - PADDOCK ROAD INTERCHANGE
MECHANICAL DETAILS - SECTION B

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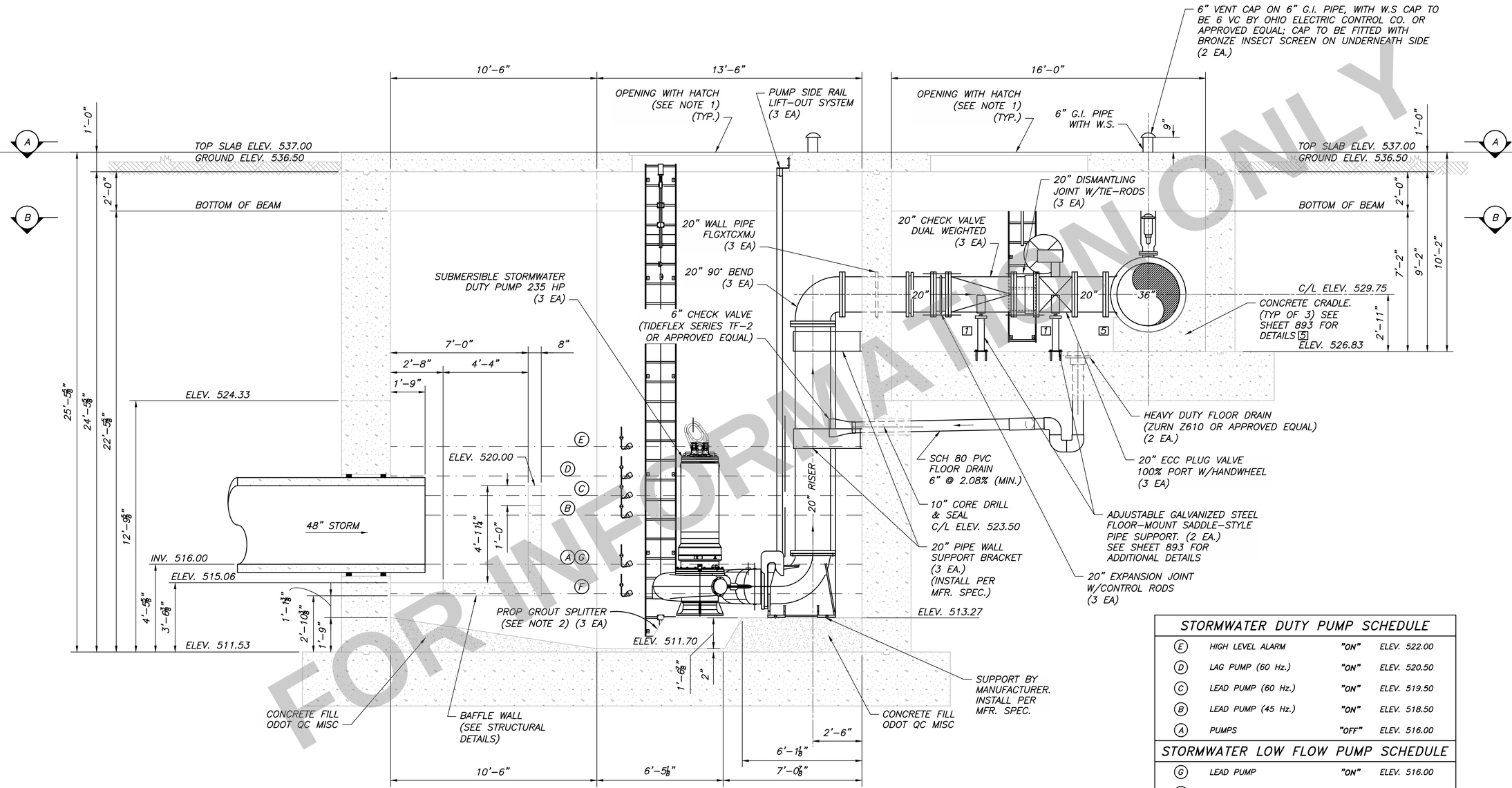
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LEGEND

[X] – SUPPORT ID NUMBER (SEE TABLE ON SHEET 893 FOR ADDITIONAL DETAILS)

SHEET NOTES

1. SEE STORMWATER PUMP STATION STRUCTURAL DETAILS FOR ADDITIONAL INFORMATION.
2. PROPOSED GROUT SPLITTERS SHALL BE SIZED PER PUMP MANUFACTURER'S RECOMMENDATIONS.



SECTION – C

Scale: 3/8" = 1'–0"

STORMWATER DUTY PUMP SCHEDULE			
(E)	HIGH LEVEL ALARM	"ON"	ELEV. 522.00
(D)	LAG PUMP (60 Hz.)	"ON"	ELEV. 520.50
(C)	LEAD PUMP (60 Hz.)	"ON"	ELEV. 519.50
(B)	LEAD PUMP (45 Hz.)	"ON"	ELEV. 518.50
(A)	PUMPS	"OFF"	ELEV. 516.00
STORMWATER LOW FLOW PUMP SCHEDULE			
(G)	LEAD PUMP	"ON"	ELEV. 516.00
(F)	PUMPS	"OFF"	ELEV. 514.50

PUMP INFORMATION				
# OF PUMPS	TYPE (BASIS OF DESIGN)	FLOW	TDH	MOTOR
3	KRT K 500–634/1858XNG–K 20" DIS. SUBMERSIBLE PUMPS	29,000 GPM	47.6 FEET	235 HP @ 900 RPM
2	KRT F 100–254/224XEG–S 4" DIS. SUBMERSIBLE PUMPS	673 GPM	61.3 FEET	30 HP @ 1,800 RPM

FOR INFORMATION ONLY

Horz: 3/8 inch = 1 foot

CALCULATED CDS
CHECKED RMA

STORMWATER PUMP STATION - PADDOCK ROAD INTERCHANGE
MECHANICAL DETAILS - SECTION C

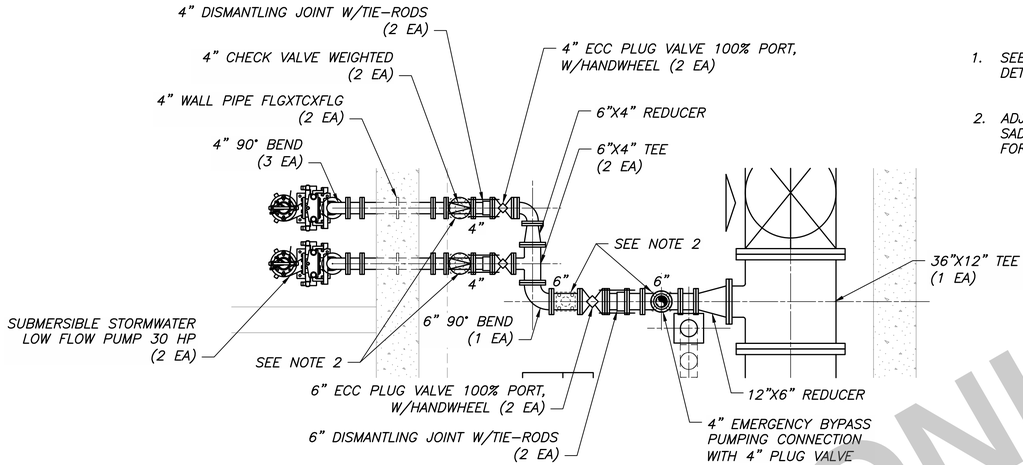
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STORMWATER DUTY PUMP SCHEDULE			
(E)	HIGH LEVEL ALARM	"ON"	ELEV. 522.00
(D)	LAG PUMP (60 Hz.)	"ON"	ELEV. 520.50
(C)	LEAD PUMP (60 Hz.)	"ON"	ELEV. 519.50
(B)	LEAD PUMP (45 Hz.)	"ON"	ELEV. 518.50
(A)	PUMPS	"OFF"	ELEV. 516.00
STORMWATER LOW FLOW PUMP SCHEDULE			
(G)	LEAD PUMP	"ON"	ELEV. 516.00
(F)	PUMPS	"OFF"	ELEV. 514.50

PUMP INFORMATION				
# OF PUMPS	TYPE (BASIS OF DESIGN)	FLOW	TDH	MOTOR
3	KRT K 500-634/1858XNG-K 20" DIS. SUBMERSIBLE PUMPS	29,000 GPM	47.6 FEET	235 HP @ 900 RPM
2	KRT F 100-254/224XEG-S 4" DIS. SUBMERSIBLE PUMPS	673 GPM	61.3 FEET	30 HP @ 1,800 RPM

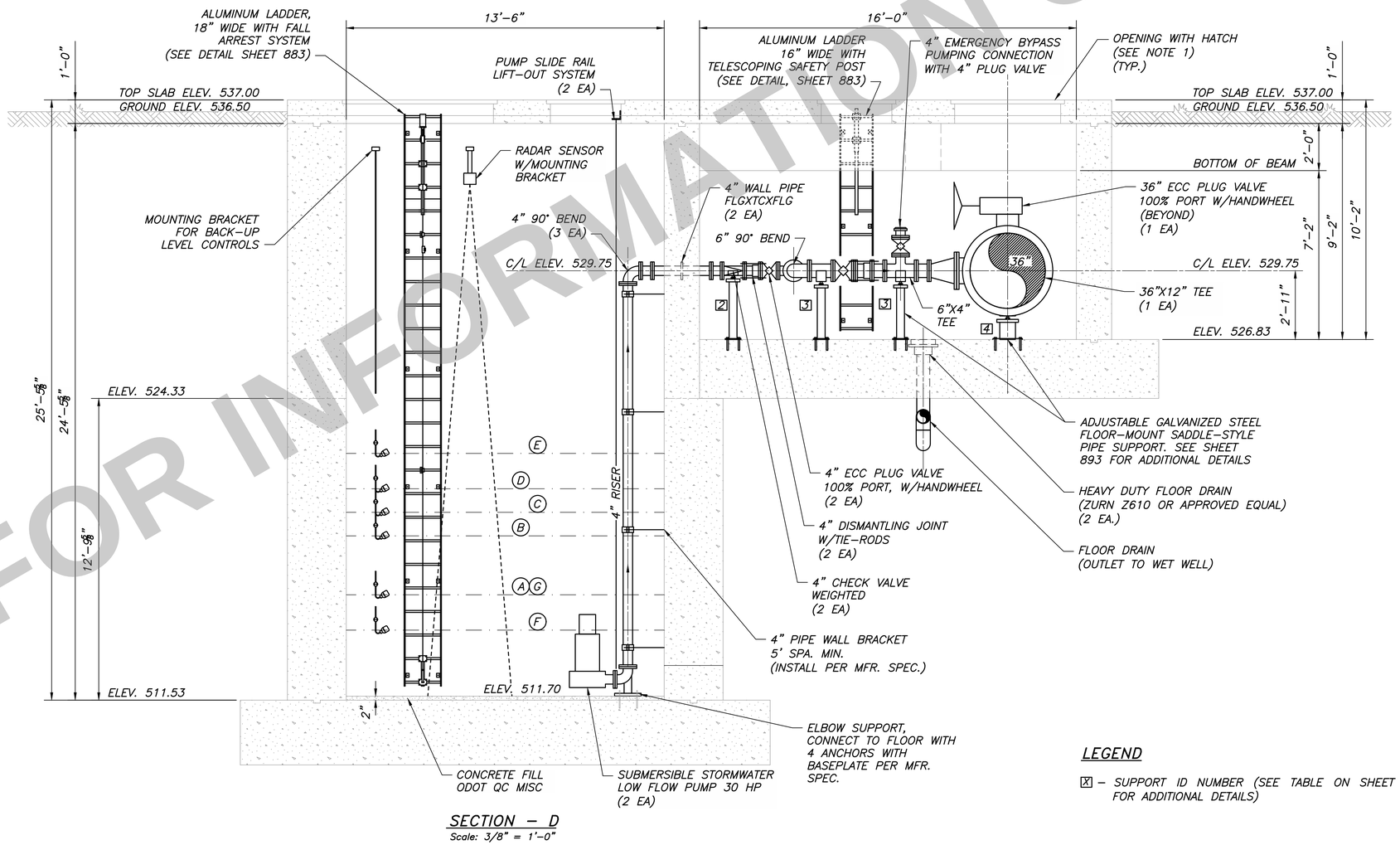


DETAIL – LOW FLOW DISCHARGE PIPING

Scale: 3/8" = 1'-0"

SHEET NOTES

1. SEE STORMWATER PUMP STATION STRUCTURAL DETAILS FOR ADDITIONAL INFORMATION.
2. ADJUSTABLE GALVANIZED STEEL FLOOR-MOUNT SADDLE-STYLE PIPE SUPPORT. SEE SHEET 893 FOR ADDITIONAL DETAILS.



SECTION – D

Scale: 3/8" = 1'-0"

LEGEND

[X] – SUPPORT ID NUMBER (SEE TABLE ON SHEET 893 FOR ADDITIONAL DETAILS)

FOR INFORMATION ONLY

Horiz. 3/8 inch = 1 foot

CALCULATED CDS
CHECKED RMA

STORMWATER PUMP STATION - PADDOCK ROAD INTERCHANGE
MECHANICAL DETAILS - SECTION D

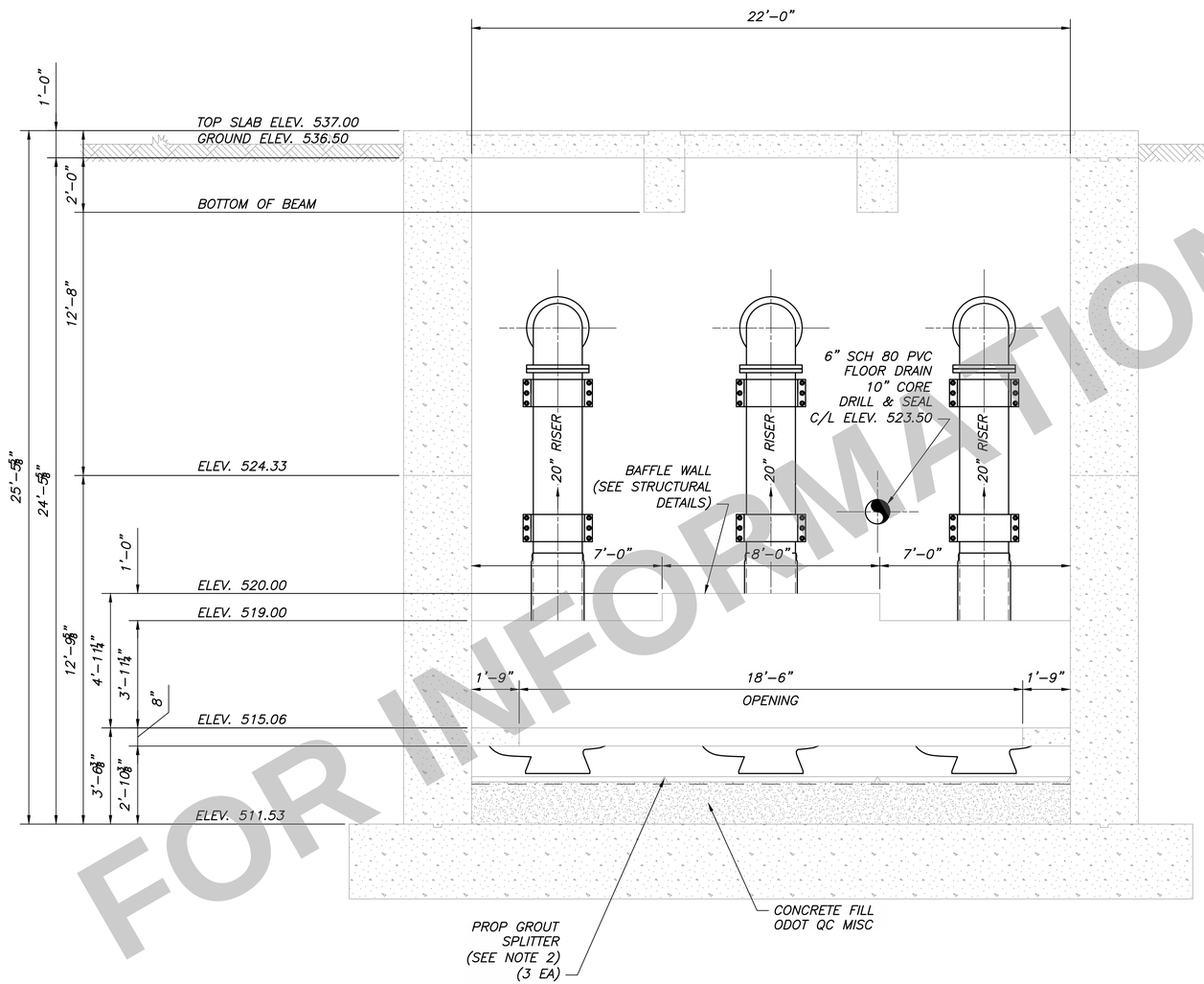
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SHEET NOTES

1. SEE STORMWATER PUMP STATION STRUCTURAL DETAILS FOR ADDITIONAL INFORMATION.
2. PROPOSED GROUT SPLITTERS SHALL BE SIZED PER PUMP MANUFACTURER'S RECOMMENDATIONS.



SECTION – E

Scale: 3/8" = 1'–0"

FOR INFORMATION ONLY

Horiz. 3/8 inch = 1 foot

CALCULATED CDS
CHECKED RMA

STORMWATER PUMP STATION - PADDOCK ROAD INTERCHANGE
MECHANICAL DETAILS - SECTION E

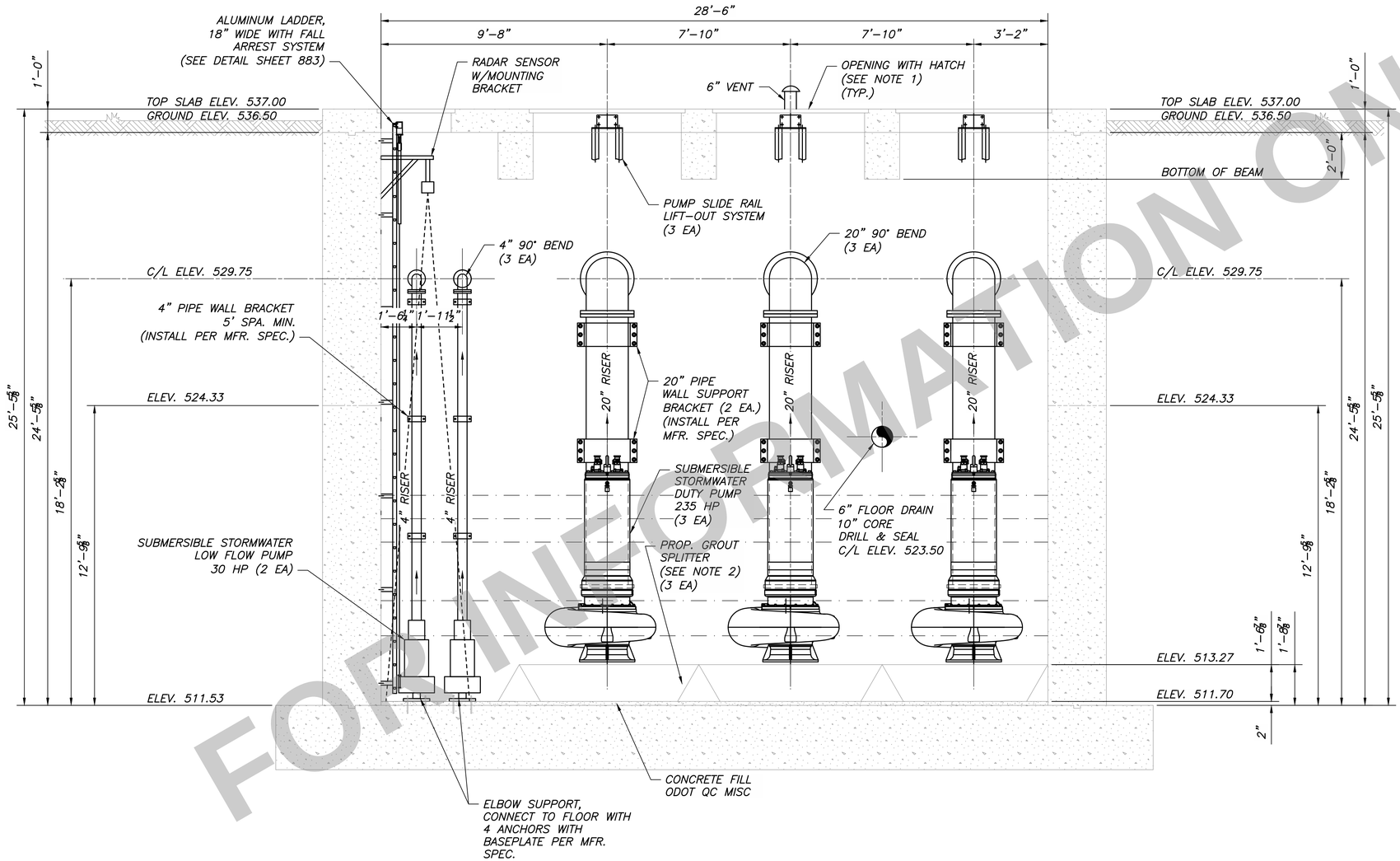
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SHEET NOTES

1. SEE STORMWATER PUMP STATION STRUCTURAL DETAILS FOR ADDITIONAL INFORMATION.
2. PROPOSED GROUT SPLITTERS SHALL BE SIZED PER PUMP MANUFACTURER'S RECOMMENDATIONS.



SECTION – F

Scale: 3/8" = 1'–0"

FOR INFORMATION ONLY

Horz: 3/8 inch = 1 foot

CALCULATED CDS
CHECKED RMA

STORMWATER PUMP STATION - PADDOCK ROAD INTERCHANGE
MECHANICAL DETAILS - SECTION F

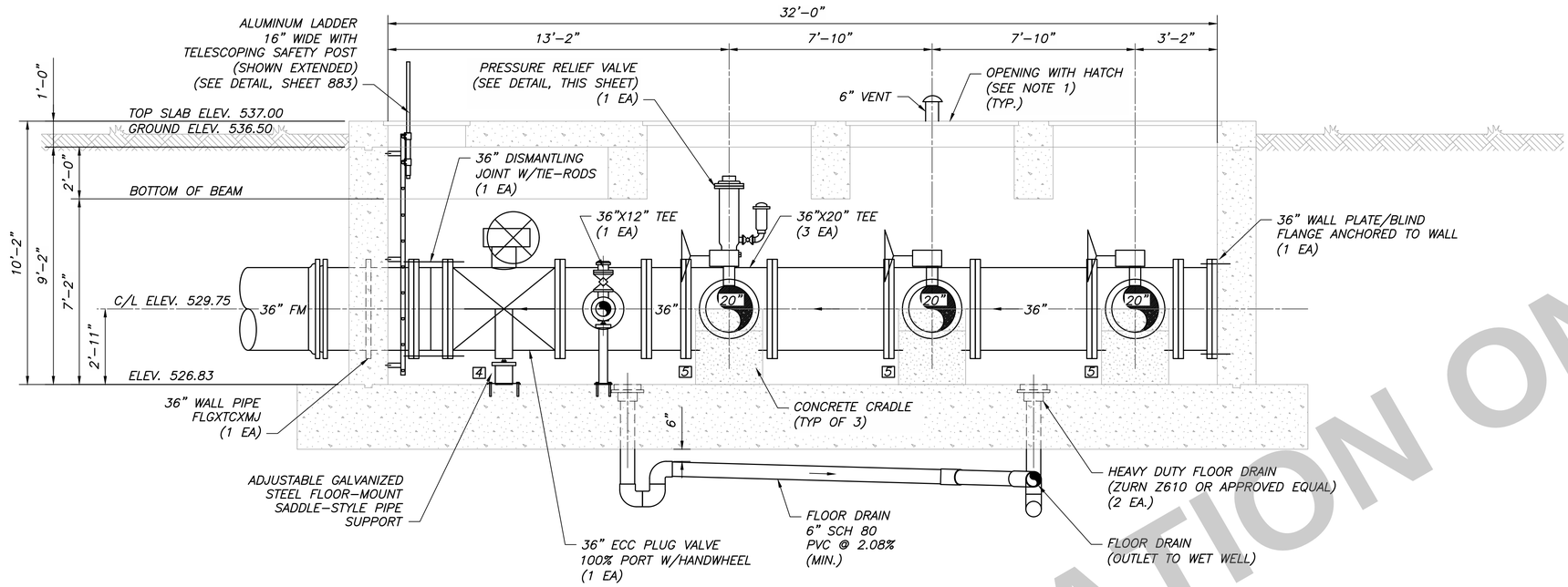
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SHEET NOTES

1. SEE STORMWATER PUMP STATION STRUCTURAL DETAILS FOR ADDITIONAL INFORMATION.
2. PIPE SUPPORTS AND HARDWARE SHALL BE GALVANIZED STEEL (MIN 36 KSI) AND CONFORM TO MANUFACTURER SPECIFICATIONS. PRIOR TO ORDERING, THE CONTRACTOR SHALL SUBMIT STEEL PIPE SUPPORT SHOP DRAWINGS TO THE ENGINEER. THE ENGINEER WILL DETERMINE WHETHER THE PROPOSED SUPPORT(S) CONFORM TO THE PLANS AND SPECIFICATIONS. SHOP DRAWINGS SHALL INCLUDE DIMENSIONS OF THE PROPOSED PIPE SUPPORT AND ITS FLOOR–MOUNTED CONNECTION (E.G. BASE PLATE, ANCHORS, POST–INSTALLED ADHESIVE). SEE TABLE ON THIS SHEET FOR MINIMUM SERVICE LOADS TO BE SUPPORTED AT EACH SUPPORT LOCATION.
3. THE BASE SLAB IS TO BE SLOPED TO DRAIN TO FLOOR DRAINS. TO SUPPORT LEVELING OF THE FLOOR–MOUNTED PIPE SUPPORTS, USE A HIGH–STRENGTH, NON–SHRINK, NON–METALLIC GROUT APPROVE BY THE ENGINEER. MAXIMUM THICKNESS OF LEVELING GROUT SHALL BE NO MORE THAN 1".
4. LOCATE EXISTING REINFORCING STEEL BARS IN THE AREA OF THE DOWEL HOLE WITH THE AID OF A PACHOMETER. IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS THE PROPOSED DOWEL HOLE, THEN MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR.



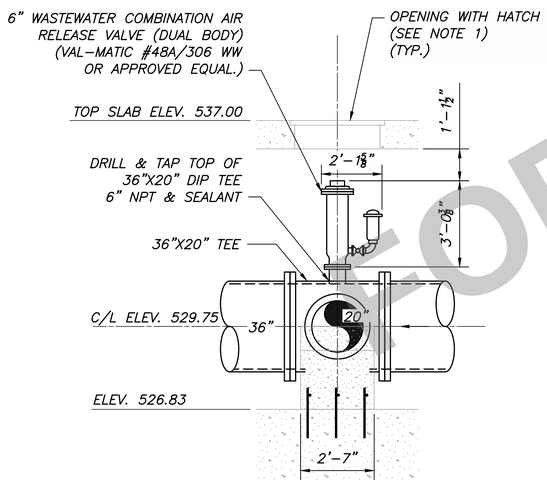
LEGEND

[X] – SUPPORT ID NUMBER (SEE TABLE THIS SHEET)

SECTION – G

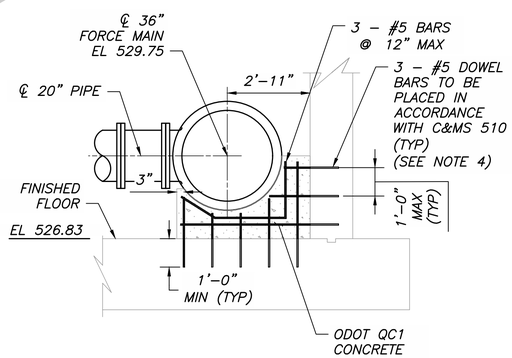
Scale: 3/8" = 1'–0"

STEEL PIPE SUPPORTS					
SUPPORT I.D. NUMBER	QNTY	PIPE I.D. (IN)	AXIAL LOAD (EACH) (LBS)	LATERAL LOAD (EACH) (LBS)	SUPPORT TYPE (SEE DETAILS BELOW)
1	6	20	5,000	–	TYPE 1
2	2	4	250	450	TYPE 1
3	2	6	500	500	TYPE 1
4	1	36	3,500	–	TYPE 1
5	3	36	28,500	28,500	TYPE 2



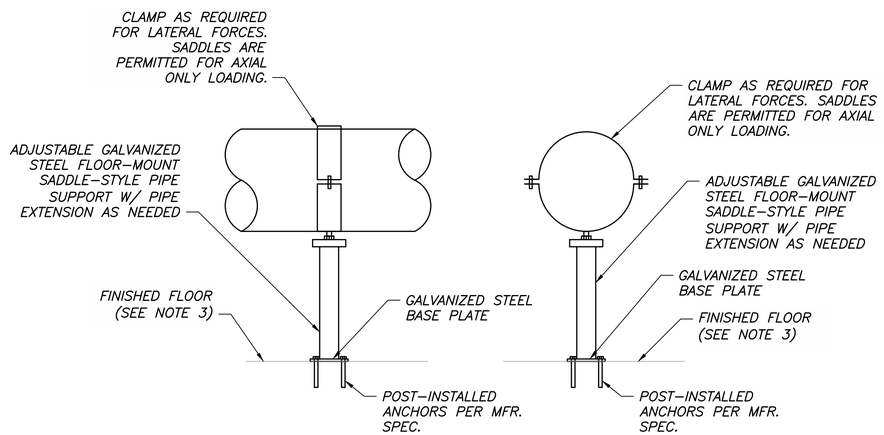
DETAIL – PRESSURE RELIEF VALVE

Scale: 3/8" = 1'–0"



DETAIL – CONCRETE CRADLE

(TYPE 2)



DETAIL – STEEL PIPE SUPPORT

(TYPE 1)

FOR INFORMATION ONLY

Horz: 3/8 inch = 1 foot

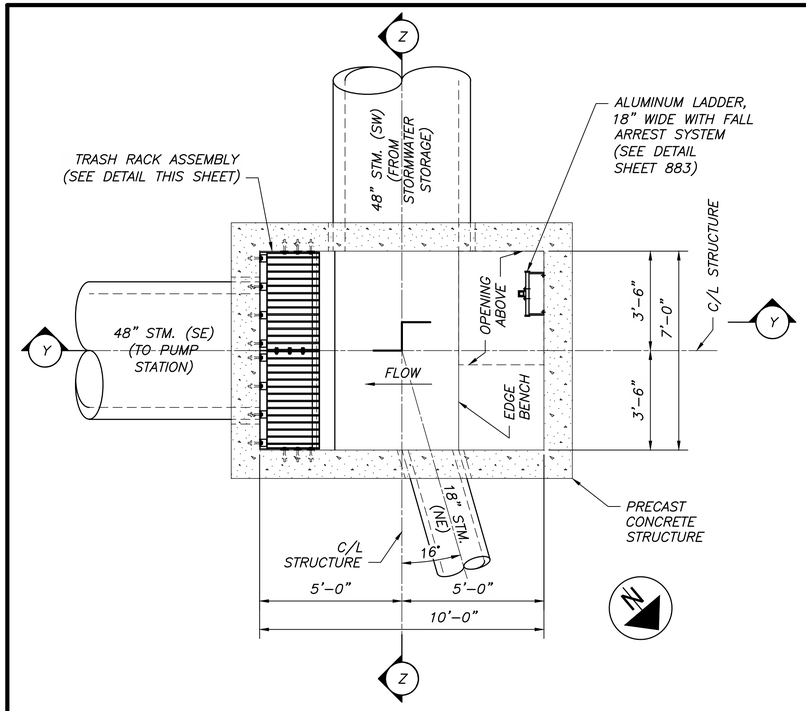
CALCULATED CDS CHECKED RMA

STORMWATER PUMP STATION - PADDOCK ROAD INTERCHANGE
MECHANICAL DETAILS - SECTION G

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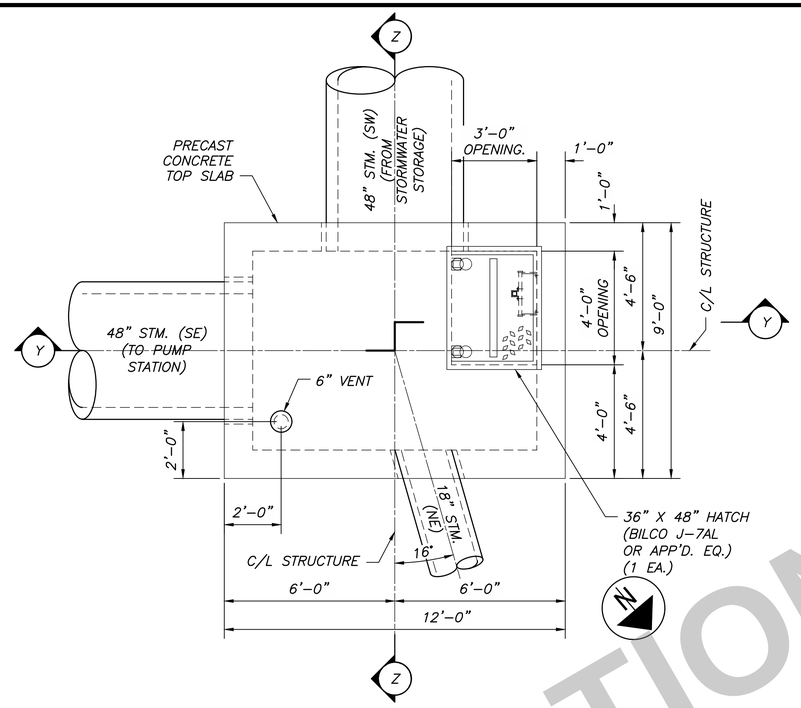
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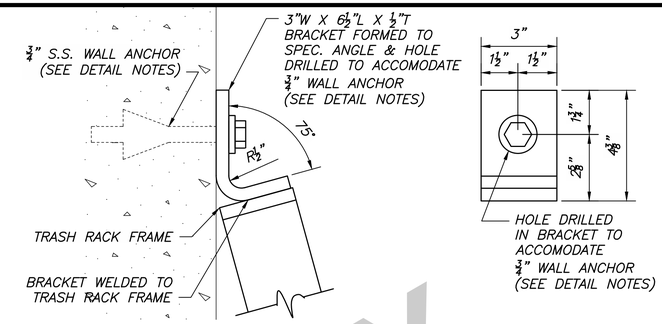
SECTION – X

Scale: 3/8" = 1'-0"



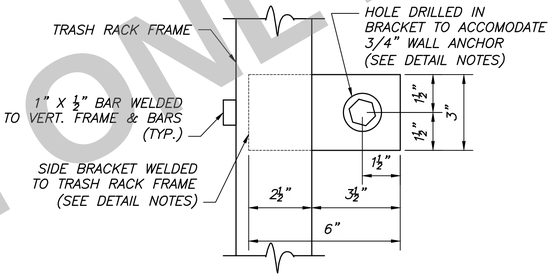
PLAN VIEW – TOP SLAB

Scale: 3/8" = 1'-0"



DETAIL A – TRASH RACK TOP BRACKET

Not To Scale



DETAIL B – TRASH RACK SIDE BRACKET

Not To Scale

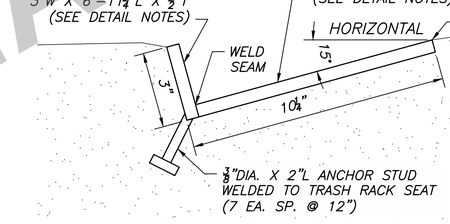
TRASH RACK DETAIL NOTES

1. TRASH RACK FRAME, BARS, BRACKETS, AND SEAT SHALL BE GALVANIZED HOT–DIPPED PER ASTM A123 AND SECTION 711.02 (OR 304 STAINLESS STEEL) ALL WELDED CONSTRUCTION BEING ABLE TO WITHSTAND 300 PSF LOADING TOWARDS THE OUTLET PIPE. GRIND ALL EDGES AND PROJECTIONS SMOOTH BEFORE GALVANIZING.

2. REMOVABLE TWO PIECE TRASH RACK SHALL BE CONSTRUCTED AS TWO FRAMES BOLTED TOGETHER AND IN A MANNER WHICH ALLOWS UNRESTRICTED REMOVAL THROUGH THE 36" X 48" HATCH. THE TWO PIECE TRASH RACK SHALL BE BOLTED TOGETHER USING ¾" S.S. HARDWARE.

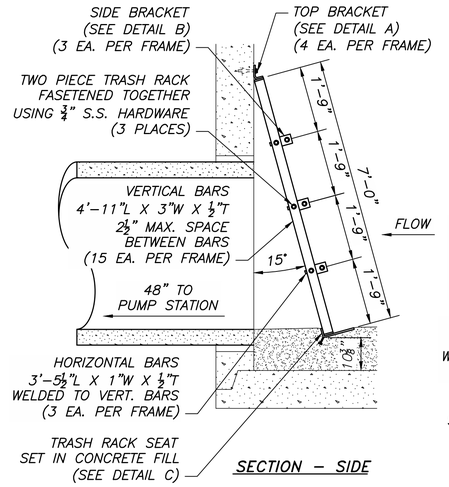
3. TRASH RACK SHALL BE FASTENED TO WALL USING ¾" S.S. HARDWARE.

4. TRASH RACK CONCRETE STRUCTURE SHALL ACCOMMODATE HL93 LIVE LOAD. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO ORDERING MATERIALS.

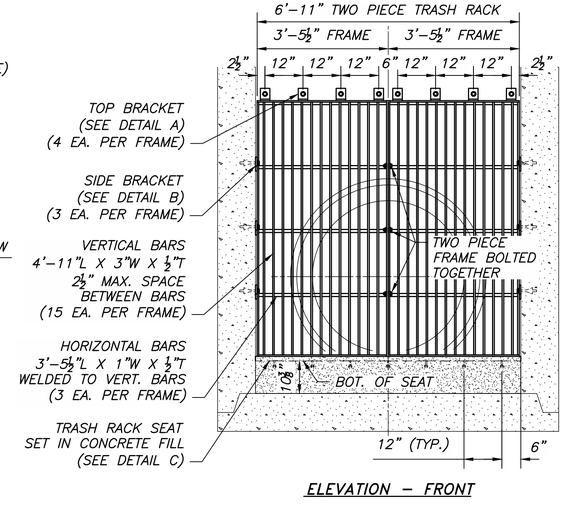


DETAIL C – TRASH RACK SEAT

Not To Scale



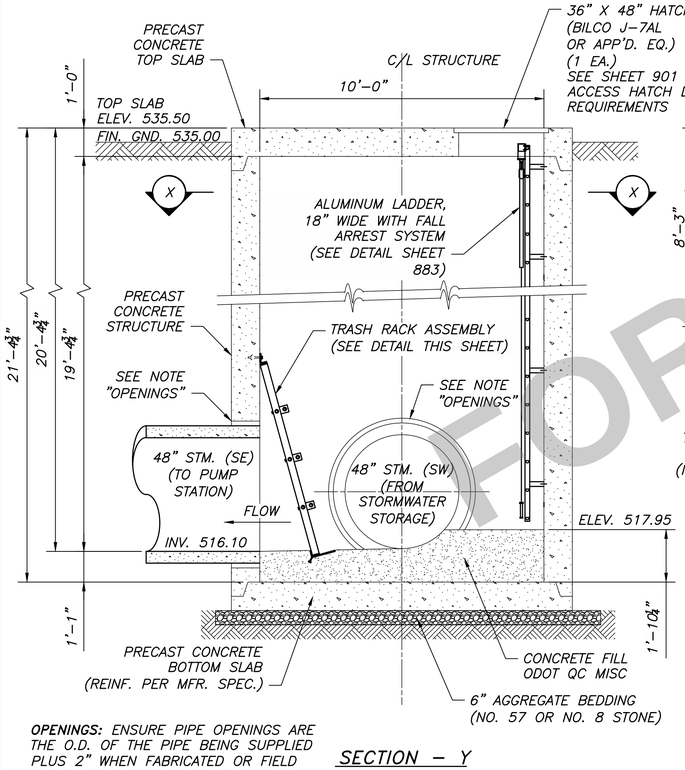
SECTION – SIDE



ELEVATION – FRONT

DETAIL – TRASH RACK ASSEMBLY

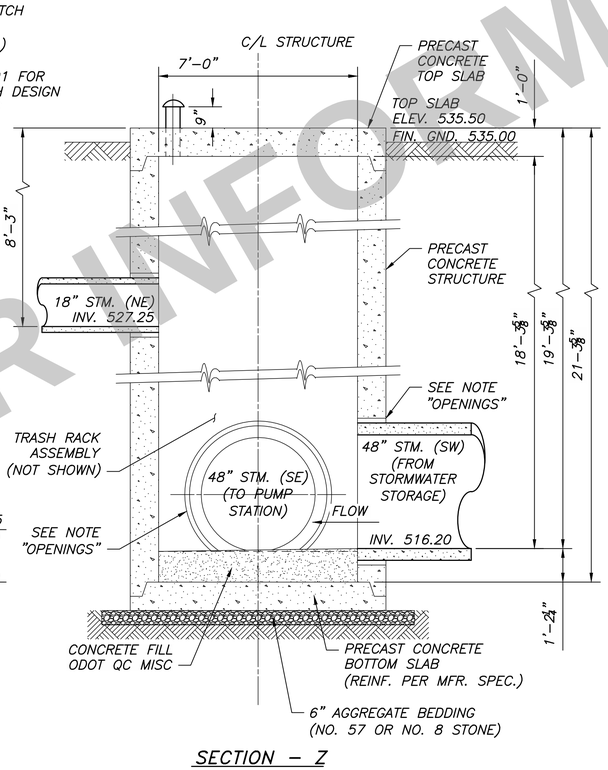
Scale: 3/8" = 1'-0"



OPENINGS: ENSURE PIPE OPENINGS ARE THE O.D. OF THE PIPE BEING SUPPLIED PLUS 2" WHEN FABRICATED OR FIELD CUT. FILL ANY VOIDS PER C&MS 611.

SECTION – Y

Scale: 3/8" = 1'-0"



SECTION – Z

Scale: 3/8" = 1'-0"

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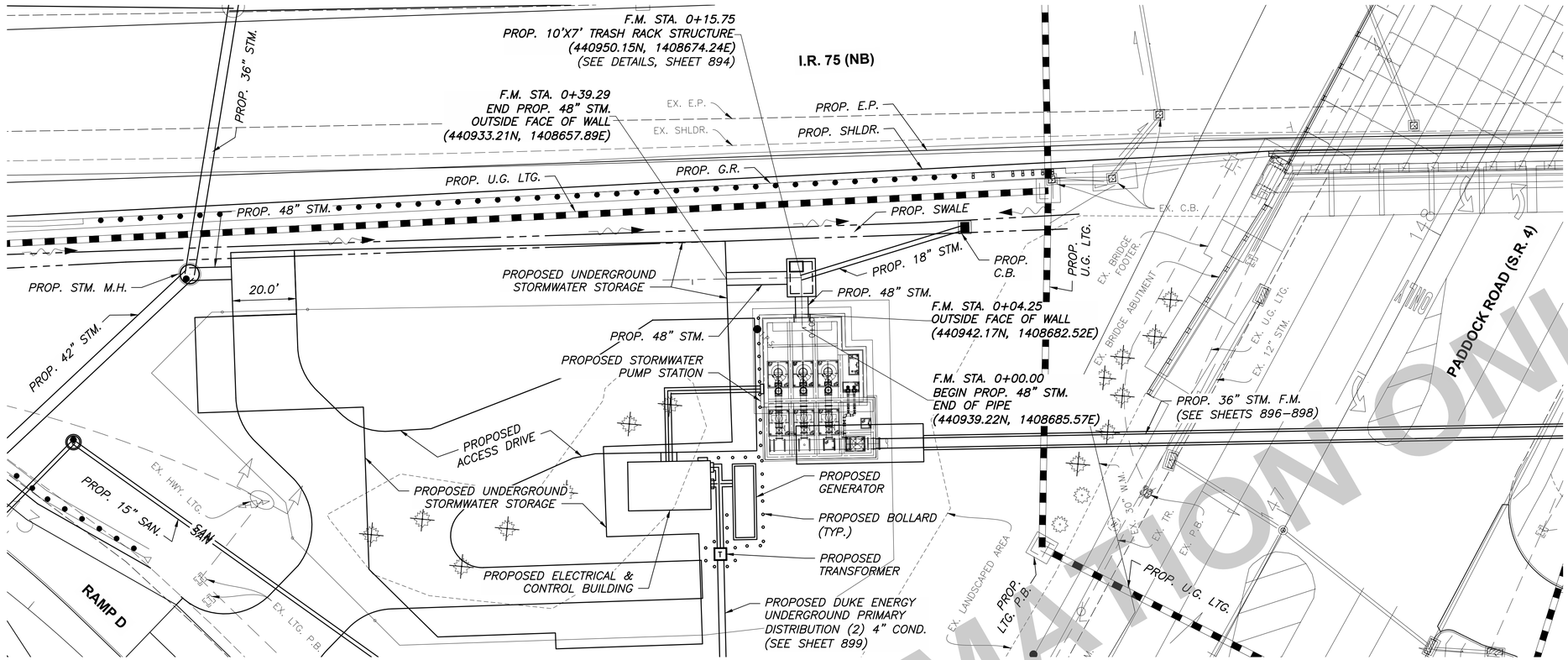
Horz: 3/8 inch = 1 foot

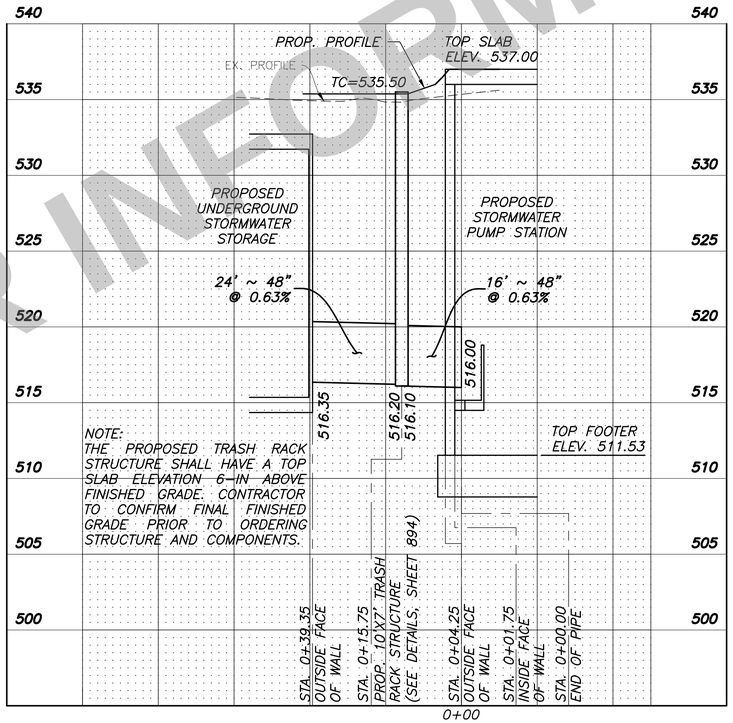
CALCULATED CDS
CHECKED RMA

STORMWATER PUMP STATION - PADDOCK ROAD INTERCHANGE
TRASH RACK STRUCTURE DETAILS

HAM-75-7.85

894
2017





FOR INFORMATION ONLY

Horiz: 1 inch = 20 feet

CALCULATED CDS
CHECKED RMA

STORMWATER PUMP STATION - PADDOCK ROAD INTERCHANGE
48-IN STORM SEWER PLAN & PROFILE

HAM-75-7.85

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2017

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SHEET NOTES

1. DRILLING OPERATIONS FOR THE 36" STM. F.M. SHALL BE COMPLETED AND CAPPED BEFORE THE STORMWATER PUMP STATION EXCAVATION & SHORING OPERATIONS BEGIN. THE 36" STM. F.M. SHALL REMAIN CAPPED UNTIL THE CONNECTION WITH THE STORMWATER PUMP STATION IS MADE.
2. PROP. GRADING AT PROP. PRESSURE RELIEF STRUCTURE TO BE BROUGHT TO WITHIN 3" OF PROP. T.C. ELEV. MAINTAIN POSITIVE DRAINAGE.

I.R. 75 (NB)
PROP. G.R.
PROP. LTG. P.B.
PROP. SWALE
PROP. 18" STM.
PROP. C.B.
O.I.P.T.
PROP. 42" STM.
PROPOSED STORMWATER PUMP STATION
F.M. STA. 0+00.00
BEGIN PROP. 6" STM. F.M.
(440929.83N, 1408727.69E)
PROPOSED BOLLARD (TYP.)
PROPOSED GENERATOR
JACKING PIT (40'X12') SEE SHEET NOTE 1.
PROP. U.G. LTG.
EX. 30" W.M.
EX. BRIDGE FOOTER
EX. BRIDGE ABUTMENT
EX. C.B.
EX. U.G. LTG.
EX. 12" STM.
PADDOCK ROAD (S.R. 4)
PROP. 36" STM. F.M.
PROP. 54" STEEL CASING PIPE (233 L.F.)
RECIEVING PIT (14'X14') SEE SHEET 903 FOR SHORING DETAILS
EX. CONC. S.W.
EX. 12" STM.
EX. BRIDGE ABUTMENT
EX. BRIDGE FOOTER
EX. LANDSCAPED AREA
EX. 24" W.M.
TC=555.42
GND=555.09
(SEE NOTE 2)
EX. 552.16
EX. 554.32
EX. 554.63
EX. 555.29
EX. SAN. M.H.
EX. SHLDR.
F.M. STA. 3+10.00
PROP. PRESSURE RELIEF VALVE & STRUCTURE
(441151.49N, 1408944.14E)
(SEE DETAIL, SHEET 898)
EX. LANDSCAPED AREA
PROP. 36" STM. F.M.
EX. U.G. LTG.
EX. 12" SAN. (EXPOSE AND VERIFY ELEVATION CROWN)
PROP. CURB.
PROP. E.P.
PROP. U.G. LTG.
F.M. STA. 3+40.00
HORIZ. DEFL. LT.
USE 22.5° HORIZ. BEND
(441168.61N, 1408968.78E)
F.M. STA. 3+00.00
HORIZ. DEFL. RT.
USE 11.25° HORIZ. BEND
(441145.78N, 1408935.93E)
RAMP A
N 33° 40' 50" E
MATCHLINE STA 5+00, SEE SHEET 897
PROP. LTG. P.B.
EX. LANDSCAPED AREA
EX. CONC. S.W.
EX. E.P.
EX. 30" W.M.
EX. TR.
EX. P.B.
PROP. U.G. LTG.
EX. U.G. LTG.

FOR INFORMATION ONLY

** PROVIDE JOINT RESTRAINTS ONE JOINT BEYOND THE SPECIFIED LENGTH.
PADDOCK ROAD
RECIEVING PIT
PROP. GRADING TO BE BROUGHT TO WITHIN 3" OF PROP TC ELEV.
EX. LT.
PROP. 12" STM.
PROP. LT.
EX. PROFILE
EX. 30" W.M.
EX. SIGN FOUNDATION
EX. 24" W.M.
JACKING PIT
TOP SLAB ELEV. 537.00
PROP. 54" STEEL CASING PIPE (233 L.F.)
C/L PROP 36" STM. F.M.
CAUTION: EX. SIGN FOUNDATION
PROP. 6" STM. F.M.
PROPOSED STORMWATER PUMP STATION
0.00%
5.00%
22.50%
5.20%
4.47%
EX. 12" SAN. (EXPOSE AND VERIFY CROWN ELEVATION)
+67
+73
+83
+97
+03
+33
+47
0+00.00 BEGIN 36" STM. F.M. ℄ 529.75
0+10.00 GRADE BREAK ℄ 529.75
2+70.00 GRADE BREAK USE 11.25° VERT. BEND ℄ 542.75
2+90.00 GRADE BREAK USE 11.25° VERT. BEND ℄ 547.25
3+00.00 HORIZ. DEFL. RT. USE 11.25° HORIZ. BEND ℄ 547.25
3+10.00 PRESSURE RELIEF VALVE & STRUCTURE TC=554.45 (SEE DETAILJ ON SHEET 881) ℄ 547.25
3+40.00 HORIZ. DEFL. RT. USE 22.5° HORIZ. BEND ℄ 547.25
3+65.00 GRADE BREAK USE JOINT DEFL. ℄ 547.25
4+00.00 GRADE BREAK USE JOINT DEFL. ℄ 545.50
565 560 555 550 545 540 535 530 525
0+00 1+00 2+00 3+00 4+00 5+00

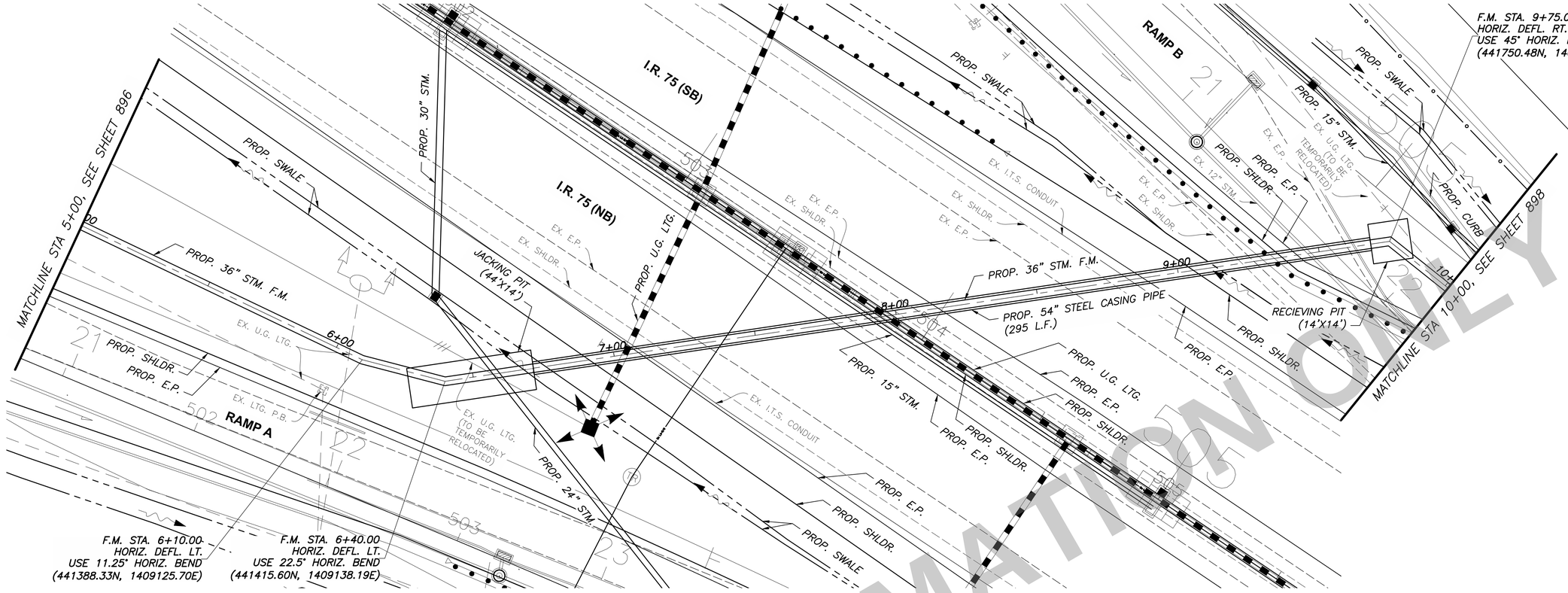
CALCULATED CDS CHECKED RMA

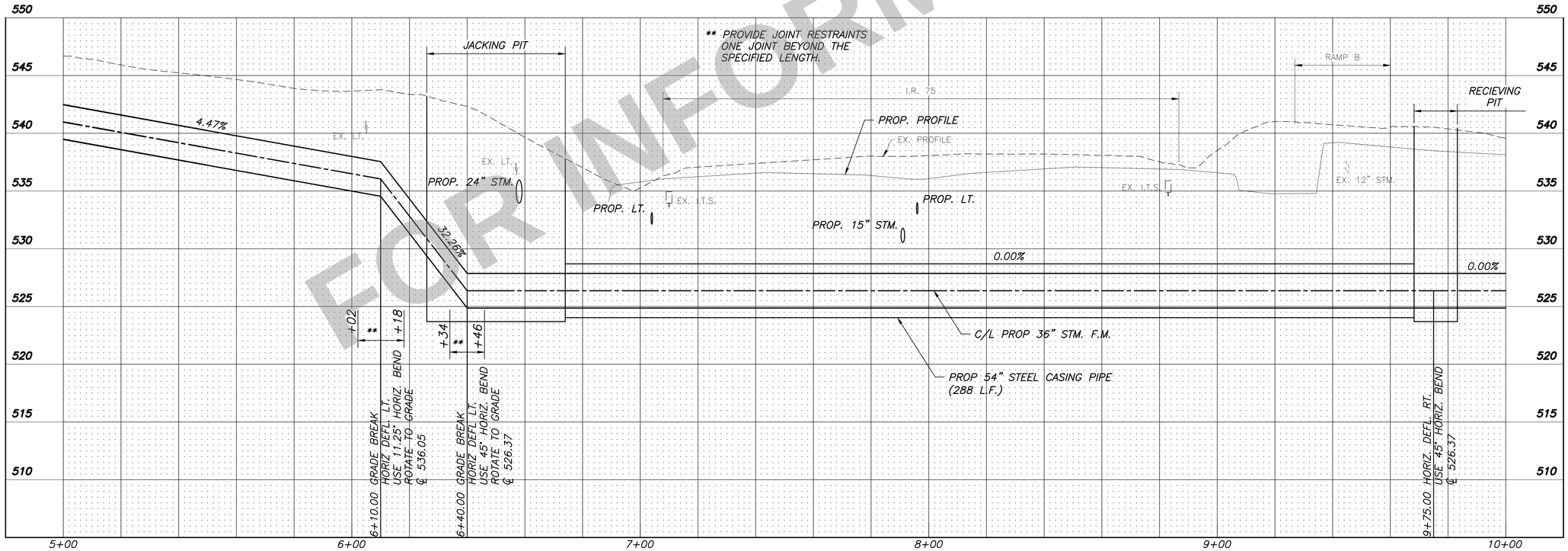
STORMWATER PUMP STATION - PADDOCK ROAD INTERCHANGE
36-IN STORMWATER FORCE MAIN PLAN & PROFILE

HAM-75-7.85

896
2017

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CALCULATED CDS
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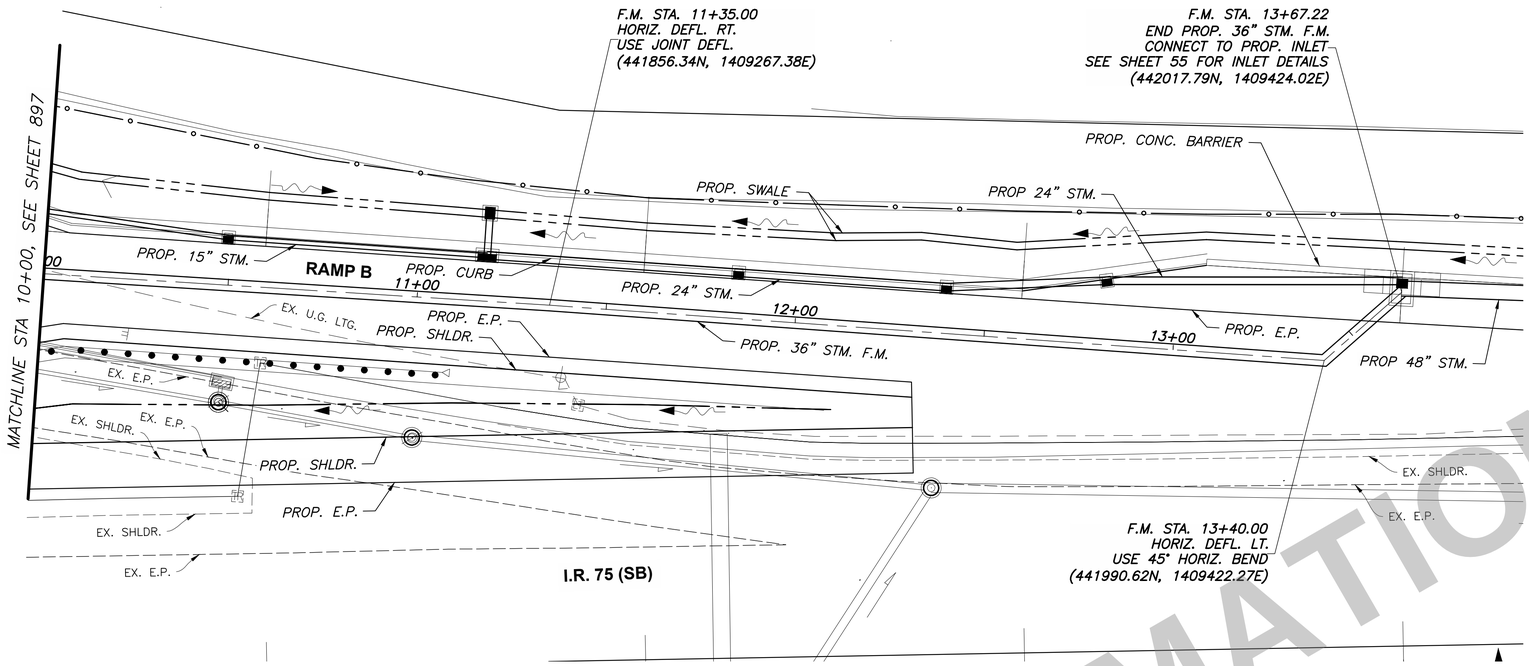
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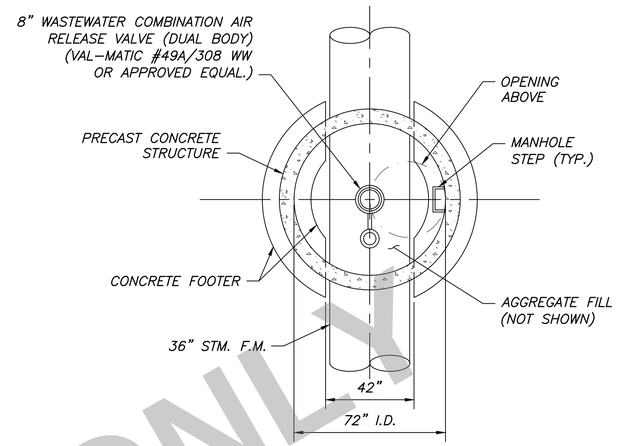
STORMWATER PUMP STATION - PADDOCK ROAD INTERCHANGE
36-IN STORMWATER FORCE MAIN PLAN & PROFILE

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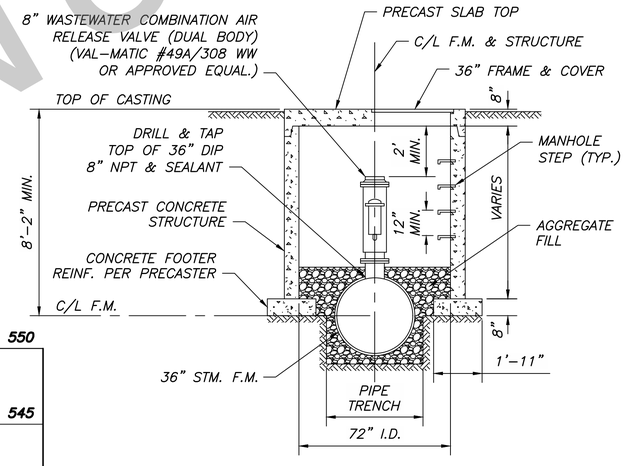
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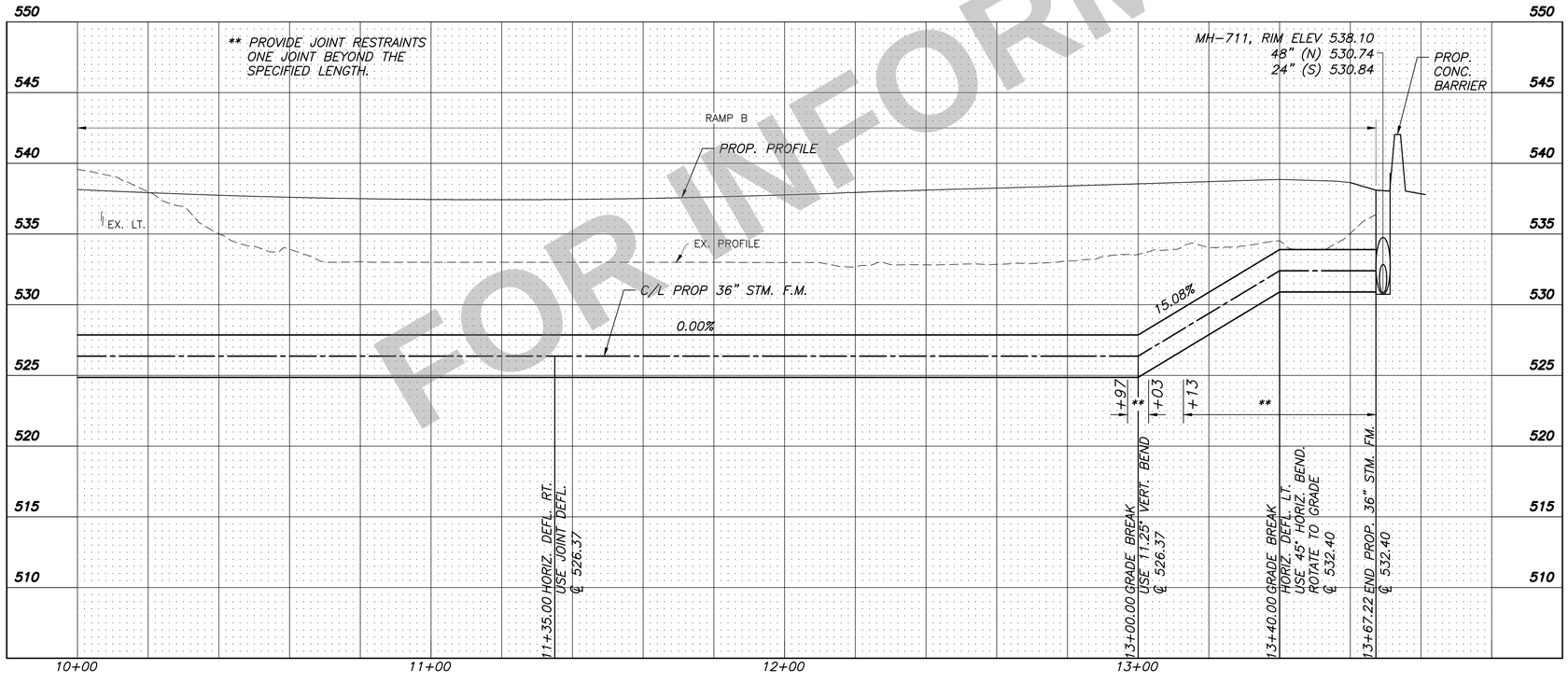


PLAN VIEW



SECTION

DETAIL – PRESSURE RELIEF VALVE & STRUCTURE
(36-IN FORCE MAIN)
Scale: 1" = 3'-0"



FOR INFORMATION ONLY

STORMWATER PUMP STATION - PADDOCK ROAD INTERCHANGE
36-IN STORMWATER FORCE MAIN PLAN & PROFILE

Horiz: 1 inch = 20 feet

CALCULATED CDS
CHECKED RMA

HAM-75-7.85

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2017

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SEE SHEETS 921–926 FOR ELECTICAL NOTES, DETAILS, AND SPECIFICATIONS REGARDING THE CONSTRUCTION AND INSTALLATION METHODS FOR THE PROPOSED DUKE ENERGY PRIMARY DISTRIBUTION CONDUITS AND CONDUCTORS.

PROPOSED DUKE ENERGY UNDERGROUND PRIMARY DISTRIBUTION (2) 4" COND. (SEE NOTES & SPEC. SHEET 914)

1+00

2+00

3+00

4+00

0+00

UGE STA. 0+99.50
HORIZ. DEFL. RT. 45°
(440550.90N, 1408744.36E)

HORIZONTAL DIRECTIONAL DRILLING

UGE STA. 0+00.00
PROPOSED DUKE ENERGY UTILITY POLE BY DUKE ENERGY, WITH CONDUIT RISER
(440480.40N, 1408814.53E)

EX. CONC. S.W.

EX. E.P.

EX. 12" STM.

PADDOCK ROAD (S.R. 4)

142

143

144

145

146

EX. 36" COMB.

PROP. SHLDR.

PROP. E.P.

RAMP D

EX. SIGN

EX. U.G. LTG.

PROP. 15" SAN.

PROPOSED UNDERGROUND STORMWATER STORAGE

PROP. U.G. STORMWATER STORAGE

PROP. ELEC. CONT. BLDG.

PROP. TRASH RACK STRUCTURE

PROPOSED GENERATOR

PROPOSED STORMWATER PUMP STATION

PROPOSED BOLLARD (TYP.)

PROP. 36" STM. F.M. (SEE SHEETS 896–899)

F.M. STA. 4+30.52
PROPOSED DUKE ENERGY PAD MOUNTED UTILITY TRANSFORMER
(440870.72N, 1408717.71E)

F.M. STA. 3+94.10
HORIZ. DEFL. LT. 45°
(440845.44N, 1408743.88E)

PROP. SAN. M.H.

PROP. 15" SAN.

EX. LANDSCAPED AREA

EX. CONC. S.W.

EX. E.P.

EX. 30" W.M.

PROP. U.G. LTG.

EX. P.B.

EX. LTG.

EX. 30" W.M.

FOR INFORMATION ONLY

570 565 560 555 550 545 540 535 530

SEE SHEETS 921–926 FOR ELECTICAL NOTES, DETAILS, AND SPECIFICATIONS REGARDING THE CONSTRUCTION AND INSTALLATION METHODS FOR THE PROPOSED DUKE ENERGY PRIMARY DISTRIBUTION CONDUITS AND CONDUCTORS.

PROPOSED DUKE ENERGY UTILITY POLE BY DUKE ENERGY, WITH CONDUIT RISER

EX. PROFILE

RAMP D

EX. LT.

EX. LT.

PROPOSED DUKE ENERGY PAD MOUNTED UTILITY TRANSFORMER

PROP. PROFILE

EX. PROFILE

℄ PROPOSED DUKE ENERGY UNDERGROUND PRIMARY DISTRIBUTION (2) 4" COND.

EX. 36" COMB.

HORIZONTAL DIRECTIONAL DRILLING

PROP. 15" SAN.

0+00.00 BEGIN UNDERGROUND PRIMARY

0+39.88 GRADE BREAK ℄ 555.50

0+99.50 GRADE BREAK HORIZ. DEFL. RT. 45° ℄ 556.09

2+00.00 GRADE BREAK ℄ 546.10

3+20.00 GRADE BREAK ℄ 543.25

3+94.10 HORIZ. DEFL. LT. 45° ℄ 536.72

4+30.52 END UNDERGROUND PRIMARY

0+00 1+00 2+00 3+00 4+00

N

Horiz: 1 inch = 20 feet

CALCULATED CDS

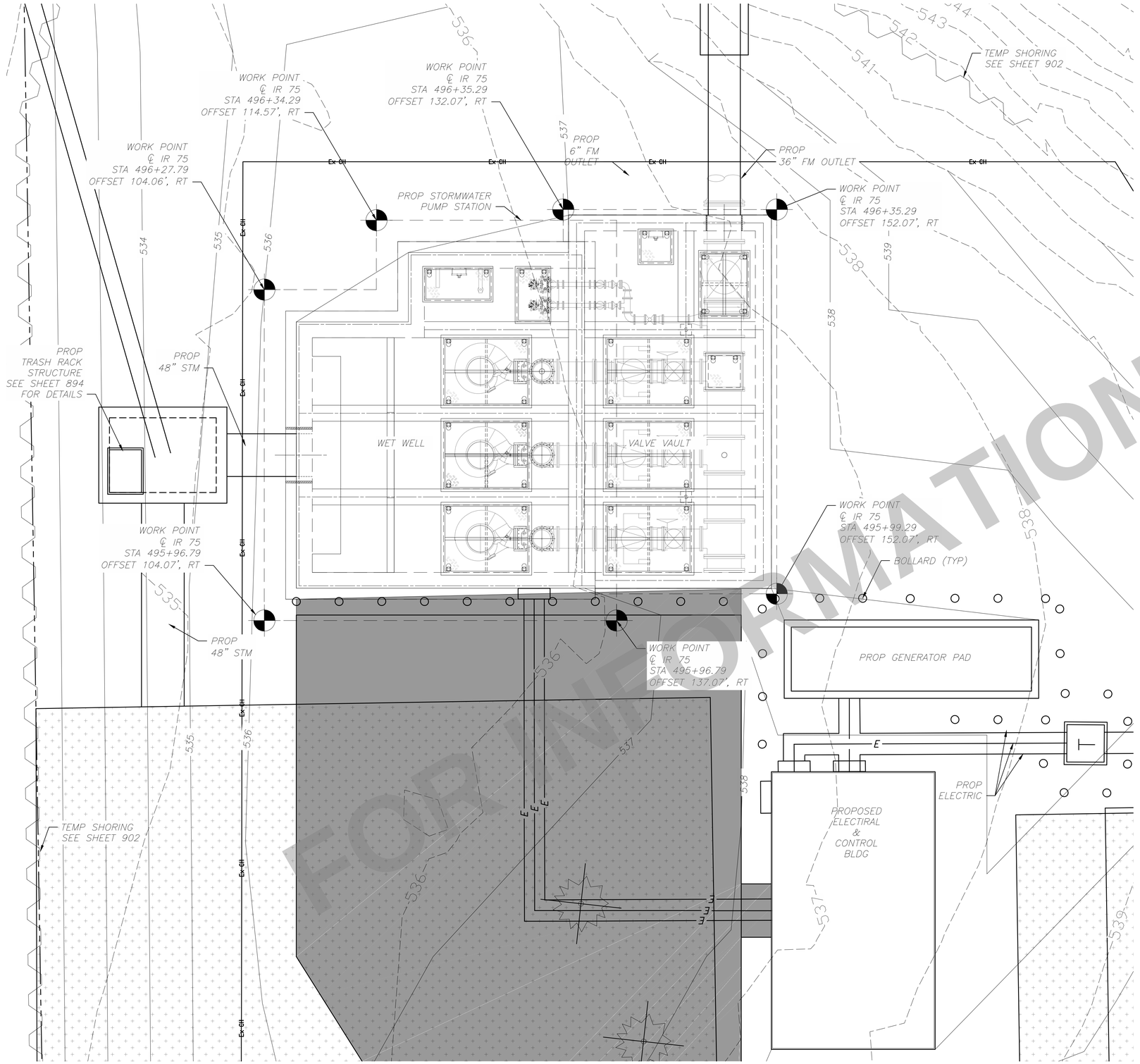
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STORMWATER PUMP STATION - PADDOCK ROAD INTERCHANGE
UNDERGROUND PRIMARY POWER DISTRIBUTION PLAN & PROFILE

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SITE PLAN

ESTIMATED QUANTITIES (FOR INFORMATION ONLY)			
ITEM	DESCRIPTION	UNIT	QTY
503	UNCLASSIFIED EXCAVATION	CY	1,600
509	EPOXY COATED REINFORCING STEEL	LB	131,158
511	CLASS QC2 CONCRETE WITH QC/QA	CY	516
512	SPECIAL – WATERPROOFING, DAMPPROOFING	SY	477
511	SPECIAL – WATERPROOFING, HYDROPHILLIC WATERSTOP	FT	58
511	SPECIAL – WATERPROOFING, PVC WATERSTOP	FT	485
511	SEALING OF CONCRETE SURFACES (NON–EPOXY)	SY	142
SPECIAL	ACCESS HATCH, 3'–0" X 3'–0" (H–20)	EA	2
SPECIAL	ACCESS HATCH, 3'–0" X 4'–6" (H–20)	EA	1
SPECIAL	ACCESS HATCH, 3'–0" X 5'–0" (H–20)	EA	1
SPECIAL	ACCESS HATCH, 3'–0" X 6'–3" (H–20)	EA	1
SPECIAL	ACCESS HATCH, 6'–4" X 8'–0" (300 PSF)	EA	6

FOR INFORMATION ONLY

PREPARED BY:
EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

PUMP STATION STRUCTURAL

ENGINEERS SEAL:

STATE OF OHIO
MATTHEW J ROTAR
E-83975
REGISTERED
PROFESSIONAL ENGINEER

SIGNED:
DATE:

LEGEND

– FLEXIBLE PAVEMENT

– PROP UNDERGROUND STORMWATER STORAGE

NOTES

1. SEE SHEET 885 FOR ADDITIONAL SITE LAYOUT DETAILS.

0 10 20 40
Horiz: 1 inch = 20 feet

CALCULATED MJR
CHECKED RMW

SITE PLAN

HAM-75-7.85

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SUBSTRUCTURE GENERAL NOTES

PAYMENT:
ALL LABOR, MATERIALS (UNCLASSIFIED EXCAVATION, CONCRETE, REINFORCING STEEL, ACCESS HATCHES, WATERPROOFING AND CONCRETE SEALER), EQUIPMENT, TOOLS AND INCIDENTALS TO CONSTRUCT THE PROPOSED STORMWATER PUMP STATION SHALL BE PAID UNDER THE LUMP SUM CONTRACT BID PRICE FOR 'STORMWATER PUMP STATION, COMPLETE, AS PER PLAN.

GENERAL:
THE NOTES AND DETAILS INCLUDED APPLY TO THE PORTIONS OF THE CAST-IN-PLACE REINFORCED CONCRETE PUMP STATION BELOW GRADE AND ALL OTHER MISCELLANEOUS STRUCTURAL ELEMENTS REQUIRED FOR ITS FUNCTIONALITY AS DETAILED IN THE PLANS AND IN THE FOLLOWING NOTES.

THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER CONSTRUCTION IS FULLY COMPLETE. THE CONTRACTOR IS RESPONSIBLE FOR THE DETERMINATION OF THE CONSTRUCTION/ERECTION SEQUENCE AND SHALL ENSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENTS CONTAINED WITHIN THIS PLAN SET AND NOTES. SEE FOLLOWING "COFFERDAMS AND EXCAVATION BRACING" NOTE FOR ADDITIONAL DETAILS ON TEMPORARY SHEETING/SHORING AT THE PROJECT SITE.

DESIGN SPECIFICATIONS:
THE PUMP STATION STRUCTURE CONFORMS TO THE AMERICAN CONCRETE INSTITUTE'S (ACI) 2014 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318-14) AND THE 2006 CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES (ACI 350-06).

DESIGN CRITERIA:

1) LOADING
HORIZONTAL SLABS AND SUPPORT BEAMS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION EXCEPT AS MODIFIED HEREIN: HL-93 DESIGN TRUCK AND TANDEM; LIVE LOADING EXCLUDES DESIGN LANE LOAD.

THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF ACCESS HATCH SUPPORTS, HANDRAILS, ACCESS LADDERS AND SUPPORT FRAMEWORK. CONTRACTOR SHALL DESIGN THE LADDERS TO ACCOMMODATE THE WORST CASE OF A 100 PSF LIVE LOAD AND A CONCENTRATED LOAD OF 400 POUNDS PLACED SUCH THAT IT PRODUCES THE MAXIMUM STRESS, PLUS ALL ANTICIPATED DEAD LOADS. PLAN DIMENSIONS AND DETAILS SHOWN ON SHEET 883 AND ILLUSTRATED THROUGHOUT THE PLANS SHALL BE USED AS A BASELINE FOR THE DESIGN/LAYOUT, HOWEVER IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE THE DESIGN/DETAILS MEET THE REQUIRED LOADING AND INSTALLATION WILL NOT COMPROMISE THE STRUCTURAL INTEGRITY OF THE CONCRETE STRUCTURE. CONTRACTOR SHALL ENSURE THE LADDER MEETS ALL CODE SAFETY AND DESIGN REQUIREMENTS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION OF THE ACCESS HATCHES, ACCESS HATCH SUPPORTS, HANDRAILS, ACCESS LADDERS AND SUPPORT FRAMEWORK.

ACCESS HATCHES AS FOLLOWS:
ALL ACCESS HATCHES TO BE DESIGNED FOR H-20 (LIVE LOAD) EXCEPT AS NOTED BELOW:

8'-0" X 6'-4" OPENINGS: 300PSF (LIVE LOAD)

2) FLOOD ELEVATION
PROPOSED BELOW GRADE PUMP STATION STRUCTURE HAS BEEN DESIGNED TO RESIST BUOYANCY FORCES BASED ON RECORDED GROUNDWATER ELEVATIONS OBSERVED IN HISTORIC BORINGS. A DESIGN GROUNDWATER ELEVATION OF 521.75 WITH A FACTOR OF SAFETY OF 1.50 HAS BEEN USED IN THE DESIGN. CONTRACTOR IS RESPONSIBLE FOR BUOYANCY DURING ALL CONSTRUCTION AND TEMPORARY CONDITIONS UNTIL CONSTRUCTION IS COMPLETE, TO BE INCLUDED AS PART OF THEIR MEANS AND METHODS.

MATERIALS:
MATERIALS USED TO CONSTRUCTION THE PROPOSED BELOW GRADE PORTIONS OF THE PUMP STATION STRUCTURE SHALL CONFORM TO THE PLAN SPECIFICATIONS AND AS FOLLOWS:

1) CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI
2) REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI, EPOXY COATED
3) STRUCTURAL STEEL - ASTM A709 GRADE 50 - YIELD STRENGTH 50 KSI
4) FASTENERS:
   a) ASTM A325 BOLTS
   b) ASTM A316 BOLTS/ANCHORS (STAINLESS)

FOUNDATIONS:
THE WET WELL FOUNDATION (BASE SLAB), AS DESIGNED, PRODUCES A MAXIMUM SERVICE LOAD PRESSURE OF 2.00 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LOAD PRESSURE OF 3.00 KIPS PER SQUARE FOOT. THE VALVE VAULT FOUNDATION (BASE SLAB), AS DESIGNED, PRODUCES A MAXIMUM SERVICE LOAD PRESSURE OF 0.40 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LOAD PRESSURE OF 1.50 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 3.0 KIPS PER SQUARE FOOT.
KEEP FOUNDATIONS FREE OF EXCESS WATER AT ALL TIMES AND REPLACE SOFT OR WEAK SOIL AS DIRECTED BY THE ENGINEER. THE CONTRACTOR MAY BACKFILL AS NECESSARY FOR THEIR MEANS/METHODS. BACKFILLING SHALL BE PLACED EQUALLY AROUND THE WALLS DURING ALL BACKFILL OPERATIONS.

CONCRETE COVER:
UNLESS NOTED OTHERWISE, MINIMUM DEPTH OF CONCRETE COVER SHALL BE 2 INCHES. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH SHALL HAVE A MINIMUM COVER OF 3 INCHES, UNLESS NOTED OTHERWISE.

ITEM 511 - CONCRETE CLASS QC2 WITH QC/QA
CONCRETE CONSTRUCTION SHALL ADHERE TO CMS 499, 508, 511, AND ACCOMPANYING SPECIFICATIONS WITH THE ADDITIONAL CLARIFICATIONS BELOW.

OPENINGS IN WALL AND SLABS:
OPENINGS ARE SHOWN FOR BIDDING PURPOSES ONLY. RECONCILE THEIR EXACT LOCATION AND SIZE WITH PROCURED MATERIALS AND PROCESS, ELECTRICAL, AND OTHER TRADES BEFORE PROCEEDING WITH WORK. IF ADDITIONAL OPENINGS ARE REQUIRED OR MODIFICATIONS TO THE LOCATIONS ARE NECESSARY, WHICH HAVE NOT BEEN INCLUDED IN THE PLANS, SECURE APPROVAL WITH THE ENGINEER PRIOR TO PROCEEDING.

CONSTRUCTION JOINTS:
CONSTRUCTION JOINTS ARE PERMITTED ONLY WHERE SHOWN ON THE PLANS OR AS APPROVED BY THE ENGINEER. RECOMMENDED CONSTRUCTION JOINT LOCATIONS HAVE BEEN PROVIDED, HOWEVER THE CONTRACTOR MAY CHOSE TO INCLUDE ADDITIONAL JOINTS, OR REMOVE THE ORIGINALLY DETAILED CONSTRUCTION JOINT WITH THE APPROVAL OF THE ENGINEER.

CONTRACTOR IS RESPONSIBLE FOR PLAN MODIFICATIONS ASSOCIATED WITH CHANGES IN THE CONSTRUCTION JOINT LOCATION, NUMBER, OR CONFIGURATION. THE ENGINEER MUST APPROVE THE FINAL CONSTRUCTION JOINT LAYOUT PRIOR TO THE CONTRACTOR PROCEEDING WITH CONSTRUCTION OF CAST IN PLACE ELEMENTS.

CONTINUOUS 2X6 KEYED CONSTRUCTION JOINTS SHALL BE PROVIDED ALL WALLS. KEYED CONSTRUCTION JOINTS SHALL BE PROVIDED AT ALL LOCATIONS, WHETHER SHOWN OR NOT. CONSTRUCTION JOINTS IN WALLS SHALL NOT BE PLACED AT GREATER THAN 40 FOOT SPACING UNLESS APPROVED BY THE ENGINEER.

TEMPORARY FALSEWORK AND FORMS:
THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, INSTALLATION, AND REMOVAL OF TEMPORARY FALSEWORK, FORMS, AND BRACING REQUIRED TO CONSTRUCT CAST-IN-PLACE PORTIONS OF THE PROPOSED STRUCTURE IN ACCORD WITH CMS ITEM 508. CAMBER SHOULD BE BUILT INTO THE TEMPORARY SUPPORTS AS NEEDED TO ACCOMMODATE THE ANTICIPATED DEFLECTIONS MENTIONED ABOVE. BEAMS, SLABS, AND DECKS THAT HAVE A MID-SPAN LOW-POINT IN THEIR FINAL CONDITION WILL BE REJECTED DUE TO LACK OF PLAN CONFORMANCE AND MAY BE SUBJECT TO REMOVAL AND REBUILT AT THE CONTRACTORS EXPENSE. ACCEPTABLE TOLERANCE FOR FINAL CAMBER OF BEAMS SHALL BE CONSIDERED TO BE -0 TO +1/2" (POSITIVE SHALL BE CONSIDERED AS UP). ACCEPTABLE TOLERANCE FOR FINAL CAMBER OF SLABS AND DECKS CONSIDERED TO BE -0 TO +1/4" (POSITIVE SHALL BE CONSIDERED UP). ALL COSTS ASSOCIATED WITH FALSEWORK AND FORMS SHALL BE INCLUDED WITH ITEM 511 FOR PAYMENT.

ALL COSTS ASSOCIATED WITH CONCRETE OPENINGS, CONSTRUCTION JOINTS AND KEYWAYS, AND TEMPORARY FALSEWORK/FORMS SHALL BE INCLUDED WITH THE LUMP SUM CONTRACT BID PRICE FOR STORMWATER PUMP STATION, COMPLETE, AS PER PLAN.

ITEM SPECIAL - WATERPROOFING, PVC WATERSTOPS
WATERSTOPS SHALL BE USED AT ALL CONSTRUCTION JOINTS BELOW THE FINISHED GRADE AT THE SITE. WATERSTOPS SHALL BE POLY VINYL CHLORIDE (PVC) SERRATED TYPE WITHOUT CENTER BULB. WATERSTOPS SHALL BE CENTERED ON THE CONSTRUCTION JOINT AND SHALL NOT BE LESS THAN 6 INCHES WIDE AND 3/8 INCH THICK AT CENTER (1/4 INCH MINIMUM THICKNESS AT ENDS).

ALL JOINTS OF PVC WATERSTOPS SHALL BE SPLICED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. OVERLAP SPLICING OF WATERSTOPS SHALL NOT BE PERMITTED. ALL SPLICES SHALL DEVELOP EFFECTIVE WATER-TIGHTNESS FULLY EQUAL TO THAT OF CONTINUOUS WATERSTOP.

CONTRACTOR SHALL UTILIZE THE FOLLOWING PVC WATERSTOPS, OR APPROVED EQUAL:

GREENSTREAK PVC WATERSTOP
SIKA CORPORATION
201 POLITO AVENUE
LYNDHURST NEW JERSEY 07071
UNITED STATES OF AMERICA
201-933-8800

DURAJOINT PVC WATERSTOP
DCA CONSTRUCION PRODUCTS, LLC
10421 INDUSTRIAL DRIVE
GARRETTSVILLE, OHIO 44231
888-833-8309

EARTHSHIELD PVC WATERSTOP
J.P. SPECIALTIES, INC.
25811 JEFFERSON AVENUE
MURRIETA, CA 92562
951-763-7077

ALL COSTS ASSOCIATED WITH PVC WATERSTOP MATERIALS, LABOR, INCIDENTALS, AND INSTALLATION AND KEYS SHALL BE INCLUDED WITH THE LUMP SUM CONTRACT BID PRICE FOR STORMWATER PUMP STATION, COMPLETE, AS PER PLAN.

ITEM SPECIAL - WATERPROOFING, HYDROPHILLIC WATERSTOP
HYDROPHILLIC, OR SWELLING, WATERSTOPS SHALL BE USED AROUND THE PERIMETER OF ALL OPENINGS IN EXTERIOR WALLS OF THE CAST IN PLACE STRUCTURE. THE WATERSTOPS SHALL INSTALLED PER THE MANUFACTURE SPECIFICATIONS AND SHALL HAVE NOMINAL MINIMUM CROSS SECTIONAL DIMENSIONS OF 3/8" X 3/4". ALL JOINTS OF THE WATERSTOPS SHALL BE SPLICED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. OVERLAP SPLICING OF WATERSTOPS SHALL NOT BE PERMITTED. ALL SPLICES SHALL DEVELOP EFFECTIVE WATER-TIGHTNESS FULLY EQUAL TO THAT OF CONTINUOUS WATERSTOP.

CONTRACTOR SHALL UTILIZE THE FOLLOWING HYDROPHILLIC WATERSTOPS, OR APPROVED EQUAL:

SWELLSTOP
SIKA CORPORATION
201 POLITO AVENUE
LYNDHURST NEW JERSEY 07071
UNITED STATES OF AMERICA
201-933-8800

EXPAND-TITE 200
DCA CONSTRUCION PRODUCTS, LLC
10421 INDUSTRIAL DRIVE
GARRETTSVILLE, OHIO 44231
888-833-8309

EARTHSHIELD TYPE 20 OR 23
J.P. SPECIALTIES, INC.
25811 JEFFERSON AVENUE
MURRIETA, CA 92562
951-763-7077

ALL COSTS ASSOCIATED WITH HYDROPHILLIC WATERSTOP MATERIALS, LABOR, INCIDENTALS, AND INSTALLATION AND KEYS SHALL BE INCLUDED WITH THE LUMP SUM CONTRACT BID PRICE FOR STORMWATER PUMP STATION, COMPLETE, AS PER PLAN.

ITEM 512 - CONCRETE DAMPPROOFING
CONTRACTOR SHALL COMPLETELY SEAL THE EXTERIOR LIMITS OF THE BELOW GRADE WALLS STARTING AT THE BOTTOM OF THE BASE SLAB ELEVATIONS, AND ENDING AT 6" BELOW THE TOP OF THE STRUCTURE. THE DAMPPROOFING TOP LIMITS MAY BE MINIMALLY ADJUSTED DOWNWARD SUCH THAT THE MATERIAL IS NOT VISIBLE IN THE FINAL CONDITION.

CONTRACTOR SHALL UTILIZE THE FOLLOWING DAMPPROOFING MATERIALS, INSTALLED PER MANUFACTURER SPECIFICATION, OR APPROVED EQUAL:

SEALMASTIC EMULSION, TYPE 1 OR TYPE 2
W.R. MEADOWS, INC
PO BOX 338
HAMPSHIRE, IL 60140
800-342-5976

DEHYDRATINE 75
EUCLID CHEMICAL
19215 REDWOOD ROAD
CLEVELAND, OH 44110
800-321-7628

HYDROCIDE 600, 700, 700B
BASF BUILDING SYSTEMS
889 VALLEY PARK DRIVE
SHAKOPEE, MN 55379
952-496-6000

ALL COSTS ASSOCIATED WITH DAMPPROOFING MATERIALS, LABOR, INCIDENTALS, AND INSTALLATION AND KEYS SHALL BE INCLUDED WITH THE LUMP SUM CONTRACT BID PRICE FOR STORMWATER PUMP STATION, COMPLETE, AS PER PLAN.

HINGED ACCESS HATCHES:
PROPOSED HINGED ACCESS HATCHES IN THE TOP SLAB SHALL BE ASSISTED OPENING AND SHALL BE LOCKABLE WITH MATCHING KEYS. ASSIST SYSTEM ON THE ACCESS HATCHES SHALL NOT REQUIRE ELECTRIC AND SHALL BE SUFFICIENTLY SIZED TO ALLOW A SINGLE PERSON OPEN THE DOOR. THE WATER-TIGHT HATCHES SHALL BE CORROSION RESISTANT AND SHALL BE FABRICATED WITH GALVANIZED STEEL, STAINLESS STEEL, OR ALUMINUM.

THE DESIGN CONFIGURATION SHALL MEET THE OPENING REQUIREMENTS WITHOUT ENCROACHMENTS INTO THE STRUCTURAL CONCRETE OR REINFORCING BARS. ACCESS HATCHES SHALL BE FABRICATED TO PERMIT NO FIXED INTERMEDIATE SUPPORTS IN THE OPENING. REMOVABLE SUPPORTS ARE PERMITTED TO GAIN FULL ACCESS IF DOUBLE-LEAF HATCHES ARE PROPOSED.

CONTRACTOR SHALL UTILIZE THE FOLLOWING MANUFACTURERS, OR APPROVED EQUAL:

THE BILCO COMPANY
PO BOX 1203
NEW HAVEN, CT 06505
203-934-6363

BABCOCK-DAVIS
9300 73RD AVENUE NORTH
BROOKLYN PARK, MN 55428
888-412-3726

ALL COSTS ASSOCIATED WITH HINGED DOOR DESIGN, MATERIALS, FABRICATION, INSTALLATION, LABOR, AND INCIDENTALS SHALL BE INCLUDED WITH THE LUMP SUM CONTRACT BID PRICE FOR STORMWATER PUMP STATION, COMPLETE, AS PER PLAN.

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN:
THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING. THE DEPARTMENT WILL NOT MAKE ADDITIONAL PAYMENT FOR PROVIDING AN ALTERNATE DESIGN.

CONSTRUCTION SEQUENCE:
THE FOLLOWING SEQUENCE OF CONSTRUCTION IS RECOMMENDED BY THE DESIGNER TO MINIMIZE POTENTIAL STRUCTURAL CRACKING, DISTORTION, AND UPLIFT PRIOR TO FULL COMPLETION OF THE PUMP STATION.

1. PLACE TEMPORARY SHORING AS NEEDED TO CONSTRUCT THE BELOW GRADE PORTIONS OF THE PUMP STATION.
2. PLACE DE-WATERING SYSTEM IF REQUIRED TO RESULT IN A WATER-FREE WORK SITE. REFER TO GENERAL NOTES OF ROADWAY PLANS.
3. EXCAVATE THE REQUIRED PLAN DIMENSIONS PLUS ACCESS LOCATION AND REQUIRED WORKING LIMITS.
4. CONSTRUCT ALL PROPOSED CAST-IN-PLACE CONCRETE STRUCTURAL COMPONENTS, INCLUDING BUT NOT LIMITED TO THE PROPOSED BASE SLAB/FOUNDATION, EXTERIOR AND INTERIOR WALLS, BEAMS, AND SLABS. APPLY DAMPROOFING AS SPECIFIED FOR BELOW GRADE EXTERIOR WALLS AND FOUNDATIONS.
5. INSTALL PROPOSED PUMPS, PIPE NETWORK, AND ALL MISCELLANEOUS ATTACHMENTS AND CONNECTIONS AS DETAILED IN THE PLANS.
6. BACKFILL THE SITE TO THE FINISHED GRADE.
7. INSTALL ALL PROPOSED GRATING AND/OR ACCESS HATCHES, INCLUDING SUPPORT STRUCTURE AS REQUIRED.
8. ANY REMAINING TASKS MAY BE COMPLETED UNDER THE CONTRACTORS DIRECTION WITH CONSIDERATION OF SCHEDULE AND PROPER ORDER TO ELIMINATE REWORK. NO COMPENSATION WILL BE GIVEN FOR REWORK AS A RESULT OF TASKS THAT WERE COMPLETED "OUT-OF-ORDER".

ABBREVIATION LEGEND

BOT	BOTTOM	FTG	FOOTING	PEJF	PREFORMED EXPANSION JOINT FILLER
℄	CENTERLINE	FM	FORCE MAIN		
CJ	CONSTRUCTION JOINT	FF	FAR FACE	PROP	PROPOSED
CONST	CONSTRUCTION	LT	LEFT	RT	RIGHT
DND	DO NOT DISTURB	MAX	MAXIMUM	STA	STATION
EF	EACH FACE	MIN	MINIMUM	STM	STORM
ELEV(EL)	ELEVATION	NF	NEAR FACE	TYP	TYPICAL
EX	EXISTING				

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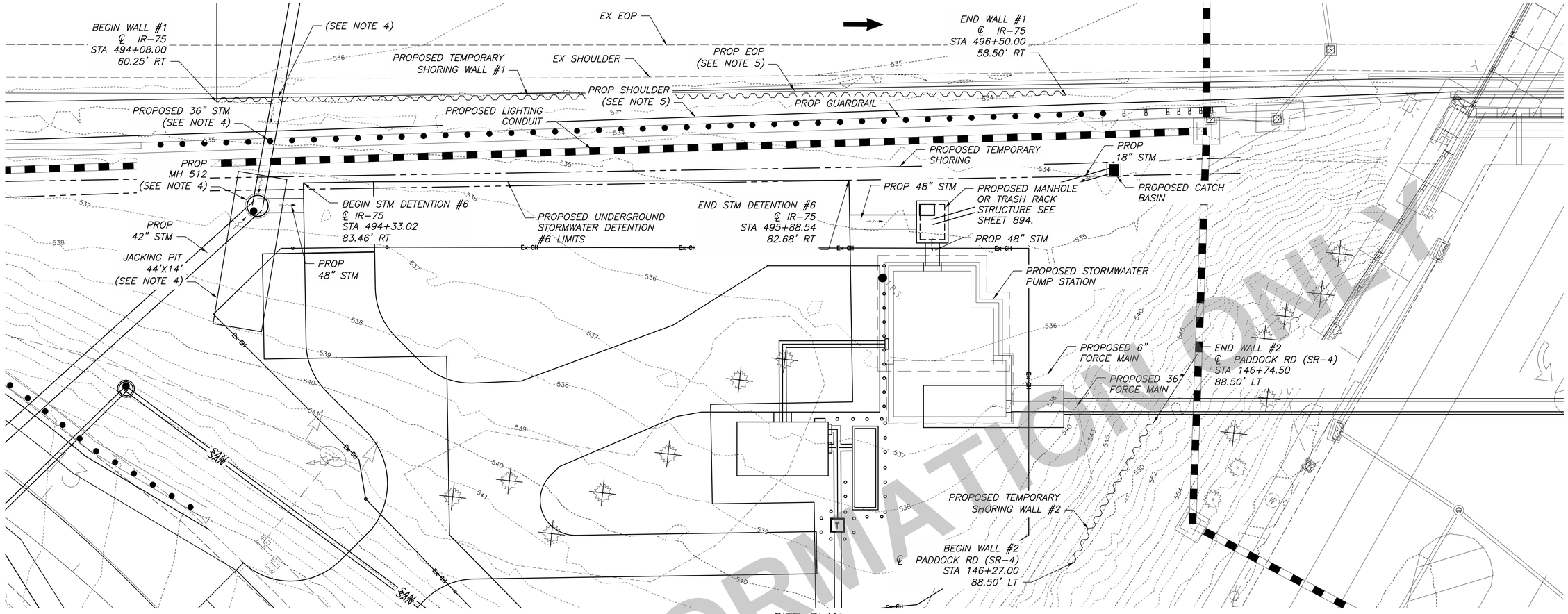
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PUMP STATION STRUCTURE NOTES

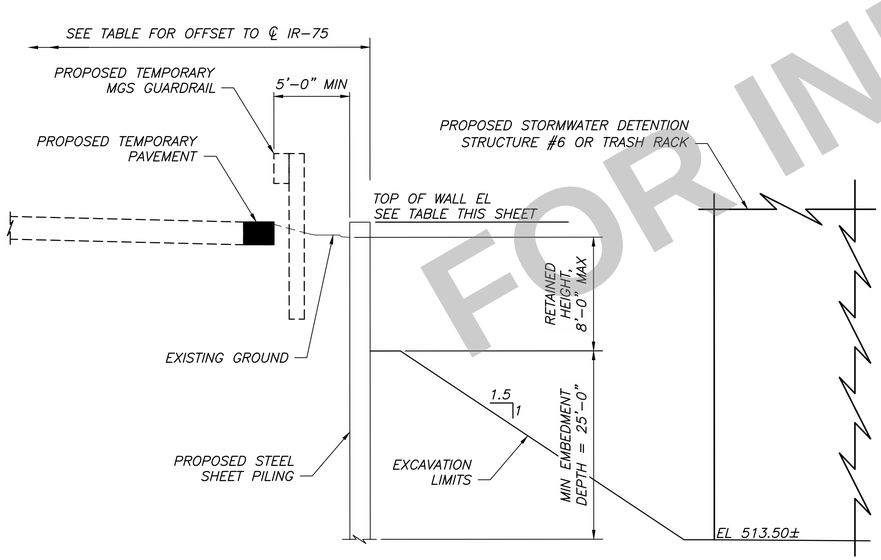
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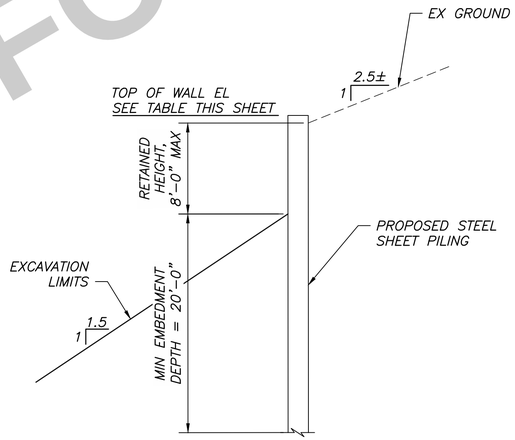
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SITE PLAN



TYPICAL SECTION – WALL #1



TYPICAL SECTION – WALL #2

WALL NUMBER	REFERENCE ALIGNMENT	BEGIN STATION	BEGIN OFFSET (FT)	BEGIN TOP OF WALL EL	END STATION	END OFFSET (FT)	END TOP OF WALL EL	LENGTH (FT)
1	℄ IR-75	494+05.00	60.25 RT	536.00	496+50.00	58.50 RT	535.00	245.00
2	℄ SR-4	146+27.00	88.50 LT	551.00	146+74.50	88.50 LT	549.00	47.50

NOTES

1. LIMITS OF UNDERGROUND STORMWATER DETENTION SHOWN ARE FOR ILLUSTRATION ONLY. ACTUAL LOCATION TO BE DETERMINED BY CONTRACTOR/MANUFACTURER OF STORMWATER DETENTION SYSTEM.
2. TEMPORARY SHORING REQUIRED AT THE LOCATIONS SHOWN. TEMPORARY SHORING LIMITS AND LOCATIONS (E.G. STATION, OFFSET, TOP OF WALL ELEVATIONS) SHOWN SHALL BE CONSIDERED APPROXIMATE. ACTUAL LOCATIONS AND LIMITS WILL DEPEND ON THE CONTRACTOR'S MEANS AND METHODS AND STEEL SHEET PILING SUPPLIED. THE MAXIMUM EXPOSED HEIGHT FOR INTERLOCKING SHEETING SHORING SYSTEMS IS 8 FEET. ONE REPRESENTATIVE LAYOUT THAT MAY BE USED TO CONSTRUCT THE PROJECT IS SHOWN. PLANS FOR AN ALTERNATE DESIGN SHALL BE PREPARED AND PROVIDED PER C&MS 501.02.
3. STEEL SHEET PILING SHALL HAVE A MINIMUM YIELD STRENGTH OF 50 KSI. SHEET PILING SHALL HAVE A MINIMUM ELASTIC SECTION MODULUS OF 30.2 CUBIC INCHES PER FOOT AND A MOMENT OF INERTIA OF 184.20 IN4 PER FOOT OF WALL FOR BOTH WALL #1 AND WALL #2.
4. PROPOSED 36" STORM TO BE JACK AND BORED AS SHOWN. MANHOLE NO. 512 TO BE PLACED WITHIN JACKING PIT PRIOR TO BACKFILLING. CONTRACTOR TO COORDINATE PLACEMENT OF MANHOLE NO. 12 AND 36" STORM WITH CONSTRUCTION OF TEMPORARY WALL #1.
5. TEMPORARY SHORING WALL #1 TO BE CONSTRUCTED PRIOR TO MOT PHASE 4.
6. SEE SHEET 901 FOR ADDITIONAL NOTES AND ABBREVIATION LEGEND.

FOR INFORMATION ONLY

Horiz: 1 inch = 20 feet

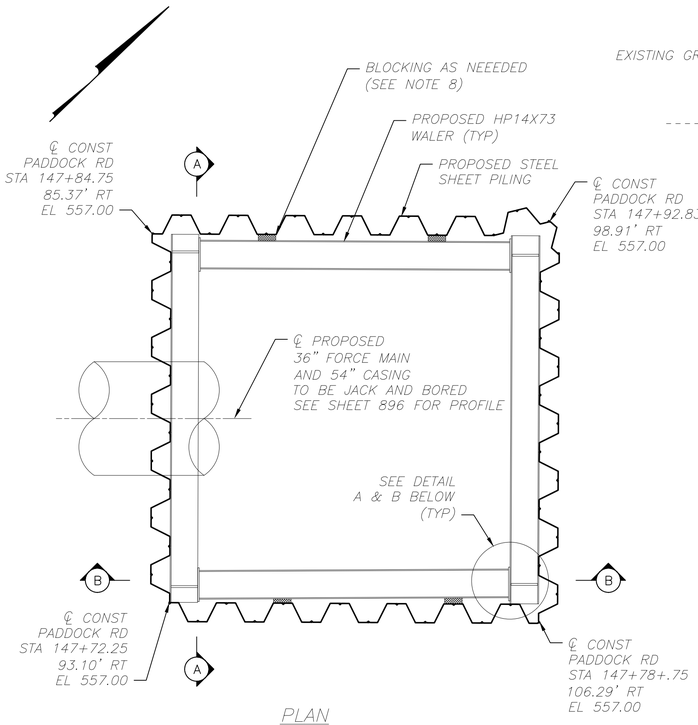
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TEMPORARY SHORING

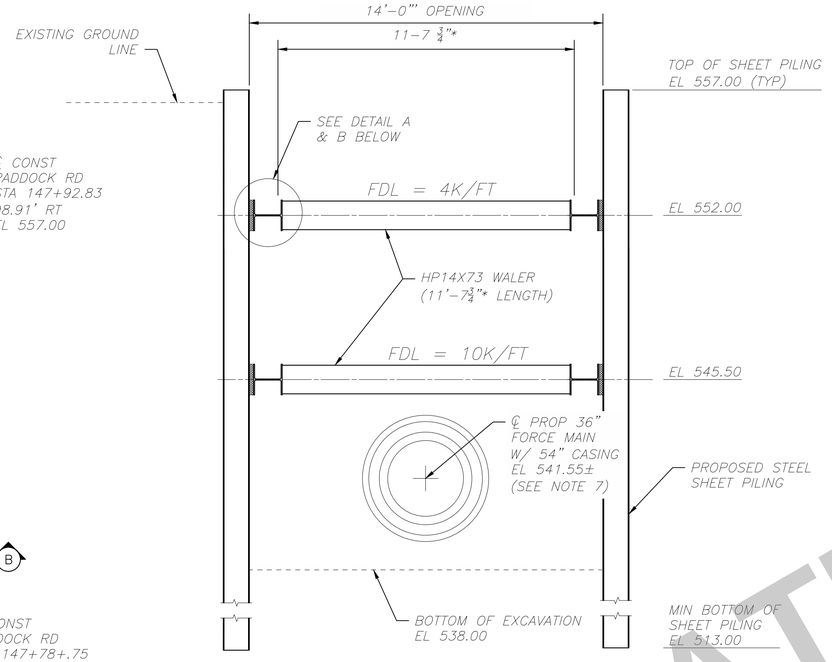
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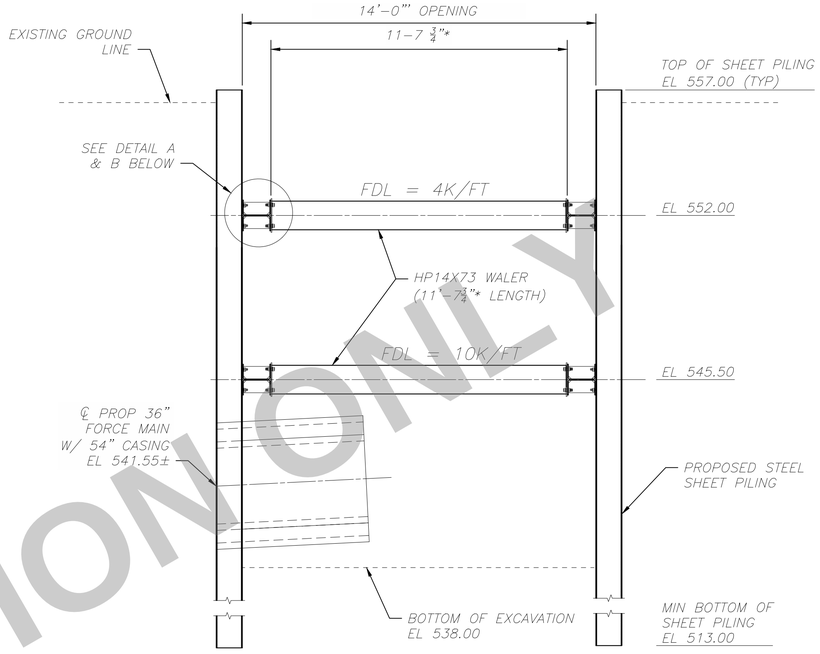
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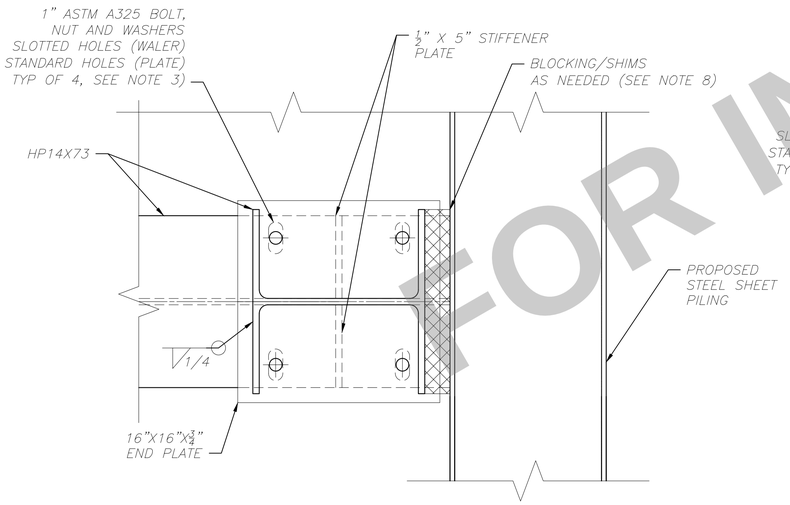
PLAN
(14'X14' RECEIVING PIT)
(SEE NOTE 1)



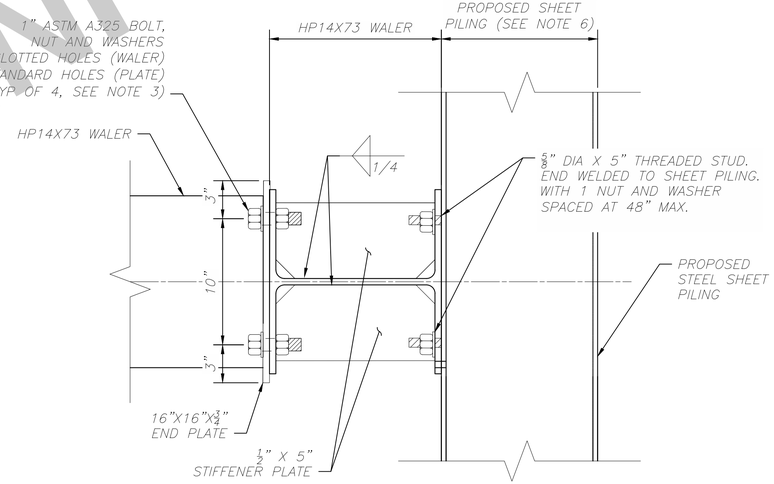
SECTION A–A
(14'X14' RECEIVING PIT)



SECTION B–B
(14'X14' RECEIVING PIT)



DETAIL A



DETAIL B

LEGEND

* – DIMENSION MEASURED FACE TO FACE OF HP14X73. DIMENSION SHALL BE EXPECTED TO VARY DEPENDING ON STEEL SECTIONS FURNISHED AND WALL DEFLECTION (SEE NOTE 8).

NOTES

1. TEMPORARY SHORING REQUIRED AT THE RECEIVING PIT SHOWN ON SHEET 896. TEMPORARY SHORING LIMITS AND LOCATIONS (E.G. STATION, OFFSET, TOP OF WALL ELEVATIONS) SHOWN SHALL BE CONSIDERED APPROXIMATE. ACTUAL LOCATIONS AND LIMITS WILL DEPEND ON THE CONTRACTOR'S MEANS AND METHODS AND SHORING SYSTEM SUPPLIED. ONE REPRESENTATIVE LAYOUT THAT MAY BE USED TO CONSTRUCT THE PROJECT IS SHOWN. PLANS FOR AN ALTERNATE DESIGN SHALL BE PREPARED AND PROVIDED PER C&MS 501.02.
2. ALL PLATES AND ROLLED SECTIONS SHALL BE FABRICATED FROM MINIMUM YIELD STRENGTH = 50 KSI STEEL.
3. ALL BOLTS, NUTS, AND WASHERS SHALL CONFORM TO ASTM A325. ALL THREADED RODS, NUTS, AND WASHERS SHALL CONFORM TO ASTM F1554, MINIMUM TENSILE STRENGTH = 105 KSI, AND SHALL BE OF THE BOLT DIAMETER SPECIFIED IN THE PLANS.
4. THE HP14X73 BRACING AND CONNECTIONS SHOWN HAVE BEEN DESIGNED FOR A MAXIMUM FACTORED COMPRESSION LOAD OF 140 KIPS.
5. ALL BOLTED CONNECTION SHALL BE SNUG TIGHT PRIOR TO BEGINNING EXCAVATIONS.
6. SHEET PILING SHALL BE 50 KSI STEEL AND HAVE A MINIMUM SECTION MODULUS = 48.5 IN3/FT AND MINIMUM MOMENT OF INERTIA = 361.22 IN4/FT.
7. CONTRACTOR SHALL INSTALL TIMBER LAGGING OR STEEL PLATING AS NEEDED BELOW THE LIMITS OF THE CASING AS REQUIRED TO CONTAIN THE LIMITS OF THE EXCAVATION WHERE SHEETING IS NOT PRESENT.
8. CONTRACTOR RESPONSIBLE FOR ALL BLOCKING AND SHIM PLATES TO MAINTAIN REQUIRED PIT OPENING.

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Horiz: 1 inch = 20 feet

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STORMWATER PUMP STATION - PADDOCK ROAD INTERCHANGE
TEMPORARY SHORING DETAILS

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JACKING PIT SITE PLAN

RECEIVING PIT SITE PLAN

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NOTES

1. TEMPORARY SHORING REQUIRED AT THE LOCATIONS SHOWN. TEMPORARY SHORING LIMITS AND LOCATIONS (E.G. STATION, OFFSET, TOP OF WALL ELEVATIONS) SHOWN SHALL BE CONSIDERED APPROXIMATE. ACTUAL LOCATIONS AND LIMITS WILL DEPEND ON THE CONTRACTOR'S MEANS AND METHODS AND SHORING SYSTEM SUPPLIED. ONE REPRESENTATIVE LAYOUT THAT MAY BE USED TO CONSTRUCT THE PROJECT IS SHOWN. PLANS FOR AN ALTERNATE DESIGN SHALL BE PREPARED AND PROVIDED PER C&MS 501.02.
2. SEE SHEET 905 FOR SECTIONS A–A, B–B, C–C, AND D–D.

Horiz: 1 inch = 20 feet

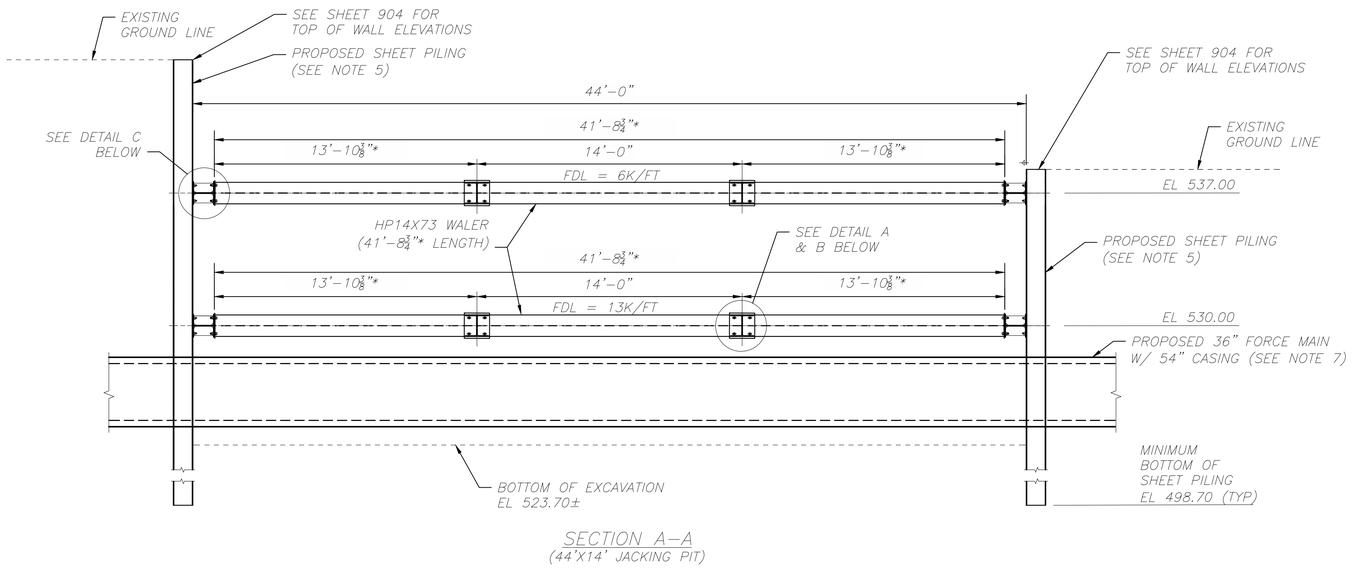
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STORMWATER PUMP STATION - PADDOCK ROAD INTERCHANGE
TEMPORARY SHORING DETAILS

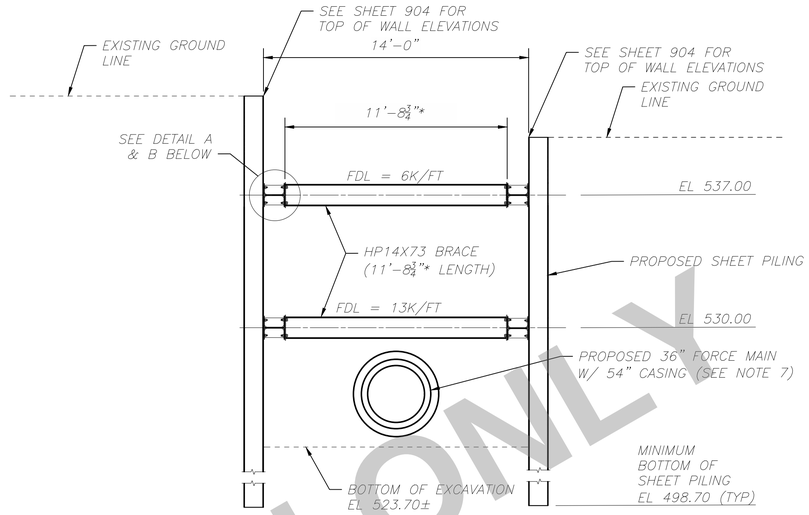
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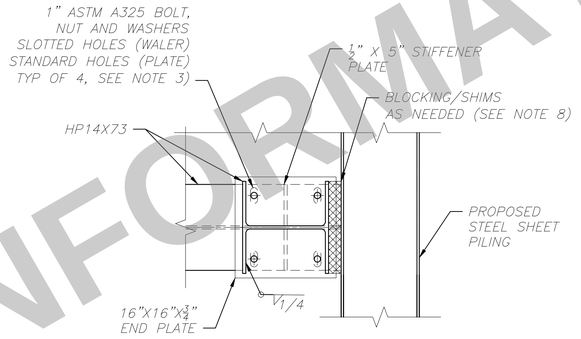


SECTION A–A
(44'X14' JACKING PIT)



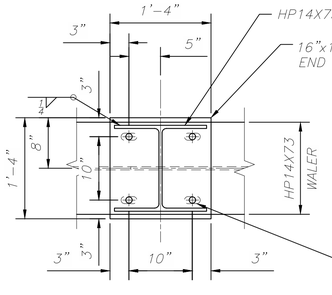
SECTION B–B
(44'X14' JACKING PIT)

SECTION C–C
(14'X14' RECEIVING PIT)

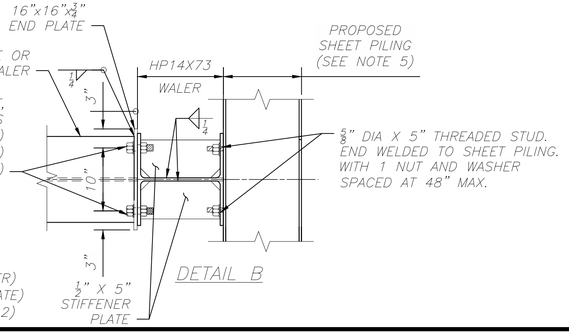


DETAIL C
(TYPICAL CONNECTION AT CORNERS)

SECTION D–D
(14'X14' RECEIVING PIT)



DETAIL A



DETAIL B

LEGEND

* – DIMENSION MEASURED FACE TO FACE OF HP14X73. DIMENSION SHALL BE EXPECTED TO VARY DEPENDING ON STEEL SECTIONS FURNISHED AND WALL DEFLECTION (SEE NOTE 8).

NOTES

1. ALL PLATES AND ROLLED SECTIONS SHALL BE FABRICATED FROM MINIMUM YIELD STRENGTH = 50 KSI STEEL.
2. ALL BOLTS, NUTS, AND WASHERS SHALL CONFORM TO ASTM A325. ALL THREADED RODS, NUTS, AND WASHERS SHALL CONFORM TO ASTM F1554, MINIMUM TENSILE STRENGTH = 105 KSI, AND SHALL BE OF THE BOLT DIAMETER SPECIFIED IN THE PLANS.
3. THE HP14X73 BRACING AND CONNECTIONS SHOWN HAVE BEEN DESIGNED FOR A MAXIMUM FACTORED COMPRESSION LOAD OF 360 KIPS.
4. ALL BOLTED CONNECTION SHALL BE SNUG TIGHT PRIOR TO BEGINNING EXCAVATIONS.
5. SHEET PILING SHALL BE 50 KSI STEEL AND MEET THE REQUIREMENTS OF C&MS 711.03. SHEET PILING SHALL HAVE A MINIMUM SECTION MODULUS = 18.1 IN3/FT AND MINIMUM MOMENT OF INERTIA = 84.38 IN4/FT.
6. FOR LOCATIONS OF SECTIONS A–A, B–B, C–C, AND D–D, SEE SHEET 904.
7. CONTRACTOR SHALL INSTALL TIMBER LAGGING OR STEEL PLATING AS NEEDED ELOW THE LIMITS OF THE CASING AS REQUIRED TO CONTAIN THE LIMITS OF EXCAVATION WHERE SHEETING IS NOT PRESENT.
8. CONTRACTOR RESPONSIBLE FOR ALL BLOCKING AND SHIM PLATES TO MAINTAIN REQUIRED PIT OPENING.

FOR INFORMATION ONLY

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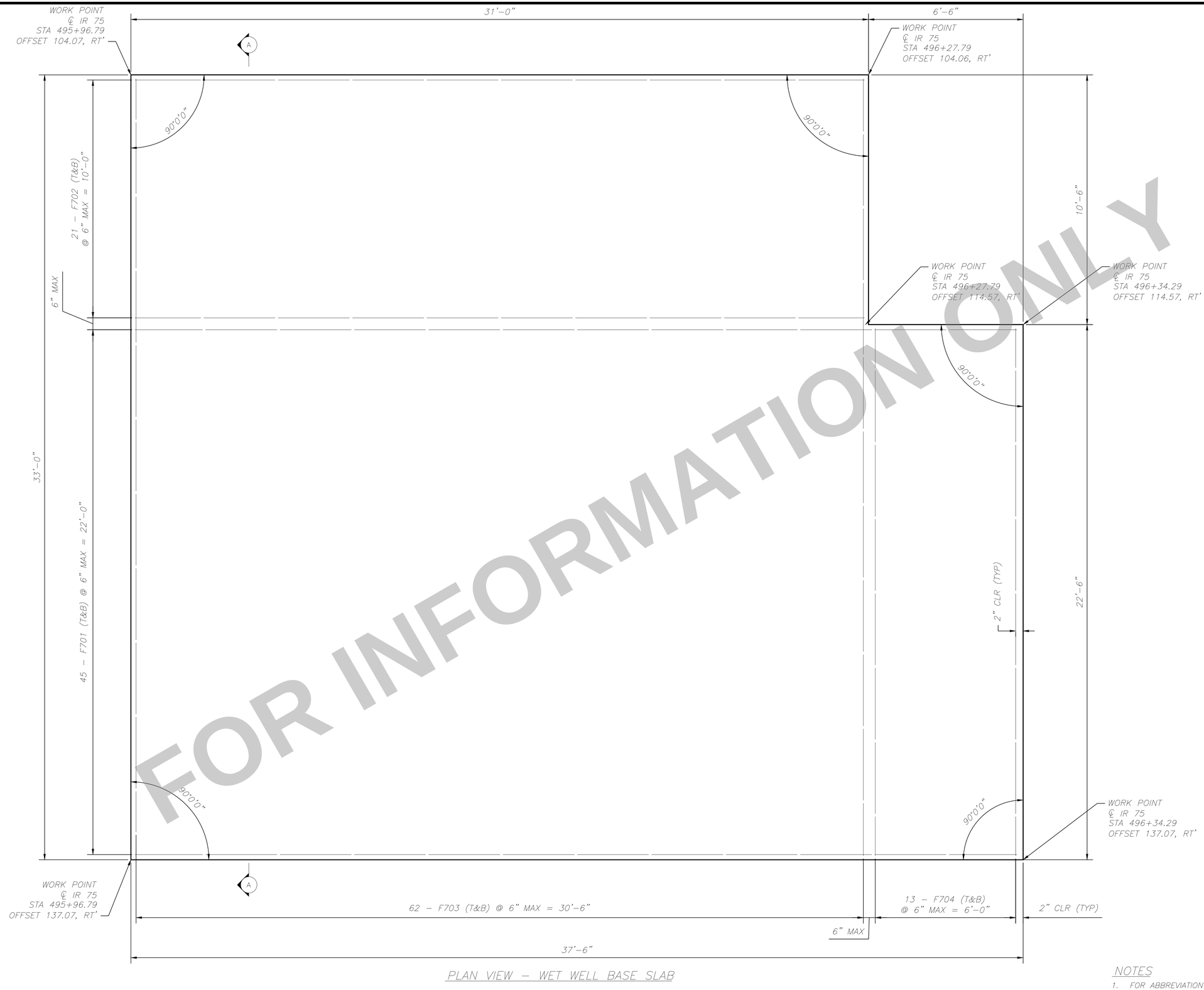
0 10 20 40
Horiz: 1 inch = 20 feet

CALCULATED RJE
CHECKED MJR

STORMWATER PUMP STATION - PADDOCK ROAD INTERCHANGE
TEMPORARY SHORING DETAILS

HAM-75-7.85

905
2017



PLAN VIEW – WET WELL BASE SLAB

NOTES

1. FOR ABBREVIATION LEGEND, SEE SHEET 901.
2. FOR SECTION A–A, SEE SHEET 907.

FOR INFORMATION ONLY

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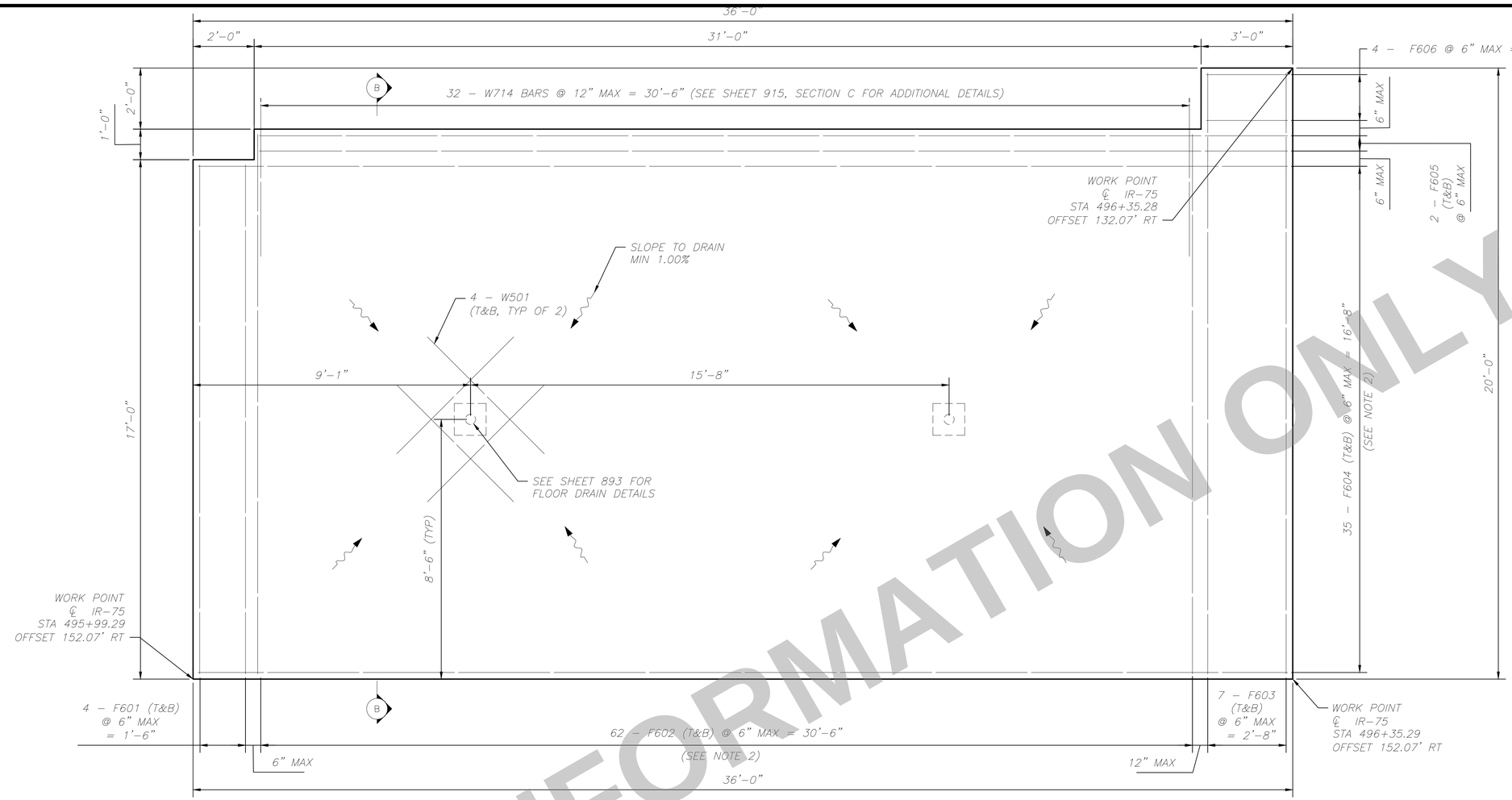
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CHECKED RMW

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Horz: 1 inch = 20 feet

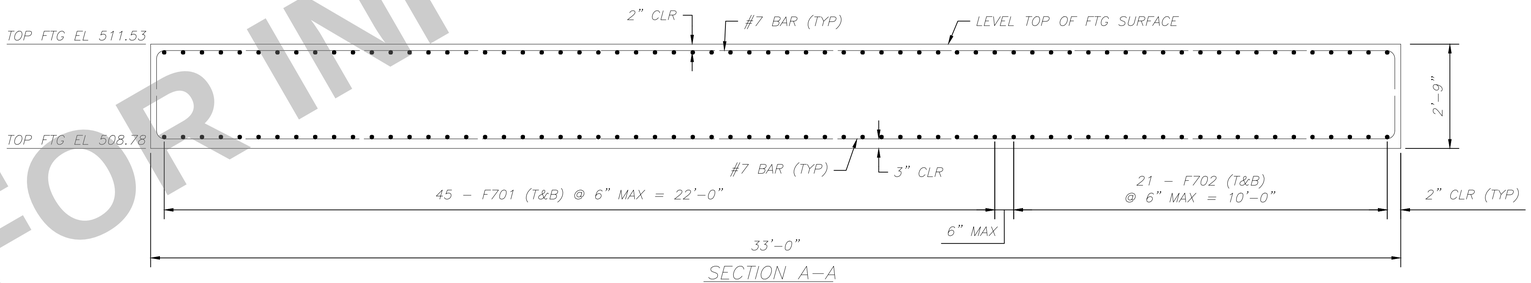
BASE SLAB PLAN - WET WELL

HAM-75-7.85

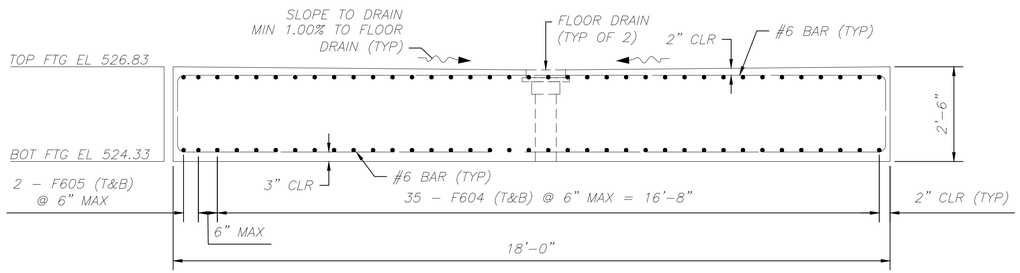
906
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PLAN VIEW – VALVE VAULT BASE SLAB



SECTION A–A



SECTION B–B

NOTES

1. FOR ABBREVIATION LEGEND, SEE SHEET 901.
2. FOR LOCATION OF SECTION A–A, SEE SHEET 906.
3. FIELD TRIM BARS 2" CLEAR AT ALL OPENINGS.

FOR INFORMATION ONLY

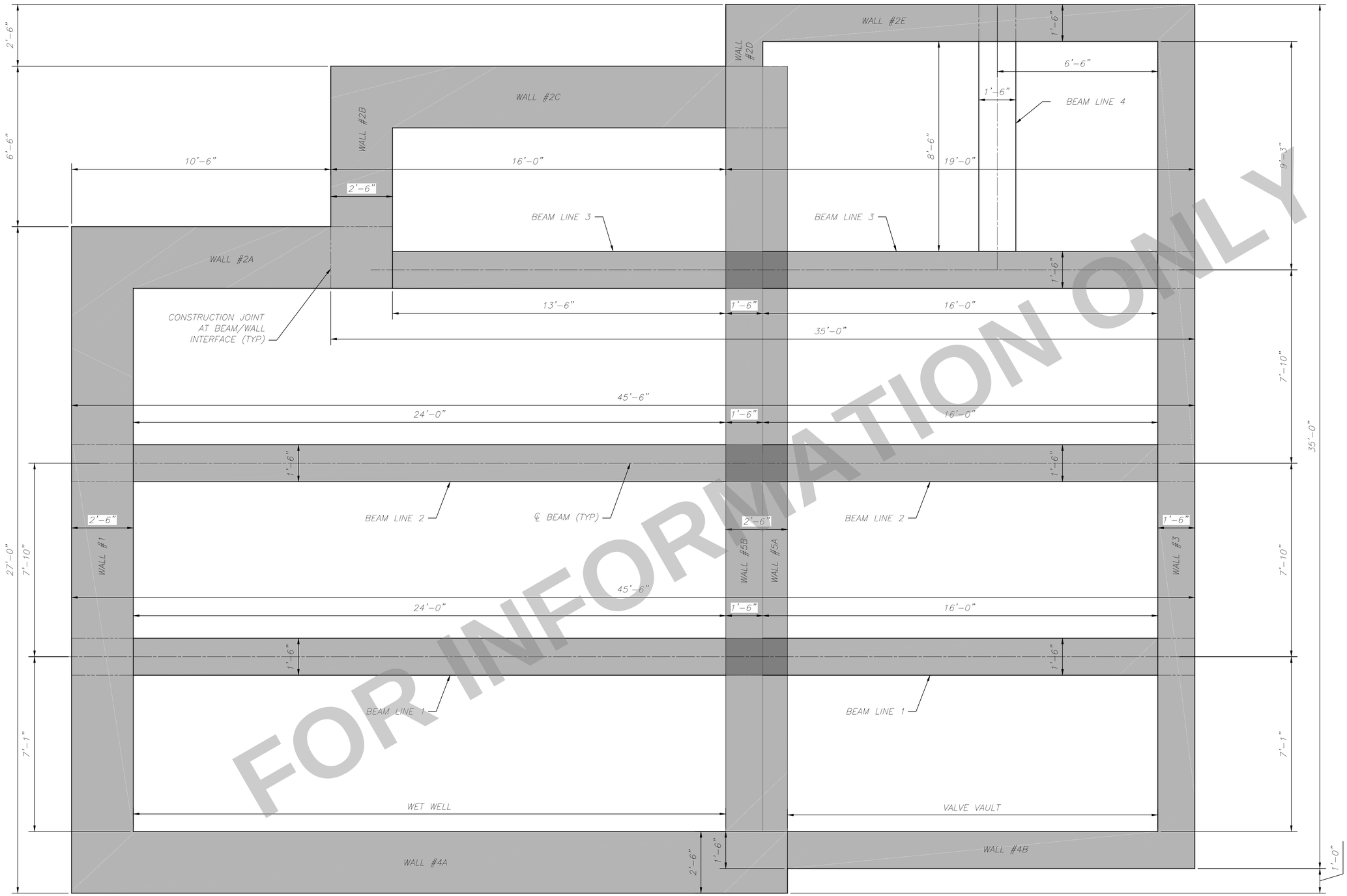
CALCULATED MJR
CHECKED RMW

BASE SLAB PLAN - VALVE VAULT

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FRAMING PLAN

NOTES

1. FOR ABBREVIATION LEGEND, SEE SHEET 901.
2. FOR BEAM ELEVATIONS AND SECTIONS, SEE SHEET 916.

FOR INFORMATION ONLY

Horiz: 1 inch = 20 feet

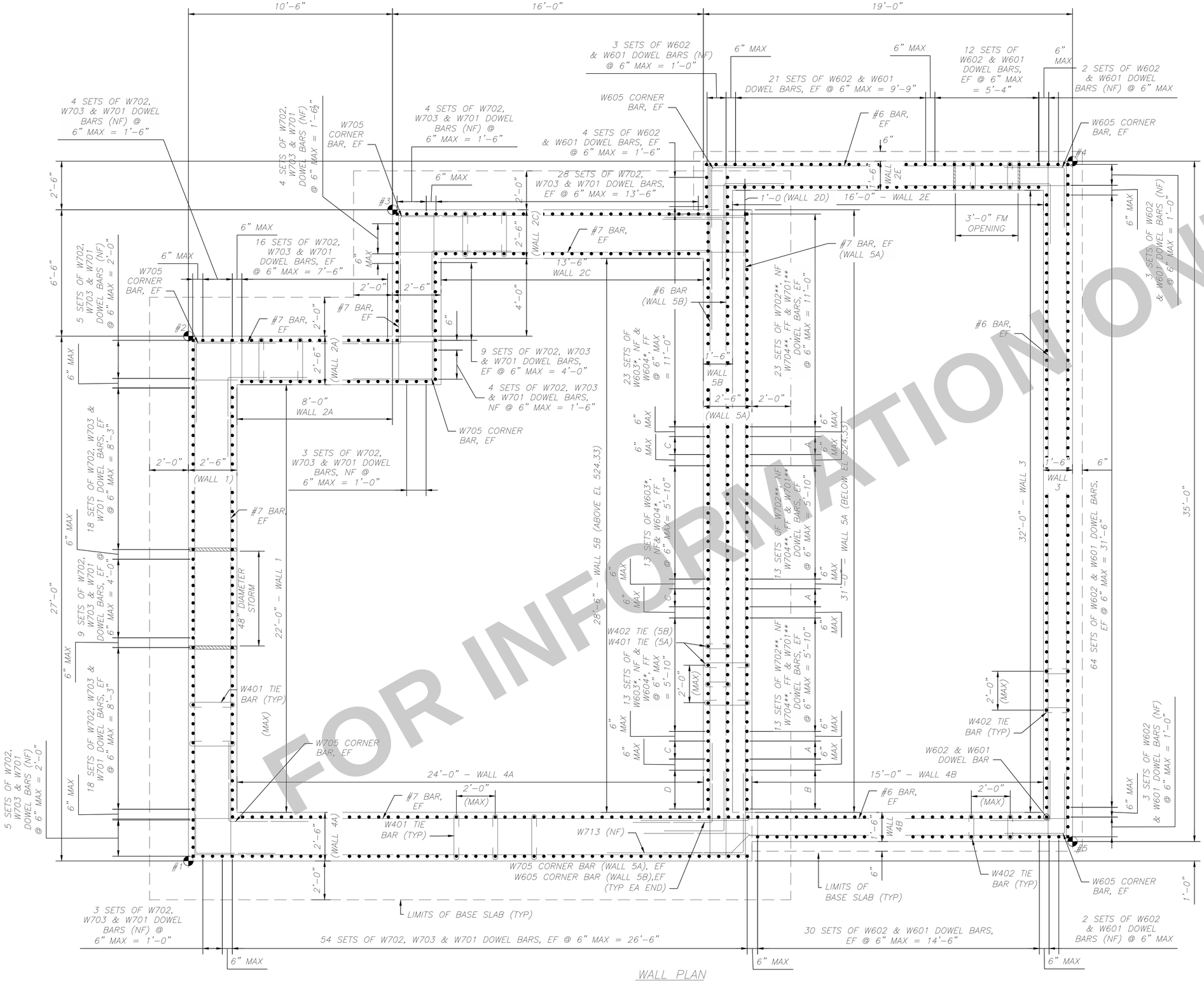
CALCULATED MJR
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SCHEMATIC PLAN

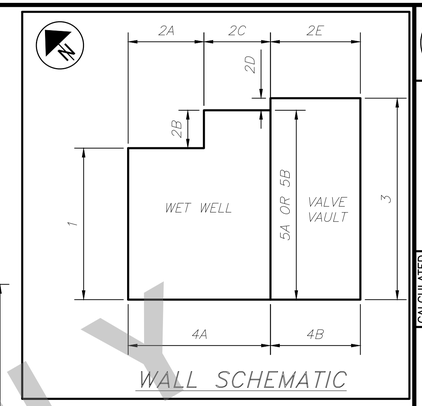
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WALL PLAN
(WALL OPENINGS IN WALL #5A/5B NOT SHOWN FOR CLARITY, SEE SHEET 913)



WALL SCHEMATIC

LEGEND

A – 2 SETS OF W702** NF, W704** FF & W701** DOWEL BARS, EF @ 6" MAX

B – 5 SETS OF W702** NF, W704** FF & W701** DOWEL BARS, EF @ 6" MAX = 2'–0"

C – 2 SETS OF W603*, NF & W604*, FF @ 6" MAX

D – 5 SETS OF W603*, NF & W604*, FF @ 6" MAX = 2'–0"

* – WALL 5B REINFORCING

** – WALL 5A REINFORCING

– WORK POINT

#1 – ℄ IR–75, STA 495+98.79, 106.07' RT

#2 – ℄ IR–75, STA 496+25.79, 106.07' RT

#3 – ℄ IR–75, STA 496+32.29, 116.57' RT

#4 – ℄ IR–75, STA 496+34.79, 151.57' RT

#5 – ℄ IR–75, STA 495+99.79, 151.57' RT

NOTES

1. FOR ABBREVIATION LEGEND, SEE SHEET 901.
2. FOR REQUIRED LAP LENGTHS, SEE SHEET 920.
3. FIELD TRIM BARS 2" CLEAR AT ALL OPENINGS.
4. #4 TIE BARS (W401 FOR 30" THICK WALLS, AND W402 FOR 18" THICK WALLS) SHALL BE PLACED AT 24" MAXIMUM ALONG LONGITUDINAL AXIS OF WALL. ALTERNATE HOOK PLACEMENT AS SHOWN.

FOR INFORMATION ONLY

Horiz: 1 inch = 20 feet

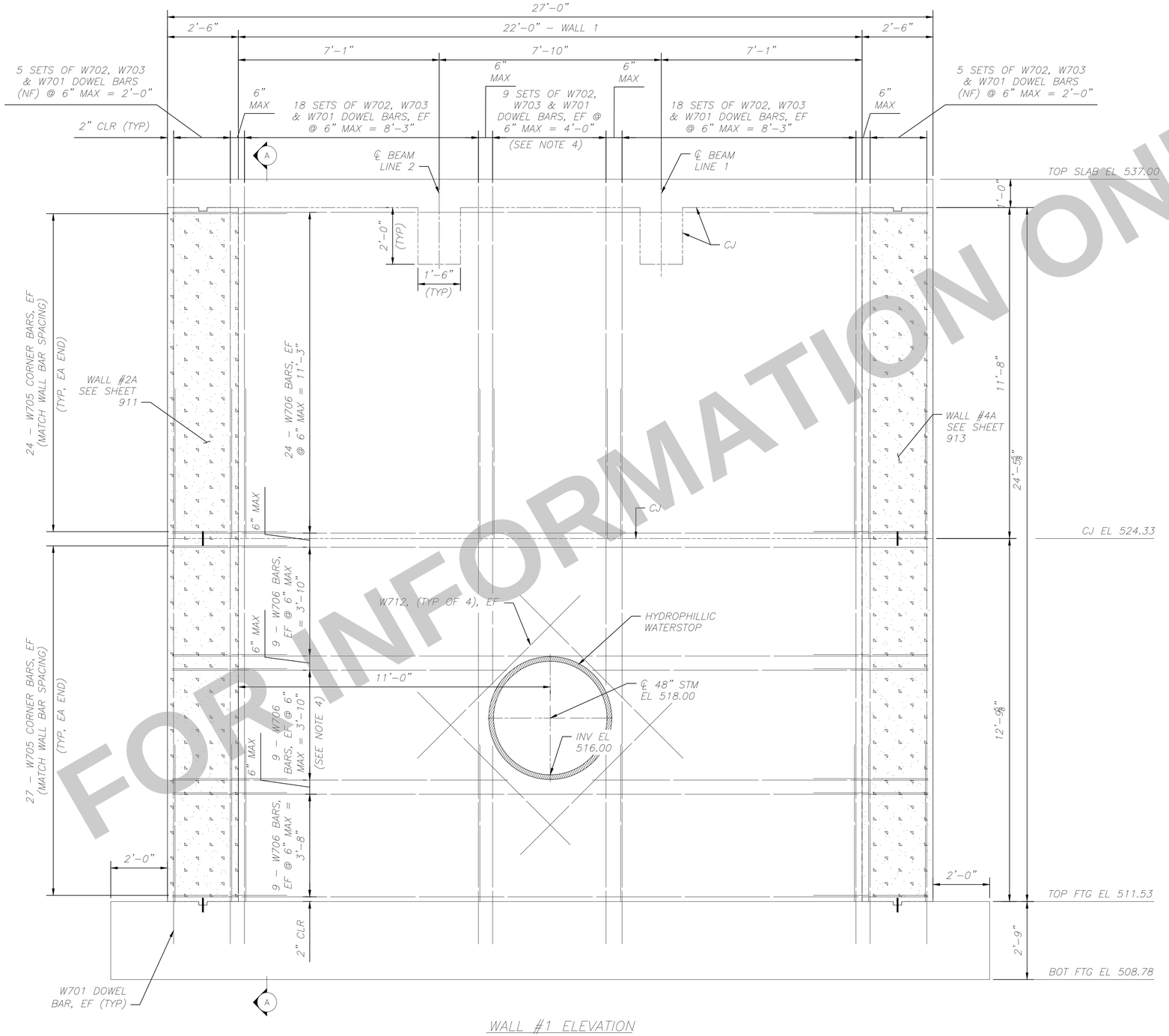
CALCULATED MJR
CHECKED RMW

WALL DETAILS

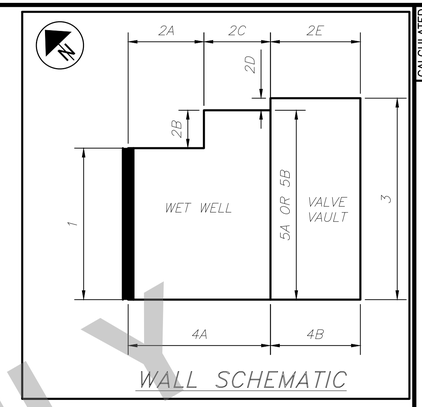
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WALL #1 ELEVATION



WALL SCHEMATIC

CALCULATED MJR
CHECKED RMW

NOTES

1. FOR ABBREVIATION LEGEND, SEE SHEET 901.
2. FOR REQUIRED LAP LENGTHS, SEE SHEET 920.
3. FOR SECTION A–A, SEE SHEET 915.
4. FIELD TRIM BARS 2" CLEAR AT ALL OPENINGS.

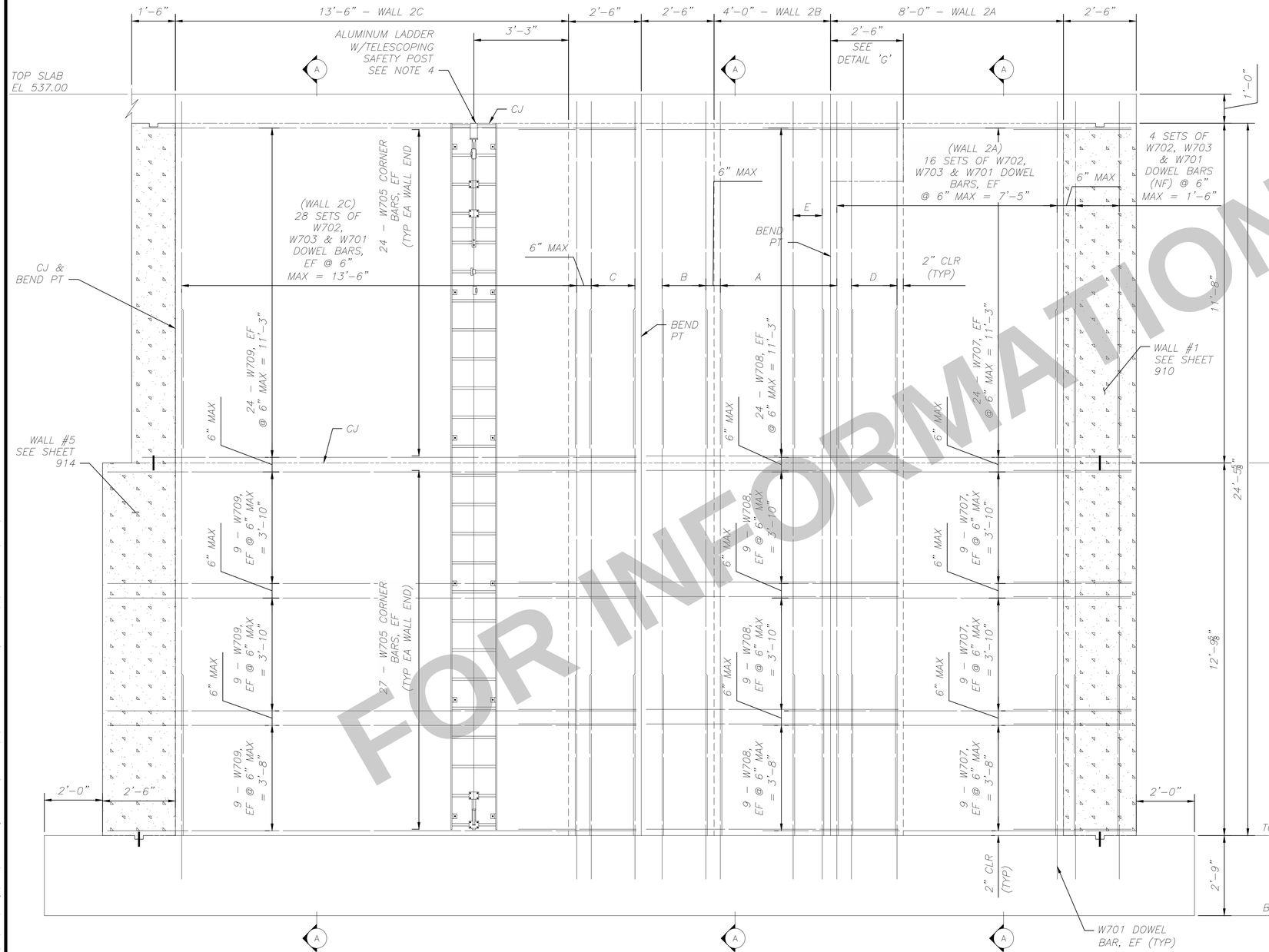
WALL DETAILS

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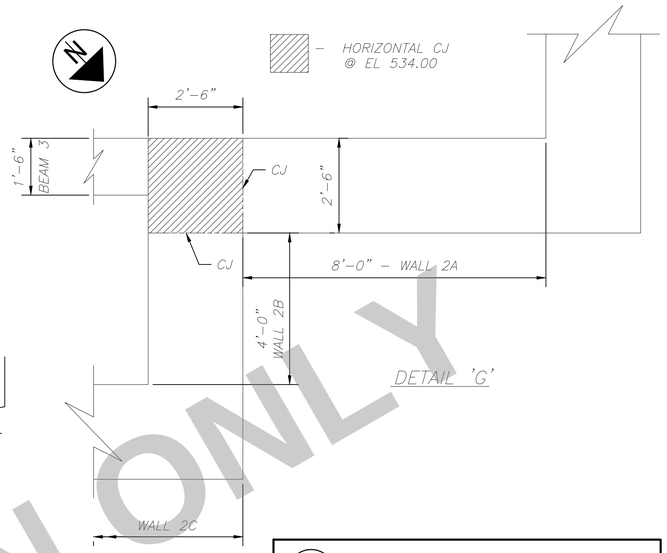
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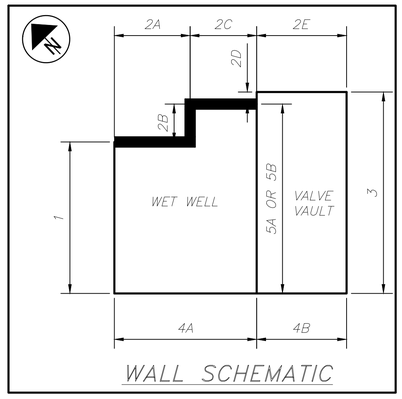
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WALL 2A–2C ELEVATION





WALL SCHEMATIC

LEGEND

A – 9 SETS OF W702, W703 & W701 DOWEL BARS, EF @ 6" MAX = 6'–0" (WALL 2B)

B – 4 SETS OF W702, W703 & W701 DOWEL BARS, NF @ 6" MAX = 1'–6" (WALL 2B)

C – 4 SETS OF W702, W703 & W701 DOWEL BARS, NF @ 6" MAX = 1'–6" (WALL 2C)

D – 4 SETS OF W702, W703 & W701 DOWEL BARS, FF @ 6" MAX = 1'–6" (WALL 2B)

E – 3 SETS OF W702, W703 & W701 DOWEL BARS, FF @ 6" MAX = 1'–0" (WALL 2A)

NOTES

1. FOR ABBREVIATION LEGEND, SEE SHEET 901.
2. FOR REQUIRED LAP LENGTHS, SEE SHEET 920.
3. FOR SECTION A–A, SEE SHEET 915.
4. CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF LADDER, LADDER SUPPORTS AND ACCESS SUPPORT FRAMEWORK. CONTRACTOR SHALL DESIGN THE LADDER TO ACCOMMODATE GREATER OF 100 PSF AND 400 LB CONCENTRATED LOAD (LIVE LOAD) PLUS ALL ANTICIPATED DEAD LOADS. CONTRACTOR SHALL ENSURE THE LADDER MEETS ALL CODE SAFETY AND DESIGN REQUIREMENTS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION OF THE LADDER AND SUPPORT FRAMEWORK. SEE SHEET 883 AND 901 FOR DETAILS AND ADDITIONAL NOTES.

FOR INFORMATION ONLY

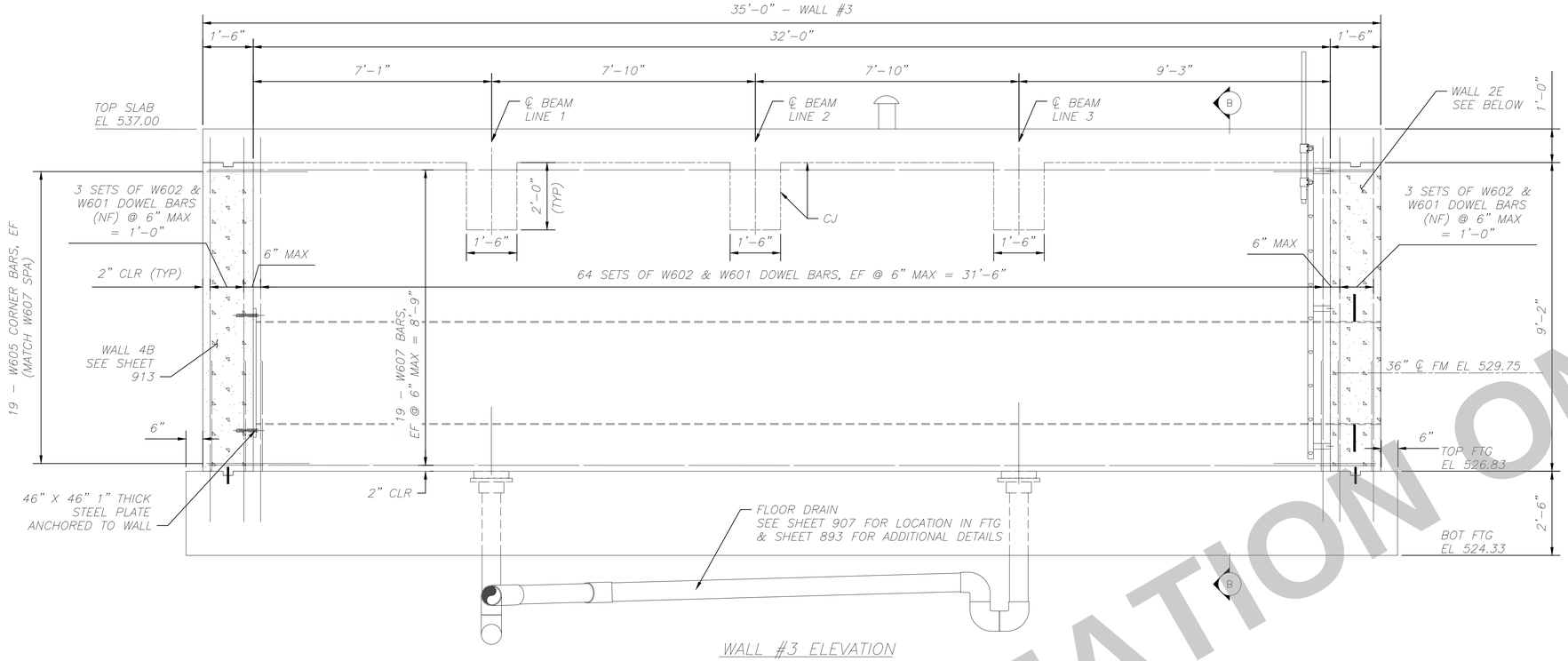
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WALL DETAILS

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NOTES

1. FOR ABBREVIATION LEGEND, SEE SHEET 901.
2. FOR REQUIRED LAP LENGTHS, SEE SHEET 920.
3. FOR SECTION AND B–B, SEE SHEET 915.
4. FIELD TRIM BARS 2" CLEAR AT ALL OPENINGS.
5. CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF LADDER, LADDER SUPPORTS AND ACCESS SUPPORT FRAMEWORK. CONTRACTOR SHALL DESIGN THE LADDER TO ACCOMMODATE GREATER OF 100 PSF AND 400 LB CONCENTRATED LOAD (LIVE LOAD) PLUS ALL ANTICIPATED DEAD LOADS. CONTRACTOR SHALL ENSURE THE LADDER MEETS ALL CODE SAFETY AND DESIGN REQUIREMENTS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION OF THE LADDER AND SUPPORT FRAMEWORK. SEE SHEET 883 AND 901 FOR DETAILS AND ADDITIONAL NOTES.

FOR INFORMATION ONLY

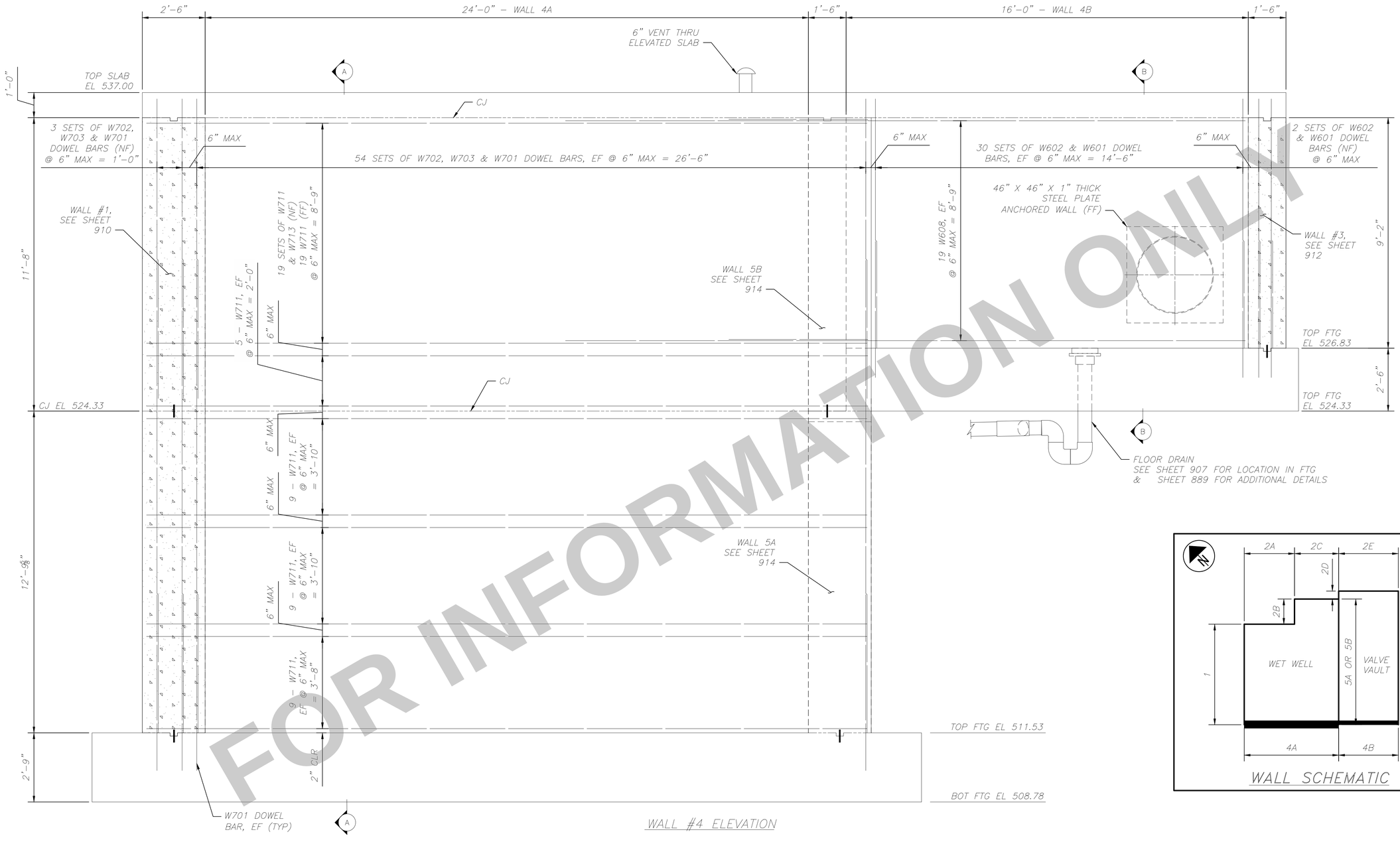
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CHECKED RMW

WALL DETAILS

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NOTES

1. FOR ABBREVIATION LEGEND, SEE SHEET 901.
2. FOR REQUIRED LAP LENGTHS, SEE SHEET 920.
3. FOR SECTION A–A AND B–B, SEE SHEET 915.

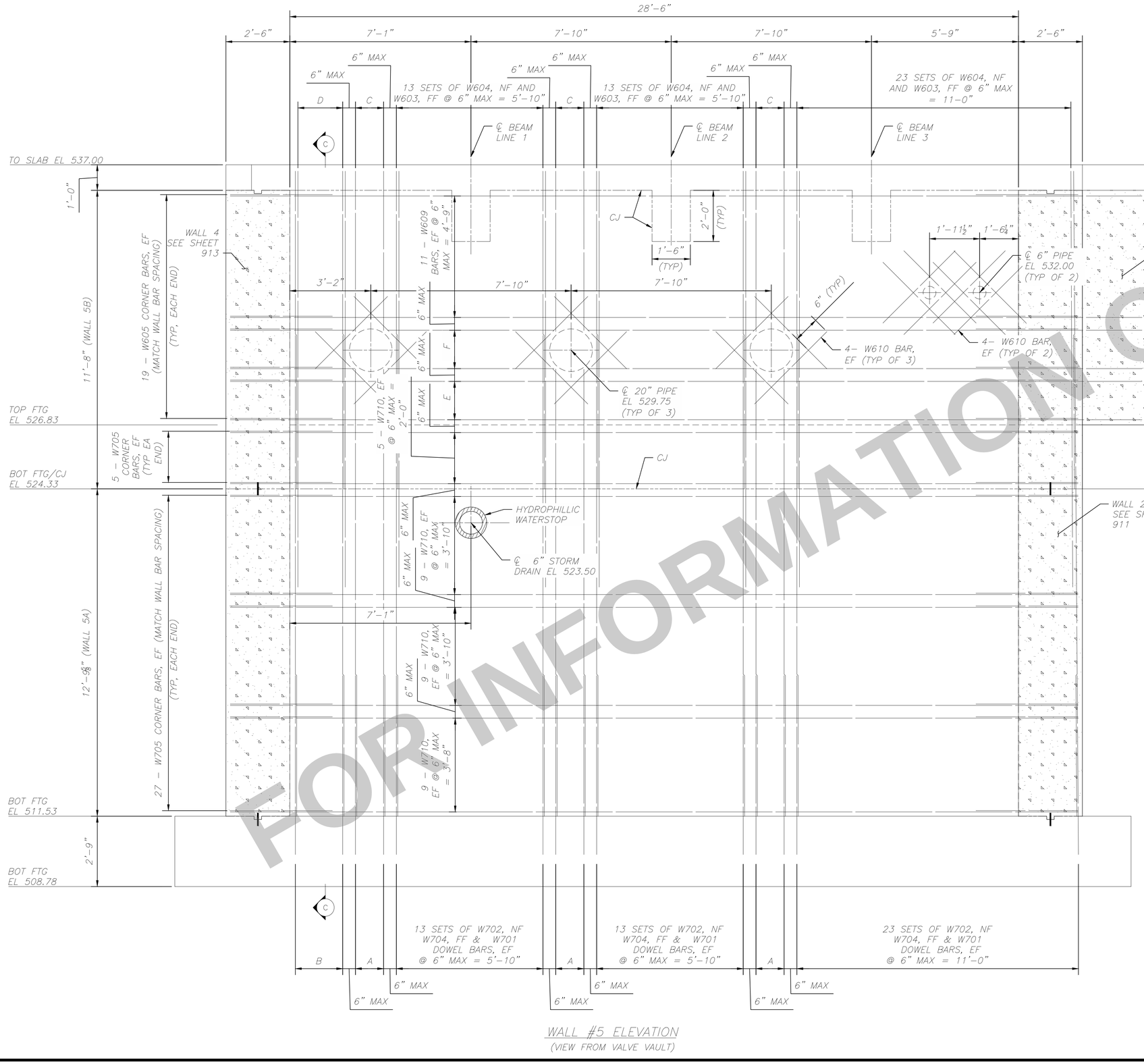
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WALL DETAILS

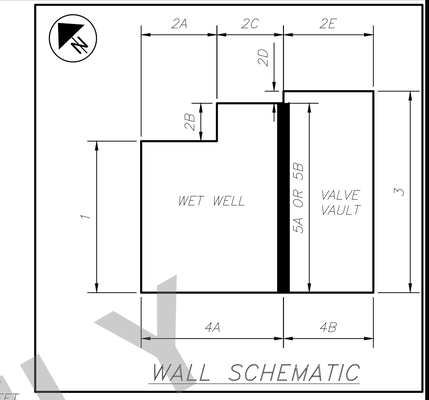
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WALL #5 ELEVATION
(VIEW FROM VALVE VAULT)



WALL SCHEMATIC

LEGEND

A – 2 SETS OF W702 (NF), W704 (FF) & W701 DOWEL BARS, EF @ 6" MAX

B – 5 SETS OF W702 (NF), W704 (FF) & W701 DOWEL BARS, EF @ 6" MAX = 2'–0"

C – 2 SETS OF W604, NF AND W603, FF @ 6" MAX (SEE NOTE 4)

D – 5 SETS OF W604, NF AND W603, FF @ 6" MAX = 2'–0"

E – 4 SETS OF W609, EF @ 6" MAX = 1'–6"

F – 4 SETS OF W609, EF @ 6" MAX = 1'–6" (SEE NOTE 4)

NOTES

1. FOR ABBREVIATION LEGEND, SEE SHEET 901.
2. FOR REQUIRED LAP LENGTHS, SEE SHEET 920.
3. FOR SECTION C–C, SEE SHEET 915.
4. FIELD TRIM BARS 2" CLEAR AT ALL OPENINGS.

FOR INFORMATION ONLY

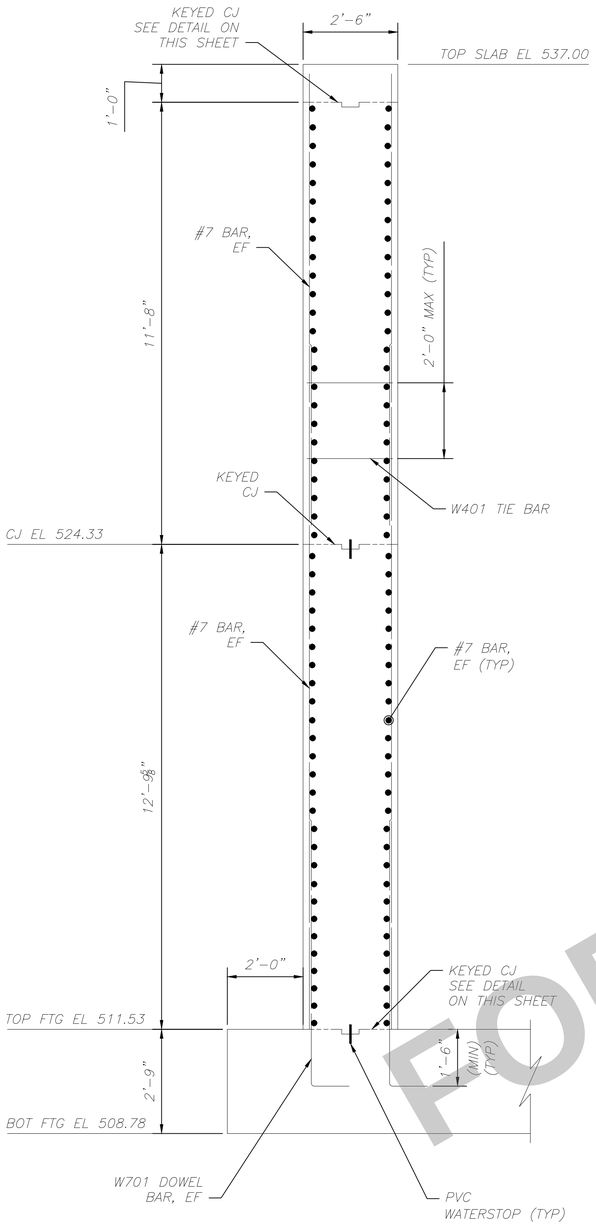
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WALL DETAILS

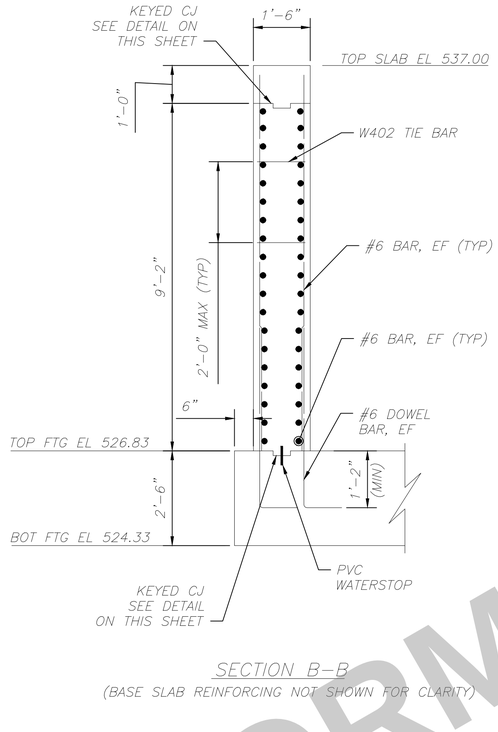
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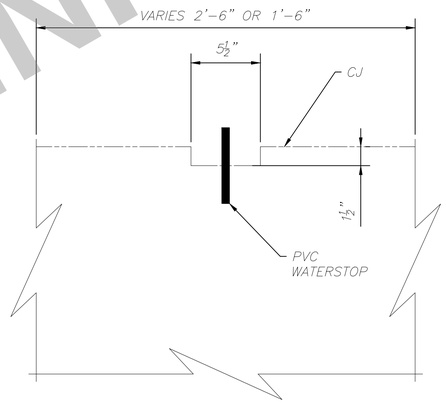
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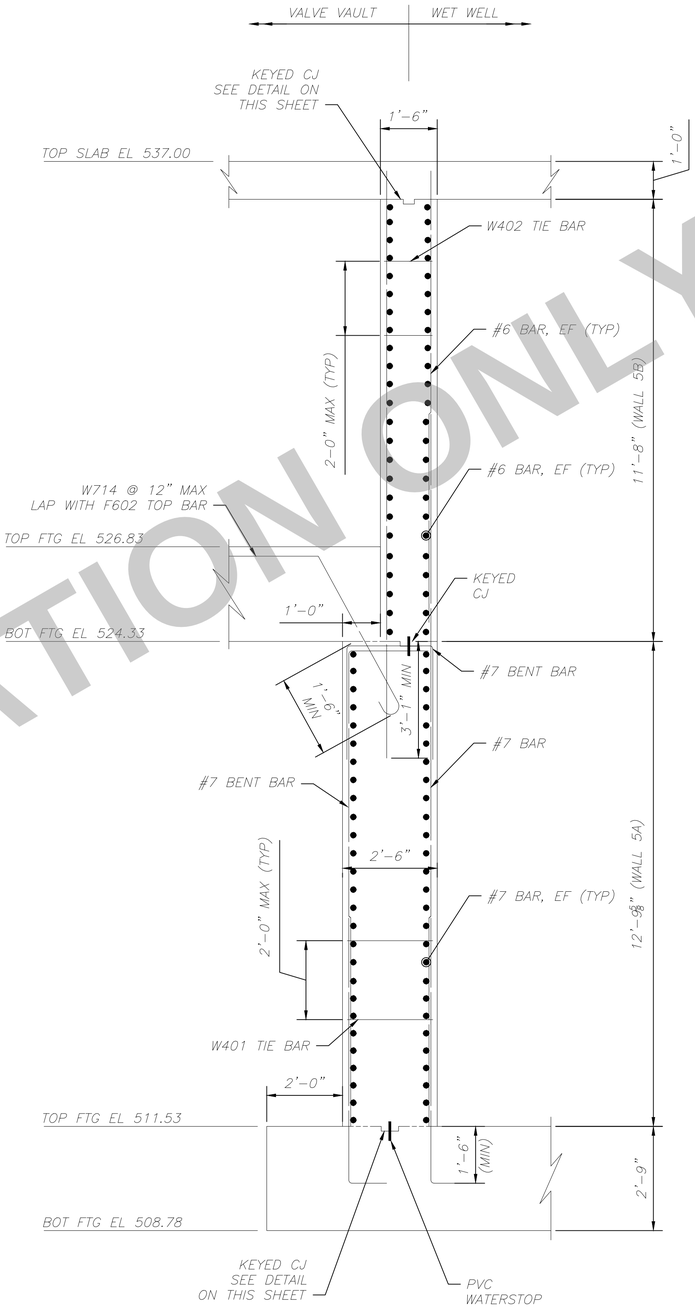
SECTION A–A
(BASE SLAB REINFORCING NOT SHOWN FOR CLARITY)



SECTION B–B
(BASE SLAB REINFORCING NOT SHOWN FOR CLARITY)



KEYED JOINT DETAIL
(REINFORCING NOT SHOWN FOR CLARITY)



SECTION C–C
(BASE SLAB REINFORCING NOT SHOWN FOR CLARITY)

NOTES

1. FOR ABBREVIATION LEGEND, SEE SHEET 901.
2. FOR REQUIRED LAP LENGTHS, SEE SHEET 920.
3. FOR LOCATION OF SECTIONS A–A, B–B AND C–C SEE SHEETS 909 THRU 914.

FOR INFORMATION ONLY

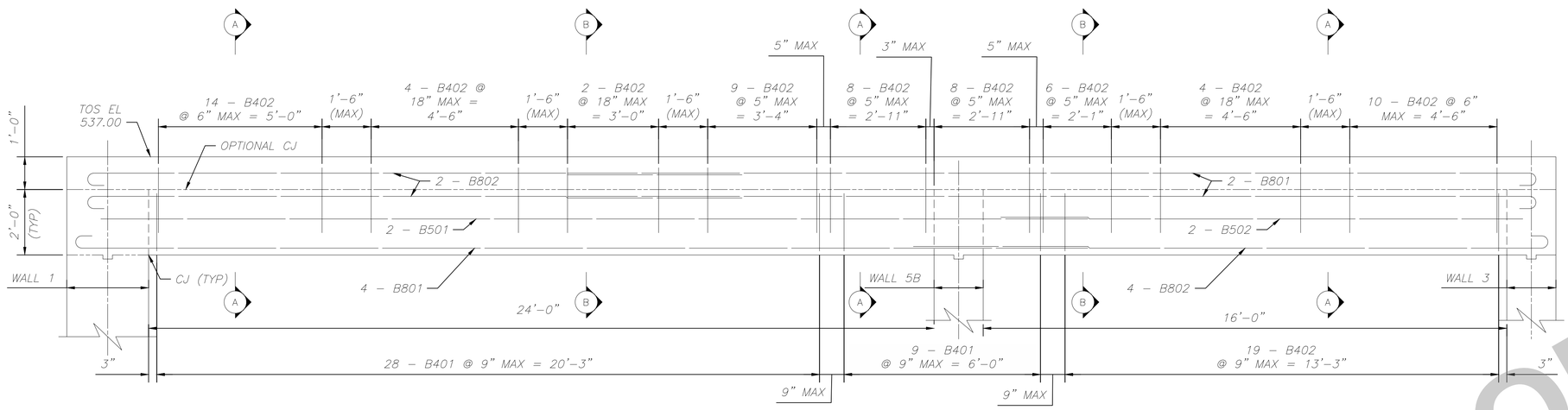
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WALL SECTIONS

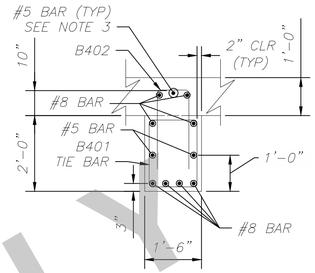
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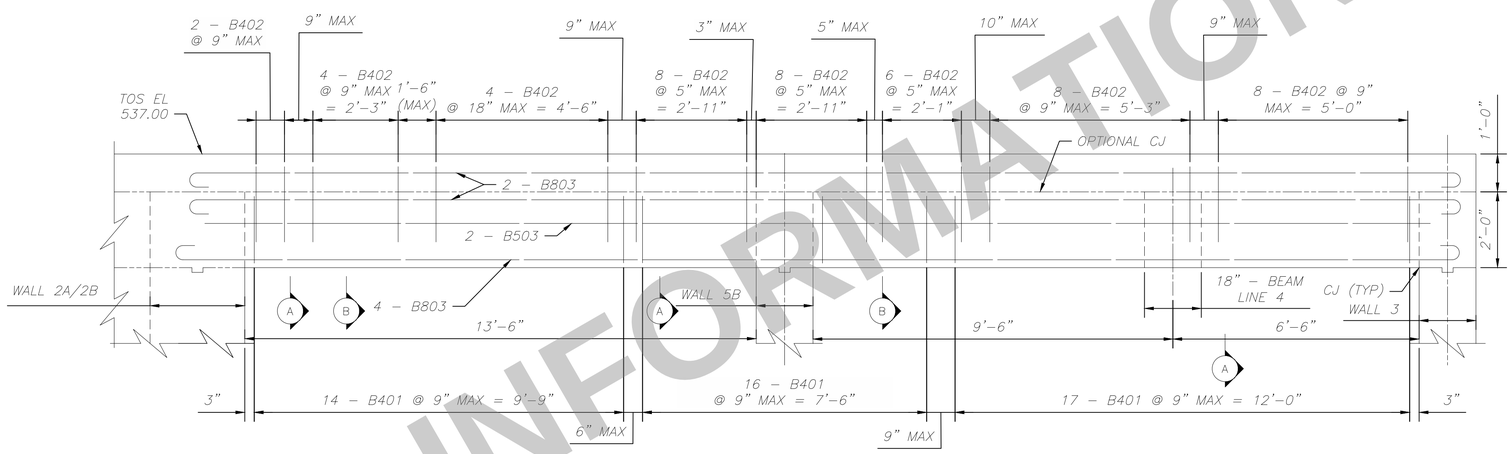
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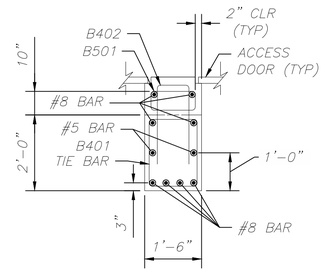
BEAM ELEVATION (BEAM LINES 1 & 2)



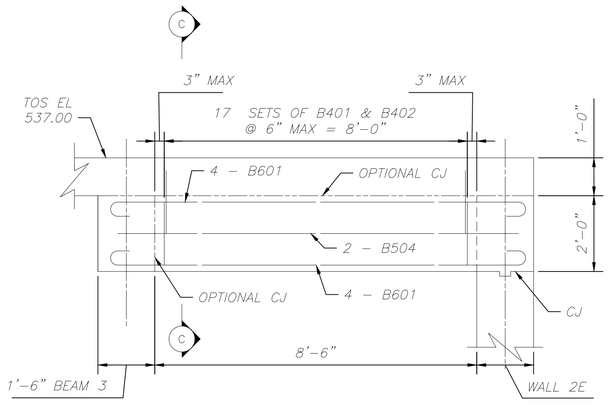
SECTION A–A



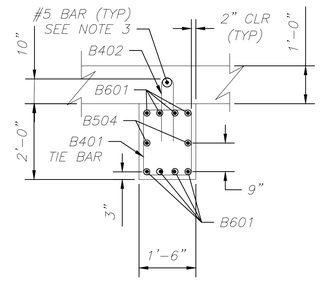
BEAM ELEVATION (BEAM LINE 3)



SECTION B–B



BEAM ELEVATION (BEAM LINE 4)



SECTION C–C

NOTES

1. FOR ABBREVIATION LEGEND, SEE SHEET 901.
2. FOR REQUIRED LAP LENGTHS, SEE SHEET 920.
3. ONE #5 BAR FROM TOP MAT OF SLAB TO BE PLACED INSIDE COMPOSITE SHEAR REINFORCING AS SHOWN.

FOR INFORMATION ONLY

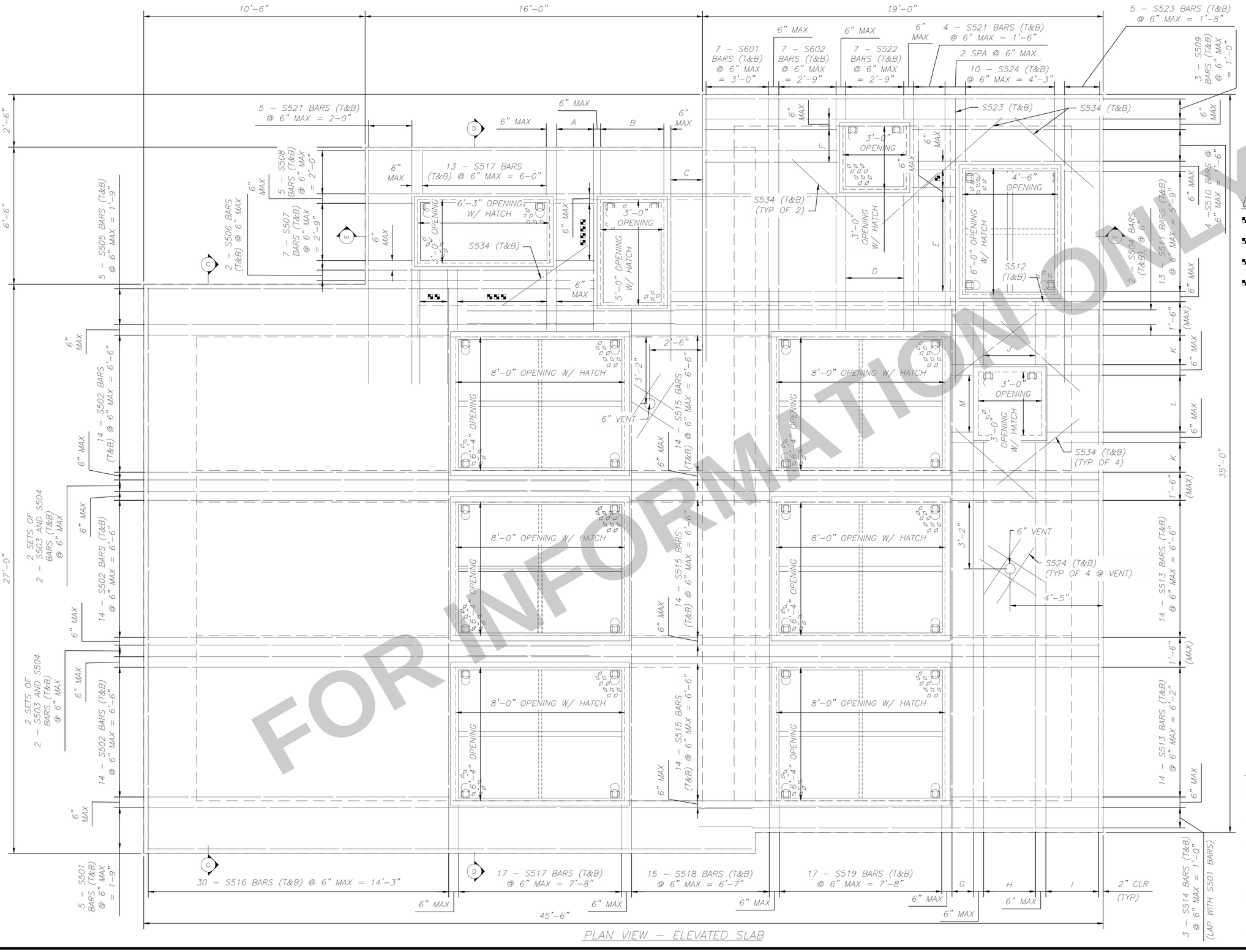
CALCULATED MJR
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BEAM DETAILS

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PLAN VIEW – ELEVATED SLAB

LEGEND

- – 2 – S517 BARS (T&B) @ 6" MAX
- – 4 – S525 BARS (T&B) @ 6" MAX = 1'– 4"
- – 10 – S526 BARS (T&B) @ 6" MAX = 4'–3"
- – 7 – S527 BARS (T&B) @ 6" MAX = 2'–8"

A – 5 – S528 BARS (T&B) @ 6" MAX = 1'–9"

B – 7 – S517 BARS (T&B) @ 6" MAX = 3'–0"

C – 4 – S529 BARS (T&B) @ 6" MAX = 1'–6"

D – 7 – S530 BARS (T&B) @ 6" MAX = 2'–9"

E – 10 – S523 BARS (T&B) @ 6" MAX = 4'–6"

F – 4 – S531 BARS (T&B) @ 6" MAX = 1'–6"

G – 3 – S520 BARS (T&B) @ 6" MAX = 1'–0"

H – 6 – S532 BARS (T&B) @ 6" MAX = 2'–6"

I – 6 – S520 BARS (T&B) @ 6" MAX = 2'–6"

J – 6 – S524 BARS (T&B) @ 6" MAX = 2'–6"

K – 4 – S513 BARS (T&B) @ 6" MAX = 1'–6"

L – 7 – S533 BARS (T&B) @ 6" MAX = 2'–8"

M – 7 – S519 BARS (T&B) @ 6" MAX = 2'–8

NOTES

1. FOR ABBREVIATION LEGEND, SEE SHEET 901.
2. FOR REQUIRED LAP LENGTHS, SEE SHEET 920.
3. FOR SECTIONS C–C, D–D AND E–E, SEE SHEET 918.
4. FIELD TRIM BARS 2" CLEAR AT ALL OPENINGS.
5. SEE SHEET 916 FOR ADDITIONAL REINFORCING STEEL IN SLAB ALONG BEAM LINES.
6. REFER TO SHEET 901 FOR ADDITIONAL HATCH INFO.

FOR INFORMATION ONLY

Horiz: 1 inch = 20 feet

CALCULATED MJR
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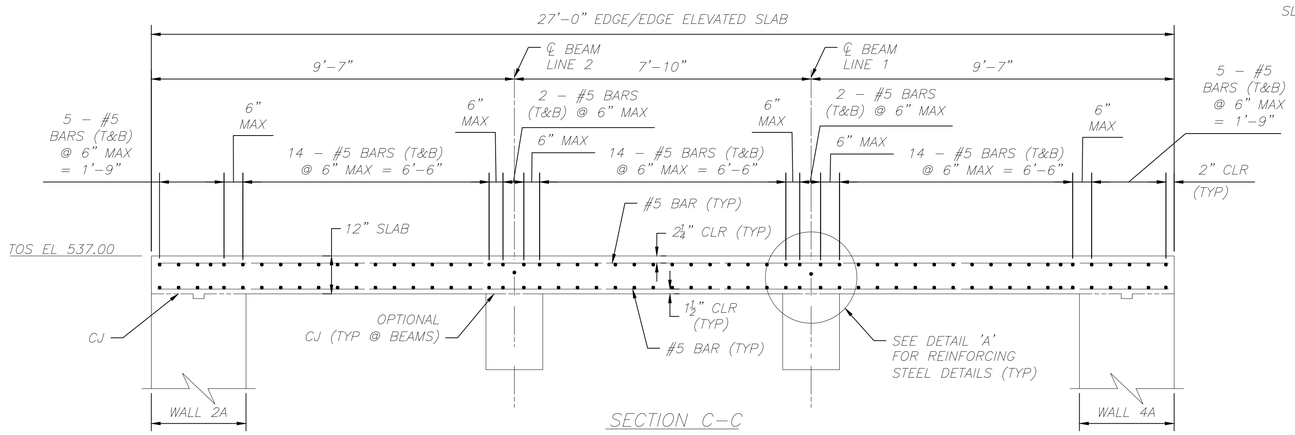
ELEVATED SLAB

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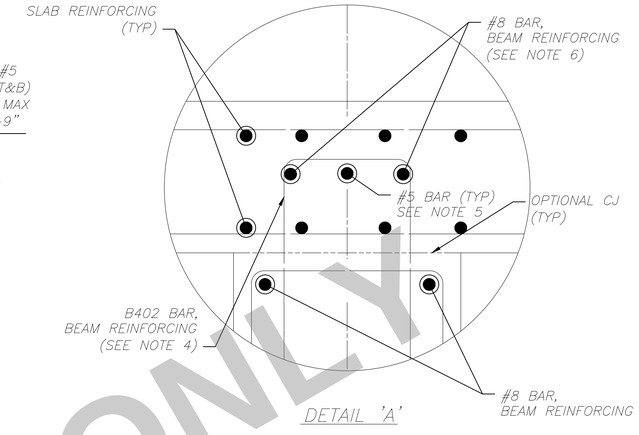
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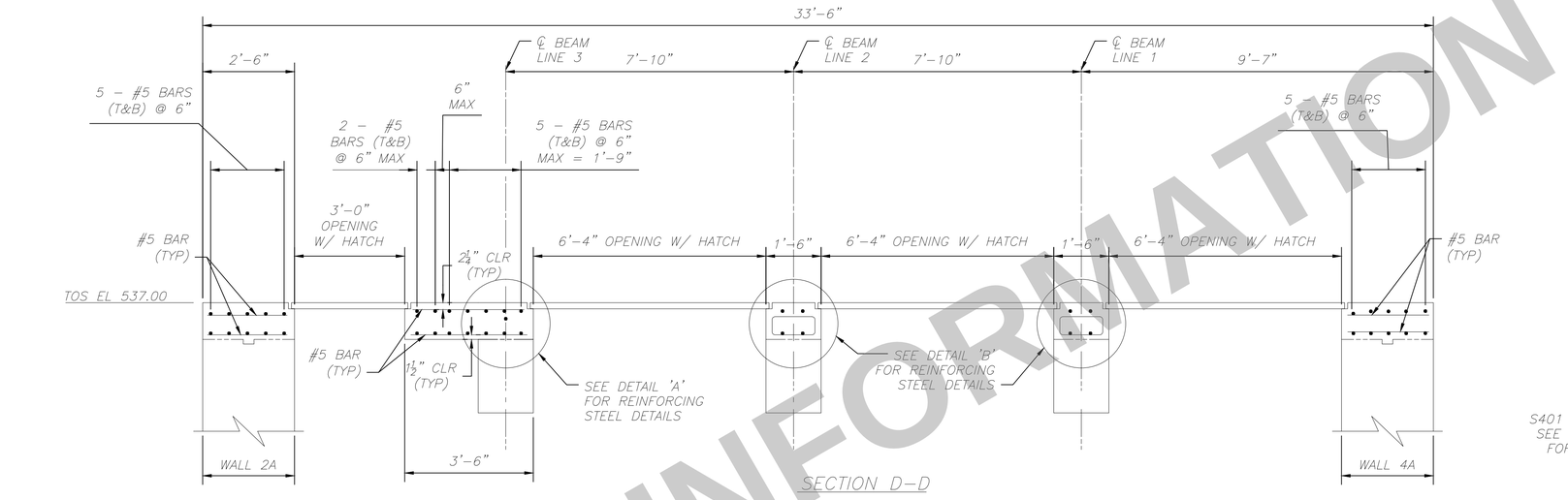
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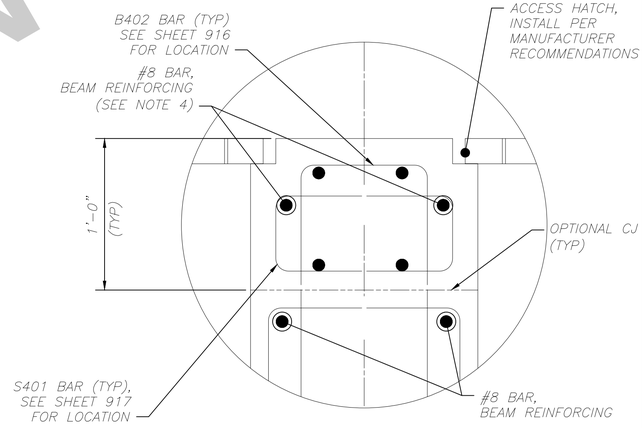
SECTION C-C



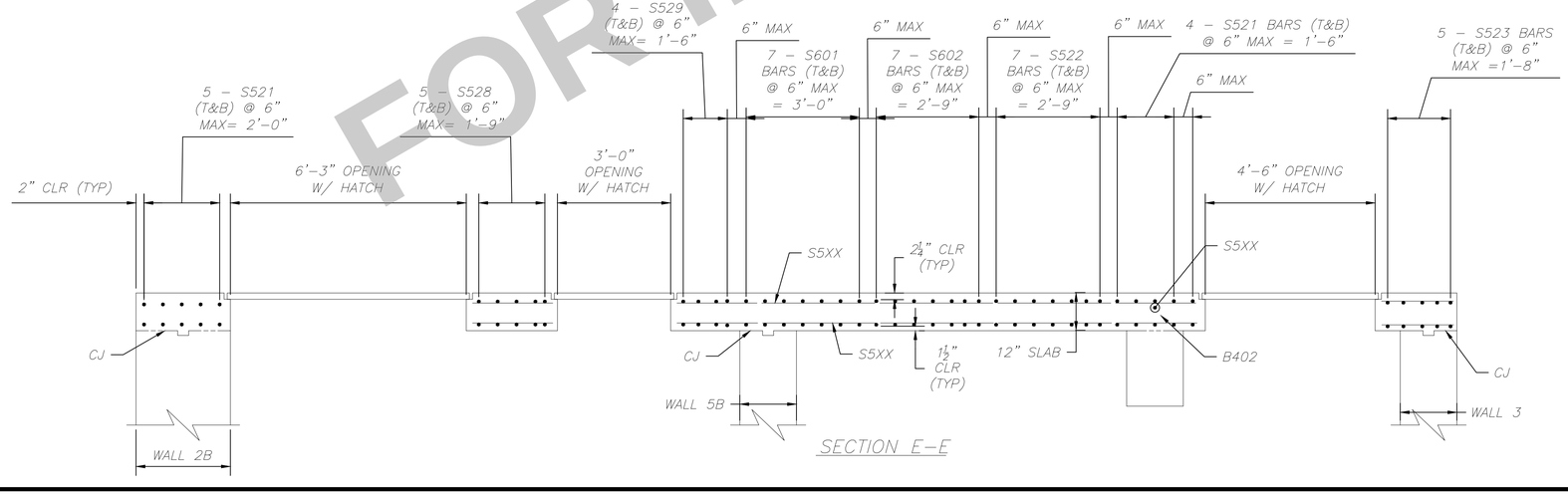
DETAIL 'A'



SECTION D-D



DETAIL 'B'



SECTION E-E

NOTES

1. FOR ABBREVIATION LEGEND, SEE SHEET 901.
2. FOR REQUIRED LAP LENGTHS, SEE SHEET 920.
3. FOR LOCATION OF SECTIONS C-C, D-D AND E-E, SEE SHEET 917.
4. FOR BEAM ELEVATIONS AND SECTIONS, SEE SHEET 916.
5. ONE #5 BAR FROM TOP MAT OF SLAB TO BE PLACED INSIDE COMPOSITE SHEAR REINFORCING AS SHOWN.
6. SEE BEAM ELEVATIONS ON SHEET 916 FOR BAR DESIGNATION.
7. APPLY NON-EPOXY SEALER TO ALL EXPOSED HORIZONTAL TOP SLAB CONCRETE SURFACES AND THE VERTICAL PORTIONS OF THE PERIMETER WALLS WHICH ARE VISIBLE IN THE FINAL CONDITION.

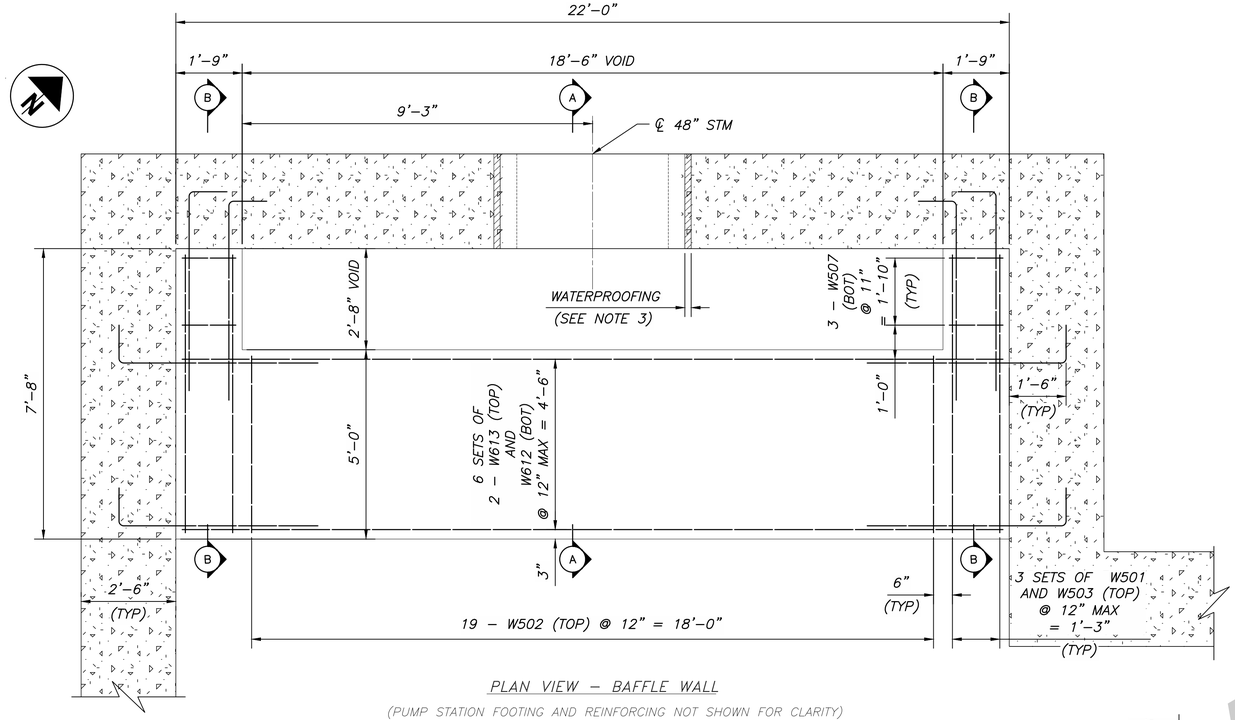
FOR INFORMATION ONLY

CALCULATED MJR
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ELEVATED SLAB DETAILS

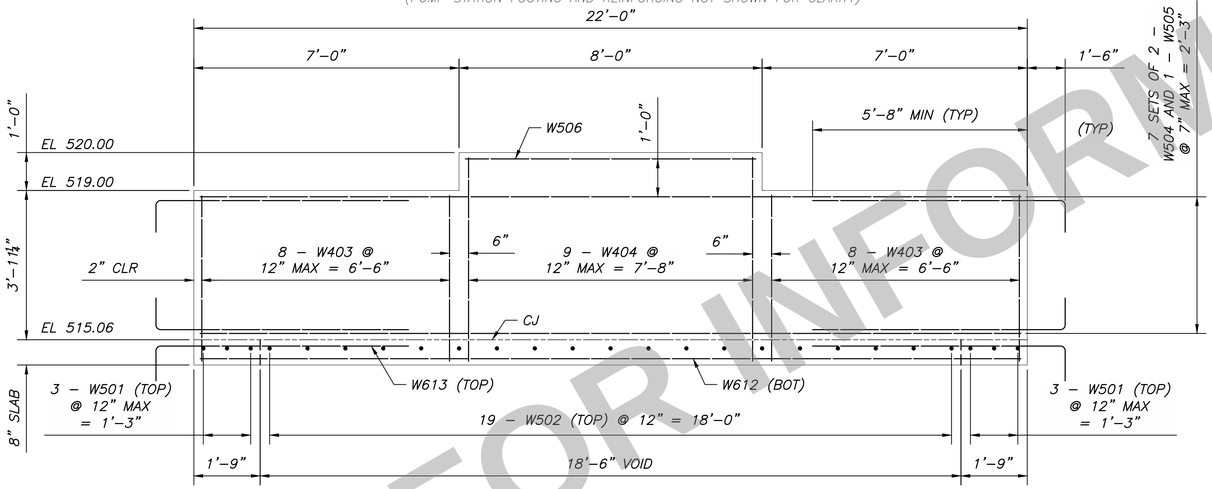
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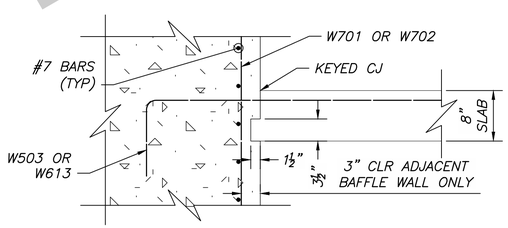
PLAN VIEW – BAFFLE WALL

(PUMP STATION FOOTING AND REINFORCING NOT SHOWN FOR CLARITY)



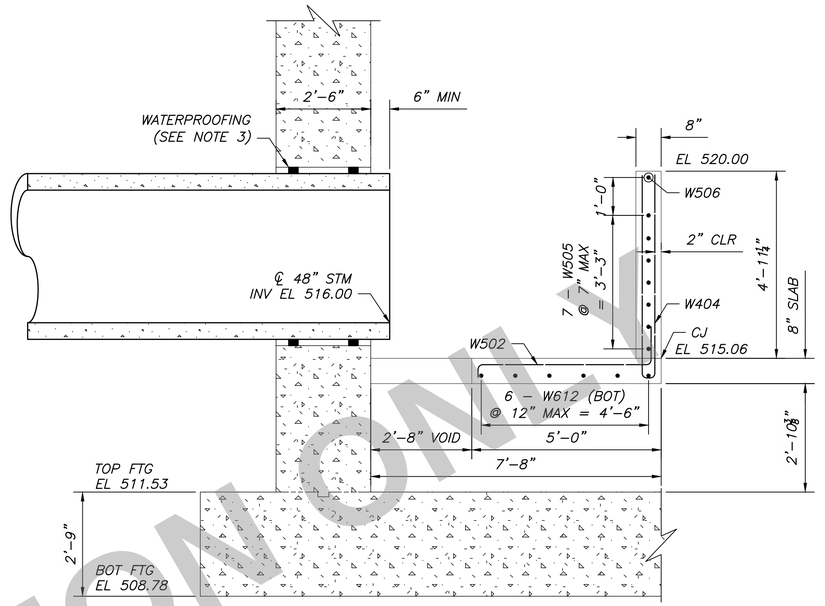
ELEVATION VIEW – BAFFLE WALL

(PUMP STATION WALLS NOT SHOWN FOR CLARITY)



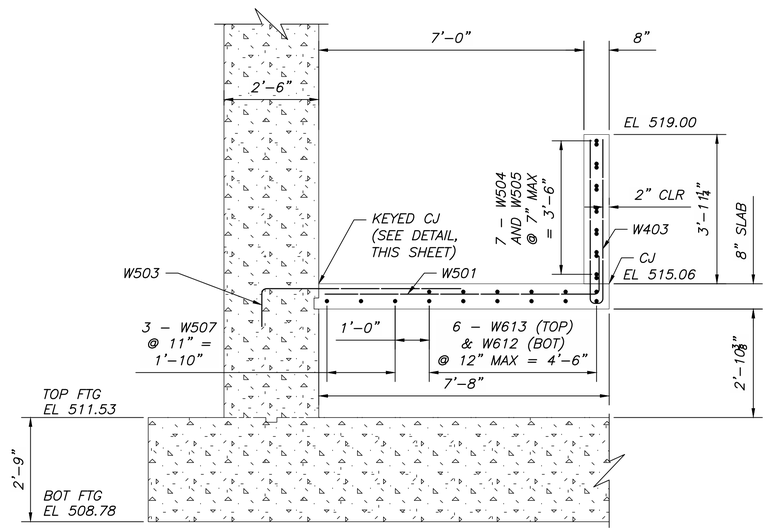
KEYED CJ DETAIL – BAFFLE WALL

(PARTIAL REINFORCING SHOWN, KEYED CJ INSTALLED ALONG ENTIRE PERIMETER IN CONTACT WITH PUMP STATION WALL)



SECTION A–A

(PUMP STATION REINFORCING NOT SHOWN FOR CLARITY)



SECTION B–B

(PUMP STATION REINFORCING NOT SHOWN FOR CLARITY)

NOTES

1. ALL REINFORCING STEEL SHALL BE PLACED WITH 2" MINIMUM CLEARANCE UNLESS OTHERWISE NOTED.
2. FOR REQUIRED LAP LENGTHS, SEE SHEET 920.
3. WRAP CONDUITS WITH (2) ROPES OF HYDROPHILLIC WATERSTOP AND INSTALL PER MANUFACTURER'S SPECIFICATIONS.

LEGEND

– PUMPSTATION GEOMETRY, SEE SHEETS 906 THROUGH 918 FOR ADDITIONAL INFORMATION NOT SHOWN

FOR INFORMATION ONLY

CALCULATED RMW
CHECKED MJR

BAFFLE WALL DETAILS

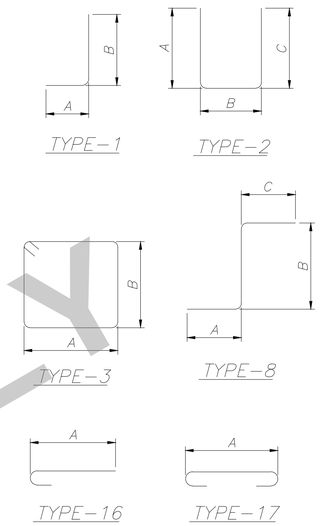
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MARK	TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
SUBSTRUCTURE – BASE SLAB											
F501	16	6'–0"	100	STR							
F601	8	18'–4"	220	2	1'–0"	16'–8"	1'–0"				
F602	124	19'–4"	3601	2	1'–0"	17'–8"	1'–0"				
F603	14	21'–4"	449	2	1'–0"	19'–8"	1'–0"				
F604	70	37'–4"	3925	2	1'–0"	35'–8"	1'–0"				
F605	4	35'–4"	212	2	1'–0"	33'–8"	1'–0"				
F606	8	4'–4"	52	2	1'–0"	2'–8"	1'–0"				
F701	90	39'–2"	7205	2	1'–2"	37'–2"	1'–2"				
F702	42	32'–8"	2804	2	1'–2"	30'–8"	1'–2"				
F703	124	34'–8"	8786	2	1'–2"	32'–8"	1'–2"				
F704	26	24'–2"	1284	2	1'–2"	22'–2"	1'–2"				
SUB–TOTAL			28,638								

MARK	TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
SUPERSTRUCTURE – BEAMS											
B401	176	6'–1"	715	3	1'–2"	1'–8"					
B402	195	5'–0"	214	2	2'–4"	0'–7"	2'–4"				
B501	4	30'–0"	125	STR							
B502	4	18'–3"	76	STR							
B503	2	33'–8"	70	STR							
B504	2	11'–0"	23	STR							
B601	8	12'–4"	148	17	11'–0"						
B801	16	29'–11"	1278	16	29'–1"						
B802	16	22'–3"	951	16	21'–5"						
B803	8	35'–4"	755	17	33'–8"						
SUB–TOTAL			4,355								



MARK	TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
SUBSTRUCTURE – WALLS & BAFFLE WALL											
W401	756	3'–2"	1599	17	2'–2"						
W402	329	2'–2"	475	17	1'–2"						
W403	16	6'–6"	69	2	3'–2"	0'–4"	3'–2"				
W404	9	10'–6"	63	2	5'–2"	0'–4"	5'–2"				
W501	6	7'–4"	46	1	0'–10"	6'–8"					
W502	19	5'–7"	111	8	0'–4"	4'–8"	0'–10"				
W503	6	4'–7"	29	1	0'–10"	3'–11"					
W504	14	7'–10"	114	1	0'–10"	7'–2"					
W505	7	21'–8"	158	STR							
W506	1	7'–8"	8	STR							
W507	6	1'–5"	9	STR							
W601	276	6'–10"	2833	1	1'–0"	6'–0"					
W602	276	9'–10"	4077	STR							
W603	60	12'–6"	1126	STR							
W604	60	15'–6"	1397	STR							
W605	190	7'–4"	2093	1	3'–9"	3'–9"					
W606	38	18'–8"	1065	STR							
W607	38	34'–8"	1979	STR							
W608	38	20'–6"	1170	STR							
W609	38	35'–8"	2036	STR							
W610	40	3'–6"	210	STR							
W611	8	5'–0"	60	STR							
W612	6	21'–8"	195	STR							
W613	12	8'–0"	144	1	1'–0"	7'–2"					
W701	456	7'–10"	7301	1	1'–2"	6'–10"					
W702	396	17'–0"	13760	STR							
W703	396	12'–5"	10050	STR							
W704	60	14'–6"	1778	1	2'–2"	12'–6"					
W705	536	8'–6"	9312	1	4'–4"	4'–4"					
W706	102	26'–8"	5560	STR							
W707	102	12'–8"	2641	STR							
W708	102	8'–8"	1807	STR							
W709	102	18'–2"	3788	STR							
W710	64	33'–2"	4339	STR							
W711	102	28'–8"	5977	STR							
W712	8	6'–1"	99	STR							
W713	19	12'–3"	476	37	5'–6"	0'–11"	0'–11"	5'–6"			
W714	32	9'–3"	605	18	4'–7"	1'–11"	3'–6"				
SUB–TOTAL			88,559								

MARK	TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
SUPERSTRUCTURE – SLAB											
S401	64	3'–5"	146	3	1'–2"	0'–4"					
S501	10	28'–8"	299	STR							
S502	84	14'–2"	1241	STR							
S503	8	18'–3"	152	STR							
S504	12	30'–0"	375	STR							
S505	10	21'–3"	222	STR							
S506	4	10'–8"	45	STR							
S507	14	2'–0"	29	STR							
S508	10	22'–2"	231	STR							
S509	6	18'–8"	117	STR							
S510	8	8'–10"	74	STR							
S511	26	1'–8"	45	STR							
S512	2	20'–4"	42	STR							
S513	72	6'–11"	519	STR							
S514	6	19'–7"	123	STR							
S515	84	6'–4"	555	STR							
S516	60	26'–8"	1669	STR							
S517	78	2'–0"	163	STR							
S518	30	25'–6"	798	STR							
S519	48	3'–10"	192	3							
S520	18	25'–0"	469	STR							
S521	18	10'–11"	205	STR							
S522	14	1'–0"	15	STR							
S523	32	13'–6"	451	STR							
S524	48	3'–0"	150	STR							
S525	8	3'–11"	33	STR							
S526	20	2'–9"	57	STR							
S527	14	1'–9"	26	STR							
S528	10	8'–5"	88	STR							
S529	8	10'–9"	90	STR							
S530	14	6'–3"	91	STR							
S531	8	6'–2"	51	STR							
S532	12	17'–6"	219	STR							
S533	14	2'–6"	37	STR							
S534	18	5'–0"	94	STR							
S601	14	12'–6"	263	STR							
S602	14	10'–11"	230	STR							
SUB–TOTAL			9,606								

NOTES

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE THE NUMBER S601 IS A NO. 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT, UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD" WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.
2. ALL REINFORCING STEEL TO BE EPOXY COATED.
3. MINIMUM BAR LAPS UNLESS OTHERWISE STATED SHALL BE:

   #5 BAR = 3'–1" (HORIZ)

   #6 BAR = 4'–0" (HORIZ)
   #6 BAR = 3'–7" (VERT)

   #7 BAR = 4'–8" (HORIZ)
   #7 BAR = 4'–2" (VERT)

   #8 BAR = 5'–4" (HORIZ)
   #8 BAR = 4'–9" (VERT)

4. SEE SHEET 901 FOR ADDITIONAL NOTES AND ABBREVIATION LEGENDS.

CALCULATED RMW
CHECKED MJR

REINFORCING STEEL LIST

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GENERAL NOTES

1. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE AND LOCAL SAFETY REQUIREMENTS AS WELL AS ADDITIONAL OWNER SPECIFIC SAFETY REQUIREMENTS. THE CONTRACTOR SHALL EXERCISE PRECAUTION ALWAYS FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT SHALL ALSO BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INITIATE, MAINTAIN AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK INCLUDING THE CURRENT EDITION OF THE OCCUPATIONAL SAFETY AND HEALTH ACT.

2. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ERECTION PROCEDURES AND SEQUENCES. DURING ERECTION OF THE STRUCTURE, THE CONTRACTOR SHALL DETERMINE MEANS AND METHODS OF TEMPORARY BRACING AND/OR SHORING (INCLUDING BUT NOT LIMITED TO TEMPORARY TIE-DOWNS, BRACING, OR GUYS) AS WELL AS THE ADEQUACY OF SHORT-TERM OR INCOMPLETE CONNECTIONS. ALL MISCELLANEOUS ERECTION MATERIAL SHALL BE REMOVED AFTER STABILITY OF THE STRUCTURE HAS BEEN VERIFIED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR. IF SHORING OF THE EXISTING STRUCTURE IS REQUIRED. SHORING DRAWINGS SHALL BE PREPARED BY A LICENSE ENGINEER AND SUBMITTED TO AND APPROVED BY THE OWNER OR THEIR REPRESENTATIVE BEFORE SHORING WORK IS PERMITTED TO COMMENCE.

3. THE DRAWINGS AND SPECIFICATIONS REPRESENT THE COMPLETED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES AND MEANS NECESSARY TO PROTECT PERSONS AND THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING, ETC. OBSERVATION VISITS BY THE ARCHITECT OR ENGINEER DOES NOT INCLUDE INSPECTION OF THOSE ITEMS.

4. NO PIPES OR DUCTS SHALL BE PLACED IN STRUCTURAL MEMBERS UNLESS SPECIFICALLY DETAILED ANDAPPROVED BY THE ENGINEER.

5. CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON THE STRUCTURAL FRAME. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOADS. PROVIDE SHORING AND BRACING WHERE DESIGN STRENGTH HAS NOT BEEN ATTAINED OR STRUCTURE IS NOT COMPLETE.

6. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE TEMPORARY REMOVAL AND REINSTALLATION (INCLUDING NECESSARY MODIFICATIONS) OF EXISTING UTILITIES OR OTHER OBSTRUCTIONS AS REQUIRED FOR THE SUCCESSFUL COMPLETION OF WORK.

7. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE REMOVAL OF CONSTRUCTION WASTE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

8. DIMENSIONS PERTAINING TO EXISTING CONDITIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO FABRICATION. CONSTRUCTION AND/OR ERECTION. DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THE ENGINEERING DRAWINGS SHALL BE SUBMITTED IN WRITTEN FORM TO THE OWNER. OR THEIR APPOINTED REPRESENTATIVE, FOR REVIEW AND/OR APPROVAL.

9. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE OWNER OR THEIR APPOINTED REPRESENTATIVE FOR APPROVAL PRIOR TO THE START OF SHOP WORK. DISCREPANCIES BETWEEN THE ENGINEERING AND SHOP DRAWINGS SHALL BE DOCUMENTED AND CLEARLY MARKED ON THE SHOP DRAWINGS SUBMITTAL.

CONCRETE NOTES:

1. ALL CONCRETE WORK INCLUDING FORMING, REINFORCING, MIXING, PLACING, FINISHING AND CURING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN CONCRETE INSTITUTE (ACI) MANUAL OF CONCRETE PRACTICE INCLUDING "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI 318 AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", ACI 301, AND ALL STANDARDS REFERENCED THEREIN.

2. CONCRETE SHALL BE CLASS QC2 PER ODOT 2019 CMS ITEM 499.

3A. REINFORCING STEEL SHALL BE DEFORMED AND CONFORM TO A615, A616, OR A617, GRADE 60, WITH A MINIMUM YIELD STRESS (FY) OF 60,000 PSI.

3B. WELDED WIRE FABRIC (WWF) REINFORCING STEEL SHALL BE SMOOTH AND CONFORM TO A185, GRADE 65, WITH A MINIMUM YIELD STRESS (FY) OF 65,000 PSI. THE MINIMUM LAP FOR SPLICES SHALL BE 9".

4. CONCRETE COVER ON REINFORCING STEEL CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH SHALL BE 3", ALL OTHER COVER SHALL BE 1 1/2 " UNO.

5. CONCRETE FINISH: INTERIOR FLOOR SLAB-ON-GRADE - HARD TROWELED FF 30 / FL 25 FINISH (OR AS REQ'D FOR FLOOR FINISH)

6. SUBMIT REINFORCEMENT SHOP DRAWINGS AND CONCRETE MIX DESIGN TO THE ENGINEER OF RECORD (E.O.R.) FOR REVIEW PRIOR TO PLACEMENT.

7. GENERAL CONTRACTOR SHALL CHECK ENTIRE SET OF CONTRACT DOCUMENTS AND DRAWINGS (E.G. ARCHITECTURAL,M.E.P., F.P., ETC.) AND WITH OTHER CONTRACTORS FOR OPENINGS, SLEEVES, ANCHORS, HANGERS, INSERTS, SLAB DEPRESSIONS AND OTHER ITEMS RELATED TO THE CONCRETE WORK, AND SHALL ASSUME FULL RESPONSIBILITY FOR THEIR PROPER LOCATION BEFORE PLACING CONCRETE.

8. SPACE CONTROL JOINTS TO FORM APPROXIMATE SQUARE SECTIONS W/ AREAS NOT TO EXCEED 150 SQ. FEET. LOCATE JOINTS AT ISOLATION JOINTS, COLUMNS, CHANGES IN SLAB THICKNESS AND OTHER FEATURES PENETRATING OR INTERSECTING THE SLAB. SEE PLAN FOR LOCATION.

9. ALL REINFORCING SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH ACI 315 AND ACI 315-R. THE REINFORCING STEEL CONTRACTOR SHALL FABRICATE ALL REINFORCEMENT AND FURNISH ALL ACCESSORIES, CHAIRS, SPACER BARS, AND SUPPORTS NECESSARY TO SECURE THE REINFORCEMENT (BARS & W.W.F.) IN THE POSITIONS SHOWN ON THE DRAWINGS.

10. COMPRESSION AND TENSION LAP SPLICES SHALL BE CLASS "B" AND SHALL BE 48 BAR DIAMETER MINIMUM U.N.O. LAP TOP BARS AT MID-SPAN AND LAP BOTTOM BARS AT SUPPORTS WHERE TWO LAYERS OF REINFORCEMENT IS PROVIDED U.N.O.

11. WELDING OF REINFORCING BARS WILL ONLY BE ALLOWED WHEN SHOWN ON THE STRUCTURAL DRAWINGS.

CONCRETE NOTES (CONTINUED)

17. THE MINIMUM LAP FOR CONCRETE REINFORCING SPLICES SHALL BE THE FOLLOWING:

#3 - 1'-8"
#4 - 2'-0"
#5 - 2'-6"
#6 - 3'-0"

18. THE MINIMUM LENGTH OF STANDARD 90°HOOK SHALL BE:

#3 - 0'-6"
#4 - 0'-8"
#5 - 0'-10"
#6 - 1'-0"

UNIT MASONRY NOTES:

A. ALL MASONRY CONSTRUCTION SHALL CONFORM TO ACI 530, "BUILDING CODE REQUIREMENTS FOR CONCRETE MASONRY STRUCTURES", AND ACI 530.1, "SPECIFICATION FOR MASONRY STRUCTURES", AND COMMENTARIES, LATEST EDITIONS.

B. MATERIAL PROPERTIES:

1. PROVIDE UNIT MASONRY THAT DEVELOPS THE MINIMUM NET-AREA COMPRESSIVE STRENGTHS OF THE MASONRY ASSEMBLIES (F'm) AT 28 DAYS AS FOLLOWS:

   a. CONCRETE UNIT MASONRY F'm = 1,500 psi

2. UNIT MASONRY MATERIALS AND REINFORCING SHALL CONFORM TO THE LATEST EDITIONS OF THE FOLLOWING ASTM SPECIFICATIONS:

   a. CONCRETE MASONRY UNITS (SOLID AND HOLLOW) SHALL BE NORMAL WEIGHT UNITS, TYPE 1, GRADE N AND CONFORM TO ASTM C90 WITH A MINIMUM NET AREA UNIT COMPRESSION STRENGTH OF 1,900 psi.

   b. ALL CONCRETE MASONRY UNITS SHALL CONFORM TO D-2 CLASSIFICATION PER UL DESIGN No.U905, 2 HOUR FIRE RATED NON LOAD BEARING WALLS.

   c. PORTLAND CEMENT-LIME MORTAR MIX SHALL CONFORM TO ASTM C270, TYPE "S", WITH A MINIMUM COMPRESSIVE STRENGTH OF 1,800 psi AT 28 DAYS.

   d. REINFORCED MASONRY WALL GROUT SHALL CONFORM TO ASTM C476 WITH A MAXIMUM AGGREGATE SIZE OF 3/8" AND A MINIMUM COMPRESSIVE STRENGTH OF 3,000 psi AT 28 DAYS.

   e. STEEL REINFORCING BARS SHALL CONFORM TO ASTM A615 (GRADE 60) WITH A MINIMUM TENSILE STRENGTH (Fy) = 60,000 psi.

C. GENERAL MASONRY NOTES

1. MORTAR BEDDING FOR LOAD BEARING HOLLOW UNITS SHALL USE FULL MORTAR COVERAGE ON THE HEAD, BED (FACE SHELLS), WEBS AND COLLAR JOINTS, UNO.

2. COURSES OF HOLLOW UNIT MASONRY BELOW FLOOR LEVEL SHALL BE LAID IN A FULL BED OF MORTAR AND GROUTED SOLID.

3. HOLLOW UNITS THAT ARE TO HAVE A GROUTED CORE SHALL HAVE THE SURROUNDING WEBS FULLY MORTARED TO CONFINE THE GROUT TO THE INTENDED CORE.

4. CLEAN-OUT OPENINGS ARE NOT REQUIRED WHEN WALLS ARE ERECTED AND THE CORES GROUTED AT NO MORE THAN FOUR (4) FOOT LIFTS. WALLS CARRIED UP HIGHER THAN FOUR (4) FOOT LIFTS SHALL HAVE A CLEAN-OUT AT THE BASE OF THE CORES TO BE FILLED WITH GROUT.

5. SUPPLY VERTICAL STEEL REINFORCING BARS IN 4'-0" + 48 BAR DIAMETER LAP LENGTHS FOR LOW-LIFT GROUTING METHOD, UNO.

6. PROVIDE DOWELS BETWEEN FOUNDATIONS AND WALL BASES EQUAL TO THE SIZE AND SPACING OF THE VERTICAL STEEL REINFORCING BARS IN THE WALL, UNO. IF A FOUNDATION DOWEL DOES NOT LINE UP WITH A VERTICAL CORE, IT SHALL NOT BE SLOPED MORE THAN ONE (1) HORIZONTAL TO SIX (6) VERTICAL.

7. ALL VERTICAL STEEL REINFORCING BARS SHALL BE AS NOTED ON THE DRAWINGS AND DETAILS WITH CORES FILLED WITH GROUT. THE FIRST CELL AT CORNERS, END WALLS AND EACH SIDE OF CONTROL JOINTS SHALL BE FULLY GROUTED AND REINFORCED PER DETAILS. THE FIRST CELL NEXT TO AN OPENING (DOOR OR WALL OPENING) SHALL BE FULLY GROUTED AND REINFORCED PER DETAILS. VERTICAL STEEL REINFORCING SHALL EXTEND THE FULL HEIGHT OF THE WALLS, UNO.

8. ALL HORIZONTAL JOINT REINFORCEMENT SHALL BE #9 GAGE (W1.7) CONTINUOUS, HOT-DIPPED GALVANIZED, LADDER/TRUSS TYPE (DUR-O-WALL, OR EQUAL) SPACED AT 16" ON CENTER MAXIMUM FOR THE FULL HEIGHT OF WALL UNO AND LOCATED AT THE BASE OF ALL TOP COURSES AND AT TOP OF FIRST COURSE ABOVE ANY WALL OPENING OR FLOOR. HORIZONTAL JOINT REINFORCING SPLICES SHALL BE LAPPED AT LEAST 6" AND CONTAIN AT LEAST ONE CROSS WIRE OF EACH PIECE OF REINFORCEMENT WITHIN THE 6".

9. SEE SHEET 927 FOR CONCRETE MASONRY UNIT CONTROL JOINT DETAILS AND 924 FOR LOCATIONS FOR ALL LOAD BEARING MASONRY WALLS. FOLLOW "NCMA" RECOMMENDATIONS AND GUIDELINES FOR JOINT DETAILS, UNO. PROVIDE CONTROL JOINTS IN MASONRY WALLS NO GREATER THAN 20'-0" ON CENTER MAXIMUM. SEE STRUCTURAL DRAWINGS FOR REQUIRED MASONRY WALL CONTROL/CONSTRUCTION JOINTS IN LOAD BEARING MASONRY WALLS.

10. PLACEMENT OF ALL MASONRY AT WALL RETURNS, CORNERS AND INTERSECTIONS SHALL BE INTEGRAL AND TOOTHED TOGETHER AT EVERY OTHER COURSE PER ACI 530.1 REQUIREMENTS. PROVIDE PROPERLY LAPPED CORNER BARS AT ALL BOND BEAMS AND HORIZONTAL JOINTS AS REQUIRED.

11. MASONRY WALLS SHALL BE ADEQUATELY BRACED/SHORED DURING ERECTION TO SAFELY WITHSTAND ALL ERECTION LOADS, INCLUDING LATERAL LOADS (I.E., WIND AND SEISMIC) PER GOVERNING BUILDING CODE. ALL BRACING/SHORING SHALL REMAIN IN PLACE UNTIL ALL PERMANENT LATERAL SUPPORTS (I.E., FLOOR SLABS, ROOFS, ETC.) ARE FULLY INSTALLED AND HAVE ACHIEVED THEIR FULL DESIGN CAPACITIES.

D. MASONRY LINTELS

1. PROVIDE MASONRY LINTELS OVER ALL OPENINGS WIDER THAN 8" IN MASONRY WALLS.

2. PROVIDE 8" DEEP CONCRETE MASONRY UNIT BOND BEAM LINTEL FOR ALL OPENINGS LESS THAN 4'-0" IN WIDTH WITH (2) #5 REINFORCING BARS AT BOTTOM, UNO. PROVIDE SOLID GROUT FOR THREE (3) COURSES DIRECTLY BELOW LINTEL BEARING. FOR LINTELS IN WALL OPENINGS GREATER THAN OR EQUAL TO 4'-0" IN WIDTH, REFER TO STRUCTURAL SECTIONS AND DETAILS.

UNIT MASONRY NOTES (CONTINUED):

E. QUALITY ASSURANCE

1. ALL MASONRY SHALL BE INSPECTED BY A QUALIFIED, INDEPENDENT, TRAINED AND CERTIFIED FULL-TIME MASONRY INSPECTOR.

2. THE OWNER SHALL EMPLOY AN INDEPENDENT TESTING AGENCY TO PERFORM THREE (3) PRISM TESTS FOR EACH 5,000 SQ.FT. OF MASONRY WALL ERECTED IN ACCORDANCE WITH ACI 530.1.

3. SUBMIT ALL REINFORCING SHOP DRAWINGS FOR CONCRETE MASONRY UNITS PRIOR TO FABRICATION.

WOOD ROOF TRUSSES

1. ROOF TRUSSES SHALL BE DESIGNED ACCORDING TO THE STANDARD SPECIFICATIONS FOR OPEN WEB WOOD TRUSSES AS RECOMMENDED BY THE TRUSS PLATE INSTITUTE (TPI) AND WOOD TRUSS COUNCIL OF AMERICA (WTCA).

2. TRUSS MANUFACTURER SHALL PROVIDE ALL NECESSARY BLOCKING, BRACING, AND CONNECTION MATERIAL TO PROVIDE A COMPLETED INSTALLATION INCLUDING ALL REQUIRED TRUSS BRIDGING. THIS INFORMATION SHALL BE CLEARLY SHOWN ON THE ERECTION PLAN.

3. THE TRUSS MANUFACTURER IN ACCORDANCE WITH ALL ARCHITECTURAL AND STRUCTURAL CRITERIA SHALL DETERMINE THE CONFIGURATION OF THE WEB MEMBERS. TRUSSES SHALL BE CONFIGURED TO FOLLOW FINAL ROOF LINES, UNLESS OTHERWISE NOTED.THE MANUFACTURER SHALL PROVIDE COMPLETED SHOP DRAWINGS AND CALCULATIONS PREPARED AND CERTIFIED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED PRIOR TO FABRICATING TRUSSES. CALCULATIONS AND DRAWINGS SHALL CLEARLY SHOW ALL SUPPORT CONDITIONS AND REACTIONS, LOADING POINTS, AND DIAGRAMS FOR ALL DEAD AND LIVE LOADS. IN ADDITION TO THE SETS THAT ARE REQUIRED BY THE OWNER'S CONTRACTOR OR OTHERS WITH RESPONSIBILITIES ASSOCIATED TO THE SHOP DRAWINGS AND CALCULATIONS. TWO ADDITIONAL SETS OF SHOP DRAWINGS AND CALCULATIONS SHALL BE PROVIDED FOR THE CONTRACTOR TO FORWARD TO THE OWNER'S PROJECT MANAGER.

4. METAL CONNECTOR PLATES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE TRUSS PLATE INSTITUTE. CENTER OF GRAVITY OF ALL INTERSECTING MEMBERS SHALL COINCIDE.

5. TRUSS TO TRUSS CONNECTIONS SHALL BE THE RESPONSIBILITY OF THE TRUSS DESIGNER IN ACCORDANCE WITH THE REQUIREMENTS OF THE TRUSS PLATE INSTITUTE.

6. MAXIMUM TOTAL DEFLECTION TO BE L/240.

7. WOOD ROOF TRUSSES AND ROOF STICK FRAMING TO BE ATTACHED TO WALL TOP PLATES WITH SIMPSON H10 TIES.

WOOD SHEATHING

1. ROOF SHEATHING SHALL BE ½" APA RATED PLYWOOD. PANELS SHALL BE ATTACHED WITH 8d x 2 ½" COMMON NAILS AT 6" o.c. AT PANEL EDGES AND 12" o.c. AT INTERMEDIATE SUPPORTS MINIMUM.

2. INSTALL ROOF SHEATHING WITH THE LONG DIMENSION OF THE PANEL PERPENDICULAR TO THE SUPPORTS WITH A MINIMUM OF TWO SPANS FOR EACH PANEL. STAGGER ALL END JOINTS

TIMBER

1. TIMBER WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE CURRENT ANSI/AF&PA "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION", WITH THE FOLLOWING SUPPLEMENTAL REQUIREMENTS:

2. MINIMUM DESIGN VALUES ARE BASED ON NORMAL LOADING CONDITIONS, SURFACED DRY AND USED AT 19% MAXIMUM MOISTURE CONTENT SHALL BE AS FOLLOWS:

EXTREME FIBER IN BENDING (Fb)	750 PSI
TENSION PARALLEL TO GRAIN (Ft)	450 PSI
HORIZONTAL SHEAR (Fv)	135 PSI
COMPRESSION PERPENDICULAR TO GRAIN (Fc)	425 PSI
COMPRESSION PARALLEL TO GRAIN (Fc)	1,150 PSI
MODULUS OF ELASTICITY (E)	1,400,000 PSI

3. SIZES SHOWN FOR LUMBER ARE STANDARD NORMAL SIZES.

4. SPLICING OF TIMBER MEMBERS IS PROHIBITED EXCEPT AS DETAILED.

5. TIMBER EXPOSED TO WEATHER OR GROUND, OR IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE - IMPREGNATED BY AN APPROVED PROCESS AND PRESERVATIVE.

6. LAG SCREWS AND THROUGH BOLTS SHALL BE OF MATERIAL CONFORMING TO ASTM STANDARD A307. LEAD HOLES SHALL BE BORED PER SECTION 9.1.2 OF THE "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION". ALL HARDWARE SHALL BE HOT DIPPED GALVANIZED.

7. ALL FASTENERS USED IN PRESSURE TREATED TIMBER SHALL BE HOT DIPPED GALVANIZED.

NOTE:

PLEASE NOTE THAT THE NOTES AND DATA ON THIS SHEET APPLY TO THE ELECTRICAL PUMP BUILDING ONLY.

DESIGN CRITERIA PER THE 2017 OHIO BUILDING CODE		
Building Risk Category		II
Roof Live Load		
Roof Live Load (psf), Reducible per Section 1607.12.2		20
Roof Snow Load		
Ground Snow Load, Pg (psf)		20.0
Roof Snow Load, Pf (psf)		14.00
Minimum Specified Roof Snow Load, (psf)		20.0
Snow Load Importance Factor, Is		1.0
Snow Exposure Factor, Ce		1.0
Sloped Roof Factor, Cs		1.0
Snow Thermal Factor, Ct		1.0
Wind Design Data		
Ultimate Design Wind Speed, Vult, (mph)		115.0
Nominal Design Wind Speed, Vasd, (mph)		89.1
Wind Exposure Category		C
Enclosure Classification		ENCLOSED
Internal Pressure Coefficients		+/- 0.18
Earthquake Design Data		
Seismic Importance Factor, Ie		1.00
Spectral Response Acceleration at 0.2-sec Period, Ss		0.143
Spectral Response Acceleration at 1-sec Period, S1		0.077
Design Spectral Response Acceleration at Short Periods, Sds		0.152
Design Spectral Response Acceleration at 1-sec Period, Sd1		0.123
Site Class		D
Seismic Design Category		B
Ordinary Reinforced Masonry Shear Walls (Load Bearing)	R= 2	Cs= 0.076
Design Base Shear (kips), V=Cs W		See Reactions
Analysis Procedure: Equivalent Lateral Force Procedure		
Roof Load		
Roof Live Load (psf) (Reducible)		20
Roof Snow Load, Pf (psf)		20
Roof Snow Load + Rain-on-Snow Surcharge, Pf (psf)		0
Roof Snow Drift Load, Pd (psf)		As Required
Asphalt Shingles on 1/2" Plywood Deck (psf)		5
Collateral Load (psf)		5
Wooden Roof Framing Load (psf)		5
Presumptive Soil Load-Bearing Values		
Vertical Foundation Pressure per OBC Table 1806.2 (psf)		1500
Lateral Bearing Pressure per OBC Table 1806.2 (psf/ft)		100
Cohesion for Sliding Resistance per OBC Table 1806.2 (psf)		130

2017 OHIO BUILDING CODE NOTES

BUILDING AREA: 399 SQ. FT.

TOTAL PROJECTED OCCUPANT LOAD FOR NEW BUILDING: 2 (DESIGN) / 0 (ACTUAL)

BUILDING OCCUPANCY: U - UTILITY

BUILDING CONSTRUCTION TYPE: 5B - ONE STORY

BUILDING SPRINKLERED: NOT SPRINKLERED (UN-OCCUPIED / NON-HAZARDOUS)

FOR INFORMATION ONLY

STATE OF OHIO
MARK H. STEMMER
52399
REGISTERED PROFESSIONAL ENGINEER

2022-04-14

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PROJECT 21140

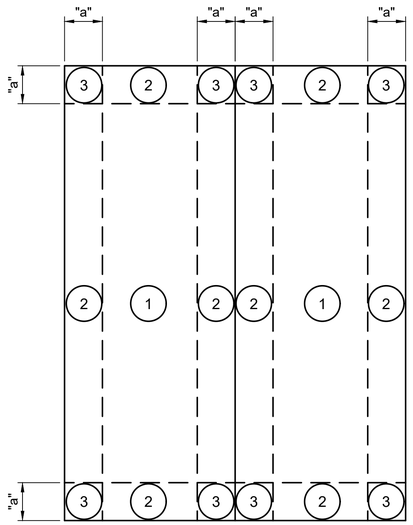
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OHIO DEPARTMENT OF TRANSPORTATION
PROPOSED PUMP STATION

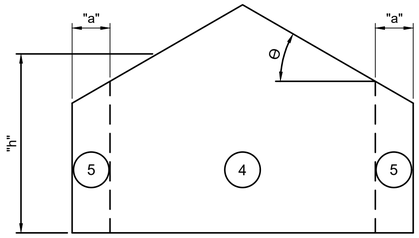
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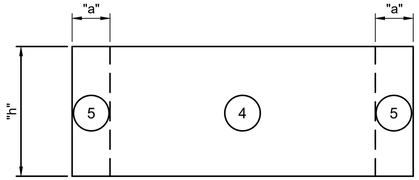
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GABLE ROOFS WITH A SLOPE GREATER THAN 7° AND LESS THAN 27°
(ASCE 7-10: FIGURE 30.4-2B)



END WALL ELEVATION



SIDE WALL ELEVATION

TYPICAL WALLS
(ASCE 7-10: FIGURE 30.4-1)

NOTE: REFER TO DRAWINGS FOR THE MEAN ROOF HEIGHT ("h") AND ROOF SLOPE ("Θ").

"h": MEAN ROOF HEIGHT (ft.), EXCEPT THAT EAVE HEIGHT SHALL BE USED FOR Θ </= 10°.

"Θ": ANGLE OF ROOF PLANE FROM HORIZONTAL, IN DEGREES.

GROSS COMPONENTS AND CLADDING (UNFACTORED) WIND LOADING (ASCE 7-10)						
EDGE ZONE (SEE NOTE #1)	EFFECTIVE WIND AREA, Ae (ft^2)					
	Ae <= 10 ft^2		Ae = 50 ft^2		Ae >= 100 ft^2	
	(P) (psf)	(S) (psf)	(P) (psf)	(S) (psf)	(P) (psf)	(S) (psf)
ROOF ZONE						
1	26.4	-28.8	24.7	-25.4	23.9	-23.9
2	26.4	-33.7	24.7	-30.3	23.9	-28.8
3	26.4	-33.7	24.7	-30.3	23.9	-28.8
OVERHANG	-	-48.9	-	-45.4	-	-44.0
WALL ZONE						
4	28.8	-31.3	25.8	-28.3	24.5	-27.0
5	28.8	-38.6	25.8	-32.6	24.5	-30.0

GROSS COMPONENTS AND CLADDING WIND LOADING TABLE NOTES:

1. EDGE ZONE DISTANCES:

   a = 3'-0"

2. PRESSURES SHOWN IN TABLES ARE APPLIED NORMAL TO THE SURFACE. POSITIVE AND MINUS SIGNS INDICATE PRESSURE ACTING TOWARD OR AWAY FROM A SURFACE, RESPECTIVELY.

3. FOR EFFECTIVE WIND AREAS OTHER THAN SHOWN IN TABLE ABOVE, LINEAR INTERPOLATION IS ACCECPTABLE. WIND PRESSURE VALUES SHOWN FOR EFFECTIVE WIND AREAS LESS THAN ACTUAL EFFECTIVE AREA ARE PERMITTED TO BE USED IN LIEU OF LINEAR INTERPOLATION.

4. FOR ALLOWABLE STRESS DESIGN ("ASD"), MULTIPLY THE TABULATED PRESSURES BY "0.6" FACTOR. FOR STRENGTH DESIGN ("LRFD"), MULTIPLY THE TABULATED PRESSURES BY "1.0" FACTOR.

5. THE WIND LOAD SHALL BE PERMITTED TO BE TAKEN AS 0.42 TIMES THE ULTIMATE WIND LOADS OR DIRECTLY CALCULATED USING THE ALLOWABLE 10-YEAR MEAN RETURN INTERVAL WIND SPEED FOR THE PURPOSE OF DETERMINING DEFLECTION/DRIFT LIMITS.

SPECIAL INSPECTIONS AND TESTING

THIS PROJECT REQUIRES SPECIAL INSPECTION AND TESTING IN ACCORDANCE WITH CHAPTER 17 OF THE OHIO BUILDING CODE, 2017 EDITION. THESE NOTES AND THE STATEMENT OF SPECIAL INSPECTIONS PREPARED FOR THE PROJECT OWNER ARE INTENDED TO INFORM THE CONTRACTOR OF THE QUALITY ASSURANCE PROGRAM AND THE EXTENT OF THE CONTRACTOR'S RESPONSIBILITIES.

GENERAL NOTES:

1. THE SPECIAL INSPECTION AND TESTING PROGRAM IS A QUALITY ASSURANCE PROGRAM INTENDED TO ENSURE THAT THE WORK IS PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
2. THE SPECIAL INSPECTION PROGRAM DOES NOT RELIEVE THE CONTRACTOR OF HIS OR HER RESPONSIBILITY TO COMPLY WITH THE OFFICIAL CONTRACT DOCUMENTS. THE CONTRACTOR HAS THE SOLE RESPONSIBILITY FOR ANY DEVIATIONS FROM THE OFFICIAL CONTRACT DRAWINGS. THE SPECIAL INSPECTOR DOES NOT REPLACE THE DUTIES OF THE BUILDING OFFICIAL NOR THE QUALITY CONTROL RESPONSIBILITIES AND PERSONNEL OF THE CONTRACTOR. JOB SITE SAFETY AND MEANS AND METHODS OF CONSTRUCTION ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
3. THESE INSPECTIONS ARE IN ADDITION TO THE INSPECTIONS SPECIFIED IN THE IBC SECTION 108 AND SPECIFIC STRUCTURAL OBSERVATION AS MAY BE REQUIRED BY THE CODE.
4. THOUGH NOT REQUIRED BY CODE, SPECIAL INSPECTORS AND/OR INSPECTION AGENCIES CAN DOCUMENT ACCEPTANCE OF THEIR RESPONSIBILITIES AND SCOPE OF WORK FOR A PROJECT BY SIGNING AN AGREEMENT THAT INCLUDES A DETAILED SCHEDULE OF SERVICES, COMMONLY KNOWN AS THE SPECIAL INSPECTION AND TESTING AGREEMENT AND THE SPECIAL INSPECTION AND TESTING SCHEDULE. THIS DOCUMENT MAY REFERENCE THIS SHEET AS THE "STATEMENT OF SPECIAL INSPECTIONS,"(SSI).
5. THE STRUCTURAL DESIGN METHODS AND/OR ASSUMPTIONS UTILIZED ARE BASED UPON THE SPECIAL INSPECTIONS REQUIRED WITHIN THE CONTRACT DOCUMENTS.

OWNER RESPONSIBILITIES AND DUTIES:

1. THE PROJECT OWNER, THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE, OR AN AGENT OF THE OWNER IS RESPONSIBLE FOR ENGAGING AND FUNDING SPECIAL INSPECTION SERVICES.

CONTRACTOR RESPONSIBILITIES AND DUTIES:

1. THE CONTRACTOR IS RESPONSIBLE FOR SCHEDULING AND PROVIDING ADEQUATE NOTICE TO THE SPECIAL INSPECTORS FOR ALL INSPECTIONS. THE CONTRACTOR SHALL REQUEST SPECIAL INSTRUCTION OF THE REQUIRED ITEMS PRIOR TO THOSE ITEMS BECOMING INACCESSIBLE AND UNOBSERVABLE DUE TO PROGRESSION OF WORK.
2. THE CONTRACTOR SHALL PROVIDE THE SPECIAL INSPECTOR ACCESS TO THE APPROVED CONTRACT DOCUMENTS. THESE DOCUMENTS INCLUDE SEALED DRAWINGS AND SPECIFICATIONS, ADDENDA, CHANGE ORDERS, APPROVED SHOP DRAWINGS, ISSUED SKETCHES AND REVISION DRAWINGS, AND ALL DIRECTIVES ISSUED BY THE ARCHITECT/ENGINEER. THIS CURRENT SET OF DOCUMENTS SHALL BE AVAILABLE AT THE JOB SITE.
3. THE CONTRACTOR IS TO CORRECT DISCREPANCIES AND DEVIATIONS AS DETERMINED BY SPECIAL INSPECTOR. ALL DISCREPANCIES AND DEVIATIONS OBSERVED SHALL BE RE-INSPECTED UNTIL THE SPECIAL INSPECTOR DEEMS CONSTRUCTION TO BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
4. THE CONTRACTOR IS TO RETAIN SPECIAL INSPECTION RECORDS COMPLETED BY THE SPECIAL INSPECTORS AT THE JOB SITE.

SPECIAL INSPECTOR QUALIFICATIONS AND RESPONSIBILITIES:

1. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
2. SPECIAL INSPECTORS SHALL NOTIFY CONTRACTOR PERSONNEL OF THEIR PRESENCE AND RESPONSIBILITIES AT THE JOB SITE.
3. THE SPECIAL INSPECTOR/AGENCY SHALL NOT BE IN THE EMPLOY OF THE CONTRACTOR, SUBCONTRACTOR, OR MATERIAL SUPPLIER. IN THE CASE OF AN OWNER/CONTRACTOR, THE SPECIAL INSPECTOR/AGENCY SHALL BE EMPLOYED AS SPECIFIED BY THE BUILDING OFFICIAL.
4. THE SPECIAL INSPECTOR IS OBLIGATED TO BOTH THE OWNER AND THE BUILDING OFFICIAL FOR OBSERVING THAT THE WORK IS EXECUTED IN ACCORDANCE WITH THE OFFICIAL CONTRACT DOCUMENTS. THESE DOCUMENTS INCLUDE SEALED DRAWINGS AND SPECIFICATIONS, ADDENDA, CHANGE ORDERS, APPROVED SHOP DRAWINGS, ISSUED SKETCHES AND REVISION DRAWINGS, AND ALL DIRECTIVES ISSUED BY THE ARCHITECT/ENGINEER.
5. SPECIAL INSPECTORS SHALL KEEP ORGANIZED RECORDS OF INSPECTIONS AND SUBMIT INSPECTION REPORTS WITH A MINIMUM WEEKLY FREQUENCY TO THE CONTRACTOR, BUILDING OFFICIAL, ENGINEERS, AND ARCHITECTS INDIVIDUALLY. REPORTS SHOULD INDICATE THAT WORK INSPECTED WAS DONE IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION TO THE CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, THEY SHOULD BE REPORTED TO THE BUILDING OFFICIAL AND TO THE ENGINEER OF RECORD.
6. A FINAL SIGNED REPORT IS TO BE SUBMITTED AT THE END OF THE PROJECT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES. THIS REPORT SHOULD STATE THAT ALL ITEMS REQUIRING SPECIAL INSPECTION AND TESTING WERE FULFILLED AND REPORTED TO THE BEST OF THEIR KNOWLEDGE IN CONFORMANCE WITH THE APPROVED PLANS, SPECIFICATIONS, AND THE APPLICABLE PROVISIONS OF THE IBC. ITEMS NOT IN CONFORMANCE, UNRESOLVED ITEMS, OR ANY DISCREPANCIES IN INSPECTION
7. THE FOLLOWING ARE THE QUALIFICATIONS FOR INDIVIDUALS PERFORMING SPECIFIC INSPECTIONS OR TESTS INCLUDING IN THIS PROJECT'S SSI.

   A. AMERICAN CONCRETE INSTITUTE (ACI):
   CONCRETE FIELD TESTING TECHNICIAN GRADE 1 (ACI-CFTT)
   CONCRETE CONSTRUCTION INSPECTOR (ACI-CCI)
   LABORATORY TESTING TECHNICIAN GRADE 1 OR 2 (ACI-LTT)
   STRENGTH TESTING TECHNICIAN (ACI-STT)

   B. AMERICAN WELDING SOCIETY (AWS):
   CERTIFIED WELDING INSPECTOR (AWS-CWI)
   CERTIFIED STRUCTURAL STEEL INSPECTION (AWS/AISC-SSI)

   C. AMERICAN SOCIETY OF NON-DESTRUCTIVE TESTING(ASNT)
   NON-DESTRUCTIVE TESTING TECHNICIAN LEVEL II OR III (ANST)

   D. INTERNATIONAL CODE COUNCIL (ICC):
   STRUCTURAL MASONRY SPECIAL INSPECTOR (ICC-SMSI)
   STRUCTURAL STEEL AND BOLTING SPECIAL INSPECTOR (ICC-SSSI)
   STRUCTURAL WELDING SPECIAL INSPECTOR (ICC-SWI)
   PRE-STRESSED CONCRETE SPECIAL INSPECTOR (ICC-PCSI)
   REINFORCED CONCRETE SPECIAL INSPECTOR (ICC-RCSI)
   SOILS SPECIAL INSPECTOR (ICC-SSI)

   E. PROFESSIONAL STATE LICENSING:
   PROFESSIONAL ENGINEER (PE)

STATEMENT OF SPECIAL INSPECTIONS (SSI):

1. THE FOLLOWING TABLES INDICATE THE MINIMUM SPECIFIC SPECIAL INSPECTION AND TESTING TO BE PERFORMED ON THIS PROJECT AND THE QUALIFICATIONS OF THE INDIVIDUAL INSPECTORS AND TESTING TECHNICIANS.

DEFINITIONS:

1. CONTINUOUS SPECIAL INSPECTION: THE FULL-TIME OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED. 100% OF THE WORK MUST BE INSPECTED AND IT MUST BE INSPECTED AS THE WORK IS BEING PERFORMED.
2. PERIODIC SPECIAL INSPECTION: THE PART-TIME OR INTERMITTENT OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK HAS BEEN, OR IS BEING, PERFORMED AND AT THE COMPLETION OF WORK.
3. YES: THE INSPECTION AND/OR TESTING IS REQUIRED BY THE BUILDING CODE AND MUST BE PERFORMED.
4. NO: THIS INSPECTION AND/OR TESTING IS NOT APPLICABLE TO THE PROJECT, AND NEED NOT BE PERFORMED.
5. SUGGESTED: THIS INSPECTION AND/OR TESTING IS NOT REQUIRED BY THE BUILDING CODE. HOWEVER, THE ENGINEER OF RECORD RECOMMENDS IMPLEMENTING THEM FOR QUALITY ASSURANCE. A POTENTIAL EXISTS FOR THESE MEASURES TO BE A VALUE ADDED SERVICE FOR THE OWNER TO ENSURE PROPER PROJECT COMPLETION.

NOTE:

PLEASE NOTE THAT THE NOTES AND DATA ON THIS SHEET APPLY TO THE ELECTRICAL PUMP BUILDING ONLY.

FOR INFORMATION ONLY

STATE OF OHIO
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REGISTERED PROFESSIONAL ENGINEER

2022-04-14

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PROJECT 21140

CALCULATED ANC
CHECKED ABC

OHIO DEPARTMENT OF TRANSPORTATION
PROPOSED PUMP STATION

HAM - 75 - 7.85

922
2017

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Special Inspections - Soils and Foundation (Ref IBC Section 1704.7, 1704.8 & 1704.9)

Verification and Inspection	Agency Qualification	Scope	Referenced Standard	Frequency of Inspection	Required on Project
1. Shallow Foundation	ICC-SSI, PE-GEOTECH	Inspect soils below footings for adequate bearing capacity and consistency with geotechnical report.	N/A	Periodic testing to verify compliance with project specifications & geotechnical report	Yes
2. Controlled Structural Fill	ICC-SSI, PE-GEOTECH	Perform applicable sieve tests and modified Proctor tests of each source of fill. Inspect placement, lift thickness, and compaction. Test density of each lift. Verify extent of slope of fill placement.	Applicable ASTM Specs	Periodic testing to verify compliance with project specifications & geotechnical report	Yes

Special Inspections - Masonry Structures Level B Quality Assurance (Ref TMS 402-08/ACI 530-08 Table 1.18.2)

Verification and Inspection	Agency Qualification	Scope	Referenced Standard	Frequency of Inspection	Required on Project
1. Verify compliance with the approved submittals	-	-	N/A	Periodic	Yes
2. As masonry construction begins, verify that the following are in compliance: a. Proportions of site-prepared mortar	-	Verify as masonry construction begins.	ACI 530.1; 2.6A	Periodic	Yes
b. Construction of mortar joints	-	Verify as masonry construction begins.	ACI 530.1; 3.3B	Periodic	Yes
c. Grade and size of reinforcement, connectors and prestressing tendons and anchorages	-	Verify as masonry construction begins.	ACI 530.1; 3.4, 3.6A	Periodic	Yes
d. Locaction of reinforcement, connectors, and prestressing tendons and anchorages	-	Verify as masonry construction begins.	ACI 530.1; 3.4, 3.6A	Periodic	Yes
e. Prestressing technique	-	Verify as masonry construction begins.	ACI 530.1; 3.6B	Periodic	No
3. Prior to grouting, verify that the following are in compliance: a.Grout space	-	Verify prior to grouting.	ACI 530.1; 3.2D	Periodic	Yes
b. Grade, type, and size of reinforcement and anchor bolts, and prestressing tendons and achorages	-	Verify prior to grouting. Review submittals and inspection of materials.	ACI 530; 1.15, ACI 530.1; 2.4, 3.4, 3.6	Periodic	Yes
c. Placement of reinforcement, connectors, and prestressing tendons and anchorages.	-	Verify prior to grouting.	ACI 530-08; 1.13, ACI 530.1; 3.4	Periodic	Yes
d. Proportions of site-prepared grout and prestressing grout for bonded tendons	-	Verify prior to grouting.	ACI 530.1; 2.6B	Periodic	Yes
e. Construction of mortar joints	-	Verify prior to grouting.	ACI 530.1; 3.3B	Periodic	Yes
4. Verify during construction: a.Size and location of structural elements	-	Review submittals and inspection of materials.	ACI 530.1; 3.3F	Periodic	Yes
b. Type, size, and location of anchors, including other details of anchorage of masonry to structral members, frames, or other construction	-	Inspections of anchorages.	ACI 530-08; 1.2.2(e), 2.1.4, 3.1.6	Periodic	Yes
c. Welding of reinforcement	-	Inspection of welding process.	ACI 530-08; 2.1.9.7.2, 3.3.3.4(b)	Continuous	No
d. Preparation, construction and protection of masonry during cold weather (temp. below 40°F(4.4°C)) or hot weather (temp. above 90°F(32.2°C))	-	Inspection of protection techniques.	ACI 530.1; 1.8C, 1.8D, IBC 2009; 2104.3, 2104.4	Periodic	Yes
e. Application and measurment of prestressing force	-	Inspection of application and measurement	ACI 530.1; 3.6B	Continuous	No
f. Placement of grout and prestressing grout for bonded tendons is in compliance	-	Inspection of placement.	ACI 530.1; 3.6C	Continuous	No
5. Observe preperation of grout specimens, mortar specimens, and/or prisms	-	Inspection of preparations.	ACI 530.1; 1.4	Periodic	Yes

Special Inspections - Cast-in-Place Concrete (Ref IBC Section 1704.3 & 1704.4)

Verification and Inspection	Agency Qualification	Scope	Referenced Standard	Frequency of Inspection	Required on Project
1. Mix Design	ACI-CCI, ICC-RCSI	Review concrete batch tickets and verify compliance with approved mix design.	ACI 318	Prior to start of concrete construction on project	Yes
2. Material Certification	Structural Engineer of Record	Verify that concrete supplier's concrete components meet requirements set forth by the applicable ASTM standards.	Applicable ASTM & ACI Specs	Prior to start of concrete construction on project	Yes
3. Reinforcement Installation	ACI-CCI, ICC-RCSI	Inspect size, spacing, cover, positioning and grade of reinforcing steel. Verify that bars are free of form oil or other deleterious materials. Inspect bar laps and mechanical splices. Verify that bars are adequately tied and supported on chairs or bolsters.	Applicable ACI Specs	Prior to each casting	Yes
4. Welding of Reinforcing	AWS-CWI	Visually inspect all reinforcing steel welds. Verify weldability of reinforcing steel. Inspect preheating of steel when required.	Applicable ASTM & AWS Specs	Continuous	Yes
5. Anchor Rods	ACI-CCI, ICC-RCSI	Inspect size, positioning and embedment of anchor rods. Inspect concrete placement and consolidation around anchors.	Applicalbe AISC & ACI Specs	Prior to each casting	Yes
6. Concrete Placement	ACI-CCI, ICC-RCSI	Inspect placement of concrete. Verify that concrete conveyance and depositing avoids segregation or contamination. Verify that concrete is properly consolidated.	Applicable ACI Specs	Periodic	Yes
7. Sampling and Testing of Concrete	ACI-CFTT, ACI-LTT, ACI-STT	Test concrete compressive strength, slump, air content and temperature.	Applicalbe ACI and ASTM Specs	Not less than once a day, nor less than once every 150 cubic yard, nor less than once for every 5000 SF of surface area for slabs or walls	Yes
8. Curing and Protection	ACI-CCI, ICC-RCSI	Inspect curing, cold weather protection and hot weather protectin procedures.	Applicable ACI Specs	Monitor on site after each casting	Yes
9. Post-Installed Anchors	ACI-CCI, ICC-RCSI	Inspect installation for type of anchor, embedment, edge distances & adhesive required.	ACI & Supplier's Specs	Continuous	Yes

Special Inspections - Wood Construction (Ref IBC Section 1704.6)

Verification and Inspection	Agency Qualification	Scope	Referenced Standard	Frequency of Inspection	Required on Project
1. Fabricator Certification/Quality Control Procedures	–	Fabricator to be enrolled in a nationally accepted inspection program acceptable to the Structural drawings and specifications. The approved fabricator to submit a certification of compliance to the building official.		N/A	Yes
2. Material Grading		Review sheathing, framing members, wall studs, plates for proper species and grade.	Applicable APA & AITC Specs	Prior to construction & periodic during contruction	Yes
3. Connections		Inspect connection of framing members. Including nail and bolts for size and spacing. Verify metal hardware connectors for type and proper installation.	ANSI/AF&PA & Supplier's Specs	Periodic	Yes
4. Framing and Details		Inspect framing for plumbness, spacing, bearing length, and size. Verify bracing is installed as required.	ANSI/AF&PA	Periodic	Yes
5. Diaphragms and Shearwalls		Inspect size, configuration, blocking and fastening of shearwalls and diaphragms. Verify panel grade and thickness. Verify size and installation of hold-downs and straps.	ANSI/AF&PA & Supplier's Specs	Periodic	Yes
6. Prefabricated Wood Trusses * I-Joists		See item #1. Inspect installation for location, spacing, bearing length, connectors, and permanent bracing.	ANSI/AF&PA & Supplier's Specs	Periodic	Yes

NOTE:

PLEASE NOTE THAT THE NOTES AND DATA ON THIS SHEET APPLY TO THE ELECTRICAL PUMP BUILDING ONLY.

FOR INFORMATION ONLY

STATE OF OHIO
MARK H. STEMMER
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REGISTERED PROFESSIONAL ENGINEER

2022-04-14

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PROJECT 21140

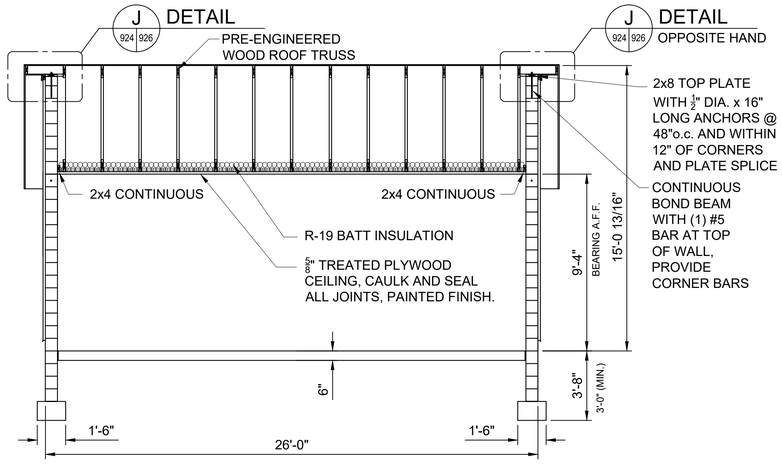
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OHIO DEPARTMENT OF TRANSPORTATION
PROPOSED PUMP STATION

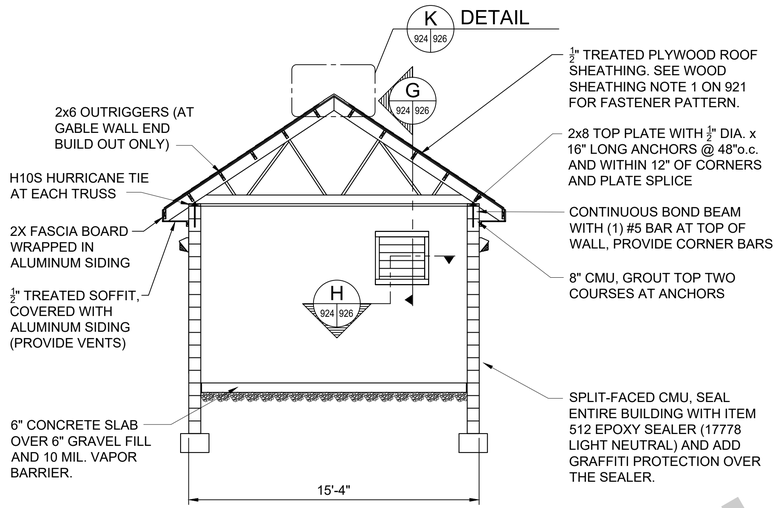
HAM - 75 - 7.85

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A BUILDING SECTION
924 924
SCALE: 1/4"=1'-0"



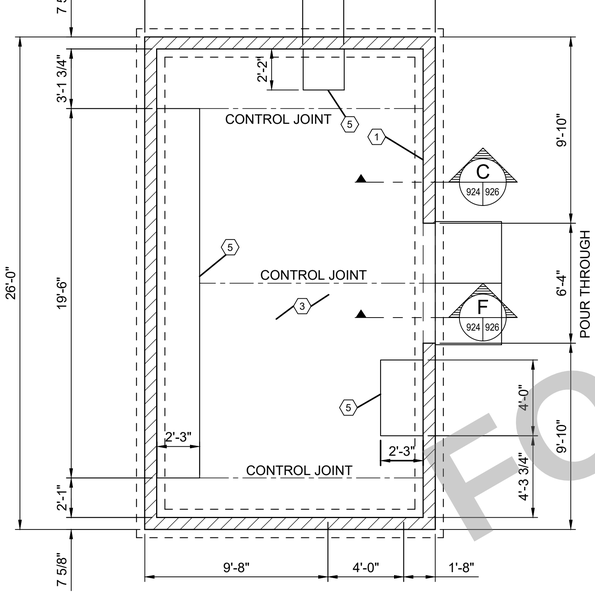
B BUILDING SECTION
924 924
SCALE: 1/4"=1'-0"

STRUCTURAL NOTES:

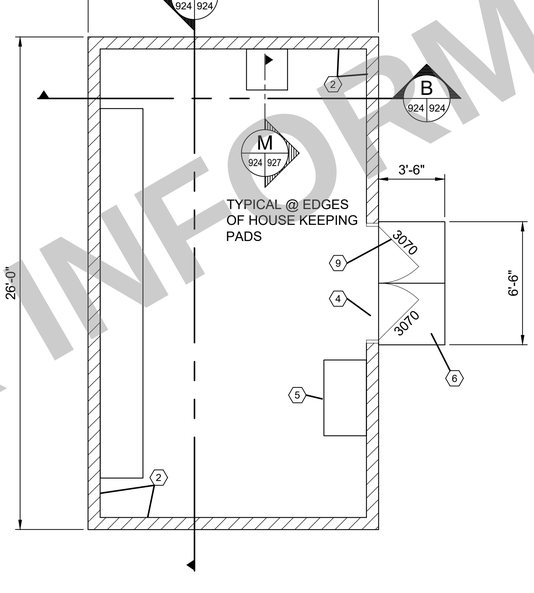
1. 8X8X16 REINFORCED CMU FOUNDATION WALL WITH 1'-6"X1'-0" CONTINUOUS CONCRETE STRIP FOOTING. REFERENCE SECTION C/926.
2. 8" CMU WALLS, VERT REINF = (1) #5 @ 48" O.C.
3. 6" CONCRETE SLAB WITH 4X4-W4.0XW4.0 WWF
4. SEE SHEET 926 FOR WALL OPENING TYPICAL DETAILS.
5. ELEVATED CONCRETE HOUSE KEEPING PADS.
6. 6'-6" x 3'-6" x 0'-6" THICK EXTERIOR CONCRETE PAD WITH 4X4-W4.0XW4.0 WWF. PROVIDE CONTROL JOINT AT CENTER LINE OF LONG EDGE (REFERENCE TYPICAL CONTROL JOINT DETAIL).
7. PRE-ENGINEERED WOOD ROOF TRUSSES AT 24"o.c.
8. BUILD-OUT GABLE END OF ROOF PER SECTION 1 AND DETAIL J.
9. 1-3/4" X 6'-0" X 7'-0" DOUBLE INSULATED METAL DOOR WITH INSULATED METAL FRAME . FINISH DOOR / FRAME COLOR TO MATCH SIDING / FASCIA. SEE DOOR HARDWARE BELOW.

PROVIDE THE FOLLOWING HARDWARE FOR DOOR:

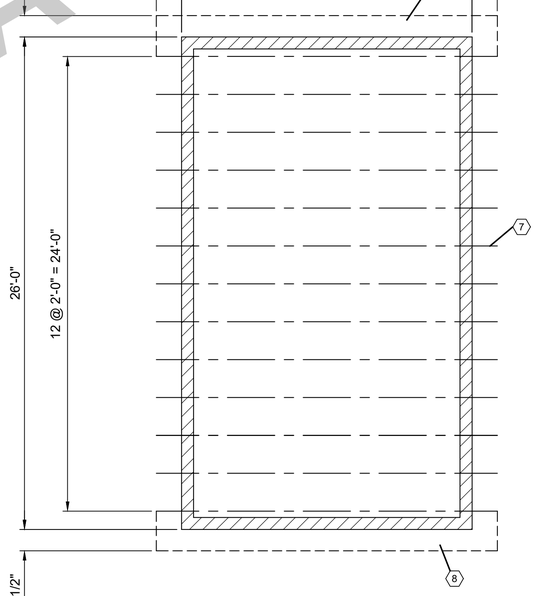
QUANTITY	DESCRIPTION	CATALOG NO.	FINISH	MANUF.
2 EA.	CONTINUOUS HINGE	112XY	628	IVES
2 EA.	MANUAL FLUSH BOLT	FB458	626	IVES
1 EA.	STOREROOM LOCK	T581BDC DAN	626	FALCON
1 EA.	SFIC CORE	C607	626	FALCON
1 EA.	LOCK GUARD	LG1	630	IVES
1 EA.	O.H. STOP & HOLDER	90H	630	GLYNN-JOHNSON
1 EA.	SURFACE CLOSER	4040XP SHOUSH SRI	689	LCN
2 EA.	KICK PLATE	8400 34" X 1" LDW B-CS	630	IVES
1 EA.	GASKETING	429AA-S	AA	ZERO
1 EA.	MULLION SEAL	8780NBK PSA	BK	ZERO (MOUNTED TO ASTRAGAL)
1 EA.	ASTRAGAL Z TYPE ASTRAGAL BY HM DOOR SUPPLIER			
2 EA.	DOOR SWEEP	8198AA	AA	ZERO
1 EA.	THRESHOLD	65A-223	A	ZERO
1 EA.	RAIN DRIP	142A	A	ZERO



FOUNDATION PLAN
SCALE: 1/4"=1'-0"



FLOOR PLAN
SCALE: 1/4"=1'-0"



ROOF FRAMING PLAN
SCALE: 1/4"=1'-0"

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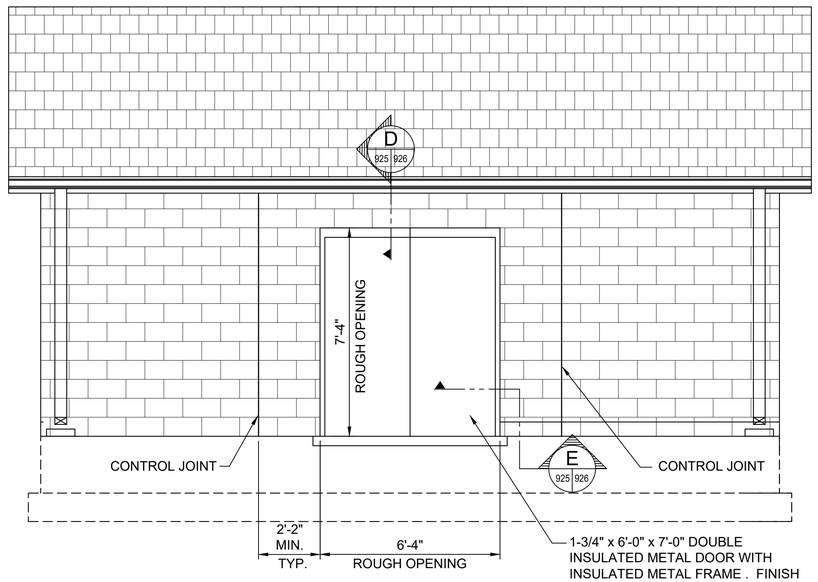
CALCULATED ANC
CHECKED ABC

OHIO DEPARTMENT OF TRANSPORTATION
PROPOSED PUMP STATION

HAM - 75 - 7.85

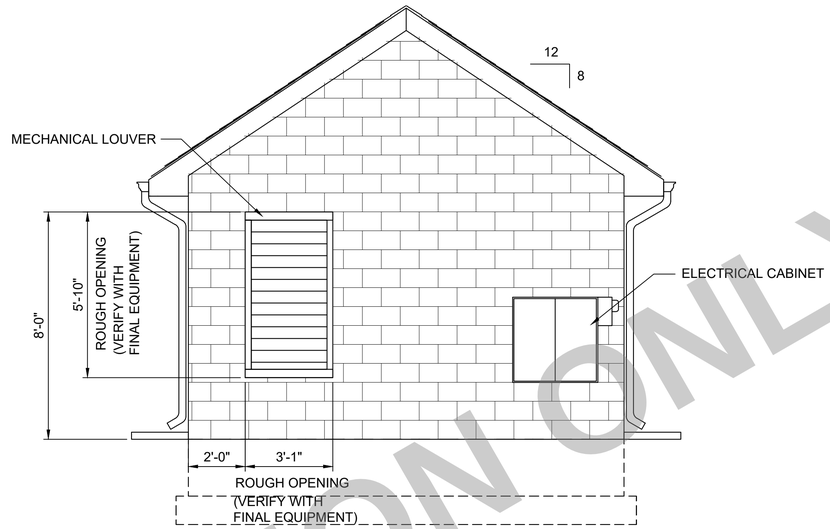
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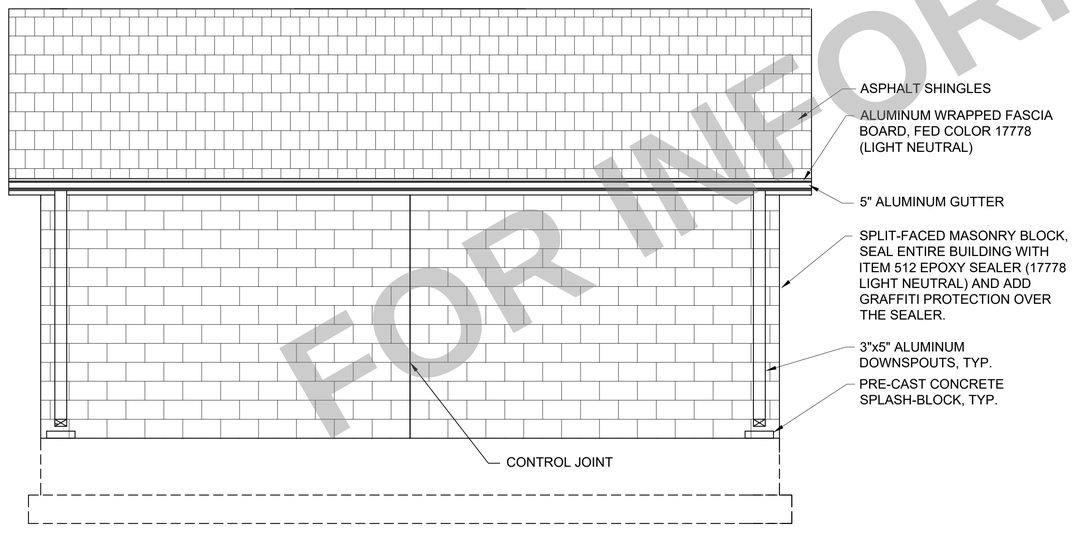
EAST ELEVATION

SCALE: 3/8"=1'-0"



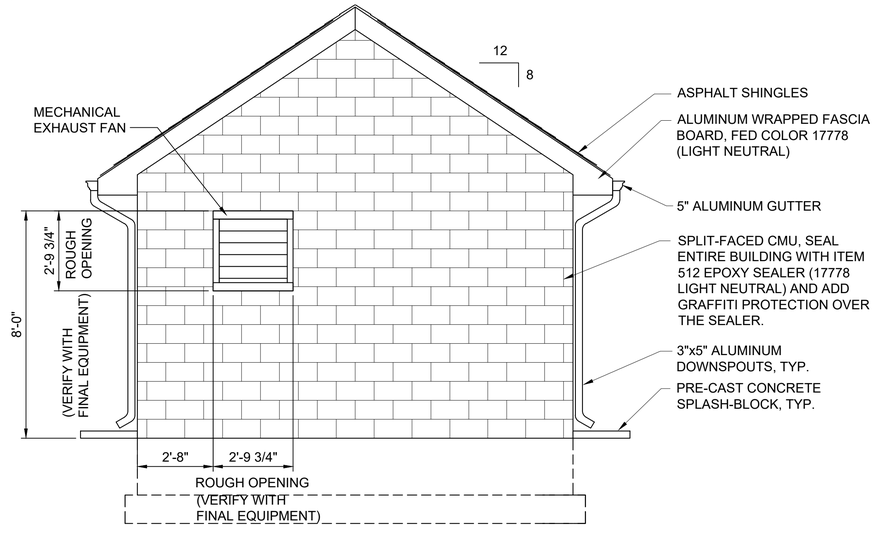
SOUTH ELEVATION

SCALE: 3/8"=1'-0"



WEST ELEVATION

SCALE: 3/8"=1'-0"



NORTH ELEVATION

SCALE: 3/8"=1'-0"

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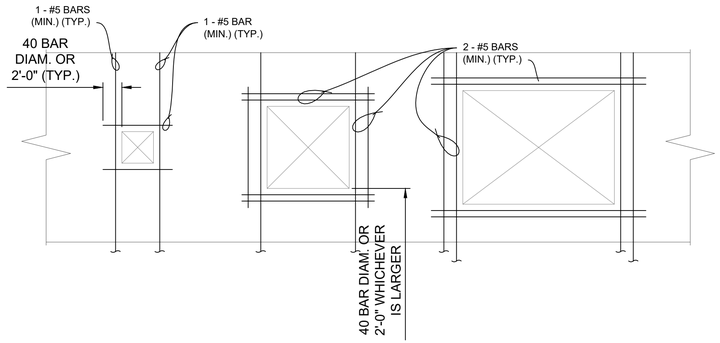
CALCULATED ANC
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OHIO DEPARTMENT OF TRANSPORTATION
PROPOSED PUMP STATION

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CASE I:

APPLIES TO (1) ALL OPENINGS IN NON-STRUCTURAL PARTITIONS OVER 100 SQ. IN., AND (2) ANY OPENING 2 FEET OR LESS BOTH WAYS BUT OVER 100 SQ. IN. IN STRUCTURAL OR EXTERIOR WALLS.

CASE II:

APPLIES TO STRUCTURAL AND EXTERIOR WALL WHEN OPENING EXCEEDS 2 FEET BUT NOT MORE THAN 4 FEET IN EITHER DIRECTION.

CASE III:

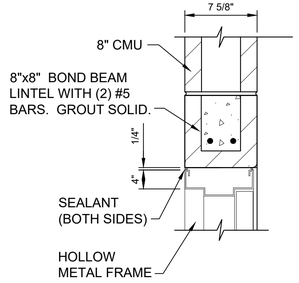
APPLIES TO STRUCTURAL AND EXTERIOR WALLS WHEN OPENING EXCEEDS 4 FEET IN EITHER DIRECTION.

NOTES:

1. VERTICAL REINFORCEMENT OF 2 BARS, EACH BAR MAY BE PLACED IN A SEPARATE CELL.
2. VERTICAL BARS SHALL BE OF THE SAME SIZE, EXTEND, AND ANCHORAGE AS THE TYPICAL REINF. IN THAT WALL UNLESS OTHERWISE INDICATED.
3. VERTICAL BARS CAN BE PART OF NORMAL REINF. IN THE WALL.
4. REINFORCEMENT AT TOP OF OPENINGS SHALL BE NOT LESS THAN THAT REQUIRED BY THE LINTEL DESIGN.

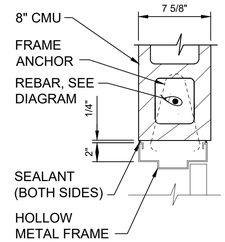
REINFORCING AROUND WALL OPENINGS

SCALE: NONE



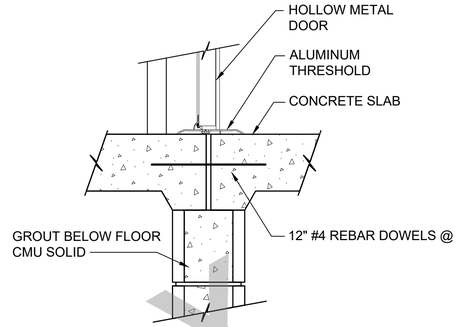
D 925 926 DOOR HEAD DETAIL

SCALE: 1-1/2"=1'-0"



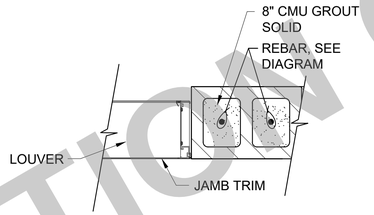
E 925 926 DOOR JAMB DETAIL

SCALE: 1-1/2"=1'-0"



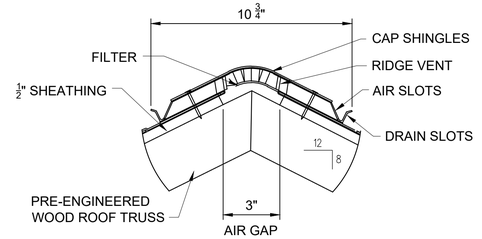
F 924 926 DOOR SILL DETAIL

SCALE: 1-1/2"=1'-0"



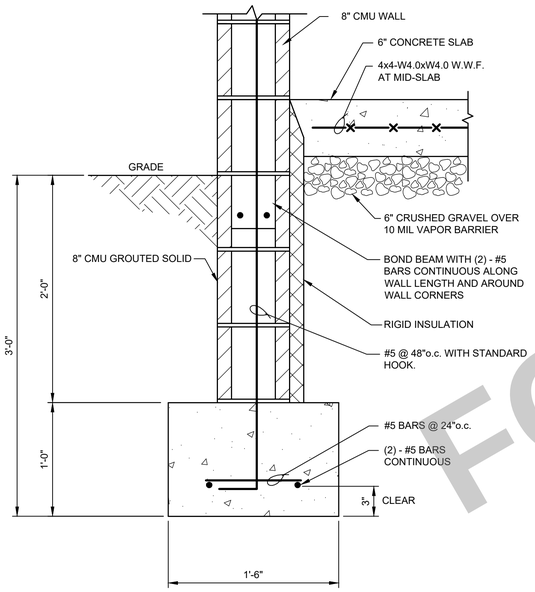
H 924 926 LOUVER JAMB DETAIL

SCALE: 1-1/2"=1'-0"



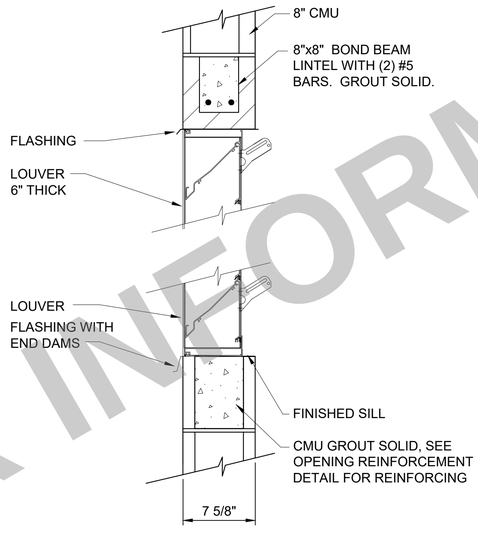
K 924 926 RIDGE VENT DETAIL

SCALE: 3"=1'-0"



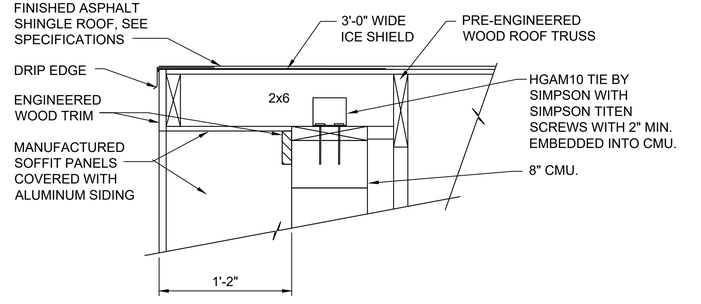
C 924 926 FOUNDATION SECTION

SCALE: 1-1/2"=1'-0"



G 924 926 LOUVER HEAD & SILL DETAIL

SCALE: 1-1/2"=1'-0"



J 924 926 RAKE DETAIL

SCALE: 1-1/2"=1'-0"

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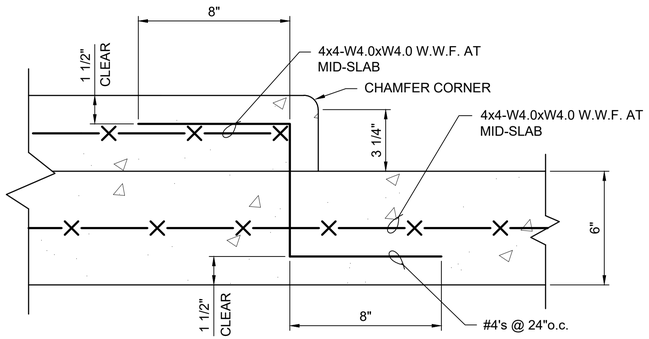
CALCULATED ANC
CHECKED ABC

OHIO DEPARTMENT OF TRANSPORTATION
PROPOSED PUMP STATION

HAM - 75 - 7.85

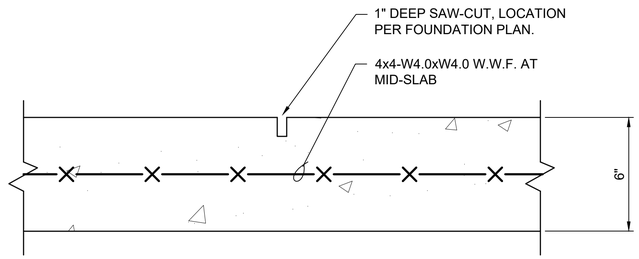
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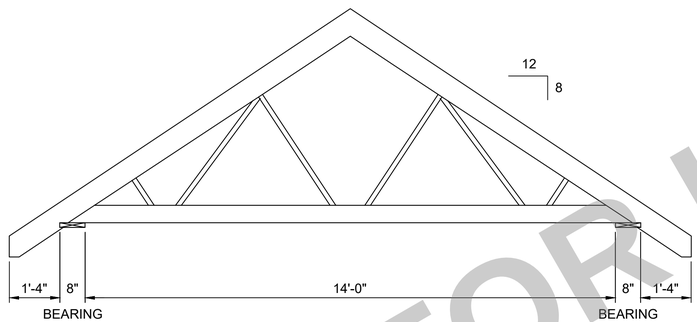
M 924 927 HOUSE KEEPING PAD SECTION

SCALE: 3"=1'-0"



TYPICAL SLAB CONTROL JOINT

SCALE: 3" = 1'-0"

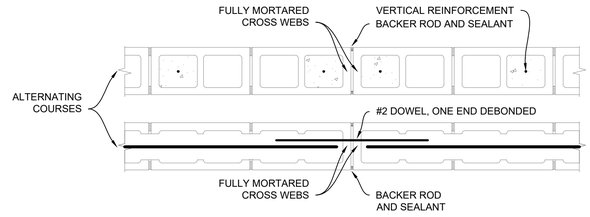


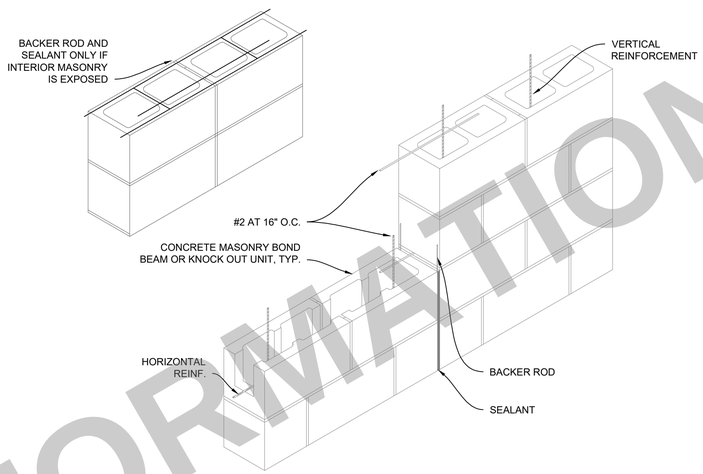
WOOD TRUSS DIAGRAM

SCALE: 3" = 1'-0"

TRUSS NOTES:

1. ACTUAL TRUSS WEB CONFIGURATION TO BE DETERMINED BY TRUSS MANUFACTURER.
2. TRUSS MANUFACTURER SHALL PROVIDE ENGINEERING DATA AND SHOP DRAWINGS CERTIFIED BY A REGISTERED ENGINEER (STATE OF OHIO).
3. TRUSS LOADS:
   - 10 PSF DL (TOP CHORD)
   - 10 PSF DL (BOTTOM CHORD)
   - 20 PSF LL
   - 20 PSF SL
   - 40 LB. DL (SEE ELECTRICAL DRAWINGS FOR LOCATION)
4. CONTRACTOR TO VERIFY ALL DIMENSIONS IN THE FIELD.





HORIZONTAL REINFORCEMENT FOR THE SOLE PURPOSE OF CONTROLLING SHRINKAGE CRACKING, SHALL BE DISCONTINUED AT THE CONTROL JOINT LOCATION. FOR BOND BEAMS LOCATED AT FLOOR AND ROOF LEVELS, THE REINFORCEMENT SHALL BE CONTINUOUS THROUGH THE CONTROL JOINT.

WHEN DISCONTINUING HORIZONTAL BOND BEAM REINFORCEMENT AT A CONTROL JOINT, THE CROSS WEBS DIRECTLY ADJACENT TO THE CONTROL JOINT SHALL BE FULLY MORTARED TO PREVENT GROUT FROM SEEPING INTO THE HEAD JOINT AND BONDING THE TWO MASONRY PANELS TOGETHER.

TYPICAL CMU WALL CONTROL JOINT DETAILS

SCALE: 1" = 1'-0"

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PROJECT 21140

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OHIO DEPARTMENT OF TRANSPORTATION
PROPOSED PUMP STATION

HAM - 75 - 7.85

927
2017

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GENERAL ELECTRICAL NOTES:

A. THE ELECTRICAL CONTRACTOR SHALL:

A.1. PERFORM ALL WORK SHOWN ON THE DRAWINGS OR REQUIRED TO PROVIDE A COMPLETE INSTALLATION, READY FOR THE OWNER'S USE;

A.2. FURNISH ALL LABOR, MATERIAL, SERVICES AND SKILLED SUPERVISION NECESSARY FOR THE CONSTRUCTION;

A.3. TEST AND ADJUST ALL CIRCUITS AND ELECTRICAL EQUIPMENT SPECIFIED, SHOWN OR NOTED ON THE DRAWINGS.

B. ELECTRICAL CONTRACTOR SHALL SECURE ALL ELECTRICAL PERMITS AS REQUIRED, MAKE ALL NECESSARY APPLICATIONS AND COORDINATE WORK WITH THE LOCAL ELECTRICAL UTILITY COMPANY, INCLUDING METER INSTALLATION, SERVICE ENTRANCE, ETC. FOR A COMPLETE ELECTRICAL INSTALLATION.

C. CONTRACTOR SHALL CONTACT OHIO UTILITIES PROTECTION SERVICE (OUPS) TWO WORKING DAYS PRIOR TO ANY FIELD WORK AT (800)-362-2764. CONTRACTOR SHALL CONTACT ANY NON-OUPS MEMBER UTILITIES DIRECTLY.

D. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL LOCAL, STATE AND NATIONAL CODES. 2017 EDITION OF NEC APPLIES TO THIS WORK.

E. ELECTRICAL CONTRACTOR SHALL VISIT SITE AND FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS AND WORK TO BE DONE. ELECTRICAL CONTRACTOR SHALL CAREFULLY CHECK PLANS OF ALL DISCIPLINES; THESE ELECTRICAL DRAWINGS ARE TO BE USED AS A GUIDE. ELECTRICAL CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR A COMPLETE AND FUNCTIONING SYSTEM.

F. ALL ITEMS SHALL BE NEW.

G. ELECTRICAL CONTRACTOR SHALL MAKE ALL NECESSARY WIRING AND CONNECTIONS TO ALL EQUIPMENT FURNISHED BY OTHERS AS NOTED OR SHOWN.

H. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS, DETAILS AND DESIGN. EQUIPMENT CALLED OUT BY CERTAIN MANUFACTURERS IS INTENDED TO CREATE A STANDARD. EQUALS WILL BE ACCEPTED UPON APPROVAL.

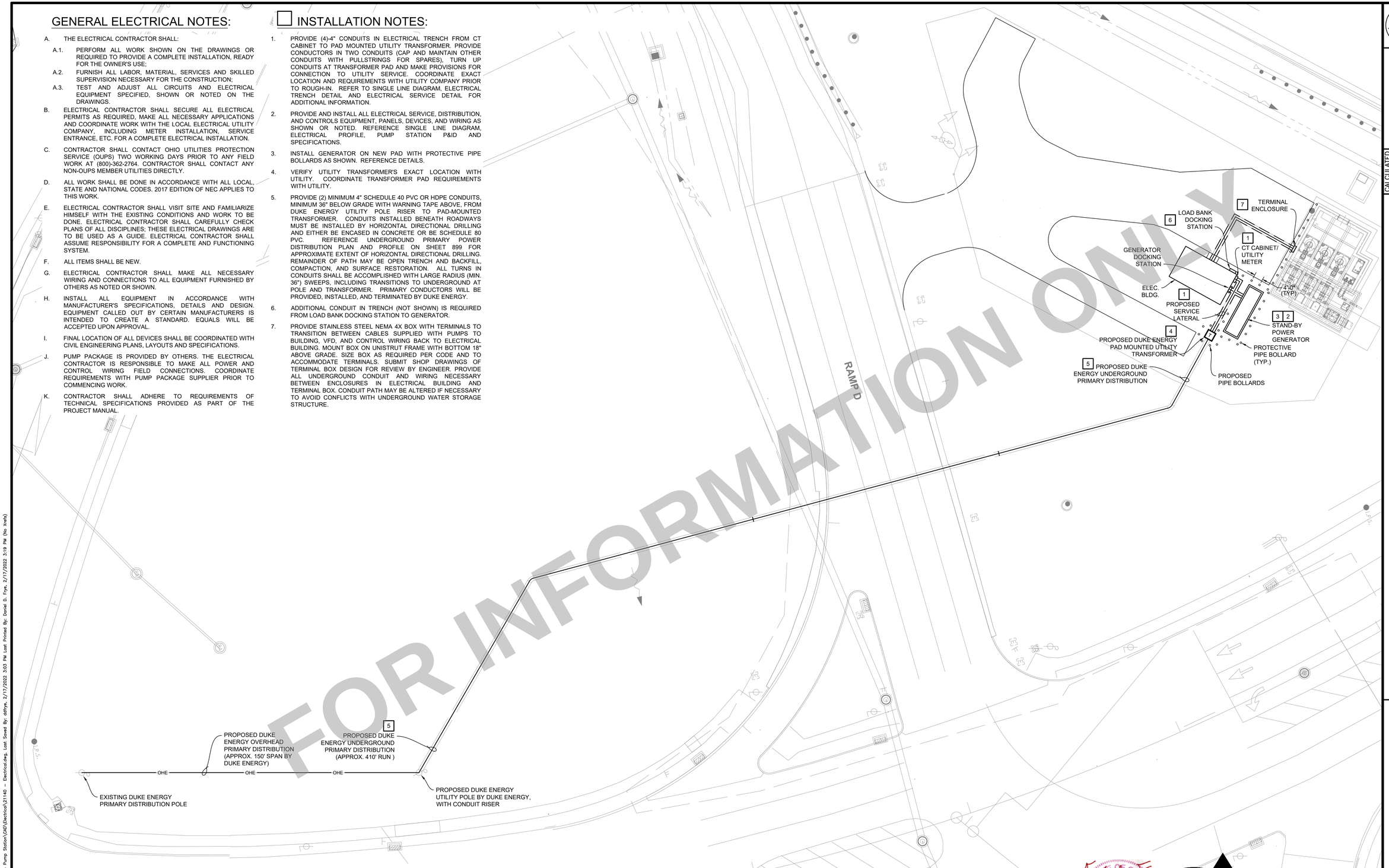
I. FINAL LOCATION OF ALL DEVICES SHALL BE COORDINATED WITH CIVIL ENGINEERING PLANS, LAYOUTS AND SPECIFICATIONS.

J. PUMP PACKAGE IS PROVIDED BY OTHERS. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO MAKE ALL POWER AND CONTROL WIRING FIELD CONNECTIONS. COORDINATE REQUIREMENTS WITH PUMP PACKAGE SUPPLIER PRIOR TO COMMENCING WORK.

K. CONTRACTOR SHALL ADHERE TO REQUIREMENTS OF TECHNICAL SPECIFICATIONS PROVIDED AS PART OF THE PROJECT MANUAL.

☐ INSTALLATION NOTES:

1. PROVIDE (4)-4" CONDUITS IN ELECTRICAL TRENCH FROM CT CABINET TO PAD MOUNTED UTILITY TRANSFORMER. PROVIDE CONDUCTORS IN TWO CONDUITS (CAP AND MAINTAIN OTHER CONDUITS WITH PULLSTRINGS FOR SPARES), TURN UP CONDUITS AT TRANSFORMER PAD AND MAKE PROVISIONS FOR CONNECTION TO UTILITY SERVICE. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH UTILITY COMPANY PRIOR TO ROUGH-IN. REFER TO SINGLE LINE DIAGRAM, ELECTRICAL TRENCH DETAIL AND ELECTRICAL SERVICE DETAIL FOR ADDITIONAL INFORMATION.
2. PROVIDE AND INSTALL ALL ELECTRICAL SERVICE, DISTRIBUTION, AND CONTROLS EQUIPMENT, PANELS, DEVICES, AND WIRING AS SHOWN OR NOTED. REFERENCE SINGLE LINE DIAGRAM, ELECTRICAL PROFILE, PUMP STATION P&ID AND SPECIFICATIONS.
3. INSTALL GENERATOR ON NEW PAD WITH PROTECTIVE PIPE BOLLARDS AS SHOWN. REFERENCE DETAILS.
4. VERIFY UTILITY TRANSFORMER'S EXACT LOCATION WITH UTILITY. COORDINATE TRANSFORMER PAD REQUIREMENTS WITH UTILITY.
5. PROVIDE (2) MINIMUM 4" SCHEDULE 40 PVC OR HDPE CONDUITS, MINIMUM 36" BELOW GRADE WITH WARNING TAPE ABOVE. FROM DUKE ENERGY UTILITY POLE RISER TO PAD-MOUNTED TRANSFORMER. CONDUITS INSTALLED BENEATH ROADWAYS MUST BE INSTALLED BY HORIZONTAL DIRECTIONAL DRILLING AND EITHER BE ENCASED IN CONCRETE OR BE SCHEDULE 80 PVC. REFERENCE UNDERGROUND PRIMARY POWER DISTRIBUTION PLAN AND PROFILE ON SHEET 899 FOR APPROXIMATE EXTENT OF HORIZONTAL DIRECTIONAL DRILLING. REMAINDER OF PATH MAY BE OPEN TRENCH AND BACKFILL, COMPACTION, AND SURFACE RESTORATION. ALL TURNS IN CONDUITS SHALL BE ACCOMPLISHED WITH LARGE RADIUS (MIN. 36") SWEEPS, INCLUDING TRANSITIONS TO UNDERGROUND AT POLE AND TRANSFORMER. PRIMARY CONDUCTORS WILL BE PROVIDED, INSTALLED, AND TERMINATED BY DUKE ENERGY.
6. ADDITIONAL CONDUIT IN TRENCH (NOT SHOWN) IS REQUIRED FROM LOAD BANK DOCKING STATION TO GENERATOR.
7. PROVIDE STAINLESS STEEL NEMA 4X BOX WITH TERMINALS TO TRANSITION BETWEEN CABLES SUPPLIED WITH PUMPS TO BUILDING, VFD, AND CONTROL WIRING BACK TO ELECTRICAL BUILDING. MOUNT BOX ON UNISTRUT FRAME WITH BOTTOM 18" ABOVE GRADE. SIZE BOX AS REQUIRED PER CODE AND TO ACCOMMODATE TERMINALS. SUBMIT SHOP DRAWINGS OF TERMINAL BOX DESIGN FOR REVIEW BY ENGINEER. PROVIDE ALL UNDERGROUND CONDUIT AND WIRING NECESSARY BETWEEN ENCLOSURES IN ELECTRICAL BUILDING AND TERMINAL BOX. CONDUIT PATH MAY BE ALTERED IF NECESSARY TO AVOID CONFLICTS WITH UNDERGROUND WATER STORAGE STRUCTURE.



FOR INFORMATION ONLY

PUMP STATION - ELECTRICAL SITE PLAN

SCALE: 1" = 20'-0"

0 10 20 40
Horiz: 1 inch = 20 feet

CALCULATED TLH
CHECKED DDF

OHIO DEPARTMENT OF TRANSPORTATION
PROPOSED PUMP STATION

HAM - 75 - 7.85

928
2017

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DANIEL D FRYE
E-65085
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PROFESSIONAL ENGINEER
17/Feb/2022

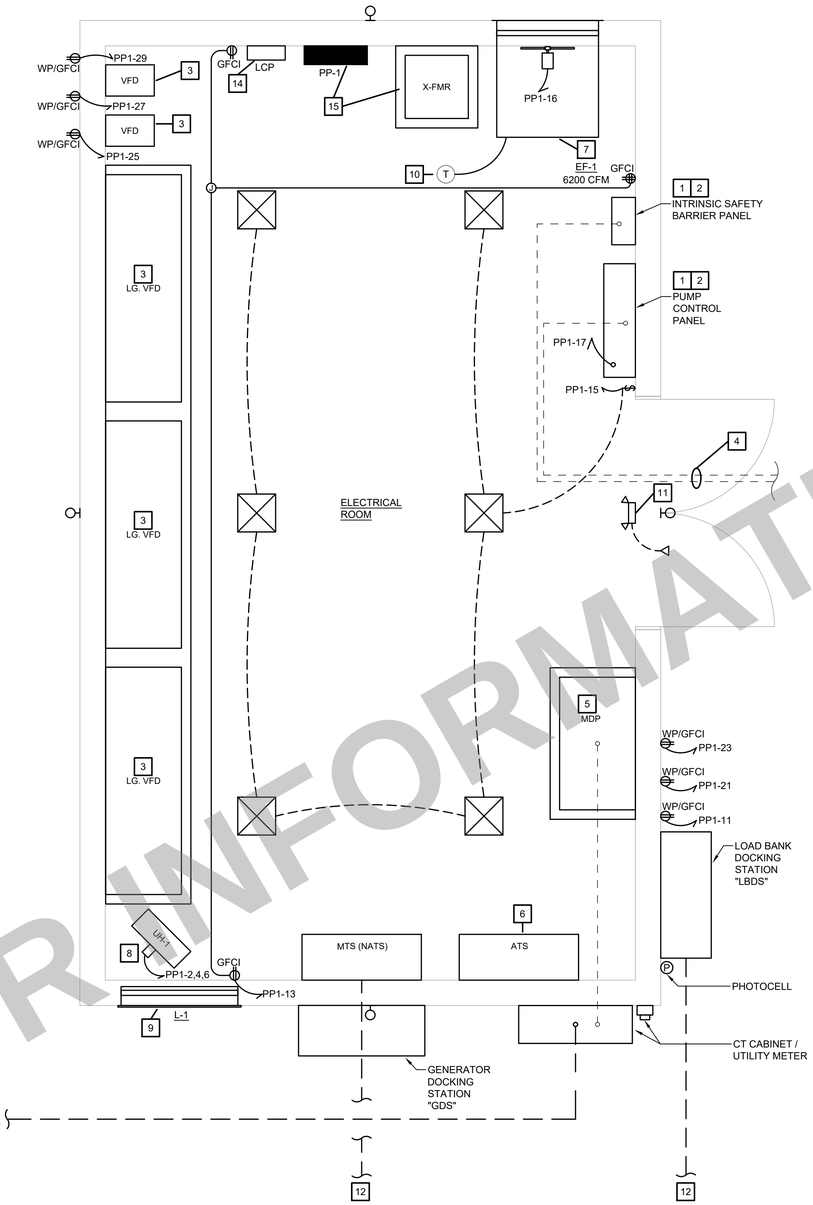
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LEGEND:

	—	SWITCH LEG WIRING
A-1	—	CIRCUIT HOME RUN, LABEL INDICATES PANEL AND CIRCUIT NUMBER.
	—	240V RECEPTACLE, COORDINATE EXACT TYPE AND NEMA CONFIGURATION.
GFCI	—	NEMA 5-20R, 20A, 125V AC STRAIGHT BLADE DUPLEX RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER (GFCI) PROTECTION.
	—	EXHAUST FAN.
	—	DOOR SWITCH.
	—	SURFACE MOUNT LED FIXTURE W/ WRAP-AROUND PRISMATIC LENS, TAMLITE NIMROD 17W LED.
	—	EXTERIOR WALL-MOUNTED LED LIGHT FIXTURE, TAMLITE MODEL #W2LED, 80W, BOROSILICATE LENS.
P	—	PHOTOCELL.
	—	EMERGENCY LIGHT WEATHER-PROOF REMOTE HEAD.
	—	EMERGENCY BATTERY BACK-UP WITH TWO EMERGENCY LIGHTS. WHERE INSTALLED IN EXTERIOR APPLICATIONS, PROVIDE BATTERY UNIT MOUNTED HIGH ON INTERIOR WALL WITH TWO REMOTE HEADS RATED FOR WET LOCATIONS. PROVIDE SUFFICIENT CAPACITY TO POWER ONE (1) EXTERIOR REMOTE HEAD.
$	—	SINGLE-POLE TOGGLE SWITCH, 120V, 20A, WITH WALL PLATE.
	—	HEAVY DUTY WALL MOUNTED PHOTO SENSOR, WEATHERPROOF, 120V, 1800 WATT, SWIVEL MOUNTED, INTERMATIC K4221C OR EQUAL.
	—	HEAVY DUTY WALL MOUNTED OUTDOOR WALL MOUNTED OCCUPANCY SENSOR, 120V, 1000 WATT, WEATHERPROOF, PIR, 200°, COMMERCIAL GRADE. LEVITON PS200-10W OR EQUAL.
A	—	AMPS.
NEC	—	NATIONAL ELECTRIC CODE.
V	—	VOLTS
W	—	WATTS.
WP/GFCI	—	WEATHER PROOF / GROUND FAULT CIRCUIT INTERRUPTER.



GRADE LEVEL ELECTRICAL BUILDING POWER / HVAC PLAN

SCALE: 1/2"=1'-0"

INSTALLATION NOTES:

1. CONNECT ALL POWER AND CONTROL WIRING FOR LEVEL TRANSDUCER AND FLOAT SWITCH TO INPUTS IN CONTROL PANEL. COORDINATE CONDUIT ENTRY INTO PUMP STATION AND CONNECTION REQUIREMENTS TO CONTROL PANEL WITH EQUIPMENT MANUFACTURER.
2. PROVIDE AND INSTALL CONTROL PANEL AND INTRINSIC SAFETY BARRIER PANEL.
3. PROVIDE AND INSTALL ACTIVE FRONT END (AFE) VARIABLE FREQUENCY DRIVES (VFD'S) FOR PUMPS. INSTALL FLOOR MOUNTED VFD'S ON 3" CONCRETE HOUSEKEEPING PADS.
4. ROUTE RIGID CONDUITS TO UNDERGROUND. LOCATION SHOWN IS ONLY A SUGGESTION, AND IS NOT THE REQUIRED PATH. ADDITIONAL CONDUITS (NOT SHOWN) WILL BE REQUIRED BETWEEN VFD'S AND CONTROL PANEL AND FROM VFD'S TO THE WET WELL. CONTRACTOR SHALL DETERMINE BEST CONDUIT ROUTES AND MARK ALL UNDERGROUND CONDUIT PATHS IN REDLINED AS-BUILT DRAWINGS. SIZE ACCORDING TO N.E.C. WHERE SIZE IS NOT OTHERWISE NOTED. MINIMUM SIZE IS 1". VERIFY ROUTING WITH OWNER AND ALL OTHER TRADES IN ORDER TO AVOID INTERFERENCES. NOTE: QUANTITY OF CONDUITS SHOWN ON PLAN IS NOT NECESSARILY ACCURATE, BUT IS ONLY REPRESENTATIVE OF SUGGESTED ROUTES OF CONDUITS IN QUANTITIES AS NECESSARY FOR THE WIRING BETWEEN POINTS.
5. PROVIDE AND INSTALL NEW DISTRIBUTION PANELBOARD WITH 800A MAIN CIRCUIT BREAKER AND ALL NECESSARY DISTRIBUTION BREAKERS. REFERENCE SINGLE LINE DIAGRAM.
6. PROVIDE AND INSTALL NEW 800A SERVICE ENTRANCE RATED AUTOMATIC TRANSFER SWITCH. REFERENCE SINGLE LINE DIAGRAM.
7. PROVIDE AND INSTALL (1) GREENHECK MODEL SE1-24-432-B7, 120V, 3HP, EXHAUST FAN EF-1 WITH BACKDRAFT DAMPER MODEL WD320-PB-26X26 OR APPROVED EQUAL. COORDINATE MOUNTING HEIGHT AND LOCATION WITH OTHER TRADES PRIOR TO ROUGH-IN.
8. PROVIDE AND INSTALL (1) QMARK MODEL MUH078, 7.5kW, 208V, THREE PHASE ELECTRIC FAN FORCED UNIT HEATER, UH-1 WITH FACTORY MANUFACTURED MOUNTING BRACKETS AND HARDWARE, OR APPROVED EQUAL. COORDINATE MOUNTING LOCATION WITH OTHER TRADES PRIOR TO ROUGH-IN.
9. PROVIDE AND INSTALL (1) GREENHECK MODEL ECD-601 37"W X 70"H COMBINATION DRAINABLE BLADE LOUVER AND DAMPER L-1. PROVIDE WITH MOTORIZED ACTUATOR AND INSECT SCREEN. COORDINATE WITH OWNER FOR LOUVER COLOR. COORDINATE MOUNTING HEIGHT AND LOCATION WITH OTHER TRADES PRIOR TO ROUGH-IN.
10. PROVIDE HEATING/COOLING THERMOSTAT TO ENERGIZE FAN WHEN ROOM TEMPERATURE EXCEEDS 80°F AND OPEN INTAKE DAMPER. THERMOSTAT SHALL ENERGIZE UNIT HEATER WHEN ROOM TEMPERATURE IS BELOW 60°F. THERMOSTAT SHALL BE LOCATED ON CEILING IN APPROXIMATE LOCATION SHOWN.
11. CONNECT EMERGENCY LIGHT TO LOCAL LIGHTING CIRCUIT AHEAD OF ALL SWITCHING.
12. PROVIDE AND INSTALL ALL CONDUITS AND WIRING SHOWN IN SINGLE LINE DIAGRAM TO GENERATOR. SEE ELECTRICAL SITE PLAN FOR SUGGESTED ROUTE.
13. PROVIDE AND INSTALL ALL CONDUITS AND WIRING SHOWN IN SINGLE LINE DIAGRAM FROM UTILITY TRANSFORMER TO C/T CABINET. SEE ELECTRICAL SITE PLAN FOR SUGGESTED ROUTE.
14. PROVIDE AND INSTALL LIGHTING CONTROL PANEL FOR EXTERIOR LIGHTING. REFERENCE LIGHTING CONTROL DIAGRAM. SUBMIT LIGHTING CONTROL PANEL SHOP DRAWINGS FOR APPROVAL.
15. PROVIDE AND INSTALL 480 - 208/120V STEP-DOWN TRANSFORMER AND PANELBOARD. REFERENCE SINGLE LINE DIAGRAM AND PANEL SCHEDULE.

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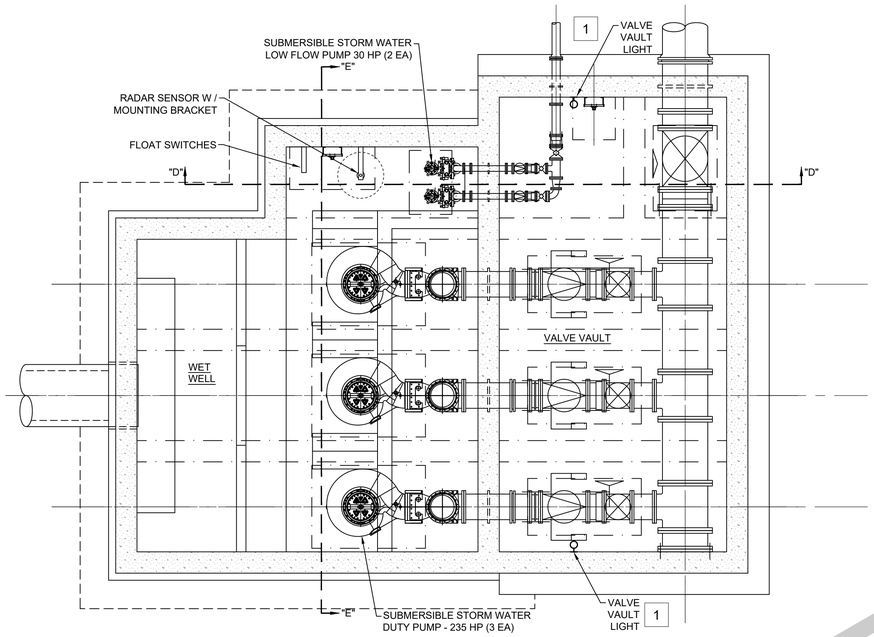
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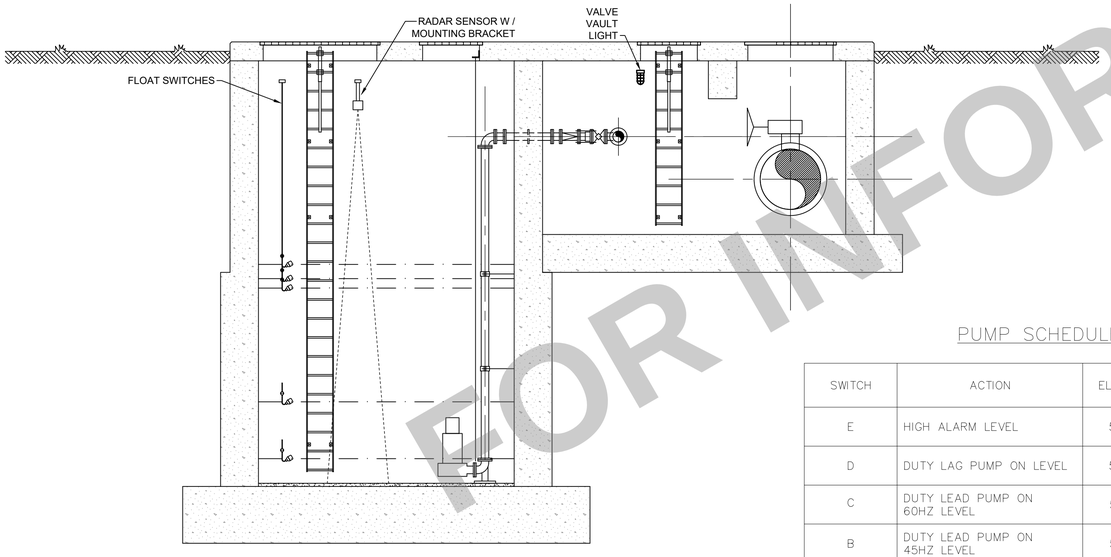
INSTALLATION NOTES:

1. PROVIDE AND INSTALL NEW WET LOCATION RATED WALL MOUNTED GLOBE LIGHT SUITABLE FOR MEDIUM BASE LAMP. PROVIDE WITH MEDIUM BASE LED LAMP. CONNECT FIXTURE TO LIGHTING CONTROLS IN ELECTRICAL BUILDING.



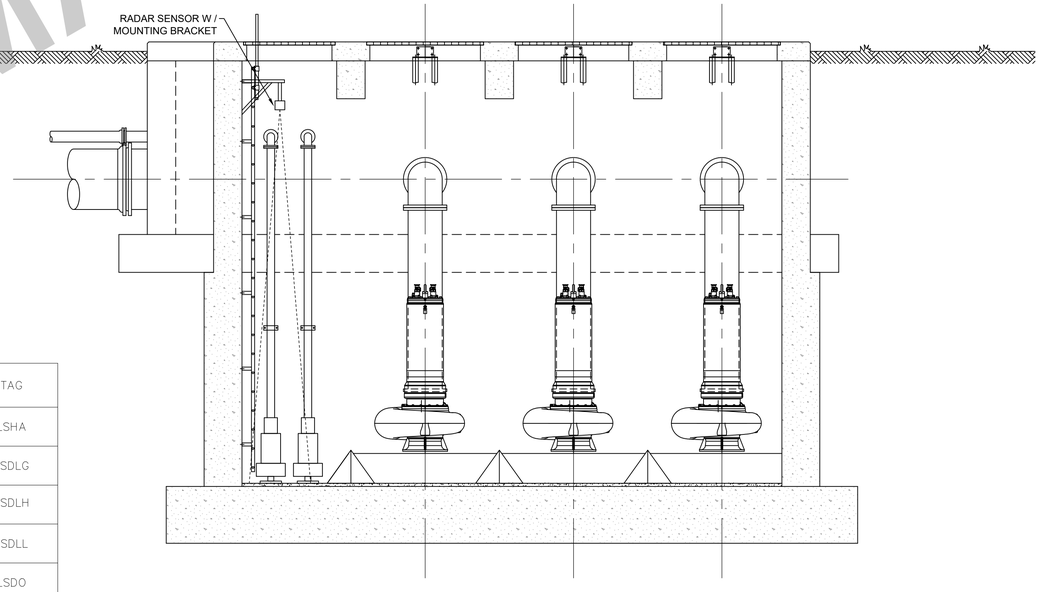
PUMP STATION ELECTRICAL PLAN (ELEV. 531.00)

NO SCALE



SECTION - "D"

NO SCALE



SECTION - "E"

NO SCALE

PUMP SCHEDULE

SWITCH	ACTION	ELEVATION	TAG
E	HIGH ALARM LEVEL	522.00	LSHA
D	DUTY LAG PUMP ON LEVEL	520.50	LSDLG
C	DUTY LEAD PUMP ON 60HZ LEVEL	519.50	LSDLH
B	DUTY LEAD PUMP ON 45HZ LEVEL	518.50	LSDLL
A	DUTY PUMPS OFF LEVEL	516.00	LSDO
G	LOW FLOW PUMP ON LEVEL	516.00	LSLF
F	LOW FLOW PUMP OFF LEVEL	514.50	LSLO

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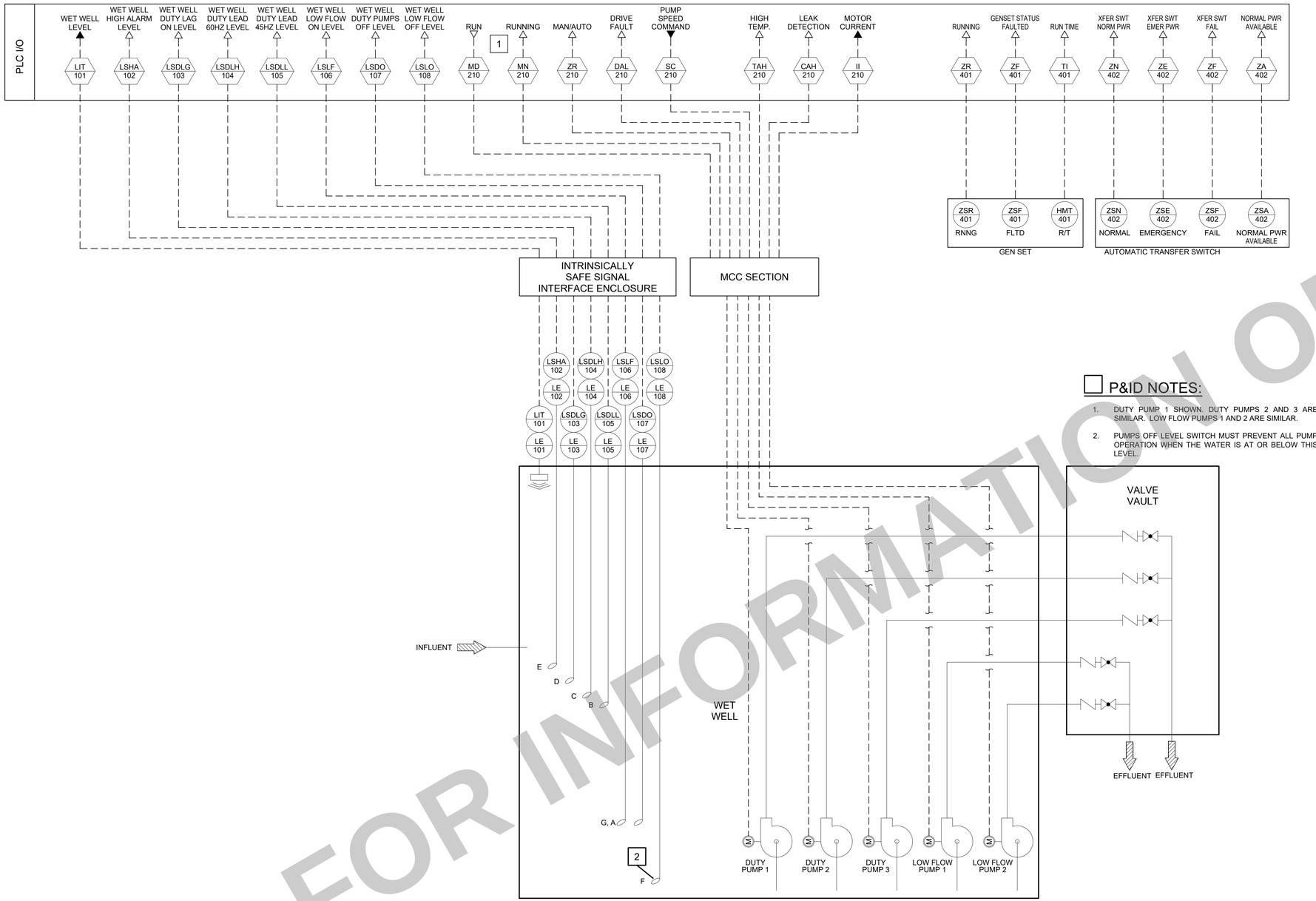
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P&ID NOTES:

1. DUTY PUMP 1 SHOWN. DUTY PUMPS 2 AND 3 ARE SIMILAR. LOW FLOW PUMPS 1 AND 2 ARE SIMILAR.
2. PUMPS OFF LEVEL SWITCH MUST PREVENT ALL PUMP OPERATION WHEN THE WATER IS AT OR BELOW THIS LEVEL.

PUMP STATION P&ID

SCALE: NONE

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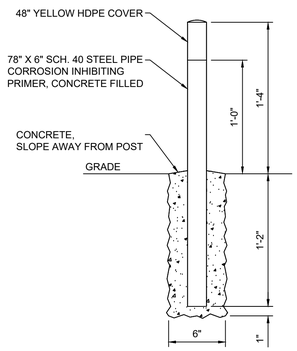
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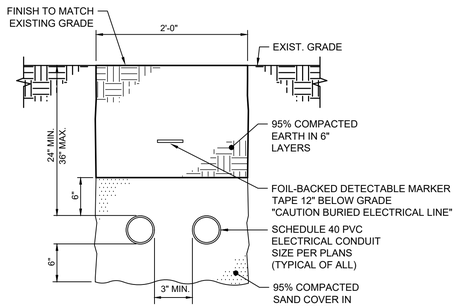
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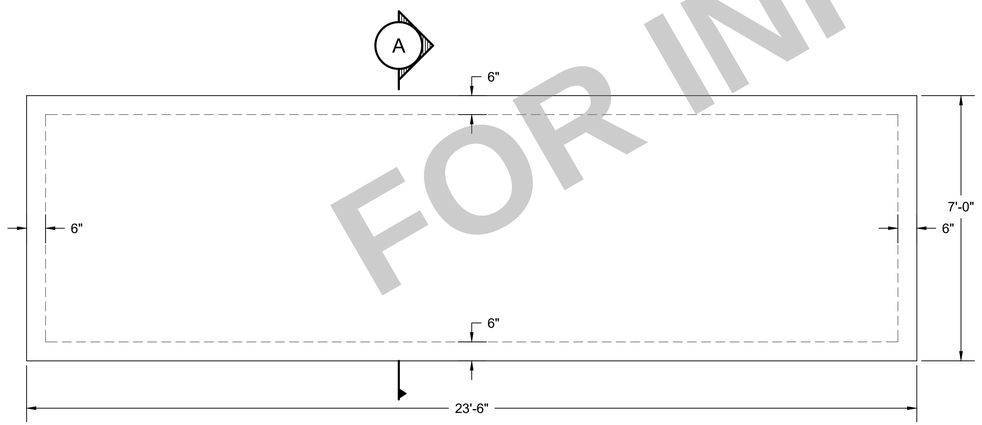
PIPE BOLLARD DETAIL

SCALE: NONE



ELECTRICAL TRENCH DETAIL

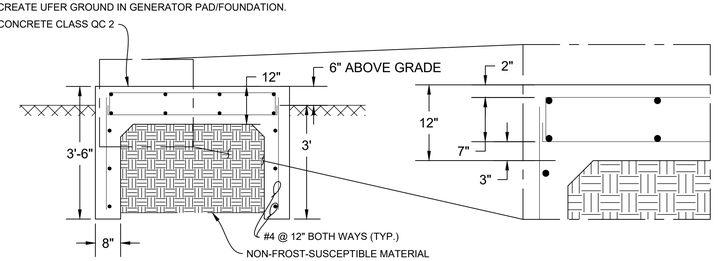
SCALE: NONE



CONCRETE PAD FOR STAND-BY GENERATOR

SCALE: NONE

NOTE: 1. USE EPOXY ANCHORS TO FASTEN UNIT TO SLAB, NOT WEDGE ANCHORS.
2. LOCATE AND STUB UP ALL CONDUITS PRIOR TO POURING CONCRETE.
3. APPLY CONCRETE SEALER TO PAD SURFACE.
4. CREATE UFER GROUND IN GENERATOR PAD/FOUNDATION.



A SECTION

SCALE: NONE

DETAIL

SCALE: NONE

GENERAL GENERATOR PAD AND BOLLARD NOTES:

1. THE LOCAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL STATE AND LOCAL SAFETY REQUIREMENTS AS WELL AS ADDITIONAL OWNER SPECIFIC SAFETY REQUIREMENTS. THE CONTRACTOR SHALL EXERCISE PRECAUTION ALWAYS FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT SHALL ALSO BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INITIATE, MAINTAIN AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK INCLUDING THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970.
2. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE VERIFICATION OF EXISTING CONDITIONS PRIOR TO THE START OF ANY FABRICATION, CONSTRUCTION OR ERECTION. DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THE ENGINEERING DRAWINGS SHALL BE SUBMITTED IN WRITTEN FORM TO THE OWNER OF THEIR APPOINTED REPRESENTATIVE FOR APPROVAL.
3. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ERECTION PROCEDURES AND SEQUENCES. DURING ERECTION OF THE STRUCTURE, THE CONTRACTOR SHALL DETERMINE MEANS AND METHODS OF TEMPORARY BRACING (INCLUDING, BUT NOT LIMITED TO TEMPORARY TIE-DOWNS, BRACING, OR GUYS) AS WELL AS THE ADEQUACY OF SHORT-TERM OR INCOMPLETE CONNECTIONS. ALL MISCELLANEOUS ERECTION MATERIAL SHALL BE REMOVED AFTER STABILITY OF THE STRUCTURE HAS BEEN VERIFIED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.
4. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE TEMPORARY REMOVAL AND INSTALLATION (INCLUDING NECESSARY MODIFICATIONS) OF EXISTING UTILITIES OR OTHER OBSTRUCTIONS AS REQUIRED FOR THE SUCCESSFUL COMPLETION OF WORK.
5. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE REMOVAL OF CONSTRUCTION WASTE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
6. THE CONTRACTOR SHALL SECURE ALL EQUIPMENT AND PANELS TO PADS WITH ANCHOR BOLTS IN SIZE, QUANTITY AND MATERIAL PER THE EQUIPMENT OR PANEL MANUFACTURER'S RECOMMENDATIONS. STORAGE TANKS SHALL BE SECURED USING EVERY AVAILABLE MOUNTING HOLE PROVIDED BY THE MANUFACTURER.

GENERATOR PAD FOUNDATION NOTES:

1. PREPARE SITE FOR FOUNDATION SUPPORT AS NECESSARY.
2. HORIZONTAL REINFORCING IN FOOTINGS SHALL BE CONTINUOUS AT CORNERS AND INTERSECTIONS. CORNER BARS SHALL BE PROVIDED TO MATCH HORIZONTAL STEEL. REINFORCING STEEL SHALL BE LAPPED AS FOLLOWS WHERE SPLICES ARE REQUIRED:

BAR SIZE	LAP DIMENSION
#4	1'-6"
#5	1'-9"
#6	2'-0"

GENERATOR PAD AND BOLLARD CONCRETE NOTES:

1. CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE CURRENT ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" WITH THE FOLLOWING SUPPLEMENTAL REQUIREMENTS:
2. CONCRETE SHALL CONFORM TO CLASS QC 2 FOR STRENGTH, AERATION, SLUMP, ADMIXTURES, ETC. PER ITEM 499 IN 2019 ODOT CMS.
3. REINFORCING STEEL SHALL BE DEFORMED AND CONFORM TO A615, A616, OR A617, GRADE 60, WITH A MINIMUM YIELD STRESS (Fy) OF 60,000 PSI. THE MINIMUM LAP FOR SPLICES SHALL BE 3' - 6".
4. CONCRETE COVER ON REINFORCING STEEL SHALL BE 3" UNLESS OTHERWISE NOTED.

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Panel:	Size: 100 Amps	Interior: CU	Main Breaker: 100A	AIC Rating: 10,000 A
PP1	Voltage: 120/208 VOLTS, 3PH, 4W.	Box: NEMA 1	Eq.Grd.Bar: CU	Series Rating: N/A
	Mains: M.C.B.	Cover: NEMA 1	IG Bar: N/A	Mounting: SURFACE

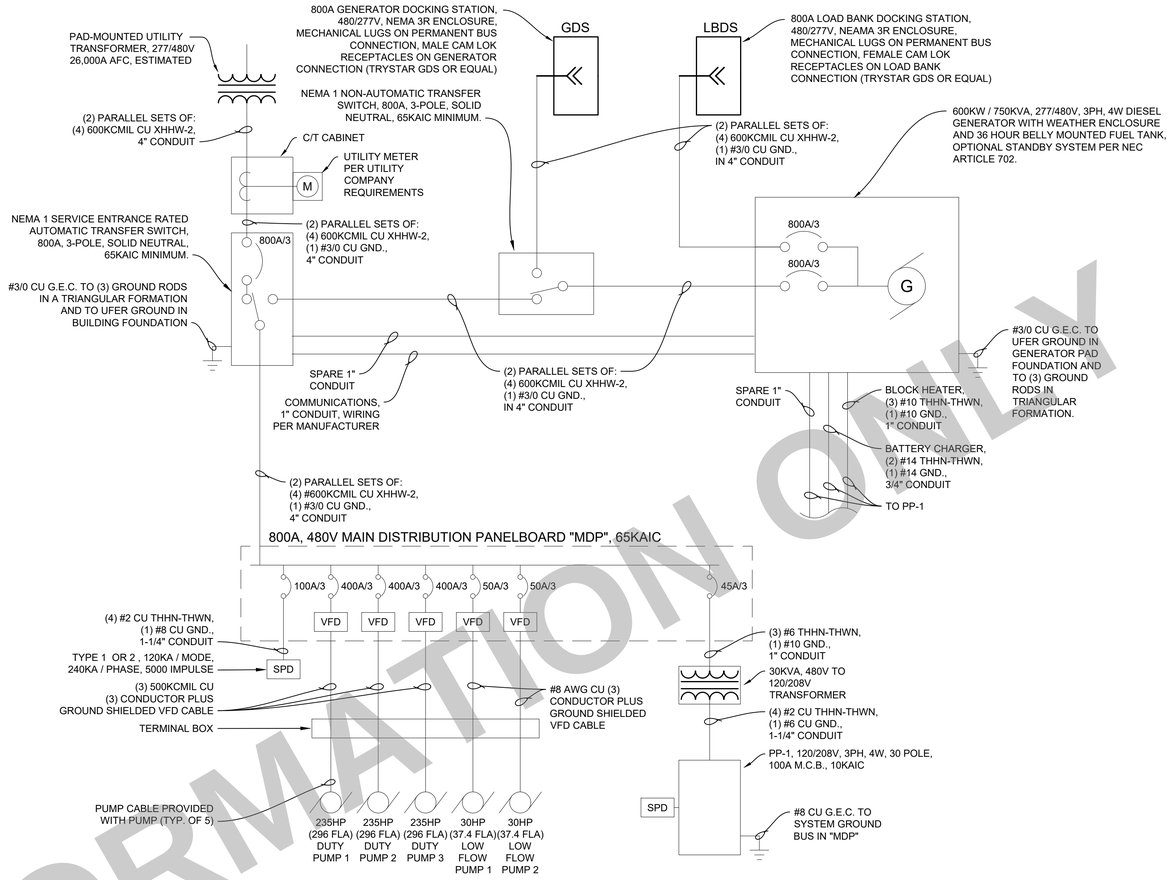
				LOAD (KW) CONNECTED				LOAD (KW) CALCULATED			
CKT NO	BRKR	DESCRIPTION	TAG NO	A	B	C	DF	A	B	C	Comments
1				0.00			1.00	0.00			
3	30/3	SURGE PROTECTIVE DEVICE			0.00		1.00		0.00		
5						0.00	1.00			0.00	
7	30/2	SPARE						0.00			
9									0.00		
11	20/1	EXTERIOR RECEPTACLE				0.18	1.00			0.18	
13	20/1	INTERIOR RECEPTACLES		0.36			1.00	0.36			
15	20/1	LIGHTING			1.20		1.25		1.50		
17	20/1	SCADA / PUMP CONTROL PANEL				0.50	1.00			0.50	
19	20/1	SPARE						0.00			
21	20/1	EXTERIOR RECEPTACLE			0.18				0.00		
23	20/1	EXTERIOR RECEPTACLE				0.18				0.00	
25	20/1	EXTERIOR RECEPTACLE		0.18				0.00			
27	20/1	EXTERIOR RECEPTACLE			0.18				0.00		
29	20/1	EXTERIOR RECEPTACLE				0.18				0.00	
2				2.50			1.00	2.50			
4	30/3	UNIT HEATER UH-1			2.50		1.00		2.50		
6						2.50	1.00			2.50	
8	20/1	SPARE						0.00			
10	20/1	SPARE							0.00		
12	20/1	SPARE								0.00	
14	20/1	SPARE						0.00			
16	20/1	EXHAUST FAN EF-1			0.50		1.25		0.63		
18	15/1	GENERATOR BATTERY CHARGER				0.50	1.00			0.50	
20	20/2	GENERATOR BLOCK HEATER		2.00			1.00	2.00			
22					2.00		1.00		2.00		
24		SPACE								0.00	
26		SPACE						0.00			
28		SPACE							0.00		
30		SPACE								0.00	

CAPACITY :	100.00 AMP SERVICE
LOAD :	55.21 AMPS CALCULATED
SPARE:	44.79 AMP AVAILABLE
	SPARE CAPACITY: 44.8%

	Total KW (CONNECTED)			Total KW (Calculated)			Total
	5.04	6.56	4.04	4.86	6.63	3.68	15.17
Total Amps (CONNECTED)	42.00	54.67	33.67				
Total Amps (Calculated)				40.50	55.21	30.67	

PANEL SCHEDULE

SCALE: NONE



ELECTRICAL SINGLE-LINE DIAGRAM

NO SCALE

GENERAL CONSTRUCTION NOTES:

1. IN SOME JURISDICTIONS THE GROUNDING OF THE METER SOCKET WILL BE SUPPLEMENTED WITH THE USE OF A DRIVEN GROUND ROD IN ADDITION TO BONDING TO THE GROUND SERVICE CONDUCTOR.
2. THE METER SOCKET SHALL BE GROUNDED. THE METER SOCKET SHALL BE BONDED THROUGH A SEPARATE EQUIPMENT GROUNDING CONDUCTOR CONNECTED TO THE GROUND SERVICE CONDUCTOR (USUALLY THE NEUTRAL).
3. THE TRENCH IS TO EXTEND NO CLOSER TO THE POWER COMPANY'S TRANSFORMER OR PEDESTAL THAN A DISTANCE SPECIFIED BY THE POWER COMPANY. CONTRACTOR TO DETERMINE LOCATION OF ALL UTILITIES BEFORE TRENCHING.
4. SCHEDULE 80 RIGID CONDUIT REQUIRED FOR DRIVEWAYS AND AND PARKING LOTS.
5. EQUIVALENT MUST BE PRE-APPROVED BY DUKE METER SERVICE.

GENERAL CONDITION NOTES:

THE UTILITY WILL BE RESPONSIBLE FOR:

a. INSTALLING AND REMOVING THE METER.

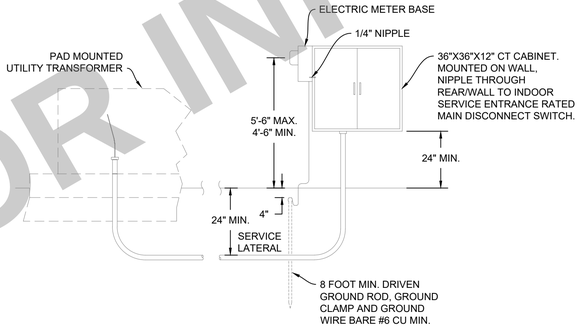
b. TERMINATE AT THE TRANSFORMER.

THE CONTRACTOR WILL BE RESPONSIBLE FOR:

a. FURNISHING AND INSTALLING THE METER BASE AND CT CABINET AS SHOWN.

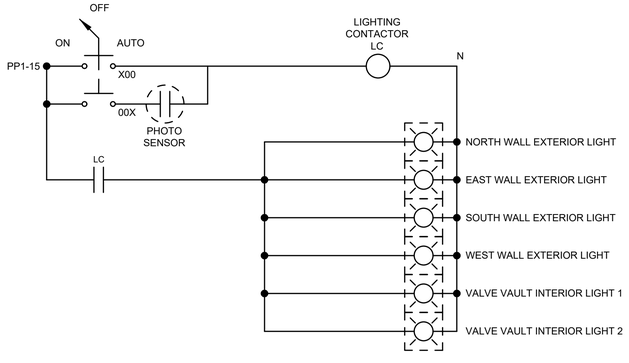
b. FURNISHING AND INSTALLING THE CONDUIT AND WIRE TO THE PAD-MOUNT TRANSFORMER.

c. INSTALLING METER SOCKET AT LOCATION USING REMOVABLE CORROSION RESISTANT FASTENERS.



ELECTRICAL SERVICE DETAIL

SCALE: NONE



EXTERIOR BUILDING LIGHTING CONTROL

NO SCALE

FOR INFORMATION ONLY

STATE OF OHIO
DANIEL D. FRYE
E-65085
REGISTERED
PROFESSIONAL ENGINEER
17/Feb/2022

TRI-TECH
Built On Integrity
ENGINEERING AND PROJECT MANAGEMENT
1785 S. METRO PARKWAY
CENTERVILLE, OH 45459
WWW.TRI-TECH.US
937.306.1630
800.334.1630
PROJECT 21140

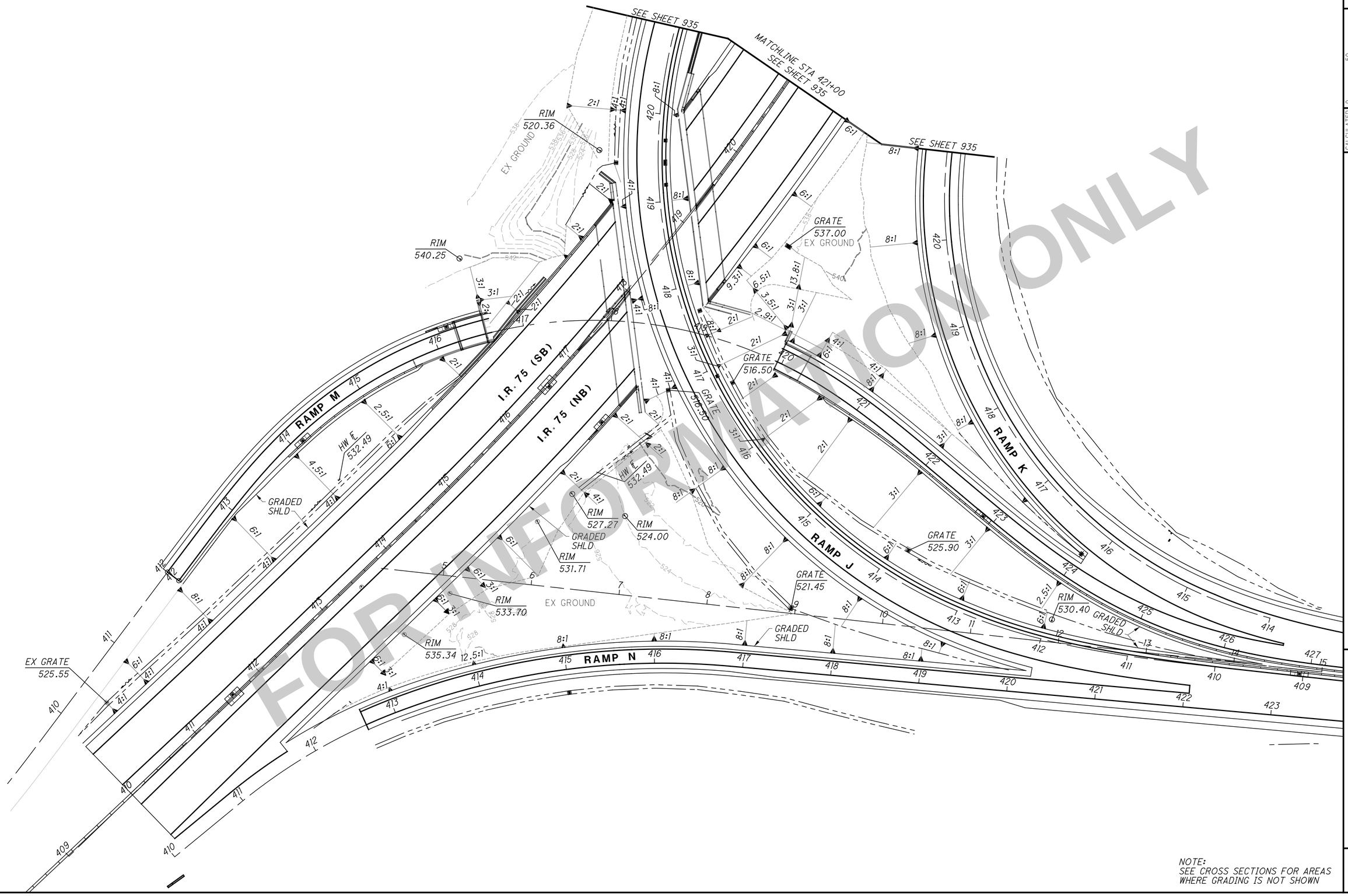
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CHECKED DDF

OHIO DEPARTMENT OF TRANSPORTATION
PROPOSED PUMP STATION

HAM - 75 - 7.85

933
2017

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FOR INFORMATION ONLY

NOTE:
SEE CROSS SECTIONS FOR AREAS
WHERE GRADING IS NOT SHOWN

HORIZONTAL SCALE IN FEET
0 25 50 100

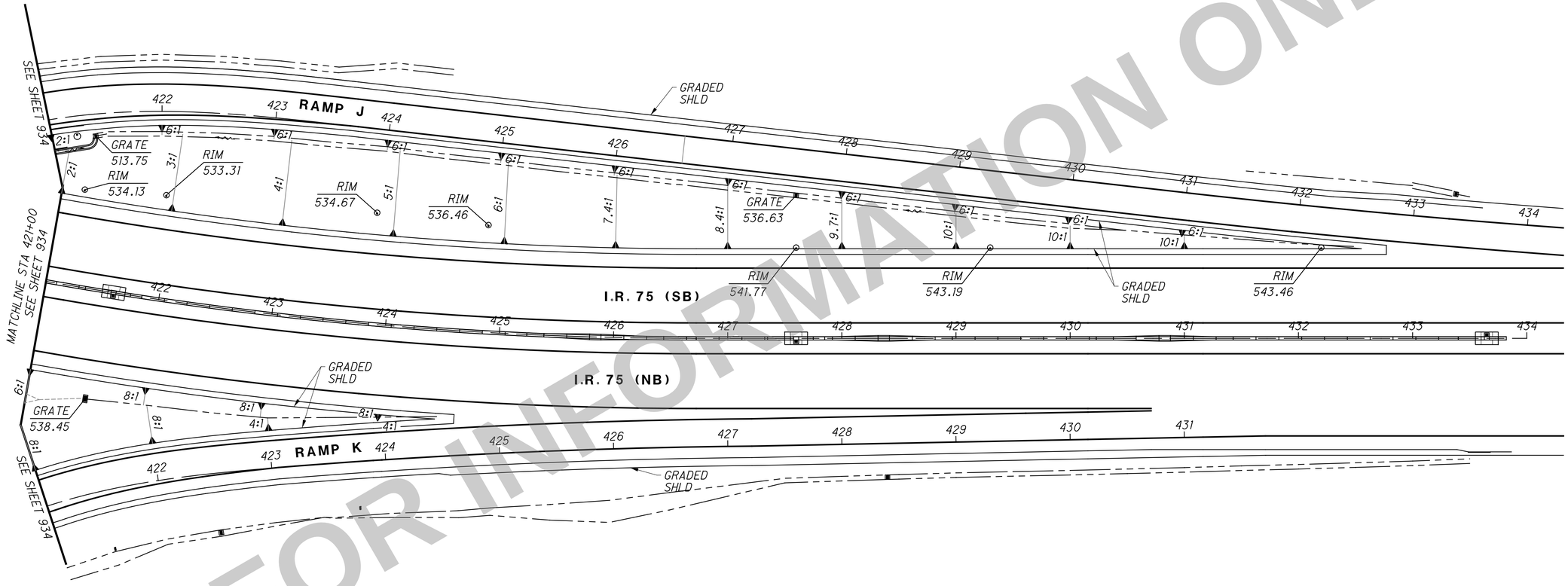
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GRADING DETAILS
NORWOOD LATERAL INTERCHANGE

HAM-75-7.85

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2017

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FOR INFORMATION ONLY

NOTE:
SEE CROSS SECTIONS FOR AREAS WHERE GRADING IS NOT SHOWN

HORIZONTAL SCALE IN FEET
0 25 50 100

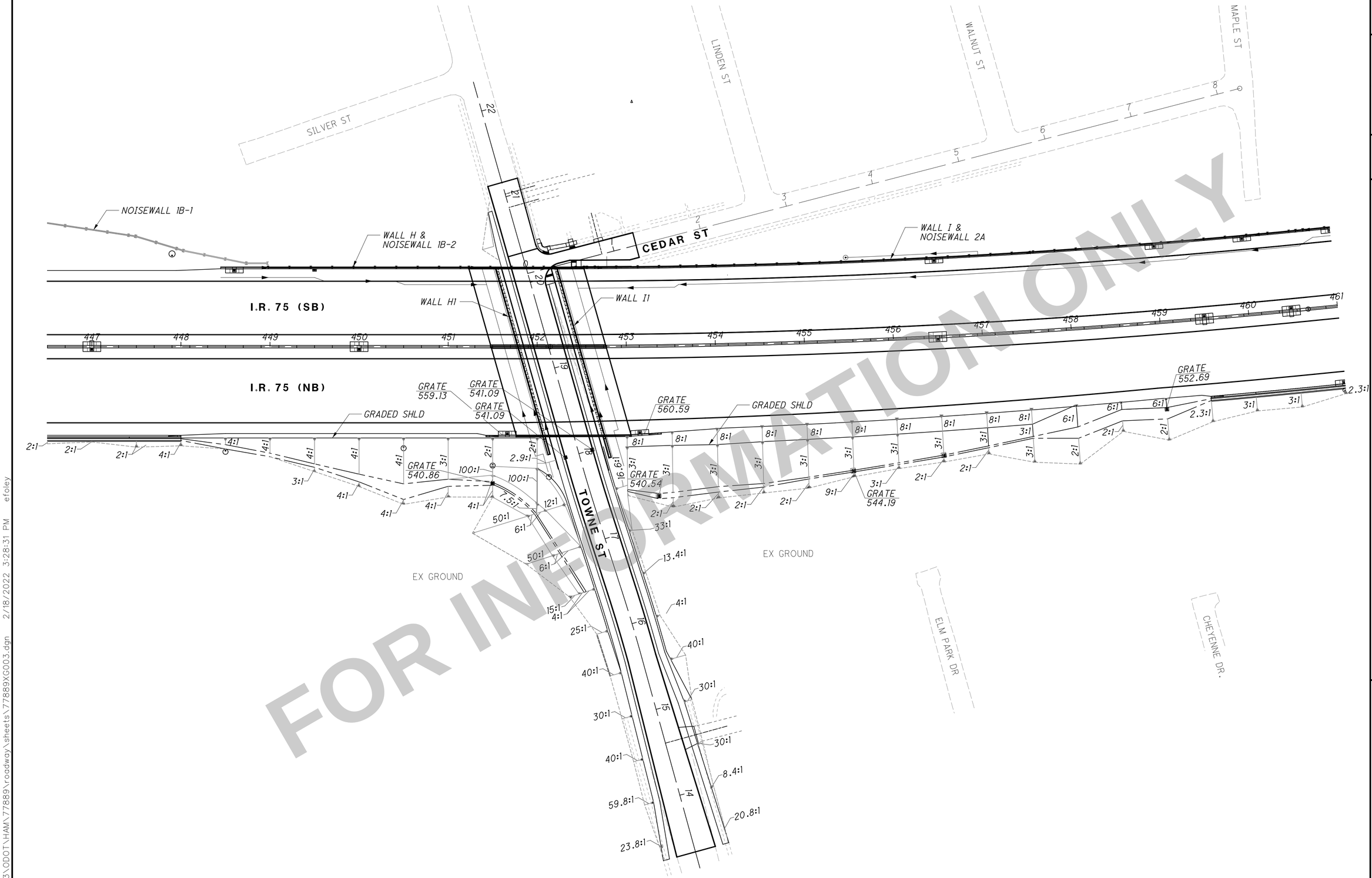
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GRADING DETAILS
NORWOOD LATERAL INTERCHANGE

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2017

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HORIZONTAL SCALE IN FEET
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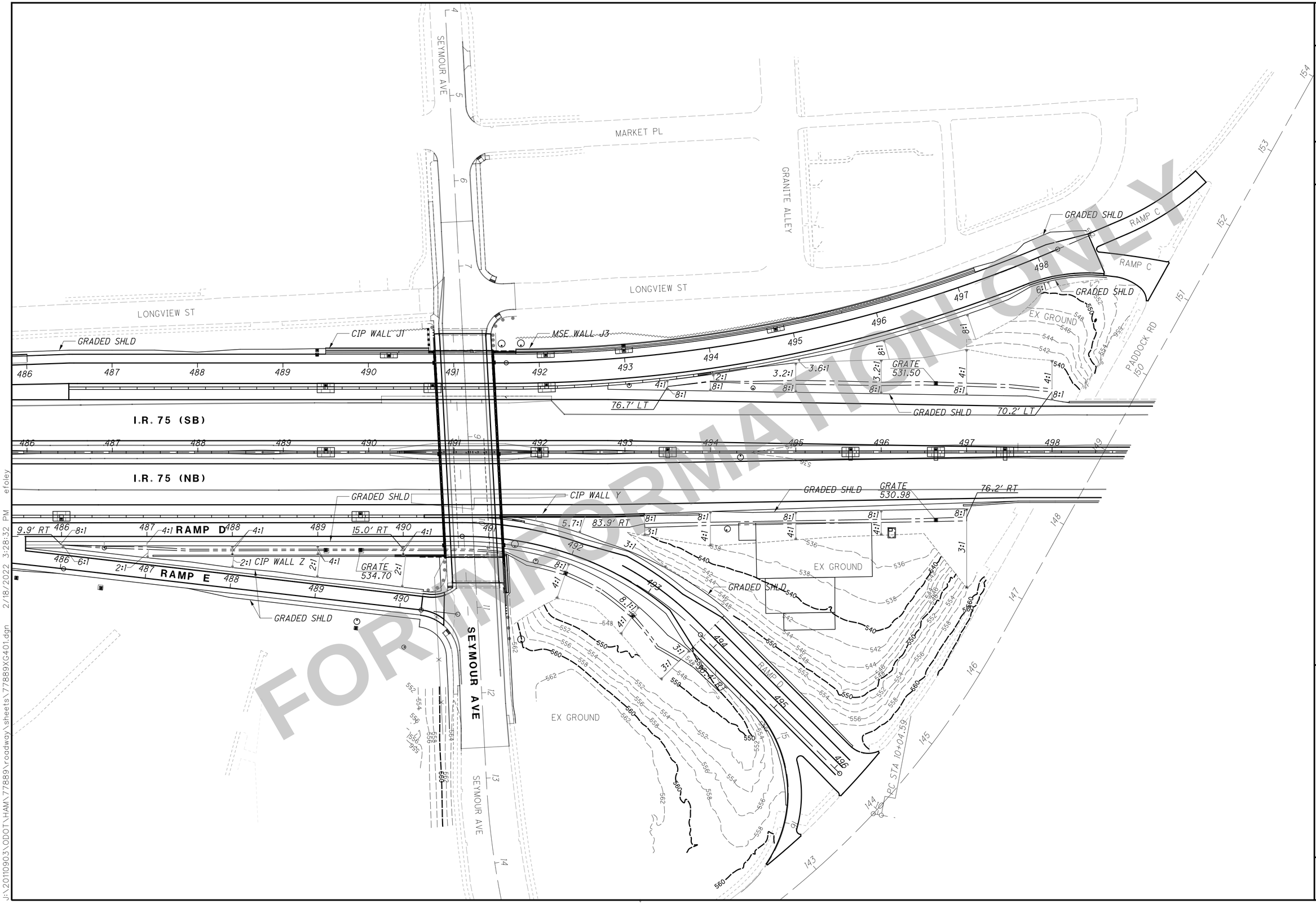
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GRADING DETAILS
TOWNE ST INTERCHANGE

HAM-75-7.85

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2017

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HORIZONTAL SCALE IN FEET
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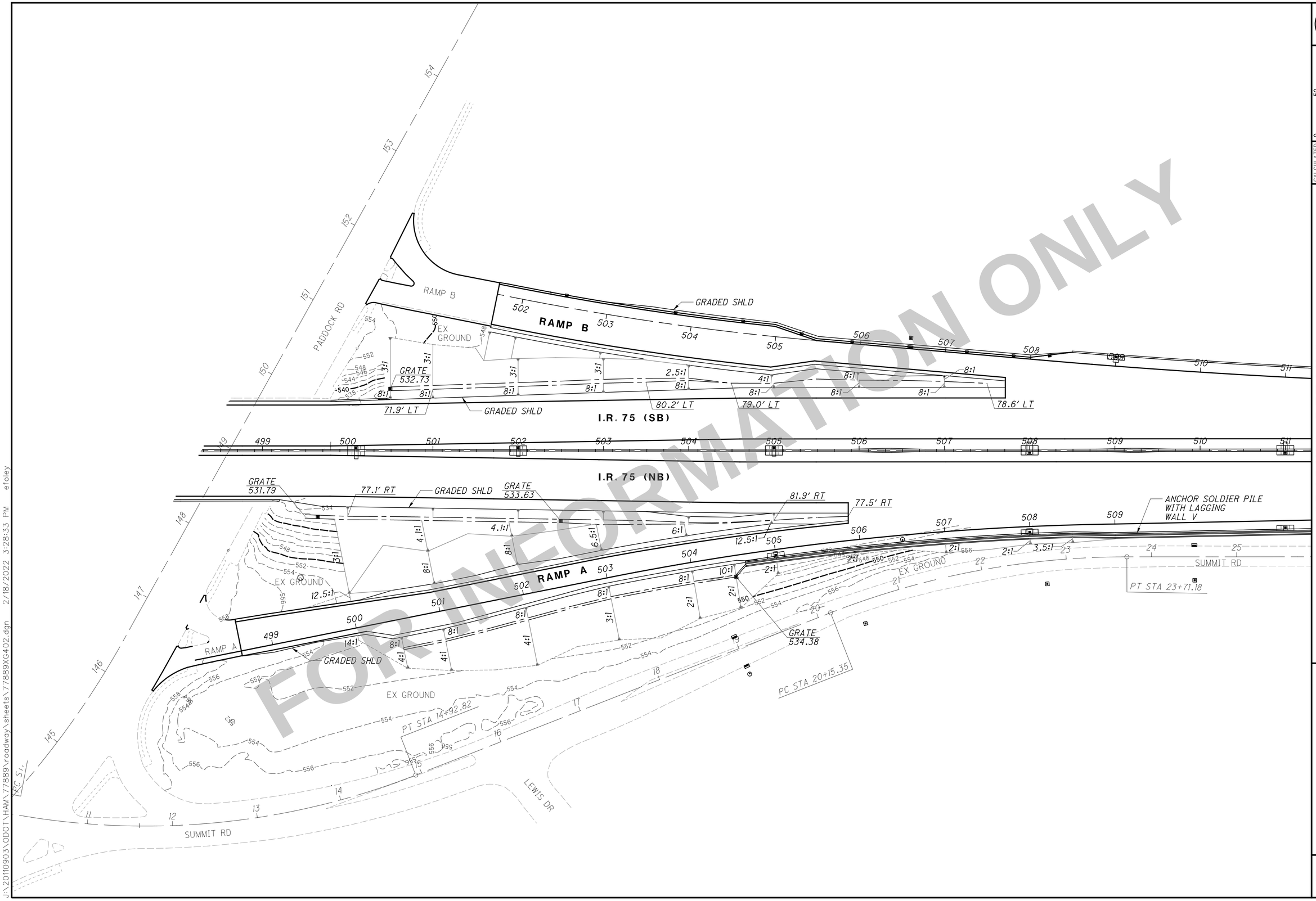
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GRADING DETAILS
PADDOCK RD INTERCHANGE

HAM-75-7.85

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2017

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HORIZONTAL SCALE IN FEET
0 25 50 100

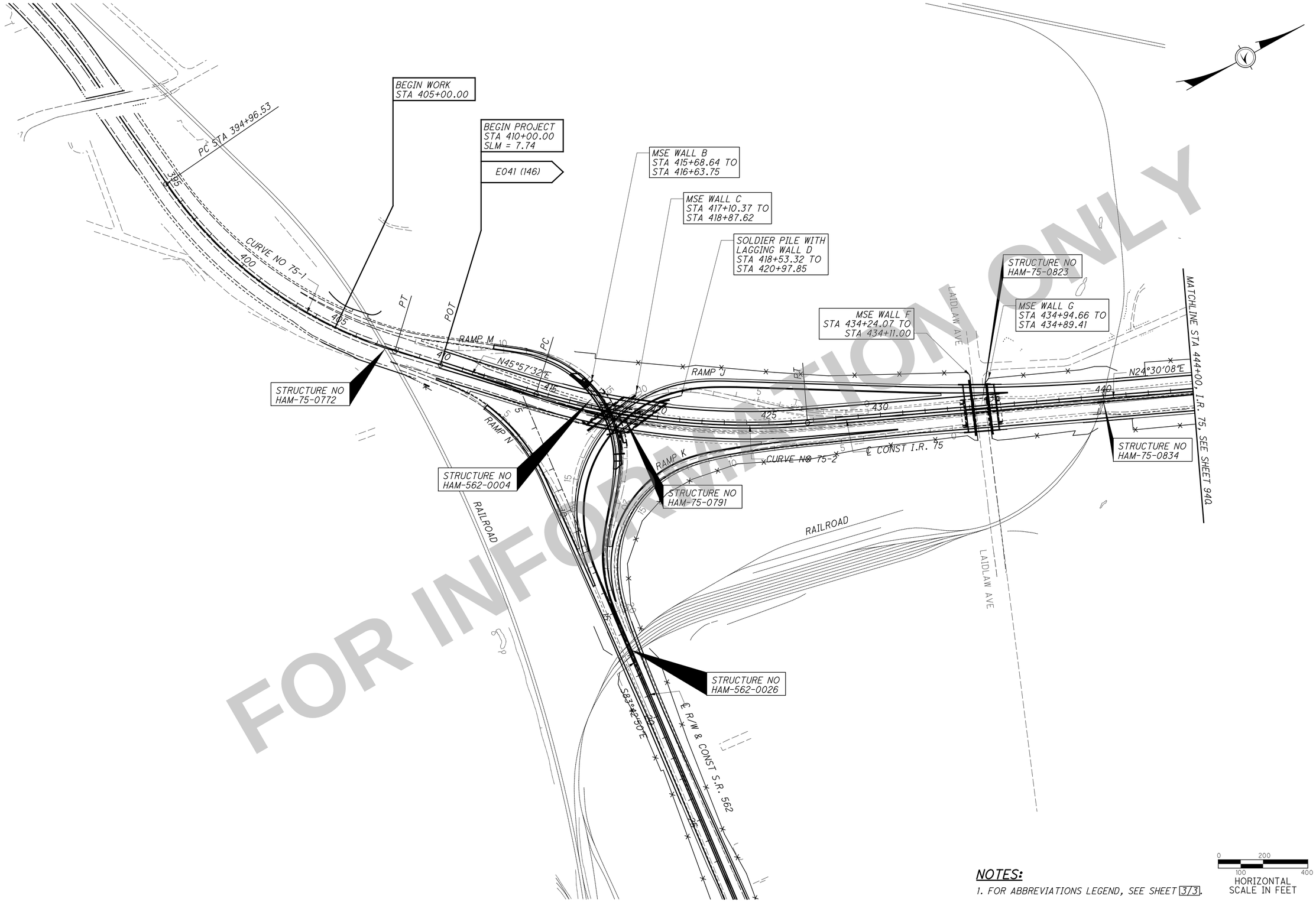
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GRADING DETAILS
PADDOCK RD INTERCHANGE

HAM-75-7.85

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2017

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NOTES:

1. FOR ABBREVIATIONS LEGEND, SEE SHEET 373.

0 100 200 400
HORIZONTAL SCALE IN FEET

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED	DRAWN	REVIEWED	DATE
JLM	SMJ	SSK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

RETAINING WALL SCHEMATIC PLAN 1 OF 3

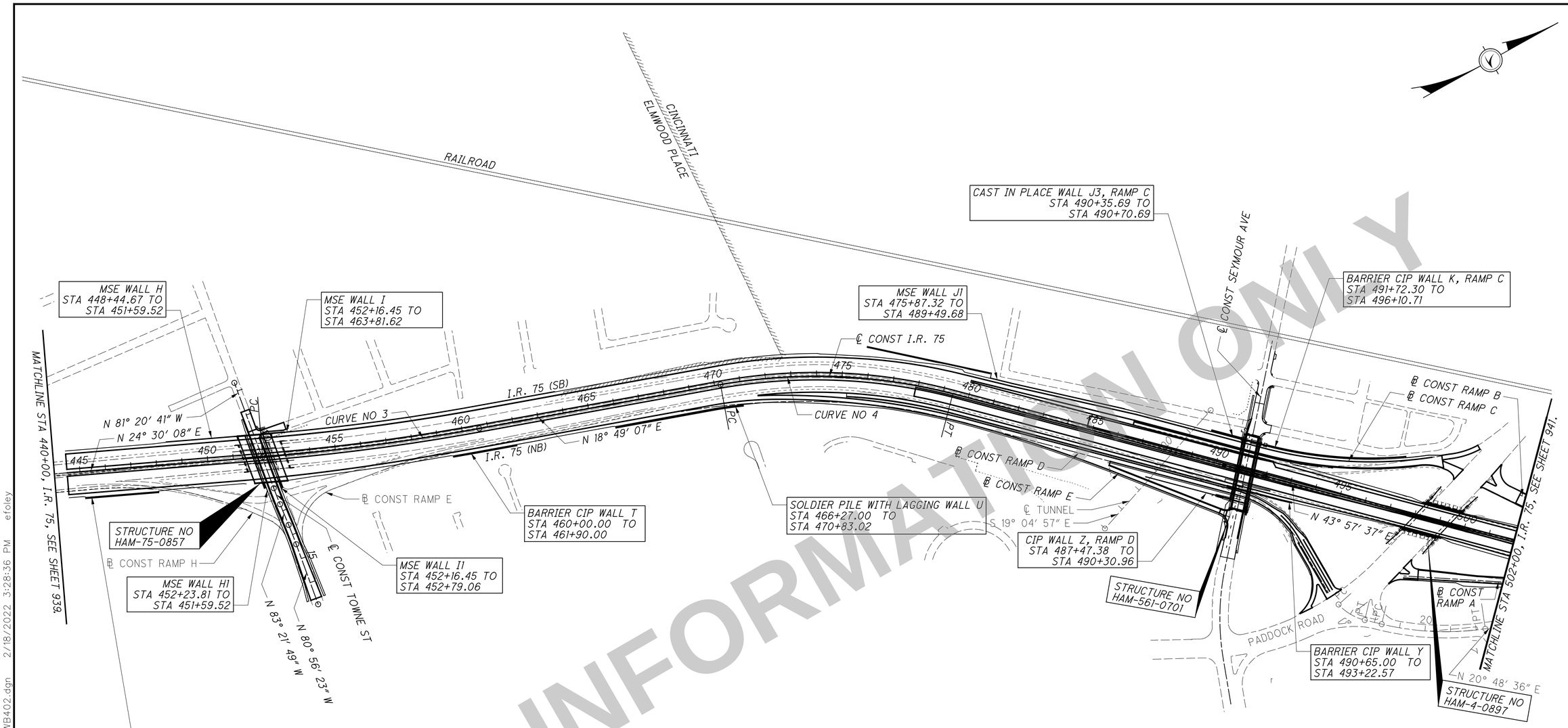
STA 410+00 TO STA 444+00

HAM-75-7.85
PID No. 77889

1 / 3

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2017

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NOTES:

1. FOR ABBREVIATIONS LEGEND, SEE SHEET 3/3.

0 100 200 400
HORIZONTAL SCALE IN FEET

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

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JLM	SMJ	SSK	12-15-21
CHECKED	REVISED		STRUCTURE FILE NUMBER
NCK			

RETAINING WALL SCHEMATIC PLAN 2 OF 3

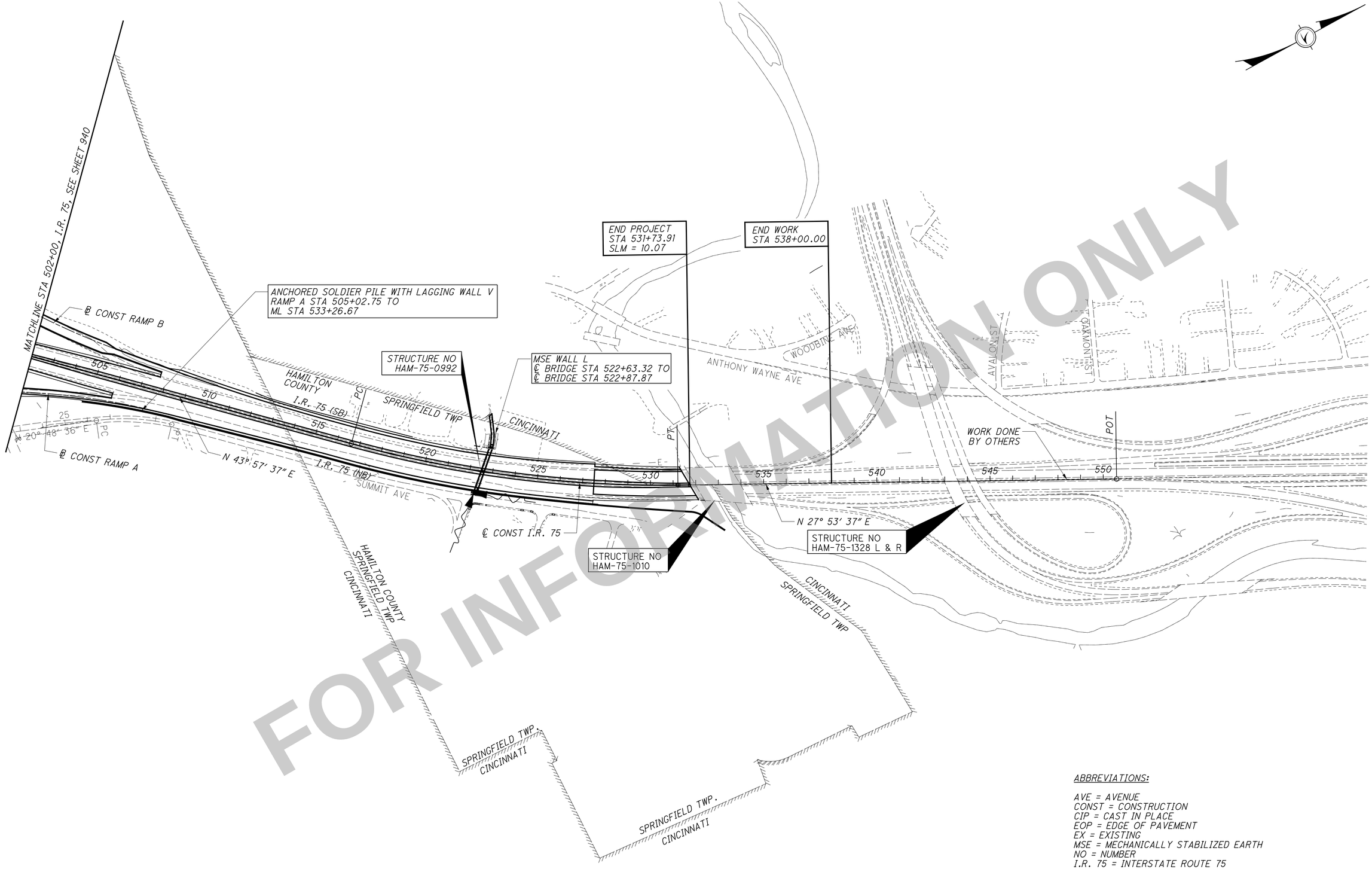
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PID No. 77889

2 / 3

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2017

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FOR INFORMATION ONLY

ABBREVIATIONS:

AVE = AVENUE
CONST = CONSTRUCTION
CIP = CAST IN PLACE
EOP = EDGE OF PAVEMENT
EX = EXISTING
MSE = MECHANICALLY STABILIZED EARTH
NO = NUMBER
I.R. 75 = INTERSTATE ROUTE 75
PROP = PROPOSED
NB = NORTHBOUND
SB = SOUTHBOUND
SLM = STRAIGHT LINE MILEAGE
ST = STREET
STA = STATION
TWP = TOWNSHIP

0 200
100 400
HORIZONTAL
SCALE IN FEET

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED	DRAWN	REVIEWED	DATE
JLM	SMJ	SSK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

RETAINING WALL SCHEMATIC PLAN 3 OF 3

STA 502+00 TO STA 531+73.91

HAM-75-7.85
PID No. 77889

3 / 3

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2017

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PROPOSED WORK
THE PROPOSED WORK CONSISTS OF BUILDING SOLDIER PILE WITH LAGGING RETAINING WALLS ALONG I.R. 75 AS FOLLOWS:
WALLS D (ANCHORED), S, U, AND V (ANCHORED)

REFERENCE SHALL BE MADE TO SUPPLEMENTAL SPECIFICATION
866 DATED 4-21-17

REFERENCE SHALL BE MADE TO SUPPLEMENT
1083 DATED 1-20-17

DESIGN SPECIFICATIONS
THIS STRUCTURE CONFORMS TO "THE LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 7TH EDITION, 2014, INCLUDING THE 2015 INTERIM SPEICIFICATIONS, AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN DATA
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4000 PSI
REINFORCING STEEL - ASTM A615 OR A996 GRADE 60, MINIMUM YIELD STRENGTH 60,000 PSI
STRUCTURAL STEEL FOR SOLDIER PILES - ASTM A709 GRADE 50 YIELD STRENGTH 50,000 PSI

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN
THIS WORK CONSISTS OF EXCAVATION OF THE SOIL IN BETWEEN THE SOLDIER PILES TO PERMIT LAGGING INSTALLATION OR EMBANKMENT REQUIRED TO CREATE A DRILLING BENCH TO INSTALL SOLDIER PILES. EACH WALL IS TO BE CONSTRUCTED IN A TOP-DOWN MANNER. THEREFORE, EXCAVATION OF THE NEW WALL SHALL BE MINIMIZED UNTIL ALL SOLDIER PILES ARE INSTALLED. IT IS NOT ACCEPTABLE TO EXCAVATE MORE THAN 3 FEET OF EXISTING GRADE FOR INSTALLATION OF SOLDIER PILES. THE EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH CMS 503, EXCEPT AS MODIFIED AND SHOWN ON THIS SHEET.

MAINTENANCE OF TRAFFIC
FOR MAINTENANCE OF TRAFFIC DETAILS, SEE THE ROADWAY PLANS.

ITEM 507 - STEEL PILES, MISC.: SOLDIER PILES HP12X53:
ITEM 507 - STEEL PILES, MISC.: SOLDIER PILES W18X86:
THIS WORK CONSISTS OF FURNISHING AND PLACING STEEL SOLDIER PILES INTO DRILLED HOLES AS WELL AS MONITORING PLUMBNESS. FURNISH SOLDIER PILES CONSISTING OF STRUCTURAL STEEL MEMBERS THAT MEET THE PLAN REQUIREMENTS AND CONFORM TO ASTM A709, GRADE 50. DO NOT FIELD WELD OR SPLICE STEEL SOLDIER PILES.

MEASUREMENT FOR PAYMENT WILL BE THE DISTANCE BETWEEN THE ENDS OF THE SOLDIER PILE. PAYMENT IS FULL COMPENSATION FOR FURNISHING AND PLACING THE SOLDIER PILES AND MONITORING THEIR PLUMBNESS UNTIL THE PLACEMENT OF THE CONCRETE FACING HAS BEGUN. THE DEPARTMENT WILL PAY FOR SOLDIER PILES AT THE CONTRACT UNIT PRICE BID PER FOOT FOR ITEM 507 STEEL PILES, MISC.: SOLDIER PILES.

ITEM 511 - CLASS QC1 CONCRETE, RETAINING/WINGWALL, NOT INCLUDING FOOTING, AS PER PLAN:
THE CUBIC YARD CONCRETE QUANTITY IS BASED ON BOTH THE STRUCTURAL THICKNESS OF THE WALL PLUS AN ADDITIONAL 2" AESTHETIC THICKNESS DUE TO THE FORMLINER. COST OF FORMLINERS FOR THE AESTHETIC TREATMENT SHALL BE INCLUDED IN THE PRICE BID PER CUBIC YARD FOR THIS ITEM. THE AESTHETIC TREATMENT SHALL BE AN "ASHLAR STONE". THE ASHLAR STONE FORMLINER PATTERN FOR THE SPL WALLS SHALL MATCH THE PATTERN FOR ALL WALLS ON THE PROJECT IN WHICH ASHLAR STONE IS SPECIFIED. IT IS NOT ACCEPTABLE TO MIX DIFFERING ASHLAR STONE PATTERNS FOR THE VARIOUS WALLS. FINISH WITH A MINIMUM OF 1" AND A MAXIMUM OF 2" RELIEF. HORIZONTAL CONSTRUCTION JOINTS ARE PROHIBITED FOR THE CAST-IN-PLACE FACING FOR BOTH CANTILEVERED SOLDIER PILE WALLS AND ANCHORED WALLS.

ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN
SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) SHALL BE APPLIED TO ALL EXPOSED SURFACES OF THE CONCRETE FACING OF THE RETAINING WALL INCLUDING THE TOP, BACK SIDE OF WALL DOWN TO THE GUTTER OR TOE OF BARRIER, AND THE FRONT VERTICAL SIDE OF THE CONCRETE FROM TOP TO BOTTOM. THE FINISH COAT COLOR FOR THE RETAINING WALL SHALL BE LIGHT NEUTRAL MEETING FEDERAL COLOR STANDARD NO. 595B-17778. THE ADDITIONAL MATERIAL AND LABOR REQUIRED TO SEAL THE AESTHETIC TREATMENT FINISH WITH THE MINIMUM OF 1" AND MAXIMUM OF 2" RELIEF SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE YARD PER CMS 512.09.

ITEM 512 - TYPE 2 WATERPROOFING, AS PER PLAN
TYPE 2 WATERPROOFING SHALL BE ATTACHED TO THE WOOD LAGGING, 3 FEET WIDE FULL HEIGHT CENTERED AT ALL EXPANSION AND CONTRACTION JOINTS. TYPE 2 WATERPROOFING SHALL ALSO BE ATTACHED TO THE BACK OF THE JOINTS AND THE CONCRETE FACING ABOVE THE SOLDIER PILES & LAGGING.

ITEM 512 - SEALING OF CONCRETE SURFACES (PERMANENT GRAFFITI PROTECTION), AS PER PLAN
APPLY A PERMANENT GRAFFITI COATING QUALIFIED ACCORDING TO SUPPLEMENT 1083 THAT IS COMPATIBLE WITH THE CONCRETE SEALER OVER WHICH IT IS APPLIED. APPLY THE GRAFFITI COATING IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS. THE ADDITIONAL MATERIAL AND LABOR REQUIRED TO SEAL THE AESTHETIC TREATMENT FINISH WITH THE MINIMUM OF 1" AND MAXIMUM OF 2" RELIEF SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE YARD PER CMS 512.09.

ITEM 524 - DRILLED SHAFTS, 24" DIAMETER, ABOVE BEDROCK, AS PER PLAN (WALLS D, S, AND V)
ITEM 524 - DRILLED SHAFTS, 30" DIAMETER, ABOVE BEDROCK, AS PER PLAN (WALL U)
THIS WORK CONSISTS OF FURNISHING AND INSTALLING DRILLED SHAFTS FOR SOLDIER PILE AND LAGGING WALLS. THE DRILLED SHAFTS ARE REINFORCED WITH SOLDIER PILES INSTEAD OF REINFORCING STEEL CAGES. THE SOLDIER PILES EXTEND ABOVE THE TOP OF THE DRILLED SHAFT. FURNISH AND INSTALL THE DRILLED SHAFTS IN ACCORDANCE WITH CMS 524 EXCEPT AS MODIFIED AND SUPPLEMENTED BELOW.

EXCAVATE THE HOLE FOR THE DRILLED SHAFT WITHIN 3 INCHES OF THE PLAN LOCATION. THE DESIGN IS BASED ON A MINIMUM TIP ELEVATION AS NOTED IN THE TABLE ON SHEETS 17/53 & 23/53. IF FIELD CONDITIONS INDICATE GREATER DEPTHS, NOTIFY THE ENGINEER FOR FURTHER EVALUATION.

ALIGN THE SOLDIER PILE VERTICALLY WITHIN THE HOLE. PLACE THE SOLDIER PILE SO THAT THE FLANGES ARE PARALLEL TO THE CENTERLINE OF THE ROW OF DRILLED SHAFTS AND THE TOP IS AT THE PLAN ELEVATION. SUPPORT THE SOLDIER PILE SO THAT IT DOES NOT MOVE DURING CONCRETE PLACEMENT. DO NOT ALLOW THE VERTICAL ALIGNMENT OF THE SOLDIER PILE TO VARY BY MORE THAN 1/4" PER FOOT OF DEPTH. DO NOT ALLOW THE ORIENTATION OF THE FLANGES TO VARY BY MORE THAN 10 DEGREES.

USE CLASS QC1 CONCRETE ACCORDING TO CMS 511. PLACE CONCRETE TO THE ELEVATION OF THE BOTTOM OF THE LAGGING. THE CONTRACTOR MAY PLACE CONCRETE USING THE FREE FALL METHOD PROVIDED THE DEPTH OF WATER IS LESS THAN 6 INCHES AND THE CONCRETE FALLS WITHOUT STRIKING THE SIDES OF THE HOLE. POURING CONCRETE ALONG THE WEB OF THE SOLDIER PILE IS ACCEPTABLE.

CHECK THE POSITION, THE VERTICAL ALIGNMENT, AND ORIENTATION OF THE SOLDIER PILE IMMEDIATELY AFTER CONCRETE PLACEMENT. MAKE CORRECTIONS AS NECESSARY TO MEET THE ABOVE TOLERANCES.

FILL THE HOLE ABOVE THE BOTTOM OF THE LAGGING TO THE EXISTING GROUND SURFACE WITH LOW STRENGTH MORTAR BACKFILL (LSM) PER ITEM 613. REMOVE CONCRETE AND LSM AS EVEN WITH THE FRONT FACE OF THE SOLDIER PILE IN ORDER TO PLACE THE LAGGING.

THE DEPARTMENT WILL CONSIDER CONSTRUCTION OF THE DRILLED SHAFTS FOR THE INSTALLATION OF THE SOLDIER PILES UTILIZING CONTINUOUS FLIGHT AUGER (CFA) METHODS. USE OF CFA METHODS IS CONSIDERED AN ALTERNATIVE TO ITEM 524 - DRILLED SHAFTS, 24" DIAMETER, ABOVE BEDROCK, AS PER PLAN OR ITEM 524 - DRILLED SHAFTS, 30" DIAMETER, ABOVE BEDROCK, AS PER PLAN. THE CONTRACTOR SHALL SUBMIT THE CFA INSTALLATION PLAN IN LIEU OF THE DRILLED SHAFT INSTALLATION. THE CFA INSTALLATION PLAN SHALL INCLUDE THE PROVISIONS OUTLINED IN ITEM 524. THE CONTINUOUS FLIGHT AUGERS MUST BE HOLLOW, AND CONTINUOUS TO INDUCE PLACEMENT OF THE GROUT/LSM UNDER PRESSURE AT THE BOTTOM OF THE DRILLED EXCAVATION. ONCE THE DESIGN SHAFT TIP ELEVATION IS REACHED, PLACE THE GROUT/LSM TO THE ELEVATIONS SHOWN IN THE PROJECT PLANS BY PUMPING. A MINIMUM OF 10 FT. OF PRESSURE HEAD MUST BE MAINTAINED DURING CASTING OF THE SHAFT. PROVIDE A CALIBRATED, AUTOMATED INLINE MONITORING SYSTEM TO DOCUMENT THE QUANTITY OF GROUT/LSM PLACED IN THE DRILLED EXCAVATION. SUBMIT THE FLOWMETER DOCUMENTATION FOR EACH DRILLED SHAFT TO THE ENGINEER THE DAY AFTER SHAFT CASTING. IMMEDIATELY RE-DRILL ANY SHAFT (DO NOT PLACE SOLDIER BEAM) IN WHICH THE AMOUNT OF GROUT/LSM UTILIZED IS LESS THAN THE THEORETICAL VOLUME.

PROVIDE PROOF OF INLINE FLOWMETER CALIBRATION WITH THE CFA INSTALLATION PLAN. THE INLINE FLOW METER MUST HAVE BEEN CALIBRATED BY AN INDEPENDENT THIRD PARTY WITHIN 12 MONTHS OF THE CFA CONSTRUCTION DATE. THE COST OF THE INLINE MONITORING SYSTEM IS INCIDENTAL TO THE COST OF THE DRILLED SHAFT. NO ADDITIONAL COMPENSATION WILL BE PERMITTED FOR SHAFTS RE-DRILLED WHEN THE INLINE FLOWMETER INDICATES THE INITIAL GROUT/LSM VOLUME WAS LESS THAN THE THEORETICAL VOLUME.

WHEN UTILIZING A CFA INSTALLATION METHOD, PROVIDE TESTING OF THE GROUT AND LEAN MIX SAMPLES BY AN INDEPENDENT TESTING LAB. QUALITY CONTROL CUBES OR 3"X6" (OR LARGER) CYLINDERS ARE ACCEPTABLE. THE DEPARTMENT WILL OBTAIN 3"X6" CYLINDERS FOR EVERY 5TH SET OF CUBES OR CYLINDERS AS QUALITY ASSURANCE SAMPLES. THE COST FOR PROVIDING CUBE SAMPLES AND TESTING IS INCIDENTAL TO THE DRILLED SHAFT COST.

THE CONTRACTOR PROPOSING TO UTILIZE CFA METHODS OF DRILLED SHAFT INSTALLATION MUST BE ODOT PREQUALIFIED AND HAVE DEMONSTRATED 5 PREVIOUS PROJECTS IN WHICH CONTINUOUS FLIGHT AUGERS WERE SUCCESSFULLY UTILIZED FOR SOLDIER PILE INSTALLATION. INCLUDE THE PREVIOUS PROJECT INFORMATION, LOCATION, YEAR AND REFERENCE CONTACT WITH THE CFA INSTALLATION PLAN.

MEASUREMENT FOR PAYMENT FOR DRILLED SHAFTS ABOVE BEDROCK, AS PER PLAN WILL BE LIMITED TO THE ACTUAL DRILLED DISTANCE BETWEEN THE GROUND SURFACE AT THE BOTTOM OF THE DRILL BENCH AND THE MINIMUM TIP ELEVATION, AS DETERMINED BY THE ENGINEER. PAYMENT IS FULL COMPENSATION FOR DRILLING THE HOLES, CONSTRUCTING THE DRILLED SHAFTS, SUPPORTING THE SOLDIER PILES, FURNISHING AND PLACING CONCRETE AND LSM, AND REMOVAL OF CONCRETE OR LSM FROM AROUND THE SOLDIER PILE AS NECESSARY TO PLACE LAGGING. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT UNIT PRICE BID PER FOOT FOR ITEM 524 - DRILLED SHAFTS, 24" DIAMETER, ABOVE BEDROCK, AS PER PLAN OR ITEM 524 - DRILLED SHAFTS, 30" DIAMETER, ABOVER BEDROCK, AS PER PLAN.

FOR INFORMATION ONLY

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED	DRAWN	REVIEWED	DATE
JLM	SMJ	SSK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

RETAINING WALL GENERAL NOTES
SOLDIER PILE WITH LAGGING RETAINING WALLS D (ANCHORED), S, U, AND V (ANCHORED)

HAM-75-7.85
PID No. 77889

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2017

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ITEM SPECIAL - RETAINING WALL, MISC.: TEMPORARY HARDWOOD LAGGING

THIS ITEM CONSISTS OF FURNISHING AND INSTALLING UNTREATED HARDWOOD LAGGING TO SERVE AS TEMPORARY LAGGING FOR THE SOLDIER PILE WALL. THE LAGGING SHALL CONSIST OF HARDWOOD TIMBER WITH NOMINAL 3" X 8" DIMENSIONS. LAGGING SHALL BE PLACED IN A TOP DOWN MANNER AS EXCAVATION PROCEEDS DOWNWARD. AT NO TIME SHOULD MORE THAN 3 FT. OF UNSUPPORTED EXCAVATION BE PERMITTED. REDUCE THE UNSUPPORTED HEIGHT AS NECESSARY TO PREVENT CAVING AND SLOUGHING OF THE SOILS BETWEEN THE SOLDIER PILES. PROVIDE 1/4" TO 7/8" HORIZONTAL JOINT SPACING BETWEEN THE LAGGING BOARDS TO PERMIT DRAINAGE.

CONNECT LAGGING TO SOLDIER PILES USING THREADED STUD SHEAR CONNECTORS, LAGGING WASHERS, AND NUTS PROVIDED AND INSTALLED PER CMS 513. LAGGING PLATES AND NUTS SHALL BE ASTM A709 GRADE 36 YIELD STRENGTH 36,000 PSI OR BETTER.

THE DEPARTMENT WILL MEASURE THE TEMPORARY HARDWOOD LAGGING BY THE NUMBER OF SQUARE FEET AND WILL DETERMINE THE AREA FROM PLAN DIMENSIONS USING A LENGTH MEASURED ALONG A HORIZONTAL LINE ALONG THE CENTERLINE OF THE SOLDIER PILES AND A HEIGHT FROM THE BOTTOM OF THE LAGGING TO THE TOP. PAYMENT IS FULL COMPENSATION FOR FURNISHING AND PLACING ALL MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT UNIT PRICE BID PER SQUARE FOOT FOR ITEM SPECIAL - RETAINING WALL, MISC.: TEMPORARY HARDWOOD LAGGING.

FOR INFORMATION ONLY

ABBREVIATIONS:

C/C - CENTER TO CENTER
CJ - CONSTRUCTION JOINT
CLR - CLR
CONST - CONSTRUCTION
DIA - DIAMETER
EF - EACH FACE
ELEV - ELEVATION
EOP - EDGE OF PAVEMENT
EX - EXISTING
FF - FAR FACE
I.R. 75 - INTERSTATE ROUTE 75
INC - INCREMENT
LT - LEFT
LSM - LOW STRENGTH MORTAR
MAX - MAXIMUM
MIN - MINIMUM
NB - NORTH BOUND
NF - NEAR FACE
PEJF - PREFORMED EXPANSION JOINT FILLER
PERF CPP - PERFORATED CORRUGATED PLASTIC PIPE
PROP - PROPOSED
RT - RIGHT
SER - SERIES
SPA - SPACING
ST - STRAIGHT
STA - STATION
TYP - TYPICAL

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED	DRAWN	REVIEWED	DATE
JLM	SMJ	SSK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

RETAINING WALL GENERAL NOTES

SOLDIER PILE WITH LAGGING RETAINING WALLS D (ANCHORED), S, U, AND V (ANCHORED)

HAM-75-7.85
PID No. 77889

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2017

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ESTIMATED QUANTITIES- 02/IMS/PV									AS PER PLAN REFERENCE SHEET
WALL D	WALL S	WALL U	WALL V	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	
LUMP	LUMP	LUMP	LUMP	503	21301	LUMP		UNCLASSIFIED EXCAVATION, AS PER PLAN	1/53
1776	553		14230	507	00400	16559	FT	STEEL PILES, MISC.: SOLDIER PILES HP12X53	1/53
		1779		507	00400	1779	FT	STEEL PILES, MISC.: SOLDIER PILES W18X86	1/53
25419	5514	19557	297098	509	10000	347588	LB	EPOXY COATED REINFORCING STEEL	
171	80	239	2312	511	46011	2802	CU YD	CLASS QC1 CONCRETE, RETAINING/WINGWALL, NOT INCLUDING FOOTING, AS PER PLAN	1/53
511	103	398	4745	512	10001	5757	SQ YD	SEALING OF CONCRETE SURFACES (PERMANENT GRAFFITI PROTECTION), AS PER PLAN	1/53
511	103	398	4745	512	10101	5757	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY URETHANE), AS PER PLAN	1/53
47	21	68	774	512	33001	910	SQ YD	TYPE 2 WATERPROOFING, AS PER PLAN	1/53
43	777	204	8650	516	13600	9674	SQ FT	1" PREFORMED EXPANSION JOINT FILLER	
494	27	84	995	518	20000	1600	SQ YD	PREFABRICATED GEOCOMPOSITE DRAIN	
100	48	108	668	518	39900	924	FT	4" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	
1882	596			524	94503	2478	FT	DRILLED SHAFTS, 24" DIAMETER ABOVE BEDROCK, AS PER PLAN	1/53
		2234	13589	524	94603	15823	FT	DRILLED SHAFTS, 30" DIAMETER ABOVE BEDROCK, AS PER PLAN	1/53
5152	1545	4802	49169	SPECIAL	530E51020	60668	SQ FT	SPECIAL - RETAINING WALL.: TIMBER LAGGING	2/53
			2	601	20000	2	SY	CRUSHED AGGREGATE SLOPE PROTECTION	
77				601	21000	77	SQ YD	CONCRETE SLOPE PROTECTION	
16	286	505	2875	601	37500	3682	FT	PAVED GUTTER, TYPE 1-2	
	204	453		605	14020	657	FT	6" BASE PIPE UNDERDRAINS WITH FABRIC WRAP	
379			266	611	1100	645	FT	6" CONDUIT, TYPE C	
3				866	00100	3	EACH	GROUND ANCHOR, 30 KIP MAX TEST LOAD	
39				866	00100	39	EACH	GROUND ANCHOR, 63 KIP MAX TEST LOAD	
			11	866	00100	11	EACH	GROUND ANCHOR, 78 KIP MAX TEST LOAD	1/53
39				866	00100	39	EACH	GROUND ANCHOR, 89 KIP MAX TEST LOAD	
			266	866	00100	266	EACH	GROUND ANCHOR, 105 KIP MAX TEST LOAD	
			243	866	00100	243	EACH	GROUND ANCHOR, 128 KIP MAX TEST LOAD	
			9	866	00100	9	EACH	GROUND ANCHOR, 138 KIP MAX TEST LOAD	
			76	866	00100	76	EACH	GROUND ANCHOR, 150 KIP MAX TEST LOAD	
			38	866	00100	38	EACH	GROUND ANCHOR, 172 KIP MAX TEST LOAD	
			18	866	00100	18	EACH	GROUND ANCHOR, 175 KIP MAX TEST LOAD	
			24	866	00100	24	EACH	GROUND ANCHOR, 215 KIP MAX TEST LOAD	
LUMP			LUMP	866	00300	LUMP		INVESTIGATIVE ANCHOR PULLOUT TESTS	
5			35	866	00400	40	EACH	PERFORMANCE TEST	
2			6	866	00500	8	EACH	EXTENDED CREEP TEST	

FOR INFORMATION ONLY

NOTE:

1. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/53

RESOURCE INTERNATIONAL INC.
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CHECKED NCK | REVISED | STRUCTURE FILE NUMBER

ESTIMATED QUANTITIES

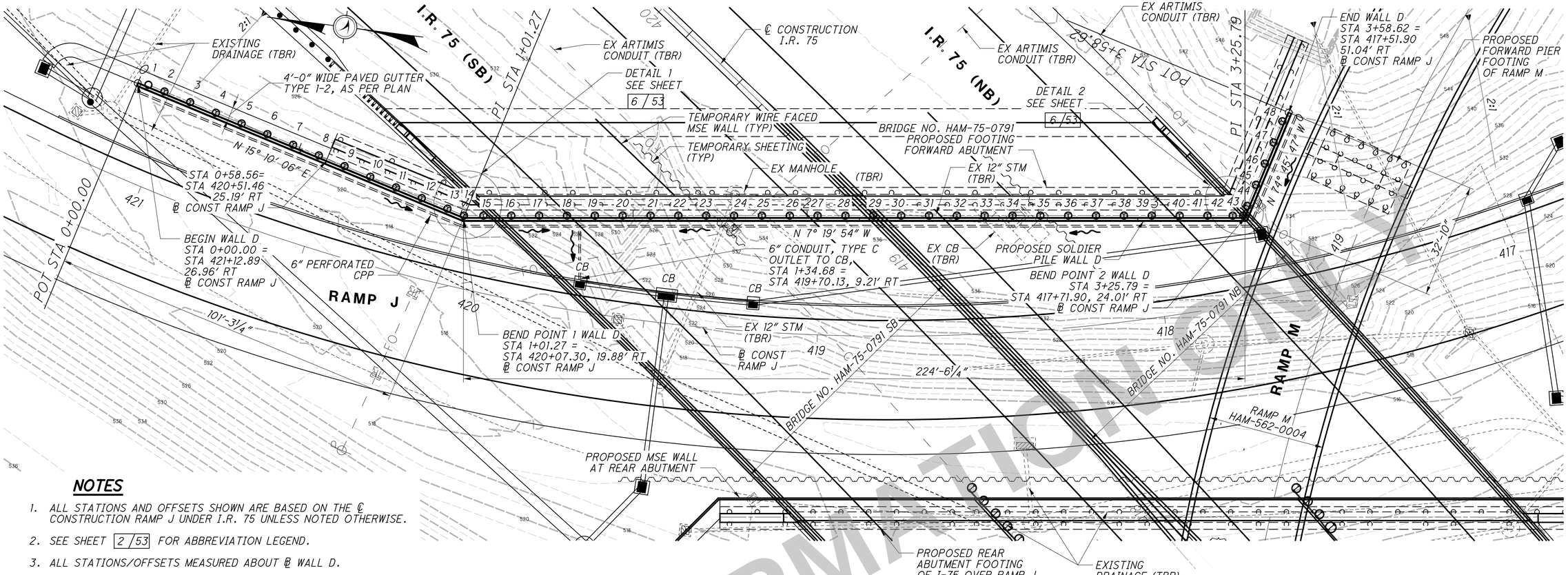
SOLDIER PILE WITH LAGGING WALLS D (ANCHORED), S, U, AND V (ANCHORED)

HAM-75-7.85

PID No. 77889

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2017

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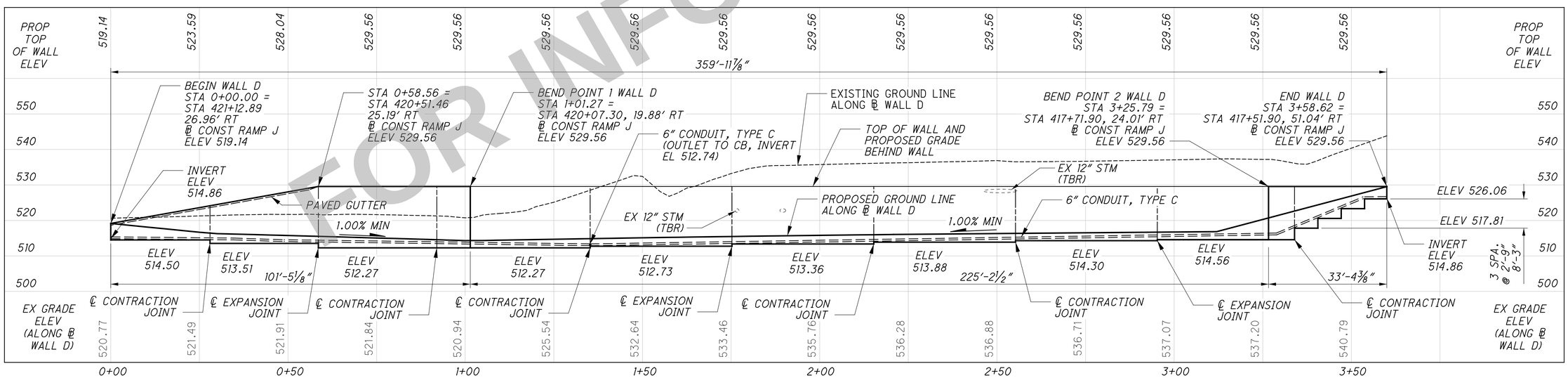


NOTES

1. ALL STATIONS AND OFFSETS SHOWN ARE BASED ON THE ℄ CONSTRUCTION RAMP J UNDER I.R. 75 UNLESS NOTED OTHERWISE.
2. SEE SHEET 2/53 FOR ABBREVIATION LEGEND.
3. ALL STATIONS/OFFSETS MEASURED ABOUT ℄ WALL D.

PLAN

AT FORWARD ABUTMENT OF BRIDGE NO. HAM-75-0791 OVER RAMP J



PROFILE ALONG ℄ WALL D

FOR INFORMATION ONLY

DESIGN AGENCY: EMH&T
DESIGNED: RJE | DRAWN: GB | REVIEWED: CAS | DATE: 12-15-21
CHECKED: RMW | REVISED: - | STRUCTURE FILE NUMBER:

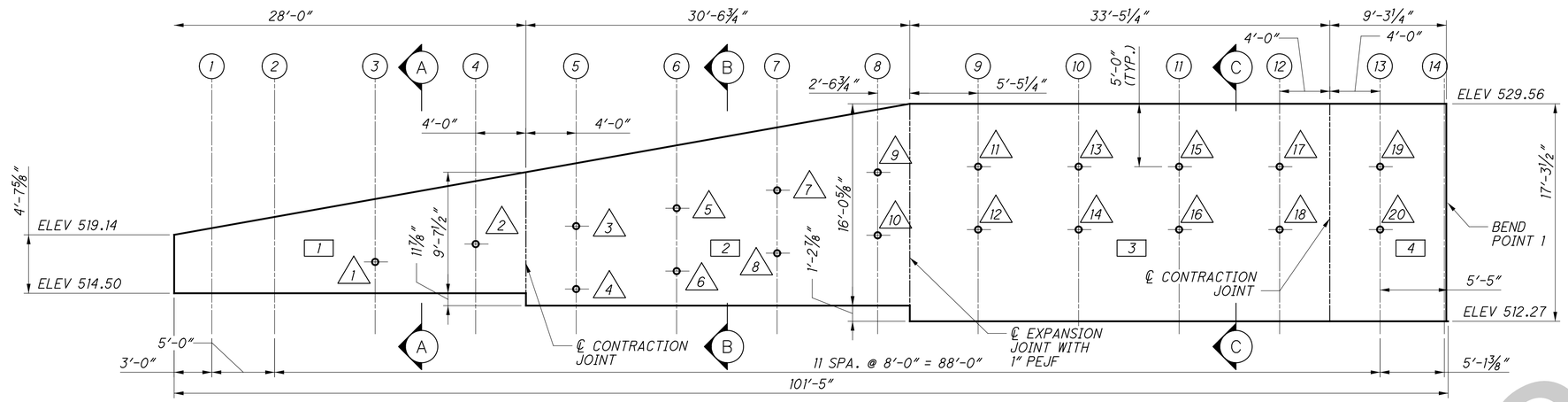
SITE PLAN
SOLDIER PILE WALL D - ALONG EAST EDGE OF RAMP J

HAM-75-7.85
PID No. 77889

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2017

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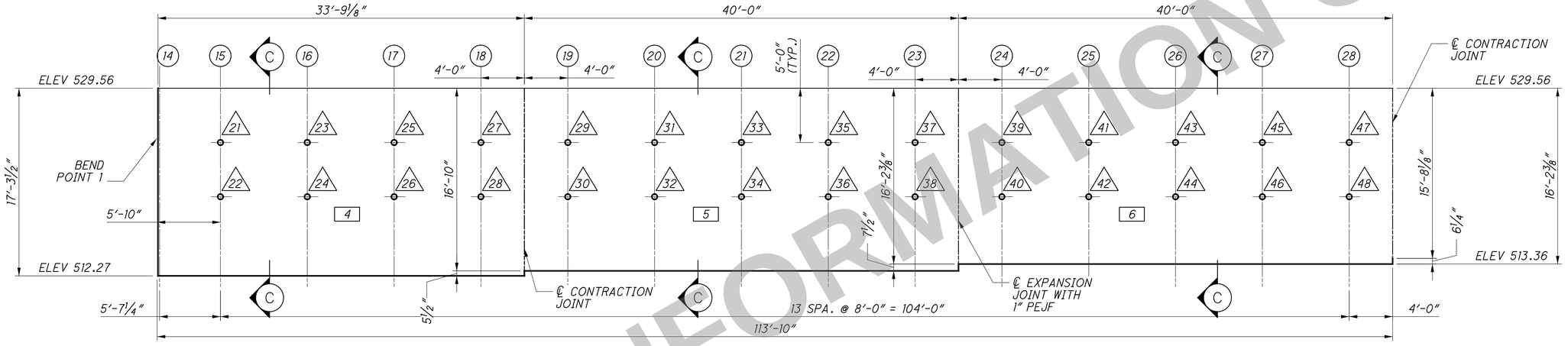


WALL ELEVATION

(FROM SOLDIER PILE NO. 1 THRU. NO. 14)

NOTES

1. FOR SECTION A-A AND SECTION B-B SEE SHEET 7/53, AND FOR SECTION C-C AND D-D SEE SHEET 8/53.
2. EMBANKMENT REQUIRED TO BE PLACED ON THE BACK SIDE OF THE PROPOSED WALL SHALL BE PERFORMED PRIOR TO INSTALLATION OF THE DRILLED SHAFTS. EMBANKMENT SHALL BE PLACED TO THE FINAL PROPOSED SURFACE ELEVATIONS BEHIND THE BACK OF PROPOSED WALL. ALL DRILLED SHAFTS AND SOLDIER PILES SHALL BE INSTALLED DURING THE HAM-75-0791 BRIDGE FORWARD ABUTMENT FOUNDATION CONSTRUCTION STAGE. ALL TIEBACKS, LAGGING TIMBERS AND CONCRETE FACING WALLS SHALL BE INSTALLED IN THE RAMP J CONSTRUCTION STAGE (PHASE 4 CONSTRUCTION).
3. PILES 1 THROUGH 22 SHALL BE INSTALLED DURING PHASE 2 CONSTRUCTION. PILES 23 THROUGH 34 SHALL BE INSTALLED DURING PHASE 3 CONSTRUCTION. PILES 35 THROUGH 48 SHALL BE INSTALLED DURING PHASE 4 CONSTRUCTION
4. ALL DIMENSIONS ARE MEASURED ALONG ℄ WALL D.
5. SEE SHEET 2/53 FOR ABBREVIATION LEGEND.

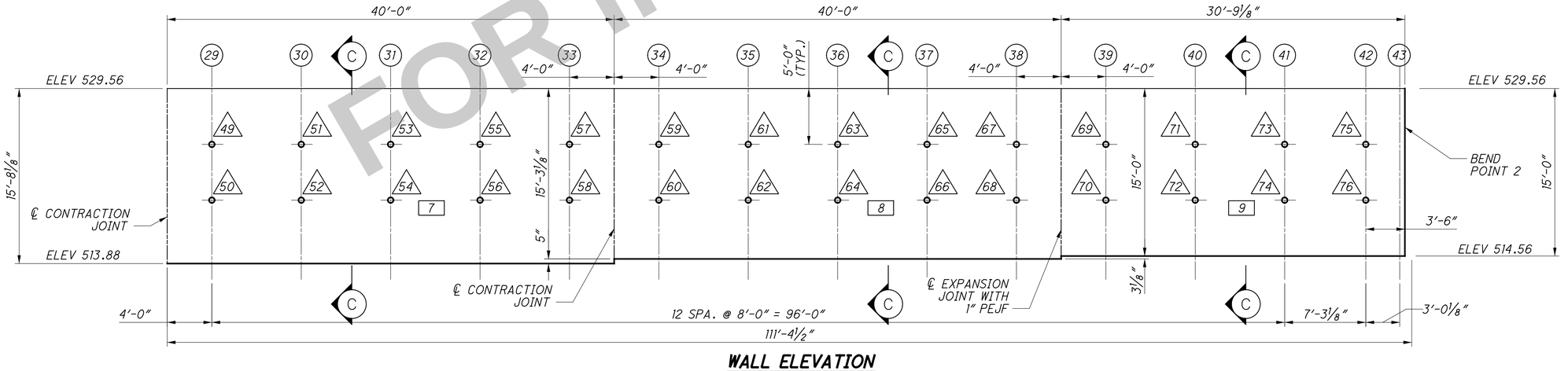


WALL ELEVATION

(FROM SOLDIER PILE NO. 14 THRU. NO. 28)

LEGEND

- [#] = WALL PANEL NUMBER
- (#) = DRILLED SHAFT NUMBER
- = ANCHOR
- ## = ANCHOR NUMBER



WALL ELEVATION

(FROM SOLDIER PILE NO. 29 THRU. NO. 43)

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DESIGN AGENCY: EMH&T

DESIGNED	DRAWN	REVIEWED	DATE
RJE	GB	CAS	12-15-21

CHECKED: RMW | REVISED: - | STRUCTURE FILE NUMBER:

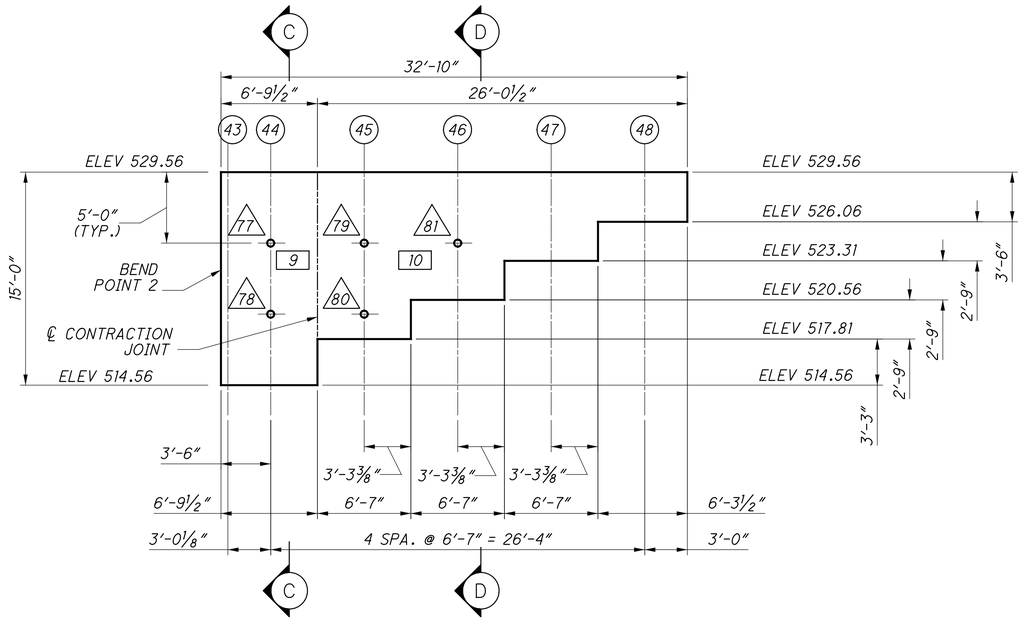
ELEVATION
SOLDIER PILE WALL D - ALONG EAST EDGE OF RAMP J

HAM-75-7.85
PID No. 77889

5 / 53

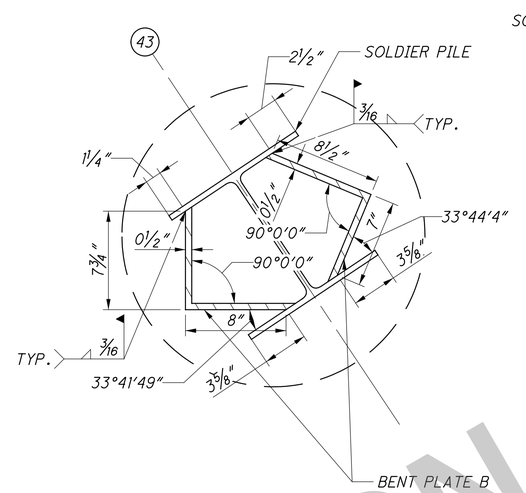
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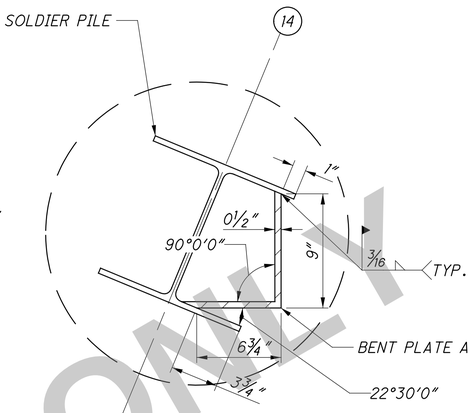


WALL ELEVATION

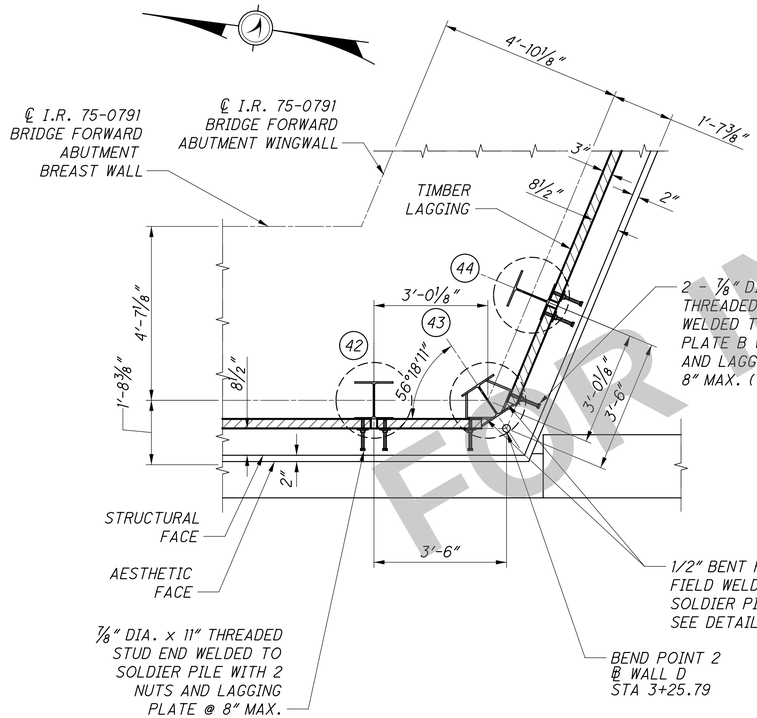
(FROM SOLDIER PILE NO. 43 THRU. NO. 48)



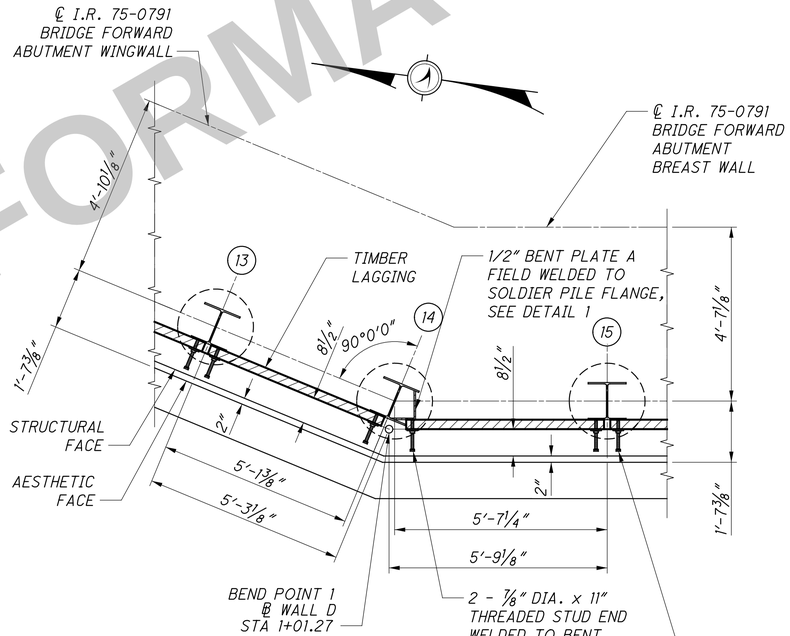
DETAIL 2



DETAIL 1



DETAIL 2



DETAIL 1

LEGEND

- [#] = WALL PANEL NUMBER
- (#) = DRILLED SHAFT NUMBER
- —o— = ANCHOR
- ⟨##⟩ = ANCHOR NUMBER

NOTES

1. FOR SECTION C-C AND SECTION D-D SEE SHEET [8/53].
2. EMBANKMENT REQUIRED TO BE PLACED ON THE BACK SIDE OF THE PROPOSED WALL SHALL BE PERFORMED PRIOR TO INSTALLATION OF THE DRILLED SHAFTS. EMBANKMENT SHALL BE PLACED TO THE FINAL PROPOSED SURFACE ELEVATIONS BEHIND THE BACK OF PROPOSED WALL. ALL DRILLED SHAFTS AND SOLDIER PILES SHALL BE INSTALLED DURING THE HAM-75-0791 BRIDGE FORWARD ABUTMENT FOUNDATION CONSTRUCTION STAGE. ALL TIEBACKS, LAGGING TIMBERS AND CONCRETE FACING WALLS SHALL BE INSTALLED IN THE RAMP J CONSTRUCTION STAGE (PHASE 4 CONSTRUCTION).
3. PILES 1 THROUGH 22 SHALL BE INSTALLED DURING PHASE 2 CONSTRUCTION. PILES 23 THROUGH 34 SHALL BE INSTALLED DURING PHASE 3 CONSTRUCTION. PILES 35 THROUGH 48 SHALL BE INSTALLED DURING PHASE 4 CONSTRUCTION
4. ALL DIMENSIONS ARE MEASURED ALONG ℄ WALL D.
5. SEE SHEET [2/53] FOR ABBREVIATION LEGEND.

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DESIGN AGENCY: EMH&T
DESIGNED: RJE | DRAWN: GB | CHECKED: RMW | REVIEWED: CAS | REVISED: - | DATE: 12-15-21 | STRUCTURE FILE NUMBER

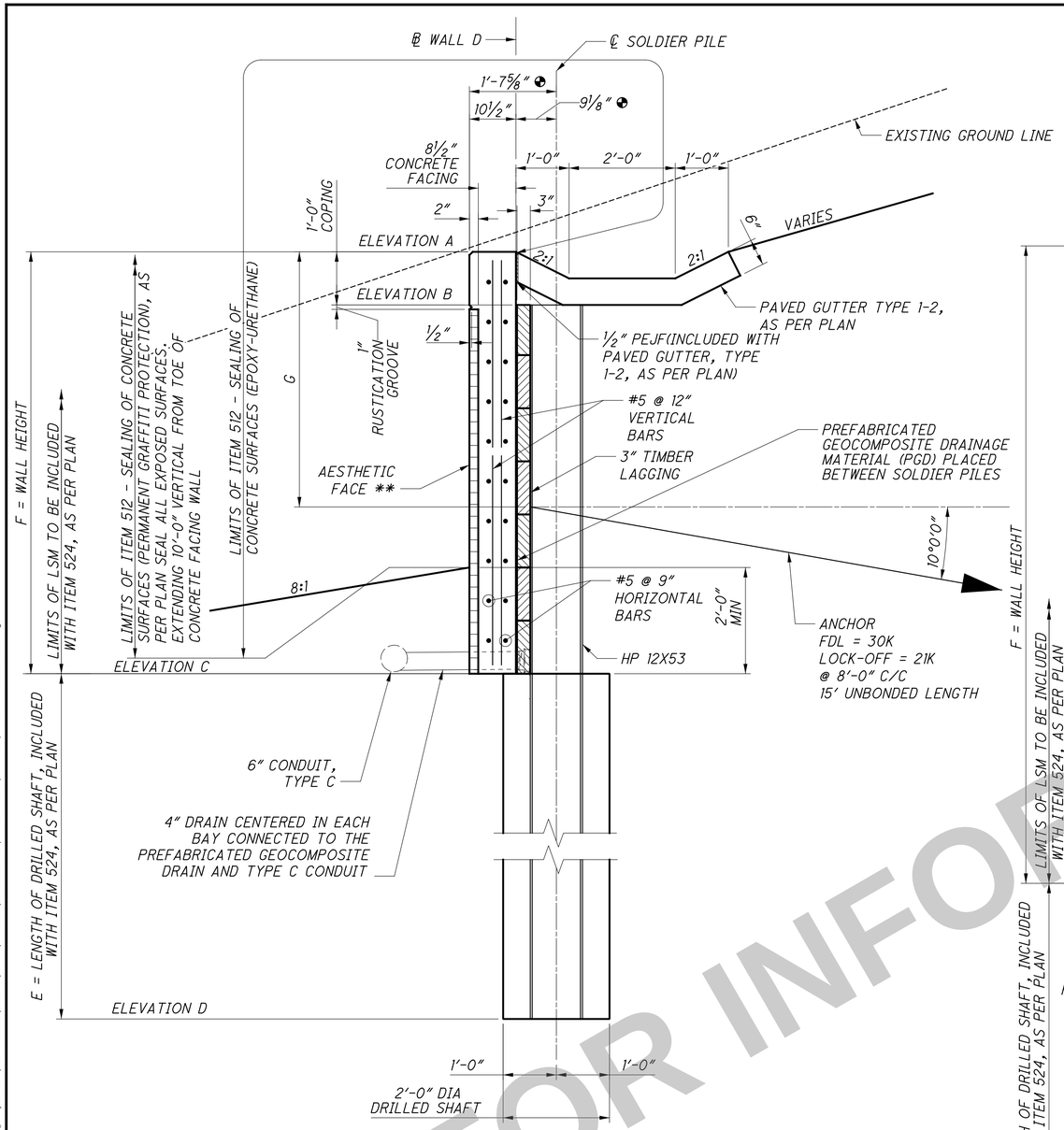
ELEVATION AND DETAILS
SOLDIER PILE WALL D - ALONG EAST EDGE OF RAMP J

HAM-75-7.85
PID No. 77889

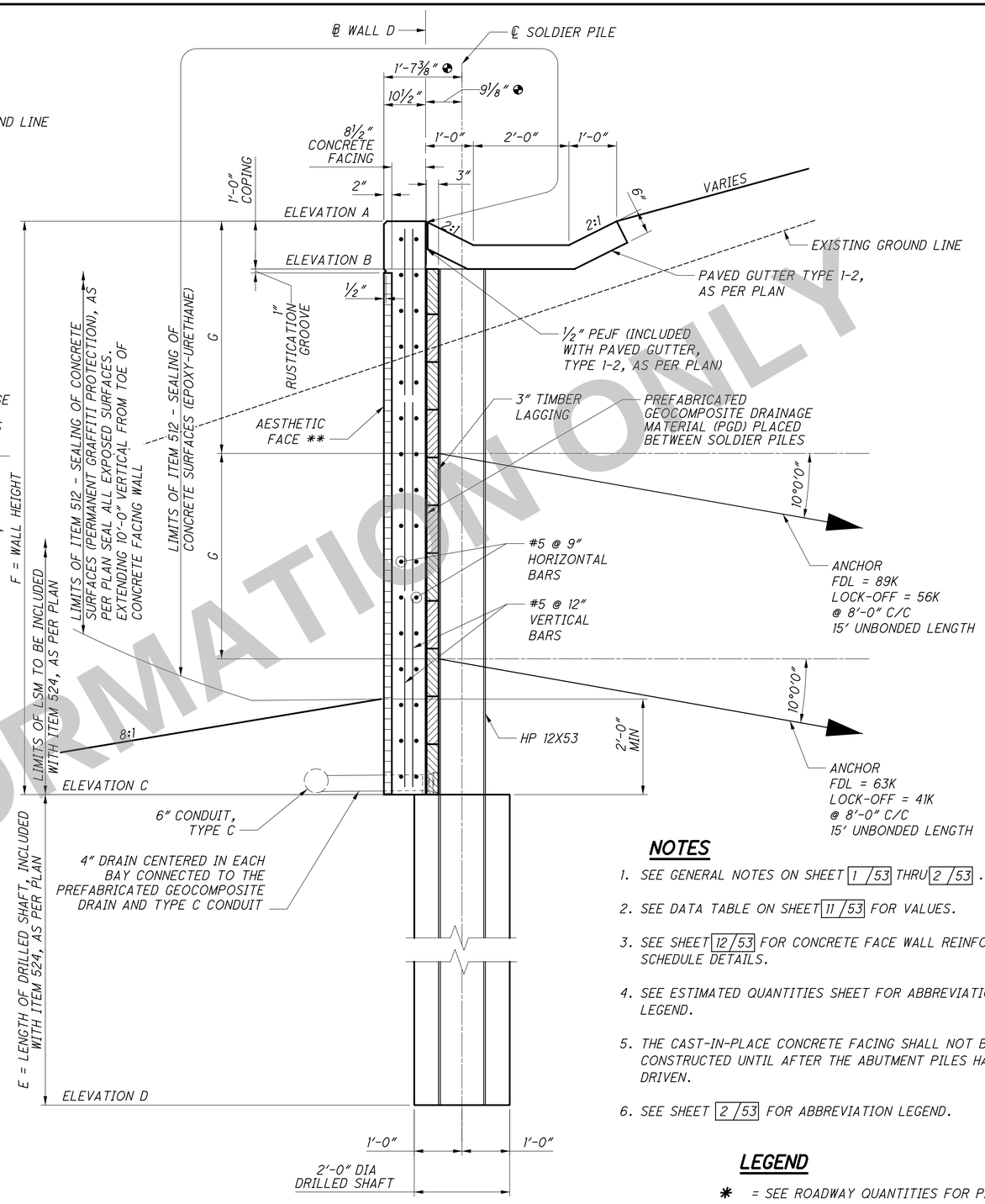
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TYPICAL SECTION A-A
SOLDIER PILES WITH 1 TIEBACK ANCHOR



TYPICAL SECTION B-B
SOLDIER PILES WITH 2 TIEBACK ANCHORS

SOLDIER PILE WALL D CONSTRUCTION SEQUENCE:

IN FRONT OF HAM-75-0791 BRIDGE FORWARD ABUTMENT

1 REMOVE PORTIONS OF EXISTING APPROACH SLABS, PAVEMENT AND DECK TO FACILITATE INSTALLATION OF SOLDIER PILES.

2 INSTALL ALL DRILLED SHAFTS AND SOLDIER PILES IN HAM-75-0791 BRIDGE FORWARD ABUTMENT PHASE CONSTRUCTION AS SOLDIER PILE DETAIL PLAN SHOWN ON SHEET 5/53 AND 6/53 .

3 EXCAVATE UNDER THE COMPLETED HAM-75-0791 BRIDGE TO THE DEPTH OF THE UPPER SOIL ANCHORS.

4 INSTALL TIMBER LAGGING AND THE UPPER SOIL ANCHOR SYSTEM ON THE SOLDIER PILES. TIMBER LAGGING SHALL BE PLACED AS SPECIFIED IN GENERAL NOTES.

5 COMPLETE EXCAVATION FOR RAMP J AT FRONT OF HAM-75-0791 FORWARD ABUTMENT AND INSTALL ALL TIMBER LAGGING, CONCRETE FACE WALL ON THE SOLDIER PILES AS SHOWN ON THIS SHEET AND 8/53 .

NOTES

1. SEE GENERAL NOTES ON SHEET 1/53 THRU 2/53 .
2. SEE DATA TABLE ON SHEET 11/53 FOR VALUES.
3. SEE SHEET 12/53 FOR CONCRETE FACE WALL REINFORCING SCHEDULE DETAILS.
4. SEE ESTIMATED QUANTITIES SHEET FOR ABBREVIATION LEGEND.
5. THE CAST-IN-PLACE CONCRETE FACING SHALL NOT BE CONSTRUCTED UNTIL AFTER THE ABUTMENT PILES HAVE BEEN DRIVEN.
6. SEE SHEET 2/53 FOR ABBREVIATION LEGEND.

LEGEND

* = SEE ROADWAY QUANTITIES FOR PAYMENT

** = FOR AESTHETIC FACE TREATMENT SEE NOTE ITEM 511 - CLASS QC1 CONCRETE, AS PER PLAN ON SHEET 1/53

● = DIMENSION INCLUDES AN ASSUMED 1/4" PREFABRICATED GEOCOMPOSITE DRAINAGE MATERIAL

FOR INFORMATION ONLY

DESIGN AGENCY
EMH&T
Engineers • Surveyors • Planners • Scientists
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Phone: 614.775.4500

DESIGNED	DRAWN	REVIEWED	DATE
RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-		

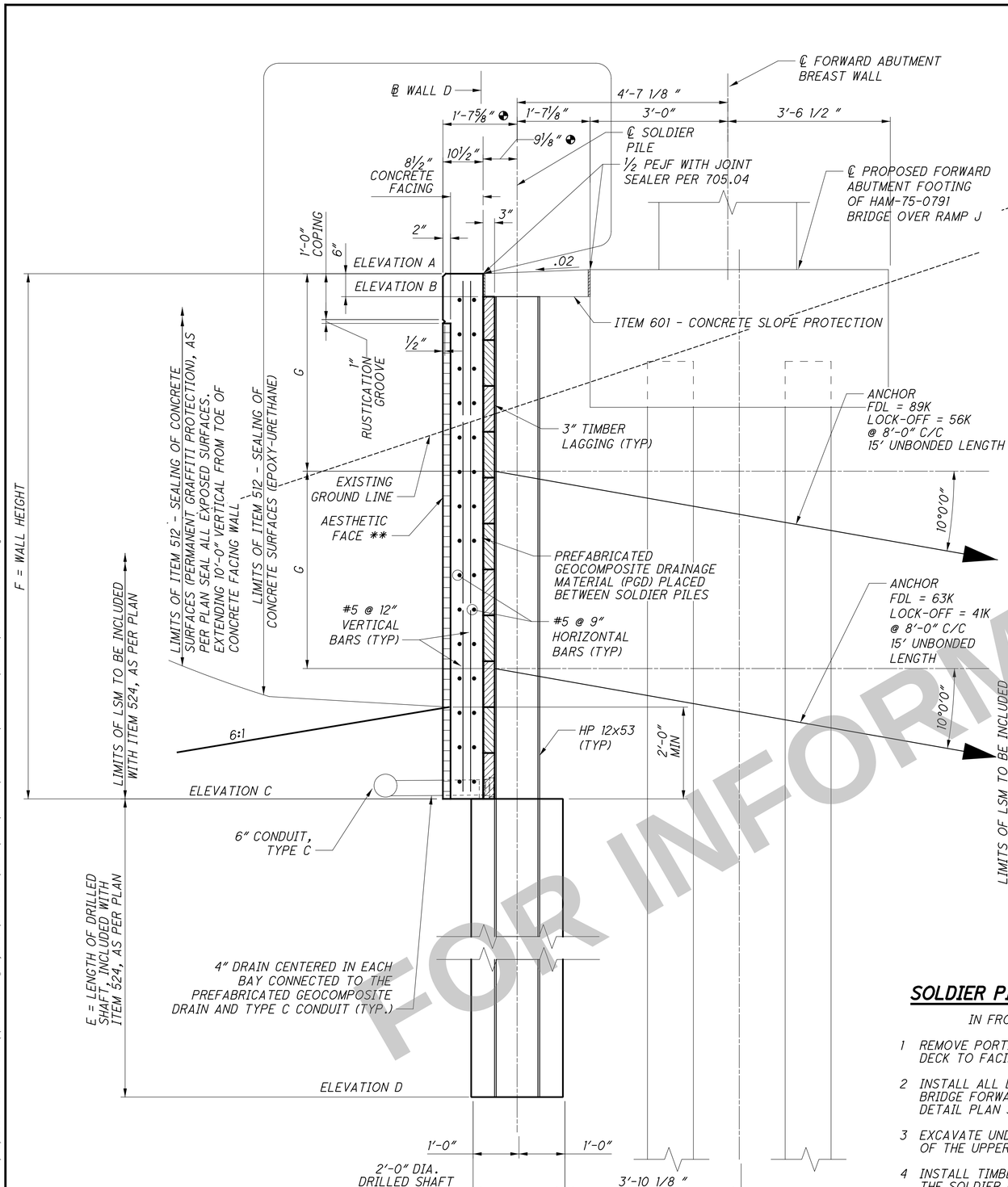
TYPICAL SECTION 2 OF 2
SOLDIER PILE WALL D - ALONG EAST EDGE OF RAMP J

HAM-75-7.85
PID No. 77889

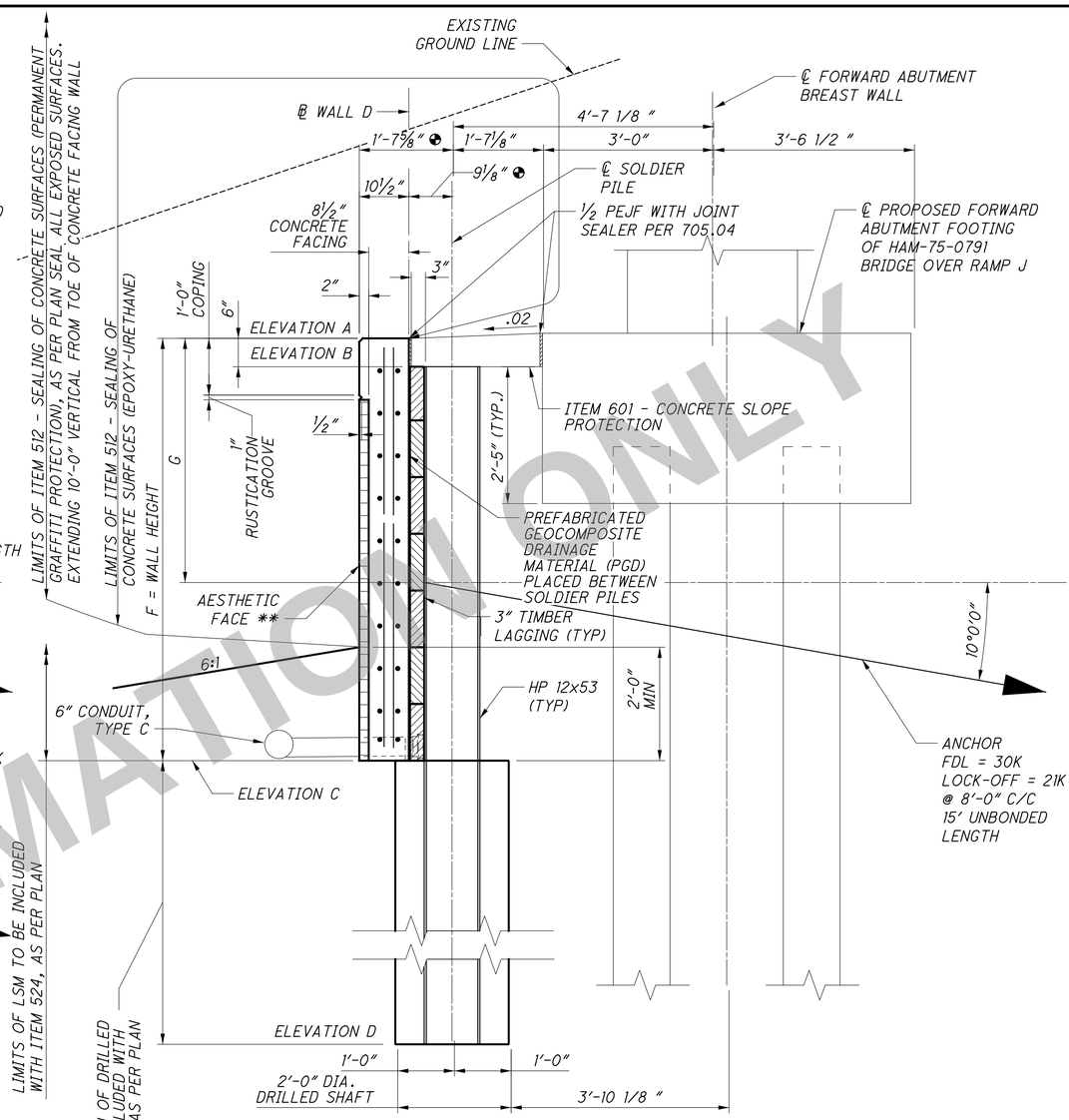
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TYPICAL SECTION C-C
SOLDIER PILES WITH 2 TIEBACK ANCHOR



TYPICAL SECTION D-D
SOLDIER PILES WITH 1 TIEBACK ANCHOR

SOLDIER PILE WALL D CONSTRUCTION SEQUENCE:

IN FRONT OF HAM-75-0791 BRIDGE FORWARD ABUTMENT

1 REMOVE PORTIONS OF EXISTING APPROACH SLABS, PAVEMENT AND DECK TO FACILITATE INSTALLATION OF SOLDIER PILES.

2 INSTALL ALL DRILLED SHAFTS AND SOLDIER PILES IN HAM-75-0791 BRIDGE FORWARD ABUTMENT PHASE CONSTRUCTION AS SOLDIER PILE DETAIL PLAN SHOWN ON SHEET 5/53 AND 6/53 .

3 EXCAVATE UNDER THE COMPLETED HAM-75-0791 BRIDGE TO THE DEPTH OF THE UPPER SOIL ANCHORS.

4 INSTALL TIMBER LAGGING AND THE UPPER SOIL ANCHOR SYSTEM ON THE SOLDIER PILES. TIMBER LAGGING SHALL BE PLACED AS SPECIFIED IN GENERAL NOTES.

5 COMPLETE EXCAVATION FOR RAMP J AT FRONT OF HAM-75-0791 FORWARD ABUTMENT AND INSTALL ALL TIMBER LAGGING, CONCRETE FACE WALL ON THE SOLDIER PILES AS SHOWN ON THIS SHEET AND 7/53.

LEGEND

** = FOR AESTHETIC FACE TREATMENT SEE NOTE ITEM 511 - CLASS QCI CONCRETE, AS PER PLAN ON SHEET 1/53

◔ = DIMENSION INCLUDES AN ASSUMED 1/4" PREFABRICATED GEOCOMPOSITE DRAINAGE MATERIAL

NOTES

1 SEE GENERAL NOTES ON SHEET 1/53 THRU 2/53 .

2 SEE DATA TABLE ON SHEET 11/53 FOR VALUES.

3 SEE SHEET 12/53 FOR CONCRETE FACE WALL REINFORCING SCHEDULE DETAILS.

4 SEE SHEET 2/53 FOR ABBREVIATION LEGEND.

5 THE STRUCTURE FACING SHALL NOT BE CONSTRUCTED UNTIL AFTER THE ABUTMENT PILES HAS BEEN DRIVEN.

FOR INFORMATION ONLY

DESIGN AGENCY
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5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500

DESIGNED	DRAWN	REVIEWED	DATE
RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-		

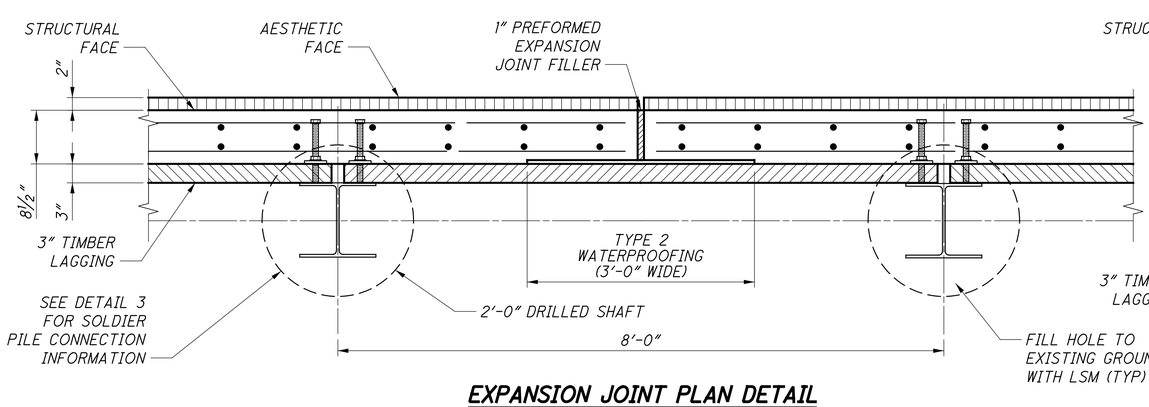
TYPICAL SECTION 1 OF 2
SOLDIER PILE WALL D - ALONG EAST EDGE OF RAMP J

HAM-75-7.85
PID No. 77889

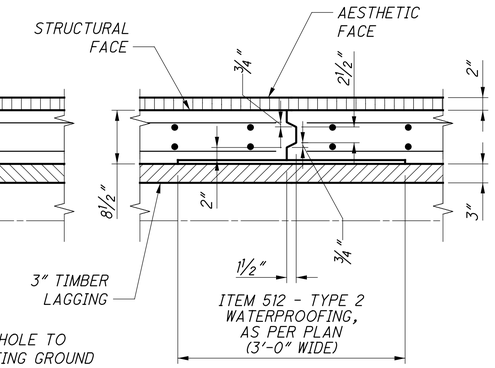
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2017

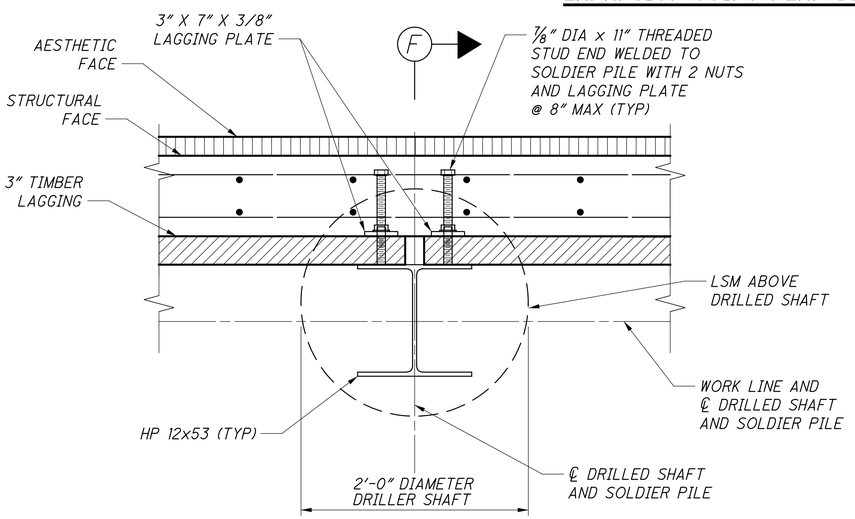
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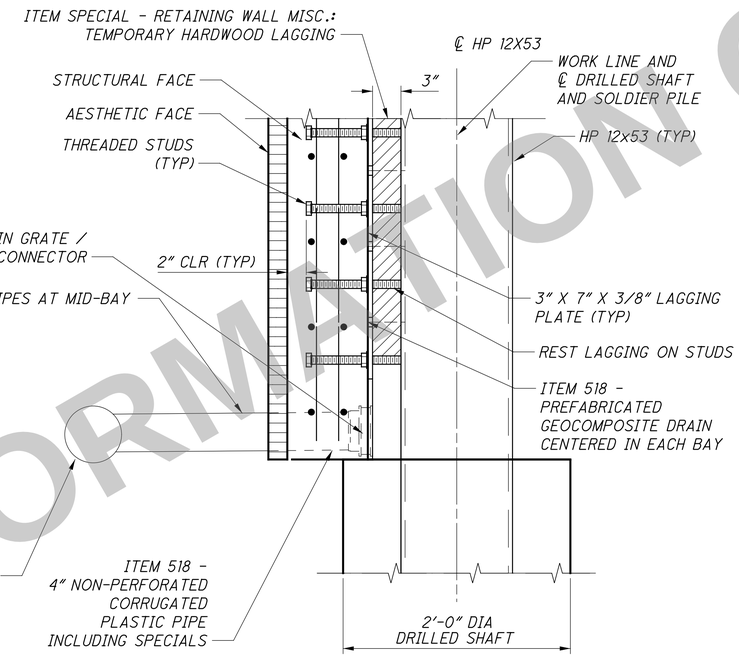
EXPANSION JOINT PLAN DETAIL



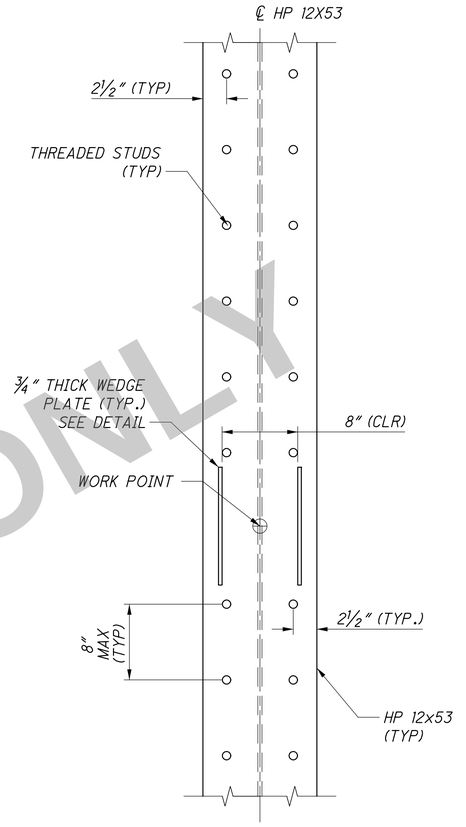
CONTRACTION JOINT PLAN DETAIL



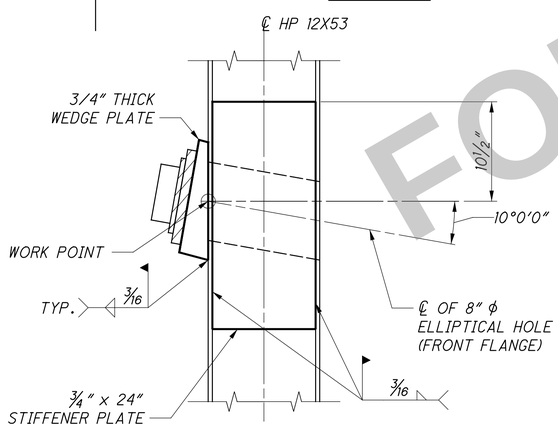
DETAIL 3



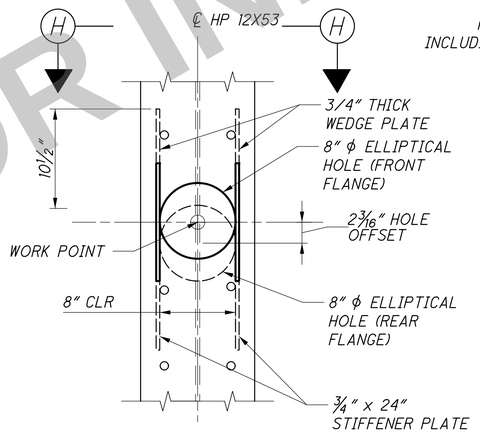
SECTION F-F



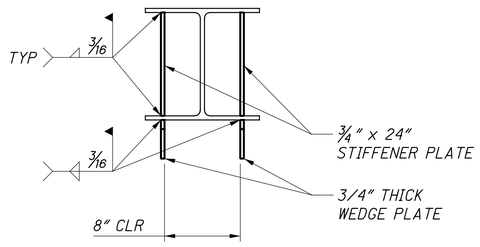
SOLDIER PILE ELEVATION



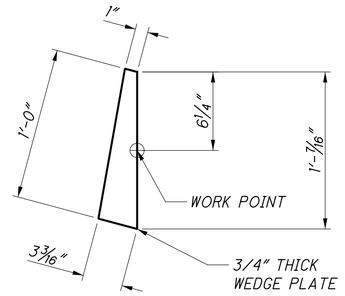
ANCHOR SECTION



SECTION G-G



SECTION H-H



WEDGE PLATE DETAIL

NOTE

1. SEE SHEET 2/53 FOR ABBREVIATION LEGEND.

FOR INFORMATION ONLY

DESIGN AGENCY EMH&T

DESIGNED	DRAWN	REVIEWED	DATE
RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-		

ANCHORED SOLDIER PILE WALL DETAILS

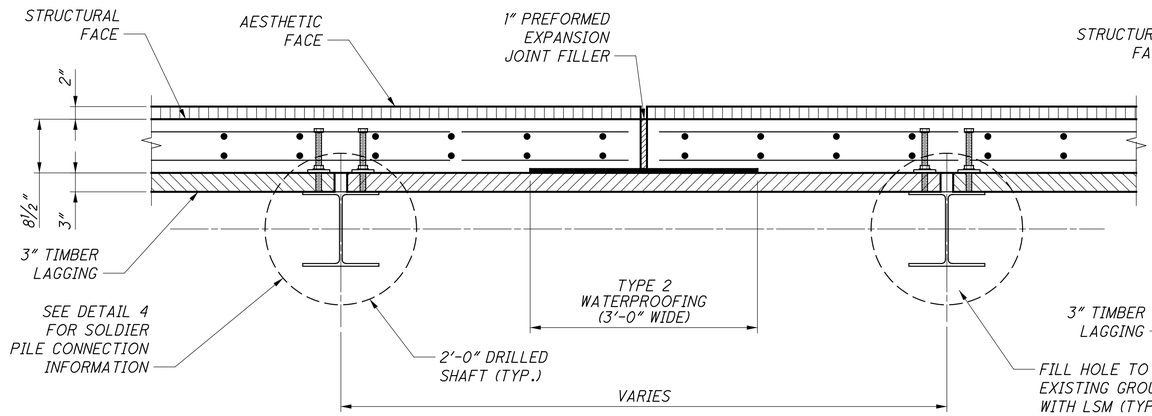
SOLDIER PILE WALL D - ALONG EAST EDGE OF RAMP J

HAM-75-7.85
PID No. 77889

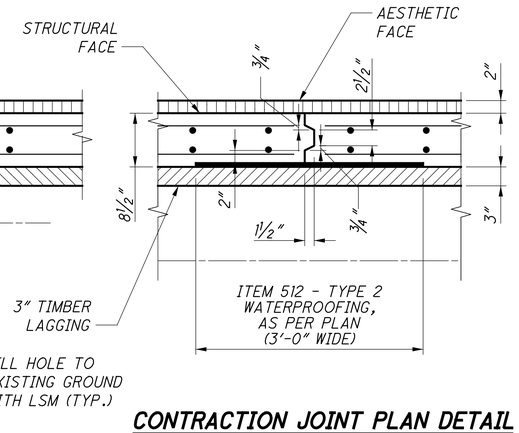
9 / 53

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2017

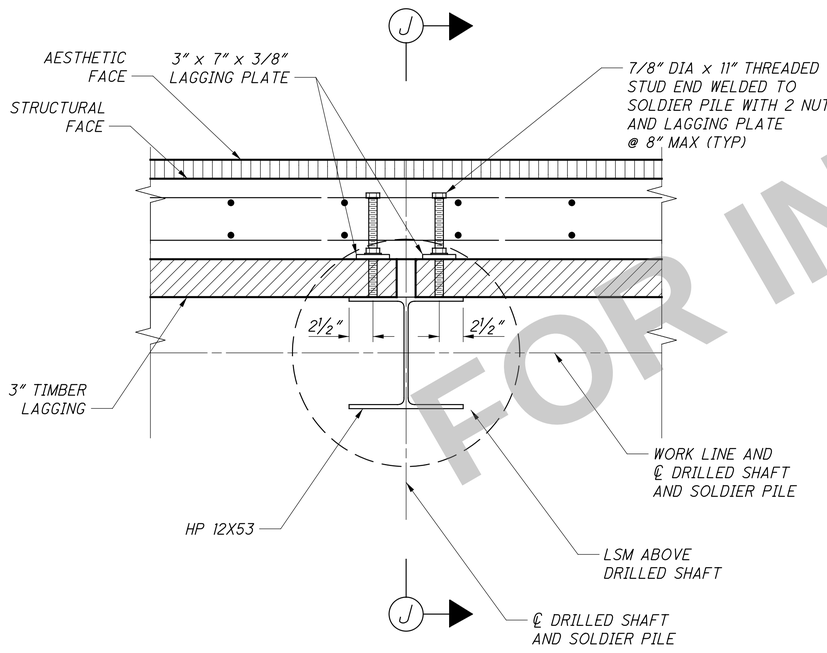
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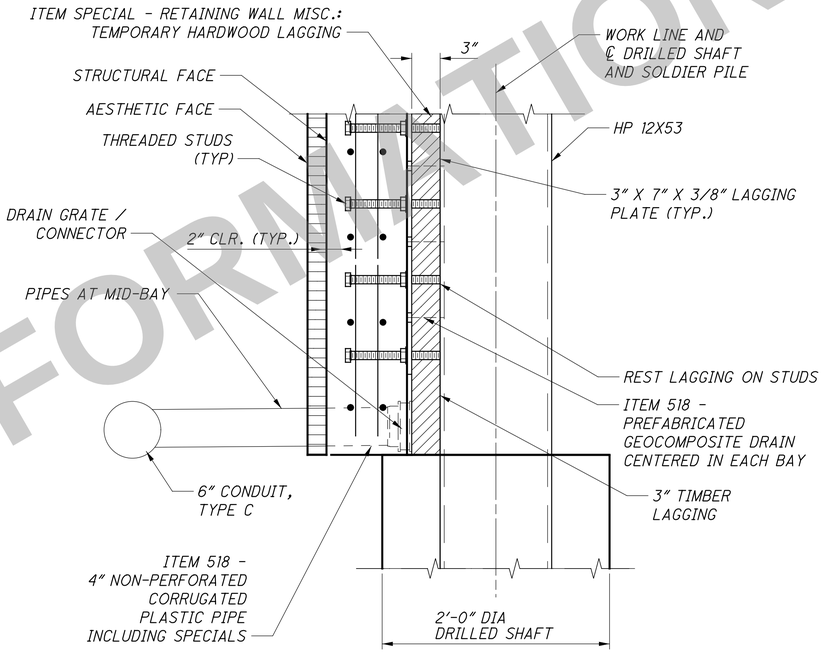
EXPANSION JOINT PLAN DETAIL



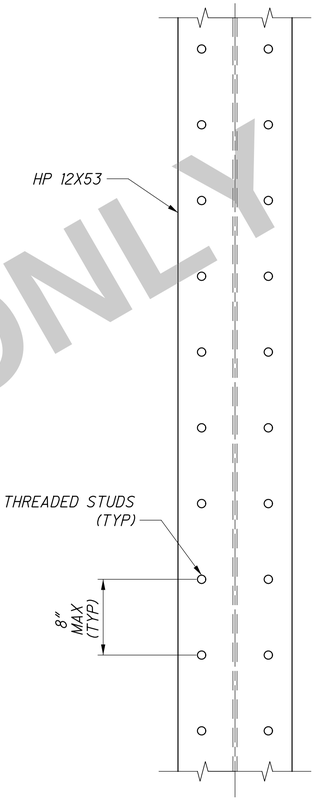
CONTRACTION JOINT PLAN DETAIL



DETAIL 4



SECTION J-J



SOLDIER PILE ELEVATION

NOTE

1. SEE SHEET 2/53 FOR ABBREVIATION LEGEND.

FOR INFORMATION ONLY

DESIGN AGENCY
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DESIGNED	DRAWN	REVIEWED	DATE
RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-		

UNANCHORED SOLDIER PILE WALL DETAILS
SOLDIER PILE WALL D - ALONG EAST EDGE OF RAMP J

HAM-75-7.85
PID No. 77889

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2017

PLOTTED BY REly 3/25/2022 7:46:11 AM \\cmhdata01\project01\20110903\ODOT\HAM\77889\structures\WALL_00D\sheets\77889_00DWD0006.dgn

LOCATION AND ELEVATION DATA TABLE

SOLDIER PILE NUMBER	SOLDIER PILE STATION WALL D	SOLDIER PILE OFFSET WALL D	SOLDIER PILE STATION CONST RAMP J	SOLDIER PILE OFFSET CONST RAMP J	TOP OF WALL ELEVATION A	TOP OF SOLDIER PILE ELEVATION B	TOP OF DRILLED SHAFT ELEVATION C	PILE TIP ELEVATION D	LENGTH OF DRILLED SHAFT E	WALL HEIGHT F	DISTANCE TO TOP ANCHOR G	SOLDIER PILE SIZE
1	0+03.00	0.74' LT	421+09.75	27.76' RT	519.67	518.67	514.50	491.50	23.00'	5.17'	-	HP 12X53
2	0+08.00	0.74' LT	421+04.49	27.84' RT	520.56	519.56	514.50	491.50	23.00'	6.06'	-	HP 12X53
3	0+16.00	0.74' LT	420+96.07	27.84' RT	521.99	520.99	514.50	491.50	23.00'	7.49'	5.00'	HP 12X53
4	0+24.00	0.74' LT	420+87.65	27.75' RT	523.41	522.41	514.50	491.50	23.00'	8.91'	5.00'	HP 12X53
5	0+32.00	0.74' LT	420+79.24	27.53' RT	524.83	523.83	513.50	490.50	23.00'	11.33'	5.00'	HP 12X53
6	0+40.00	0.74' LT	420+70.84	27.18' RT	526.26	525.26	513.50	490.50	23.00'	12.76'	5.00'	HP 12X53
7	0+48.00	0.74' LT	420+62.45	26.72' RT	527.68	526.68	513.50	490.50	23.00'	14.18'	5.00'	HP 12X53
8	0+56.00	0.74' LT	420+54.07	26.14' RT	529.10	528.10	513.50	490.50	23.00'	15.60'	5.00'	HP 12X53
9	0+64.00	0.74' LT	420+45.72	25.44' RT	529.56	529.06	512.27	489.27	23.00'	17.29'	5.00'	HP 12X53
10	0+72.00	0.74' LT	420+37.39	24.61' RT	529.56	529.06	512.27	489.27	23.00'	17.29'	5.00'	HP 12X53
11	0+80.00	0.74' LT	420+29.08	23.67' RT	529.56	529.06	512.27	489.27	23.00'	17.29'	5.00'	HP 12X53
12	0+88.00	0.74' LT	420+20.81	22.62' RT	529.56	529.06	512.27	489.27	23.00'	17.29'	5.00'	HP 12X53
13	0+96.00	0.74' LT	420+12.57	21.44' RT	529.56	529.06	512.27	489.27	23.00'	17.29'	5.00'	HP 12X53
14	1+01.41	0.74' LT	420+07.32	20.63' RT	529.56	529.06	512.27	489.27	23.00'	17.29'	5.00'	HP 12X53
15	1+07.02	0.74' LT	420+01.63	21.87' RT	529.56	529.06	512.27	489.27	23.00'	17.29'	5.00'	HP 12X53
16	1+15.02	0.74' LT	419+93.48	23.55' RT	529.56	529.06	512.27	489.27	23.00'	17.29'	5.00'	HP 12X53
17	1+23.02	0.74' LT	419+85.28	25.11' RT	529.56	529.06	512.27	489.27	23.00'	17.29'	5.00'	HP 12X53
18	1+31.02	0.74' LT	419+77.03	26.56' RT	529.56	529.06	512.27	489.27	23.00'	17.29'	5.00'	HP 12X53
19	1+39.02	0.74' LT	419+68.74	27.89' RT	529.56	529.06	512.73	489.73	23.00'	16.83'	5.00'	HP 12X53
20	1+47.02	0.74' LT	419+60.40	29.10' RT	529.56	529.06	512.73	489.73	23.00'	16.83'	5.00'	HP 12X53
21	1+55.02	0.74' LT	419+52.03	30.20' RT	529.56	529.06	512.73	489.73	23.00'	16.83'	5.00'	HP 12X53
22	1+63.02	0.74' LT	419+43.63	31.17' RT	529.56	529.06	512.73	489.73	23.00'	16.83'	5.00'	HP 12X53
23	1+71.02	0.74' LT	419+35.20	32.03' RT	529.56	529.06	512.73	489.73	23.00'	16.83'	5.00'	HP 12X53
24	1+79.02	0.74' LT	419+26.75	32.76' RT	529.56	529.06	513.36	490.36	23.00'	16.20'	5.00'	HP 12X53
25	1+87.02	0.74' LT	419+18.27	33.38' RT	529.56	529.06	513.36	490.36	23.00'	16.20'	5.00'	HP 12X53
26	1+95.02	0.74' LT	419+09.77	33.87' RT	529.56	529.06	513.36	490.36	23.00'	16.20'	5.00'	HP 12X53
27	2+03.02	0.74' LT	419+01.26	34.24' RT	529.56	529.06	513.36	490.36	23.00'	16.20'	5.00'	HP 12X53
28	2+11.02	0.74' LT	418+92.74	34.49' RT	529.56	529.06	513.36	490.36	23.00'	16.20'	5.00'	HP 12X53
29	2+19.02	0.74' LT	418+84.22	34.62' RT	529.56	529.06	513.88	490.88	23.00'	15.68'	5.00'	HP 12X53
30	2+27.02	0.74' LT	418+75.69	34.63' RT	529.56	529.06	513.88	490.88	23.00'	15.68'	5.00'	HP 12X53
31	2+35.02	0.74' LT	418+67.16	34.51' RT	529.56	529.06	513.88	490.88	23.00'	15.68'	5.00'	HP 12X53
32	2+43.02	0.74' LT	418+58.64	34.27' RT	529.56	529.06	513.88	490.88	23.00'	15.68'	5.00'	HP 12X53
33	2+51.02	0.74' LT	418+50.13	33.91' RT	529.56	529.06	513.88	490.88	23.00'	15.68'	5.00'	HP 12X53
34	2+59.02	0.74' LT	418+41.63	33.43' RT	529.56	529.06	514.30	491.30	23.00'	15.26'	5.00'	HP 12X53
35	2+67.02	0.74' LT	418+33.15	32.83' RT	529.56	529.06	514.30	491.30	23.00'	15.26'	5.00'	HP 12X53
36	2+75.02	0.74' LT	418+24.69	32.11' RT	529.56	529.06	514.30	491.30	23.00'	15.26'	5.00'	HP 12X53
37	2+83.02	0.74' LT	418+16.26	31.26' RT	529.56	529.06	514.30	491.30	23.00'	15.26'	5.00'	HP 12X53
38	2+91.02	0.74' LT	418+07.85	30.30' RT	529.56	529.06	514.30	491.30	23.00'	15.26'	5.00'	HP 12X53
39	2+99.02	0.74' LT	417+99.48	29.22' RT	529.56	529.06	514.56	491.56	23.00'	15.00'	5.00'	HP 12X53
40	3+07.02	0.74' LT	417+91.15	28.02' RT	529.56	529.06	514.56	491.56	23.00'	15.00'	5.00'	HP 12X53
41	3+15.02	0.74' LT	417+82.85	26.70' RT	529.56	529.06	514.56	491.56	23.00'	15.00'	5.00'	HP 12X53
42	3+22.29	0.74' LT	417+75.35	25.40' RT	529.56	529.06	514.56	491.56	23.00'	15.00'	5.00'	HP 12X53
43	3+26.28	0.74' LT	417+72.26	24.84' RT	529.56	529.06	514.56	491.56	23.00'	15.00'	5.00'	HP 12X53
44	3+29.29	0.74' LT	417+70.51	27.34' RT	529.56	529.06	514.56	491.56	23.00'	15.00'	5.00'	HP 12X53
45	3+35.87	0.74' LT	417+66.63	32.80' RT	529.56	529.06	517.81	494.81	23.00'	11.75'	5.00'	HP 12X53
46	3+42.46	0.74' LT	417+62.66	38.24' RT	529.56	529.06	520.56	497.56	23.00'	9.00'	5.00'	HP 12X53
47	3+49.04	0.74' LT	417+58.61	43.64' RT	529.56	529.06	523.31	500.31	23.00'	6.25'	-	HP 12X53
48	3+55.62	0.74' LT	417+54.48	49.03' RT	529.56	529.06	526.06	503.06	23.00'	3.50'	-	HP 12X53

FOR INFORMATION ONLY

NOTES

1. SEE SHEET 5/53 & 6/53 FOR WALL ELEVATION AND SOLDIER PILE DETAILS.
2. SEE SHEET 2/53 FOR ABBREVIATION LEGEND.

DESIGN AGENCY
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DESIGNED	DRAWN	REVIEWED	DATE
RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-		

LOCATION AND ELEVATION DATA TABLE
SOLDIER PILE WALL D - ALONG EAST EDGE OF RAMP J

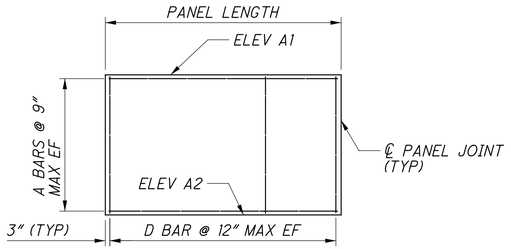
HAM-75-7.85
PID No. 77889

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2017

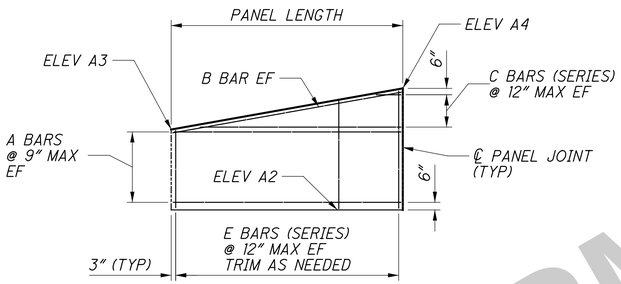
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WALL PANEL TABLE

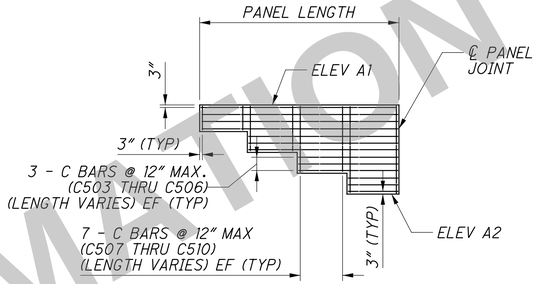
PANEL NUMBER	PANEL TYPE	PANEL LENGTH	ELEVATION A1	ELEVATION A2	ELEVATION A3	ELEVATION A4	A BARS		B BARS		C BARS		D BARS		E BARS		F BARS	
							NO.	MARK	NO.	MARK	NO.	MARK	NO.	MARK	NO.	MARK	NO.	MARK
1	DB	28'-0"	-	514.50	519.14	524.13	14	A501	2	B501	10	C501			58	E501		
2	DB	30'-6 3/4"	-	513.51	524.13	529.56	30	A502	2	B502	10	C502			62	E502		
3	DA	33'-5 1/4"	529.56	512.27	-	-	46	A503					68	D501				
4	DD	43'-0 3/8"	529.56	512.27	-	-	92	A504 AND A505					88	D501			48	F501
5	DA	40'-0"	529.56	512.73	-	-	44	A506					82	D502				
6	DA	40'-0"	529.56	513.36	-	-	44	A506					82	D503				
7	DA	40'-0"	529.56	513.88	-	-	42	A506					82	D504				
8	DA	40'-0"	529.56	514.30	-	-	42	A506					82	D505				
9	DD	37'-6 5/8"	529.56	514.56	-	-	84	A507 AND A508					78	D506			42	F502
10	DC	26'-0 1/2"	529.56	517.81	-	-					80	C503 TO C510						



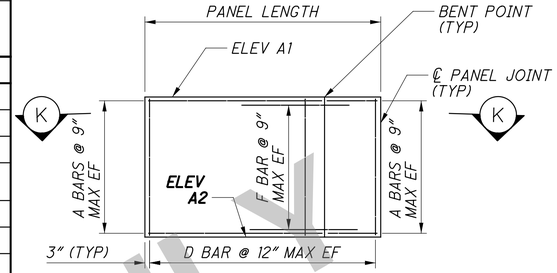
TYPE DA PANEL



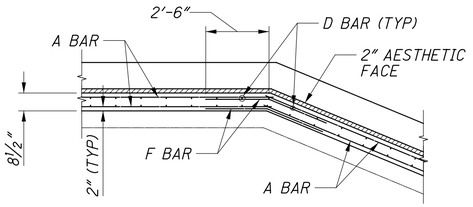
TYPE DB PANEL



TYPE DC PANEL



TYPE DD PANEL



SECTION K-K
(TYP AT WALL BENDS)

NOTES

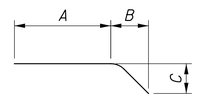
1. SEE SHEET 5/53 THROUGH 10/53 FOR WALL ELEVATION AND DETAILS.
2. SEE SHEET 2/53 FOR ABBREVIATION LEGEND.

REINFORCING SCHEDULE

MARK	NUMBER	LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS					
					A	B	C	D	E	INC.
A501	14	27'-8"	404	STR						
A502	30	30'-4 1/2"	950	STR						
A503	46	33'-1 1/2"	795	STR						
A504	46	9'-1"	436	STR						
A505	46	33'-7"	1611	STR						
A506	172	39'-8"	7166	STR						
A507	42	31'-5"	1376	STR						
A508	42	6'-9"	296	STR						
B501	2	28'-1 1/2"	59	STR						
B502	2	30'-9"	64	STR						
C501	2 SERIES OF 6	3'-10" TO 24'-10"	179	STR						
C502	2 SERIES OF 6	2'-1" TO 27'-5"	185	STR						
C503	6	25'-8 1/2"	161	STR						
C504	6	19'-5"	122	STR						
C505	6	12'-10"	80	STR						
C506	6	6'-3"	39	STR						

REINFORCING SCHEDULE

MARK	NUMBER	LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS					
					A	B	C	D	E	INC.
C507	14	11'-5"	167	STR						
C508	14	8'-8"	127	STR						
C509	14	5'-11"	86	STR						
C510	14	3'-2"	46	STR						
D501	156	17'-0"	2766	STR						
D502	82	16'-6"	1411	STR						
D503	82	15'-10"	1354	STR						
D504	82	15'-4"	1311	STR						
D505	82	14'-11"	1276	STR						
D506	78	15'-9"	1281	STR						
E501	2 SERIES OF 29	4'-4" TO 9'-3"	411	STR						
E502	2 SERIES OF 31	10'-4" TO 15'-8"	841	STR						
F501	48	5'-0"	250	19	2'-6"	2'-3 3/4"	11 1/2"			
F502	42	5'-0"	219	19	2'-6"	11 1/2"	2'-3 3/4"			
		TOTAL	25,419							



TYPE-19

NOTES

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE A501 IS A NO. 5 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT, UNLESS OTHERWISE INDICATED.
2. ALL REINFORCING STEEL TO BE EPOXY COATED.
3. UNLESS OTHERWISE NOTED, THE FOLLOWING LAP LENGTHS SHALL APPLY:

#5 BARS: 2'-5"

FOR INFORMATION ONLY

DESIGN AGENCY: EMH&T
DESIGNED: RJE | DRAWN: GB | CHECKED: RMW | REVIEWED: CAS | DATE: 12-15-21 | REVISED: - | STRUCTURE FILE NUMBER

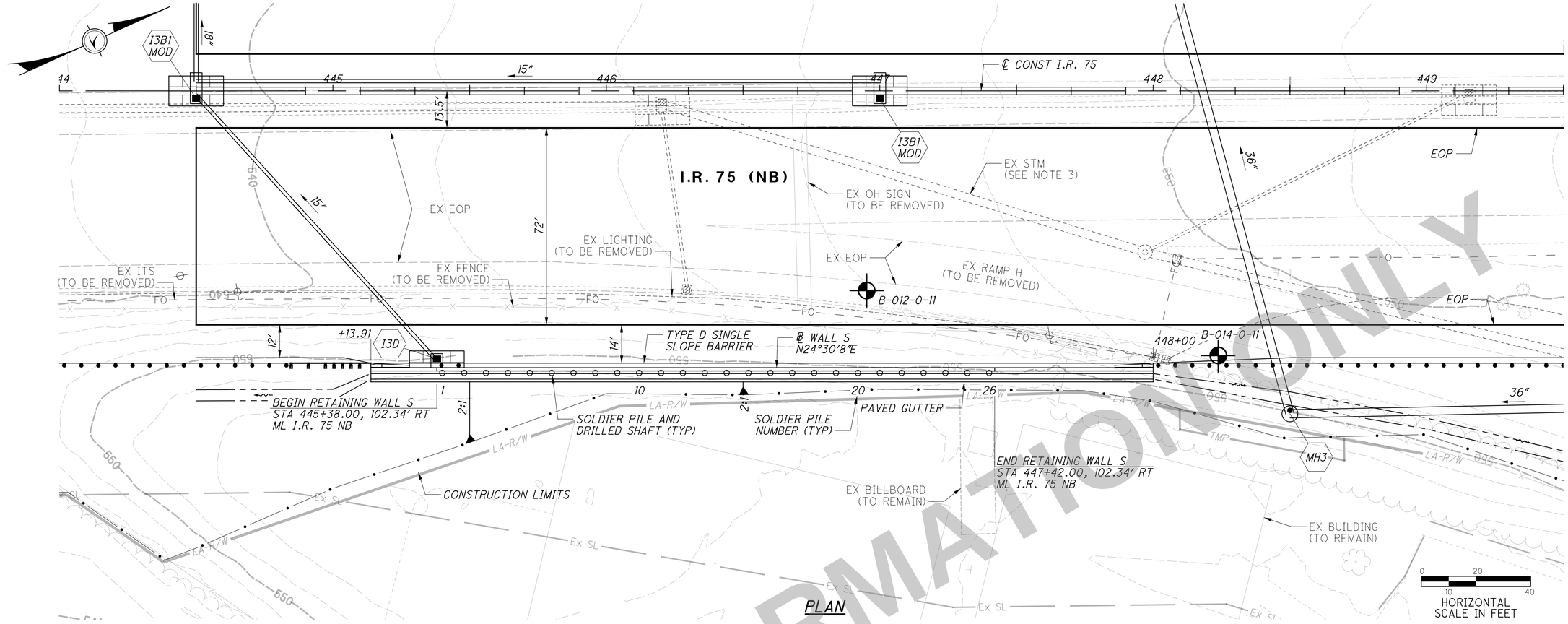
REINFORCING SCHEDULE
SOLDIER PILE WALL D - ALONG EAST EDGE OF RAMP J

HAM-75-7.85
PID No. 77889

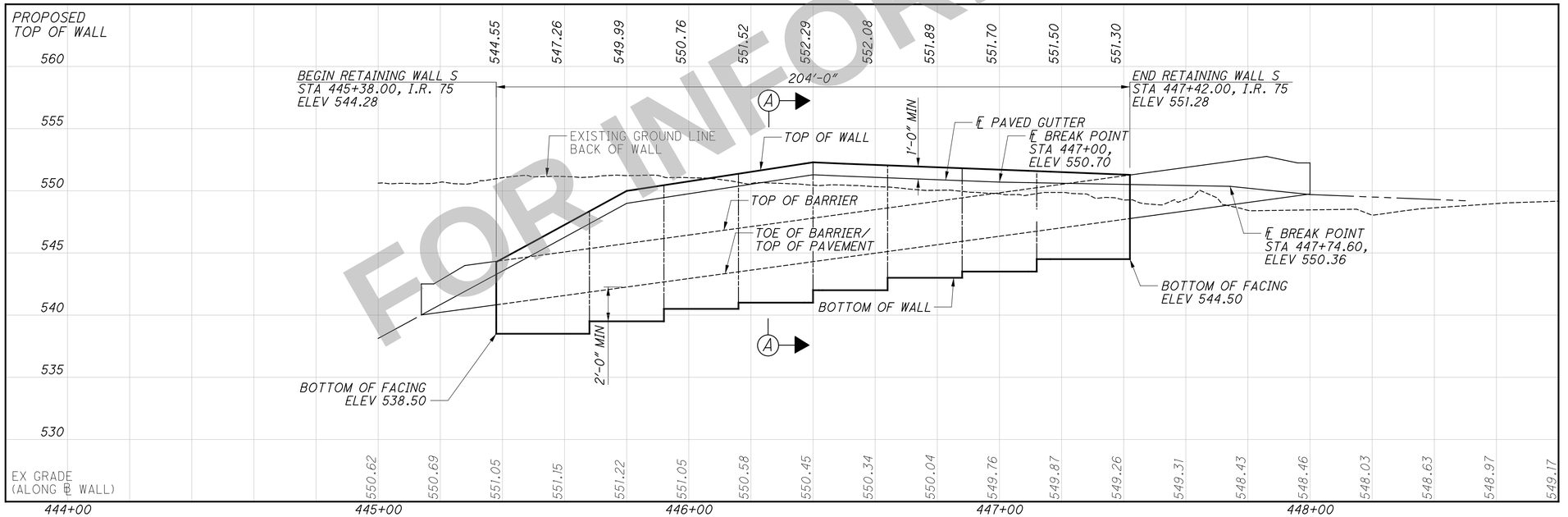
12 / 53

953 / 2017

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PLAN



ELEVATION ALONG BACK OF WALL

LEGEND:

= BORING LOCATION

NOTES:

1. FOR SECTION A-A, SEE SHEET 15/53
2. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/53
3. ALL EXISTING STORM SEWER IS TO BE REMOVED UNLESS OTHERWISE NOTED.
4. UNDERDRAIN AND 4" DRAIN PIPES NOT SHOWN FOR CLARITY (TYP). FOR WALL DRAINAGE INFORMATION, SEE SHEETS 15/53 TO 16/53

FOR INFORMATION ONLY

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED JLM | DRAWN SMJ | REVIEWED SSK | DATE 12-15-21
CHECKED NCK | REVISED | STRUCTURE FILE NUMBER

PLAN AND ELEVATION

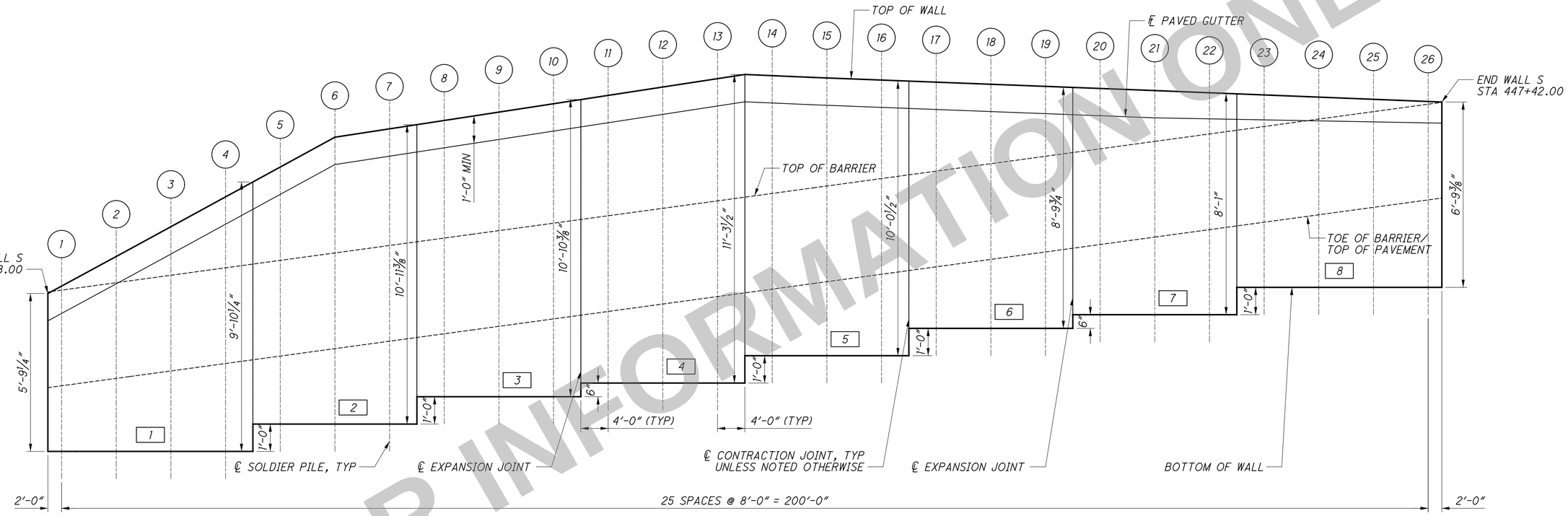
SOLDIER PILE WITH LAGGING WALL S

HAM-75-7.85
PID No. 77889

13 / 53

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DEVELOPED ELEVATION

FOR INFORMATION ONLY

NOTES:

1. SEE SHEET 17/53 FOR PANEL DETAILS.
2. FOR WALL CROSS-SECTION, SEE SHEET 15/53.
3. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/53.

LEGEND:

(#) = PILE NUMBER

[#] = PANEL NUMBER

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NCK			

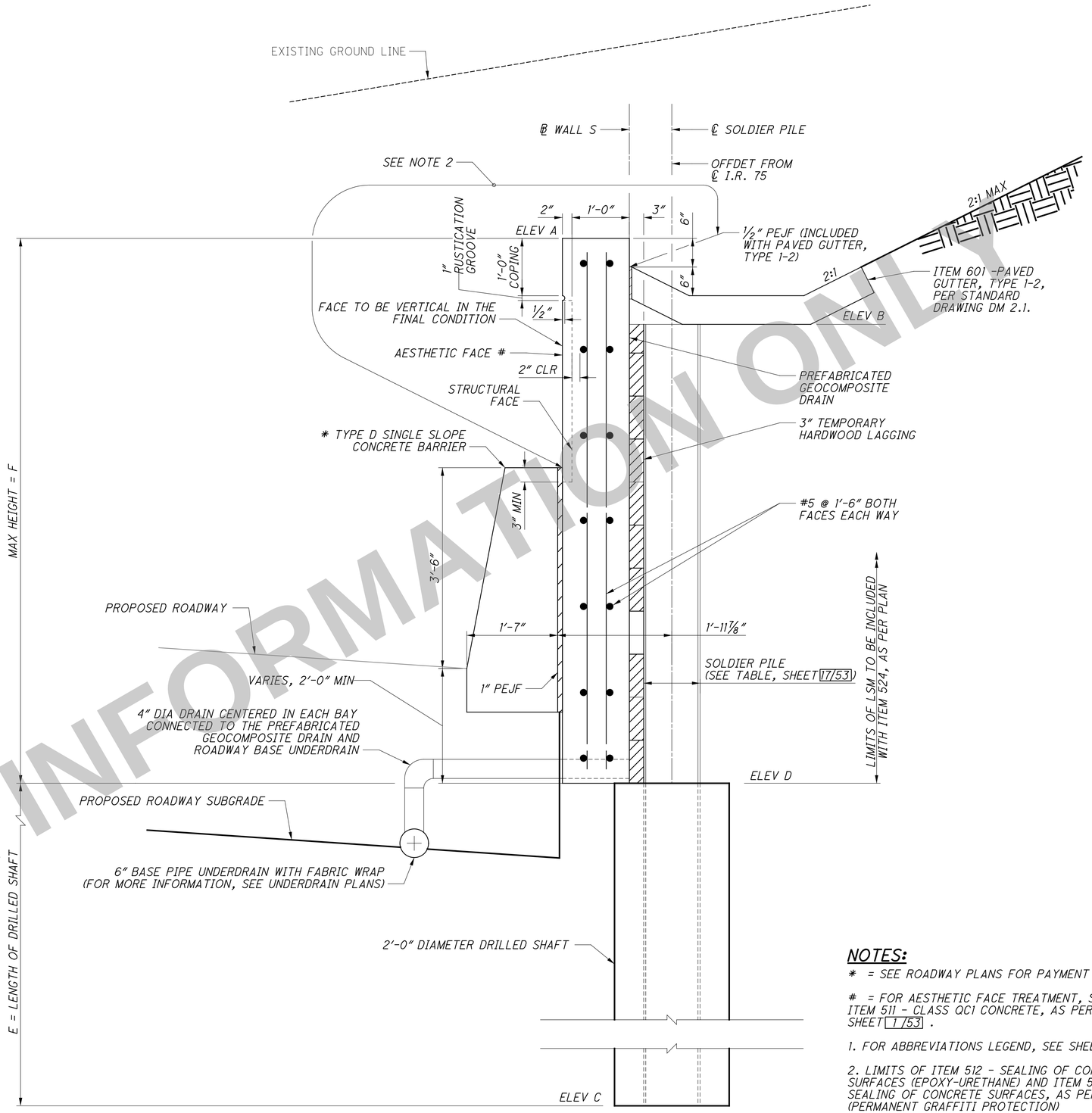
WALL ELEVATION
SOLDIER PILE WITH LAGGING WALL S

HAM-75-7.85
PID No. 77889

14 / 53

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2017

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SECTION A-A

NOTES:

* = SEE ROADWAY PLANS FOR PAYMENT

\# = FOR AESTHETIC FACE TREATMENT, SEE NOTE ITEM 511 - CLASS QC1 CONCRETE, AS PER PLAN ON SHEET 1/53 .

1. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/53

2. LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) AND ITEM 512 - SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)

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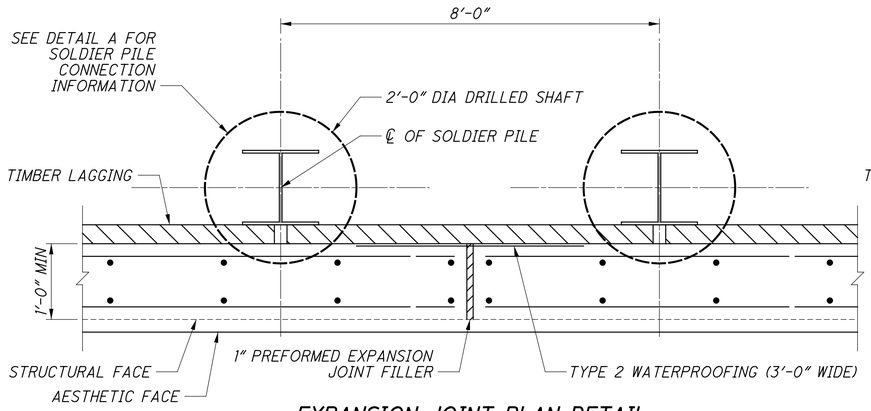
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JLM	SMJ	SSK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

RETAINING WALL DETAILS 1 OF 2
SOLDIER PILE WITH LAGGING WALL S

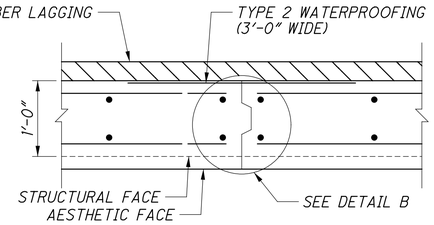
HAM-75-7.85
PID No. 77889

956
2017

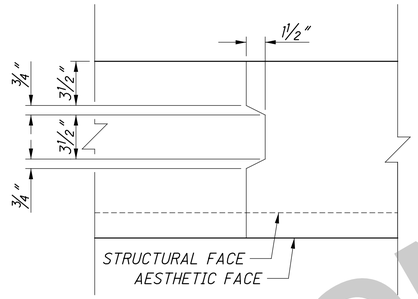
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EXPANSION JOINT PLAN DETAIL

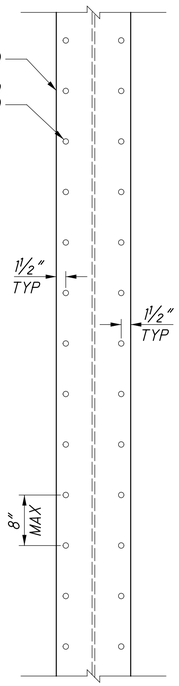


CONTRACTION JOINT PLAN DETAIL

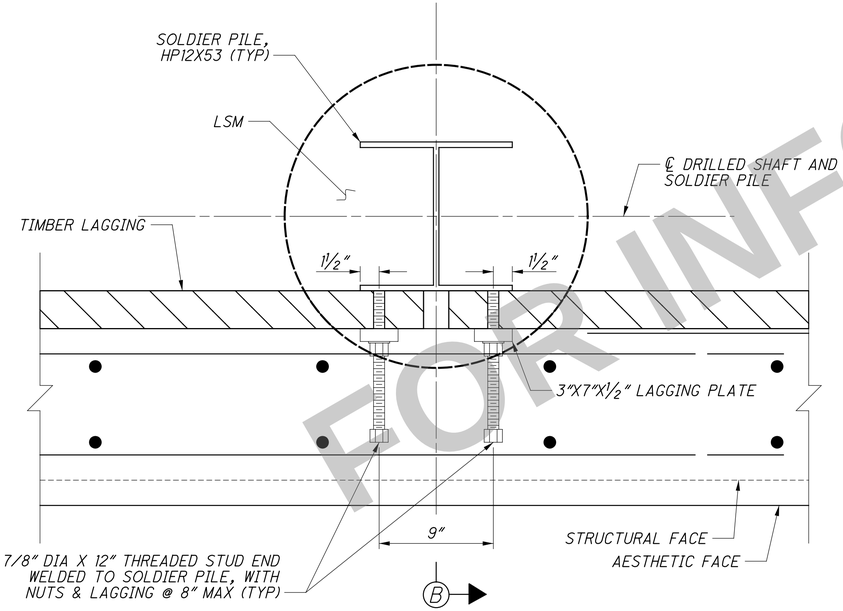


DETAIL B

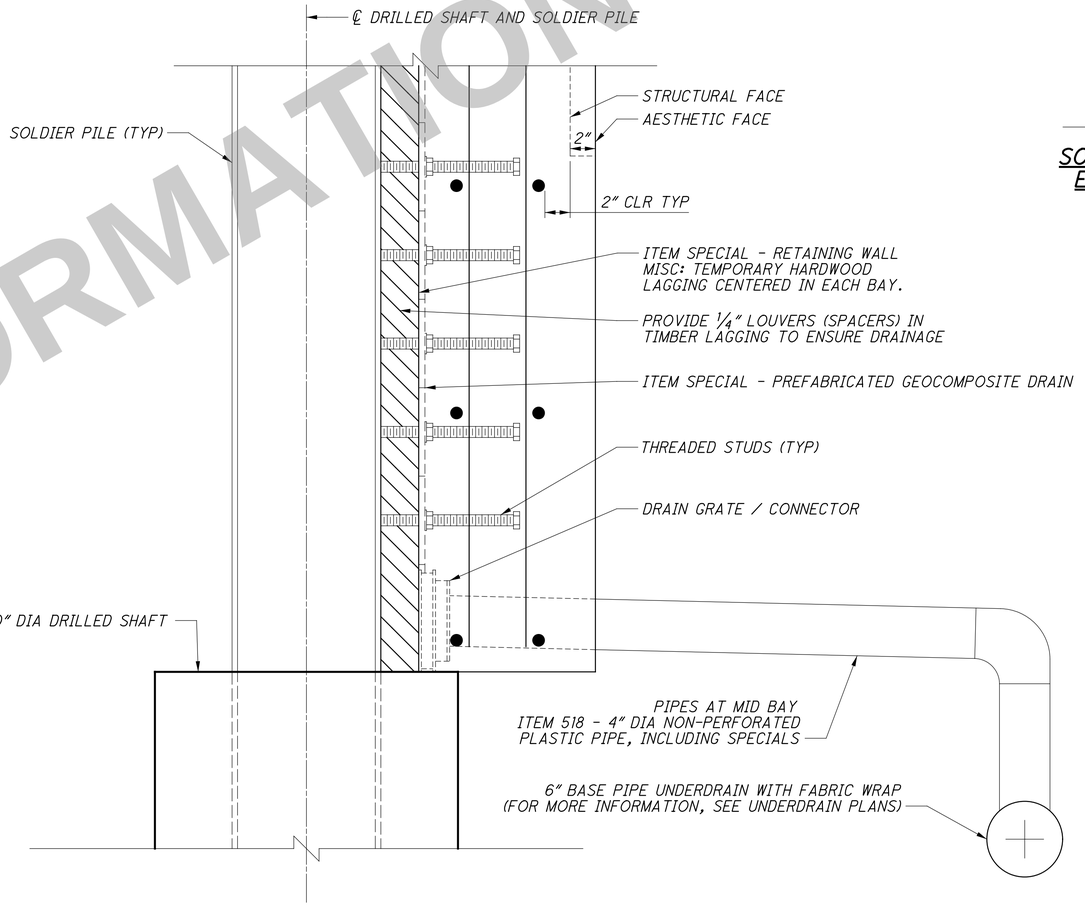
(TIMBER LAGGING AND TYPE 2 WATERPROOFING NOT SHOWN FOR CLARITY)



SOLDIER PILE ELEVATION



DETAIL A



SECTION B-B

NOTES

1. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/53 .

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

RETAINING WALL DETAILS 2 OF 2

SOLDIER PILE WITH LAGGING RETAINING WALL S

HAM-75-7.85
PID No. 77889

16 / 53

957
2017

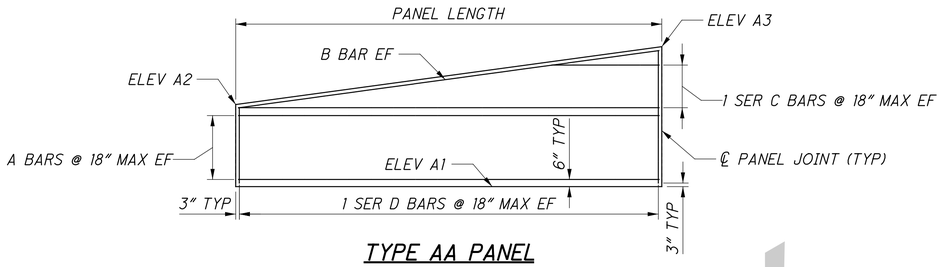
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RETAINING WALL DETAIL TABLE

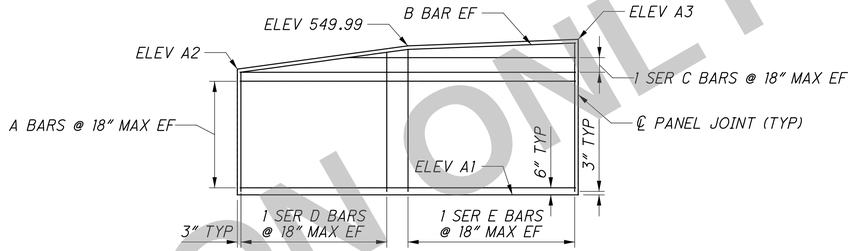
SOLDIER PILE NUMBER	SOLDIER PILE STATION	SOLDIER PILE OFFSET (FT)	TOP OF WALL ELEV A	TOP OF SOLDIER PILE ELEV B	MINIMUM PILE TIP ELEV C	TOP OF DRILLED SHAFT ELEV D	LENGTH OF DRILLED SHAFT E MIN (FT)	WALL HEIGHT F (FT)	SOLDIER PILE SIZE	SOLDIER PILE LENGTH (FT)
1	445+40.00	103.07	544.55	543.05	526.50	538.50	12.00	6.05	HP 12X53	16.55
2	445+48.00	103.07	545.63	544.13	526.50	538.50	12.00	7.13	HP 12X53	17.63
3	445+56.00	103.07	546.72	545.22	526.50	538.50	12.00	8.22	HP 12X53	18.72
4	445+64.00	103.07	547.81	546.31	523.50	538.50	15.00	9.31	HP 12X53	22.81
5	445+72.00	103.07	548.90	547.40	524.50	539.50	15.00	9.40	HP 12X53	22.90
6	445+80.00	103.07	549.99	548.49	524.50	539.50	15.00	10.49	HP 12X53	23.99
7	445+88.00	103.07	550.30	548.80	524.50	539.50	15.00	10.80	HP 12X53	24.30
8	445+96.00	103.07	550.61	549.11	525.50	540.50	15.00	10.11	HP 12X53	23.61
9	446+04.00	103.07	550.91	549.41	525.50	540.50	15.00	10.41	HP 12X53	23.91
10	446+12.00	103.07	551.22	549.72	525.50	540.50	15.00	10.72	HP 12X53	24.22
11	446+20.00	103.07	551.52	550.02	526.00	541.00	15.00	10.52	HP 12X53	24.02
12	446+28.00	103.07	551.83	550.33	526.00	541.00	15.00	10.83	HP 12X53	24.33
13	446+36.00	103.07	552.14	550.64	526.00	541.00	15.00	11.14	HP 12X53	24.64
14	446+44.00	103.07	552.24	550.74	527.00	542.00	15.00	10.24	HP 12X53	23.74
15	446+52.00	103.07	552.16	550.66	527.00	542.00	15.00	10.16	HP 12X53	23.66
16	446+60.00	103.07	552.08	550.58	527.00	542.00	15.00	10.08	HP 12X53	23.58
17	446+68.00	103.07	552.01	550.51	528.00	543.00	15.00	9.01	HP 12X53	22.51
18	446+76.00	103.07	551.93	550.43	528.00	543.00	15.00	8.93	HP 12X53	22.43
19	446+84.00	103.07	551.85	550.35	531.00	543.00	12.00	8.85	HP 12X53	19.35
20	446+92.00	103.07	551.78	550.28	531.50	543.50	12.00	8.28	HP 12X53	18.78
21	447+00.00	103.07	551.70	550.20	531.50	543.50	12.00	8.20	HP 12X53	18.70
22	447+08.00	103.07	551.62	550.12	531.50	543.50	12.00	8.12	HP 12X53	18.62
23	447+16.00	103.07	551.54	550.04	532.50	544.50	12.00	7.04	HP 12X53	17.54
24	447+24.00	103.07	551.46	549.96	532.50	544.50	12.00	6.96	HP 12X53	17.46
25	447+32.00	103.07	551.38	549.88	532.50	544.50	12.00	6.88	HP 12X53	17.38
26	447+40.00	103.07	551.30	549.80	532.50	544.50	12.00	6.80	HP 12X53	17.30

RETAINING WALL PANEL TABLE

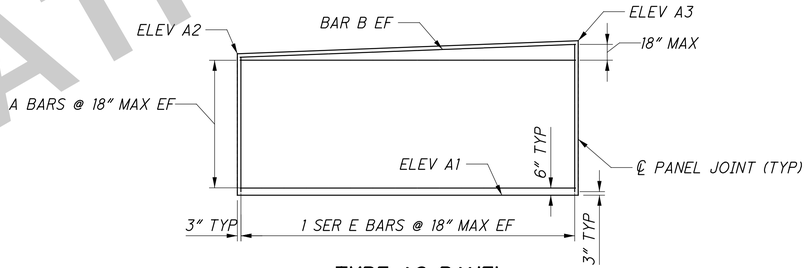
PANEL NUMBER	PANEL TYPE	PANEL LENGTH	ELEV A1	ELEV A2	ELEV A3	A BARS NO	A BARS MARK	B BARS NO	B BARS MARK	C BARS NO	C BARS MARK	D BARS NO	D BARS MARK	E BARS NO	E BARS MARK	F BARS NO	F BARS MARK
1	AA	30'	538.50	544.28	548.36	8	A501	2	B501	6	C501	42	D501				
2	AB	24'	539.50	548.36	550.45	12	A502	2	B502	4	C502	16	D502	18	E501		
3	AC	24'	540.50	550.45	551.37	14	A502	2	B503					34	E502		
4	AC	24'	541.00	551.37	552.29	14	A502	2	B503					34	E503		
5	AD	24'	542.00	552.29	552.05	14	A502	2	B503							34	F501 TO F503
6	AD	24'	543.00	552.05	551.82	12	A502	2	B503							34	F504 TO F506
7	AD	24'	543.50	551.82	551.59	12	A502	2	B503							34	F507 TO F509
8	AD	30'	544.50	551.59	551.28	10	A501	2	B504							168	F510



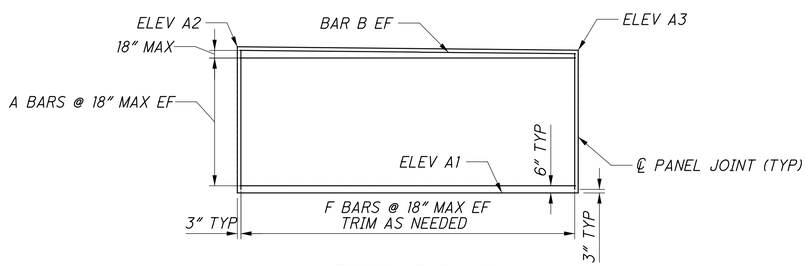
TYPE AA PANEL



TYPE AB PANEL



TYPE AC PANEL



TYPE AD PANEL

NOTES:

1. FOR PILE SPACING, SEE SHEET 14/53 .
2. FOR REINFORCING STEEL SCHEDULE, SEE SHEET 18/53 .
3. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/53 .

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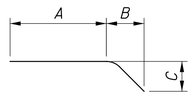
RETAINING WALL DETAIL TABLE AND WALL PANELS
SOLDIER PILE WITH LAGGING WALL S

HAM-75-7.85
PID No. 77889

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2017

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MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
CONCRETE FACING PANELS											
A501	18	29'-6"	554	ST.							
A502	78	23'-6"	1912	ST.							
B501	2	29'-9"	62	ST.							
B502	2	23'-6"	49	19	11'-11"	11'-8 3/4"	1'-1 5/8"				
B503	10	23'-6"	245	ST.							
B504	2	29'-6"	62	ST.							
	2	7'-5"									
C501	SER OF	TO	116	ST.							11'-0 1/2"
	3	29'-6"									
	2	16'									
C502	SER OF	TO	82	ST.							7'-6"
	2	23'-6"									
	2	5'-3"									
D501	SER OF	TO	319	ST.							2 7/16"
	21	9'-4"									
	2	8'-4"									
D502	SER OF	TO	151	ST.							0'-2 7/16"
	8	9'-9"									
	2	10'-0"									
E501	SER OF	TO	192	ST.							5/8"
	9	10'-5"									
	2	9'-5"									
E502	SER OF	TO	350	ST.							11/16"
	17	10'-4"									
	2	9'-10"									
E503	SER OF	TO	365	ST.							11/16"
	17	10'-9"									
F501	11	9'-9"	112	ST.							
F502	11	9'-8"	111	ST.							
F503	12	9'-7"	120	ST.							
F504	11	8'-6"	98	ST.							
F505	11	8'-5"	97	ST.							
F506	12	8'-4"	104	ST.							
F507	11	7'-9"	89	ST.							
F508	11	7'-8"	88	ST.							
F509	12	7'-7"	95	ST.							
	1	6'-3"									
F510	SER OF	TO	141	ST.							3/16"
	21	6'-7"									
		TOTAL	5514								



TYPE-19

FOR INFORMATION ONLY

NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE 3 DIGITS ARE USED, AND THE FIRST 2 DIGITS WHERE FOUR DIGITS ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, A601 IS A NO 6 BAR AND 01 INDICATES BAR SEQUENCE NUMBER. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED.

2. SER INDICATES A SERIES BAR AND INC INDICATES THE LENGTH INCREMENT FOR SERIES BARS.

3. ALL REINFORCING STEEL TO BE EPOXY COATED.

4. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/53 .

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

REINFORCING STEEL SCHEDULE

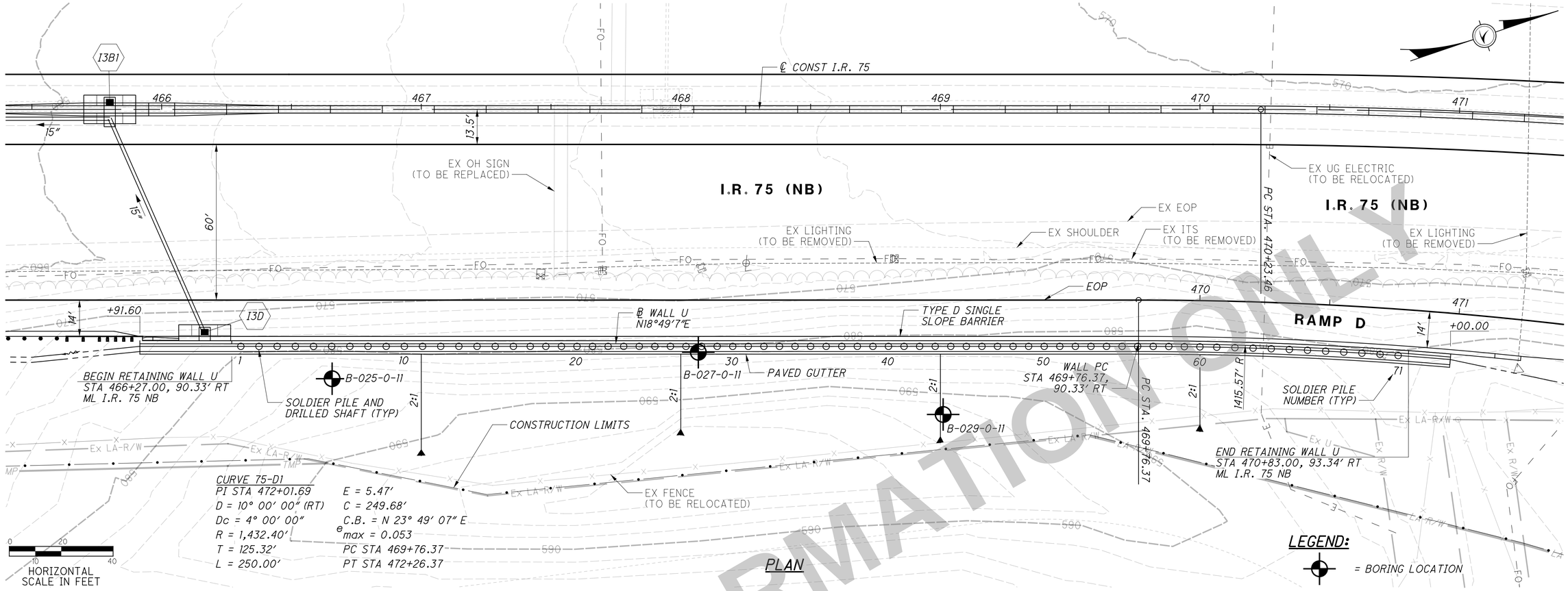
SOLDIER PILE WITH LAGGING WALL S

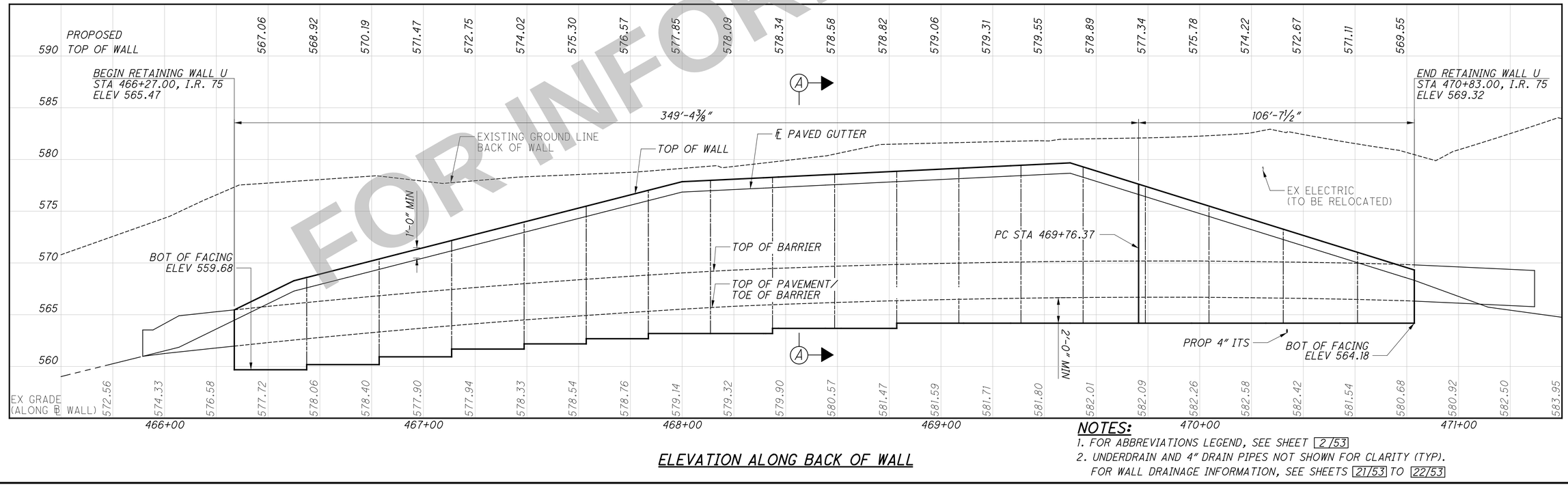
HAM-75-7.85

PID No. 77889

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2017

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ELEVATION ALONG BACK OF WALL

NOTES:

1. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/53
2. UNDERDRAIN AND 4" DRAIN PIPES NOT SHOWN FOR CLARITY (TYP). FOR WALL DRAINAGE INFORMATION, SEE SHEETS 21/53 TO 22/53

FOR INFORMATION ONLY

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DESIGNED JLM | DRAWN SMJ | REVIEWED SSK | DATE 12-15-21
CHECKED NCK | REVISED | STRUCTURE FILE NUMBER

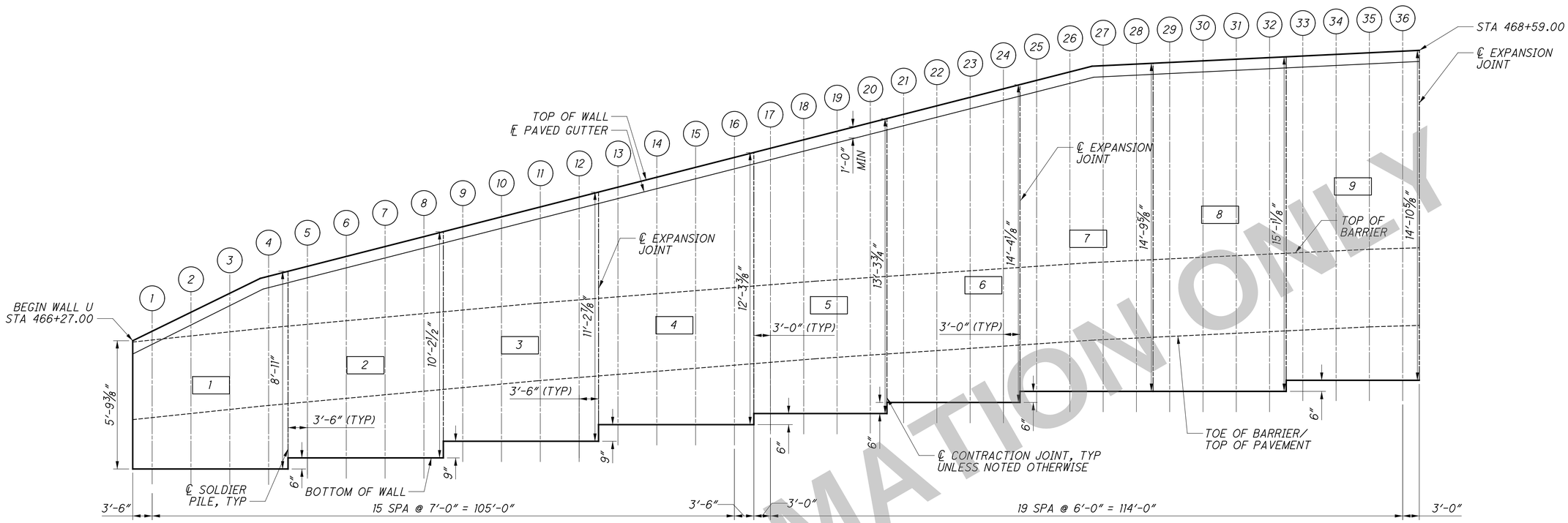
PLAN AND ELEVATION

SOLDIER PILE WITH LAGGING WALL U

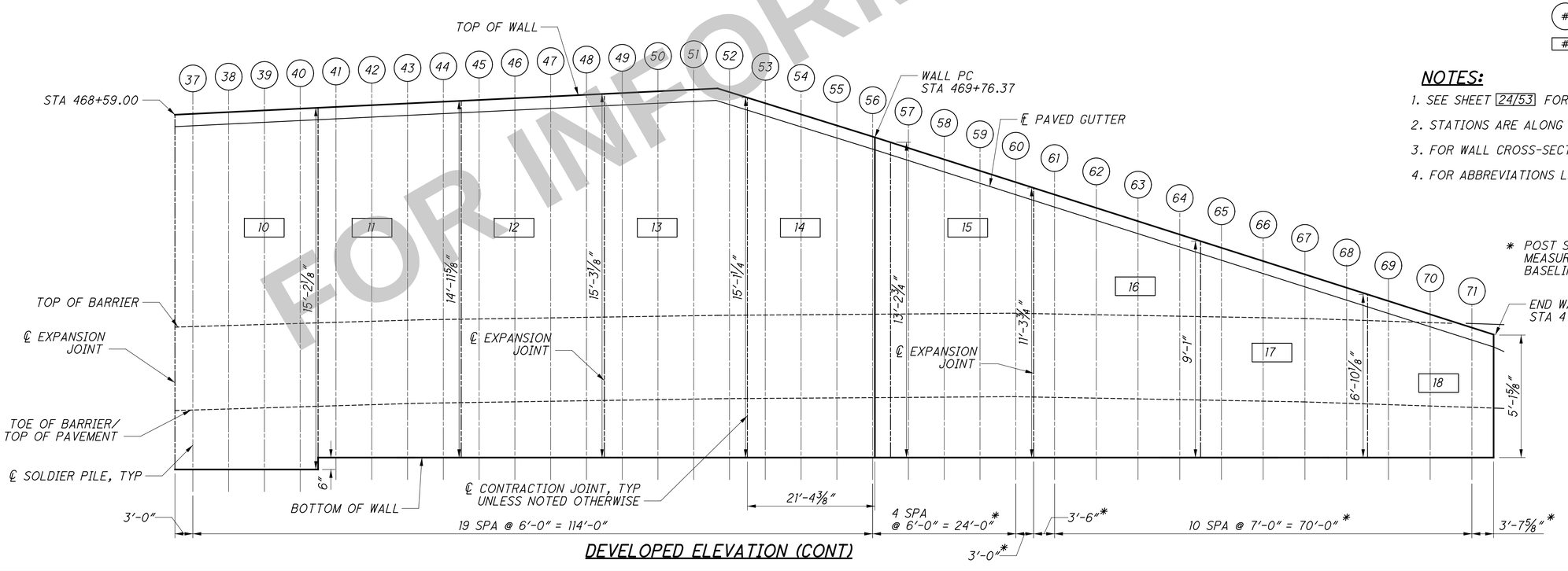
HAM-75-7.85
PID No. 77889

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2017

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DEVELOPED ELEVATION



DEVELOPED ELEVATION (CONT)

LEGEND:

(#) = PILE NUMBER

[#] = PANEL NUMBER

NOTES:

1. SEE SHEET [24/53] FOR PANEL DETAILS.
2. STATIONS ARE ALONG ℄ I.R. 75.
3. FOR WALL CROSS-SECTION SEE SHEET [22/53].
4. FOR ABBREVIATIONS LEGEND, SEE SHEET [2/53].

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

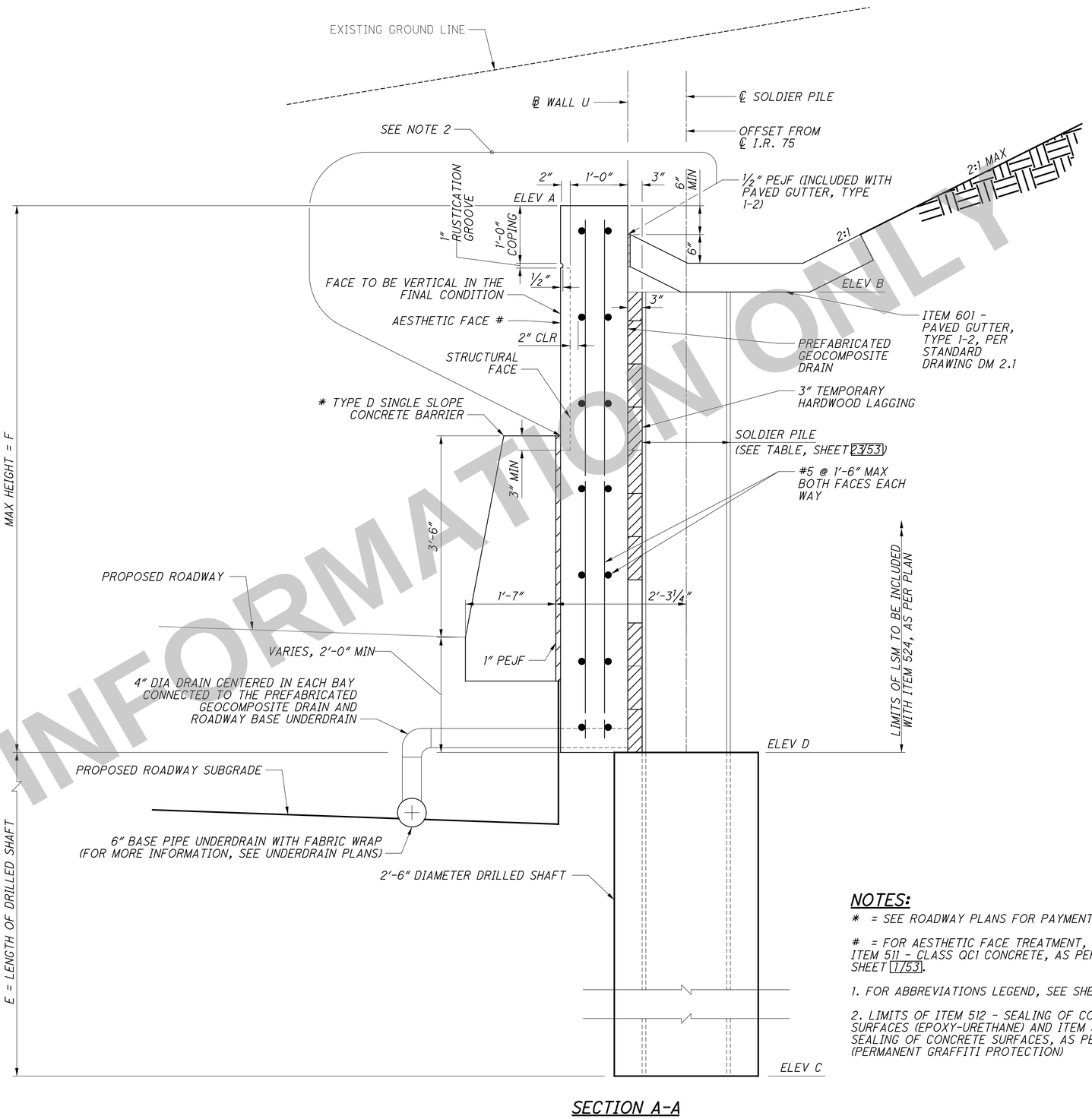
WALL ELEVATION
SOLDIER PILE WITH LAGGING WALL U

HAM-75-7.85
PID No. 77889

20 / 53

961 / 2017

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SECTION A-A

NOTES:

* = SEE ROADWAY PLANS FOR PAYMENT

\# = FOR AESTHETIC FACE TREATMENT, SEE NOTE ITEM 511 - CLASS QC1 CONCRETE, AS PER PLAN ON SHEET 1/53.

1. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/53.

2. LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) AND ITEM 512 - SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)

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COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED	DRAWN	REVIEWED	DATE
JLM	SMJ	SSK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

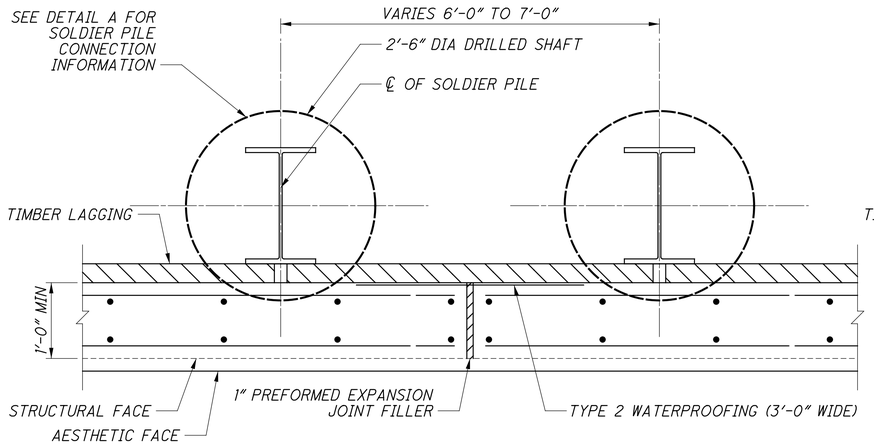
RETAINING WALL DETAILS 1 OF 2
SOLDIER PILE WITH LAGGING WALL U

HAM-75-7.85
PID No. 77889

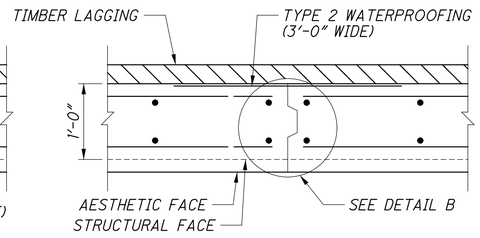
21 / 53

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2017

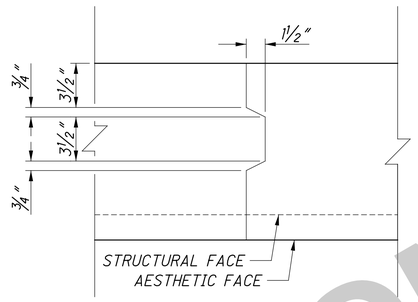
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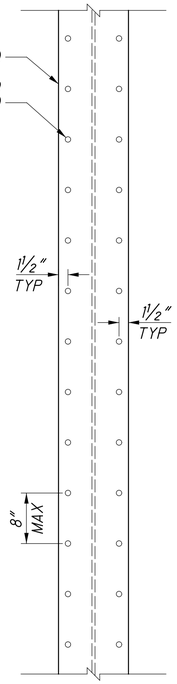
EXPANSION JOINT PLAN DETAIL



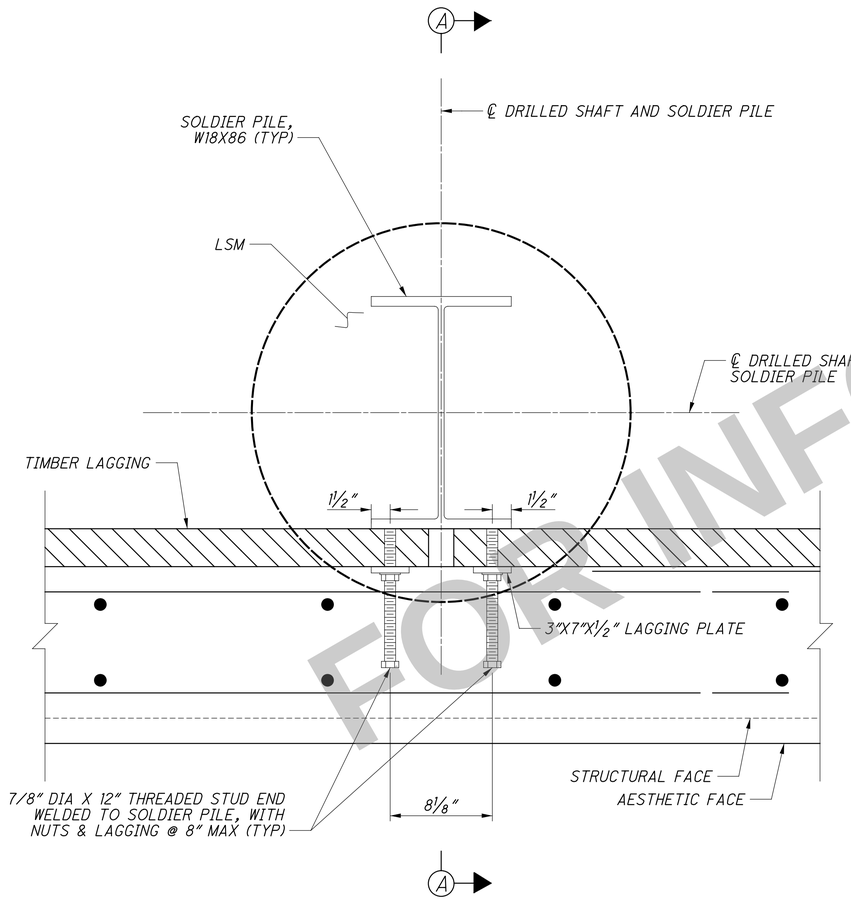
CONTRACTION JOINT PLAN DETAIL



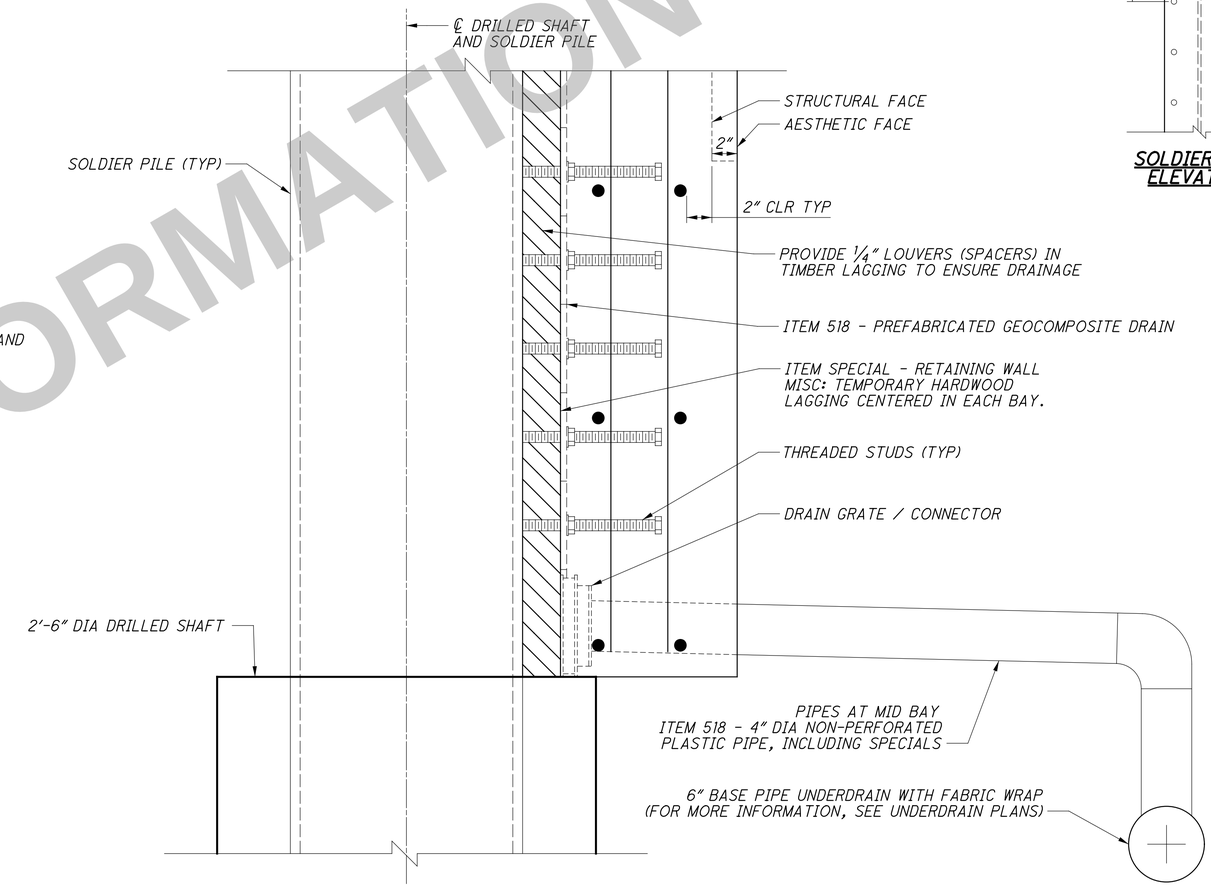
DETAIL B
(TIMBER LAGGING AND TYPE 2 WATERPROOFING NOT SHOWN FOR CLARITY)



SOLDIER PILE ELEVATION



DETAIL A



SECTION B-B

NOTES:

1. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/53.

FOR INFORMATION ONLY

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

RETAINING WALL DETAILS 2 OF 2

SOLDIER PILE WITH LAGGING RETAINING WALL U

HAM-75-7.85
PID No. 77889

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2017

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RETAINING WALL DETAIL TABLE

SOLDIER PILE NUMBER	SOLDIER PILE STATION	SOLDIER PILE OFFSET (FT)	TOP OF WALL ELEV A	TOP OF SOLDIER PILE ELEV B	MINIMUM PILE TIP ELEV C	TOP OF DRILLED SHAFT ELEV D	LENGTH OF DRILLED SHAFT E MIN (FT)	WALL HEIGHT F (FT)	SOLDIER PILE SIZE	SOLDIER PILE LENGTH (FT)
1	466+30.50	91.35	565.90	564.40	551.68	559.68	8.00	6.22	W18X86	12.72
2	466+37.50	91.35	566.75	565.25	551.68	559.68	8.00	7.07	W18X86	13.57
3	466+44.50	91.35	567.61	566.11	551.68	559.68	8.00	7.93	W18X86	14.43
4	466+51.50	91.35	568.38	566.88	546.68	559.68	13.00	8.70	W18X86	20.20
5	466+58.50	91.35	568.82	567.32	547.18	560.18	13.00	8.64	W18X86	20.14
6	466+65.50	91.35	569.27	567.77	547.18	560.18	13.00	9.09	W18X86	20.59
7	466+72.50	91.35	569.72	568.22	547.18	560.18	13.00	9.54	W18X86	21.04
8	466+79.50	91.35	570.16	568.66	547.18	560.18	13.00	9.98	W18X86	21.48
9	466+86.50	91.35	570.61	569.11	547.93	560.93	13.00	9.68	W18X86	21.18
10	466+93.50	91.35	571.06	569.56	547.93	560.93	13.00	10.13	W18X86	21.63
11	467+00.50	91.35	571.50	570.00	547.93	560.93	13.00	10.57	W18X86	22.07
12	467+07.50	91.35	571.95	570.45	547.93	560.93	13.00	11.02	W18X86	22.52
13	467+14.50	91.35	572.40	570.90	548.68	561.68	13.00	10.72	W18X86	22.22
14	467+21.50	91.35	572.84	571.34	548.68	561.68	13.00	11.16	W18X86	22.66
15	467+28.50	91.35	573.29	571.79	548.68	561.68	13.00	11.61	W18X86	23.11
16	467+35.50	91.35	573.73	572.23	545.68	561.68	16.00	12.05	W18X86	26.55
17	467+42.00	91.35	574.15	572.65	546.18	562.18	16.00	11.97	W18X86	26.47
18	467+48.00	91.35	574.53	573.03	546.18	562.18	16.00	12.35	W18X86	26.85
19	467+54.00	91.35	574.92	573.42	546.18	562.18	16.00	12.74	W18X86	27.24
20	467+60.00	91.35	575.30	573.80	546.18	562.18	16.00	13.12	W18X86	27.62
21	467+66.00	91.35	575.68	574.18	546.68	562.68	16.00	13.00	W18X86	27.50
22	467+72.00	91.35	576.06	574.56	546.68	562.68	16.00	13.38	W18X86	27.88
23	467+78.00	91.35	576.45	574.95	546.68	562.68	16.00	13.77	W18X86	28.27
24	467+84.00	91.35	576.83	575.33	546.68	562.68	16.00	14.15	W18X86	28.65
25	467+90.00	91.35	577.21	575.71	547.18	563.18	16.00	14.03	W18X86	28.53
26	467+96.00	91.35	577.59	576.09	547.18	563.18	16.00	14.41	W18X86	28.91
27	468+02.00	91.35	577.87	576.37	547.18	563.18	16.00	14.69	W18X86	29.19
28	468+08.00	91.35	577.95	576.45	547.18	563.18	16.00	14.77	W18X86	29.27
29	468+14.00	91.35	578.02	576.52	547.18	563.18	16.00	14.84	W18X86	29.34
30	468+20.00	91.35	578.09	576.59	547.18	563.18	16.00	14.91	W18X86	29.41
31	468+26.00	91.35	578.17	576.67	547.18	563.18	16.00	14.99	W18X86	29.49
32	468+32.00	91.35	578.24	576.74	547.18	563.18	16.00	15.06	W18X86	29.56
33	468+38.00	91.35	578.31	576.81	547.68	563.68	16.00	14.63	W18X86	29.13
34	468+44.00	91.35	578.38	576.88	547.68	563.68	16.00	14.70	W18X86	29.20
35	468+50.00	91.35	578.46	576.96	547.68	563.68	16.00	14.78	W18X86	29.28
36	468+56.00	91.35	578.53	577.03	547.68	563.68	16.00	14.85	W18X86	29.35
37	468+62.00	91.35	578.60	577.10	547.68	563.68	16.00	14.92	W18X86	29.42
38	468+68.00	91.35	578.68	577.18	547.68	563.68	16.00	15.00	W18X86	29.50
39	468+74.00	91.35	578.75	577.25	547.68	563.68	16.00	15.07	W18X86	29.57
40	468+80.00	91.35	578.82	577.32	547.68	563.68	16.00	15.14	W18X86	29.64
41	468+86.00	91.35	578.89	577.39	548.18	564.18	16.00	14.71	W18X86	29.21
42	468+92.00	91.35	578.97	577.47	548.18	564.18	16.00	14.79	W18X86	29.29
43	468+98.00	91.35	579.04	577.54	548.18	564.18	16.00	14.86	W18X86	29.36
44	469+04.00	91.35	579.11	577.61	548.18	564.18	16.00	14.93	W18X86	29.43
45	469+10.00	91.35	579.18	577.68	548.18	564.18	16.00	15.00	W18X86	29.50
46	469+16.00	91.35	579.26	577.76	548.18	564.18	16.00	15.08	W18X86	29.58
47	469+22.00	91.35	579.33	577.83	548.18	564.18	16.00	15.15	W18X86	29.65
48	469+28.00	91.35	579.40	577.90	548.18	564.18	16.00	15.22	W18X86	29.72
49	469+34.00	91.35	579.48	577.98	548.18	564.18	16.00	15.30	W18X86	29.80
50	469+40.00	91.35	579.55	578.05	548.18	564.18	16.00	15.37	W18X86	29.87
51	469+46.00	91.35	579.62	578.12	548.18	564.18	16.00	15.44	W18X86	29.94
52	469+52.00	91.35	579.69	578.19	548.18	564.18	16.00	15.51	W18X86	30.01
53	469+58.00	91.35	579.05	577.55	548.18	564.18	16.00	14.87	W18X86	29.37
54	469+64.00	91.35	578.58	577.08	548.18	564.18	16.00	14.40	W18X86	28.90
55	469+70.00	91.35	578.11	576.61	548.18	564.18	16.00	13.93	W18X86	28.43
56	469+76.00	91.35	577.65	576.15	548.18	564.18	16.00	13.47	W18X86	27.97
57	469+82.00	91.36	577.18	575.68	548.18	564.18	16.00	13.00	W18X86	27.50
58	469+87.99	91.40	576.71	575.21	548.18	564.18	16.00	12.53	W18X86	27.03
59	469+93.99	91.46	576.25	574.75	551.18	564.18	13.00	12.07	W18X86	23.57
60	469+99.98	91.55	575.78	574.28	551.18	564.18	13.00	11.60	W18X86	23.10
61	470+06.48	91.67	575.27	573.77	551.18	564.18	13.00	11.09	W18X86	22.59
62	470+13.47	91.84	574.73	573.23	551.18	564.18	13.00	10.55	W18X86	22.05
63	470+20.46	92.04	574.19	572.69	551.18	564.18	13.00	10.01	W18X86	21.51
64	470+27.64	92.27	573.63	572.13	551.18	564.18	13.00	9.45	W18X86	20.95
65	470+34.95	92.51	573.06	571.56	551.18	564.18	13.00	8.88	W18X86	20.38
66	470+42.27	92.77	572.49	570.99	551.18	564.18	13.00	8.31	W18X86	19.81

RETAINING WALL DETAIL TABLE

SOLDIER PILE NUMBER	SOLDIER PILE STATION	SOLDIER PILE OFFSET (FT)	TOP OF WALL ELEV A	TOP OF SOLDIER PILE ELEV B	MINIMUM PILE TIP ELEV C	TOP OF DRILLED SHAFT ELEV D	LENGTH OF DRILLED SHAFT E MIN (FT)	WALL HEIGHT F (FT)	SOLDIER PILE SIZE	SOLDIER PILE LENGTH (FT)
67	470+49.59	93.03	571.92	570.42	556.18	564.18	8.00	7.74	W18X86	14.24
68	470+56.90	93.30	571.35	569.85	556.18	564.18	8.00	7.17	W18X86	13.67
69	470+64.22	93.59	570.78	569.28	556.18	564.18	8.00	6.60	W18X86	13.10
70	470+71.54	93.88	570.21	568.71	556.18	564.18	8.00	6.03	W18X86	12.53
71	470+78.86	94.18	569.64	568.14	556.18	564.18	8.00	5.46	W18X86	11.96

FOR INFORMATION ONLY

NOTES:

1. SEE SHEET 20/53 FOR PILE SPACING.
2. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/53.

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED JLM | DRAWN SMJ | CHECKED NCK | REVISED | REVIEWED SSK | DATE 12-15-21 | STRUCTURE FILE NUMBER

RETAINING WALL DETAIL TABLE
SOLDIER PILE WITH LAGGING WALL U

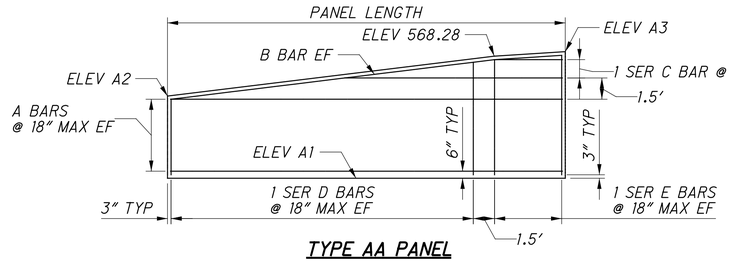
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PID No. 77889

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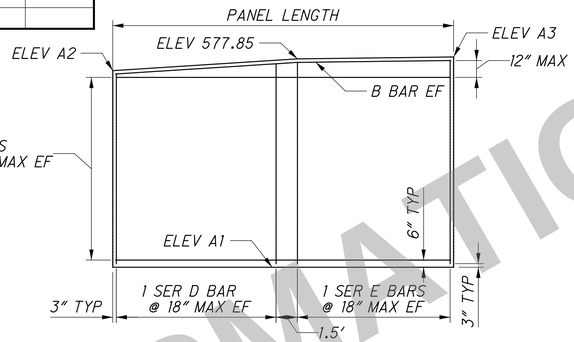
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WALL PANEL TABLE

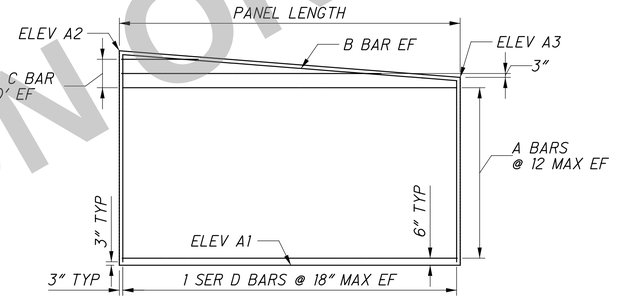
PANEL NUMBER	PANEL TYPE	PANEL LENGTH	ELEV A1	ELEV A2	ELEV A3	A BARS NO	A BARS MARK	B BARS NO	B BARS MARK	C BARS NO	C BARS MARK	D BARS NO	D BARS MARK	E BARS NO	E BARS MARK
1	AA	28′	559.68	565.47	568.60	10	A501	2	B501	4	C501	32	D501	10	E501
2	AB	28′	560.18	568.60	570.38	14	A501	2	B502	2	C502	40	D502		
3	AB	28′	560.93	570.38	572.17	14	A501	2	B502	2	C502	40	D503		
4	AB	28′	561.68	572.17	573.96	16	A501	2	B502	2	C502	40	D504		
5	AB	24′	562.18	573.96	575.49	18	A502	2	B503	2	C502	34	D505		
6	AC	24′	562.68	575.49	577.02	28	A502	2	B503	2	C503	34	D506		
7	AD	24′	563.18	577.02	577.98	30	A502	2	B504			18	D507	18	E502
8	AE	24′	563.18	577.98	578.27	32	A502					34	D508		
9	AE	24′	563.7	578.3	578.6	32	A502					34	D509		
10	AE	24′	563.7	578.6	578.9	32	A502					34	D510		
11	AE	24′	564.18	578.86	579.15	32	A502					34	D511		
12	AE	24′	564.2	579.2	579.4	32	A502					34	D512		
13	AF	24′	564.2	579.4	579.3	32	A502	2	B505			28	D513	8	E503
14	AG	24′	564.18	579.28	577.41	28	A502	2	B503	4	C504	34	D514		
15	AH	24′	564.18	577.41	575.49	18	A502	2	B503	2	C505	34	D515		
16	AH	28′	564.2	575.49	573.3	14	A501	2	B502	2	C505	40	D516		
17	AH	28′	564.18	573.26	571.03	12	A501	2	B502	2	C505	40	D517		
18	AH	21.42′	564.2	571	569.3	10	A503	2	B506	2	C506	30	D518		



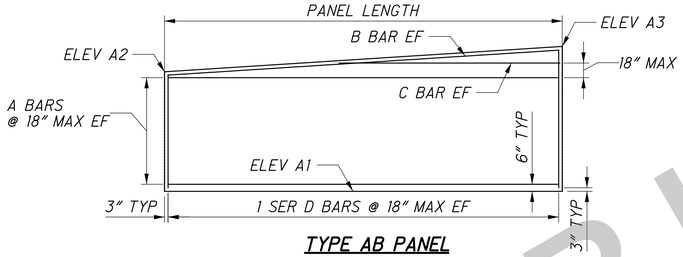
TYPE AA PANEL



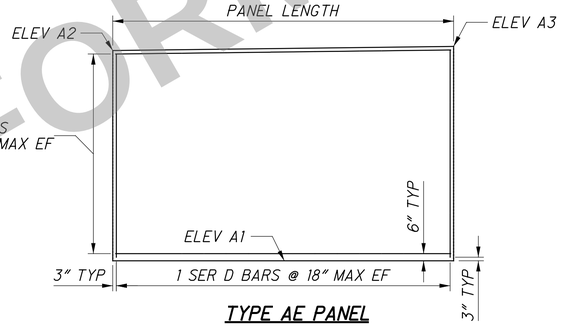
TYPE AD PANEL



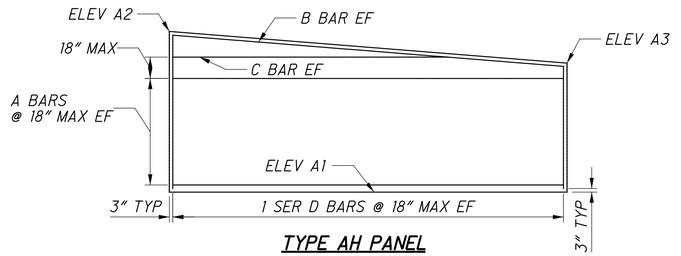
TYPE AG PANEL



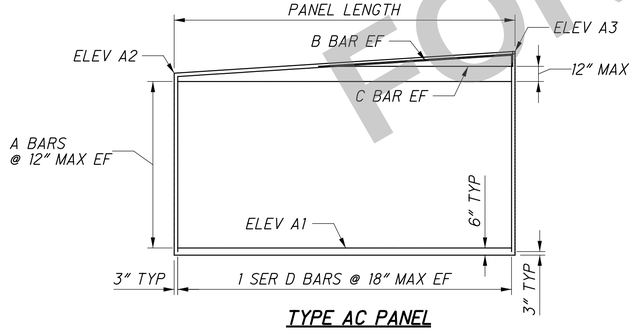
TYPE AB PANEL



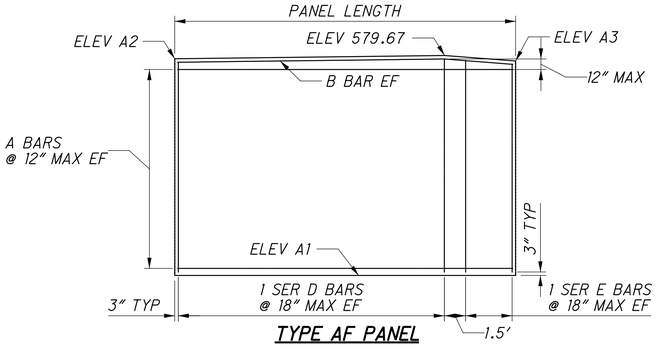
TYPE AE PANEL



TYPE AH PANEL



TYPE AC PANEL



TYPE AF PANEL

NOTES:

1. SEE SHEET 25/53 FOR REINFORCING STEEL SCHEDULE.
2. LONGITUDINAL BARS ALONG WALL CURVE SHALL BE FIELD BENT.
3. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/53 .

FOR INFORMATION ONLY

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

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CHECKED NCK | REVISED | STRUCTURE FILE NUMBER

WALL PANELS
SOLDIER PILE WITH LAGGING WALL U

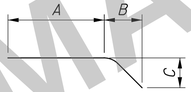
HAM-75-7.85
PID No. 77889

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MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
CONCRETE FACING PANELS											
A501	98	27'-6"	2811	ST							
A502	314	23'-6"	7696	ST							
A503	10	20'-11"	218	ST							
B501	2	27'-8"	58	19	22'-11 1/4"	4'-8 3/4"	3 1/4"				
B502	10	27'-6"	287	ST							
B503	8	23'-6"	196	ST							
B504	2	23'-7"	49	19	12'-10"	10'-9 1/8"	6 11/16"				
B505	2	23'-7"	49	19	18'-9 1/2"	4'-9 11/16"	5 1/8"				
B506	2	21'-2"	44	ST							
	2	4'-8"									
C501	SER OF	TO	42	ST							10'-7"
	2	15'-3"									
C502	8	14'-2"	118	ST							
C503	2	12'-3"	26								
	2	4'-3"									
C504	SER OF	TO	45	ST							12'-10"
	2	17'-1"									
C505	2	19'-4"	40	ST							
C506	2	12'-9"	27	ST							
	2	5'-3"									
D501	SER OF	TO	220	ST							2 1/8 "
	16	7'-11"									
	2	7'-11"									
D502	SER OF	TO	367	ST							1 1/8"
	20	9'-8"									
	2	8'-11"									
D503	SER OF	TO	410	ST							1 1/8"
	20	10'-9"									
	2	10'-0"									
D504	SER OF	TO	454	ST							1 1/8"
	20	11'-9"									
	2	11'-3"									
D505	SER OF	TO	428	ST							1 1/8"
	17	12'-10"									
	2	12'-4"									
D506	SER OF	TO	464	ST							1 1/8"
	17	13'-10"									
	2	13'-4"									
D507	SER OF	TO	258	ST							1 1/4"
	9	14'-2"									
	2	14'-3"									
D508	SER OF	TO	511	ST							1/4"
	17	14'-7"									
	2	14'-1"									
D509	SER OF	TO	505	ST							3/16"
	17	14"-4"									
	2	14'-4"									
D510	SER OF	TO	514	ST							1/4"
	17	14'-8"									
	2	14'-2"									
D511	SER OF	TO	507	ST							3/16"
	17	14'-5"									
	2	14'-5"									
D512	SER OF	TO	517	ST							1/4"
	17	14'-9"									
	2	14'-7"									
D513	SER OF	TO	432	ST							3/8"
	14	15'-0"									

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
CONCRETE FACING PANELS											
	2	12'-9"									
D514	SER OF	TO	485	ST							1 3/8"
	17	14'-7"									
	2	10'-10"									
D515	SER OF	TO	418	ST							1 7/16"
	17	12'-9"									
	2	8'-7"									
D516	SER OF	TO	403	ST							1 3/8"
	20	10'-9"									
	2	6'-4"									
D517	SER OF	TO	311	ST							1 7/16"
	20	8'-7"									
	2	4'-7"									
D518	SER OF	TO	171	ST							1 1/2"
	15	6'-4"									
	2	8'-1"									
E501	SER OF	TO	86	ST							1"
	5	8'-5"									
	2	14'-2"									
E502	SER OF	TO	267	ST							1/8"
	9	14'-3"									
	2	14'-7"									
E503	SER OF	TO	123	ST							1 11/16"
	4	15'-0"									
		TOTAL	19557								



TYPE-19

NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE 3 DIGITS ARE USED, AND THE FIRST 2 DIGITS WHERE FOUR DIGITS ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, B501 IS A NO 5 BAR AND 01 INDICATES BAR SEQUENCE NUMBER. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED.

2. SER INDICATES A SERIES BAR AND INC INDICATES THE LENGTH INCREMENT FOR SERIES BARS.

3. ALL REINFORCING STEEL TO BE EPOXY COATED.

4. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/53 .

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REINFORCING STEEL SCHEDULE

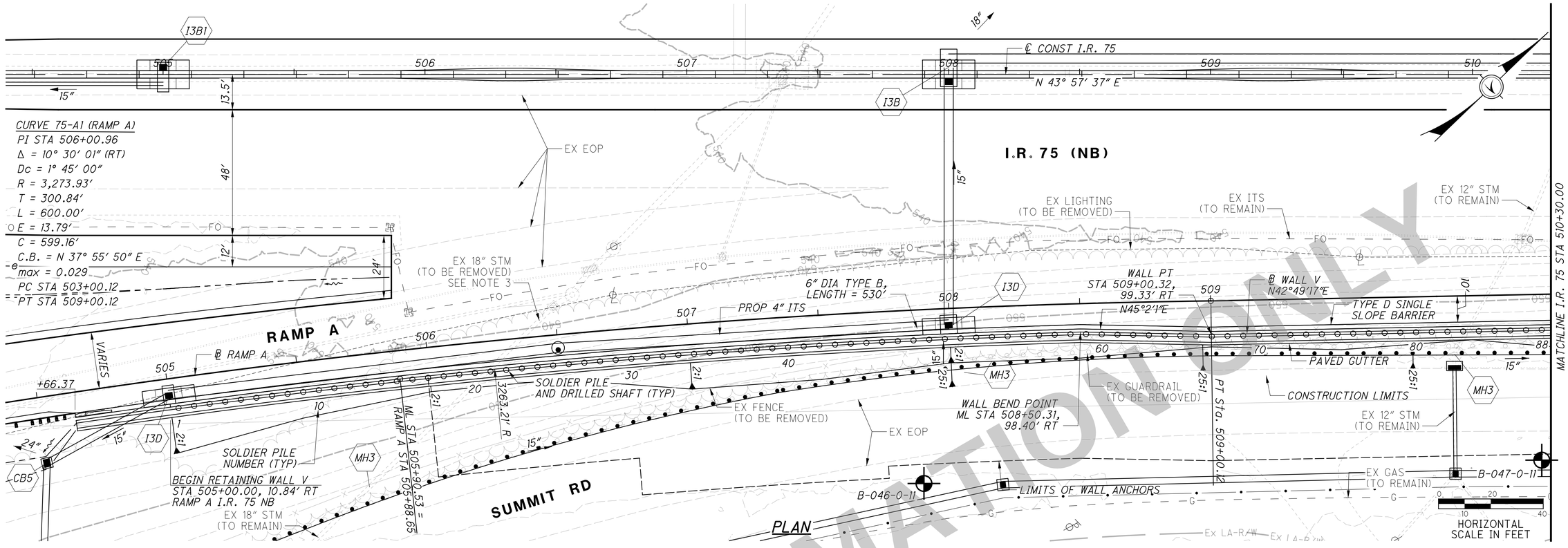
SOLDIER PILE WITH LAGGING WALL U

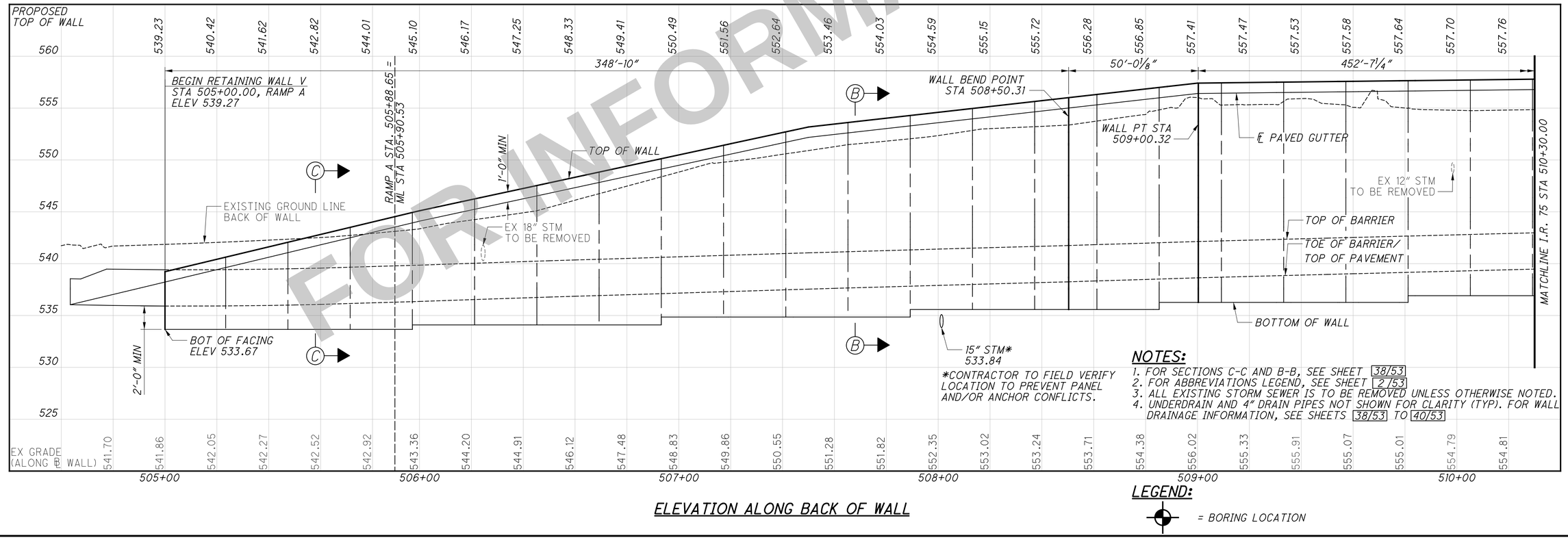
HAM-75-7.85
PID No. 77889

25 / 53

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2017

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ELEVATION ALONG BACK OF WALL

NOTES:

1. FOR SECTIONS C-C AND B-B, SEE SHEET 38/53
2. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/53
3. ALL EXISTING STORM SEWER IS TO BE REMOVED UNLESS OTHERWISE NOTED.
4. UNDERDRAIN AND 4" DRAIN PIPES NOT SHOWN FOR CLARITY (TYP). FOR WALL DRAINAGE INFORMATION, SEE SHEETS 38/53 TO 40/53

LEGEND:

= BORING LOCATION

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(614) 823-4949

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NCK			

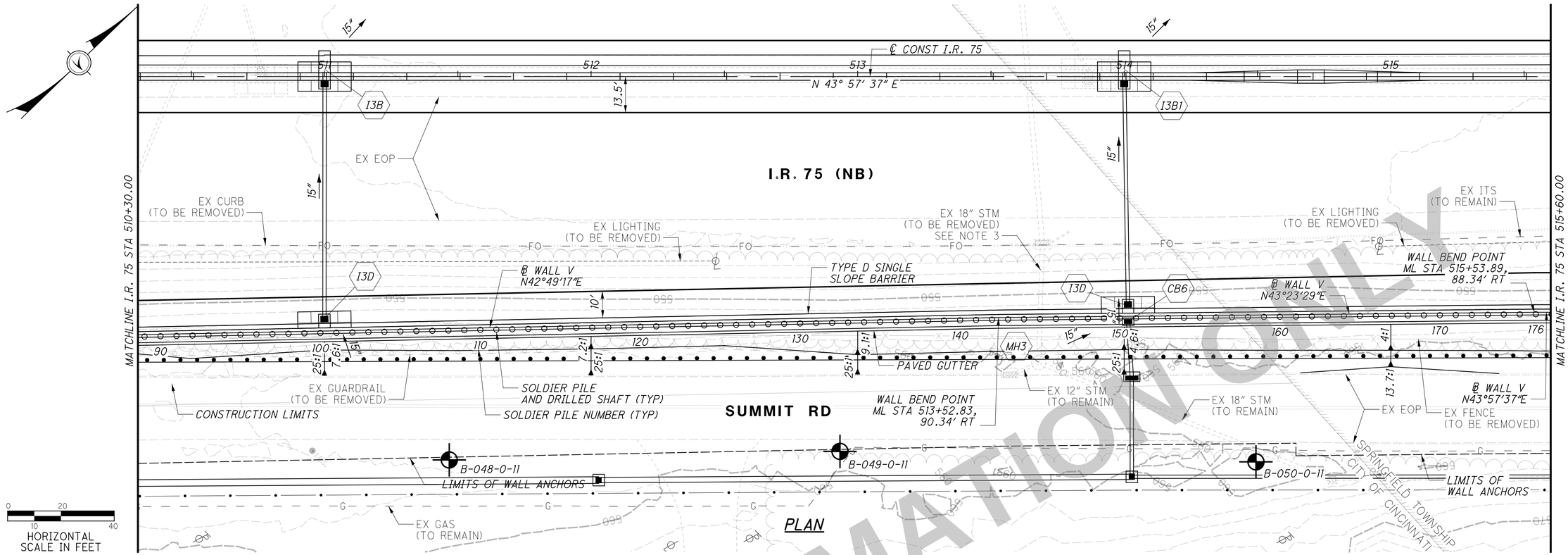
PLAN AND ELEVATION 1 OF 6
ANCHORED SOLDIER PILE WITH LAGGING WALL V

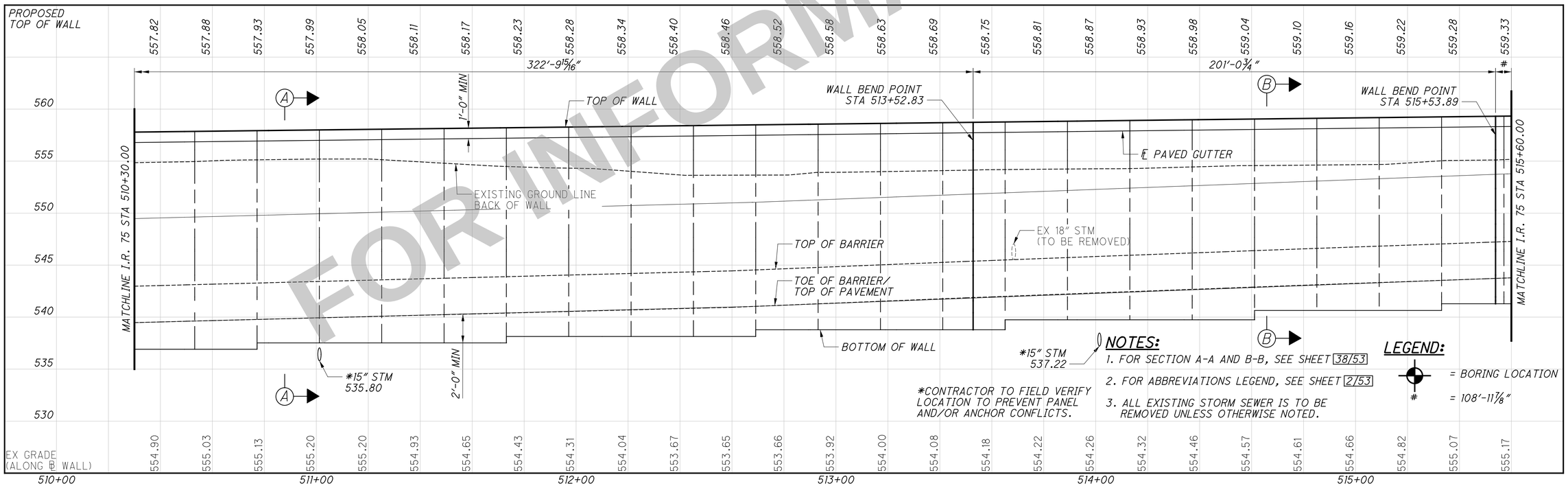
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PID No. 77889

26 / 53

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2017

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ELEVATION ALONG BACK OF WALL

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(614) 823-4949

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

PLAN AND ELEVATION 2 OF 6
ANCHORED SOLDIER PILE WITH LAGGING WALL V

HAM-75-7.85
PID No. 77889

27/53

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FOR INFORMATION ONLY

CURVE 75-5 (ML I.R. 75)
PI STA 523+96.89
Δ = 16° 02′ 37″ (LT)
Dc = 1° 06′ 00″
R = 5,208.71′
T = 734.06′
L = 1,458.52′
E = 51.47′
C = 1,453.75′
C.B. = N 35° 56′ 18″ E
e_{max} = 0.030
PC STA 516+62.83
PT STA 531+21.35

0 10 20 40
HORIZONTAL SCALE IN FEET

PC STA 516+62.83
MATCHLINE I.R. 75 STA 515+60.00
MATCHLINE I.R. 75 STA 520+90.00
N 43° 57′ 37″ E
℄ CONST I.R. 75
I.R. 75 (NB)
SUMMIT RD
EX EOP
EX CURB (TO BE REMOVED)
EX GUARDRAIL (TO BE REMOVED)
EX FO (TO REMAIN)
EOP
EX LIGHTING (TO BE REMOVED)
EX 12″ STM (TO BE REMOVED) SEE NOTE 3
TYPE D SINGLE SLOPE BARRIER
℄ WALL V N43°57′37″E
EX OH ITS (TO BE REPLACED)
SOLDIER PILE AND DRILLED SHAFT (TYP)
℄ WALL V
5297.05′ R
PAVED GUTTER
EX FENCE (TO BE REMOVED)
WALL PC STA 516+62.83, 88.34′ RT
SOLDIER PILE NUMBER (TYP)
EX GAS (TO REMAIN)
EX GUARDRAIL (TO BE REMOVED)
CONSTRUCTION LIMITS
EX 12″ STM (TO REMAIN)
LIMITS OF WALL ANCHORS
B-051-0-11
B-052-0-11
B-053-0-11
B-054-0-11
13.5′
60′
12′
15″
3.8:1
13.7:1
2:1
25:1
2.4:1

PLAN

PROPOSED TOP OF WALL
EX GRADE (ALONG ℄ WALL)
MATCHLINE I.R. 75 STA 515+60.00
MATCHLINE I.R. 75 STA 520+90.00
108′-11⅞″
823′-4⅛″
1′-0″ MIN
TOP OF WALL
℄ PAVED GUTTER
EX 12″ STM TO BE REMOVED
TOP OF BARRIER
TOE OF BARRIER/ TOP OF PAVEMENT
EXISTING GROUND LINE BACK OF WALL
BOTTOM OF WALL
15″ STM* 540.18
*CONTRACTOR TO FIELD VERIFY LOCATION TO PREVENT PANEL AND/OR ANCHOR CONFLICTS.

LEGEND:
= BORING LOCATION

NOTES:
1. FOR SECTION B-B, SEE SHEET 38/53
2. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/53
3. ALL EXISTING STORM SEWER IS TO BE REMOVED UNLESS OTHERWISE NOTED.

ELEVATION ALONG BACK OF WALL

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(614) 823-4949

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CHECKED NCK | REVISED | STRUCTURE FILE NUMBER

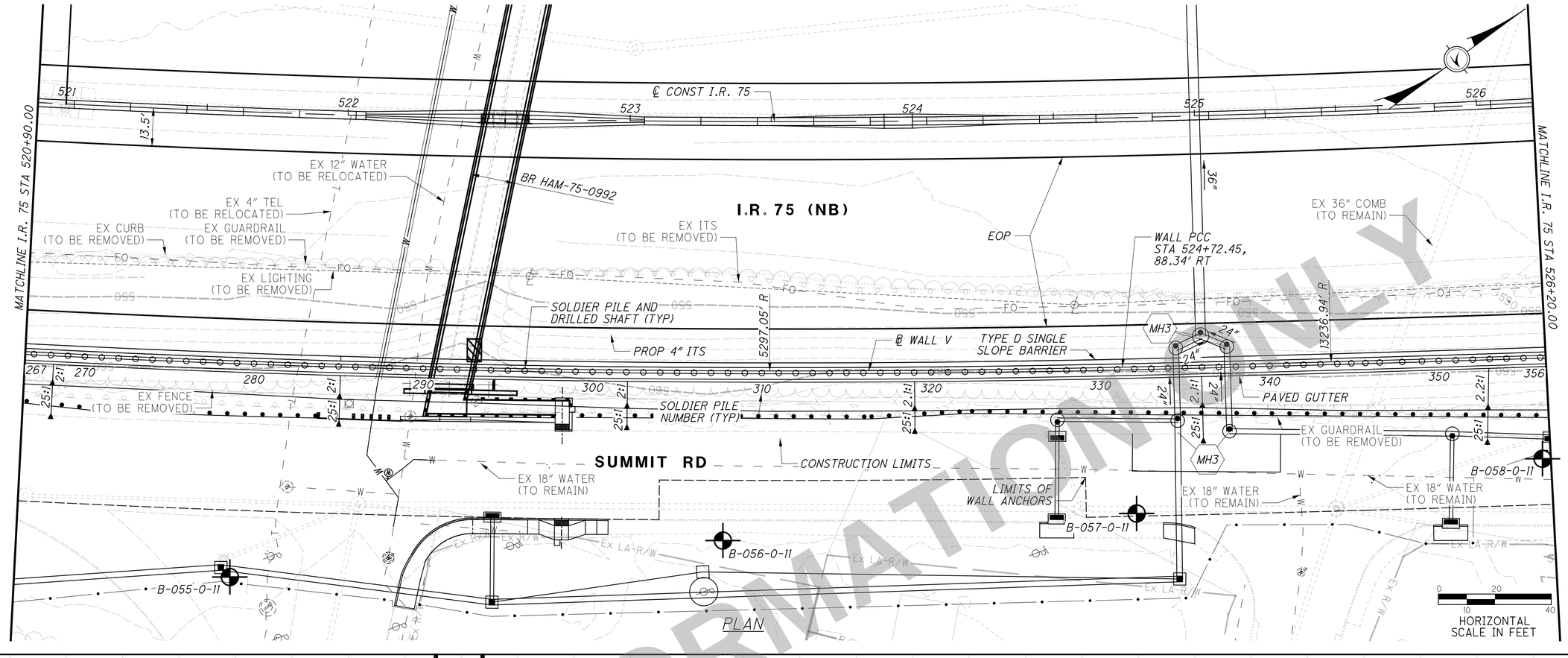
PLAN AND ELEVATION 3 OF 6
ANCHORED SOLDIER PILE WITH LAGGING WALL V

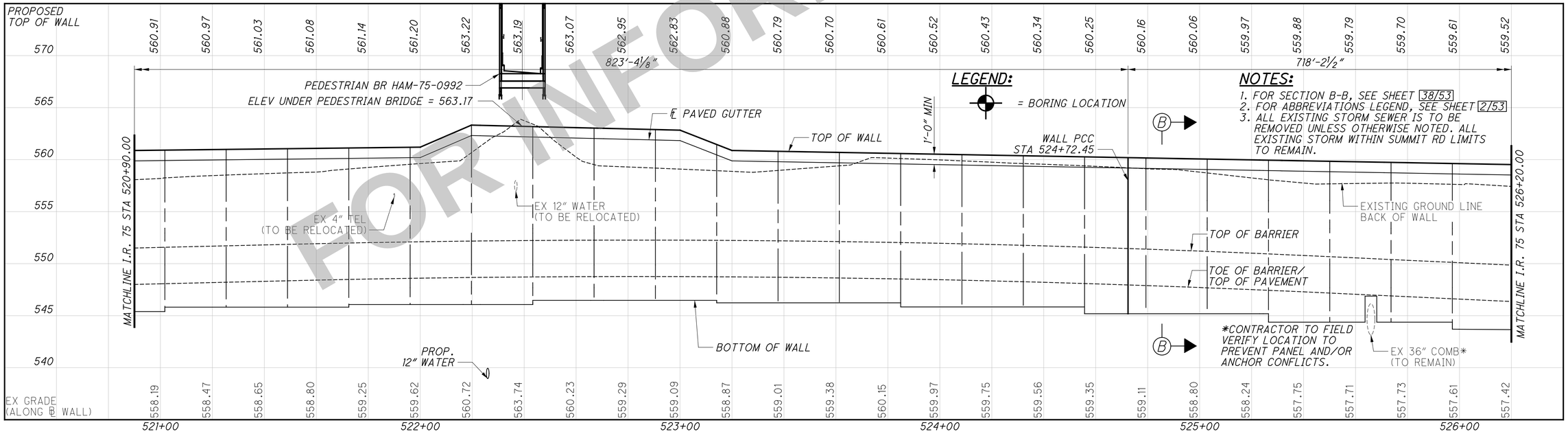
HAM-75-7.85
PID No. 77889

28 / 53

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2017

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DEVELOPED ELEVATION ALONG BACK OF WALL

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NCK			

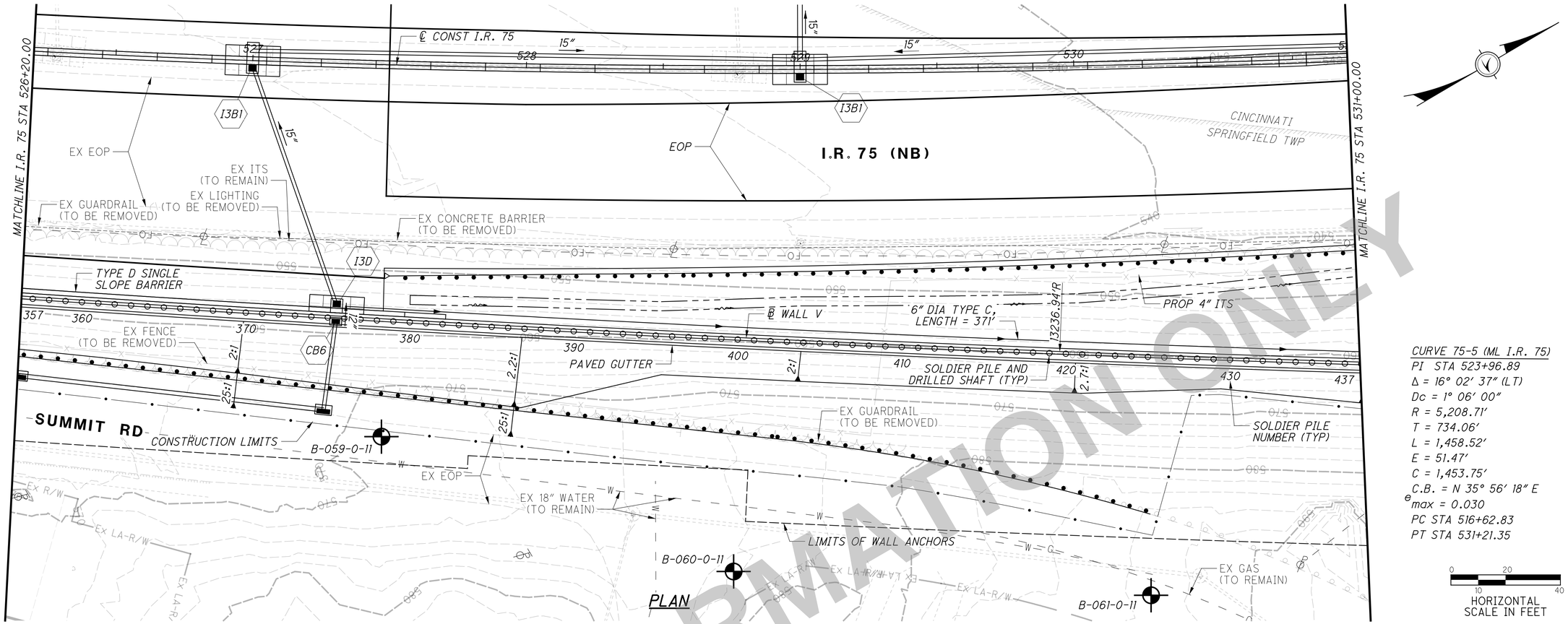
PLAN AND ELEVATION 4 OF 6
ANCHORED SOLDIER PILE WITH LAGGING WALL V

HAM-75-7.85
PID No. 77889

29/53

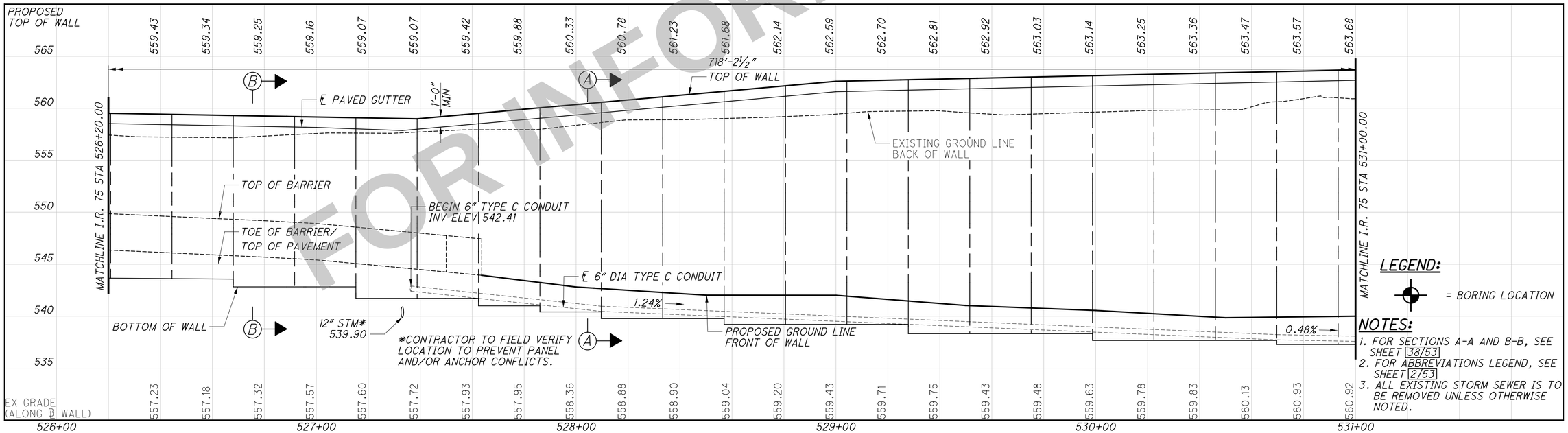
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PLAN

CURVE 75-5 (ML I.R. 75)
PI STA 523+96.89
Δ = 16° 02' 37" (LT)
Dc = 1° 06' 00"
R = 5,208.71'
T = 734.06'
L = 1,458.52'
E = 51.47'
C = 1,453.75'
C.B. = N 35° 56' 18" E
e max = 0.030
PC STA 516+62.83
PT STA 531+21.35



ELEVATION ALONG BACK OF WALL

LEGEND:
= BORING LOCATION

NOTES:
1. FOR SECTIONS A-A AND B-B, SEE SHEET 38/53
2. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/53
3. ALL EXISTING STORM SEWER IS TO BE REMOVED UNLESS OTHERWISE NOTED.

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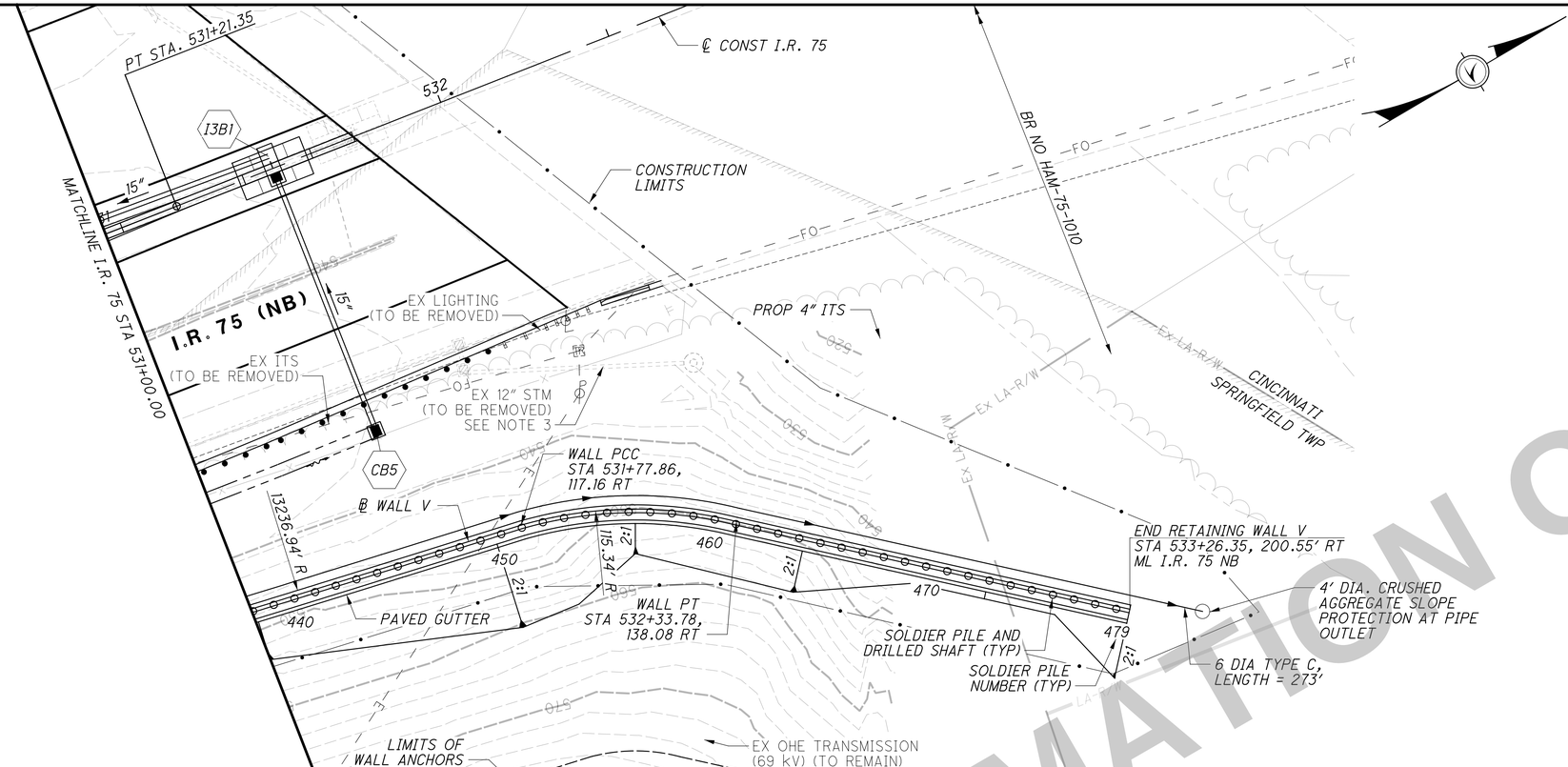
DESIGNED	DRAWN	REVIEWED	DATE
JLM	SMJ	SSK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

PLAN AND ELEVATION 5 OF 6
ANCHORED SOLDIER PILE WITH LAGGING WALL V

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PID No. 77889

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ELEVATION ALONG BACK OF WALL

FOR INFORMATION ONLY

LEGEND:

= BORING LOCATION

NOTES:

1. FOR SECTION A-A, SEE SHEET 38/53
2. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/53
3. ALL EXISTING STORM SEWER IS TO BE REMOVED UNLESS OTHERWISE NOTED.

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

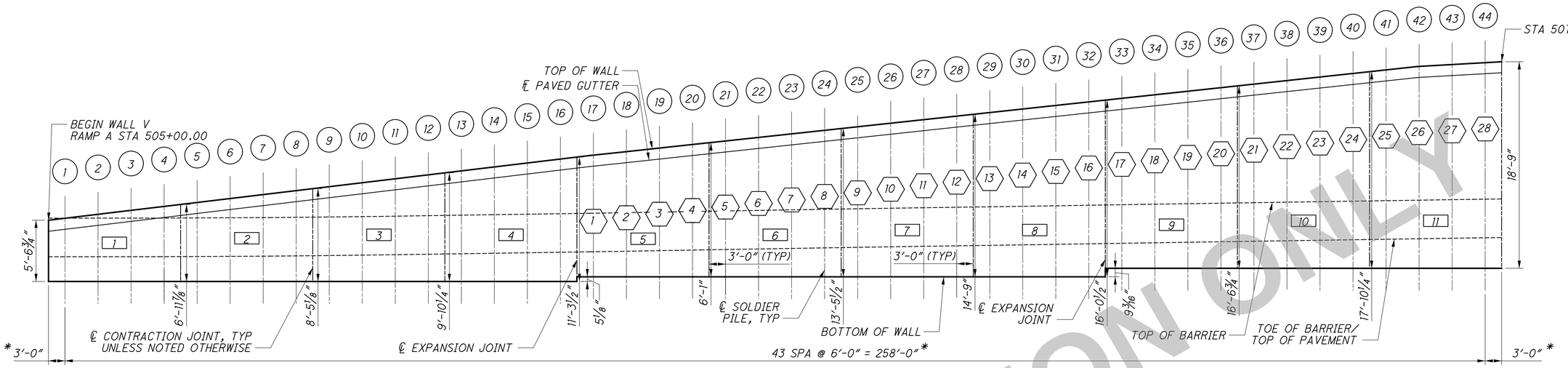
PLAN AND ELEVATION 6 OF 6
ANCHORED SOLDIER PILE WITH LAGGING WALL V

HAM-75-7.85
PID No. 77889

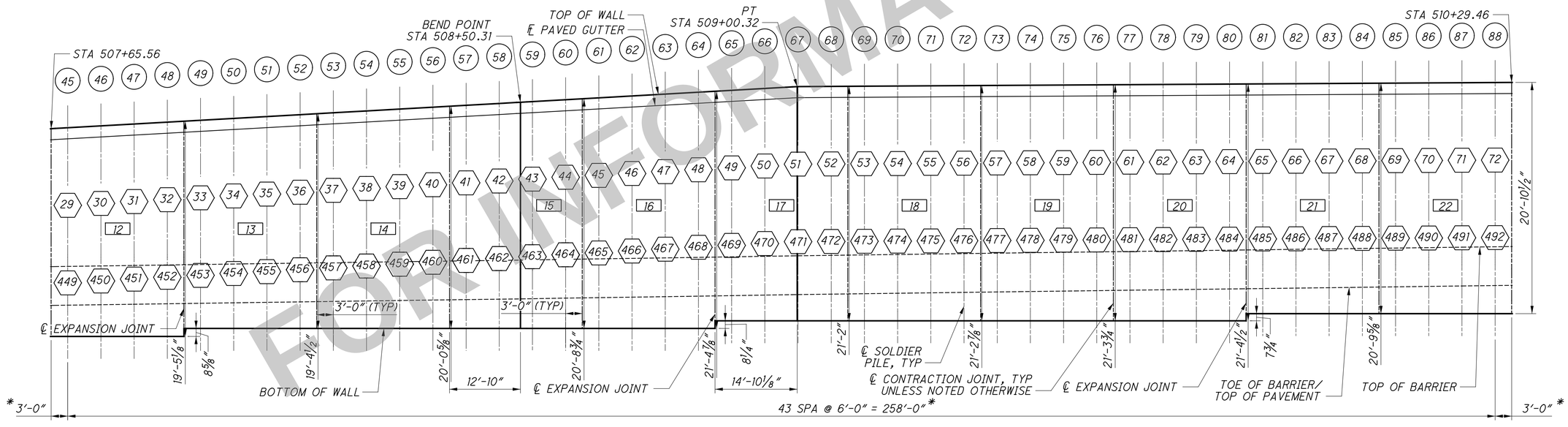
31 / 53

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2017

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DEVELOPED ELEVATION



DEVELOPED ELEVATION (CONT)

FOR INFORMATION ONLY

* SOLDIER PILE SPACING MEASURED ALONG BASELINE OF WALL

NOTES:

1. SEE SHEETS 49/53 TO 51/53 FOR PANEL DETAILS.
2. STATIONS ARE ALONG I.R. 75
3. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/53

LEGEND:

(#) = PILE NUMBER
[#] = PANEL NUMBER
⟨#⟩ = ANCHOR NUMBER

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

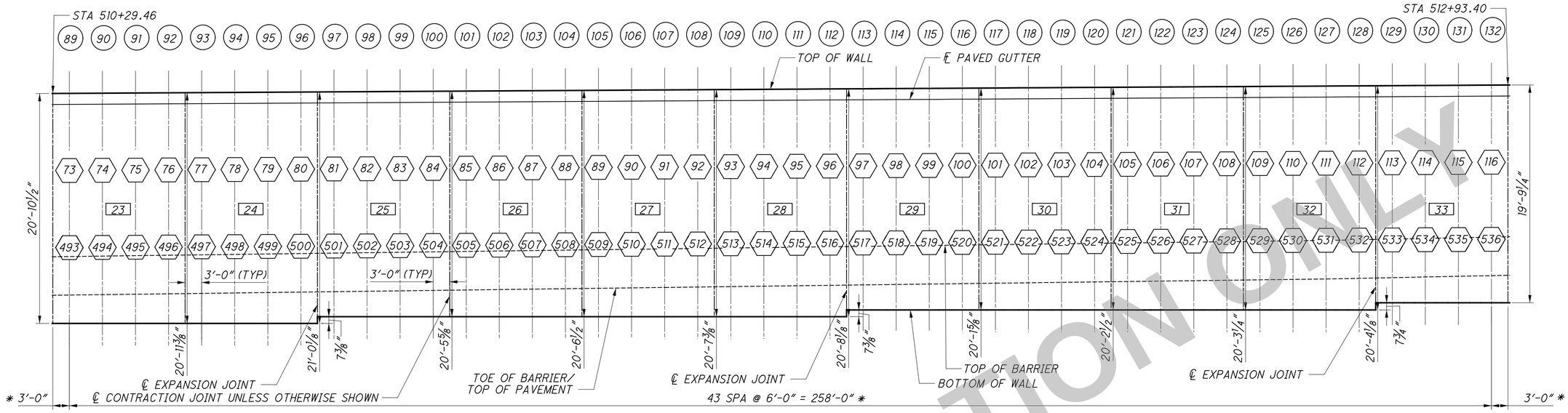
WALL ELEVATION 1 OF 6
SOLDIER PILE WITH LAGGING WALL V

HAM-75-7.85
PID No. 77889

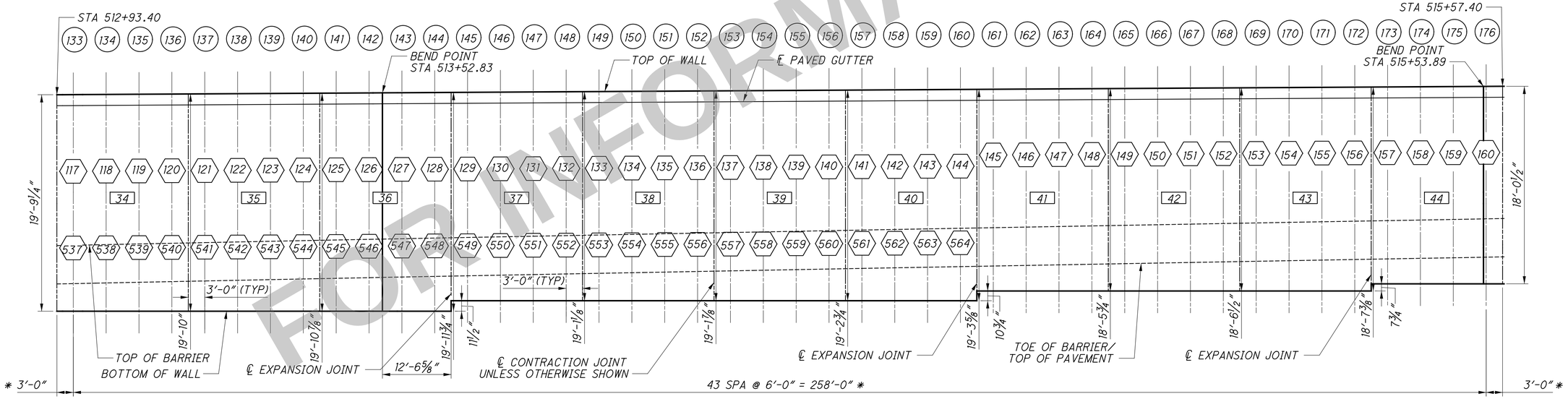
32 / 53

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DEVELOPED ELEVATION



DEVELOPED ELEVATION (CONT)

* SOLDIER PILE SPACING MEASURED ALONG BASELINE OF WALL

NOTES:

1. SEE SHEETS 49/53 TO 51/53 FOR PANEL DETAILS.
2. STATIONS ARE ALONG I.R. 75
3. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/53

LEGEND:

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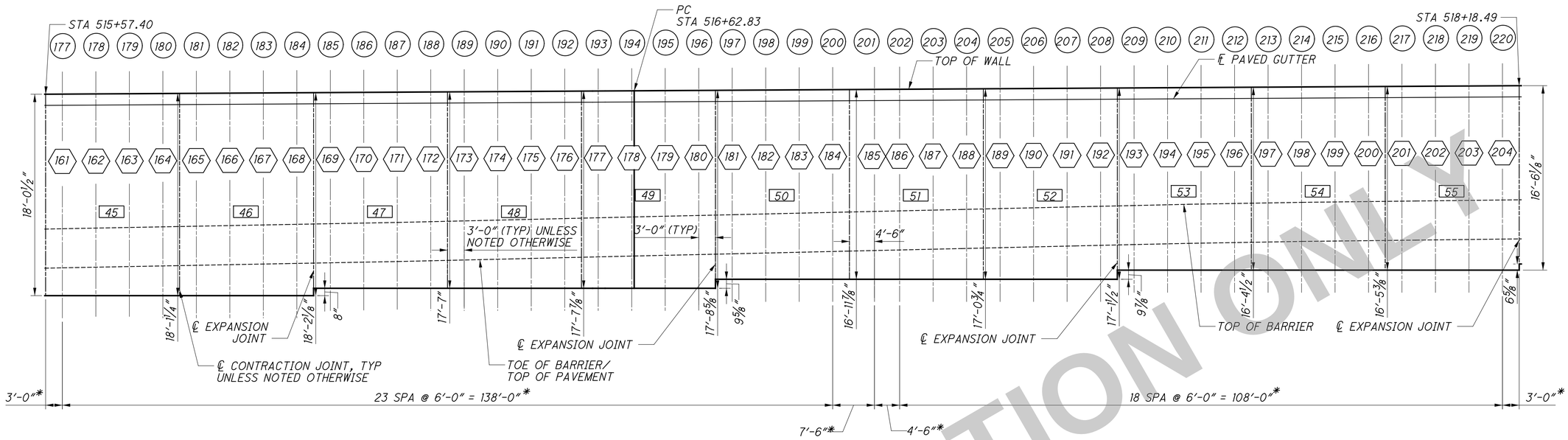
WALL ELEVATION 2 OF 6
SOLDIER PILE WITH LAGGING WALL V

HAM-75-7.85
PID No. 77889

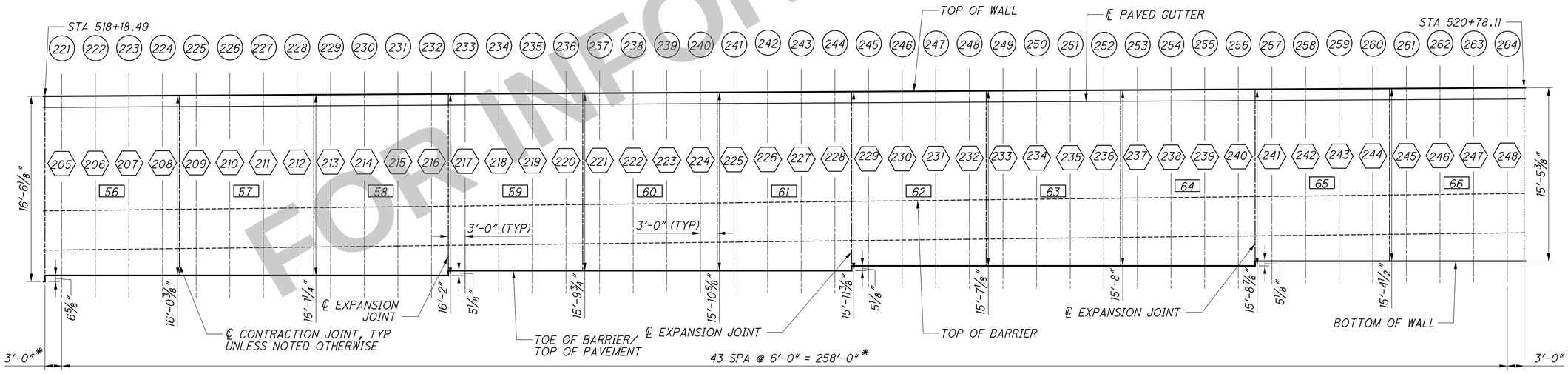
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2017

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DEVELOPED ELEVATION



DEVELOPED ELEVATION (CONT)

* SOLDIER PILE SPACING MEASURED ALONG BASELINE OF WALL

NOTES:

1. SEE SHEETS 49/53 TO 51/53 FOR PANEL DETAILS.
2. STATIONS ARE ALONG I.R. 75
3. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/53

LEGEND:

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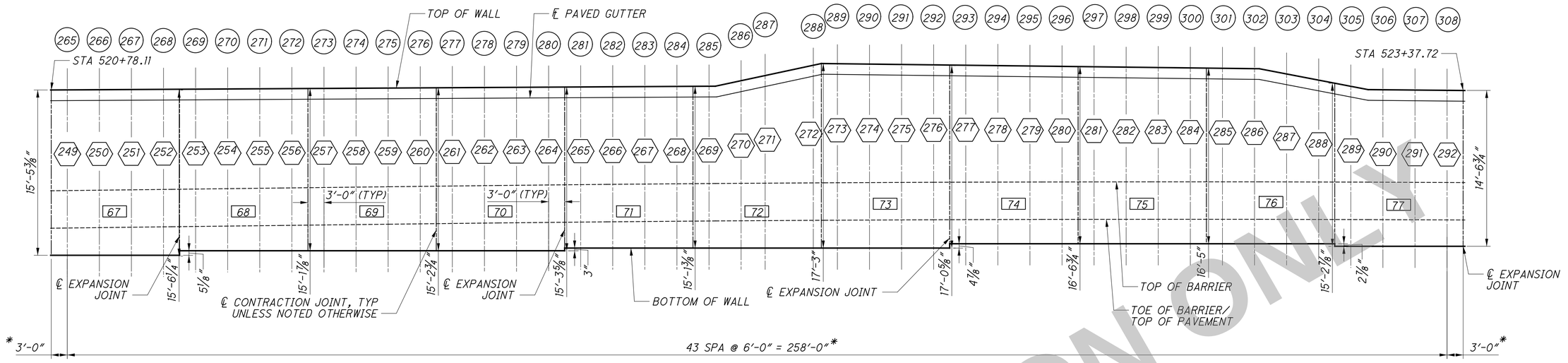
WALL ELEVATION 3 OF 6
SOLDIER PILE WITH LAGGING WALL V

HAM-75-7.85
PID No. 77889

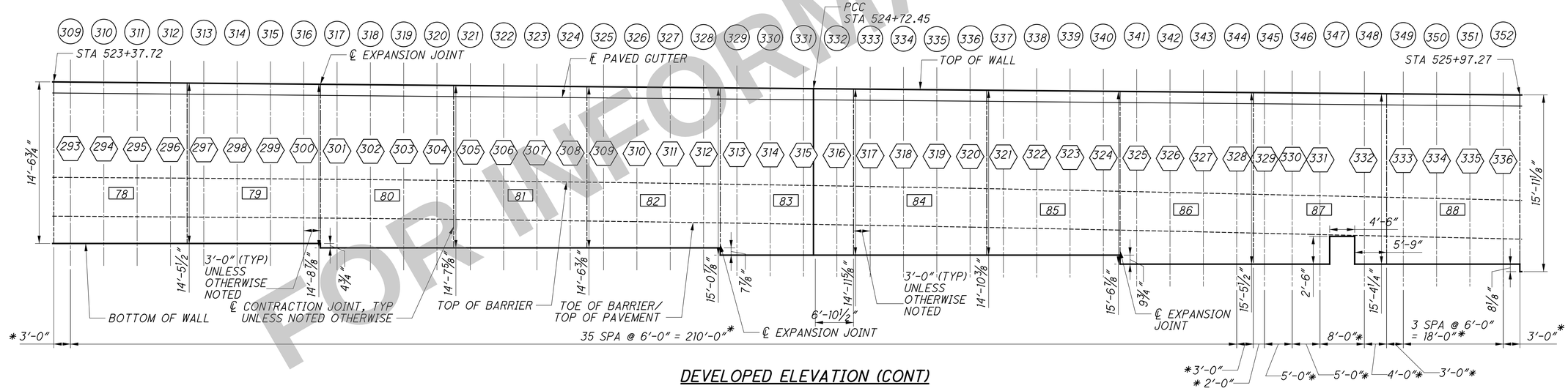
34/53

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2017

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DEVELOPED ELEVATION



DEVELOPED ELEVATION (CONT)

FOR INFORMATION ONLY

* SOLDIER PILE SPACING MEASURED ALONG BASELINE OF WALL

NOTES:

1. SEE SHEETS 49/53 TO 51/53 FOR PANEL DETAILS.
2. STATIONS ARE ALONG I.R. 75
3. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/53

LEGEND:

(#) = PILE NUMBER
[#] = PANEL NUMBER
⬡ # = ANCHOR NUMBER

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(614) 823-4949

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JLM	SMJ	SSK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

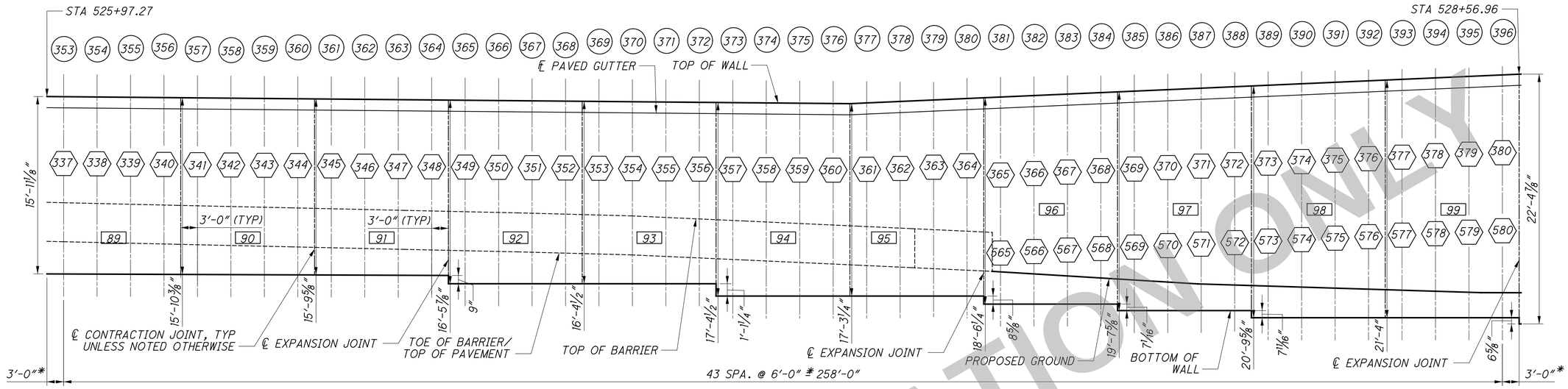
WALL ELEVATION 4 OF 6
SOLDIER PILE WITH LAGGING WALL V

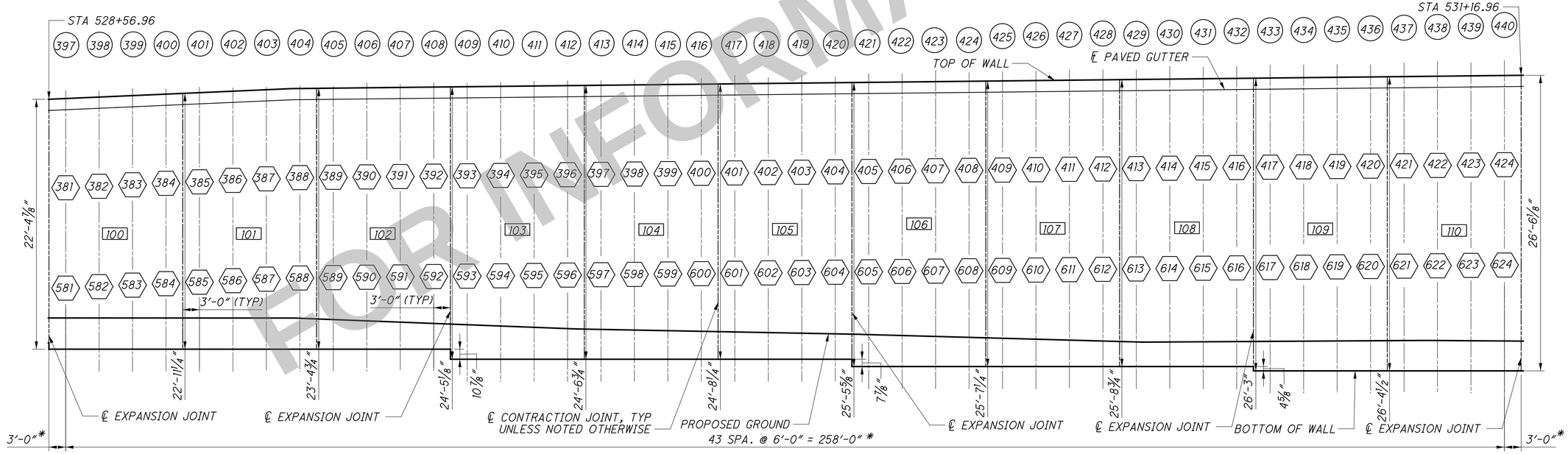
HAM-75-7.85
PID No. 77889

35 / 53

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2017

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* SOLDIER PILE SPACING MEASURED ALONG BASELINE OF WALL

NOTES:

1. SEE SHEETS 49/53 TO 51/53 FOR PANEL DETAILS.
2. STATIONS ARE ALONG I.R. 75
3. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/53

LEGEND:

(#) = PILE NUMBER
[#] = PANEL NUMBER
⟨#⟩ = ANCHOR NUMBER

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JLM	SMJ	SSK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

WALL ELEVATION 5 OF 6

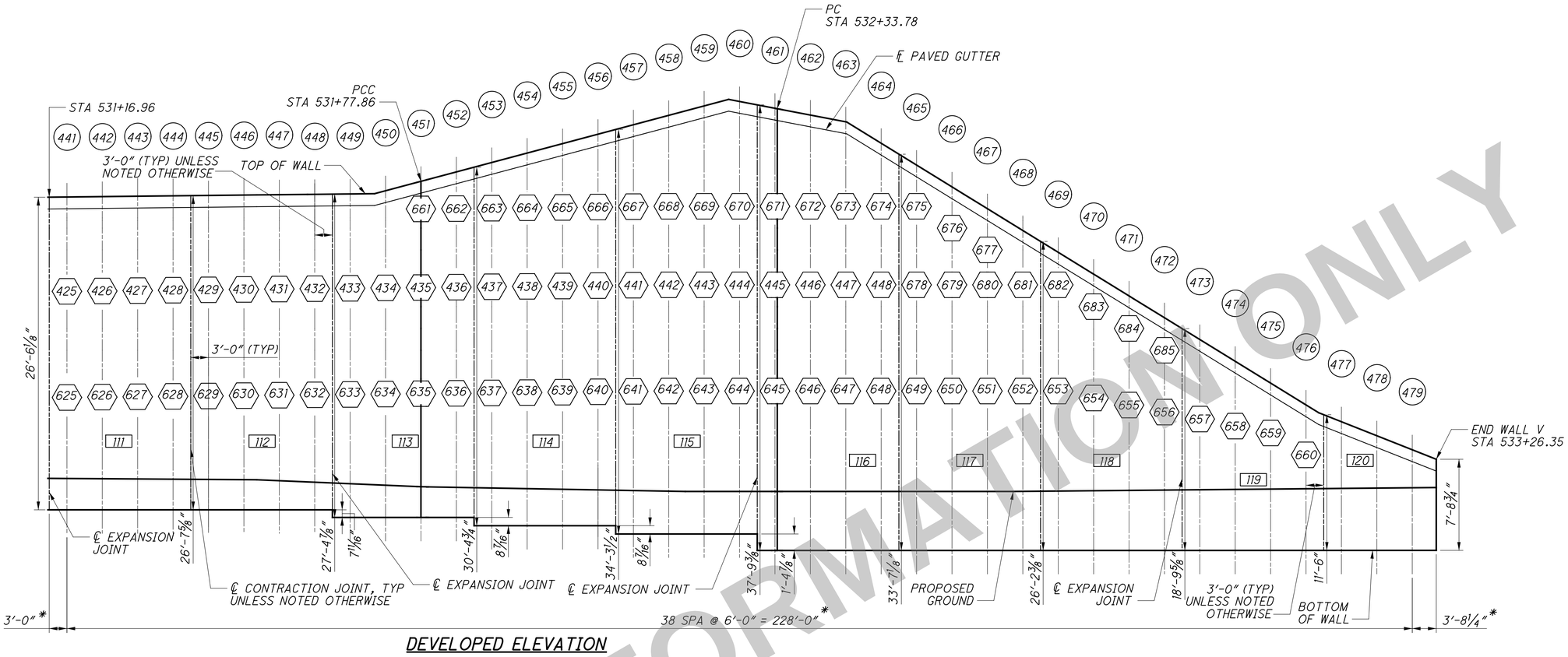
SOLDIER PILE WITH LAGGING WALL V

HAM-75-7.85
PID No. 77889

36 / 53

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2017

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DEVELOPED ELEVATION

FOR INFORMATION ONLY

* SOLDIER PILE SPACING MEASURED ALONG BASELINE OF WALL

NOTES:

1. SEE SHEETS 49/53 TO 51/53 FOR PANEL DETAILS.
2. STATIONS ARE ALONG I.R. 75
3. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/53

LEGEND

(#) = PILE NUMBER

[#] = PANEL NUMBER

⟨#⟩ = ANCHOR NUMBER

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DESIGNED	DRAWN	REVIEWED	DATE
JLM	SMJ	SSK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

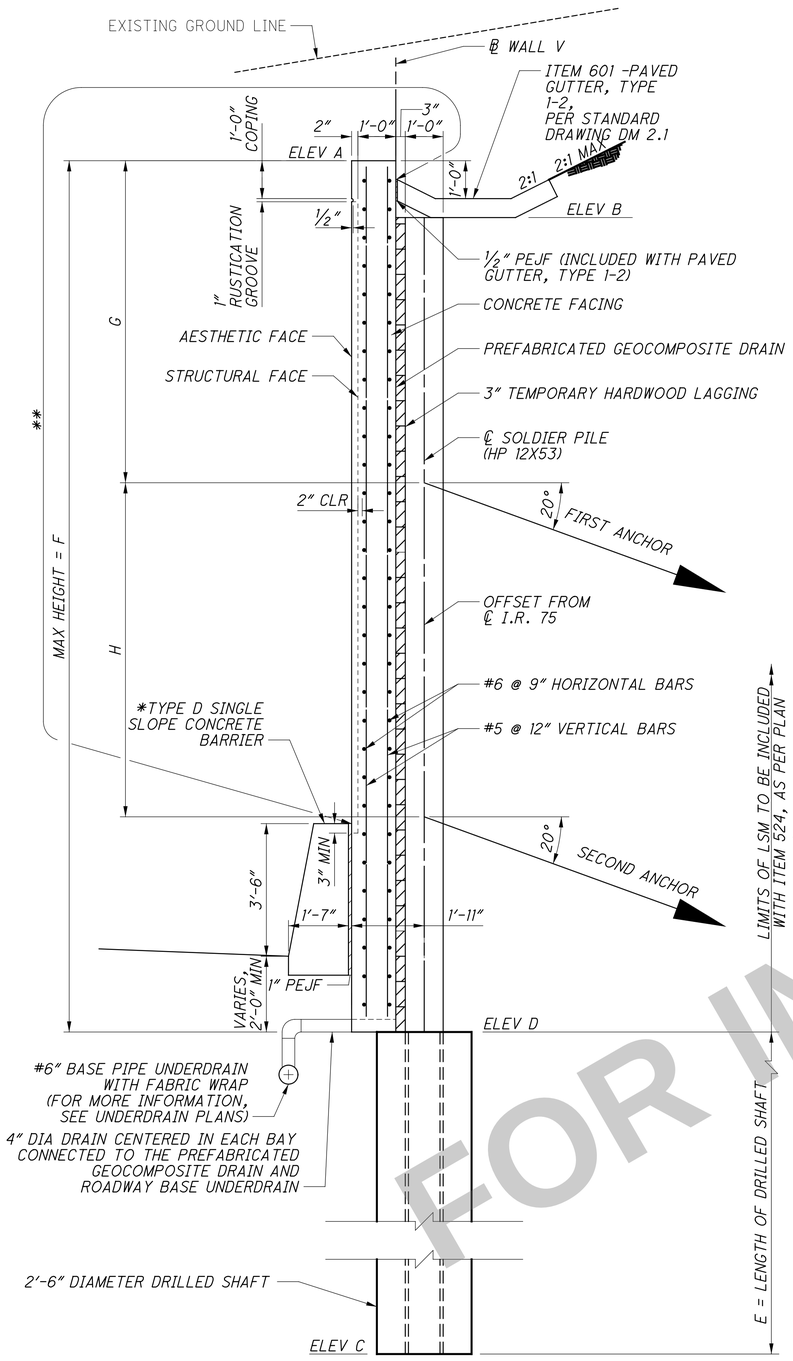
WALL ELEVATION 6 OF 6

SOLDIER PILE WITH LAGGING WALL V

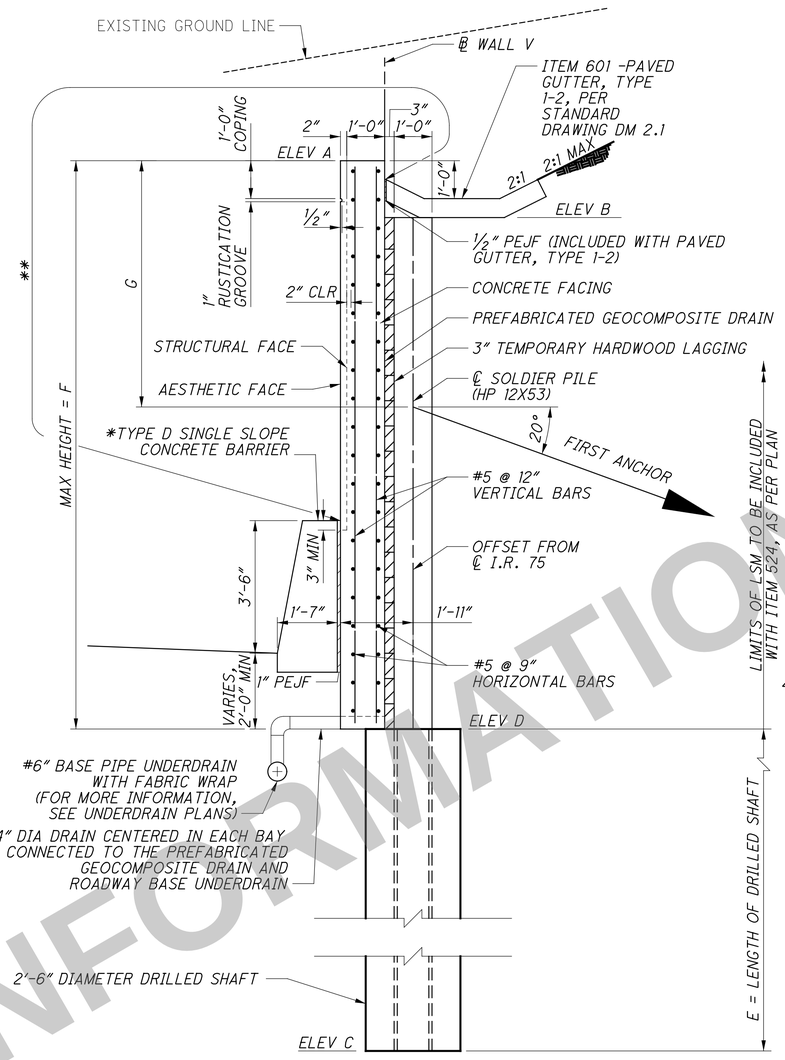
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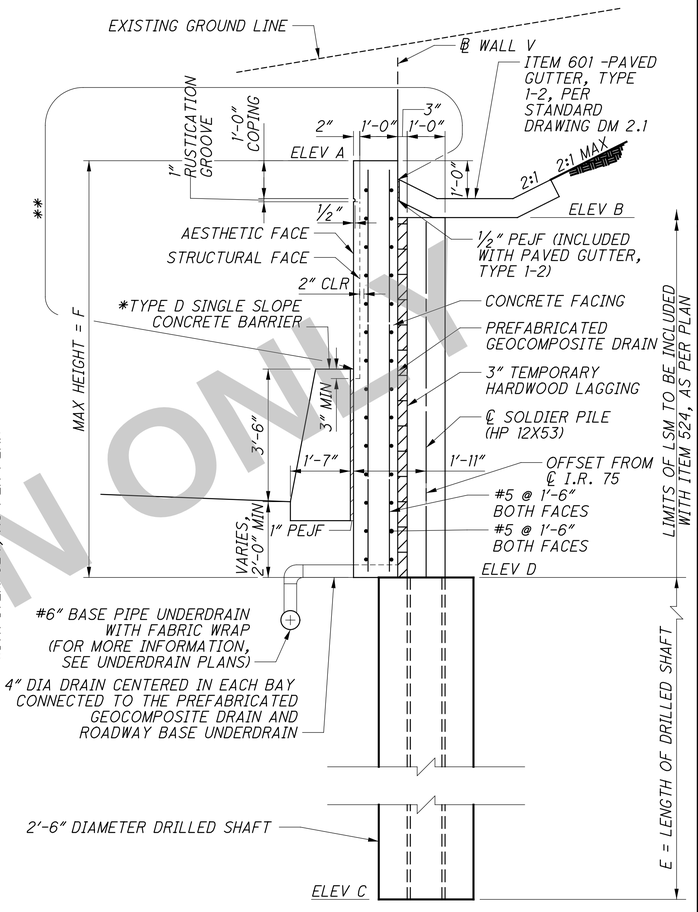
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SECTION A-A (TYP)
(SOLDIER PILE WITH 2 ANCHORS)
(PANEL 12 TO 40, PANEL 96 TO 113 AND PANEL 117 TO 118)



SECTION B-B (TYP)
(SOLDIER PILE WITH 1 ANCHOR)
(PANEL 5 TO 11, PANEL 41 TO 95 AND PANEL 118 TO 119)



SECTION C-C (TYP)
(SOLDIER PILE WITH NO ANCHOR)
(PANEL 1 TO 4 AND PANEL 120)

ANCHOR DATA TABLE			
WALL HT. "F" RANGE	FDL (K)	LOCK OFF LOAD (K)	NUMBER OF ANCHORS
10'-14'	78	52	11
14'-18'	128	85	243
18'-22'	108	70	266
22'-26'	150	100	76
26'-28'	172	115	38

NOTES:

1. FOR AESTHETIC FACE TREATMENT, SEE NOTE ITEM 511 - CLASS QC1 CONCRETE, AS PER PLAN ON SHEET 2/53.
2. TYPE D SINGLE SLOPE BARRIER APPLIES FROM STATION 504+81.00 TO 527+63.69. AT LOCATIONS WHERE TYPE D ROADWAY BARRIER IS NOT PRESENT THE AESTHETIC FACE SHALL BE CONTINUED BELOW GRADE TO THE BOTTOM OF THE PANEL.
3. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/53.

LEGEND:

* = SEE ROADWAY QUANTITIES FOR PAYMENT.
** = LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) AND ITEM 512 - SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)
# 4" DRAINS WILL ATTACH TO 6" TYPE C CONDUIT FOR PANELS 95 TO 120. FOR MORE INFORMATION, SEE WALL DRAINAGE ON SECTION D-D ON SHEET 40/53 .

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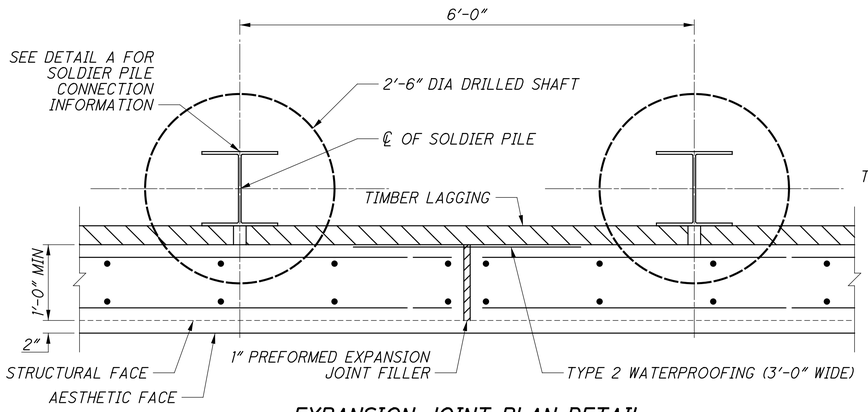
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
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RETAINING WALL DETAILS 1 OF 3
SOLDIER PILE WITH LAGGING WALL V

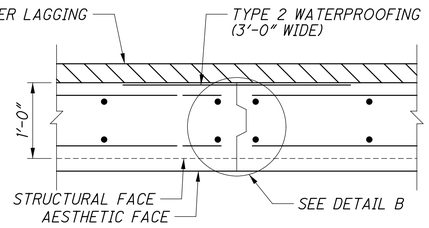
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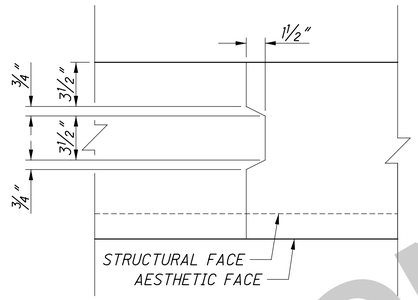
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EXPANSION JOINT PLAN DETAIL

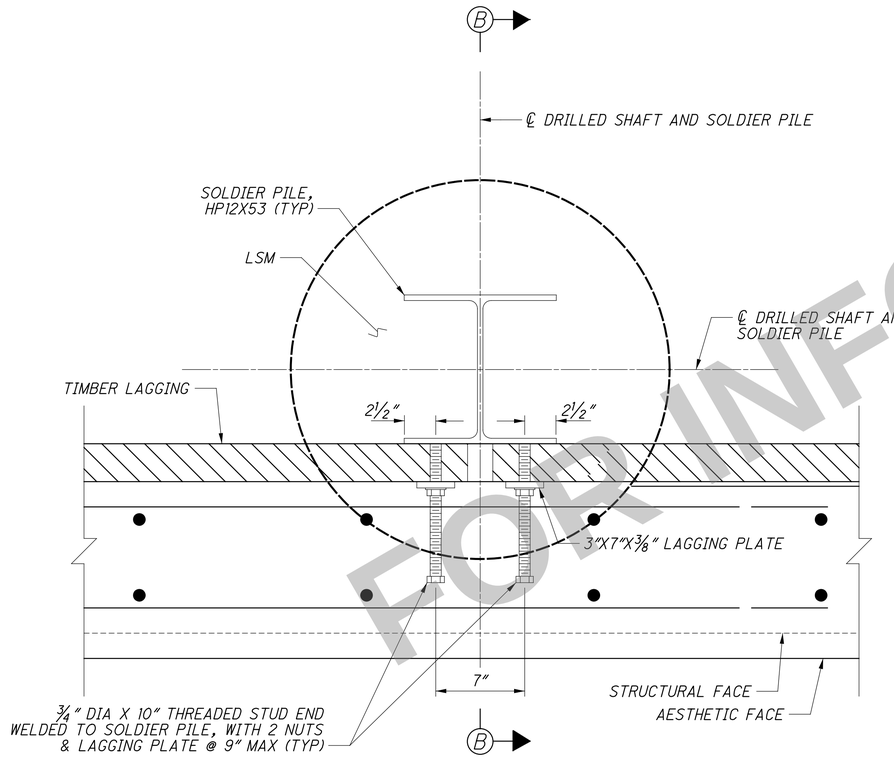


CONTRACTION JOINT PLAN DETAIL

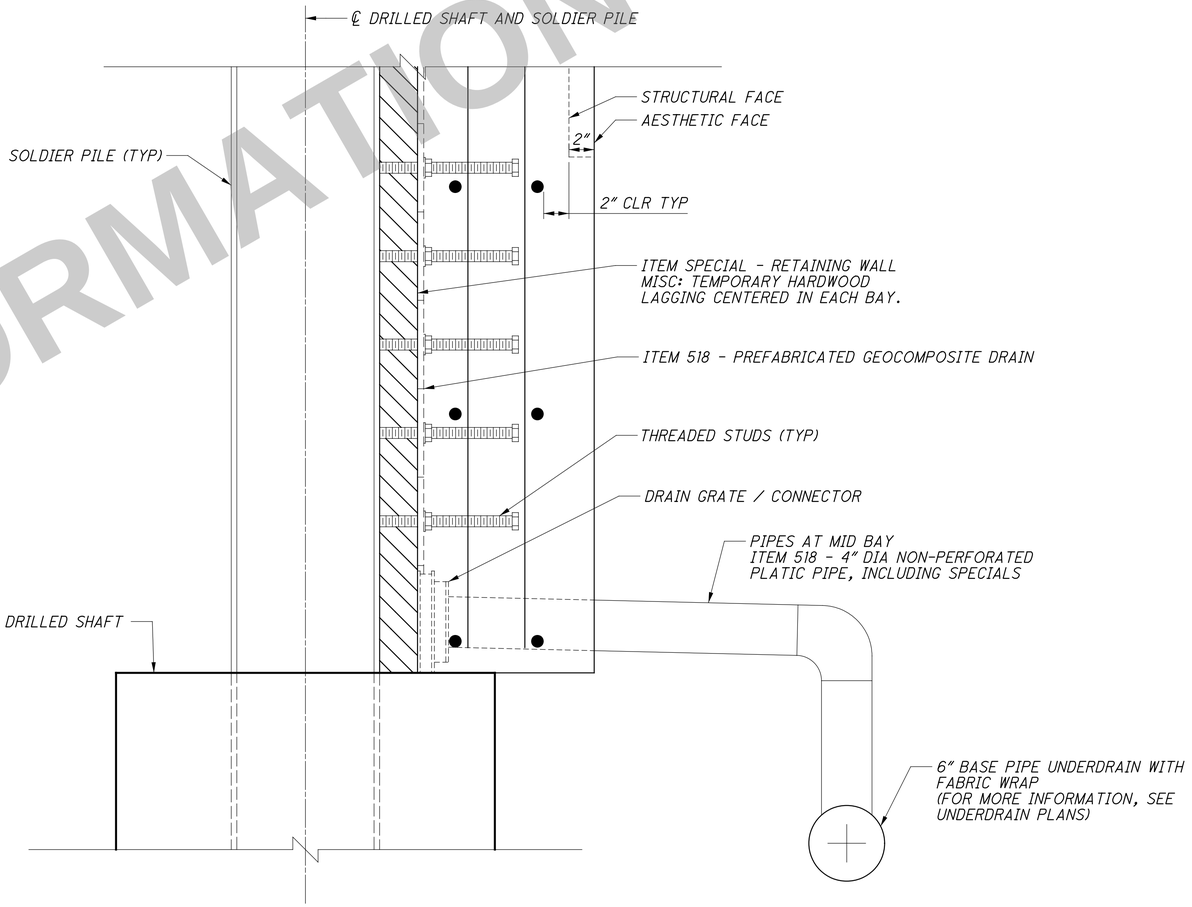


DETAIL B

(TIMBER LAGGING AND TYPE 2 WATERPROOFING NOT SHOWN FOR CLARITY)



DETAIL A



SECTION B-B

NOTES

1. FOR ABBREVIATIONS LEGEND, SEE SHEET 2753.

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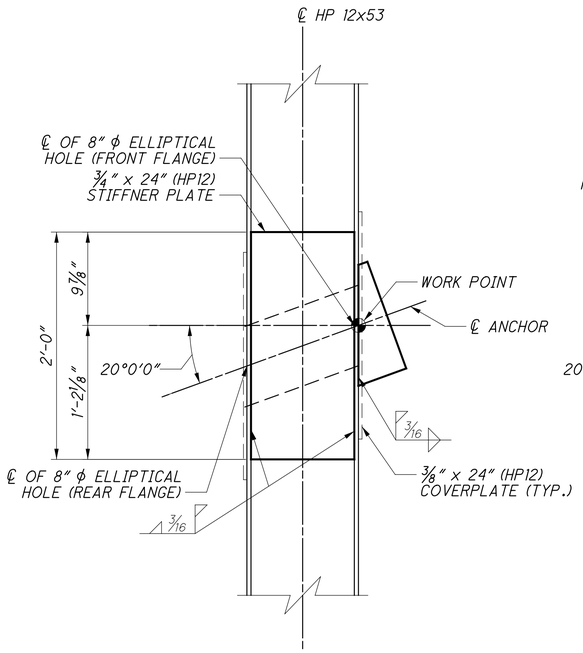
DESIGNED	DRAWN	REVIEWED	DATE
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
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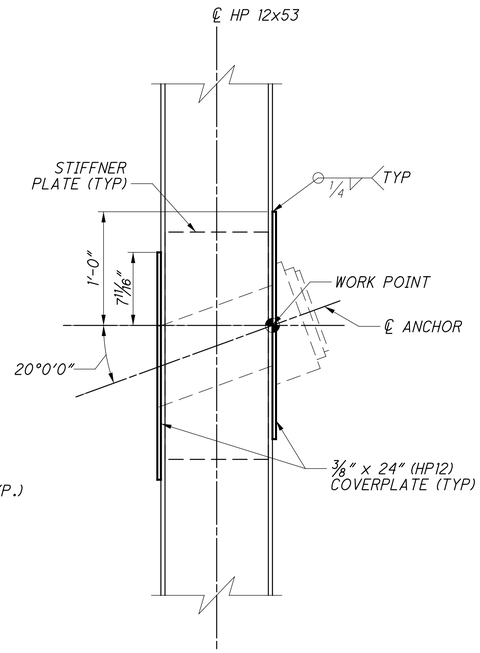
RETAINING WALL DETAILS 2 OF 3
ANCHORED SOLDIER PILE WITH LAGGING WALL V

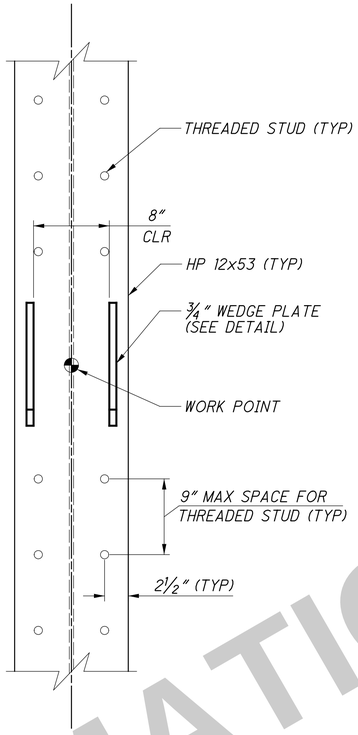
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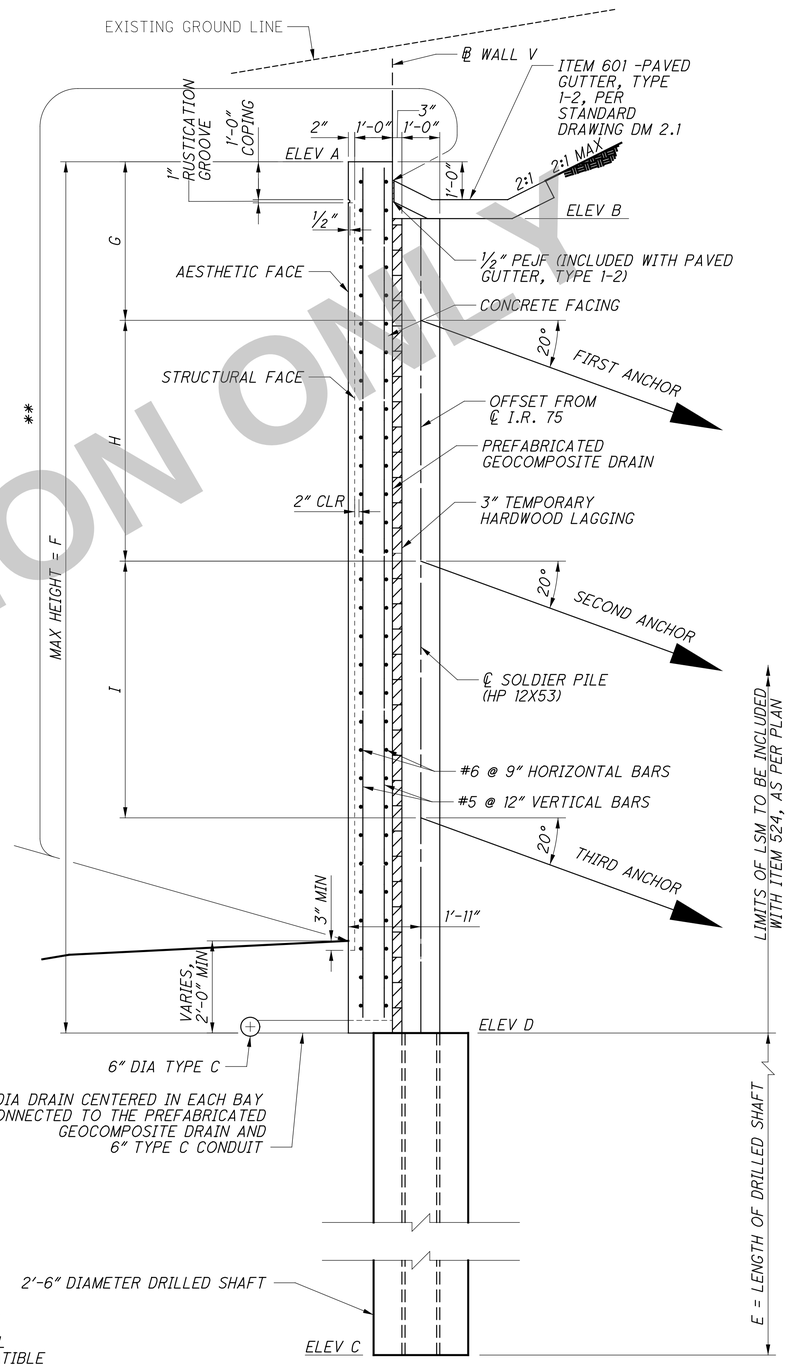




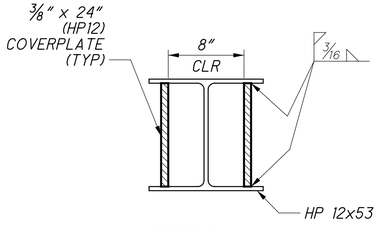


SOLDIER PILE ELEVATION

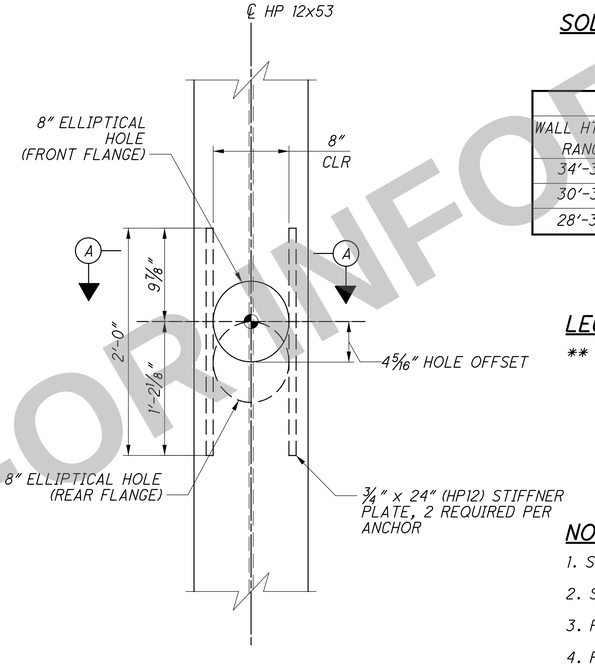
ANCHOR DATA TABLE			
WALL HT. "F" RANGE	FDL (K)	LOCK OFF LOAD (K)	NUMBER OF ANCHORS
34'-38'	215	140	24
30'-34'	177	115	18
28'-30'	138	90	9

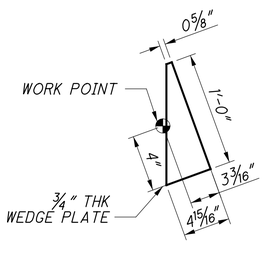


SECTION D-D (TYP)
(SOLDIER PILE WITH 3 ANCHORS)
(PANEL 114 TO 117)



SECTION A-A





20° WEDGE PLATE DETAIL

ANCHOR FABRICATION DETAILS

LEGEND:

** - LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) AND ITEM 512 - SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION.

NOTES:

1. SEE SHEETS 49/53 TO 51/53 FOR PANEL DETAILS.
2. STATIONS ARE ALONG I.R. 75
3. FOR TYPICAL SECTIONS SEE SHEET 38/53
4. FILL DRILLED SHAFT WITH LOW STRENGTH MORTAR.
5. THE MANUFACTURER OF THE TIEBACK SYSTEM SHALL PROVIDE ANCHOR HEAD AND OTHER DETAILS COMPATIBLE WITH THE TENDON AND PILE COMPONENTS PROVIDED AND CAPABLE CARRYING THE DESIGN LOADS SPECIFIED IN ACCORDANCE WITH ITEM SPECIAL - RETAINING WALL MISC.: TIEBACKS, AS PER PLAN
6. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/53

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RETAINING WALL DETAILS 3 OF 3
ANCHORED SOLDIER PILE WITH LAGGING WALL V

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RETAINING WALL DETAIL TABLE

SOLDIER PILES AND WALL DIMENSIONS											FIRST ANCHOR		SECOND ANCHOR		THIRD ANCHOR	
SOLDIER PILE NUMBER	SOLDIER PILE STATION	SOLDIER PILE OFFSET	TOP OF WALL ELEV A	TOP OF SOLDIER PILE ELEV B	MINIMUM PILE TIP ELEV C	TOP OF DRILLED SHAFT ELEV D	LENGTH OF DRILLED SHAFT E (FT) (MIN)	WALL HEIGHT F (FT)	SOLDIER PILE SIZE	SOLDIER PILE LENGTH(FT)	DISTANCE TO ANCHOR G (FT)	ANCHOR FREE LENGTH K (FT)	DISTANCE TO ANCHOR H (FT)	ANCHOR FREE LENGTH K (FT)	DISTANCE TO ANCHOR I (FT)	ANCHOR FREE LENGTH K (FT)
1	505+03.01	11.56	539.41	537.91	521.67	533.67	12.00	5.74	HP 12X53	16.24	-	-	-	-	-	-
2	505+09.03	11.56	539.77	538.27	521.67	533.67	12.00	6.10	HP 12X53	16.60	-	-	-	-	-	-
3	505+15.05	11.56	540.13	538.63	521.67	533.67	12.00	6.46	HP 12X53	16.96	-	-	-	-	-	-
4	505+21.07	11.56	540.49	538.99	521.67	533.67	12.00	6.82	HP 12X53	17.32	-	-	-	-	-	-
5	505+27.09	11.56	540.84	539.34	521.67	533.67	12.00	7.17	HP 12X53	17.67	-	-	-	-	-	-
6	505+33.11	11.56	541.20	539.70	521.67	533.67	12.00	7.53	HP 12X53	18.03	-	-	-	-	-	-
7	505+39.13	11.56	541.56	540.06	521.67	533.67	12.00	7.89	HP 12X53	18.39	-	-	-	-	-	-
8	505+45.15	11.56	541.92	540.42	521.67	533.67	12.00	8.25	HP 12X53	18.75	-	-	-	-	-	-
9	505+51.17	11.56	542.28	540.78	521.67	533.67	12.00	8.61	HP 12X53	19.11	-	-	-	-	-	-
10	505+57.19	11.56	542.63	541.13	521.67	533.67	12.00	8.96	HP 12X53	19.46	-	-	-	-	-	-
11	505+63.21	11.56	542.99	541.49	521.67	533.67	12.00	9.32	HP 12X53	19.82	-	-	-	-	-	-
12	505+69.23	11.56	543.35	541.85	521.67	533.67	12.00	9.68	HP 12X53	20.18	-	-	-	-	-	-
13	505+75.25	11.56	543.71	542.21	521.67	533.67	12.00	10.04	HP 12X53	20.54	-	-	-	-	-	-
14	505+81.27	11.56	544.07	542.57	521.67	533.67	12.00	10.40	HP 12X53	20.90	-	-	-	-	-	-
15	505+87.29	11.56	544.42	542.92	521.67	533.67	12.00	10.75	HP 12X53	21.25	-	-	-	-	-	-
16	505+95.22	116.53	544.78	543.28	521.67	533.67	12.00	11.11	HP 12X53	21.61	-	-	-	-	-	-
17	506+01.19	115.89	545.13	543.63	522.09	534.09	12.00	11.04	HP 12X53	21.54	5	15	-	-	-	-
18	506+07.15	115.27	545.45	543.95	522.09	534.09	12.00	11.36	HP 12X53	21.86	5	15	-	-	-	-
19	506+13.12	114.65	545.77	544.27	522.09	534.09	12.00	11.68	HP 12X53	22.18	5	15	-	-	-	-
20	506+19.09	114.05	546.10	544.60	522.09	534.09	12.00	12.01	HP 12X53	22.51	5	15	-	-	-	-
21	506+25.06	113.45	546.42	544.92	522.09	534.09	12.00	12.33	HP 12X53	22.83	5	15	-	-	-	-
22	506+31.03	112.87	546.74	545.24	522.09	534.09	12.00	12.65	HP 12X53	23.15	5	15	-	-	-	-
23	506+37.00	112.30	547.06	545.56	522.09	534.09	12.00	12.97	HP 12X53	23.47	5	15	-	-	-	-
24	506+42.97	111.74	547.39	545.89	522.09	534.09	12.00	13.30	HP 12X53	23.80	5	15	-	-	-	-
25	506+48.94	111.19	547.71	546.21	522.09	534.09	12.00	13.62	HP 12X53	24.12	5	15	-	-	-	-
26	506+54.92	110.65	548.03	546.53	522.09	534.09	12.00	13.94	HP 12X53	24.44	5	15	-	-	-	-
27	506+60.89	110.12	548.35	546.85	522.09	534.09	12.00	14.26	HP 12X53	24.76	5	15	-	-	-	-
28	506+66.87	109.61	548.68	547.18	522.09	534.09	12.00	14.59	HP 12X53	25.09	5	15	-	-	-	-
29	506+72.85	109.10	549.00	547.50	522.09	534.09	12.00	14.91	HP 12X53	25.41	6	15	-	-	-	-
30	506+78.83	108.61	549.32	547.82	522.09	534.09	12.00	15.23	HP 12X53	25.73	6	15	-	-	-	-
31	506+84.80	108.12	549.64	548.14	522.09	534.09	12.00	15.55	HP 12X53	26.05	6	15	-	-	-	-
32	506+90.78	107.65	549.97	548.47	522.09	534.09	12.00	15.88	HP 12X53	26.38	6	15	-	-	-	-
33	506+96.77	107.19	550.29	548.79	522.86	534.86	12.00	15.43	HP 12X53	25.93	6	15	-	-	-	-
34	507+02.75	106.74	550.61	549.11	522.86	534.86	12.00	15.75	HP 12X53	26.25	6	15	-	-	-	-
35	507+08.73	106.30	550.94	549.44	522.86	534.86	12.00	16.08	HP 12X53	26.58	6	15	-	-	-	-
36	507+14.71	105.87	551.26	549.76	522.86	534.86	12.00	16.40	HP 12X53	26.90	6	15	-	-	-	-
37	507+20.70	105.46	551.58	550.08	522.86	534.86	12.00	16.72	HP 12X53	27.22	6	15	-	-	-	-
38	507+26.68	105.05	551.90	550.40	522.86	534.86	12.00	17.04	HP 12X53	27.54	6	15	-	-	-	-
39	507+32.67	104.65	552.23	550.73	522.86	534.86	12.00	17.37	HP 12X53	27.87	6	15	-	-	-	-
40	507+38.65	104.27	552.55	551.05	522.86	534.86	12.00	17.69	HP 12X53	28.19	6	15	-	-	-	-
41	507+44.64	103.90	552.87	551.37	522.86	534.86	12.00	18.01	HP 12X53	28.51	6	15	-	-	-	-
42	507+50.63	103.53	553.19	551.69	522.86	534.86	12.00	18.33	HP 12X53	28.83	6	15	-	-	-	-
43	507+56.62	103.18	553.36	551.86	522.86	534.86	12.00	18.50	HP 12X53	29.00	6	15	-	-	-	-
44	507+62.61	102.84	553.52	552.02	522.86	534.86	12.00	18.66	HP 12X53	29.16	6	15	-	-	-	-
45	507+68.60	102.51	553.69	552.19	522.86	534.86	12.00	18.83	HP 12X53	29.33	6	15	7	15	-	-
46	507+74.59	102.20	553.86	552.36	522.86	534.86	12.00	19.00	HP 12X53	29.50	6	15	7	15	-	-
47	507+80.58	101.89	554.03	552.53	522.86	534.86	12.00	19.17	HP 12X53	29.67	6	15	7	15	-	-
48	507+86.57	101.59	554.20	552.70	522.86	534.86	12.00	19.34	HP 12X53	29.84	6	15	7	15	-	-
49	507+92.56	101.31	554.37	552.87	523.58	535.58	12.00	18.79	HP 12X53	29.29	6	15	7	15	-	-
50	507+98.55	101.03	554.54	553.04	523.58	535.58	12.00	18.96	HP 12X53	29.46	6	15	7	15	-	-
51	508+04.55	100.77	554.71	553.21	523.58	535.58	12.00	19.13	HP 12X53	29.63	6	15	7	15	-	-
52	508+10.54	100.52	554.88	553.38	523.58	535.58	12.00	19.30	HP 12X53	29.80	6	15	7	15	-	-
53	508+16.53	100.28	555.04	553.54	523.58	535.58	12.00	19.46	HP 12X53	29.96	6	15	7	15	-	-
54	508+22.53	100.05	555.21	553.71	523.58	535.58	12.00	19.63	HP 12X53	30.13	6	15	7	15	-	-
55	508+28.52	99.83	555.38	553.88	523.58	535.58	12.00	19.80	HP 12X53	30.30	6	15	7	15	-	-
56	508+34.52	99.62	555.55	554.05	523.58	535.58	12.00	19.97	HP 12X53	30.47	6	15	7	15	-	-
57	508+40.51	99.42	555.72	554.22	523.58	535.58	12.00	20.14	HP 12X53	30.64	6	15	7	15	-	-
58	508+46.51	99.24	555.89	554.39	523.58	535.58	12.00	20.31	HP 12X53	30.81	6	15	7	15	-	-
59	508+52.47	99.16	556.06	554.56	523.58	535.58	12.00	20.48	HP 12X53	30.98	6	15	7	15	-	-
60	508+58.47	99.28	556.23	554.73	523.58	535.58	12.00	20.65	HP 12X53	31.15	6	15	7	15	-	-
61	508+64.47	99.39	556.40	554.90	523.58	535.58	12.00	20.82	HP 12X53	31.32	6	15	7	15	-	-
62	508+70.47	99.50	556.56	555.06	523.58	535.58	12.00	20.98	HP 12X53	31.48	6	15	7	15	-	-
63	508+76.47	99.61	556.73	555.23	523.58	535.58	12.00	21.15	HP 12X53	31.65	6	15	7	15	-	-
64	508+82.46	99.73	556.90	555.40	523.58	535.58	12.00	21.32	HP 12X53	31.82	6	15	7	15	-	-
65	508+88.46	99.84	557.07	555.57	524.27	536.27	12.00	20.80	HP 12X53	31.30	6	15	7	15	-	-

FOR INFORMATION ONLY

NOTES:

1. THE STATION AND OFFSET OF SOLDIER PILES 1 TO 15 ARE MEASURED FROM ℄ RAMP A (UP TO STA 505+88.65). THE REMAINING UPSTATION PILES ARE MEASURED FROM ℄ CONST I.R. 75.
2. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/53.

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED JLM | DRAWN SMJ | REVIEWED SSK | DATE 12-15-21 | CHECKED NCK | REVISED | STRUCTURE FILE NUMBER

RETAINING WALL DETAIL TABLE 1 OF 8
SOLDIER PILE WITH LAGGING WALL V

HAM-75-7.85
PID No. 77889

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RETAINING WALL DETAIL TABLE

SOLDIER PILES AND WALL DIMENSIONS											FIRST ANCHOR		SECOND ANCHOR		THIRD ANCHOR	
SOLDIER PILE NUMBER	SOLDIER PILE STATION	SOLDIER PILE OFFSET	TOP OF WALL ELEV A	TOP OF SOLDIER PILE ELEV B	MINIMUM PILE TIP ELEV C	TOP OF DRILLED SHAFT ELEV D	LENGTH OF DRILLED SHAFT E (FT) (MIN)	WALL HEIGHT F (FT)	SOLDIER PILE SIZE	SOLDIER PILE LENGTH(FT)	DISTANCE TO ANCHOR G (FT)	ANCHOR FREE LENGTH K (FT)	DISTANCE TO ANCHOR H (FT)	ANCHOR FREE LENGTH K (FT)	DISTANCE TO ANCHOR I (FT)	ANCHOR FREE LENGTH K (FT)
66	508+94.46	99.95	557.24	555.74	524.27	536.27	12.00	20.97	HP 12X53	31.47	6	15	7	15	-	-
67	509+00.49	100.06	557.41	555.91	521.27	536.27	15.00	21.14	HP 12X53	34.64	6	15	7	15	-	-
68	509+06.49	99.94	557.43	555.93	521.27	536.27	15.00	21.16	HP 12X53	34.66	6	15	7	15	-	-
69	509+12.49	99.82	557.45	555.95	521.27	536.27	15.00	21.18	HP 12X53	34.68	6	15	7	15	-	-
70	509+18.49	99.70	557.47	555.97	521.27	536.27	15.00	21.20	HP 12X53	34.70	6	15	7	15	-	-
71	509+24.48	99.58	557.48	555.98	521.27	536.27	15.00	21.21	HP 12X53	34.71	6	15	7	15	-	-
72	509+30.48	99.46	557.50	556.00	521.27	536.27	15.00	21.23	HP 12X53	34.73	6	15	7	15	-	-
73	509+36.48	99.34	557.52	556.02	521.27	536.27	15.00	21.25	HP 12X53	34.75	6	15	7	15	-	-
74	509+42.48	99.22	557.54	556.04	521.27	536.27	15.00	21.27	HP 12X53	34.77	6	15	7	15	-	-
75	509+48.48	99.10	557.55	556.05	521.27	536.27	15.00	21.28	HP 12X53	34.78	6	15	7	15	-	-
76	509+54.48	98.98	557.57	556.07	521.27	536.27	15.00	21.30	HP 12X53	34.80	6	15	7	15	-	-
77	509+60.48	98.86	557.59	556.09	521.27	536.27	15.00	21.32	HP 12X53	34.82	6	15	7	15	-	-
78	509+66.48	98.74	557.61	556.11	521.27	536.27	15.00	21.34	HP 12X53	34.84	6	15	7	15	-	-
79	509+72.48	98.63	557.62	556.12	521.27	536.27	15.00	21.35	HP 12X53	34.85	6	15	7	15	-	-
80	509+78.47	98.51	557.64	556.14	521.27	536.27	15.00	21.37	HP 12X53	34.87	6	15	7	15	-	-
81	509+84.47	98.39	557.65	556.15	521.91	536.91	15.00	20.74	HP 12X53	34.24	6	15	7	15	-	-
82	509+90.47	98.27	557.67	556.17	521.91	536.91	15.00	20.76	HP 12X53	34.26	6	15	7	15	-	-
83	509+96.47	98.15	557.69	556.19	521.91	536.91	15.00	20.78	HP 12X53	34.28	6	15	7	15	-	-
84	510+02.47	98.03	557.71	556.21	521.91	536.91	15.00	20.80	HP 12X53	34.30	6	15	7	15	-	-
85	510+08.47	97.91	557.72	556.22	521.91	536.91	15.00	20.81	HP 12X53	34.31	6	15	7	15	-	-
86	510+14.47	97.79	557.74	556.24	521.91	536.91	15.00	20.83	HP 12X53	34.33	6	15	7	15	-	-
87	510+20.47	97.67	557.76	556.26	521.91	536.91	15.00	20.85	HP 12X53	34.35	6	15	7	15	-	-
88	510+26.46	97.55	557.78	556.28	521.91	536.91	15.00	20.87	HP 12X53	34.37	6	15	7	15	-	-
89	510+32.46	97.43	557.79	556.29	521.91	536.91	15.00	20.88	HP 12X53	34.38	6	15	7	15	-	-
90	510+38.46	97.31	557.81	556.31	521.91	536.91	15.00	20.90	HP 12X53	34.40	6	15	7	15	-	-
91	510+44.46	97.19	557.83	556.33	521.91	536.91	15.00	20.92	HP 12X53	34.42	6	15	7	15	-	-
92	510+50.46	97.07	557.85	556.35	521.91	536.91	15.00	20.94	HP 12X53	34.44	6	15	7	15	-	-
93	510+56.46	96.96	557.86	556.36	521.91	536.91	15.00	20.95	HP 12X53	34.45	6	15	7	15	-	-
94	510+62.46	96.84	557.88	556.38	521.91	536.91	15.00	20.97	HP 12X53	34.47	6	15	7	15	-	-
95	510+68.46	96.72	557.90	556.40	521.91	536.91	15.00	20.99	HP 12X53	34.49	6	15	7	15	-	-
96	510+74.46	96.60	557.92	556.42	521.91	536.91	15.00	21.01	HP 12X53	34.51	6	15	7	15	-	-
97	510+80.45	96.48	557.94	556.44	522.53	537.53	15.00	20.41	HP 12X53	33.91	6	15	7	15	-	-
98	510+86.45	96.36	557.96	556.46	522.53	537.53	15.00	20.43	HP 12X53	33.93	6	15	7	15	-	-
99	510+92.45	96.24	557.97	556.47	522.53	537.53	15.00	20.44	HP 12X53	33.94	6	15	7	15	-	-
100	510+98.45	96.12	557.99	556.49	522.53	537.53	15.00	20.46	HP 12X53	33.96	6	15	7	15	-	-
101	511+04.45	96.00	558.01	556.51	525.53	537.53	12.00	20.48	HP 12X53	30.98	6	15	7	15	-	-
102	511+10.45	95.88	558.03	556.53	525.53	537.53	12.00	20.50	HP 12X53	31.00	6	15	7	15	-	-
103	511+16.45	95.76	558.04	556.54	525.53	537.53	12.00	20.51	HP 12X53	31.01	6	15	7	15	-	-
104	511+22.45	95.64	558.06	556.56	525.53	537.53	12.00	20.53	HP 12X53	31.03	6	15	7	15	-	-
105	511+28.44	95.52	558.08	556.58	525.53	537.53	12.00	20.55	HP 12X53	31.05	6	15	7	15	-	-
106	511+34.44	95.40	558.10	556.60	525.53	537.53	12.00	20.57	HP 12X53	31.07	6	15	7	15	-	-
107	511+40.44	95.29	558.11	556.61	525.53	537.53	12.00	20.58	HP 12X53	31.08	6	15	7	15	-	-
108	511+46.44	95.17	558.13	556.63	525.53	537.53	12.00	20.60	HP 12X53	31.10	6	15	7	15	-	-
109	511+52.44	95.05	558.15	556.65	525.53	537.53	12.00	20.62	HP 12X53	31.12	6	15	7	15	-	-
110	511+58.44	94.93	558.17	556.67	525.53	537.53	12.00	20.64	HP 12X53	31.14	6	15	7	15	-	-
111	511+64.44	94.81	558.18	556.68	525.53	537.53	12.00	20.65	HP 12X53	31.15	6	15	7	15	-	-
112	511+70.44	94.69	558.20	556.70	525.53	537.53	12.00	20.67	HP 12X53	31.17	6	15	7	15	-	-
113	511+76.44	94.57	558.21	556.71	526.14	538.14	12.00	20.07	HP 12X53	30.57	6	15	7	15	-	-
114	511+82.43	94.45	558.23	556.73	526.14	538.14	12.00	20.09	HP 12X53	30.59	6	15	7	15	-	-
115	511+88.43	94.33	558.25	556.75	526.14	538.14	12.00	20.11	HP 12X53	30.61	6	15	7	15	-	-
116	511+94.43	94.21	558.27	556.77	526.14	538.14	12.00	20.13	HP 12X53	30.63	6	15	7	15	-	-
117	512+00.43	94.09	558.28	556.78	526.14	538.14	12.00	20.14	HP 12X53	30.64	6	15	7	15	-	-
118	512+06.43	93.97	558.30	556.80	526.14	538.14	12.00	20.16	HP 12X53	30.66	6	15	7	15	-	-
119	512+12.43	93.85	558.32	556.82	526.14	538.14	12.00	20.18	HP 12X53	30.68	6	15	7	15	-	-
120	512+18.43	93.74	558.34	556.84	526.14	538.14	12.00	20.20	HP 12X53	30.70	6	15	7	15	-	-
121	512+24.43	93.62	558.35	556.85	526.14	538.14	12.00	20.21	HP 12X53	30.71	6	15	7	15	-	-
122	512+30.42	93.50	558.37	556.87	526.14	538.14	12.00	20.23	HP 12X53	30.73	6	15	7	15	-	-
123	512+36.42	93.38	558.39	556.89	526.14	538.14	12.00	20.25	HP 12X53	30.75	6	15	7	15	-	-
124	512+42.42	93.26	558.41	556.91	526.14	538.14	12.00	20.27	HP 12X53	30.77	6	15	7	15	-	-
125	512+48.42	93.14	558.42	556.92	526.14	538.14	12.00	20.28	HP 12X53	30.78	6	15	7	15	-	-
126	512+54.42	93.02	558.44	556.94	526.14	538.14	12.00	20.30	HP 12X53	30.80	6	15	7	15	-	-
127	512+60.42	92.90	558.46	556.96	526.14	538.14	12.00	20.32	HP 12X53	30.82	6	15	7	15	-	-
128	512+66.42	92.78	558.48	556.98	526.14	538.14	12.00	20.34	HP 12X53	30.84	6	15	7	15	-	-
129	512+72.42	92.66	558.50	557.00	526.79	538.79	12.00	19.71	HP 12X53	30.21	6	15	7	15	-	-
130	512+78.41	92.54	558.51	557.01	526.79	538.79	12.00	19.72	HP 12X53	30.22	6	15	7	15	-	-

FOR INFORMATION ONLY

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

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CHECKED NCK | REVISED | STRUCTURE FILE NUMBER

RETAINING WALL DETAIL TABLE 2 OF 8
SOLDIER PILE WITH LAGGING WALL V

HAM-75-7.85
PID No. 77889

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2017

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RETAINING WALL DETAIL TABLE

SOLDIER PILES AND WALL DIMENSIONS											FIRST ANCHOR		SECOND ANCHOR		THIRD ANCHOR	
SOLDIER PILE NUMBER	SOLDIER PILE STATION	SOLDIER PILE OFFSET	TOP OF WALL ELEV A	TOP OF SOLDIER PILE ELEV B	MINIMUM PILE TIP ELEV C	TOP OF DRILLED SHAFT ELEV D	LENGTH OF DRILLED SHAFT E (FT) (MIN)	WALL HEIGHT F (FT)	SOLDIER PILE SIZE	SOLDIER PILE LENGTH(FT)	DISTANCE TO ANCHOR G (FT)	ANCHOR FREE LENGTH K (FT)	DISTANCE TO ANCHOR H (FT)	ANCHOR FREE LENGTH K (FT)	DISTANCE TO ANCHOR I (FT)	ANCHOR FREE LENGTH K (FT)
131	512+84.41	92.42	558.53	557.03	526.79	538.79	12.00	19.74	HP 12X53	30.24	6	15	7	15	-	-
132	512+90.41	92.30	558.55	557.05	526.79	538.79	12.00	19.76	HP 12X53	30.26	6	15	7	15	-	-
133	512+96.41	92.18	558.57	557.07	526.79	538.79	12.00	19.78	HP 12X53	30.28	6	15	7	15	-	-
134	513+02.41	92.07	558.58	557.08	526.79	538.79	12.00	19.79	HP 12X53	30.29	6	15	7	15	-	-
135	513+08.41	91.95	558.60	557.10	526.79	538.79	12.00	19.81	HP 12X53	30.31	6	15	7	15	-	-
136	513+14.41	91.83	558.62	557.12	526.79	538.79	12.00	19.83	HP 12X53	30.33	6	15	7	15	-	-
137	513+20.41	91.71	558.64	557.14	526.79	538.79	12.00	19.85	HP 12X53	30.35	6	15	7	15	-	-
138	513+26.41	91.59	558.65	557.15	526.79	538.79	12.00	19.86	HP 12X53	30.36	6	15	7	15	-	-
139	513+32.40	91.47	558.67	557.17	526.79	538.79	12.00	19.88	HP 12X53	30.38	6	15	7	15	-	-
140	513+38.40	91.35	558.69	557.19	526.79	538.79	12.00	19.90	HP 12X53	30.40	6	15	7	15	-	-
141	513+44.40	91.23	558.71	557.21	526.79	538.79	12.00	19.92	HP 12X53	30.42	6	15	7	15	-	-
142	513+50.40	91.11	558.72	557.22	526.79	538.79	12.00	19.93	HP 12X53	30.43	6	15	7	15	-	-
143	513+56.39	91.03	558.74	557.24	526.79	538.79	12.00	19.95	HP 12X53	30.45	6	15	7	15	-	-
144	513+62.39	90.97	558.76	557.26	526.79	538.79	12.00	19.97	HP 12X53	30.47	6	15	7	15	-	-
145	513+68.39	90.91	558.78	557.28	527.75	539.75	12.00	19.03	HP 12X53	29.53	6	15	7	15	-	-
146	513+74.39	90.85	558.80	557.30	527.75	539.75	12.00	19.05	HP 12X53	29.55	6	15	7	15	-	-
147	513+80.39	90.79	558.81	557.31	527.75	539.75	12.00	19.06	HP 12X53	29.56	6	15	7	15	-	-
148	513+86.39	90.73	558.83	557.33	527.75	539.75	12.00	19.08	HP 12X53	29.58	6	15	7	15	-	-
149	513+92.39	90.67	558.85	557.35	527.75	539.75	12.00	19.10	HP 12X53	29.60	6	15	7	15	-	-
150	513+98.39	90.61	558.87	557.37	527.75	539.75	12.00	19.12	HP 12X53	29.62	6	15	7	15	-	-
151	514+04.39	90.55	558.88	557.38	527.75	539.75	12.00	19.13	HP 12X53	29.63	6	15	7	15	-	-
152	514+10.39	90.49	558.90	557.40	527.75	539.75	12.00	19.15	HP 12X53	29.65	6	15	7	15	-	-
153	514+16.39	90.43	558.92	557.42	527.75	539.75	12.00	19.17	HP 12X53	29.67	6	15	7	15	-	-
154	514+22.39	90.37	558.94	557.44	527.75	539.75	12.00	19.19	HP 12X53	29.69	6	15	7	15	-	-
155	514+28.39	90.31	558.95	557.45	527.75	539.75	12.00	19.20	HP 12X53	29.70	6	15	7	15	-	-
156	514+34.39	90.25	558.97	557.47	527.75	539.75	12.00	19.22	HP 12X53	29.72	6	15	7	15	-	-
157	514+40.39	90.19	558.99	557.49	527.75	539.75	12.00	19.24	HP 12X53	29.74	6	15	7	15	-	-
158	514+46.39	90.13	559.01	557.51	527.75	539.75	12.00	19.26	HP 12X53	29.76	6	15	7	15	-	-
159	514+52.39	90.07	559.02	557.52	527.75	539.75	12.00	19.27	HP 12X53	29.77	6	15	7	15	-	-
160	514+58.39	90.01	559.04	557.54	527.75	539.75	12.00	19.29	HP 12X53	29.79	6	15	7	15	-	-
161	514+64.39	89.95	559.05	557.55	529.64	540.64	11.00	18.41	HP 12X53	27.91	6	15	-	-	-	-
162	514+70.39	89.90	559.07	557.57	529.64	540.64	11.00	18.43	HP 12X53	27.93	6	15	-	-	-	-
163	514+76.39	89.84	559.09	557.59	529.64	540.64	11.00	18.45	HP 12X53	27.95	6	15	-	-	-	-
164	514+82.39	89.78	559.11	557.61	529.64	540.64	11.00	18.47	HP 12X53	27.97	6	15	-	-	-	-
165	514+88.39	89.72	559.12	557.62	529.64	540.64	11.00	18.48	HP 12X53	27.98	6	15	-	-	-	-
166	514+94.39	89.66	559.14	557.64	529.64	540.64	11.00	18.50	HP 12X53	28.00	6	15	-	-	-	-
167	515+00.39	89.60	559.16	557.66	529.64	540.64	11.00	18.52	HP 12X53	28.02	6	15	-	-	-	-
168	515+06.39	89.54	559.18	557.68	529.64	540.64	11.00	18.54	HP 12X53	28.04	6	15	-	-	-	-
169	515+12.39	89.48	559.19	557.69	529.64	540.64	11.00	18.55	HP 12X53	28.05	6	15	-	-	-	-
170	515+18.38	89.42	559.21	557.71	529.64	540.64	11.00	18.57	HP 12X53	28.07	6	15	-	-	-	-
171	515+24.38	89.36	559.23	557.73	529.64	540.64	11.00	18.59	HP 12X53	28.09	6	15	-	-	-	-
172	515+30.38	89.30	559.25	557.75	529.64	540.64	11.00	18.61	HP 12X53	28.11	6	15	-	-	-	-
173	515+36.38	89.24	559.27	557.77	530.29	541.29	11.00	17.98	HP 12X53	27.48	6	15	-	-	-	-
174	515+42.38	89.18	559.28	557.78	530.29	541.29	11.00	17.99	HP 12X53	27.49	6	15	-	-	-	-
175	515+48.38	89.12	559.30	557.80	530.29	541.29	11.00	18.01	HP 12X53	27.51	6	15	-	-	-	-
176	515+54.38	89.07	559.32	557.82	530.29	541.29	11.00	18.03	HP 12X53	27.53	6	15	-	-	-	-
177	515+60.38	89.07	559.34	557.84	530.29	541.29	11.00	18.05	HP 12X53	27.55	6	15	-	-	-	-
178	515+66.38	89.07	559.35	557.85	530.29	541.29	11.00	18.06	HP 12X53	27.56	6	15	-	-	-	-
179	515+72.38	89.07	559.37	557.87	530.29	541.29	11.00	18.08	HP 12X53	27.58	6	15	-	-	-	-
180	515+78.38	89.07	559.39	557.89	530.29	541.29	11.00	18.10	HP 12X53	27.60	6	15	-	-	-	-
181	515+84.38	89.07	559.41	557.91	530.29	541.29	11.00	18.12	HP 12X53	27.62	6	15	-	-	-	-
182	515+90.38	89.07	559.42	557.92	530.29	541.29	11.00	18.13	HP 12X53	27.63	6	15	-	-	-	-
183	515+96.38	89.07	559.44	557.94	530.29	541.29	11.00	18.15	HP 12X53	27.65	6	15	-	-	-	-
184	516+02.38	89.07	559.46	557.96	530.29	541.29	11.00	18.17	HP 12X53	27.67	6	15	-	-	-	-
185	516+08.38	89.07	559.47	557.97	530.95	541.95	11.00	17.52	HP 12X53	27.02	6	15	-	-	-	-
186	516+14.38	89.07	559.49	557.99	530.95	541.95	11.00	17.54	HP 12X53	27.04	6	15	-	-	-	-
187	516+20.38	89.07	559.51	558.01	530.95	541.95	11.00	17.56	HP 12X53	27.06	6	15	-	-	-	-
188	516+26.38	89.07	559.53	558.03	530.95	541.95	11.00	17.58	HP 12X53	27.08	6	15	-	-	-	-
189	516+32.38	89.07	559.54	558.04	530.95	541.95	11.00	17.59	HP 12X53	27.09	6	15	-	-	-	-
190	516+38.38	89.07	559.56	558.06	530.95	541.95	11.00	17.61	HP 12X53	27.11	6	15	-	-	-	-
191	516+44.38	89.07	559.58	558.08	530.95	541.95	11.00	17.63	HP 12X53	27.13	6	15	-	-	-	-
192	516+50.38	89.07	559.60	558.10	530.95	541.95	11.00	17.65	HP 12X53	27.15	6	15	-	-	-	-
193	516+56.38	89.07	559.61	558.11	530.95	541.95	11.00	17.66	HP 12X53	27.16	6	15	-	-	-	-
194	516+62.38	89.07	559.63	558.13	530.95	541.95	11.00	17.68	HP 12X53	27.18	6	15	-	-	-	-
195	516+68.28	89.07	559.65	558.15	530.95	541.95	11.00	17.70	HP 12X53	27.20	6	15	-	-	-	-

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RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED	DRAWN	REVIEWED	DATE
JLM	SMJ	SSK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

RETAINING WALL DETAIL TABLE 3 OF 8
SOLDIER PILE WITH LAGGING WALL V

HAM-75-7.85
PID No. 77889

43 / 53

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2017

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RETAINING WALL DETAIL TABLE

SOLDIER PILES AND WALL DIMENSIONS											FIRST ANCHOR		SECOND ANCHOR		THIRD ANCHOR	
SOLDIER PILE NUMBER	SOLDIER PILE STATION	SOLDIER PILE OFFSET	TOP OF WALL ELEV A	TOP OF SOLDIER PILE ELEV B	MINIMUM PILE TIP ELEV C	TOP OF DRILLED SHAFT ELEV D	LENGTH OF DRILLED SHAFT E (FT) (MIN)	WALL HEIGHT F (FT)	SOLDIER PILE SIZE	SOLDIER PILE LENGTH(FT)	DISTANCE TO ANCHOR G (FT)	ANCHOR FREE LENGTH K (FT)	DISTANCE TO ANCHOR H (FT)	ANCHOR FREE LENGTH K (FT)	DISTANCE TO ANCHOR I (FT)	ANCHOR FREE LENGTH K (FT)
196	516+74.18	89.07	559.66	558.16	530.95	541.95	11.00	17.71	HP 12X53	27.21	6	15	-	-	-	-
197	516+80.08	89.07	559.68	558.18	531.75	542.75	11.00	16.93	HP 12X53	26.43	6	15	-	-	-	-
198	516+85.98	89.07	559.70	558.20	531.75	542.75	11.00	16.95	HP 12X53	26.45	6	15	-	-	-	-
199	516+91.88	89.07	559.72	558.22	531.75	542.75	11.00	16.97	HP 12X53	26.47	6	15	-	-	-	-
200	516+97.78	89.07	559.73	558.23	531.75	542.75	11.00	16.98	HP 12X53	26.48	6	15	-	-	-	-
201	517+04.67	89.07	559.75	558.25	531.75	542.75	11.00	17.00	HP 12X53	26.50	6	15	-	-	-	-
202	517+09.58	89.07	559.77	558.27	531.75	542.75	11.00	17.02	HP 12X53	26.52	6	15	-	-	-	-
203	517+15.48	89.07	559.79	558.29	531.75	542.75	11.00	17.04	HP 12X53	26.54	6	15	-	-	-	-
204	517+21.38	89.07	559.80	558.30	531.75	542.75	11.00	17.05	HP 12X53	26.55	6	15	-	-	-	-
205	517+27.28	89.07	559.82	558.32	531.75	542.75	11.00	17.07	HP 12X53	26.57	6	15	-	-	-	-
206	517+33.18	89.07	559.84	558.34	531.75	542.75	11.00	17.09	HP 12X53	26.59	6	15	-	-	-	-
207	517+39.08	89.07	559.85	558.35	531.75	542.75	11.00	17.10	HP 12X53	26.60	6	15	-	-	-	-
208	517+44.98	89.07	559.87	558.37	531.75	542.75	11.00	17.12	HP 12X53	26.62	6	15	-	-	-	-
209	517+50.88	89.07	559.89	558.39	532.58	543.58	11.00	16.31	HP 12X53	25.81	6	15	-	-	-	-
210	517+56.78	89.07	559.91	558.41	532.58	543.58	11.00	16.33	HP 12X53	25.83	6	15	-	-	-	-
211	517+62.68	89.07	559.93	558.43	532.58	543.58	11.00	16.35	HP 12X53	25.85	6	15	-	-	-	-
212	517+68.58	89.07	559.95	558.45	532.58	543.58	11.00	16.37	HP 12X53	25.87	6	15	-	-	-	-
213	517+74.48	89.07	559.96	558.46	532.58	543.58	11.00	16.38	HP 12X53	25.88	6	15	-	-	-	-
214	517+80.38	89.07	559.98	558.48	532.58	543.58	11.00	16.40	HP 12X53	25.90	6	15	-	-	-	-
215	517+86.28	89.07	560.00	558.50	532.58	543.58	11.00	16.42	HP 12X53	25.92	6	15	-	-	-	-
216	517+92.18	89.07	560.01	558.51	532.58	543.58	11.00	16.43	HP 12X53	25.93	6	15	-	-	-	-
217	517+98.08	89.07	560.03	558.53	532.58	543.58	11.00	16.45	HP 12X53	25.95	6	15	-	-	-	-
218	518+03.98	89.07	560.05	558.55	532.58	543.58	11.00	16.47	HP 12X53	25.97	6	15	-	-	-	-
219	518+09.88	89.07	560.07	558.57	532.58	543.58	11.00	16.49	HP 12X53	25.99	6	15	-	-	-	-
220	518+15.78	89.07	560.08	558.58	532.58	543.58	11.00	16.50	HP 12X53	26.00	6	15	-	-	-	-
221	518+21.68	89.07	559.55	558.05	532.58	543.58	11.00	15.97	HP 12X53	25.47	6	15	-	-	-	-
222	518+27.58	89.07	559.57	558.07	532.58	543.58	11.00	15.99	HP 12X53	25.49	6	15	-	-	-	-
223	518+33.48	89.07	559.59	558.09	532.58	543.58	11.00	16.01	HP 12X53	25.51	6	15	-	-	-	-
224	518+39.38	89.07	559.61	558.11	532.58	543.58	11.00	16.03	HP 12X53	25.53	6	15	-	-	-	-
225	518+45.28	89.07	559.62	558.12	532.58	543.58	11.00	16.04	HP 12X53	25.54	6	15	-	-	-	-
226	518+51.18	89.07	560.18	558.68	533.12	544.12	11.00	16.06	HP 12X53	25.56	6	15	-	-	-	-
227	518+57.08	89.07	560.20	558.70	533.12	544.12	11.00	16.08	HP 12X53	25.58	6	15	-	-	-	-
228	518+62.98	89.07	560.21	558.71	533.12	544.12	11.00	16.09	HP 12X53	25.59	6	15	-	-	-	-
229	518+68.88	89.07	560.23	558.73	533.12	544.12	11.00	16.11	HP 12X53	25.61	6	15	-	-	-	-
230	518+74.78	89.07	560.25	558.75	533.12	544.12	11.00	16.13	HP 12X53	25.63	6	15	-	-	-	-
231	518+80.68	89.07	560.27	558.77	533.12	544.12	11.00	16.15	HP 12X53	25.65	6	15	-	-	-	-
232	518+86.58	89.07	560.28	558.78	533.12	544.12	11.00	16.16	HP 12X53	25.66	6	15	-	-	-	-
233	518+92.48	89.07	560.31	558.81	533.55	544.55	11.00	15.76	HP 12X53	25.26	6	15	-	-	-	-
234	518+98.38	89.07	560.32	558.82	533.55	544.55	11.00	15.77	HP 12X53	25.27	6	15	-	-	-	-
235	519+04.28	89.07	560.34	558.84	533.55	544.55	11.00	15.79	HP 12X53	25.29	6	15	-	-	-	-
236	519+10.18	89.07	560.36	558.86	533.55	544.55	11.00	15.81	HP 12X53	25.31	6	15	-	-	-	-
237	519+16.08	89.07	560.37	558.87	533.55	544.55	11.00	15.82	HP 12X53	25.32	6	15	-	-	-	-
238	519+21.98	89.07	560.39	558.89	533.55	544.55	11.00	15.84	HP 12X53	25.34	6	15	-	-	-	-
239	519+27.88	89.07	560.41	558.91	533.55	544.55	11.00	15.86	HP 12X53	25.36	6	15	-	-	-	-
240	519+33.78	89.07	560.43	558.93	533.55	544.55	11.00	15.88	HP 12X53	25.38	6	15	-	-	-	-
241	519+39.68	89.07	560.44	558.94	533.55	544.55	11.00	15.89	HP 12X53	25.39	6	15	-	-	-	-
242	519+45.58	89.07	560.46	558.96	533.55	544.55	11.00	15.91	HP 12X53	25.41	6	15	-	-	-	-
243	519+51.48	89.07	560.48	558.98	533.55	544.55	11.00	15.93	HP 12X53	25.43	6	15	-	-	-	-
244	519+57.38	89.07	560.49	558.99	533.55	544.55	11.00	15.94	HP 12X53	25.44	6	15	-	-	-	-
245	519+63.28	89.07	560.51	559.01	533.97	544.97	11.00	15.54	HP 12X53	25.04	6	15	-	-	-	-
246	519+69.18	89.07	560.52	559.02	533.97	544.97	11.00	15.55	HP 12X53	25.05	6	15	-	-	-	-
247	519+75.08	89.07	560.54	559.04	533.97	544.97	11.00	15.57	HP 12X53	25.07	6	15	-	-	-	-
248	519+80.98	89.07	560.56	559.06	533.97	544.97	11.00	15.59	HP 12X53	25.09	6	15	-	-	-	-
249	519+86.88	89.07	560.58	559.08	533.97	544.97	11.00	15.61	HP 12X53	25.11	6	15	-	-	-	-
250	519+92.78	89.07	560.59	559.09	533.97	544.97	11.00	15.62	HP 12X53	25.12	6	15	-	-	-	-
251	519+98.68	89.07	560.61	559.11	533.97	544.97	11.00	15.64	HP 12X53	25.14	6	15	-	-	-	-
252	520+04.58	89.07	560.63	559.13	533.97	544.97	11.00	15.66	HP 12X53	25.16	6	15	-	-	-	-
253	520+10.48	89.07	560.64	559.14	533.97	544.97	11.00	15.67	HP 12X53	25.17	6	15	-	-	-	-
254	520+16.78	89.07	560.66	559.16	533.97	544.97	11.00	15.69	HP 12X53	25.19	6	15	-	-	-	-
255	520+22.28	89.07	560.68	559.18	533.97	544.97	11.00	15.71	HP 12X53	25.21	6	15	-	-	-	-
256	520+28.18	89.07	560.70	559.20	533.97	544.97	11.00	15.73	HP 12X53	25.23	6	15	-	-	-	-
257	520+34.08	89.07	560.72	559.22	534.40	545.40	11.00	15.32	HP 12X53	24.82	6	15	-	-	-	-
258	520+39.98	89.07	560.74	559.24	534.40	545.40	11.00	15.34	HP 12X53	24.84	6	15	-	-	-	-
259	520+45.88	89.07	560.75	559.25	534.40	545.40	11.00	15.35	HP 12X53	24.85	6	15	-	-	-	-
260	520+51.78	89.07	560.77	559.27	534.40	545.40	11.00	15.37	HP 12X53	24.87	6	15	-	-	-	-

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RESOURCE INTERNATIONAL INC.
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DESIGNED JLM | DRAWN SMJ | REVIEWED SSK | DATE 12-15-21
CHECKED NCK | REVISED | STRUCTURE FILE NUMBER

RETAINING WALL DETAIL TABLE 4 OF 8
SOLDIER PILE WITH LAGGING WALL V

HAM-75-7.85
PID No. 77889

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RETAINING WALL DETAIL TABLE

SOLDIER PILES AND WALL DIMENSIONS											FIRST ANCHOR		SECOND ANCHOR		THIRD ANCHOR	
SOLDIER PILE NUMBER	SOLDIER PILE STATION	SOLDIER PILE OFFSET	TOP OF WALL ELEV A	TOP OF SOLDIER PILE ELEV B	MINIMUM PILE TIP ELEV C	TOP OF DRILLED SHAFT ELEV D	LENGTH OF DRILLED SHAFT E (FT) (MIN)	WALL HEIGHT F (FT)	SOLDIER PILE SIZE	SOLDIER PILE LENGTH(FT)	DISTANCE TO ANCHOR G (FT)	ANCHOR FREE LENGTH K (FT)	DISTANCE TO ANCHOR H (FT)	ANCHOR FREE LENGTH K (FT)	DISTANCE TO ANCHOR I (FT)	ANCHOR FREE LENGTH K (FT)
261	520+57.68	89.07	560.79	559.29	534.40	545.40	11.00	15.39	HP 12X53	24.89	6	15	-	-	-	-
262	520+63.58	89.07	560.80	559.30	534.40	545.40	11.00	15.40	HP 12X53	24.90	6	15	-	-	-	-
263	520+69.78	89.07	560.82	559.32	534.40	545.40	11.00	15.42	HP 12X53	24.92	6	15	-	-	-	-
264	520+75.38	89.07	560.84	559.34	534.40	545.40	11.00	15.44	HP 12X53	24.94	6	15	-	-	-	-
265	520+81.28	89.07	560.86	559.36	534.40	545.40	11.00	15.46	HP 12X53	24.96	6	15	-	-	-	-
266	520+87.18	89.07	560.87	559.37	534.40	545.40	11.00	15.47	HP 12X53	24.97	6	15	-	-	-	-
267	520+93.08	89.07	560.89	559.39	534.40	545.40	11.00	15.49	HP 12X53	24.99	6	15	-	-	-	-
268	520+98.98	89.07	560.91	559.41	534.40	545.40	11.00	15.51	HP 12X53	25.01	6	15	-	-	-	-
269	521+04.88	89.07	560.92	559.42	534.82	545.82	11.00	15.10	HP 12X53	24.60	6	15	-	-	-	-
270	521+10.78	89.07	560.94	559.44	534.82	545.82	11.00	15.12	HP 12X53	24.62	6	15	-	-	-	-
271	521+16.68	89.07	560.95	559.45	534.82	545.82	11.00	15.13	HP 12X53	24.63	6	15	-	-	-	-
272	521+22.56	89.07	560.97	559.47	534.82	545.82	11.00	15.15	HP 12X53	24.65	6	15	-	-	-	-
273	521+28.48	89.07	560.99	559.49	534.82	545.82	11.00	15.17	HP 12X53	24.67	6	15	-	-	-	-
274	521+34.38	89.07	561.01	559.51	534.82	545.82	11.00	15.19	HP 12X53	24.69	6	15	-	-	-	-
275	521+40.28	89.07	561.02	559.52	534.82	545.82	11.00	15.20	HP 12X53	24.70	6	15	-	-	-	-
276	521+46.18	89.07	561.04	559.54	534.82	545.82	11.00	15.22	HP 12X53	24.72	6	15	-	-	-	-
277	521+52.08	89.07	561.06	559.56	534.82	545.82	11.00	15.24	HP 12X53	24.74	6	15	-	-	-	-
278	521+57.98	89.07	561.07	559.57	534.82	545.82	11.00	15.25	HP 12X53	24.75	6	15	-	-	-	-
279	521+63.88	89.07	561.09	559.59	534.82	545.82	11.00	15.27	HP 12X53	24.77	6	15	-	-	-	-
280	521+69.78	89.07	561.11	559.61	534.82	545.82	11.00	15.29	HP 12X53	24.79	6	15	-	-	-	-
281	521+75.68	89.07	561.13	559.63	535.07	546.07	11.00	15.06	HP 12X53	24.56	6	15	-	-	-	-
282	521+81.58	89.07	561.14	559.64	535.07	546.07	11.00	15.07	HP 12X53	24.57	6	15	-	-	-	-
283	521+87.48	89.07	561.16	559.66	535.07	546.07	11.00	15.09	HP 12X53	24.59	6	15	-	-	-	-
284	521+93.38	89.07	561.18	559.68	535.07	546.07	11.00	15.11	HP 12X53	24.61	6	15	-	-	-	-
285	521+99.28	89.07	561.20	559.70	535.07	546.07	11.00	15.13	HP 12X53	24.63	6	15	-	-	-	-
286	522+05.18	89.07	561.71	560.21	535.07	546.07	11.00	15.64	HP 12X53	25.14	6	15	-	-	-	-
287	522+09.60	89.07	562.19	560.69	535.07	546.07	11.00	16.12	HP 12X53	25.62	6	15	-	-	-	-
288	522+18.45	89.07	563.15	561.65	535.07	546.07	11.00	17.08	HP 12X53	26.58	6	15	-	-	-	-
289	522+22.88	89.07	563.30	561.80	535.07	546.07	11.00	17.23	HP 12X53	26.73	6	15	-	-	-	-
290	522+28.78	89.07	563.26	561.76	535.07	546.07	11.00	17.19	HP 12X53	26.69	6	15	-	-	-	-
291	522+34.68	89.07	563.23	561.73	535.07	546.07	11.00	17.16	HP 12X53	26.66	6	15	-	-	-	-
292	522+40.58	89.07	563.19	561.69	535.07	546.07	11.00	17.12	HP 12X53	26.62	6	15	-	-	-	-
293	522+46.48	89.07	563.16	561.66	535.48	546.48	11.00	16.68	HP 12X53	26.18	6	15	-	-	-	-
294	522+52.38	89.07	563.13	561.63	535.48	546.48	11.00	16.65	HP 12X53	26.15	6	15	-	-	-	-
295	522+58.28	89.07	563.09	561.59	535.48	546.48	11.00	16.61	HP 12X53	26.11	6	15	-	-	-	-
296	522+64.18	89.07	563.06	561.56	535.48	546.48	11.00	16.58	HP 12X53	26.08	6	15	-	-	-	-
297	522+70.08	89.07	563.02	561.52	535.48	546.48	11.00	16.54	HP 12X53	26.04	6	15	-	-	-	-
298	522+75.98	89.07	562.99	561.49	535.48	546.48	11.00	16.51	HP 12X53	26.01	6	15	-	-	-	-
299	522+81.88	89.07	562.95	561.45	535.48	546.48	11.00	16.47	HP 12X53	25.97	6	15	-	-	-	-
300	522+87.78	89.07	562.91	561.41	535.48	546.48	11.00	16.43	HP 12X53	25.93	6	15	-	-	-	-
301	522+93.68	89.07	562.88	561.38	535.48	546.48	11.00	16.40	HP 12X53	25.90	6	15	-	-	-	-
302	522+99.58	89.07	562.84	561.34	535.48	546.48	11.00	16.36	HP 12X53	25.86	6	15	-	-	-	-
303	523+05.48	89.07	562.35	560.85	535.48	546.48	11.00	15.87	HP 12X53	25.37	6	15	-	-	-	-
304	523+11.38	89.07	561.77	560.27	535.48	546.48	11.00	15.29	HP 12X53	24.79	6	15	-	-	-	-
305	523+17.28	89.07	561.19	559.69	535.24	546.24	11.00	14.95	HP 12X53	24.45	6	15	-	-	-	-
306	523+23.18	89.07	560.87	559.37	535.24	546.24	11.00	14.63	HP 12X53	24.13	6	15	-	-	-	-
307	523+29.08	89.07	560.84	559.34	535.24	546.24	11.00	14.60	HP 12X53	24.10	6	15	-	-	-	-
308	523+34.98	89.07	560.81	559.31	535.24	546.24	11.00	14.57	HP 12X53	24.07	6	15	-	-	-	-
309	523+40.88	89.07	560.79	559.29	535.24	546.24	11.00	14.55	HP 12X53	24.05	6	15	-	-	-	-
310	523+46.78	89.07	560.76	559.26	535.24	546.24	11.00	14.52	HP 12X53	24.02	6	15	-	-	-	-
311	523+52.68	89.07	560.73	559.23	535.24	546.24	11.00	14.49	HP 12X53	23.99	6	15	-	-	-	-
312	523+58.58	89.07	560.71	559.21	535.24	546.24	11.00	14.47	HP 12X53	23.97	6	15	-	-	-	-
313	523+64.48	89.07	560.68	559.18	535.24	546.24	11.00	14.44	HP 12X53	23.94	6	15	-	-	-	-
314	523+70.38	89.07	560.65	559.15	535.24	546.24	11.00	14.41	HP 12X53	23.91	6	15	-	-	-	-
315	523+76.28	89.07	560.63	559.13	535.24	546.24	11.00	14.39	HP 12X53	23.89	6	15	-	-	-	-
316	523+82.18	89.07	560.60	559.10	535.24	546.24	11.00	14.36	HP 12X53	23.86	6	15	-	-	-	-
317	523+88.08	89.07	559.92	558.42	534.19	545.19	11.00	14.73	HP 12X53	24.23	6	15	-	-	-	-
318	523+93.98	89.07	559.89	558.39	534.19	545.19	11.00	14.70	HP 12X53	24.20	6	15	-	-	-	-
319	523+99.88	89.07	559.87	558.37	534.19	545.19	11.00	14.68	HP 12X53	24.18	6	15	-	-	-	-
320	524+05.78	89.07	559.84	558.34	534.19	545.19	11.00	14.65	HP 12X53	24.15	6	15	-	-	-	-
321	524+11.68	89.07	559.81	558.31	534.19	545.19	11.00	14.62	HP 12X53	24.12	6	15	-	-	-	-
322	524+17.58	89.07	559.79	558.29	534.19	545.19	11.00	14.60	HP 12X53	24.10	6	15	-	-	-	-
323	524+23.48	89.07	559.76	558.26	534.19	545.19	11.00	14.57	HP 12X53	24.07	6	15	-	-	-	-
324	524+29.38	89.07	559.73	558.23	534.19	545.19	11.00	14.54	HP 12X53	24.04	6	15	-	-	-	-
325	524+35.28	89.07	559.71	558.21	534.19	545.19	11.00	14.52	HP 12X53	24.02	6	15	-	-	-	-

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RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED JLM | DRAWN SMJ | REVIEWED SSK | DATE 12-15-21
CHECKED NCK | REVISED | STRUCTURE FILE NUMBER

RETAINING WALL DETAIL TABLE 5 OF 8
SOLDIER PILE WITH LAGGING WALL V

HAM-75-7.85
PID No. 77889

986
2017

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RETAINING WALL DETAIL TABLE

SOLDIER PILES AND WALL DIMENSIONS											FIRST ANCHOR		SECOND ANCHOR		THIRD ANCHOR	
SOLDIER PILE NUMBER	SOLDIER PILE STATION	SOLDIER PILE OFFSET	TOP OF WALL ELEV A	TOP OF SOLDIER PILE ELEV B	MINIMUM PILE TIP ELEV C	TOP OF DRILLED SHAFT ELEV D	LENGTH OF DRILLED SHAFT E (FT) (MIN)	WALL HEIGHT F (FT)	SOLDIER PILE SIZE	SOLDIER PILE LENGTH(FT)	DISTANCE TO ANCHOR G (FT)	ANCHOR FREE LENGTH K (FT)	DISTANCE TO ANCHOR H (FT)	ANCHOR FREE LENGTH K (FT)	DISTANCE TO ANCHOR I (FT)	ANCHOR FREE LENGTH K (FT)
326	524+41.18	89.07	559.68	558.18	534.19	545.19	11.00	14.49	HP 12X53	23.99	6	15	-	-	-	-
327	524+47.08	89.07	559.65	558.15	534.19	545.19	11.00	14.46	HP 12X53	23.96	6	15	-	-	-	-
328	524+52.98	89.07	559.63	558.13	534.19	545.19	11.00	14.44	HP 12X53	23.94	6	15	-	-	-	-
329	524+58.88	89.07	560.25	558.75	534.19	545.19	11.00	15.06	HP 12X53	24.56	6	15	-	-	-	-
330	524+64.77	89.07	560.23	558.73	534.19	545.19	11.00	15.04	HP 12X53	24.54	6	15	-	-	-	-
331	524+70.67	89.07	560.20	558.70	534.19	545.19	11.00	15.01	HP 12X53	24.51	6	15	-	-	-	-
332	524+76.57	89.07	560.17	558.67	534.19	545.19	11.00	14.98	HP 12X53	24.48	6	15	-	-	-	-
333	524+82.47	89.07	560.15	558.65	534.19	545.19	11.00	14.96	HP 12X53	24.46	6	15	-	-	-	-
334	524+88.37	89.08	560.12	558.62	534.19	545.19	11.00	14.93	HP 12X53	24.43	6	15	-	-	-	-
335	524+94.27	89.09	560.09	558.59	534.19	545.19	11.00	14.90	HP 12X53	24.40	6	15	-	-	-	-
336	525+00.17	89.11	560.07	558.57	534.19	545.19	11.00	14.88	HP 12X53	24.38	6	15	-	-	-	-
337	525+06.07	89.13	560.04	558.54	534.19	545.19	11.00	14.85	HP 12X53	24.35	6	15	-	-	-	-
338	525+11.97	89.16	560.01	558.51	534.19	545.19	11.00	14.82	HP 12X53	24.32	6	15	-	-	-	-
339	525+17.87	89.19	559.99	558.49	534.19	545.19	11.00	14.80	HP 12X53	24.30	6	15	-	-	-	-
340	525+23.77	89.22	559.96	558.46	534.19	545.19	11.00	14.77	HP 12X53	24.27	6	15	-	-	-	-
341	525+29.67	89.26	559.94	558.44	533.38	544.38	11.00	15.56	HP 12X53	25.06	6	15	-	-	-	-
342	525+35.57	89.30	559.91	558.41	533.38	544.38	11.00	15.53	HP 12X53	25.03	6	15	-	-	-	-
343	525+41.47	89.35	559.88	558.38	533.38	544.38	11.00	15.50	HP 12X53	25.00	6	15	-	-	-	-
344	525+47.37	89.39	559.86	558.36	533.38	544.38	11.00	15.48	HP 12X53	24.98	6	15	-	-	-	-
345	525+52.28	89.44	559.83	558.33	533.38	544.38	11.00	15.45	HP 12X53	24.95	6	15	-	-	-	-
346	525+57.20	89.49	559.81	558.31	533.38	544.38	11.00	15.43	HP 12X53	24.93	6	15	-	-	-	-
347	525+62.11	89.54	559.79	558.29	533.38	544.38	11.00	15.41	HP 12X53	24.91	6	15	-	-	-	-
348	525+69.98	89.62	559.75	558.25	533.38	544.38	11.00	15.37	HP 12X53	24.87	6	15	-	-	-	-
349	525+76.86	89.70	559.72	558.22	533.38	544.38	11.00	15.34	HP 12X53	24.84	6	15	-	-	-	-
350	525+82.76	89.78	559.69	558.19	533.38	544.38	11.00	15.31	HP 12X53	24.81	6	15	-	-	-	-
351	525+88.65	89.86	559.67	558.17	533.38	544.38	11.00	15.29	HP 12X53	24.79	6	15	-	-	-	-
352	525+94.55	89.94	559.64	558.14	533.38	544.38	11.00	15.26	HP 12X53	24.76	6	15	-	-	-	-
353	526+00.45	90.03	559.61	558.11	532.70	543.70	11.00	15.91	HP 12X53	25.41	6	15	-	-	-	-
354	526+06.35	90.12	559.60	558.10	532.70	543.70	11.00	15.90	HP 12X53	25.40	6	15	-	-	-	-
355	526+12.25	90.21	559.58	558.08	532.70	543.70	11.00	15.88	HP 12X53	25.38	6	15	-	-	-	-
356	526+18.14	90.31	559.57	558.07	532.70	543.70	11.00	15.87	HP 12X53	25.37	6	15	-	-	-	-
357	526+24.04	90.41	559.55	558.05	532.70	543.70	11.00	15.85	HP 12X53	25.35	6	15	-	-	-	-
358	526+29.94	90.52	559.54	558.04	532.70	543.70	11.00	15.84	HP 12X53	25.34	6	15	-	-	-	-
359	526+35.83	90.63	559.52	558.02	532.70	543.70	11.00	15.82	HP 12X53	25.32	6	15	-	-	-	-
360	526+41.73	90.74	559.51	558.01	532.70	543.70	11.00	15.81	HP 12X53	25.31	6	15	-	-	-	-
361	526+47.63	90.86	559.49	557.99	532.70	543.70	11.00	15.79	HP 12X53	25.29	6	15	-	-	-	-
362	526+53.52	90.99	559.48	557.98	532.70	543.70	11.00	15.78	HP 12X53	25.28	6	15	-	-	-	-
363	526+59.42	91.11	559.46	557.96	532.70	543.70	11.00	15.76	HP 12X53	25.26	6	15	-	-	-	-
364	526+65.31	91.24	559.45	557.95	532.70	543.70	11.00	15.75	HP 12X53	25.25	6	15	-	-	-	-
365	526+71.21	91.38	559.29	557.79	531.82	542.82	11.00	16.47	HP 12X53	25.97	6	15	-	-	-	-
366	526+77.11	91.52	559.27	557.77	531.82	542.82	11.00	16.45	HP 12X53	25.95	6	15	-	-	-	-
367	526+83.00	91.66	559.24	557.74	531.82	542.82	11.00	16.42	HP 12X53	25.92	6	15	-	-	-	-
368	526+88.89	91.81	559.21	557.71	531.82	542.82	11.00	16.39	HP 12X53	25.89	6	15	-	-	-	-
369	526+94.79	91.96	559.19	557.69	531.82	542.82	11.00	16.37	HP 12X53	25.87	6	15	-	-	-	-
370	527+00.68	92.12	559.16	557.66	531.82	542.82	11.00	16.34	HP 12X53	25.84	6	15	-	-	-	-
371	527+06.58	92.28	559.13	557.63	531.82	542.82	11.00	16.31	HP 12X53	25.81	6	15	-	-	-	-
372	527+12.47	92.44	559.11	557.61	531.82	542.82	11.00	16.29	HP 12X53	25.79	6	15	-	-	-	-
373	527+18.36	92.61	559.08	557.58	530.72	541.72	11.00	17.36	HP 12X53	26.86	6	15	-	-	-	-
374	527+24.26	92.80	559.05	557.55	530.72	541.72	11.00	17.33	HP 12X53	26.83	6	15	-	-	-	-
375	527+30.15	92.96	559.03	557.53	530.72	541.72	11.00	17.31	HP 12X53	26.81	6	15	-	-	-	-
376	527+36.04	93.14	559.00	557.50	530.72	541.72	11.00	17.28	HP 12X53	26.78	6	15	-	-	-	-
377	527+41.93	93.32	559.05	557.55	530.72	541.72	11.00	17.33	HP 12X53	26.83	6	15	-	-	-	-
378	527+47.83	93.51	559.19	557.69	530.72	541.72	11.00	17.47	HP 12X53	26.97	6	15	-	-	-	-
379	527+53.72	93.70	559.32	557.82	530.72	541.72	11.00	17.60	HP 12X53	27.10	6	15	-	-	-	-
380	527+59.61	93.90	559.45	557.95	530.72	541.72	11.00	17.73	HP 12X53	27.23	6	15	-	-	-	-
381	527+65.50	94.10	559.58	558.08	529.00	541.00	12.00	18.58	HP 12X53	29.08	6	15	7	15	-	-
382	527+71.39	94.30	559.71	558.21	529.00	541.00	12.00	18.71	HP 12X53	29.21	6	15	7	15	-	-
383	527+77.28	94.51	559.85	558.35	529.00	541.00	12.00	18.85	HP 12X53	29.35	6	15	7	15	-	-
384	527+83.17	94.72	559.98	558.48	529.00	541.00	12.00	18.98	HP 12X53	29.48	6	15	7	15	-	-
385	527+89.06	94.94	560.11	558.61	528.41	540.41	12.00	19.70	HP 12X53	30.20	6	15	7	15	-	-
386	527+94.95	95.16	560.24	558.74	528.41	540.41	12.00	19.83	HP 12X53	30.33	6	15	7	15	-	-
387	528+00.84	95.39	560.37	558.87	528.41	540.41	12.00	19.96	HP 12X53	30.46	6	15	7	15	-	-
388	528+06.72	95.61	560.50	559.00	528.41	540.41	12.00	20.09	HP 12X53	30.59	6	15	7	15	-	-
389	528+12.61	95.85	560.64	559.14	527.77	539.77	12.00	20.87	HP 12X53	31.37	6	15	7	15	-	-
390	528+18.50	96.08	560.77	559.27	527.77	539.77	12.00	21.00	HP 12X53	31.50	6	15	7	15	-	-

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RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED JLM | DRAWN SMJ | REVIEWED SSK | DATE 12-15-21
CHECKED NCK | REVISED | STRUCTURE FILE NUMBER

RETAINING WALL DETAIL TABLE 6 OF 8
SOLDIER PILE WITH LAGGING WALL V

HAM-75-7.85
PID No. 77889

987
2017

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RETAINING WALL DETAIL TABLE

SOLDIER PILES AND WALL DIMENSIONS

SOLDIER PILE NUMBER	SOLDIER PILE STATION	SOLDIER PILE OFFSET	TOP OF WALL ELEV A	TOP OF SOLDIER PILE ELEV B	MINIMUM PILE TIP ELEV C	TOP OF DRILLED SHAFT ELEV D	LENGTH OF DRILLED SHAFT E (FT) (MIN)	WALL HEIGHT F (FT)	SOLDIER PILE SIZE	SOLDIER PILE LENGTH(FT)	FIRST ANCHOR		SECOND ANCHOR		THIRD ANCHOR	
											DISTANCE TO ANCHOR G (FT)	ANCHOR FREE LENGTH K (FT)	DISTANCE TO ANCHOR H (FT)	ANCHOR FREE LENGTH K (FT)	DISTANCE TO ANCHOR I (FT)	ANCHOR FREE LENGTH K (FT)
391	528+24.39	96.32	560.90	559.40	527.77	539.77	12.00	21.13	HP 12X53	31.63	6	15	7	15	-	-
392	528+30.27	96.57	561.03	559.53	527.77	539.77	12.00	21.26	HP 12X53	31.76	6	15	7	15	-	-
393	528+36.16	96.82	561.17	559.67	527.77	539.77	12.00	21.40	HP 12X53	31.90	6	15	7	15	-	-
394	528+42.04	97.07	561.30	559.80	527.77	539.77	12.00	21.53	HP 12X53	32.03	6	15	7	15	-	-
395	528+47.93	97.33	561.43	559.93	527.77	539.77	12.00	21.66	HP 12X53	32.16	6	15	7	15	-	-
396	528+53.81	97.59	561.56	560.06	527.77	539.77	12.00	21.79	HP 12X53	32.29	6	15	7	15	-	-
397	528+59.70	97.86	561.70	560.20	524.22	539.22	15.00	22.48	HP 12X53	35.98	7	15	9	15	-	-
398	528+65.58	98.12	561.83	560.33	524.22	539.22	15.00	22.61	HP 12X53	36.11	7	15	9	15	-	-
399	528+71.46	98.40	561.96	560.46	524.22	539.22	15.00	22.74	HP 12X53	36.24	7	15	9	15	-	-
400	528+77.35	98.68	562.09	560.59	524.22	539.22	15.00	22.87	HP 12X53	36.37	7	15	9	15	-	-
401	528+83.23	98.96	562.23	560.73	524.22	539.22	15.00	23.01	HP 12X53	36.51	7	15	9	15	-	-
402	528+89.11	99.24	562.36	560.86	524.22	539.22	15.00	23.14	HP 12X53	36.64	7	15	9	15	-	-
403	528+94.99	99.53	562.49	560.99	524.22	539.22	15.00	23.27	HP 12X53	36.77	7	15	9	15	-	-
404	529+00.87	99.83	562.60	561.10	524.22	539.22	15.00	23.38	HP 12X53	36.88	7	15	9	15	-	-
405	529+06.75	100.12	562.63	561.13	524.22	539.22	15.00	23.41	HP 12X53	36.91	7	15	9	15	-	-
406	529+12.63	100.43	562.66	561.16	524.22	539.22	15.00	23.44	HP 12X53	36.94	7	15	9	15	-	-
407	529+18.51	100.73	562.70	561.20	524.22	539.22	15.00	23.48	HP 12X53	36.98	7	15	9	15	-	-
408	529+24.39	101.04	562.73	561.23	524.22	539.22	15.00	23.51	HP 12X53	37.01	7	15	9	15	-	-
409	529+30.27	101.36	562.76	561.26	523.32	538.32	15.00	24.44	HP 12X53	37.94	7	15	9	15	-	-
410	529+36.14	101.67	562.80	561.30	523.32	538.32	15.00	24.48	HP 12X53	37.98	7	15	9	15	-	-
411	529+42.02	102.00	562.83	561.33	523.32	538.32	15.00	24.51	HP 12X53	38.01	7	15	9	15	-	-
412	529+47.90	102.32	562.86	561.36	523.32	538.32	15.00	24.54	HP 12X53	38.04	7	15	9	15	-	-
413	529+53.77	102.65	562.89	561.39	523.32	538.32	15.00	24.57	HP 12X53	38.07	7	15	9	15	-	-
414	529+59.65	102.99	562.93	561.43	523.32	538.32	15.00	24.61	HP 12X53	38.11	7	15	9	15	-	-
415	529+65.52	103.32	562.96	561.46	523.32	538.32	15.00	24.64	HP 12X53	38.14	7	15	9	15	-	-
416	529+71.40	103.67	562.99	561.49	523.32	538.32	15.00	24.67	HP 12X53	38.17	7	15	9	15	-	-
417	529+77.27	104.01	563.02	561.52	523.32	538.32	15.00	24.70	HP 12X53	38.20	7	15	9	15	-	-
418	529+83.14	104.36	563.06	561.56	523.32	538.32	15.00	24.74	HP 12X53	38.24	7	15	9	15	-	-
419	529+89.01	104.72	563.09	561.59	523.32	538.32	15.00	24.77	HP 12X53	38.27	7	15	9	15	-	-
420	529+94.88	105.07	563.12	561.62	523.32	538.32	15.00	24.80	HP 12X53	38.30	7	15	9	15	-	-
421	530+00.76	105.44	563.15	561.65	522.66	537.66	15.00	25.49	HP 12X53	38.99	7	15	9	15	-	-
422	530+06.63	105.80	563.18	561.68	522.66	537.66	15.00	25.52	HP 12X53	39.02	7	15	9	15	-	-
423	530+12.50	106.17	563.21	561.71	522.66	537.66	15.00	25.55	HP 12X53	39.05	7	15	9	15	-	-
424	530+18.36	106.55	563.25	561.75	522.66	537.66	15.00	25.59	HP 12X53	39.09	7	15	9	15	-	-
425	530+24.23	106.93	563.28	561.78	522.66	537.66	15.00	25.62	HP 12X53	39.12	7	15	9	15	-	-
426	530+30.10	107.31	563.31	561.81	522.66	537.66	15.00	25.65	HP 12X53	39.15	7	15	9	15	-	-
427	530+35.97	107.70	563.34	561.84	522.66	537.66	15.00	25.68	HP 12X53	39.18	7	15	9	15	-	-
428	530+41.83	108.09	563.38	561.88	522.66	537.66	15.00	25.72	HP 12X53	39.22	7	15	9	15	-	-
429	530+47.70	108.48	563.41	561.91	522.66	537.66	15.00	25.75	HP 12X53	39.25	7	15	9	15	-	-
430	530+53.56	108.88	563.44	561.94	522.66	537.66	15.00	25.78	HP 12X53	39.28	7	15	9	15	-	-
431	530+59.43	109.28	563.47	561.97	522.66	537.66	15.00	25.81	HP 12X53	39.31	7	15	9	15	-	-
432	530+65.29	109.69	563.51	562.01	522.66	537.66	15.00	25.85	HP 12X53	39.35	7	15	9	15	-	-
433	530+71.15	110.10	563.53	562.03	519.27	537.27	18.00	26.26	HP 12X53	42.76	8	16	9	15	-	-
434	530+77.01	110.52	563.57	562.07	519.27	537.27	18.00	26.30	HP 12X53	42.80	8	16	9	15	-	-
435	530+82.88	110.93	563.60	562.10	519.27	537.27	18.00	26.33	HP 12X53	42.83	8	16	9	15	-	-
436	530+88.74	111.36	563.63	562.13	519.27	537.27	18.00	26.36	HP 12X53	42.86	8	16	9	15	-	-
437	530+94.60	111.78	563.66	562.16	519.27	537.27	18.00	26.39	HP 12X53	42.89	8	16	9	15	-	-
438	531+00.45	112.21	563.70	562.20	519.27	537.27	18.00	26.43	HP 12X53	42.93	8	16	9	15	-	-
439	531+06.31	112.65	563.73	562.23	519.27	537.27	18.00	26.46	HP 12X53	42.96	8	16	9	15	-	-
440	531+12.17	113.09	563.76	562.26	519.27	537.27	18.00	26.49	HP 12X53	42.99	8	16	9	15	-	-
441	531+18.03	113.53	563.79	562.29	519.27	537.27	18.00	26.52	HP 12X53	43.02	8	16	9	15	-	-
442	531+23.94	113.98	563.83	562.33	519.27	537.27	18.00	26.56	HP 12X53	43.06	8	16	9	15	-	-
443	531+29.92	114.42	563.86	562.36	519.27	537.27	18.00	26.59	HP 12X53	43.09	8	16	9	15	-	-
444	531+35.91	114.86	563.89	562.39	519.27	537.27	18.00	26.62	HP 12X53	43.12	8	16	9	15	-	-
445	531+41.89	115.30	563.92	562.42	519.27	537.27	18.00	26.65	HP 12X53	43.15	8	16	9	15	-	-
446	531+47.87	115.74	563.95	562.45	519.27	537.27	18.00	26.68	HP 12X53	43.18	8	16	9	15	-	-
447	531+53.86	116.17	563.99	562.49	519.27	537.27	18.00	26.72	HP 12X53	43.22	8	16	9	15	-	-
448	531+59.84	116.60	564.02	562.52	519.27	537.27	18.00	26.75	HP 12X53	43.25	8	16	9	15	-	-
449	531+65.83	117.03	564.06	562.56	518.63	536.63	18.00	27.43	HP 12X53	43.93	8	16	9	15	-	-
450	531+71.81	117.46	564.33	562.83	518.63	536.63	18.00	27.70	HP 12X53	44.20	8	16	9	15	-	-
451	531+77.80	117.88	565.13	563.63	516.63	536.63	20.00	28.50	HP 12X53	47.00	6.5	21	9	16.5	9	15
452	531+83.75	118.61	565.93	564.43	516.63	536.63	20.00	29.30	HP 12X53	47.80	6.5	21	9	16.5	9	15
453	531+89.66	119.66	567.43	565.93	516.63	536.63	20.00	30.80	HP 12X53	49.30	6.5	21	9	16.5	9	15
454	531+95.51	121.01	568.22	566.72	516.63	536.63	20.00	31.59	HP 12X53	50.09	6.5	21	9	16.5	9	15
455	532+01.28	122.67	569.02	567.52	514.63	536.63	22.00	32.39	HP 12X53	52.89	6.5	21	9	16.5	9	15
456	532+06.95	124.62	569.82	568.32	514.63	536.63	22.00	33.19	HP 12X53	53.69	6.5	21	9	16.5	9	15

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RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED JLM | DRAWN SMJ | REVIEWED SSK | DATE 12-15-21

CHECKED NCK | REVISED | STRUCTURE FILE NUMBER

RETAINING WALL DETAIL TABLE 7 OF 8
SOLDIER PILE WITH LAGGING WALL V

HAM-75-7.85
PID No. 77889

47 / 53

988
2017

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RETAINING WALL DETAIL TABLE

SOLDIER PILES AND WALL DIMENSIONS

SOLDIER PILE NUMBER	SOLDIER PILE STATION	SOLDIER PILE OFFSET	TOP OF WALL ELEV A	TOP OF SOLDIER PILE ELEV B	MINIMUM PILE TIP ELEV C	TOP OF DRILLED SHAFT ELEV D	LENGTH OF DRILLED SHAFT E (FT) (MIN)	WALL HEIGHT F (FT)	SOLDIER PILE SIZE	SOLDIER PILE LENGTH(FT)	FIRST ANCHOR		SECOND ANCHOR		THIRD ANCHOR	
											DISTANCE TO ANCHOR G (FT)	ANCHOR FREE LENGTH K (FT)	DISTANCE TO ANCHOR H (FT)	ANCHOR FREE LENGTH K (FT)	DISTANCE TO ANCHOR I (FT)	ANCHOR FREE LENGTH K (FT)
457	532+12.51	126.87	569.92	568.42	513.23	535.23	22.00	34.69	HP 12X53	55.19	7.5	23	10	18	10	15
458	532+17.95	129.41	570.72	569.22	513.23	535.23	22.00	35.49	HP 12X53	55.99	7.5	23	10	18	10	15
459	532+23.25	132.23	571.52	570.02	511.23	535.23	24.00	36.29	HP 12X53	58.79	7.5	23	10	18	10	15
460	532+28.39	135.32	571.89	570.39	511.23	535.23	24.00	36.66	HP 12X53	59.16	7.5	23	10	18	10	15
461	532+33.36	138.67	571.32	569.82	509.83	533.83	24.00	37.49	HP 12X53	59.99	7.5	23	10	18	10	15
462	532+38.34	142.03	570.75	569.25	509.83	533.83	24.00	36.92	HP 12X53	59.42	7.5	23	10	18	10	15
463	532+43.31	145.39	570.17	568.67	509.83	533.83	24.00	36.34	HP 12X53	58.84	7.5	23	10	18	10	15
464	532+48.28	148.74	568.35	566.85	511.83	533.83	22.00	34.52	HP 12X53	55.02	7.5	23	10	18	10	15
465	532+53.26	152.10	566.50	565.00	511.83	533.83	22.00	32.67	HP 12X53	53.17	6.5	21	9	16.5	9	15
466	532+58.23	155.46	564.65	563.15	513.83	533.83	20.00	30.82	HP 12X53	49.32	6.5	21	9	16.5	9	15
467	532+63.20	158.81	562.80	561.30	513.83	533.83	20.00	28.97	HP 12X53	47.47	6.5	21	9	16.5	9	15
468	532+68.18	162.17	560.95	559.45	515.83	533.83	18.00	27.12	HP 12X53	43.62	8	16	9	15	-	-
469	532+73.15	165.53	559.11	557.61	518.83	533.83	15.00	25.28	HP 12X53	38.78	7	15	9	15	-	-
470	532+78.12	168.88	557.26	555.76	518.83	533.83	15.00	23.43	HP 12X53	36.93	7	15	9	15	-	-
471	532+83.10	172.24	555.41	553.91	521.83	533.83	12.00	21.58	HP 12X53	32.08	6	15	7	15	-	-
472	532+88.07	175.60	553.56	552.06	521.83	533.83	12.00	19.73	HP 12X53	30.23	6	15	7	15	-	-
473	532+93.05	178.96	551.71	550.21	521.83	533.83	12.00	17.88	HP 12X53	28.38	6	15	-	-	-	-
474	532+98.02	182.31	549.86	548.36	521.83	533.83	12.00	16.03	HP 12X53	26.53	6	15	-	-	-	-
475	533+02.99	185.67	548.01	546.51	521.83	533.83	12.00	14.18	HP 12X53	24.68	6	15	-	-	-	-
476	533+07.97	189.03	546.16	544.66	521.83	533.83	12.00	12.33	HP 12X53	22.83	5	15	-	-	-	-
477	533+12.94	192.38	544.74	543.24	521.83	533.83	12.00	10.91	HP 12X53	21.41	-	-	-	-	-	-
478	533+17.91	195.74	543.55	542.05	521.83	533.83	12.00	9.72	HP 12X53	20.22	-	-	-	-	-	-
479	533+22.89	199.10	542.36	540.86	521.83	533.83	12.00	8.53	HP 12X53	19.03	-	-	-	-	-	-

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NOTES:

1. SEE SHEETS 32/53 TO 37/53 FOR PILE SPACING.

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

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JLM	SMJ	SSK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

RETAINING WALL DETAIL TABLE 8 OF 8
SOLDIER PILE WITH LAGGING WALL V

HAM-75-7.85
PID No. 77889

989
2017

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WALL PANEL TABLE

PANEL NUMBER	PANEL TYPE	PANEL LENGTH	ELEV A1	ELEV A2	ELEV A2-2	ELEV A3	A BARS		B BARS		C BARS		D BARS		E BARS	
							NO	MARK	NO	MARK	NO	MARK	NO	MARK	NO	MARK
1	AA	24	533.67	539.23		540.66	14	A501	2	B501			50	D501		
2	AA	24	533.67	540.66		542.10	16	A501	2	B501			50	D502		
3	AA	24	533.67	542.10		543.53	18	A501	2	B501			50	D503		
4	AA	24	533.67	543.53		544.96	22	A501	2	B501			50	D504		
5	AC	24	534.09	544.95	545.10	546.26	30	A501	2	B501	2	C501	50	D505		
6	AB	24	534.09	546.26		547.55	34	A501	2	B501	2	C501	50	D506		
7	AB	24	534.09	547.55		548.84	38	A501	2	B501	2	C501	50	D507		
8	AB	24	534.09	548.84		550.13	40	A501	2	B501	2	C501	50	D508		
9	AB	24	534.86	550.13		551.42	42	A501	2	B501	2	C502	50	D509		
10	AD	24	534.86	551.42		552.71	46	A501	2	B601			50	D510		
11	AC	24	534.86	552.71	553.18	553.61	50	A501	2	B601			50	D511		
12	AD	24	534.86	553.61		554.28	52	A501	2	B601			50	D512		
13	AD	24	535.58	554.29		554.96	52	A501	2	B601			50	D513		
14	AD	24	535.58	554.96		555.64	54	A501	2	B601			50	D514		
15	AC	24	535.58	555.64	556.00	556.31	56	A501	2	B601			50	D515		
16	AD	24	535.58	556.31		556.99	56	A601	2	B601			50	D516		
17	AE	24	536.27	556.99	557.41	557.44	56	A601	2	B601			32	D517	18	E502
18	AF	24	536.27	557.44		557.51	58	A601					50	D518		
19	AF	24	536.27	557.51		557.58	58	A601					50	D519		
20	AF	24	536.27	557.58		557.65	58	A601					50	D520		
21	AF	24	536.92	557.65		557.72	58	A601					50	D521		
22	AF	24	536.92	557.72		557.79	58	A601					50	D522		
23	AF	24	536.92	557.79		557.86	58	A601					50	D523		
24	AF	24	536.92	557.86		557.93	58	A601					50	D524		
25	AF	24	537.53	557.93		558.00	56	A601					50	D525		
26	AF	24	537.53	558.00		558.07	56	A601					50	D526		
27	AF	24	537.53	558.07		558.14	56	A601					50	D527		
28	AF	24	537.53	558.14		558.21	58	A601					50	D528		
29	AF	24	538.14	558.21		558.28	56	A601					50	D529		
30	AF	24	538.14	558.28		558.35	56	A601					50	D530		
31	AF	24	538.14	558.35		558.42	56	A601					50	D531		
32	AF	24	538.14	558.42		558.49	56	A601					50	D532		
33	AF	24	538.79	558.49		558.56	54	A601					50	D533		
34	AF	24	538.79	558.56		558.63	54	A601					50	D534		
35	AF	24	538.79	558.63		558.70	54	A601					50	D535		
36	AE	24	538.79	558.70	558.73	558.77	54	A601	2	B601			32	D536	18	E501
37	AF	24	539.75	558.77		558.84	52	A601					50	D537		
38	AF	24	539.75	558.84		558.91	52	A601					50	D538		
39	AF	24	539.75	558.91		558.98	54	A601					50	D539		
40	AF	24	539.75	558.98		559.05	54	A601					50	D540		
41	AH	24	540.65	559.05		559.12	52	A501					50	D541		
42	AH	24	540.65	559.12		559.19	52	A501					50	D542		
43	AH	24	540.65	559.19		559.26	52	A501					50	D543		
44	AH	24	541.29	559.26		559.33	50	A501					50	D544		
45	AH	24	541.29	559.33		559.40	50	A501					50	D545		
46	AH	24	541.29	559.40		559.47	50	A501					50	D546		
47	AH	24	541.96	559.47		559.54	48	A501					50	D547		
48	AH	24	541.96	559.54		559.61	48	A501					50	D548		
49	AE	24	541.96	559.61	559.64	559.68	48	A501	2	B601			32	D549	18	E509
50	AG	24	542.76	559.68		559.75	70	A501					50	D550		
51	AG	24	542.76	559.75		559.82	70	A501					50	D551		
52	AH	24	542.76	559.82		559.89	48	A501					50	D552		
53	AH	24	543.58	559.89		559.95	46	A501					50	D553		
54	AH	24	543.58	559.95		560.02	46	A501					50	D554		
55	AH	24	543.58	560.02		560.09	46	A501					50	D555		
56	AH	24	544.13	560.10		560.16	44	A501					50	D556		
57	AH	24	544.13	560.16		560.23	44	A501					50	D557		
58	AH	24	544.13	560.23		560.30	46	A501					50	D558		
59	AH	24	544.55	560.30		560.37	44	A501					50	D559		
60	AH	24	544.55	560.37		560.43	44	A501					50	D560		
61	AH	24	544.55	560.43		560.50	44	A501					50	D561		
62	AH	24	544.98	560.51		560.58	44	A501					50	D562		
63	AH	24	544.98	560.58		560.65	44	A501					50	D563		
64	AH	24	544.98	560.65		560.71	44	A501					50	D564		

WALL PANEL TABLE

PANEL NUMBER	PANEL TYPE	PANEL LENGTH	ELEV A1	ELEV A2	ELEV A2-2	ELEV A3	A BARS		B BARS		C BARS		D BARS		E BARS	
							NO	MARK	NO	MARK	NO	MARK	NO	MARK	NO	MARK
65	AH	24	545.4	560.71		560.78	42	A501					50	D565		
66	AH	24	545.4	560.78		560.85	44	A501					50	D566		
67	AH	24	545.4	560.85		560.92	44	A501					50	D567		
68	AH	24	557.56	572.65		572.72	42	A501					50	D568		
69	AH	24	557.56	572.72		572.79	42	A501					50	D569		
70	AH	24	557.56	572.79		572.86	42	A501					50	D570		
71	AH	24	546.08	561.13		561.2	42	A501					50	D571		
72	AI	24	546.08	561.2	561.21	563.33	42	A501	2	B504	6	C503	10	D572	40	E503
73	AJ	24	546.08	563.33		563.18	48	A501					50	D573		
74	AJ	24	546.48	563.18		563.04	46	A501					50	D574		
75	AJ	24	546.48	563.04		562.9	46	A501					50	D575		
76	AK	24	546.48	562.9	562.84	561.48	40	A501	2	B505	6	C504	20	D576	30	E504
77	AL	24	546.25	561.49	560.89	560.81	40	A501	2	B506			14	D577	36	E505
78	AN	24	546.25	560.81		560.7	40	A501					50	D578		
79	AN	24	546.25	560.7		560.6	40	A501					50	D579		
80	AN	24	545.85	560.59		560.49	40	A501					50	D580		
81	AN	24	545.85	560.49		560.38	40	A501					50	D581		
82	AN	24	545.85	560.38		560.27	40	A501					50	D582		
83	AN	24	545.19	560.27		560.16	42	A501					50	D583		
84	AN	24	545.19	560.16		560.05	42	A501					50	D584		
85	AN	24	545.19	560.05		559.95	42	A501					50	D585		
86	AN	24	544.38	559.95		559.84	44	A501					50	D586		
87	AV	24	544.38	559.84		559.74	52	A501	10	B502	10	C505	44	D587	8	E506
88	AN	24	544.38	559.74		559.63	42	A501					50	D588		
89	AN	24	543.71	559.63		559.57	44	A501					50	D589		
90	AN	24	543.71	559.57		559.51	44	A501					50	D590		
91	AN	24	543.71	559.51		559.45	44	A501					50	D591		
92	AN	24	542.82	559.31		559.2	46	A501					50	D592		
93	AN	24	542.82	559.2		559.09	46	A501					50	D593		
94	AN	24	541.72	559.1		558.99	48	A501					50	D594		
95	AO	24	541.72	558.99		559.52	50	A501	2	B501			50	D595		
96	AP	24	541	559.52		560.04	52	A601	2	B601			50	D596		
97	AP	24	540.42	560.05		560.58	56	A601	2	B601			50	D597		
98	AP	24	539.77	560.57		561.1	58	A601	2	B601			50	D598		
99	AP	24	539.77	561.1		561.63	60	A601	2	B601			50	D599		
100	AP	24	539.22	561.63		562.16	64	A601	2	B601			50	D500A		
101	AQ	24	539.22	562.16	562.59	562.61	64	A601	2	B601			40	D500B	10	E507
102	AR	24	539.22	562.61		562.74	64	A601					50	D500C		
103	AR	24	538.32	562.75		562.88	68	A601					50	D500D		
104	AR	24	538.32	562.88		563.01	68	A601					50	D500E		
105	AR	24	538.32	563.01		563.14	68	A601					50	D500F		
106	AR	24	537.66	563.13		563.26	70	A601					50	D500G		
107	AR	24	537.66	563.26		563.39	70	A601					50	D500H		
108	AR	24	537.66	563.39		563.51	70	A601					50	D500I		
109	AR	24	537.28	563.53		563.66	72	A601					50	D500J		
110	AR	24	537.28	563.66		563.79	72	A601					50	D500K		
111	AR	24	537.28	563.79		563.92	72	A601					50	D500L		
112	AR	24	537.28	563.92		564.05	74	A601					50	D500M		
113	AR	24	536.63	564.04	564.07	566.32	82	A601					50	D500N		
114	AR	24	535.93	566.32		569.52	82	A601	2	B604	8	C509	50	D500O		
115	AW	24	535.23	569.52	572.07	571.61	92	A601	2	B602	6	C506	40	D500P	10	E508
116	AW	24	533.83	571.61	570.16	567.43	90	A601	2	B603	8	C507	32	D500Q	18	E509
117	AT	24	533.83	567.43		560.03	70	A601	2	B507	18	C510	50	D500R		
118	AT	24	533.83	560.03		552.63	50	A601	2	B507	18	C511	50	D500S		
119	AT	24	533.83	552.63		545.33	30	A601	2	B507	18	C512	50	D500T		
120	AT	19.146	533.83	545.33		541.55	20	A602	2	B508	10	C513	40	D500U		

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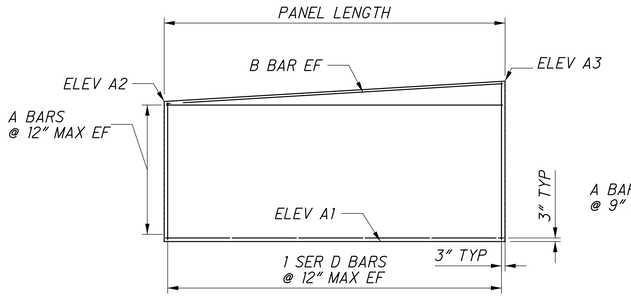
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CHECKED NCK | REVISED | STRUCTURE FILE NUMBER

WALL PANEL DETAILS 1 OF 3
SOLDIER PILE WITH LAGGING WALL V

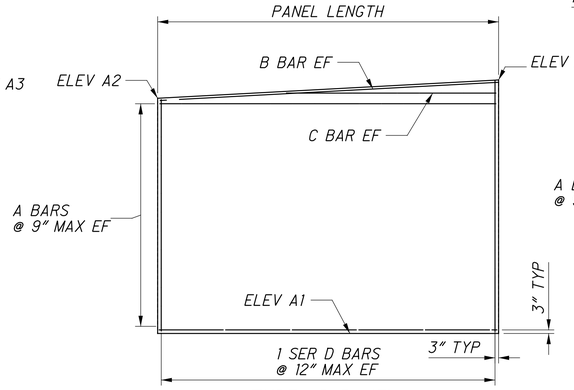
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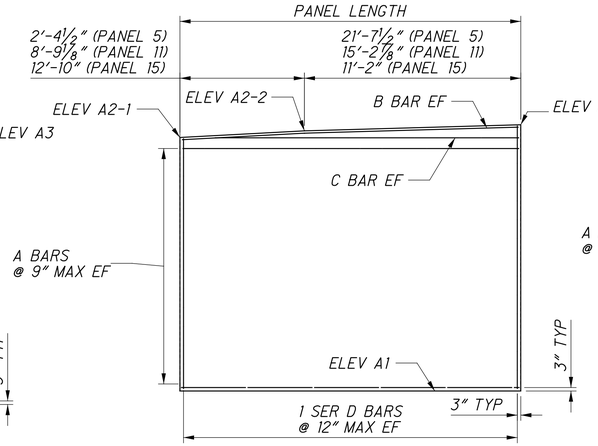
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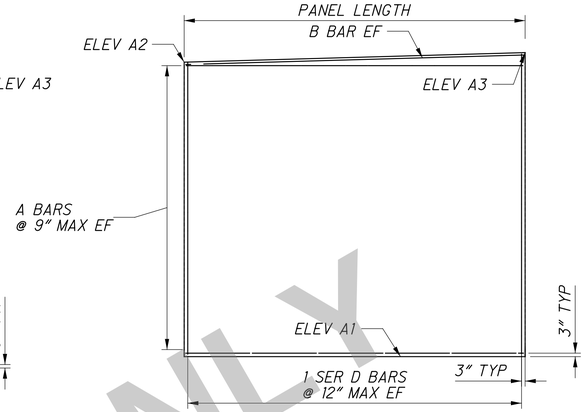
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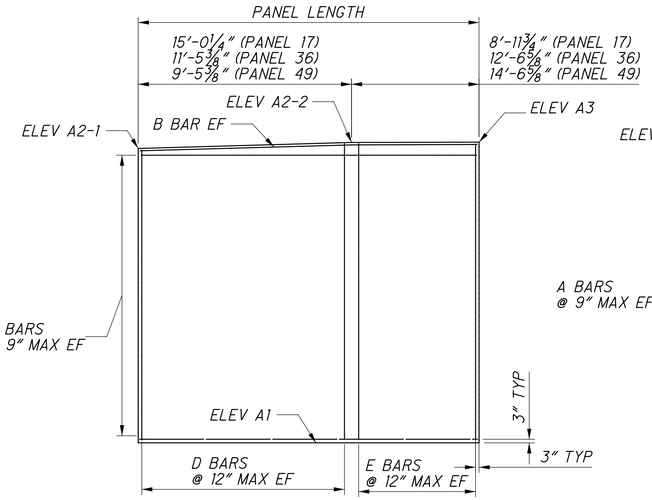
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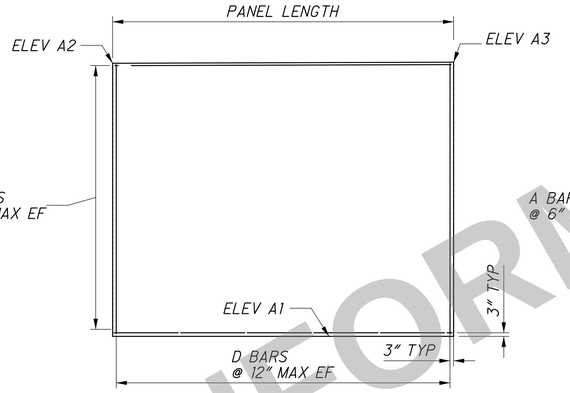
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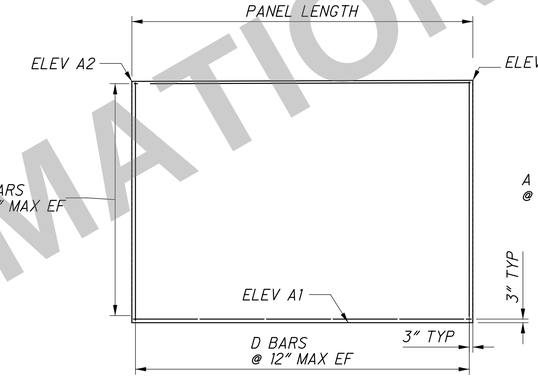
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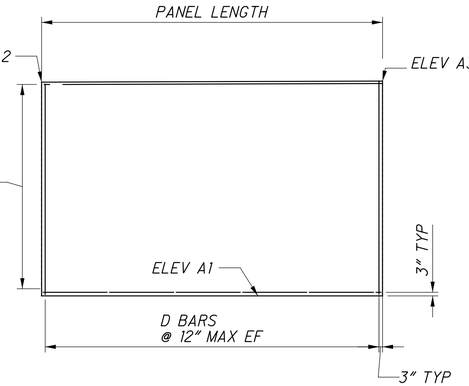
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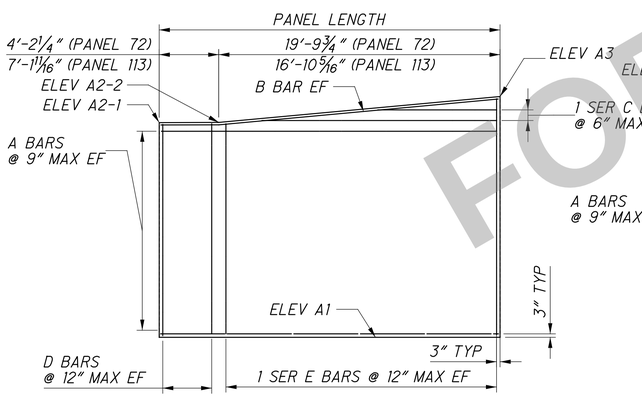
TYPE AF PANEL



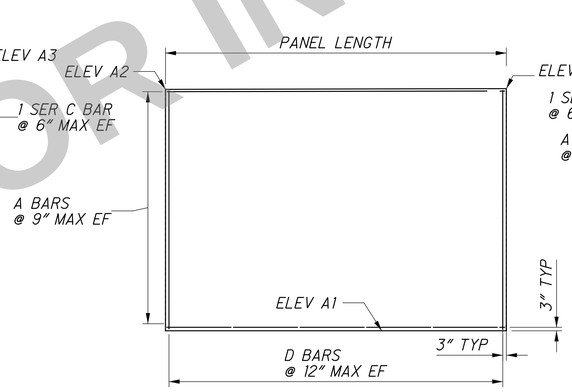
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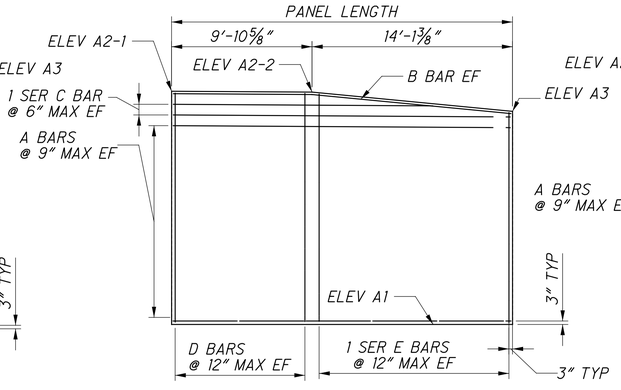
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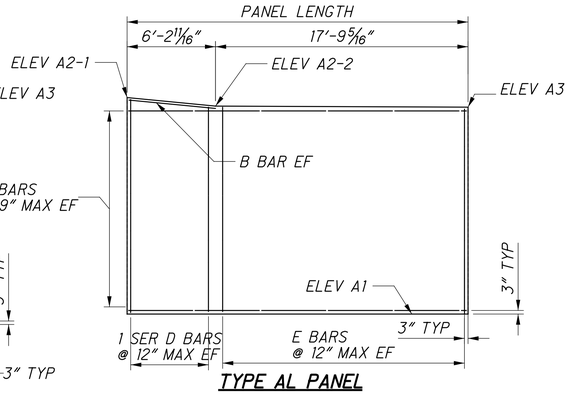
TYPE AI PANEL



TYPE AJ PANEL



TYPE AK PANEL



TYPE AL PANEL

NOTES:

1. SEE SHEET 49/53 FOR PANEL ELEVATIONS.
2. SEE SHEET 52/53 FOR REINFORCING STEEL SCHEDULE.
3. LONGITUDINAL BARS ALONG THE CURVE SHALL BE FIELD BENT.

FOR INFORMATION ONLY

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
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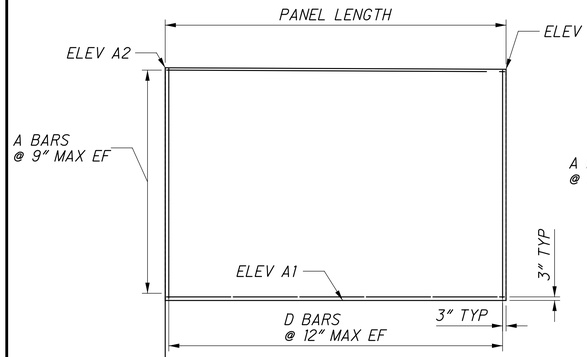
WALL PANEL DETAILS 2 OF 3
SOLDIER PILE WITH LAGGING WALL V

HAM-75-7.85
PID No. 77889

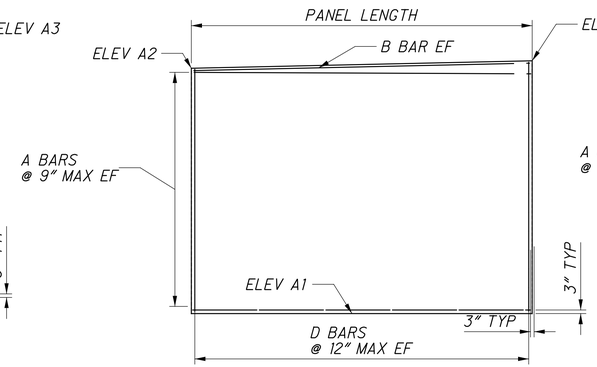
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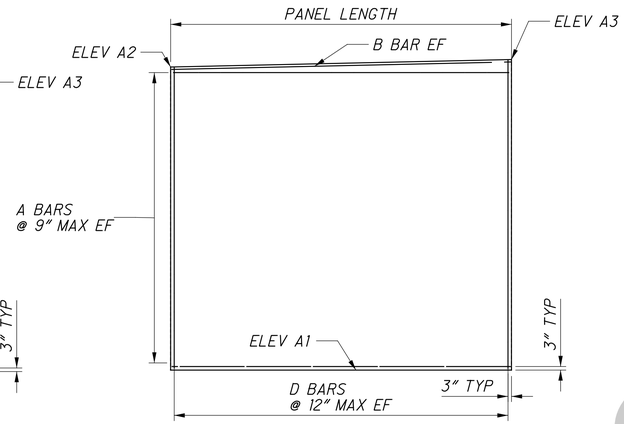
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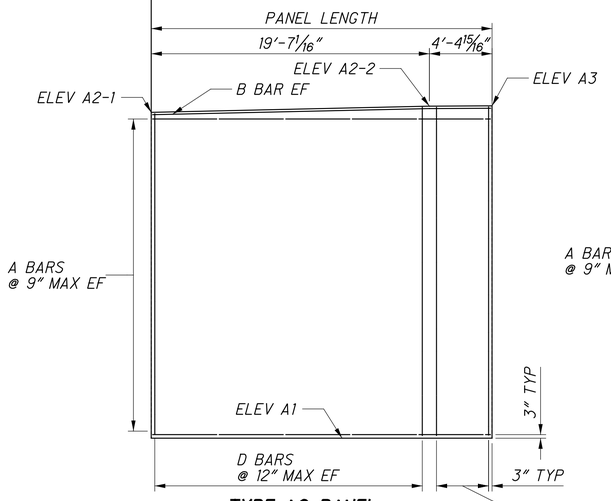
TYPE AN PANEL



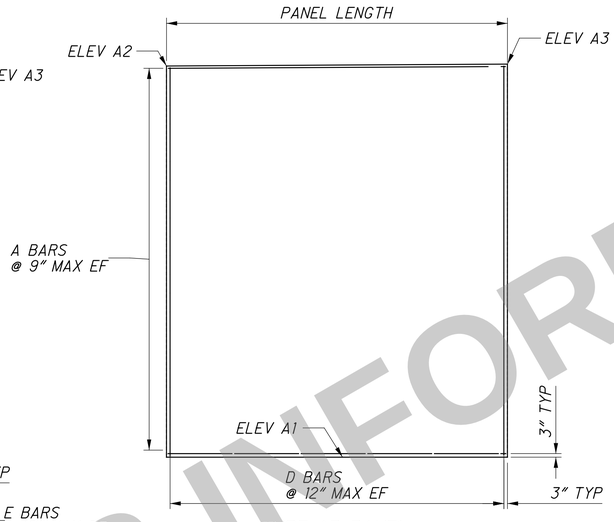
TYPE AO PANEL



TYPE AP PANEL

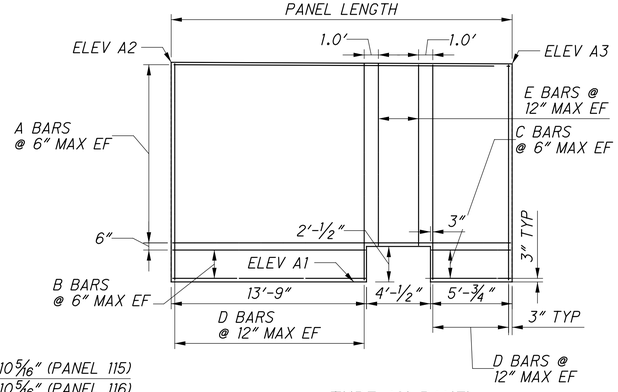


TYPE AQ PANEL

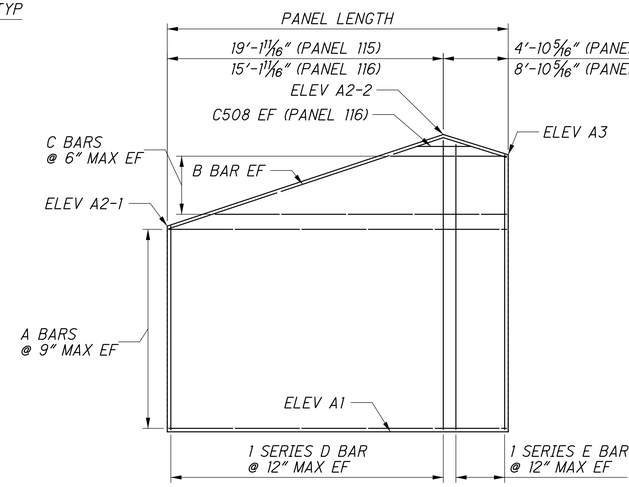


TYPE AR PANEL

TYPE AT PANEL



TYPE AV PANEL



TYPE AW PANEL

NOTES:

1. SEE SHEET 49/53 FOR PANEL ELEVATIONS.
2. SEE SHEET 52/53 FOR REINFORCING STEEL SCHEDULE.
3. LONGITUDINAL BARS ALONG THE CURVE SHALL BE FIELD BENT.

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6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

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WALL PANEL DETAILS 3 OF 3
SOLDIER PILE WITH LAGGING WALL V

HAM-75-7.85
PID No. 77889

51/53

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MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
CONCRETE FACING PANELS											
A501	3084	23'-6"	75590	ST							
A601	3014	23'-6"	106385	ST							
A602	20	18'-8"	561	ST							
B501	20	23'-6"	490	ST							
B502	10	13'-5"	140	ST							
B503	NOT	USED									
B504	2	23'-9"	50	19	19'-8 3/4"	4'-0"	5"				
B505	2	23'-9"	50	19	9'-8 1/2"	14'-0"	1'-3"				
B506	2	23'-8"	49	19	17'-7 1/2"	6'-0 1/2"	6 5/8"				
B507	6	24'-9"	155	ST							
B508	2	19'-1"	40	ST							
B601	32	23'-6"	1130	ST							
B602	2	23'-10"	72	19	15'-0"	8'-11 1/4"	1'-10"				
B603	2	24'-1"	72	19	19'-1 3/4"	4'-7"	1'-0 3/4"				
B604	2	23'-10"	72	ST							
C501	8	14'-8"	122	ST							
C502	2	21'-4"	45	ST							
C503	2 SER OF 3	5'-2" TO 14'-10"	60	ST							4'-5"
C504	2 SER OF 3	12'-7" TO 23'-0"	111	ST							5'-2 1/2"
C505	10	5'-5"	57	ST							
C506	2 SER OF 3	8'-6" TO 19'-9"	88	ST							5'-7 1/2"
C507	2 SER OF 4	14'-11" TO 22'-3"	155	ST							2'-5 5/16"
C508	2	7'-1"	15	ST							
C509	2 SER OF 4	1'-9" TO 18'-8"	85	ST							5'-7 11/16"
C510	2 SER OF 9	3'-1" TO 22'-7"	241	ST							2'-5 1/4"
C511	2 SER OF 9	3'-4" TO 22'-10"	246	ST							2'-5 1/4"
C512	2 SER OF 9	3'-9" TO 23'-3"	253	ST							2'-5 1/4"
C513	2 SER OF 5	3'-2" TO 18'-4"	112	ST							3'-9 1/2"
D501	2 SER OF 25	5'-1" TO 6'-6"	302	ST							11/16"
D502	2 SER OF 25	6'-6" TO 7'-11"	376	ST							11/16"
D503	2 SER OF 25	7'-11" TO 9'-4"	450	ST							11/16"
D504	2 SER OF 25	9'-4" TO 10'-9"	524	ST							11/16"

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
CONCRETE FACING PANELS											
D505	2 SER OF 25	10'-4" TO 11'-8"	574	ST							11/16"
D506	2 SER OF 25	11'-8" TO 13'-0"	643	ST							11/16"
D507	2 SER OF 25	13'-0" TO 14'-3"	711	ST							5/8"
D508	2 SER OF 25	14'-3" TO 15'-7"	778	ST							11/16"
D509	2 SER OF 25	14'-9" TO 16'-0"	802	ST							5/8"
D510	2 SER OF 25	16'-0" TO 17'-4"	869	ST							11/16"
D511	2 SER OF 25	17'-4" TO 18'-3"	928	ST							1/2"
D512	2 SER OF 25	18'-3" TO 18'-11"	969	ST							3/8"
D513	2 SER OF 25	18'-3" TO 18'-11"	969	ST							3/8"
D514	2 SER OF 25	18'-11" TO 19'-7"	1004	ST							3/8"
D515	2 SER OF 25	19'-7" TO 20'-3"	1039	ST							3/8"
D516	2 SER OF 25	20'-3" TO 20'-11"	1073	ST							3/8"
D517	2 SER OF 16	20'-3" TO 20'-8"	683	ST							3/8"
D518	50	20'-9"	1082	ST							
D519	50	20'-10"	1086	ST							
D520	50	20'-10"	1086	ST							
D521	50	20'-3"	1056	ST							
D522	50	20'-3"	1056	ST							
D523	50	20'-4"	1060	ST							
D524	50	20'-5"	1065	ST							
D525	50	19'-10"	1034	ST							
D526	50	19'-10"	1034	ST							
D527	50	20'-0"	1043	ST							
D528	50	20'-1"	1047	ST							
D529	50	19'-7"	1021	ST							
D530	50	19'-7"	1021	ST							
D531	50	19'-8"	1026	ST							
D532	50	19'-9"	1030	ST							
D533	50	19'-2"	1000	ST							
D534	50	19'-3"	1004	ST							
D535	50	19'-4"	1008	ST							
D536	32	19'-6"	651	ST							
D537	50	18'-6"	965	ST							
D538	50	18'-6"	965	ST							
D539	50	18'-10"	982	ST							
D540	50	18'-8"	974	ST							
D541	50	17'-11"	935	ST							
D542	50	18'-0"	939	ST							
D543	50	18'-1"	943	ST							
D544	50	17'-5"	908	ST							
D545	50	17'-6"	913	ST							

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6350 PRESIDENTIAL GATEWAY
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(614) 823-4949

DESIGNED JLM | DRAWN SMJ | REVIEWED SSK | DATE 12-15-21
CHECKED NCK | REVISED | STRUCTURE FILE NUMBER

REINFORCING STEEL SCHEDULE

SOLDIER PILE WITH LAGGING WALL V

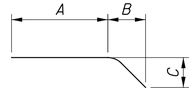
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PID No. 77889

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MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	INC
CONCRETE FACING PANELS									
D546	50	17'-7"	917	ST					
D547	50	17'-0"	887	ST					
D548	50	17'-1"	891	ST					
D549	32	17'-2"	573	ST					
D550	50	16'-5"	856	ST					
D551	50	16'-6"	860	ST					
D552	50	16'-7"	865	ST					
D553	50	15'-10"	826	ST					
D554	50	15'-11"	830	ST					
D555	50	15'-11"	830	ST					
D556	50	15'-6"	808	ST					
D557	50	15'-6"	808	ST					
D558	50	15'-7"	813	ST					
D559	50	15'-3"	795	ST					
D560	50	15'-4"	799	ST					
D561	50	15'-5"	804	ST					
D562	50	15'-0"	782	ST					
D563	50	15'-1"	787	ST					
D564	50	15'-2"	791	ST					
D565	50	14'-10"	773	ST					
D566	50	14'-11"	778	ST					
D567	50	15'-0"	782	ST					
D568	50	14'-8"	765	ST					
D569	50	14'-9"	769	ST					
D570	50	14'-9"	769	ST					
D571	50	14'-7"	761	ST					
D572	10	14'-8"	153	ST					
D573	50	16'-8"	869	ST					
D574	50	16'-1"	839	ST					
D575	50	16'-0"	839	ST					
D576	20	15'-11"	332	ST					
D577	2 SER OF 7	14'-1" TO 14'-9"	211	ST					1 5/16"
D578	50	14'-0"	730	ST					
D579	50	13'-11"	730	ST					
D580	50	14'-3"	743	ST					
D581	50	14'-1"	734	ST					
D582	50	14'-0"	730	ST					
D583	50	14'-6"	756	ST					
D584	50	14'-5"	752	ST					
D585	50	14'-4"	747	ST					
D586	50	15'-0"	782	ST					
D587	44	14'-11"	685	ST					
D588	50	14'-9"	769	ST					
D589	50	15'-5"	804	ST					
D590	50	15'-5"	804	ST					
D591	50	15'-4"	800	ST					
D592	50	15'-11"	830	ST					
D593	50	15'-10"	826	ST					
D594	50	16'-10"	878	ST					
D595	2 SER OF 25	16'-10" TO 17'-3"	889	ST					3/16"
D596	2 SER OF 25	18'-0" TO 18'-7"	954	ST					5/16"
D597	2 SER OF 25	19'-2" TO 19'-8"	1013	ST					1/4"
D598	2 SER OF 25	20'-4" TO 20'-10"	1073	ST					1/4"
D599	2 SER OF 25	20'-10" TO 21'-4"	1099	ST					1/4"

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	INC
CONCRETE FACING PANELS									
D500A	2 SER OF 25	21'-10" TO 22'-5"	1154	ST					5/16"
D500B	2 SER OF 20	22'-5" TO 22'-11"	946	ST					5/16"
D500C	50	22'-11"	1195	ST					
D500D	50	24'-0"	1252	ST					
D500E	50	24'-2"	1260	ST					
D500F	50	24'-3"	1265	ST					
D500G	50	25'-0"	1304	ST					
D500H	50	25'-2"	1312	ST					
D500I	50	25'-3"	1317	ST					
D500J	50	25'-10"	1347	ST					
D500K	50	25'-11"	1352	ST					
D500L	50	26'-1"	1360	ST					
D500M	50	26'-3"	1369	ST					
D500N	50	27'-0"	1408	ST					
D500O	2 SER OF 25	29'-11" TO 33'-2"	1645	ST					1 5/8"
D500P	2 SER OF 20	34'-0" TO 36'-4"	1133	ST					1 7/16"
D500Q	2 SER OF 16	36'-0" TO 37'-5"	622	ST					1 1/8"
D500R	2 SER OF 25	25'-9" TO 33'-2"	502	ST					3 11/16"
D500S	2 SER OF 25	18'-6" TO 25'-9"	1154	ST					3 5/8"
D500T	2 SER OF 25	11'-1" TO 18'-5"	769	ST					3 11/16"
D500U	2 SER OF 20	7'-5" TO 11'-1"	386	ST					4 3/8"
E501	18	19'-6"	366	ST					
E502	18	20'-8"	388	ST					
E503	2 SER OF 20	14'-8" TO 16'-9"	655	ST					1 5/16"
E504	2 SER OF 15	14'-6" TO 15'-11"	476	ST					1 3/16"
E505	36	14'-0"	526	ST					
E506	8	14'-11"	124	ST					
E507	10	22'-11"	239	ST					
E508	2 SER OF 5	36'-0" TO 36'-5"	263	ST					1 1/4"
E509	2 SER OF 9	33'-3" TO 35'-9"	648	ST					3 3/4"
		TOTAL	297098						



TYPE-19

NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE 3 DIGITS ARE USED, AND THE FIRST 2 DIGITS WHERE FOUR DIGITS ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, B501 IS A NO 5 BAR AND 01 INDICATES BAR SEQUENCE NUMBER. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED.

2. SER INDICATES A SERIES BAR AND INC INDICATES THE LENGTH INCREMENT FOR SERIES BARS.

3. ALL REINFORCING STEEL TO BE EPOXY COATED.

4. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/53 .

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(614) 823-4949

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REINFORCING STEEL SCHEDULE

SOLDIER PILE WITH LAGGING WALL V

HAM-75-7.85
PID No. 77889

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2017

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PROPOSED WORK

THE PROPOSED WORK CONSISTS OF BUILDING CAST-IN-PLACE REINFORCED CONCRETE RETAINING WALLS IN THE FOLLOWING LOCATIONS:

WALLS T AND Y - ALONG I.R. 75 NB ML.
WALL Z - ALONG RAMP D SOUTH OF THE SEYMOUR AVENUE HAM-75-0561 BRIDGE.
WALL J3 - ALONG RAMP C SOUTH OF THE SEYMOUR AVENUE HAM-75-0561 BRIDGE.
WALL K - ALONG RAMP C NORTH OF THE SEYMOUR AVENUE HAM-75-0561 BRIDGE.
WALL M - ALONG RAMP N, EXTENDING HAM-75-0772 BRIDGE WINGWALL.

REFERENCE SHALL BE MADE TO SUPPLEMENTAL SPECIFICATION

NONE

REFERENCE SHALL BE MADE TO SUPPLEMENT

1083 DATED 1-20-17

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOBTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DESIGN PARAMETERS

ANGLE OF FRICTION = 30°
UNIT WEIGHT OF SOIL = 125 PCF
ALLOWABLE COEFFICIENT OF FRICTION = 0.5

DESIGN DATA

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4000 PSI

REINFORCING STEEL - ASTM A615 OR A996 GRADE 60, MINIMUM YIELD STRENGTH 60,000 PSI

FOUNDATION BEARING PRESSURE

RETAINING WALL FOOTINGS, AS DESIGNED, PRODUCE THE FOLLOWING BEARING PRESSURES:

WALL	FOUNDATION BEARING PRESSURE (KSF)	
	MAX SERVICE	MAX FACTORED
T	2.25	2.81
Z	2.74	3.43
Y	2.4	3
K	1.75	2.46
M	1.84	2.52

MAINTENANCE OF TRAFFIC

FOR MAINTENANCE OF TRAFFIC DETAILS, SEE THE ROADWAY PLANS.

ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) SHALL BE APPLIED TO ALL EXPOSED SURFACES OF THE CONCRETE FACING OF THE RETAINING WALL INCLUDING THE TOP, BACKSIDE OF WALL DOWN TO THE GUTTER OR TOE OF BARRIER, AND THE FRONT VERTICAL SIDE OF THE CONCRETE FROM TOP TO BOTTOM. THE FINISH COAT COLOR FOR THE RETAINING WALL SHALL BE LIGHT NEUTRAL MEETING FEDERAL COLOR STANDARD NO. 595B-17778.

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN

ALL EXCAVATION AND BACKFILL REQUIRED TO CONSTRUCT THE PROPOSED EMBANKMENT BETWEEN THE VERTICAL LIMITS OF THE UNCLASSIFIED EXCAVATION FOR THE RETAINING WALL SHALL BE INCLUDED WITH ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN FOR PAYMENT. UNCLASSIFIED EXCAVATION WILL BE MEASURED PER CMS 503.09. SEE DETAIL ON SHEET 2/37.

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL J3, M & WALL K):

TEMPORARY SHORING IS REQUIRED TO CONSTRUCT THE CIP WALLS WITHIN THE AVAILABLE RIGHT-OF-WAY.

TEMPORARY SHORING REQUIRED IN ADDITION TO THE SHORING FOR CONSTRUCTION PAID FOR WITH THE DRAINAGE OF WALL EXCAVATIONS IS ALSO INCLUDED FOR PAYMENT IN THE LUMP SUM BID FOR THIS ITEM.

WALL J3: SEE WALL DETAIL SHEETS

WALL M: SEE WALL DETAIL SHEETS

WALL K:

EXCAVATION HEIGHT	SECTION MODULUS IN^3/FT	EMBEDMENT DEPTH (FT)	WALER FORCE (K/FT)	LOCATION FROM TOP
8' OR LESS	18.40	15	-	-
8' OR 12'	48.90	21	-	-
	18.40	10	2	2.5 FT.
12' TO 18'	18.40	18	4	4 FT.
18' TO 24'	18.40	18	6.4	4 FT.

THE DESIGN SHOWN IN THE PLANS FOR TEMPORARY SUPPORT OF THE EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF THE EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05.

ITEM 530 - SPECIAL - FORM LINER: (WALLS M, J3, Z AND K):

FOR WALL M, FORM LINERS IN ACCORDANCE WITH 508.03 SHALL BE USED. FORM LINERS SHALL BE USED TO PRODUCE THE TEXTURED SURFACES ACCORDING TO THE LIMITS SHOWN ON THE PLANS. THE FORM LINERS USED TO PRODUCE THE ARCHITECTURAL SURFACE TEXTURES SHALL BE APPROVED BY THE DIRECTOR. PROVIDE A FORMLINER THAT MATCHES THE ADJACENT DRY STAKED PATTERN OF THE ADJACENT HAM-75-0772 STRUCTURE. INCLUDE A SMOOTH COPING AS INDICATED IN THE WALL DETAILS.

FOR WALLS J3, Z AND K, IMMEDIATELY ADJACENT TO THE SEYMOUR AVENUE BRIDGE, PROVIDE SPEC FORMLINERS RE ASHLAR STONE #1523 TO MATCH THE EXISTING FORMLINER. INCORPORATE A SMOOTH COPING ALONG THE TOP OF EACH WALL TO MATCH THE EXISTING WALL AESTHETICS.

METHOD OF MEASUREMENT: THE DEPARTMENT WILL MEASURE FORM LINERS BY THE NUMBER OF SQUARE FEET. THE DEPARTMENT WILL DETERMINE THE AREA OF THE FORM LINERS USING NOMINAL DIMENSIONS AS SHOWN ON THE PLANS. THE DEPARTMENT WILL NOT ADJUST PAY QUANTITIES FOR JOINT RSTIFICATIONS OR OTHER FORM LINER CONTRUCTION DETAILS.

BASIS OF PAYMENT: THE DEPARTMENT WILL PAY FOR FALSEWORK, STRUCTURAL FORMWORK, FURNISHING, PLACING, CONSOLIDATING, FINISHING, AND CURING PROTLAND CEMENT CONCRETE SEPARATELY. PAYMENT FOR ITEM 530, SPECIAL - FORM LINER INCLUDES ALL MATERIALS AND LABOR REQUIRED TO PRODUCE THE TEXTURED CONCRETE SURFACES SHOWN ON THE PLANS AND DESCRIBED HEREIN.

ITEM 512- SEALING OF CONCRETE SURFACES (PERMANENT GRAFFITI PROTECTION), AS PER PLAN

APPLY A PERMANENT GRAFFITI COATING QUALIFIED ACCORDING TO SUPPLEMENT 1083 THAT IS COMPATIBLE WITH THE CONCRETE SEALER OVER WHICH IT IS APPLIED. APPLY THE GRAFFITI COATING IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS. THE ADDITIONAL MATERIAL AND LABOR REQUIRED TO SEAL THE AESTHETIC TREATMENT FINISH WITH THE MINIMUM OF 1" AND MAXIMUM OF 2" RELIEF SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE YARD PER CMS 512.09.

CAST IN PLACE FOOTINGS

THE CONTRACTOR SHOULD CUT THE FOOTING AND FOOTING KEYWAY TO NEAT EXCAVATION LINES WITHOUT FORMING PRIOR TO PLACING THE FOOTING CONCRETE AND REINFORCING STEEL. FORM THE FOOTING ONLY WHEN THE EXCAVATION WALLS ARE UNSTABLE.

ITEM 601 - PAVED GUTTER, TYPE 1-2, AS PER PLAN (WALL K AND M)

PAVED GUTTER, AS PER PLAN, SHALL MEET ALL THE REQUIREMENTS OF SCD DM-2.1. WIDTH SHALL BE PER SCD DM-2.1, UNLESS OTHERWISE NOTED ON THE PLANS.

PILE DESIGN LOADS (ULTIMATE BEARING VALUE):

THE ULTIMATE BEARING VALUE IS 220 KIPS PER PILE FOR THE WALL J3 PILES.

WALL J3 PILES:
19 PILES 30 FEET LONG, ORDER LENGTH
1 DYNAMIC LOAD TESTING ITEMS

ITEM 507 - PREBORED HOLES, AS PER PLAN:

INSTALL PILES IN PREBORED HOLES. PERBORE UP TO 25 FEET BELOW THE BOTTOM OF THE PILE CAP. ALL PREBORED HOLES SHALL HAVE A MINIMUM DIAMETER OF 18 INCHES AND SHALL BE BACKFILLED WITH CLEAN DRY SAND PRIOR TO DRIVING THE PILE.

ABBREVIATIONS:

CJ - CONSTRUCTION JOINT
C/C - CENTER TO CENTER
CLR - CLEAR
CONST - CONSTRUCTION
EF - EACH FACE
ELEV - ELEVATION
EX - EXISTING
FF - FAR FACE
I.R. 75 - INTERSTATE ROUTE 75
INC - INCREMENT
LT - LEFT
MAX - MAXIMUM
MIN - MINIMUM
NB - NORTH BOUND
NF - NEAR FACE
PEJF - PREFORMED EXPANSION JOINT FILLER
PROP - PROPOSED
RT - RIGHT
SER - SERIES
SPA - SPACING
STA - STATION
ST - STRAIGHT
TYP - TYPICAL

FOR INFORMATION ONLY

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RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

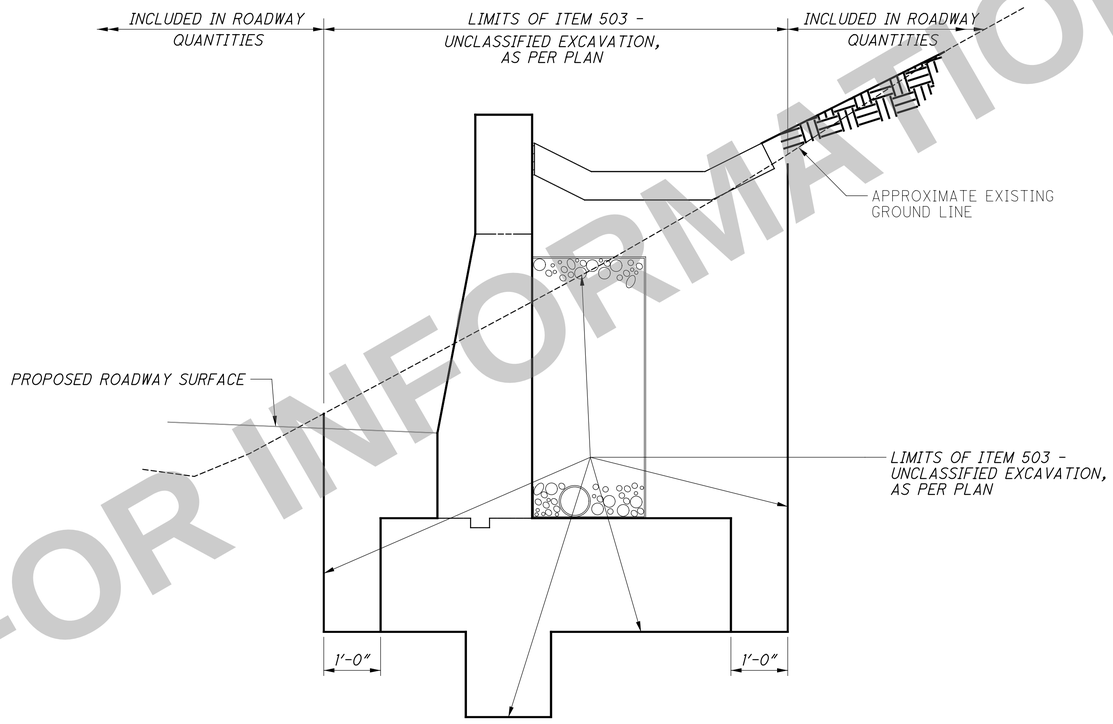
DESIGNED JLM | DRAWN SMJ | REVIEWED SSK | DATE 12-15-21
CHECKED NCK | REVISED | STRUCTURE FILE NUMBER

GENERAL NOTES
CAST IN PLACE RETAINING WALLS T, Z, Y, J3, K AND M

HAM-75-7.85
PID No. 77889

995
2017

ESTIMATED QUANTITIES - 02/IMS/PV											AS PER PLAN REFERENCE SHEET
WALL T	WALL Z	WALL Y	WALL J3	WALL K	WALL M	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	
42			6	79		203	22000	127	CU YD	EMBANKMENT, USING NATURAL SOIL, 703.16.A	
LUMP	LUMP	LUMP				503	11100	LUMP		COFFERDAMS AND EXCAVATION BRACING	
			LUMP	LUMP	LUMP	503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	3/37, 6/37, 12/37, 17/37, 22/37, 32/37
LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	503	21301	LUMP		UNCLASSIFIED EXCAVATION, AS PER PLAN	2/37
			LUMP			505	11100	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION	
			475			507	00600	475	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	
			570			507	00650	570	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	1/37
			473			507	92201	473	FT	PREBORED HOLES, AS PER PLAN	1/37
15586	28232	23059	9864	81882	2065	509	10000	160688	LB	EPOXY COATED REINFORCING STEEL	
151	299	292	75	516	25	511	50212	1359	CU YD	CLASS QC1 CONCRETE WITH QC/QA, SUBSTRUCTURE	
131	227	238	37	372	20	512	10001	1025	SQ YD	SEALING OF CONCRETE SURFACES (PERMANENT GRAFFITI PROTECTION), AS PER PLAN	3/37, 9/37, 15/37, 18/37, 27/37, 35/37
131	227	238	37	372	20	512	10100	1025	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY URETHANE)	3/37, 9/37, 15/37, 18/37, 27/37, 35/37
19	32	21		47	4	512	33000	123	SQ YD	TYPE 2 WATERPROOFING	
19						516	13400	19	SQ FT	3/4" PREFORMED EXPANSION JOINT FILLER	
20	37	90	198	122	22	516	13600	489	SQ FT	1" PREFORMED EXPANSION JOINT FILLER	
58	147	101	31	181	13	518	21200	531	CU YD	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
191	284	258	38	445		518	40000	1215	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
10	20	341		10		518	40010	381	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	
					22	518	42200	22	FT	8" PERFORATED CORRUGATED STEEL PIPE, 707.01	
					2	518	42300	2	FT	8" NON-PERFORATED CORRUGATED STEEL PIPE, INCLUDING SPECIALS, 707.01	
			1			523	20000	1	EACH	DYNAMIC LOAD TESTING	
	2245		195	206	153	530	13000	2799	SF	SPECIAL - FORMLINER	1/37
252			120			601	37500	372	FT	PAVED GUTTER, TYPE 1-2	
				502	28	601	37501	530	FT	PAVED GUTTER, TYPE 1-2, AS PER PLAN	5/37, 27/37



UNCLASSIFIED EXCAVATION, AS PER PLAN, PAYMENT LIMITS

WALL T SHOWN
WALLS Z, Y, J3, M, AND K SIMILAR

NOTES:

1. FOR ABBREVIATIONS LEGEND, SEE SHEET 1/37
2. FOR ADDITIONAL UNCLASSIFIED EXCAVATION, AS PER PLAN, PAYMENT LIMITS, SEE SHEET 1/37

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6350 PRESIDENTIAL GATEWAY
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(614) 823-4949

DESIGNED JLM | DRAWN SMJ | REVIEWED SSK | DATE 12-15-21
CHECKED NCK | REVISED | STRUCTURE FILE NUMBER

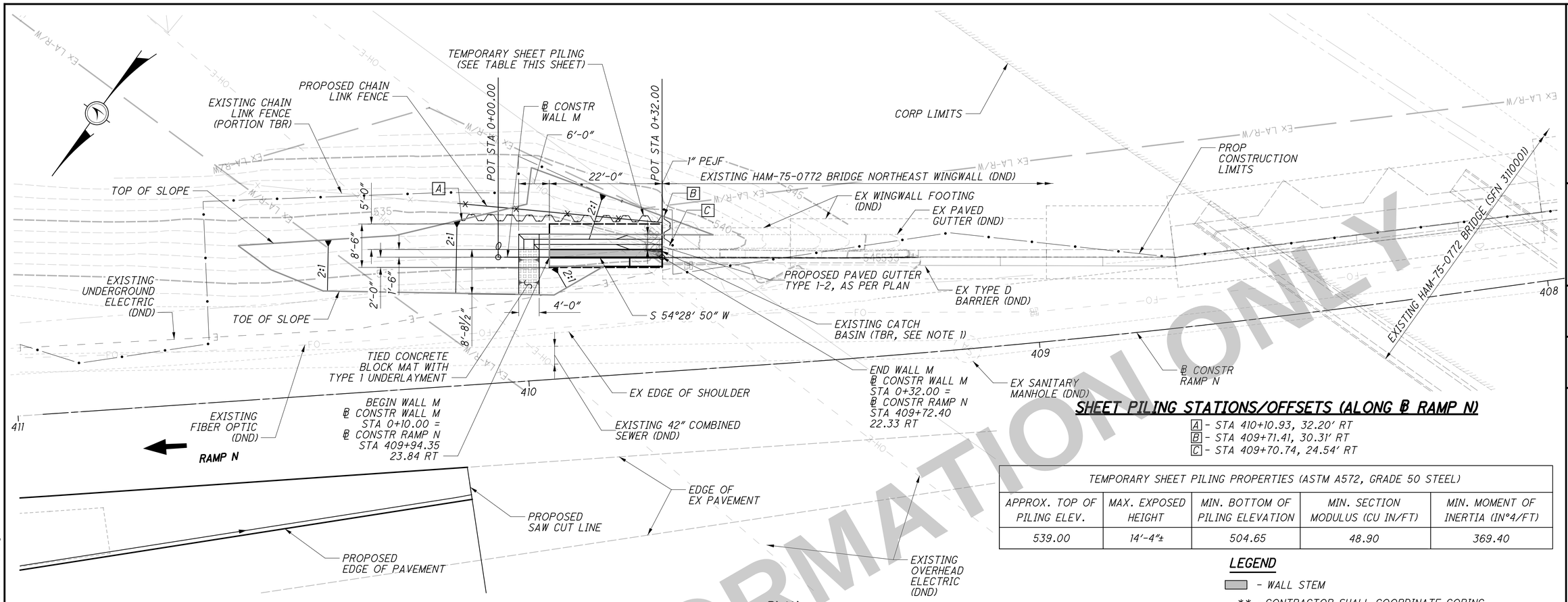
ESTIMATED QUANTITIES

CAST-IN-PLACE RETAINING WALLS T, Z, Y, J3, K AND M

HAM-75-7.85
PID No. 77889

996
2017

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SHEET PILING STATIONS/OFFSETS (ALONG ℄ RAMP N)

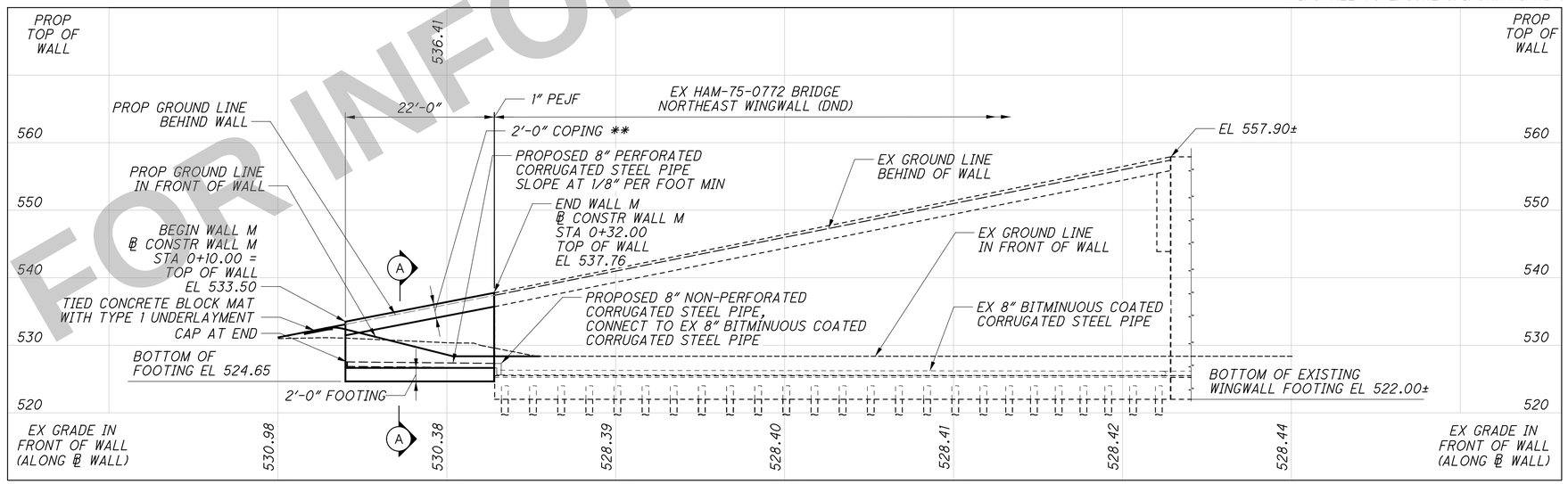
A - STA 410+10.93, 32.20' RT
B - STA 409+71.41, 30.31' RT
C - STA 409+70.74, 24.54' RT

TEMPORARY SHEET PILING PROPERTIES (ASTM A572, GRADE 50 STEEL)				
APPROX. TOP OF PILING ELEV.	MAX. EXPOSED HEIGHT	MIN. BOTTOM OF PILING ELEVATION	MIN. SECTION MODULUS (CU IN/FT)	MIN. MOMENT OF INERTIA (IN^4/FT)
539.00	14'-4"±	504.65	48.90	369.40

LEGEND

- WALL STEM
** - CONTRACTOR SHALL COORDINATE COPING GEOMETRY AND TIE IN WITH THE EXISTING WINGWALL TO ENSURE UNIFORM FINAL CONDITION

PLAN



PROFILE ALONG ℄ CONST WALL M

(NORTHEAST WING WALL ADDITION, EXISTING CONCRETE BARRIER NOT SHOWN FOR CLARITY)

LEGEND

1. ALL STORM PIPES CONNECTED TO THE EXISTING CATCH BASIN IS ARE BE REMOVED.

FOR INFORMATION ONLY

DESIGN AGENCY EMH&T
DESIGNED RJE | DRAWN GB | CHECKED RMW | REVIEWED CAS | DATE 12-15-21 | REVISED - | STRUCTURE FILE NUMBER

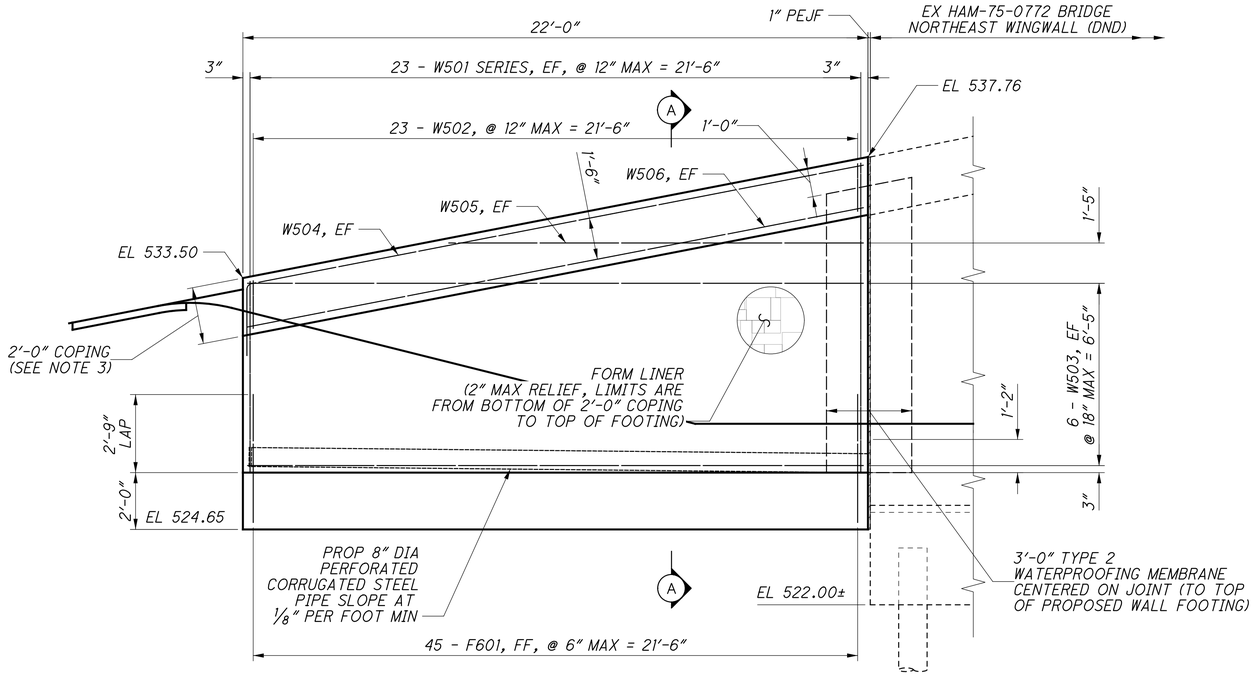
PLAN AND PROFILE
CAST-IN-PLACE RETAINING WALL M

HAM-75-7.85
PID No. 77889

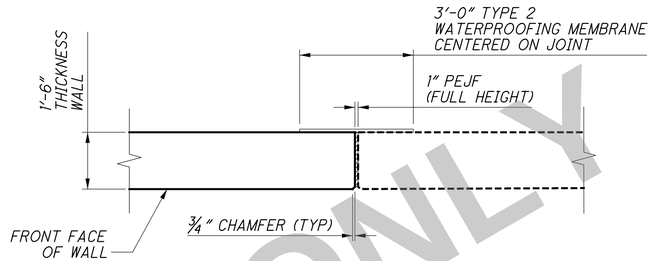
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2017

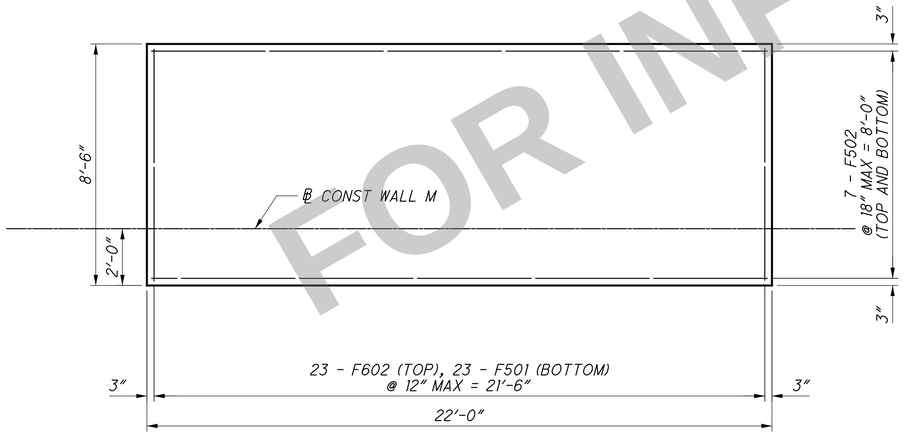
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ELEVATION



EXPANSION JOINT DETAIL



FOOTING PLAN

NOTES

1. FOR SECTION A-A SEE SHEET 5/37
2. SEE GENERAL NOTES FOR ABBREVIATION LEGENDS.
3. CONTRACTOR SHALL COORDINATE COPING GEOMETRY AND TIE IN WITH THE EXISTING WINGWALL TO ENSURE UNIFORM FINAL CONDITION.

FOR INFORMATION ONLY

DESIGN AGENCY
EMH&T
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500

DESIGNED	DRAWN	REVIEWED	DATE
RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-		

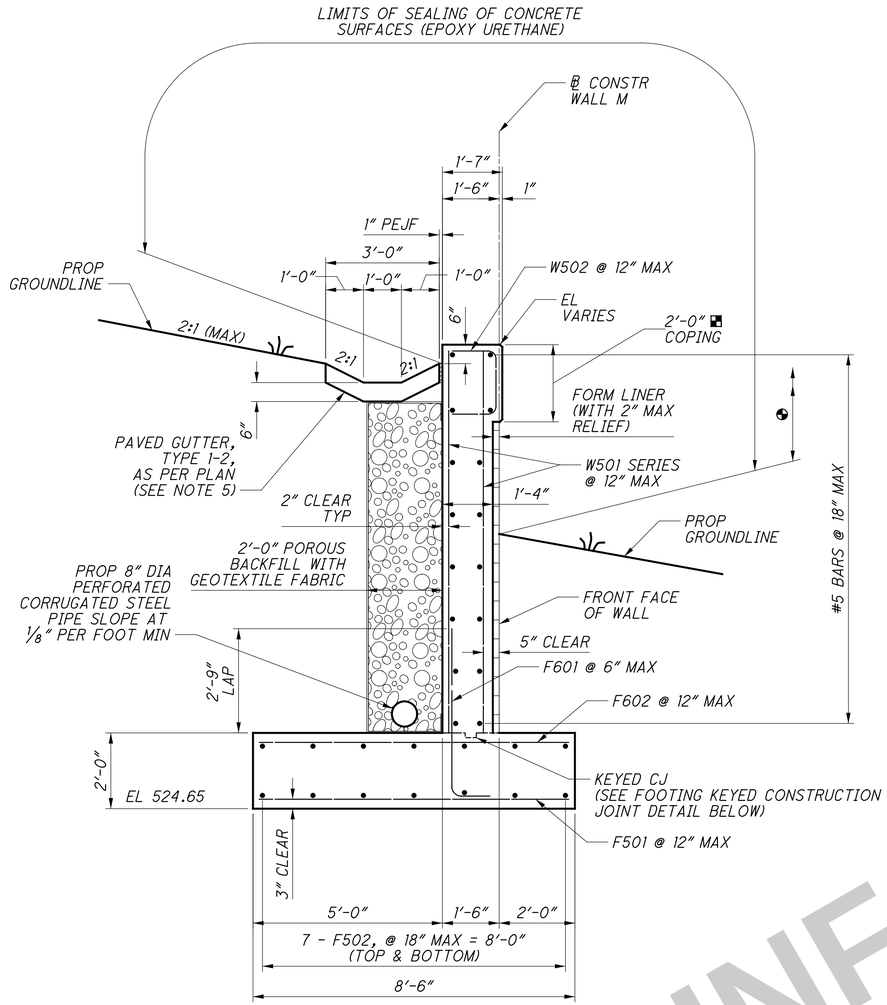
WALL DETAILS
CAST-IN-PLACE RETAINING WALL M

HAM-75-7.85
PID No. 77889

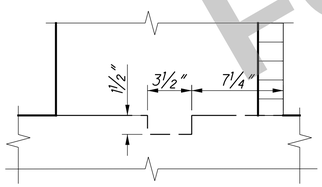
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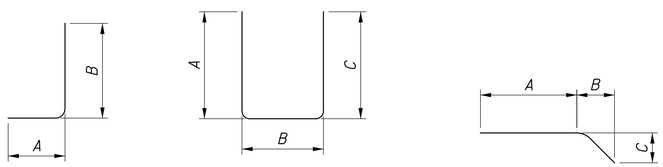


SECTION A-A



FOOTING KEYED CONSTRUCTION JOINT DETAIL

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
WALL											
W501	2 SR OF 23	6'-8" TO 10'-9½"	419	STR							0'-2¼"
W502	23	3'-11"	94	2	1'-3"	1'-8"	1'-3"				
W503	12	21'-8"	271	STR							
W504	2	24'-6"	51	19	22'-1"	0'-6"	2'-5½"				
W505	2	14'-7"	30	STR							
W506	2	22'-1"	46	STR							
SUB-TOTAL			911								
FOUNDATION											
F501	23	8'-2"	196	STR							
F502	14	21'-8"	316	STR							
F601	45	5'-4"	360	1	1'-0"	4'-6"					
F602	23	8'-2"	282	STR							
SUB-TOTAL			1,154								
TOTAL			2,065								



LEGEND

■ - MEASURED PERPENDICULAR TO TOP OF WALL. CONTRACTOR SHALL COORDINATE COPING GEOMETRY AND TIE-IN WITH THE EXISTING WINGWALL TO ENSURE UNIFORM FINAL CONDITION.

◕ - LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION). SEAL ALL EXPOSED SURFACES EXTENDING 10'-0" VERTICAL FROM GROUND LINE.

NOTES

1. THE LIMITS OF SEALING OF CONCRETE SURFACES ARE TO BE EXTENDED DOWN TO THE PROPOSED TOP OF GROUND ELEVATIONS AT THE FRONT FACE OF STEM AND WINGWALLS DURING THE HAM-75-7.85 PROJECT.
2. THE BAR SIZE ON THE PLANS IN THE BAR COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR THE NUMBER S601 IS A NO. 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT, UNLESS OTHERWISE INDICATED. R INDICATES I INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD" WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.
3. ALL REINFORCING STEEL TO EPOXY COATED.
4. SEE GENERAL NOTES FOR ABBREVIATION LEGENDS.
5. PROPOSED PAVED GUTTER SHALL BE POURED ADJACENT TO THE EDGE OF THE EXISTING PAVED GUTTER BEHIND THE EXISTING WINGWALL.

FOR INFORMATION ONLY

DESIGN AGENCY EMH&T
DESIGNED RJE
DRAWN GB
CHECKED RMW
REVIEWED CAS
DATE 12-15-21
REVISED -
STRUCTURE FILE NUMBER

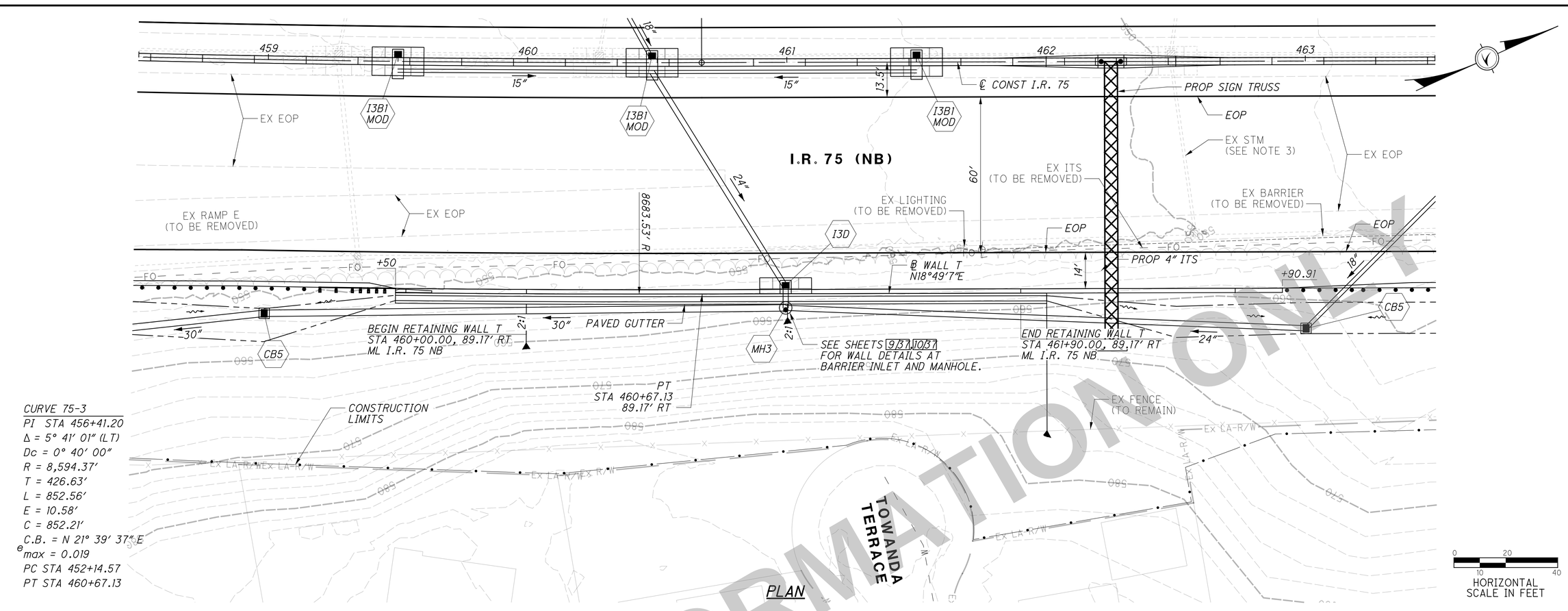
WALL DETAILS
CAST-IN-PLACE RETAINING WALL M

HAM-75-7.85
PID No. 77889

5 / 37

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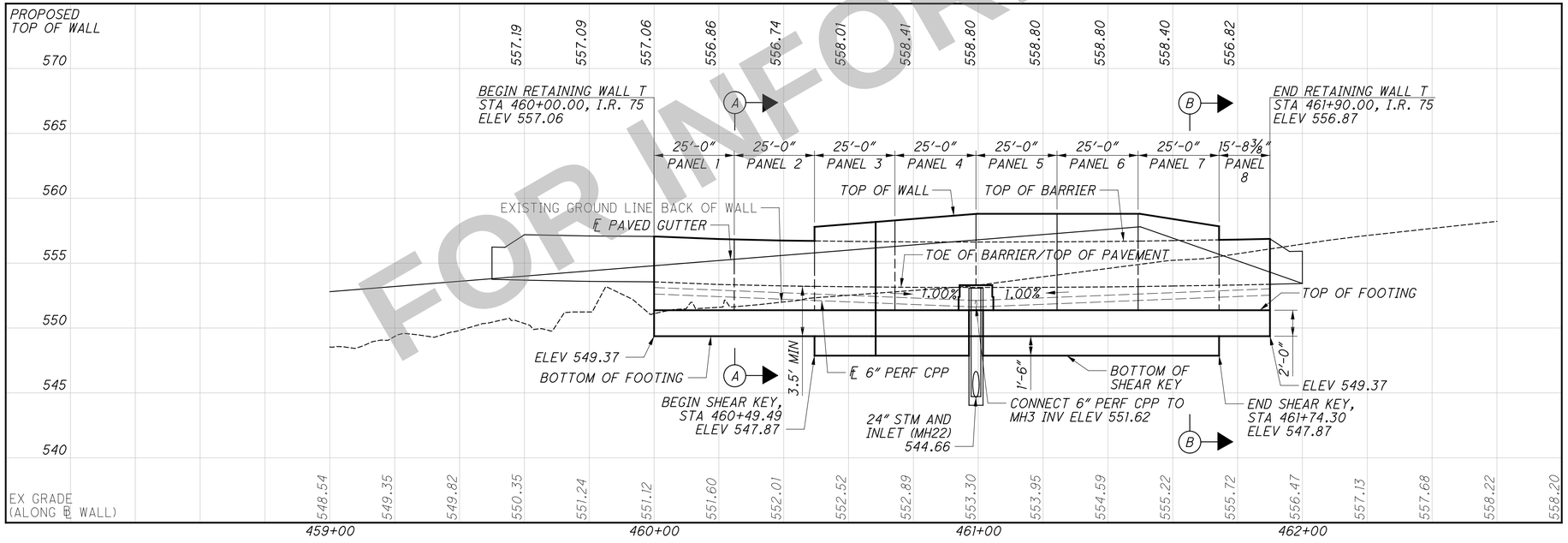
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CURVE 75-3
PI STA 456+41.20
Δ = 5° 41' 01" (LT)
Dc = 0° 40' 00"
R = 8,594.37'
T = 426.63'
L = 852.56'
E = 10.58'
C = 852.21'
C.B. = N 21° 39' 37" E
e_{max} = 0.019
PC STA 452+14.57
PT STA 460+67.13

0 20
10 40
HORIZONTAL SCALE IN FEET

PLAN



ELEVATION ALONG BACK OF WALL

NOTES:

1. FOR SECTIONS A-A AND B-B, SEE SHEET 9/37
2. FOR ABBREVIATIONS LEGEND, SEE SHEET 1/37
3. ALL EXISTING STORM SEWER IS TO BE REMOVED UNLESS OTHERWISE NOTED.

FOR INFORMATION ONLY

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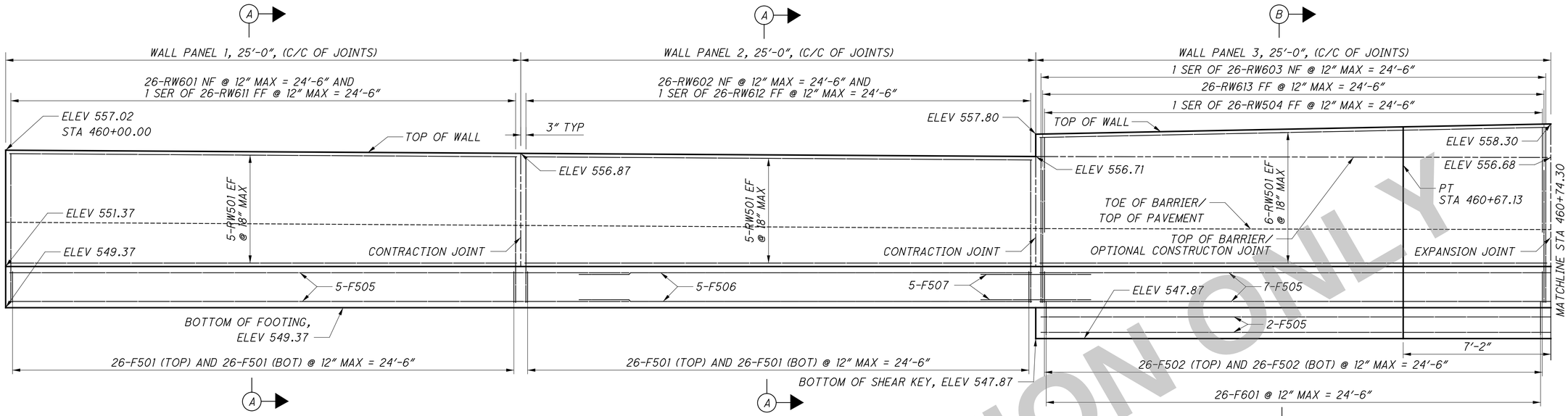
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PLAN AND ELEVATION
CAST-IN-PLACE BARRIER RETAINING WALL T

HAM-75-7.85
PID No. 77889

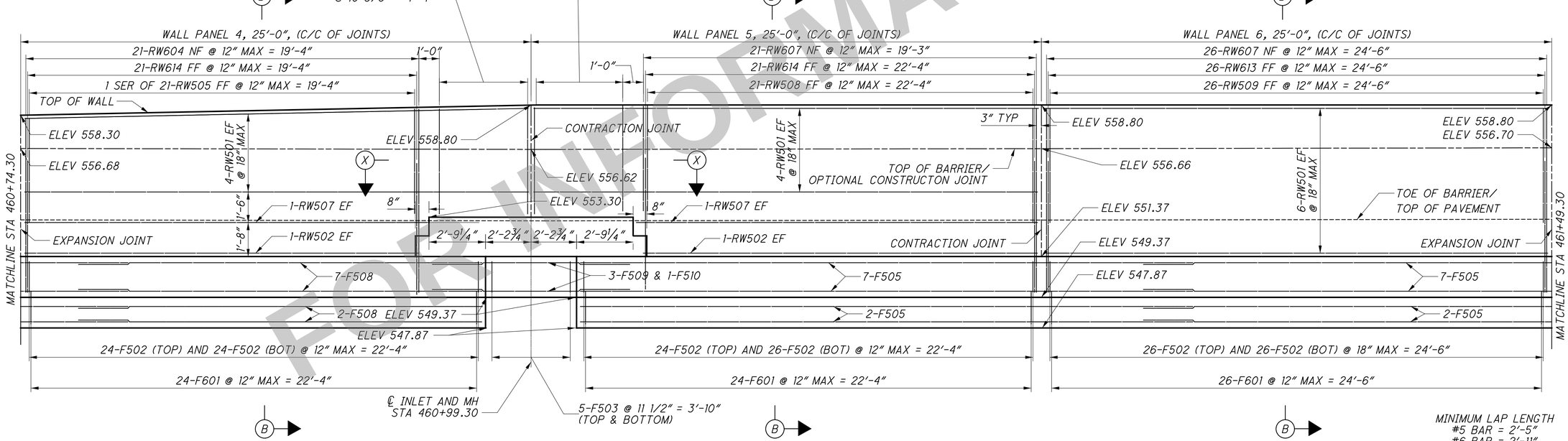
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DEVELOPED ELEVATION

REAR FACE OF WALL



DEVELOPED ELEVATION

REAR FACE OF WALL

MINIMUM LAP LENGTH
#5 BAR = 2'-5"
#6 BAR = 2'-11"

NOTES:

1. SEE SHEET 10/37 FOR ADDITIONAL DETAILS FOR BARRIER INLET OPENING
2. STATIONS ARE ALONG I.R.75
3. SEE SHEET 1/37 FOR ABBREVIATIONS LEGEND

FOR INFORMATION ONLY

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6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED	DRAWN	REVIEWED	DATE
JLM	SMJ	SSK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

WALL ELEVATION 1 OF 2

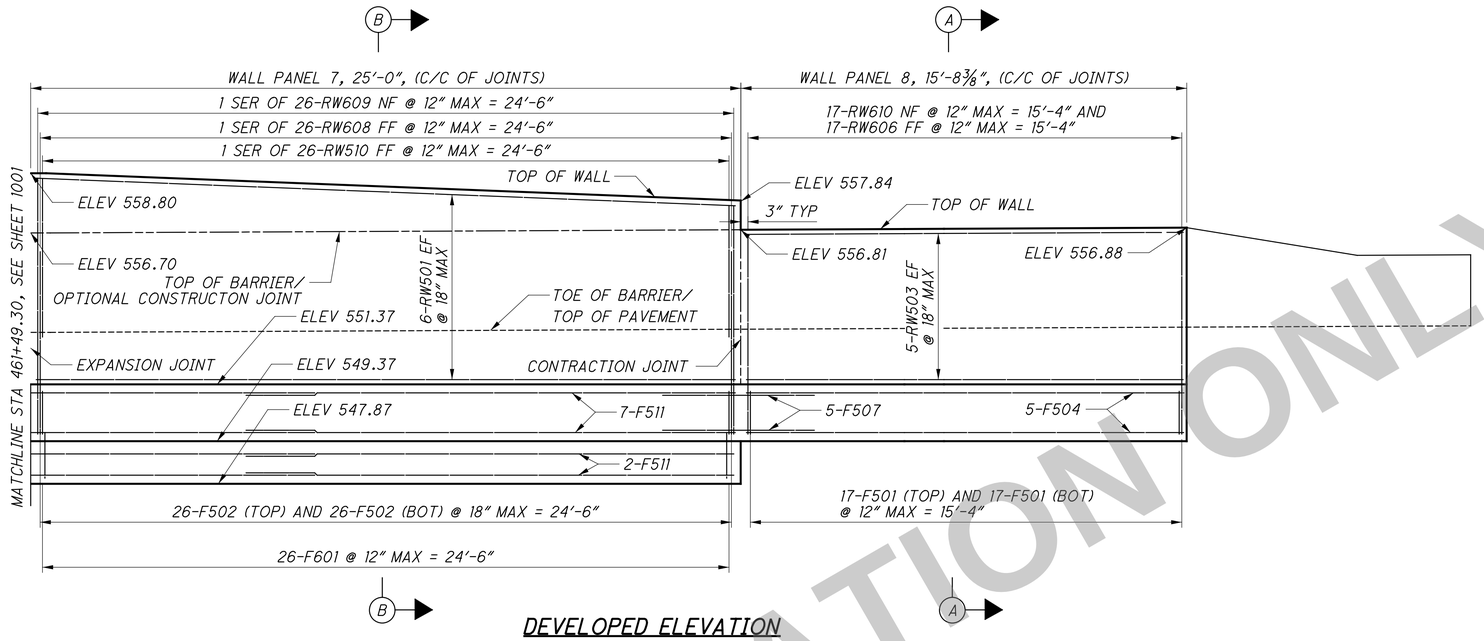
CAST-IN-PLACE BARRIER RETAINING WALL T

HAM-75-7.85
PID No. 77889

7 / 37

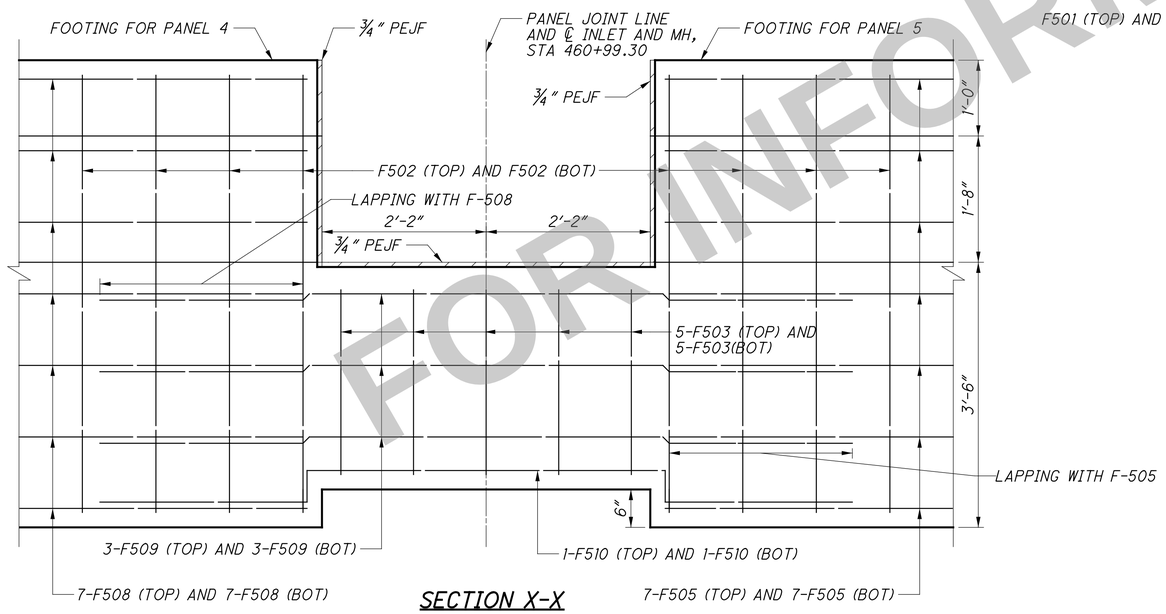
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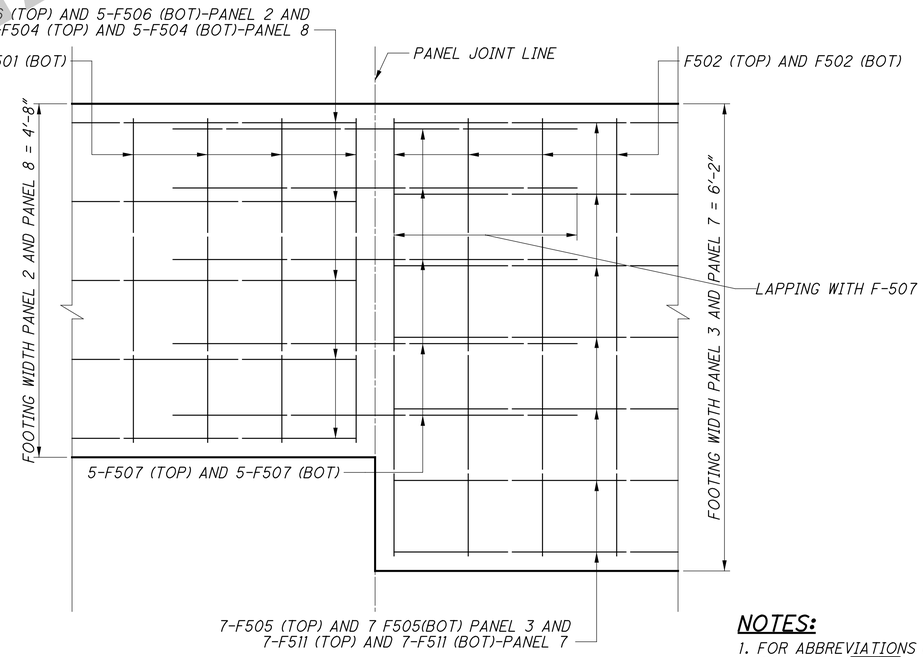
DEVELOPED ELEVATION

REAR FACE OF WALL



SECTION X-X

JUNCTION OF PANEL 4 AND PANEL 5
(ONLY REINFORCEMENT FOR FOOTING SHOWN)



FOOTING WIDTH TRANSITION PLAN

NOTES:

1. FOR ABBREVIATIONS LEGEND, SEE SHEET 1 /37

MINIMUM LAP LENGTH
#5 BAR = 2'-5"
#6 BAR = 2'-11"

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COLUMBUS, OHIO 43231
(614) 823-4949

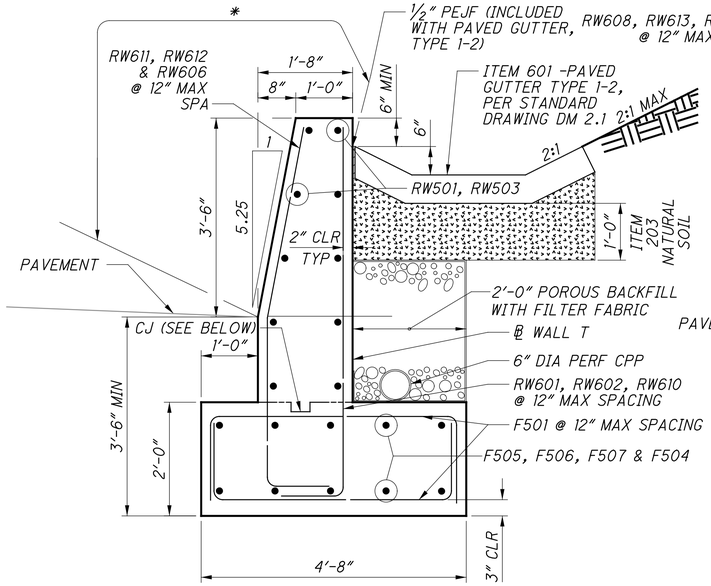
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JLM	SMJ	SSK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

WALL ELEVATION 2 OF 2
CAST-IN-PLACE BARRIER RETAINING WALL T

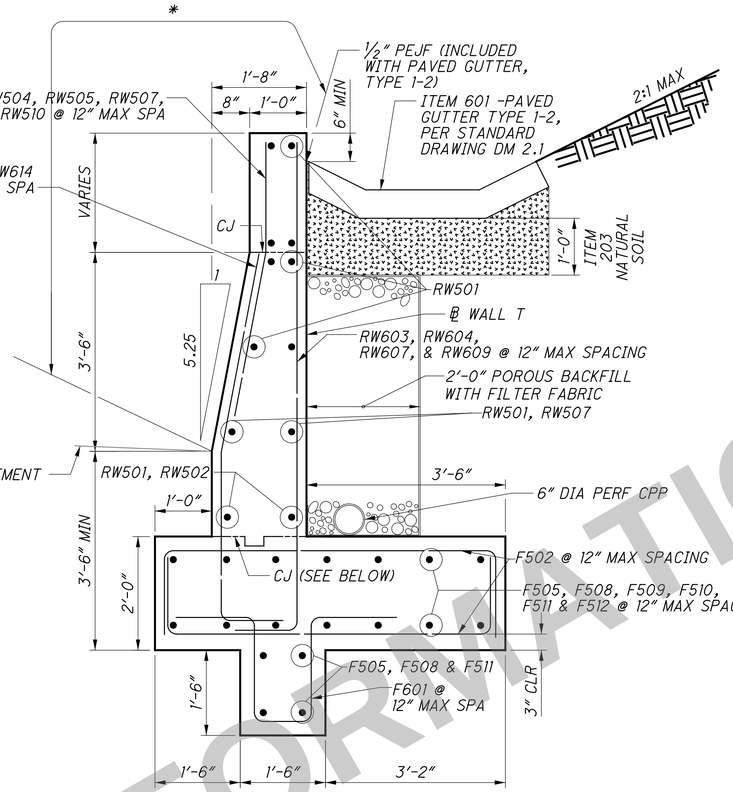
HAM-75-7.85
PID No. 77889

1002
2017

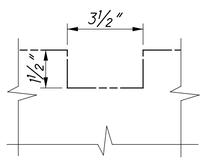
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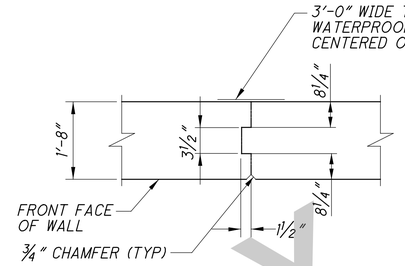
SECTION A-A



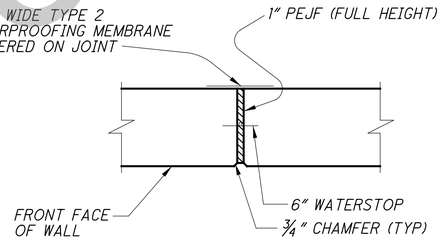
SECTION B-B



FOOTING CONSTRUCTION JOINT DETAIL



CONTRACTION JOINT DETAIL



EXPANSION JOINT DETAIL

LEGEND:

* - LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) AND ITEM 512 - SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)

NOTES:

1. PROVIDE 2" CLEARANCE FROM THE FACE OF WALL TO FACE FO REINFORCING BAR EXCEPT WHERE NOTED OTHERWISE.
2. FOR ABBREVIATIONS LEGEND, SEE SHEET 1/37

MINIMUM LAP LENGTHS:
#5 BAR = 2'-5"
#6 BAR = 2'-11"

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6550 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

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TYPICAL SECTION AND WALL DETAILS

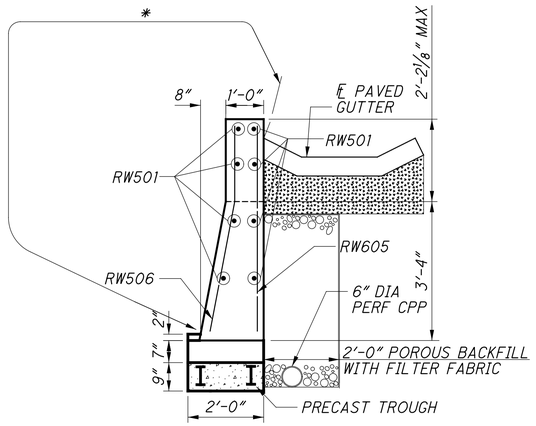
CAST-IN-PLACE BARRIER RETAINING WALL T

HAM-75-7.85
PID No. 77889

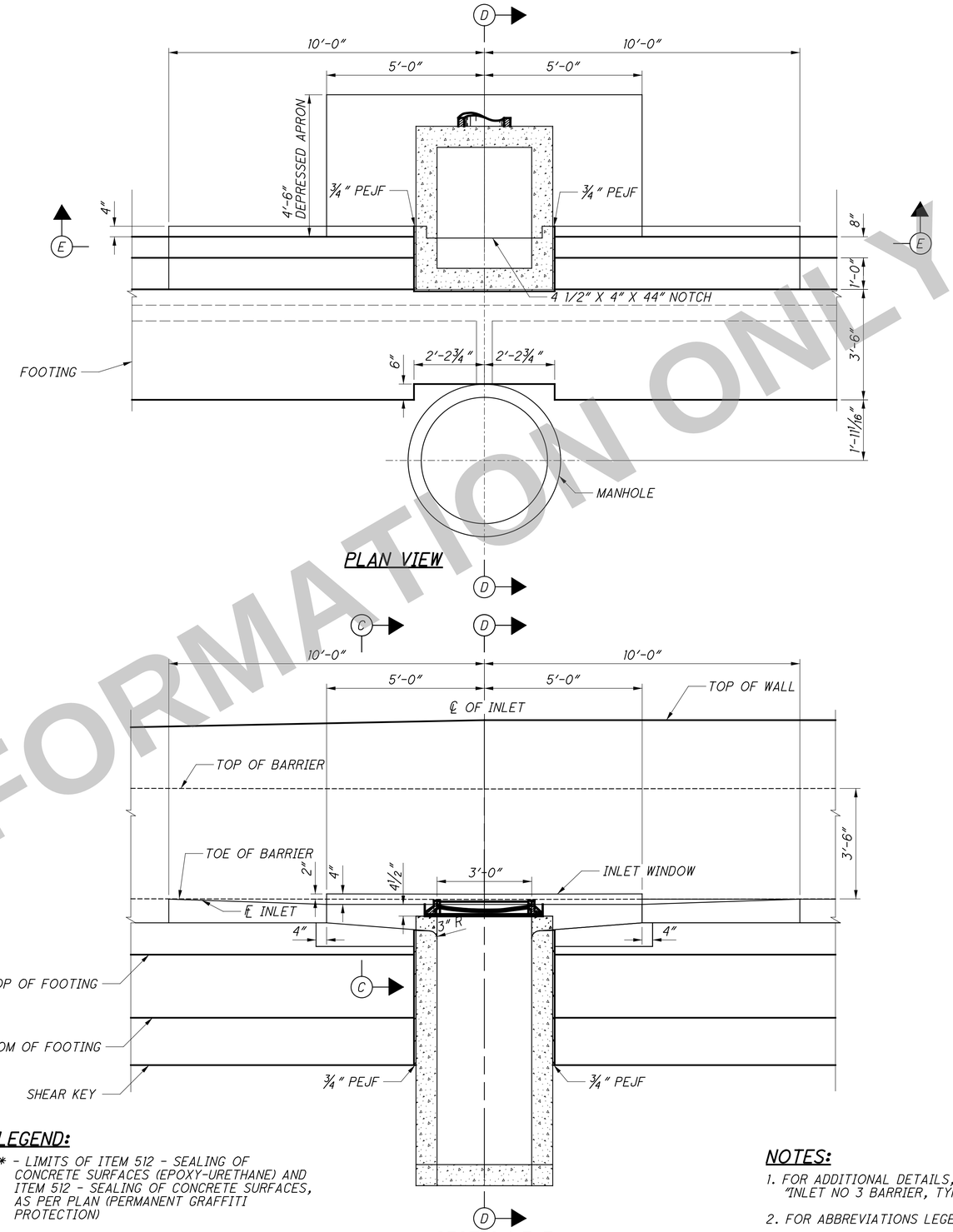
9 / 37

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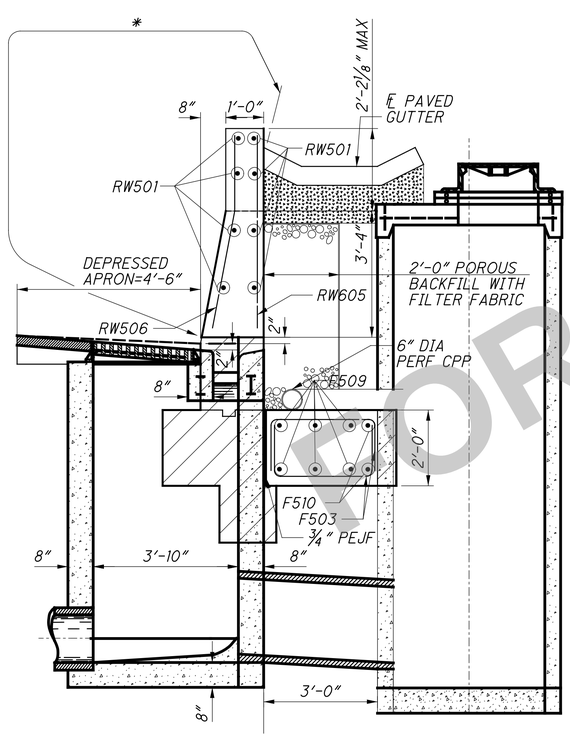


SECTION C-C



PLAN VIEW

SECTION E-E



SECTION D-D

LEGEND:

* - LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) AND ITEM 512 - SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)

NOTES:

1. FOR ADDITIONAL DETAILS, SEE SCD I-2.3 "INLET NO 3 BARRIER, TYPE D"
2. FOR ABBREVIATIONS LEGEND, SEE SHEET 1 / 37

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TYPICAL INLET DETAILS

CAST-IN-PLACE BARRIER RETAINING WALL T

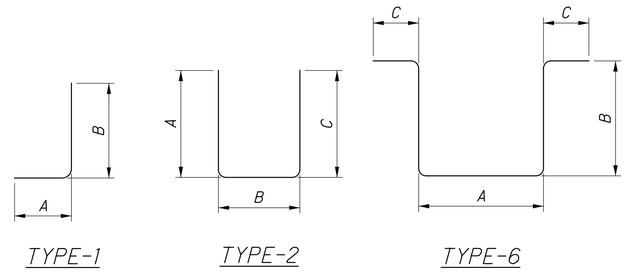
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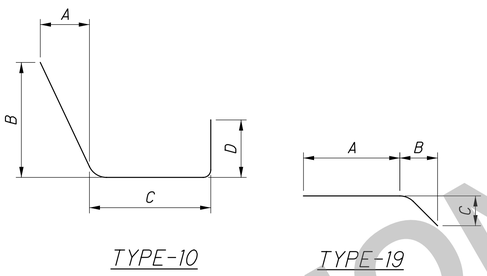
PID No. 77889

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2017

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MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
RETAINING WALL T											
RW501	72	24'-8"	1852	ST							
RW502	4	19'-0"	79	ST							
RW503	10	15'-4"	160	ST							
	1	3'-10"			11"						
RW504	SER OF	TO	112	19	TO	2'-10 1/2"	6 1/2"				1/4"
	26	4'-5"			1'-5 1/2"						
	1	4'-4"			1'-5 3/8"						
RW505	SER OF	TO	100	19	TO	2'-10 1/2"	6 1/2"				1/4"
	21	4'-10"			1'-10 1/2"						
RW506**	12	5'-3"	66	19	2'-0"	3'-2"	7 1/4"				
RW507	4	19'-8"	82	ST							
RW508**	21	4'-11"	108	19	2'-0"	2'-10 1/2"	6 1/2"				
RW509**	26	4'-10"	131	19	1'-11 1/8"	2'-10 1/2"	6 1/2"				
	1	3'-9"			10 1/4"						
RW510	SER OF	TO	116	19	TO	2'-10 1/2"	6 1/2"				1/2"
	26	4'-10"			1'-11 1/4"						
RW601**	26	8'-1"	316	1	1'-1"	7'-2"					
RW602**	26	7'-11"	309	1	1'-1"	7'-0"					
	1	8'-11"				8'-0 1/8"					
RW603	SER OF	TO	358	1	1'-1"	TO					1/4"
	26	9'-5"				8'-6"					
	1	9'-5"				8'-6"					
RW604	SER OF	TO	305	1	1'-1"	TO					1/4"
	21	9'-11"				8'-10 5/8"					
RW605**	12	5'-1"	92	ST							
RW606	17	8'-0"	204	10	3'-4"	7 3/4"	3'-8 1/4"	1'-1"			
RW607**	47	9'-11"	700	1	1'-1"	9'-0"					
	1	8-9"					3'-7"				
RW608	SER OF	TO	343	10	3'-4"	7 3/4"	TO	1'-11"			1/16"
	26	8'-10"					3'-8"				
	1	9'-0"				8'-1/2"					
RW609	SER OF	TO	369	1	1'-1"	TO					7/16"
	26	9'-11"				9'-0"					
RW610**	17	8'-0"	204	1	1'-1"	7'-1"					
	1	8'-1"					3'-9"				
RW611	SER OF	TO	319	10	3'-4"	7 3/4"	TO	1'-1"			1/16"
	26	8'-3"					3'-11"				
	1	7'-11"					3'-7"				
RW612	SER OF	TO	312	10	3'-4"	7 3/4"	TO	1'-1"			1/16"
	26	8'-1"					3'-9"				
RW613	52	7'-10"	612	10	3'-4"	7 3/4"	3'-6 1/2"	1'-1"			
RW614	42	7'-10"	494	10	3'-4"	7 3/4"	3'-6"	1'-1"			
F501	138	7'-1"	1020	2	1'-6"	4'-4"	1'-6"				
F502	252	8'-7"	2256	2	1'-6"	5'-10"	1'-6"				
F503	10	5'-5"	56	2	1'-6"	2'-8"	1'-6"				
F504	10	15'-4"	160	ST							
F505	64	30'-0"	2003	ST							
F506	10	22'-1"	230	ST							
F507	20	5'-2"	108	ST							
F508	18	19'-10"	372	ST							
F509	6	9'-7"	60	ST							
F510	2	10'-0"	21	6	4'-9 1/2"	6"	2'-5"				
F511	18	17'-4"	325	ST							
F601	126	6'-6"	1230	6	1'-2"	1'-6"	1'-6"				
		TOTAL	15586								





NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE 3 DIGITS ARE USED, AND THE FIRST 2 DIGITS WHERE FOUR DIGITS ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, RW601 IS A NO 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. "R" INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD" WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

2. ALL REINFORCING STEEL TO BE EPOXY COATED.

3. FOR ABBREVIATIONS SEE SHEET 1/37.

LEGEND

** - FIELD CUT

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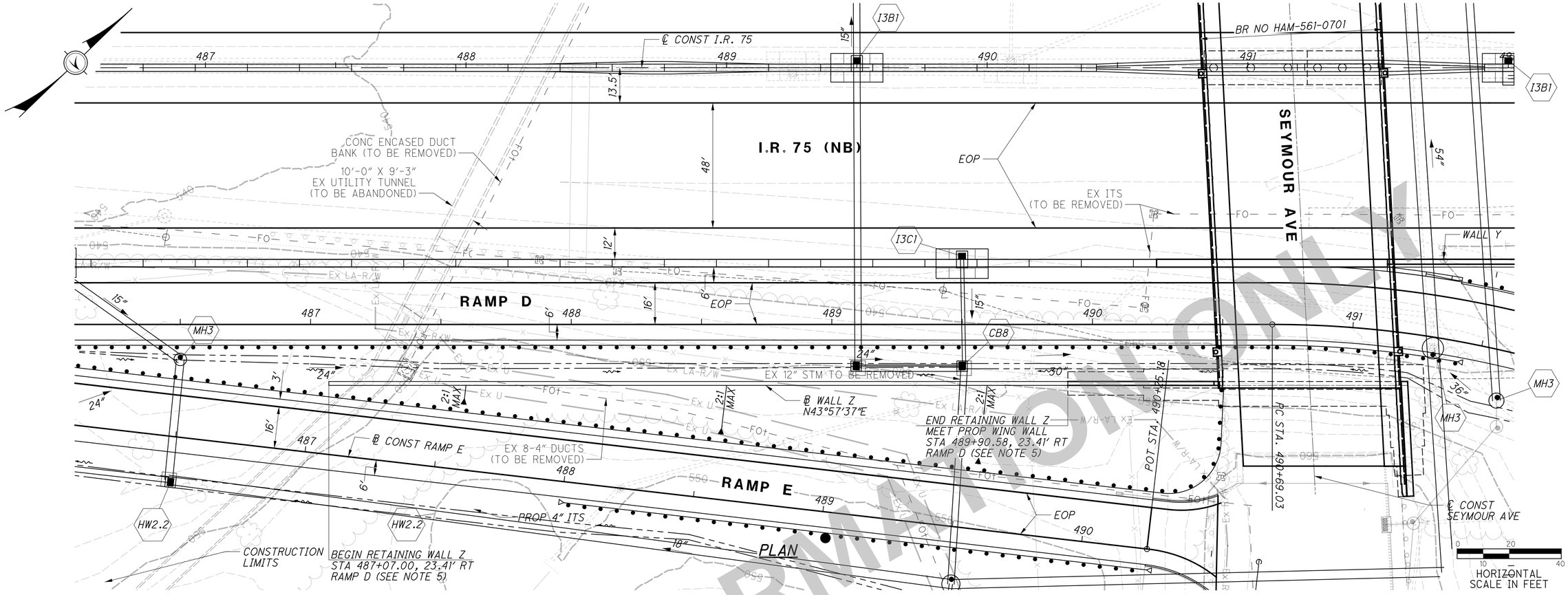
REINFORCING STEEL SCHEDULE

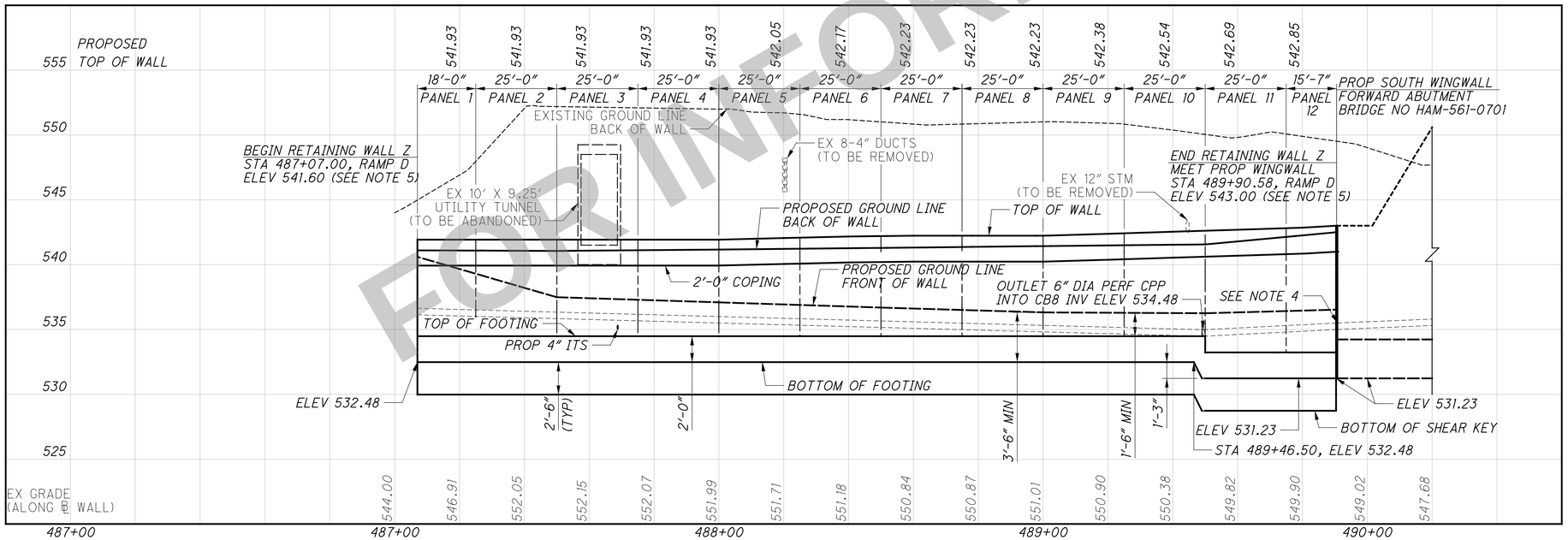
CAST-IN-PLACE BARRIER RETAINING WALL T

HAM-75-7.85
PID No. 77889

1005
2017

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ELEVATION ALONG BACK OF WALL

NOTES:

1. SHEAR KEY STEPS TO MATCH THOSE DETAILED FOR FOOTING.
2. FOR ABBREVIATIONS LEGEND, SEE SHEET 1/37.
3. ALL EXISTING STORM SEWER IS TO BE REMOVED WITHIN THE CONSTRUCTION LIMITS UNLESS OTHERWISE NOTED.
4. WALL Z 6" DIA PERF CPP TO CONNECT TO EX 6" DIA PERF CPP BEHIND WINGWALL OF FORWARD ABUTMENT OF BR NO HAM-561-0701.
5. STATION, OFFSET, AND TOP OF WALL ELEVATIONS SHALL BE ADJUSTED AS NEEDED TO MAINTAIN A FRONT FACE OF WALL AND TOP OF WALL ELEVATION WHICH MATCH THE END OF THE ADJACENT HAM-561-0701 BRIDGE WINGWALL.

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

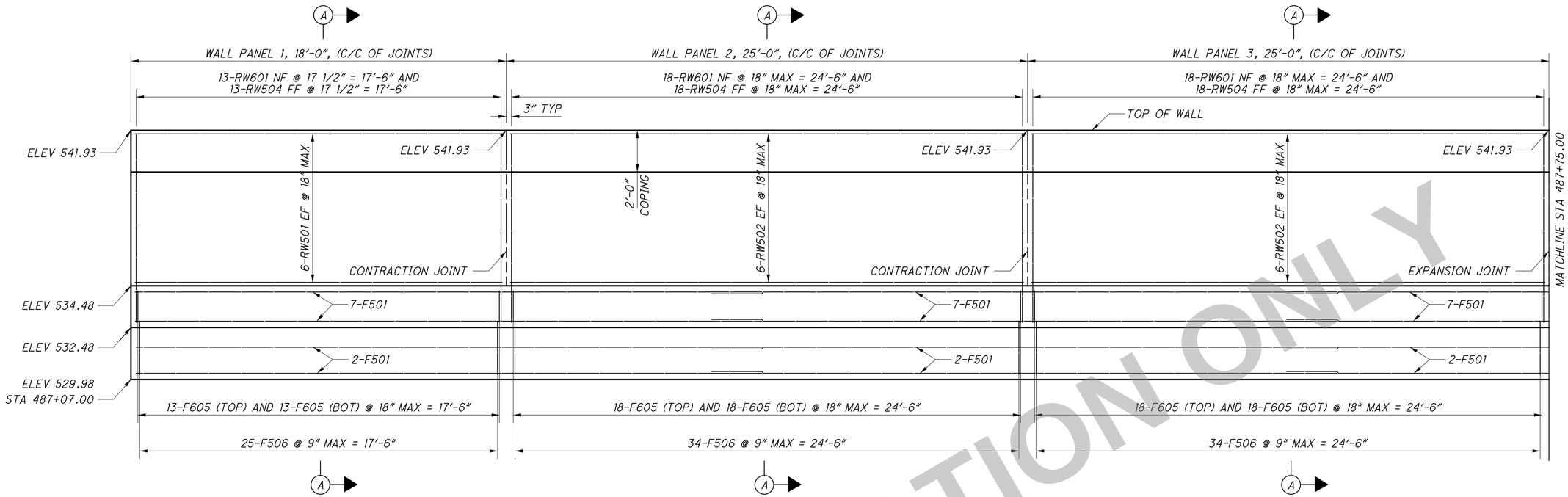
PLAN AND ELEVATION
CAST IN PLACE RETAINING WALL Z

HAM-75-7.85
PID No. 77889

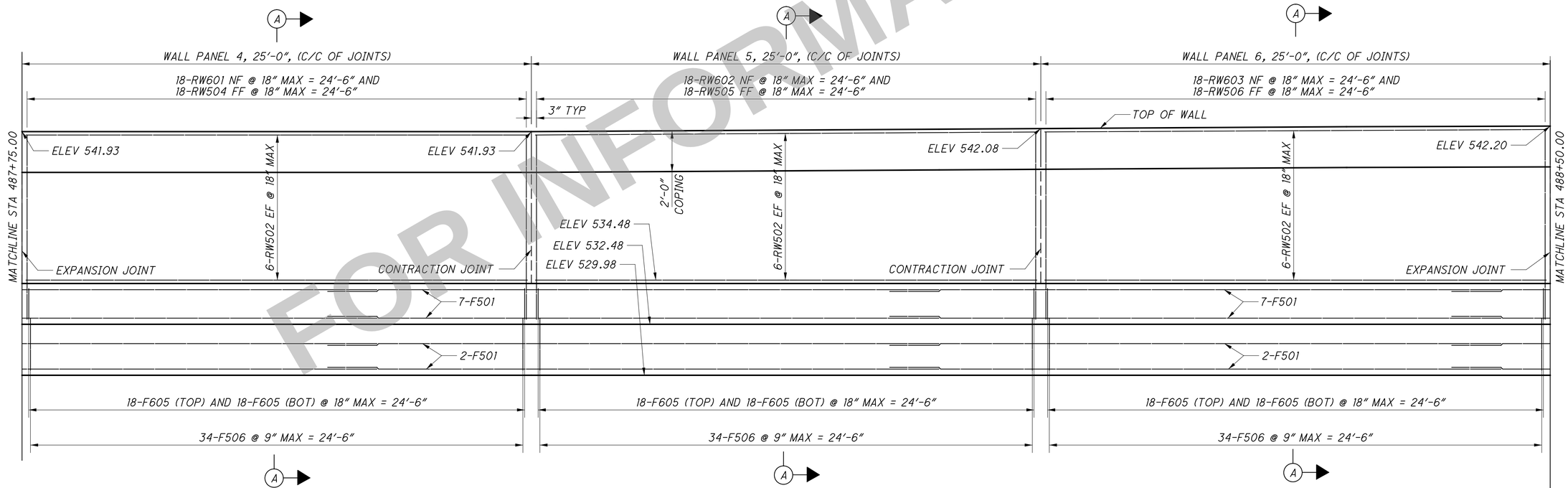
12 / 37

1006
2017

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DEVELOPED ELEVATION
REAR FACE OF WALL



DEVELOPED ELEVATION
REAR FACE OF WALL

MINIMUM LAP LENGTH
#5 BAR = 2'-5"
#6 BAR = 2'-11"

NOTES:

1. FOR ABBREVIATIONS LEGEND, SEE SHEET 1/37.

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

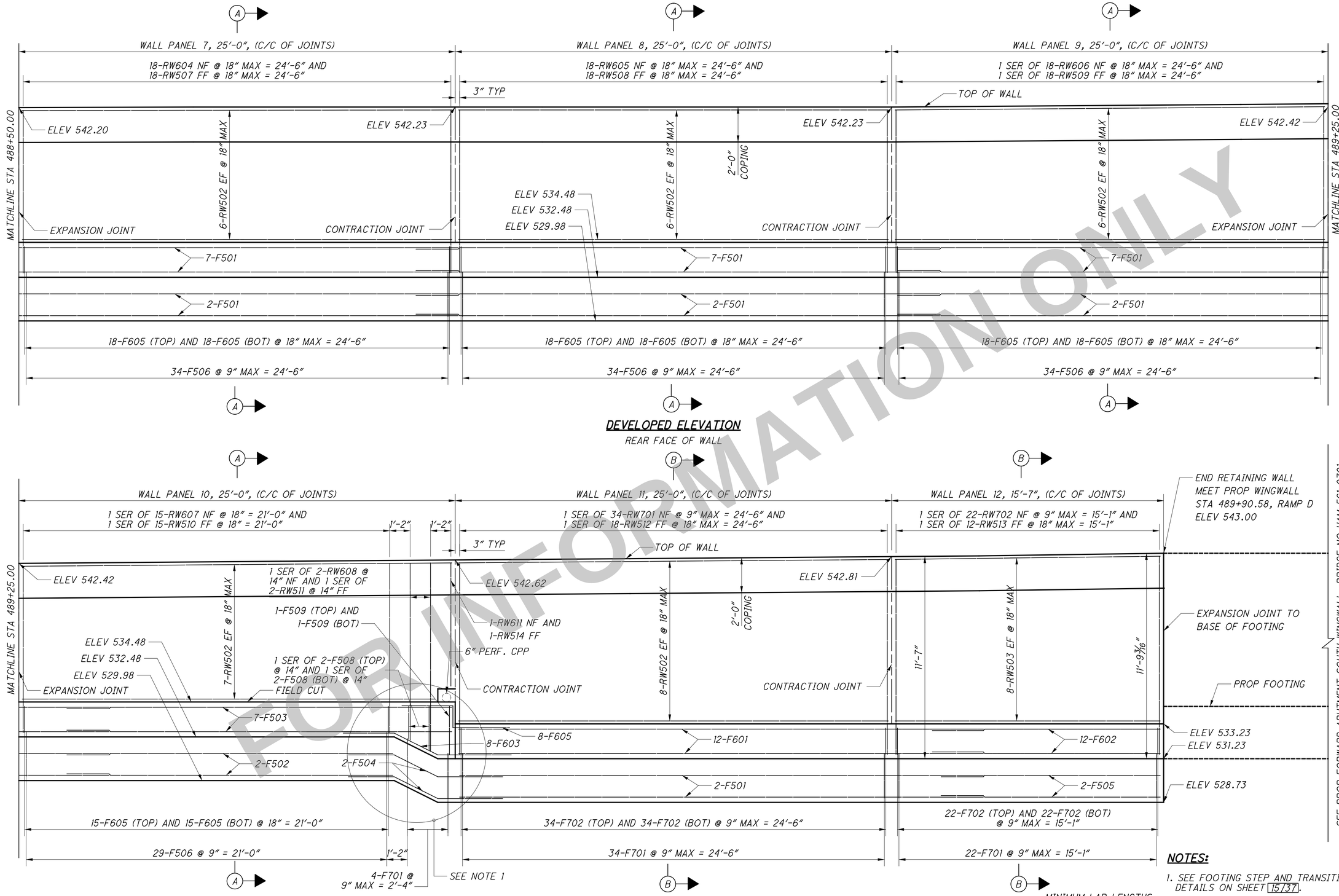
WALL ELEVATION 1 OF 2
CAST IN PLACE RETAINING WALL Z

HAM-75-7.85
PID No. 77889

13 / 37

1007
2017

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DEVELOPED ELEVATION
REAR FACE OF WALL

DEVELOPED ELEVATION
REAR FACE OF WALL

MINIMUM LAP LENGTHS
#5 BAR = 2'-5"
#6 BAR = 2'-11"

NOTES:

1. SEE FOOTING STEP AND TRANSITION DETAILS ON SHEET 15/37.
2. FOR ABBREVIATIONS LEGEND, SEE SHEET 1/37.

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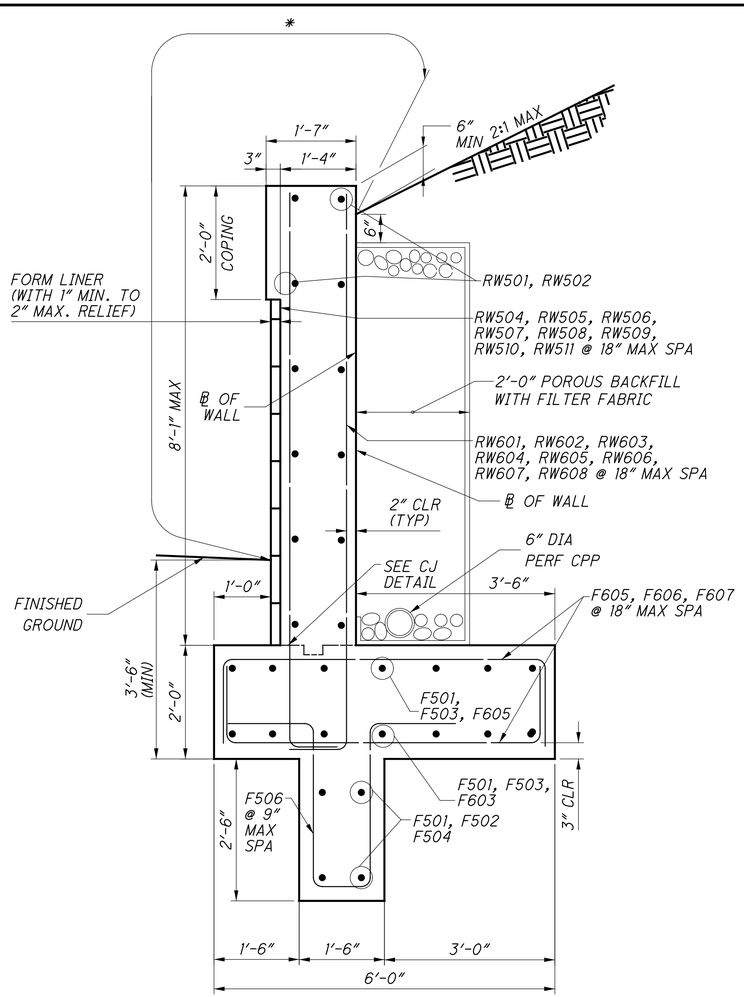
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JLM	SMJ	SSK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
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WALL ELEVATION 2 OF 2
CAST IN PLACE RETAINING WALL Z

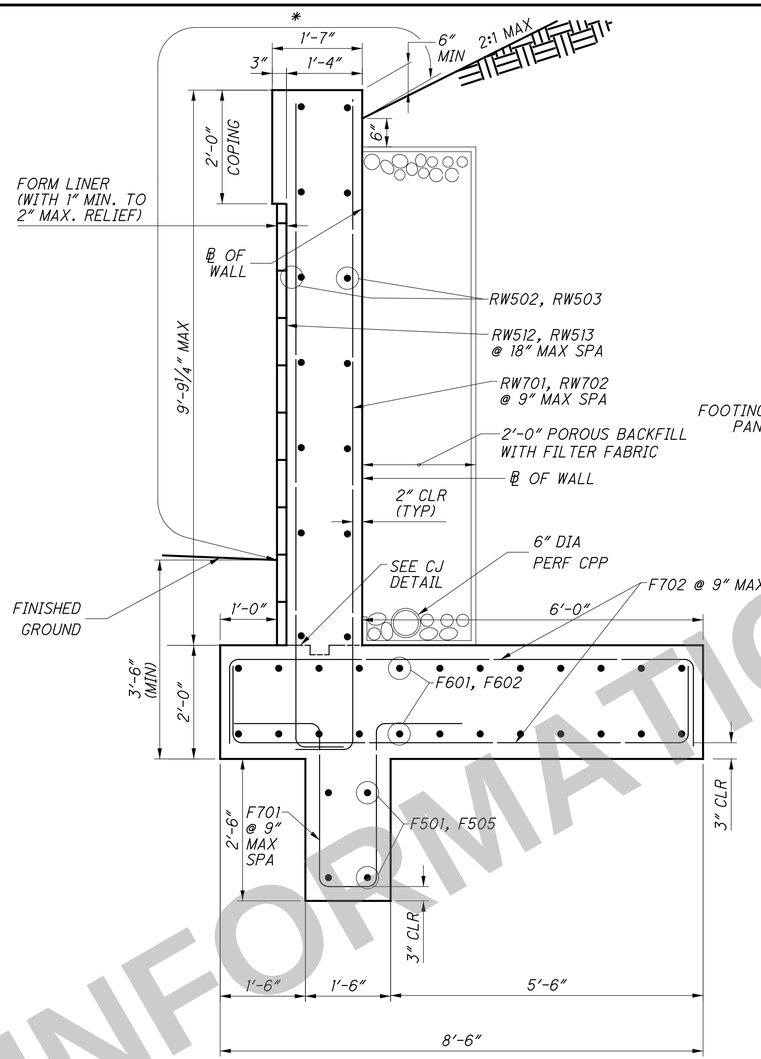
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PID No. 77889

1008
2017

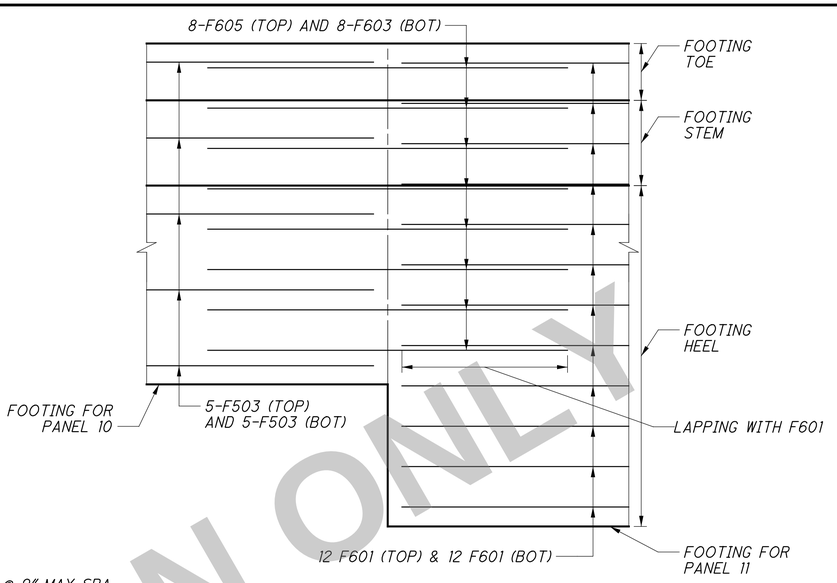
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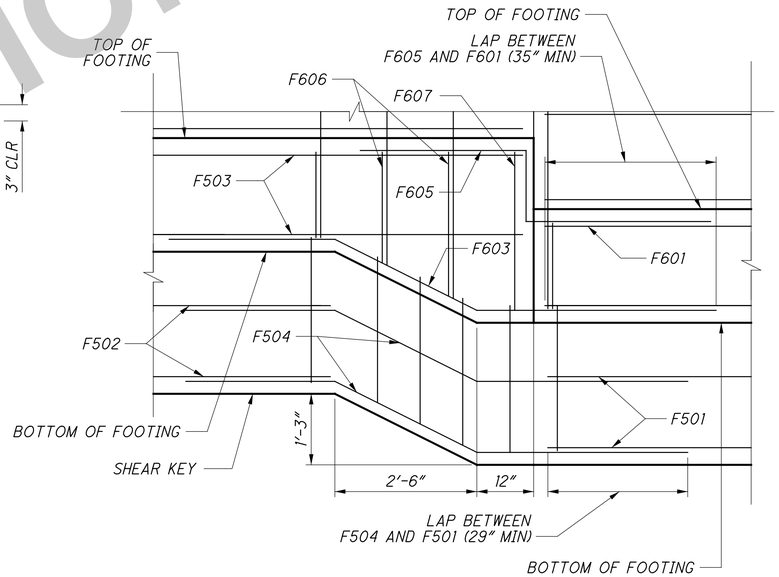
SECTION A-A



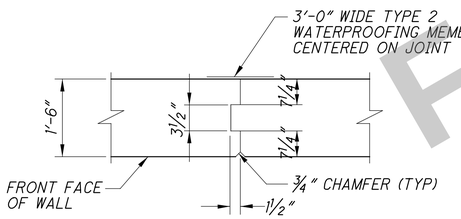
SECTION B-B



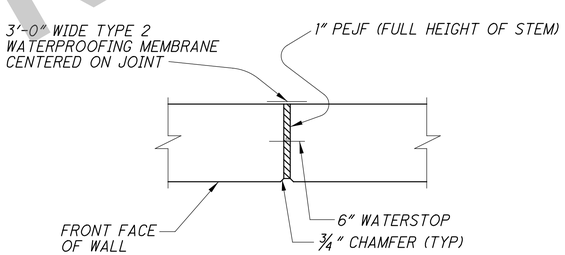
FOOTING WIDTH TRANSITION DETAIL (PLAN)



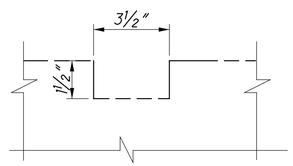
FOOTING STEP ELEVATION DETAIL



CONTRACTION JOINT DETAIL



EXPANSION JOINT DETAIL



CONSTRUCTION JOINT DETAIL

LEGEND:

* - LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) AND ITEM 512 - SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)

MINIMUM LAP LENGTHS
#5 BAR = 2'-5"
#6 BAR = 2'-11"

NOTES:

1. FOR ABBREVIATIONS LEGEND, SEE SHEET 1/37.

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NCK			

TYPICAL SECTION AND WALL DETAILS
CAST IN PLACE RETAINING WALL Z

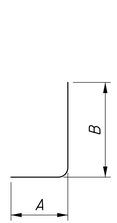
HAM-75-7.85
PID No. 77889

15 / 37

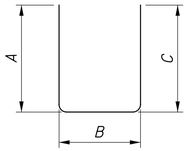
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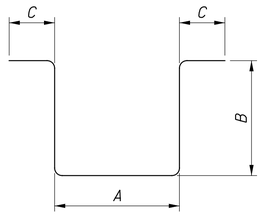
MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
RETAINING WALL Z											
RW501	12	17'-8"	221	ST							
RW502	126	24'-8"	3242	ST							
RW503	16	15'-3"	254	ST							
RW504	67	9'-11"	693	1	1'-0"	9'-0 3/8"					
RW505**	18	10'-0"	188	1	1'-0"	9'-1 1/4"					
RW506**	18	10'-2"	191	1	1'-0"	9'-3"					
RW507**	18	10'-3"	192	1	1'-0"	9'-3 1/2"					
RW508	18	10'-3"	175	1	1'-0"	9'-4"					
	1	10'-3"				9'-4"					
RW509	SER OF	TO	196	1	1'-0"	TO					1/8"
	18	10'-5"				9'-6"					
	1	10'-5"				9'-6"					
RW510	SER OF	TO	164	1	1'-0"	TO					1/8"
	15	10'-7"				9'-8 1/4"					
	1	11'-0"				10'-1 1/2"					
RW511	SER OF	TO	24	1	1'-0"	TO					7"
	2	11'-7"				10'-8 3/4"					
	1	11'-11"				11'-0"					
RW512	SER OF	TO	224	1	1'-0"	TO					1/8"
	18	12'-0"				11'-2"					
	1	12'-1"				11'-2"					
RW513	SER OF	TO	152	1	1'-0"	TO					1/8"
	12	12'-3"				11'-4"					
RW601	67	9'-10"	990	1	1'-0"	9'-0 3/8"					
RW602**	18	9'-11"	268	1	1'-0"	9'-1 1/4"					
RW603**	18	10'-1"	273	1	1'-0"	9'-3"					
RW604**	18	10'-2"	275	1	1'-0"	9'-3 1/2"					
RW605	18	10'-2"	275	1	1'-0"	9'-4"					
	1	10'-2"				9'-4"					
RW606	SER OF	TO	277	1	1'-0"	TO					1/8"
	18	10'-4"				9'-6"					
	1	10'-4"				9'-6"					
RW607	SER OF	TO	235	1	1'-0"	TO					1/8"
	15	10'-6"				9'-8 1/4"					
	1	11'-0"				10'-1 1/2"					
RW608	SER OF	TO	34	1	1'-0"	TO					7"
	2	11'-7"				10'-8 3/4"					
	1	11'-10"				11'-0"					
RW701	SER OF	TO	828	1	1'-0"	TO					1/16"
	34	12'-0"				11'-2"					
	1	12'-0"				11'-2"					
RW702	SER OF	TO	543	1	1'-0"	TO					1/16"
	22	12'-2"				11'-4"					
F501	166	30'-0"	5194	ST							
F502	4	18'-8"	78	ST							
F503	14	22'-0"	321	ST							
F504	4	9'-1"	38	34	2'-7 1/2"	2'-6"	3'-8 1/2"	1'-3"			
F505	4	12'-7"	52	ST							
F506	326	8'-8"	2947	6	1'-2"	2'-6"	1'-6"				
F601	24	30'-0"	1081	ST							
F602	24	13'-2"	475	ST							
F603	8	9'-10"	118	34	2'-11"	2'-6"	4'-2 1/2"	1'-3"			
F604	NOT	USED									
F605	344	8'-6"	4392	2	1'-7"	5'-8"	1'-7"				
	2	9'-4"			2'-0"		2'-0"				
F607	SER OF	TO	59	2	TO	5'-8"	TO				1'-1"
	2	10'-4"			2'-6 1/2"		2'-6 1/2"				
F608	2	11'-0"	33	2	2'-10"	5'-8"	2'-10"				
F701	60	8'-5"	1032	6	1'-2"	2'-6"	1'-6"				
F702	112	10'-11"	2498	2	1'-7"	8'-2"	1'-7"				
		TOTAL	28232								



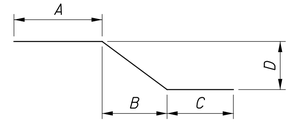
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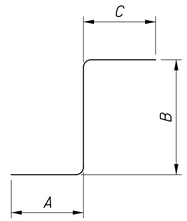
TYPE-2



TYPE-6



TYPE-34



TYPE-8

FOR INFORMATION ONLY

NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE 3 DIGITS ARE USED, AND THE FIRST 2 DIGITS WHERE FOUR DIGITS ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, F601 IS A NO 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. "R" INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD" WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

2. ALL REINFORCING STEEL TO BE EPOXY COATED.

3. FOR ABBREVIATIONS LEGEND, SEE SHEET 1/37.

LEGEND:

** - FIELD CUT

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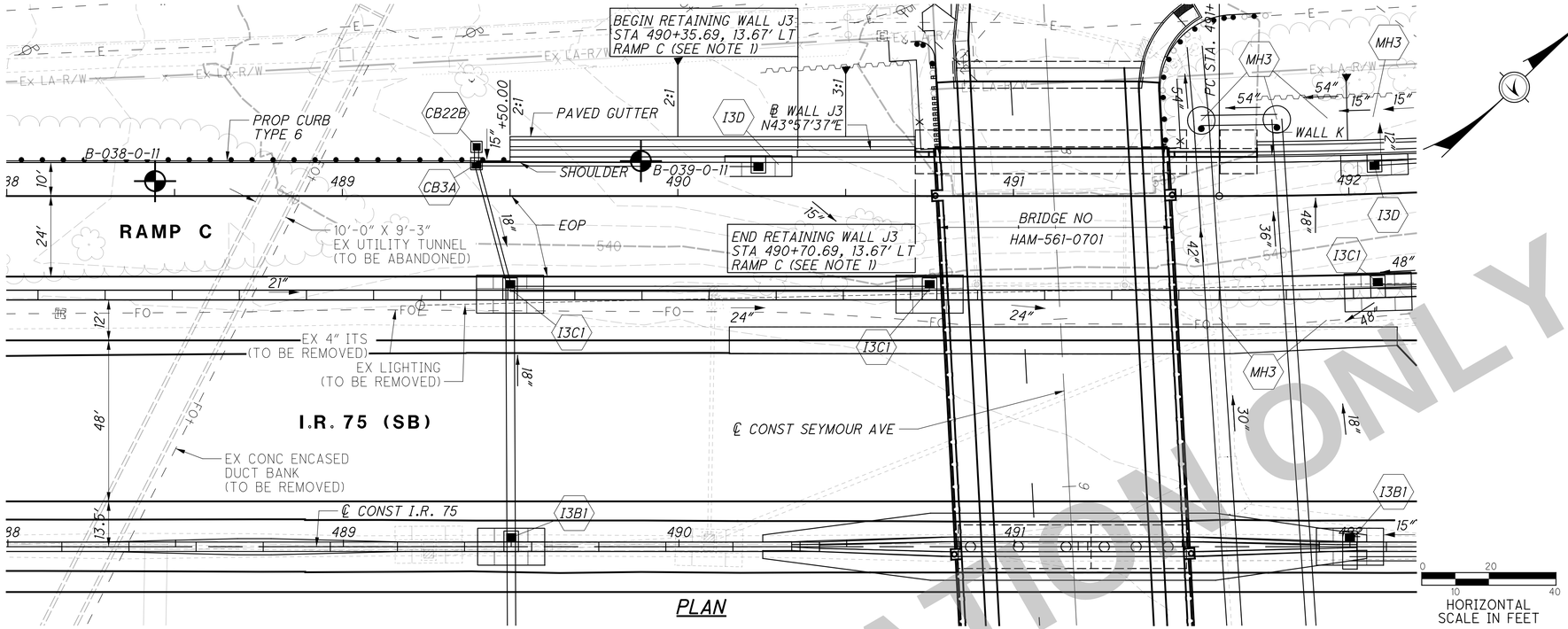
REINFORCING STEEL SCHEDULE

CAST IN PLACE RETAINING WALL Z

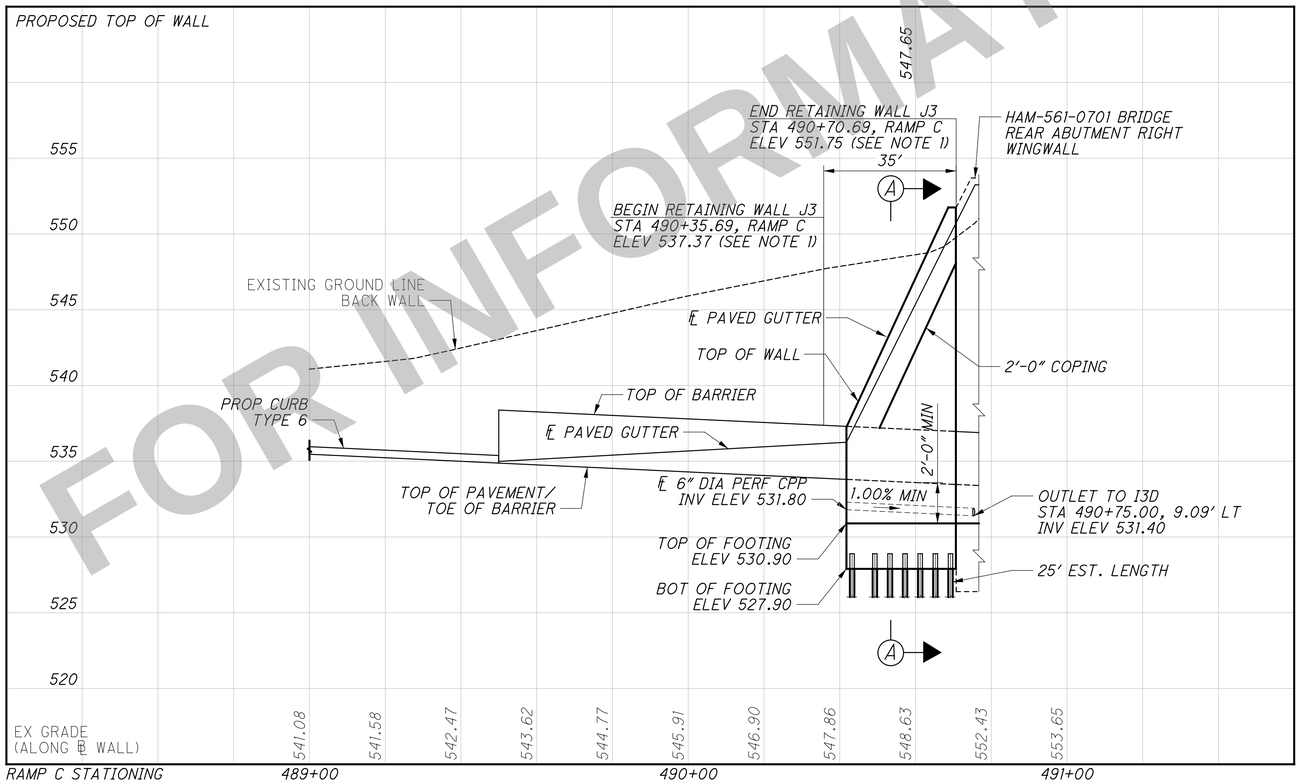
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PID No. 77889

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2017

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PLAN



ELEVATION ALONG BACK OF WALL

NOTES:

1. STATION, OFFSET, AND TOP OF WALL ELEVATIONS SHALL BE ADJUSTED AS NEEDED TO MAINTAIN A FRONT FACE OF WALL AND TOP OF WALL ELEVATION WHICH MATCH THE END OF THE ADJACENT HAM-561-0701 BRIDGE WINGWALL.

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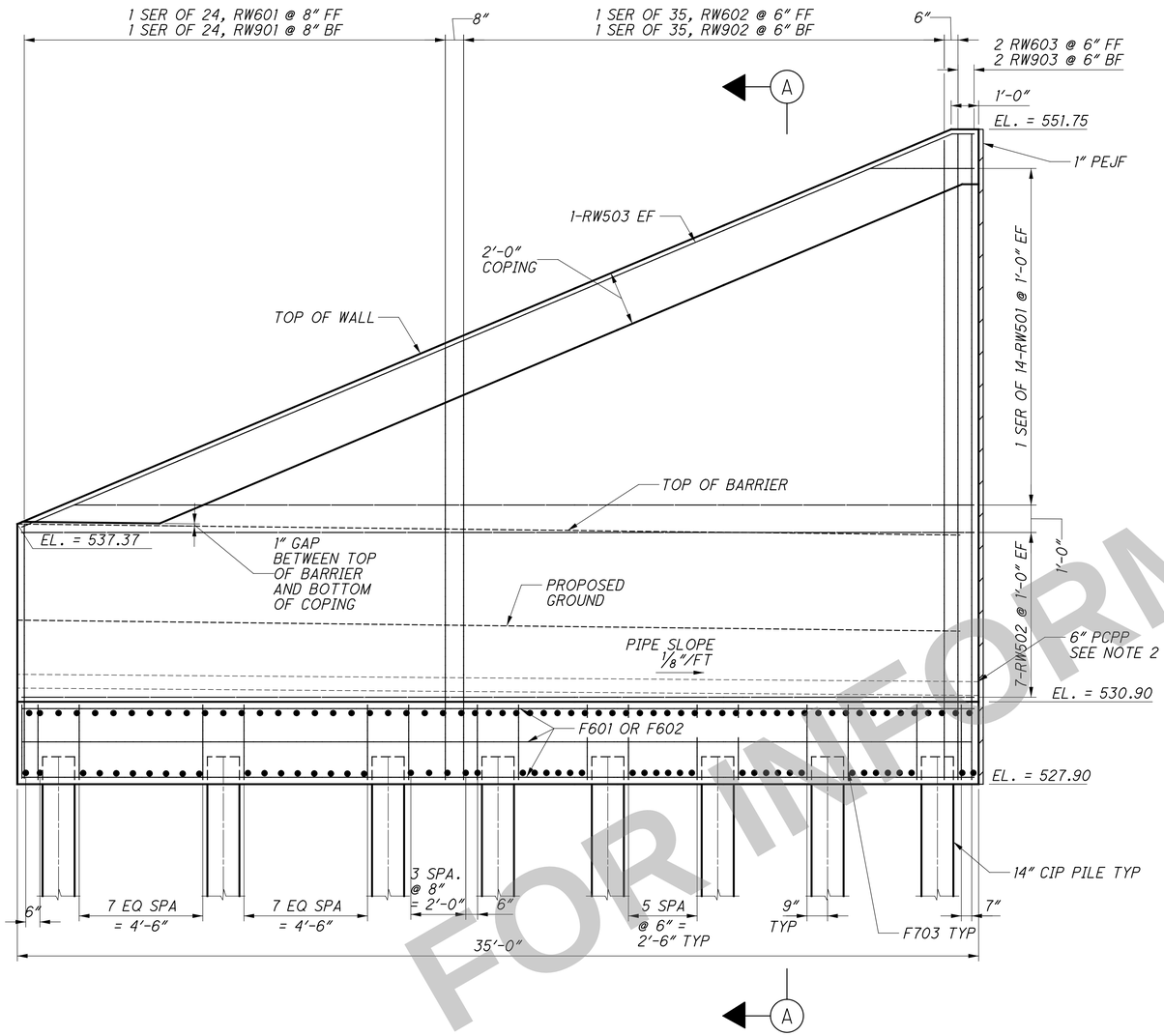
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NCK			

PLAN AND ELEVATION
CAST-IN-PLACE BARRIER RETAINING WALL J3

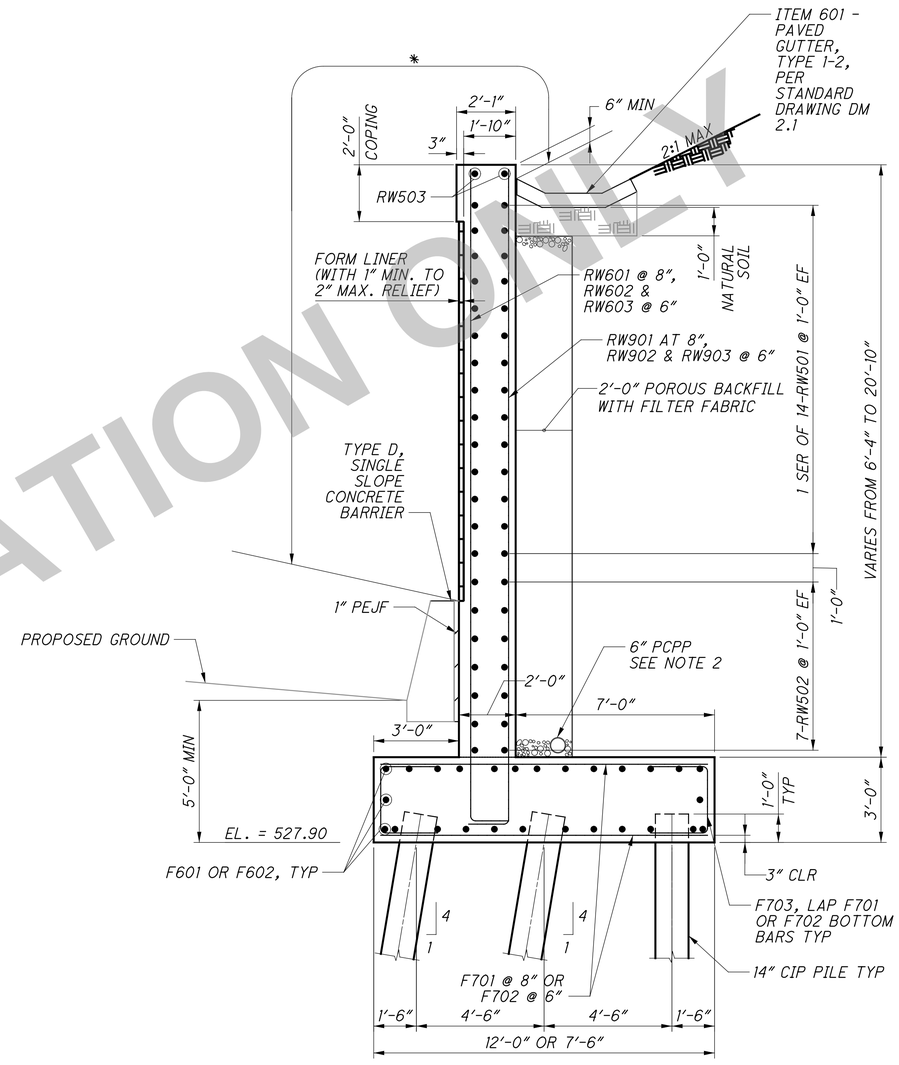
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ELEVATION



SECTION A-A

FOR INFORMATION ONLY

LEGEND:

* - LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) AND ITEM 512 - SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)

NOTES:

1. SEE SHEET 21/37 FOR FOUNDATION REINFORCING.
2. TIE PROPOSED 6" PCPP INTO EXISTING PCPP LOCATED AT THE REAR ABUTMENT, HAM-561-0701 BRIDGE. SEE EXISTING PLANS FOR INVERT INFORMATION. PID NO. 89835.
3. THE ULTIMATE BEARING VALUE IS 220 KIPS PER PILE.
4. 19 PILES, 30 FEET LONG, PREBORE 25' DEEP.
5. SEE GENERAL NOTES SHEET FOR ADDITIONAL PILE NOTES.

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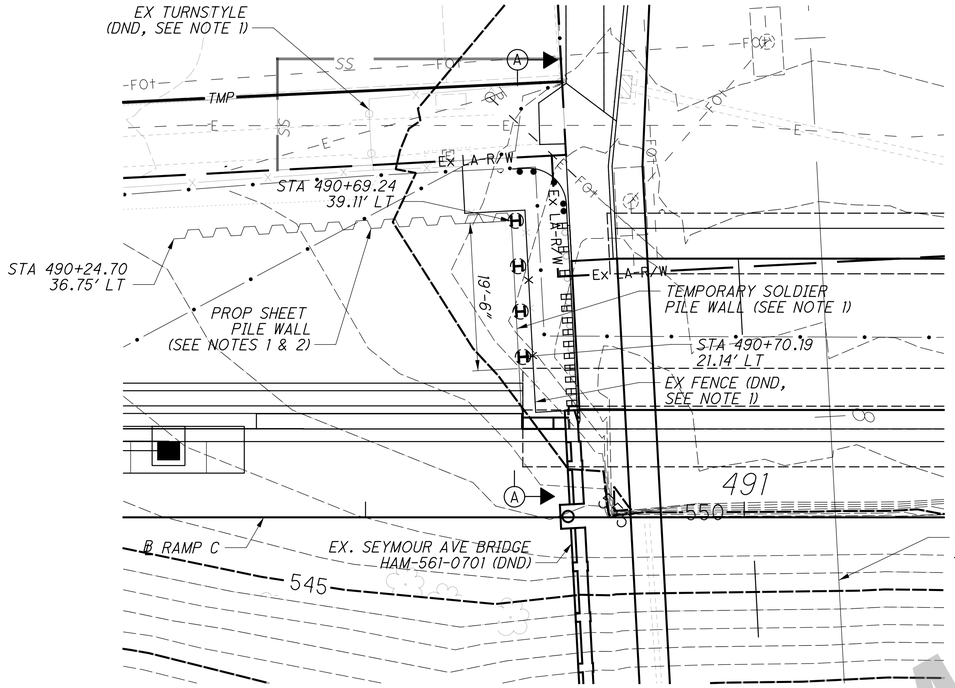
WALL ELEVATION 1 OF 1
CAST-IN-PLACE RETAINING WALL J3

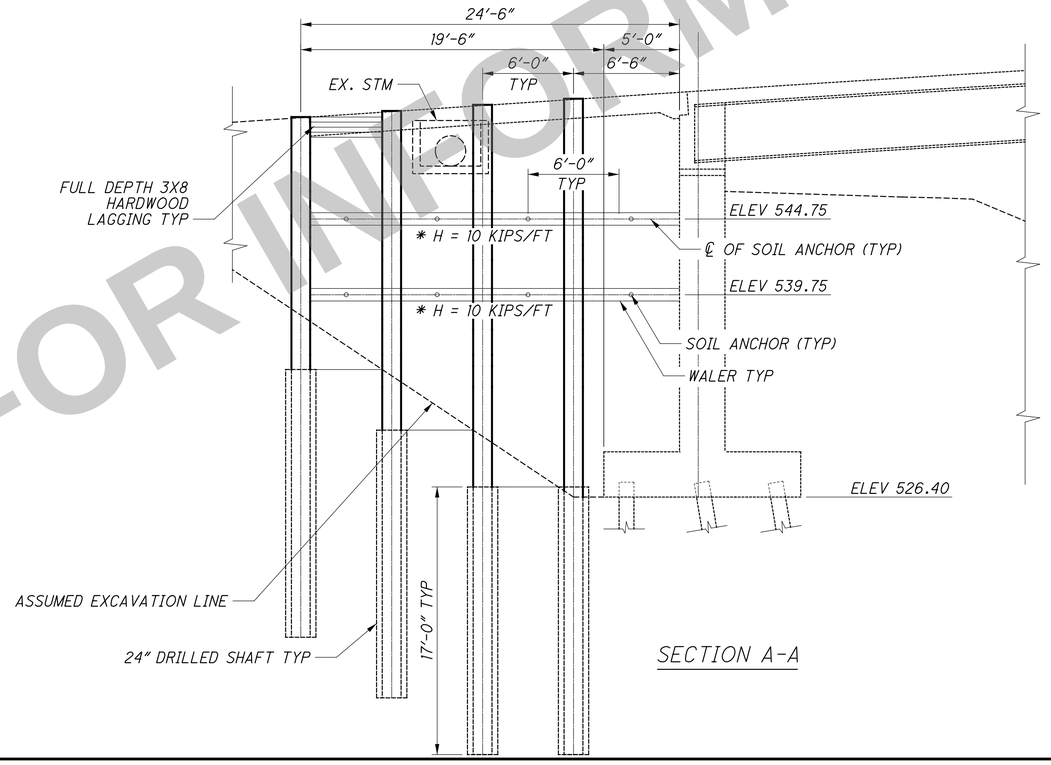
HAM-75-7.85
PID No. 77889

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NOTES:

1. TEMPORARY SHORING SHALL NOT DISTURB EITHER THE EXISTING FENCE OR TURNSTYLE ON THE WESTERN GIVAUDAN PROPERTY.
2. TEMPORARY SHEETING SHALL BE PER ASTM A572 AND SHALL HAVE A MINIMUM YIELD STRENGTH OF 50 KSI, MINIMUM SECTION MODULUS = 30 IN°2/FT, AND A MINIMUM MOMENT OF INERTIA = 184.20 IN°4/FT. MINIMUM DEPTH OF SHEETING SHALL BE 15'.

LEGEND

* - BOND LENGTH OF SOIL ANCHOR TO BE DETERMINED BY CONTRACTOR.

H = HORIZONTAL COMPONENT OF REQUIRED SOIL ANCHOR DESIGN LOAD PER FOOT OF WALER.

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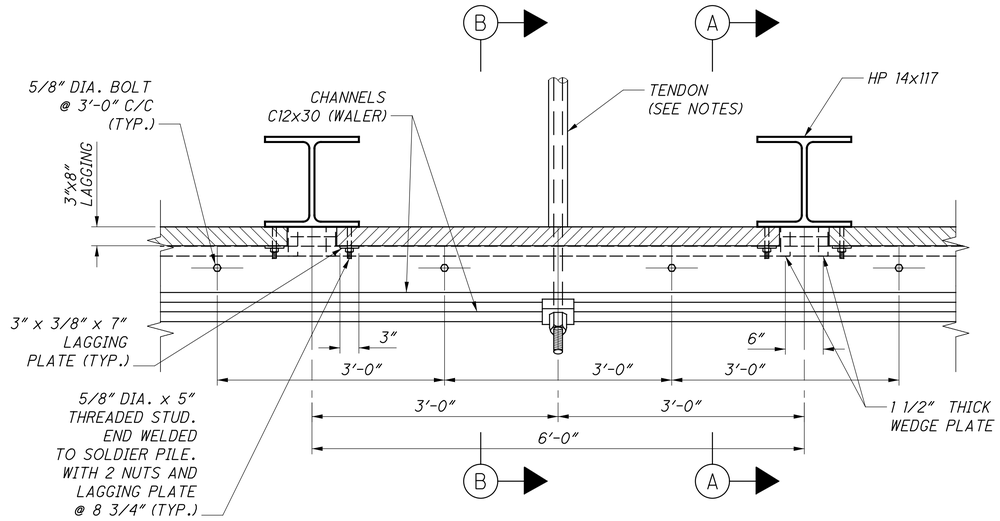
TEMPORARY SHORING PLAN

CAST-IN-PLACE BARRIER RETAINING WALL J3

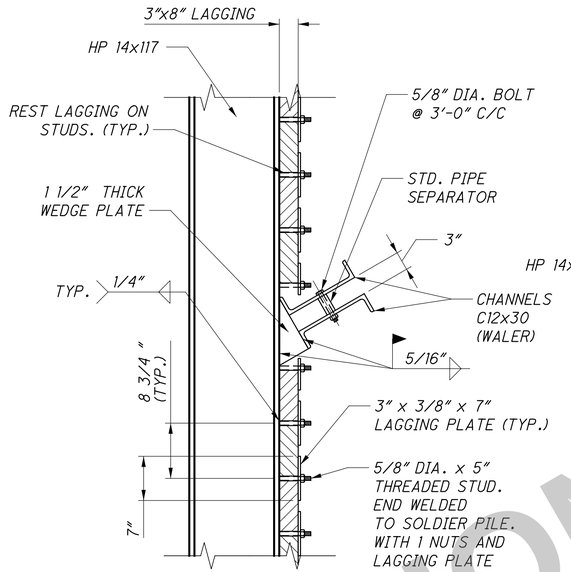
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PID No. 77889

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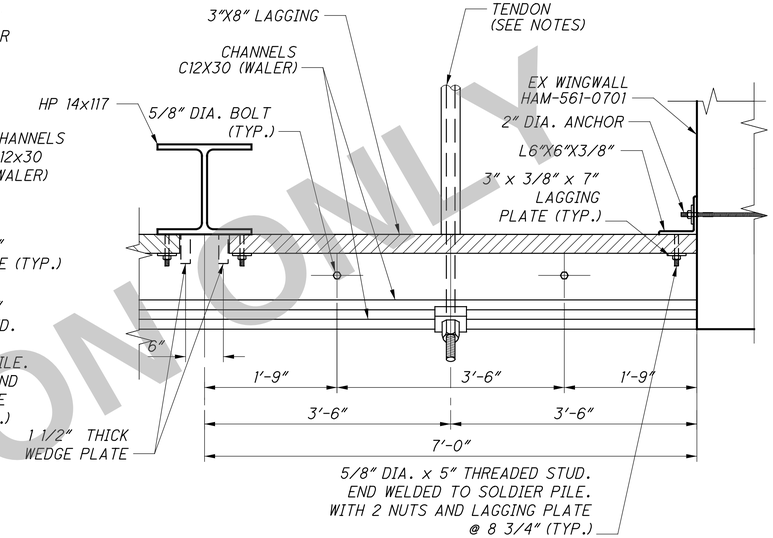
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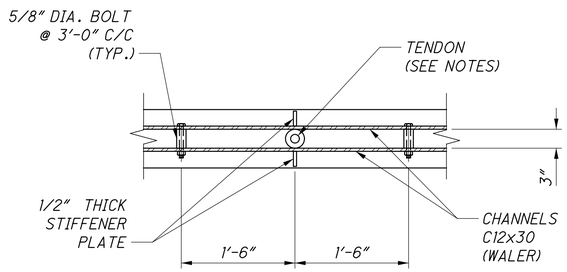
SOLDIER PILE WALL PLAN



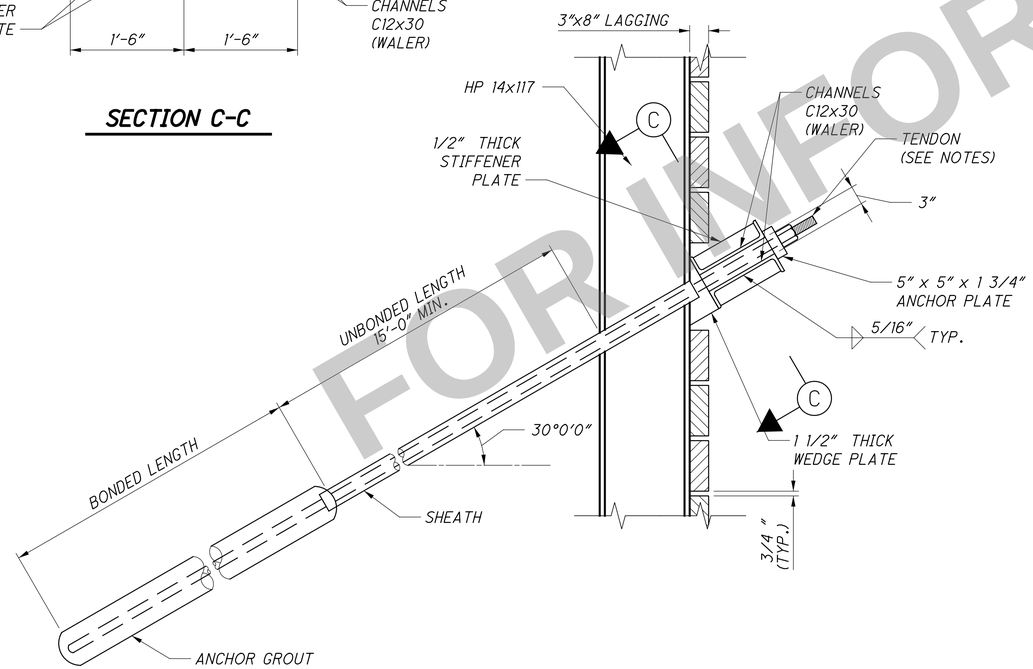
SECTION A-A



CONNECTION DETAIL AT EX WINGWALL



SECTION C-C



SECTION B-B

NOTES:

1. TENDON SHALL BE EITHER A 1 3/8" DIAMETER THREADED BAR (ASTM A722 GRADE 150) OR A LOW RELAXATION FOUR-STRAND (ASTM A416 GRADE 270) SEVEN-WIRE UNCOATED STRAND. THE TENDONS USED FOR PHASE 1 SHALL BE STRAND TYPE TENDONS TO FACILITATE THE DRIVING OF THE PHASE 2 SOLDIER PILES.

2. THE CEMENT FOR THE GROUT SHALL BE TYPE I, TYPE III, OR TYPE III CONFORMING TO ASTM C150. THE GROUT SHALL CONFORM TO ALL APPLICABLE REQUIREMENTS OF 499. GROUT ADDITIVES SHOULD BE AVOIDED. CHEMICAL ADDITIVES WHICH CAN CONTROL BLEED, AND/OR RETARD SET MAY BE USED IN THE ANCHOR GROUT AS DIRECTED BY THE ENGINEER.

3. THE SHEATH (BOND BREAKER) SHALL BE EITHER A POLYVINYL CHLORIDE (PVC), POLYETHYLENE, OR PROPYLENE PIPE OR TUBE. THE MATERIAL SHALL BE CAPABLE OF WITHSTANDING DAMAGE DURING SHIPPING, HANDLING, AND INSTALLATION. THE SHEATH SHALL HAVE A MINIMUM WALL THICKNESS OF 0.04 INCH. THE MATERIAL IS SUBJECT TO THE APPROVAL OF THE ENGINEER.

THE MATERIALS SHALL CONFORM TO THE FOLLOWING:

PVC	ASTM D1785
POLYETHYLENE	ASTM D1248
PROPYLENE	ASTM D4101

THE INSTALLED SHEATHING SHALL PERMIT AT LEAST 95 PERCENT OF THE TENDON FORCE TO BE TRANSMITTED TO THE ANCHOR LENGTH. THE SHEATHING SHALL HAVE A TENSILE STRENGTH EXCEEDING 3,000 POUNDS PER SQUARE INCH (PSI) AS DETERMINED BY ASTM D638 AND AN IZOD IMPACT STRENGTH EXCEEDING 4 FOOT-POUNDS PER INCH AS DETERMINED BY ASTM D256A.

4. ALL STEEL SHALL BE GRADE 50. ALL BOLTS SHALL BE 5/8" DIA. HIGH STRENGTH BOLTS ASTM A325.

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SOLDIER PILE DETAILS

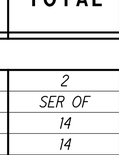
CAST-IN-PLACE BARRIER RETAINING WALL J3

HAM-75-7.85
PID No. 77889

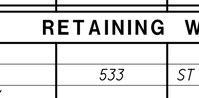
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	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	R	INC
RETAINING WALL J3										
	2	3′-9″								
RW501	SER OF	TO	533	ST						2′-2 3/4″
	14	32′-9″								
RW502	14	34′-8″	506	ST						
RW503	2	37′-7″	78	19	36′-9″	8 7/8″	3 3/4″			
	1	10′-0″				9′-2″				
RW601	SER OF	TO	478	1	1′-0″	TO				3 3/8″
	24	16′-6″				15′-7 3/4″				
	1	16′-9″				15′-11″				
RW602	SER OF	TO	1075	1	1′-0″	TO				2 5/8″
	35	24′-2″				23′-4″				
RW603	2	24′-3″	73	ST	1′-0″	23′-5″				
	1	10′-4″				9′-2″				
RW901	SER OF	TO	1105	1	1′-5″	TO				3 3/8″
	24	16′-9″				15′-7 3/4″				
	1	17′-1″				15′-11″				
RW902	SER OF	TO	2474	1	1′-5″	TO				3 3/16″
	35	24′-6″				23′-4″				
RW903	2	24′-7″	167	1	1′-5″	23′-5″				
F601	16	34′-8″	833	ST						
F602	11	18′-8″	308	ST						
F701	45	7′-2″	659	ST						
F702	66	11′-8″	1574	ST						
F703	98	6′-3″	1252	2	2′-0″	2′-7″	2′-0″			
		TOTAL	9864							



TYPE-1



TYPE-19

LEGEND:

○ - 14″ CIP PILES

▽ - 14″ CIP PILES, BATTERED 4:1

NOTES:

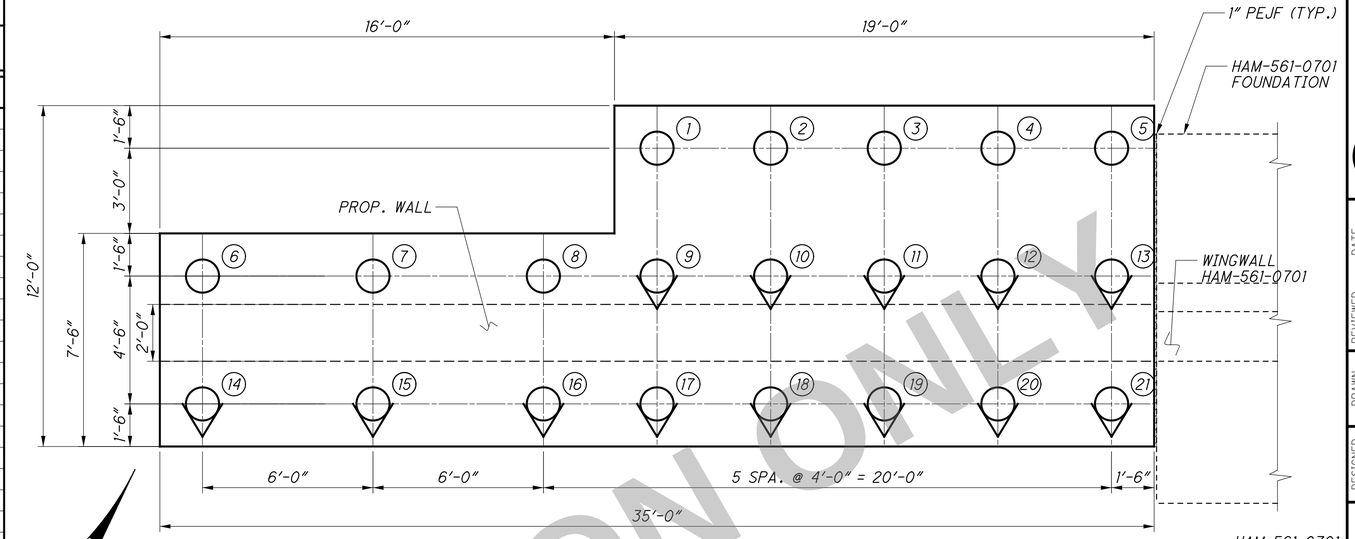
1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE 3 DIGITS ARE USED, AND THE FIRST 2 DIGITS WHERE FOUR DIGITS ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, RW601 IS A NO 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. "R" INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD" WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

2. ALL REINFORCING STEEL TO BE EPOXY COATED.

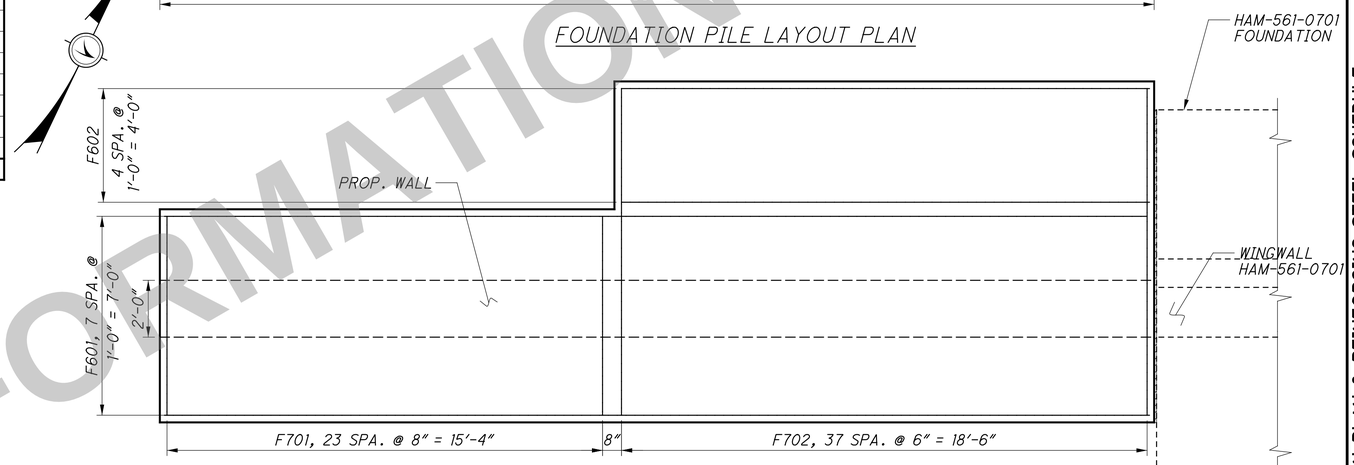
3. FOR ABBREVIATIONS LEGEND, SEE SHEET 1/37 .

LEGEND:

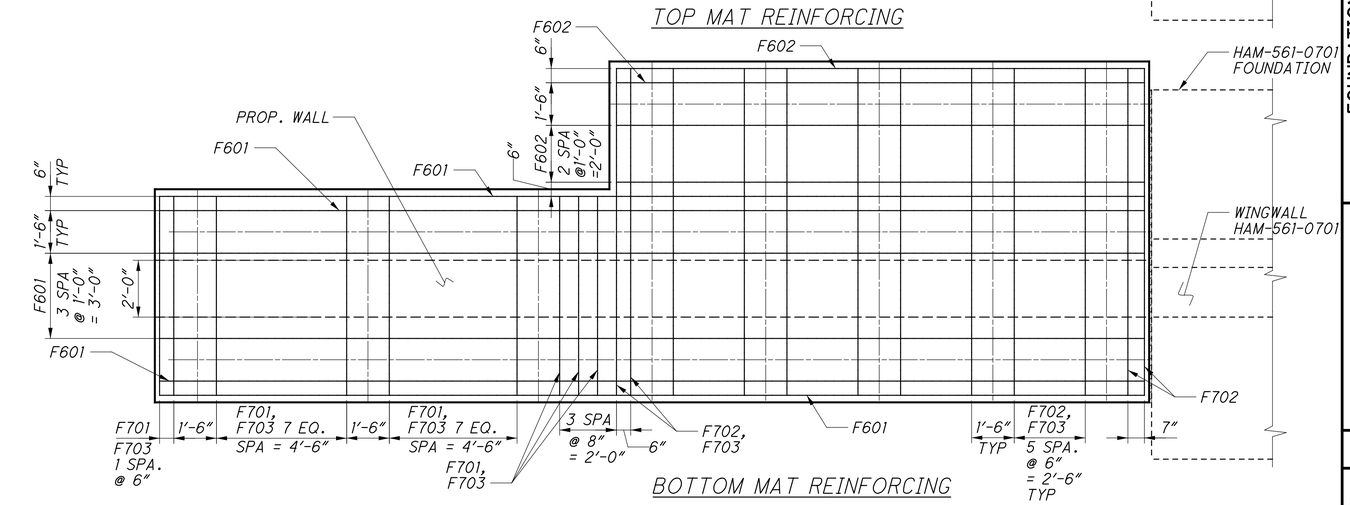
** - FIELD CUT



FOUNDATION PILE LAYOUT PLAN



TOP MAT REINFORCING



BOTTOM MAT REINFORCING

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FOUNDATION PLAN & REINFORCING STEEL SCHEDULE

CAST-IN-PLACE RETAINING WALL J3

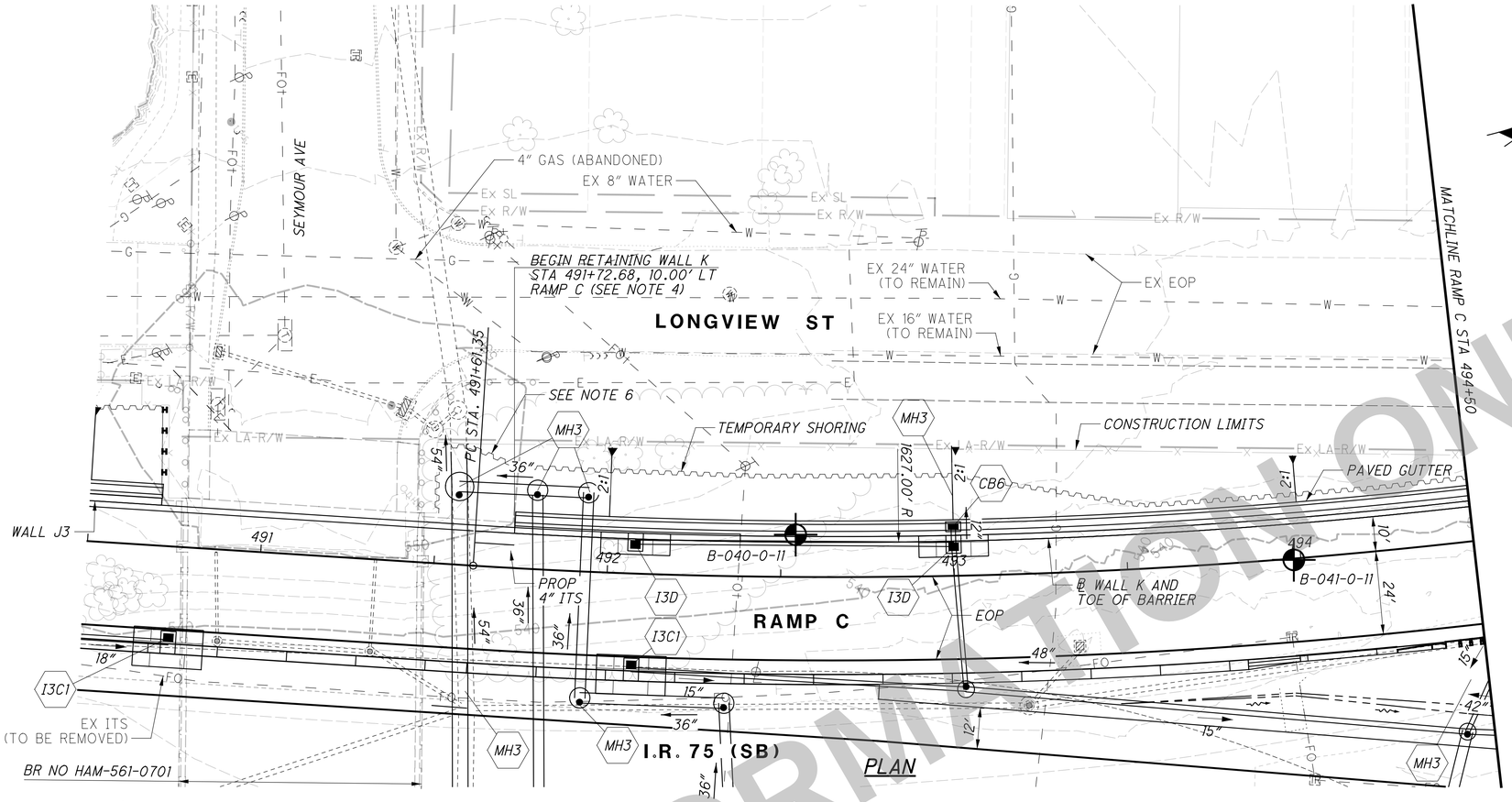
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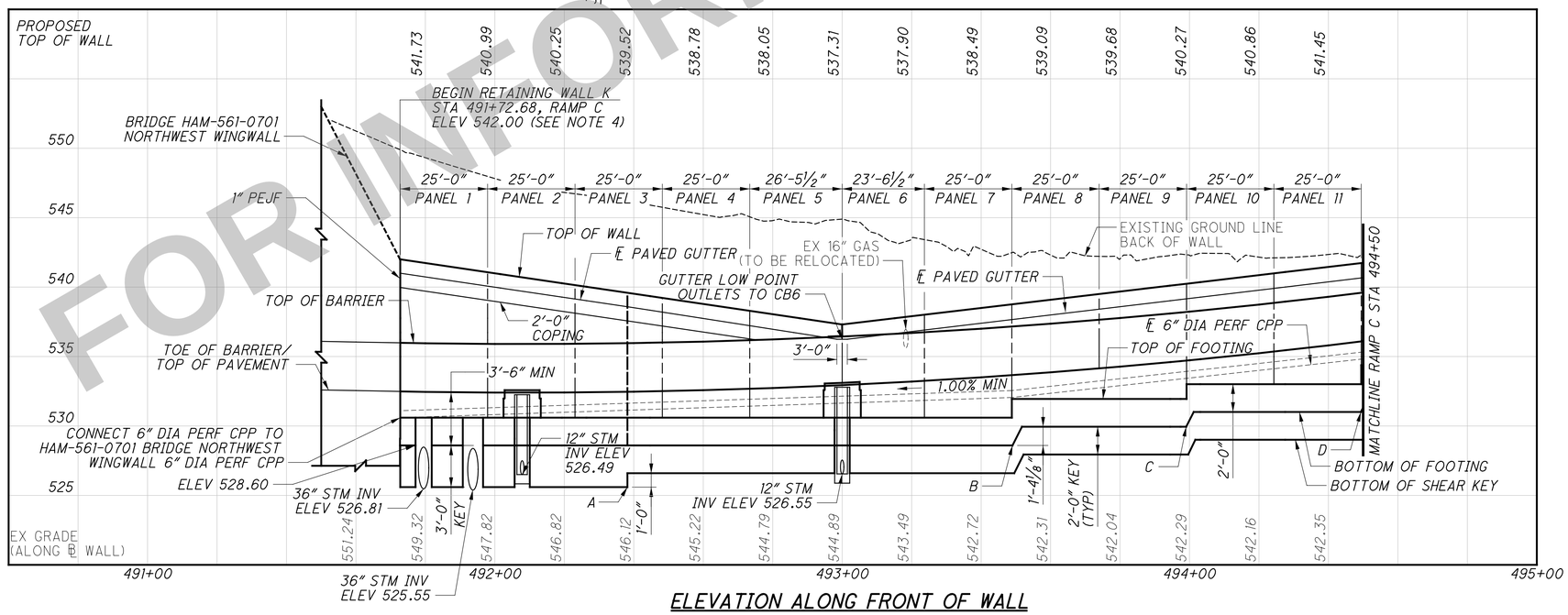
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CURVE 75-C1
PI STA 494+97.83
D = 23° 13' 49" (LT)
Dc = 3° 30' 00"
R = 1,637.00'
T = 336.48'
L = 663.71'
E = 34.22'
C = 659.18'
C.B. = N 32° 20' 42" E
e max = 0.037
PC STA 491+61.35
PCC STA 498+25.06



ELEVATION ALONG FRONT OF WALL

POINT	STATION	ELEVATION
A	492+38.17	525.60
B	493+49.06	528.60
C	493+99.06	529.95
D	494+49.46	531.95

LEGEND:

= BORING LOCATION

NOTES:

1. SHEAR KEY STEPS TO MATCH THOSE DETAILED FOR FOOTING.
2. FOR ABBREVIATIONS LEGEND, SEE SHEET 1/37.
3. ALL EXISTING STORM SEWER WITHIN CONSTRUCTION LIMITS IS TO BE REMOVED UNLESS OTHERWISE NOTED.
4. STATION, OFFSET, AND TOP OF WALL ELEVATIONS SHALL BE ADJUSTED AS NEEDED TO MAINTAIN A FRONT FACE OF WALL AND TOP OF WALL ELEVATIONS WHICH MATCH THE END OF THE ADJACENT HAM-75-0701 BRIDGE WINGWALL.
5. COPING AND FORMLINER SHALL BE INSTALLED ON WALL PANELS 1 THROUGH 5 ONLY.
6. THE PORTION OF TEMPORARY SHORING ATOP THE EXISTING 54" STORM SHALL BE DRIVEN TO A DEPTH JUST ABOVE THE TOP OF THE EXISTING STORM PIPE AT EL. 531.00.

0 10 20 40
HORIZONTAL
SCALE IN FEET

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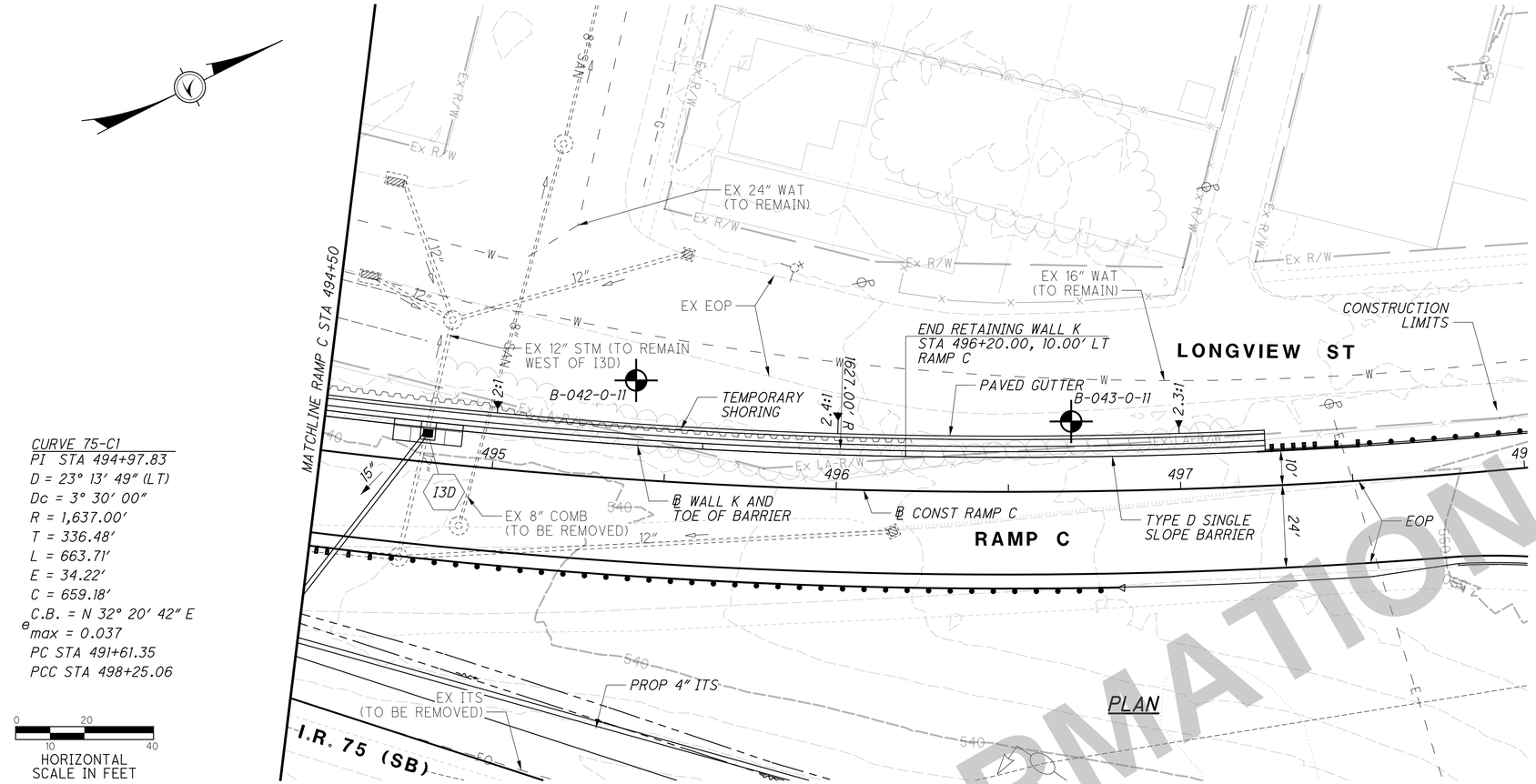
PLAN AND ELEVATION
CAST-IN-PLACE BARRIER RETAINING WALL K

HAM-75-7.85
PID No. 77889

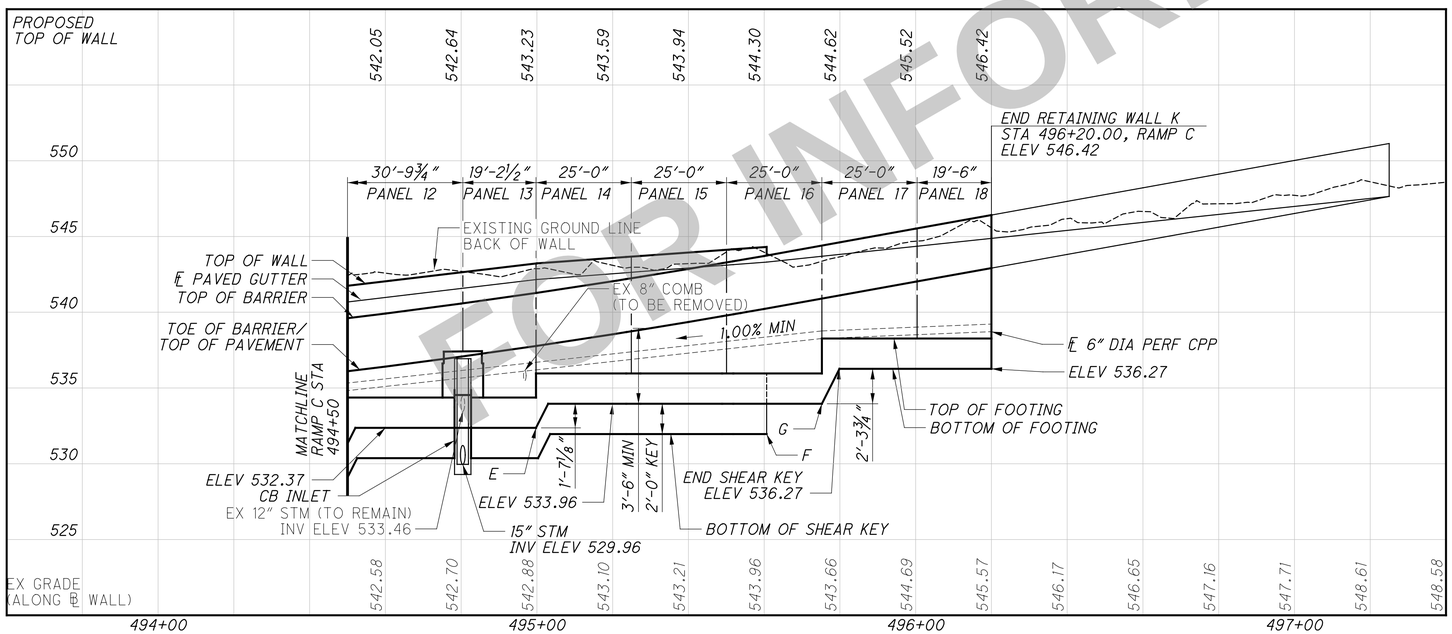
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PLAN



ELEVATION ALONG FRONT OF WALL

POINT	STATION	ELEVATION	DESCRIPTION
E	494+99.77	532.37	-
F	495+60.66	531.96	END SHEAR KEY
G	495+75.23	533.96	-

CURVE 75-C1
PI STA 494+97.83
D = 23° 13' 49" (LT)
Dc = 3° 30' 00"
R = 1,637.00'
T = 336.48'
L = 663.71'
E = 34.22'
C = 659.18'
C.B. = N 32° 20' 42" E
e_{max} = 0.037
PC STA 491+61.35
PCC STA 498+25.06

HORIZONTAL SCALE IN FEET
0 10 20 40

LEGEND:

= BORING LOCATION

NOTES:

1. SHEAR KEY STEPS TO MATCH THOSE DETAILED FOR FOOTING.
2. FOR ABBREVIATIONS LEGEND, SEE SHEET 1737.
3. ALL EXISTING STORM SEWER WITHIN CONSTRUCTION LIMITS IS TO BE REMOVED UNLESS OTHERWISE NOTED.

FOR INFORMATION ONLY

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED JLM | DRAWN SMJ | REVIEWED SSK | DATE 12-15-21
CHECKED NCK | REVISED | STRUCTURE FILE NUMBER

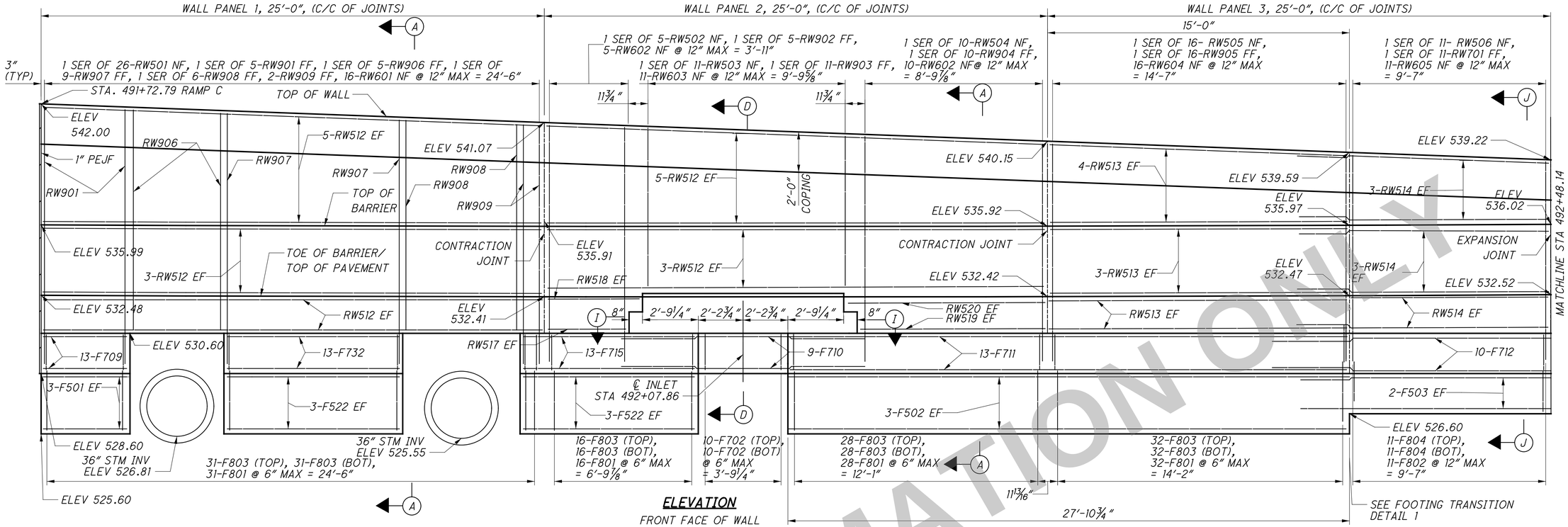
PLAN AND ELEVATION
CAST-IN-PLACE BARRIER RETAINING WALL K

HAM-75-7.85
PID No. 77889

23 / 37

1017
2017

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WALL ELEVATION 1 OF 3

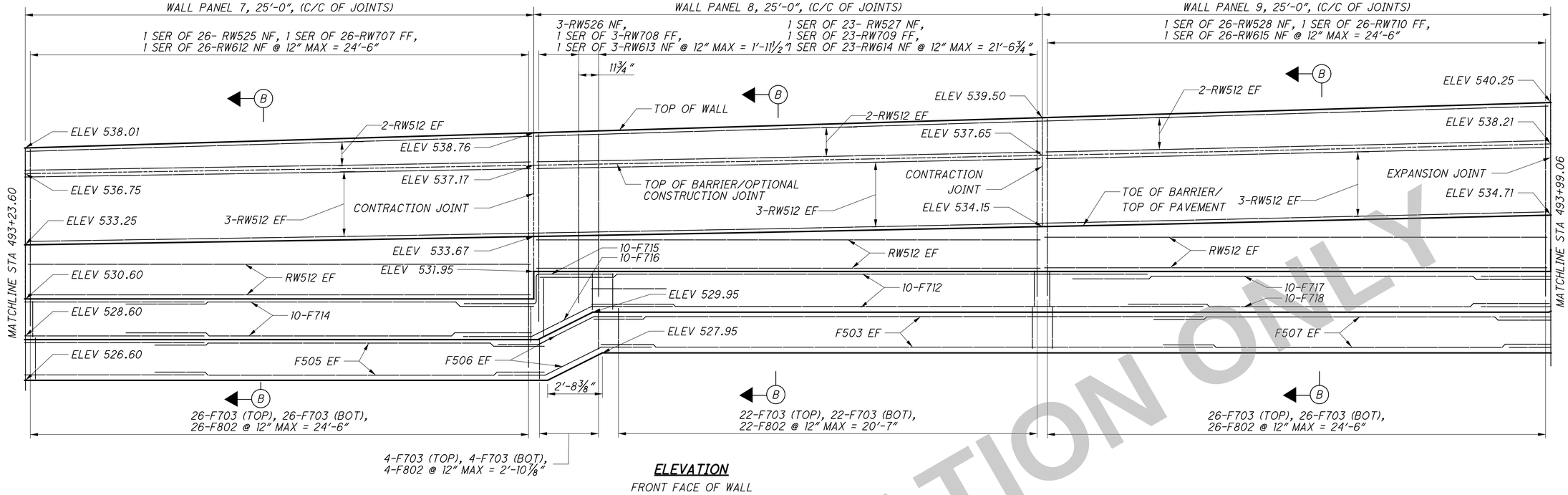
CAST-IN-PLACE BARRIER RETAINING WALL K

HAM-75-7.85
PID No. 77889

24 / 37

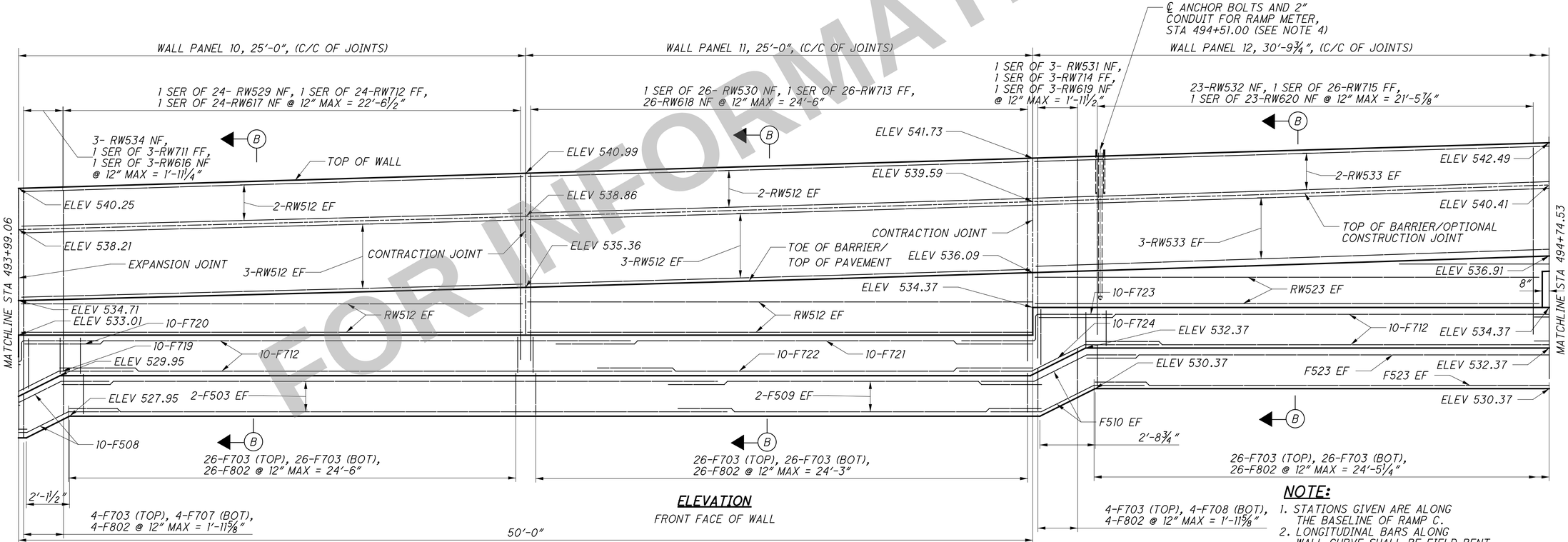
1018
2017

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ELEVATION

FRONT FACE OF WALL



ELEVATION

FRONT FACE OF WALL

MINIMUM LAP LENGTH
#5 BAR = 2'-5"
#6 BAR = 2'-11"
#7 BAR = 3'-8"

NOTE:

1. STATIONS GIVEN ARE ALONG THE BASELINE OF RAMP C.
2. LONGITUDINAL BARS ALONG WALL CURVE SHALL BE FIELD BENT.
3. FOR ABBREVIATIONS LEGEND, SEE SHEET 1/37.
4. THE CONDUIT AND ANCHOR BOLTS ARE CAST IN THE WALL TO FACILITATE A RAMP METER PEDESTAL MOUNTED TO THE TOP OF THE WALL AT STA 494+51, 141' LT. SEE ITS PLAN SHEET 1216 2017 FOR LOCATION AND ADDITIONAL DETAILS.

FOR INFORMATION ONLY

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6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

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NCK			

WALL ELEVATION 2 OF 3

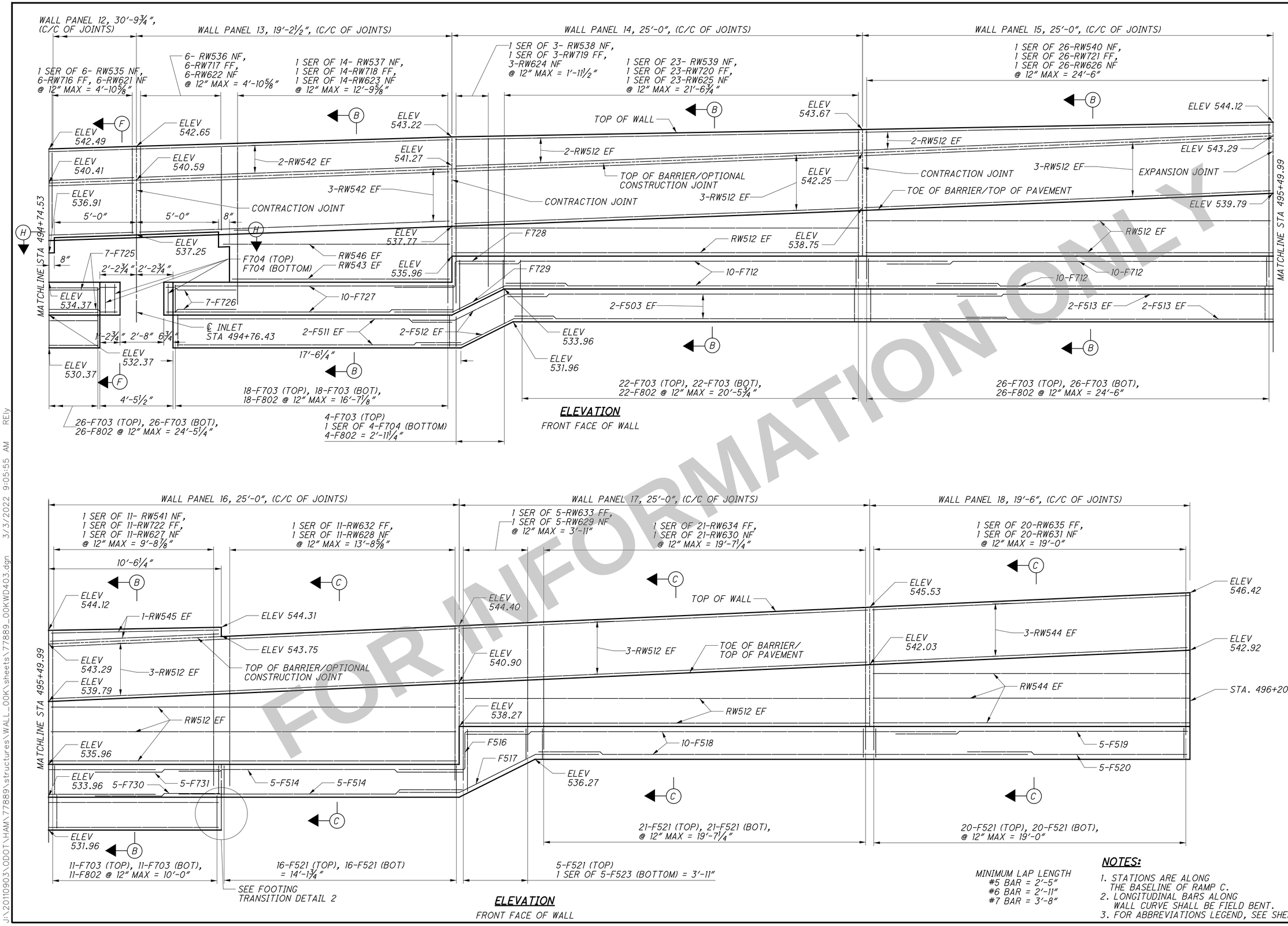
CAST-IN-PLACE BARRIER RETAINING WALL K

HAM-75-7.85

PID No. 77889

1019 2017

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NOTES:

1. STATIONS ARE ALONG THE BASELINE OF RAMP C.
2. LONGITUDINAL BARS ALONG WALL CURVE SHALL BE FIELD BENT.
3. FOR ABBREVIATIONS LEGEND, SEE SHEET 1/37.

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COLUMBUS, OHIO 43231
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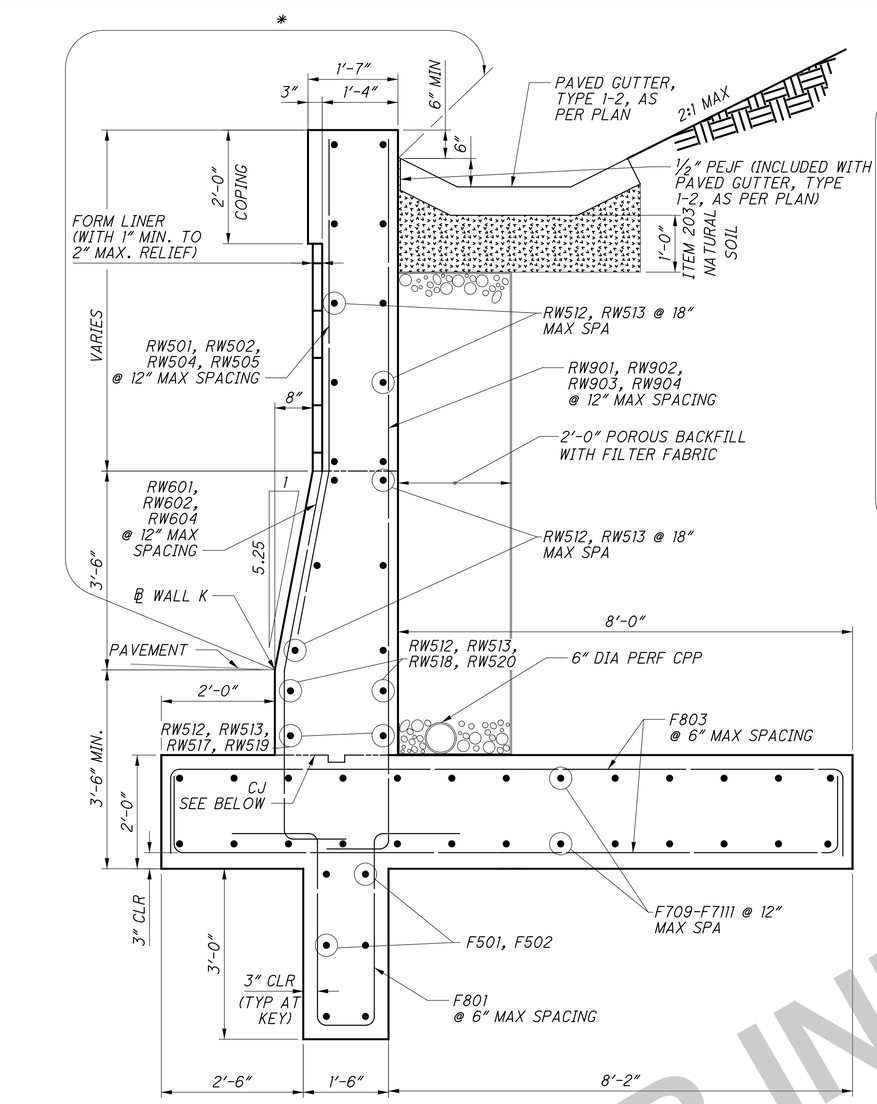
DESIGNED	DRAWN	REVIEWED	DATE
JLM	SMJ	SSK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

WALL ELEVATION 3 OF 3
CAST-IN-PLACE BARRIER RETAINING WALL K

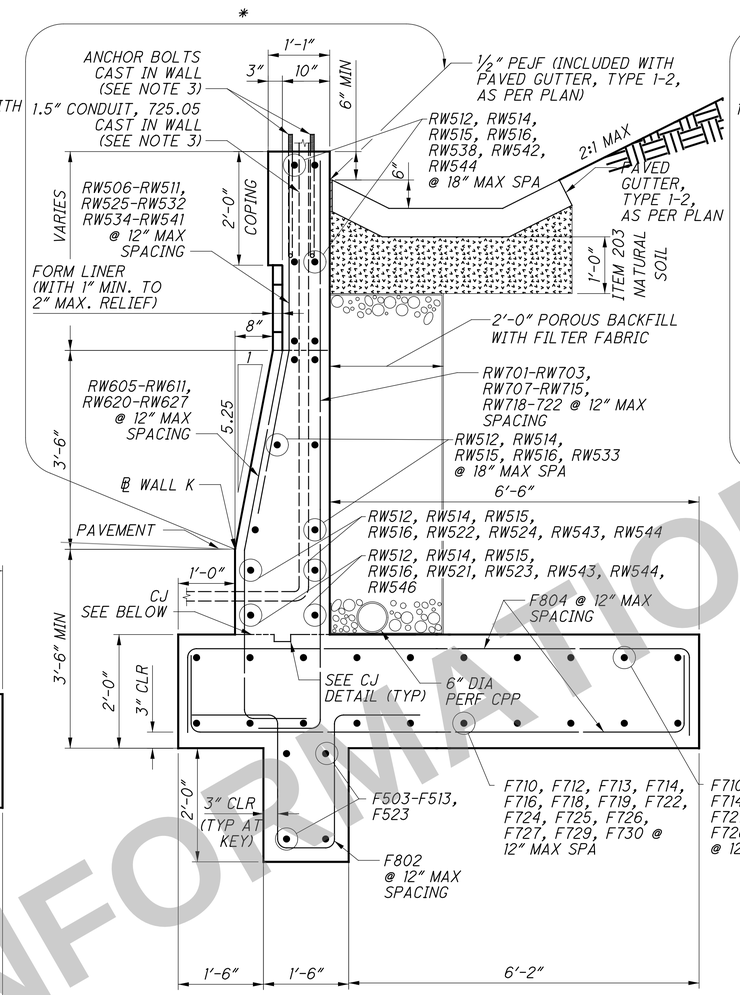
HAM-75-7.85
PID No. 77889

1020 2017

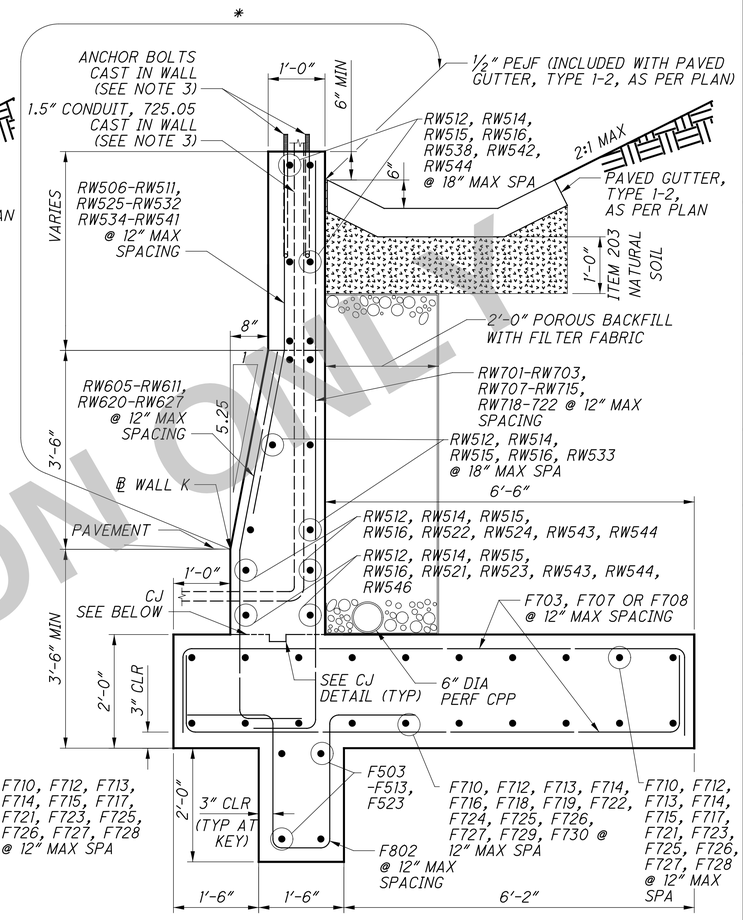
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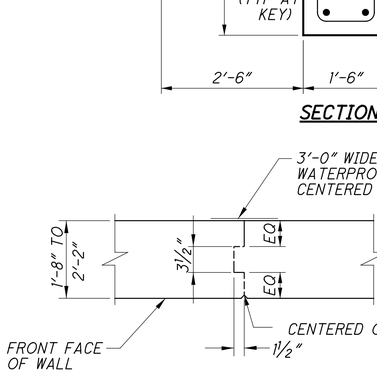
SECTION A-A



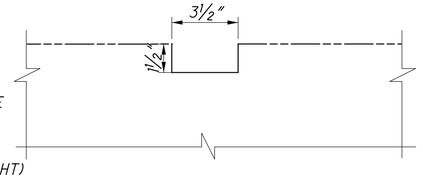
SECTION J-J



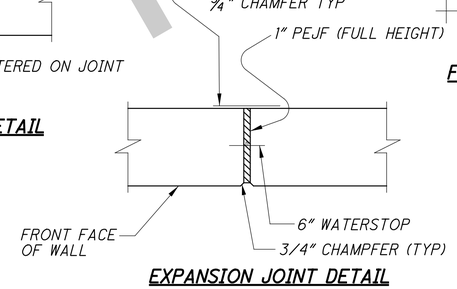
SECTION B-B



CONTRACTION JOINT DETAIL



FOOTING CONSTRUCTION JOINT DETAIL



EXPANSION JOINT DETAIL

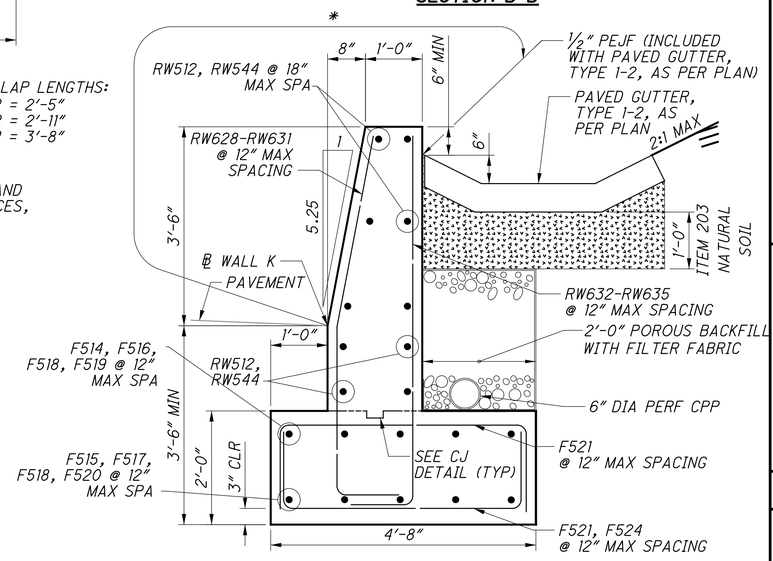
MINIMUM LAP LENGTHS:
#5 BAR = 2'-5"
#6 BAR = 2'-11"
#7 BAR = 3'-8"

LEGEND:

* - LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) AND ITEM 512 - SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)

NOTES:

1. PROVIDE 2" CLEARANCE FROM THE FACE OF WALL TO FACE OF REINFORCING BAR EXCEPT WHERE NOTED OTHERWISE.
2. FOR ABBREVIATIONS LEGEND, SEE SHEET 1/37.
3. THE CONDUIT AND ANCHOR BOLTS ARE CAST IN THE WALL TO FACILITATE A RAMP METER PEDESTAL MOUNTED TO THE TOP OF THE WALL AT STA 494+51, 141' LT. SEE ITS PLAN SHEET 966 2017 FOR LOCATION AND ADDITIONAL DETAILS.



SECTION C-C

FOR INFORMATION ONLY

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6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

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JLM	SMJ	SSK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

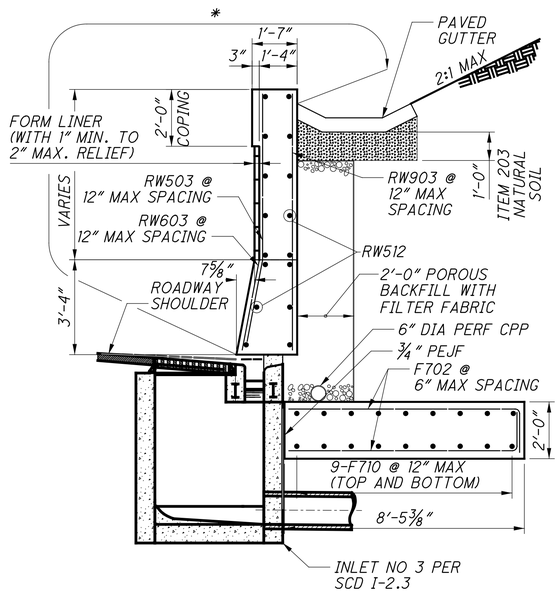
TYPICAL SECTION AND WALL DETAILS

CAST-IN-PLACE BARRIER RETAINING WALL K

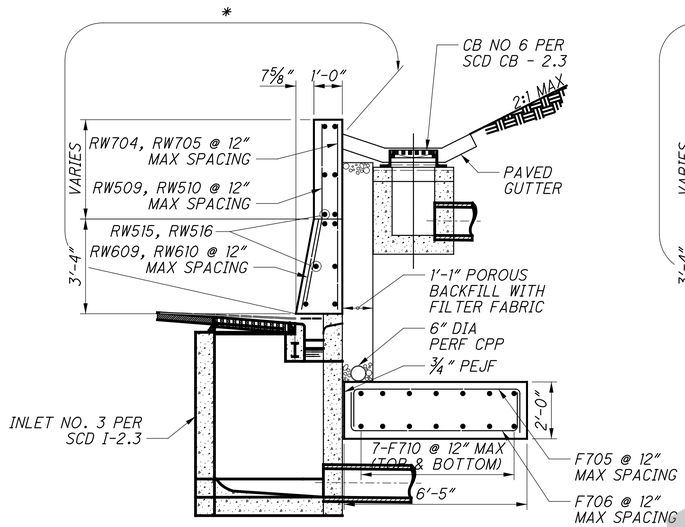
HAM-75-7.85
PID No. 77889

1021 2017

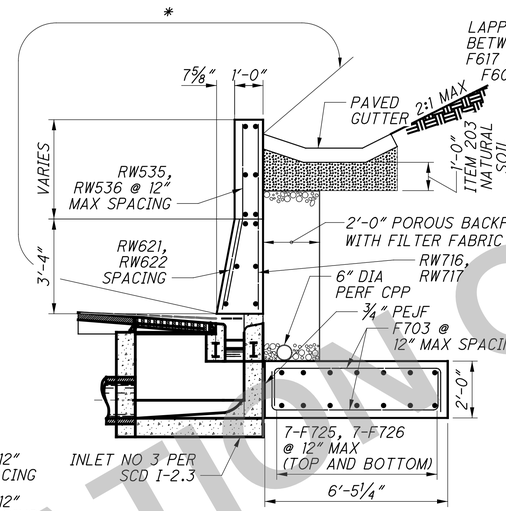
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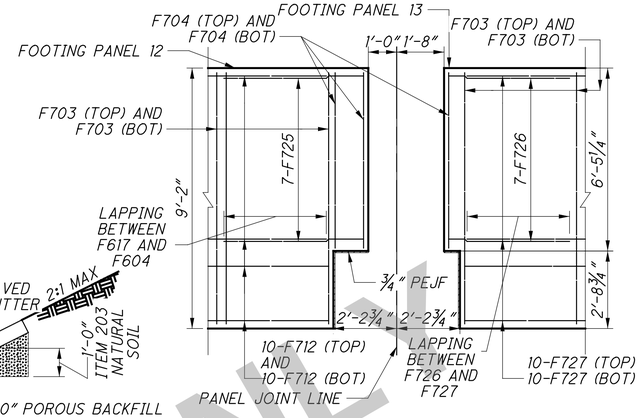
SECTION D-D
AT STA. 492+07.29



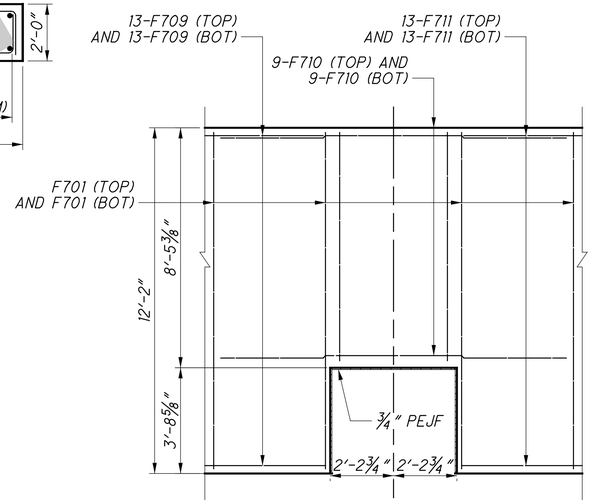
SECTION E-E
AT STA. 492+98.79



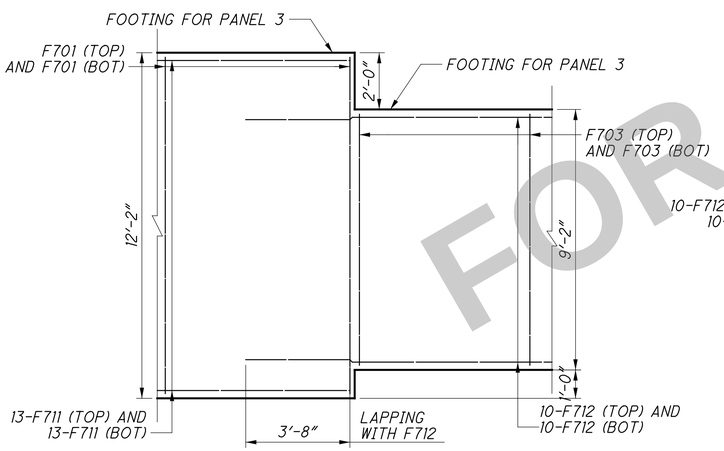
SECTION F-F
AT STA. 494+76.43



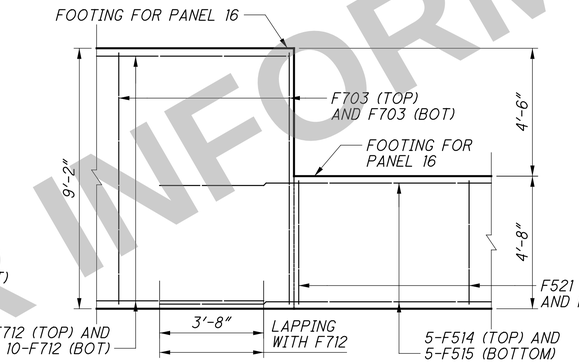
SECTION H-H
(REINFORCEMENT SHOWN FOR FOOTING ONLY)



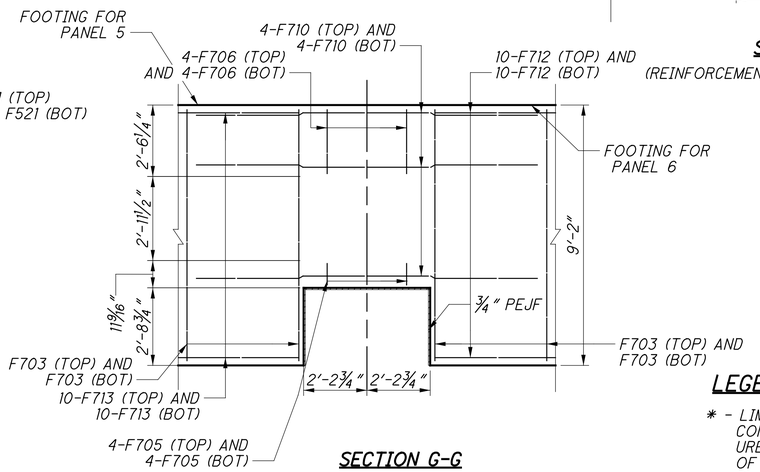
SECTION I-I
(REINFORCEMENT SHOWN FOR FOOTING ONLY)



FOOTING TRANSITION DETAIL-1
PLAN VIEW (REINFORCEMENT SHOWN FOR FOOTING ONLY)



FOOTING TRANSITION DETAIL-2
PLAN VIEW (REINFORCEMENT SHOWN FOR FOOTING ONLY)



SECTION G-G
(REINFORCEMENT SHOWN FOR FOOTING ONLY)

MINIMUM LAP LENGTH
#5 BAR = 2'-5"
#6 BAR = 2'-11"
#7 BAR = 3'-8"

LEGEND:

* - LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) AND ITEM 512 - SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)

1. FOR ABBREVIATIONS LEGEND, SEE SHEET 1/37.

FOR INFORMATION ONLY

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED	DRAWN	REVIEWED	DATE
JLM	SMJ	SSK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

INLET DETAILS AND FOOTING TRANSITION DETAILS

CAST-IN-PLACE BARRIER RETAINING WALL K

HAM-75-7.85
PID No. 77889

28 / 37

1022
2017

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MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
RETAINING WALL K											
	1	7′-11″			4′-11″						
RW501	SER OF	TO	226	19	TO	2′-11″	0′-6″				3/8″
	26	8′-9″			5′-10″						
	1	7′-9″			4′-9″						
RW502	SER OF	TO	41	19	TO	2′-11″	0′-6″				1/2″
	5	7′-11″			4′-11″						
	1	7′-5″			4′-5″						
RW503	SER OF	TO	87	19	TO	2′-11″	0′-6″				3/8″
	11	7′-9″			4′-9″						
	1	7′-0″			4′-0″						
RW504	SER OF	TO	75	19	TO	2′-11″	0′-6″				7/16″
	10	7′-4″			4′-4″						
	1	6′-5″			3′-5″						
RW505	SER OF	TO	112	19	TO	2′-11″	0′-6″				5/16″
	16	7′-0″			4′-0″						
	1	6′-0″			3′-0″						
RW506	SER OF	TO	71	19	TO	2′-11″	0′-6″				1/2″
	11	6′-5″			3′-5″						
	1	4′-11″			1′-11″						
RW507	SER OF	TO	148	19	TO	2′-11″	0′-6″				1/2″
	26	6′-0″			3′-0″						
	1	3′-11″			0′-11″						
RW508	SER OF	TO	101	19	TO	2′-11″	0′-6″				9/16″
	22	4′-11″			1′-11″						
	1	1′-7″			0′-6″						
RW509	SER OF	TO	11	19	TO	1′-1″	0′-2″				5/8″
	6	1′-10″			0′-9″						
	1	1′-7″			0′-6″						
RW510	SER OF	TO	11	19	TO	1′-1″	0′-2″				5/8″
	6	1′-10″			0′-9″						
	1	3′-9″			0′-9″						
RW511	SER OF	TO	77	19	TO	2′-11″	0′-6″				3/16″
	19	4′-0″			1′-1″						
RW512	172	24′-8″	4425	ST							
RW513	18	14′-8″	275	ST							
RW514	16	12′-5″	207	ST							
RW515	10	26′-1″	272	ST							
RW516	10	23′-2″	242	ST							
RW517	2	3′-10″	8	ST							
RW518	2	4′-6″	9	ST							
RW519	2	9′-2″	19	ST							
RW520	2	9′-9″	20	ST							
RW521	2	20′-5″	43	ST							
RW522	2	21′-2″	44	ST							
RW523	2	17′-6″	37	ST							
RW524	2	18′-2″	38	ST							
	1	4′-0″			1′-1″						
RW525	SER OF	TO	114	19	TO	2′-11″	0′-6″				3/16″
	26	4′-5″			1′-5″						
RW526	3	4′-5″	14	19	1′-5″	2′-11″	0′-6″				5 1/2″
	1	4′-5″			1′-5″						
RW527	SER OF	TO	109	19	TO	2′-11″	0′-6″				1/8″
	23	4′-8″			1′-8″						
	1	4′-8″			1′-8″						
RW528	SER OF	TO	129	19	TO	2′-11″	0′-6″				1/16″
	26	4′-10″			1′-10″						
	1	4′-10″			1′-10″						
RW529	SER OF	TO	121	19	TO	2′-11″	0′-6″				1/16″
	24	4′-11″			1′-11″						
	1	4′-11″			1′-11″						
RW530	SER OF	TO	134	19	TO	2′-11″	0′-6″				1/16″
	26	5′-0″			2′-0″						
	1	4′-11″			1′-11″						
RW531	SER OF	TO	16	19	TO	2′-11″	0′-6″				1/2″
	3	5′-0″			2′-0″						

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
RW532	23	4′-11″	118	19	1′-11″	2′-11″	0′-6″				
RW533	10	30′-5″	317	ST							
RW534	3	4′-10″	15	19	1′-10 1/2″	2′-11″	0′-6″				
	1	4′-10″			1′-10						
RW535	SER OF	TO	30	19	TO	2′-11″	0′-6″				3/16″
	6	4′-11″			1′-11″						
RW536	6	4′-10″	30	19	1′-11″	2′-11″	0′-6″				
	1	4′-9″			1′-9″						
RW537	SER OF	TO	69	19	TO	2′-11″	0′-6″				
	14	4′-9″			1′-10″						
	1	4′-8″			1′-8″						
RW538	SER OF	TO	15	19	TO	2′-11″	0′-6″				1/2″
	3	4′-9″			1′-9″						
	1	4′-3″			1′-3″						
RW539	SER OF	TO	107	19	TO	2′-11″	0′-6″				1/4″
	23	4′-8″			1′-8″						
	1	3′-8″			0′-8″						
RW540	SER OF	TO	107	19	TO	2′-11″	0′-6″				1/4″
	26	4′-3″			1′-3″						
	1	3′-5″			0′-5″						
RW541	SER OF	TO	41	19	TO	2′-11″	0′-6″				5/16″
	11	3′-8″			0′-8″						
RW542	10	18′-10″	196	ST							
RW543	2	13′-6″	28	ST							
RW544	12	19′-2″	240	ST							
RW545	4	10′-2″	42	ST							
RW546	2	13′-10″	29	ST							
RW601	16	8′-0″	192	10	3′-6″	0′-8″	3′-6″	1′-1″			
RW602	15	8′-0″	180	10	3′-6″	0′-8″	3′-6 1/2″	1′-1″			
RW603	11	3′-2″	51	ST							
RW604	16	8′-1″	194	10	3′-6″	0-8″	3′-7″	1′-1″			
RW605	11	8′-1″	134	10	3′-6″	0′-8″	3′-7 1/2″	1′-1″			
RW606	13	8′-2″	160	10	3′-6″	0′-8″	3′-8″	1′-1″			
	1	8′-2″					3′-8″				
RW607	SER OF	TO	161	10	3′-6″	0′-8″	TO	1′-1″			3/16″
	13	8′-4″					3′-10″				
	1	8′-4″					3′-10″				
RW608	SER OF	TO	278	10	3′-6″	0′-8″	TO	1′-1″			1/8″
	22	8′-6″					4′-0″				
RW609	6	3′-2″	29	ST							
RW610	6	3′-1″	28	ST							
	1	8′-8″					4′-2″				
RW611	SER OF	TO	250	10	3′-6″	0′-8″	TO	1′-1″			1/8″
	19	8′-10″					4′-4″				
	1	8′-10″					4′-4″				
RW612	SER OF	TO	353	10	3′-6″	0′-8″	TO	1′-1″			3/16″
	26	9′-3″					4′-9″				
	1	8′-4″					3′-10″				
RW613	SER OF	TO	40	10	3′-6″	0′-8″	TO	1′-1″			5 1/2″
	3	9′-3″					4′-9″				
	1	8′-0″					3′-6″				
RW614	SER OF	TO	284	10	3′-6″	0′-8″	TO	1′-1″			1/4″
	23	8′-5″					3′-11″				
	1	8′-5″					3′-11″				
RW615	SER OF	TO	340	10	3′-6″	0′-8″	TO	1′-1″			5/16″
	26	9′-0″					4′-6″				
	1	8′-0″					3′-6″				
RW616	SER OF	TO	38	10	3′-6″	0′-8″	TO	1′-1″			5″
	3	8′-10″					4′-4″				
	1	8′-0″					3′-6″				
RW617	SER OF	TO	299	10	3′-6″	0′-8″	TO	1′-1″			5/16″
	24	8′-7″					4′-1″				
	1	8′-7″					4′-1″				
RW618	SER OF	TO	348	10	3′-6″	0′-8″	TO	1′-1″			5/16″
	26	9′-3″					4′-9″				

FOR INFORMATION ONLY

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED JLM | DRAWN SMJ | REVIEWED SSK | DATE 12-15-21
CHECKED NCK | REVISED | STRUCTURE FILE NUMBER

REINFORCING STEEL SCHEDULE
CAST-IN-PLACE BARRIER RETAINING WALL K

HAM-75-7.85
PID No. 77889

29 / 37

1023
2017

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MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
RETAINING WALL K											
	1	8′-3″					3′-9″				
RW619	SER OF	TO	39	10	3′-6″	0′-8″	TO	1′-1″			4 1/2″
	3	9′-0″					4′-6″				
	1	8′-0″					3′-6″				
RW620	SER OF	TO	289	10	3′-6″	0′-8″	TO	1′-1″			7/16″
	23	8′-9″					4′-3″				
RW621	6	3′-2″	29	ST							
RW622	6	3′-2″	29	ST							
	1	9′-2″					4′-8″				
RW623	SER OF	TO	197	10	3′-6″	0′-8″	TO	1′-1″			3/8″
	14	9′-7″					5′-1″				
	1	8′-7″					4′-1″				
RW624	SER OF	TO	41	10	3′-6″	0′-8″	TO	1′-1″			5 1/2″
	3	9′-6″					5′-0″				
	1	8′-2″					3′-8″				
RW625	SER OF	TO	297	10	3′-6″	0′-8″	TO	1′-1″			7/16″
	23	9′-0″					4′-6″				
	1	9′-0″					4′-6″				
RW626	SER OF	TO	371	10	3′-6″	0′-8″	TO	1′-1″			1/2″
	26	10′-0″					5′-6″				
	1	10′-1″					5′-7″				
RW627	SER OF	TO	170	10	3′-6″	0′-8″	TO	1′-1″			1/2″
	11	10′-6″					6′-0″				
	1	10′-6″					6′-0″				
RW628	SER OF	TO	179	10	3′-6″	0′-8″	TO	1′-1″			13/16″
	11	11′-2″					6′-8″				
	1	9′-3″					4′-9″				
RW629	SER OF	TO	76	10	3′-6″	0′-8″	TO	1′-1″			9/16″
	5	11′-0″					6′-6″				
	1	9′-1″					4′-7″				
RW630	SER OF	TO	301	10	3′-6″	0′-8″	TO	1′-1″			9/16″
	21	10′-0″					5′-6″				
	1	10′-0″					5′-6″				
RW631	SER OF	TO	313	10	3′-6″	0′-8″	TO	1′-1″			1/2″
	20	10′-10″					6′-4″				
	1	10′-3″				9′-4″					
RW632	SER OF	TO	175	1	1′-1″	TO					13/16″
	11	10′-11″				10′-0″					
	1	9′-0″				8′-1″					
RW633	SER OF	TO	75	1	1′-1″	TO					5 1/4″
	5	10′-9″				9′-10″					
	1	8′-10″				7′-11″					
RW634	SER OF	TO	294	1	1′-1″	TO					9/16″
	21	9′-9″				8′-10″					
	1	9′-9″				8′-10″					
RW635	SER OF	TO	306	1	1′-1″	TO					1/2″
	20	10′-7″				9′-8″					
	1	11′-2″				10′-3″					
RW701	SER OF	TO	255	1	1′-1″	TO					7/16″
	11	11′-6″				10′-7″					
	1	10′-3″				9′-4″					
RW702	SER OF	TO	569	1	1′-1″	TO					7/16″
	26	11′-2″				10′-3″					
	1	9′-5″				8′-6″					
RW703	SER OF	TO	440	1	1′-1″	TO					7/16″
	22	10′-2″				9′-3″					
	1	3′-10″									
RW704	SER OF	TO	49	ST							5/8″
	6	4′-1″									
	1	3′-10″									
RW705	SER OF	TO	198	ST							5/8″
	6	4′-1″									
	1	9′-5″				8′-6″					
RW706	SER OF	TO	375	1	1′-1″	TO					5/16″
	19	9′-11″				9′-0″					

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
	1	9′-11″				9′-0″					
RW707	SER OF	TO	549	1	1′-1″	TO					3/8″
	26	10′-8″				9′-9″					
	1	9′-9″				8′-10″					
RW708	SER OF	TO	63	1	1′-1″	TO					5 1/2″
	3	10′-8″				9′-9″					
	1	9′-5″				8′-6″					
RW709	SER OF	TO	452	1	1′-1″	TO					1/4″
	23	9′-10″				8′-11″					
	1	9′-10″				8′-11″					
RW710	SER OF	TO	549	1	1′-1″	TO					1/2″
	26	10′-10″				9′-11″					
	1	9′-10″				8′-11″					
RW711	SER OF	TO	63	1	1′-1″	TO					5″
	3	10′-8″				9′-9″					
	1	9′-10″				8′-11″					
RW712	SER OF	TO	498	1	1′-1″	TO					3/8″
	24	10′-6″				9′-7″					
	1	10′-6″				9′-7″					
RW713	SER OF	TO	578	1	1′-1″	TO					3/8″
	26	11′-3″				10′-4″					
	1	10′-1″				9′-2″					
RW714	SER OF	TO	65	1	1′-1″	TO					6″
	3	11′-1″				10′-2″					
	1	10′-0″				9′-1″					
RW715	SER OF	TO	547	1	1′-1″	TO					1/4″
	26	10′-7″				9′-8″					
RW716	6	5′-1″	62	ST							
RW717	6	5′-0″	61	ST							
	1	11′-0″				10′-1″					
RW718	SER OF	TO	321	1	1′-1″	TO					5/16″
	14	11′-5″				10′-5″					
	1	10′-4″				9′-5″					
RW719	SER OF	TO	66	1	1′-1″	TO					6″
	3	11′-3″				10′-4″					
	1	9′-10″				8′-11″					
RW720	SER OF	TO	472	1	1′-1″	TO					1/4″
	23	10′-3″				9′-4″					
	1	10′-3″				9′-4″					
RW721	SER OF	TO	558	1	1′-1″	TO					1/4″
	26	10′-9″				9′-10″					
	1	10′-9″				9′-10″					
RW722	SER OF	TO	244	1	1′-1″	TO					3/16″
	11	10′-11″				10′-0″					
	1	13′-9″				12′-10″					
RW901	SER OF	TO	235	1	1′-1″	TO					1/2″
	5	13′-11″				13′-0″					
	1	12′-9″				11′-11″					
RW902	SER OF	TO	218	1	1′-1″	TO					1/2″
	5	12′-11″				12′-1″					
	1	7′-7″									
RW903	SER OF	TO	291	ST							1/2″
	11	8′-0″									
	1	12′-0″				11′-2″					
RW904	SER OF	TO	414	1	1′-1″	TO					7/16″
	10	12′-4″				11′-6″					
	1	11′-6″				10′-8″					
RW905	SER OF	TO	639	1	1′-1″	TO					3/8″
	16	12′-0″				11′-2″					
	1	11′-7″				10′-9″					
RW906	SER OF	TO	198	1	1′-1″	TO					1/2″
	5	11′-9″				10′-11″					

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CHECKED NCK | REVISED | STRUCTURE FILE NUMBER

REINFORCING STEEL SCHEDULE

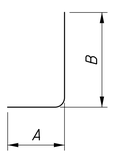
CAST-IN-PLACE BARRIER RETAINING WALL K

HAM-75-7.85
PID No. 77889

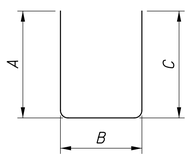
1024
2017

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
RETAINING WALL K											
	1	12′-11″				12′-1″					
RW907	SER OF	TO	400	1	1′-1″	TO					1/2″
	9	13′-3″				12′-5″					
	1	11′-0″				10′-2″					
RW908	SER OF	TO	227	1	1′-1″	TO					1/2″
	6	11′-3″				10′-5″					
RW909	2	13′-0″	88	1	1′-1″	12′-2″					
F501	6	4′-1″	26	ST							
F502	6	27′-7″	173	ST							
F503	24	30′-0″	751	ST							
F504	4	6′-4″	25	ST							
F505	4	19′-2″	80	ST							
F506	2	7′-11″	17	25	2′-5″	2′-9″	2′-5″	1′-5″			
F507	4	19′-5″	81	ST							
F508	20	7′-3″	151	25	2′-5″	2′-1″	2′-5″	1′-0″			
F509	4	17′-11″	75	ST							
F510	4	7′-9″	32	25	2′-5″	2′-7″	2′-5″	1′-4″			
F511	4	17′-4″	72	ST							
F512	4	8′-5″	35	25	2′-5″	3′-2″	2′-5″	1′-7″			
F513	4	29′-0″	121	ST							
F514	10	17′-2″	179	ST							
F516	1	7′-1″	7	8	2′-7″	2′-4″	2′-5″				
F517	1	10′-0″	10	25	2′-5″	4′-7″	2′-5″	2′-4″			
F518	20	29′-9″	621	ST							
F519	5	17′-9″	93	ST							
F520	5	13′-5″	70	ST							
F521	119	7′-3″	900	2	1′-7″	4′-4″	1′-7″				
F522	12	8′-6″	106	ST							
F523	4	25′-9″	107	ST							
	1	7′-3″			1′-7″		1′-7″				
F524	SER OF	TO	47	2	TO	4′-4″	TO				8 3/8″
	5	10′-9″			3′-4″		3′-4″				

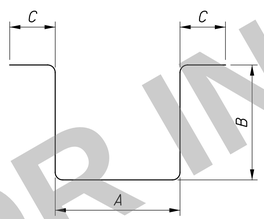
MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
RETAINING WALL K											
F701	NOT	USED									
F702	20	9′-6″	388	1	1′-7″	8′-1″					
F703	522	11′-8″	12448	2	1′-7″	8′-10″	1′-7″				
F704	4	8′-11″	73	2	1′-7″	6′-1″	1′-7″				
F705	5	8′-11″	91	2	1′-7″	6′-1″	1′-7″				
F706	5	8′-11″	91	2	1′-7″	6′-1″	1′-7″				
F707	4	11-8″	95	2	1′-7″	8′-10″	1′-7″				
F708	4	11′-8″	95	2	1′-7″	8′-10″	1′-7″				
F709	26	4′-1″	217	ST							
F710	32	12′-1″	790	ST							
F711	26	27′-7″	1466	ST							
F712	160	30′-0″	9811	ST							
F713	20	10′-3″	419	ST							
F714	20	19′-10″	811	ST							
F715	10	8′-5″	172	8	3′-8″	1′-6″	3′-8″				
F716	10	10′-8″	218	25	3′-8″	2′-9″	3′-8″	1′-5″			
F717	10	23′-6″	480	ST							
F718	10	20′-9″	424	ST							
F719	10	9′-8″	198	25	3′-8″	2′-1″	3′-8″	1′-1″			
F720	10	7′-11″	162	8	3′-8″	1′-0″	3′-8″				
F721	10	23′-6″	480	ST							
F722	10	21′-6″	439	ST							
F723	10	8′-3″	169	8	3′-8″	1′-4″	3′-8″				
F724	10	10′-3″	210	25	3′-8″	2′-7″	3′-8″	1′-4″			
F725	14	4′-11″	141	ST							
F726	14	4′-3″	122	ST							
F727	20	16′-10″	688	ST							
F728	1	8′-6″	17	8	3′-8″	1′-7″	3′-8″	0			
F729	1	10′-11″	22	25	3′-8″	3′-2″	3′-8″	1′-7″			
F730	5	7′-8″	78	ST							
F731	5	7′-8″	78	ST							
F732	26	8′-6″	452	ST							
F801	107	9′-10″	2809	6	1′-2″	3′-3″	1′-6″				
F802	329	7′-10″	6878	6	1′-2″	2′-3″	1′-6″				
F803	214	14′-7″	8331	2	1′-7″	11′-10″	1′-7″				
F804	124	11′-7″	3834	2	1′-7″	8′-10″	1′-7″				
		TOTAL	81882								



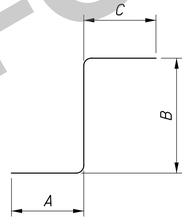
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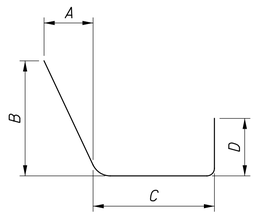
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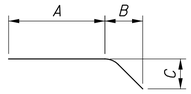
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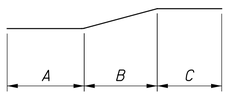
TYPE-8



TYPE-10



TYPE-19



TYPE-25

NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE 3 DIGITS ARE USED, AND THE FIRST 2 DIGITS WHERE FOUR DIGITS ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, RW601 IS A NO 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. "R" INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD" WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

2. ALL REINFORCING STEEL TO BE EPOXY COATED.

3. FOR ABBREVIATIONS LEGEND, SEE SHEET 1/37 .

LEGEND:

** - FIELD CUT

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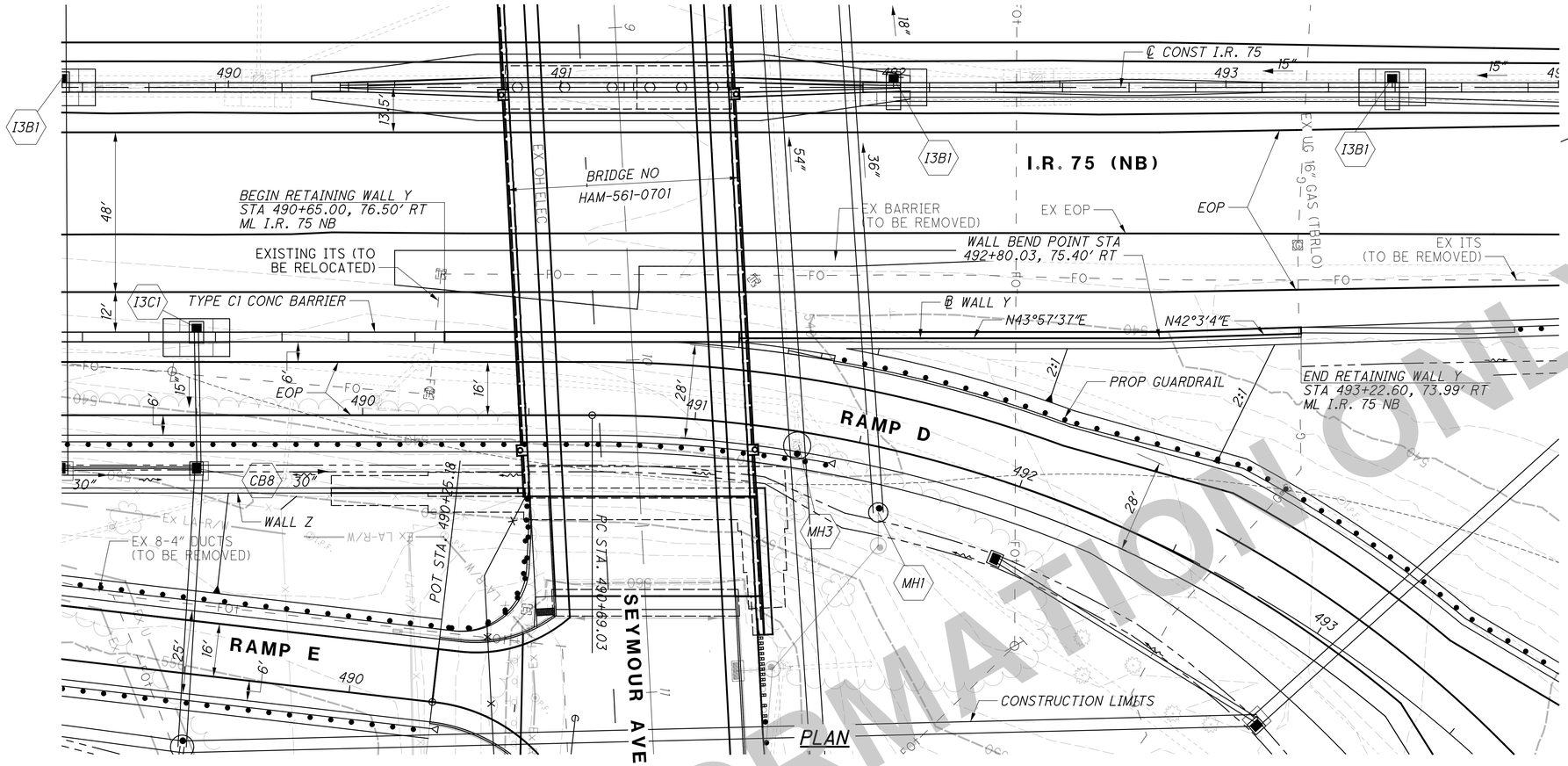
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CHECKED NCK | REVISED | STRUCTURE FILE NUMBER

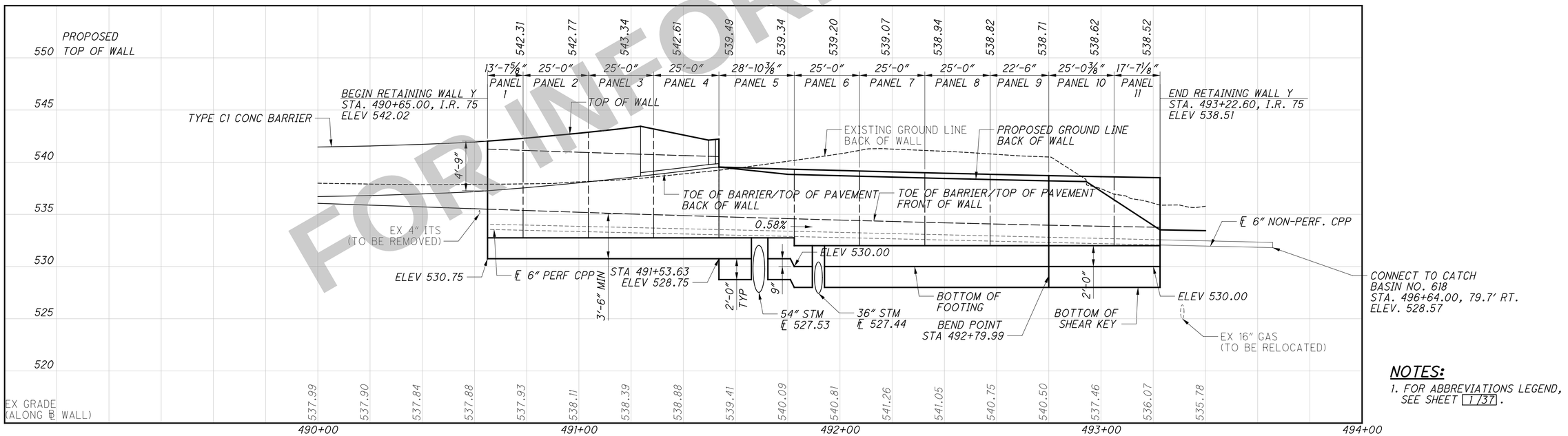
REINFORCING STEEL SCHEDULE
CAST-IN-PLACE BARRIER RETAINING WALL K

HAM-75-7.85
PID No. 77889

1025
2017

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ELEVATION ALONG BACK OF WALL

NOTES:

1. FOR ABBREVIATIONS LEGEND, SEE SHEET 1 / 37 .

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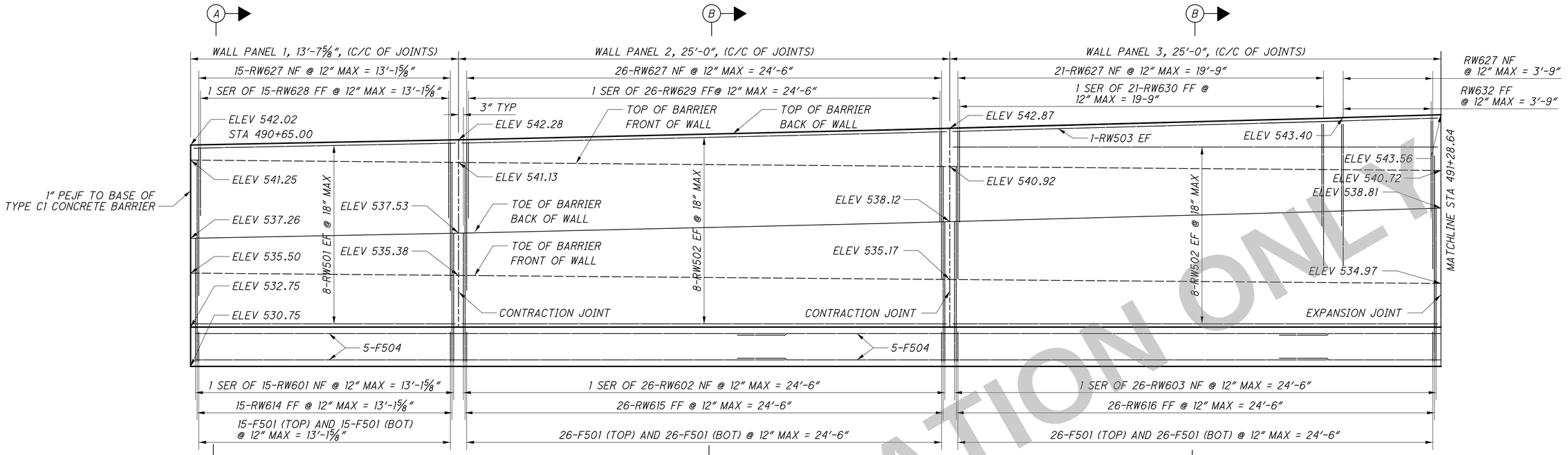
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JLM	SMJ	SSK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

PLAN AND ELEVATION
CAST IN PLACE BARRIER RETAINING WALL Y

HAM-75-7.85
PID No. 77889

1026
2017

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NOTES:

1. SEE FOOTING STEP DETAILS ON SHEET 35/37.
2. SEE SHEET 36/37 FOR SECTION D-D.
3. FIELD BEND LONGINTUDINAL BARS ALONG PARAPET TRANSITION.
4. FOR ABBREVIATIONS LEGEND, SEE SHEET 1/37.

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JLM	SMJ	SSK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

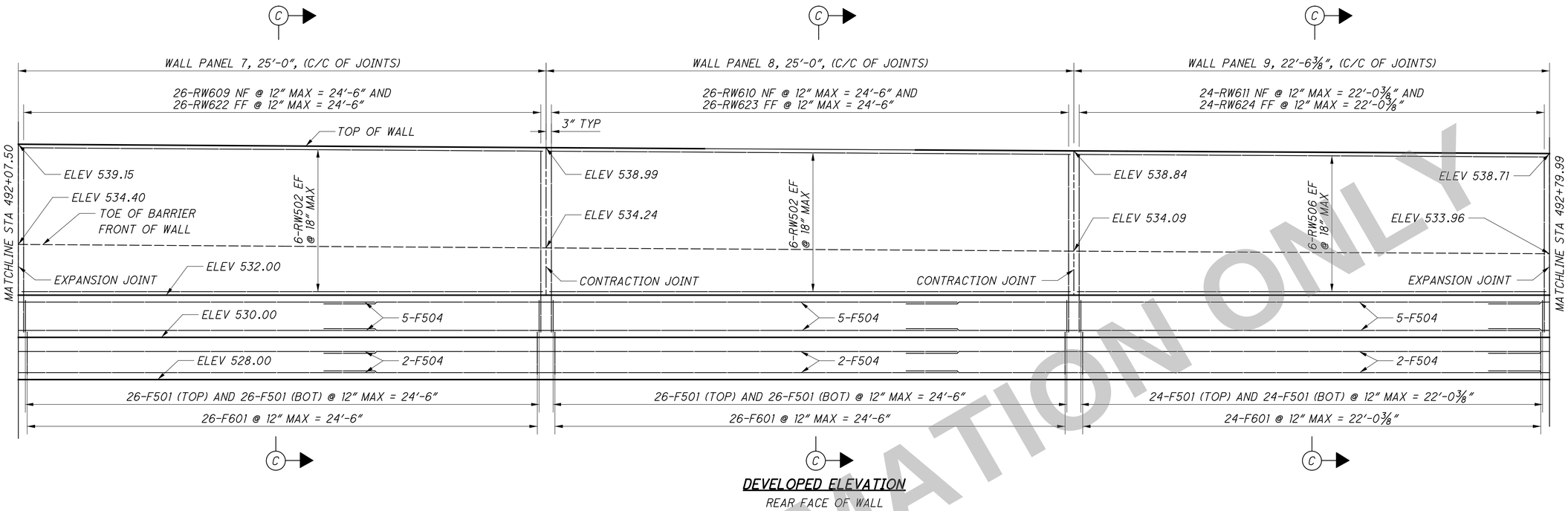
WALL ELEVATION 1 OF 2
CAST-IN-PLACE RETAINING WALL Y

HAM-75-7.85
PID No. 77889

33/37

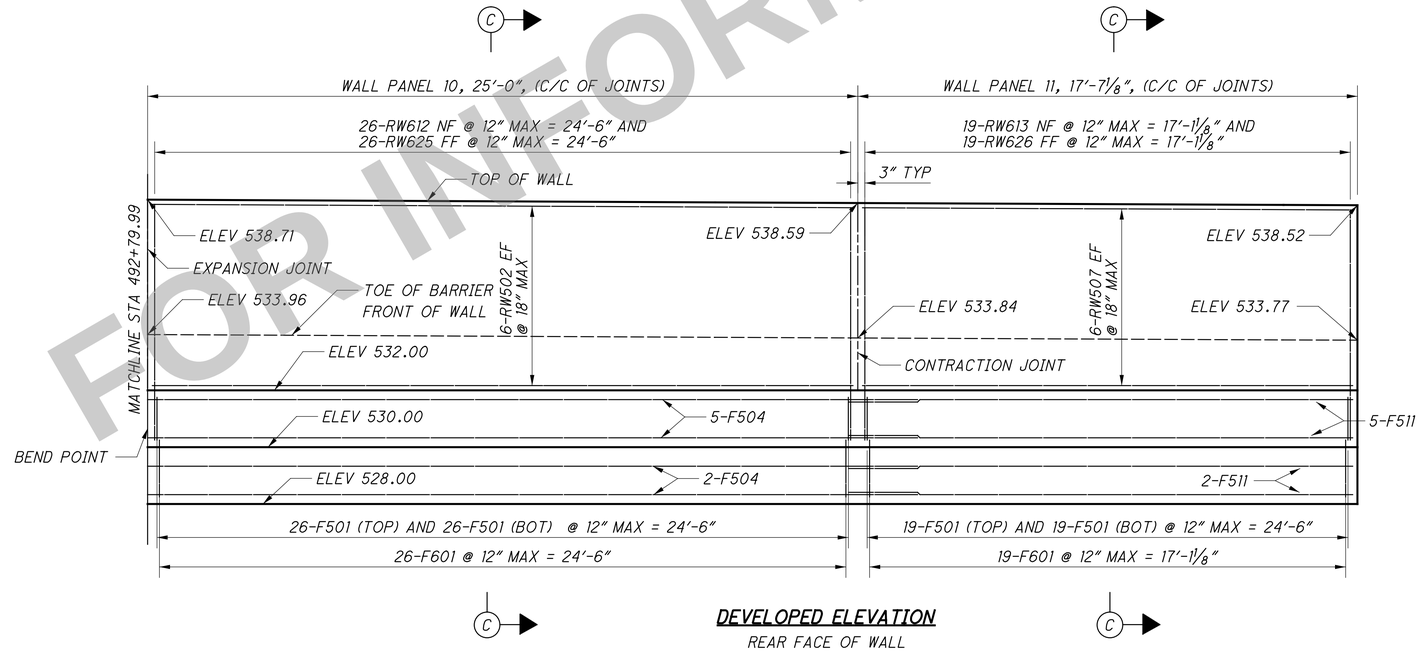
1027
2017

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DEVELOPED ELEVATION

REAR FACE OF WALL



DEVELOPED ELEVATION

REAR FACE OF WALL

MINIMUM LAP LENGTH
#5 BAR = 2'-5"
#6 BAR = 2'-11"

NOTES:

1. FOR ABBREVIATIONS LEGEND, SEE SHEET 1/37.

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JLM	SMJ	SSK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
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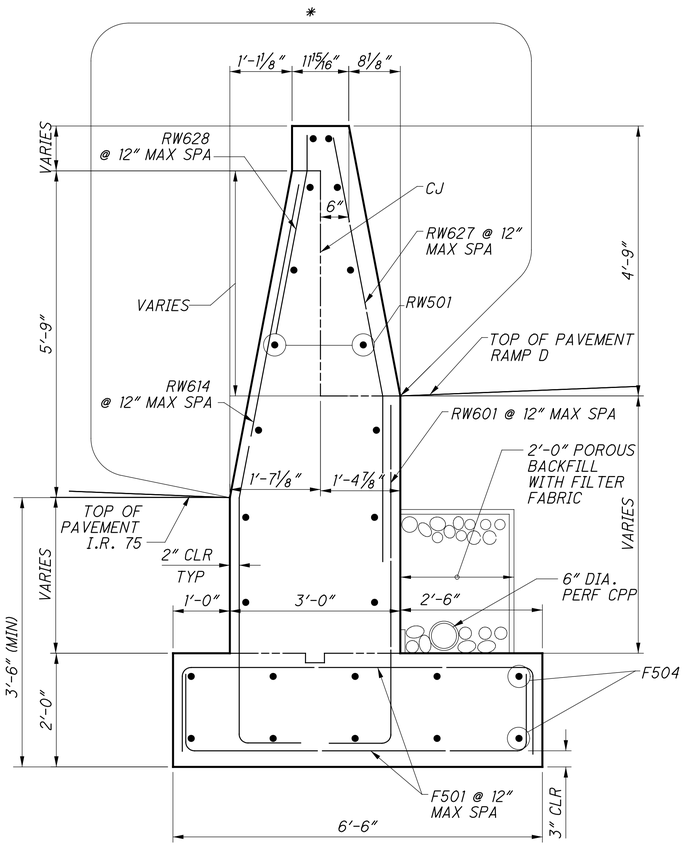
WALL ELEVATION 2 OF 2

CAST-IN-PLACE RETAINING WALL Y

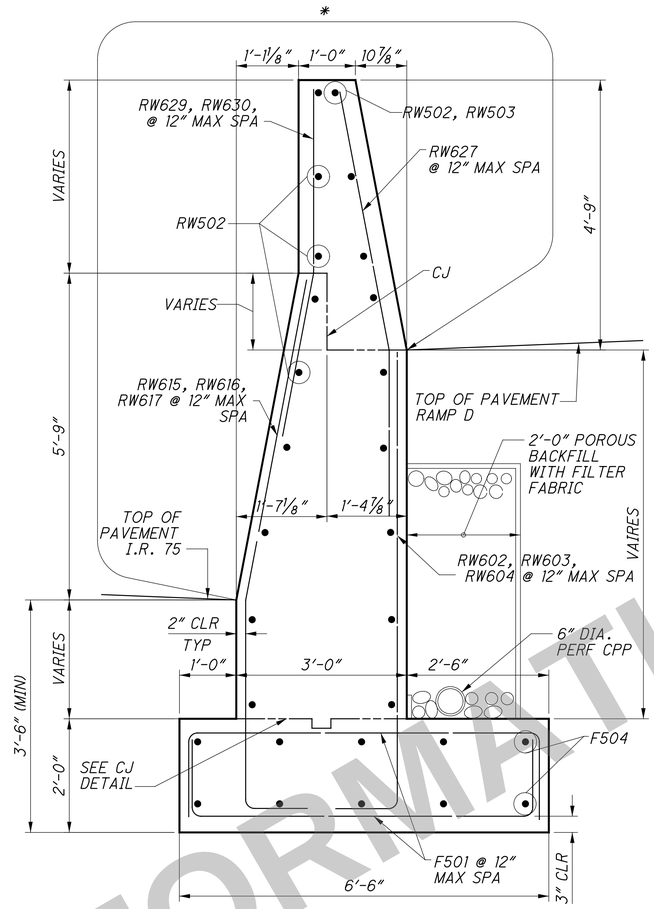
HAM-75-7.85
PID No. 77889

1028
2017

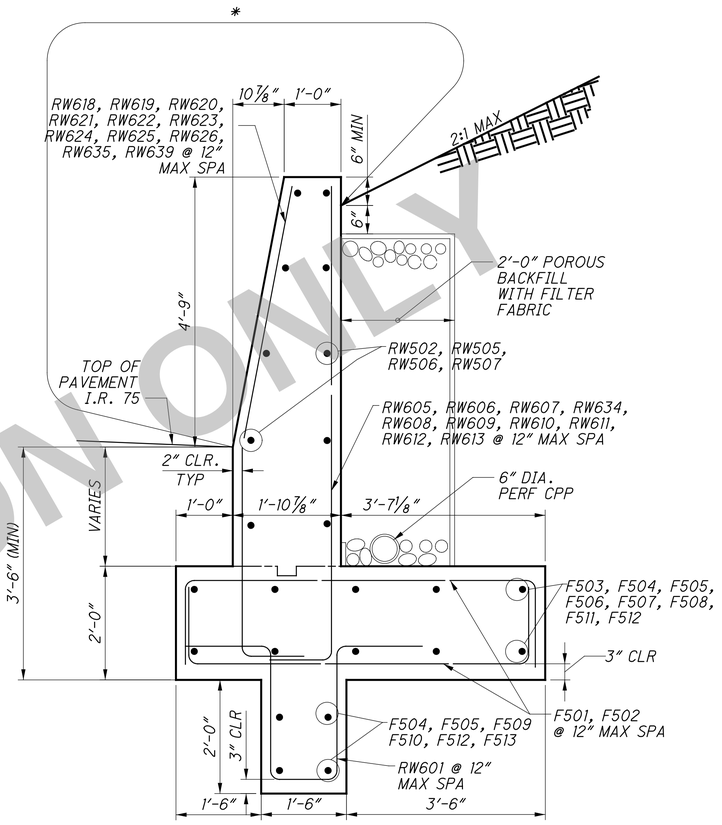
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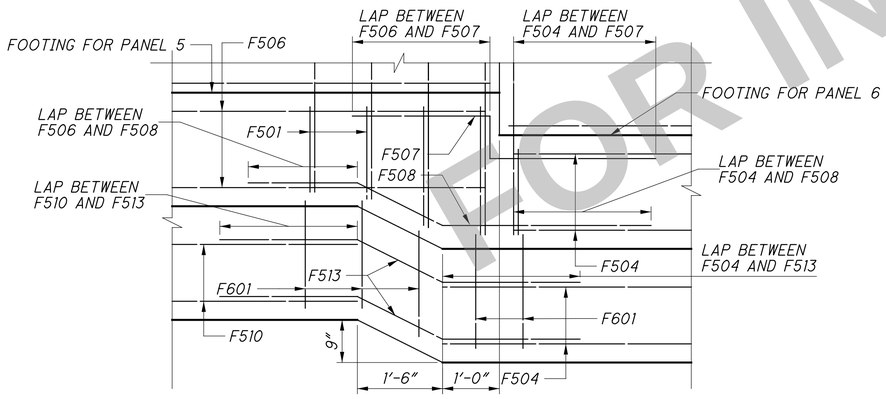
SECTION A-A



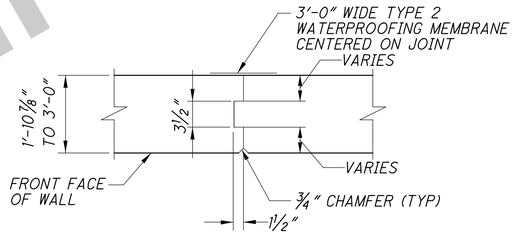
SECTION B-B



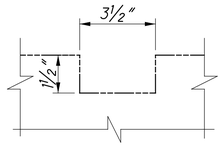
SECTION C-C



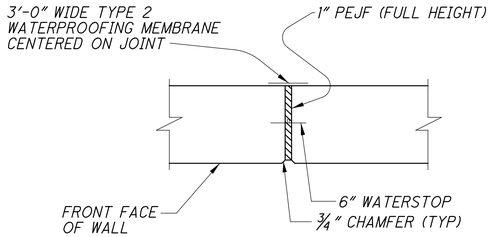
FOOTING STEP ELEVATION DETAIL



CONTRACTION JOINT DETAIL



CONSTRUCTION JOINT DETAIL



EXPANSION JOINT DETAIL

MINIMUM LAP LENGTHS
#5 BAR = 2'-5"
#6 BAR = 2'-11"

LEGEND:

* - LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) AND ITEM 512 - SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)

NOTES:

1. FOR ABBREVIATIONS LEGEND, SEE SHEET 1/37.
2. TYPE 2 WATERPROOFING MEMBRANE SHALL NOT EXTEND ABOVE GRADE.

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6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

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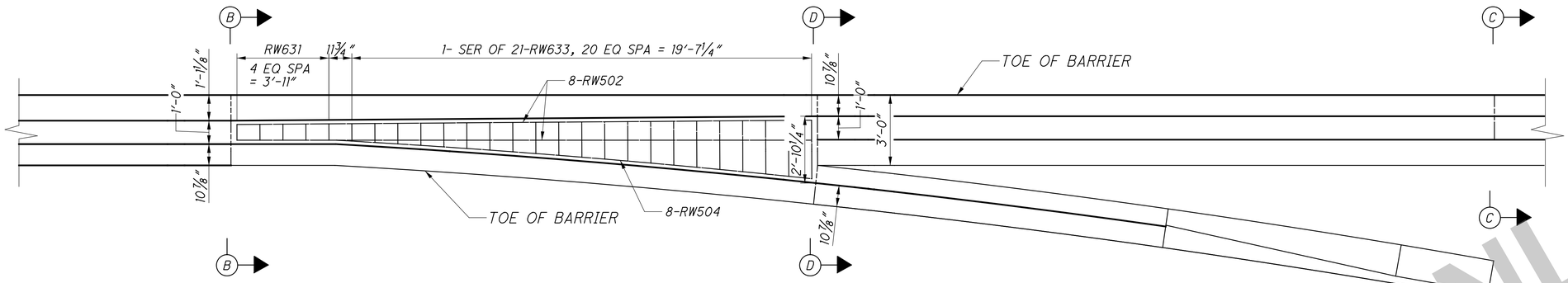
TYPICAL SECTION AND WALL DETAILS
WALL Y
CAST-IN-PLACE RETAINING WALL

HAM-75-7.85
PID No. 77889

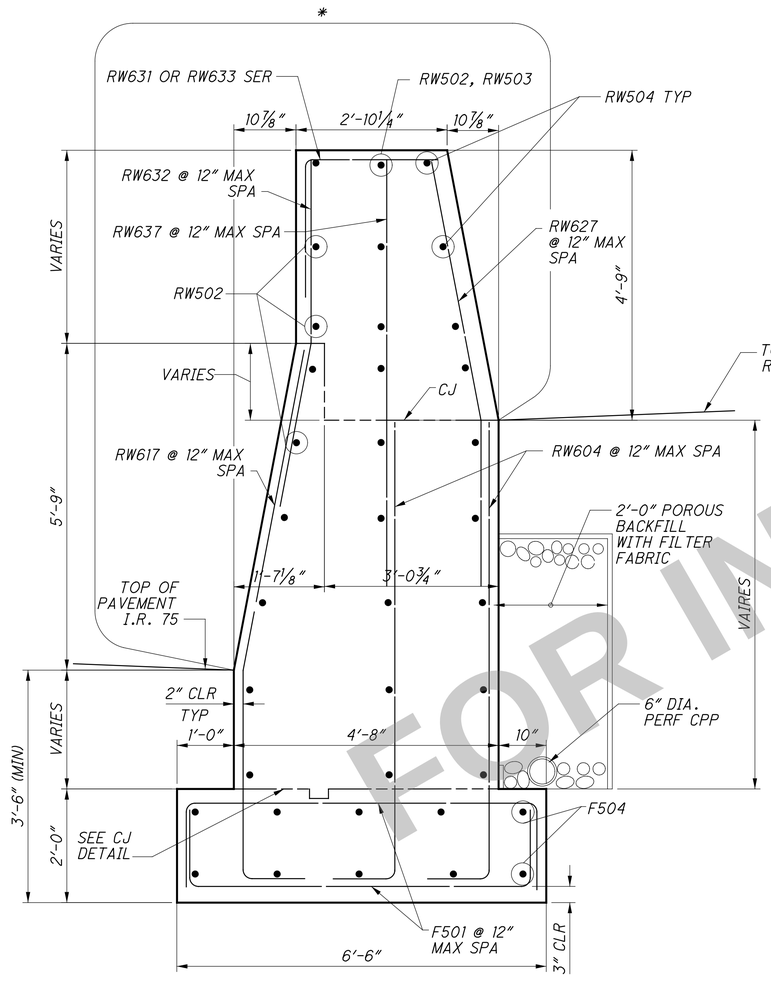
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PLAN



SECTION D-D

MINIMUM LAP LENGTHS
#5 BAR = 2'-5"
#6 BAR = 2'-11"

LEGEND:

* - LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) AND ITEM 512 - SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)

NOTES:

1. FOR SEALING OF CONCRETE (EPOXY URETHANE) AND PERMANENT GRAFFITI PROTECTION DETAILS SEE SHEET 35/37 .
2. FOR ABBREVIATIONS LEGEND, SEE SHEET 1/37.

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TYPICAL SECTION AND WALL DETAILS

CAST-IN-PLACE RETAINING WALL Y

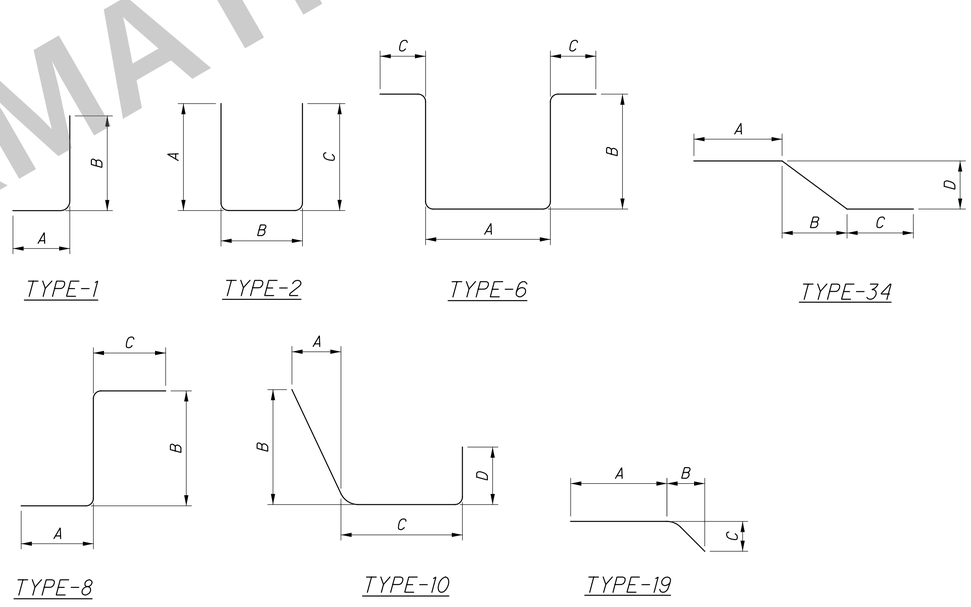
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MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
RETAINING WALL Y											
RW501	16	13'-3"	221	ST							
RW502	75	24'-8"	1930	ST							
RW503*	2	24'-8"	51	ST							
RW504	9	22'-9"	214	ST							
RW505	12	28'-6"	357	ST							
RW506	12	22'-2"	277	ST							
RW507	12	17-3"	216	ST							
	1	7'-2"			6'-3"						
RW601	SER OF	TO	164	1	TO	1'-1"					1/4"
	15	7'-5"			6'-6"						
	1	7'-5"			6'-6 1/4"						
RW602	SER OF	TO	303	1	TO	1'-1"					1/4"
	26	8'-1"			7'-1 1/2"						
	1	8'-1"			7'-1 1/2"						
RW603	SER OF	TO	329	1	TO	1'-1"					3/8"
	26	8'-9"			7'-9 3/4"						
RW604	52	9'-5"	736	1	8'-6 1/4"	1'-1"					
RW605**	21	9'-2"	289	1	8'-3"	1'-1"					
RW606**	7	6'-4"	67	ST							
	1	9'-3"			8'-3 1/2"						
RW607	SER OF	TO	29	1	TO	1'-1"					6"
	2	9'-9"			8'-9 1/2						
RW608**	8	9'-10"	118	1	8'-10 1/2"	1'-1"					
RW609**	26	9'-7"	374	1	8'-8"	1'-1"					
RW610**	26	9'-5"	368	1	8'-6"	1'-1"					
RW611**	24	9'-3"	333	1	8'-4"	1'-1"					
RW612**	26	9'-2"	358	1	8'-3"	1'-1"					
RW613**	19	9'-1"	259	1	8'-1 1/2"	1'-1"					
RW614**	15	11'-2"	252	10	5-9"	1'-1 1/8"	4'-4"	1'-1"			
RW615**	26	10'-11"	426	10	5-9"	1'-1 1/8"	4'-2"	1'-1"			
RW616**	26	10'-9"	420	10	5-9"	1'-1 1/8"	4'-0"	1'-1"			
RW617**	26	10'-7"	413	10	5-9"	1'-1 1/8"	3'-10"	1'-1"			
RW618**	21	9'-2"	289	10	4'-7"	10 1/2"	3'-8"	1'-1"			
RW619	7	6'-4"	67	19	1'-9"	4'-7"	10 1/2"				
	1	9'-4"					3'-8 1/2"				
RW620	SER OF	TO	29	10	4'-7"	10 1/2"	TO	1'-1"			6"
	2	9'-10"					4'-2 1/2"				
RW621**	8	9'-10"	118	10	4'-7"	10 1/2"	4'-3"	1'-1"			
RW622**	26	9'-7"	374	10	4'-7"	10 1/2"	4'-0"	1'-1"			
RW623**	26	9'-5"	368	10	4'-7"	10 1/2"	3'-10"	1'-1"			
RW624**	24	9'-4"	336	10	4'-7"	10 1/2"	3'-8 1/2"	1'-1"			
RW625**	26	9'-2"	358	10	4'-7"	10 1/2"	3'-7"	1'-1"			
RW626**	19	9'-0"	257	10	4'-7"	10 1/2"	3'-6"	1'-1"			
RW627	62	7'-7"	706	19	2'-11"	4'-7"	10 1/2"				
	1	3'-6"			7 3/8"						
RW628	SER OF	TO	84	19	TO	2'-10 3/8"	6 1/2"				3/8"
	15	3'-11"			1'-0"						
	1	3'-11"			1'-0"						
RW629	SER OF	TO	168	19	TO	2'-10 3/8"	6 1/2"				3/8"
	26	4'-8"			1'-9"						
	1	4'-8"			1'-9 1/2"						
RW630	SER OF	TO	152	19	TO	2'-10 3/8"	6 1/2"				3/16"
	21	5'-0"			2'-1"						
RW631	5	3'-5"	26	1	8"	2'-11"					
RW632	22	4'-9"	157	19	1'-10"	2'-10 3/8"	6 1/2"				
	1	3'-5"			8"						
RW633	SER OF	TO	135	1	TO	2'-11"					1"
	21	5'-2"			2'-5"						
RW634	1	9'-10"	15	1	8'-11"	1'-1"					
RW635	1	9'-9"	15	10	4'-3 1/2"	10 1/2"	4'-7"	1'-1"			
RW636	1	7'-10"	12	1	6'-11"	1'-1"					
RW637	22	7'-8"	253	ST							
RW638**	10	9'-8"	145	1	8'-9"	1'-1"					
RW639**	14	9'-9"	205	10	4'-7"	10 1/2"	4'-2"	1'-1"			

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
CONCRETE FACING PANELS											
F501	516	8'-11"	4799	2	1'-6"	6'-2"	1'-6"				
	2	9'-2"			1'-7 1/2"		1'-7 1/2"				
F502	SER OF	TO	40	2	TO	6'-2"	TO				11"
	2	10'-1"			2'-1"		2'-1"				
F503	2	10'-8"	22	2	2'-3"	6'-2"	2'-3"				
F504	86	30'-0"	2691	ST							
F505	10	14'-11"	156	ST							
F506	10	9'-9"	102	ST							
F507	5	5'-8"	30	8	2'-5"	0'-9"	2'-9"				
F508	5	7'-5"	39	34	2'-5"	1'-6"	3'-5"	0'-9"			
F509	4	11'-5"	48	ST							
F510	4	7'-3"	30	ST							
F511	14	17'-9"	259	ST							
F512	14	7'-10"	114	ST							
F513	10	6'-5"	67	34	2'-5"	1'-6"	2'-5"	0'-9"			
F601	168	7'-6"	1893	6	1'-2"	2'-0"	1'-6"				
		TOTAL	23059								



NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE 3 DIGITS ARE USED, AND THE FIRST 2 DIGITS WHERE FOUR DIGITS ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, F601 IS A NO 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. "R" INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD" WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

2. ALL REINFORCING STEEL TO BE EPOXY COATED.

3. FOR ABBREVIATIONS LEGEND, SEE SHEET 1/37.

LEGEND:

* - FIELD BENT
** - FIELD CUT

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COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED JLM | DRAWN SMJ | REVIEWED SSK | DATE 12-15-21
CHECKED NCK | REVISED | STRUCTURE FILE NUMBER

REINFORCING STEEL SCHEDULE
CAST-IN-PLACE RETAINING WALL Y

HAM-75-7.85
PID No. 77889

1031
2017

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REFERENCE SHALL BE MADE TO SUPPLEMENTAL SPECIFICATION

840 DATED 4-16-21

867 DATED 1-15-21

REFERENCE SHALL BE MADE TO SUPPLEMENT

1083 DATED 1-20-17

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DESIGN DATA

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4000 PSI (CIP FACING AND SLEEPER SLAB)

REINFORCING STEEL - ASTM A615 OR A996 GRADE 60, MINIMUM YIELD STRENGTH 60,000 PSI

FOUNDATION BEARING RESISTANCE

THE FACTORED BEARING RESISTANCE FOR EACH WALL IS LISTED IN THE TABLE BELOW:

FOUNDATION BEARING RESISTANCE

WALL NUMBER	WALL LIMITS		FACTORED BEARING RESISTANCE (KSF)
	FROM STA	TO STA	
B	ALL		15.1
C	ALL		8.9
F	ALL		16.9
G	ALL		16.2
H	ALL		7.7
H1	ALL		18.2
I	452+52	453+60	7.7
	453+60	456+40	13.2
	456+40	460+40	6.7
	460+40	463+56	14.1
I1	ALL		6.7
J1	481+00	483+00	11.3
	483+80	486+00	12
L	ALL		25.7

MINIMUM SOIL REINFORCEMENT LENGTHS

THE FOLLOWING TABLE LISTS THE MINIMUM SOIL REINFORCEMENT LENGTHS FOR EACH WALL. SOIL REINFORCEMENT LENGTHS FOR ALL OTHER MSE WALL LOCATIONS NOT INCLUDED IN THE TABLE SHALL BE 0.7H OR 8'-0", WHICHEVER IS GREATER, WHERE H = THE WALL HEIGHT AS DETERMINED ACCORDING TO 840.04.

SOIL REINFORCEMENT LENGTHS

MSE WALL	WALL STATION RANGE		SOIL REINFORCEMENT LENGTH
	FROM STA	TO STA	
C	0+00.00	0+13.44	20'-0"
	0+13.44	0+63.51	27'-0"
	0+63.51	2+62.00	29'-0"
	2+62.00	2+82.58	21'-6"
J1	483+80.00	484+00.00	10'-0"
	484+00.00	484+80.00	9'-0"
	484+80.00	486+00.00	8'-0"

PROPRIETARY RETAINING WALL DATA:

THE PROPRIETARY WALL SUPPLIER SHALL DESIGN THE INTERNAL STABILITY OF THE MECHANICALLY STABILIZED EARTH (MSE) WALL IN ACCORDANCE WITH SS840 TO SUPPORT THE ABUTMENTS. THE DESIGN FOR INTERNAL STABILITY SHALL INCLUDE A NOMINAL (I.E. UNFACTORED) HORIZONTAL STRIP LOAD DUE TO FRICTION (FR) FROM THE SUPERSTRUCTURES LISTED IN THE FOLLOWING TABLE, APPLIED PERPENDICULAR TO THE FACE OF WALL AT THE BASE OF THE CONCRETE FOOTING. THIS STRIP LOAD DOES NOTE INCLUDE EARTH PRESSURE LOADS FROM THE ABUTMENT BACKFILL. HOWEVER, THE PROPRIETARY WALL SUPPLIER SHALL INCLUDE EARTH PRESSURE LOADS FROM THE ABUTMENT BACKFILL IN THE DESIGN CALCULATIONS.

BRIDGE SUPERSTRUCTURE LOADINGS

MSE WALL	BRIDGE NUMBER	HORIZONTAL LOAD (K/FT)
B	HAM-562-0004	1.93
C	HAM-75-0791	1.27
F	HAM-75-0823	1.23
G	HAM-75-0823	1.23
H1	HAM-75-0857	1.1
I1	HAM-75-0857	1.1
L	HAM-75-0992	0.9

ITEM 203 - GRANULAR MATERIAL, TYPE B, AS PER PLAN

THIS PAY ITEM INCLUDES THE PORTION OF GRANULAR MATERIAL WHICH WILL ENCASE SOIL REINFORCEMENTS FROM THE PORTION OF MSE WALL ADJACENT TO THE BARRIER AND MOMENT SLAB. THIS GRANULAR MATERIAL SHALL MEET THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION 840.

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN

THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH CMS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN.

ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN

SEALING OF THE MSE WALL PANELS, COPINGS, AND RAILING SHALL BE AS PER ITEM 512 AND THE COLOR SHALL BE LIGHT NEUTRAL MEETING FEDERAL COLOR STANDARD NO. 595B-17778. THE ADDITIONAL MATERIAL AND LABOR REQUIRED TO SEAL THE AESTHETIC TREATMENT FINISH WITH THE MINIMUM OF 1" AND MAXIMUM OF 1½" RELIEF SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE YARD PER CMS 512.09.

ITEM 512 - SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)

APPLY A PERMANENT GRAFFITI COATING QUALIFIED ACCORDING TO SUPPLEMENT 1083 THAT IS COMPATIBLE WITH THE CONCRETE SEALER OVER WHICH IT IS APPLIED. APPLY THE GRAFFITI COATING IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS.

THE ADDITIONAL MATERIAL AND LABOR REQUIRED TO SEAL THE AESTHETIC TREATMENT FINISH WITH THE MINIMUM OF 1" AND MAXIMUM OF 1½" RELIEF SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE YARD PER CMS 512.09.

ITEM 517 - RAILING, MISC.: TRAFFIC BARRIER ON MSE WALL

THIS ITEM PERTAINS TO ALL BARRIER AND MOMENT SLABS THAT DO NOT SUPPORT NOISE BARRIERS. THIS ITEM SHALL INCLUDE, BUT IS NOT LIMITED TO THE CONCRETE, REINFORCING STEEL, DOWELS, SLEEVES, PEJF, AND JOINT SEAL NECESSARY TO FORM AND PLACE THE CONCRETE RAILING AND BARRIER MOMENT SLAB. PAYMENT FOR THIS ITEM SHALL ALSO INCLUDE ALL OTHER NECESSARY MATERIAL, LABOR, AND EQUIPMENT AND SHALL BE INCLUDED IN THE UNIT PRICE BID PER LINEAR FOOT FOR ITEM 517 - RAILING, MISC.: TRAFFIC BARRIER ON MSE WALL

ITEM 517 - RAILING (COMBINATION NOISE AND TRAFFIC BARRIER ON MSE WALL WITH FLEXIBLE PAVEMENT)

THIS ITEM PERTAINS TO THE BARRIER AND MOMENT SLABS THAT SUPPORT NOISE BARRIERS. THIS ITEM SHALL INCLUDE, BUT IS NOT LIMITED TO THE CONCRETE, REINFORCING STEEL, DOWELS, SLEEVES, PEJF, AND JOINT SEAL NECESSARY TO FORM AND PLACE THE CONCRETE RAILING AND BARRIER MOMENT SLAB. PAYMENT FOR THIS ITEM SHALL ALSO INCLUDE ALL OTHER NECESSARY MATERIAL, LABOR, AND EQUIPMENT AND SHALL BE INCLUDED IN THE UNIT PRICE BID PER LINEAR FOOT FOR ITEM 517 - RAILING (COMBINATION NOISE AND TRAFFIC BARRIER ON MSE WALL WITH FLEXIBLE PAVEMENT). NOISE BARRIER ATTACHED TO THESE BARRIER AND MOMENT SLABS SHALL BE INCLUDED FOR PAYMENT WITH ITEM 606 - SPECIAL: NOISE BARRIER (REFLECTIVE), PARAPET MOUNTED.

ITEM 690E98400
ITEM SPECIAL - TEMPORARY SURCHARGE

DESCRIPTION: THIS ITEM CONSISTS OF DESIGNING, CONSTRUCTING, AND REMOVING A TEMPORARY SURCHARGE BEHIND THE REAR ABUTMENT OF THE HAM-562-0004, REAR ABUTMENT OF THE HAM-75-0791 BRIDGE, REAR AND FORWARD ABUTMENTS OF THE HAM-75-0823 BRIDGE, AND REAR AND FORWARD ABUTMENTS OF THE HAM-75-0857 BRIDGE.

AS DIRECTED IN THE PILE DRIVING CONSTRAINTS, A TEMPORARY SURCHARGE IS NECESSARY AT THE ABUTMENTS TO MITIGATE EMBANKMENT SETTLEMENT. CONSTRUCT THE TEMPORARY SURCHARGE SO IT EXTENDS VERTICALLY FROM THE ELEVATION OF THE BOTTOM OF THE PROPOSED ABUTMENT FOOTING TO THE PROPOSED ROADWAY SUBGRADE ELEVATION. CONSTRUCT THE TEMPORARY SURCHARGE USING ITEM 203 EMBANKMENT WITH A DRY DENSITY OF AT LEAST 105 PCF AFTER COMPACTION. ALTERNATE MATERIALS, SUCH AS PRECAST CONCRETE, MAY BE UTILIZED FOR ALL OR A PORTION OF THE REQUIRED SURCHARGE LOAD PROVIDED THE APPLIED SURCHARGE IS GREATER THAN OR EQUIVALENT TO THE SURCHARGE OF EMBANKMENT WITH A DRY UNIT WEIGHT OF 105 PCF. SUPPORT THE SIDES OF THE TEMPORARY SURCHARGE SO THAT THE TOP OF THE SURCHARGE MATERIAL IS NO MORE THAN 2 FEET (MEASURED HORIZONTALLY) FROM THE BACK FACE OF THE PROPOSED MSE WALLS. CONSTRUCT THE TEMPORARY SURCHARGE SO THAT IT EXTENDS AT LEAST 100 FEET BEHIND EACH ABUTMENT.

REMOVE THE TEMPORARY SURCHARGE AFTER THE CONDITIONS SPECIFIED IN THE PILE DRIVING CONSTRAINTS ARE SATISFIED AND THE ENGINEER AUTHORIZES REMOVAL.

PREPARE AND PROVIDE SHOP DRAWINGS AND DESIGN CALCULATIONS FOR THE TEMPORARY SURCHARGE, INCLUDING THE METHOD USED TO SUPPORT THE SIDES OF THE TEMPORARY SURCHARGE AND ALL DETAILS OF THE SUPPORT SYSTEM. ENSURE THE TEMPORARY SURCHARGE DESIGN ACCOMMODATES THE LOCATION AND COMPOSITION OF THE PROPOSED MSE WALLS FOR THE BRIDGE STRUCTURE. HAVE TWO OHIO REGISTERED ENGINEERS SIGN, SEAL, AND DATE THE DRAWINGS AND CALCULATIONS ACCORDING TO C&MS 501.05. SUBMIT THE DRAWINGS AND CALCULATIONS TO THE ENGINEER AT LEAST 30 DAYS BEFORE CONSTRUCTION OF THE TEMPORARY SURCHARGE BEGINS.

BASIS OF PAYMENT: THE DEPARTMENT WILL PAY FOR ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO DESIGN, CONSTRUCT AND REMOVE THE TEMPORARY SURCHARGE AT THE CONTRACT LUMP SUM BID PRICE FOR ITEM SPECIAL 690E98400: SPECIAL - TEMPORARY SURCHARGE.

ITEM 840 - MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN

DO NOT FABRICATE WALL TOP PANELS OR INSTALL COPINGS, BARRIER MOMENT SLABS, OR RAILINGS LOCATED ON TOP OF MSE WALLS UNTIL AFTER THE MSE WALL EMBANKMENT HAS BEEN CONSTRUCTED TO WITHIN 1 FOOT OF THE PROPOSED FINISHED GRADE AND THE SETTLEMENT REQUIREMENTS HAVE BEEN MET. THE CONTRACTOR SHALL FABRICATE THE TOP PANEL TO ACCOUNT FOR THE ACTUAL SETTLEMENT. NO SEPARATE PAYMENT WILL BE MADE TO EXCAVATE AND RE-COMPACT MATERIAL NECESSARY TO PLACE THE TOP PANEL, BUT THE COST THEREOF SHALL BE INCLUDED WITH ITEM 840 - MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN FOR PAYMENT.

MSE WALL PHASED CONSTRUCTION:
MSE WALLS C, F, G, H1, AND I1 WILL BE CONSTRUCTED IN PHASES. IN ORDER TO ASSURE THAT THE WALL COPINGS ARE IN LINE, DO NOT INSTALL PERMANENT COPING ON TOP OF THESE WALLS UNTIL ALL PHASES OF WALL CONSTRUCTION ARE COMPLETE.

ITEM 840 - FOUNDATION PREPARATION, AS PER PLAN

THIS ITEM APPLIES TO MSE WALLS B, H1, AND I1, WHICH ALL REQUIRE AN UNDERCUT THAT EXCEEDS 1'-0" IN DEPTH. THE EXISTING SOILS WITHIN THE LIMITS OF THIS UNDERCUT SHALL BE REPLACED WITH ITEM 203 - GRANULAR MATERIAL, TYPE C. ITEM 203 MATERIAL SHALL BE PAID FOR UNDER ITEM 840 - FOUNDATION PREPARATION, AS PER PLAN.

ITEM 840 - CONCRETE COPING

PROVIDE EPOXY COATED REINFORCING AND CLASS QC1 CONCRETE AS SHOWN IN THE PLANS. THE COPING SHALL NOT BE CONSTRUCTED UNTIL ALL PHASES OF MSE WALL CONSTRUCTION ARE COMPLETE. THE COPING JOINTS SHALL BE PLACED ON A MAXIMUM 20'-0" SPACING AND SHALL ALIGN WITH A PANEL JOINT. CONCRETE AND REINFORCING STEEL IN THE COPING, ADDITIONAL CONCRETE AND REINFORCING STEEL AT ROADWAY FEATURES, PEJF BETWEEN COPING AND BARRIER, AND EXPANSION AND CONTRACTION JOINTS SHALL BE INCLUDED IN THE UNIT BID PRICE PER FOOT FOR THIS ITEM.

ITEM 840 - AESTHETIC SURFACE TREATMENT

ALL MSE WALL PANELS SHALL HAVE AN "ASHLAR STONE" FINISH WITH A MINIMUM OF 1" AND A MAXIMUM OF 1½" RELIEF. THE MSE WALL ASHLAR STONE SHALL MATCH OTHER ASHLAR STONE PATTERNS SPECIFIED FOR THE PROJECT.

ALL MSE WALL BASELINES ARE ALONG THE STRUCTURAL FACE OF A 5½" MINIMUM FACING PANEL.

FOR INFORMATION ONLY

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DESIGN AGENCY EMH&T

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GENERAL NOTES - MSE WALLS

MSE RETAINING WALL NUMBERS B, C, F, G, H, I, J1, AND L

HAM-75-7.85

PID No. 77889

1032
2017

ITEM SPECIAL - SETTLEMENT PLATFORMS

DESCRIPTION: THIS ITEM CONSISTS OF FURNISHING, CONSTRUCTING, AND MAINTAINING SETTLEMENT PLATFORMS AND OBTAINING SETTLEMENT READINGS AS REQUIRED BY THE PLANS OR AS DIRECTED BY THE ENGINEER. AT THE OPTION AND EXPENSE OF THE CONTRACTOR, ADDITIONAL SETTLEMENT PLATFORMS MAY BE INSTALLED AT LOCATIONS APPROVED BY THE ENGINEER. SETTLEMENT READINGS SHALL BE TAKEN WEEKLY DURING CONSTRUCTION AND DURING ANY SPECIFIED WAITING PERIOD. THE READINGS SHALL BE PLOTTED ON GRAPH PAPER PRESENTING DEFORMATION (ON THE NEGATIVE Y-AXIS) AND FILL HEIGHT (ON THE POSITIVE Y-AXIS) VERSUS TIME (ON THE X-AXIS). IN ORDER TO CREATE THE GRAPH, USE THE SETTLEMENT PLATFORM SPREADSHEET LOCATED AT HTTP://WWW.DOT.STATE.OH.US/DIVISIONS/PRODMGT/GEOTECHNICAL/GEOTECHNICAL_DOCUMENTS/BLANK_SETTLEMENT_READING_PLOTS-ENGLISH.XLS ON THE OFFICE OF GEOTECHNCIAL ENGINEERING WEBSITE PUBLICATIONS AND DOCUMENTS SECTION. MARK THE TOP OF EACH SETTLEMENT PLATFORM SECTION AND OBTAIN THE SETTLEMENT PLATFORM READING AT THE SAME LOCATION FOR EACH CONSECUTIVE READING. COPY OF EACH CUMULATIVE PLOT SHALL BE SENT TO THE DISTRICT GEOTECHNICAL ENGINEER AND THE OFFICE OF GEOTECHNICAL ENGINEERING, ATTENTION: GEOTECHNICAL DESIGN COORDINATOR, AFTER EACH SETTLEMENT READING IS RECORDED.

CONSTRUCTION METHODS: THE PLATFORM SHALL CONFORM TO THE DETAILS SHOWN ON THE PLANS. THE PLATFORM SHALL BE SET ON A LEVEL SURFACE. THE PIPE SHALL BE FIRMLY SECURED TO THE PLATFORM AND SHALL BE MAINTAINED IN A PLUMB POSITION DURING THE PLACEMENT OF THE EMBANKMENT. THE PIPE SHALL BE MARKED AT INTERVALS TO FACILITATE MEASUREMENT OF THE DEPTH OF FILL. THE CONTRACTOR SHALL STOP WORK IN ANY LOCATION WHERE THE SETTLEMENT PLATFORM HAS BEEN DISTURBED OR DAMAGED. PLATFORMS OR PIPES DAMAGED OR DISPLACED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR PROPER CONDITION AT THE CONTRACTOR'S EXPENSE.

PRIOR TO PAVING, THE TOP OF THE SETTLEMENT PLATFORM PIPE SHALL BE CUT OFF 600MM (TWO FEET) BELOW THE FINISHED SURFACE OF THE SUBGRADE OR FINISHED GROUND SURFACE, WHICHEVER IS APPLICABLE.

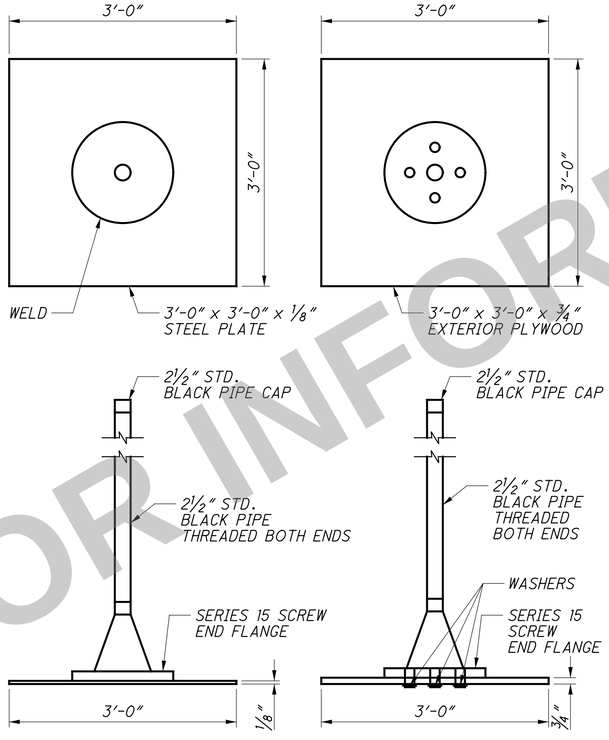
MATERIALS: SOUND LUMBER SUCH AS 19MM (3/4-INCH) EXTERIOR GRADE PLYWOOD SHALL BE USED FOR THE BASE. THE PIPE SHALL BE 64MM (2-1/2-INCH) STANDARD BLACK PIPE WITH THREADED FITTINGS AS SHOWN ON THE PLANS. A STEEL PLATE 915MM X 915MM X 3.2MM (36" X 36" X 1#8") MAY BE SUBSTITUTED FOR THE LUMBER FOR THE PLATFORMS, AT THE CONTRACTOR'S OPTION.

THE DEPARTMENT WILL CONSIDER VIBRATING WIRE SETTLEMENT MONITORING PLATFORMS IN LIEU OF THE CONVENTIONAL SETTLEMENT PLATFORMS. THE CONTRACTOR SHOULD PROVIDE DETAILS OF THE PROPOSED VIBRATING WIRE SETTLEMENT PLATFORMS AS WELL AS DESIGN DRAWINGS OF THE PROPOSED PLATFORM AND CABLING LAYOUT TO THE ENGINEER AT LEAST 30 DAYS PRIOR TO CONSTRUCTION. THE DEPARTMENT WILL REQUIRE 10 WORKING DAYS FOR REVIEW AND APPROVAL. THE DESIGN DRAWINGS SHOULD ILLUSTRATE THE PROPOSED SETTLEMENT VIBRATING WIRE SETTLEMENT PLATFORM LOCATIONS WITH ALL EXISTING AND PROPOSED SITE FEATURES TO VERIFY THE PROPOSED CABLING WILL NOT CONFLICT WITH EXISTING FACILITIES, PROPOSED FACILITIES OR UTILITIES. NO ADDITIONAL PAYMENT WILL BE PROVIDED IF THE CONTRACTOR ELECTS TO UTILIZE VIBRATING WIRE SETTLEMENT PLATFORMS.

WAITING PERIOD: A 30 CALENDAR DAY WAITING PERIOD IS ANTICIPATED FOR SETTLEMENT MITIGATION OF THE MSE WALLS. THE WAITING PERIOD COMMENCES ONCE THE EMBANKMENT HAS REACHED THE DESIGN SUBGRADE LEVEL. MONITOR THE SETTLEMENT PLATFORMS AT LEAST WEEKLY FROM INSTALLATION TO THE TERMINATION OF THE WAITING PERIOD. THE WAITING PERIOD MAY BE REDUCED OR EXTENDED BASED ON THE SETTLEMENT PLATFORM READINGS. COMMENCEMENT OF CONSTRUCTION MAY OCCUR ONCE THE SETTLEMENT PLATFORM READINGS ILLUSTRATE 1#8" OR LESS OF TOTAL MOVEMENT OVER A TWO WEEK WAITING PERIOD AND APPROVAL TO BEGIN WORK BY THE ENGINEER.

METHOD OF MEASUREMENT: THE NUMBER OF SETTLEMENT PLATFORMS TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF SETTLEMENT PLATFORMS COMPLETED, MAINTAINED, AND ACCEPTED BY THE ENGINEER.

BASIS OF PAYMENT: PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE EACH FOR ITEM SPECIAL - SETTLEMENT PLATFORMS WHICH IS COMPENSATION FOR CONSTRUCTING MAINTAINING, AND MONITORING THE SETTLEMENT PLATFORMS INCLUDING FURNISHING ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. PAYMENT SHALL NOT BE MADE FOR SETTLEMENT PLATFORMS WHICH BECOME USELESS DUE TO DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS.



SETTLEMENT PLATFORM

ABBREVIATION LEGEND

ABUT. - ABUTMENT
ADT - AVERAGE DAILY TRAFFIC
ADTT - AVERAGE DAILY TRUCK TRAFFIC
APP SLAB - APPROACH SLAB
AVE. - AVENUE
℄ - BASELINE
BM - BENCH MARK
BOT. - BOTTOM
BTW. - BETWEEN
BRG - BEARING
BTA - BRIDGE TERMINAL ASSEMBLY
C/C - CENTER TO CENTER
CB - CATCH BASIN
CIP - CAST IN PLACE
CJ - CONSTRUCTION JOINT
℄ - CENTERLINE
CLR - CLEARANCE
CONST - CONSTRUCTION
DIA - DIAMETER
EB - EAST BOUND
EF - EACH FACE
ELEV - ELEVATION
E/P - EDGE OF PAVEMENT
E/S - EDGE OF SHOULDER
EQ. - EQUAL
EST. - ESTIMATED
EX - EXISTING
EXP - EXPANSION
FA - FORWARD ABUTMENT
F/F - FACE TO FACE
FF - FAR FACE
FTG - FOOTING
FWD - FORWARD
GEN - GENERAL
GR - GUARD RAIL
HMWM - HIGH MOLECULAR WEIGHT METHACRYLATE
INCR. - INCREMENT
INT. - INTEGRAL
I.R. - INTERSTATE ROUTE
LT - LEFT
MAX - MAXIMUM
MECH. CONN. - MECHANICAL CONNECTOR
MIN - MINIMUM
MISC - MISCELLANEOUS
M.O.T. - MAINTENANCE OF TRAFFIC
MSE - MECHANICALLY STABALIZED EARTH
N/A - NOT APPLICABLE
NB - NORTHBOUND
NF - NEAR FACE
NO - NUMBER
NPCPP - NON-PERFORATED CORRUGATED PLASTIC PIPE
O/O - OUT TO OUT
O.C. - ON CENTER
OD - OUTSIDE DIAMETER
PC - POINT OF CURVE
PT - POINT OF TANGENT
P.V.I. - POINT OF VERTICAL INTERSECTION
PCB - PORTABLE CONCRETE BARRIER
PCPP - PERFORATED CORRUGATED PLASTIC PIPE
PVMT - PAVEMENT
PEJF - PREFORMED EXPANSION JOINT FILLER
PG - PROFILE GRADE
PROP - PROPOSED
PT. - POINT
PVMT. - PAVEMENT
RA - REAR ABUTMENT
RD - ROAD
REF. - REFERENCE
REQ'D - REQUIRED
RT - RIGHT
SB - SOUTHBOUND
SER. - SERIES
SHLD - SHOULDER
SPA - SPACES
S.R. - STATE ROUTE
ST - STREET
STA - STATION
SCD - STANDARD CONSTRUCTION DRAWING
STD - STANDARD
SUPER. - SUPERSTRUCTURE
TEMP - TEMPORARY
TOW - TOP OF WALL
T/S - TOE OF SLOPE
T/T - TOP TO TOE
TYP - TYPICAL
UNO - UNLESS NOTED OTHERWISE
VC - VERTIAL CURVE
VERT - VERTICAL
W/ - WITH
WB - WEST BOUND

FOR INFORMATION ONLY

DESIGN AGENCY: EMH&T
DESIGNED: RJE | DRAWN: GB | REVIEWED: CAS | DATE: 12-15-21
CHECKED: RMW | REVISED: - | STRUCTURE FILE NUMBER:

GENERAL NOTES - MSE WALLS
MSE RETAINING WALL NUMBERS B, C, F, G, H, I, J1, AND L

HAM-75-7.85
PID No. 77889

1033
2017

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ESTIMATED QUANTITIES (02/IMS/PV)

WALL B	WALL C	WALL F	WALL G	WALL H	WALL H1	WALL I	WALL I1	WALL J1	WALL L	ITEM	ITEM EXT	TOTAL	UNIT	DESCRIPTION	SEE STRUCTURE SHEET NO.
						LUMP	LUMP			202	11200		LUMP	PORTIONS OF STRUCTURE REMOVED	
5	1187	815	608							203	20000	2615	CU YD	EMBANKMENT	
	4791	1614	1384							203	35110	7789	CU YD	GRANULAR MATERIAL, TYPE B	
290					830		1348		70	203	35111	2538	CU YD	GRANULAR MATERIAL, TYPE B, AS PER PLAN	1/45
1	3	4	4	3	3	9	3	5		SPECIAL	20365000	35	EACH	SPECIAL - SETTLEMENT PLATFORM	2/45
LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP		503	11101		LUMP	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	1/45
215	409	388	296	1045	246	4667	256	2153	124	512	10001	9799	SQ YD	SEALING OF CONCRETE SURFACES, AS PER PLAN	1/45
215	409	388	296	1045	246	4667	256	2153	124	512	10101	9799	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	1/45
34	274				240		240			516	13200	788	SQ FT	1/2" PREFORMED EXPANSION JOINT FILLER	
		247	225						56	516	13600	528	SQ FT	1" PREFORMED EXPANSION JOINT FILLER	
				12		12				516	13900	24	SQ FT	2" PREFORMED EXPANSION JOINT FILLER	
55				51				516		517	76300	622	FT	RAILING, MISC.: TRAFFIC BARRIER ON MSE WALL	1/45
				227		1128				517	80010	1355	FT	RAILING (COMBINATION NOISE AND TRAFFIC BARRIER ON MSE WALL WITH FLEXIBLE PAVEMENT)	1/45
7	56	37	33		52		51		9	601	21000	245	SQ YD	CONCRETE SLOPE PROTECTION	
	23							489		601	37500	512	FT	PAVED GUTTER, TYPE 1-2	
LUMP	LUMP	LUMP	LUMP		LUMP		LUMP			SPECIAL	69098400		LUMP	SPECIAL - TEMPORARY SURCHARGE	1/45
2082	4556	4235	3398	6300	4076	26,607	4172	15,660	1807	840	20001	72,893	SQ FT	MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN	1/45
835	10190	1387	1043	2104	2907	7463	2889	4742	705	840	21000	34,265	CU YD	WALL EXCAVATION	
219		793	696	667		2778		1396	223	840	22000	3327	SQ YD	FOUNDATION PREPARATION	
	1227				656		700			840	22001	6027	SQ YD	FOUNDATION PREPARATION, AS PER PLAN	1/45
796	9084	3276	2412	3744	3500	17,578	3800	4004	936	840	23000	49,130	CU YD	SELECT GRANULAR BACKFILL	
	163	37	35		11		11	599	58	840	23050	914	CU YD	NATURAL SOIL	
230	792	625	575	848	472	2670	480	1032	164	840	25010	7888	FT	6" DRAINAGE PIPE, PERFORATED	
3	85	10	11		240	20		10	62	840	25020	441	FT	6" DRAINAGE PIPE, NON-PERFORATED	
139	285	299	278	322	236	1173	237	1012	167	840	26000	4148	FT	CONCRETE COPING	1/45
1805	3990	3647	2841	5671	3605	24,223	3703	14,628	1475	840	26050	65,588	SQ FT	AESTHETIC SURFACE TREATMENT	1/45
1	1	1	1	1	1	3	3	2	1	840	27000	15	DAY	ON-SITE ASSISTANCE	
LUMP										867	00100		LUMP	TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL B-1)	
	LUMP									867	00100		LUMP	TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL C-1)	
	LUMP									867	00100		LUMP	TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL C-2)	
		LUMP								867	00100		LUMP	TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL F1)	
		LUMP								867	00100		LUMP	TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL F2)	
		LUMP								867	00100		LUMP	TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL F3)	
			LUMP							867	00100		LUMP	TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL G1)	
			LUMP							867	00100		LUMP	TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL G2)	
			LUMP							867	00100		LUMP	TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL G3)	
				LUMP						867	00100		LUMP	TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL H1-1)	
				LUMP						867	00100		LUMP	TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL H1-2)	
						LUMP				867	00100		LUMP	TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL I1-1)	
						LUMP				867	00100		LUMP	TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL I1-2)	

FOR INFORMATION ONLY

NOTE

1. SEE SHEET 2/45 FOR ABBREVIATION LEGEND.

DESIGN AGENCY
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RMW	-		

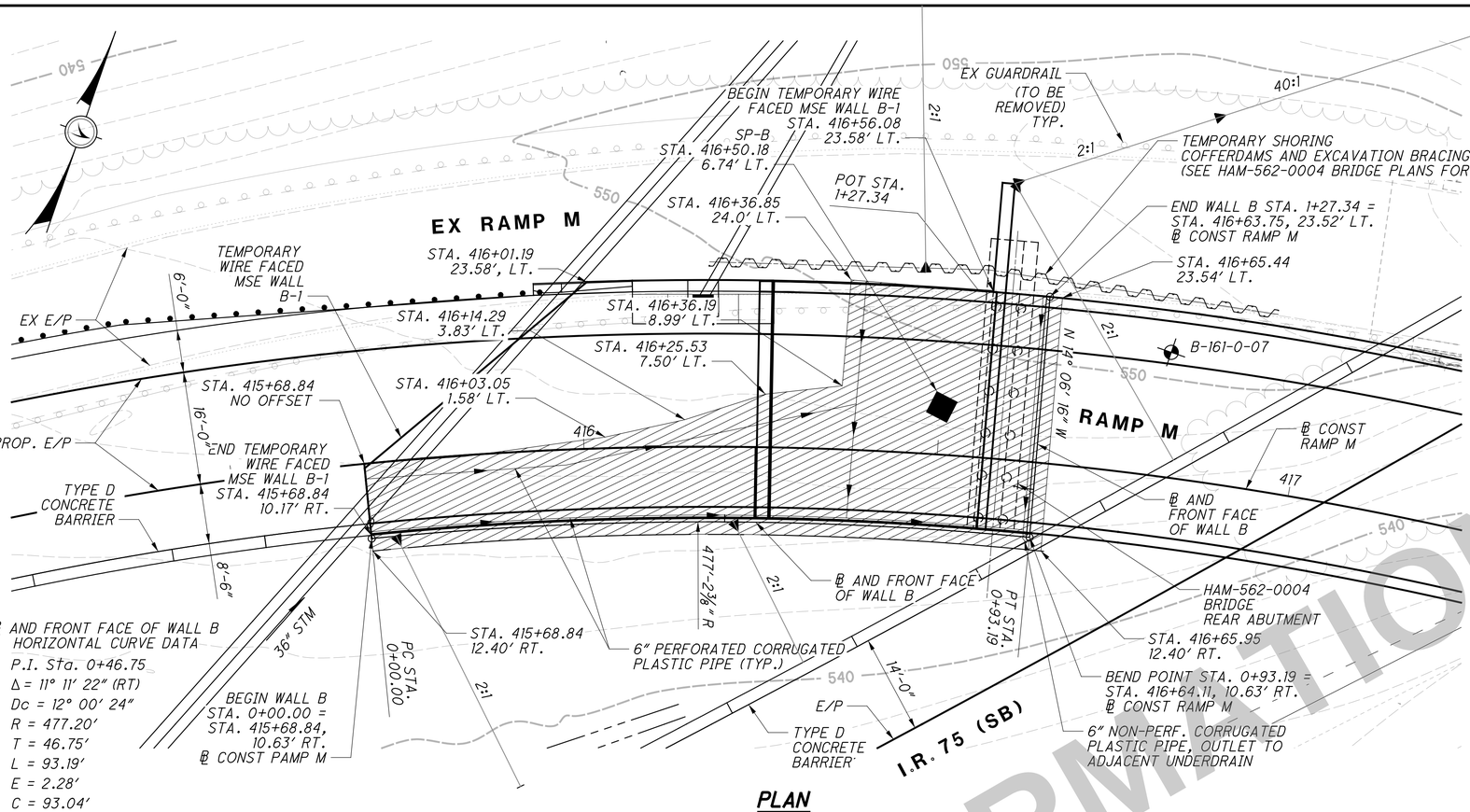
ESTIMATED QUANTITIES - MSE WALLS
MSE RETAINING WALL NUMBERS B, C, F, G, H, I, J1, AND L

HAM-75-7.85
PID No. 77889

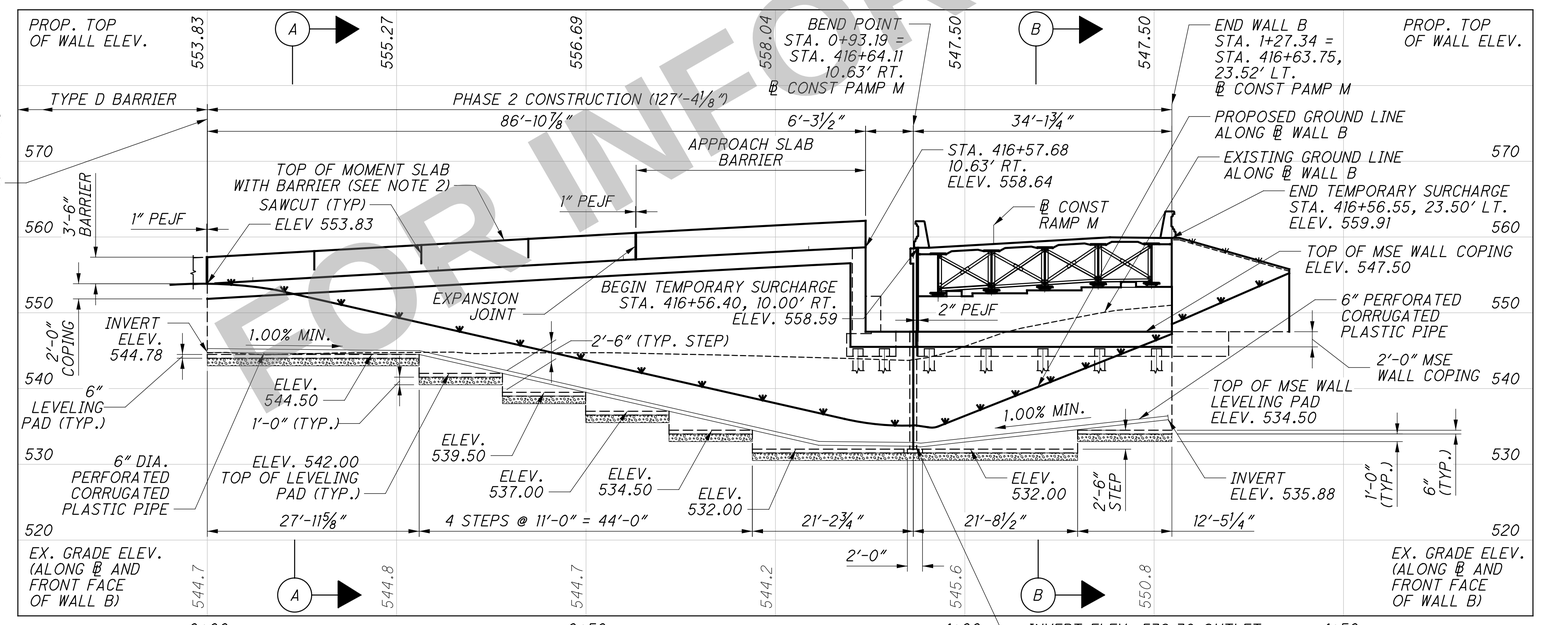
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2017

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PLAN



PROFILE ALONG ℄ WALL B

LEGEND

- PLAN BOUNDARY FOR ITEMS INCLUDED WITH MSE WALL FOR PAYMENT
- 6" DIAMETER PERFORATED CORRUGATED PLASTIC PIPE
- SETTLEMENT PLATFORM
- DENOTES LIMITS OF ITEM 203, GRANULAR MATERIAL, TYPE C

NOTES

1. ALL STATIONS, OFFSETS, ELEVATIONS AND DIMENSIONS MEASURED ABOUT THE FRONT FACE OF MSE WALL PANEL.
2. FOR DETAILS OF MOMENT SLAB WITH BARRIER, SEE SHEET 6/45 .
3. FOR SECTIONS A-A AND B-B, SEE SHEET 5/45 .
4. SEE SHEET 2/45 FOR ABBREVIATION LEGEND.

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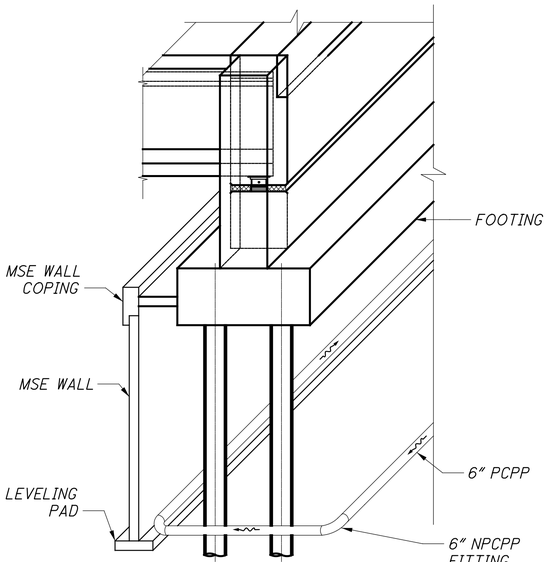
PLAN AND PROFILE
MSE RETAINING WALL B

HAM-75-7.85
PID No. 77889

4 / 45

1035
2017

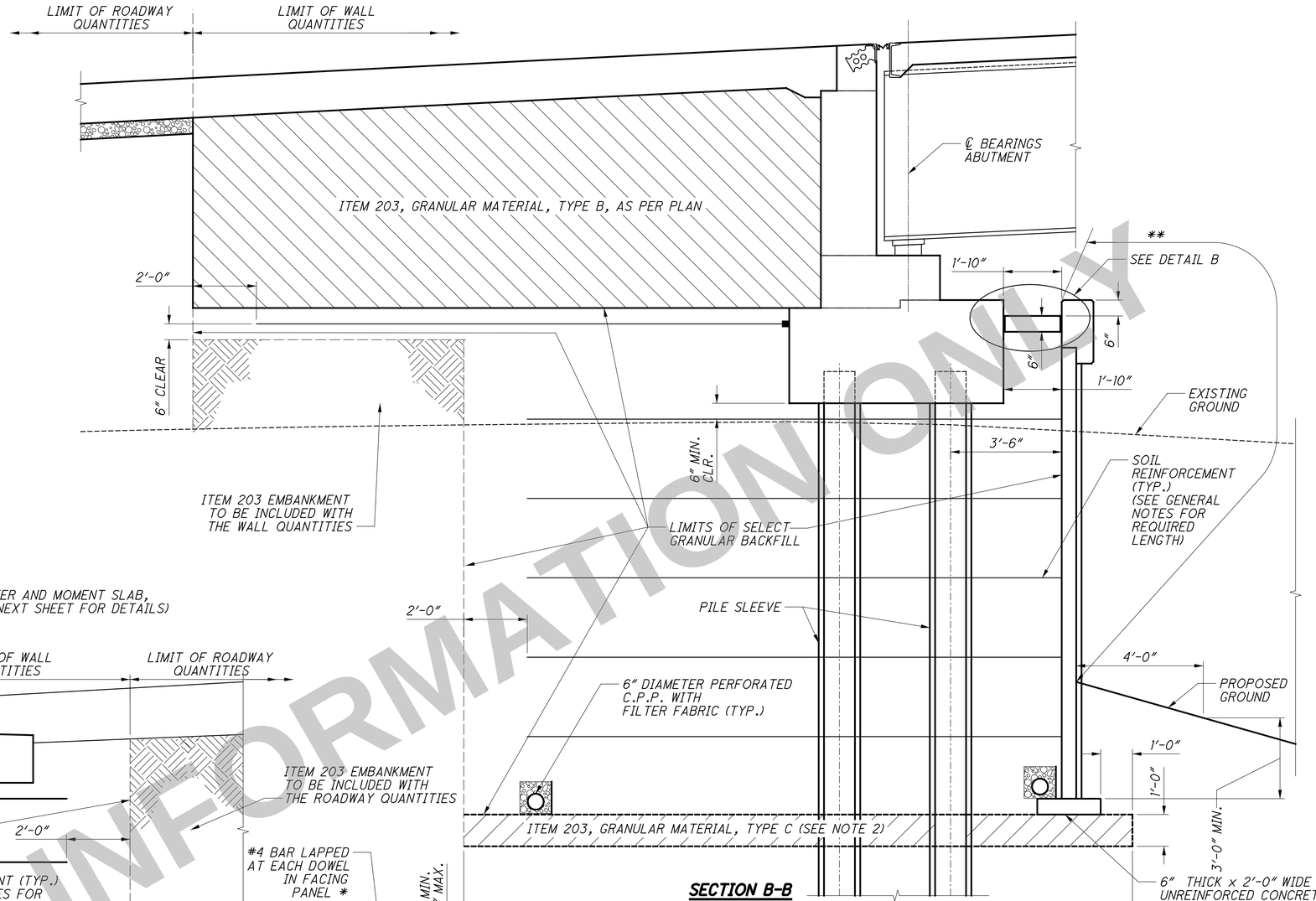
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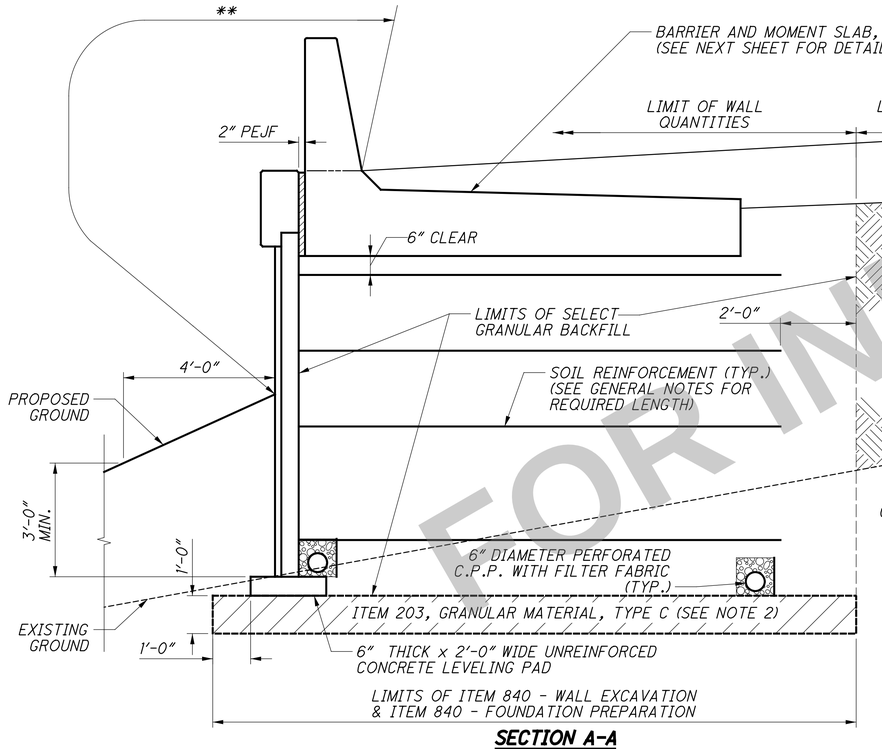
MSE WALL DRAINAGE DETAIL

NOTES

1. SEE SHEET 2/45 FOR ABBREVIATION LEGEND.
2. ITEM 203 - GRANULAR MATERIAL, TYPE C SHALL BE INCLUDED FOR PAYMENT WITH ITEM 840 - FOUNDATION PREPARATION.



SECTION B-B



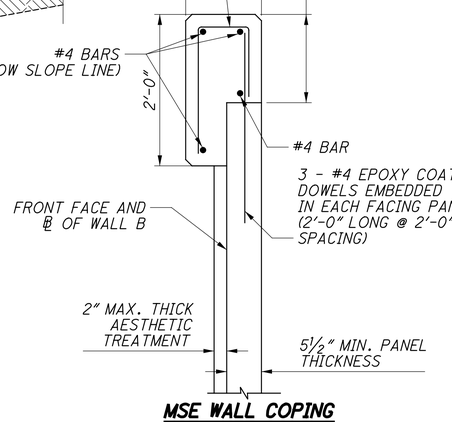
SECTION A-A

TYPICAL SECTION SHOWN IS A GENERAL REPRESENTATION AND NOT THE ACTUAL ELEVATION DIFFERENCE BETWEEN THE MSE WALL AND THE BARRIER MOMENT SLAB. ROADWAY PROFILE GRADES CONTROL BARRIER MOMENT SLAB ELEVATIONS.

LEGEND

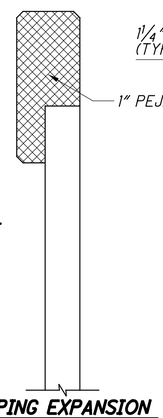
* - INCLUDE WITH ITEM 840 - CONCRETE COPING, FOR PAYMENT

** - LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) & SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)

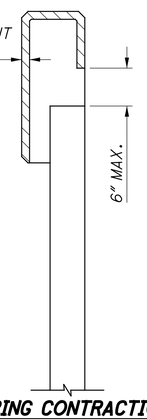


MSE WALL COPING

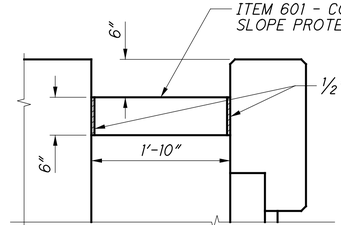
ALL REINFORCING STEEL TO BE EPOXY COATED



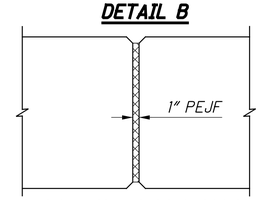
COPING EXPANSION JOINTS



COPING CONTRACTION JOINTS



DETAIL B



COPING EXPANSION JOINTS

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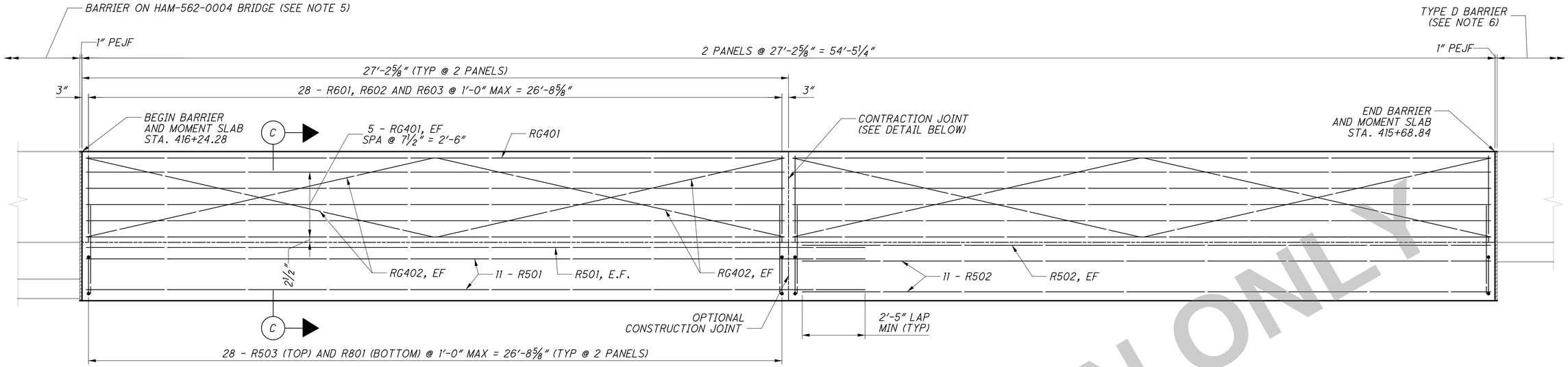
MSE WALL DETAILS
MSE RETAINING WALL B

HAM-75-7.85
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5 / 45

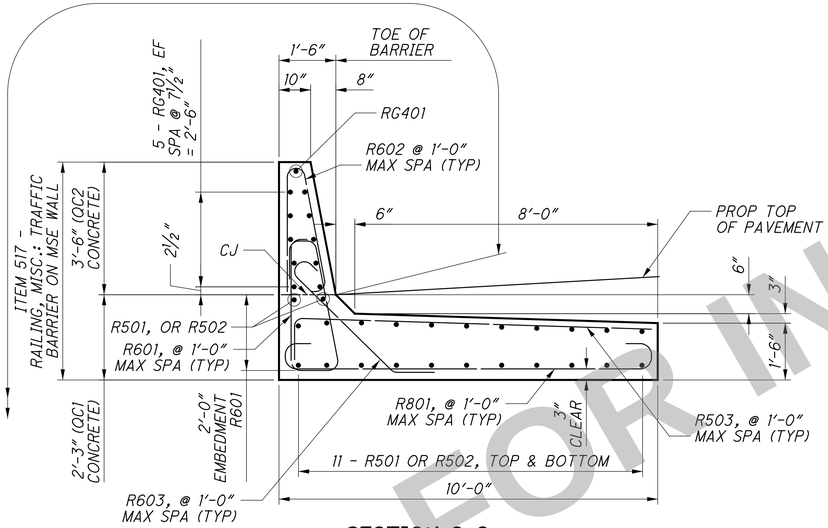
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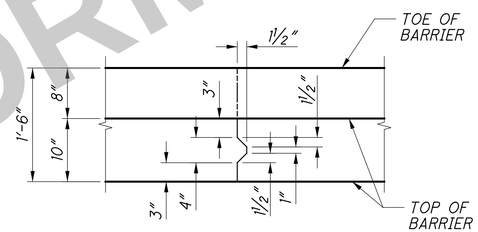


BARRIER AND MOMENT SLAB ELEVATION

LOOKING SOUTH (TRAFFIC SIDE)
ALL DIMENSIONS MEASURED ABOUT THE TOE OF BARRIER



SECTION C-C



CONTRACTION JOINT

BARRIER NOTES

1. ALL ITEMS SHOWN ON THIS SHEET, EXCLUDING PAVEMENT, ARE INCIDENTAL TO ITEM 517 - RAILING, MISC.: TRAFFIC BARRIER ON MSE WALL.
2. FOR ADDITIONAL BARRIER DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWING SBR-1-20.
3. SEE SHEET 2/45 FOR ABBREVIATION LEGEND.
4. ROADWAY PROFILE GRADES CONTROL BARRIER MOMENT SLAB ELEVATIONS. REFER TO ROADWAY SHEETS AS NECESSARY.
5. SEE HAM-562-0004 BRIDGE PLANS FOR DETAILS.
6. SEE ROADWAY SHEETS FOR DETAILS.

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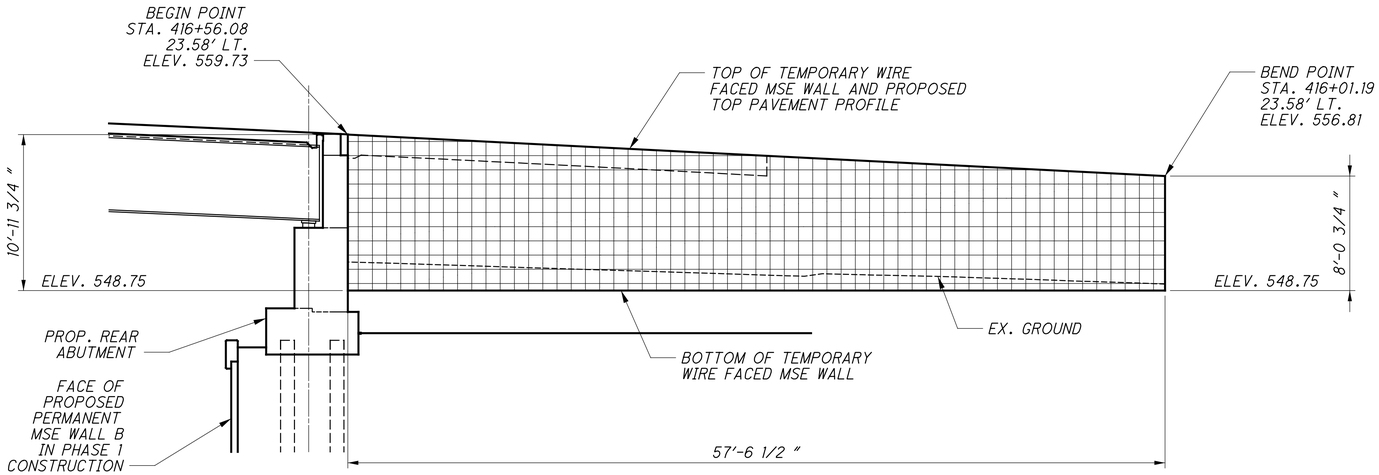
DESIGNED	DRAWN	REVIEWED	DATE
RJE	GB	CAS	12-15-21
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RMW	-		

BARRIER AND MOMENT SLAB DETAILS
MSE RETAINING WALL B

HAM-75-7.85
PID No. 77889

1037
2017

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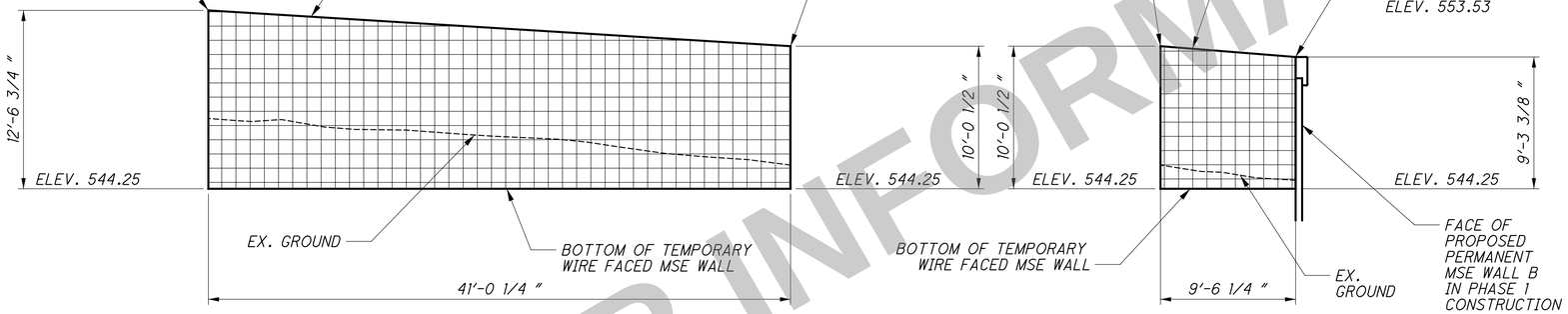
ELEVATION - TEMPORARY WIRE FACED MSE WALL B-1
REAR ABUTMENT PHASE 1

NOTES

1. TOP OF THE TEMPORARY WIRE FACED MSE WALL TO MATCH THE PROPOSED PAVEMENT ELEVATION OF RAMP M OR TOP OF THE APPROACH SLAB OF HAM-562-0004 BRIDGE.
2. SEE HAM-562-0004 BRIDGE PLANS FOR ADDITIONAL INFORMATION AT THE BRIDGE ABUTMENTS AND TEMPORARY SHORING DETAILS.
3. SEE PROPOSED PERMANENT MSE WALL DETAILS ON SHEET 5 / 45
4. SEE SHEET 2 / 45 FOR ABBREVIATION LEGEND.

LEGEND

- TEMPORARY MSE WALL FACE



ELEVATION - TEMPORARY WIRE FACED MSE WALL B-1
REAR ABUTMENT PHASE 1

ELEVATION - TEMPORARY WIRE FACED MSE WALL B-1
REAR ABUTMENT PHASE 1

FOR INFORMATION ONLY

DESIGN AGENCY
EMH&T
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500

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RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-		

TEMPORARY MSE WALL DETAILS
MSE RETAINING WALL B

HAM-75-7.85
PID No. 77889

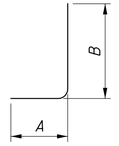
7 / 45

1038
2017

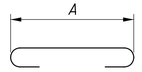
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MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
WALL B CAST-IN-PLACE BARRIER WITH MOMENT SLAB REINFORCING LIST*											
RG401 ■	22	26'-10"		STR							
RG402 ■	16	13'-9"		STR							
R501	24	30'-0"	751	STR							
R502	24	26'-6"	663	STR							
R503	56	10'-6"	613	1	1'-0"	9'-8"					
R601	56	10'-0"	841	41	0'-10"	0'-7"	1'-0"	3'-5"	1'-6"		
R602	56	7'-2"	603	39	0'-6"	3'-3"	3'-3"	1'-1"		0'-2"	
R603	56	5'-6"	463	18	3'-10"	0'-9"	0'-9"				
R801	56	11'-4"	1695	17	9'-8"						
	SUB-TOTAL		5,629								

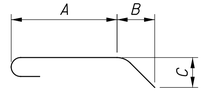
* REINFORCING INCLUDED WITH ITEM 517 - RAILING, CONCRETE, AS PER PLAN



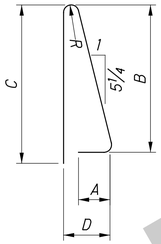
TYPE-1



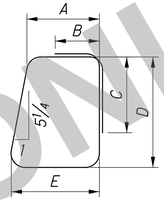
TYPE-17



TYPE-18



TYPE-39



TYPE-41

FOR INFORMATION ONLY

LEGEND

■ - RG4XX - GLASS FIBER REINFORCED POLYMER (GFRP) BAR

NOTES

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE S601 IS A NO. 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT, UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD" WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

2. ALL REINFORCING STEEL TO BE EPOXY COATED.

3. UNLESS OTHERWISE NOTED, THE FOLLOWING LAP LENGTHS SHALL APPLY:
   #5 BARS: 2'-5", #6 BARS: 3'-7"

4. SEE SHEET 2/45 FOR ABBREVIATION LEGEND.

DESIGN AGENCY
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5500 New Albany Road, Columbus, Ohio 43054
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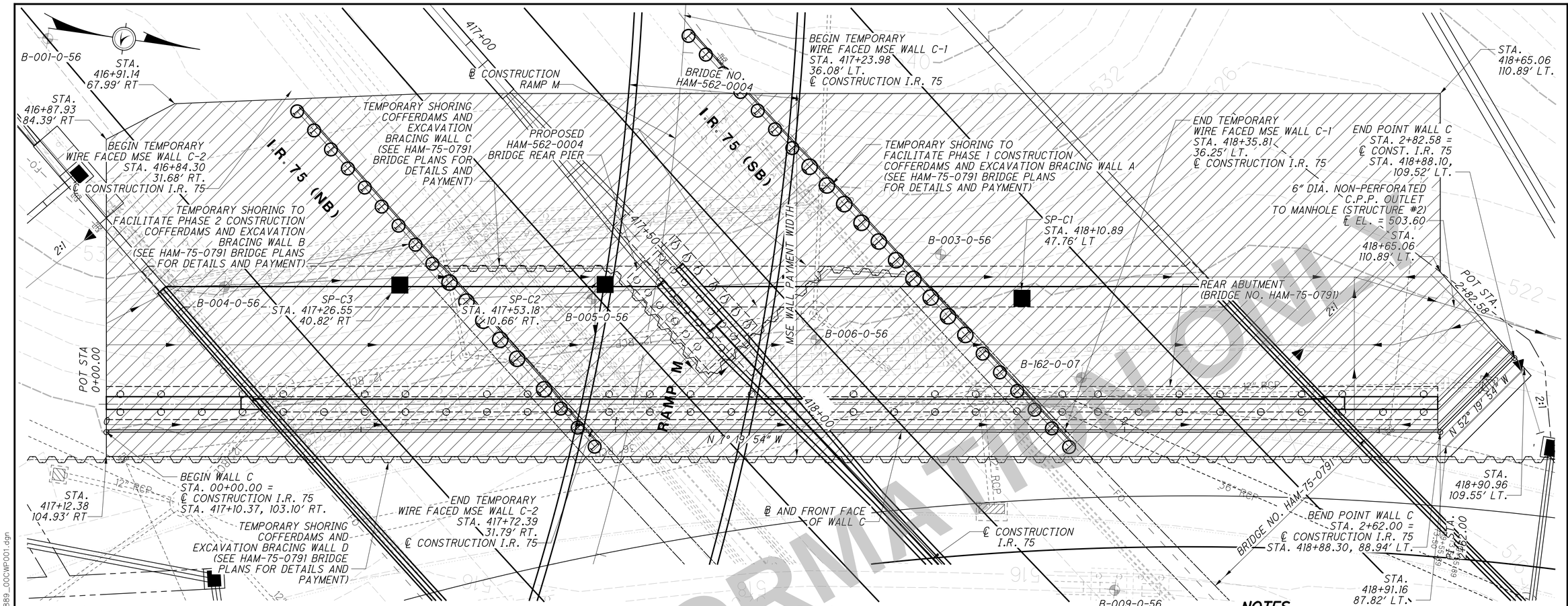
DESIGNED	DRAWN	REVIEWED	DATE
RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-		

REINFORCING STEEL LIST
MSE RETAINING WALL B

HAM-75-7.85
PID No. 77889

1039
2017

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LEGEND

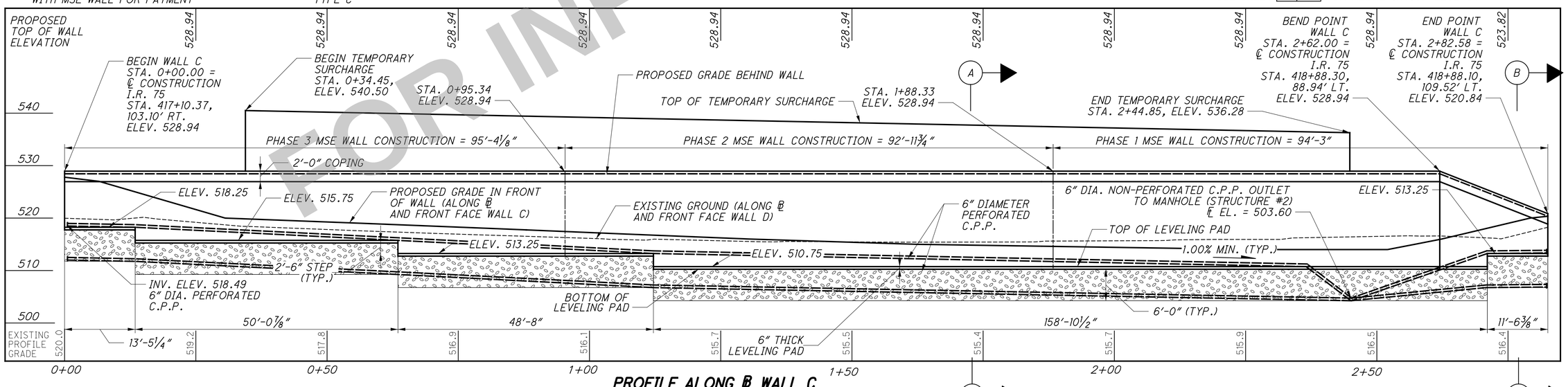
- 6" DIA. PERFORATED C.P.P.
- SETTLEMENT PLATFORM
- PLAN BOUNDARY FOR ITEMS INCLUDED WITH MSE WALL FOR PAYMENT
- ITEM 203, GRANULAR MATERIAL, TYPE C

PLAN

AT REAR ABUTMENT OF HAM-75-0791 BRIDGE

NOTES

1. ALL STATIONS AND OFFSETS ARE ALONG ℄ CONSTRUCTION I.R. 75 UNLESS OTHERWISE SHOWN.
2. FOR SECTIONS A-A AND B-B, SEE SHEET 10 / 45
3. SEE SHEET 2 / 45 FOR ABBREVIATION LEGEND.



PROFILE ALONG ℄ WALL C

AT REAR ABUTMENT OF HAM-75-0791 BRIDGE

FOR INFORMATION

DESIGN AGENCY: EMH&T
DESIGNED: RJE | DRAWN: GB | REVIEWED: CAS | DATE: 12-15-21
CHECKED: RMW | REVISED: - | STRUCTURE FILE NUMBER

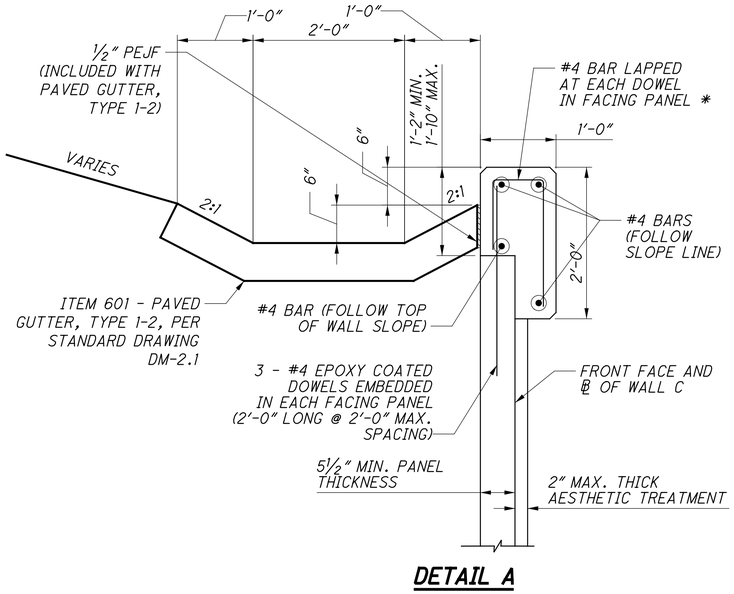
PLAN AND PROFILE
MSE RETAINING WALL C

HAM-75-7.85
PID No. 77889

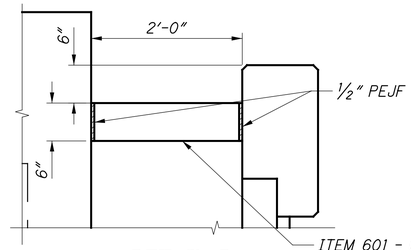
9 / 45

1040
2017

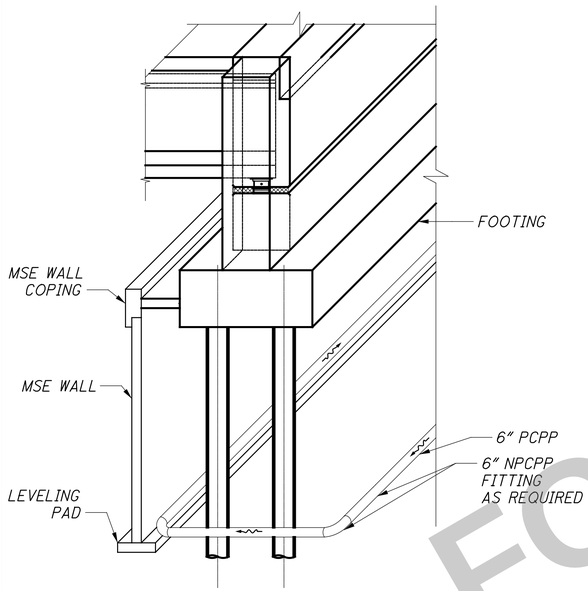
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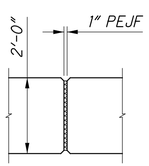
DETAIL A



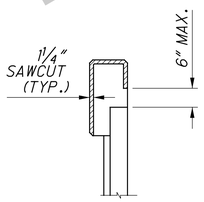
DETAIL B



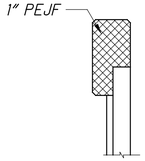
MSE WALL DRAINAGE DETAIL



COPING EXPANSION JOINTS

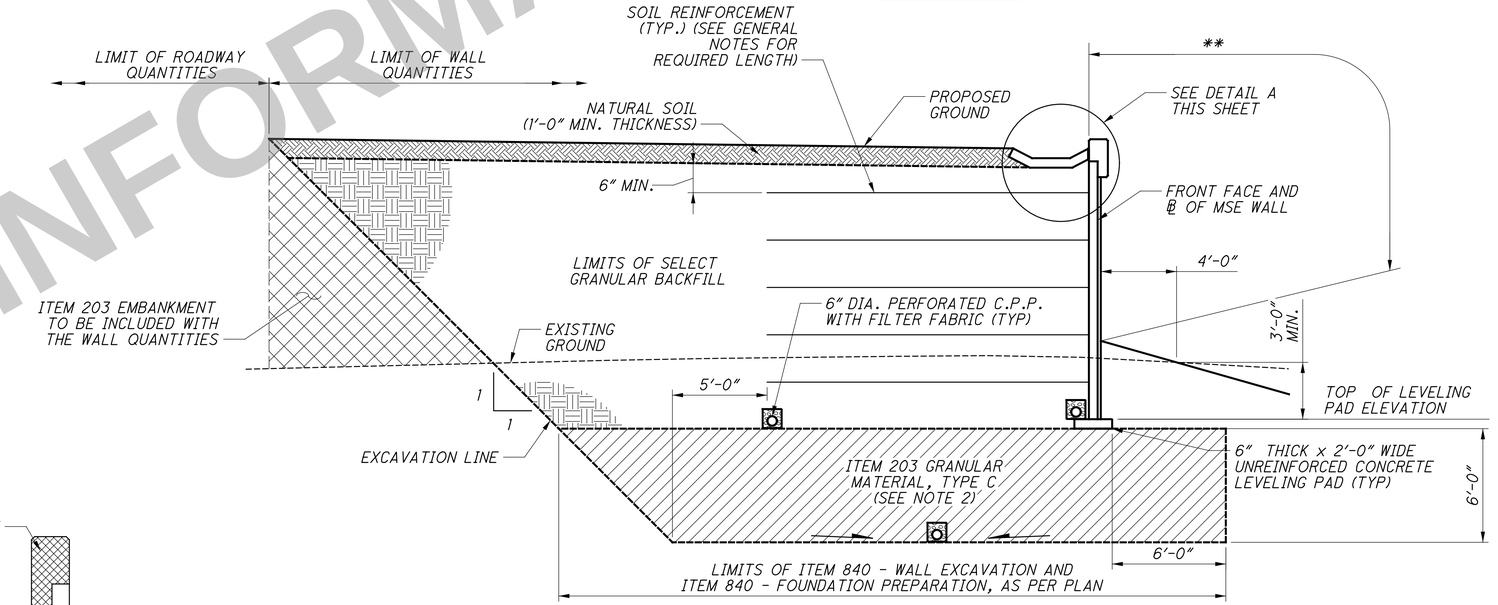


COPING CONTRACTION JOINTS



COPING EXPANSION JOINTS

SECTION A-A



SECTION B-B

LEGEND

* - INCLUDE WITH ITEM 840 - CONCRETE COPING, FOR PAYMENT

** - LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) & SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)

NOTES

1. SEE SHEET 2/45 FOR ABBREVIATION LEGEND.
2. ITEM 203 - GRANULAR MATERIAL, TYPE C SHALL BE INCLUDED FOR PAYMENT WITH ITEM 840 - FOUNDATION PREPARATION, AS PER PLAN.

FOR INFORMATION ONLY

DESIGN AGENCY: EMH&T
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DRAWN: GB
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DATE: 12-15-21
STRUCTURE FILE NUMBER
REVISED: -

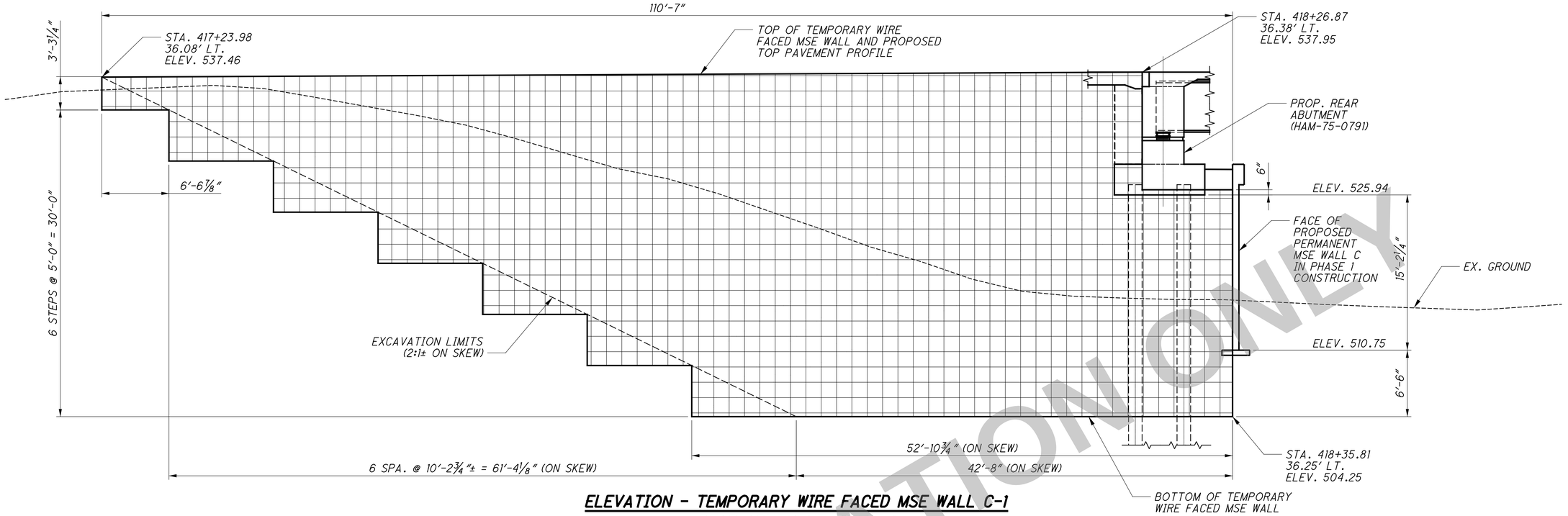
MSE WALL DETAILS
MSE RETAINING WALL C

HAM-75-7.85
PID No. 77889

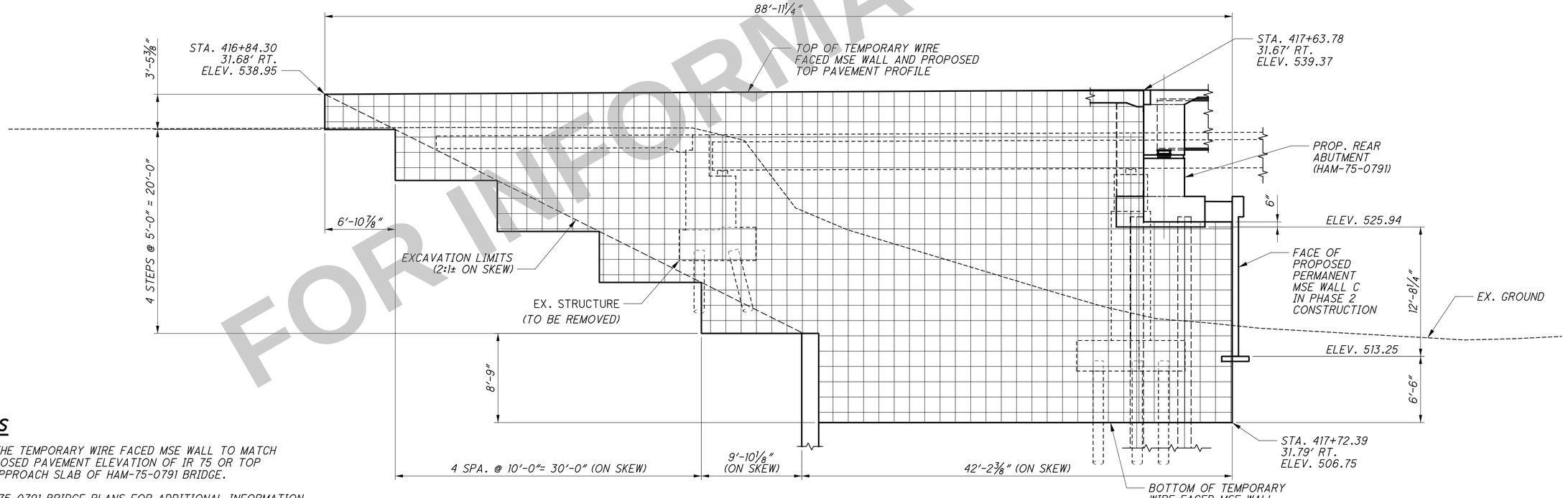
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2017

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ELEVATION - TEMPORARY WIRE FACED MSE WALL C-1
REAR ABUTMENT PHASE 1



ELEVATION - TEMPORARY WIRE FACED MSE WALL C-2
REAR ABUTMENT PHASE 2

NOTES

1. TOP OF THE TEMPORARY WIRE FACED MSE WALL TO MATCH THE PROPOSED PAVEMENT ELEVATION OF IR 75 OR TOP OF THE APPROACH SLAB OF HAM-75-0791 BRIDGE.
2. SEE HAM-75-0791 BRIDGE PLANS FOR ADDITIONAL INFORMATION AT THE BRIDGE ABUTMENTS AND TEMPORARY SHORING DETAILS.
3. SEE PROPOSED PERMANENT MSE WALL DETAILS ON SHEET 10 / 45
4. SEE SHEET 2 /45 FOR ABBREVIATION LEGEND.

LEGEND

- TEMPORARY MSE WALL FACE

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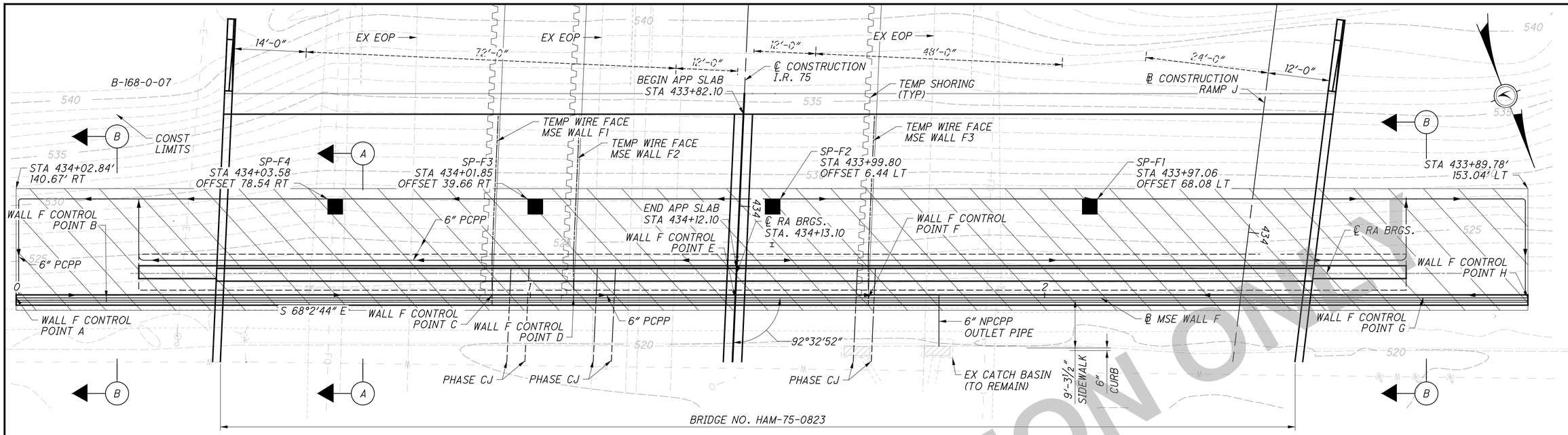
TEMPORARY MSE WALL DETAILS
MSE RETAINING WALL C

HAM-75-7.85
PID No. 77889

11 / 45

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2017

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PLAN

WALL F CONTROL POINT TABLE				
WALL CONTROL POINT	℄ CONST IR 75 STATION	℄ CONST IR 75 OFFSET (FT)	WALL STATION	TOW ELEV
A	434+24.07	139.73 RT.	0+00.00	523.50
B	434+23.29	122.22 RT.	0+17.53	532.27
C	434+19.96	47.26 RT.	0+92.56	532.27
D	434+19.26	31.44 RT.	1+08.40	532.27
E	434+17.86	0.00	1+39.85	532.27
F	434+16.71	25.85 LT.	1+65.74	532.27
G	434+11.91	133.60 LT.	2+73.60	532.27
H	434+11.00	153.98 LT.	2+94.00	522.07

NOTES:

1. ALL TOP OF WALL ELEVATIONS ARE GIVEN TO TOP OF COPING.
2. WALL BASELINE IS LOCATED AT THE BACK FACE OF MSE WALL.
3. SEE SHEET 13/45 FOR SECTIONS A-A AND B-B.
4. ALL STATION AND OFFSETS ARE ALONG ℄ I.R. 75 UNLESS NOTED OTHERWISE.
5. SEE GENERAL NOTES FOR SETTLEMENT PLATFORM DETAILS.
6. SEE SHEET 2/45 FOR ABBREVIATION LEGEND.

LEGEND:

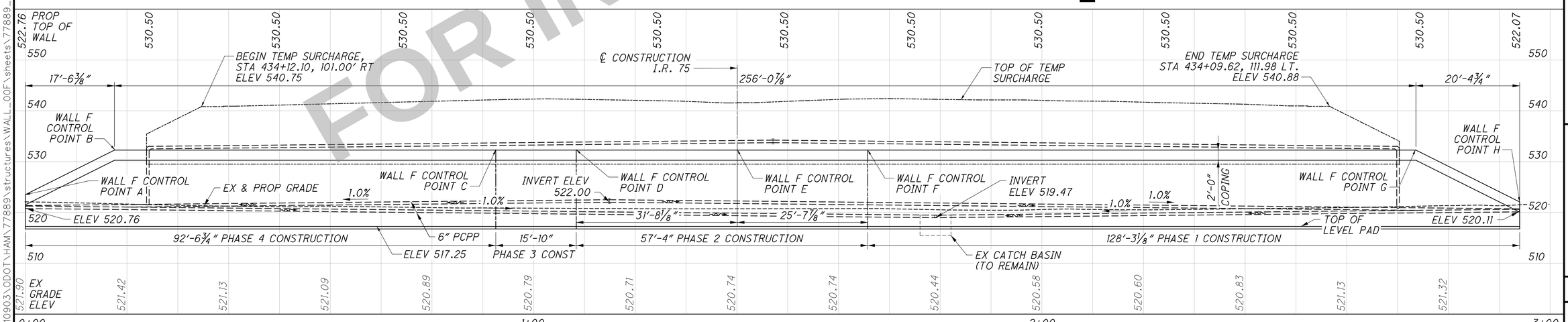
TOW - TOP OF WALL

- WALL EXCAVATION AND SELECT GRANULAR EMBANKMENT
- SETTLEMENT PLATFORM

PCPP = PERFORATED CORRUGATED POLYETHYLENE PIPE

NPCPP = NON-PERFORATED CORRUGATED POLYETHYLENE PIPE

6" DIA. PCPP OR NPCPP



ELEVATION

FOR INFORMATION ONLY

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2000 Corporate Exchange Drive, Suite 200, Columbus, OH 43231

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TML	TML	NCM	12-15-21
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JWE			

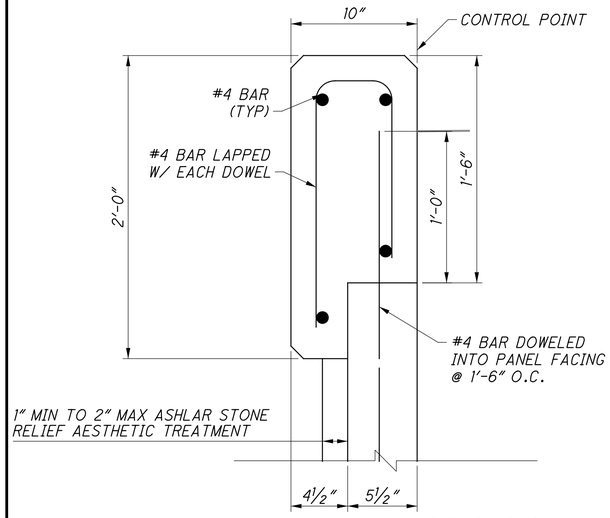
MSE WALL F PLAN & ELEVATION
MSE RETAINING WALL F

HAM-75-7.85
PID No. 77889

12/45

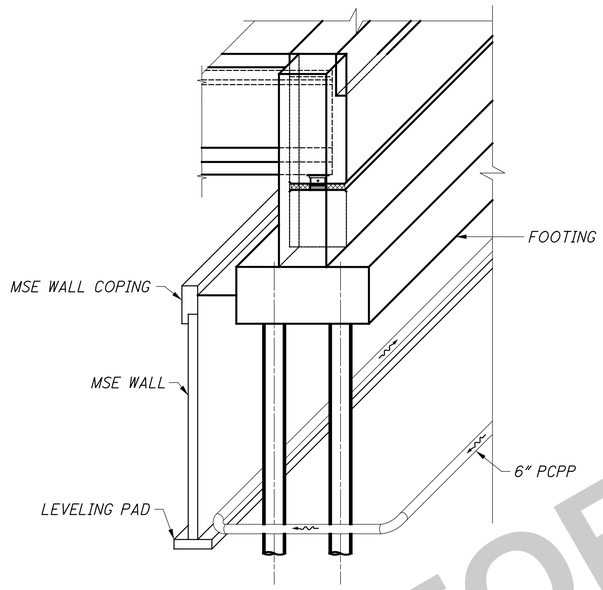
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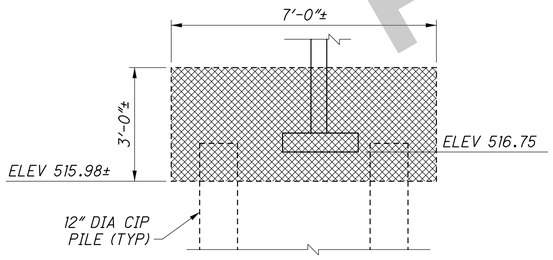


MSE WALL COPING DETAIL

(ALL REINFORCING STEEL TO BE EPOXY COATED)

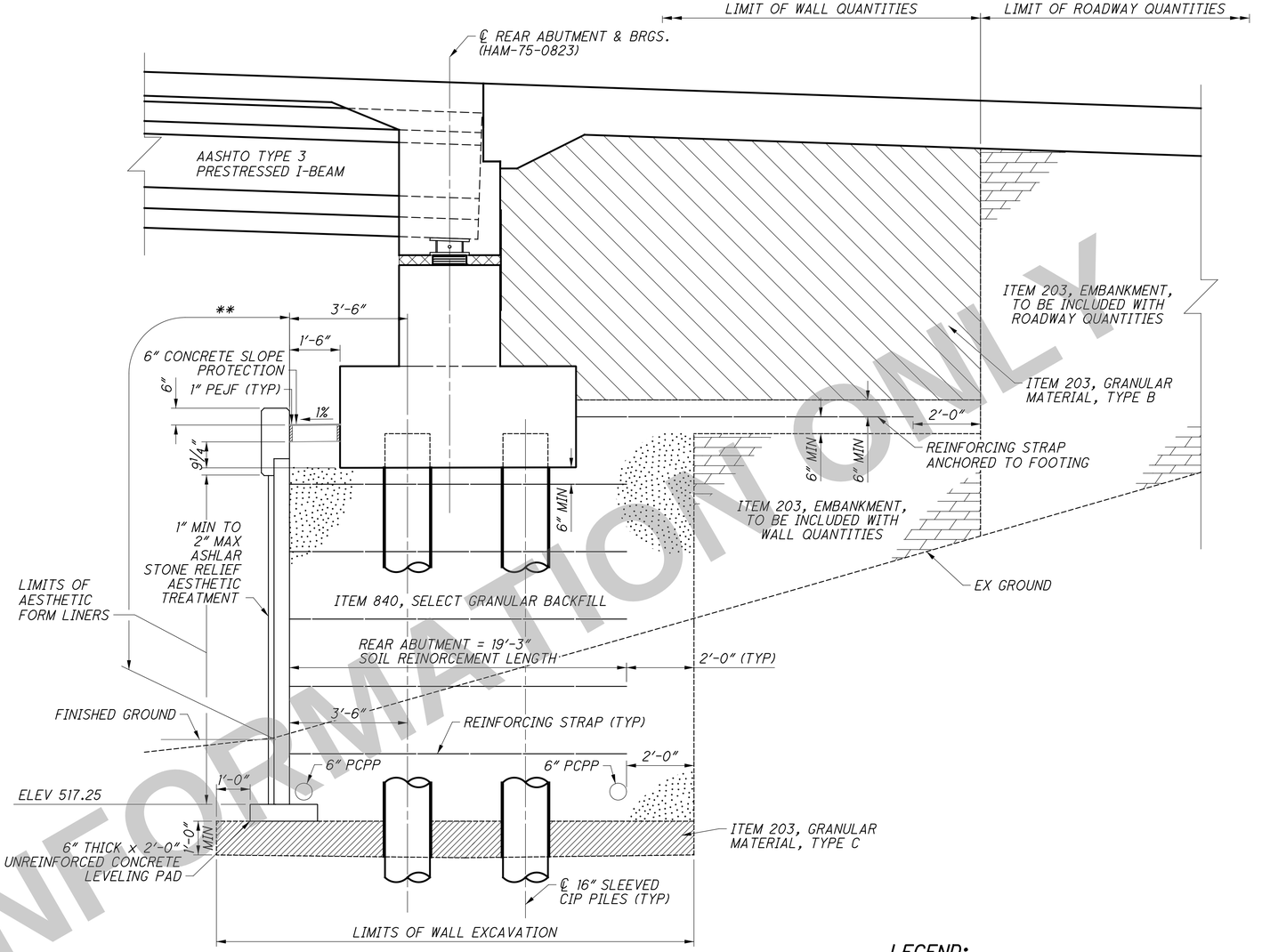


MSE WALL DRAINAGE DETAIL

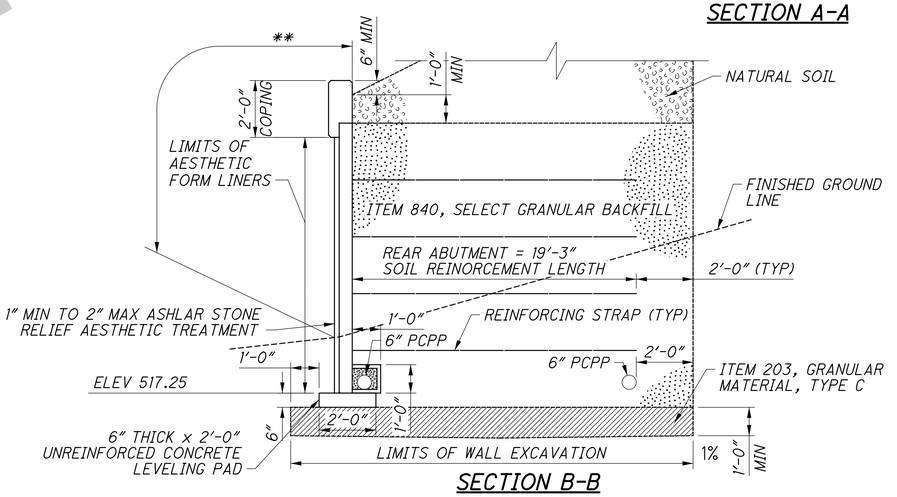


EX. FOOTING REMOVAL DETAIL

(RA & WALL F)



SECTION A-A



SECTION B-B

LEGEND:

= MINIMUM REMOVAL LIMITS

** - LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) & SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)

NOTES:

1. SEE HAM-75-0823 PLANS FOR ABUTMENT DETAILS.
2. SEE SHEET 1/45 FOR AESTHETIC NOTES.
3. SEE SHEET 2/45 FOR ABBREVIATION LEGEND.
4. ITEM 203 - GRANULAR MATERIAL, TYPE C SHALL BE INCLUDED FOR PAYMENT WITH ITEM 840 - FOUNDATION PREPARATION.

FOR INFORMATION ONLY

DESIGN AGENCY
2000 Corporate Exchange Drive, Suite 200, Columbus, OH 43231

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TML	TML	NCM	12-15-21
CHECKED	REVISED		STRUCTURE FILE NUMBER
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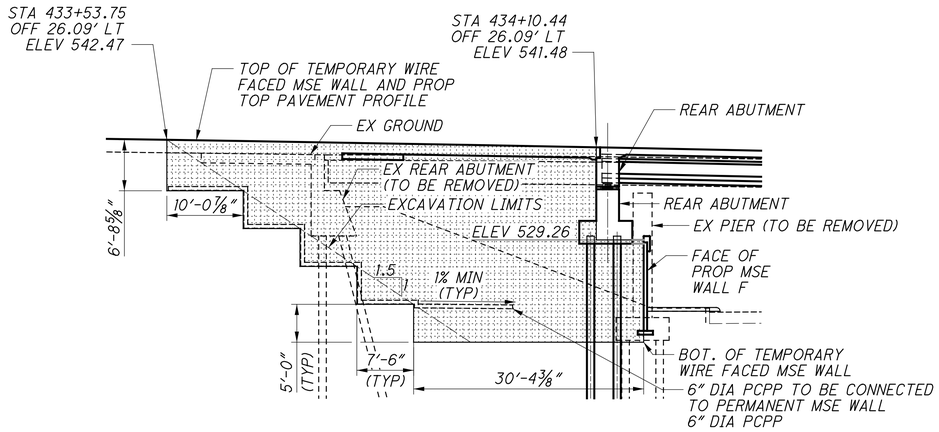
MSE WALL DETAILS
MSE RETAINING WALL F

HAM-75-7.85
PID No. 77889

13 / 45

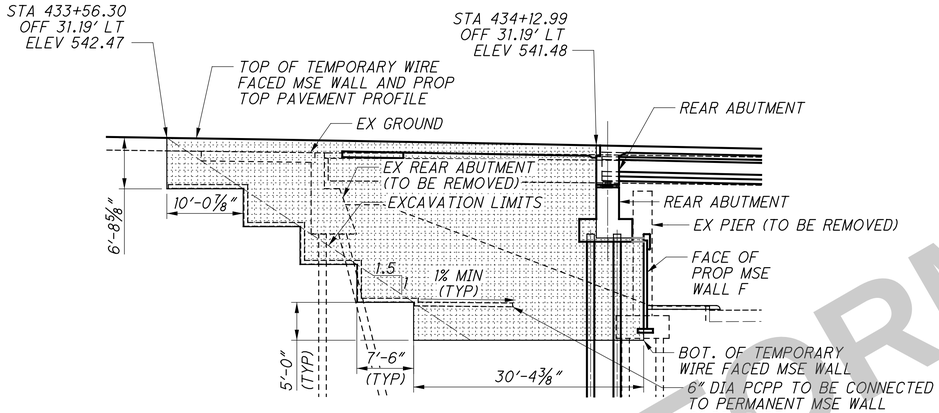
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2017

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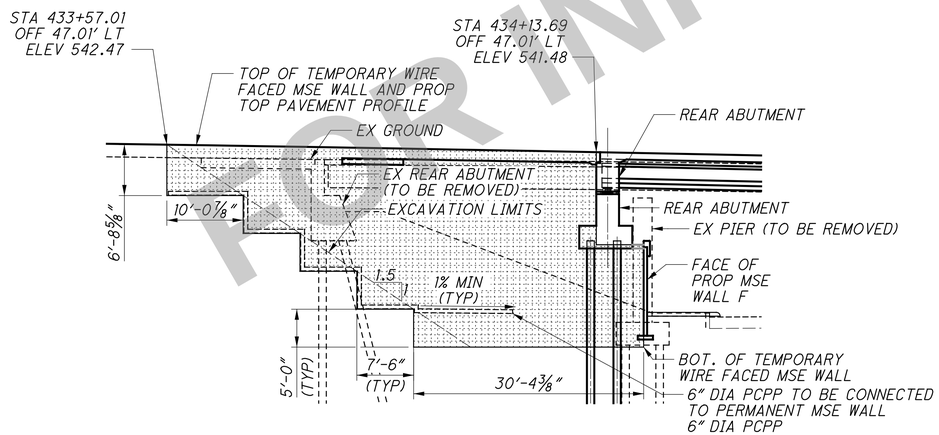
ELEVATION - TEMPORARY WIRE FACED MSE WALL F1

REAR ABUTMENT PHASE 1



ELEVATION - TEMPORARY WIRE FACED MSE WALL F2

REAR ABUTMENT PHASE 2



ELEVATION - TEMPORARY WIRE FACED MSE WALL F3

REAR ABUTMENT PHASE 3

FOR INFORMATION ONLY

LEGEND:

= TEMPORARY MSE WALL FACE

NOTES:

1. SEE HAM-75-0823 BRIDGE PLANS FOR ABUTMENT DETAILS.
2. TOP OF TEMPORARY WIRE FACED MSE WALL TO MATCH PROPOSED PAVEMENT ELEVATION OF I.R. 75.
3. SEE HAM-75-0823 BRIDGE PLANS FOR TEMPORARY SHORING DETAILS AND QUANTITIES.
4. SEE SHEET 2/45 FOR ABBREVIATION LEGEND.

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CMH	CMH	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
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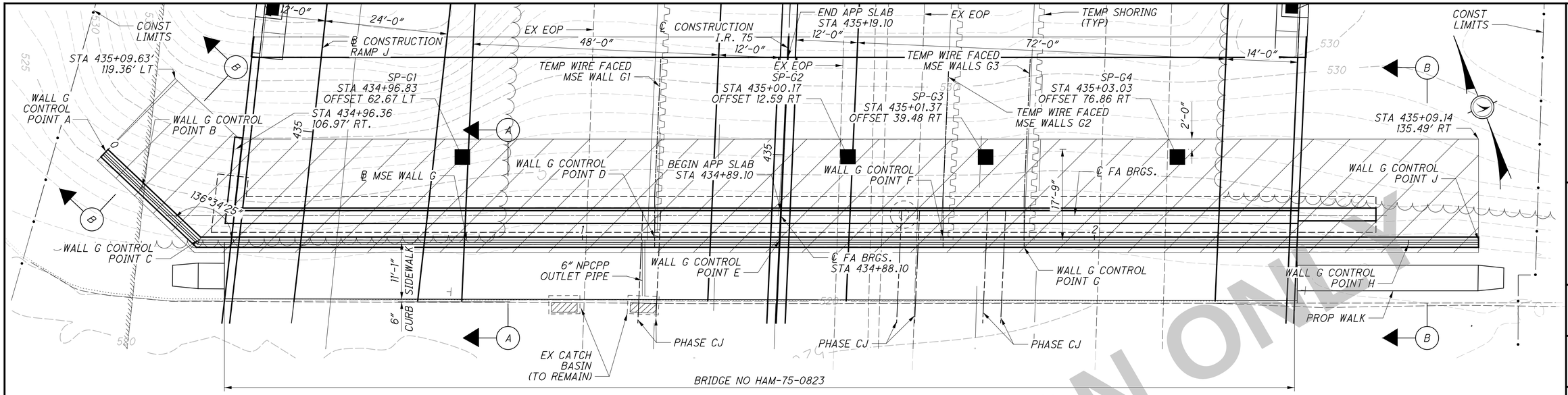
TEMPORARY MSE WALL DETAILS
MSE RETAINING WALL F

HAM-75-7.85
PID No. 77889

14 / 45

1045
2017

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PLAN

WALL G CONTROL POINT TABLE				
WALL CONTROL POINT	℄ CONST IR 75		WALL STATION	TOW ELEV
	STATION	OFFSET (FT)		
A	434+94.66	132.32 LT.	0+00.00	526.08
B	434+88.32	124.81 LT.	0+09.83	530.60
C	434+78.30	113.42 LT.	0+25.00	530.60
D	434+82.26	24.40 LT.	1+14.10	530.60
E	434+83.35	0.00	1+38.53	530.60
F	434+84.77	31.88 RT.	1+70.45	530.60
G	434+85.47	47.70 RT.	1+86.28	530.60
H	434+88.80	122.66 RT.	2+61.31	530.60
J	434+89.41	136.37 RT.	2+75.03	523.74

NOTES:

1. ALL TOP OF WALL ELEVATIONS ARE GIVEN TO TOP OF COPING.
2. WALL BASELINE IS LOCATED AT THE BACK FACE OF MSE WALL.
3. SEE SHEET 16/45 FOR SECTIONS A-A AND B-B.
4. ALL STATION AND OFFSETS ARE ALONG ℄ I.R. 75 UNLESS NOTED OTHERWISE.
5. SEE GENERAL NOTES FOR SETTLEMENT PLATFORM DETAILS.
6. SEE SHEET 2/45 FOR ABBREVIATION LEGEND.

LEGEND:

TOW - TOP OF WALL

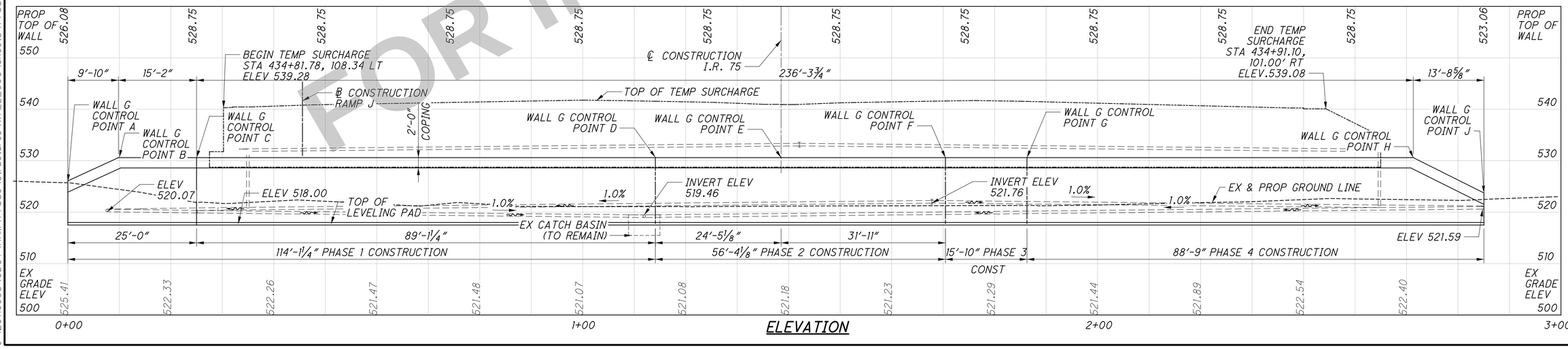
- WALL EXCAVATION AND SELECT GRANULAR EMBANKMENT

- SETTLEMENT PLATFORM

PCPP = PERFORATED CORRUGATED POLYETHYLENE PIPE

NPCPP = NON-PERFORATED CORRUGATED POLYETHYLENE PIPE

6" DIA. PCPP OR NPCPP



ELEVATION

FOR INFORMATION ONLY

DESIGN AGENCY
2001 Crown Centre Drive, Suite 201, Columbus, OH 43201

DESIGNED	DRAWN	REVIEWED	DATE
TML	TML	NCM	12-15-21
CHECKED	REVISED		STRUCTURE FILE NUMBER
JAD			

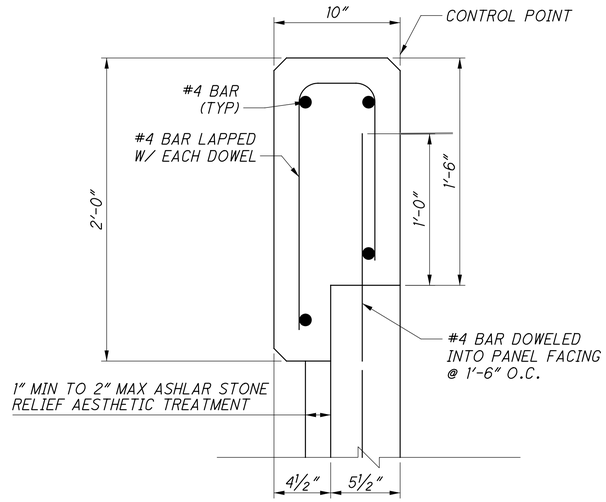
MSE WALL G PLAN & ELEVATION
MSE RETAINING WALL G

HAM-75-7.85
PID No. 77889

15 / 45

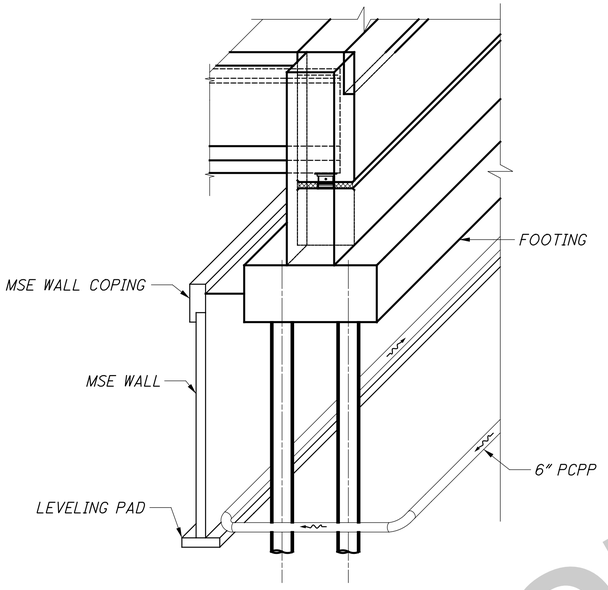
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2017

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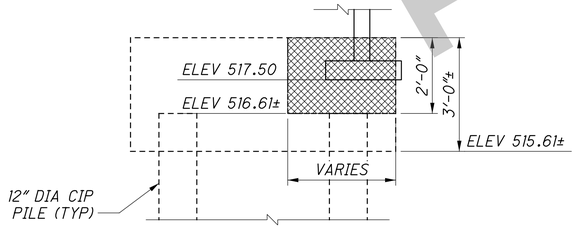


MSE WALL COPING DETAIL

(ALL REINFORCING STEEL TO BE EPOXY COATED)

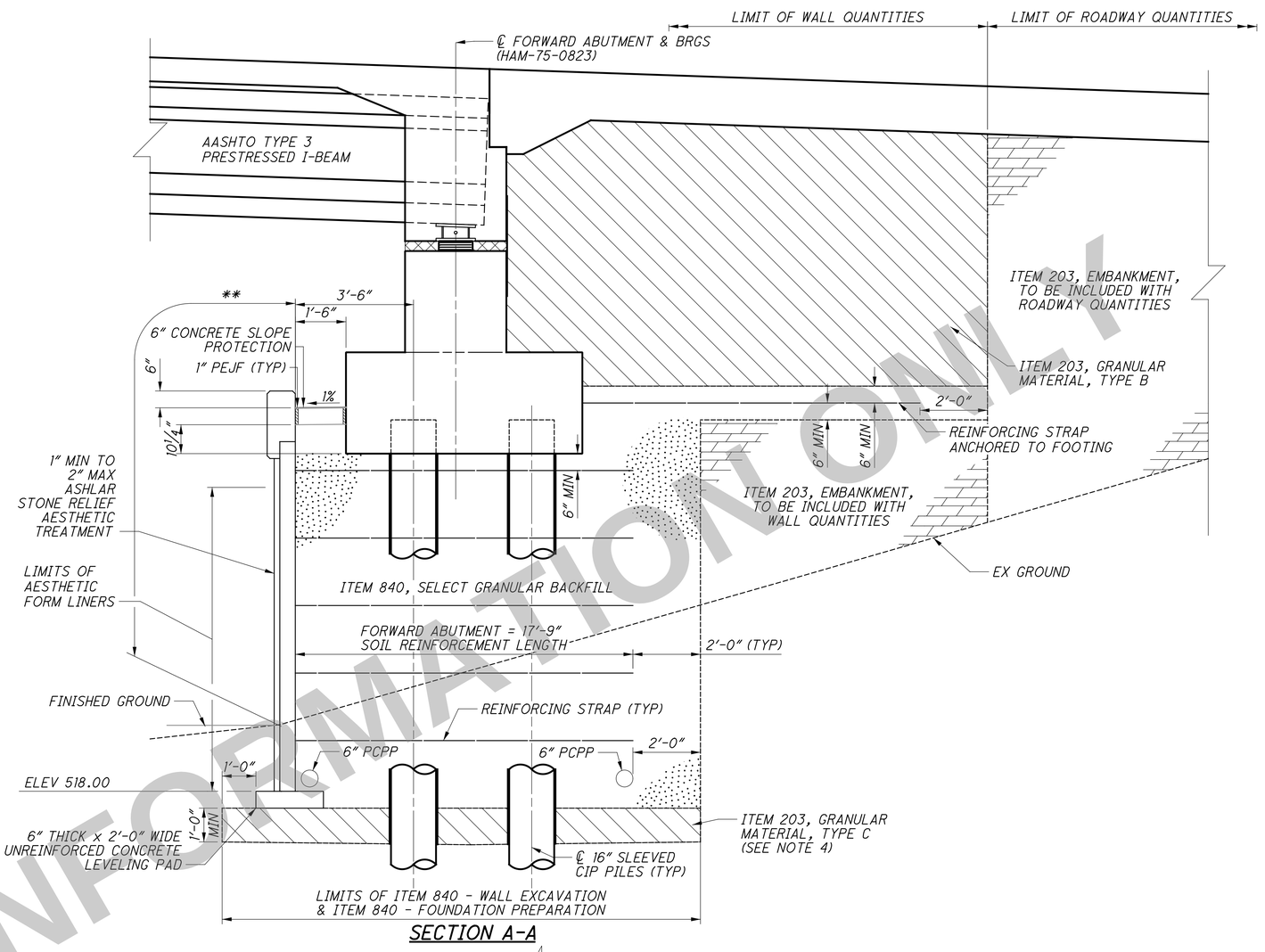


MSE WALL DRAINAGE DETAIL

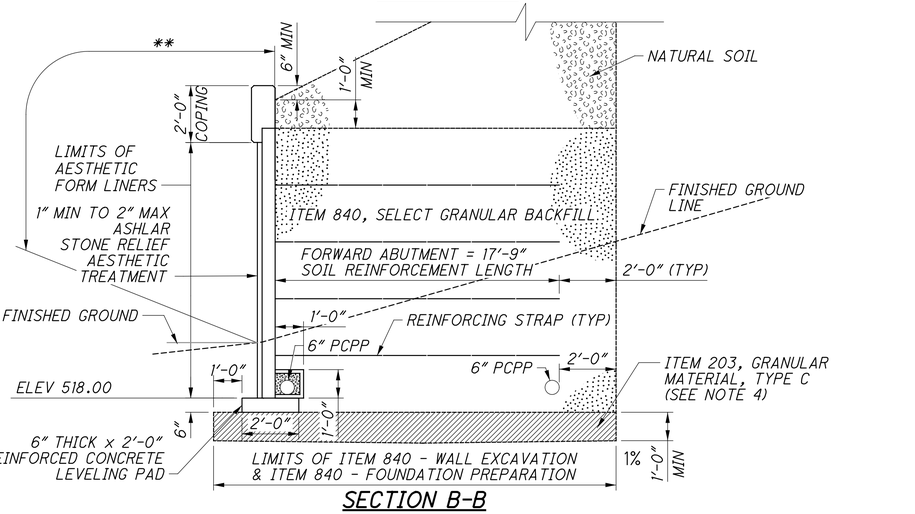


EX. FOOTING REMOVAL DETAIL

(FA & WALL G)



SECTION A-A



SECTION B-B

LEGEND:

= MINIMUM REMOVAL LIMITS

** - LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) & SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)

NOTES:

1. SEE HAM-75-0823 PLANS FOR ABUTMENT DETAILS.
2. SEE SHEET 1/45 FOR AESTHETIC NOTES.
3. SEE SHEET 2/45 FOR ABBREVIATION LEGEND.
4. ITEM 203 - GRANULAR MATERIAL, TYPE C SHALL BE INCLUDED FOR PAYMENT WITH ITEM 840 - FOUNDATION PREPARATION.

FOR INFORMATION ONLY

DESIGN AGENCY
2000 Corporate Exchange Drive, Suite 200, Columbus, OH 43231

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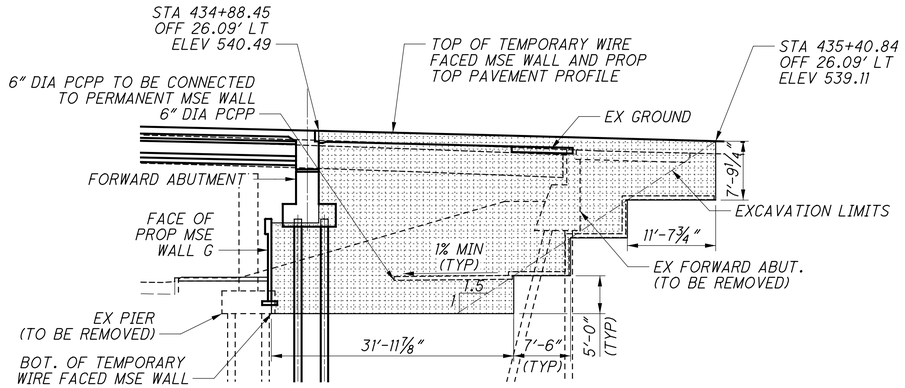
MSE WALL DETAILS
MSE RETAINING WALL G

HAM-75-7.85
PID No. 77889

16 / 45

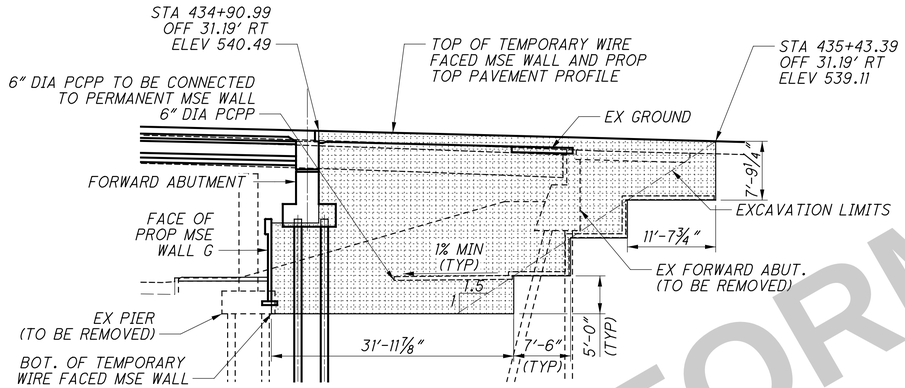
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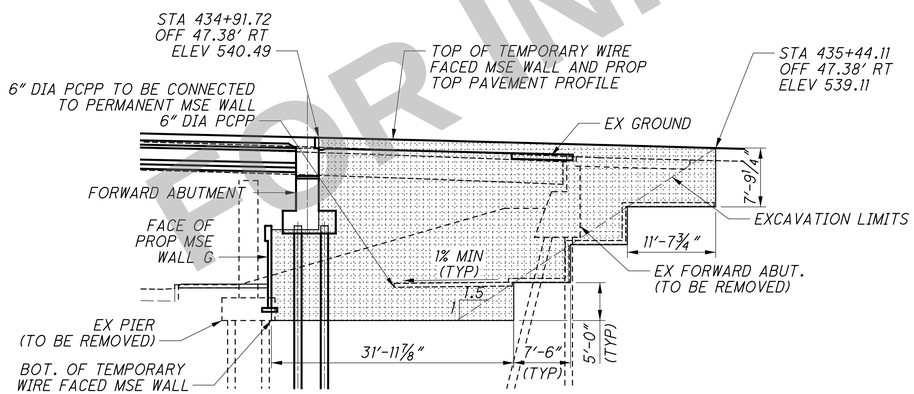
ELEVATION - TEMPORARY WIRE FACED MSE WALL G1

FORWARD ABUTMENT PHASE 1



ELEVATION - TEMPORARY WIRE FACED MSE WALL G2

FORWARD ABUTMENT PHASE 2



ELEVATION - TEMPORARY WIRE FACED MSE WALL G3

FORWARD ABUTMENT PHASE 3

LEGEND:

= TEMPORARY MSE WALL FACE

NOTES:

1. SEE HAM-75-0823 BRIDGE PLANS FOR ABUTMENT DETAILS.
2. TOP OF TEMPORARY WIRE FACED MSE WALL TO MATCH PROPOSED PAVEMENT ELEVATION OF IR-75.
3. SEE HAM-75-0823 BRIDGE PLANS FOR TEMPORARY SHORING DETAILS AND QUANTITIES.
4. SEE SHEET 2/45 FOR ABBREVIATION LEGEND.

FOR INFORMATION ONLY

DESIGN AGENCY
2000 Corporate Exchange Drive, Suite 300, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
CMH	CMH	NCM	12-15-21
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JAD			

TEMPORARY MSE WALL DETAILS

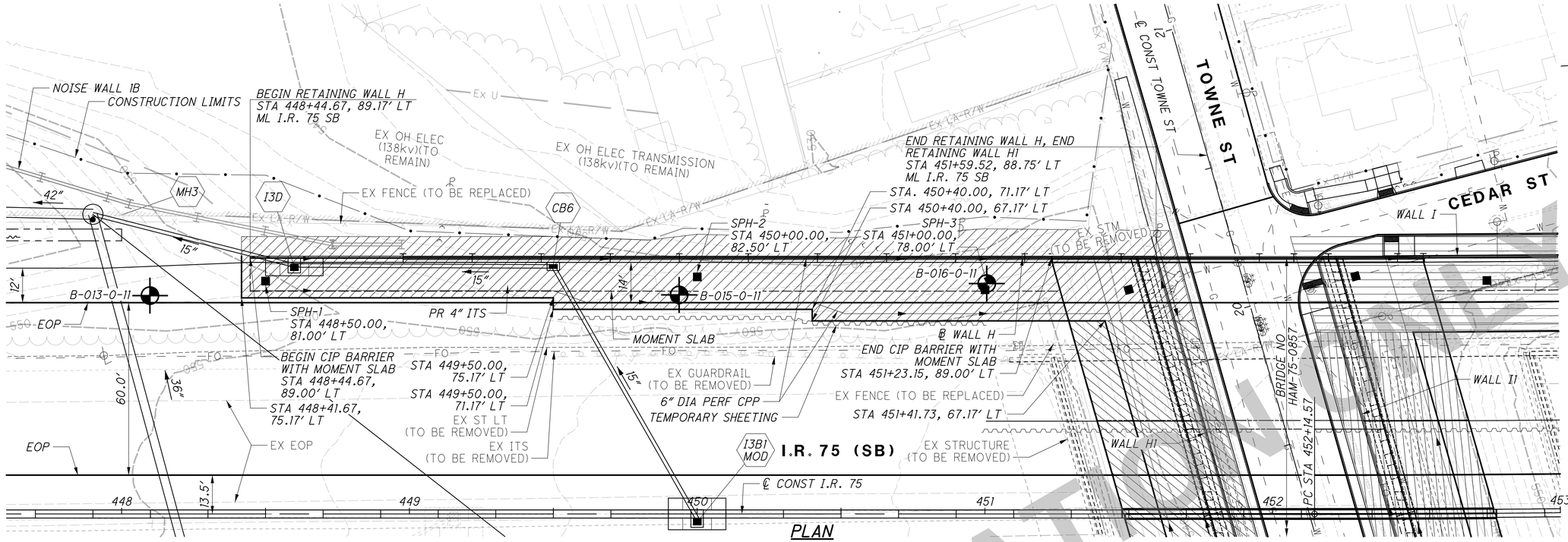
MSE RETAINING WALL G

HAM-75-7.85

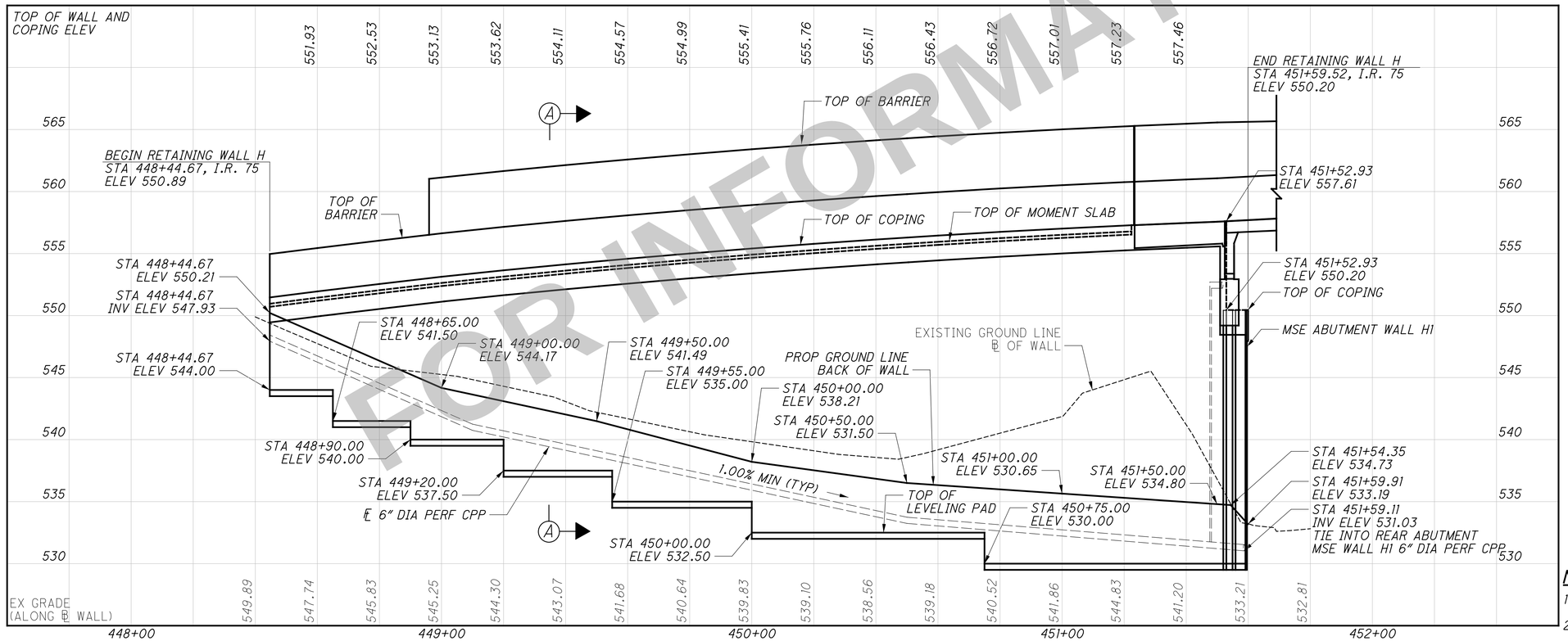
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2017

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PLAN



ELEVATION ALONG BACK FACE OF WALL

LEGEND:

= BORING LOCATION

= SETTLEMENT PLATFORM

= PLAN BOUNDARY FOR ITEMS INCLUDED WITH MSE WALL H FOR PAYMENT

= PLAN BOUNDARY FOR ITEMS INCLUDED WITH MSE WALL H1 FOR PAYMENT

NOTES:

1. FOR SECTION A-A, SEE SHEET 20/45
2. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/45
3. ALL EXISTING STORM SEWER IS TO BE REMOVED UNLESS OTHERWISE NOTED.

FOR INFORMATION ONLY

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

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PLAN AND ELEVATION
MSE RETAINING WALL H

HAM-75-7.85
PID No. 77889

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PLAN BOUNDARY FOR ITEMS INCLUDED WITH MSE WALL H1 FOR PAYMENT

PLAN BOUNDARY FOR ITEMS INCLUDED WITH MSE WALL H FOR PAYMENT

SPH1-1
STA 18+00.00,
38.00' LT

STA 17+87.87,
40.98 LT

STA 18+08.45,
49.97 LT

STA 18+08.45,
40.97 LT

MH3

CB3A

36"

15"

ABUTMENT 6" PERFORATED CORRUGATED PLASTIC PIPE

℄ REAR ABUTMENT MSE WALL H1
S81°20'41"E

6" DIA PERF CPP

B-181-0-07

BEGIN RETAINING WALL H1
STA 452+23.59, 137.49' RT, ML I.R. 75 NB
STA 17+89.70, 26.98' LT, TOWNE ST
STA 452+26.46, 138.76' RT, ML I.R. 75 NB
STA 17+87.70, 24.52' LT, TOWNE ST

PT STA 17+95.00

℄ CONST TOWNE ST

BRIDGE NO HAM-75-0857

SPH1-2
STA 19+00.00,
38.00' LT

STA 452+12.74 I.R. 75 =
STA 19+24.88 TOWNE STREET

452

19

BEGIN TEMPORARY WIRE FACED MSE WALL H1-2
STA 451+00.45, 32.25' LT
℄ CONSTRUCTION I.R. 75

EOP

EX ITS (TO BE REMOVED)

EX STRUCTURE (TO BE REMOVED)

TEMPORARY SHORING TO FACILITATE PHASE 2 CONSTRUCTION

℄ CONST I.R. 75

PHASE CONSTRUCTION JOINT

END TEMPORARY WIRE FACED MSE WALL H1-2
STA 451+90.88, 21.75' RT
℄ CONSTRUCTION I.R. 75

BEGIN TEMPORARY WIRE FACED MSE WALL H1-1
STA 451+00.45, 32.25' LT
℄ CONSTRUCTION I.R. 75

TEMPORARY SHORING TO FACILITATE PHASE 1 CONSTRUCTION

END TEMPORARY WIRE FACED MSE WALL H1-1
STA 451+75.55, 32.25' LT
℄ CONSTRUCTION I.R. 75

STA 451+41.73, 67.17' LT, ML I.R. 75 SB
STA 20+08.88, 49.97' LT, TOWNE ST

EX ITS (TO BE REMOVED)

EX ST LT (TO BE REMOVED)

EX GUARDRAIL (TO BE REMOVED)

EX CURB (TO BE REMOVED)

B-016-0-11

MOMENT SLAB

EX OHE TRANSMISSION (138kV) (TO REMAIN)

SPH1-3
STA 20+17.05,
39.06' LT

WALL H

CONSTRUCTION LIMITS

EX WATER (TO REMAIN)

EX LA R/W

EX STRUCTURE (TO BE REMOVED)

STA 19+32.41,
26.51' LT

6" NPCPP IN FRONT OF WALL

EX 20" GAS (TO REMAIN)

EX ST LT (TO BE REMOVED)

PHASE CONSTRUCTION JOINT

END RETAINING WALL H1
STA 451+59.52, 88.75' LT, ML I.R. 75 SB
STA 20+24.79, 26.97' LT, TOWNE ST

0 5 10 20
HORIZONTAL SCALE IN FEET

PLAN

PHASE 3 MSE WALL CONSTRUCTION = 120'-6"

PHASE 2 MSE WALL CONSTRUCTION = 56'-1⅝"

PHASE 1 MSE WALL CONSTRUCTION = 58'-6"

BEGIN RETAINING WALL H1
STA 452+23.59, ML I.R. 75 NB
STA 17+89.70, TOWNE ST
ELEV 544.55

STA 18+00.92
ELEV 550.20

BEGIN TEMPORARY SURCHARGE
STA 18+27.57, ELEV 560.06

PROP 4" ITS

TOP OF TEMPORARY SURCHARGE

℄ CONST I.R. 75

B

END RETAINING WALL H1
STA 451+59.52, ML I.R. 75 SB
STA 20+24.79, TOWNE ST
ELEV 550.20

END TEMPORARY SURCHARGE
STA 20+25.12,
ELEV 557.78

PROP 4" ITS

EX ITS (TO BE REMOVED)

TOP OF COPING
ELEV 550.20

EX ST LT (TO BE REMOVED)

EX ITS (TO BE REMOVED)

C

STA 18+00.00
ELEV 542.01

CONSTRUCTION JOINT

CONSTRUCTION JOINT

STA 17+89.69
ELEV 542.55

EXISTING GROUND LINE FRONT OF WALL

STA 17+99.94
ELEV 536.50

℄ 6" DIA PERF CPP

STA 18+50.00
ELEV 539.26

STA 19+00.00
ELEV 536.96

PROPOSED GROUND LINE FRONT OF WALL

STA 19+50.00
ELEV 535.13

STA 20+00.00
ELEV 533.75

STA 20+24.94
ELEV 533.19

EX ST LT (TO REMAIN)

STA 17+89.69
ELEV 538.50

15" STM
536.46

STA 18+39.94
ELEV 534.00

1.00% MIN (TYP)

TOP OF LEVELING PAD

PRECAST CONCRETE CORNER ELEMENT (WALL H)

STA 20+24.94
INV ELEV 531.03

℄ DIA 6" NON-PERF CPP IN FRONT OF WALL

STA 18+89.94
ELEV 531.50

STA 19+54.94
ELEV 530.00

OUTLET 6" DIA NON-PERF CPP INTO MH3 INV ELEV 530.53

560 555 550 545 540 535 530 525

EX GRADE (ALONG ℄ WALL)
542.37 541.91 541.45 541.00 540.52 539.97 539.50 539.05 538.59 538.04 537.52 537.06 536.68 536.30 535.93 535.55 535.20 534.95 534.69 534.44 534.18 533.93 533.67 533.42 533.29 533.16 533.02 533.16

℄ TOWNE ST STA 18+00 18+50 19+00 19+50 20+00 20+50

ELEVATION ALONG BACK FACE OF WALL

LEGEND:

= BORING LOCATION

NOTES:

1. FOR SECTIONS B-B AND C-C, SEE SHEET 20/45
2. FOR ADDITIONAL NOTES AND LEGEND INFORMATION, SEE SHEET 18/45
3. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/45

FOR INFORMATION ONLY

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

PLAN AND ELEVATION

REAR ABUTMENT MSE RETAINING WALL H1 - TOWNE STREET

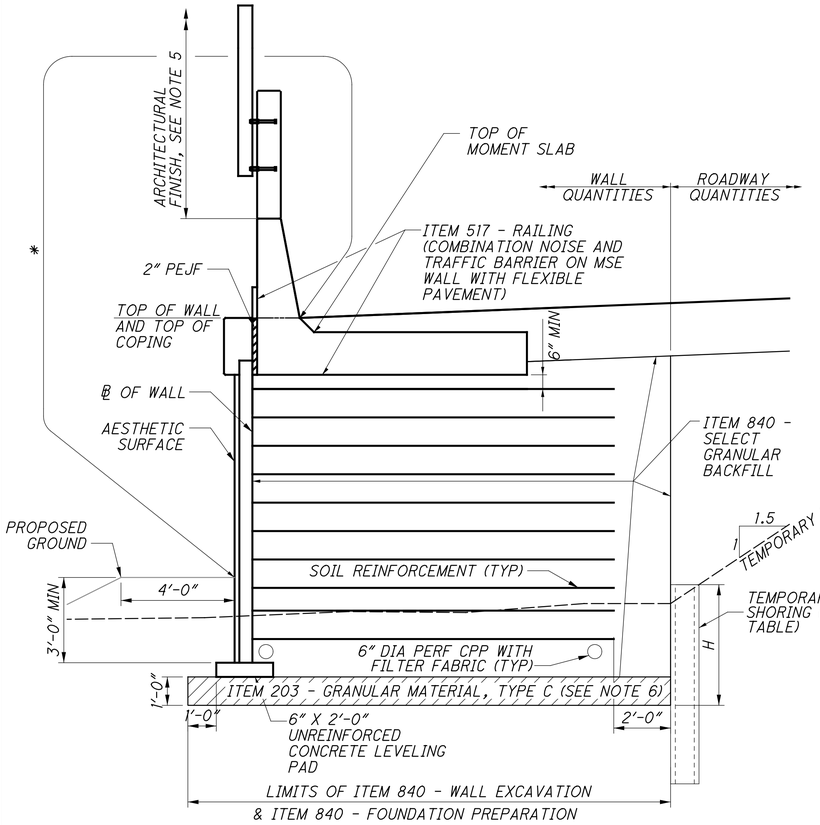
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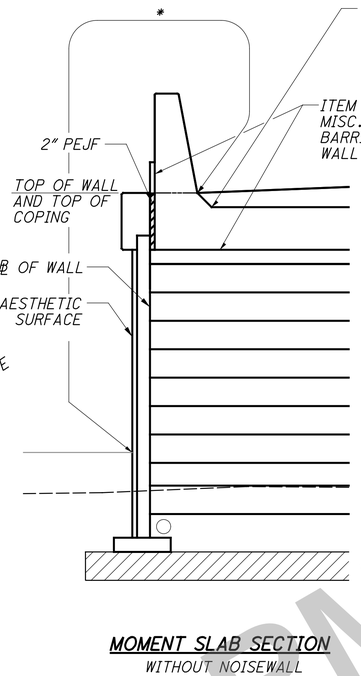
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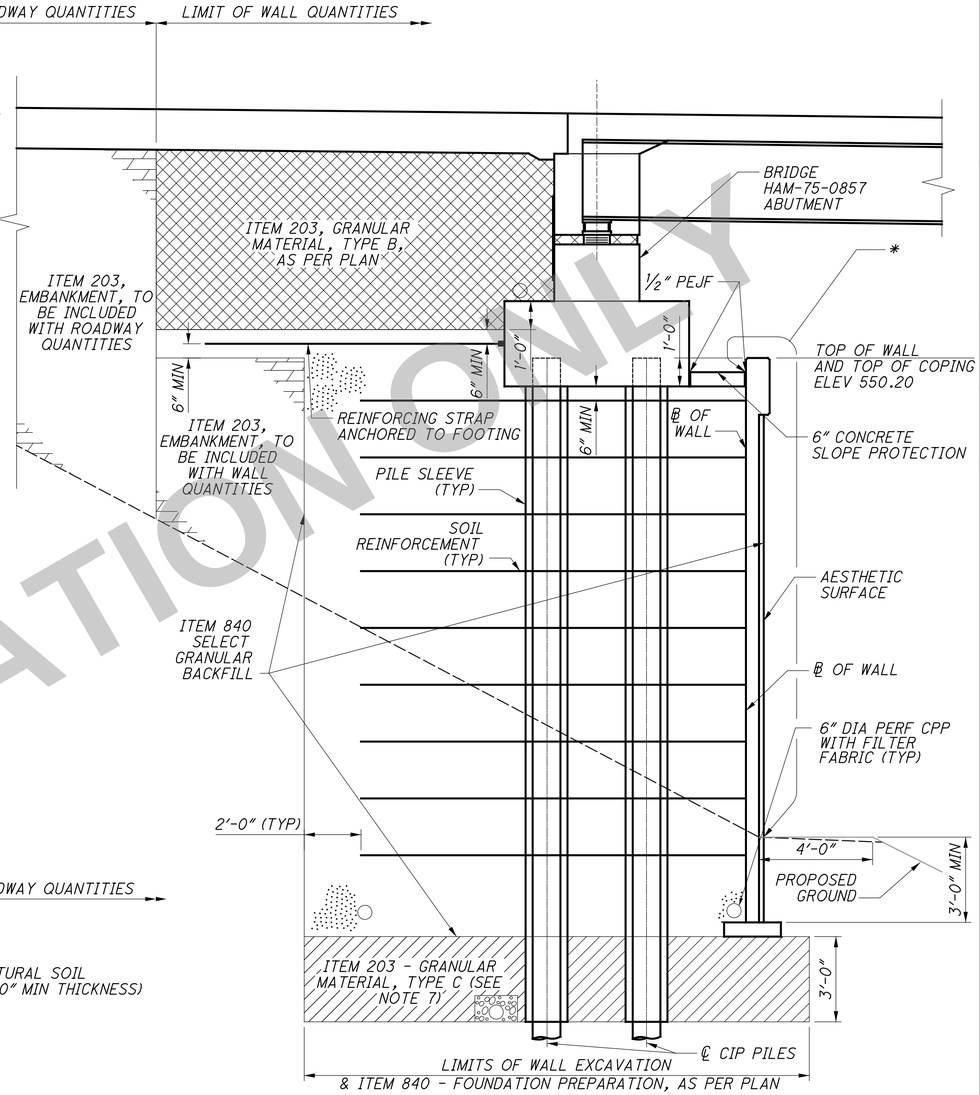
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MOMENT SLAB SECTION
WITH NOISEWALL



MOMENT SLAB SECTION
WITHOUT NOISEWALL

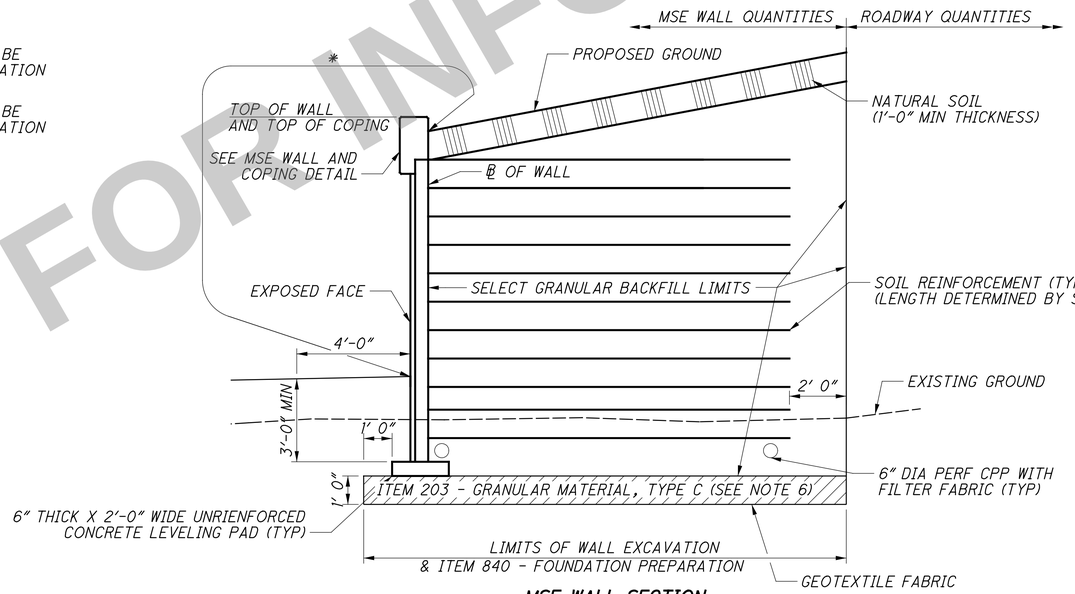


BRIDGE SECTION

* LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) AND ITEM 512 - SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)

NOTES

6. ITEM 203 - GRANULAR MATERIAL, TYPE C SHALL BE INCLUDED FOR PAYMENT WITH ITEM 840 - FOUNDATION PREPARATION.
7. ITEM 203 - GRANULAR MATERIAL, TYPE C SHALL BE INCLUDED FOR PAYMENT WITH ITEM 840 - FOUNDATION PREPARATION, AS PER PLAN.



MSE WALL SECTION

TEMPORARY SHORING TABLE		
STATION	ALIGNMENT	WALL HEIGHT (H)
		(FT)
450+00.00	I.R. 75	1
450+50.00	I.R. 75	4.5
451+00.00	I.R. 75	7
451+50.00	I.R. 75	7.5

* TEMPORARY SHORING NOT NEEDED FROM STATION 448+50 TO 449+50

NOTES

1. SEE BRIDGE PLANS HAM-75-0857 FOR ADDITIONAL ABUTMENT AND WINGWALL DETAILS.
2. SOIL REINFORCEMENT SHALL BE CONSTRUCTED SO AS TO AVOID INTERFERENCE WITH BRIDGE PILING.
3. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/45
4. SEE SHEET 25/45 FOR COPING DETAIL.
5. THE ARCHITECTURAL FINISH SHALL BE BEIGE ASHLAR STONE (MANUFACTURED BY ARCHITECTURAL POLYMERS, #9050 SMALL AGED ASHLAR STONE) ON THE FREEWAY SIDE AND BEIGE DRY STACK (MANUFACTURED BY ARCHITECTURAL POLYMERS, #9110 LARGE STONE OHIO DRY STACK) ON THE PARK AND RESIDENTIAL SIDE. THE FEGERAL COLOR NUMBER FOR BEIGE IS NO. 17778.

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6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
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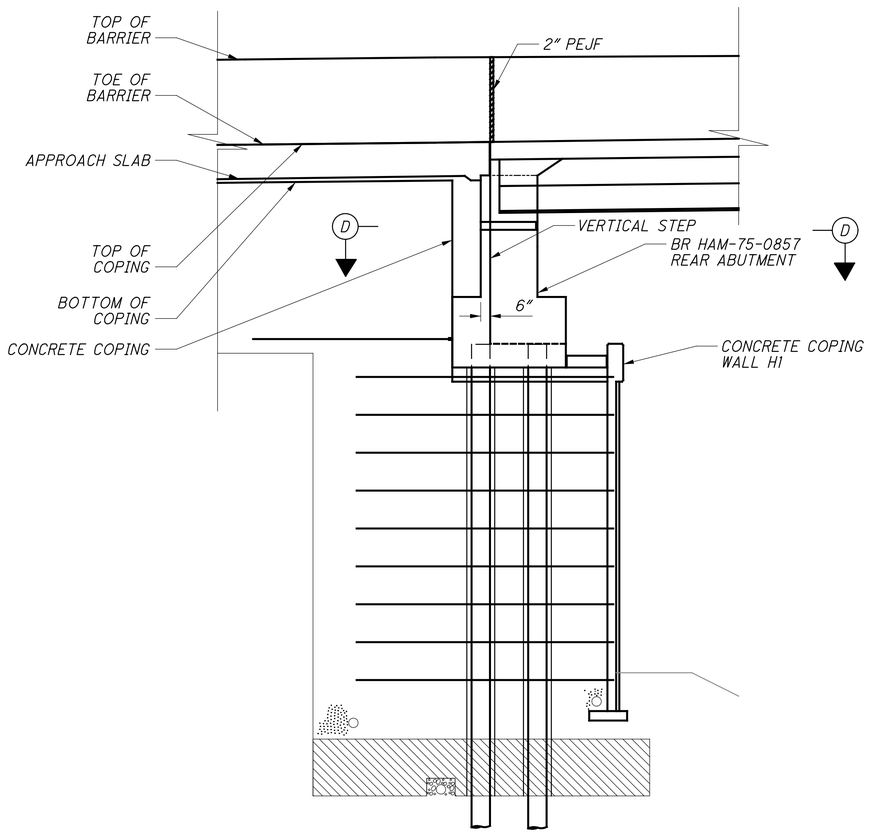
TYPICAL MSE WALL DETAILS 1 OF 2

MSE RETAINING WALLS H & H1

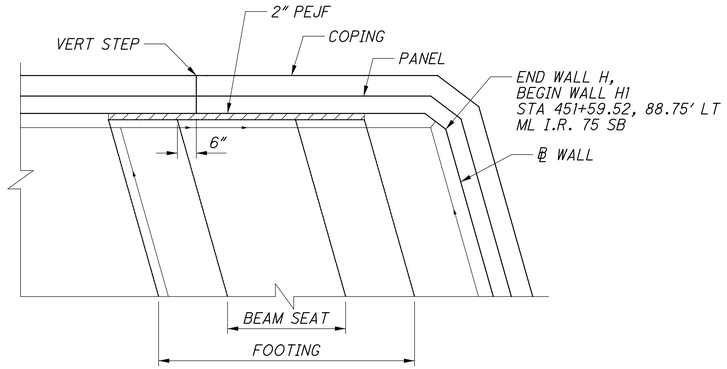
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PID No. 77889

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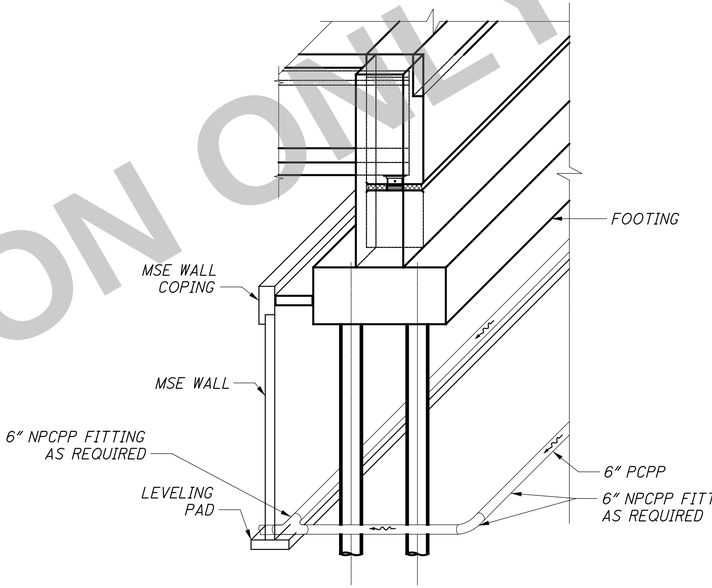
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WALL TRANSITION DETAIL AT ABUTMENT



SECTION D-D



TYPICAL RISER DETAIL

(CONNECTION FROM BRIDGE DRAINAGE SYSTEM TO MSE WALL DRAINAGE SYSTEM)

FOR INFORMATION ONLY

* MEASURED PERPENDICULAR TO SKEW

NOTES:

1. SEE HAM-75-0857 BRIDGE PLANS FOR ADDITIONAL PRESSURE RELIEF JOINT DETAILS AND PAYMENT.
2. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/45

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

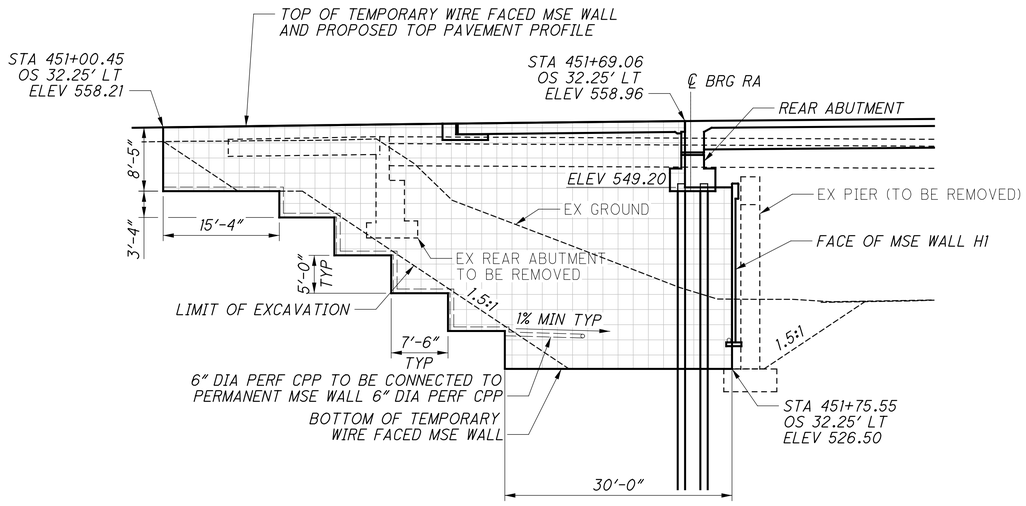
TYPICAL MSE WALL DETAILS 2 OF 2
MSE RETAINING WALLS H & H1

HAM-75-7.85
PID No. 77889

21/45

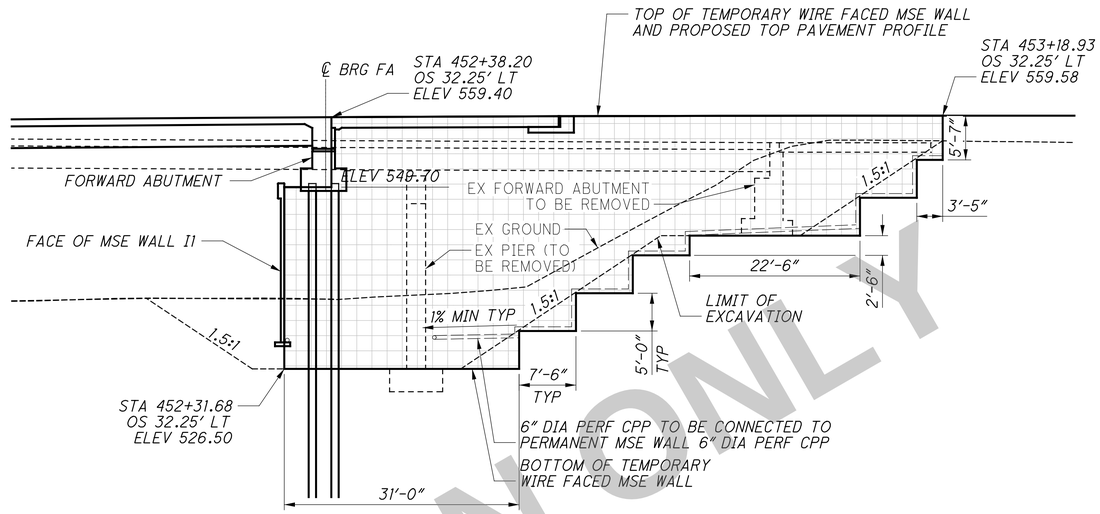
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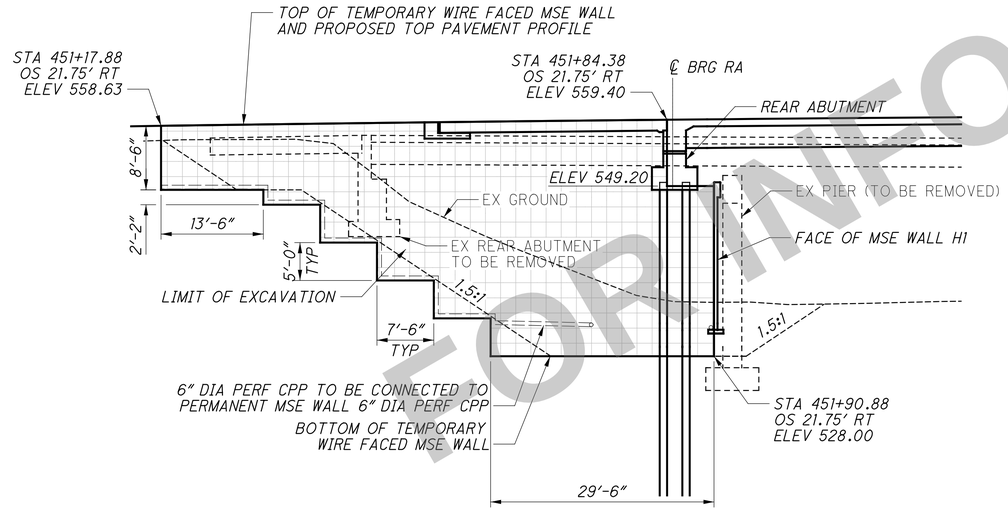
TEMPORARY WIRE FACED MSE WALL H1-1 ELEVATION

REAR ABUTMENT PHASE 1



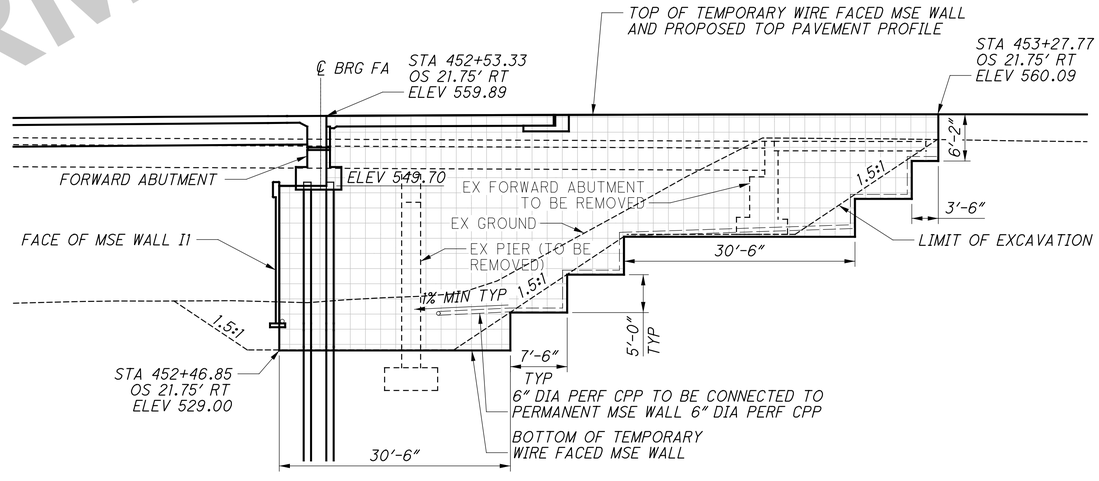
TEMPORARY WIRE FACED MSE WALL I1-1 ELEVATION

FORWARD ABUTMENT PHASE 1



TEMPORARY WIRE FACED MSE WALL H1-2 ELEVATION

REAR ABUTMENT PHASE 2



TEMPORARY WIRE FACED MSE WALL I1-2 ELEVATION

FORWARD ABUTMENT PHASE 2

NOTES:

1. SEE HAM-75-0857 PLANS FOR ABUTMENT DETAILS.
2. TOP OF TEMPORARY WIRE FACED MSE WALL TO MATCH PROPOSED PAVEMENT ELEVATION OF I.R. 75.
3. SEE HAM-75-0857 BRIDGE PLANS FOR ADDITIONAL TEMPORARY SHORING DETAILS AND QUANTITIES.
4. SEE MSE WALL I/I1 PLANS FOR PERMANENT MSE WALL DETAILS AT THE FORWARD ABUTMENT.
5. FOR ABBREVIATIONS LEGEND, SEE SHEET 2 / 45 .

LEGEND:

PERF CPP = PERFORATED CORRUGATED POLYETHYLENE PIPE

= ITEM 867 - TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL

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RESOURCE INTERNATIONAL INC.
8350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED	DRAWN	REVIEWED	DATE
SMJ	SMJ	NCK	12-15-21
CHECKED	REVISED		STRUCTURE FILE NUMBER
JGM			

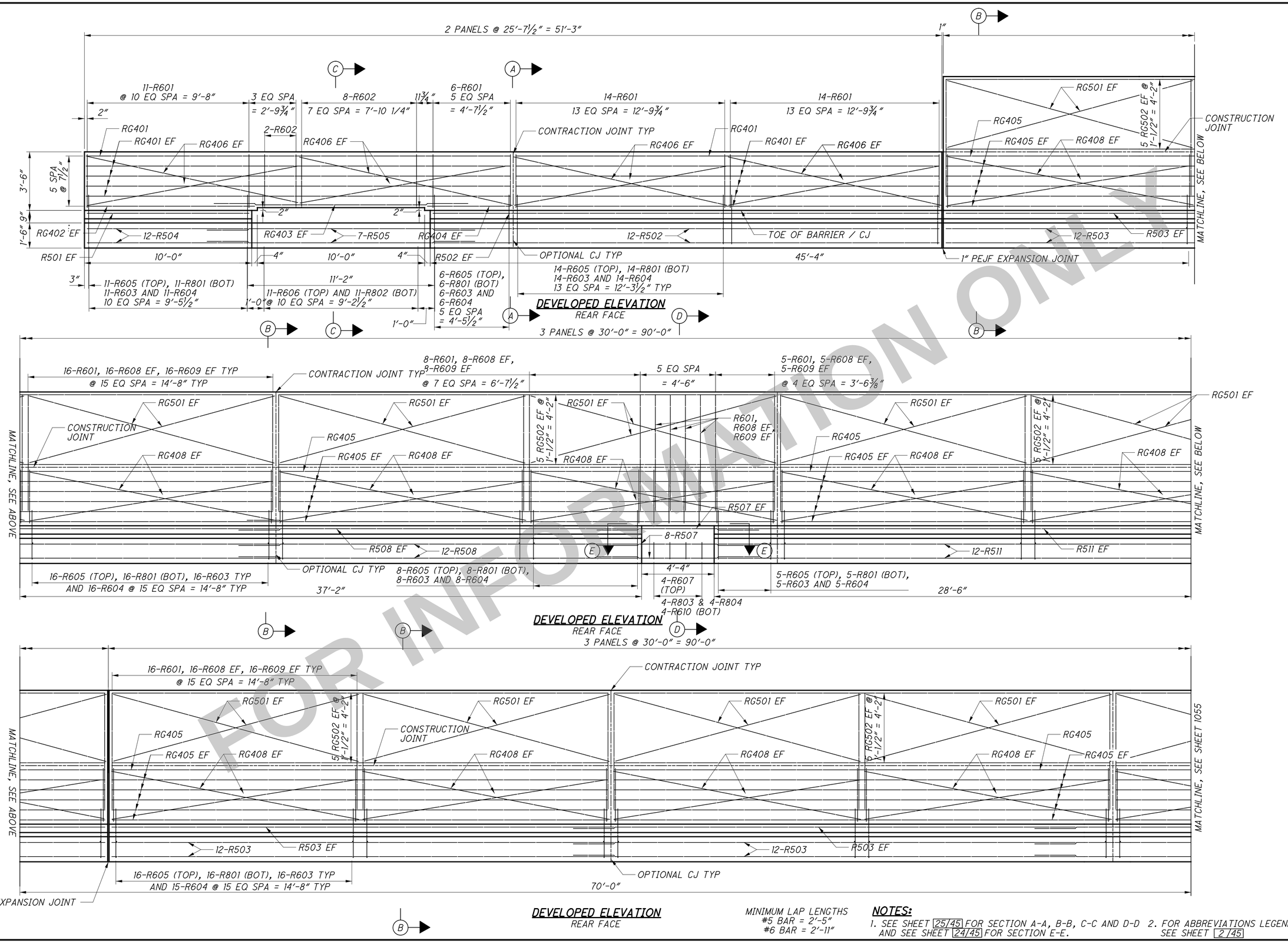
TEMPORARY MSE WALL DETAILS

MSE RETAINING WALLS H1 AND I1
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

1053
2017

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MINIMUM LAP LENGTHS
#5 BAR = 2'-5"
#6 BAR = 2'-11"

NOTES:

1. SEE SHEET 25/45 FOR SECTION A-A, B-B, C-C AND D-D AND SEE SHEET 24/45 FOR SECTION E-E.
2. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/45

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BARRIER AND MOMENT SLAB DETAILS

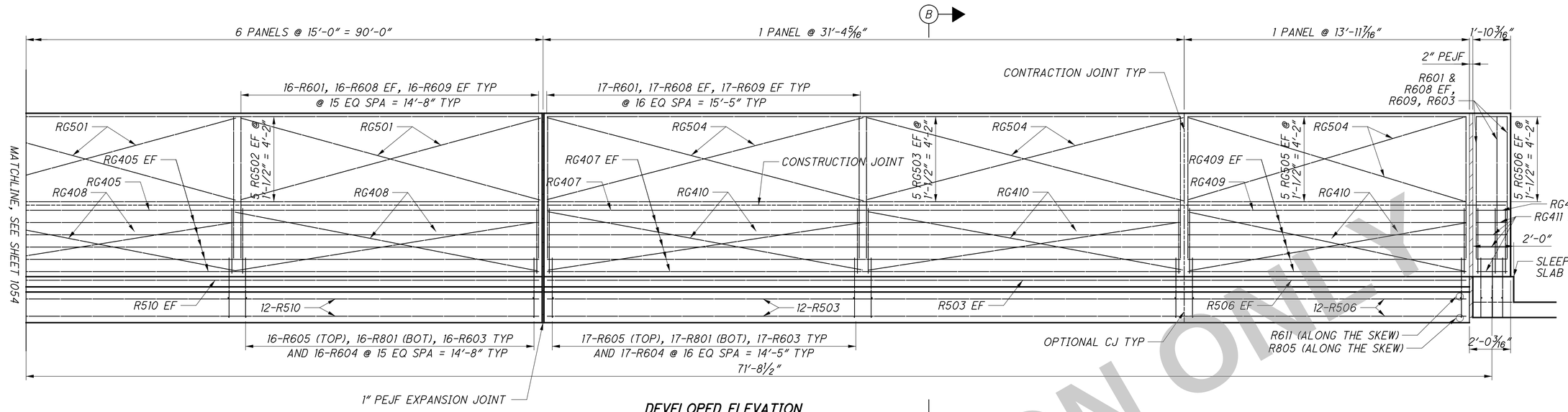
MSE RETAINING WALL H

HAM-75-7.85

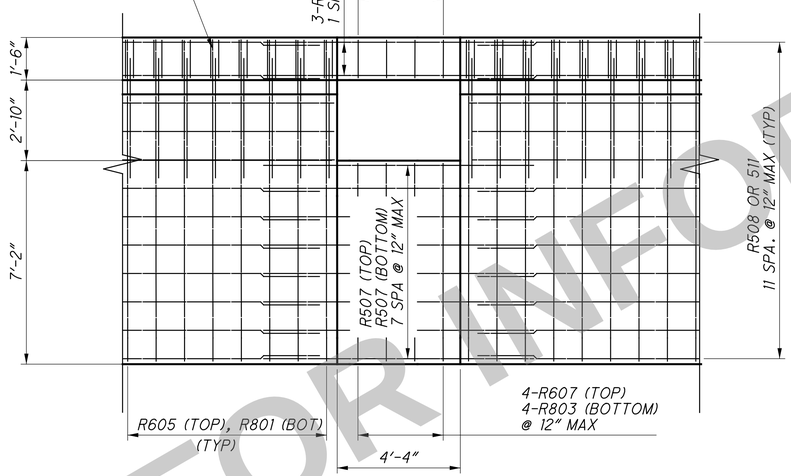
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2017

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DEVELOPED ELEVATION
REAR FACE



SECTION E-E

MINIMUM LAP LENGTHS
#5 BAR = 2'-5"
#6 BAR = 2'-11"

NOTES:

1. *SEE SHEET 25/45 FOR SECTION B-B.*
2. *FOR ABBREVIATIONS LEGEND, SEE SHEET 2/45.*

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

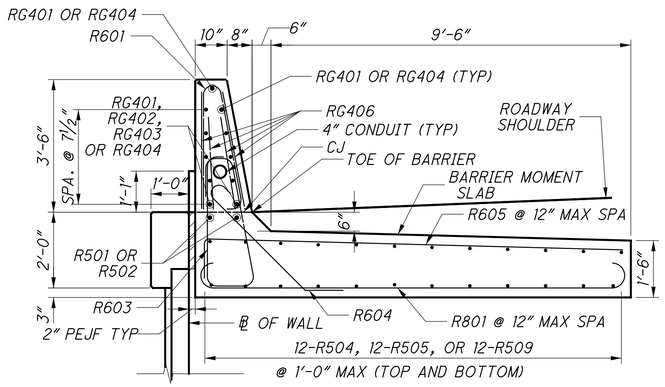
BARRIER AND MOMENT SLAB DETAILS SHEET 2 OF 4
MSE RETAINING WALL H

HAM-75-7.85
PID No. 77889

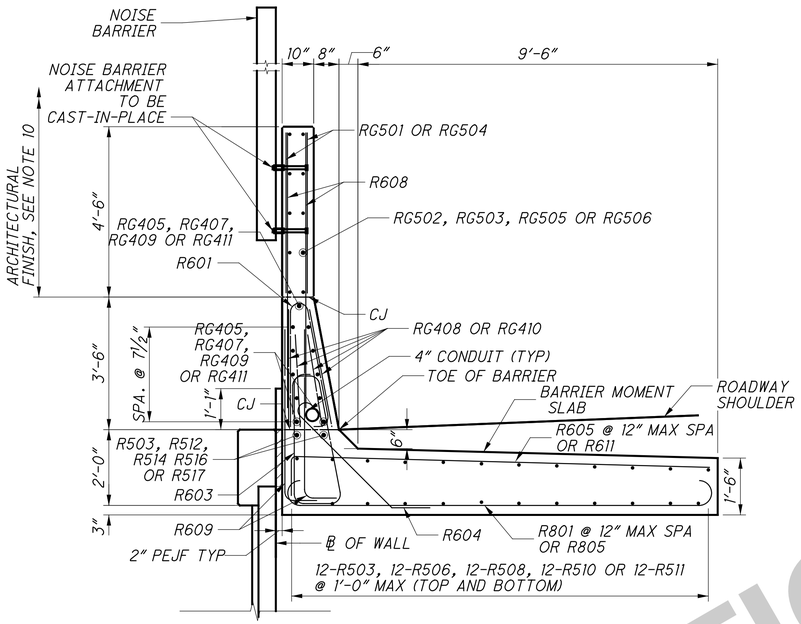
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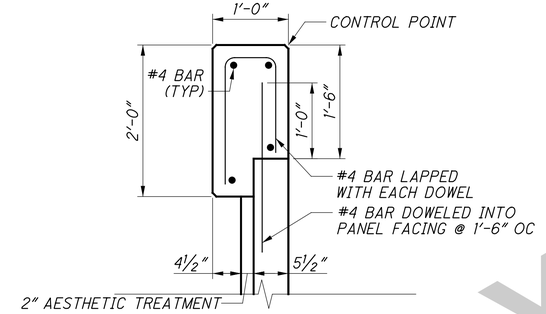
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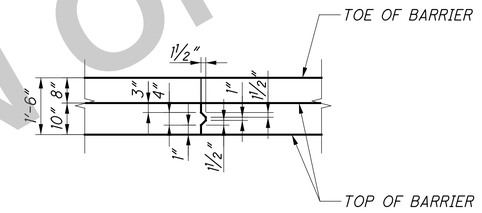
SECTION A-A



SECTION B-B

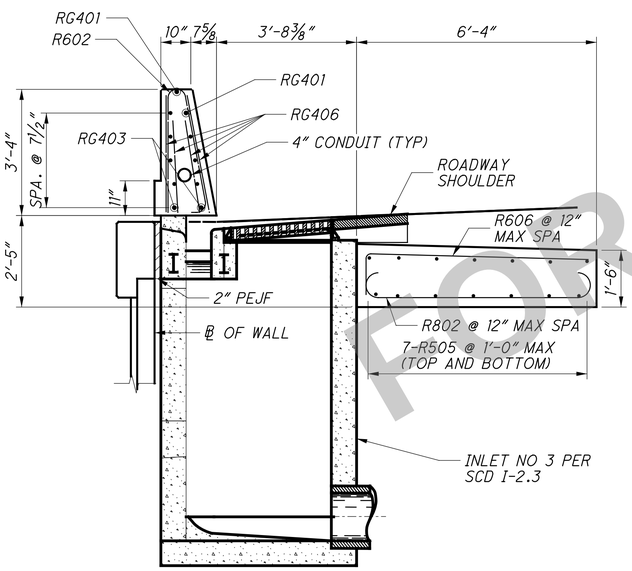


COPING DETAIL

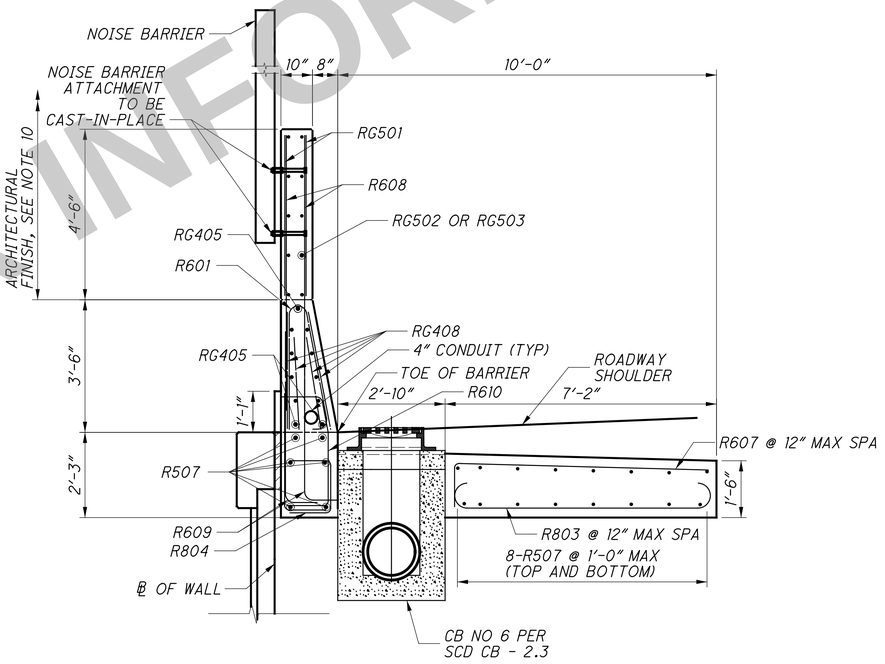


CONTRACTION JOINT

MINIMUM LAP LENGTHS:
#5 LAP LENGTH = 2'-5"
#6 LAP LENGTH = 2'-11"



SECTION C-C



SECTION D-D

NOTES:

1. *ALL ITEMS SHOWN ON THIS SHEET, EXCLUDING PAVEMENT, ARE INCIDENTAL TO RAILING MISC: TRAFFIC BARRIER ON MSE WALL AND RAILING (COMBINATION NOISE AND TRAFFIC BARRIER ON MSE WALL)*
2. *CONTROL JOINT: SAWCUT 1¼" DEEP CONTROL JOINTS ALONG THE PERIMETER AS SHOWN ON THIS SHEET AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE.*

   USE AN EDGE GUIDE, FENCE OR JIG TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE AND ALIGNED ON ALL FACES OF THE BARRIER. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF ¼".

   SEAL THE PERIMETER OF THE CONTROL JOINT TO A MINIMUM DEPTH OF 1" WITH A POLYURETHANE OR POLYMERIC MATERIAL CONFORMING TO C920, TYPE S. LEAVE THE BOTTOM ½" OF BOTH THE INSIDE AND OUTSIDE FACES OF THE BARRIER UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE.
3. *SAWCUT CONTROL JOINTS SHALL HAVE A MINIMUM SPACING OF 6' AND A MAXIMUM SPACING OF 15'-8". THE CONTRACTOR SHALL ADJUST THE JOINT LOCATIONS IN THE FIELD AS NEEDED TO AVOID CONFLICTS WITH THE TRANSVERSE REBAR.*
4. *SEE NOISE BARRIER PLAN SHEETS FOR NOISE BARRIER DETAILS.*
5. *SEE SHEET 20/45 FOR CONCRETE SEALING LIMITS.*
6. *SEE ROADWAY PLANS AND ODOT STANDARD CONSTRUCTION DRAWINGS FOR ADDITIONAL DRAINAGE INLET DETAILS.*
7. *FOR ABBREVIATIONS LEGEND, SEE SHEET 2/45.*
8. *THE COPING SHALL NOT BE CONSTRUCTED UNTIL ALL PHASES OF MSE WALL CONSTRUCTION ARE COMPLETE.*
9. *THE COPING JOINTS SHALL BE PLACED ON A MAXIMUM 20 FT. SPACING AND SHALL ALIGN WITH A PANEL JOINT.*
10. *THE ARCHITECTURAL FINISH SHALL BE BEIGE ASHLAR STONE (MANUFACTURED BY ARCHITECTURAL POLYMERS, #9050 SMALL AGED ASHLAR STONE) ON THE FREEWAY SIDE AND BEIGE DRY STACK (MANUFACTURED BY ARCHITECTURAL POLYMERS, #9110 LARGE STONE OHIO DRY STACK) ON THE PARK AND RESIDENTIAL SIDE. THE FEGERAL COLOR NUMBER FOR BEIGE IS NO. 17778.*

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COLUMBUS, OHIO 43231
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NCK			

BARRIER AND MOMENT SLAB DETAILS SHEET 3 OF 4

MSE RETAINING WALL H

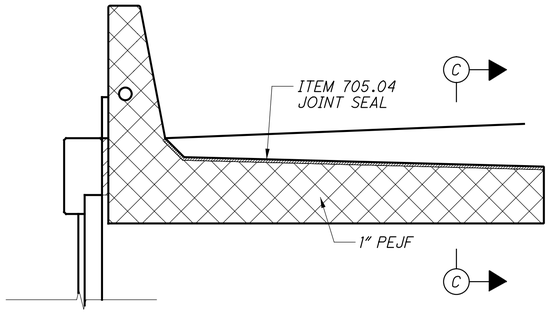
HAM-75-7.85

PID No. 77889

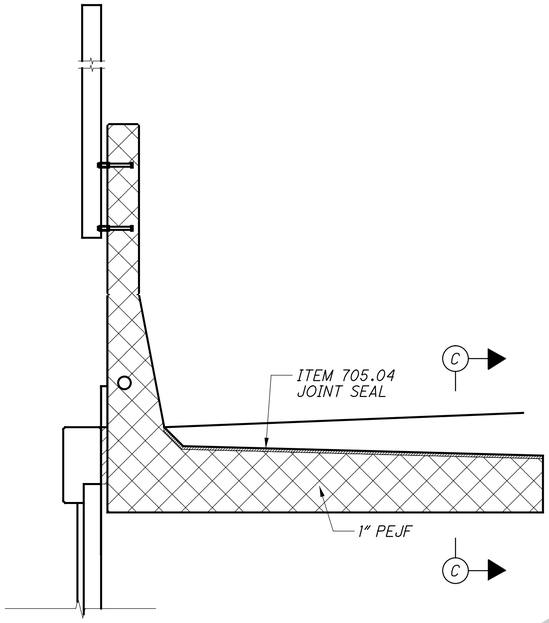
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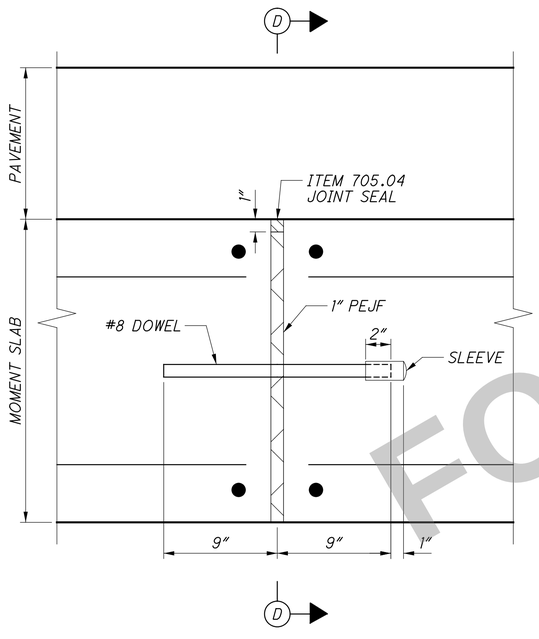
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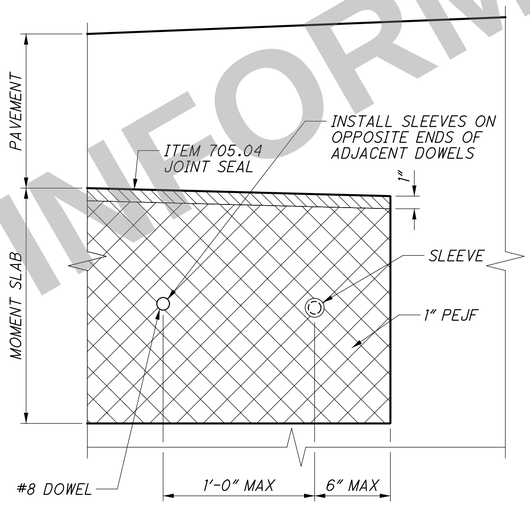
SECTION A-A: BARRIER AND MOMENT SLAB AT EXPANSION JOINT



SECTION B-B: BARRIER AND MOMENT SLAB AT EXPANSION JOINT



SECTION C-C



SECTION D-D

NOTES:

1. ALL ITEMS SHOWN ON THIS SHEET, EXCLUDING PAVEMENT, ARE INCIDENTAL TO ITEM 517-RAILING, CONCRETE, AS PER PLAN.

2. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/45

3. MAXIMUM SPACING OF EXPANSION JOINTS SHALL BE 90'-0".

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BARRIER AND MOMENT SLAB DETAILS SHEET 4 OF 4
MSE RETAINING WALL H, I, & J1

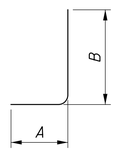
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PID No. 77889

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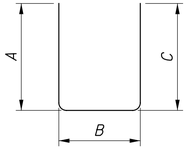
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MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
REINFORCING SCHEDULE											
R501	2	9'-8"	20	ST.							
R502	26	30'-3"	820	ST.							
R503	104	30'-0"	3254	ST.							
R504	24	9'-7"	240	ST.							
R505	14	16'-0"	234	ST.							
R506	26	18'-8"	506	ST.							
R507	22	9'-8"	222	ST.							
R508	26	23'-11"	649	ST.							
R509	NOT	USED									
R510	26	34'-5"	933	ST.							
R511	26	33'-5"	906	ST.							
R601	292	7'-2"	3140	39	6"	3'-3"	3'-3"	1'-1"		2"	
R602	10	6'-0"	90	39	5"	3'-0"	3'-0"	1'-1"		2"	
R603	287	10'-0"	4311	41	10"	7"	1'-0"	3'-5"	1'-6"		
R604	287	5'-6"	2371	18	3'-10"	9"	9"				
R605	287	12'-0"	5173	1	1'-0"	11'-2"					
R606	11	7'-2"	118	1	1'-2"	6'-0"					
R607	4	8'-0"	48	1	1'-2"	6'-10"					
R608	494	6'-9"	5008	ST.							
R609	494	5'-10"	4326	1	9"	5'-0"					
R610	4	4'-9"	29	14	1'-2"	2'-0"	11"	2 1/4"	11"		
R611	1	12'-7"	19	1	1'-0"	11'-9"					
R801	287	12'-10"	9834	17	11'-2"						
R802	11	7'-8"	225	17	6'-0"						
R803	4	8'-6"	91	17	6'-10"						
R804	4	3'-9"	40	2	1'-2"	1'-4 1/2"	1'-2"				
R805	1	13'-5"	36	17	11'-9"						
		TOTAL	42643								

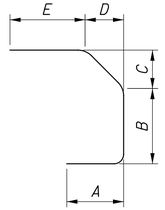
MARK	NUMBER TOTAL	LENGTH	TYPE	DIMENSIONS						
				A	B	C	D	E	R	INC
GLASS FIBER BARS										
RG401	20	25'-4"	ST							
RG402	2	10'-0"	ST							
RG403	2	15'-2"	ST							
RG404	2	5'-0"	ST							
RG405	66	29'-8"	ST							
RG406	16	12'-8"	ST							
RG407	11	31'-0"	ST							
RG408	48	14'-6"	ST							
RG409	11	13'-7"	ST							
RG410	12	15'-4"	ST							
RG411	11	1'-6"	ST							
	TOTAL	2770	FT							
RG501	48	15'-2"	ST							
RG502	60	29'-8"	ST							
RG503	10	31'-0"	ST							
RG504	12	14'-2"	ST							
RG505	10	13'-7"	ST							
RG506	10	1'-6"	ST							
	TOTAL	3273	FT							



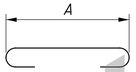
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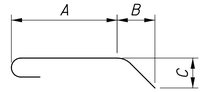
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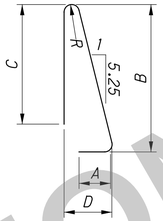
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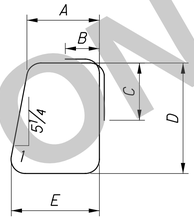
TYPE-17



TYPE-18



TYPE-39



TYPE-41

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NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE 3 DIGITS ARE USED, AND THE FIRST 2 DIGITS WHERE FOUR DIGITS ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, F601 IS A NO 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. "R" INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD" WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

2. ALL REINFORCING STEEL TO BE EPOXY COATED.

3. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/45.

LEGEND:

** - FIELD CUT

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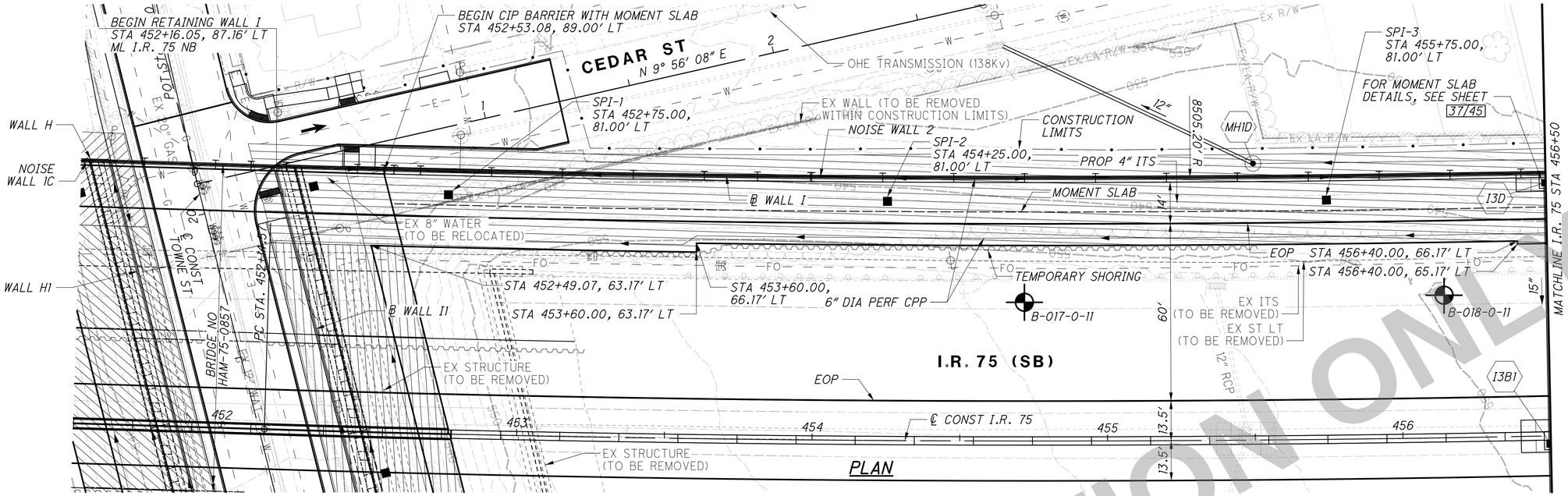
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REINFORCING STEEL SCHEDULE
MSE RETAINING WALLS H & H1

HAM-75-7.85
PID No. 77889

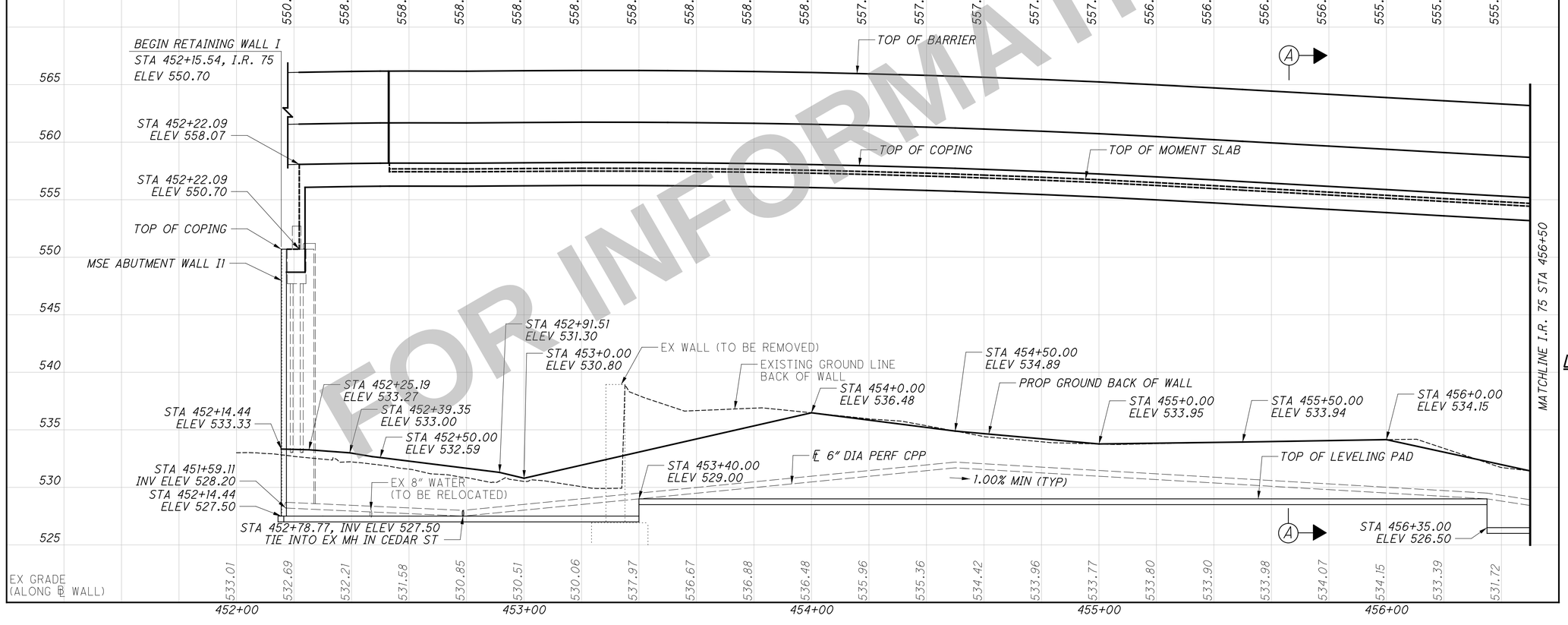
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CURVE 75-3
PI STA 456+41.20
Δ = 5° 41' 01" (LT)
Dc = 0° 40' 00"
R = 8,594.37'
T = 426.63'
L = 852.56'
E = 10.58'
C = 852.21'
C.B. = N 21° 39' 37" E
e_{max} = 0.019
PC STA 452+14.57
PT STA 460+67.13

0 20 10 40
HORIZONTAL SCALE IN FEET



ELEVATION ALONG BACK FACE OF WALL

LEGEND:

= BORING LOCATION

= PLAN BOUNDARY FOR ITEMS INCLUDED WITH MSE WALL I1 FOR PAYMENT

= PLAN BOUNDARY FOR ITEMS INCLUDED WITH MSE WALL I FOR PAYMENT

NOTES:

1. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/45

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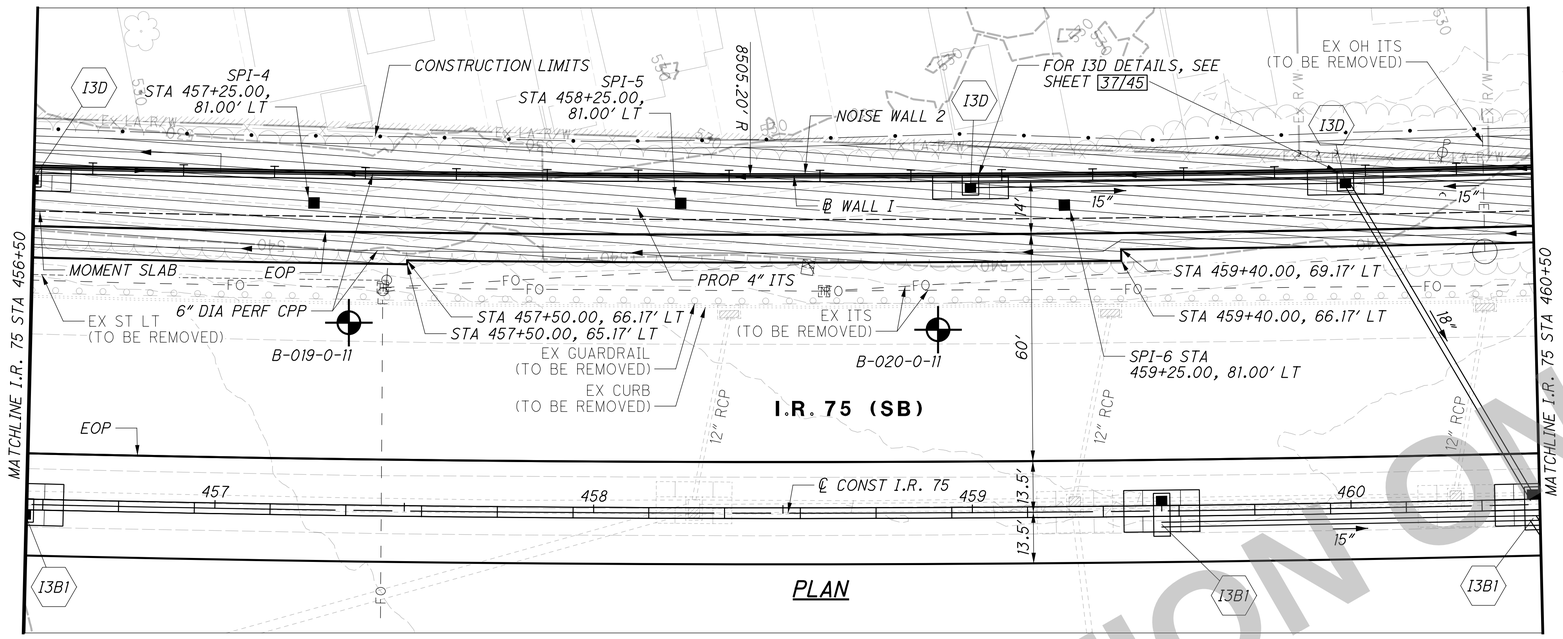
DESIGNED JLM | DRAWN SMJ | REVIEWED SSK | DATE 12-15-21
CHECKED NCK | REVISED | STRUCTURE FILE NUMBER

PLAN AND ELEVATION
MSE RETAINING WALL I

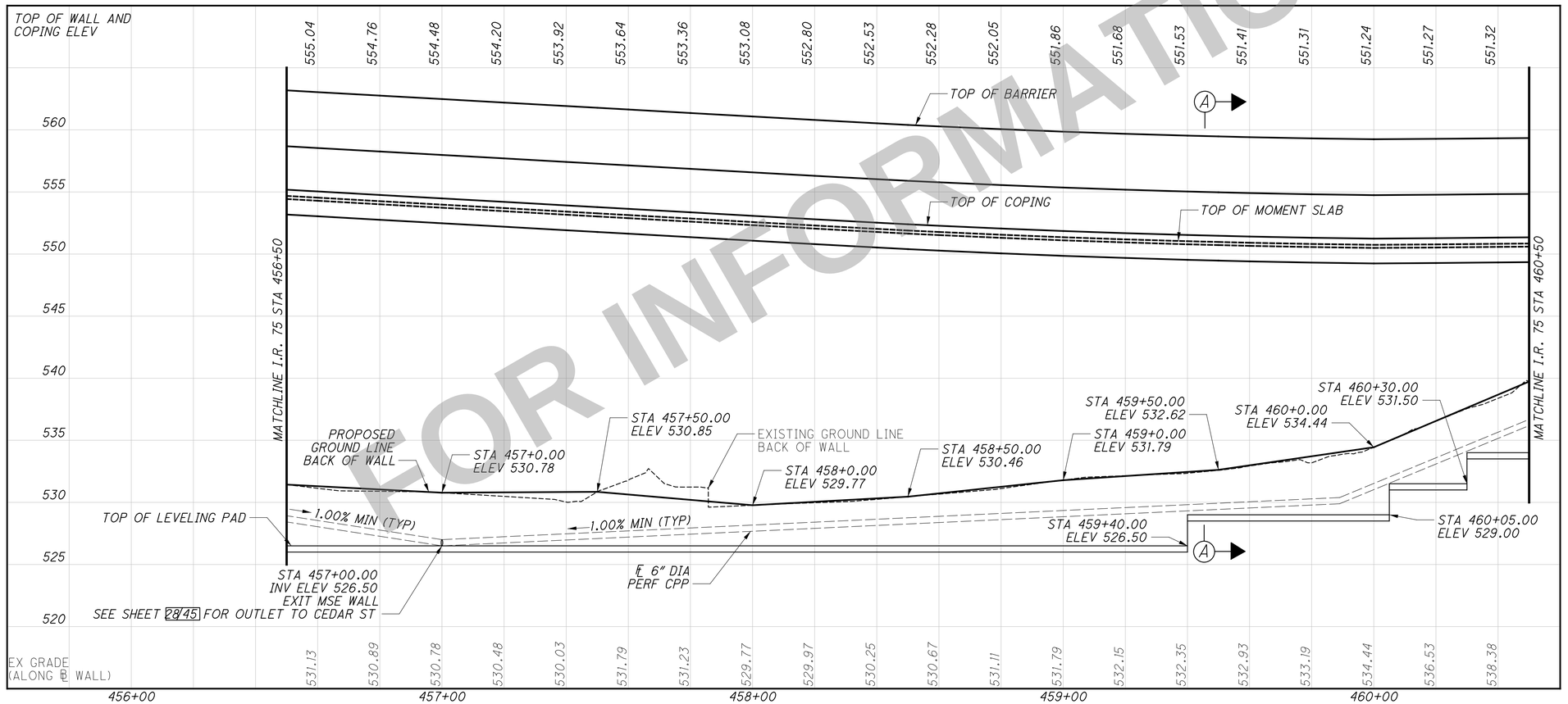
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PID No. 77889

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2017

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0 20
10 40
HORIZONTAL
SCALE IN FEET



ELEVATION ALONG BACK FACE OF WALL

LEGEND:

= BORING LOCATION

= PLAN BOUNDARY FOR ITEMS INCLUDED WITH MSE WALL I FOR PAYMENT

NOTES:

1. FOR CURVE DATA, SEE SHEET 28/45.
2. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/45.
3. ALL EXISTING STORM SEWER WITHIN CONSTRUCTION LIMITS TO BE REMOVED UNLESS OTHERWISE NOTED.

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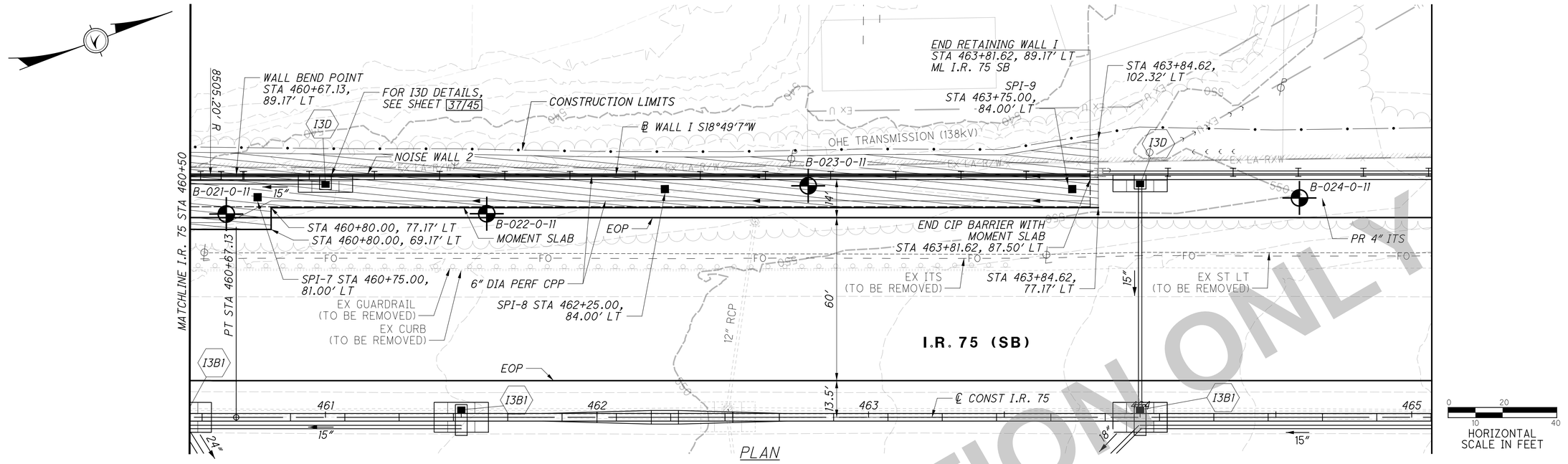
PLAN AND ELEVATION
MSE RETAINING WALL I

HAM-75-7.85
PID No. 77889

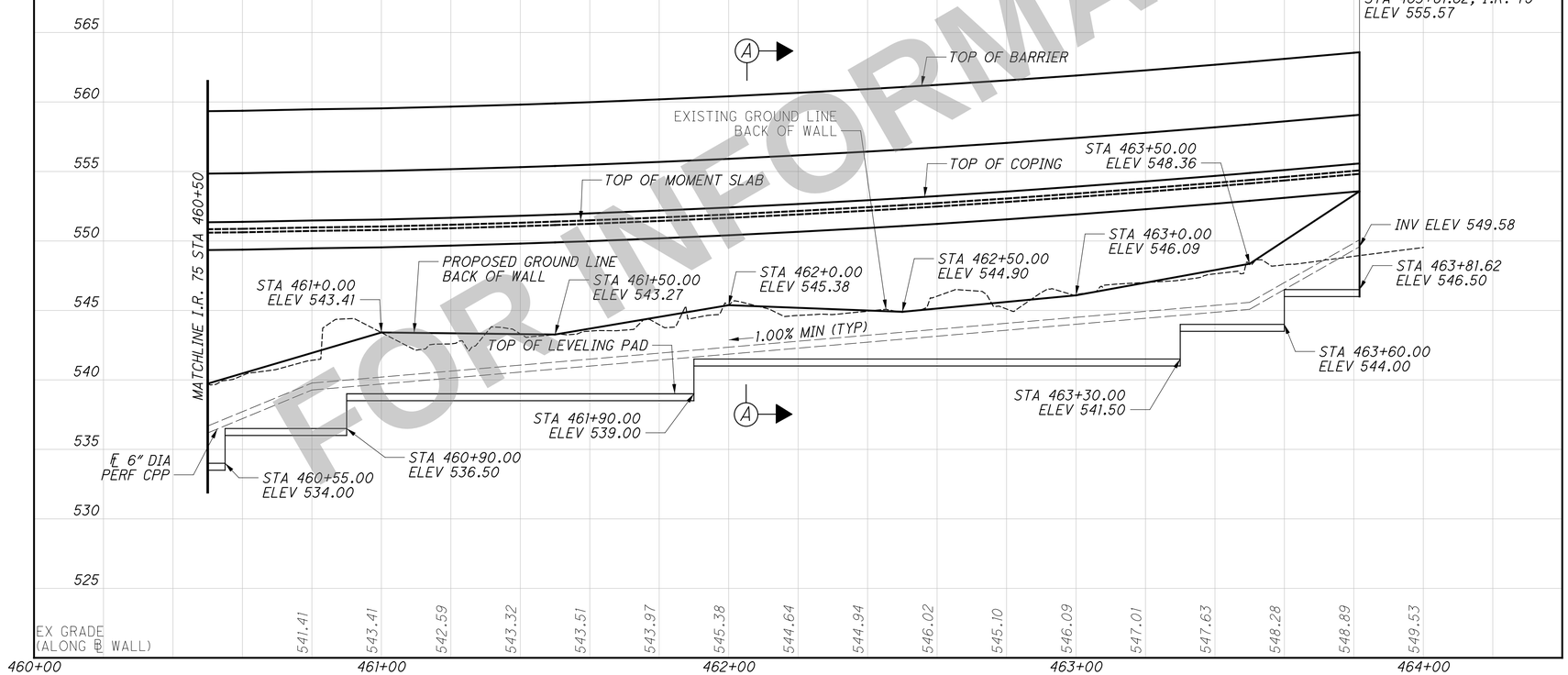
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2017

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PLAN



ELEVATION ALONG BACK FACE OF WALL

LEGEND:

= BORING LOCATION

= PLAN BOUNDARY FOR ITEMS INCLUDED WITH MSE WALL I FOR PAYMENT

NOTES:

1. FOR CURVE DATA, SEE SHEET 28/45 .
2. FOR ABBREVIATIONS LEGEND, SEE SHEET . 2/45
3. ALL EXISTING STORM SEWER WITHIN CONSTRUCTION LIMITS TO BE REMOVED UNLESS OTHERWISE NOTED.

FOR INFORMATION ONLY

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED JLM | DRAWN SMJ | REVIEWED SSK | DATE 12-15-21
CHECKED NCK | REVISED | STRUCTURE FILE NUMBER

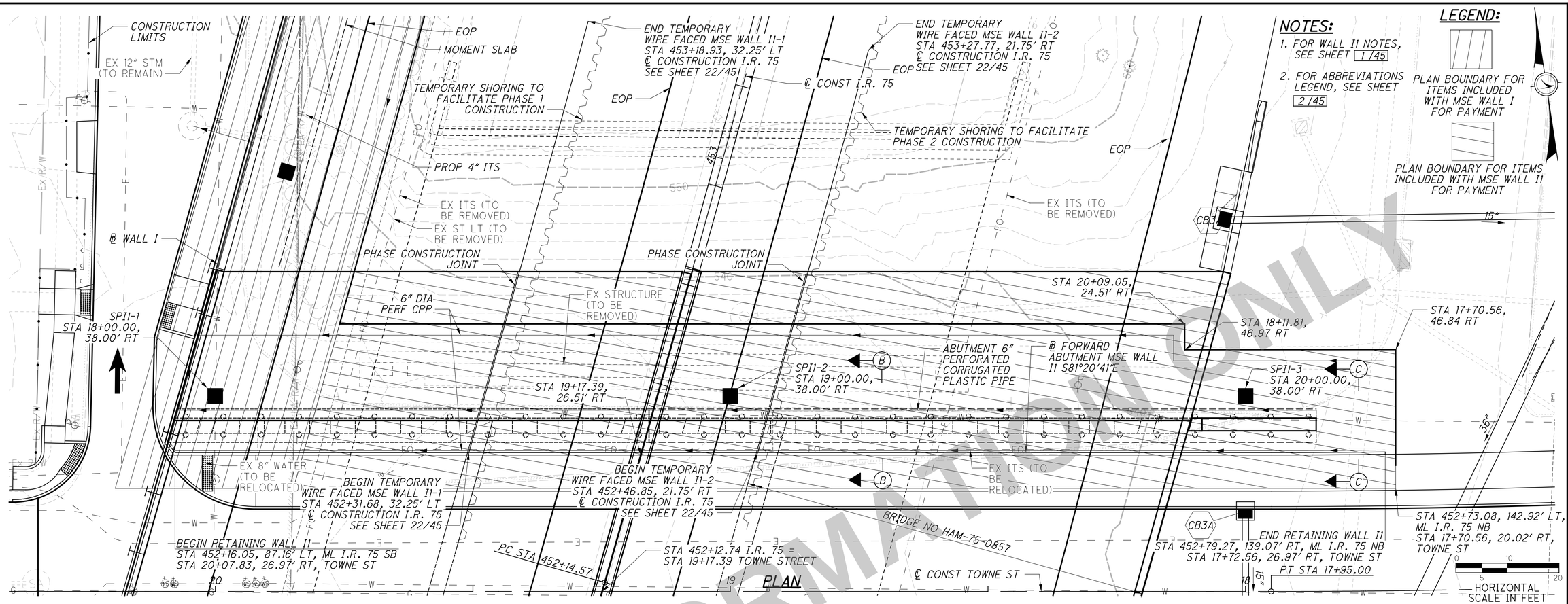
PLAN AND ELEVATION
MSE RETAINING WALL I

HAM-75-7.85
PID No. 77889

30 / 45

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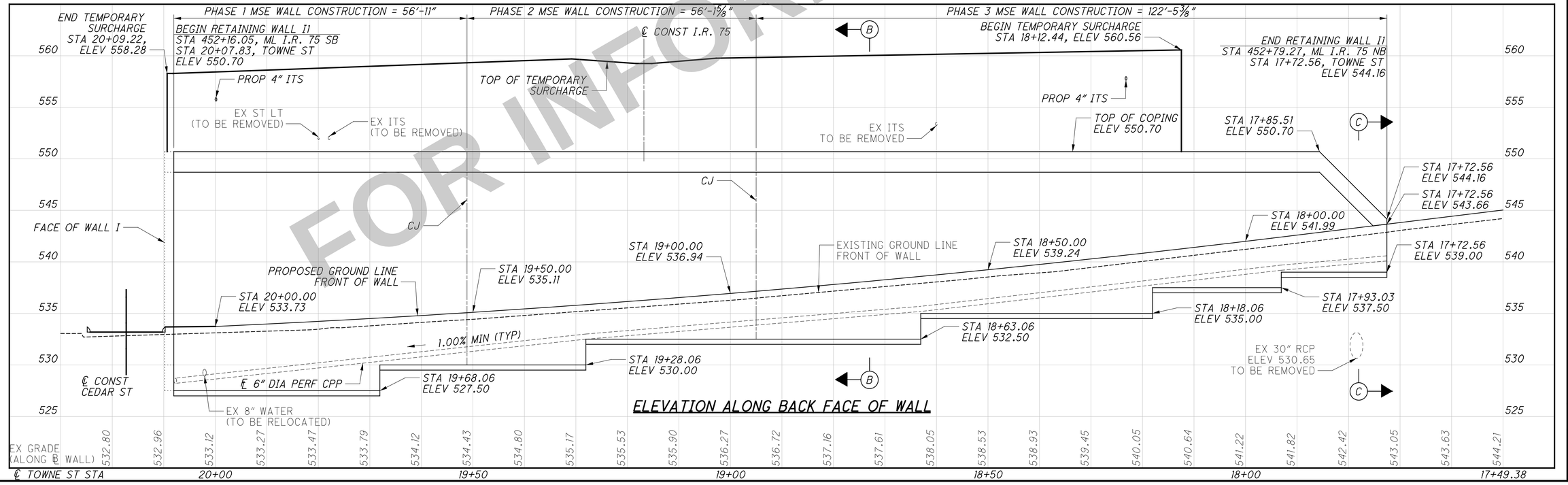
NOTES:

1. FOR WALL I1 NOTES, SEE SHEET 1/45
2. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/45

LEGEND:

PLAN BOUNDARY FOR ITEMS INCLUDED WITH MSE WALL I FOR PAYMENT

PLAN BOUNDARY FOR ITEMS INCLUDED WITH MSE WALL I1 FOR PAYMENT



ELEVATION ALONG BACK FACE OF WALL

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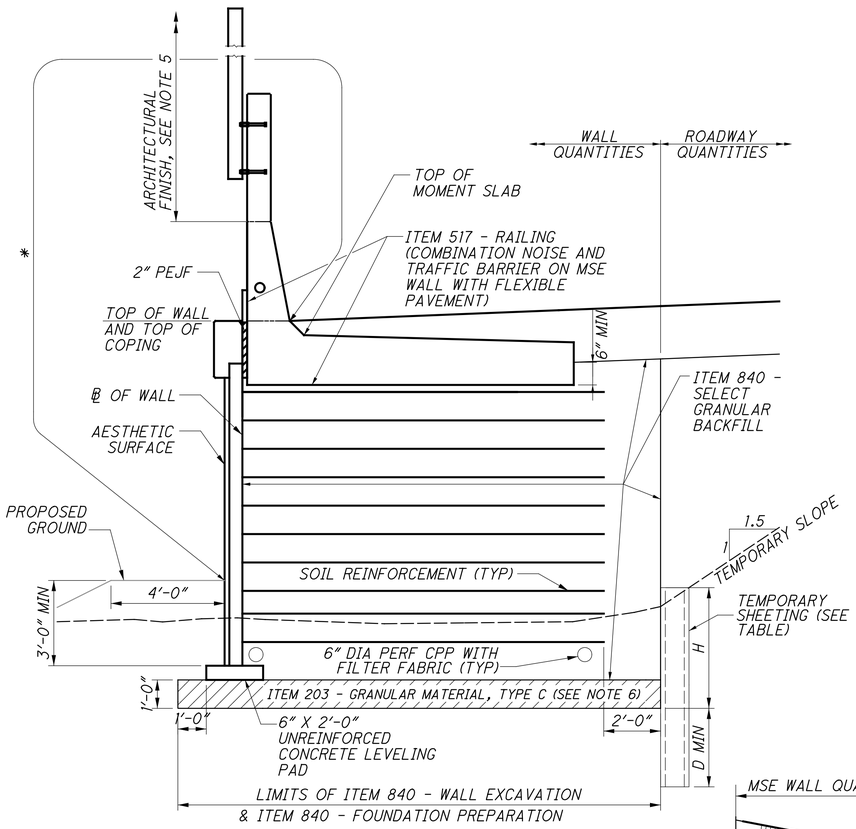
PLAN AND ELEVATION
FORWARD ABUTMENT MSE RETAINING WALL I1 - TOWNE STREET

HAM-75-7.85
PID No. 77889

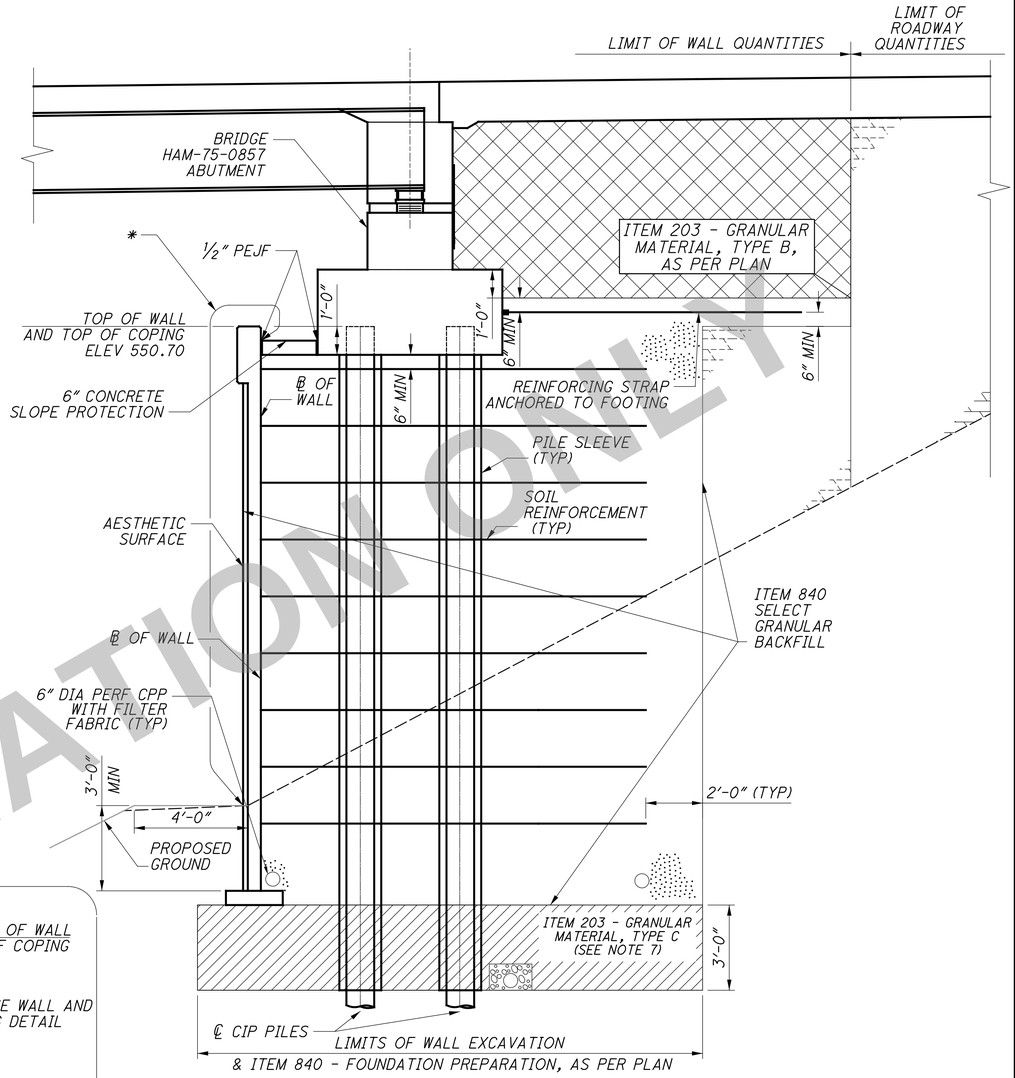
31 / 45

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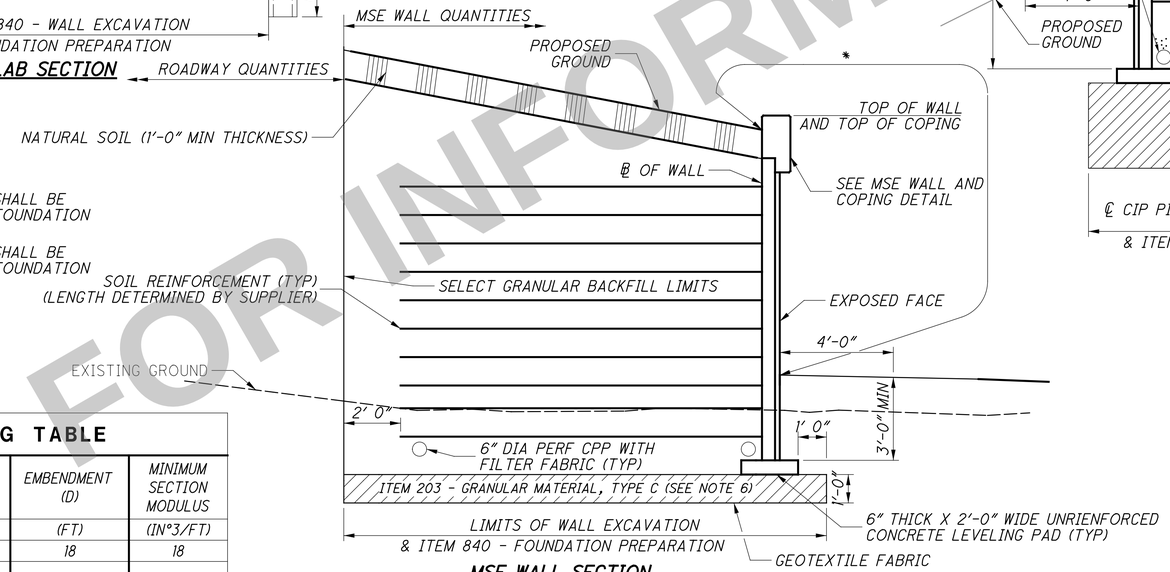
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MOMENT SLAB SECTION



BRIDGE SECTION



MSE WALL SECTION

* LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) AND ITEM 512 - SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)

NOTES

1. SEE BRIDGE PLANS HAM-75-0857 FOR ADDITIONAL ABUTMENT AND WINGWALL DETAILS.
2. SOIL REINFORCEMENT SHALL BE CONSTRUCTED SO AS TO AVOID INTERFERENCE WITH BRIDGE PILING.
3. FOR ABBREVIATIONS LEGEND, SEE SHEET 1/45.
4. SEE SHEET 37/45 FOR MSE WALL COPING DETAILS.
5. THE ARCHITECTURAL FINISH SHALL BE BEIGE ASHLAR STONE (MANUFACTURED BY ARCHITECTURAL POLYMERS, #9050 SMALL AGED ASHLAR STONE) ON THE FREEWAY SIDE AND BEIGE DRY STACK (MANUFACTURED BY ARCHITECTURAL POLYMERS, #9110 LARGE STONE OHIO DRY STACK) ON THE PARK AND RESIDENTIAL SIDE. THE FEGERAL COLOR NUMBER FOR BEIGE IS NO. 17778.

NOTES

6. ITEM 203 - GRANULAR MATERIAL, TYPE C SHALL BE INCLUDED FOR PAYMENT WITH ITEM 840 - FOUNDATION PREPARATION.
7. ITEM 203 - GRANULAR MATERIAL, TYPE C SHALL BE INCLUDED FOR PAYMENT WITH ITEM 840 - FOUNDATION PREPARATION, AS PER PLAN.

TEMPORARY SHORING TABLE

STATION	ALIGNMENT	WALL HEIGHT (H)	EMBENDMENT (D)	MINIMUM SECTION MODULUS
		(FT)	(FT)	(IN^3/FT)
453+00.00	I.R. 75	8	18	18
453+50.00	I.R. 75	6		
454+00.00	I.R. 75	4		
454+50.00	I.R. 75	3		
455+00.00	I.R. 75	2		

NOTE:
TEMPORARY SHORING NOT NEEDED FROM STATION 455+50.00 TO STATION 463+81.56.

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NCK			

TYPICAL MSE WALL DETAILS 1 OF 2

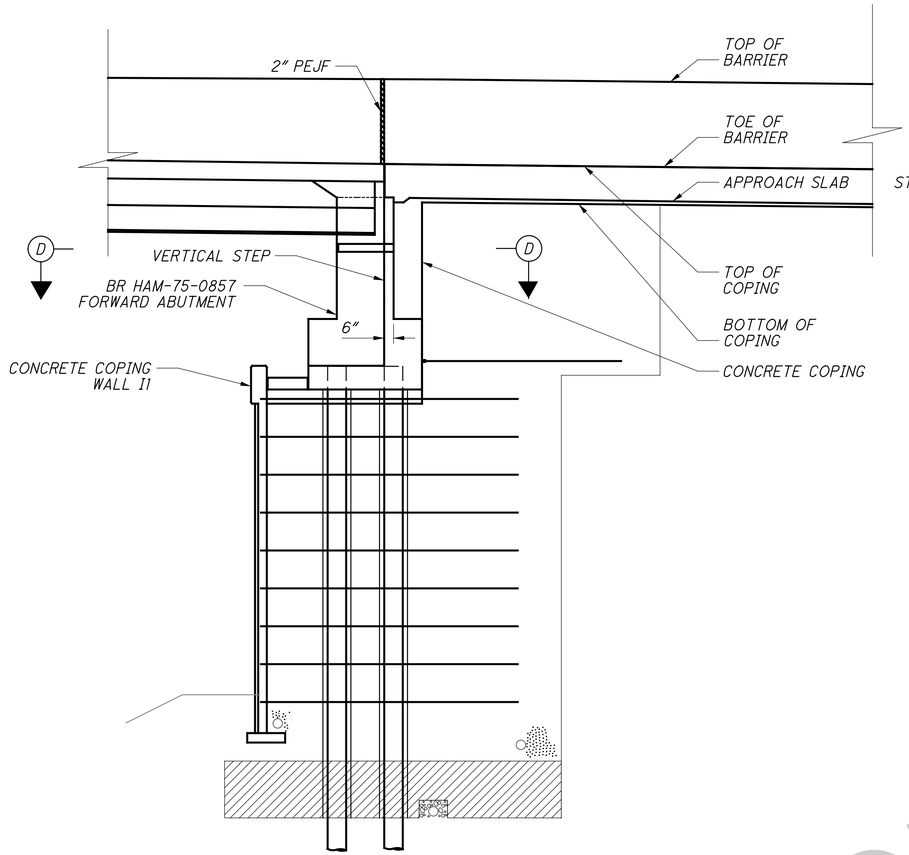
MSE RETAINING WALLS I & 11

HAM-75-7.85
PID No. 77889

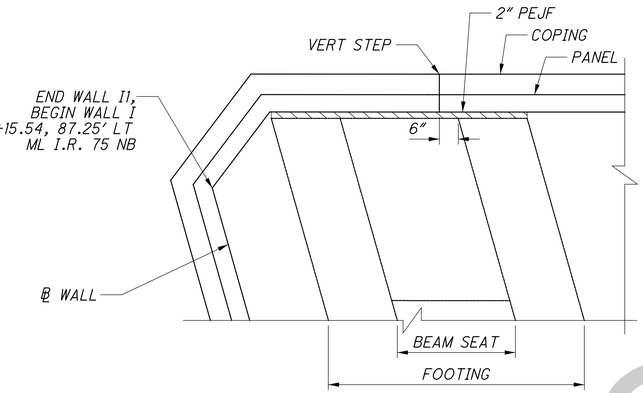
32/45

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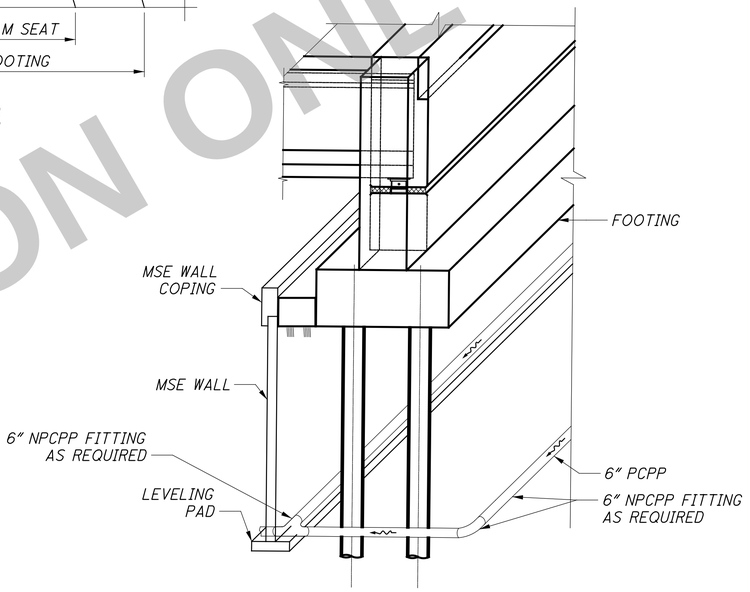
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WALL TRANSITION DETAIL AT ABUTMENT



SECTION D-D



TYPICAL RISER DETAIL

(CONNECTION FROM BRIDGE DRAINAGE SYSTEM TO MSE WALL DRAINAGE SYSTEM)

* MEASURED PERENDICULAR TO SKEW

NOTES:

1. SEE BRIDGE PLANS FOR ADDITIONAL PRESSURE RELIEF JOINT DETAILS AND PAYMENT.
2. SEE WALLS H/H1 PLANS, SHEET 1053 FOR TEMPORARY MSE WIRE WALL DETAILS.
3. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/45.

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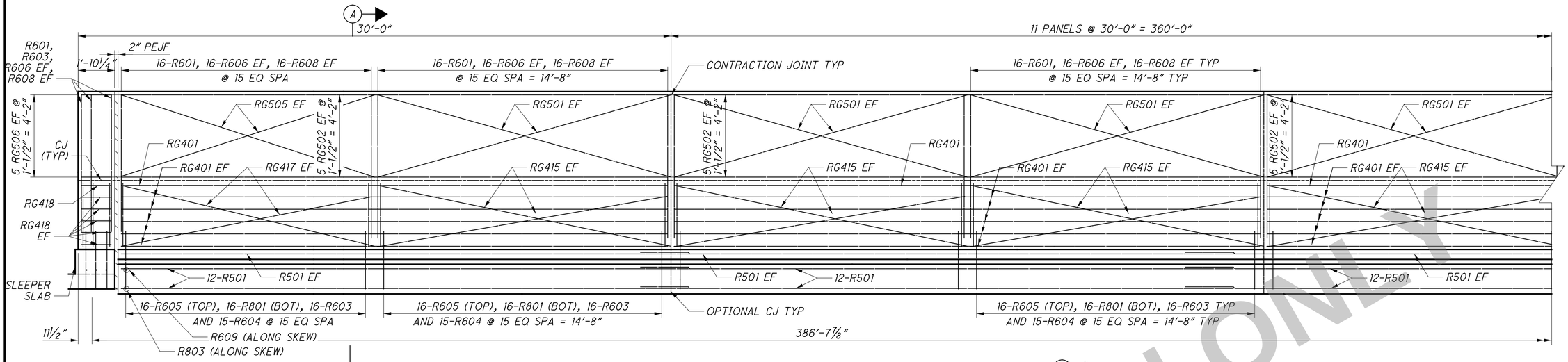
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JLM	SMJ	SSK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
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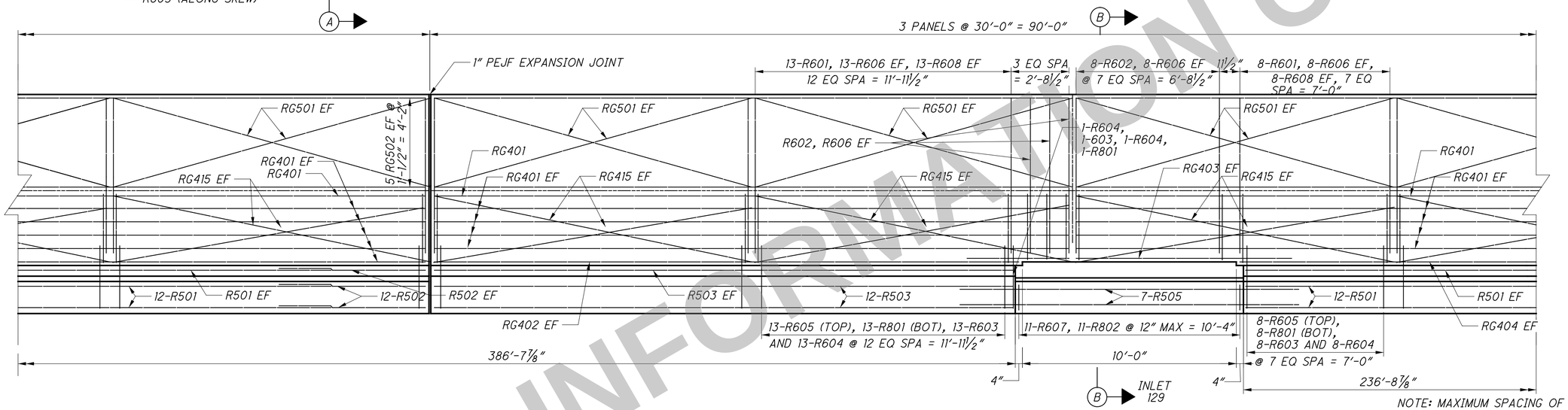
TYPICAL MSE WALL DETAILS 2 OF 2
MSE RETAINING WALLS I & I1

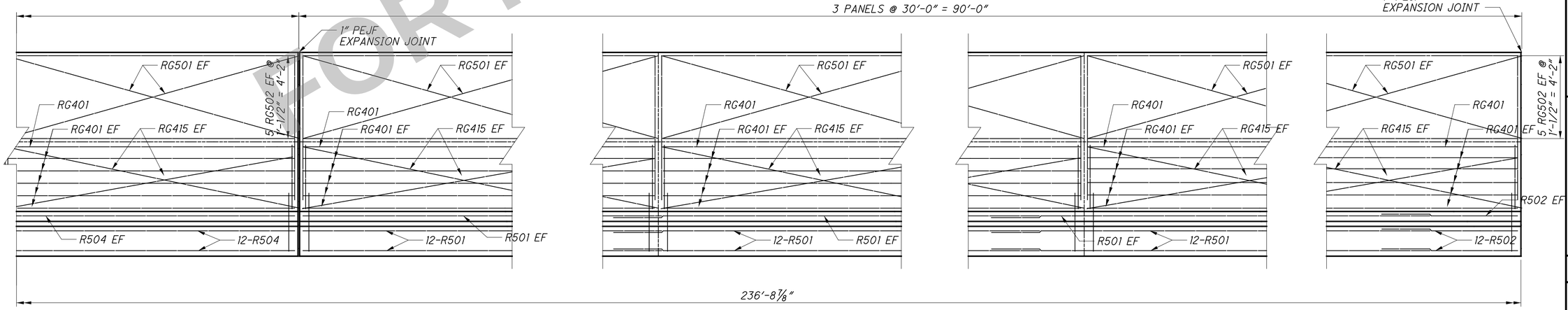
HAM-75-7.85
PID No. 77889

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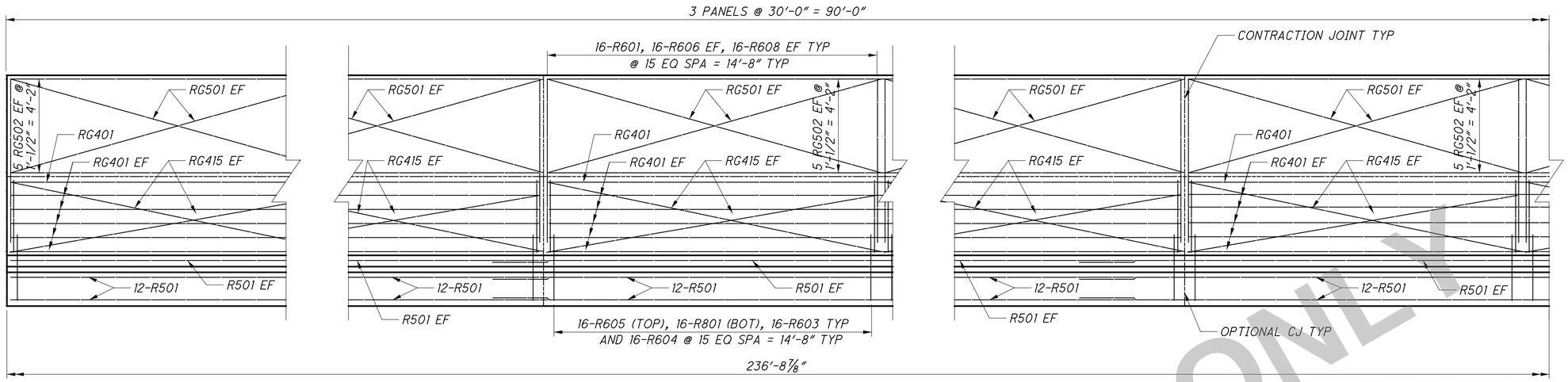
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JLM	SMJ	SSK	12-15-21
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BARRIER AND SLEEPER SLAB DETAILS 1 OF 4
MSE RETAINING WALL I

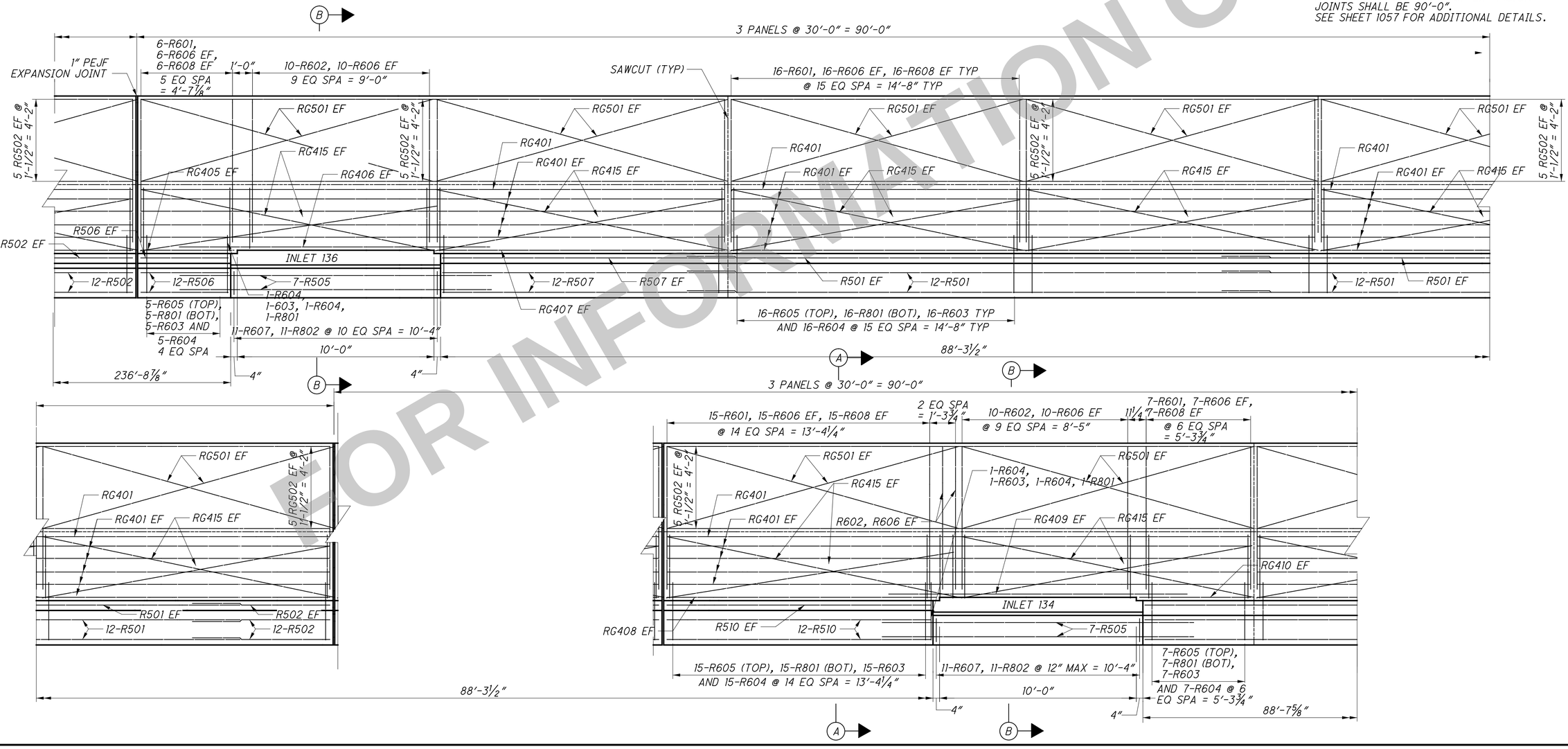
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PID No. 77889

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NOTE: MAXIMUM SPACING OF EXPANSION JOINTS SHALL BE 90'-0".
SEE SHEET 1057 FOR ADDITIONAL DETAILS.



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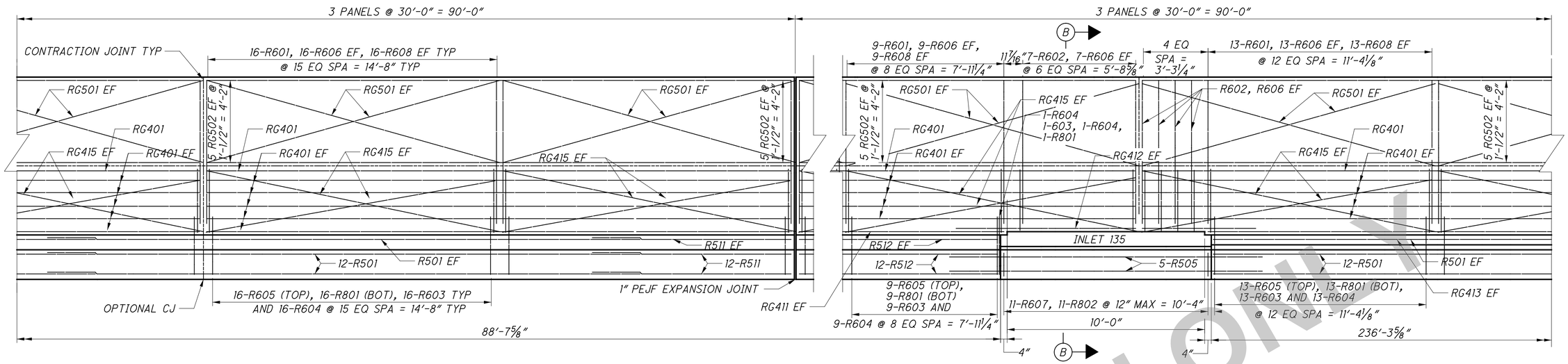
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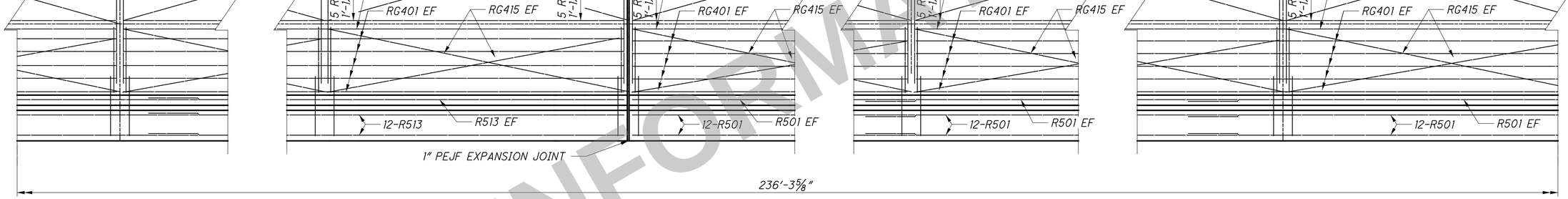
BARRIER AND SLEEPER SLAB DETAILS 2 OF 4
MSE RETAINING WALL I

HAM-75-7.85
PID No. 77889

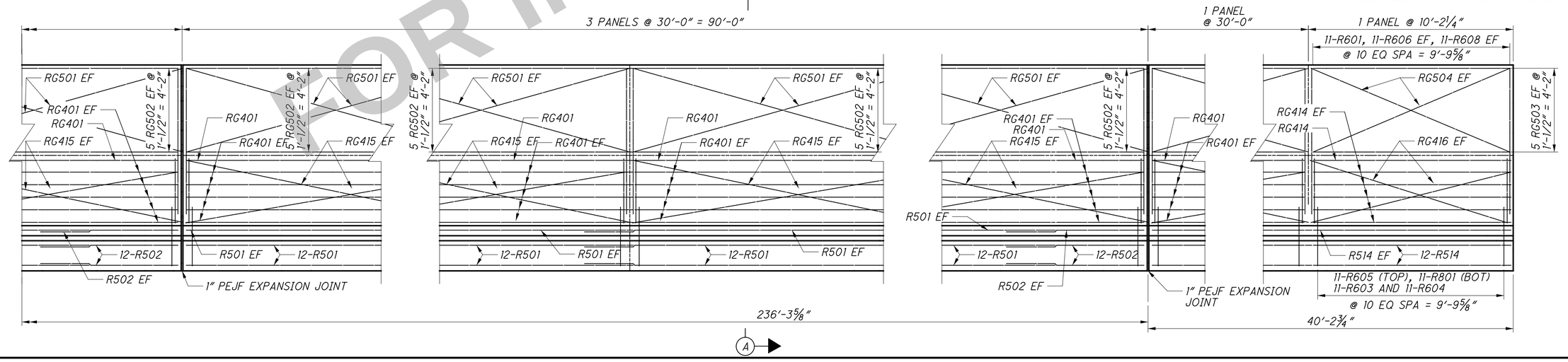
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NOTE: MAXIMUM SPACING OF EXPANSION JOINTS SHALL BE 90'-0".
SEE SHEET 1057 FOR ADDITIONAL DETAILS.



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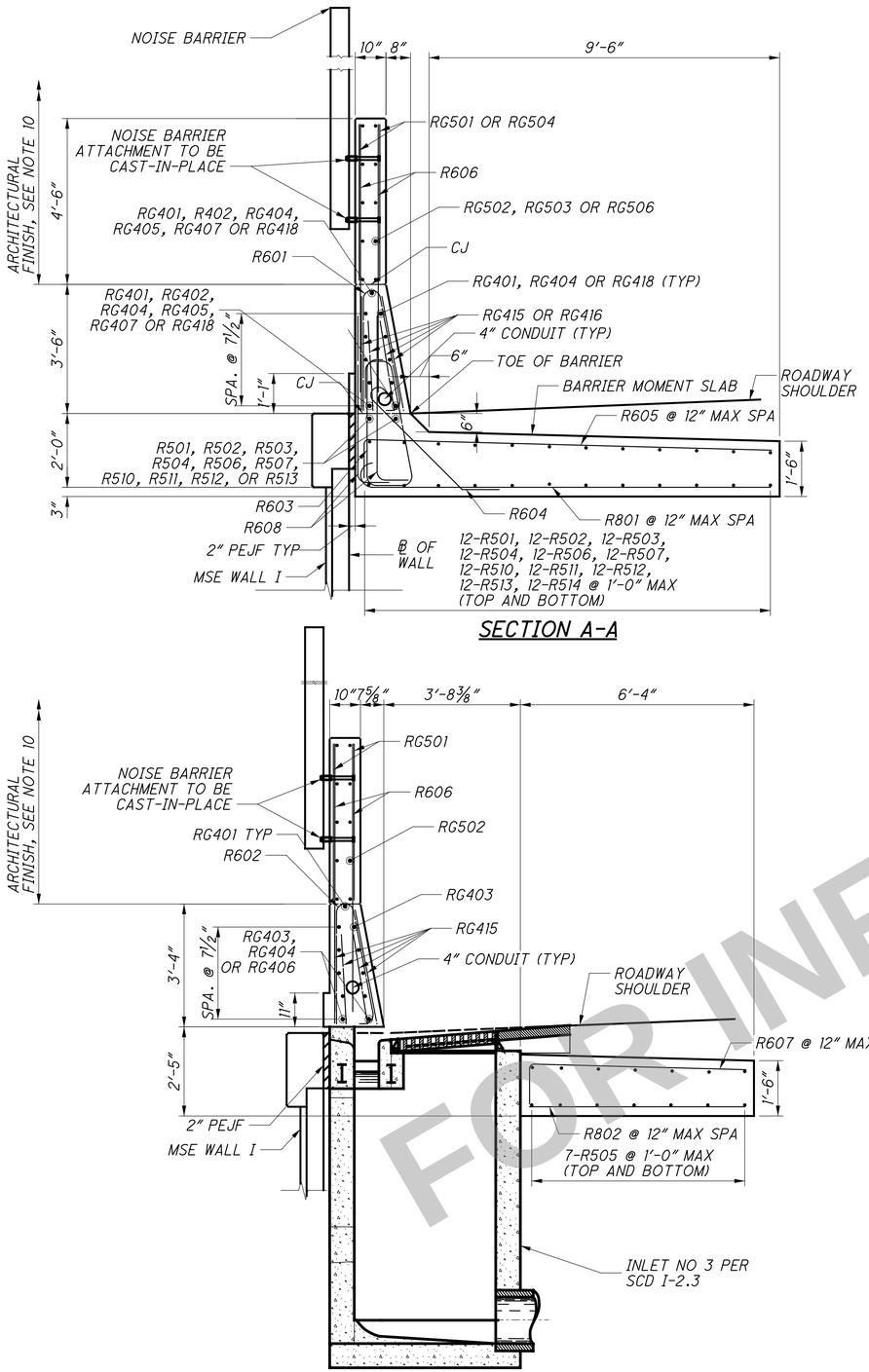
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BARRIER AND SLEEPER SLAB DETAILS 3 OF 4
MSE RETAINING WALL I

HAM-75-7.85
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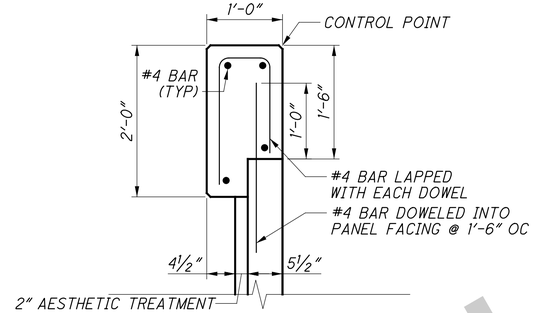
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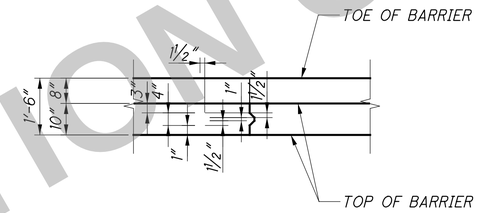


SECTION A-A

SECTION B-B



COPING DETAIL



CONTRACTION JOINT

MINIMUM LAP LENGTHS:
#5 LAP LENGTH = 2'-5"
#6 LAP LENGTH = 2'-11"

BARRIER NOTES:

1. ALL ITEMS SHOWN ON THIS SHEET, EXCLUDING PAVEMENT, ARE INCIDENTAL TO RAILING MISC: TRAFFIC BARRIER ON MSE WALL AND RAILING (COMBINATION NOISE AND TRAFFIC BARRIER ON MSE WALL).
2. CONTROL JOINT: SAWCUT 1¼" DEEP CONTROL JOINTS ALONG THE PERIMETER AS SHOWN ON THIS SHEET AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE.

   USE AN EDGE GUIDE, FENCE OR JIG TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE AND ALIGNED ON ALL FACES OF THE BARRIER. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF ¼".

   SEAL THE PERIMETER OF THE CONTROL JOINT TO A MINIMUM DEPTH OF 1" WITH A POLYURETHANE OR POLYMERIC MATERIAL CONFORMING TO C920, TYPE S. LEAVE THE BOTTOM ½" OF BOTH THE INSIDE AND OUTSIDE FACES OF THE BARRIER UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE.
3. SAWCUT CONTROL JOINTS SHALL HAVE A MINIMUM SPACING OF 6' AND A MAXIMUM SPACING OF 15'. SEE PLANS FOR BARRIER CONTROL JOINT LOCATIONS.
4. SEE NOISE BARRIER PLAN SHEETS FOR NOISE BARRIER DETAILS.
5. SEE SHEET 32/45 FOR CONCRETE SEALING LIMITS.
6. SEE ROADWAY PLANS AND ODOT STANDARD CONSTRUCTION DRAWINGS FOR ADDITIONAL DRAINAGE INLET DETAILS.
7. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/45.
8. THE COPING SHALL NOT BE CONSTRUCTED UNTIL ALL PHASES OF MSE WALL CONSTRUCTION ARE COMPLETE.
9. THE COPING JOINTS SHALL BE PLACED ON A MAXIMUM 20 FT. SPACING AND SHALL ALIGN WITH A PANEL JOINT.
10. THE ARCHITECTURAL FINISH SHALL BE BEIGE ASHLAR STONE (MANUFACTURED BY ARCHITECTURAL POLYMERS, #9050 SMALL AGED ASHLAR STONE) ON THE FREEWAY SIDE AND BEIGE DRY STACK (MANUFACTURED BY ARCHITECTURAL POLYMERS, #9110 LARGE STONE OHIO DRY STACK) ON THE PARK AND RESIDENTIAL SIDE. THE FEGERAL COLOR NUMBER FOR BEIGE IS NO. 17778.

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BARRIER AND SLEEPER SLAB DETAILS 4 OF 4
MSE RETAINING WALL I

HAM-75-7.85
PID No. 77889

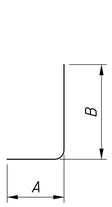
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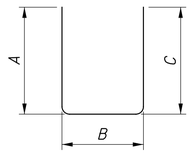
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MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
REINFORCING SCHEDULE											
R501	630	30'-0"	19713	ST.							
R502	40	7'-3"	302	ST.							
R503	26	27'-0"	732	ST.							
R504	26	22'-5"	608	ST.							
R505	56	16'-0"	935	ST.							
R506	26	4'-7"	124	ST.							
R507	26	17'-0"	461	ST.							
NOT	USED										
R509	120	7'-3"	907	ST.							
R510	26	12'-5"	337	ST.							
R511	26	8'-0"	217	ST.							
R512	26	23'-0"	624	ST.							
R513	26	28'-9"	780	ST.							
R514	26	39'-10"	1080	ST.							
R601	1172	7'-2"	12604	39	6"	3'-3"	3'-3"	1'-1"			
R602	41	6'-0"	369	39	3'-0"	3'-0"	1"	1'-1"			
R603	1172	10'-0"	17603	41	10"	7"	1'-0"	3'-5"	1'-6"		
R604	1172	5'-6"	9682	18	3'-10"	9"	9"				
R605	1172	12'-0"	21124	1	1'-0"	11'-2"					
R606	2428	6'-9"	24616	ST.							
R607	44	8'-0"	529	1	1'-2"	6'-10"					
R608	2344	5'-10"	20526	1	9"	5'-0"					
R609	1	12'-7"	19	1	1'-0"	11'-9"					
R801	1172	12'-10"	40158	17	11'-2"						
R802	44	7'-8"	900	17	6'-0"						
R803	1	13'-5"	36	17	11'-9"						
TOTAL			174986								

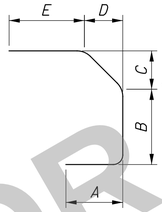
MARK	NUMBER TOTAL	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	R	INC
GLASS FIBER BARS										
RG401	395	29'-8"	ST							
RG402	2	27'-4"	ST							
RG403	2	10'-0"	ST							
RG404	2	22'-0"	ST							
RG405	2	4'-9"	ST							
RG406	2	15'-9"	ST							
RG407	2	14'-7"	ST							
RG408	2	13'-8"	ST							
RG409	2	15'-2"	ST							
RG410	2	5'-7"	ST							
RG411	2	23'-0"	ST							
RG412	2	9'-0"	ST							
RG413	2	26'-4"	ST							
RG414	2	9'-9"	ST							
RG415	292	15'-0"	ST							
RG416	4	10'-3"	ST							
RG417	4	13'-0"	ST							
RG418	11	1'-6"	ST							
	TOTAL	11088	FT							
RG501	292	15'-4"	ST							
RG502	148	29'-8"	ST							
RG503	10	9'-9"	ST							
RG504	2	10'-7"	ST							
RG505	4	13'-6"	ST							
RG506	10	1'-6"	ST							
	TOTAL	9443	FT							



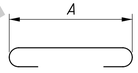
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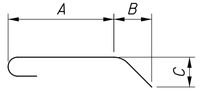
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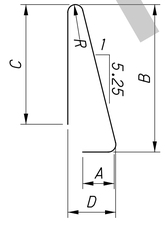
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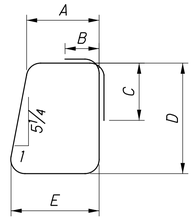
TYPE-17



TYPE-18



TYPE-39



TYPE-41

NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE 3 DIGITS ARE USED, AND THE FIRST 2 DIGITS WHERE FOUR DIGITS ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, F601 IS A NO 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. "R" INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD" WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

2. ALL REINFORCING STEEL TO BE EPOXY CODATED.

3. FOR ABBREVIATIONS LEGEND, SEE SHEET 2745.

LEGEND:

** - FIELD CUT

FOR INFORMATION ONLY

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED JLM | DRAWN SMJ | REVIEWED SSK | DATE 12-15-21
CHECKED NCK | REVISED | STRUCTURE FILE NUMBER

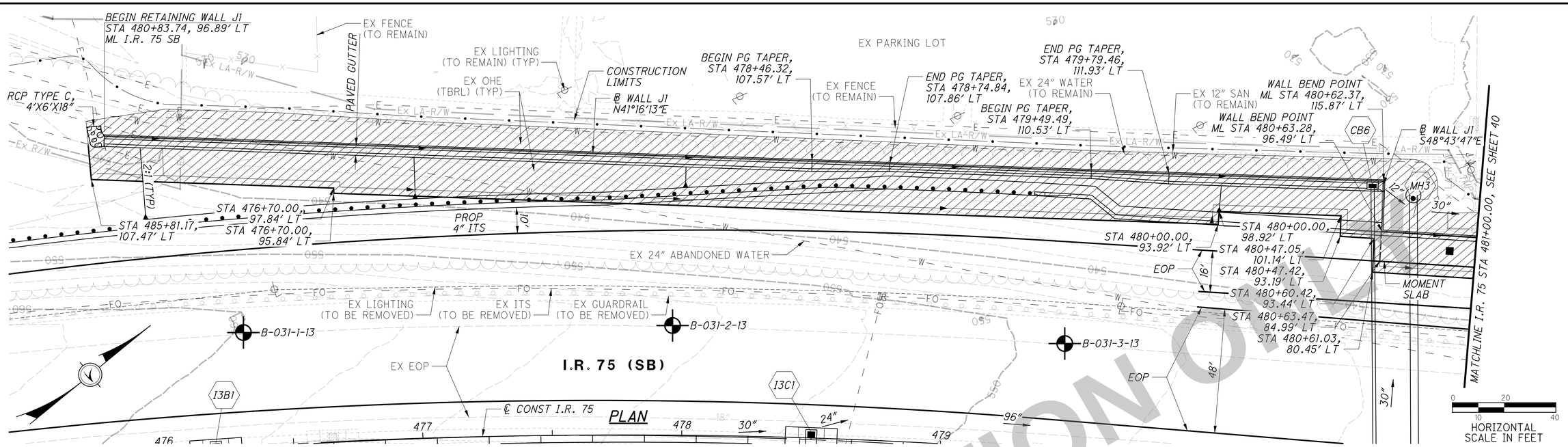
REINFORCING STEEL SCHEDULE
MSE RETAINING WALLS I & II

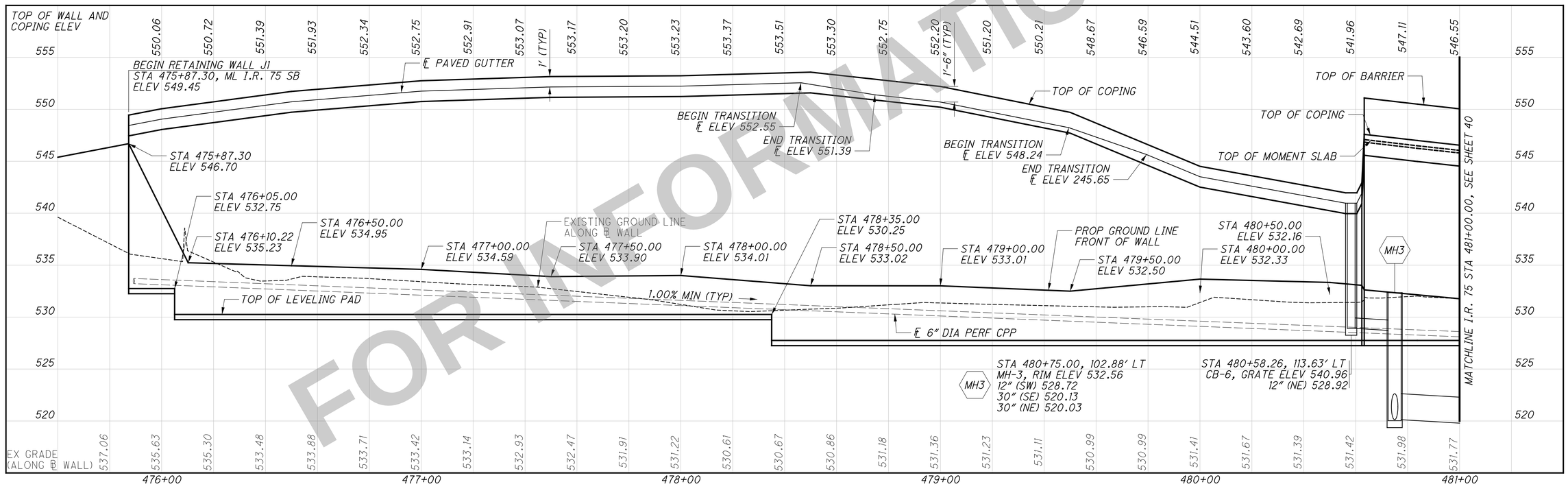
HAM-75-7.85
PID No. 77889

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2017

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FOR INFORMATION ONLY





ELEVATION ALONG BACK FACE OF WALL

NOTES:

1. FOR TYPICAL SECTION, SEE SHEET 41/45
2. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/45
3. ALL EXISTING STORM SEWER WITHIN THE CONSTRUCTION LIMITS IS TO BE REMOVED UNLESS OTHERWISE NOTED.

LEGEND:

= BORING LOCATION

= SETTLEMENT PLATFORM

= PLAN BOUNDARY FOR ITEMS INCLUDED WITH MSE WALL J1 FOR PAYMENT

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED	DRAWN	REVIEWED	DATE
JLM	SMJ	SSK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

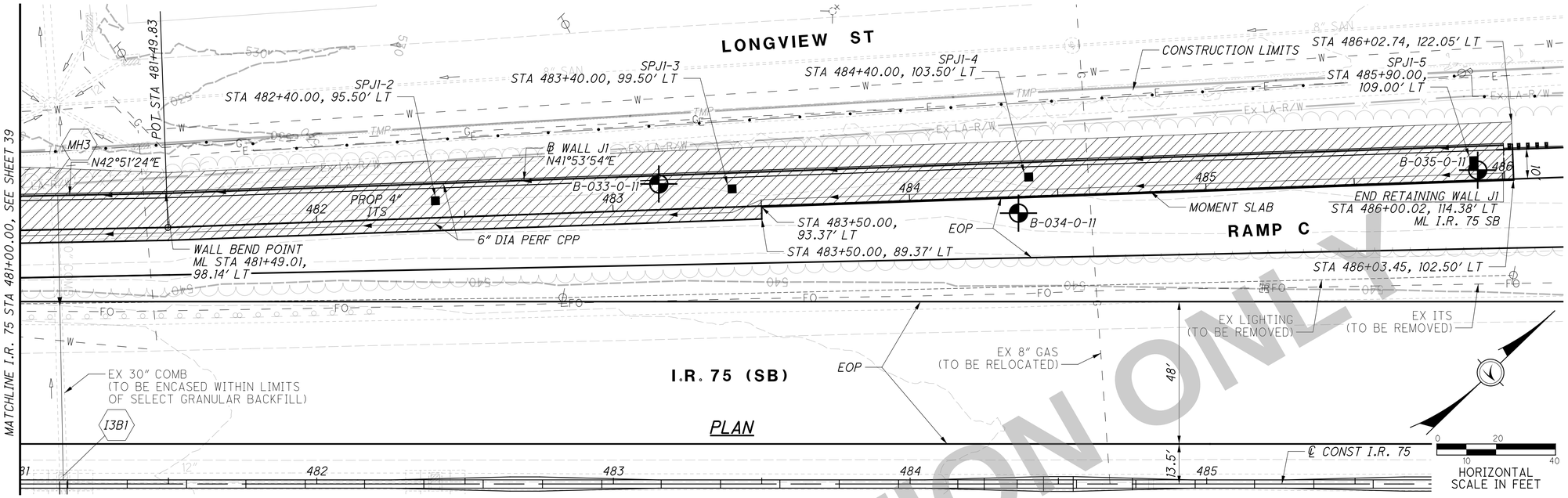
PLAN AND ELEVATION 1 OF 2
MSE RETAINING WALL J1

HAM-75-7.85
PID No. 77889

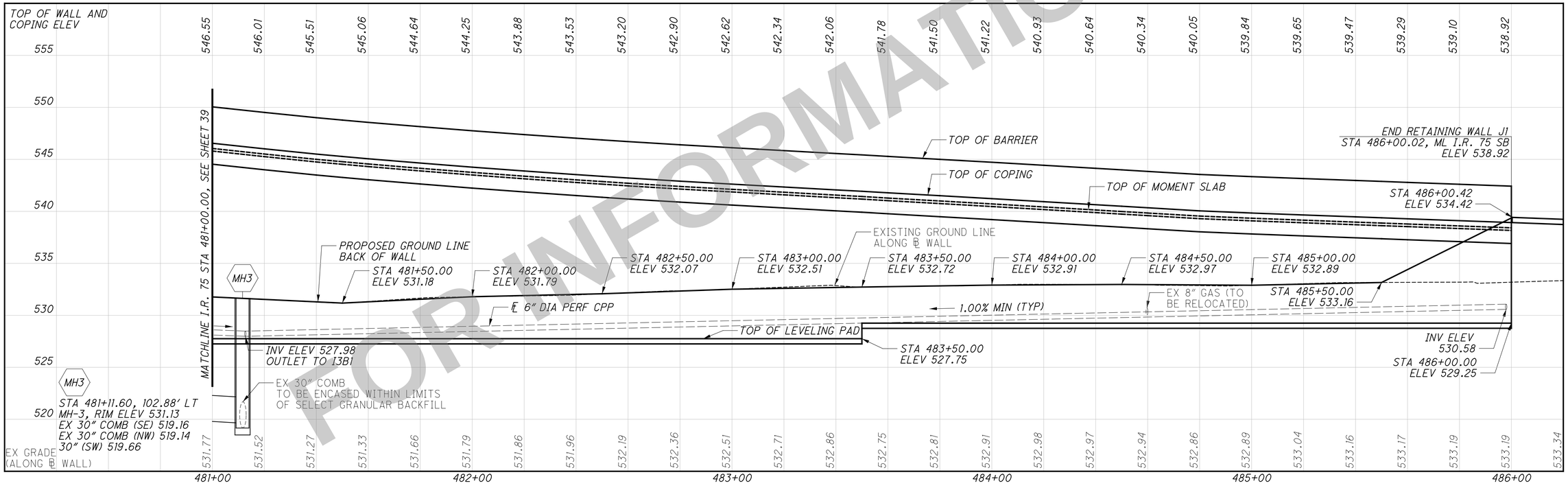
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2017

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PLAN



ELEVATION ALONG BACK FACE OF WALL

NOTES:

1. FOR TYPICAL SECTION, SEE SHEET 41/45
2. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/45
3. ALL EXISTING STORM SEWER WITHIN THE CONSTRUCTION LIMITS IS TO BE REMOVED UNLESS OTHERWISE NOTED.

LEGEND:

- = BORING LOCATION
- = SETTLEMENT PLATFORM
- = PLAN BOUNDARY FOR ITEMS INCLUDED WITH MSE WALL J1 FOR PAYMENT

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6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

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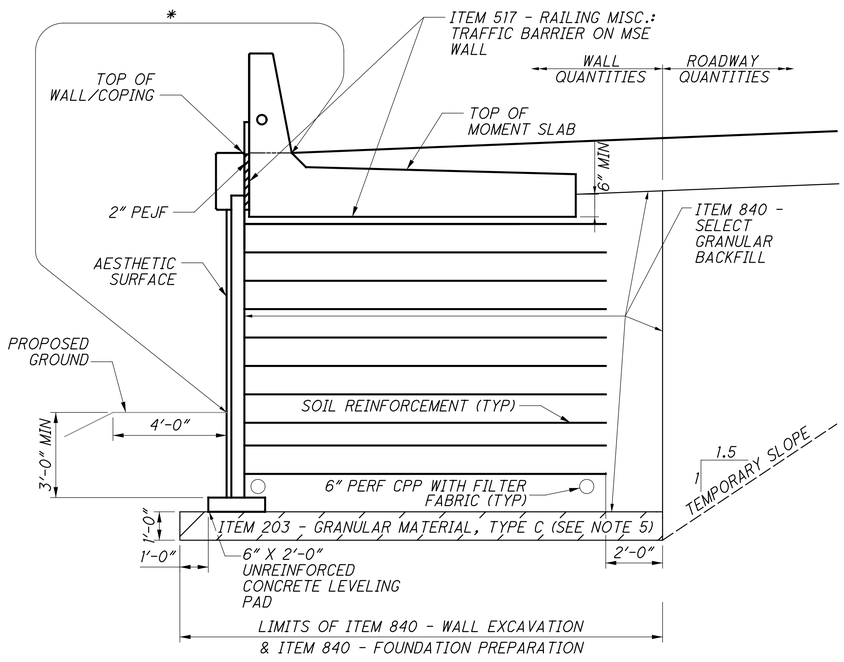
PLAN AND ELEVATION 2 OF 2
MSE RETAINING WALL J1

HAM-75-7.85
PID No. 77889

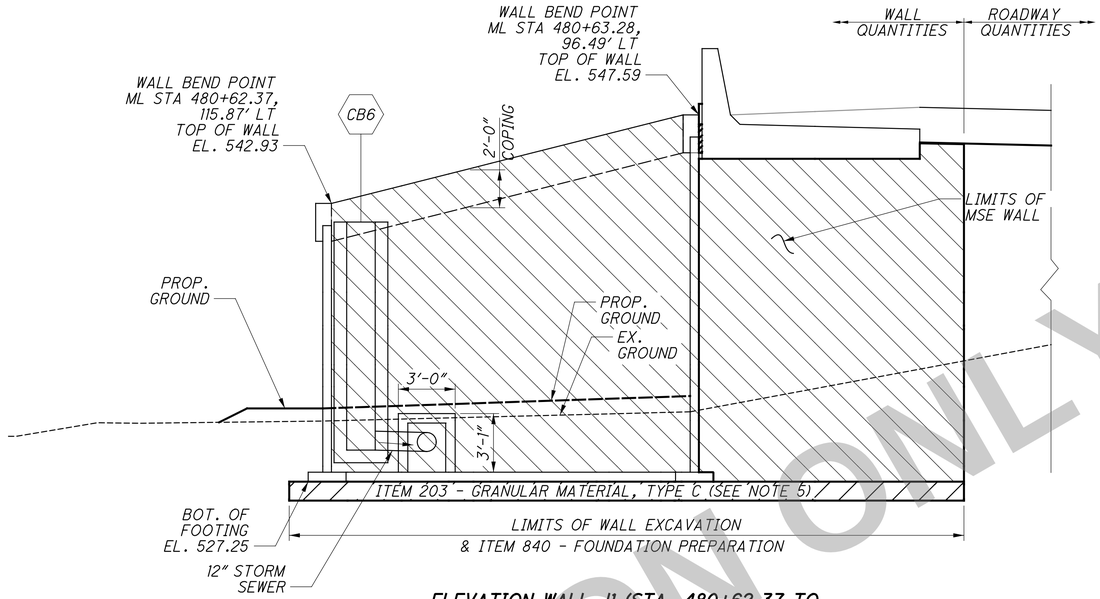
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2017

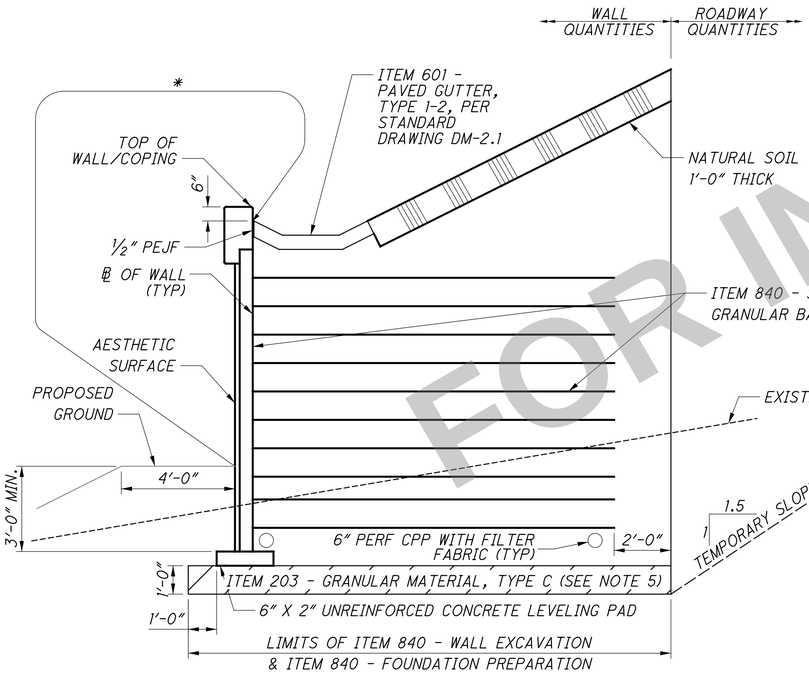
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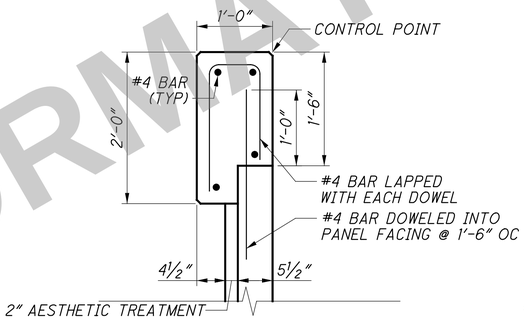
TYPICAL SECTION WALL J1



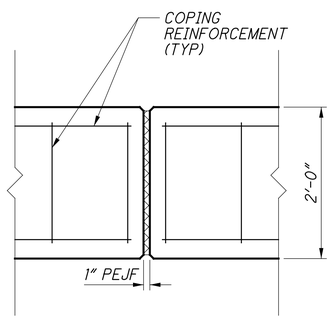
ELEVATION WALL J1 (STA. 480+62.37 TO STA. 480+63.28)
ROADWAY C/S STA 480+62.50



TYPICAL SECTION WALL J1-MSE WALL



COPING DETAIL



COPING EXPANSION JOINTS

* - LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) AND ITEM 512 - SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)

MINIMUM LAP LENGTHS:
#5 LAP LENGTH = 2'-5"
#6 LAP LENGTH = 2'-11"

NOTES:

1. ALL ITEMS SHOWN ON THIS SHEET, EXCLUDING PAVEMENT, ARE INCIDENTAL TO RAILING MISC: TRAFFIC BARRIER ON MSE WALL.
2. CONTROL JOINT: SAWCUT 1¼" DEEP CONTROL JOINTS ALONG THE PERIMETER AS SHOWN ON THIS SHEET AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE.

   USE AN EDGE GUIDE, FENCE OR JIG TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE AND ALIGNED ON ALL FACES OF THE BARRIER. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF ¼".

   SEAL THE PERIMETER OF THE CONTROL JOINT TO A MINIMUM DEPTH OF 1" WITH A POLYURETHANE OR POLYMERIC MATERIAL CONFORMING TO C920, TYPE S. LEAVE THE BOTTOM ½" OF BOTH THE INSIDE AND OUTSIDE FACES OF THE BARRIER UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE.
3. SEE PLANS FOR BARRIER CONTROL JOINT LOCATIONS.
4. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/45
5. ITEM 203 - GRANULAR MATERIAL, TYPE C SHALL BE INCLUDED FOR PAYMENT WITH ITEM 840 - FOUNDATION PREPARATION.

FOR INFORMATION ONLY

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6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED JLM | DRAWN SMJ | REVIEWED SSK | DATE 12-15-21
CHECKED NCK | REVISED | STRUCTURE FILE NUMBER

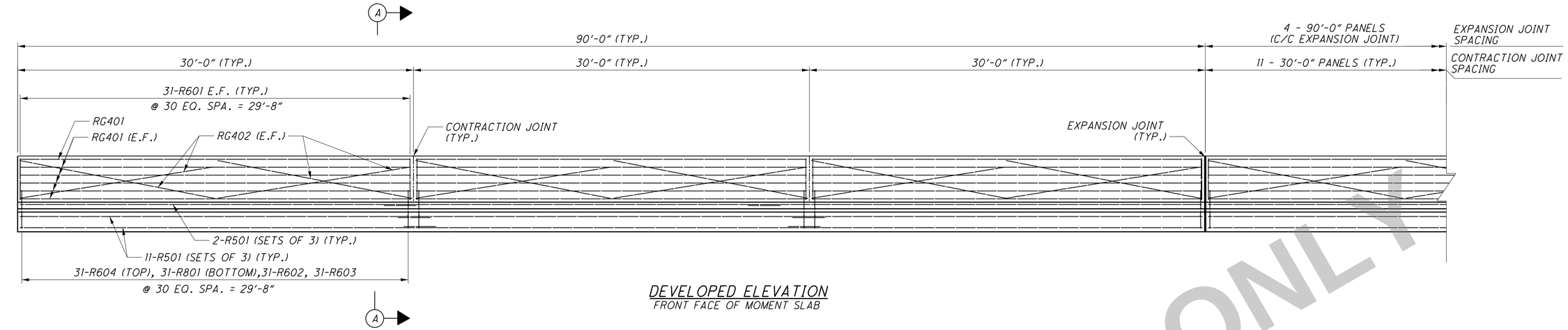
TYPICAL MSE WALL, BARRIER, AND SLEEPER SLAB DETAILS 1 OF 2
MSE RETAINING WALL J1

HAM-75-7.85
PID No. 77889

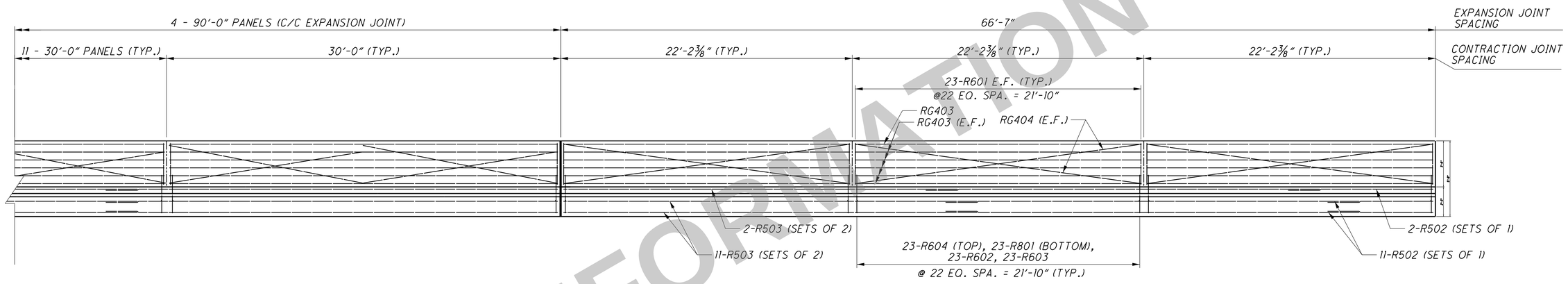
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2017

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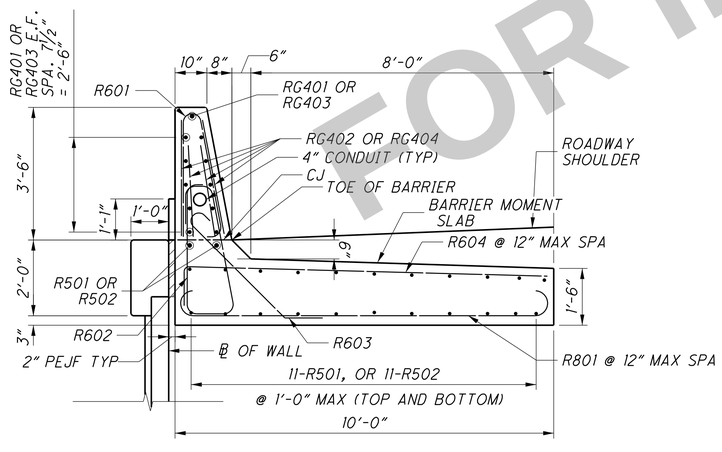


DEVELOPED ELEVATION
FRONT FACE OF MOMENT SLAB

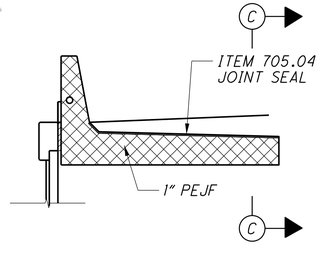


DEVELOPED ELEVATION
FRONT FACE OF MOMENT SLAB

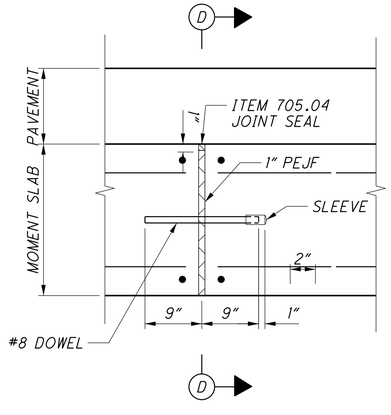
MINIMUM LAP LENGTHS
#5 BAR = 2'-5"
#6 BAR = 2'-11"



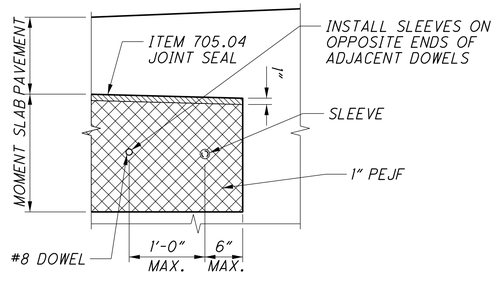
SECTION A-A



BARRIER AND MOMENT SLAB AT EXPANSION JOINT



SECTION C-C



SECTION D-D

NOTES:

1. *-FIELD BEND ALONG CURVE 41/45
2. FOR ABBREVIATIONS LEGEND, SEE SHEET 2/45.
3. MAXIMUM SPACING OF EXPANSION JOINTS SHALL BE 90'-0".

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6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED	DRAWN	REVIEWED	DATE
JLM	SMJ	SSK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

BARRIER AND SLEEPER SLAB DETAILS 2 OF 2
MSE RETAINING WALL J1

HAM-75-7.85
PID No. 77889

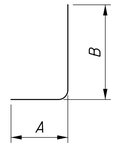
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2017

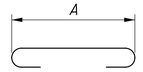
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MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
REINFORCING SCHEDULE											
R501	408	31'-6"	13405	ST.							
R502	24	8'-1"	202	ST.							
R601	534	7'-2"	5748	39	6"	3'-3"	3'-3"	1'-1"		2"	
R602	534	10'-0"	8021	41	10"	7"	1'-0"	3'-5"		0	
R603	534	5'-6"	4411	18	3'-10"	9"	9"	0	0:00		
R604	534	10'-6"	8422	1	1'-0"	9'-8"	0				
R801	534	11'-4"	16158	17	9'-8"						
		TOTAL	56367								

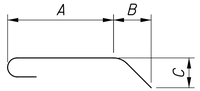
MARK	NUMBER TOTAL	LENGTH	TYPE	DIMENSIONS						
				A	B	C	D	E	R	INC
GLASS FIBER BARS										
RG401	165	29'-8"	ST							
RG402	120	15'-0"	ST							
RG403	33	21'-10"	ST							
RG404	12	22'-1"	ST							
	TOTAL	7681	FT							



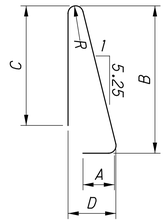
TYPE-1



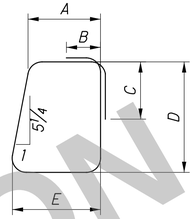
TYPE-17



TYPE-18



TYPE-39



TYPE-41

FOR INFORMATION ONLY

NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE 3 DIGITS ARE USED, AND THE FIRST 2 DIGITS WHERE FOUR DIGITS ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, F601 IS A NO 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. "R" INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD" WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

2. ALL REINFORCING STEEL TO BE EPOXY COATED.

LEGEND:

** - FIELD CUT

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

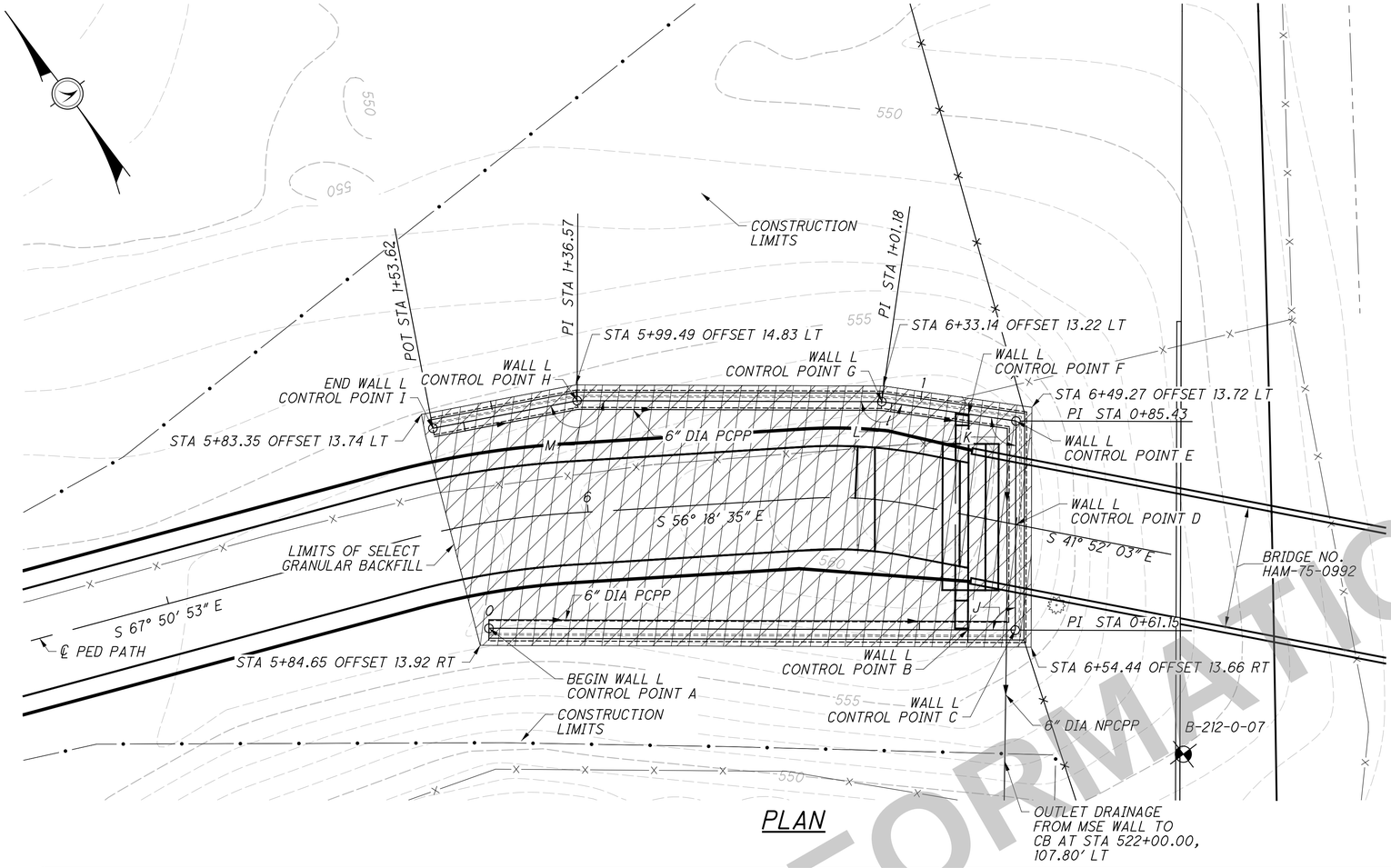
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JLM	SMJ	SSK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
NCK			

REINFORCING STEEL SCHEDULE
MSE RETAINING WALL J1

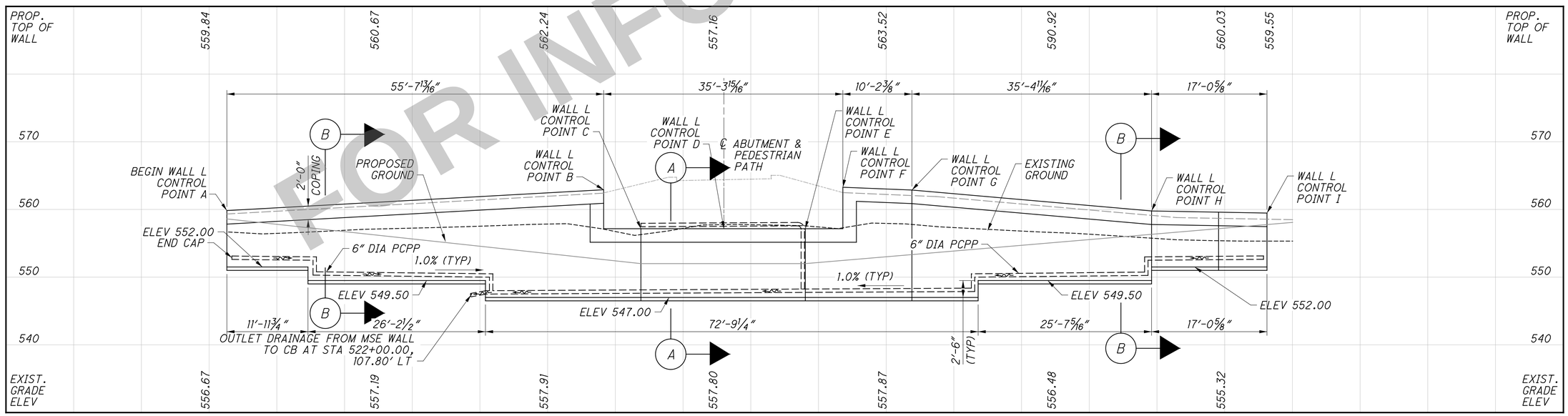
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PID No. 77889

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PLAN



ELEVATION

WALL L CONTROL POINT TABLE					
WALL CONTROL POINT	℄ BRIDGE STATION	℄ BRIDGE OFFSET	WALL STATION	TOW ELEVATION	TOP OF LEVELLING PAD ELEVATION
A	5+86.21	12.16 (RT.)	0+00.00	559.84	552.00
B	6+46.86	13.07 (RT.)	0+55.65	562.91	549.50
C	6+52.27	12.05 (RT.)	0+61.15	557.16	547.00
D	6+49.99	0.00	0+73.41	557.16	547.00
E	6+47.76	11.81 (LT.)	0+85.43	557.16	547.00
F	6+42.21	11.55 (LT.)	0+90.98	563.86	547.00
G	6+33.16	11.38 (LT.)	1+01.18	563.45	547.00
H	5+99.54	12.99 (LT.)	1+36.57	560.36	550.00
I	5+84.21	11.90 (LT.)	1+53.62	560.05	552.00

DEFLECTION ANGLE	
POINT	DEFLECTION ANGLE
J	90°00'00"
K	98°00'00"
L	172°00'00"
M	169°00'00"

NOTES:

1. ALL TOP OF WALL ELEVATIONS ARE GIVEN TO TOP OF COPING.
2. WALL BASELINE IS LOCATED AT THE BACK OF MSE WALL.
3. SEE SHEET 45/45 FOR SECTIONS A-A AND B-B.
4. SEE SHEET 2/45 FOR ABBREVIATION LEGEND.

LEGEND:

TOW = TOP OF WALL

▭ - WALL EXCAVATION AND ITEM 203 GRANULAR MATERIAL, TYPE C AND ITEM 840 FOUNDATION PREPARATION AND SELECT GRANULAR BACKFILL OR ITEM 203 GRANULAR MATERIAL, TYPE B, AS PER PLAN

PCPP = PERFORATED CORRUGRATED PLASTIC PIPE

NPCPP = NON-PERFORATED CORRUGRATED PLASTIC PIPE

→ 6" DIA PCPP OR NPCPP

FOR INFORMATION ONLY

DESIGN AGENCY
2001 Crocker Road, Suite 200, Columbus, OH 43220

DESIGNED RT | DRAWN RT | CHECKED JWE | REVIEWED NCM | DATE 12-15-21

STRUCTURE FILE NUMBER

REVISED

MSE WALL PLAN AND PROFILE

MSE RETAINING WALL L

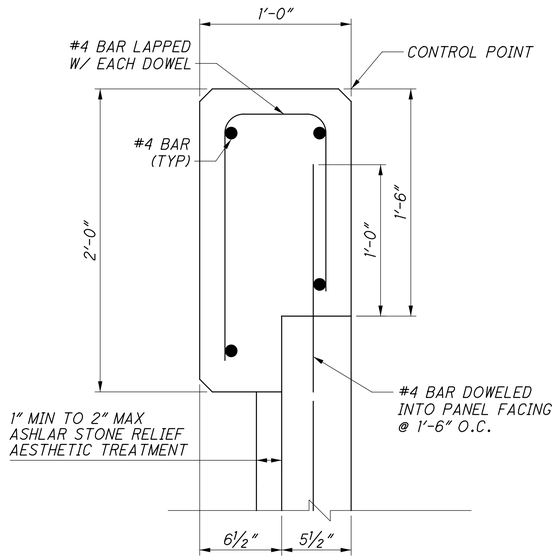
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PID No. 77889

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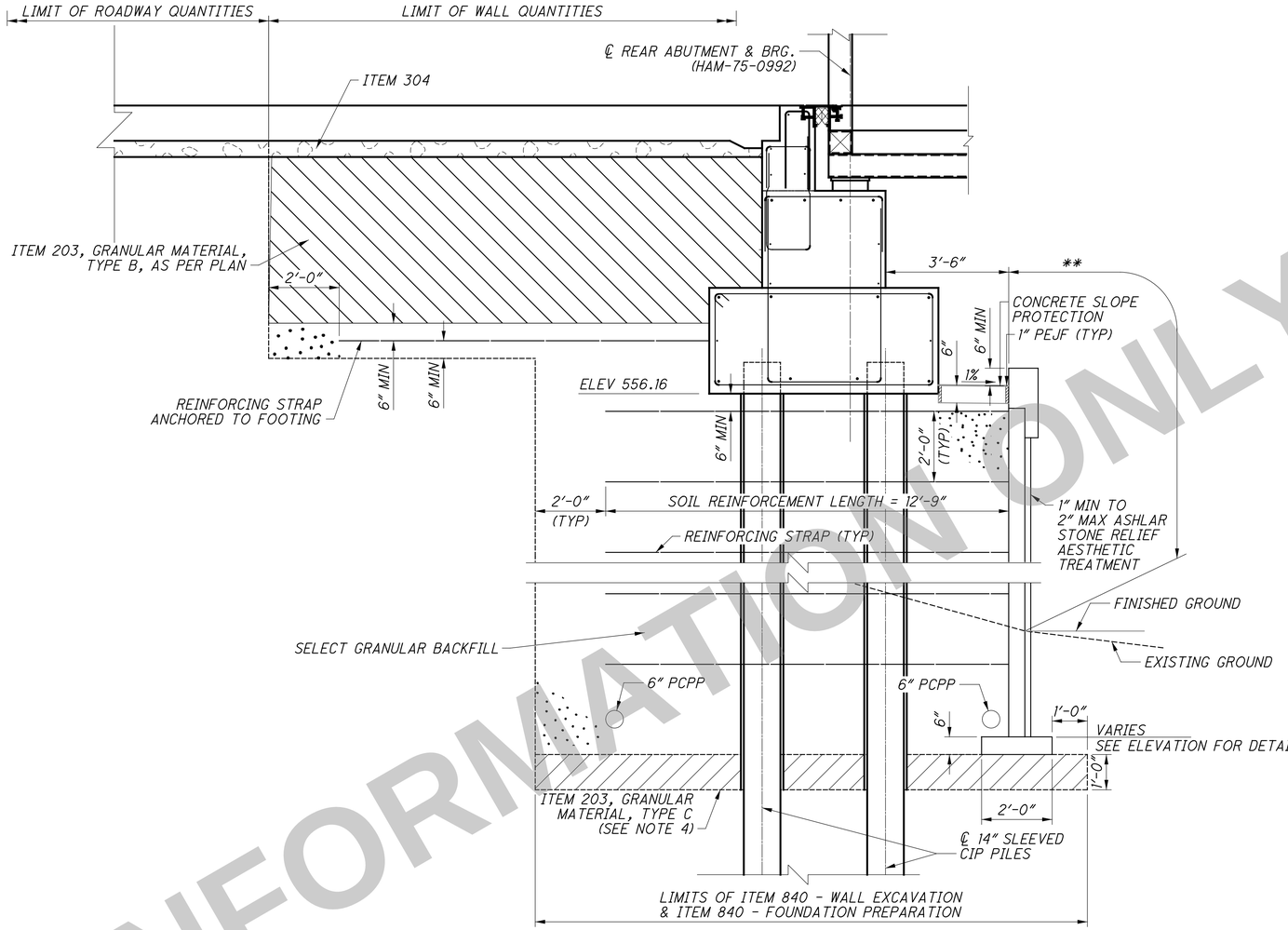
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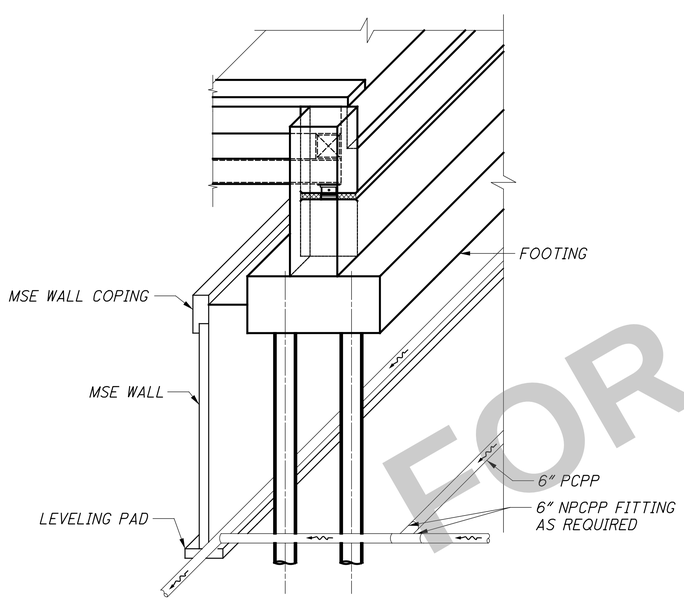


MSE WALL COPING DETAIL

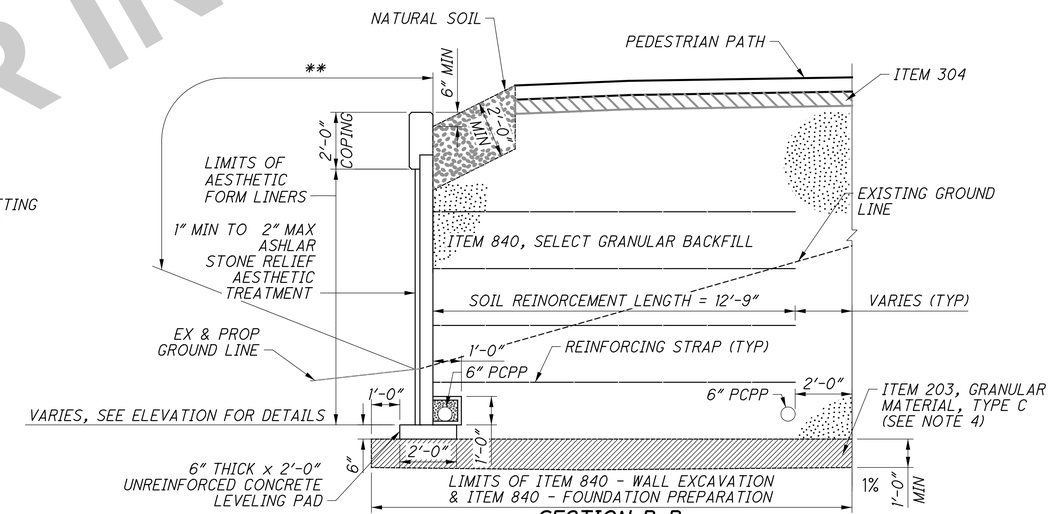
(ALL REINFORCING STEEL TO BE EPOXY COATED)



SECTION A-A



MSE WALL DRAINAGE DETAIL



SECTION B-B

LEGEND:

** - LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) & SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)

NOTES:

1. SEE SHEET 1492/2017 FOR ABUTMENT DETAILS.
2. SEE SHEET 1/45 FOR AESTHETIC NOTES.
3. SEE SHEET 2/45 FOR ABBREVIATION LEGEND.
4. ITEM 203 - GRANULAR MATERIAL, TYPE C SHALL BE INCLUDED FOR PAYMENT WITH ITEM 840 - FOUNDATION PREPARATION.

FOR INFORMATION ONLY

DESIGN AGENCY
2001 Crown Centre Drive, Suite 201, Columbus, OH 43201

DESIGNED	DRAWN	REVIEWED	DATE
RT	RT	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JWE			

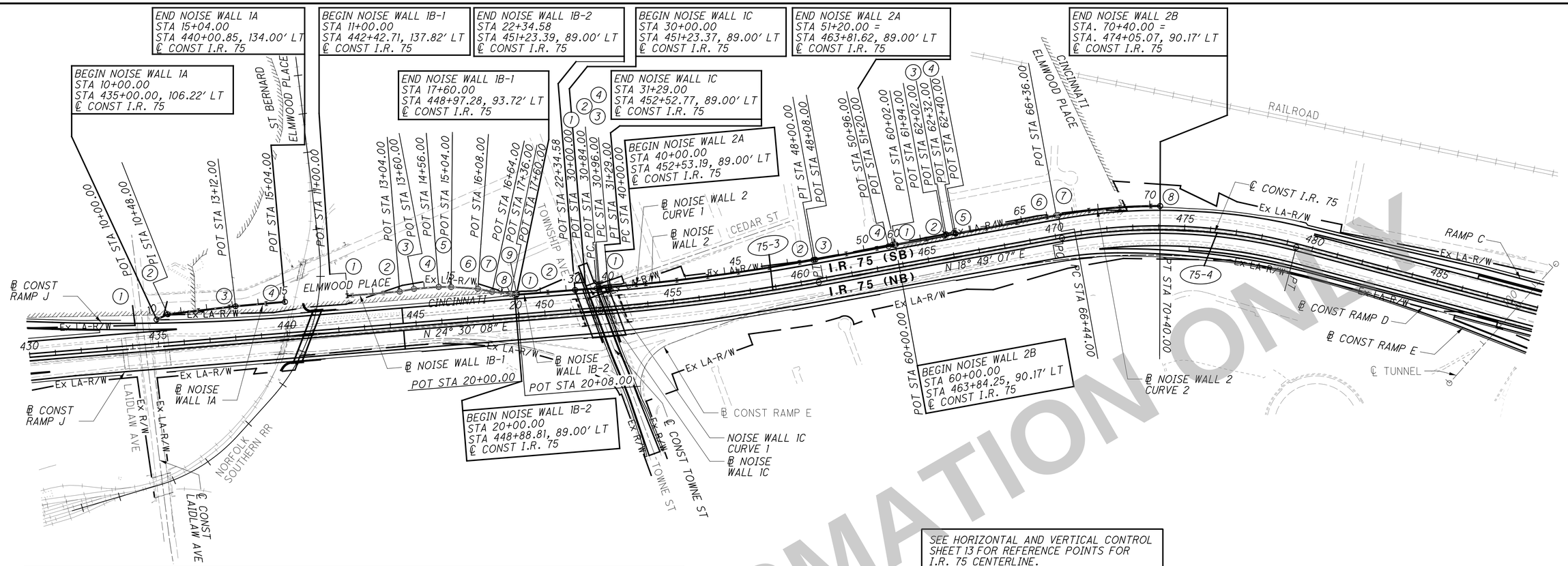
MSE WALL DETAILS
MSE RETAINING WALL L

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PID No. 77889

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SEE HORIZONTAL AND VERTICAL CONTROL SHEET 13 FOR REFERENCE POINTS FOR I.R. 75 CENTERLINE.

NOISE WALL BASELINE GEOMETRY

PI NO	NOISE BARRIER STATION	I.R. 75	I.R. 75 OFFSET	NORTHING	EASTING	BEARING
	WALL 1A					
1	10+00.00	435+00.00	106.22' LT	435,822.84	1,405,540.60	N 4° 16' 32" E
2	10+48.00	435+45.04	122.81' LT	435,870.71	1,405,544.17	N 22° 23' 05" E
3	13+12.00	438+08.86	132.57' LT	436,114.82	1,405,644.71	N 24° 04' 28" E
4	15+04.00	440+00.85	134.00' LT	436,290.11	1,405,723.03	
	WALL 1B-1					
1	11+00.00	442+42.71	137.82' LT	436,511.78	1,405,819.86	N 24° 30' 33" E
2	13+04.00	444+46.71	137.79' LT	436,697.40	1,405,904.49	N 18° 21' 58" E
3	13+60.00	445+02.39	143.78' LT	436,750.54	1,405,922.14	N 24° 32' 10" E
4	14+56.00	445+98.39	143.72' LT	436,837.88	1,405,962.00	N 29° 38' 40" E
5	15+04.00	446+46.20	139.42' LT	436,879.59	1,405,985.74	N 33° 01' 59" E
6	16+08.00	447+49.05	123.99' LT	436,966.78	1,406,042.44	N 41° 12' 17" E
7	16+64.00	448+02.69	107.90' LT	437,008.91	1,406,079.33	N 35° 51' 23" E
8	17+36.00	448+73.28	93.72' LT	437,067.27	1,406,121.50	N 24° 30' 08" E
9	17+60.00	448+97.28	93.72' LT	437,089.11	1,406,131.45	
	WALL 1B-2					
1	20+00.00	448+88.81	89.00' LT	437,079.44	1,406,132.24	N 24° 30' 08" E
2	20+08.00	448+96.81	89.00' LT	437,086.72	1,406,135.56	N 24° 30' 08" E
3	22+34.58	451+23.39	89.00' LT	437,292.37	1,406,229.29	
	WALL 1C					
1	30+00.00	451+23.37	89.00' LT	437,292.88	1,406,229.52	N 24° 30' 08" E
2	30+84.00	452+07.37	89.00' LT	437,369.32	1,406,264.36	N 24° 29' 45" E
3	PC 30+96.00	452+19.42	89.00' LT	437,380.24	1,406,269.33	BK N 24° 28' 12" E
4	PT 31+29.00	452+52.77	89.00' LT	437,410.30	1,406,282.94	AH N 24° 14' 51" E

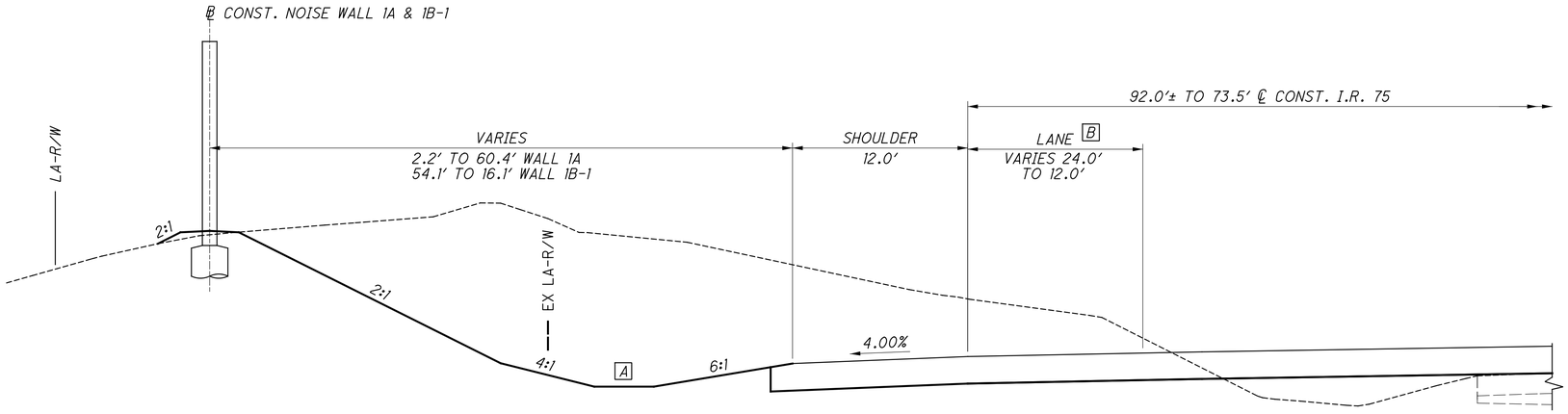
NOISE WALL BASELINE GEOMETRY

PI NO	NOISE BARRIER STATION	I.R. 75	I.R. 75 OFFSET	NORTHING	EASTING	BEARING
	WALL 2A					
1	PC 40+00.00	452+53.19	89.00' LT	437,410.68	1,406,283.11	
2	PT 48+00.00	460+61.56	89.00' LT	438,154.48	1,406,576.86	N 18° 49' 53" E
3	48+08.00	460+69.62	89.00' LT	438,162.05	1,406,579.44	N 18° 49' 07" E
4	50+96.00	463+57.62	89.00' LT	438,434.66	1,406,672.34	N 16° 01' 56" E
5	51+20.00	463+81.62	89.00' LT	438,457.72	1,406,678.97	
	WALL 2B					
1	60+00.00	463+84.25	90.17' LT	438,460.24	1,406,679.83	N 18° 49' 07" E
2	60+02.00	463+86.25	90.17' LT	438,462.13	1,406,680.47	N 18° 49' 07" E
3	61+94.00	465+78.25	90.17' LT	438,643.87	1,406,742.41	N 14° 40' 53" W
4	62+02.00	465+84.92	94.58' LT	438,651.61	1,406,740.38	N 18° 49' 07" E
5	62+32.00	466+14.92	94.58' LT	438,680.00	1,406,750.06	N 52° 19' 07" E
6	62+40.00	466+21.59	90.17' LT	438,684.89	1,406,756.39	N 18° 49' 07" E
7	66+36.00	470+17.60	90.17' LT	439,059.73	1,406,884.13	N 18° 49' 33" E
8	PC 66+44.00	470+25.50	90.17' LT	439,067.30	1,406,886.71	
9	PT 70+40.00	474+05.07	90.17' LT	439,428.30	1,407,048.14	

FOR INFORMATION ONLY

NOISE WALL 1 & 2 SCHEMATIC PLAN
I.R. 75
HAM-75-7.85
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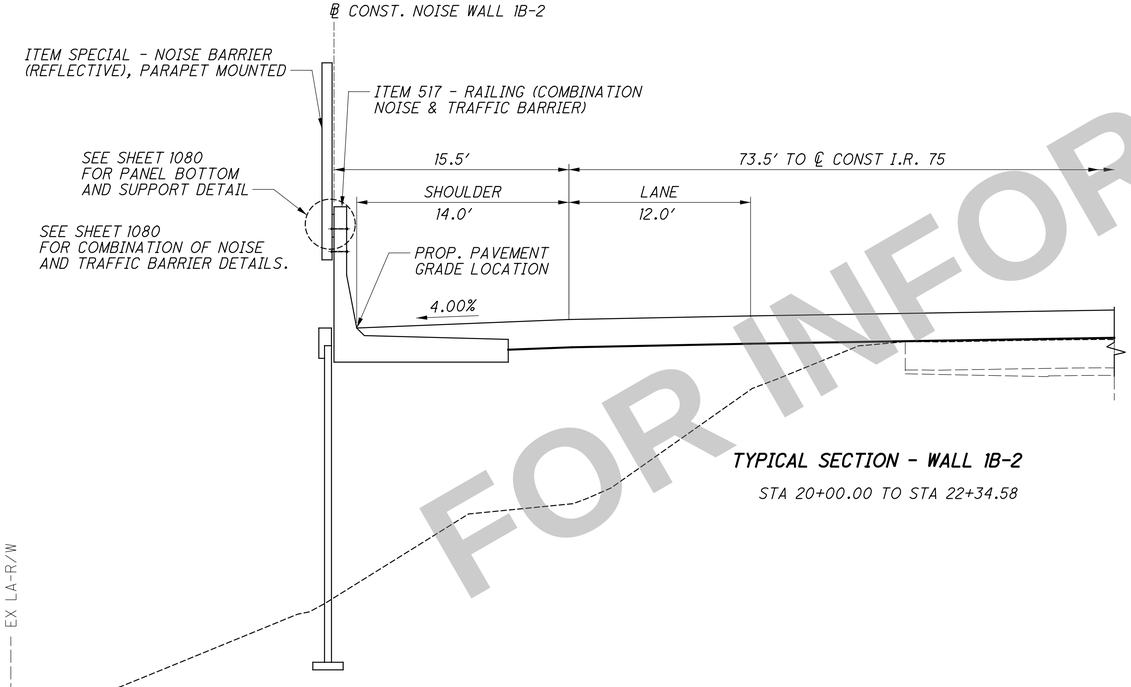
A FOR ROADSIDE GRADING AT NOISE WALL LOCATIONS SEE SHEET 28 & NOISE WALL 1A,1B, & 1C CROSS SECTION SHEETS 467 TO 481.

B I.R. 75 SB AUXILIARY/ACCELERATION LANE (RAMP J)

TYPICAL SECTION - WALL 1A & 1B-1

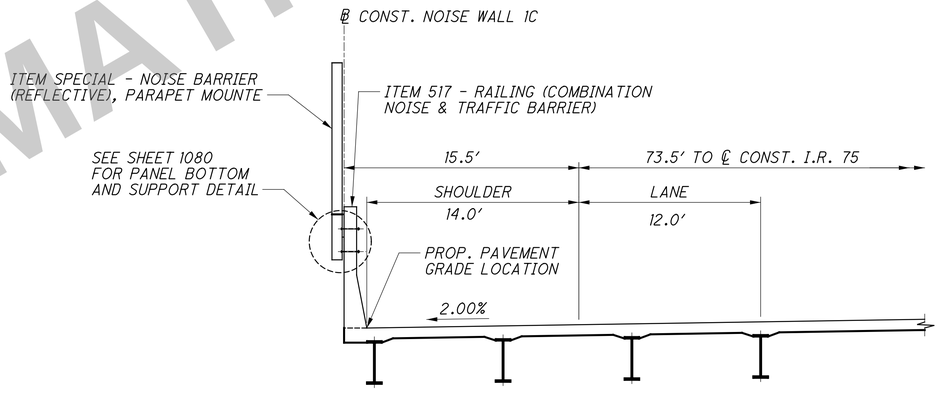
STA. 10+00.00 TO STA. 15+04.00 - WALL 1A

STA. 11+00.00 TO STA. 17+60.00 - WALL 1B-1



TYPICAL SECTION - WALL 1B-2

STA 20+00.00 TO STA 22+34.58



TYPICAL SECTION - WALL 1C

STA 30+00.00 TO STA 31+29.00

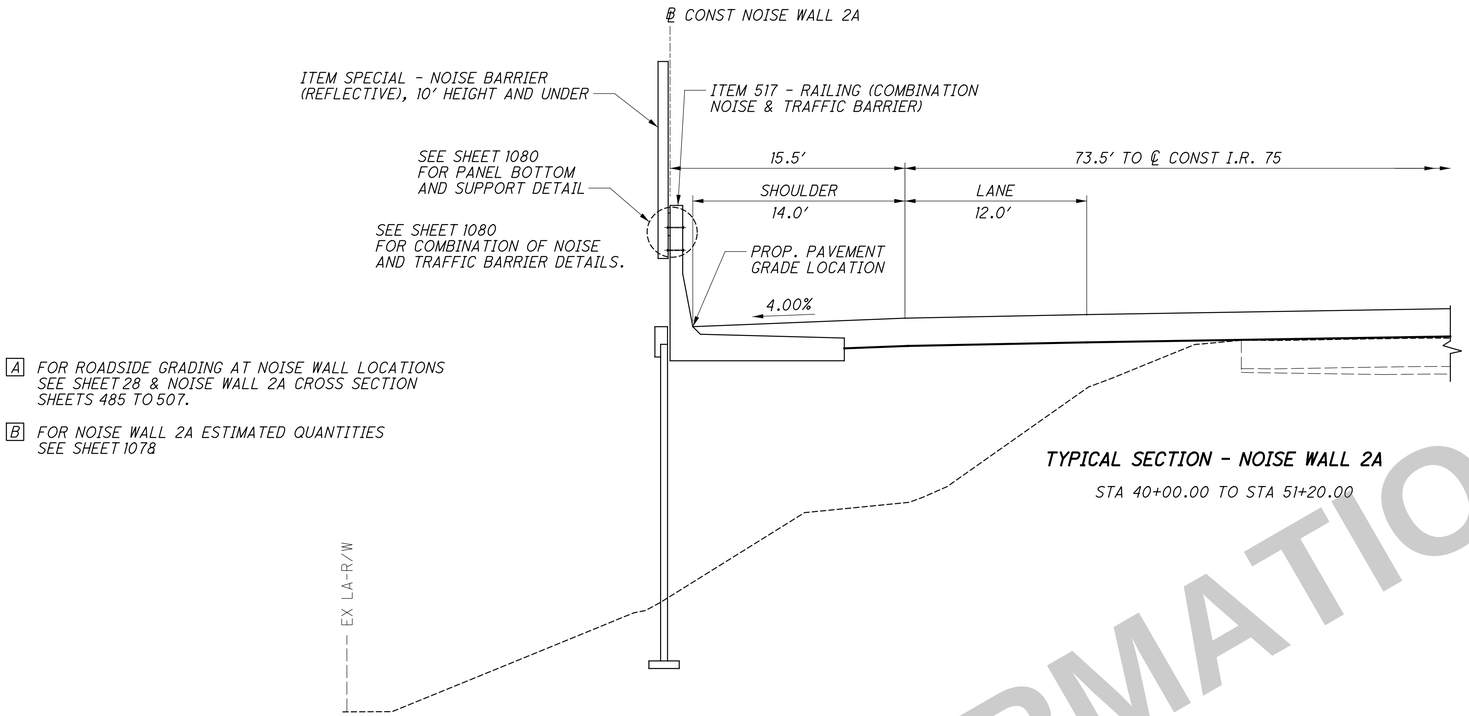
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NOISE WALL 1A & 1B TYPICAL SECTIONS

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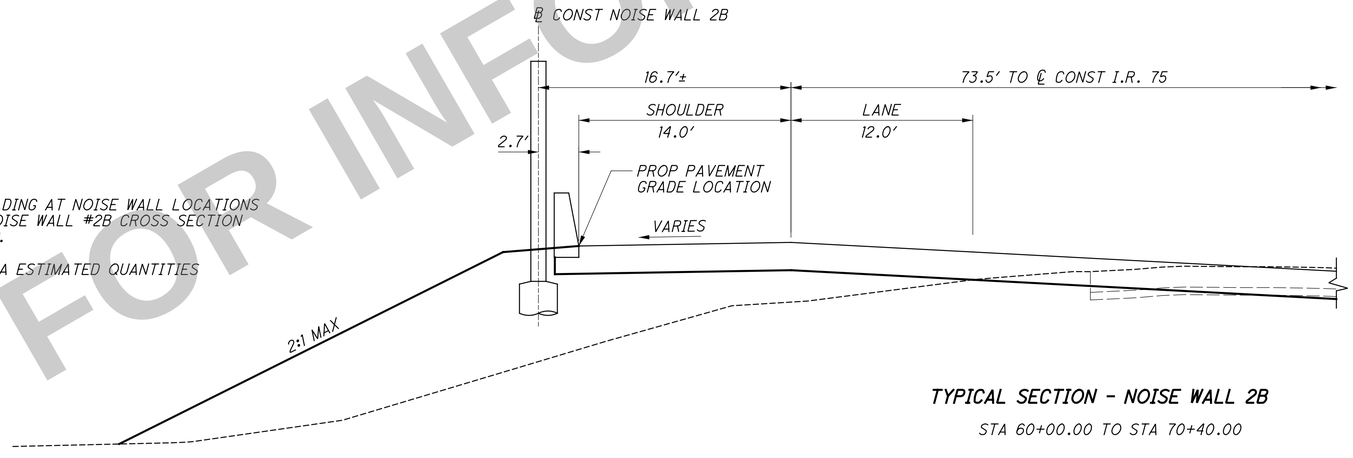


A FOR ROADSIDE GRADING AT NOISE WALL LOCATIONS SEE SHEET 28 & NOISE WALL 2A CROSS SECTION SHEETS 485 TO 507.

B FOR NOISE WALL 2A ESTIMATED QUANTITIES SEE SHEET 1078

TYPICAL SECTION - NOISE WALL 2A

STA 40+00.00 TO STA 51+20.00



A FOR ROADSIDE GRADING AT NOISE WALL LOCATIONS SEE SHEET 28 & NOISE WALL #2B CROSS SECTION SHEETS 507 TO 529.

B FOR NOISE WALL 2A ESTIMATED QUANTITIES SEE SHEET 1078

TYPICAL SECTION - NOISE WALL 2B

STA 60+00.00 TO STA 70+40.00

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NOISEWALL 2 TYPICAL SECTIONS

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NOISE WALL NOTES

1. SEE ODOT STANDARD CONSTRUCTION DRAWING NBS-1-09 FOR FURTHER DETAILS.

2. SHOP DRAWING SUBMITTALS SHALL INCLUDE:
   SCALED DRAWINGS ON 11 X 17 SHEETS IN PDF FORMAT
   SHOW THE ACOUSTIC PROFILE LINE SHOWN ON THESE PLANS ON SHOP DRAWINGS ALL CALCULATIONS IN PDF FORMAT

3. ITEM 512- SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION):
   APPLY A PERMANENT GRAFFITI COATING QUALIFIED ACCORDING TO SUPPLEMENT 1083 THAT IS COMPATIBLE WITH THE CONCRETE SEALER OVER WHICH IT IS APPLIED. APPLY THE GRAFFITI COATING IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS. APPLY THE GRAFFITI COATING OVER THE ENTIRE EXPOSED SURFACE AREA OF THE NOISE BARRIER PANELS AND POSTS.

4. ALL NOISE BARRIER PANELS AND POSTS SHALL HAVE A 12" INTEGRAL CAP WITH A 1.5" RUSTIFICATION GROOVE OR RELIEF.

5. THE ARCHITECTURAL TREATMENT ON THE NOISE PANELS SHALL BE CREATED USING CONCRETE CAST IN FORMLINERS ON BOTH SIDES OF THE PANELS. STAMPING OF THE ARCHITECTURAL PATTERNS IS NOT ACCEPTABLE.

6. THE ARCHITECTURAL FINISH SHALL BE BEIGE ARCHITECTURAL POLYMERS NO. 9050 SMALLED AGED PER SHEET 1079B ON THE FREEWAY SIDE AND ARCHITECTURAL POLYMERS NO. 9110 LARGE STONE DRY STACK ON THE PARK AND RESIDENTIAL SIDE. FEDERAL COLOR NUMBER FOR BEIGE IS NO. 17778. THE ARCHITECTURAL POLYMERS PATTERN 9050 SHALL MEET THE CUT SHEET ILLUSTRATED ON SHEET 1079B.

7. SEE ODOT STANDARD CONSTRUCTION DRAWING NBS-1-09 FOR FURTHER DETAILS.

8. THESE NOTES APPLY TO EACH NOISE BARRIER ITEM:
   NOISE BARRIER (REFLECTIVE)
   NOISE BARRIER (REFLECTIVE), PARAPET MOUNTED

9. SEAL NOISE BARRIER PANEL AND POSTS WITH ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).

COMBINATION NOISE AND TRAFFIC BARRIER

DESIGN SPECIFICATIONS:
THE STRUCTURE CONFORMS TO "THE LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 5TH EDITION, 2012, AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN DATA:
CONCRETE - MINIMUM COMPRESSIVE STRENGTH = 4000 PSI
REINFORCING STEEL - MINIMUM YIELD STRENGTH = 60,000 PSI
STRUCTURAL STEEL - MINIMUM YIELD STRENGTH = 50,000 PSI

MATERIAL:
STRUCTURAL STEEL - ASTM A709, GRADE 50
(FURNISH ACCORDING TO 711.01)
HIGH STRENGTH BOLTS - 1" DIAMETER, ASTM A325
(FURNISH ACCORDING TO 711.09)

FABRICATION:
FABRICATE STRUCTURAL STEEL MEMBERS ACCORDING TO 513.

GALVANIZING:
GALVANIZE ALL STRUCTURAL STEEL SHAPES, PLATES, HARDWARE AND ACCERSSORIES IN ACCORDANCE WITH 711.02.

PAINT OVER ALL GALVANIZE STRUCTURAL STEEL SHAPES, PLATES, HARDWARE AND ACCERSSORIES. PAINT SHALL MATCH SURFACE COLOR OF NOISE WALLS.

EXPANSION & CONTRACTION JOINTS:
PLACE EXPANSION JOINTS AT A MAXIMUM SPACING OF 90'-0" AND CONTRACTION JOINTS AT A MAXIMUM SPACING OF 15'-0", UNLESS NOTED OTHERWISE.

CONSTRUCT THE EXPANSION JOINT FROM THE BOTTOM OF THE SLEEPER SLAB TO THE TOP OF THE 8'-0" CAST-IN-PLACE WALL. DO NOT EXTEND REINFORCING STEEL THROUGH EXPANSION JOINTS.

FOOTINGS:
FOR BARRIERS WITH SLEEPER SLABS ON MSE WALLS, PLACE THE BOTTOM OF THE SLEEPER SLAB PARALLEL THE THE ROADWAY GRADE.

FORMLINERS:
REFER TO THE PROJECT PLANS FOR SPECIFIC IFORMATION REGARDING FORMLINERS. THE TRAFFIC FACE OF THE BARRIER MAY BE TEXTURED TO A MAXIMUM DEPTH OF 1/2" ABOVE THE 42" SINGLE SLOPE BARRIER. THE OPPOSITE FACE OF THE BARRIER MAY BE TEXTURED TO A MAXIMUM DEPTH OF 1" ABOVE THE 42" BARRIER. MAINTAIN A MINIMUM CLEAR COVER OF 2" OVER REINFORCING STEEL.

REINFORCING STEEL:
FURNISH AND INSTALL EPOXY COATED REINFORCING STEEL ACCORDING TO CMS 509. THE MINIMUM LAP LENGTHS ARE 3'-7" FOR #5 BARS AND 4'-4" FOR #6 BARS.

METHOD OF MEASUREMENT:
THE DEPARTMENT WILL MEASURE THE COMBINATION NOISE AND TRAFFIC BARRIER BY THE NUMBER OF FEET MEASURED ALONG ITS LENGTH.

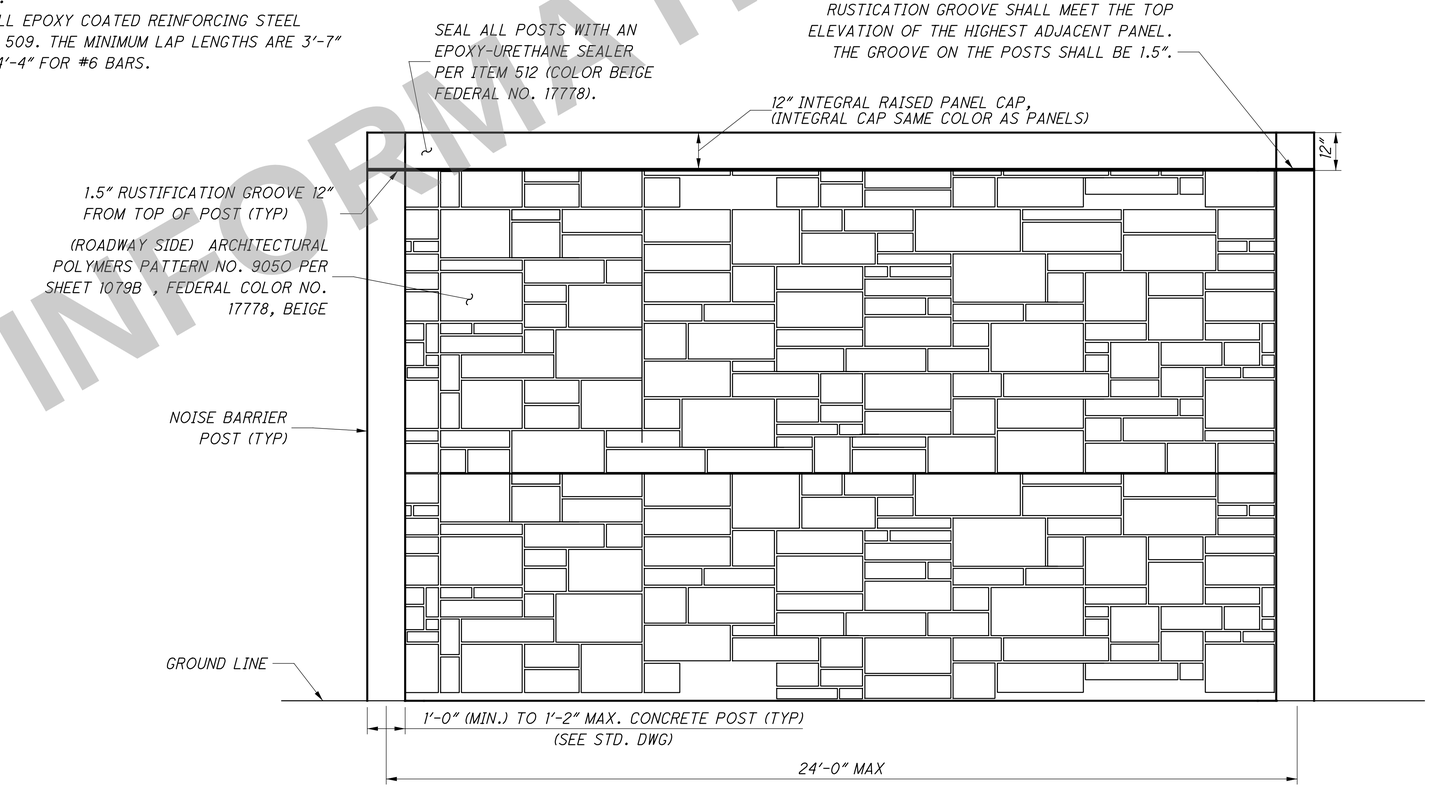
THE DEPARTMENT WILL MEASURE THE NOISE BARRIER BY THE NUMBER OF SQUARE FEET. THE DEPARTMENT WILL MEASURE THE TOTAL AREA AS THE SUM OF THE AREA OF THE INDIVIDUAL PANEL SECTIONS. THE DEPARTMENT WILL MEASURE THE HEIGHT OF AN INDIVIDUAL PANEL SECTION FROM THE BOTTOM OF THE LOWEST PANEL TO THE TOP OF THE CAP. THE DEPARTMENT WILL MEASURE THE WIDTH OF AN INDIVIDUAL PANEL SECTION AS THE CENTER TO CENTER SPACING OF ADJACENT STEEL POSTS.

BASIS OF PAYMENT:
THE DEPARTMENT WILL INCLUDE THE COSTS ASSOCIATED WITH FURNISHING AND INSTALLING THE CONCRETE AND REINFORCING STEEL WITH THE BARRIER FOR PAYMENT. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES OF THE COMBINATION NOISE AND TRAFFIC BARRIER AS FOLLOWS:

ITEM 517 - RAILING (COMBINATION NOISE AND TRAFFIC BARRIER ON MSE WALL WITH FLEXIBLE PAVEMENT)

THE DEPARTMENT WILL INCLUDE THE COSTS ASSOCIATED WITH FURNISHING AND INSTALLING ALL ANCHOR BOLTS, STEEL POSTS AND PANELS WITH THE NOISE BARRIERS FOR PAYMENT. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES OF THE NOISE BARRIERS AS FOLLOWS:

ITEM SPECIAL - NOISE BARRIER (REFLECTIVE)



NOISE BARRIER ELEVATION

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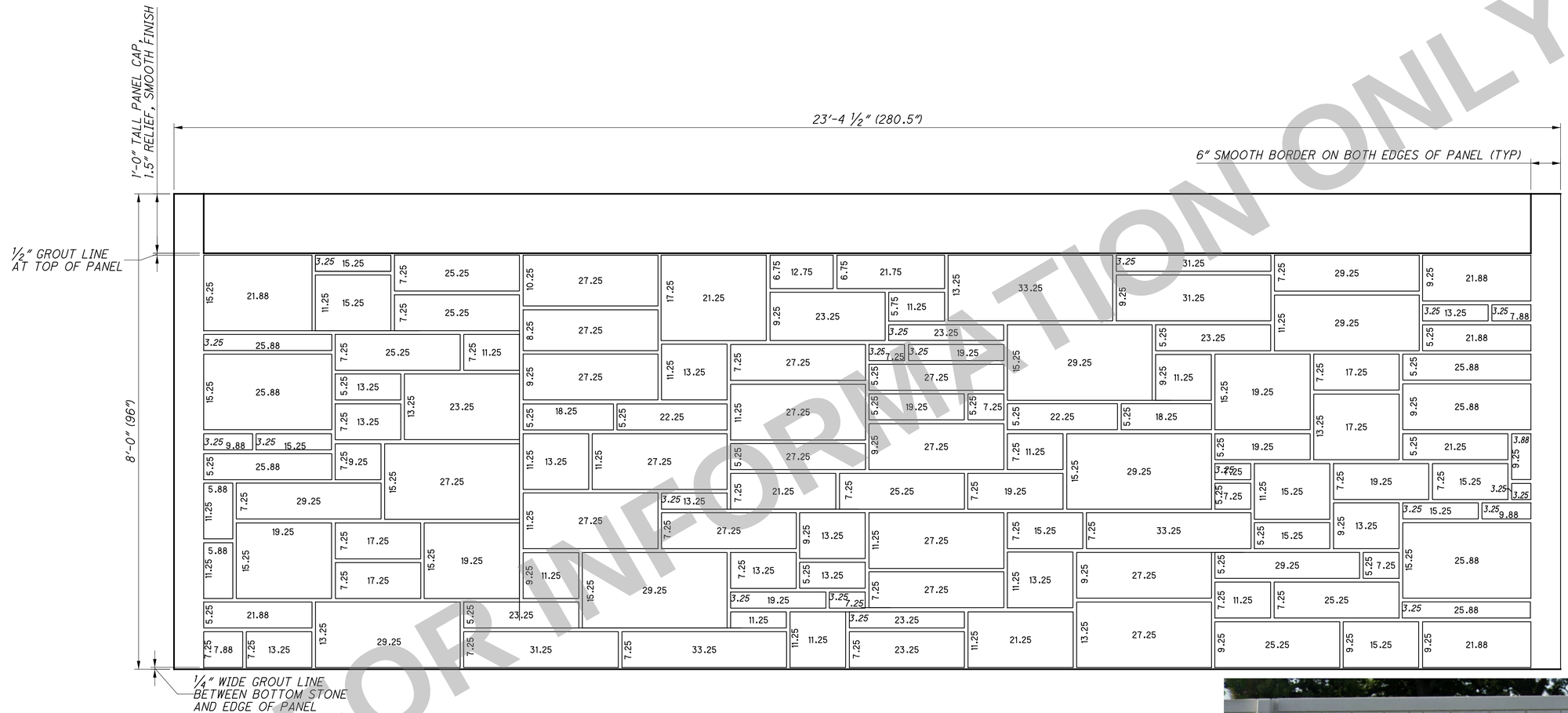
CALCULATED CFR CHECKED NCK

NOISE WALL GENERAL NOTES AND DETAILS

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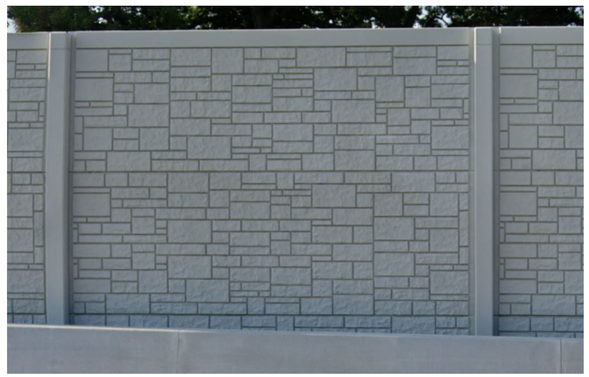
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ARCHITECTURAL POLYMERS NO. 9050 PATTERN ELEVATION

(DIMENSIONS FOR INDIVIDUAL BLOCKS ARE IN INCHES)

NOTES:

1. GROUT LINE BETWEEN INDIVIDUAL STONES COMPRISING THE 9050 PATTERN ARE TO BE 0.75" IN WIDTH UNLESS OTHERWISE NOTED.
2. INDIVIDUAL BLOCKS COMPRISING THE 9050 PATTERN ARE TO PROVIDE A PATTERN RELIEF OF 1 TO 2 INCHES ABOVE THE ADJACENT SMOOTH GROUT LINE OR PANEL EDGE.
3. CREATE A 12" SMOOTH INTEGRAL PANEL CAP WITH A 1.5" RELIEF.



SAMPLE NOISE BARRIER PANEL

CALCULATED CFR
CHECKED NCK

ARCHITECTURAL POLYMERS NO. 9050

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REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

NBS-1-09 REVISED 01-15-21

ITEM 513 - STRUCTURAL STEEL, MISC.: C10x15.3
ITEM 513 - STRUCTURAL STEEL, MISC.: L4X4X1/2

STRUCTURAL STEEL IS ASTM A709, GRADE 50 AS PER CMS 711.01.

GALVANIZE ALL STRUCTURAL STEEL PER CMS 711.02.

PAYMENT FOR THIS WORK INCLUDES ALL MATERIAL, LABOR AND EQUIPMENT REQUIRED TO FABRICATE, GALVANIZE, TRANSPORT AND ERECT THESE STRUCTURAL STEEL SHAPES. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT UNIT PRICE BID PER FOOT FOR ITEM 513 - STRUCTURAL STEEL MISC.: C10x15.3, AND ITEM 513 - STRUCTURAL STEEL, MISC.: L4x4x1/2.

ITEM 513 - STRUCTURAL STEEL, MISC.: 5/8" DIA. A325 BOLTS

THIS ITEM IS USED TO MOUNT THE C10x15.3 TO THE EXISTING W8x28 SUPPORT POST THAT IS PART OF NOISE WALL 1B-2. THE BOLTS ARE ASTM A325. NUTS SHALL BE ASTM A563, GRADE DH AND WASHERS SHALL BE ASTM F436.

GALVANIZE THE BOLTS, NUTS AND WASHERS PER CMS 711.02. ENSURE THAT THE ENTIRE LENGTH OF BOLTS AND ALL SURFACES OF NUTS AND WASHERS ARE GALVANIZED.

PAYMENT FOR THIS ITEM INCLUDES ALL MATERIAL, LABOR AND EQUIPMENT REQUIRED TO GALVANIZE, TRANSPORT AND INSTALL THE BOLTS, NUTS AND WASHERS. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT UNIT PRICE BID PER EACH FOR ITEM 513 - STRUCTURAL STEEL, MISC.: 5/8" DIA. A325 BOLTS.

ITEM 513 - STRUCTURAL STEEL, MISC.: 5/8" DIA. THREADED ANCHOR RODS

THIS ITEM IS USED TO MOUNT THE C10x15.3 TO THE EXISTING GROUND MOUNTED CONCRETE POST THAT IS PART OF NOISE WALL 1B-1 & 2B AS WELL AS MOUNT THE L4x4x1/2 ANGLES TO THE CONBINATION NOISE AND TRAFFIC BARRIER AND MSE WALL COPING. THE 5/8" DIA. THREADED RODS FOR ADHESIVE ANCHORS SHALL BE ASTM A193 GRADE 87 WITH ASTM A563 NUTS AND ASTM F436 WASHERS.

GALVANIZE THE THREADED RODS, NUTS AND WASHERS PER CMS 711.02. ENSURE THAT THE ENTIRE LENGTH OF THE THREADED RODS AND ALL SURFACES OF NUTS AND WASHERS ARE GALVANIZED.

USE AN ANCHOR ADHESIVE EVALUATED ACCORDING TO ICCES REPORT AC308 "ACCEPTANCE CRITERIA FOR POST-INSTALLED ADHESIVE ANCHORS IN CONCRETE ELEMENTS", FOR CRACKED AND UNCRACKED CONCRETE APPLICATIONS. PUBLISHED ICCES REPORTS FOR ACCEPTABLE PRODUCTS ARE AVAILABLE AT: WWW.ICC-ES.ORG/EVALUATION REPORTS/INDEX.SHTML

SELECT FROM ONE OF THE APPROVED PRODUCTS:
POWERS PE1000+ EPOXY ADHESIVE ANCHOR SYSTEM (ICCES REPORT ESR-2583)
CHEMOFASTC-RE 385 EPOXY ADHESIVE ANCHOR SYSTEM (ICCES REPORT ESR-2538)
SIMPSON STRONG-TIE SET-XP EPOXY ADHESIVE ANCHORS (ICCES REPORT ESR-2508)
WURTH WIT-PE500 EPOXY ADHESIVE ANCHORS (ICCES REPORT ESR-3051)
HILTI-HY 200-R ADHESIVE ANCHOR SYSTEM (ICCES REPORT ESR-3187)

INSTALL ADHESIVE ANCHORS ACCORDING TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS PUBLISHED IN SECTION 4.3 OF THE ICCES REPORTS LISTED ABOVE. THE MINIMUM ENBEDMENT DEPTH (H) FOR ANCHORS SHALL BE 5".

PAYMENT FOR THIS ITEM INCLUDES ALL MATERIAL, LABOR AND EQUIPMENT REQUIRED TO GALVANIZE, TRANSPORT AND INSTALL THE THREADED RODS, NUTS AND WASHERS. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT UNIT PRICE BID PER EACH FOR ITEM 513 - STRUCTURAL STEEL, MISC.: 5/8" DIA. THREADED ANCHOR RODS.

ITEM SPECIAL - NOISE BARRIER (METAL PANELS)

METAL PANELS SHALL BE PROVIDED BY THE FOLLOWING VENDOR

EMPIRE INTERNATIONAL
36744 CONSTITUTION DRIVE
TRINIDAD, COLORADO 81082
PHONE: 1-719-846-2300
FAX: 1-719-846-7466

PANELS ARE FABRICATED FROM 22 GAUGE COLD-FORMED SHEET STEEL AND GALVANIZED ACCORDING TO ASTM A-653, CLASS G-90. PANELS MAY HAVE A SMOOTH SURFACE WITH MINIMAL OR NO RELIEF PATTERN.

PAYMENT FOR THIS ITEM INCLUDES ALL MATERIAL, LABOR AND EQUIPMENT REQUIRED TO FABRICATE, GALVANIZE, TRANSPORT AND ERECT THE PANELS. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT UNIT PRICE BID PER SQUARE FOOT FOR ITEM SPECIAL - NOISE BARRIER (METAL PANELS).

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING NOISE WALLS HAVE BEEN OBTAINED FROM PLANS OF THE NOISE WALLS AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING NOISE WALLS AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING NOISE WALLS. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

ESTIMATED QUANTITIES											AS PER PLAN REFERENCE SHEET
1A	1B-1	1B-2	1C	2A	2B	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	
		30		6		513	95000	36	FT	STRUCTURAL STEEL, MISC.: C10X15.3	
		5				513	95000	5	FT	STRUCTURAL STEEL, MISC.: L4X4X1/2	
		11				513	95030	11	EACH	STRUCTURAL STEEL, MISC.: 5/8" DIA. A325 BOLTS	
		15		4		513	95030	19	EACH	STRUCTURAL STEEL, MISC.: 5/8" DIA. THREADED ANCHOR RODS	
5,784	7,509				11,972	SPECIAL	606E10210	25,265	SQ FT	NOISE BARRIER (REFLECTIVE)	
		1,035	535	6,992		SPECIAL	606E10920	8,562	SQ FT	NOISE BARRIER (REFLECTIVE), PARAPET MOUNTED	
		36				SPECIAL	606E10920	36	SQ FT	NOISE BARRIER (METAL PANELS)	

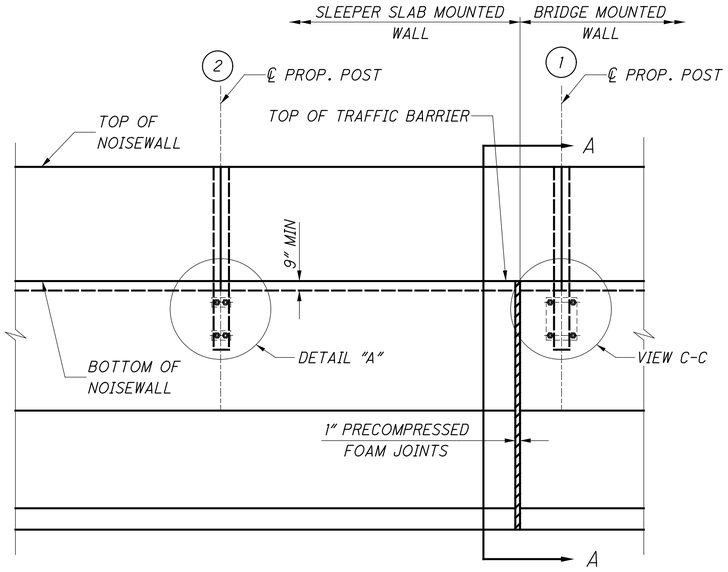
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NOISE WALL PANEL GENERAL NOTES AND QUANTITIES

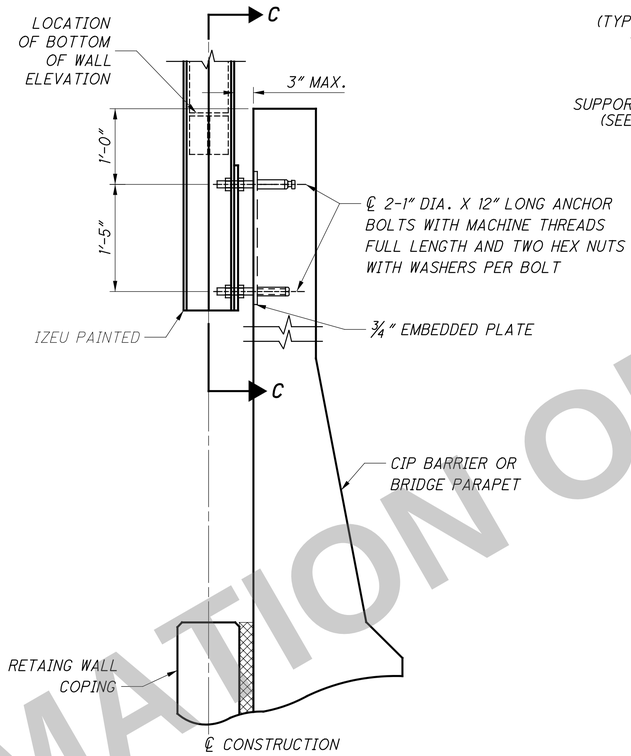
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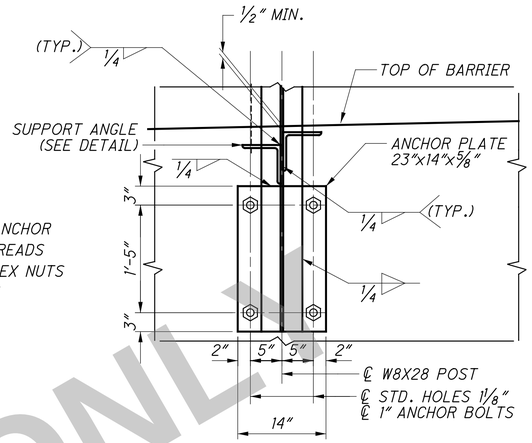


ELEVATION



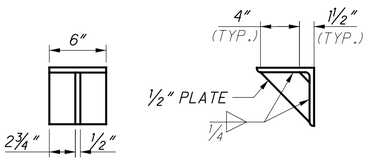
SECTION A-A

PANEL BOTTOM AND SUPPORT CLIP DETAIL

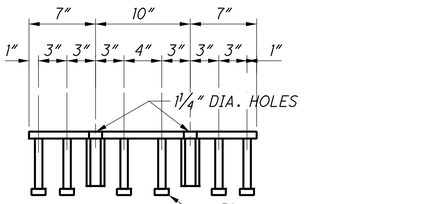


VIEW C-C

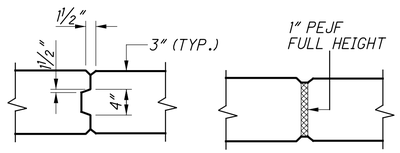
(ALL POST EXCEPT FIRST POST OFF THE BRIDGE AS SHOWN IN DETAIL A)



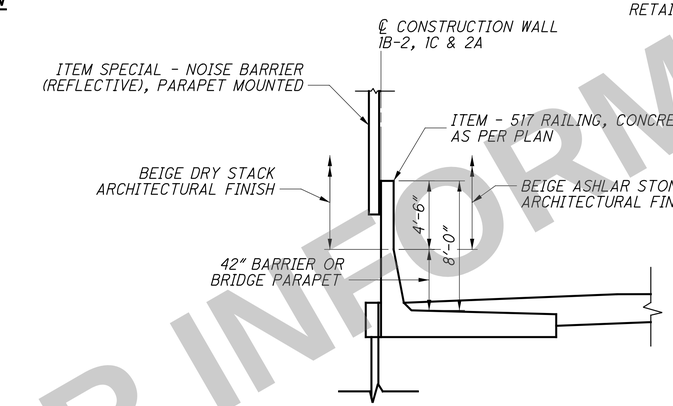
SUPPORT ANGLE DETAILS



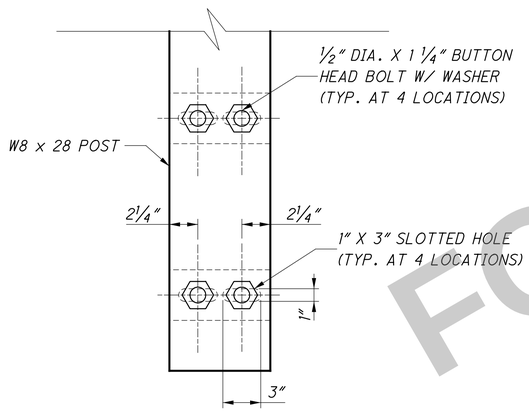
VIEW D-D



CONTRACTION JOINT **EXPANSION JOINT**



NOTE:
THE ARCHITECTURAL FINISH SHALL BE BEIGE ASHLAR STONE (MANUFACTURED BY ARCHITECTURAL POLYMERS, #9050 SMALL AGED ASHLAR STONE) ON THE FREEWAY SIDE AND BEIGE DRY STACK (MANUFACTURED BY ARCHITECTURAL POLYMERS, #9110 LARGE STONE OHIO DRY STACK) ON THE PARK AND RESIDENTIAL SIDE. THE FEDERAL COLOR NUMBER FOR BEIGE IS NO. 17778.

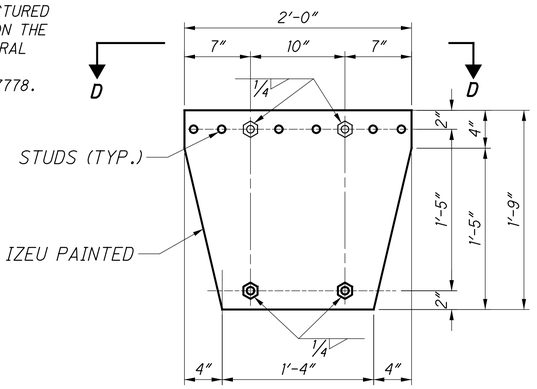


DETAIL A

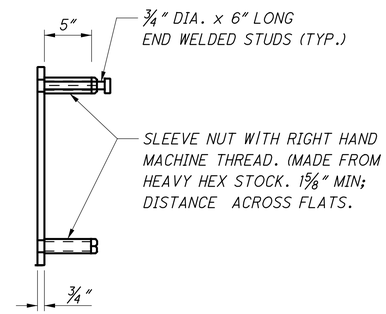
AT POST NO. (2) EACH END OF PARAPET

(SEE NOTE BELOW)

NOTE:
PANEL FABRICATOR SHALL FABRICATE SPECIAL PANELS TO BE PLACED BETWEEN POST 1 AND 2. THE LENGTH OF THESE PANELS SHALL BE MEASURED IN THE FIELD AND AS DIRECTED BY THE ENGINEER WITH ENOUGH OVERLAP TO COVER ADJACENT PANELS. SLOTTED HOLES SHALL BE PROVIDED OVER POST NO. 2 TO PROVIDE A FREE END FOR ANY MOVEMENTS CAUSED BY BRIDGE EXPANSION OR CONTRACTION. THESE HOLES SHALL BE 1" X 3" IN SIZE AND BOLTS SHALL BE 1/2" DIA. X 1 1/4" BUTTON HEAD WITH NUTS AND WASHER. ALL OTHER PANEL ATTACHMENTS SHALL BE BOLTED WITH SIMILAR BOLTS AS EXISTING. PAYMENTS FOR ALL ABOVE MATERIAL AND LABOR SHALL BE INCLUDED WITH ITEM 606 - SPECIAL - NOISE BARRIER (REFLECTIVE), PARAPET MOUNTED.



ELEVATION



END VIEW

POST ANCHOR DEVICE

FOR INFORMATION ONLY

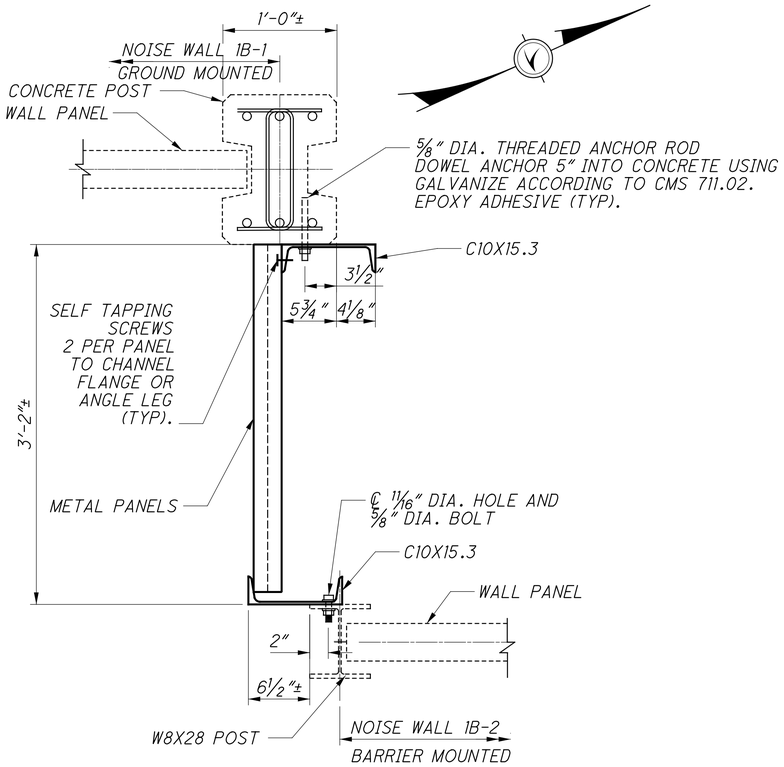
CALCULATED MMS CHECKED NCK

NOISE BARRIER DETAILS

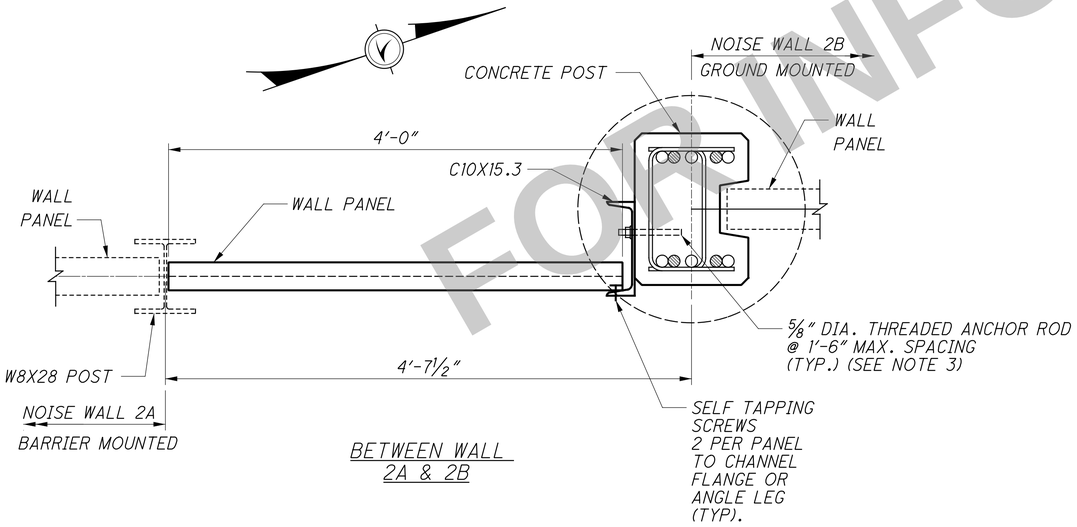
HAM-75-7.85

1080 2017

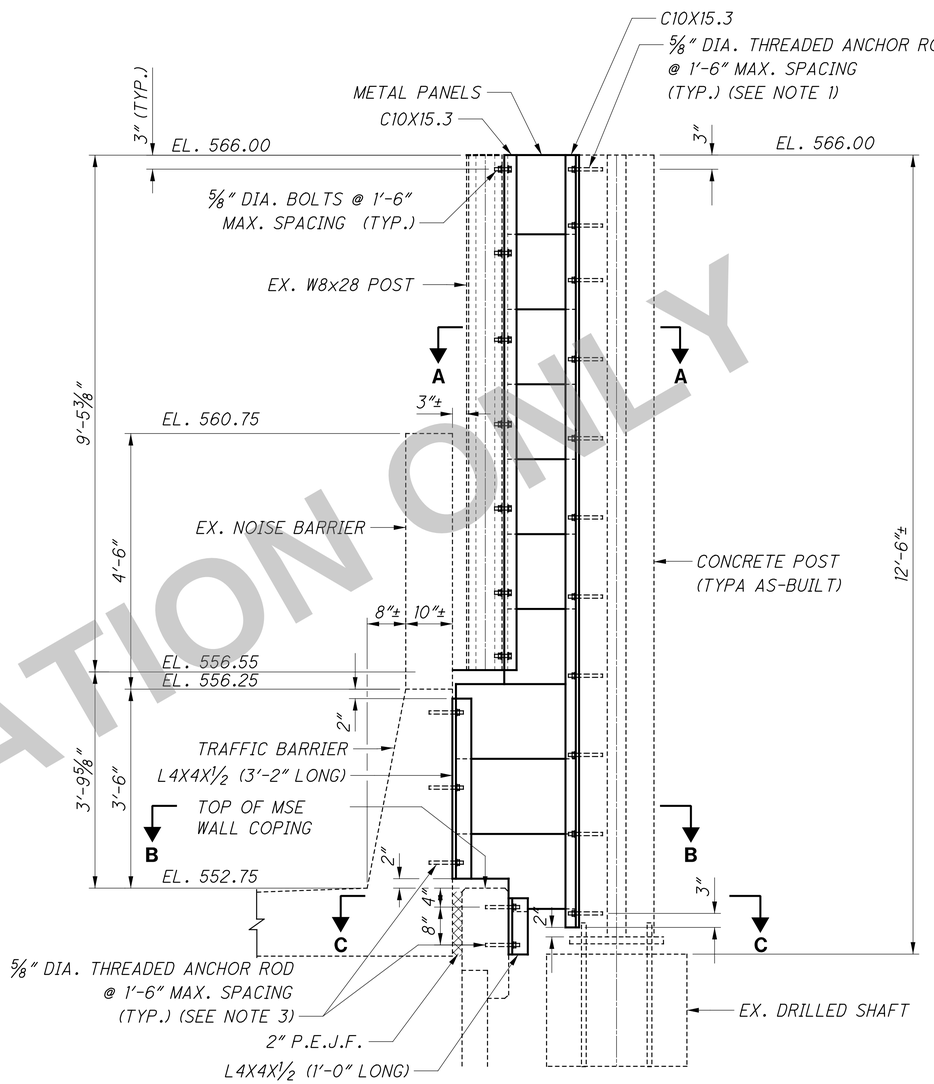
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BETWEEN WALL
1B-1 & 1B-2



BETWEEN WALL
2A & 2B



ELEVATION

(BETWEEN WALL 1B-1 & 1B-2)
(LOOKING SOUTH)

NOTES:

1. ACCURATELY PLACE 5/8" DIA. THREADED ANCHOR RODS TO AVOID INTERFERENCE WITH EXISTING REINFORCING STEEL. USE CONCRETE POST SHOP DRAWINGS AND AVAILABLE PLAN INFORMATION TO LOCATE REINFORCING STEEL.

FOR INFORMATION ONLY

CALCULATED MMS
CHECKED NCK

NOISE WALL PANEL DETAIL
(BETWEEN NOISE WALLS 1B-1&1B-2 AND 2A&2B)

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2017

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WALL 1A FOUNDATION DATA

POST NO.	POST TYPE	WORK POINT STATION	DRILLED SHAFT TOP ELEVATION	SHAFT LENGTH
1	B	10+00.00	536.67	7
2	A	10+24.00	537.67	7
3	A	10+48.00	536.67	7
4	A	10+72.00	536.67	7
5	A	10+96.00	536.67	12
6	A	11+20.00	536.67	12
7	A	11+44.00	536.67	12
8	A	11+68.00	536.67	12
9	A	11+92.00	536.67	12
10	A	12+16.00	536.67	12
11	A	12+40.00	536.67	12
12	A	12+64.00	536.67	12
13	A	12+88.00	536.67	12
14	A	13+12.00	536.67	12
15	A	13+36.00	536.67	12
16	A	13+60.00	536.67	12
17	A	13+84.00	536.67	12
18	A	14+08.00	536.67	12
19	A	14+32.00	536.67	12
20	A	14+56.00	536.67	12
21	A	14+80.00	536.67	12
22	B	15+04.00	536.67	12

WALL 1B-1 FOUNDATION DATA

POST NO.	POST TYPE	WORK POINT STATION	DRILLED SHAFT TOP ELEVATION	SHAFT LENGTH
1	A	11+00.00	541.67	12
2	A	11+20.00	541.67	12
3	A	11+36.00	542.67	12
4	A	11+52.00	543.67	12
5	A	11+68.00	544.67	12
6	A	11+84.00	545.67	12
7	A	12+00.00	546.67	12
8	A	12+16.00	546.67	12
9	A	12+32.00	547.67	12
10	A	12+48.00	547.67	12
11	A	12+64.00	548.67	12
12	A	12+80.00	549.67	12
13	A	12+96.00	550.67	12
14	A	13+04.00	551.67	12
15	A	13+20.00	552.67	12
16	A	13+36.00	553.67	12
17	A	13+52.00	554.67	12
18	A	13+60.00	555.67	9.5
19	A	13+68.00	555.67	9.5
20	A	13+84.00	556.67	9.5
21	A	14+00.00	557.67	9.5
22	A	14+16.00	557.67	9.5
23	A	14+32.00	558.67	9.5
24	A	14+56.00	558.67	9.5
25	A	14+80.00	558.67	9.5
26	A	15+04.00	558.67	9.5
27	A	15+28.00	557.67	9.5
28	A	15+52.00	556.67	9.5
29	A	15+76.00	555.67	9.5
30	A	16+00.00	554.67	9.5
31	A	16+08.00	553.67	7
32	A	16+16.00	553.67	7
33	A	16+24.00	552.67	7
34	A	16+32.00	552.67	7
35	A	16+40.00	551.67	7
36	A	16+48.00	550.67	7
37	A	16+56.00	550.67	7
38	A	16+64.00	550.67	7
39	A	16+88.00	550.67	7
40	A	17+12.00	550.67	7
41	A	17+36.00	550.67	7
42	B	17+60.00	551.67	7

WALL 2B FOUNDATION DATA

POST NO.	POST TYPE	WORK POINT STATION	DRILLED SHAFT TOP ELEVATION	SHAFT LENGTH
1	B	60+00.00	554.67	12
2	A	60+13.00	554.67	12
3	A	60+26.00	554.67	12
4	A	60+50.00	554.67	12
5	A	60+74.00	555.67	12
6	A	60+98.00	556.67	12
7	A	61+22.00	556.67	7
8	A	61+46.00	557.67	7
9	A	61+70.00	559.67	7
10	D	61+94.00	560.67	7
11	D	62+02.00	560.67	7
12	A	62+17.00	560.67	7
13	A	62+32.00	560.67	7
14	A	62+40.00	561.67	7
15	D	62+64.00	562.67	7
16	D	62+88.00	562.67	7
17	A	63+12.00	563.67	7
18	A	63+36.00	564.67	7
19	A	63+60.00	564.67	7
20	A	63+84.00	565.67	7
21	A	64+08.00	565.67	7
22	A	64+32.00	566.67	7
23	A	64+56.00	566.67	7
24	A	64+80.00	567.67	7
25	A	65+04.00	567.67	7
26	A	65+28.00	567.67	7
27	A	65+52.00	568.67	7
28	A	65+76.00	568.67	7
29	A	66+00.00	568.67	7
30	A	66+24.00	569.67	7
31	A	66+36.00	569.67	7
32	A	66+44.00	569.67	7
33	A	66+68.00	569.67	7
34	A	66+92.00	569.67	7
35	A	67+16.00	570.67	7
36	A	67+40.00	570.67	7
37	A	67+64.00	570.67	7
38	A	67+88.00	570.67	7
39	A	68+12.00	570.67	7
40	A	68+36.00	570.67	7
41	A	68+60.00	569.67	7
42	A	68+84.00	569.67	7
43	A	69+08.00	569.67	7
44	A	69+32.00	569.67	7
45	A	69+44.00	568.67	7
46	A	69+56.00	568.67	7
47	A	69+80.00	568.67	7
48	A	70+04.00	567.67	7
49	A	70+28.00	567.67	7
50	B	70+40.00	567.67	7

FOR INFORMATION ONLY

CALCULATED CFR
CHECKED NCK

NOISE WALL FOUNDATION DATA

HAM-75-7.85

1082
2017

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BEGIN NOISE WALL 1A
STA 10+00.00
STA 435+00.00, 106.22' LT
℄ CONST I.R. 75

END NOISE WALL 1A
STA 15+04.00
STA 440+00.85,
134.00' LT
℄ CONST I,R. 75

WARNING! EXISTING
OVERHEAD TELEPHONE
FIBER OPTIC IN VICINITY.

POT STA 10+00.00
Δ= 23° 54' 29"
N 4° 16' 32" E

POT STA 10+48.00
EX POT STA 18+06.33"

POT STA 13+12.00
Δ= 01° 41' 16"
N 22° 23' 05" E

POT STA 15+04.00
℄ NOISE WALL 1A
N 24° 04' 21" E

CONST LIMITS

EX 8" WATER

QUE TRANSMISSION (138kV)

EX R/W LA R/W

EX LA R/W

OH ITS

OH ELEC

E/S

E/P

B-169-0-07

B-005-0-11

B-006-0-11

B-007-0-11

B-171-0-07

B-005-0-55

RAMP J

LAIDLAW AVE

STRUCTURE NO
HAM-75-0823

I.R. 75 (SB)

I.R. 75 (NB)

℄ CONST I.R. 75

EX ST LT

EX ITS

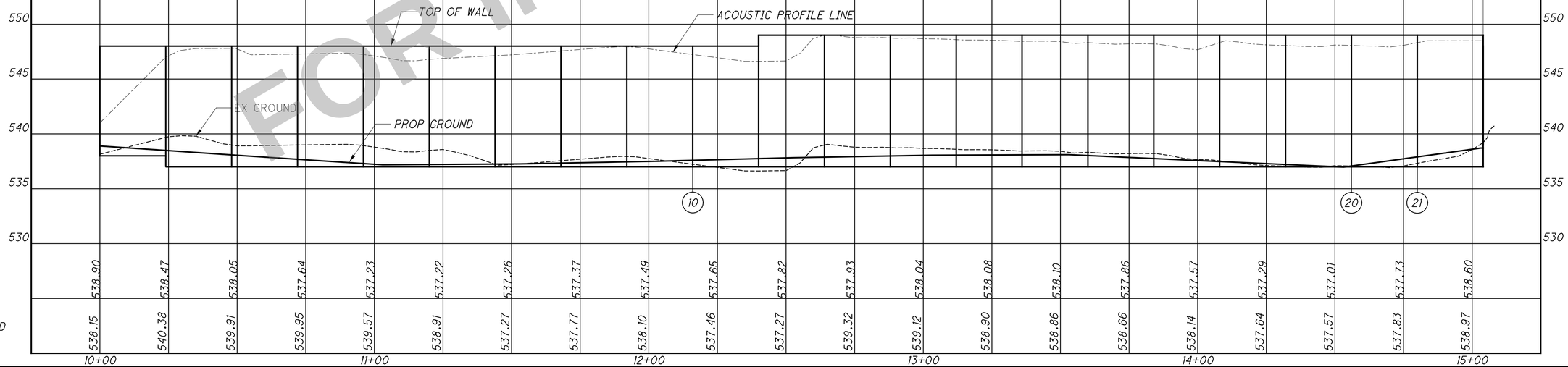
EX 12" RCP

15' X 10' SD

LEGEND
- SOIL BORING
1 - DRILLED SHAFT NUMBERS

ACOUSTIC PROFILE ELEV	541.00	547.12	547.74	547.30	547.10	546.88	547.20	547.70	547.76	546.95	546.65	548.78	548.68	548.55	548.42	548.21	547.67	548.12	548.11	548.08	548.50
TOP OF WALL ELEV	548.00	548.00	548.00	548.00	548.00	548.00	548.00	548.00	548.00	548.00	549.00	549.00	549.00	549.00	549.00	549.00	549.00	549.00	549.00	549.00	549.00
BOTTOM OF WALL ELEV	538.00	537.00	537.00	537.00	537.00	537.00	537.00	537.00	537.00	537.00	537.00	537.00	537.00	537.00	537.00	537.00	537.00	537.00	537.00	537.00	537.00
PANEL NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

21 PANELS @ 24' = 504'



PROP GRADE ELEV	538.90	538.47	538.05	537.64	537.23	537.22	537.26	537.37	537.49	537.65	537.82	537.93	538.04	538.08	538.10	537.86	537.57	537.29	537.01	537.73	538.60
EX GROUND ELEV	538.15	540.38	539.91	539.95	539.57	538.91	537.27	537.77	538.10	537.46	537.27	539.32	539.12	538.90	538.86	538.66	538.14	537.64	537.57	537.83	538.97

10+00 11+00 12+00 13+00 14+00 15+00

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

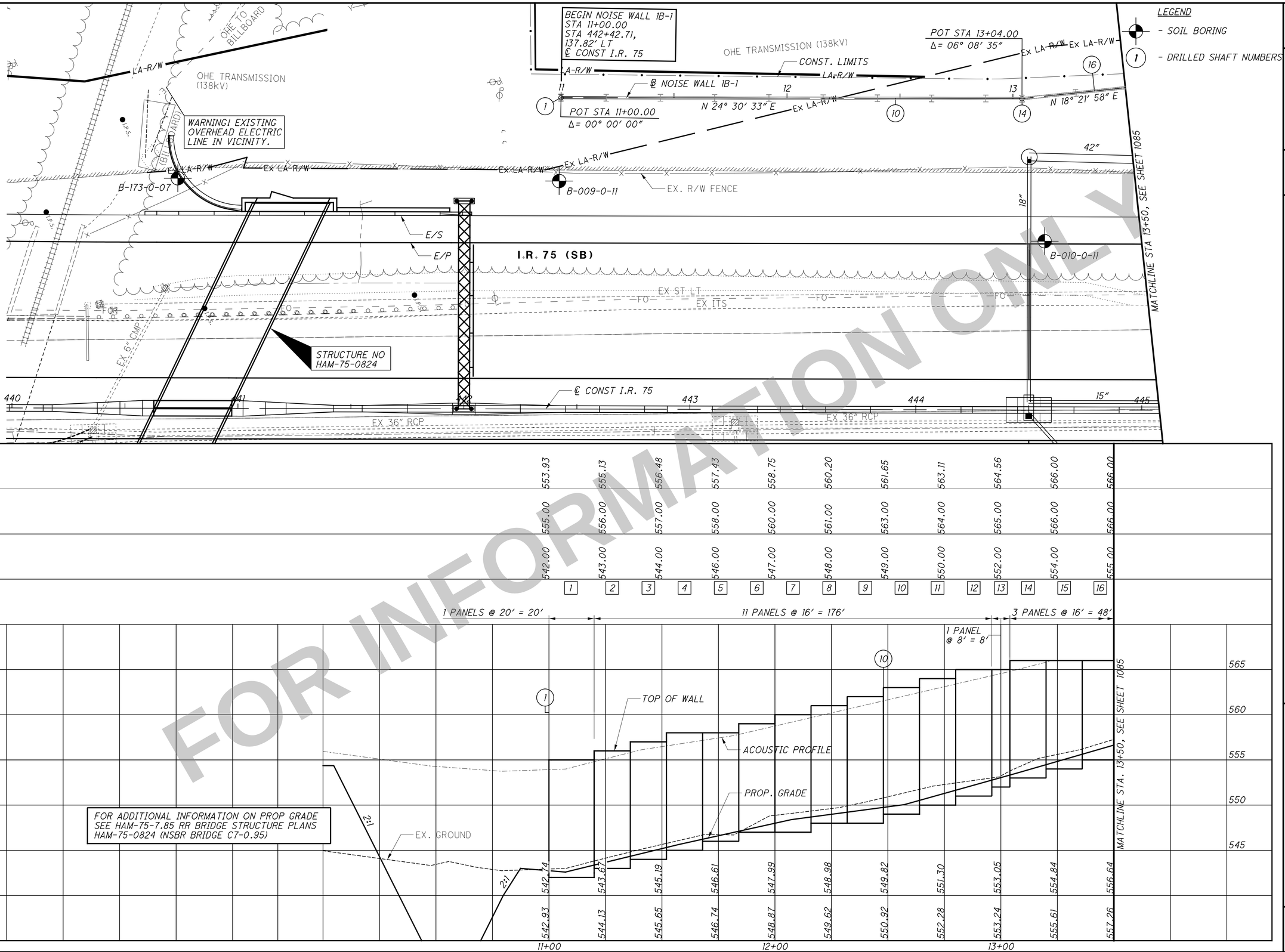
CALCULATED CFR
CHECKED NCK

PLAN AND PROFILE - NOISE WALL 1A
STA. 10+00 TO STA. 15+04

HAM-75-7.85

1083
2017

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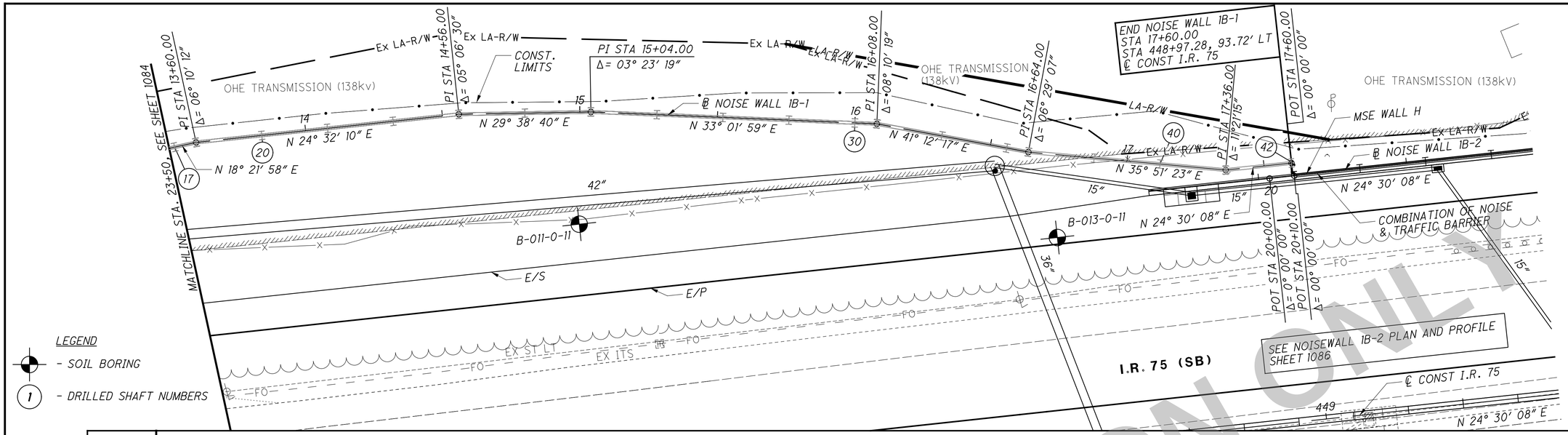
FOR INFORMATION ONLY

PLAN AND PROFILE - NOISE WALL 1B-1
STA. 11+00 TO STA. 13+50

HAM-75-7.85

1084
2017

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Ex LA-R/W
OHE TRANSMISSION (138kv)
CONST. LIMITS
PI STA 13+60.00
Δ= 06° 10' 12"
PI STA 14+56.00
Δ= 05° 06' 30"
PI STA 15+04.00
Δ= 03° 23' 19"
PI STA 16+08.00
Δ=08° 10' 19"
PI STA 16+64.00
Δ= 06° 29' 07"
PI STA 17+36.00
Δ= 1°21'15"
POT STA 17+60.00
Δ= 00° 00' 00"
℄ NOISE WALL 1B-1
℄ NOISE WALL 1B-2
END NOISE WALL 1B-1
STA 17+60.00
STA 448+97.28, 93.72' LT
℄ CONST I.R. 75
MSE WALL H
COMBINATION OF NOISE & TRAFFIC BARRIER
N 18° 21' 58" E
N 24° 32' 10" E
N 29° 38' 40" E
N 33° 01' 59" E
N 41° 12' 17" E
N 35° 51' 23" E
N 24° 30' 08" E
MATCHLINE STA. 23+50, SEE SHEET 1084
B-011-0-11
B-013-0-11
E/S
E/P
42"
15"
36"
EX STL'T
EX ITS
FO
POT STA 20+00.00
POT STA 20+10.00
SEE NOISEWALL 1B-2 PLAN AND PROFILE SHEET 1086
I.R. 75 (SB)
℄ CONST I.R. 75
449
LEGEND
- SOIL BORING
- DRILLED SHAFT NUMBERS

| | | |

BEGIN NOISE WALL 1B-2
STA 20+10.00
STA 448+98.81,
89.00' LT
℄ CONST I.R. 75

END NOISE WALL 1B-2
STA 22+34.58
STA 451+23.39,
89.00' LT
℄ CONST I.R. 75

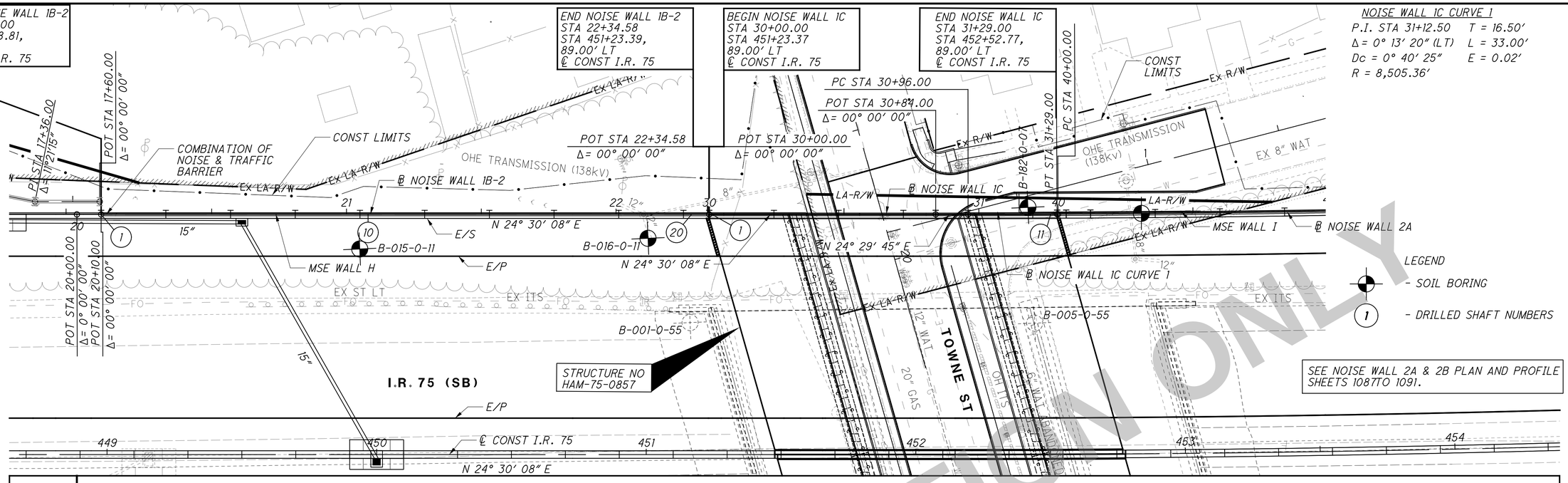
BEGIN NOISE WALL 1C
STA 30+00.00
STA 451+23.37
89.00' LT
℄ CONST I.R. 75

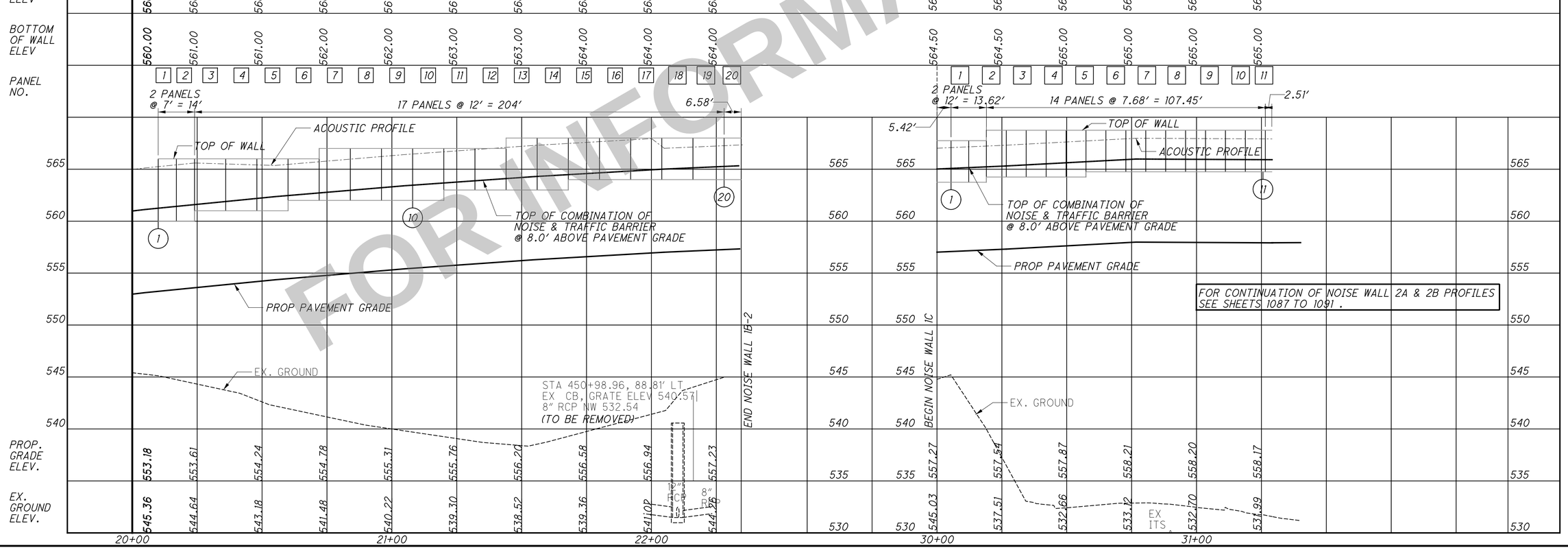
END NOISE WALL 1C
STA 31+29.00
STA 452+52.77,
89.00' LT
℄ CONST I.R. 75

NOISE WALL 1C CURVE 1
P.I. STA 31+12.50 T = 16.50'
Δ = 0° 13' 20" (LT) L = 33.00'
Dc = 0° 40' 25" E = 0.02'
R = 8,505.36'

LEGEND
- SOIL BORING
1 - DRILLED SHAFT NUMBERS

SEE NOISE WALL 2A & 2B PLAN AND PROFILE SHEETS 1087TO 1091.





FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED CFR CHECKED NCK

PLAN AND PROFILE - NOISE WALL 1B-2 & 1C
STA. 28+50 TO STA. 31+29.00

HAM-75-7.85

1086
2017

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LEGEND
- SOIL BORING
(1) - DRILLED SHAFT NUMBERS

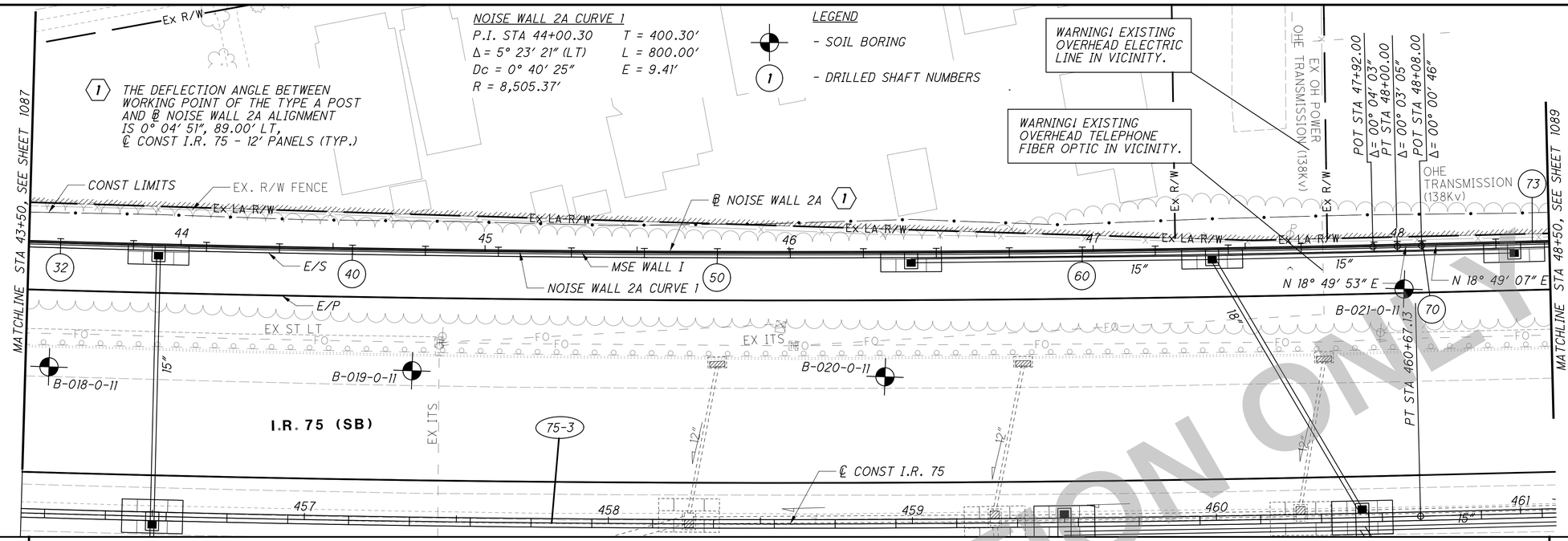
BEGIN NOISE WALL 2A
STA 40+00.00
STA 452+53.19, 89.00' LT
℄ CONST I.R. 75

NOISE WALL 2A CURVE 1
P.I. STA 44+00.30
Δ = 5° 23' 21" (LT)
Dc = 0° 40' 25"
R = 8,505.37'
T = 400.30'
L = 800.00'
E = 9.41'

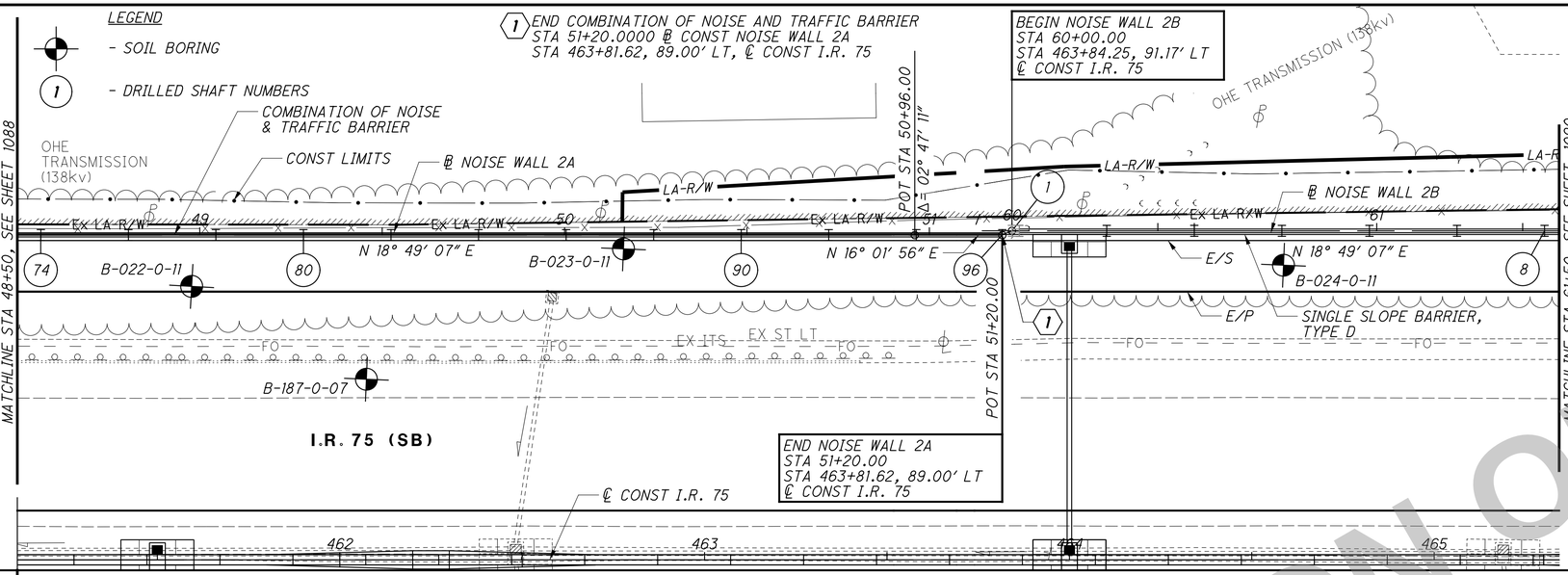
(1) THE DEFLECTION ANGLE BETWEEN WORKING POINT OF TYPE A POST AND ℄ NOISE WALL 2A ALIGNMENT IS 0° 47' 51", 89' LT, ℄ CONST I.R. 75

PC STA 30+96.00
POT STA 30+84.00
Δ= 00° 00' 00"
POT STA 30+00.00
Δ= 00° 00' 00"
PC STA 31+29.00
PC STA 40+00.00
OHE TRANSMISSION (138kv)
COMBINATION OF NOISE & TRAFFIC BARRIER
B-016-0-11
℄ NOISE WALL 1C
B-182-0-07
CEDAR ST
NOISE WALL 2A CURVE 1 CONST. LIMITS
COMBINATION OF NOISE & TRAFFIC BARRIER
℄ NOISE WALL 2A
E/S
E/P
EX SIGN
EX ST LT
EX ITS
B-183-0-07
B-017-0-11
TOWNE ST
EX 20" GAS
EX (4" WATER, CABLE T.V., U.G. ITS)
EX 12" WATER
EX 8" SAN
EX 8" WATER
Ex R/W
LA-R/W
EX LA-R/W
STRUCTURE NO HAM-75-0857
SEE NOISE WALL 1C PLAN AND PROFILE SHEET 1086
I.R. 75 (SB)
75-3
℄ CONST I.R. 75
N 24° 30' 08" E
MATCHLINE STA 43+50, SEE SHEET 1088

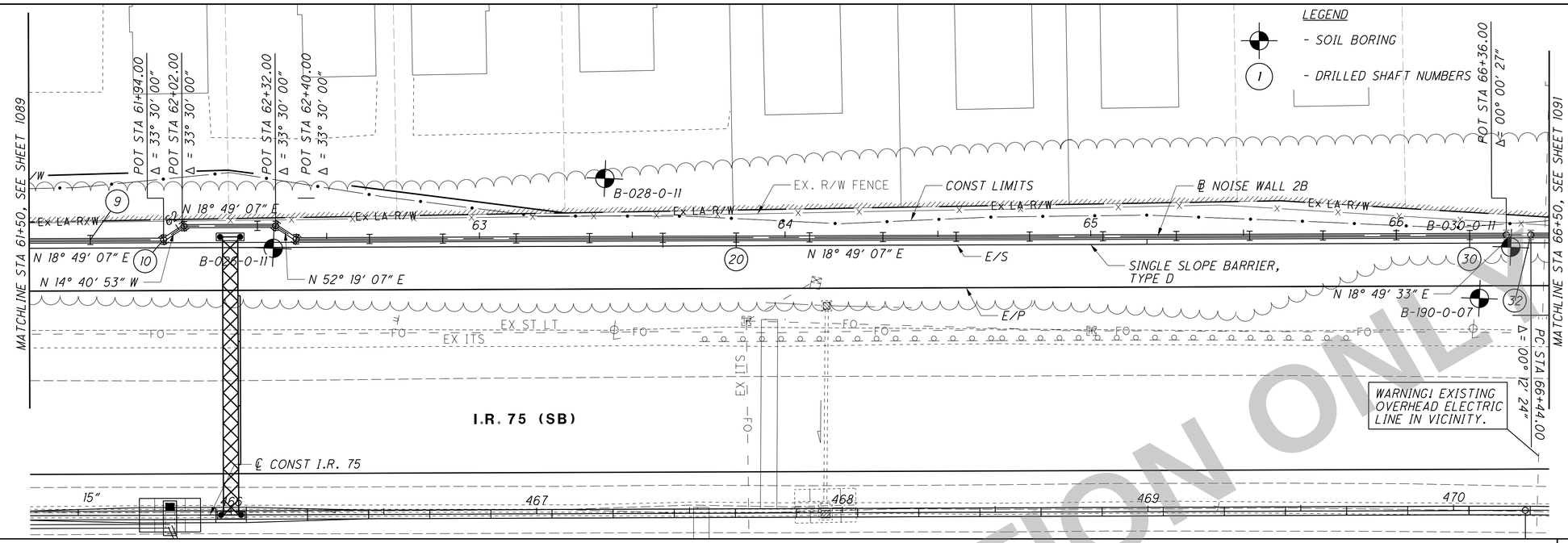
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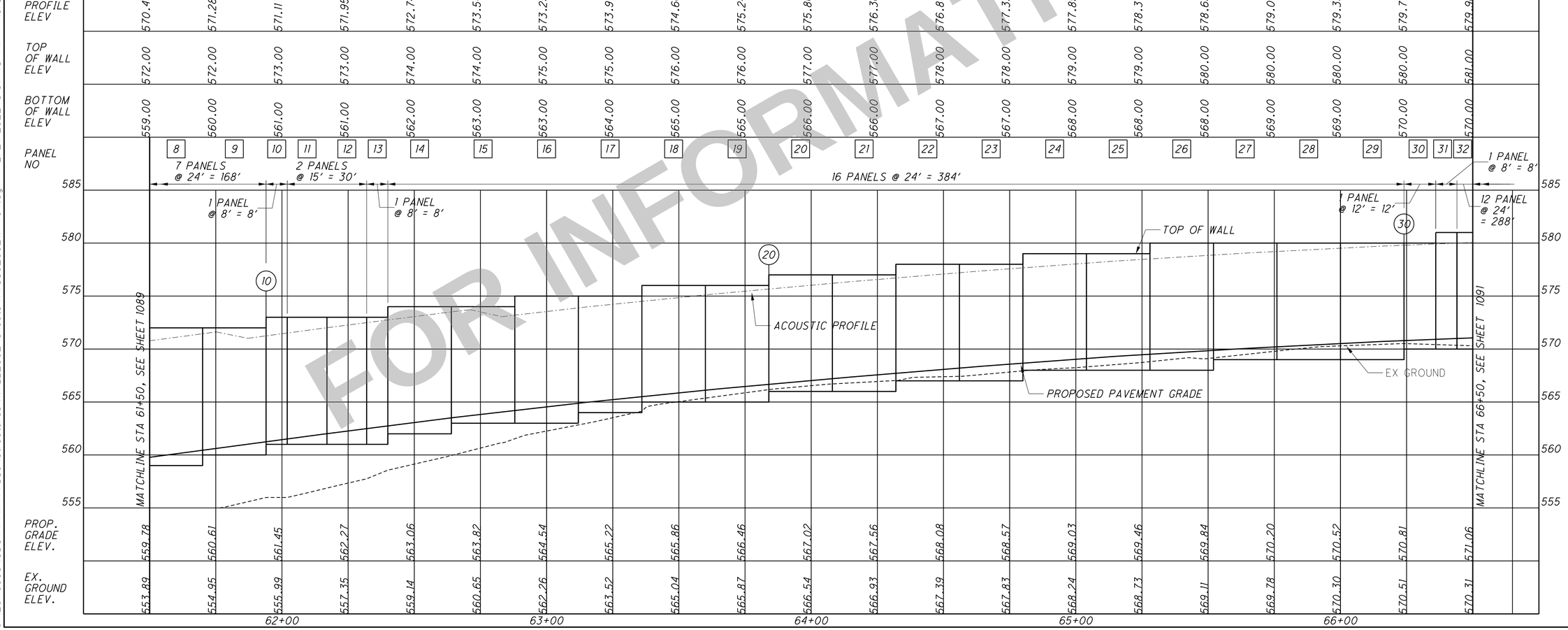

NOISE WALL 2A CURVE 1
P.I. STA 44+00.30
Δ = 5° 23′ 21″ (LT)
Dc = 0° 40′ 25″
R = 8,505.37′
T = 400.30′
L = 800.00′
E = 9.41′
LEGEND
- SOIL BORING
- DRILLED SHAFT NUMBERS
1 THE DEFLECTION ANGLE BETWEEN WORKING POINT OF THE TYPE A POST AND ℄ NOISE WALL 2A ALIGNMENT IS 0° 04′ 51″, 89.00′ LT, ℄ CONST I.R. 75 - 12′ PANELS (TYP.)
WARNING! EXISTING OVERHEAD ELECTRIC LINE IN VICINITY.
WARNING! EXISTING OVERHEAD TELEPHONE FIBER OPTIC IN VICINITY.
MATCHLINE STA 43+50, SEE SHEET 1087
MATCHLINE STA 48+50, SEE SHEET 1089
CONST LIMITS
EX. R/W FENCE
EX LA R/W
℄ NOISE WALL 2A
E/S
E/P
MSE WALL I
NOISE WALL 2A CURVE 1
EX ST LT
EX ITS
EX R/W
EX OH POWER TRANSMISSION (138Kv)
OHE TRANSMISSION (138Kv)
POT STA 47+92.00
Δ= 00° 04′ 03″
PT STA 48+00.00
Δ= 00° 03′ 05″
POT STA 48+08.00
Δ= 00° 00′ 46″
PT STA 460+67.13
N 18° 49′ 53″ E
N 18° 49′ 07″ E
B-018-0-11
B-019-0-11
B-020-0-11
B-021-0-11
I.R. 75 (SB)
℄ CONST I.R. 75
15″
18″
12″
32
40
50
60
70
73
75-3
44
45
46
47
48
457
458
459
460
461

| | | |


LEGEND
- SOIL BORING
1 - DRILLED SHAFT NUMBERS
COMBINATION OF NOISE & TRAFFIC BARRIER
CONST LIMITS
℄ NOISE WALL 2A
OHE TRANSMISSION (138kv)
1 END COMBINATION OF NOISE AND TRAFFIC BARRIER STA 51+20.0000 ℄ CONST NOISE WALL 2A STA 463+81.62, 89.00' LT, ℄ CONST I.R. 75
BEGIN NOISE WALL 2B STA 60+00.00 STA 463+84.25, 91.17' LT ℄ CONST I.R. 75
POT STA 50+96.00
Δ 02° 47' 11"
POT STA 51+20.00
LA-R/W
EX LA-R/W
℄ NOISE WALL 2B
E/S
E/P
SINGLE SLOPE BARRIER, TYPE D
N 18° 49' 07" E
N 16° 01' 56" E
B-022-0-11
B-023-0-11
B-024-0-11
B-187-0-07
EX ITS
EX ST LT
FO
MATCHLINE STA 48+50, SEE SHEET 1088
MATCHLINE STA 61+50, SEE SHEET 1090
I.R. 75 (SB)
END NOISE WALL 2A STA 51+20.00 STA 463+81.62, 89.00' LT ℄ CONST I.R. 75
℄ CONST I.R. 75
462
463
464
465

| | | |





FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

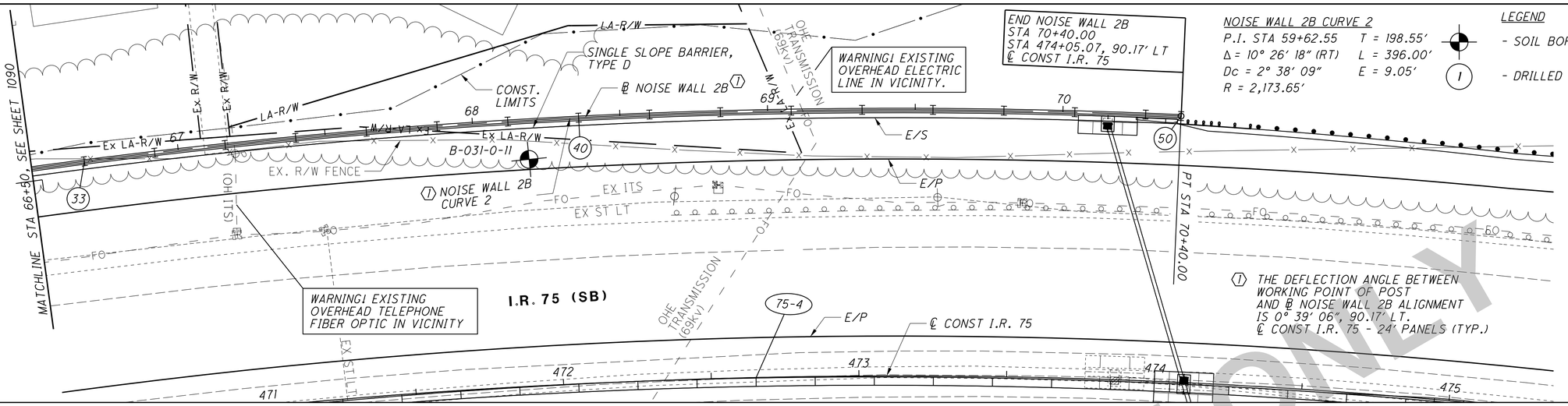
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PLAN AND PROFILE - NOISE WALL 2B
STA. 61+50 TO STA. 66+50

HAM-75-7.85

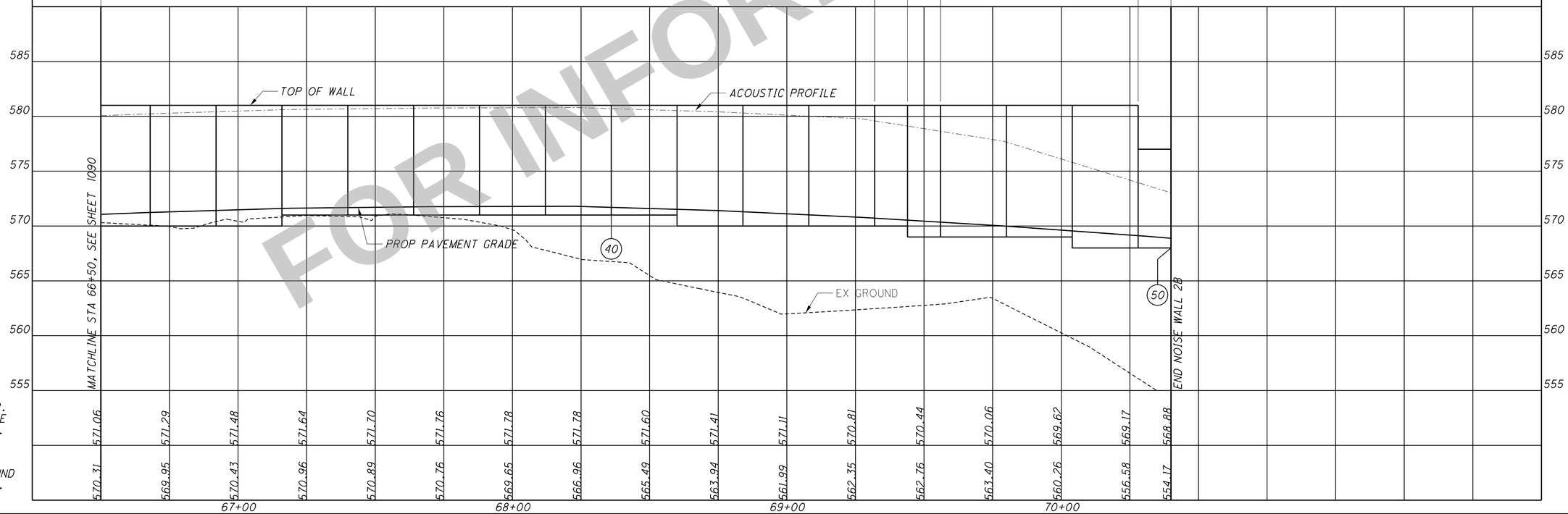
1090
2017

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ACOUSTIC PROFILE ELEV	579.96	580.21	580.40	580.59	580.68	580.75	580.77	580.79	580.67	580.48	580.23	579.93	579.27	578.28	576.88	574.95	573.03	
TOP OF WALL ELEV	581.00	581.00	581.00	581.00	581.00	581.00	581.00	581.00	581.00	581.00	581.00	581.00	581.00	581.00	581.00	581.00	577.00	
BOTTOM OF WALL ELEV	570.00	570.00	570.00	571.00	571.00	571.00	571.00	571.00	571.00	570.00	570.00	570.00	569.00	569.00	569.00	568.00	568.00	
PANEL NO	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49

12 PANELS @ 24' = 288' | 1 PANEL @ 12' = 12' | 1 PANEL @ 12' = 12' | 3 PANELS @ 24' = 72' | 1 PANEL @ 12' = 12'



PROP. GRADE ELEV.	571.06	571.29	571.48	571.64	571.70	571.76	571.78	571.78	571.60	571.41	571.11	570.81	570.44	570.06	569.62	569.17	568.88	
EX. GROUND ELEV.	570.31	569.95	570.43	570.96	570.89	570.76	569.65	566.96	565.49	563.94	561.99	562.35	562.76	563.40	560.26	556.58	554.17	

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET: 0, 10, 20, 40

CALCULATED CFR | CHECKED NCK

PLAN AND PROFILE - NOISE WALL 2B STA. 66+50 TO STA. 70+40

HAM-75-7.85

1091 2017

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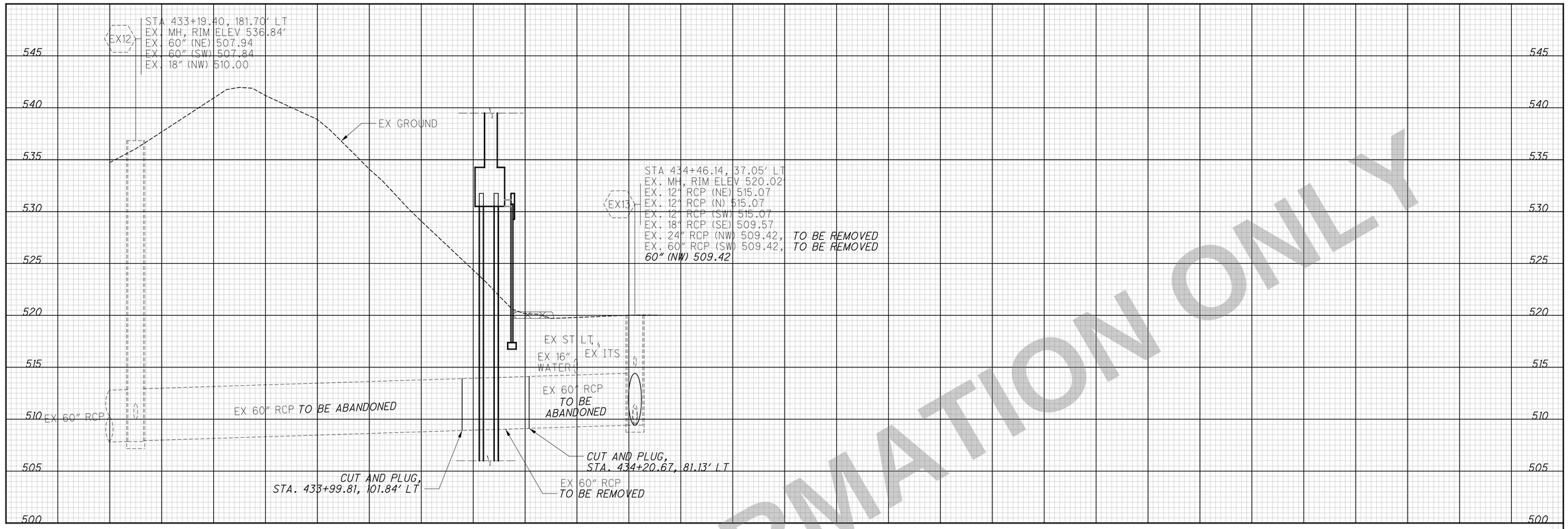
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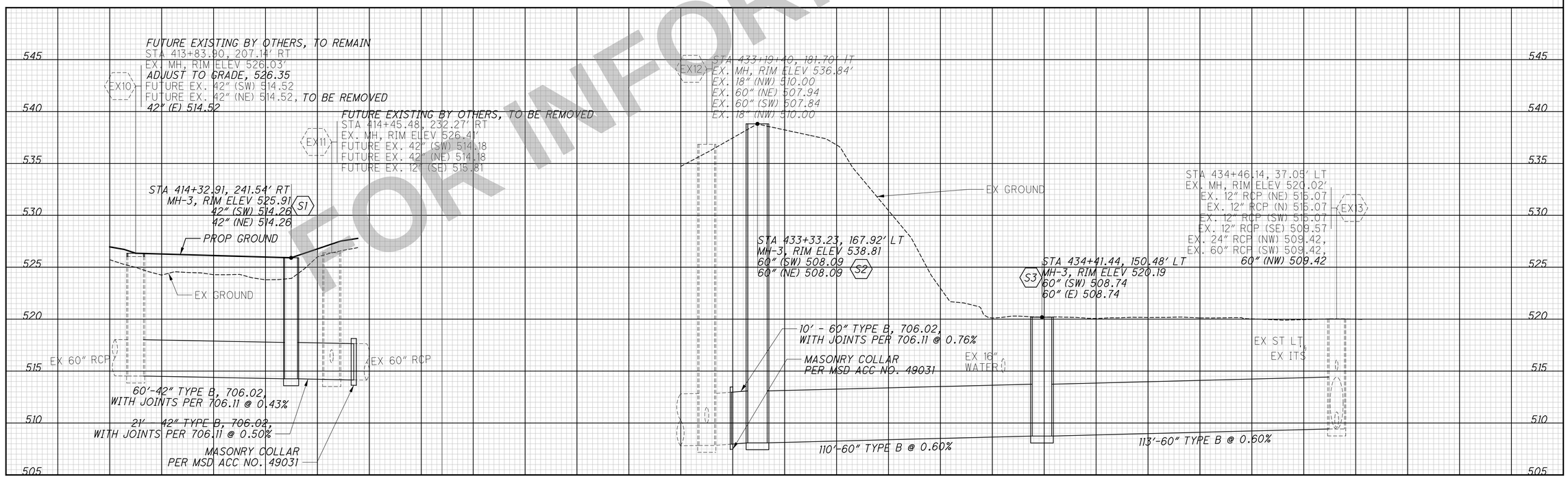
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SANITARY SEWER PROFILES

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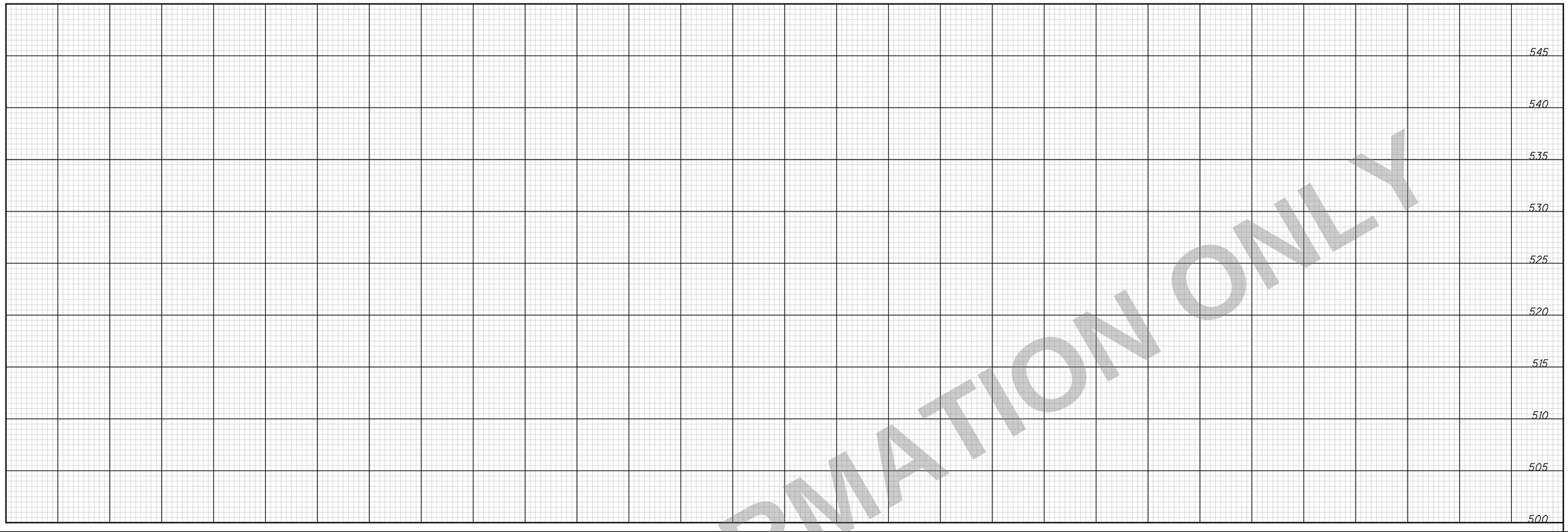
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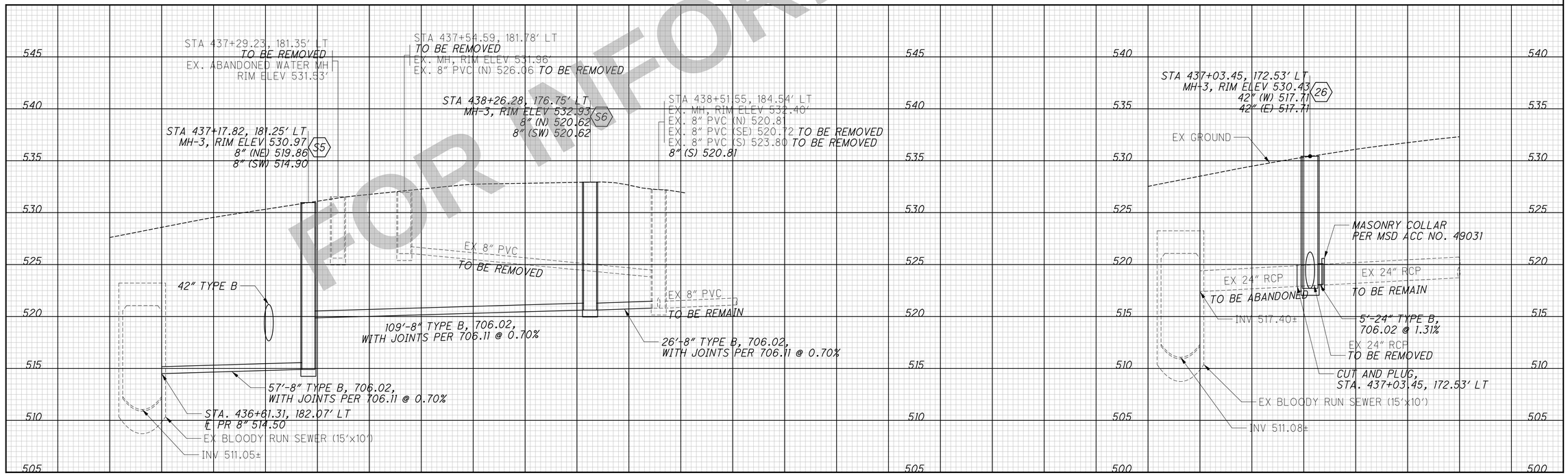
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SANITARY SEWER PROFILES

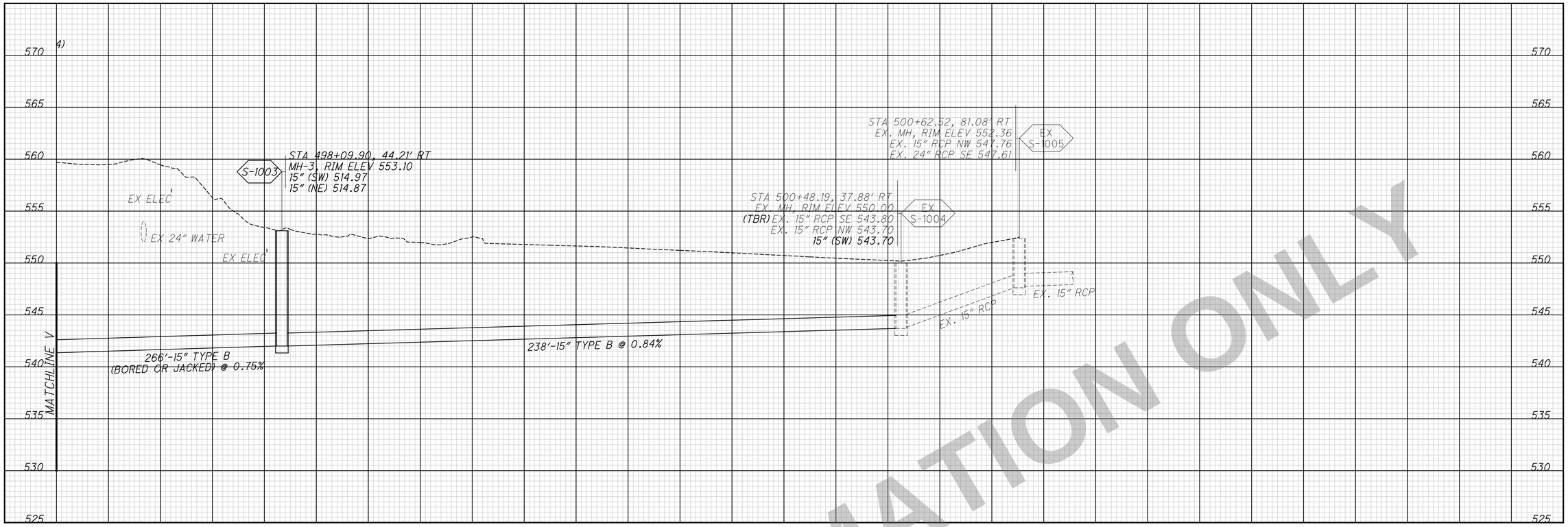
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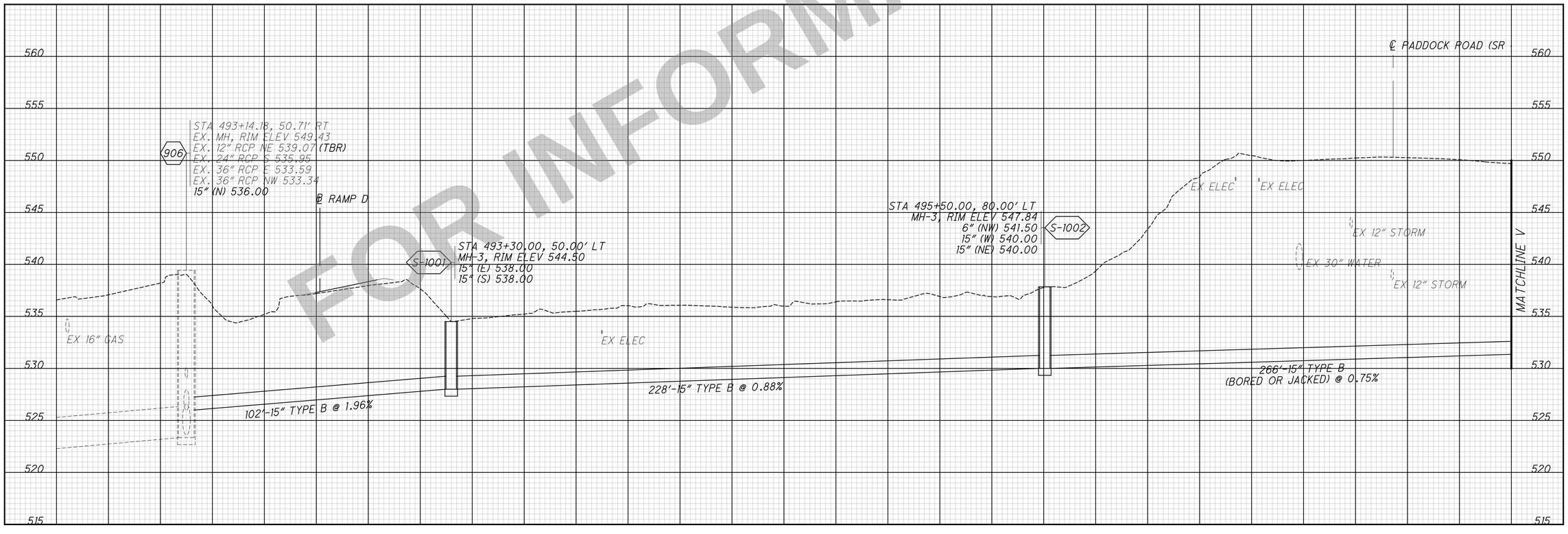
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FOR INFORMATION ONLY

CALCULATED ECH
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SANITARY SEWER PROFILES

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FOR INFORMATION ONLY

2017 1095	HAM-75-7.85	SANITARY SEWER PROFILES	CALCULATED ECH CHECKED SSK

GENERAL PROVISIONS

The Contractor is advised that there are several changes to the most recent edition of the City of Cincinnati Supplement dated January 1, 2019. These General Provisions include these changes. The Supplement and a Summary of Changes can be purchased or downloaded from the City's website:
http://www.cincinnati-oh.gov/dote/manuals-permits-supplements/2019-city-supplement-to-odot-construction-and-materials-specifications/

Water main items are to be constructed in accordance with the provisions of the State of Ohio, Department of Transportation, Construction and Material Specifications, dated January 1, 2019, and modified by the City of Cincinnati Supplement to said State of Ohio Specifications, effective January 1, 2019, and any supplements or changes thereto. Copies of the State specifications are on file at the Office of Contract Sales of the State of Ohio, Department of Transportation, 25 South Front Street, Columbus, Ohio, and at the offices of the City Engineer of Cincinnati, Ohio. Submittal of a bid for this project implies that the Contractor has taken all provisions of the Supplement into account.

The Greater Cincinnati Water Works (GCWW) understands that differing site conditions results in extra work/change orders to the project. Change orders on GCWW contracts will be done in strict accordance with Item 109.05 C of the State of Ohio Department of Transportation Construction and Material Specifications dated January 1, 2019 or most recent edition and as modified in this City of Cincinnati Supplement. GCWW limits the mark up on wages and fringe benefits as described in 109.05 C. 2. "Labor" to 30%. It is expressly understood that regardless of the nature of the claim, or change in scope of work, the Contractor is not entitled to compensation for loss of anticipated profit or production.

As defined in the City of Cincinnati Supplement, sections 107.07 and 107.071, the Contractor is required to submit, at the time of the pre-construction meeting, a Site Safety Plan. Furthermore, the Contractor shall have an authorized and competent safety representative assigned to the project site.

The Contractor is advised that he has certain responsibilities under Section 153.64 of The Ohio Revised Code. For all underground utilities, contact the Ohio Utilities Protection Service at 1-800-362-2764 (toll free) 48 hours in advance of work. The Contractor is advised that all utility information has been shown on the contract plans from information provided by the owner of each utility in compliance with Sec. 153.64 of the Ohio Revised Code. In cases where utility information is incorrect and it results in a change in the contract plans the Contractor shall first notify the owner of the utility to determine the necessary course of action. The Contractor shall submit any subsequent claims as a result of downtime or additional work to the owner of the conflicting utility. The GCWW will not accept claims for any utility other than those as a result of incorrect water main and related appurtenance information.

The Contractor must locate or "pot hole" all utilities within the alignment of the proposed main a minimum of 50 feet ahead of pipe laying. Test holes must be dug, or trench excavated, a minimum of 50 feet (15.2 m) in advance of pipe laying, to assure proper clearance between the water main and any utility crossing, or underground structure. All utilities and structures shall be suitably braced and supported. The Contractor shall understand that any obstructions encountered in the installation of the main, due to the failure of having 50 feet (15.2m) of trench excavated ahead of laying operations, may require removal and relaying of the pipe at the contractors expense. The GCWW will not accept a claim for different utility conditions encountered when test holes are not performed as required.

Item 1120, "Exploratory Excavation", shall not include excavations within the limits of the proposed trench as defined in 1101.04 and 1101.05. Test holes are required on all utilities within 50 feet of the last laid pipe. Test holes within the alignment of the proposed trench are included in the Contractor's unit bid for Item 1101. Locations to be explored will vary from areas within the roadway to areas outside of the roadway.

It is the nature of construction that unmarked utilities or utilities not shown on the Plans may be encountered within the excavation for the proposed work. Identify and remove any abandoned utilities encountered in the excavation. Unless otherwise noted on the Plans, no extra payment will be made to the Contractor for the identification and removal of the abandoned utility. Include all costs for this work in the unit price bid for the appropriate Item 1101.

Street pavement or sidewalk should not be disturbed for a distance of more than 200 Feet (61.0 m) ahead of the last laid pipe. Backfill shall be completed within 50 feet (15.2 m) of the last laid pipe. Temporary or permanent surface restoration must be installed within a distance of 200 feet (61.0 m) of the laid pipe, including those areas where main installations occur within a closed lane or closed street condition. Roadway plates may be used as a temporary measure for a period not to exceed 24 hours without the approval of the GCWW.

Any undermined pavement of more than 6 inches horizontal must be removed prior to starting trench backfill. If undermining of pavement occurs more than 1 foot, then pavement must be shored to protect traffic, or arrangements made for additional lane closures must be made. If problems continue to occur regarding trenching integrity, sheeting and bracing can be required by the City Engineer or the City Engineer's representative, at the contractor's expense. If any tunneling is necessary, adequate information shown in both plan and profile and tunneling procedures must be submitted to the City Engineer's Office prior to commencement of work.

The GCWW has made every effort to depict the pipe sewers and lateral information on the plans. The Contractor is advised that sewer laterals are shown in plan view only. The Contractor shall determine the elevation of the sewer laterals in advance of laying the water main at these crossings. If the sewer laterals require changing in order to avoid conflict with the water main, or if the Contractor encounters a pipe sewer or lateral in the excavation that was not shown on the plans and requires a change of grade or alignment due to the installation of the water main, the Contractor shall furnish all necessary labor, material, tools, and equipment required to change the grade or alignment of pipe sewers and laterals of various sizes, allowing installation of water mains and appurtenances as shown on the plans, or as directed by the GCWW Inspector. This work shall include all necessary excavation, backfill, and restoration. The Contractor will be compensated under Item 1123, "Changing Pipe Sewers 8 Inch and Under". When crossing sanitary and combination sewers, a vertical clearance of 18" must be maintained.

The Contractor is advised that due to the alignment of the proposed water main, it may be necessary to install a temporary valve box over an existing chambered valve that must remain in service during the water main installation as directed by the GCWW Inspector. The chamber shall be abandoned, a valve box (furnished by the contractor) placed over the valve, and upon project completion, the valve box must be removed. The contractor will not receive additional compensation for this work, but should include the cost of this work in his unit bid price for Item 1101, "Furnishing & Laying Ductile Iron Pipe and Fittings".

It is the Contractor's responsibility to provide adequate water supply for domestic and fire fighting purposes. In order to accomplish the water main connections with a minimum amount of inconvenience to the consumers, it may be necessary to do the work at other than normal working hours or as may be scheduled by the GCWW.

The Contractor is advised that the operating pressure of the existing water main within the limits of the subject project is approximately **164 – 182 P.S.I.**

In order to minimize the inconvenience of the consumers, the number of shutdowns required to do the proposed water main work shall be limited. Only one shutdown, limited to 8 hours, will be allowed during a 24 hour period.

All water service branches have a minimum cover of 3.0 feet.

The Contractor is advised that it shall be necessary to install temporary Plug/caps on the existing and proposed water mains in order to maintain service during testing and water main and branch connections. These temporary Plug shall be furnished by the contractor. He is responsible for their proper installation. The cost for this work shall be included in the Contractor's unit bid price for the appropriate Item 1101, "Furnishing & Laying Ductile Iron Pipe and Fittings".

The Contractor is required to excavate and expose the existing utilities and existing water mains along the line of the proposed water main and all proposed connection points to verify location, diameter, line and grade. Also, if the removal of the bulkhead or plug is required all excavation and temporary/permanent restoration shall be compensated under the Contractor's unit bid price for Item 1101, "Furnishing & Laying Ductile Iron Pipe and Fittings".

The Contractor is advised that all C.J. Plug are to be restrained with a Field Lok Gasket and all M.J. caps are to be restrained using a Megalug Assembly. This includes temporary Plug and caps for testing purposes. When a temporary plug is used, the contractor is permitted to remove the plug by cutting the section of pipe containing the plug and using a solid sleeve at that point to complete the tie-in. In the event that a cap is used, the contractor shall remove the Megalug Assembly and cap before completing the tie-in.

The Contractor is advised that on any fire hydrant required to be relocated with this project, all bolt assemblies shall be replaced. The cost for this work shall be included in the unit bid price for Item 1113 "Relocating Existing Fire Hydrants". No part of any fire hydrant setting shall be installed closer than five feet to any driveway, inlet, utility pole or guy wire anchor.

Item 1111, "Water Works Valve Chambers", shall also cover the furnishing and installing of Precast Reinforced Concrete Chambers in accordance with O.D.O.T. Specification 706.13. All pertinent provisions of this item and GCWW Standard Drawing No. 104-1A shall apply. Precast chambers shall be used in all locations where space permits and as directed by the GCWW.

Air cocks may be necessary for the proper operation of the water system. The Air Release Assembly, which may not be shown on the drawing, will be furnished and installed by the Contractor per the detail on these plans, if required by the GCWW.

It shall be the Contractor's responsibility to arrange for the removal and replacement of any poles and guys necessary for the installation of the proposed water mains, and any cost connected thereto shall be at his expense.

All pipe and specials shall be in accordance with City of Cincinnati Specification 40-110-12.

All procured water main and appurtenance materials, other than those furnished through the GCWW must be properly certified; certified for GCWW Inspection: or already inspected by the GCWW. Pipe, fittings, valves and fire hydrants must be GCWW inspected and stamped materials.

The Contractor should be advised that all Fittings (Bends, Offset Bends, Tees, Crosses, Sleeves, Caps and Plug) supplied for this job may be either ANSI/AWWA C-110 Full-body Ductile Iron, Cement Lined Fittings or ANSI/AWWA C-153 Compact Ductile Iron, Fusion Bonded Epoxy Coated Fittings in accordance with City of Cincinnati, Department of Purchasing, Standard Specification No. 40-110-12 for Pipe and Fittings Water, Ductile Iron 3" to 60". All fittings are subject to inspection and approval by appropriate GCWW Inspection personnel. Minor pinholes and abrasions to epoxy coated valves and fittings are to be repaired using 3M Hot Melt Patch Compounds (H.M.P.C.) in the stick form. Repair procedures shall be in accordance with the General Application Steps identified for the H.M.P.C. All repairs to epoxy coated fittings are subject to inspection and approval by appropriate GCWW Inspection personnel.

All rejected material, including pipe and fittings, shall be removed from the project site immediately.

The Contractor must maintain access to sidewalks at all times. Storage of any materials within the public Right of Way, including sidewalks, is not permitted unless approved by GCWW, the Project Engineer, or as indicated on the approved plans.

All copper tubing shall be type "K" of a standard nominal size: 3/4", 1", 1-1/2" and 2". All fittings will have copper flare type connections and shall be in accordance with City of Cincinnati Specification No. 40-113-05.

The contractor shall furnish the necessary certifications for branch material.

All proposed water mains will be hydrostatically tested for leakage in accordance with 1101.054,'Hydrostatic Test for Leakage', of the appropriate Item 1101, "Furnishing & Laying Ductile Iron Pipe and Fittings".

The Contractor will be responsible for filling, flushing, and pressure testing new water mains, 20" or smaller. The contractor will provide all labor, material and equipment (including the necessary pumps to apply the pressure test). The Water Works will provide the necessary meter and gauge. All costs for this work shall be included in the contractor's unit bid price for Item 1101, "Furnishing & Laying Ductile Iron Pipe and Fittings". Once the filling and pressure testing are completed, the Contractor will be responsible for flushing the proposed water main and the CCWW will be responsible for bacteria sampling. The GCWW will be responsible for filling, pressure testing and flushing new water mains greater than 20".

The Contractor is responsible for all pipe sewers disturbed in the completion of this project. In the event it becomes necessary to repair or replace existing pipe sewers, the Contractor must notify Sewer Maintenance, (513)244-1369, before proceeding with the work.

The Contractor is advised that his unit bid prices for the appropriate Item 1101, "Furnish & Install Pipe and Fittings", includes final restoration of all disturbed surfaces. The GCWW will not make full compensation under Item 1101 until final restoration is complete.

Final restoration shall be done in accordance with the restoration detail drawing as shown on Sheet 1.

"All valve boxes shall be domestically manufactured. All valve boxes for 1-inch air release assemblies and gate valves 12-inch and smaller shall be Tyler Union Series 6850, East Jordan Iron Works Series 8550, or a domestically manufactured approved equal. The approved equal will be determined by the City of Cincinnati Greater Cincinnati Water Works. A valve box frost plug shall also be included. All valve boxes for gate valves 12-inch and smaller shall include the BOXLOK valve box alignment device from EMMA Sales, LLC. All costs associated with adherence to this requirement shall be included in the Contractor's unit bid price for Item 1116 – Furnishing and Installing Valve Box Complete"

Notice of Confidentiality – Public Infrastructure Record

This Document is a Public Infrastructure Record of the City of Cincinnati and its Greater Cincinnati Water Works, and is not subject to the public disclosure requirements of the public records laws of the State of Ohio and federal government. This Document is being provided on the basis of your reported need, and shall be considered confidential. By accepting this Document, you agree that it will not be shared or otherwise disclosed to anyone other than persons who have a direct need to know for the sole purpose of carrying out the project for which this Document was obtained. Anyone receiving this Document is bound by the same confidentiality requirements and must take precautions to protect against its dissemination.

The failure to observe the confidentiality requirements of this Notice shall serve as the basis for the City of Cincinnati to immediately seek legal recourse, including the recovery of actual damages resulting from unauthorized access or disclosure of the Document.

SUGGESTED BILL OF MATERIAL

FURNISHED BY CONTRACTOR

1	EACH	6" Ductile Iron Pipe, CJ. Th. Cl. 55, 20' Lengths
8	EACH	8" Ductile Iron Pipe, CJ. Th. Cl. 55, 20' Lengths
20	EACH	12" Ductile Iron Pipe, CJ. Th. Cl. 56, 20' Lengths
2	EACH	16" Ductile Iron Pipe, CJ. Th. Cl. 56, 20' Lengths
2	EACH	Polyethylene Flattened Tube, 4 Mil Thickness Cross-Laminate 16" Wide x 20' Long
9	EACH	Polyethylene Flattened Tube, 4 Mil Thickness Cross-Laminate 20" Wide x 20' Long
22	EACH	Polyethylene Flattened Tube, 4 Mil Thickness Cross-Laminate 27" Wide x 20' Long
4	EACH	Polyethylene Flattened Tube, 4 Mil Thickness Cross-Laminate 30" Wide x 20' Long
4	EACH	Rolls Polyethylene Tape w/Adhesive 1 1/2" Width, 100' Length
196	EACH	24" O.D. Steel Casing, 3/8" Plate Thickness
2	EACH	12" 22.5° Bend, 2MJ
4	EACH	8" 45° Bend, 2MJ
9	EACH	12" 45° Bend, 2MJ
2	EACH	8" Solid Sleeve, 2MJ
3	EACH	12" Solid Sleeve, 2MJ
1	EACH	12" Solid Sleeve, DP
2	EACH	16" Solid Sleeve, 2MJ
2	EACH	8" Cap, MJ (Temporary)
2	EACH	12" Cap, MJ (Temporary)
1	EACH	8" x 6" Tee, 2MJ x Flg.
1	EACH	12" x 12" Tee, 3MJ
1	EACH	16" x 6" Tee, 2MJ x Flg.
1	EACH	16" x 12" Reducer, MJ x PE
2	EACH	6" Flange Tyte Rubber Gasket
2	EACH	6" Valve, Flg. x MJ
1	EACH	8" Valve, 2MJ
2	EACH	12" Valve, 2MJ
5	EACH	Valve Box Complete
5	EACH	Valve Box Frost Plug
5	EACH	Valve Box Boxlok
4	EACH	6" Mega Lug Assembly
19	EACH	8" Mega Lug Assembly
36	EACH	12" Mega Lug Assembly
11	EACH	16" Mega Lug Assembly
5	EACH	8" Field Lok Gasket
13	EACH	12" Field Lok Gasket

SERVICE BRANCH MATERIAL

(FURNISHED BY CONTRACTOR)

1	EACH	3/4" Ferrule
1	EACH	3/4" Insulating Coupling
1	EACH	Curb Box

AIR RELEASE MATERIAL

(FURNISHED BY CONTRACTOR)

2	EACH	VALVE BOX COMPLETE
2	EACH	VALVE BOX FROST PLUG
2	EACH	1" FERRULE
8	L.F.	1" COPPER SERVICE PIPE
2	EACH	1" BLOW OFF BALL VALVE ASSEMBLY

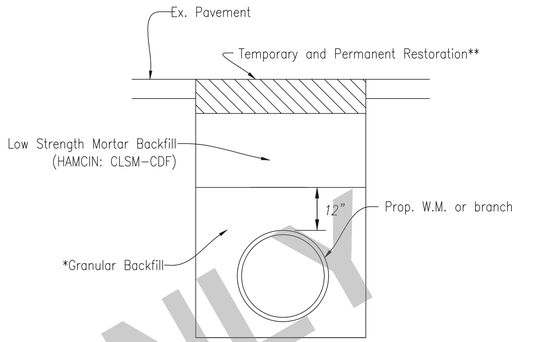
The materials listed are only suggested for use during the water main and branch relocation work as proposed on the drawings. The contractor shall furnish additional material where needed. No allowance will be made for unused material nor will any extra payment be made for additional specials required to complete the water main work. Before ordering material the contractor is responsible for making his own field measurements and for field verifying the O.D. of existing water mains where sleeves and pipe couplings are involved.

Note 1:
Valves furnished by the contractor shall be; American Resilient Wedge Gate Valve Series 2500, U.S. Pipe Metroseal Gate Valve, Kennedy Valve Ken Seal II Resilient Gate Valve, Clow F-6100 Series Resilient Wedge Gate Valve, Mueller 2360 Resilient Wedge Gate Valve.

Note 2:
Low-Lead Brass Material Requirements:
All components in contact with water shall be fabricated from Sebiloy II or Federalloy I-836 alloys or a material approved by the Engineer. All components that do not come in contact with water shall comply with the requirements of ASTM B 62 Copper Alloy Number. Coated or washed metals are not acceptable if their lead levels exceed .25% by weight prior to the coating or washing process. All service fittings and materials shall be certified as suitable for contact with drinking water by an accredited certification organization in accordance with ANSI/NSF Standard 61, Drinking Water Systems Components – Health Effects. All service fittings shall either be stamped or embossed with the letter "NL", to indicate "No-Lead", or marked to indicate that the product is manufactured from the low-lead alloys.

Note 3:
Special Note on Service Pipe in Corrosive Soils:
Service tubing is to be soft K Copper manufactured to the requirements of ASTM B88. Service tubing coating shall have NOVA Polyethylene LLDPE extrusion resin PP-0118-F coating to meet minimum of .026 mil thickness containing UV inhibitors. Service tubing shall have identification & traceability on both copper & plastic continuously line-marked with tube contents, ASTM specification, size, & descending footage. Unique lot number printed on both copper & plastic allowing product to be traced back to origin and time of manufacturing. Service tubing shall be Aqua Shield as manufactured by KAMCO Products Inc. or approved equal.

RESTORATION DETAIL



**Temporary and Permanent Restoration shall be done in accordance with the Contract specifications and/or project plan typical sections. (Match the "Storm Sewer Trench Restoration.)

In areas where the pavement; base and/or sub-base is to be replaced as part of the roadway contract, the cost for permanent pavement restoration shall be included under the appropriate pavement bid items. Cost for temporary pavement restoration in these areas shall be included in the Contractor's appropriate Unit Bid Price for Item 1101 or Item 1126.

Unless otherwise noted on the plans, areas where the existing pavement, base and/or sub-base are not to be disturbed, the cost for temporary and permanent pavement restoration shall be included in the Contractor's appropriate Unit Bid Price for Item 1101 or Item 1126.

*Backfill of the water main and branch trench shall be done in accordance with G.C.W.W. specifications. All water mains and branches installed outside of the pavement area shall utilize Granular Backfill in lieu of the Control Density Fill. All costs for backfill shall be included under Item 1101, "Furnishing and Installing Ductile Iron Pipe and Fittings".

Controlled Density Fill must meet both HAMCIN: CLSM-CDF performance specification and O.D.O.T. specification. All flowable fill products shall meet the requirements of the current HAMCIN CLSM-CDF Backfill Specification (dated March 2015). Copies of the HAMCIN CLSM-CDF Backfill Specification are made available at the GCWW Engineering Offices at 4747 Spring Grove Avenue, Cincinnati Department of Transportation & Engineering at 801 Plum Street, or their website http://www.cincinnati-oh.gov/dote/manuals-permits-supplements/. Also, the Contractor shall submit, prior to the start of construction, the necessary documentation for review and approval by the GCWW.

Please note that the G.C.W.W. requirement is in addition to HAMCIN specifications for flowable fill products. A copy of the G.C.W.W. requirement is available at the G.C.W.W. Engineering Office located at 4747 Spring Grove Avenue. Contact the Supervisor of Inspection at 591-7870.

Prior to the start of construction, the Contractor shall submit the necessary Controlled Density Fill compliance documentation for review and approval by the G.C.W.W.

GCWW Note:
All field layout of water main pipe and specials shall be the responsibility of the Contractor and shall be performed by a licensed surveyor.

INDEX

General Provisions 1
Suggested Bill of Materials 1
Restoration Details 1
GCWW General Summary 2
Plan 3-4

PROJECT NAME HAM 75-7.85

APPROVED: WW002842 / 4-3761 / MF-16242

10-01-21
GCWW SUPERVISING ENGINEER - DESIGN DATE

GCWW PRINCIPAL ENGINEER - SYSTEM FACILITIES DATE

10/5/2021
GCWW CHIEF ENGINEER DATE

STATE OF OHIO MATTHEW S. SMITH E-71924 REGISTERED PROFESSIONAL ENGINEER

OhioEPA Ohio Environmental Protection Agency "Self-Certification" letter required prior to the start of construction.

☒ OEPA CERTIFICATION EXEMPT
☐ NON - EXEMPT

10-01-21
OEPA REVIEW DATE

FOR INFORMATION ONLY

HORIZONTAL AND VERTICAL SCALE IN FEET
0 10 20 40

CALCULATED E.G.B. CHECKED M.S.

REVISIONS

GREATER CINCINNATI WATER WORKS
ENGINEERING DIVISION / DESIGN SECTION
3645 EASTERN AVENUE, CINCINNATI, OHIO 45226

HAM 75-7.85 COVER SHEET

4-3761 WW002842 MF-16242

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HAM 75-7.85

	GENERAL SUMMARY					
ODOT ITEM	ODOT ITEM NUMBER AND/OR EXTENSION	100% PROJECT COST	TOTAL QUANTITY	UNITS	DESCRIPTION	GCWW SPEC. NUMBER
SPECIAL	638E98600	20	20	LIN. FT.	FURNISHING AND LAYING 6" DUCTILE IRON PIPE AND FITTINGS (CIN. 1101)	1101
SPECIAL	638E98600	145	145	LIN. FT.	FURNISHING AND LAYING 8" DUCTILE IRON PIPE AND FITTINGS (CIN. 1101)	1101
SPECIAL	638E98600	371	371	LIN. FT.	FURNISHING AND LAYING 12" DUCTILE IRON PIPE AND FITTINGS (CIN. 1101)	1101
SPECIAL	638E98600	42	42	LIN. FT.	FURNISHING AND LAYING 16" DUCTILE IRON PIPE AND FITTINGS (CIN. 1101)	1101
SPECIAL	638E98600	196	196	LIN. FT.	FURNISHING AND INSTALLING 24" STEEL CASING (CIN. 1108)	1108
SPECIAL	602E20001	23	23	CU. YD.	CONCRETE, CLASS C (CIN. 1110)	1110
SPECIAL	638E98000	2	2	EACH	RELOCATE EX. FIRE HYDRANT (CIN. 1113)	1113
SPECIAL	638E98000	5	5	EACH	FURNISHING AND INSTALLING VALVE BOX, COMPLETE (CIN. 1116)	1116
SPECIAL	638E98000	2	2	EACH	FURNISHING AND INSTALLING VALVE BOX W/1" AIR RELEASE COMPLETE (CIN. 1116)	1116
SPECIAL	203E10001	5	5	CU. YD.	*ADDITIONAL EXCAVATION (CIN. 1119)	1119
SPECIAL	203E10001	5	5	CU. YD.	*EXPLORATORY EXCAVATION (CIN. 1120)	1120
SPECIAL	638E98000	3	3	EACH	REMOVING EXISTING MANHOLE CURB AND COVER (CIN. 1122)	1122
SPECIAL	638E98000	2	2	EACH	REMOVING EXISTING VALVE BOX (CIN. 1122)	1122
SPECIAL	638E98600	25	25	LIN. FT.	*CHANGING 8" AND UNDER PIPE SEWER (CIN. 1123)	1123
SPECIAL	638E98600	25	25	LIN. FT.	*CHANGING 10" THRU 24" PIPE SEWER (CIN. 1123)	1123
SPECIAL	638E98000	8	8	EACH	RESETTING EXISTING VALVE BOX, COMPLETE (CIN. 1125)	1125
SPECIAL	638E98000	1	1	EACH	RECONNECTING EXISTING (3/4)" SERVICE BRANCH (CIN. 1128)	1128
SPECIAL	638E98000	1	1	EACH	FURNISHING AND INSTALLING CURB AND ROADWAY BOX (CIN. 1131)	1131
SPECIAL	638E98000	2	2	EACH	RESETTING EXISTING CURB AND ROADWAY BOX (CIN. 1132)	1132
509	E25000	2852	2852	POUND	REINFORCING STEEL	509
602	602E98200	1	1	CU. YD.	*BRICK MASONRY	602
638	E11500	1	1	MBF	*SHEETING AND BRACING ORDERED LEFT IN PLACE	637
	* CONTINGENCY					

FOR INFORMATION ONLY

NOTICE OF CONFIDENTIALITY - PUBLIC INFRASTRUCTURE RECORD

THIS DOCUMENT IS A PUBLIC INFRASTRUCTURE RECORD OF THE CITY OF CINCINNATI AND ITS GREATER CINCINNATI WATER WORKS, AND IS NOT SUBJECT TO THE PUBLIC DISCLOSURE REQUIREMENTS OF THE PUBLIC RECORDS LAWS OF THE STATE OF OHIO AND FEDERAL GOVERNMENT. THIS DOCUMENT IS BEING PROVIDED ON THE BASIS OF YOUR REPORTED NEED, AND SHALL BE CONSIDERED CONFIDENTIAL. BY ACCEPTING THIS DOCUMENT, YOU AGREE THAT IT WILL NOT BE SHARED OR OTHERWISE DISCLOSED TO ANYONE OTHER THAN PERSONS WHO HAVE A DIRECT NEED TO KNOW FOR THE SOLE PURPOSE OF CARRYING OUT THE PROJECT FOR WHICH THIS DOCUMENT WAS OBTAINED. ANYONE RECEIVING THIS DOCUMENT IS BOUND BY THE SAME CONFIDENTIALITY REQUIREMENTS AND MUST TAKE PRECAUTIONS TO PROTECT AGAINST ITS DISSEMINATION.

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0 10 20 40
HORIZONTAL AND VERTICAL SCALE IN FEET

CALCULATED E.G.B.
CHECKED M.S.

REVISIONS

GREATER CINCINNATI WATER WORKS
ENGINEERING DIVISION / DESIGN SECTION
3945 EASTERN AVENUE, CINCINNATI, OHIO 45226

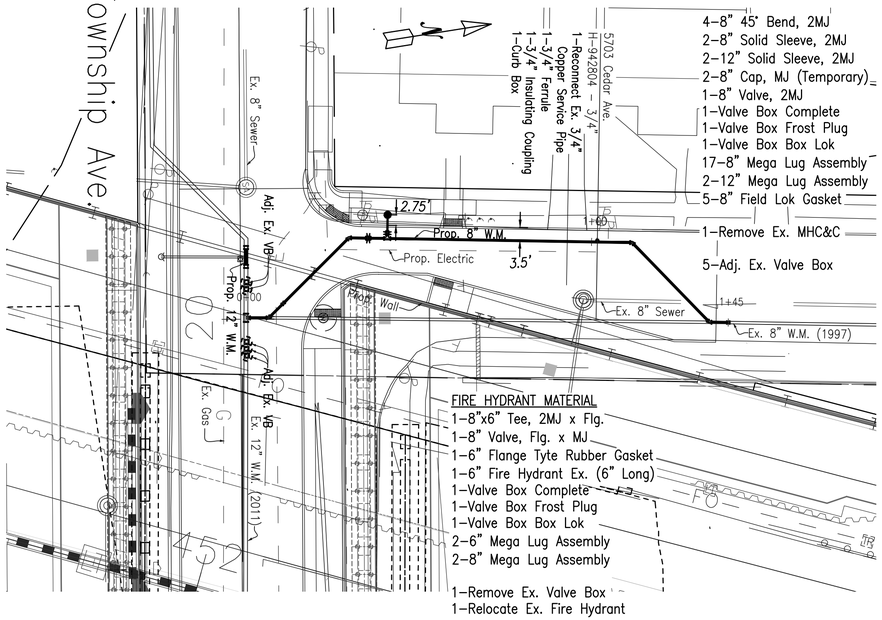
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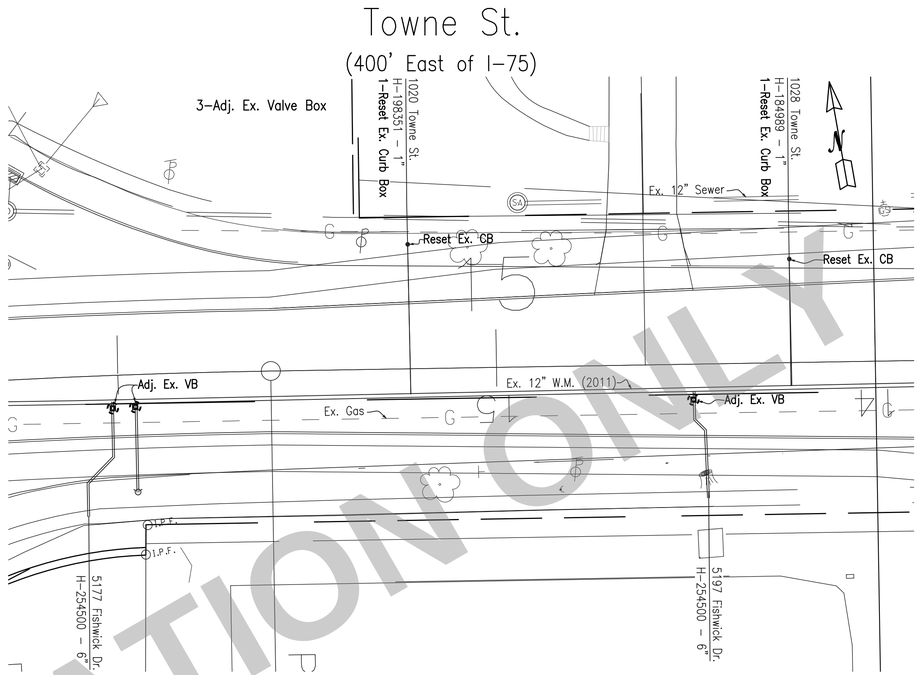
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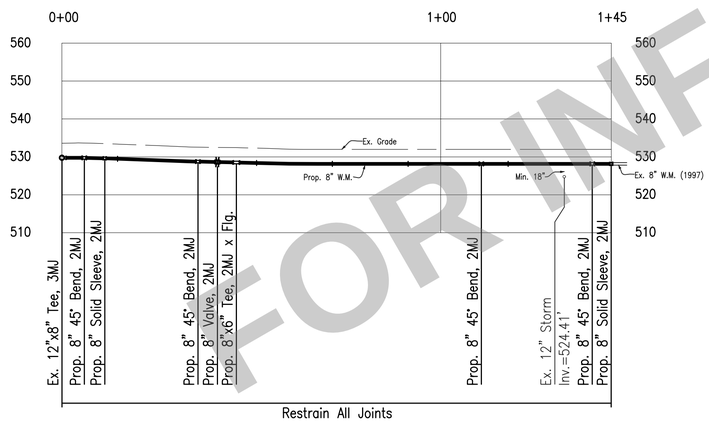
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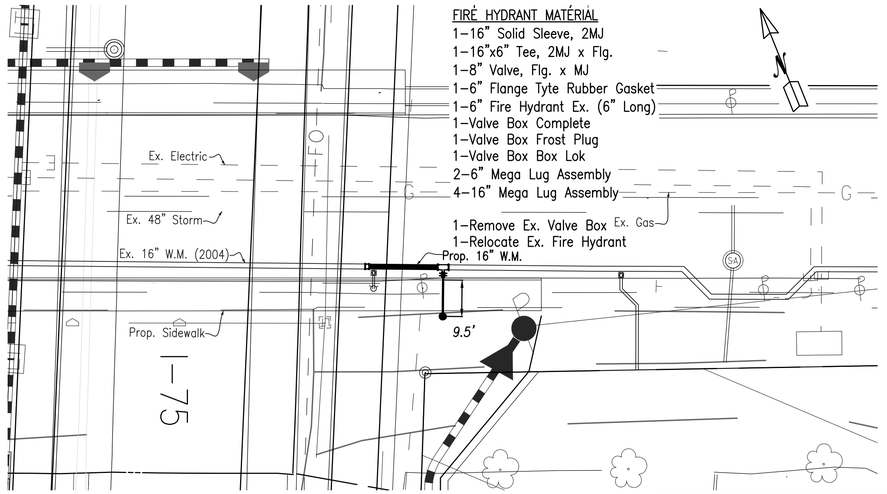
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HORIZONTAL AND VERTICAL SCALE IN FEET

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REVISIONS

GREATER CINCINNATI WATER WORKS
ENGINEERING DIVISION / DESIGN SECTION
3645 EASTERN AVENUE, CINCINNATI, OHIO 45226

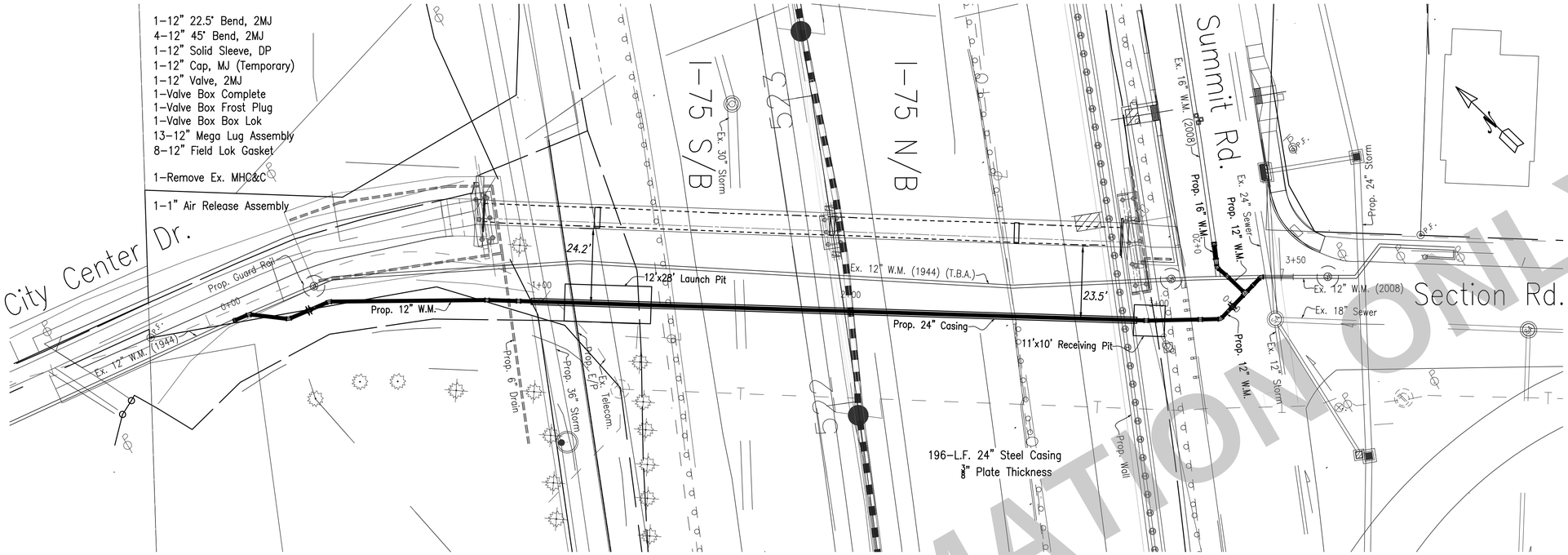
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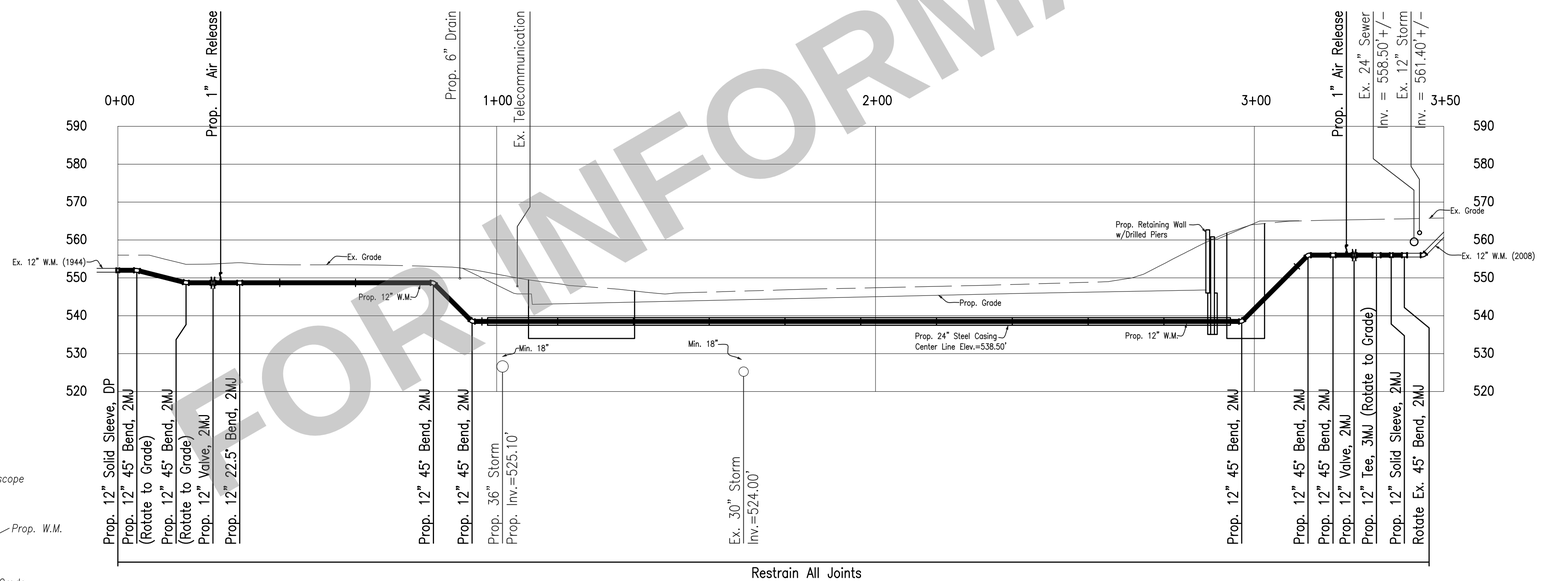
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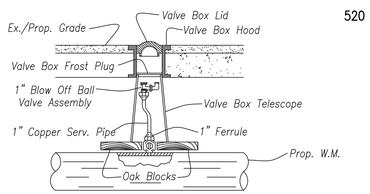
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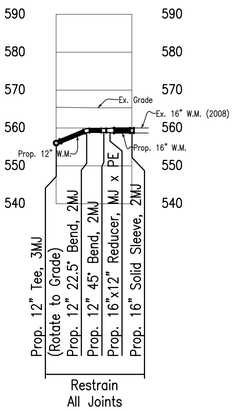




Note: Air Release Must Be 15" to 19" Below Final Grade

1–Valve Box Complete
1–Valve Box Frost Plug
1–1" Ferrule
3–L.F.± 1" Copper Service Pipe
(Length May Vary Depending On W.M. Depth)
1–1" x 1" x 3/4" Blow–off Ball Valve Assembly
(A.Y. McDonald Part #76109 (BCAP)

AIR RELEASE DETAIL
FOR 1" AIR RELEASE ASSY.



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PEDESTRIAN BRIDGE AT SECTION RD.
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WW002842
MF-16242

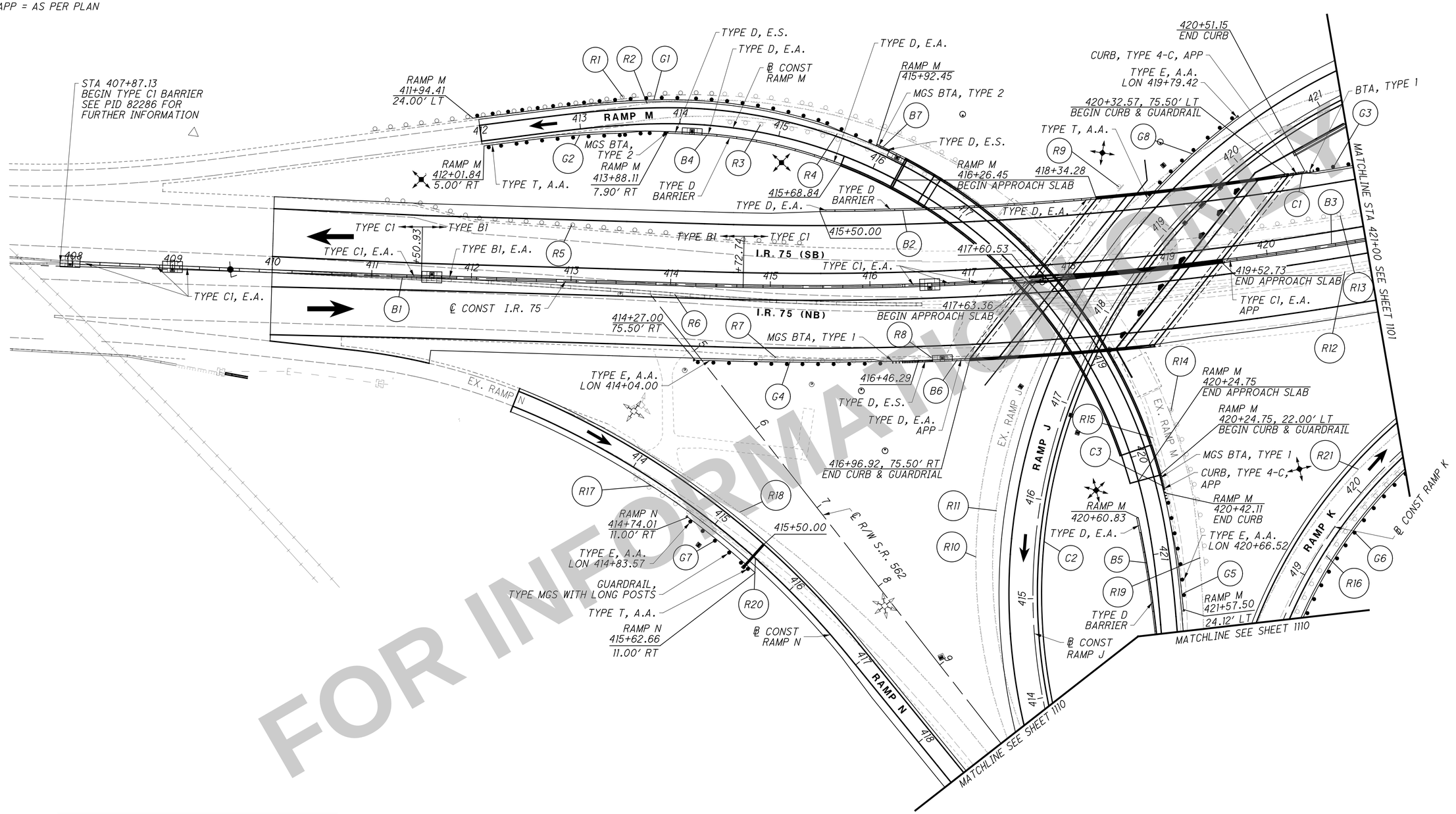
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HAM 75-7.85

LEGEND

E.A. = END ANCHORAGE
E.S. = END SECTION
A.A. = ANCHOR ASSEMBLY
BTA = BRIDGE TERMINAL ASSEMBLY
APP = AS PER PLAN



FOR INFORMATION

FOR ESTIMATED QUANTITIES SEE SHEET 307

ALL GUARDRAIL ASSUMED TO BE TYPE MGS, UNLESS OTHERWISE NOTED

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ROADSIDE BARRIER PLAN
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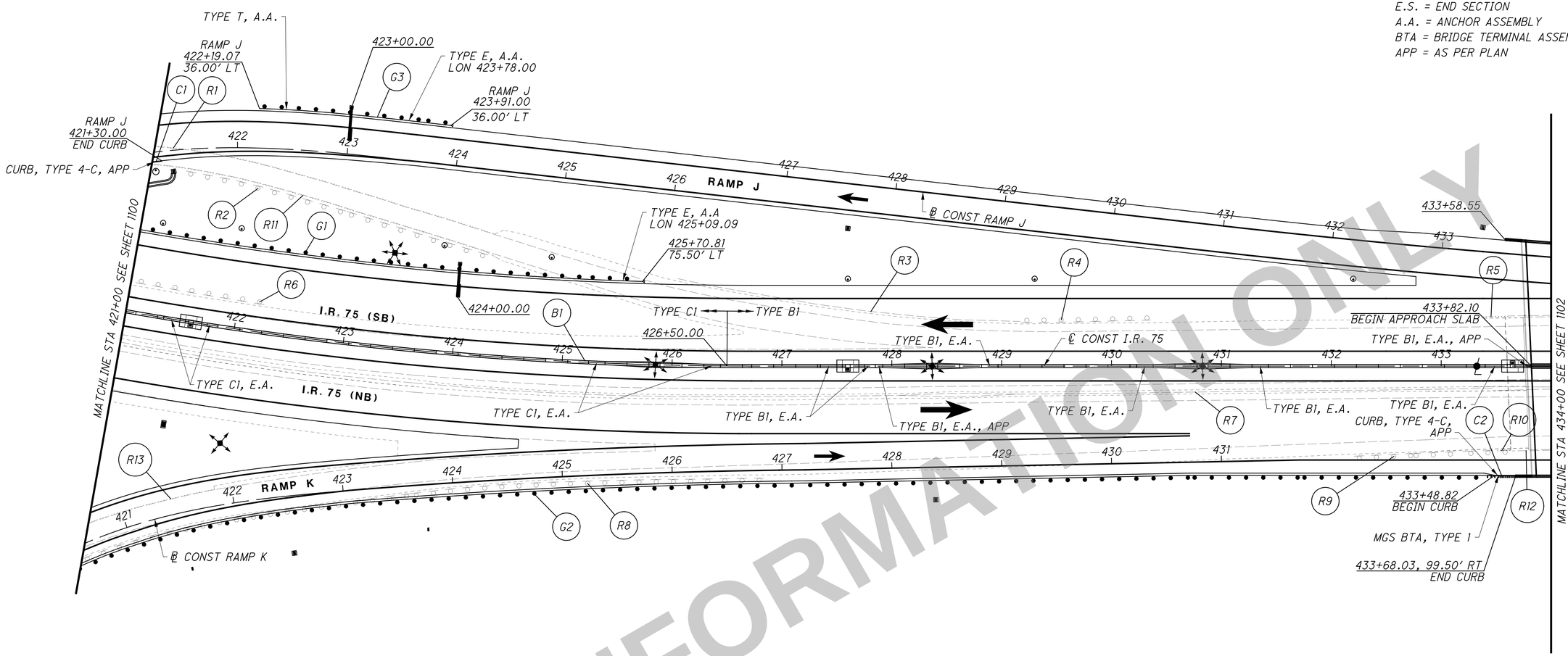
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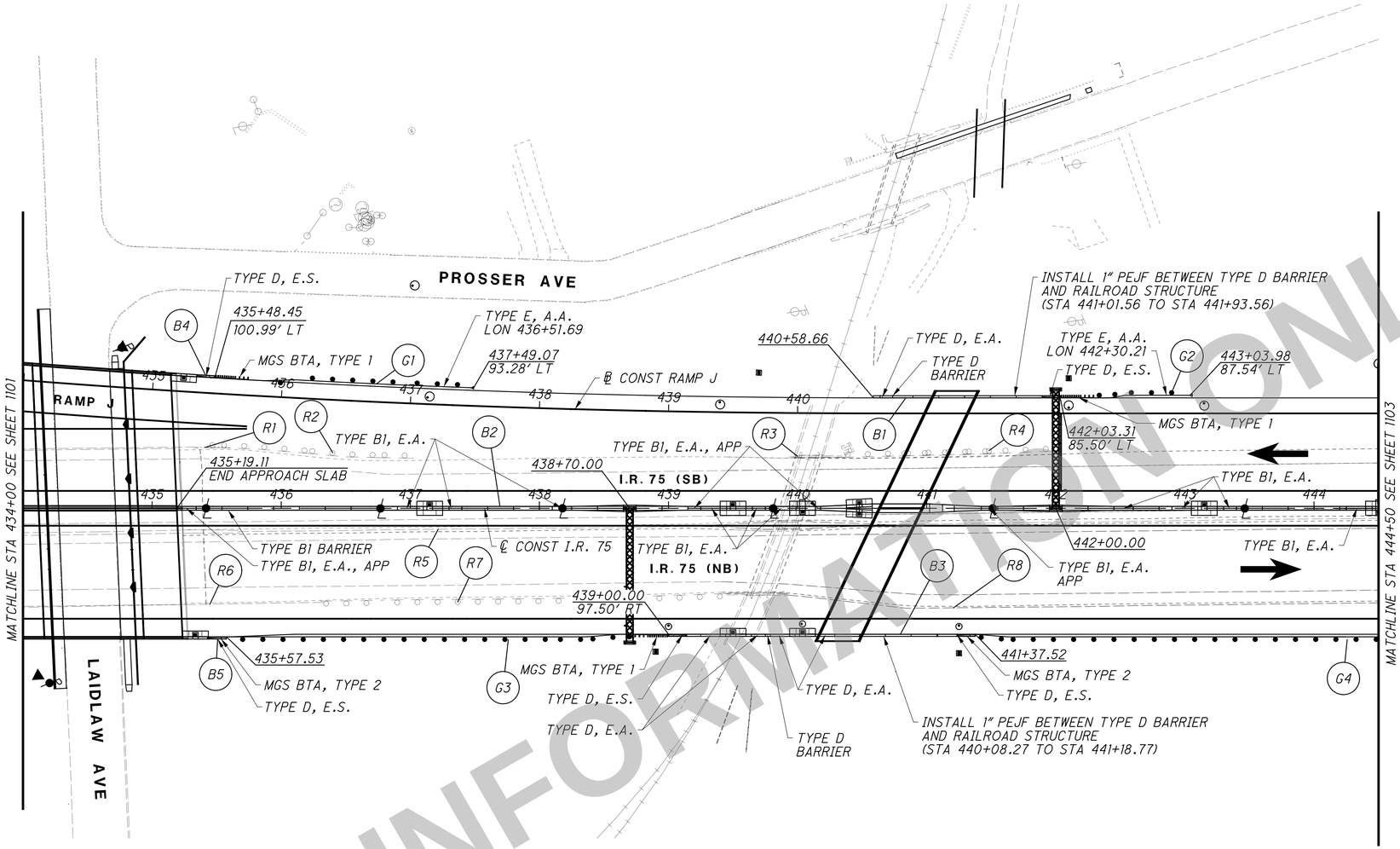
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HORIZONTAL SCALE IN FEET
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ROADSIDE BARRIER PLAN
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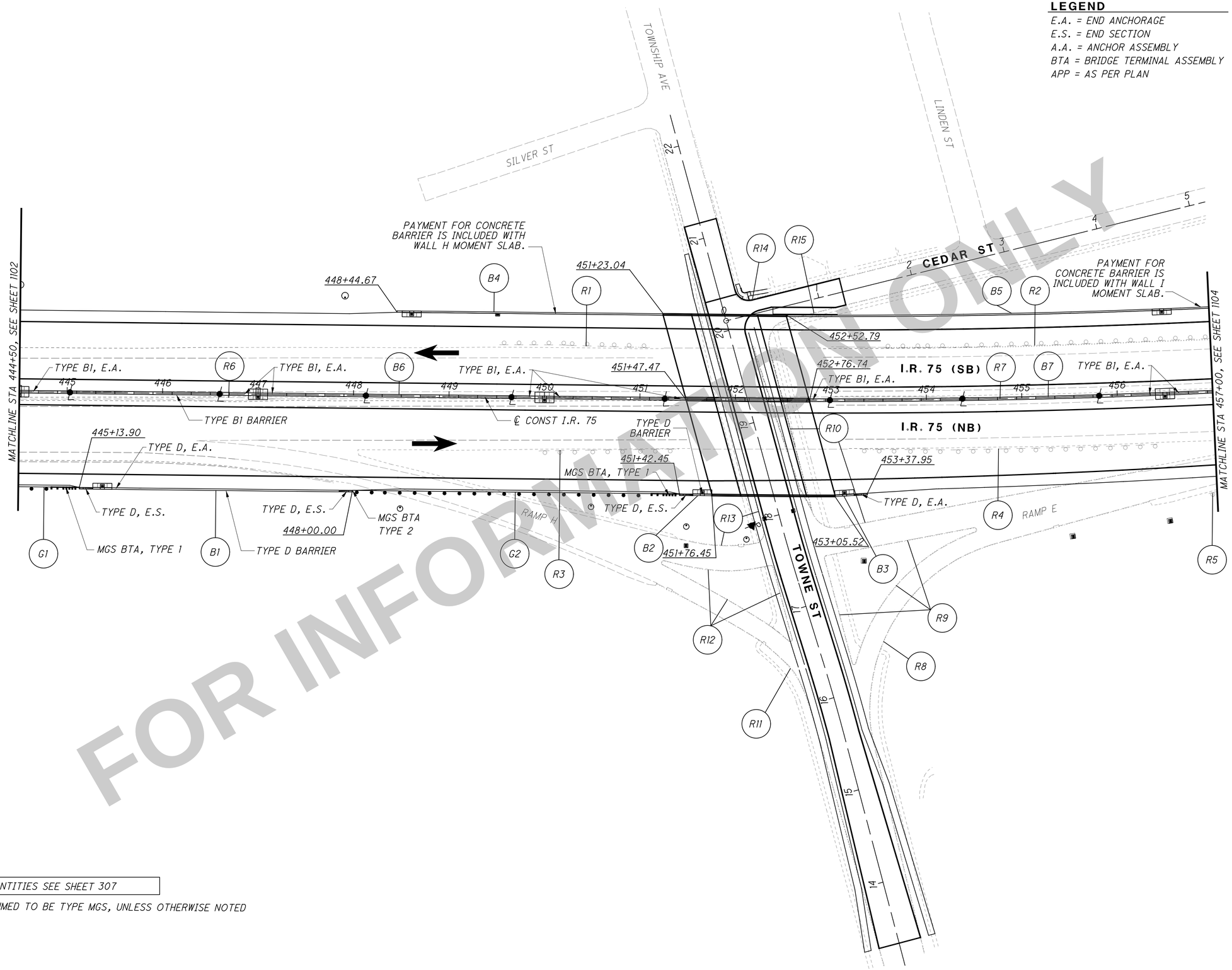
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HORIZONTAL SCALE IN FEET
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ROADSIDE BARRIER PLAN
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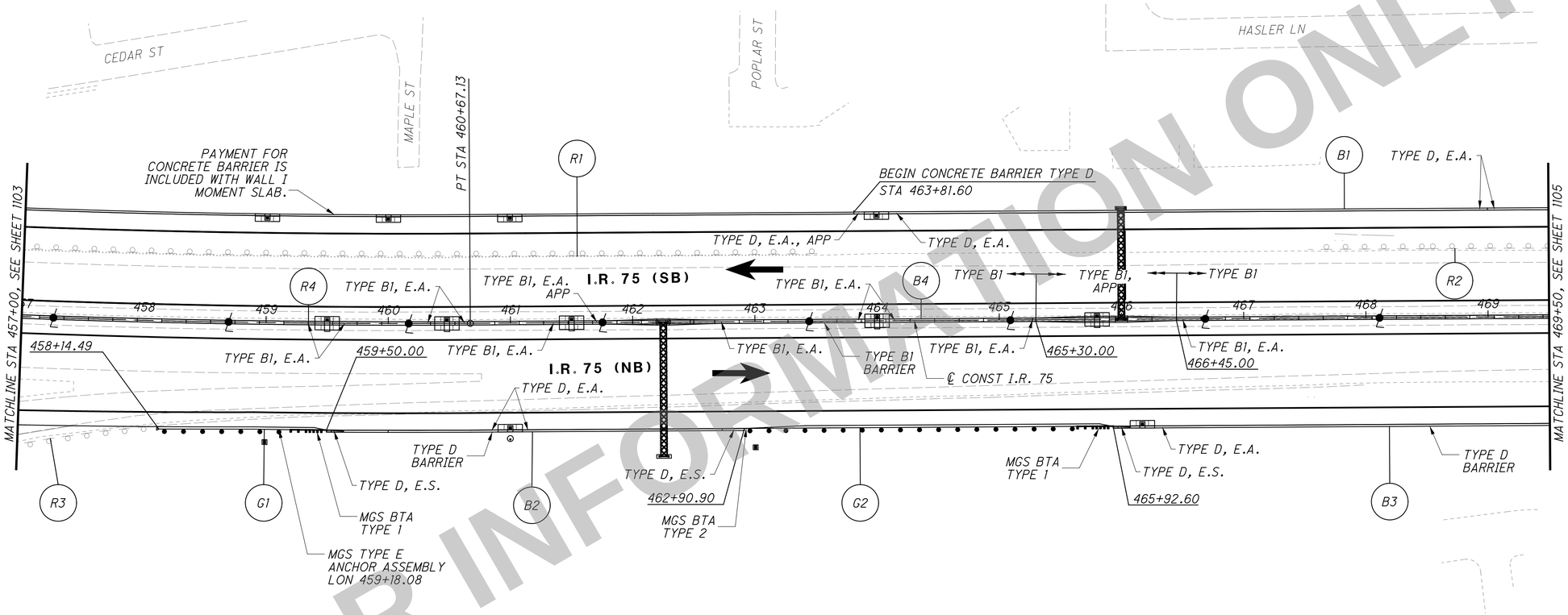
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LEGEND

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ROADSIDE BARRIER PLAN
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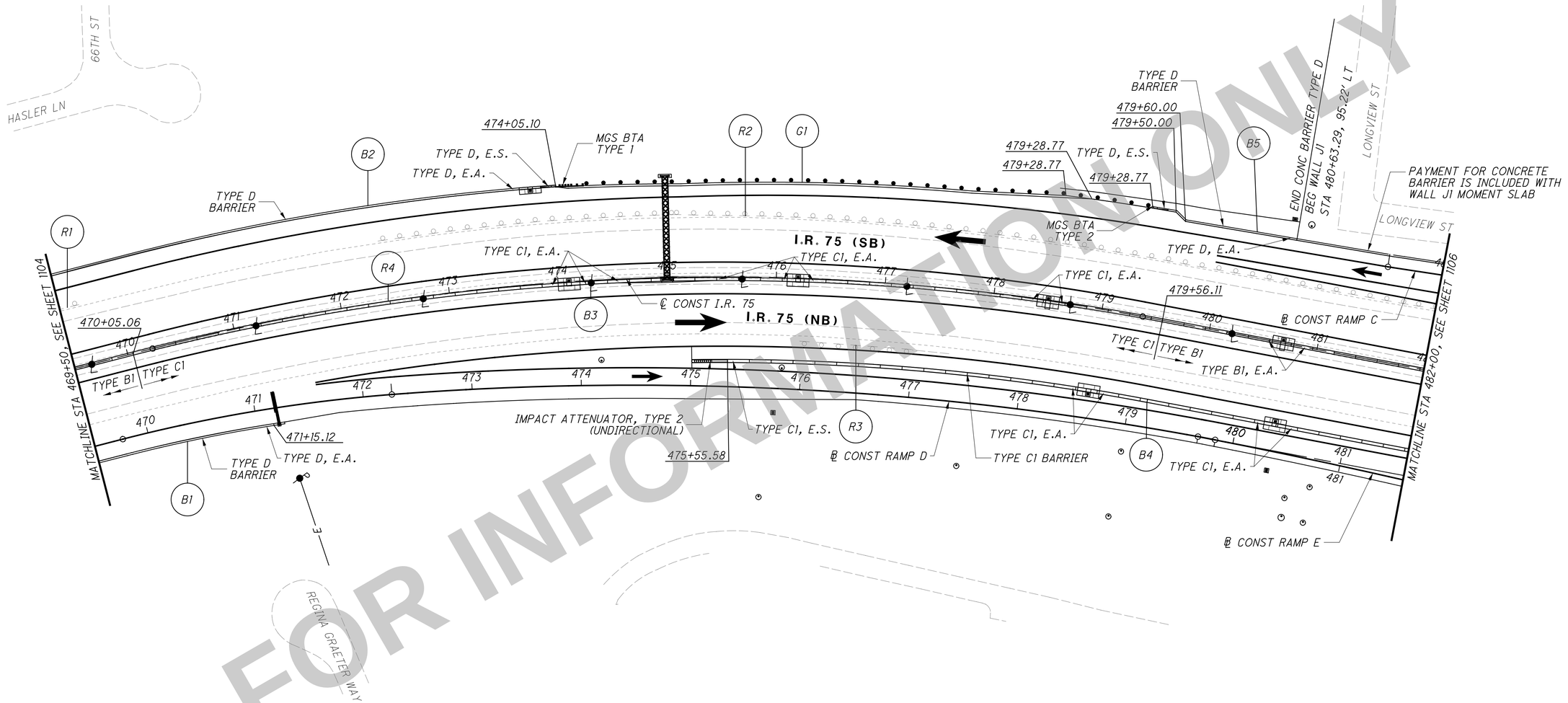
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CALCULATED BLM
CHECKED SSK

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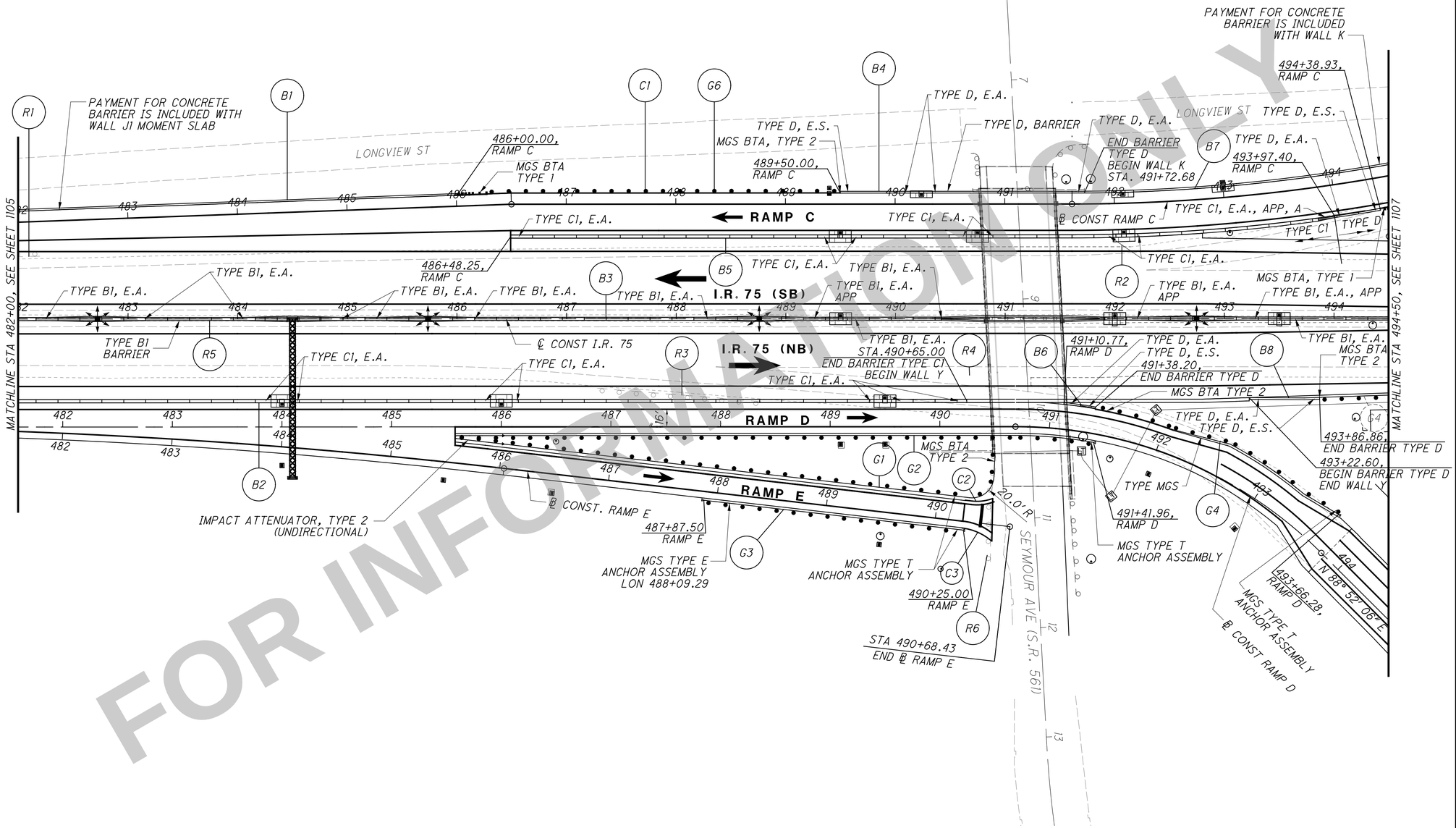
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CALCULATED BLM
CHECKED SSK

ROADSIDE BARRIER PLAN
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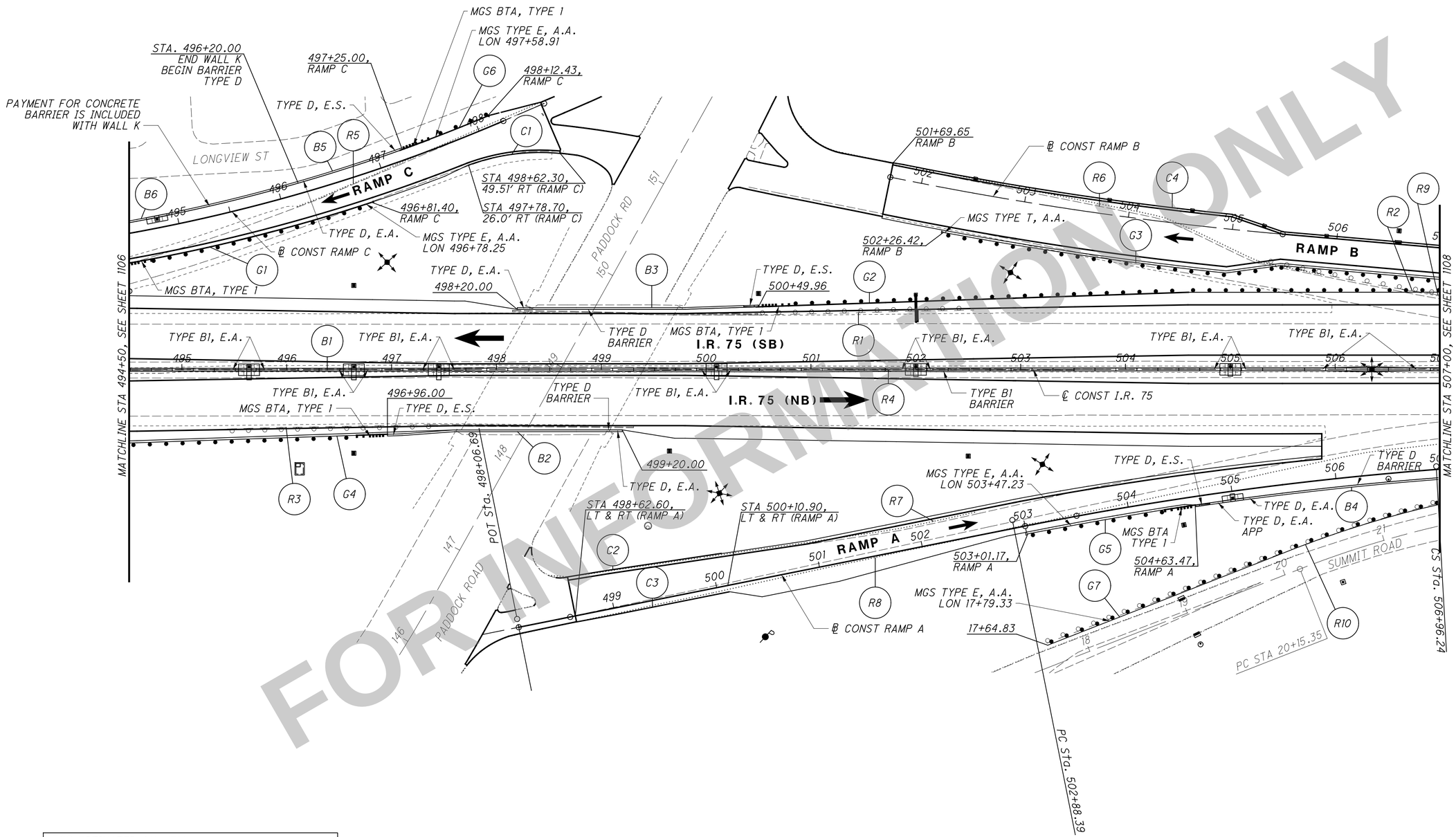
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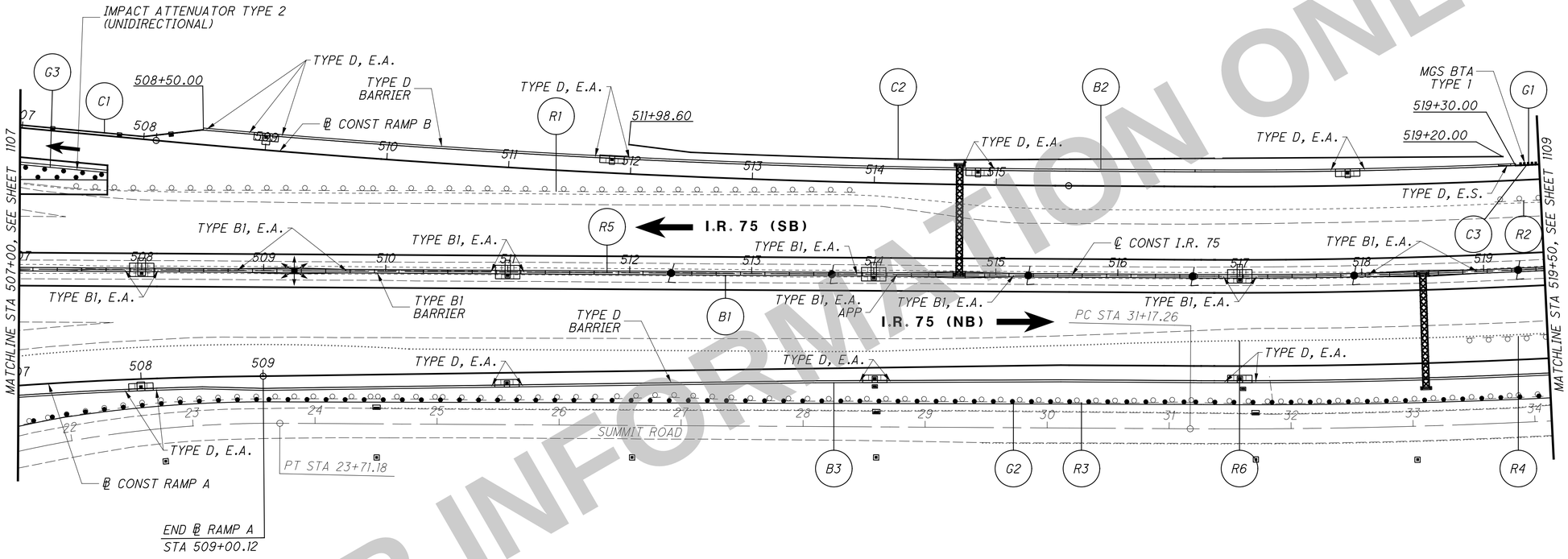
LEGEND

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STA. 496+20.00
END WALL K
BEGIN BARRIER
TYPE D
PAYMENT FOR CONCRETE BARRIER IS INCLUDED WITH WALL K
LONGVIEW ST
TYPE D, E.S.
497+25.00,
RAMP C
MGS BTA, TYPE 1
MGS TYPE E, A.A.
LON 497+58.91
498+12.43,
RAMP C
RAMP C
STA 498+62.30,
49.51' RT (RAMP C)
STA 497+78.70,
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TYPE D, E.A.
MGS TYPE E, A.A.
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℄ CONST RAMP C
MGS BTA, TYPE 1
TYPE D, E.A.
498+20.00
PADDOCK RD
TYPE D
BARRIER
MGS BTA, TYPE 1
I.R. 75 (SB)
TYPE B1, E.A.
501+69.65
RAMP B
℄ CONST RAMP B
MGS TYPE T, A.A.
502+26.42,
RAMP B
RAMP B
TYPE D, E.S.
500+49.96
TYPE B1, E.A.
TYPE B1, E.A.
TYPE B1, E.A.

LEGEND

E.A. = END ANCHORAGE
E.S. = END SECTION
A.A. = ANCHOR ASSEMBLY
BTA = BRIDGE TERMINAL ASSEMBLY
APP = AS PER PLAN



FOR ESTIMATED QUANTITIES SEE SHEET 307

ALL GUARDRAIL ASSUMED TO BE TYPE MGS, UNLESS OTHERWISE NOTED

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED BLM
CHECKED SSK

ROADSIDE BARRIER PLAN
STA 507+00 TO STA 519+50

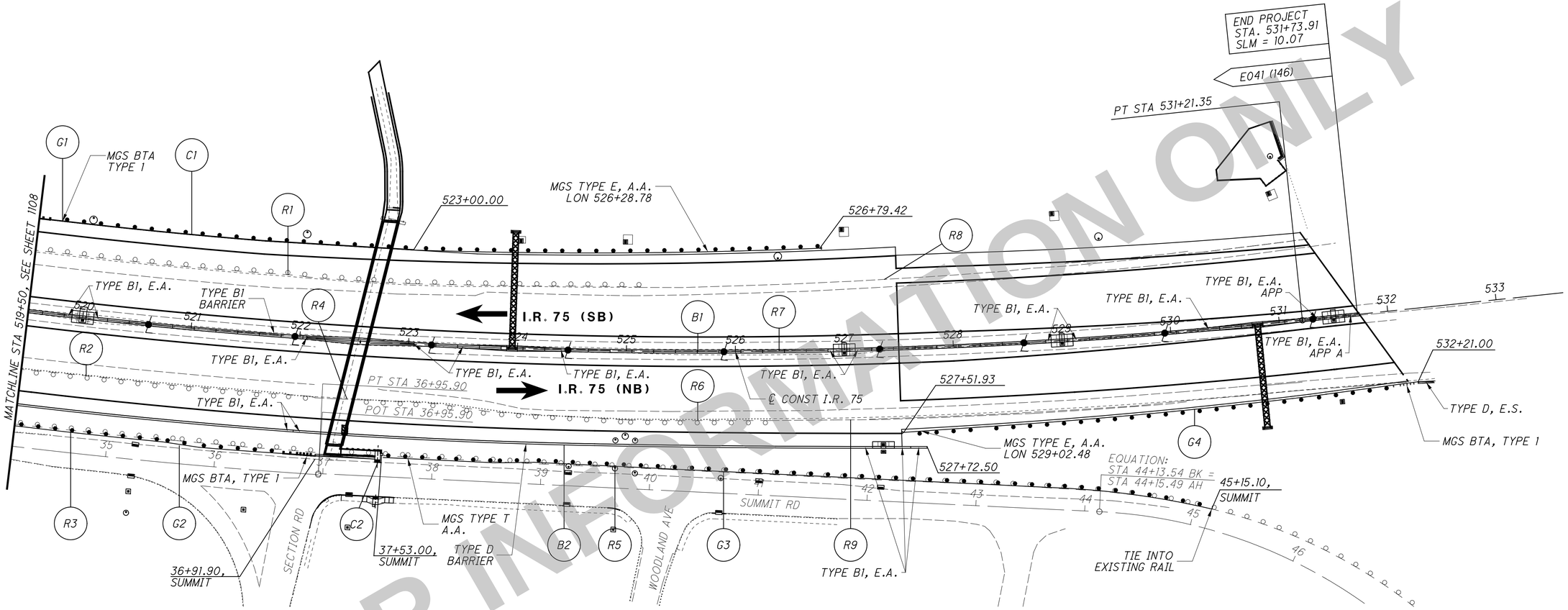
HAM-75-7.85

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2017

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LEGEND

E.A. = END ANCHORAGE
E.S. = END SECTION
A.A. = ANCHOR ASSEMBLY
BTA = BRIDGE TERMINAL ASSEMBLY
APP = AS PER PLAN



FOR INFORMATION ONLY

FOR ESTIMATED QUANTITIES SEE SHEET 307

ALL GUARDRAIL ASSUMED TO BE TYPE MGS, UNLESS OTHERWISE NOTED

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED BLM
CHECKED SSK

ROADSIDE BARRIER PLAN
STA 519+50 TO STA 531+73.91

HAM-75-7.85

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2017

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LEGEND

E.A. = END ANCHORAGE
E.S. = END SECTION
A.A. = ANCHOR ASSEMBLY
BTA = BRIDGE TERMINAL ASSEMBLY
APP = AS PER PLAN

MATCHLINE SEE SHEET 1100

℄ CONST RAMP K

℄ CONST RAMP M

RAMP J
413+43.79
8.50' RT

TYPE D, E.A.

℄ CONST RAMP J

MGS TYPE E, A.A.
LON 413+25.00

CURB, TYPE 4-C, APP

TYPE D, E.S.

MGS BTA, TYPE 1

℄ CONST RAMP N

422+67.14
10.00' RT

MGS BTA, TYPE 1

MGS TYPE E, A.A.
LON 423+19.63

TYPE D BARRIER

427+79.14, 47.41' LT (RAMP M)
412+69.02, 12.64' RT (RAMP K)

MGS BTA, TYPE 2

TYPE D, E.A.

TYPE D, E.S.

TYPE D, E.A.

TYPE D BARRIER

BEGIN CURB & GUARDRAIL
429+61.94, 39.62' LT (RAMP M)
410+85.76, 12.02' RT (RAMP K)

MGS BTA, TYPE 1

TYPE C1, E.A., APP

TYPE C1, E.A.

CURB, TYPE 4-C APP

TYPE C1 → TYPE B1

℄ CONST S.R. 562

TYPE B1 BARRIER → TYPE B1, E.A.

TYPE B1, E.A.

TYPE B1, E.A.

RAMP M
426+53.01

RAMP N
425+83.12

S.R. 562
18+85.00

TYPE D, E.A.

TYPE D BARRIER

TYPE D, E.A.

RAMP N
424+76.78

TYPE D, E.A.
APP

TYPE D, E.S.

RAMP N
424+17.89
8.00' RT

INSTALL 1" PEJF BETWEEN TYPE D BARRIER AND RAILROAD STRUCTURE (STA 424+92.29 TO STA 426+48.26 - RAMP N)

TYPE D, E.A.

15+54 SR 562 =
427+67.01 RAMP M =
408+25.31 RAMP J

MATCHLINE STA 23+00 SEE SHEET 1111

[1] END CURB & GUARDRAIL
421+67.22, 55.49' LT (RAMP N)
410+65.29, 5.25' RT (RAMP J)

FOR ESTIMATED QUANTITIES SEE SHEET 307

ALL GUARDRAIL ASSUMED TO BE TYPE MGS, UNLESS OTHERWISE NOTED

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SEA
CHECKED DLR

ROADSIDE BARRIER PLAN
STA 10+00 TO STA 23+00

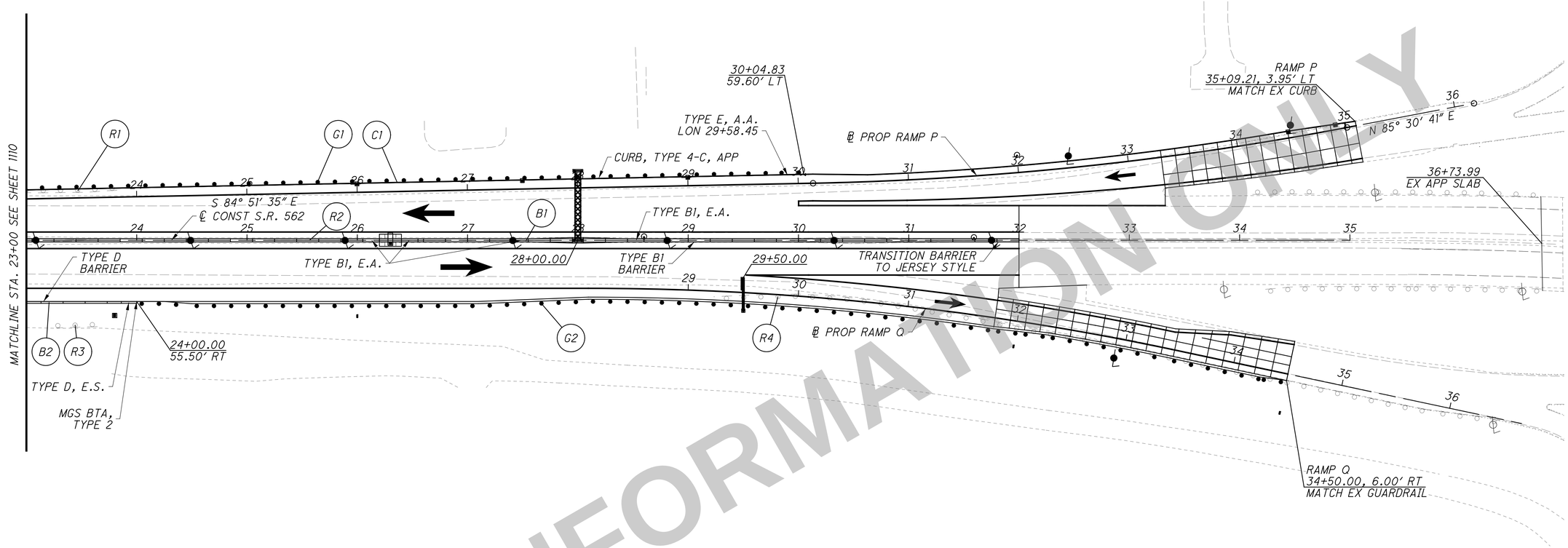
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LEGEND

E.A. = END ANCHORAGE
E.S. = END SECTION
A.A. = ANCHOR ASSEMBLY
BTA = BRIDGE TERMINAL ASSEMBLY
APP = AS PER PLAN



FOR INFORMATION ONLY

FOR ESTIMATED QUANTITIES SEE SHEET 307

ALL GUARDRAIL ASSUMED TO BE TYPE MGS, UNLESS OTHERWISE NOTED

HORIZONTAL SCALE IN FEET
0 25 50 100

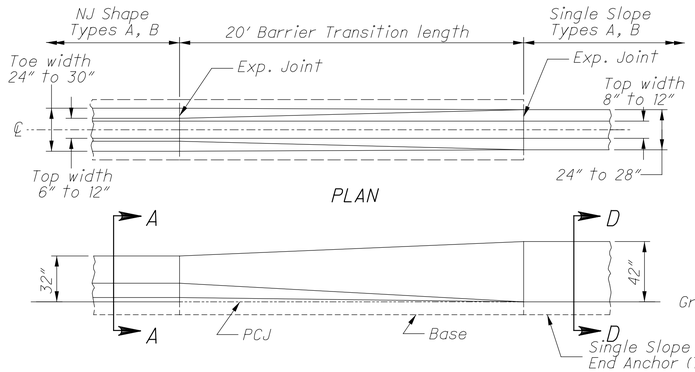
CALCULATED SEA
CHECKED DLR

ROADSIDE BARRIER PLAN
STA 23+00 TO STA 35+00

HAM-75-7.85

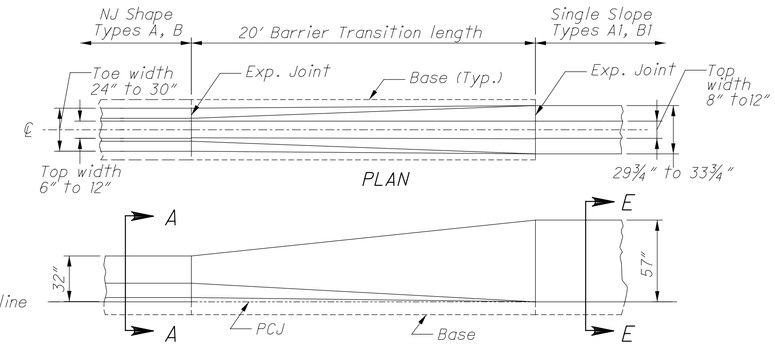
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2017

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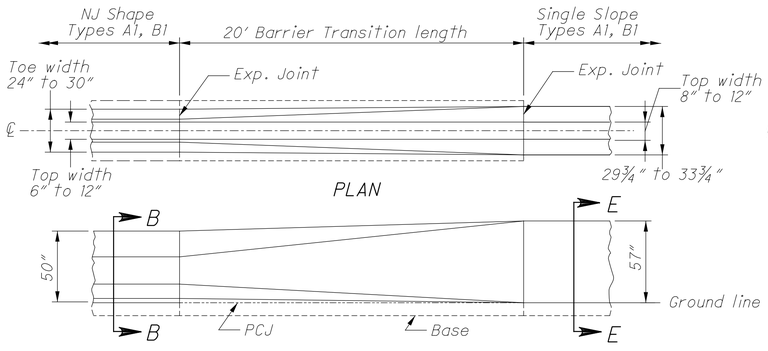
Standard low barrier connection

ELEVATION



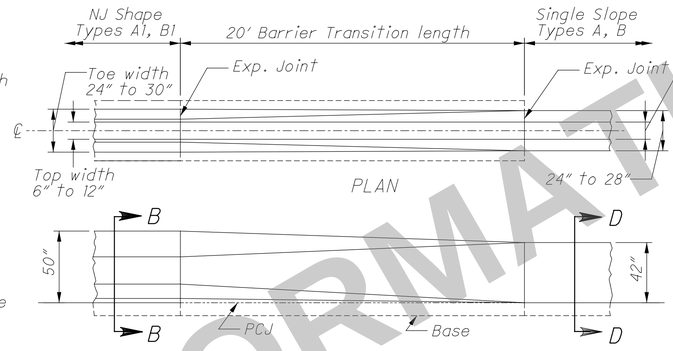
Atypical use

ELEVATION



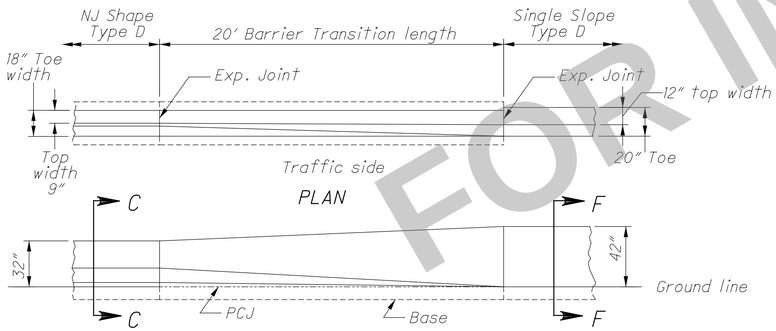
Standard tall barrier connection

ELEVATION



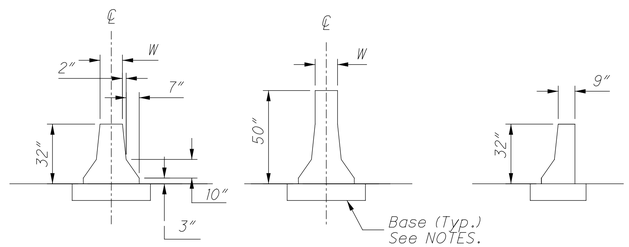
Atypical use

ELEVATION



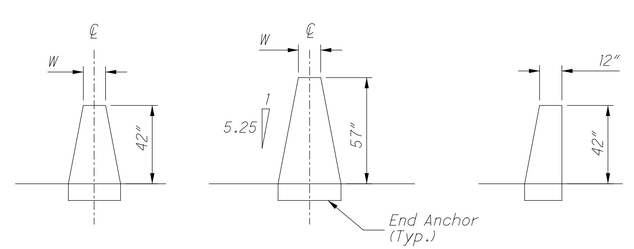
Standard Roadside barrier connection

ELEVATION



NJ SHAPE SECTIONS

See Plan Insert sheets for specific NJ Shape Concrete barrier details.



SINGLE SLOPE SECTIONS

See SCD RM-4.3 and RM-4.5 for specific Single Slope concrete barrier details.

NOTES

GENERAL: This insert details the Barrier Transition, to connect existing NJ Concrete Barrier (safety shape) to a new run of Single Slope Concrete Barrier at locations shown on the plans. For NJ barrier shape and other details see the respective plan insert sheets. For Single Slope barrier details, see SCD RM-4.3 (RM-4.5 for Type D).

ADJACENT CONCRETE BARRIER RUNS: Remove any tapered end sections, Impact attenuators, or other guardrail hardware from existing barrier end. The barrier to barrier transition is not intended to be used at transition sections (those shown on SCD RM-4.4), Inlets, or on Type C or C1 Barrier. If proposed adjacent single slope barrier is Type A or A1, the Barrier Transiton should contain horizontal reinforcing steel similiar to that required in the respective single slope barrier. Reinforcement is not shown and should be detailed separately. The adjacent single slope end should be terminated with a reinforced End Anchor as detailed on the SCDs.

BARRIER FACE TRANSITION: To prevent vehicle snagging, a smooth transition from the safety shape face to the single slope face is made over a 20' length. The actual shape of the Transition is dependent on both the adjacent NJ barrier and the single slope barrier Types, as detailed on the plans. The contractor and Engineer will agree on a construction method to ensure a smooth barrier face.

MATERIALS: Materials are same for those shown on RM-4.3 and RM-4.5, except that cast-in-place is the only acceptable method. Edges may be chamfered or radiused as shown on those drawings.

CONCRETE BASE: Construct base as shown on the NJ shape insert sheets, including the methods detailing the footing joint, Permissible Construction Joint (PCJ), and Dowelling requirements. The width of the base matches the existing NJ barrier.

JOINTS: Construct joints as shown on respective barrier drawings.

RACEWAYS: When specified, place raceway(s) to match raceway elevation in adjoining segments. Place to obtain maximum concrete cover.

METRIC UNITS: Refer to respective barrier drawings or inserts for metric dimensions.

PAYMENT: This Barrier Transiton shall include all material and labor needed to construct this 20' section, including any raceways, reinforcing steel, dowels and other necessary incidentals. Payment shall be made at the unit price for Item 622 - Barrier Transition, Each.

FOR INFORMATION ONLY

OFFICE OF ROADWAY ENGINEERING

DESIGNED | REVIEWED

REVISION DATE 10-20-06 | CHECKED

PLAN INSERT SHEET

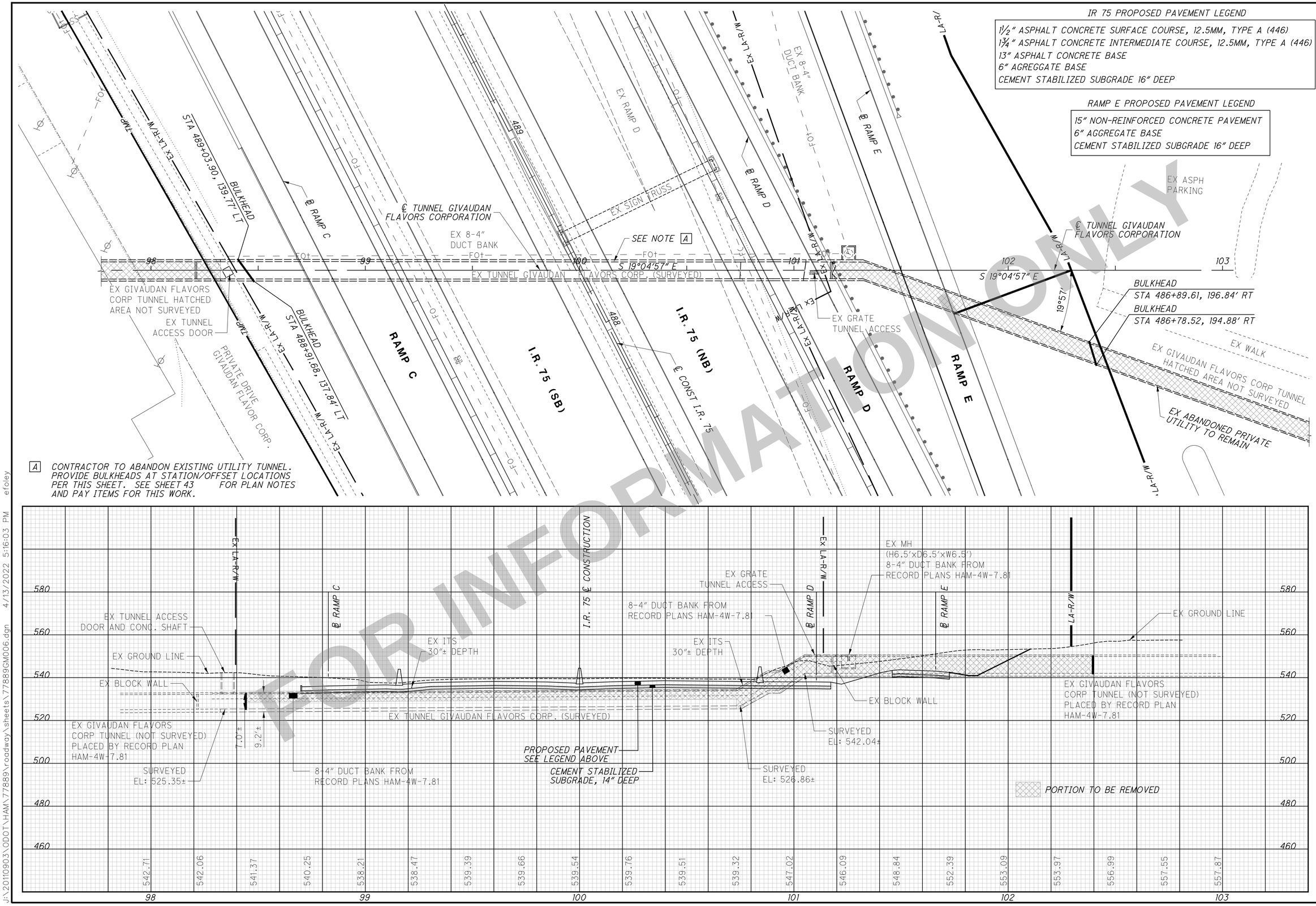
NJ SHAPE TO SINGLE SLOPE BARRIER TRANSITION

HAM-75-7.85

1 / 1

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2017

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IR 75 PROPOSED PAVEMENT LEGEND
1½" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)
1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5MM, TYPE A (446)
13" ASPHALT CONCRETE BASE
6" AGREGGATE BASE
CEMENT STABILIZED SUBGRADE 16" DEEP
RAMP E PROPOSED PAVEMENT LEGEND
15" NON-REINFORCED CONCRETE PAVEMENT
6" AGGREGATE BASE
CEMENT STABILIZED SUBGRADE 16" DEEP
STA 489+03.90, 139.77' LT
BULKHEAD
STA 488+91.68, 137.84' LT
BULKHEAD
℄ RAMP C
℄ TUNNEL GIVAUDAN FLAVORS CORPORATION
EX 8-4" DUCT BANK
EX SIGN TRUSS
SEE NOTE A
S 19°04'57" E
EX TUNNEL GIVAUDAN FLAVORS CORP. (SURVEYED)
EX GIVAUDAN FLAVORS CORP TUNNEL HATCHED AREA NOT SURVEYED
EX TUNNEL ACCESS DOOR
PRIVATE DRIVE GIVAUDAN FLAVOR CORP.
EX LA-R/W
I.R. 75 (SB)
I.R. 75 (NB)
℄ CONST I.R. 75
℄ RAMP D
℄ RAMP E
EX RAMP D
EX GRATE TUNNEL ACCESS
EX ASPH PARKING
BULKHEAD
STA 486+89.61, 196.84' RT
BULKHEAD
STA 486+78.52, 194.88' RT
EX WALK
EX ABANDONED PRIVATE UTILITY TO REMAIN
19°57'
98
99
100
101
102
103
A CONTRACTOR TO ABANDON EXISTING UTILITY TUNNEL. PROVIDE BULKHEADS AT STATION/OFFSET LOCATIONS PER THIS SHEET. SEE SHEET 43 FOR PLAN NOTES AND PAY ITEMS FOR THIS WORK.
EX TUNNEL ACCESS DOOR AND CONC. SHAFT
EX GROUND LINE
EX BLOCK WALL
EX GIVAUDAN FLAVORS CORP TUNNEL (NOT SURVEYED) PLACED BY RECORD PLAN HAM-4W-7.81
SURVEYED EL: 525.35±
7.0'±
9.2'±
8-4" DUCT BANK FROM RECORD PLANS HAM-4W-7.81
EX ITS 30"± DEPTH
I.R. 75 ℄ CONSTRUCTION
PROPOSED PAVEMENT SEE LEGEND ABOVE
CEMENT STABILIZED SUBGRADE, 14" DEEP
EX TUNNEL GIVAUDAN FLAVORS CORP. (SURVEYED)
EX GRATE TUNNEL ACCESS
EX MH (H6.5'xD6.5'xW6.5') 8-4" DUCT BANK FROM RECORD PLANS HAM-4W-7.81
SURVEYED EL: 542.04±
SURVEYED EL: 526.86±
EX GIVAUDAN FLAVORS CORP TUNNEL (NOT SURVEYED) PLACED BY RECORD PLAN HAM-4W-7.81
PORTION TO BE REMOVED
580
560
540
520
500
480
460
542.71
542.06
541.37
540.25
538.21
538.47
539.39
539.66
539.54
539.76
539.51
539.32
547.02
546.09
548.84
552.39
553.09
553.97
556.99
557.55
557.87
98
99
100
101
102
103
FOR INFORMATION ONLY
HORIZONTAL SCALE IN FEET
0
10
20
40
CALCULATED SEA
CHECKED DLR
MISCELLANEOUS DETIALS
EXISTING TUNNEL GIVAUDAN FLAVORS CORP.
HAM-75-7.85
1113
2017
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GENERAL

THESE SPECIFICATIONS, TOGETHER WITH THE ACCOMPANYING PLANS, ARE INTENDED TO DESCRIBE THE TYPE, SIZE, AND LOCATION OF THE PRODUCTS AND MATERIALS TO BE PROVIDED AND INSTALLED UNDER VARIOUS BID ITEMS RELATED TO TRAFFIC CONTROL. THE CONTRACTOR SHALL FURNISH AND INSTALL TRAFFIC CONTROL DEVICES AND RELATED MATERIALS IN COMPLIANCE WITH THESE PLANS AND SPECIFICATIONS, AS WELL AS THE 2016 OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS, THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, AND THE STANDARD CONSTRUCTION DRAWINGS ISSUED BY THE OHIO DEPARTMENT OF TRANSPORTATION. THESE SPECIFICATIONS SET FORTH THE MINIMUM PERFORMANCE AND OPERATING REQUIREMENTS OF THE TRAFFIC CONTROL ITEMS REFERRED TO HEREIN.

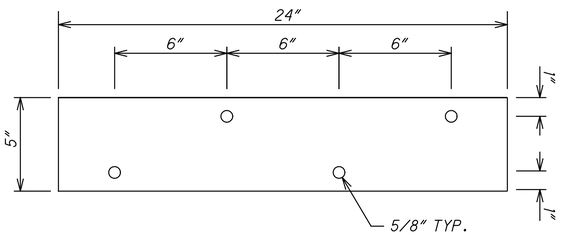
ITEM 630 CONCRETE MEDIAN BARRIER SIGN BRACKET, AS PER PLAN

EACH SIGN SUPPORT ASSEMBLY SHALL MEET THE REQUIREMENTS OF 630 AND CONFORM TO THE DIMENSIONS IN THE DETAILS BELOW.

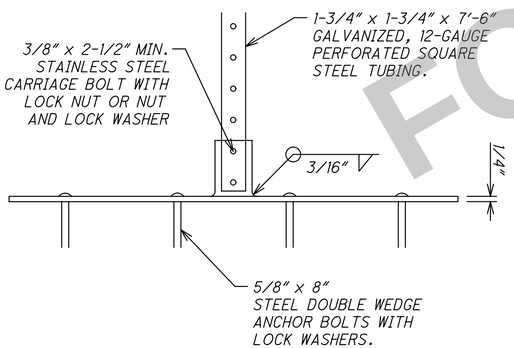
ALL HARDWARE SHALL BE GALVANIZED STEEL OR STAINLESS STEEL AS SPECIFIED IN THE DETAILS BELOW.

ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION. PAYMENT FOR THIS ITEM SHALL BE MADE AT THE CONTRACT PRICE BID PER EACH CONCRETE MEDIAN BARRIER SIGN BRACKET, AS PER PLAN.

TOP VIEW



SIDE VIEW



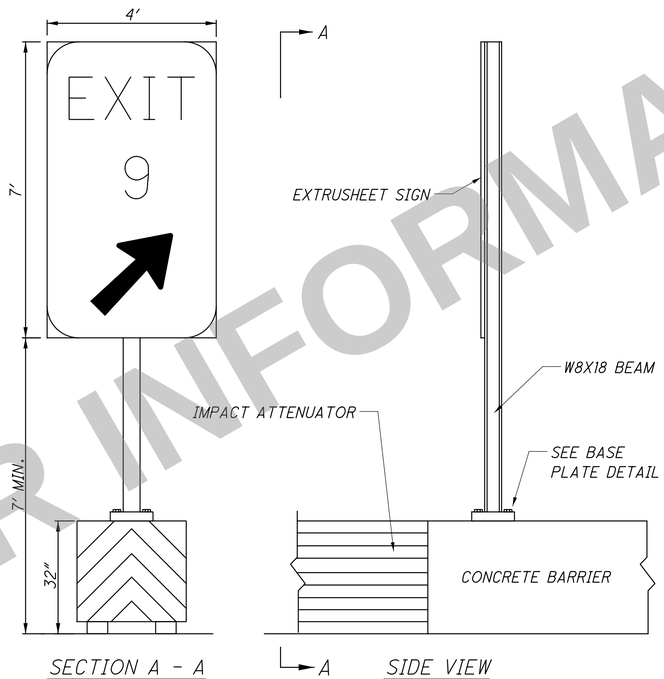
REFERENCE LOCATION SIGNS

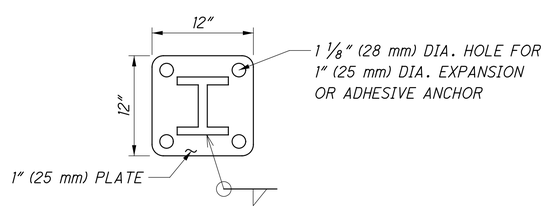
THE LOCATION OF REFERENCE LOCATION SIGNS ON THE PLANS ARE APPROXIMATE AND MORE PRECISE LOCATION WILL BE PROVIDED BY THE DEPARTMENT. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 30 DAYS IN ADVANCE OF THE PLANNED DATE OF REFERENCE LOCATION SIGN INSTALLATION. THE ENGINEER WILL CONTACT THE OFFICE OF TECHNICAL SERVICES WHICH WILL LOCATE THE LONGITUDINAL POSITION OF REFERENCE LOCATION SIGNS BY MEANS OF A PAINT MARK ON THE PAVEMENT EDGE. ALTERNATE MARKS WILL NOT BE PROVIDED ON DIVIDED HIGHWAYS AND THE CONTRACTOR SHALL SET REFERENCE LOCATION SIGNS FOR THE OPPOSITE ROADWAY ACROSS FROM THE PROVIDED MARK. DELINEATORS WHOSE NORMAL POSITION FALLS WITHIN 50 FEET OF A REFERENCE LOCATION SIGN SHALL BE OMITTED.

ITEM 630 SIGN SUPPORT ASSEMBLY, BARRIER MOUNTED, AS PER PLAN

EACH SIGN SUPPORT ASSEMBLY SHALL MEET THE REQUIREMENTS OF 630 AND CONFORM TO THE DIMENSIONS IN THE DETAILS BELOW. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS.

PAYMENT FOR THIS ITEM SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS (INCLUDING BUT NOT LIMITED TO W8X18 BEAM WITH BASE PLATE AND ANCHORS) NECESSARY TO COMPLETE THE WORK AND SHALL BE MADE AT THE CONTRACT PRICE BID PER EACH.





BASE PLATE DETAIL

TC-12.31 BASE PLATE CONNECTION

ALL REFERENCE ITEMS THAT REFER TO THE TC-12.31 STANDARD DRAWING SHALL HAVE BASE CONNECTION FABRICATED AS PER THE "STANDARD BASE DESIGN" WHICH UTILIZES COMPLETE JOINT PENETRATION (CJP) WELDS.

SIGNING LEGEND	
	PROPOSED SIGN
	EXISTING SIGN TO BE REMOVED
	EXISTING SIGN TO REMAIN

PAVEMENT MARKING LEGEND	
XX	PROPOSED PAVEMENT MARKINGS, THERMO
XX	PROPOSED PAVEMENT MARKINGS, EPOXY
XX	EXISTING PAVEMENT MARKINGS TO REMAIN

LINE SPECIFICATIONS - I.R. 75 AND S.R. 562		
THERMO	EPOXY	
YE	YE	EDGE LINE, 6″ YELLOW
WE	WE	EDGE LINE, 6″ WHITE
LL	LL	LANE LINE, 6″ WHITE
CH	CH	CHANNELIZING LINE, 12″ WHITE
WT	WT	TRANSVERSE/DIAGONAL LINE, 24″ WHITE
CM	CM	CHEVRON MARKING, 24″ WHITE
WD6	WD6	DOTTED LINE, 6″ WHITE (3′ SEGMENT/9′ GAP)
WD12	WD12	DOTTED LINE, 12″ WHITE (3′ SEGMENT/9′ GAP)
LA	LA	LANE ARROW
LRA	LRA	LANE REDUCTION ARROW
WA	WA	WRONG WAY ARROW
R	R	REMOVAL OF PAVEMENT MARKING

LINE SPECIFICATIONS - LOCAL STREETS	
ITEM 644	
DY	CENTER LINE, DOUBLE SOLID, 4″ YELLOW
SL	STOP LINE, 24″ WHITE
XW	CROSSWALK LINE, 12″ WHITE
YT	TRANSVERSE LINE, 24″ YELLOW
LA	LANE ARROW
R	REMOVAL OF PAVEMENT MARKING

FOR INFORMATION ONLY

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CALCULATED JF CHECKED JDS

TRAFFIC CONTROL GENERAL NOTES

HAM-75-7.85

1114 2017

SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
1117	1118	1119	1120	1121	1123	1124	1125	1126	1127	1128	1129	1130							
					93									620	00500	93	EACH	DELINEATOR, POST GROUND MOUNTED	
					6									620	11000	6	EACH	DELINEATOR, BRACKET MOUNTED	
					9									620	31200	9	EACH	REMOVAL OF DELINEATOR	
					1,572									621	00100	1,572	EACH	RPM	
					860									621	54000	860	EACH	RAISED PAVEMENT MARKER REMOVED	
									5	6	17	1		625	32000	29	EACH	GROUND ROD	
									275	289	257.5	912.5		630	03100	1,734	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
									65.7		32.5			630	06400	98.2	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, S4X7.7	
												33.4		630	06500	33.4	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W6X9	
									47.5	42.5	40.8	98.4		630	07500	229.2	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X22	
									12	64				630	08004	76	FT	ONE WAY SUPPORT, NO. 3 POST	
									5	8	2	55		630	08600	70	EACH	SIGN POST REFLECTOR	
									6	2	6	6		630	09000	20	EACH	BREAKAWAY STRUCTURAL BEAM CONNECTION	
									1	2	3			630	72340	6	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.31, DESIGN 12	
											2			630	72410	2	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-15.116, DESIGN 1	
											3			630	72420	3	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-15.116, DESIGN 2	
									2	2	2			630	72430	6	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-15.116, DESIGN 3	
									14					630	75000	14	EACH	SIGN ATTACHMENT ASSEMBLY	
										1				630	79611	1	EACH	SIGN SUPPORT ASSEMBLY, BARRIER MOUNTED, AS PER PLAN	1114
									294.2	329.9	250	487.9		630	80100	1,362	SF	SIGN, FLAT SHEET	
									158	112	158	142		630	80200	570	SF	SIGN, GROUND MOUNTED EXTRUSHEET	
									1,910	2,012	4,433.5			630	80224	8,355.5	SF	SIGN, OVERHEAD EXTRUSHEET	
									11	9	10			630	81021	30	EACH	CONCRETE MEDIAN BARRIER SIGN BRACKET, AS PER PLAN	1114
									2	3	7			630	84010	12	EACH	CONCRETE BARRIER MEDIAN OVERHEAD SIGN SUPPORT FOUNDATION, TYPE TC-21.50	
									6	2	6	6		630	84500	20	EACH	GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION	
									3	3	10	1		630	84510	17	EACH	RIGID OVERHEAD SIGN SUPPORT FOUNDATION	
						68	60	38						630	84900	166	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
						3								630	85400	3	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL	
												1		630	85600	1	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION	
						44	52	41						630	86002	137	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
						12	3	3				2		630	86102	20	EACH	REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL	
						2								630	86310	2	EACH	REMOVAL OF STRUCTURE MOUNTED SIGN AND DISPOSAL	
						19	23	12						630	87400	54	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	
						5	10	8						630	87500	23	EACH	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL	
						3	3	1						630	89706	7	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-12.30	
						1								630	89708	1	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-9.30	
						1	4	4						630	89802	9	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-7.65	
						1								630	89806	1	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-18.24	
14.91														807	14010	14.91	MILE	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, EDGE LINE, 6"	
	16.22													807	14110	16.22	MILE	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, LANE LINE, 6"	
				0.15										644	00300	0.15	MILE	CENTER LINE	
		14,194												807	14310	14,194	FT	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, CHANNELIZING LINE, 12"	
			172											644	00500	172	FT	STOP LINE	
			745											644	00620	745	FT	CROSSWALK LINE, 12"	
				215										644	00700	215	FT	TRANSVERSE/DIAGONAL LINE	
				523										644	00720	523	FT	CHEVRON MARKING	
				34										644	01300	34	EACH	LANE ARROW	
				2										644	01350	2	EACH	LANE REDUCTION ARROW	
			7,956											807	14410	7,956	FT	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, DOTTED LINE, 6"	
			13,289											807	14430	13,289	FT	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, DOTTED LINE, 12"	
				1,881										644	30000	1,881	FT	REMOVAL OF PAVEMENT MARKING	
				7										644	30020	7	EACH	REMOVAL OF PAVEMENT MARKING	

CALCULATED RJI
CHECKED JF

TRAFFIC CONTROL SUBSUMMARY

HAM-75-7.85

1115
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SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
1117	1118	1119	1120	1121															
2.6														807	12010	2.6	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6"	
	0.9													807	12110	0.9	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6"	
		2,685												807	12310	2,685	FT	WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12"	
				105										646	10620	105	FT	CHEVRON MARKING	
				13										646	20300	13	EACH	LANE ARROW	
			5											646	20320	5	EACH	WRONG WAY ARROW	
			258											807	12430	258	FT	WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 12"	
14.91	16.22													850	10010	31.13	MILE	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)	
			7,956											850	10110	7,956	FT	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)	
		14,194	13,289											850	10130	27,483	FT	GROOVING FOR 12" RECESSED PAVEMENT MARKING, (ASPHALT)	
2.6	0.9													850	20010	3.5	MILE	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (CONCRETE)	
		2,685	258											850	20130	2,943	FT	GROOVING FOR 12" RECESSED PAVEMENT MARKING, (CONCRETE)	

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TRAFFIC CONTROL SUBSUMMARY

HAM-75-7.85

1116
2017

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SHEET NO.	REFERENCE NO.	LOCATION	STATION FROM	STATION TO	SIDE	807 WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, EDGE LINE, 6" (WHITE) FEET	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6" (WHITE) FEET	850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT) FEET	850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, (CONCRETE) FEET
1131	WE-1	C.L. CONST. I.R. 75	395+50	407+65	RT	1,215		1215	
1132	WE-2	C.L. CONST. I.R. 75	411+62	417+09	RT	547		547	
1132	WE-3	C.L. CONST. I.R. 75	417+09	418+92	RT		183		183
1132 - 1133	WE-4	C.L. CONST. I.R. 75	418+92	424+65	RT	573		573	
1133 - 1135	WE-5	C.L. CONST. I.R. 75	430+71	451+72	RT	2,101		2101	
1135	WE-6	C.L. CONST. I.R. 75	451+72	453+00	RT		128		128
1135 - 1137	WE-7	C.L. CONST. I.R. 75	453+00	475+22	RT	2,222		2222	
1137 - 1139	WE-8	C.L. CONST. I.R. 75	475+22	505+87	RT	3,065		3065	
1140 - 1141	WE-9	C.L. CONST. I.R. 75	510+43	532+08	RT	2,165		2165	
1131	WE-10	C.L. CONST. I.R. 75	393+50	401+96	LT	846		846	
1132	WE-11	C.L. CONST. I.R. 75	408+88	418+21	LT	933		933	
1132	WE-12	C.L. CONST. I.R. 75	418+21	420+17	LT		196		196
1132 - 1133	WE-13	C.L. CONST. I.R. 75	420+17	432+76	LT	1,259		1259	
1133 - 1135	WE-14	C.L. CONST. I.R. 75	436+09	451+27	LT	1,518		1518	
1135	WE-15	C.L. CONST. I.R. 75	451+27	452+57	LT		130		130
1135 - 1138	WE-16	C.L. CONST. I.R. 75	452+57	486+50	LT	3,393		3393	
1138 - 1140	WE-17	C.L. CONST. I.R. 75	486+50	507+72	LT	2,122		2122	
1140 - 1141	WE-18	C.L. CONST. I.R. 75	507+73	531+36	LT	2,363		2363	
1141	WE-19	C.L. CONST. I.R. 75	531+36	534+49	LT		313		313
1141	WE-20	C.L. CONST. I.R. 75	533+71	534+49	LT	78		78	
1131 - 1132 , 1142	WE-21	RAMP M	401+96	416+26	LT	1,430		1430	
1142	WE-22	RAMP M	416+26	420+25	LT		399		399
1142 - 1143	WE-23	RAMP M	420+25	424+09	LT	384		384	
1131 - 1132 , 1142 - 1143	WE-24	RAMP N	407+78	423+52	CL	1,574		1574	
1133 , 1142 - 1143	WE-25	RAMP K	413+56	430+71	RT	1,715		1715	
1133 , 1142 - 1143	WE-26	RAMP J	412+01	436+10	LT	2,409		2409	
1137 - 1138	WE-27	RAMP D/RAMP E	475+00	490+25	CL		1,525		1,525
1138	WE-28	RAMP D	485+56	493+83	CL/RT		827		827
1138 - 1139	WE-29	RAMP D	493+83	496+20	RT	237		237	
1139	WE-30	RAMP D	495+40	496+06	RT	66		66	
1138 - 1139	WE-31	RAMP C	486+50	498+64	CL		1,215		1,215
1139	WE-32	RAMP C	498+64	500+09	CL	144		144	
1139	WE-33	RAMP C	498+68	499+25	RT	57		57	
1139	WE-34	RAMP A	498+63	505+89	RT		726		726
1139 - 1140	WE-35	RAMP A	505+89	510+43	CL	454		454	
1139	WE-36	RAMP B	500+75	501+70	LT	94		94	
1139 - 1140	WE-37	RAMP B	501+70	507+73	LT/CL		603		603
1143 - 1144	WE-38	C.L. CONST. S.R. 562	15+00	27+00	RT	1,200		1200	
1144	WE-39	C.L. CONST. S.R. 562	31+81	36+76	RT	495		495	
1143 - 1144	WE-40	C.L. CONST. S.R. 562	14+77	30+00	LT	1,523		1523	
1144	WE-41	C.L. CONST. S.R. 562	33+33	36+76	LT	343		343	
1144	WE-42	C.L. CONST. S.R. 562	36+76	39+06	LT		230		230
1144	WE-43	C.L. CONST. S.R. 562	39+06	42+38	LT	332		332	
1144	WE-44	C.L. CONST. S.R. 562	42+43	47+50	LT	507		507	
1144	WE-45	RAMP Q	27+00	37+51	CL	1,051		1051	
1144	WE-46	RAMP Q	36+92	37+39	LT	47		47	
1144	WE-47	RAMP P	30+00	37+67	CL	767		767	
1144	WE-48	RAMP P	36+50	37+26	RT	76		76	
1141	WE-49	C.L. CONST. I.R. 75	532+08	535+67	RT		359		359
1139	WE-50	RAMP A	497+51	497+96	LT	107		107	
		ITEM TOTALS	(FEET)			39,412 FT	6,834 FT	39,412 FT	6,834 FT
TOTALS - LEFT COLUMNS						7.46 MI	1.29 MI	7.46 MI	1.29 MI

SHEET NO.	REFERENCE NO.	LOCATION	STATION FROM	STATION TO	SIDE	807 WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, EDGE LINE, 6" (WHITE) FEET	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6" (WHITE) FEET	850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT) FEET	850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, (CONCRETE) FEET
1131 - 1132	YE-1	C.L. CONST. I.R. 75	395+50	417+51	RT	2,201		2,201	
1132	YE-2	C.L. CONST. I.R. 75	417+51	419+39	RT		188		188
1132 - 1135	YE-3	C.L. CONST. I.R. 75	419+39	451+52	RT	3,213		3,213	
1135	YE-4	C.L. CONST. I.R. 75	451+52	452+81	RT		129		129
1135 - 1141	YE-5	C.L. CONST. I.R. 75	452+81	531+79	RT	7,898		7,898	
1141	YE-6	C.L. CONST. I.R. 75	531+79	535+67	RT		388		388
1131 - 1132	YE-7	C.L. CONST. I.R. 75	393+50	417+76	LT	2,426		2,426	
1132	YE-8	C.L. CONST. I.R. 75	417+76	419+67	LT		191		191
1132 - 1135	YE-9	C.L. CONST. I.R. 75	419+67	451+44	LT	3,177		3,177	
1135	YE-10	C.L. CONST. I.R. 75	451+44	452+74	LT		129		129
1135 - 1141	YE-11	C.L. CONST. I.R. 75	452+74	531+69	LT	7,896		7,896	
1141	YE-12	C.L. CONST. I.R. 75	531+69	534+49	LT		280		280
1132 , 1142	YE-13	RAMP M	408+79	416+26	CL	747		747	
1142	YE-14	RAMP M	416+26	420+25	CL		399		399
1142 - 1143	YE-15	RAMP M	420+25	426+89	CL	664		664	
1132 , 1142 - 1143	YE-16	RAMP N	411+72	420+25	LT	853		853	
1133 , 1142 - 1143	YE-17	RAMP K	416+13	424+61	LT	848		848	
1133 , 1142 - 1143	YE-18	RAMP J	408+79	432+78	RT	2,399		2,399	
1137 - 1138	YE-19	RAMP D	475+01	493+83	LT		1,882		1,882
1138	YE-20	RAMP E	485+57	490+25	LT		468		468
1138 - 1139	YE-21	RAMP D	493+83	496+06	LT	223		223	
1139	YE-22	RAMP D	495+40	496+06	RT	66		66	
1138 - 1139	YE-23	RAMP C	486+49	498+64	RT		1215		1215
1139	YE-24	RAMP C	498+64	499+21	RT	57		57	
1139	YE-25	RAMP C	498+68	500+09	RT	141		141	
1139	YE-26	RAMP A	498+34	498+63	LT	35		35	
1139	YE-27	RAMP A	498+63	505+89	LT		726		726
1139	YE-28	RAMP B	500+38	501+70	RT	132		132	
1143 - 1144	YE-29	C.L. CONST. S.R. 562	15+00	36+76	RT	2,176		2,176	
1143 - 1144	YE-30	C.L. CONST. S.R. 562	14+76	36+76	LT	2,200		2,200	
1144	YE-31	C.L. CONST. S.R. 562	36+76	39+06	LT		230		230
1144	YE-32	C.L. CONST. S.R. 562	39+06	47+50	LT	844		844	
1144	YE-33	RAMP Q	31+81	37+39	LT	558		558	
1144	YE-34	RAMP Q	36+86	37+68	LT	82		82	
1144	YE-35	RAMP P	33+31	37+05	RT	374		374	
1144	YE-36	RAMP P	36+49	37+63	RT	114		114	
1141	YE-37	C.L. CONST. I.R. 75	533+96	534+49	LT		53		53
1141	YE-38	RAMP B	501+70	507+73	RT		608		608
			TOTALS - RIGHT COLUMNS			39,324	6,886	39,324	6,886
			TOTALS - LEFT COLUMNS			39,412	6,834	39,412	6,834
			ITEM TOTALS			78,736 FT	13,720 FT	78,736 FT	13,720 FT
TOTALS CARRIED TO TRAFFIC CONTROL SUBSUMMARY						14.91 MI	2.60 MI	14.91 MI	2.60 MI

CALCULATED RJI CHECKED JF

PAVEMENT MARKING ESTIMATED QUANTITIES

HAM-75-7.85

1117 2017

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SHEET NO.	REFERENCE NO.	LOCATION	STATION FROM	STATION TO	SIDE		807 WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, LANE LINE, 6" FEET		807 WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6" FEET		850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT) FEET	850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, (CONCRETE) FEET					
1131 - 1132	LL-1	C.L. CONST. I.R. 75	395+50	417+19	RT		2,169				2,169						
1131 - 1132	LL-2	C.L. CONST. I.R. 75	395+50	417+30	RT		2,180				2,180						
1131 - 1132	LL-3	C.L. CONST. I.R. 75	395+50	417+40	RT		2,190				2,190						
1132	LL-4	C.L. CONST. I.R. 75	417+19	419+03	RT				184			184					
1132	LL-5	C.L. CONST. I.R. 75	417+30	419+15	RT				185			185					
1132	LL-6	C.L. CONST. I.R. 75	417+40	419+27	RT				187			187					
1132 - 1135	LL-7	C.L. CONST. I.R. 75	419+03	451+62	RT		3,259				3,259						
1132 - 1135	LL-8	C.L. CONST. I.R. 75	419+15	451+59	RT		3,244				3,244						
1132 - 1135	LL-9	C.L. CONST. I.R. 75	419+27	451+55	RT		3,228				3,228						
	LL-10	NOT USED															
1135	LL-11	C.L. CONST. I.R. 75	451+62	452+91	RT				129			129					
1135	LL-12	C.L. CONST. I.R. 75	451+59	452+88	RT				129			129					
1135	LL-13	C.L. CONST. I.R. 75	451+55	452+84	RT				129			129					
1135 - 1139	LL-14	C.L. CONST. I.R. 75	452+91	505+00	RT		5,209				5,209						
1135 - 1141	LL-15	C.L. CONST. I.R. 75	452+88	531+92	RT		7,904				7,904						
1135 - 1141	LL-16	C.L. CONST. I.R. 75	452+84	531+85	RT		7,901				7,901						
1141	LL-17	C.L. CONST. I.R. 75	531+92	534+15	RT				222			222					
1141	LL-18	C.L. CONST. I.R. 75	531+85	534+08	RT				222			222					
1141	LL-19	C.L. CONST. I.R. 75	534+15	535+67	RT		152				152						
1141	LL-20	C.L. CONST. I.R. 75	534+08	535+67	RT		159				159						
1138 - 1139	LL-21	RAMP D	493+83	496+06	RT		233				233						
1139	LL-22	RAMP A	500+10	502+90	LT				280			280					
1131 - 1132	LL-23	C.L. CONST. I.R. 75	393+50	417+87	LT		2,437				2,437						
1131 - 1132	LL-24	C.L. CONST. I.R. 75	393+50	417+98	LT		2,448				2,448						
1131 - 1132	LL-25	C.L. CONST. I.R. 75	393+50	418+09	LT		2,459				2,459						
1132	LL-26	C.L. CONST. I.R. 75	417+87	419+79	LT				192			192					
1132	LL-27	C.L. CONST. I.R. 75	417+98	419+92	LT				194			194					
1132	LL-28	C.L. CONST. I.R. 75	418+09	420+04	LT				195			195					
1132 - 1135	LL-29	C.L. CONST. I.R. 75	419+79	451+41	LT		3,162				3,162						
1132 - 1135	LL-30	C.L. CONST. I.R. 75	419+92	451+38	LT		3,146				3,146						
1132 - 1135	LL-31	C.L. CONST. I.R. 75	420+04	451+34	LT		3,130				3,130						
1135	LL-32	C.L. CONST. I.R. 75	451+41	452+70	LT				129			129					
1135	LL-33	C.L. CONST. I.R. 75	451+38	452+67	LT				129			129					
1135	LL-34	C.L. CONST. I.R. 75	451+34	452+64	LT				129			129					
1135 - 1141	LL-35	C.L. CONST. I.R. 75	452+70	531+62	LT		7,892				7,892						
1135 - 1141	LL-36	C.L. CONST. I.R. 75	452+67	531+55	LT		7,889				7,889						
1135 - 1141	LL-37	C.L. CONST. I.R. 75	452+64	530+10	LT		7,746				7,746						
1141	LL-38	C.L. CONST. I.R. 75	531+62	533+85	LT				222			222					
1141	LL-39	C.L. CONST. I.R. 75	531+55	533+78	LT				222			222					
1141	LL-40	C.L. CONST. I.R. 75	533+85	534+49	LT		64				64						
1141	LL-41	C.L. CONST. I.R. 75	533+78	534+49	LT		71				71						
1138 - 1139	LL-42	RAMP C	486+49	498+21	RT				1,172			1,172					
1139 - 1140	LL-43	RAMP B	504+98	507+73	RT				275			275					
1133 , 1142 - 1143	LL-44	RAMP K	416+13	429+00	LT		1,287				1,287						
1133 , 1142 - 1143	LL-45	RAMP J	408+79	432+79	LT		2,400				2,400						
1143 - 1144	LL-46	C.L. CONST. S.R. 562	15+00	36+76	RT		2,176				2,176						
1144	LL-47	C.L. CONST. S.R. 562	30+00	36+76	LT		676				676						
1144	LL-48	C.L. CONST. S.R. 562	36+76	39+06	LT				230			230					
1144	LL-49	C.L. CONST. S.R. 562	39+06	47+50	LT		844				844						
		ITEM TOTALS	(FEET)				85,655 FT		4,756 FT		85,655 FT	4,756 FT					
TOTALS CARRIED TO TRAFFIC CONTROL SUBSUMMARY							16.22 MI		0.90 MI		16.22 MI	0.90 MI					

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CALCULATED RJI CHECKED JF

PAVEMENT MARKING ESTIMATED QUANTITIES

HAM-75-7.85

1118 2017

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SHEET NO.	REFERENCE NO.	LOCATION	STATION FROM	STATION TO	SIDE	850 GROOVING FOR 12" RECESSED PAVEMENT MARKING, (ASPHALT) FEET	807 WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, CHANNELIZING LINE, 12" FEET	850 GROOVING FOR 12" RECESSED PAVEMENT MARKING, (CONCRETE) FEET	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12" FEET
1131 - 1132	CH-1	C.L. CONST. I.R. 75	407+65	411+62	RT	397	397		
1133	CH-2	C.L. CONST. I.R. 75	424+65	430+71	RT	606	606		
1137	CH-3	C.L. CONST. I.R. 75	471+23	475+22	RT	387	387		
1139	CH-4	C.L. CONST. I.R. 75	505+87	510+43	RT	460	460		
1141	CH-5	C.L. CONST. I.R. 75	531+99	534+21	RT			222	222
1131 - 1132	CH-6	C.L. CONST. I.R. 75	401+96	408+88	LT	692	692		
1133	CH-7	C.L. CONST. I.R. 75	432+76	436+09	LT	333	333		
1133 - 1134	CH-8	RAMP J	432+76	438+00	RT	524	524		
1133	CH-9	RAMP J	432+78	436+09	RT	331	331		
1137 - 1138	CH-10	C.L. CONST. I.R. 75	479+95	486+49	LT	654	654		
1137 - 1138	CH-11	RAMP C	479+95	486+49	RT	654	654		
1140	CH-12	C.L. CONST. I.R. 75	507+72	511+06	LT	333	333		
1140	CH-13	RAMP B	507+72	511+06	RT	334	334		
1140	CH-14	RAMP B	507+73	515+59	RT	788	788		
1141	CH-15	C.L. CONST. I.R. 75	530+10	531+48	LT	137	137		
1141	CH-16	C.L. CONST. I.R. 75	530+10	531+44	LT	132	132		
1141	CH-17	C.L. CONST. I.R. 75	531+48	528+25	LT			223	223
1141	CH-18	C.L. CONST. I.R. 75	531+44	528+18	LT			252	252
1141	CH-19	C.L. CONST. I.R. 75	534+21	535+67	RT	146	146		
1132	CH-20	RAMP N	409+13	411+72	LT	261	261		
1131 - 1132	CH-21	RAMP M	401+96	408+88	RT	692	692		
1133	CH-22	RAMP K	424+61	430+71	LT	610	610		
1137	CH-23	RAMP D	471+23	475+01	RT	385	385		
1138	CH-24	RAMP D	483+71	485+56	RT			185	185
1138	CH-25	RAMP D	483+71	485+56	CL			185	185
1138 - 1139	CH-26	RAMP D	492+50	496+06	LT	356	356		
1138 - 1139	CH-27	RAMP D	493+83	496+06	LT	224	224		
1139	CH-28	RAMP C	498+21	498+68	RT			49	49
1139	CH-29	RAMP C	498+21	498+72	RT			52	52
1139	CH-30	RAMP A	498+18	498+63	LT	47	47		
1139	CH-31	RAMP A	498+09	498+63	LT	54	54		
1139	CH-32	RAMP A	498+63	500+10	LT			148	148
1139	CH-33	RAMP A	498+63	500+10	LT			148	148
1139	CH-34	RAMP A	505+87	510+43	LT	456	456		
1139	CH-35	RAMP B	500+82	501+00	RT	43	43		
1139	CH-36	RAMP B	500+47	501+70	RT	123	123		
1139	CH-37	RAMP B	500+50	501+70	RT	120	120		
1139	CH-38	RAMP B	500+82	501+70	BL	102	102		
1139	CH-39	RAMP B	501+70	504+98	RT			331	331
1139	CH-40	RAMP B	501+70	504+98	RT			331	331
TOTALS - LEFT COLUMNS						10,381	10,381	2,126	2,126

SHEET NO.	REFERENCE NO.	LOCATION	STATION FROM	STATION TO	SIDE	850 GROOVING FOR 12" RECESSED PAVEMENT MARKING, (ASPHALT) FEET	807 WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, CHANNELIZING LINE, 12" FEET	850 GROOVING FOR 12" RECESSED PAVEMENT MARKING, (CONCRETE) FEET	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12" FEET
1139	CH-41	RAMP B	501+70	504+98	CL			331	331
1143	CH-42	RAMP N	420+25	423+52	LT	327	327		
1143	CH-43	RAMP J	408+80	412+01	LT	321	321		
1143	CH-44	RAMP M	424+09	426+89	LT	280	280		
1143	CH-45	RAMP K	413+56	416+13	LT	257	257		
1143	CH-46	RAMP K	413+56	416+13	LT	257	257		
1143	CH-47	C.L. CONST. S.R. 562	14+78	16+00	LT	122	122		
1144	CH-48	C.L. CONST. S.R. 562	27+00	31+81	RT	481	481		
1144	CH-49	RAMP P	30+00	33+33	RT	333	333		
1144	CH-50	C.L. CONST. S.R. 562	42+38	44+18	LT	180	180		
1144	CH-51	RAMP Q	29+52	31+80	LT	228	228		
1144	CH-52	RAMP Q	34+21	37+16	LT	295	295		
1144	CH-53	RAMP Q	36+63	36+84	LT	21	21		
1144	CH-54	RAMP Q	36+63	36+84	LT	21	21		
1144	CH-55	C.L. CONST. S.R. 562	30+00	33+33	LT	333	333		
1144	CH-56	RAMP P	36+29	36+49	RT	20	20		
1144	CH-57	RAMP P	36+29	36+50	RT	21	21		
1144	CH-58	C.L. CONST. S.R. 562	42+42	44+18	LT	176	176		
1141	CH-59	C.L. CONST. I.R. 75	531+99	534+27	RT			228	228
1141	CH-60	C.L. CONST. I.R. 75	534+27	535+67	RT	140	140		
				TOTALS - RIGHT COLUMNS		3,813	3,813	559	559
				TOTALS - LEFT COLUMNS		10,381	10,381	2,126	2,126
				ITEM TOTALS		14,194	14,194	2,685	2,685
TOTALS CARRIED TO TRAFFIC CONTROL SUBSUMMARY						14,194	14,194	2,685	2,685

CALCULATED RJI CHECKED JF

PAVEMENT MARKING ESTIMATED QUANTITIES

HAM-75-7.85

1119 2017

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SHEET NO.	REF. NO.	LOCATION	STATION FROM	STATION TO	SIDE	644 STOP LINE, 24" FT	644 CROSSWALK LINE, 12" (WHITE) FT	807 WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, DOTTED LINE, 6" FT	807 WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, DOTTED LINE, 12" FT		807 WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 12" FT	646 WRONG WAY ARROW EACH		850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT) FEET	850 GROOVING FOR 12" RECESSED PAVEMENT MARKING, (ASPHALT) FEET	850 GROOVING FOR 12" RECESSED PAVEMENT MARKING, (CONCRETE) FEET				
1133 - 1135	WD12-1	C.L. CONST. I.R. 75	430+71	451+66	RT				2,095						2,095					
1135	WD12-2	C.L. CONST. I.R. 75	451+66	452+94	RT						128					128				
1135 - 1137	WD12-3	C.L. CONST. I.R. 75	452+94	471+23	RT				1,829						1,829					
1139 - 1141	WD12-4	C.L. CONST. I.R. 75	505+00	531+99	RT				2,699						2,699					
1134 - 1135	WD12-5	C.L. CONST. I.R. 75	438+00	451+31	LT				1,331						1,331					
1135	WD12-6	C.L. CONST. I.R. 75	451+31	452+60	LT						129					129				
1135 - 1137	WD12-7	C.L. CONST. I.R. 75	452+60	479+95	LT				2,735						2,735					
1143 - 1144	WD12-8	C.L. CONST. S.R. 562	15+00	27+00	RT				1,200						1,200					
1143 - 1144	WD12-9	C.L. CONST. S.R. 562	16+00	30+00	LT				1,400						1,400					
1131	WD6-1	C.L. CONST. I.R. 75	403+22	407+65	RT			443						443						
1131	WD6-2	C.L. CONST. I.R. 75	394+73	401+96	LT			723						723						
1140 - 1141	WD6-3	C.L. CONST. I.R. 75	510+43	528+00	RT			1,757						1,757						
1140 - 1141	WD6-4	C.L. CONST. I.R. 75	515+59	526+00	LT			1,041						1,041						
1133 - 1136	WD6-5	C.L. CONST. I.R. 75	429+00	458+92	RT			2,992						2,992						
1143 - 1144	WD6-6	C.L. CONST. S.R. 562	20+00	30+00	LT			1,000						1,000						
1138	SL-1	RAMP E	490+41		LT	20														
1139	SL-2	RAMP D	496+06		RT/LT	51														
1139	SL-3	RAMP B	500+82		RT/LT	32														
1139	SL-4	RAMP B	500+50		RT/LT	24														
1141	SL-5	SUMMIT RD	37+59		RT/LT	20														
1144	SL-6	RAMP Q	37+16		LT	25														
1135	XW-1	TOWNSHIP AVE	19+97	20+28	RT		47													
1139	XW-2	RAMP D	496+13	496+25	LT/RT		126													
1139	XW-3	RAMP D	496+02	496+12	RT		32													
1139	XW-4	RAMP A	498+20	498+26	LT		74													
1139	XW-5	RAMP A	497+96	498+08	LT/RT		46													
1139	XW-6	RAMP B	500+59	500+65	LT/RT		68													
1139	XW-7	RAMP B	500+27	500+40	RT		63													
1139	XW-8	RAMP C	499+88	500+07	RT		38													
1139	XW-9	RAMP C	499+07	499+19	RT		87													
1141	XW-10	SUMMIT RD	37+42	37+52	LT/RT		62													
1144	XW-11	RAMP Q	37+20		LT		60													
1144	XW-12	RAMP Q	37+48		LT		42													
1138	WA-1	RAMP E	487+00		LT							1								
1138	WA-2	RAMP E	490+11		LT							1								
1138	WA-3	RAMP D	492+00		LT							1								
1139	WA-4	RAMP B	506+08		LT							1								
1139	WA-5	RAMP B	506+08		LT							1								
TOTALS CARRIED TO TRAFFIC CONTROL SUBSUMMARY						172	745	7,956	13,289		258	5		7,956	13,289	258				

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PAVEMENT MARKING ESTIMATED QUANTITIES

HAM-75-7.85

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SHEET NO.	REF. NO.	LOCATION	STATION FROM	STATION TO	SIDE	644 CENTER LINE (DOUBLE SOLID, 4" YELLOW)	644 TRANSVERSE/DIAGONAL LINE (24" WHITE)	644 TRANSVERSE/DIAGONAL LINE (24" YELLOW)	644 CHEVRON MARKING (24" WHITE)	644 LANE ARROW	644 LANE REDUCTION ARROW	644 REMOVAL OF PAVEMENT MARKING	644 REMOVAL OF PAVEMENT MARKING	646 CHEVRON MARKING (24" WHITE)	646 LANE ARROW					
						FT	FT	FT	FT	EACH	EACH	FT	EACH	FT	EACH					
1132	CM-1	C.L. CONST. I.R. 75	409+00	411+62	RT				91											
1133	CM-2	C.L. CONST. I.R. 75	432+79	436+09	LT				150											
1137	CM-3	C.L. CONST. I.R. 75	471+23	475+22	RT				147											
1141	CM-4	C.L. CONST. I.R. 75	532+00	535+67	RT									105						
1143	CM-5	RAMP K	413+56	416+13	LT				135											
1135	DY-1	CEDAR ST	00+81		LT	8														
1135	DY-2	CEDAR ST	00+47	01+04	LT	59														
1135	DY-3	CEDAR ST	01+04	02+56	BL	152														
1135	DY-4	TOWNSHIP AVE	20+39	21+17	BL	78														
1135	DY-5	TOWNE ST	14+75	19+93	BL	520														
1135	YT-1	CEDAR ST	20+32		RT			17												
1141	WT-1	C.L. CONST. I.R. 75	525+50	527+50	LT		198													
1131	R-1	C.L. CONST. I.R. 75	393+78	403+40	LT							962								
1131	R-2	C.L. CONST. I.R. 75	396+52	403+40	LT							688								
1141	R-3	SUMMIT RD	37+02	37+15	LT/RT							140								
1141	R-4	SUMMIT RD	37+24	37+59	RT							34								
1141	R-5	SUMMIT RD	37+24	37+59	LT							35								
1141	R-6	SUMMIT RD	37+23		LT/RT							22								
1141	R-7	SECTION RD											4							
1141	R-8	SUMMIT RD											3							
1134	LRA-1	C.L. CONST. I.R. 75	444+00		RT						1									
1135	LRA-2	C.L. CONST. I.R. 75	451+38		RT						1									
1138	LA-1	RAMP D	492+98		LT/RT										1					
1138	LA-2	RAMP D	493+98		LT/RT					4										
1139	LA-3	RAMP D	494+64		LT/RT					4										
1139	LA-4	RAMP D	495+30		LT/RT					3										
1139	LA-5	RAMP D	495+96		LT/RT					4										
1139	LA-6	RAMP B	500+80		LT/RT					2										
1139	LA-7	RAMP B	500+84		LT/RT					2										
1139	LA-8	RAMP B	502+12		LT/RT										4					
1139	LA-9	RAMP B	503+44		LT/RT										4					
1139	LA-10	RAMP B	504+76		LT/RT										4					
1141	LA-11	SUMMIT RD	37+69		RT					1										
1141	LA-12	SUMMIT RD	38+09		RT					1										
1141	LA-13	SECTION RD								2										
1141	LA-14	SECTION RD								2										
1144	LA-15	RAMP Q	34+65		LT					1										
1144	LA-16	RAMP Q	35+31		LT					1										
1144	LA-17	RAMP Q	35+97		LT					1										
1144	LA-18	RAMP Q	36+62		LT					2										
1144	LA-19	RAMP Q	36+70		LT					1										
1144	LA-20	RAMP Q	37+27		LT					2										
1144	LA-21	RAMP Q	37+39		LT					1										
		ITEM TOTALS				817 FT	198	17	523	34	2	1,881	7	105	13					
TOTALS CARRIED TO TRAFFIC CONTROL SUBSUMMARY						0.15 MI	215		523	34	2	1,881	7	105	13					

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PAVEMENT MARKING ESTIMATED QUANTITIES

HAM-75-7.85

1121
2017

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RAISED PAVEMENT MARKER ESTIMATED QUANTITIES

CALCULATED RJI | CHECKED JF

HAM-75-7.85

1122 / 2017

SHEET NO.			REFERENCE NO.	LOCATION	STATION		SIDE	621 RAISED PAVEMENT MARKER REMOVED	621 1-WAY WHITE RPM	621 2-WAY WHITE/RED RPM	621 2-WAY YELLOW/RED RPM	621 2-WAY YELLOW/YELLOW RPM	SPACING
					FROM	TO		EACH	EACH	EACH	EACH	EACH	FEET
1131	-	1132	LL-1	C.L. CONST. I.R. 75	395+50	417+19	RT		18				120
1131	-	1132	LL-2	C.L. CONST. I.R. 75	395+50	417+30	RT	18	19				120
1131	-	1132	LL-3	C.L. CONST. I.R. 75	395+50	417+40	RT	18	19				120
	1132		LL-4	C.L. CONST. I.R. 75	417+19	419+03	RT		2				120
	1132		LL-5	C.L. CONST. I.R. 75	417+30	419+15	RT	2	2				120
	1132		LL-6	C.L. CONST. I.R. 75	417+40	419+27	RT	2	2				120
1132	-	1135	LL-7	C.L. CONST. I.R. 75	419+03	451+62	RT		28				120
1132	-	1135	LL-8	C.L. CONST. I.R. 75	419+15	451+59	RT	28	28				120
1132	-	1135	LL-9	C.L. CONST. I.R. 75	419+27	451+55	RT	28	27				120
			LL-10	NOT USED									
	1135		LL-11	C.L. CONST. I.R. 75	451+62	452+91	RT		1				120
	1135		LL-12	C.L. CONST. I.R. 75	451+59	452+88	RT	1	1				120
	1135		LL-13	C.L. CONST. I.R. 75	451+55	452+84	RT	1	1				120
1135	-	1139	LL-14	C.L. CONST. I.R. 75	452+91	505+00	RT		42				120
1135	-	1141	LL-15	C.L. CONST. I.R. 75	451+88	531+92	RT	67	67				120
1135	-	1141	LL-16	C.L. CONST. I.R. 75	452+84	531+85	RT	66	66				120
	1141		LL-17	C.L. CONST. I.R. 75	531+92	534+15	RT	2	2				120
	1141		LL-18	C.L. CONST. I.R. 75	531+85	534+08	RT	2	2				120
	1141		LL-19	C.L. CONST. I.R. 75	534+15	534+87	RT	1	1				120
	1141		LL-20	C.L. CONST. I.R. 75	534+08	534+87	RT	1	1				120
1138	-	1139	LL-21	RAMP D	493+83	496+06	RT	2	2				120
	1139		LL-22	RAMP A	500+10	502+90	LT	3	3				120
1131	-	1132	LL-23	C.L. CONST. I.R. 75	393+50	417+87	LT	20	21				120
1131	-	1132	LL-24	C.L. CONST. I.R. 75	393+50	417+98	LT	20	21				120
1131	-	1132	LL-25	C.L. CONST. I.R. 75	393+50	418+09	LT	3	21				120
	1132		LL-26	C.L. CONST. I.R. 75	417+87	419+79	LT	3	2				120
	1132		LL-27	C.L. CONST. I.R. 75	417+98	419+92	LT	3	2				120
	1132		LL-28	C.L. CONST. I.R. 75	418+09	420+04	LT		2				120
1132	-	1135	LL-29	C.L. CONST. I.R. 75	419+79	451+41	LT	27	27				120
1132	-	1135	LL-30	C.L. CONST. I.R. 75	419+92	451+38	LT	27	27				120
1132	-	1135	LL-31	C.L. CONST. I.R. 75	420+04	451+34	LT		27				120
	1135		LL-32	C.L. CONST. I.R. 75	451+41	452+70	LT	1	1				120
	1135		LL-33	C.L. CONST. I.R. 75	451+38	452+67	LT	1	1				120
	1135		LL-34	C.L. CONST. I.R. 75	451+34	452+64	LT	1	1				120
1135	-	1141	LL-35	C.L. CONST. I.R. 75	452+70	531+62	LT	66	66				120
1135	-	1141	LL-36	C.L. CONST. I.R. 75	452+67	531+55	LT	66	66				120
1135	-	1141	LL-37	C.L. CONST. I.R. 75	452+64	530+10	LT		65				120
	1141		LL-38	C.L. CONST. I.R. 75	531+62	533+85	LT	2	2				120
	1141		LL-39	C.L. CONST. I.R. 75	531+55	533+78	LT	2	2				120
	1141		LL-40	C.L. CONST. I.R. 75	533+85	534+49	LT	1	1				120
	1141		LL-41	C.L. CONST. I.R. 75	533+78	534+49	LT	1	1				120
1138	-	1139	LL-42	RAMP C	486+49	498+21	RT		10				120
1139	-	1140	LL-43	RAMP B	504+98	507+73	RT		3				120
1133	, 1142	, 1143	LL-44	RAMP K	416+13	430+71	LT		13				120
1133	, 1142	, 1143	LL-45	RAMP J	408+79	432+79	LT		20				120
1143	-	1144	LL-46	C.L. CONST. S.R. 562	15+00	36+76	RT	19	19				120
	1144		LL-47	C.L. CONST. S.R. 562	30+00	36+76	LT	6	6				120
	1144		LL-48	C.L. CONST. S.R. 562	36+76	39+06	LT	2	2				120
	1144		LL-49	C.L. CONST. S.R. 562	39+06	47+50	LT	7	7				120
TOTALS - LEFT COLUMNS								520	770	0	0	0	

SHEET NO.			REFERENCE NO.	LOCATION	STATION		SIDE	621 RAISED PAVEMENT MARKER REMOVED	621 1-WAY WHITE RPM	621 2-WAY WHITE/RED RPM	621 2-WAY YELLOW/RED RPM	621 2-WAY YELLOW/YELLOW RPM	SPACING
					FROM	TO		EACH	EACH	EACH	EACH	EACH	FEET
	1138		WE-27	RAMP E	485+57	490+41	CL			11			40
	1138		WE-28	RAMP D	491+50	493+83	CL	5		5			40
1139	- 1140		WE-29	RAMP D	493+83	496+20	RT	6		6			40
	1139		WE-30	RAMP D	495+40	496+06	RT	2		2			40
	1139		WE-36	RAMP B	500+75	507+70	LT	2		2			40
	1139		WE-37	RAMP B	501+70	505+00	LT	9		9			40
1131	- 1132		CH-1	C.L. CONST. I.R. 75	407+65	411+62	RT	3		10			40
	1133		CH-2	C.L. CONST. I.R. 75	424+65	430+71	RT	6		16			40
	1137		CH-3	C.L. CONST. I.R. 75	471+23	475+22	RT	6		10			40
	1139		CH-4	C.L. CONST. I.R. 75	505+87	510+43	RT	5		12			40
	1141		CH-5	C.L. CONST. I.R. 75	531+99	534+21	RT	6		6			40
1131	- 1132		CH-6	C.L. CONST. I.R. 75	401+96	408+88	LT	3		18			40
	1133		CH-7	C.L. CONST. I.R. 75	432+76	436+09	LT	5		9			40
1133	- 1134		CH-8	RAMP J	432+76	438+00	RT			14			40
	1133		CH-9	RAMP J	432+78	436+09	RT	5		9			40
1137	- 1138		CH-10	C.L. CONST. I.R. 75	479+95	486+49	LT	4		17			40
1137	- 1138		CH-11	RAMP C	479+95	486+49	RT	4		17			40
	1140		CH-12	C.L. CONST. I.R. 75	507+72	511+06	LT	4		9			40
	1140		CH-13	RAMP B	507+72	511+06	RT	4		9			40
	1140		CH-14	RAMP B	507+73	515+59	RT			20			40
	1141		CH-15	C.L. CONST. I.R. 75	530+10	531+48	LT	4		4			40
	1141		CH-16	C.L. CONST. I.R. 75	530+10	531+44	LT	4		4			40
	1141		CH-17	C.L. CONST. I.R. 75	531+48	528+25	LT	6		6			40
	1141		CH-18	C.L. CONST. I.R. 75	531+44	528+18	LT	6		6			40
	1141		CH-19	C.L. CONST. I.R. 75	534+31	534+87	RT	2		2			40
	1132		CH-20	RAMP N	409+13	411+72	LT	4		7			40
1131	- 1132		CH-21	RAMP M	401+96	408+88	RT	3		18			40
	1133		CH-22	RAMP K	424+61	430+71	LT	6		16			40
	1137		CH-23	RAMP D	471+23	475+01	RT	5		10			40
	1138		CH-24	RAMP D	483+71	485+56	RT			5			40
	1138		CH-25	RAMP D	483+71	485+56	CL			5			40
1138	- 1139		CH-26	RAMP D	492+50	496+06	LT	2		9			40
1138	- 1139		CH-27	RAMP D	493+83	496+06	LT	2		6			40
	1139		CH-28	RAMP C	498+21	498+68	RT			3			40
	1139		CH-29	RAMP C	498+21	498+72	RT			3			40
	1139		CH-30	RAMP A	498+18	498+63	LT			3			40
	1139		CH-31	RAMP A	498+09	498+63	LT			2			40
	1139		CH-32	RAMP A	498+63	500+10	LT	3		8			40
	1139		CH-33	RAMP A	498+63	500+10	LT	3		8			40
1139	- 1140		CH-34	RAMP A	505+87	510+43	LT	5		12			40
	1139		CH-35	RAMP B	500+82	501+00	RT			2			40
	1139		CH-36	RAMP B	500+47	501+70	RT			3			40
	1139		CH-37	RAMP B	500+50	501+70	RT			3			40
	1139		CH-38	RAMP B	500+82	501+70	CL			11			40
	1139		CH-39	RAMP B	501+70	504+98	RT	9		8			40
	1139		CH-40	RAMP B	501+70	504+98	RT	9		8			40
	1139		CH-41	RAMP B	501+70	504+98	CL	9		8			40
	1143		CH-42	RAMP N	420+25	423+52	LT	4		9			40
					TOTALS - RIGHT COLUMNS			165	0	400	0	0	
					TOTALS - LEFT COLUMNS			520	770	0	0	0	
TOTALS CARRIED TO SHEET 1123								685	770	400	0	0	

FOR INFORMATIONAL ONLY

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SHEET NO.	REFERENCE NO.	LOCATION	STATION FROM	STATION TO	SIDE	621 RAISED PAVEMENT MARKER REMOVED EACH	621 1-WAY WHITE RPM EACH	621 2-WAY WHITE/RED RPM EACH	621 2-WAY YELLOW/RED RPM EACH	621 2-WAY YELLOW/YELLOW RPM EACH	SPACING FEET
1143	CH-43	RAMP J	408+80	412+01	LT	3		8			40
1143	CH-44	RAMP M	424+09	426+89	LT	13		7			40
1143	CH-45	RAMP K	413+56	416+13	LT	14		7			40
1143	CH-46	RAMP K	413+56	416+13	LT			7			40
1143	CH-47	C.L. CONST. S.R. 562	14+78	16+00	LT			3			40
1144	CH-48	C.L. CONST. S.R. 562	27+00	31+81	RT	5		12			40
1144	CH-49	RAMP P	30+00	33+33	RT	6		9			40
1144	CH-50	C.L. CONST. S.R. 562	42+38	44+18	LT	5		5			40
1144	CH-51	RAMP Q	29+52	31+80	LT	5		6			40
1144	CH-52	RAMP Q	34+21	37+16	LT	2		8			40
1144	CH-55	C.L. CONST. S.R. 562	30+00	33+33	LT	5		9			40
1144	CH-58	C.L. CONST. S.R. 562	42+42	44+18	LT	5		5			40
1141	CH-59	C.L. CONST. I.R. 75	531+99	534+87	RT	6		6			40
1141	YE-12	C.L. CONST. I.R. 75	531+69	534+49	LT				4		80
1132 , 1142	YE-13	RAMP M	408+79	416+26	CL	9			10		80
1142	YE-14	RAMP M	416+26	420+25	CL	3			5		80
1142 - 1143	YE-15	RAMP M	420+25	426+89	CL	5			9		80
1132 , 1142 , 1143	YE-16	RAMP N	411+72	420+25	LT	10			11		80
1133 , 1142 , 1143	YE-17	RAMP K	416+13	424+61	LT	9			11		80
1133 , 1142 , 1143	YE-18	RAMP J	409+20	432+78	RT	18			30		80
1137 - 1138	YE-19	RAMP D	475+01	493+83	LT	8			27		80-40
1138	YE-20	RAMP E	485+57	490+25	LT				11		40
1138 - 1139	YE-21	RAMP D	493+83	496+06	LT				8		40
1139	YE-22	RAMP D	495+40	496+06	RT				2		40
1138 - 1139	YE-23	RAMP C	486+49	498+64	RT	7			16		80
1139	YE-24	RAMP C	498+64	499+21	RT				1		80
1139	YE-25	RAMP C	498+68	500+09	RT				2		80
1139	YE-26	RAMP A	498+34	498+63	LT				1		80
1139	YE-27	RAMP A	498+63	505+89	LT	10			9		80
1139	YE-28	RAMP B	500+38	501+70	RT				3		40
1144	YE-33	RAMP Q	31+81	37+39	LT	6			7		80
1144	YE-35	RAMP P	33+31	37+05	LT	6			5		80
1141	YE-37	C.L. CONST. I.R. 75	533+64	534+49	LT				1		80
1139 - 1140	YE-38	RAMP B	501+70	507+73	RT	7			13		80-40
1135	DY-1	CEDAR	00+81		LT					1	80
1135	DY-2	CEDAR	00+47	01+04	LT					1	80
1135	DY-3	CEDAR	01+04	02+56	CL					2	80
1135	DY-4	TOWNSHIP	20+39	21+17	CL	1				1	80
1135	DY-5	TOWNE	14+75	19+93	CL	7				7	80
1133 - 1135	WD12-1	C.L. CONST. I.R. 75	430+71	451+66	RT		17				120
1135	WD12-2	C.L. CONST. I.R. 75	451+66	452+94	RT		1				120
1135 - 1137	WD12-3	C.L. CONST. I.R. 75	452+94	471+23	RT		15				120
1139 - 1141	WD12-4	C.L. CONST. I.R. 75	505+00	531+99	RT		22				120
1134 - 1135	WD12-5	C.L. CONST. I.R. 75	438+00	451+31	LT		11				120
1135	WD12-6	C.L. CONST. I.R. 75	451+31	452+60	LT		1				120
1135 - 1137	WD12-7	C.L. CONST. I.R. 75	452+60	479+95	LT		23				120
1143 - 1144	WD12-8	C.L. CONST. S.R. 562	15+00	27+00	RT		10				120
1143 - 1144	WD12-9	C.L. CONST. S.R. 562	16+00	30+00	LT		12				120
				TOTALS - THIS SHEET		175	112	92	186	12	
				TOTALS - PREVIOUS SHEET		685	770	400	0	0	
TOTALS CARRIED TO TRAFFIC CONTROL SUBSUMMARY						860	1,572				

SHEET NO.	LOCATION	STATION FROM	STATION TO	SIDE	620 REMOVAL OF DELINEATOR EACH	620 DELINEATOR, POST GROUND MOUNTED (TYPE C, WHITE) EACH	620 DELINEATOR, POST GROUND MOUNTED (TYPE D, YELLOW) EACH	620 DELINEATOR, BRACKET MOUNTED (TYPE C, WHITE) EACH	SPACING FEET
1132	RAMP M	409+00	412+00	LT		2			140
1142	RAMP M	412+00	416+25	LT	4	6			70
1142	RAMP M	416+25	420+25	LT				6	70
1142	RAMP M	420+25	422+00	LT		3			70
1142	RAMP M	422+00	423+00	RT	1		2		70
1143	RAMP M	423+00	426+00	RT			4		70
1132	RAMP N	411+72	413+00	LT			2		80
1142	RAMP N	413+00	418+00	LT			7		80
1143	RAMP N	418+00	420+25	LT			3		80
1143	RAMP K	416+10	417+00	LT			2		70
1142	RAMP K	417+00	423+00	LT			9		70
1133	RAMP K	423+00	424+50	LT			2		70
1143	RAMP J	412+00	413+50	LT		2			70
1142	RAMP J	413+50	423+50	LT		15			70
1133	RAMP J	423+50	432+80	LT		7			140
1138	RAMP E	485+50	490+25	LT			3		200
1138	RAMP D	491+00	494+50	LT			6		60
1139	RAMP D	494+50	496+00	LT			2		120
1138	RAMP C	493+00	494+50	RT			2		200
1139	RAMP C	494+50	498+00	RT			2		200
1139	RAMP A	498+60	505+90	LT			4		200
1139	RAMP B	500+50	507+00	RT			4		200
1143	RAMP B	507+00	507+70	RT			1		200
1144	RAMP Q	31+80	34+50	LT	2		2		200
1144	RAMP P	33+30	35+10	RT	2		1		200
				COLUMN TOTALS	9	35	58	6	
TOTALS CARRIED TO TRAFFIC CONTROL SUBSUMMARY					9	93		6	

CALCULATED RJI CHECKED JF

RPM AND DELINEATOR ESTIMATED QUANTITIES

HAM-75-7.85

1123 2017

FOR INFORMATION ONLY

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SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	625 GROUND ROD EACH	630 GROUND MOUNTED SUPPORT, NO. 3 POST FT	630 GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X22 FT	630 ONE WAY SUPPORT, NO. 3 POST FT	630 SIGN POST REFLECTOR EACH	630 BREAKAWAY STRUCTURAL BEAM CONNECTION EACH	630 OVERHEAD SIGN SUPPORT, TYPE TC-12.31, DESIGN 12 EACH	630 OVERHEAD SIGN SUPPORT, TYPE TC-15.116, DESIGN 3 EACH	630 SIGN SUPPORT ASSEMBLY, BARRIER MOUNTED, AS PER PLAN EACH	630 SIGN, FLAT SHEET SQ FT	630 SIGN, GROUND MOUNTED EXTRUSHEET SQ FT	630 SIGN, OVERHEAD EXTRUSHEET SQ FT	630 CONCRETE MEDIAN BARRIER SIGN BRACKET, AS PER PLAN EACH	630 CONCRETE BARRIER MEDIAN OVERHEAD SIGN SUPPORT FOUNDATION, TYPE TC-21.50 EACH	630 GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION EACH	630 RIGID OVERHEAD SIGN SUPPORT FOUNDATION EACH		
1150	S-35	CL CONST. I.R. 75	466+00	LT	E1-H5P	84" X 30"	2							1				17.5		1		1		
						696" X 192"												928						
1150	S-36	CL CONST. I.R. 75	469+45	CL	D10-5-18	18" X 60"										7.5			1					
					D10-5-18	18" X 60"										7.5								
1150	S-37	CL CONST. I.R. 75	471+23	RT	E1-H5P	84" X 30"	1						1					17.5		1				
						204" X 156"												221						
1150	S-38	CL CONST. I.R. 75	474+75	LT	D10-1-12	12" X 24"		12								2								
1150	S-39	CL CONST. I.R. 75	474+75	CL	D10-5-18	18" X 60"										7.5			1					
					D10-5-18	18" X 60"										7.5								
1150	S-40	CL CONST. I.R. 75	474+75	RT	D10-1-12	12" X 24"		12								2								
1150	S-41	CL CONST. I.R. 75	475+45	RT	E5-H1C	48" X 84"									1		28							
1151	S-42	CL CONST. I.R. 75	480+00	CL	D10-5-18	18" X 60"										7.5			1					
					D10-5-18	18" X 60"										7.5								
1151	S-43	CL CONST. I.R. 75	484+50	RT	E1-H5bP	120" X 54"	2							1				45			1	1		
						192" X 72"												96						
					E1-H5P	108" X 30"												22.5						
						228" X 180"												285						
						117" X 108"												117						
						204" X 84"												119						
1151	S-44	CL CONST. I.R. 75	485+30	CL	D10-5-18	18" X 60"										7.5			1					
					D10-5-18	18" X 60"										7.5								
1151	S-45	RAMP E	488+00	RT	D10-H5a-30	30" X 30"		14								6.25								
1151	S-46	RAMP D	489+00	RT	D10-H5a-30	30" X 30"		14.5								6.25								
1151	S-47	RAMP E	488+50	RT	R5-1A-42	42" X 30"		14 / 15			2					8.75								
				RT	R5-1A-42	42" X 30"										8.75								
				LT	R5-1A-42	42" X 30"		14 / 15			2					8.75								
				LT	R5-1A-42	42" X 30"										8.75								
1151	S-48	RAMP C	489+50	LT	W4-2R-48	48" X 48"		16 / 17								16								
1152	S-49	CL CONST. I.R. 75	490+60	CL	D10-5-18	18" X 60"										7.5			1					
					D10-5-18	18" X 60"										7.5								
1152	S-50	CL CONST. I.R. 75	494+00	LT	W4-3R-48	48" X 48"		15 / 15								16								
1152	S-51	CL CONST. I.R. 75	494+40	CL	D10-5-18	18" X 60"										7.5			1					
					D10-5-18	18" X 60"										7.5								
1152	S-52	CL CONST. I.R. 75	498+15	CL	D10-5-18	18" X 60"										7.5			1					
1152	S-53	CL CONST. I.R. 75	499+07	CL	D10-5-18	18" X 60"										7.5			1					
1152	S-54	CL CONST. I.R. 75	502+00	LT	E1-H5P	84" X 30"	1						1					17.5				1		
						168" X 108"												126						
1152	S-55	CL CONST. I.R. 75	503+75	CL	D10-5-18	18" X 60"										7.5			1					
					D10-5-18	18" X 60"										7.5								
1152	S-56	RAMP C	497+00	LT	D10-H5a	30" X 30"		12.5								6.25								
1152	S-57	RAMP E	490+71	LT	R5-1-36	36" X 36"										9								
					R6-1R-36	36" X 12"				16 / 16	2					3								
					R6-1L-36	36" X 12"										3								
					R1-1-48	48" X 48"										16								
				RT	R5-1-36	36" X 36"										9								
					R6-1R-36	36" X 12"				16 / 17	2					3								
					R6-1L-36	36" X 12"										3								
					R1-1-48	48" X 48"										16								
1152	S-58	RAMP A	502+61	RT	D10-H5a-30	30" X 30"		14.5								6.25								
1153	S-59	RAMP B	504+50	LT	R3-H8dc(MOD)-54	54" X 30"		14 / 15								11.25								
				RT	R3-H8dc(MOD)-54	54" X 30"		15 / 15								11.25								
1153	S-60	CL CONST. I.R. 75	505+00	RT	W4-1R-48	48" X 48"		16 / 16								16								
1153	S-61	RAMP B	506+00	LT	M1-5-30-3	30" X 24"										5								
					M1-5-24-2	24" X 24"										4								
					M6-1L-21	21" X 15"										2.19								
					M6-4-21	21" X 15"			## / ##			2				2.19						2		
					D3-H5-144	144" X 36"											36							
					D3-H3a-144	144" X 24"											24							
					D7-H15a-144	144" X 24"											24							
TOTALS CARRIED TO TRAFFIC CONTROL SUBSUMMARY							6	289.0	42.5	64.0	8	2	2	2	1	329.9	112	2,012	9	3	2	3		

FOR INFORMATION ONLY

CALCULATED RJI CHECKED JF

SIGNING ESTIMATED QUANTITIES

HAM-75-7.85

1128 2017

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SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	630 REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL EACH	630 REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-12.30 EACH	630 REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-7.65 EACH
1151	R-58	CL CONST. I.R. 75	480+05	CL			2		1					
1151	R-59	CL CONST. I.R. 75	482+25	RT			1		2					
1151	R-60	CL CONST. I.R. 75	484+83	CL			2		1					
1151	R-61	CL CONST. I.R. 75	488+48	RT							2			1
											2			
											2			
												2		
1151	R-62	CL CONST. I.R. 75	489+49	CL			2		1					
1152	R-63	CL CONST. I.R. 75	494+40	CL			2		1					
1152	R-64	CL CONST. I.R. 75	494+66	LT			1		2					
	R-65	NOT USED												
1152	R-66	CL CONST. I.R. 75	498+15	CL			1		1					
1152	R-67	CL CONST. I.R. 75	499+07	CL			1		1					
1152	R-68	CL CONST. I.R. 75	503+07	RT			1		2					
1152	R-69	CL CONST. I.R. 75	503+73	CL			2		1					
1152	R-70	RAMP C	492+66	LT			1		2					
1152	R-71	RAMP C	495+95	LT			1		1					
1152	R-72	CL CONST. I.R. 75	503+69	LT			1		2					
1152	R-73	CL CONST. I.R. 75	503+79	LT			1		2					
1152	R-74	CL CONST. I.R. 75	490+85	RT			1		2					
1152	R-75	CL CONST. I.R. 75	494+00	RT			1		2					
1152	R-76	RAMP A	502+61	RT			1		1					
1153	R-77	RAMP B	505+10	RT			8			2				
1153	R-78	CL CONST. I.R. 75	505+58	LT			1			1				
1153	R-79	CL CONST. I.R. 75	507+22	LT							2	1		1
											2			
1153	R-80	CL CONST. I.R. 75	508+47	CL			2		1					
1153	R-81	CL CONST. I.R. 75	510+66	RT			1		1					
1153	R-82	CL CONST. I.R. 75	513+17	CL			2		1					
1153	R-83	CL CONST. I.R. 75	514+88	RT								1		
1154	R-84	CL CONST. I.R. 75	518+00	CL			2		1					
1154	R-85	CL CONST. I.R. 75	519+26	LT							1	1	1	
1154	R-86	CL CONST. I.R. 75	520+22	RT							2			1
											2	1		
	R-87	NOT USED												
1154	R-88	CL CONST. I.R. 75	522+43	CL			1		1					
1154	R-89	CL CONST. I.R. 75	522+49	LT			1		1					
1154	R-90	CL CONST. I.R. 75	522+20	RT			1		1					
1154	R-91	CL CONST. I.R. 75	522+82	CL			1		1					
1154	R-92	CL CONST. I.R. 75	527+35	CL			2		1					
1154	R-93	CL CONST. I.R. 75	527+38	LT			1		1					
1154	R-94	CL CONST. I.R. 75	530+80	RT							2			1
											2	1		
1154	R-95	CL CONST. I.R. 75	531+33	LT								1		
1154	R-96	CL CONST. I.R. 75	531+85	CL			2		1					
1156	R-97	RAMP M	412+34	LT			1		1					
1156	R-98	RAMP M	413+79	LT			1		1					
1156	R-99	RAMP M	414+91	LT			1		1					
1156	R-100	RAMP M	415+40	LT			1		1					
1156	R-101	RAMP M	415+56	LT			1		1					
1156	R-102	RAMP M	419+67	LT			1		1					
1156	R-103	RAMP M	419+74	LT			1		1					
1156	R-104	RAMP M	422+46	LT			1		2					
1156	R-105	RAMP J	422+11	RT							2	1	1	
1156	R-106	RAMP J	413+96	LT			1		2					
1156	R-107	RAMP N	413+45	LT			1		1					
1156	R-108	RAMP N	414+94	LT			1		1					
1156	R-109	RAMP N	415+13	RT			1		2					
1156	R-110	RAMP N	415+50	LT							2	1	1	
1156	R-111	RAMP N	416+60	LT			1		1					
TOTALS CARRIED TO TRAFFIC CONTROL SUBSUMMARY							60		52	3	23	10	3	4

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CALCULATED RJI
CHECKED JF

ESTIMATED QUANTITIES

SIGNING

HAM-75-7.85

1125
2017

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SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	630 REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL EACH	630 REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-12.30 EACH	630 REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-7.65 EACH
1156	R-112	RAMP K	417+79	LT			1	1					
1156	R-113	RAMP K	418+66	LT			1	1					
1156	R-114	RAMP K	418+65	RT			1	1					
1156	R-115	RAMP K	419+54	LT			1	1					
1156	R-116	RAMP K	420+42	LT			1	1					
1156	R-117	RAMP K	423+98	LT			1	2					
1157	R-118	RAMP N	418+16	LT			1	2					
1157	R-119	RAMP K	415+68	LT						1			
										1	1		1
1157	R-120	CL CONST. S.R. 562	15+07	LT			1	1					
1157	R-121	RAMP N	423+50	LT			1	1					
1157	R-122	RAMP N	424+31	LT			1	2					
1157	R-123	RAMP K	412+99	RT			2	1					
1157	R-124	RAMP N	424+72	LT			2	1					
1157	R-125	CL CONST. S.R. 562	17+79	LT						1			
										1	1		1
1157	R-126	CL CONST. S.R. 562	20+82	LT			2	2					
1157	R-127	CL CONST. S.R. 562	20+72	RT			2	2					
1157	R-128	CL CONST. S.R. 562	21+48	CL			2	1					
1157	R-129	CL CONST. S.R. 562	21+98	RT						2			
										2	1		1
1158	R-130	CL CONST. S.R. 562	23+00	LT						1			
										1	1		1
1158	R-131	CL CONST. S.R. 562	26+79	CL			2	1					
1158	R-132	CL CONST. S.R. 562	29+67	LT							3		
1158	R-133	CL CONST. S.R. 562	30+52	RT						2	1	1	
1158	R-134	RAMP P	31+43	LT			1	2					
1158	R-135	CL CONST. S.R. 562	32+81	RT			1		1				
1158	R-136	RAMP Q	34+00	RT			4		2				
1156	R-137	RAMP J	415+46	LT			1	2					
1156	R-138	RAMP J	419+44	LT			1	2					
1156	R-139	RAMP J	417+46	LT			1	2					
1156	R-140	RAMP J	418+51	LT			1	2					
1156	R-141	RAMP J	419+88	LT			1	2					
1156	R-142	RAMP J	420+98	LT			1	2					
1152	R-143	RAMP D	491+15	LT			1	2					
1152	R-144	RAMP D	492+32	LT			1	2					
1152	R-145	RAMP D	491+51	LT			2	2					
TOTALS CARRIED TO TRAFFIC CONTROL SUBSUMMARY							38	41	3	12	8	1	4

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SIGNING ESTIMATED QUANTITIES

HAM-75-7.85

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SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	625 GROUND ROD EACH	630 GROUND MOUNTED SUPPORT, NO. 3 POST FT	630 GROUND MOUNTED STRUCTURAL BEAM SUPPORT, S4X7.7 FT	630 GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X22 FT	630 ONE WAY SUPPORT, NO. 3 POST FT	630 SIGN POST REFLECTOR EACH	630 BREAKAWAY STRUCTURAL BEAM CONNECTION EACH	630 OVERHEAD SIGN SUPPORT, TYPE TC-12.31, DESIGN 12 EACH	630 OVERHEAD SIGN SUPPORT, TYPE TC-15.116, DESIGN 3 EACH	630 SIGN ATTACHMENT ASSEMBLY EACH	630 SIGN, FLAT SHEET SQ FT	630 SIGN, GROUND MOUNTED EXTRUSHEET SQ FT	630 SIGN, OVERHEAD EXTRUSHEET SQ FT	630 CONCRETE MEDIAN BARRIER SIGN BRACKET, AS PER PLAN EACH	630 CONCRETE BARRIER MEDIAN OVERHEAD SIGN SUPPORT FOUNDATION, TYPE TC-21.50 EACH	630 GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION EACH	630 RIGID OVERHEAD SIGN SUPPORT FOUNDATION EACH		
1145	S-1	CL CONST. I.R. 75	374+75	RT	E1-H5P	84" X 30"												17.5							
						168" X 108"										3		126							
1145	S-2	CL CONST. I.R. 75	395+00	RT	E1-H5P	84" X 30"												17.5							
						168" X 108"										3		126							
1145	S-3	CL CONST. I.R. 75	403+00	RT	E1-H5P	84" X 30"												17.5							
						204" X 96"										4		136							
					E1-H5P	84" X 30"												17.5							
						204" x 144"										4		204							
1145	S-4	CL CONST. I.R. 75	404+00	LT	R1-2-60	60" X 60"		15 / 16				2					12.5								
1146	S-5	CL CONST. I.R. 75	411+00	LT	W4-1R-48	48" X 48"		14 / 15									16								
1146	S-6	CL CONST. I.R. 75	411+40	CL	D10-5-18	18" X 60"											7.5			1					
					D10-5-18	18" X 60"											7.5								
1146	S-7	CL CONST. I.R. 75	412+07	RT	E5-H1A-72	72" X 60"			16.2 / 16.9				2					30				2			
1146	S-8	CL CONST. I.R. 75	416+65	CL	D10-5-18	18" X 60"											7.5			1					
					D10-5-18	18" X 60"											7.5								
1146	S-9	CL CONST. I.R. 75	421+81	CL	D10-5-18	18" X 60"											7.5			1					
					D10-5-18	18" X 60"											7.5								
1146	S-10	CL CONST. I.R. 75	421+91	RT	D10-1-12	12" X 24"		12									2								
1146	S-11	CL CONST. I.R. 75	421+83	LT	D10-1-12	12" X 24"		12									2								
1147	S-12	CL CONST. I.R. 75	423+82	RT	W4-3R-48	48" X 48"		16.5 / 16.0									16								
1147	S-13	CL CONST. I.R. 75	424+00	LT	E1-H5P	84" X 30"	1							1					17.5					1	
						192" X 96"													128						
1147	S-14	CL CONST. I.R. 75	427+00	CL	D10-5-18	18" X 60"											7.5			1					
					D10-5-18	18" X 60"											7.5								
1147	S-15	RAMP J	429+50	LT	D10-H5a-30	30" X 30"		14.5									6.25								
1147	S-16	CL CONST. I.R. 75	431+55	LT	E5-H1A-72	72" X 60"			16.1 / 16.5				2					30				2			
1147	S-17	CL CONST. I.R. 75	432+25	CL	D10-5-18	18" X 60"											7.5			1					
					D10-5-18	18" X 60"											7.5								
1148	S-18	CL CONST. I.R. 75	437+50	CL	D10-5-18	18" X 60"											7.5			1					
					D10-5-18	18" X 60"											7.5								
1148	S-19	CL CONST. I.R. 75	438+70	RT	E1-H5P	84" X 30"	2								1				17.5			1		1	
						204" X 180"													255						
1148	S-20	CL CONST. I.R. 75	442+00	LT	E1-H5P	84" X 30"	2								1				17.5			1		1	
						696" X 168"													812						
1148	S-21	CL CONST. I.R. 75	442+75	CL	D10-5-18	18" X 60"											7.5			1					
					D10-5-18	18" X 60"											7.5								
1148	S-22	CL CONST. I.R. 75	445+00	RT	R2-1-48	48" X 60"		14.5 / 15.5									20								
1148	S-23	CL CONST. I.R. 75	448+50	LT	R2-1-48	48" X 60"		16.5 / 17.5									20								
1148	S-24	CL CONST. I.R. 75	448+00	CL	D10-5-18	18" X 60"											7.5			1					
					D10-5-18	18" X 60"											7.5								
	S-25	NOT USED																							
1149	S-26	CL CONST. I.R. 75	453+30	CL	D10-5-18	18" X 60"											7.5			1					
					D10-5-18	18" X 60"											7.5								
1149	S-27	CL CONST. I.R. 75	456+00	RT	168" x 84"					22.5 / 25.0			2					98				2			
1149	S-28	CL CONST. I.R. 75	458+50	CL	D10-5-18	18" X 60"											7.5			1					
					D10-5-18	18" X 60"											7.5								
1149	S-29	CL CONST. I.R. 75	463+90	CL	D10-5-18	18" X 60"											7.5			1					
					D10-5-18	18" X 60"											7.5								
1149	S-30	CEDAR STREET	452+02	LT	R6-1L-36	36" X 12"					12						3								
					R6-1R-36	36" X 12"											3								
1149	S-31	CEDAR STREET	452+52	LT	R5-1-30	30" X 30"											6.25								
					R7-1-12	12" X 18"		15				1					1.5								
			452+57	LT	R5-1-30	30" X 30"											6.25								
					R7-1-12	12" X 18"		15				1					1.5								
1149	S-32	CEDAR STREET	453+30	LT	R7-1-12	12" X 18"		12									1.5								
			453+58	LT	R7-1-12	12" X 18"		12									1.5								
			454+18	LT	R7-1-12	12" X 18"		12									1.5								
1149	S-33	CEDAR STREET	454+30	LT	W14-2-30	30" X 30"		14				1					6.25								
1149	S-34	PADDOCK RD	388+91	RT	M6-3	21" X 15"											2.19								
TOTALS CARRIED TO TRAFFIC CONTROL SUBSUMMARY							5	275.0	65.7	47.5	12.0	5	6	1	2	14	294.2	158	1,910	11	2	6	3		

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SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	625 GROUND ROD EACH	630 GROUND MOUNTED SUPPORT, NO. 3 POST FT	630 GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X22 FT	630 ONE WAY SUPPORT, NO. 3 POST FT	630 SIGN POST REFLECTOR EACH	630 BREAKAWAY STRUCTURAL BEAM CONNECTION EACH	630 OVERHEAD SIGN SUPPORT, TYPE TC-12.31, DESIGN 12 EACH	630 OVERHEAD SIGN SUPPORT, TYPE TC-15.116, DESIGN 3 EACH	630 SIGN SUPPORT ASSEMBLY, BARRIER MOUNTED, AS PER PLAN EACH	630 SIGN, FLAT SHEET SQ FT	630 SIGN, GROUND MOUNTED EXTRUSHEET SQ FT	630 SIGN, OVERHEAD EXTRUSHEET SQ FT	630 CONCRETE MEDIAN BARRIER SIGN BRACKET, AS PER PLAN EACH	630 CONCRETE BARRIER MEDIAN OVERHEAD SIGN SUPPORT FOUNDATION, TYPE TC-21.50 EACH	630 GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION EACH	630 RIGID OVERHEAD SIGN SUPPORT FOUNDATION EACH		
1150	S-35	CL CONST. I.R. 75	466+00	LT	E1-H5P	84" X 30"	2							1				17.5		1		1		
						696" X 192"												928						
1150	S-36	CL CONST. I.R. 75	469+45	CL	D10-5-18	18" X 60"										7.5			1					
					D10-5-18	18" X 60"										7.5								
1150	S-37	CL CONST. I.R. 75	471+23	RT	E1-H5P	84" X 30"	1						1					17.5		1				
						204" X 156"												221						
1150	S-38	CL CONST. I.R. 75	474+75	LT	D10-1-12	12" X 24"		12								2								
1150	S-39	CL CONST. I.R. 75	474+75	CL	D10-5-18	18" X 60"										7.5			1					
					D10-5-18	18" X 60"										7.5								
1150	S-40	CL CONST. I.R. 75	474+75	RT	D10-1-12	12" X 24"		12								2								
1150	S-41	CL CONST. I.R. 75	475+45	RT	E5-H1C	48" X 84"									1		28							
1151	S-42	CL CONST. I.R. 75	480+00	CL	D10-5-18	18" X 60"										7.5			1					
					D10-5-18	18" X 60"										7.5								
1151	S-43	CL CONST. I.R. 75	484+50	RT	E1-H5bP	120" X 54"	2							1				45			1	1		
						192" X 72"												96						
					E1-H5P	108" X 30"												22.5						
						228" X 180"												285						
						117" X 108"												117						
						204" X 84"												119						
1151	S-44	CL CONST. I.R. 75	485+30	CL	D10-5-18	18" X 60"										7.5			1					
					D10-5-18	18" X 60"										7.5								
1151	S-45	RAMP E	488+00	RT	D10-H5a-30	30" X 30"		14								6.25								
1151	S-46	RAMP D	489+00	RT	D10-H5a-30	30" X 30"		14.5								6.25								
1151	S-47	RAMP E	488+50	RT	R5-1A-42	42" X 30"		14 / 15			2					8.75								
				RT	R5-1A-42	42" X 30"										8.75								
				LT	R5-1A-42	42" X 30"		14 / 15			2					8.75								
				LT	R5-1A-42	42" X 30"										8.75								
1151	S-48	RAMP C	489+50	LT	W4-2R-48	48" X 48"		16 / 17								16								
1152	S-49	CL CONST. I.R. 75	490+60	CL	D10-5-18	18" X 60"										7.5			1					
					D10-5-18	18" X 60"										7.5								
1152	S-50	CL CONST. I.R. 75	494+00	LT	W4-3R-48	48" X 48"		15 / 15								16								
1152	S-51	CL CONST. I.R. 75	494+40	CL	D10-5-18	18" X 60"										7.5			1					
					D10-5-18	18" X 60"										7.5								
1152	S-52	CL CONST. I.R. 75	498+15	CL	D10-5-18	18" X 60"										7.5			1					
1152	S-53	CL CONST. I.R. 75	499+07	CL	D10-5-18	18" X 60"										7.5			1					
1152	S-54	CL CONST. I.R. 75	502+00	LT	E1-H5P	84" X 30"	1						1					17.5				1		
						144" X 108"												108						
1152	S-55	CL CONST. I.R. 75	503+75	CL	D10-5-18	18" X 60"										7.5			1					
					D10-5-18	18" X 60"										7.5								
1152	S-56	RAMP C	497+00	LT	D10-H5a	30" X 30"		12.5								6.25								
1152	S-57	RAMP E	490+71	LT	R5-1-36	36" X 36"										9								
					R6-1R-36	36" X 12"				16 / 16	2					3								
					R6-1L-36	36" X 12"										3								
					R1-1-48	48" X 48"										16								
				RT	R5-1-36	36" X 36"										9								
					R6-1R-36	36" X 12"				16 / 17	2					3								
					R6-1L-36	36" X 12"										3								
					R1-1-48	48" X 48"										16								
1152	S-58	RAMP A	502+61	RT	D10-H5a-30	30" X 30"		14.5								6.25								
1153	S-59	RAMP B	504+50	LT	R3-H8dc(MOD)-54	54" X 30"		14 / 15								11.25								
				RT	R3-H8dc(MOD)-54	54" X 30"		15 / 15								11.25								
1153	S-60	CL CONST. I.R. 75	505+00	RT	W4-1R-48	48" X 48"		16 / 16								16								
1153	S-61	RAMP B	506+00	LT	M1-5-30-3	30" X 24"										5								
					M1-5-24-2	24" X 24"										4								
					M6-1L-21	21" X 15"										2.19								
					M6-4-21	21" X 15"			21.2 / 21.3			2				2.19					2			
					D3-H5-144	144" X 36"											36							
					D3-H3a-144	144" X 24"											24							
					D7-H15a-144	144" X 24"											24							
TOTALS CARRIED TO TRAFFIC CONTROL SUBSUMMARY							6	289.0	42.5	64.0	8	2	2	2	1	329.9	112	1,994	9	3	2	3		

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SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	625 GROUND ROD EACH	630 GROUND MOUNTED SUPPORT, NO. 3 POST FT	630 GROUND MOUNTED STRUCTURAL BEAM SUPPORT, S4x7.7 FT	630 GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X22 FT	630 SIGN POST REFLECTOR EACH	630 BREAKAWAY STRUCTURAL BEAM CONNECTION EACH	630 OVERHEAD SIGN SUPPORT, TYPE TC-12.31, DESIGN 12 EACH	630 OVERHEAD SIGN SUPPORT, TYPE TC-15.116, DESIGN 1 EACH	630 OVERHEAD SIGN SUPPORT, TYPE TC-15.116, DESIGN 2 EACH	630 OVERHEAD SIGN SUPPORT, TYPE TC-15.116, DESIGN 3 EACH	630 SIGN, FLAT SHEET SQ FT	630 SIGN, GROUND MOUNTED EXTRUSHEET SQ FT	630 SIGN, OVERHEAD EXTRUSHEET	630 CONCRETE MEDIAN BARRIER SIGN BRACKET, AS PER PLAN EACH	630 CONCRETE BARRIER MEDIAN OVERHEAD SIGN SUPPORT FOUNDATION, TYPE TC-21.50 EACH	630 GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION EACH	630 RIGID OVERHEAD SIGN SUPPORT FOUNDATION EACH		
1153	S-62	CL CONST. I.R. 75	506+34	LT	E5-H1A-72	72" X 60"			16.4 / 16.0			2						30					2			
1153	S-63	RAMP B	508+00	LT	D10-H5a	30" X 30"		14									6.25									
1153	S-64	CL CONST. I.R. 75	508+50	CL	D10-5-18	18" X 60"											7.5			1						
					D10-5-18	18" X 60"											7.5									
1153	S-65	RAMP A	510+50	RT	R1-2-60	60" X 60"		14.5 / 14			2						12.5									
1153	S-66	CL CONST. I.R. 75	513+20	CL	D10-5-18	18" X 60"											7.5			1						
					D10-5-18	18" X 60"											7.5									
1153	S-67	CL CONST. I.R. 75	514+70	LT	E1-H5P	84" X 30"	2									1			17.5			1		1		
						696" X 192"													928							
1154	S-68	CL CONST. I.R. 75	518+00	CL	D10-5-18	18" X 60"											7.5			1						
					D10-5-18	18" X 60"											7.5									
1154	S-69	CL CONST. I.R. 75	518+50	RT	E1-H5bP	120" X 54"	2								1				45			1		1		
						192" X 72"													96							
					E1-H5P	108" X 30"													22.5							
						240" X 156"													260							
1154	S-70	CL CONST. I.R. 75	522+40	CL	D10-5-18	18" X 60"											7.5			1						
1154	S-71	CL CONST. I.R. 75	522+50	LT	D10-2-12	12" X 36"		13									3									
1154	S-72	CL CONST. I.R. 75	522+32	RT	D10-2-12	12" X 36"		13									3									
1154	S-73	CL CONST. I.R. 75	522+85	CL	D10-5-18	18" X 60"											7.5			1						
1154	S-74	CL CONST. I.R. 75	523+95	LT	E1-H5P	84" X 30"	2									1			17.5			1		1		
						696" X 216"													1,044							
1154	S-75	CL CONST. I.R. 75	527+35	CL	D10-5-18	18" X 60"											7.5			1						
					D10-5-18	18" X 60"											7.5									
1154	S-76	CL CONST. I.R. 75	528+00	LT		168" x 84"				19.9 / 20.9		2						98					2			
1154	S-77	CL CONST. I.R. 75	530+80	RT	E1-H5bP	120" X 54"	2								1				45			1		1		
						192" X 72"													96							
					E1-H5P	108" X 30"													22.5							
						228" X 156"													247							
1154	S-78	CL CONST. I.R. 75	531+85	CL	D10-5-18	18" X 60"											7.5			1						
					D10-5-18	18" X 60"											7.5									
1156	S-79	RAMP M	412+25	LT	D10-H5a-30	30" X 30"		15.5									6.25									
1156	S-80	RAMP J	423+00	LT	E1-H5P	72" X 30"	1						1						15					1		
						180" X 108"													135							
1156	S-81	RAMP N	415+50	LT	E1-H5P	72" X 30"	1						1						15					1		
						180" X 108"													135							
1156	S-82	RAMP N	416+00	RT	D10-H5a-30	30" X 30"		14.5									6.25									
1156	S-83	RAMP K	418+00	RT	D10-H5a-30	30" X 30"		15									6.25									
1157	S-84	RAMP N	419+73	RT	W4-3L-30	48" X 48"		16 / 16.5									16									
1157	S-85	RAMP N	423+50	RT	D10-1-12	12" X 24"		12									2									
1157	S-86	RAMP K	412+50	RT	D10-1-12	12" X 24"		12									2									
1157	S-87	CL CONST. S.R. 562	15+60	CL	D10-5-18	18" X 60"											7.5			1						
					D10-5-18	18" X 60"											7.5									
1157	S-88	CL CONST. S.R. 562	16+25	RT	E1-H5P	84" X 30"	2							1					17.5			1		1		
						180" X 108"													135							
					E1-H5P	72" X 30"													15							
						180" X 132"													165							
1157	S-89	CL CONST. S.R. 562	18+40	LT		360" X 156"	2							1					390			1		1		
1157	S-90	CL CONST. S.R. 562	20+82	LT	M4-6-36	36" X 18"		15 / 15									4.5									
					M1-5-45-3	45" X 36"											11.25									
1157	S-91	CL CONST. S.R. 562	20+72	RT	M3-2-36	36" X 18"		14 / 13									4.5									
					M1-5-45-3	45" X 36"											11.25									
1157	S-92	CL CONST. S.R. 562	21+48	CL	D10-5-18	18" X 60"											7.5			1						
					D10-5-18	18" X 60"											7.5									
1158	S-93	CL CONST. S.R. 562	23+00	RT	R2-1-48	48" X 60"		15.5 / 15									20									
1158	S-94	CL CONST. S.R. 562	26+79	CL	D10-5-18	18" X 60"											7.5			1						
					D10-5-18	18" X 60"											7.5									
1158	S-95	CL CONST. S.R. 562	28+00	LT		360" X 156"	2								1				390			1		1		
1158	S-96	CL CONST. S.R. 562	29+50	RT	E1-H5P	72" X 30"	1						1						15					1		
						180" X 132"													165							
1158	S-97	CL CONST. S.R. 562	32+48	RT	E5-H1A-72	72" X 60"			16.4 / 16.1			2						30					2			
TOTALS CARRIED TO TRAFFIC CONTROL SUBSUMMARY							17	257.5	32.5	40.8	2	6	3	2	3	2	250	158	4433.5	10	7	6	10			

FOR INFORMATION ONLY

CALCULATED RJI CHECKED JF

SIGNING ESTIMATED QUANTITIES

HAM-75-7.85

1129 2017

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SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	625 GROUND ROD EACH	630 GROUND MOUNTED SUPPORT, NO. 3 POST FT	630 GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W6X9 FT	630 GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X22 FT	630 SIGN POST REFLECTOR EACH	630 BREAKAWAY STRUCTURAL BEAM CONNECTION EACH	630 SIGN, FLAT SHEET SQ FT	630 SIGN, GROUND MOUNTED EXTRUSHEET SQ FT	630 GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION EACH	630 RIGID OVERHEAD SIGN SUPPORT FOUNDATION EACH	630 REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION EACH	630 REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL EACH
1158	S-98	CL CONST. S.R. 562	34+00	RT	M1-5-24-2	24" X 24"							4					
					M6-4-21	21" X 15"			15.9 / 17.5			2	2.19		2			
					D3-H5-144	120" X 36"								30				
1152	S-99	CL CONST. I.R. 75	493+50	LT	W9-1-48	48" X 48"		16 / 17					16					
1156	S-100	RAMP M	413+10	LT	W1-8L-30	30" X 36"		14.5			1		7.5					
1156	S-101	RAMP M	414+30	LT	W1-8L-30	30" X 36"		14.5			1		7.5					
1156	S-102	RAMP M	415+50	LT	W1-8L-30	30" X 36"		14.5			1		7.5					
1156	S-103	RAMP M	421+00	LT	W13-3-36	36" X 48"		14.5 / 14.5			2		12					
1156	S-104	RAMP M	422+75	LT	W1-2L-36	36" X 36"		18.0			1		9					
					W13-1P-24	24" X 24"							4					
1156	S-105	RAMP K	417+30	LT	W1-8R-30	30" X 36"		14.5			1		7.5					
1156	S-106	RAMP K	418+50	LT	W1-8R-30	30" X 36"		14.5			1		7.5					
1156	S-107	RAMP K	419+70	LT	W1-8R-30	30" X 36"		14.5			1		7.5					
1156	S-108	RAMP K	420+90	LT	W1-8R-30	30" X 36"		14.5			1		7.5					
1157	S-109	RAMP K	413+50	RT	W13-3-48	48" X 60"		15.5 / 15.5			2		20					
1157	S-110	RAMP K	411+00	RT	W1-2R-48	48" X 48"		15.0 / 15.5			2		16					
					W13-1P-30	30" X 30"							6.25					
1146	S-111	RAMP N	409+50	RT	W1-2R-36	36" X 36"		17.5			1		9					
					W13-1P-30	30" X 30"							6.25					
1146	S-112	RAMP N	412+50	RT	W1-8R-30	30" X 36"		14.0			1		7.5					
1147	S-113	RAMP J	424+00	LT	W13-3-48	48" X 60"		14.5 / 15.0			2		20					
1147	S-114	RAMP J	426+00	LT	W1-2L-48	48" X 48"		17.5 / 18.0			2		16					
					W13-1P-30	30" X 30"							6.25					
1147	S-115	CL CONST. I.R. 75	436+00	RT	W9-1R-48	48" X 48"		15.0 / 15.5			2		16					
1148	S-116	CL CONST. I.R. 75	441+50	RT	W4-2R-48	48" X 48"		15.0 / 15.0			2		16					
1156	S-117	RAMP N	413+70	LT	W1-8R-30	30" X 36"		13.5			1		7.5					
1156	S-118	RAMP N	414+90	LT	W1-8R-30	30" X 36"		13.5			1		7.5					
1156	S-119	RAMP N	416+10	LT	W1-8R-30	30" X 36"		13.5			1		7.5					
1156	S-120	RAMP J	414+60	LT	W1-8L-36	36" X 48"		14.5 / 15.0			2		12					
1156	S-121	RAMP J	415+80	LT	W1-8L-36	36" X 48"		14.5 / 15.0			2		12					
1156	S-122	RAMP J	417+00	LT	W1-8L-36	36" X 48"		14.5 / 15.0			2		12					
1156	S-123	RAMP J	418+20	LT	W1-8L-36	36" X 48"		14.5 / 14.5			2		12					
1156	S-124	RAMP J	419+40	LT	W1-8L-36	36" X 48"		14.5 / 15.0			2		12					
1156	S-125	RAMP J	420+60	LT	W1-8L-36	36" X 48"		15.0 / 15.0			2		12					
1156	S-126	RAMP J	421+80	LT	W1-8L-36	36" X 48"		15.0 / 15.0			2		12					
1157	S-127	RAMP J	413+40	LT	W1-8L-30	30" X 36"		14.5			1		7.5					
1150	S-128	CL CONST. I.R. 75	476+00	LT	EX.	EX.				23.9 / 27.9		2			2		1	2
1151	S-129	RAMP D	488+00	RT	W1-2-36	36" X 36"		18.0			1		9					
					W13-1P-24	24" X 24"							4					
1151	S-130	RAMP D	490+00	RT	W13-3-36	36" X 48"		14.5 / 15.0			2		12					
1152	S-131	RAMP D	491+50	LT	W1-8R-30	30" X 36"		14.5			1		7.5					
1152	S-132	RAMP D	492+45	LT	W1-8R-30	30" X 36"		14.5			1		7.5					
1152	S-133	RAMP D	494+00	RT	R3-H8dg-60	60" X 30"		14.0 / 15.0					12.5					
				LT	R3-H8dg-60	60" X 30"		14.0 / 15.0					12.5					
1152	S-134	RAMP D	493+00	RT	R5-1A-42	42" X 30"		14.0 / 15.0			2		8.75					
				RT	R5-1A-42	42" X 30"							8.75					
				LT	R5-1A-42	42" X 30"		14.0 / 15.0			2		8.75					
				LT	R5-1A-42	42" X 30"							8.75					
1152	S-135	RAMP B	503+50	RT	R5-1A-42	42" X 30"		14.0 / 15.0			2		8.75					
				RT	R5-1A-42	42" X 30"							8.75					
				LT	R5-1A-42	42" X 30"		14.0 / 15.0			2		8.75					
				LT	R5-1A-42	42" X 30"							8.75					
1154	S-136	CL CONST. I.R. 75	529+00	RT		169" X 96"				23.3 / 23.3		2		112	2			
1154	S-137	CL CONST. I.R. 75	530+00	RT			1									1		
TOTALS CARRIED TO TRAFFIC CONTROL SUBSUMMARY							1	912.5	33.4	98.4	55	6	487.9	142	6	1	1	2

FOR INFORMATION ONLY

CALCULATED RJI
CHECKED JF

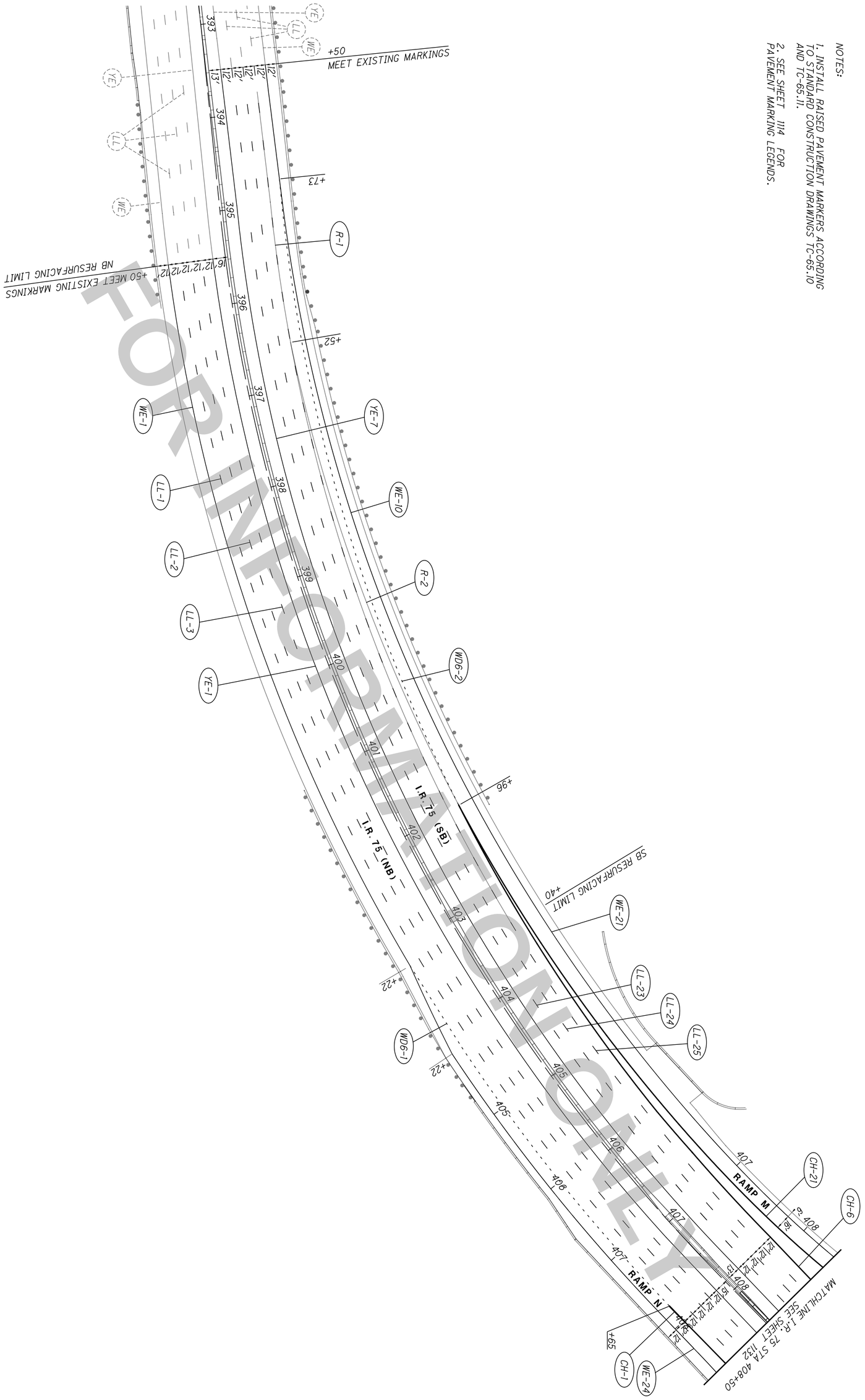
SIGNING ESTIMATED QUANTITIES

HAM-75-7.85

1130
2017

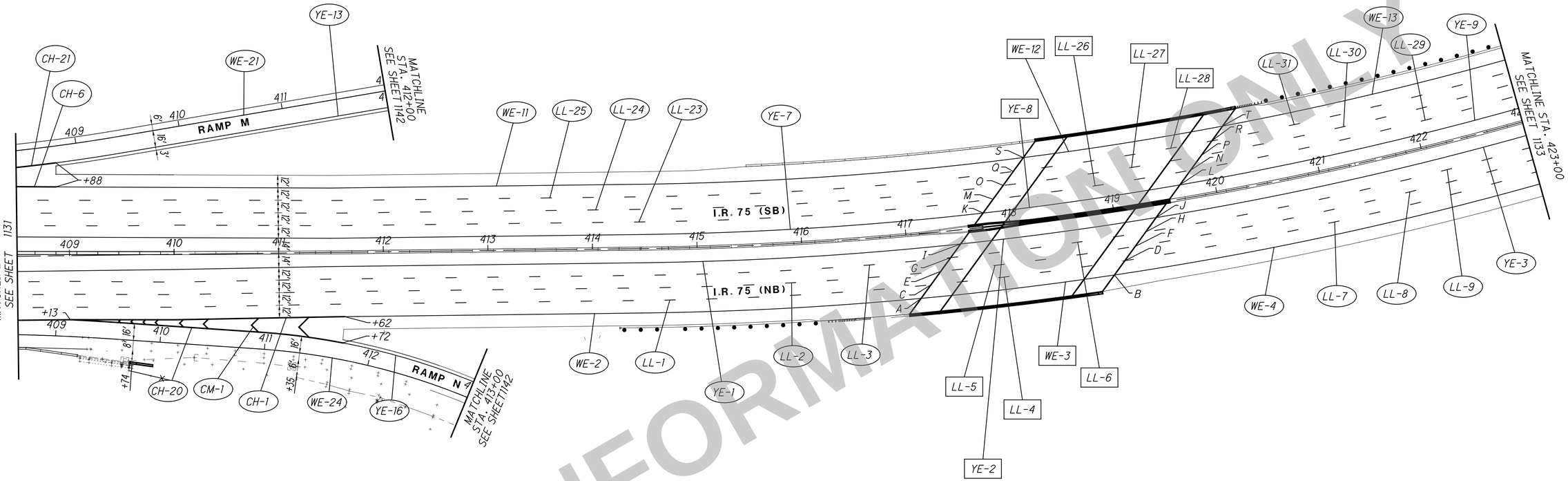
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FOR INFORMATION ONLY

2017 113	HAM-75-7.85	I.R. 75 PAVEMENT MARKING PLAN STA. 393+50 TO STA. 408+50	CALCULATED JF / CHECKED JDS	0 50 25 100 HORIZONTAL SCALE IN FEET



FOR INFORMATION ONLY

NOTES:

1. INSTALL RAISED PAVEMENT MARKERS ACCORDING TO STANDARD CONSTRUCTION DRAWINGS TC-65.10 AND TC-65.11.

2. SEE SHEET 1114 FOR PAVEMENT MARKING LEGENDS.

HORIZONTAL SCALE IN FEET
0 25 50 100

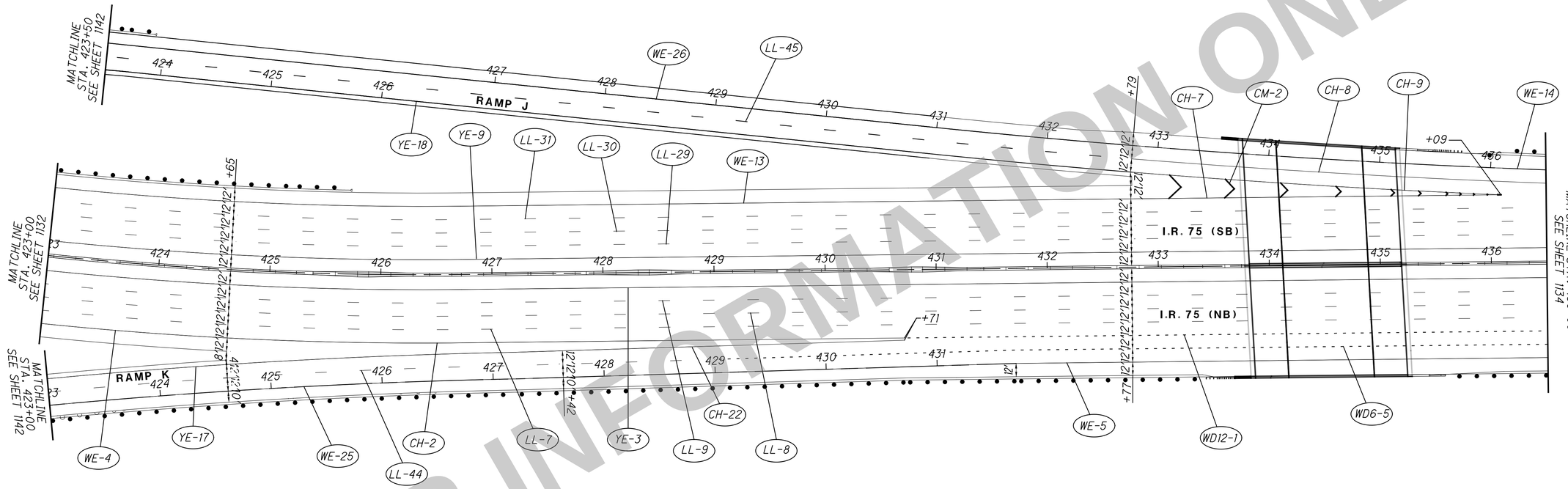
CALCULATED JF
CHECKED JDS

I.R. 75 PAVEMENT MARKING PLAN
STA. 408+50 TO STA. 423+00

HAM-75-7.85

1132
2017

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FOR INFORMATION ONLY

NOTES:

1. INSTALL RAISED PAVEMENT MARKERS ACCORDING TO STANDARD CONSTRUCTION DRAWINGS TC-65.10 AND TC-65.11.

2. SEE SHEET 1114 FOR PAVEMENT MARKING LEGENDS.

HORIZONTAL SCALE IN FEET
0 25 50 100

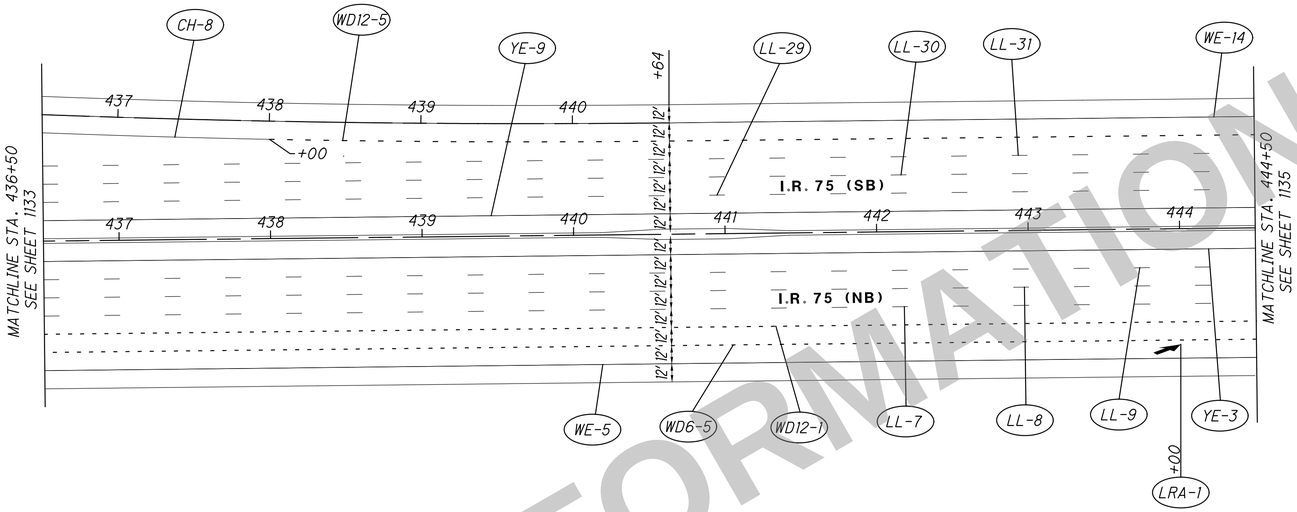
CALCULATED JF
CHECKED JDS

I.R. 75 PAVEMENT MARKING PLAN
STA. 423+00 TO STA. 436+50

HAM-75-7.85

1133
2017

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FOR INFORMATION ONLY

NOTES:

1. INSTALL RAISED PAVEMENT MARKERS ACCORDING TO STANDARD CONSTRUCTION DRAWINGS TC-65.10 AND TC-65.11.

2. SEE SHEET 1114 FOR PAVEMENT MARKING LEGENDS.

HORIZONTAL SCALE IN FEET
0 25 50 100

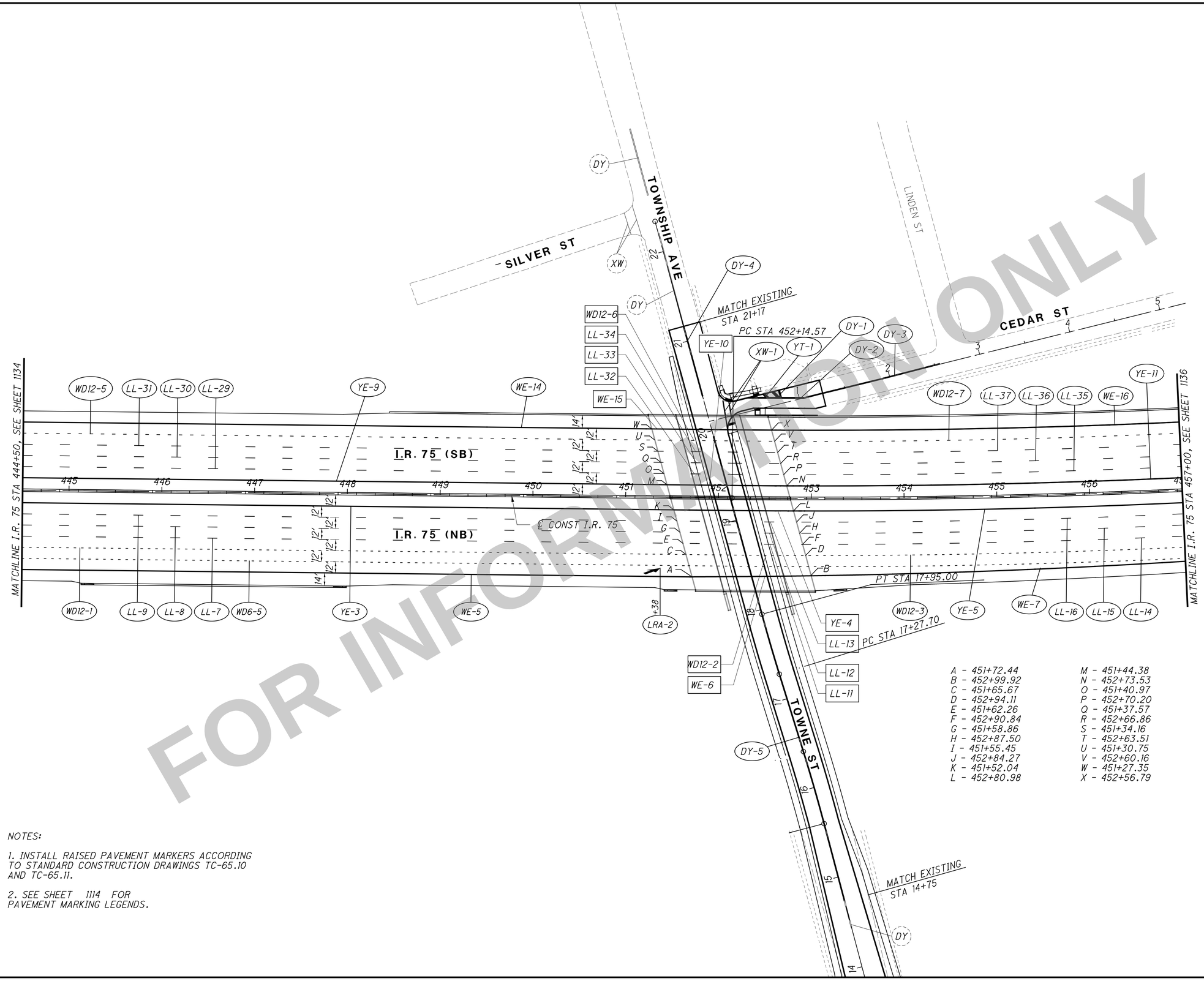
CALCULATED JF
CHECKED JDS

I.R. 75 PAVEMENT MARKING PLAN
STA. 436+50 TO STA. 444+50

HAM-75-7.85

1134
2017

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FOR INFORMATION ONLY

NOTES:

1. INSTALL RAISED PAVEMENT MARKERS ACCORDING TO STANDARD CONSTRUCTION DRAWINGS TC-65.10 AND TC-65.11.

2. SEE SHEET 1114 FOR PAVEMENT MARKING LEGENDS.

HORIZONTAL SCALE IN FEET
0 25 50 100

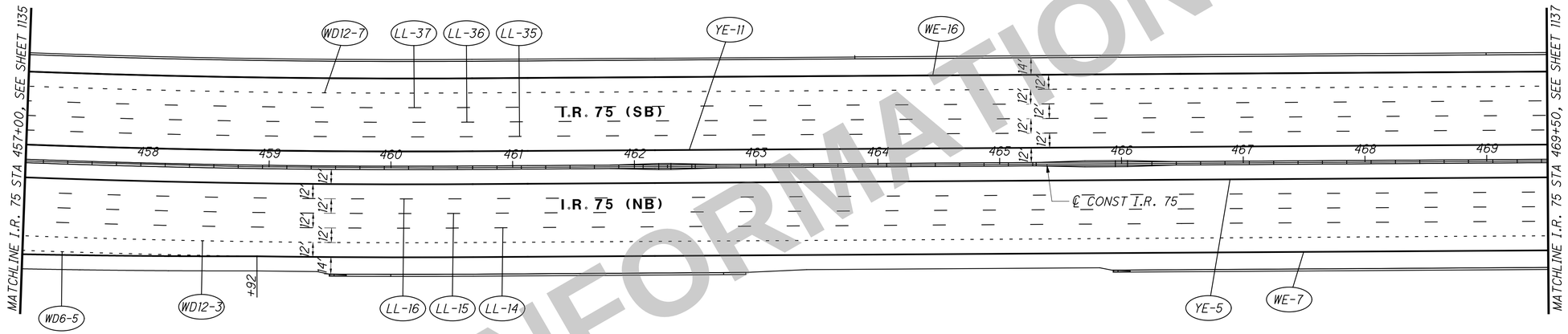
CALCULATED DPF
CHECKED SSK

I.R. 75 PAVEMENT MARKING PLAN
STA 444+50 TO STA 457+00

HAM-75-7.85

1135
2017

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FOR INFORMATION ONLY

NOTES:

1. INSTALL RAISED PAVEMENT MARKERS ACCORDING TO STANDARD CONSTRUCTION DRAWINGS TC-65.10 AND TC-65.11.

2. SEE SHEET 1114 FOR PAVEMENT MARKING LEGENDS.

HORIZONTAL SCALE IN FEET
0 25 50 100

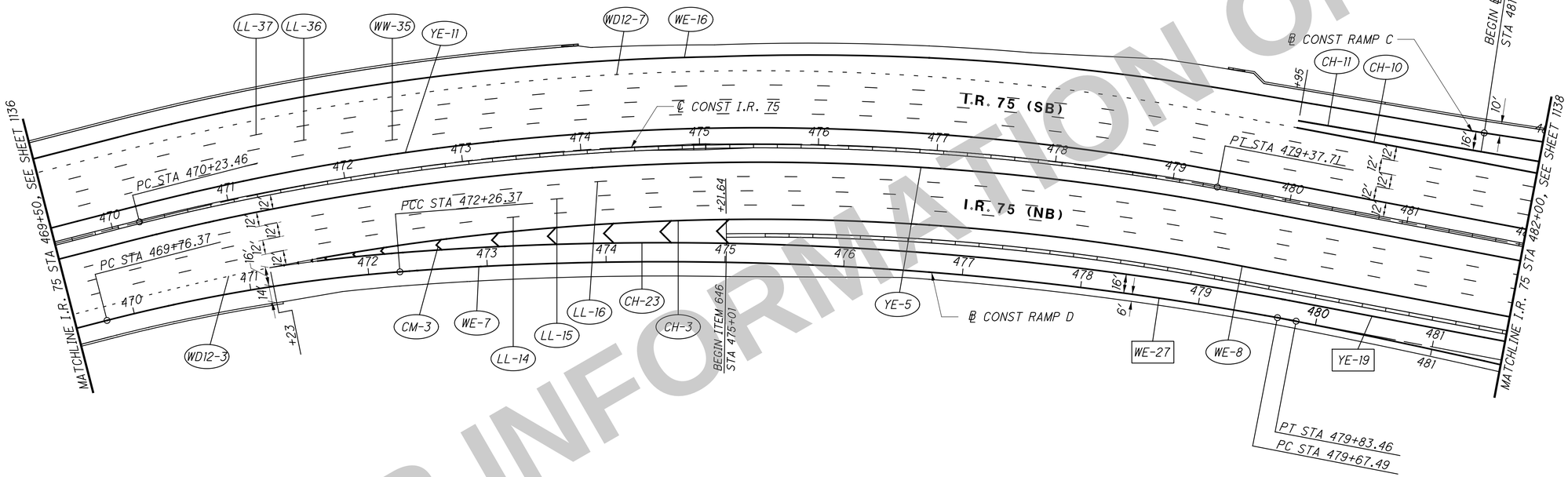
CALCULATED DPF
CHECKED SEK

I.R. 75 PAVEMENT MARKING PLAN
STA 457+00 TO STA 469+50

HAM-75-7.85

1136
2017

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FOR INFORMATION ONLY

NOTES:

1. INSTALL RAISED PAVEMENT MARKERS ACCORDING TO STANDARD CONSTRUCTION DRAWINGS TC-65.10 AND TC-65.11.

2. SEE SHEET 1114 FOR PAVEMENT MARKING LEGENDS.

HORIZONTAL SCALE IN FEET
0 25 50 100

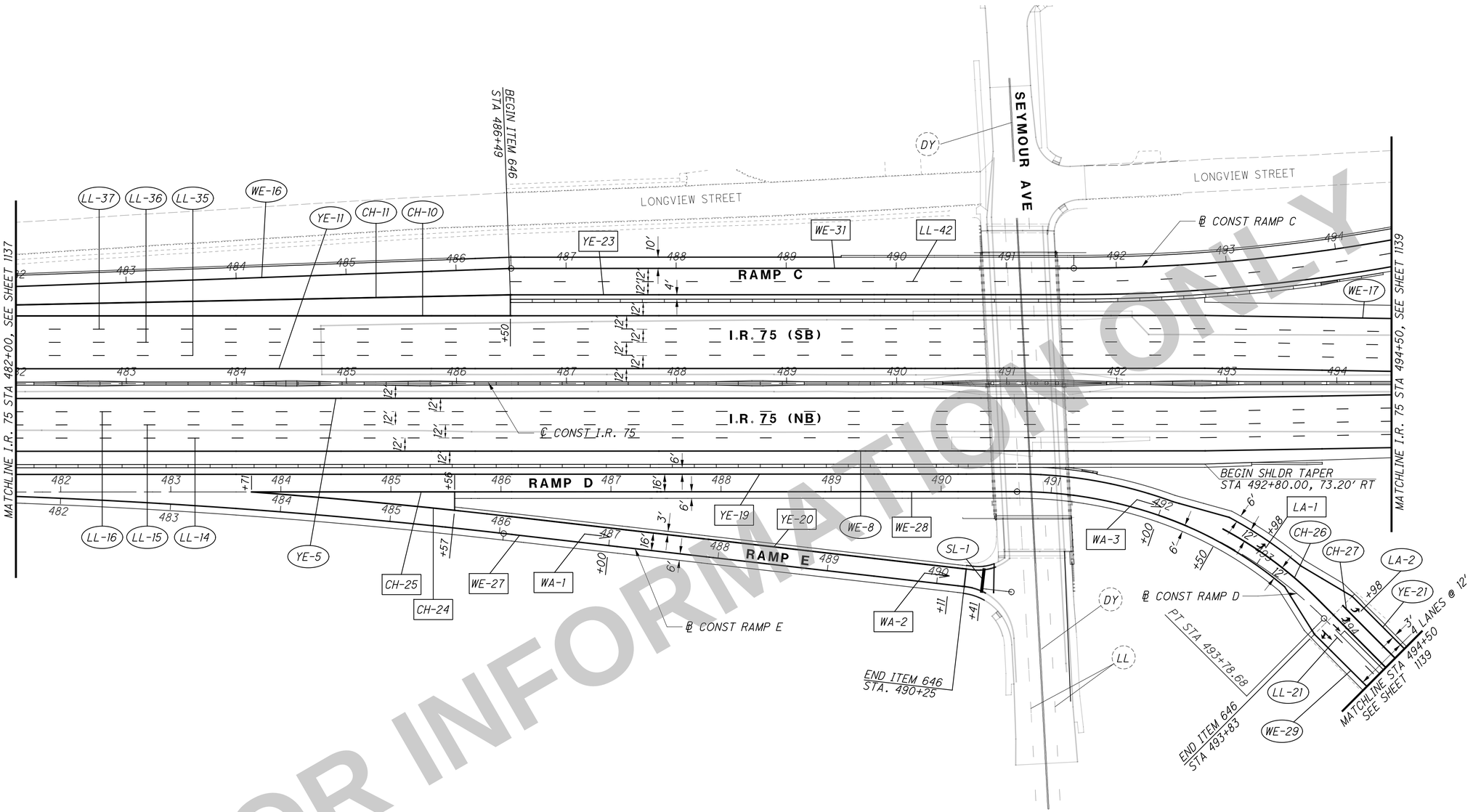
CALCULATED DPF
CHECKED SEK

I.R. 75 PAVEMENT MARKING PLAN
STA 469+50 TO STA 482+00

HAM-75-7.85

1137
2017

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FOR INFORMATION ONLY

NOTES:

1. INSTALL RAISED PAVEMENT MARKERS ACCORDING TO STANDARD CONSTRUCTION DRAWINGS TC-65.10 AND TC-65.11.

2. INSTALL RAISED PAVEMENT MARKERS ON RAMP D AND RAMP E ACCORDING TO STANDARD CONSTRUCITON DRAWING TC-73.20.

3. SEE SHEET 1114 FOR PAVEMENT MARKING LEGENDS.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DPF
CHECKED SEK

I.R. 75 PAVEMENT MARKING PLAN
STA 482+00 TO STA 494+50

HAM-75-7.85

1138
2017

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NOTES:

1. INSTALL RAISED PAVEMENT MARKERS ACCORDING TO STANDARD CONSTRUCTION DRAWINGS TC-65.10 AND TC-65.11.

2. INSTALL RAISED PAVEMENT MARKERS ON RAMP B AND RAMP D ACCORDING TO STANDARD CONSTRUCITON DRAWING TC-73.20.

3. SEE SHEET 1114 FOR PAVEMENT MARKING LEGENDS.

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

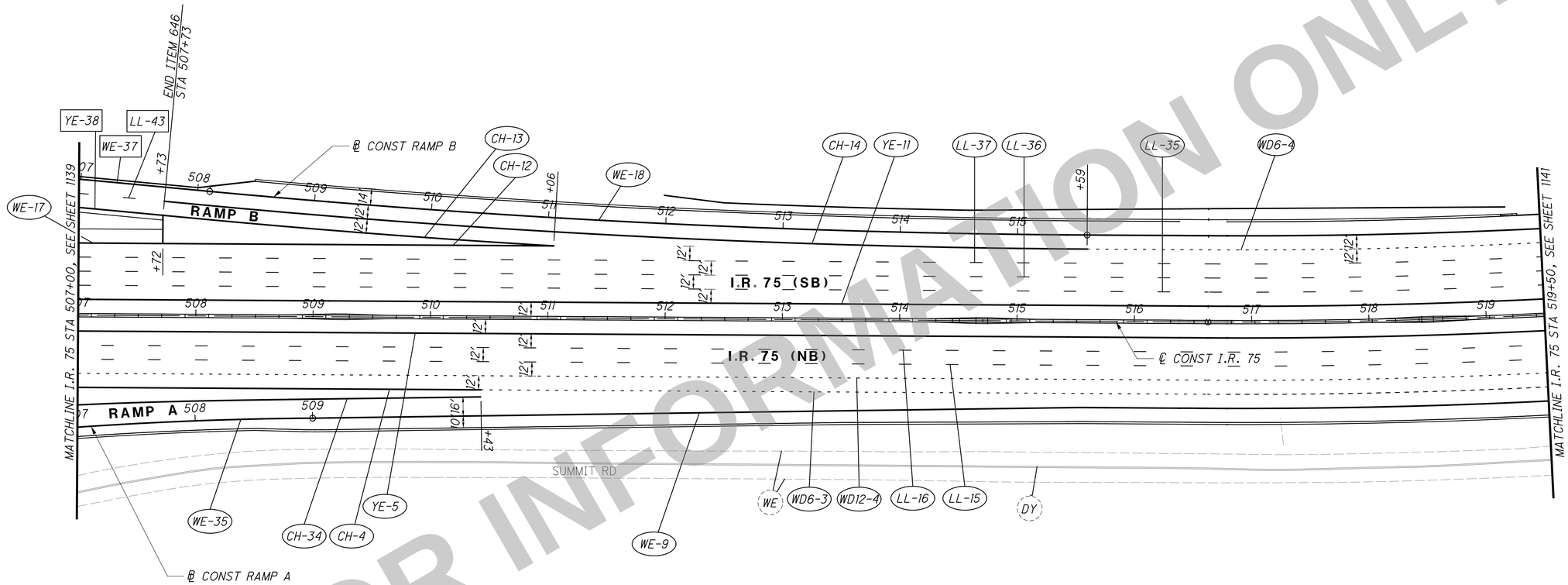
CALCULATED DPF
CHECKED SSK

I.R. 75 PAVEMENT MARKING PLAN
STA 494+50 TO STA 507+00

HAM-75-7.85

1139
2017

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FOR INFORMATION ONLY

NOTES:

1. INSTALL RAISED PAVEMENT MARKERS ACCORDING TO STANDARD CONSTRUCTION DRAWINGS TC-65.10 AND TC-65.11.

2. SEE SHEET 1114 FOR PAVEMENT MARKING LEGENDS.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DPF
CHECKED SEK

I.R. 75 PAVEMENT MARKING PLAN
STA 507+00 TO STA 519+50

HAM-75-7.85

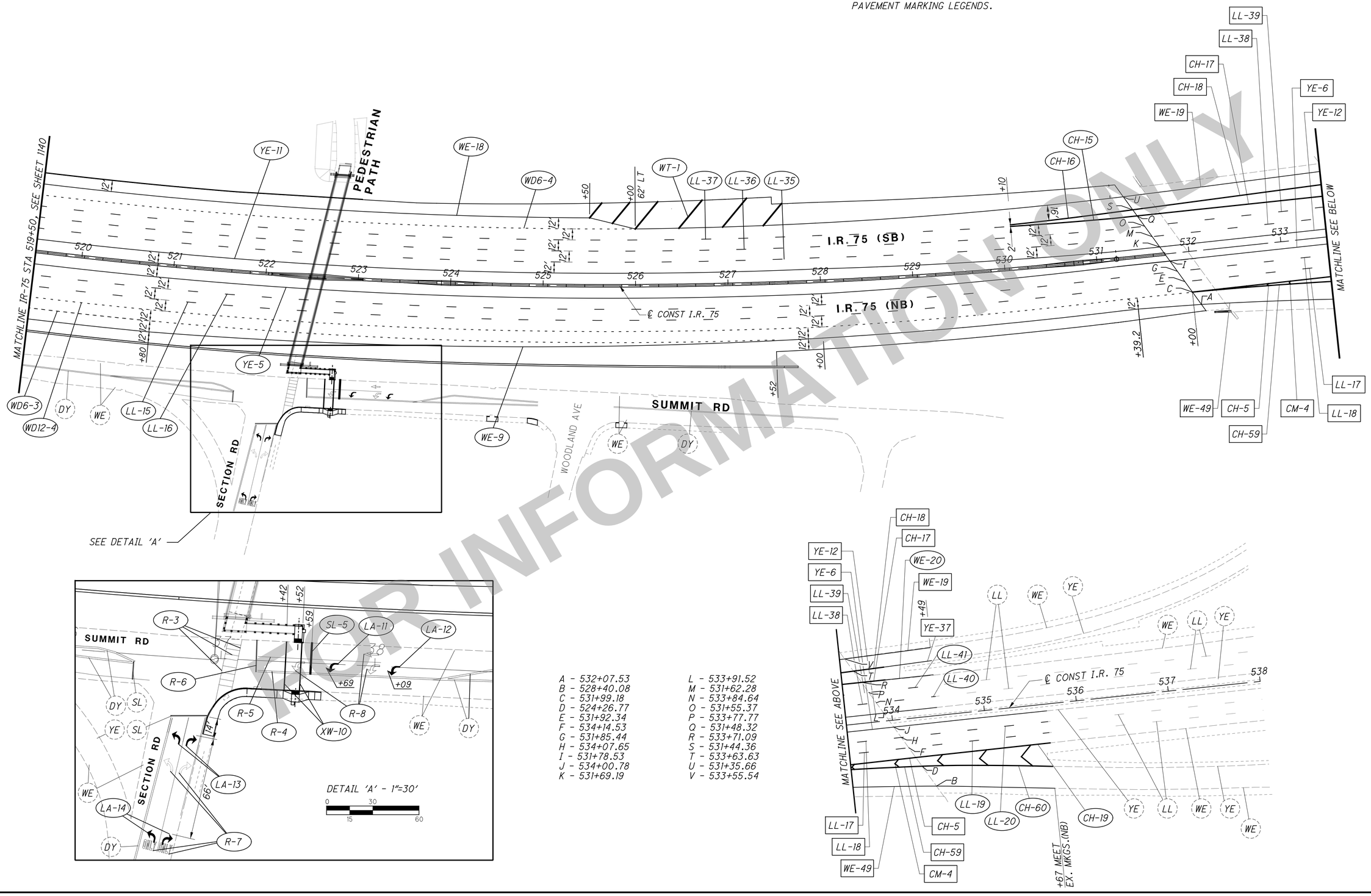
1140
2017

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NOTES:

1. INSTALL RAISED PAVEMENT MARKERS ACCORDING TO STANDARD CONSTRUCTION DRAWINGS TC-65.10 AND TC-65.11.

2. SEE SHEET 1114 FOR PAVEMENT MARKING LEGENDS.



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

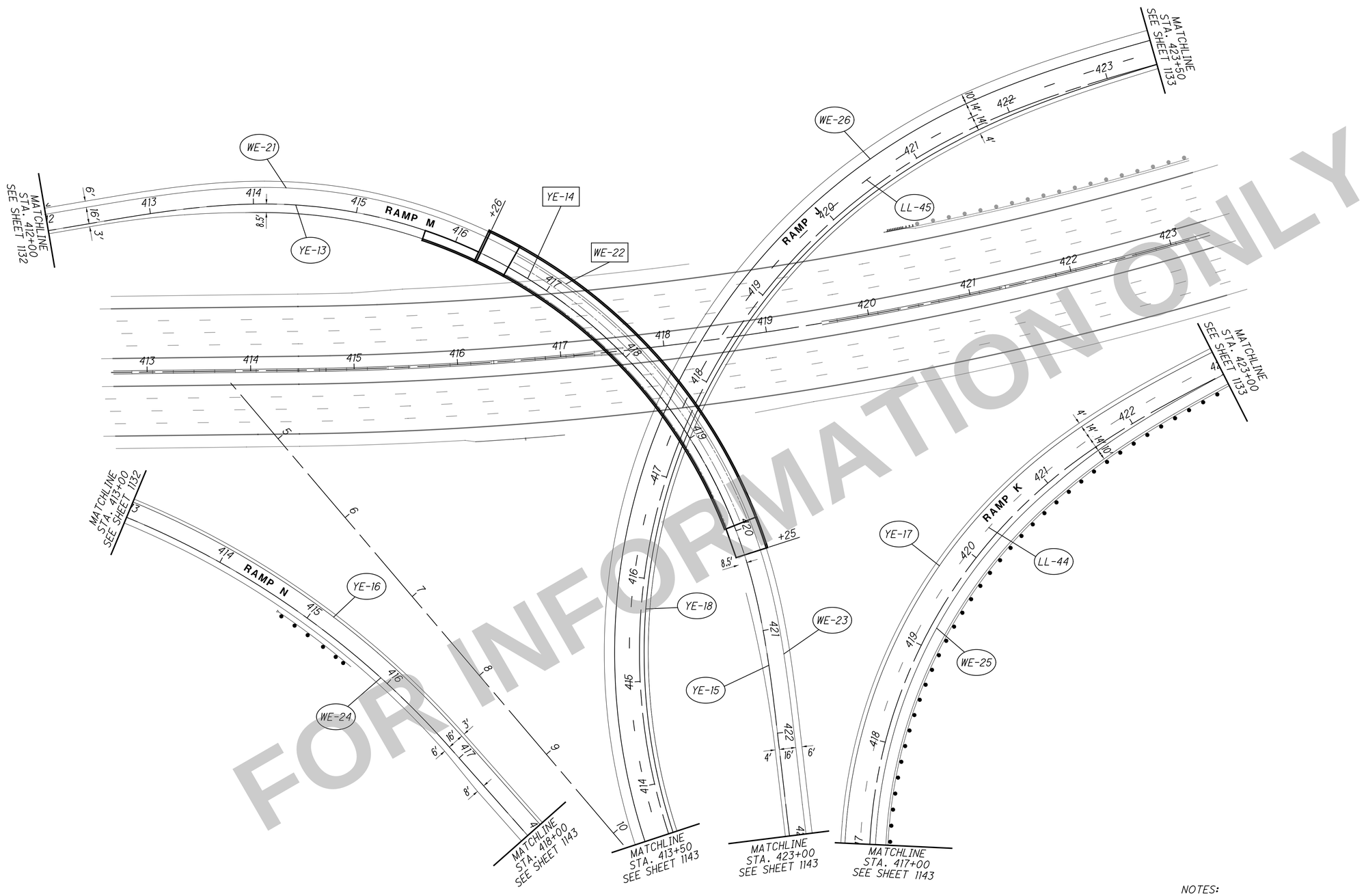
CALCULATED DPF
CHECKED SSK

I.R. 75 PAVEMENT MARKING PLAN
STA 519+50 TO STA 531+73.91

HAM-75-7.85

1141
2017

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NOTES:

1. INSTALL RAISED PAVEMENT MARKERS ACCORDING TO STANDARD CONSTRUCTION DRAWINGS TC-65.10 AND TC-65.11.

2. SEE SHEET 1114 FOR PAVEMENT MARKING LEGENDS.

HORIZONTAL SCALE IN FEET
0 25 50 100

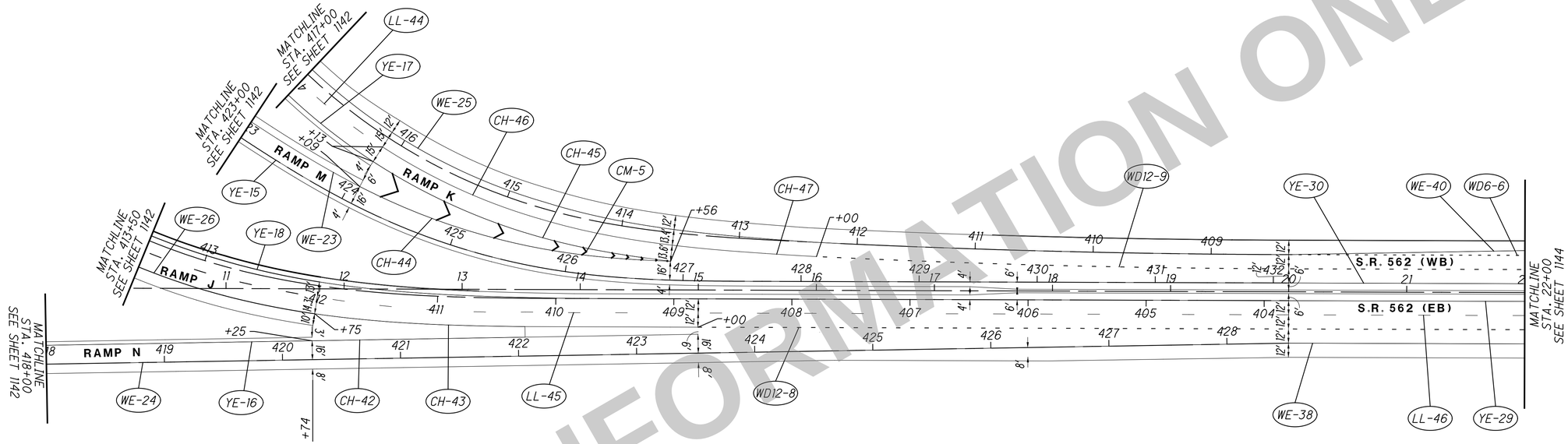
CALCULATED JF
CHECKED JDS

RAMPS J,K,M & N PAVEMENT MARKING PLAN
STA. 412+00 TO STA. 423+00

HAM-75-7.85

1142
2017

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FOR INFORMATION ONLY

NOTES:

1. INSTALL RAISED PAVEMENT MARKERS ACCORDING TO STANDARD CONSTRUCTION DRAWINGS TC-65.10 AND TC-65.11.

2. SEE SHEET 1114 FOR PAVEMENT MARKING LEGENDS.

HORIZONTAL SCALE IN FEET
0 25 50 100

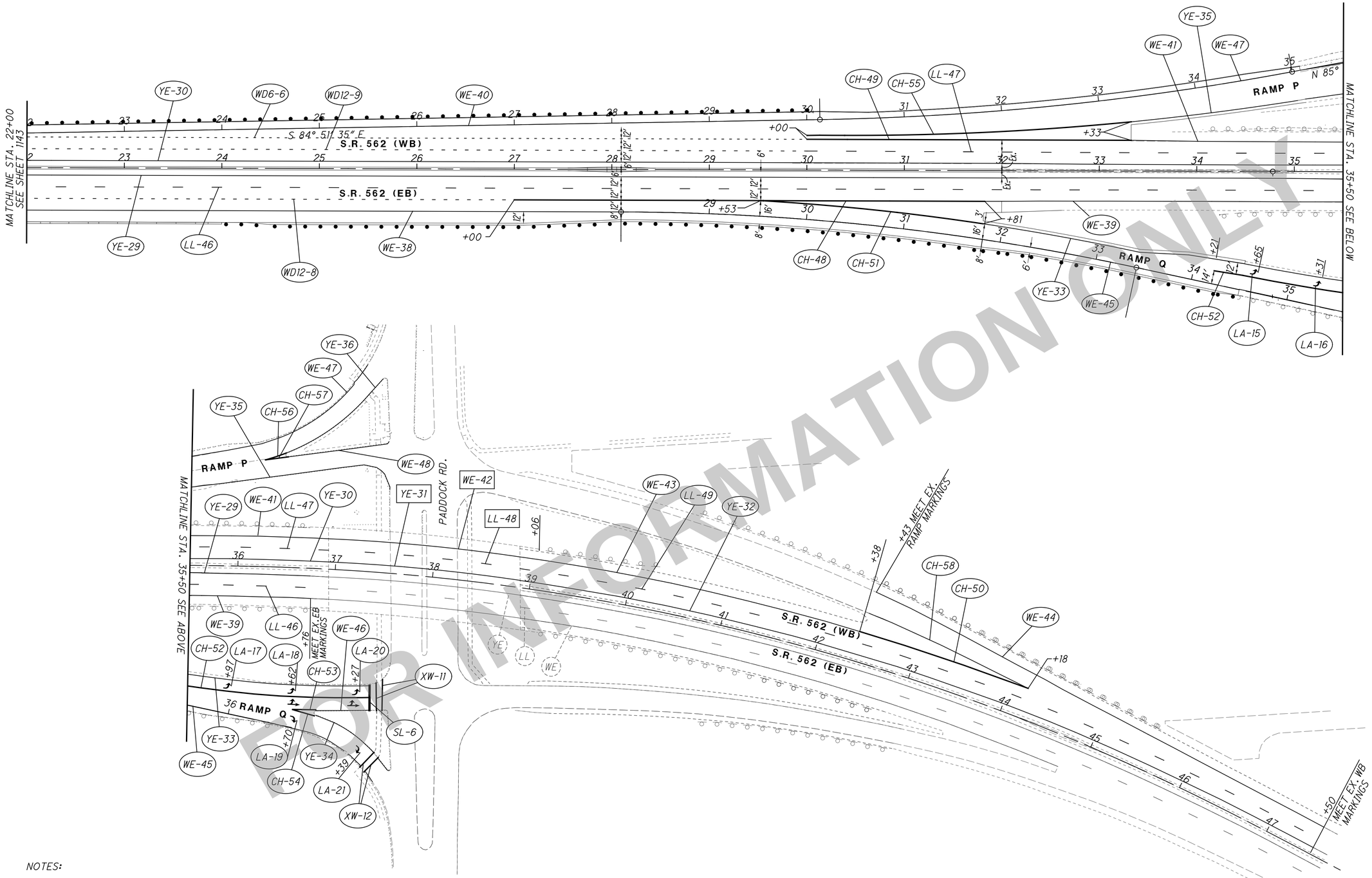
CALCULATED JF
CHECKED JDS

S.R. 562 PAVEMENT MARKING PLAN
STA. 418+00 TO STA. 22+00

HAM-75-7.85

1143
2017

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NOTES:

1. INSTALL RAISED PAVEMENT MARKERS ACCORDING TO STANDARD CONSTRUCTION DRAWINGS TC-65.10 AND TC-65.11.

2. SEE SHEET 1114 FOR PAVEMENT MARKING LEGENDS.

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED JF
CHECKED JDS

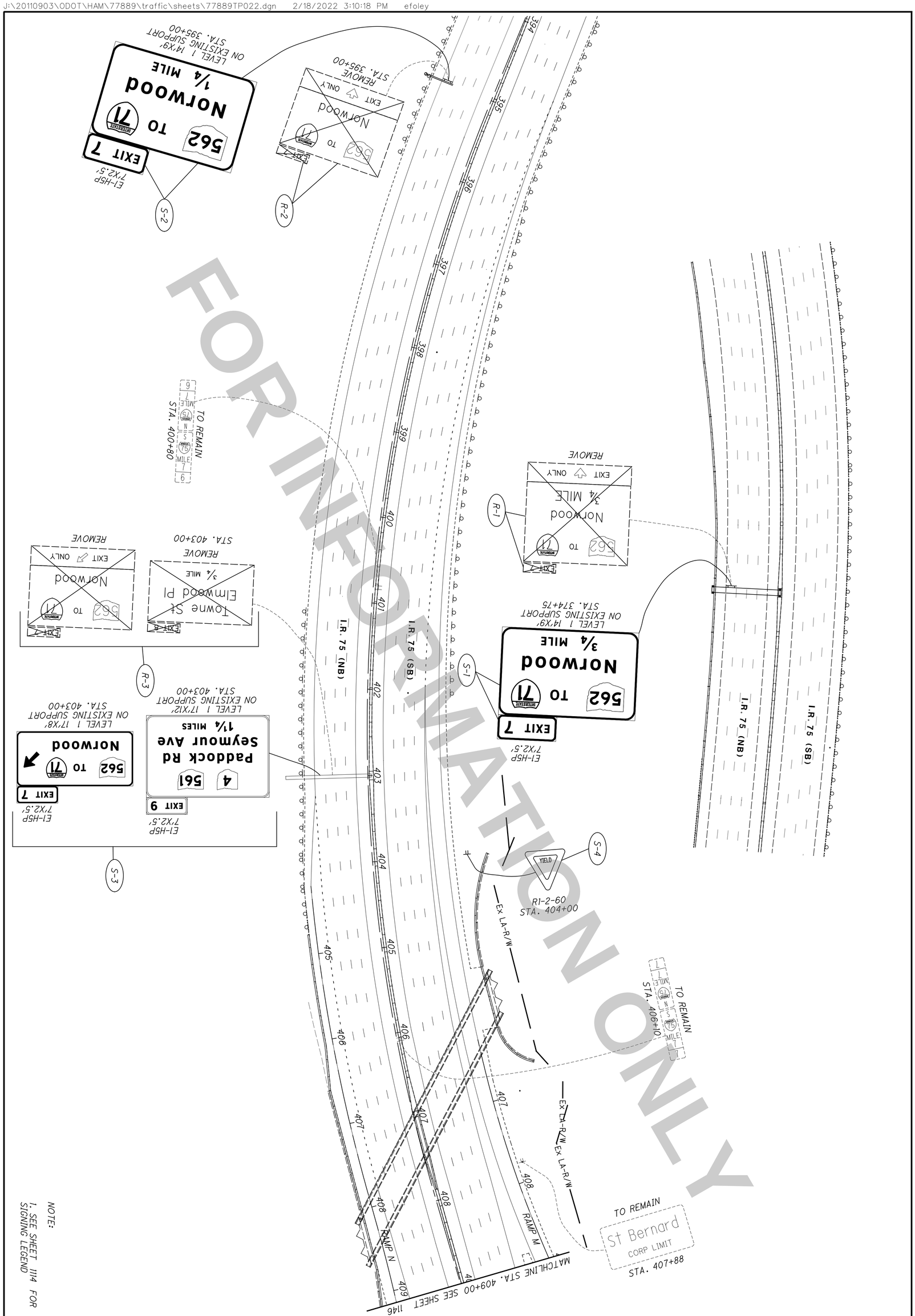
S.R. 562 PAVEMENT MARKING PLAN
STA. 22+00 TO STA. 36+00

HAM-75-7.85

1144
2017

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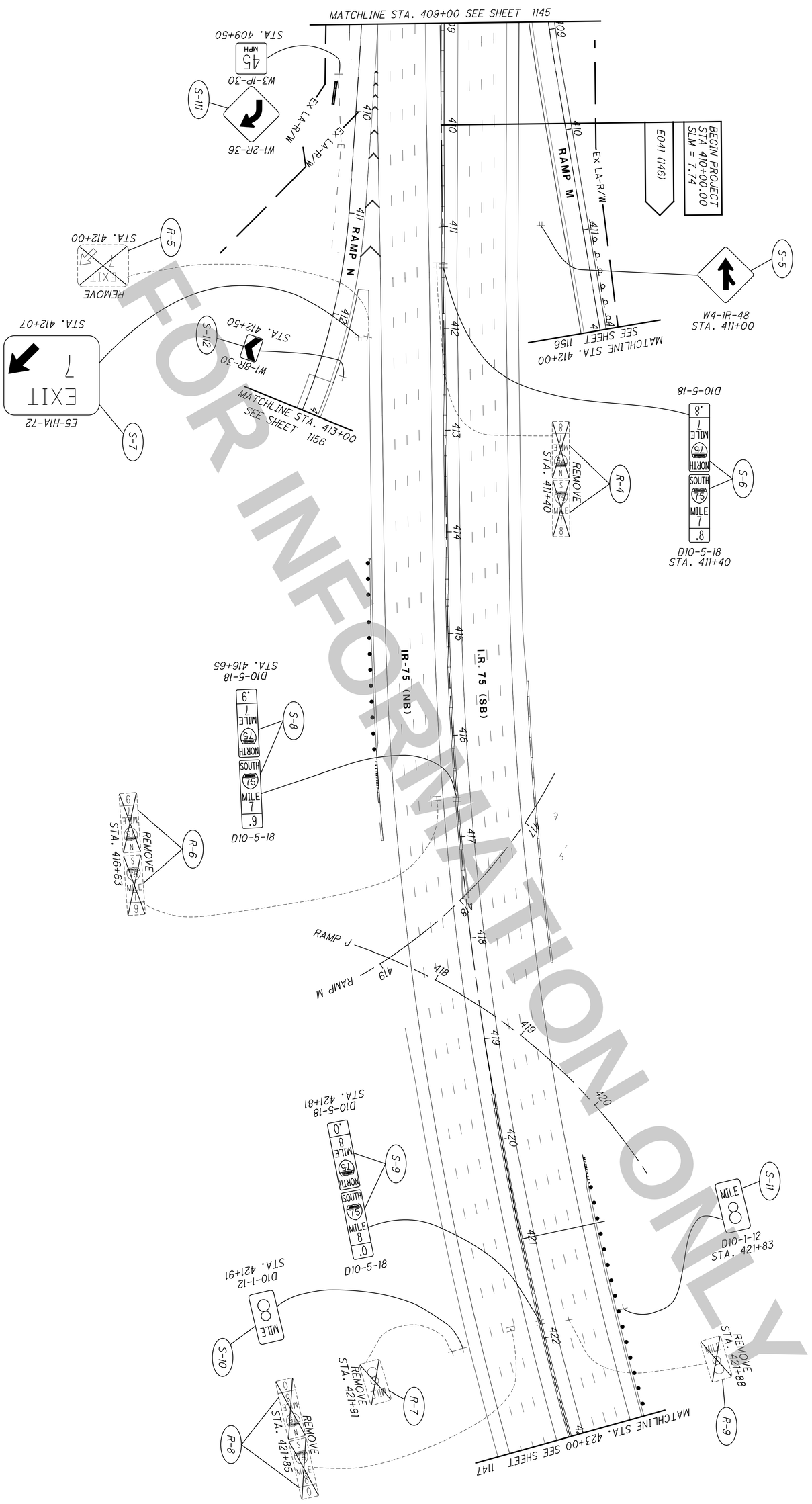
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NOTE:
1. SEE SHEET 1114 FOR SIGNING LEGEND

2017 1145	HAM-75-7.85	I.R. 75 SIGNING PLAN STA. 371+00 TO STA. 409+00	CALCULATED JF CHECKED JDS	0 50 25 100 HORIZONTAL SCALE IN FEET	N

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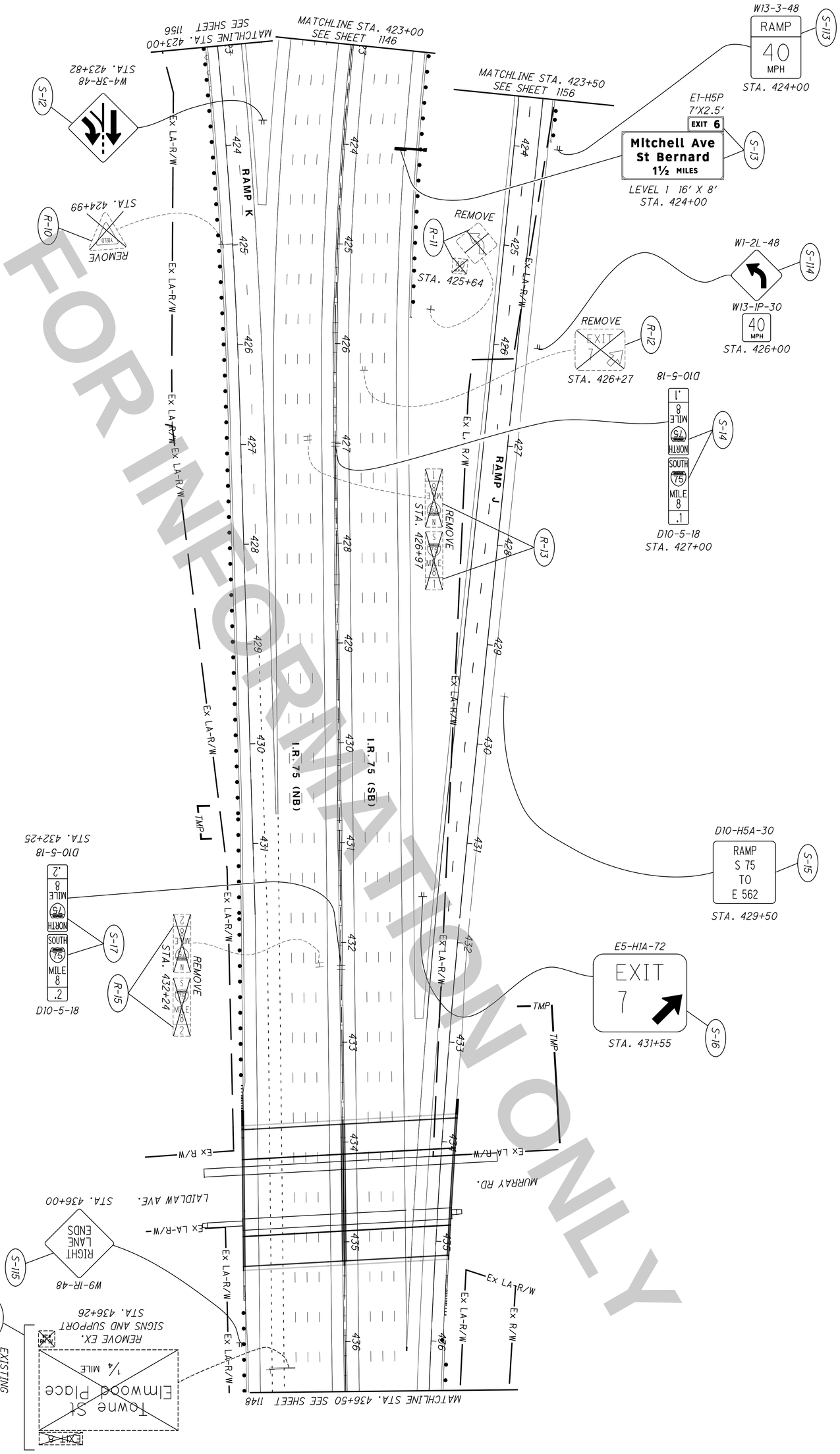


FOR INFORMATION ONLY

NOTE:
1. SEE SHEET 1114 FOR SIGNING LEGEND

1146 (2017)	HAM-75-7.85	I.R. 75 SIGNING PLAN STA. 409+00 TO STA. 423+00	CALCULATED JF CHECKED JDS	0 50 25 100 HORIZONTAL SCALE IN FEET

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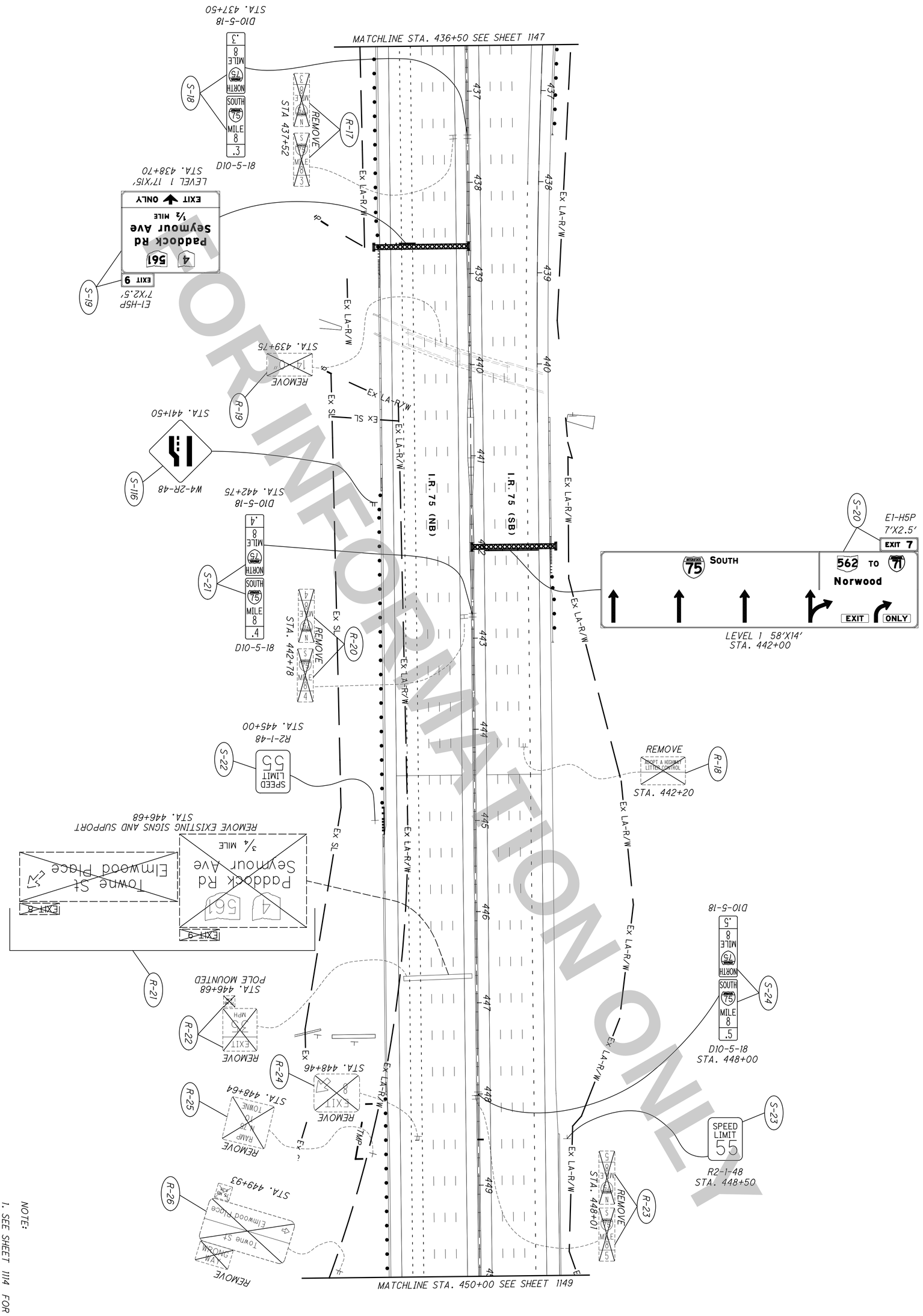


FOR INFORMATION ONLY

NOTE:
1. SEE SHEET 1114 FOR SIGNING LEGEND

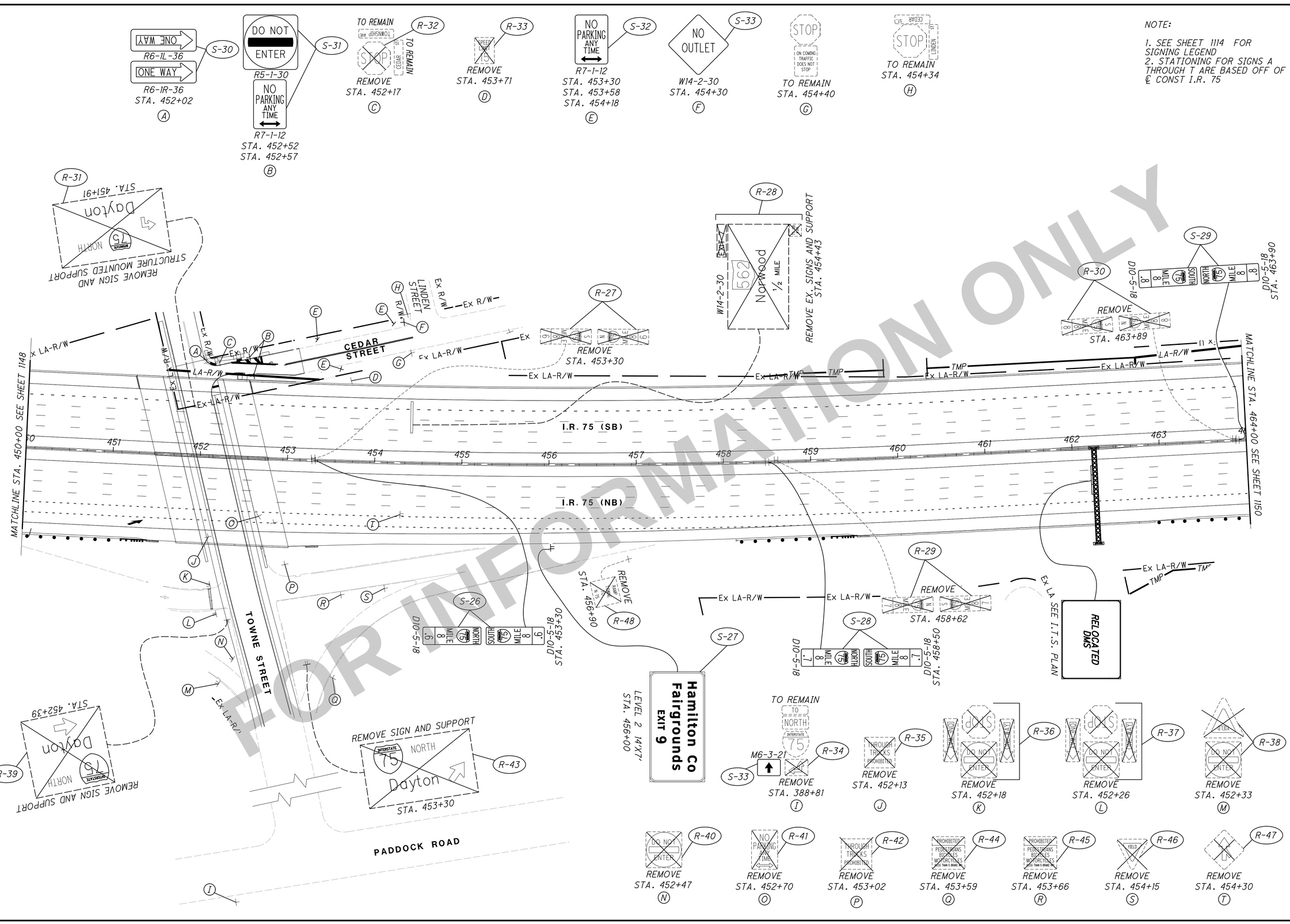
2017 1147	HAM-75-7.85	I.R. 75 SIGNING PLAN STA. 423+00 TO STA. 436+50	CALCULATED JF CHECKED JDS	0 50 25 100 HORIZONTAL SCALE IN FEET

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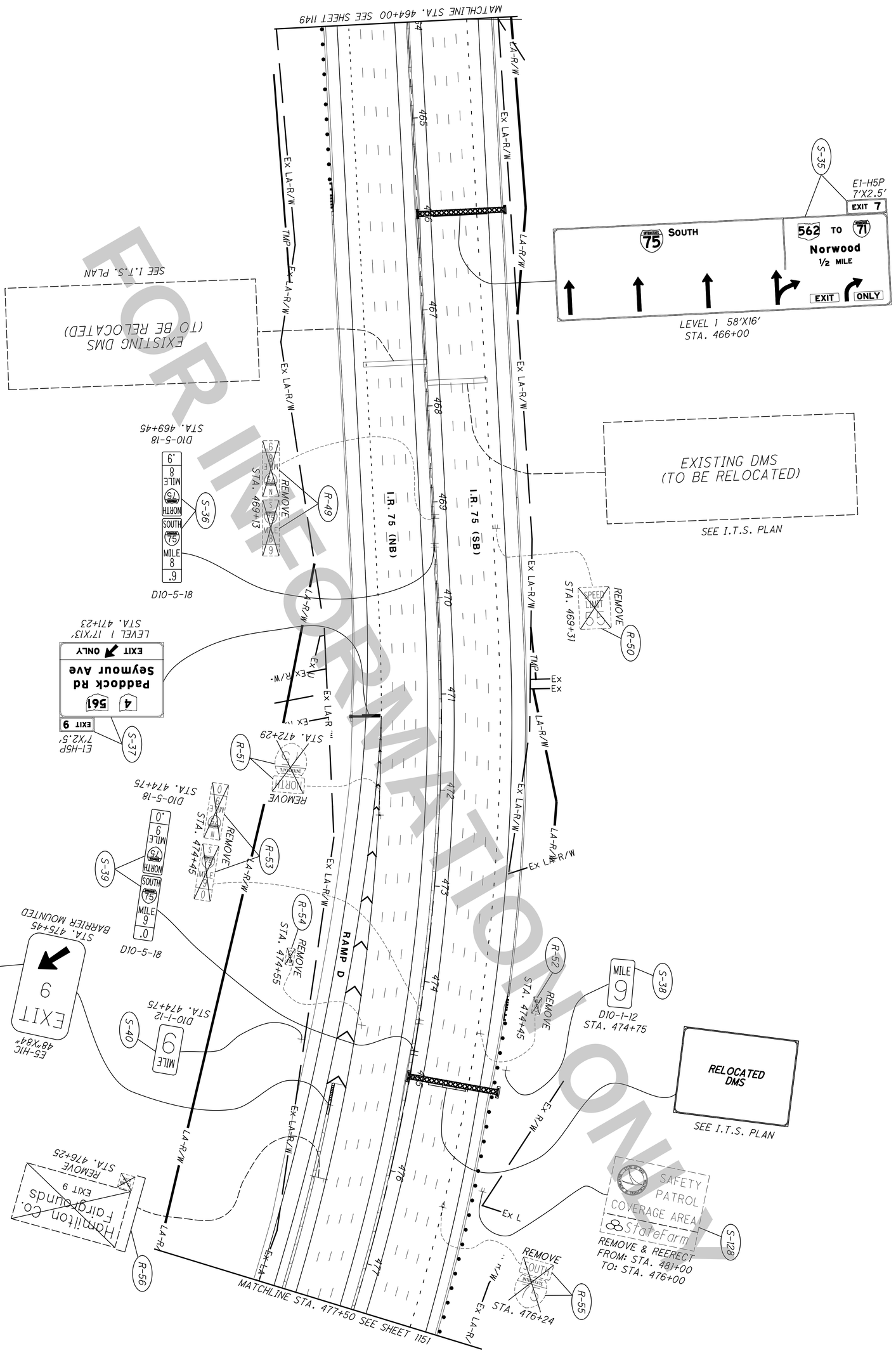
FOR INFORMATION ONLY

2017 1148	HAM-75-7.85	I.R. 75 SIGNING PLAN STA. 436+50 TO STA. 450+00	CALCULATED JF CHECKED JDS	0 50 25 100 HORIZONTAL SCALE IN FEET


S-30
ONE WAY
R6-1L-36
ONE WAY
R6-1R-36
STA. 452+02
A
S-31
DO NOT ENTER
R5-1-30
NO PARKING ANY TIME
R7-1-12
STA. 452+52
STA. 452+57
B
R-32
TO REMAIN
TOWNSHIP AVE
STOP
1ST
CEDAR
TO REMAIN
REMOVE
STA. 452+17
C
R-33
SPEED LIMIT 45
REMOVE
STA. 453+71
D
S-32
NO PARKING ANY TIME
R7-1-12
STA. 453+30
STA. 453+58
STA. 454+18
E
S-33
NO OUTLET
W14-2-30
STA. 454+30
F
STOP
ON COMING TRAFFIC DOES NOT STOP
TO REMAIN
STA. 454+40
G
STOP
CEDAR ST
LINDEN ST
TO REMAIN
STA. 454+34
H
NOTE:
1. SEE SHEET 1114 FOR SIGNING LEGEND
2. STATIONING FOR SIGNS A THROUGH T ARE BASED OFF OF ℄ CONST I.R. 75
R-31
Dayton
NORTH
75
INTERSTATE
STA. 451+91
REMOVE SIGN AND SUPPORT STRUCTURE MOUNTED SUPPORT
R-28
W14-2-30
562
Norwood
1/2 MILE
REMOVE EX. SIGNS AND SUPPORT
STA. 454+43
R-27
REMOVE
STA. 453+30
R-30
REMOVE
STA. 463+89
S-29
D10-5-18
STA. 463+90
CEDAR STREET
LINDEN STREET
Ex R/W
Ex LA-R/W
LA-R/W
TMP
I.R. 75 (SB)
I.R. 75 (NB)
MATCHLINE STA. 450+00 SEE SHEET 1148
MATCHLINE STA. 464+00 SEE SHEET 1150
TOWNE STREET
PADDOCK ROAD
REMOVE SIGN AND SUPPORT
Dayton
NORTH
75
INTERSTATE
STA. 452+39
R-39
REMOVE SIGN AND SUPPORT
INTERSTATE
75
NORTH
Dayton
STA. 453+30
R-43
S-26
D10-5-18
NORTH
SOUTH
MILE
8
.6
STA. 453+30
REMOVE
RAMP
STA. 456+90
R-48
S-27
Hamilton Co Fairgrounds
EXIT 9
LEVEL 2 14'X7'
STA. 456+00
S-28
D10-5-18
NORTH
SOUTH
MILE
8
.7
STA. 458+50
R-29
REMOVE
STA. 458+62
EX LA SEE I.T.S. PLAN
RELOCATED DMS
TO REMAIN
NORTH
INTERSTATE
75
M6-3-21
R-34
REMOVE
STA. 388+81
I
R-35
THROUGH TRUCKS PROHIBITED
REMOVE
STA. 452+13
J
R-36
DO NOT ENTER
REMOVE
STA. 452+18
K
R-37
DO NOT ENTER
REMOVE
STA. 452+26
L
R-38
YIELD
DO NOT ENTER
REMOVE
STA. 452+33
M
R-40
DO NOT ENTER
REMOVE
STA. 452+47
N
R-41
NO PARKING ANY TIME
REMOVE
STA. 452+70
O
R-42
THROUGH TRUCKS PROHIBITED
REMOVE
STA. 453+02
P
R-44
PROHIBITED
PEDESTRIANS
BICYCLES
MOTORCYCLES
REMOVE
STA. 453+59
Q
R-45
PROHIBITED
PEDESTRIANS
BICYCLES
MOTORCYCLES
REMOVE
STA. 453+66
R
R-46
YIELD
REMOVE
STA. 454+15
S
R-47
REMOVE
STA. 454+30
T
FOR INFORMATION ONLY
HORIZONTAL SCALE IN FEET
0
25
50
100
CALCULATED JF
CHECKED JDS
I.R. 75 SIGNING PLAN
STA. 450+00 TO STA. 464+00
HAM-75-7.85
1149
2017
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NOTE:
1. SEE SHEET 1114 FOR SIGNING LEGEND

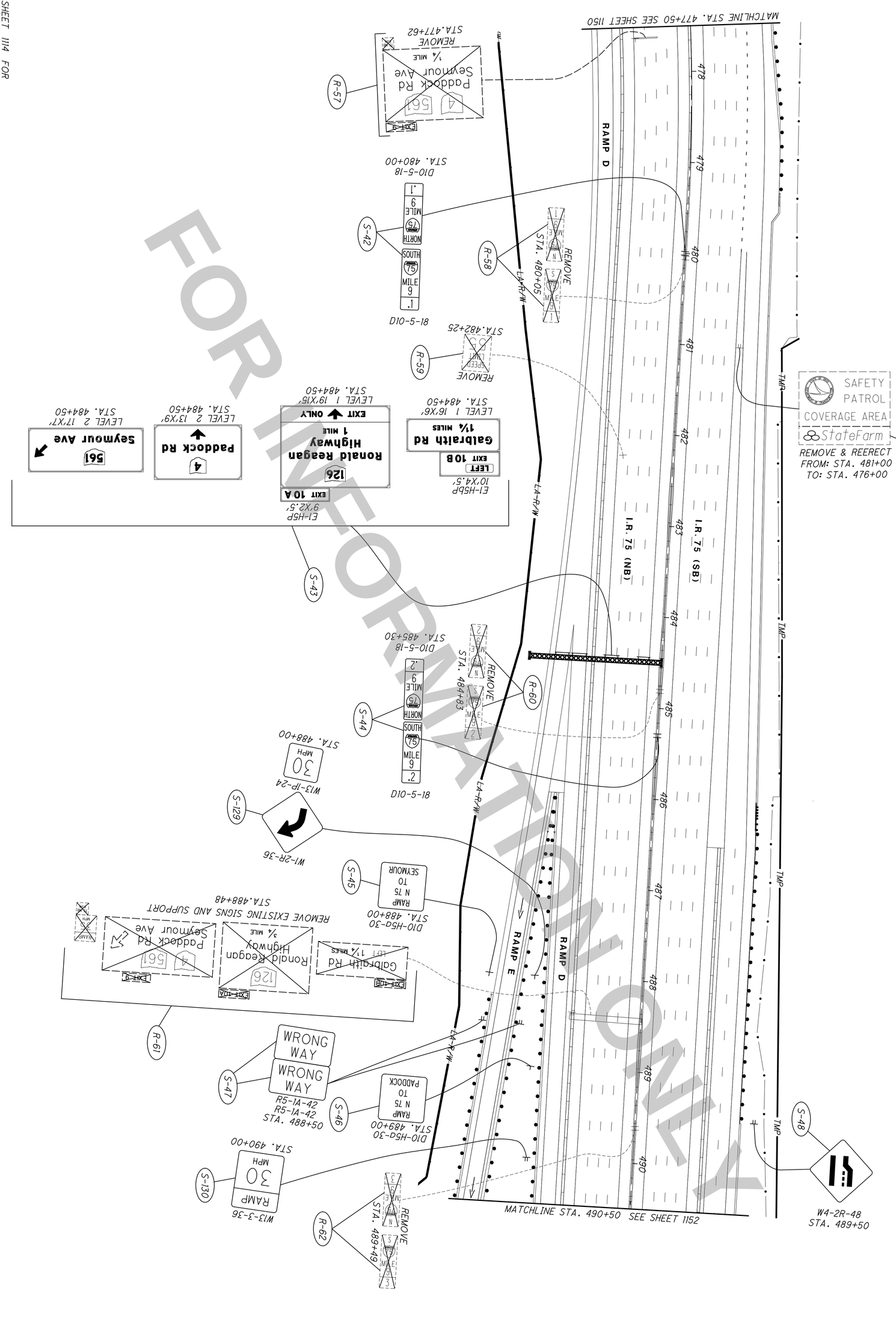


FOR INFORMATION ONLY

2017 1150	HAM-75-7.85	I.R. 75 SIGNING PLAN STA. 464+00 TO STA. 477+50	CALCULATED JF CHECKED JDS	0 50 25 100 HORIZONTAL SCALE IN FEET	N

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NOTE:
1. SEE SHEET 1114 FOR SIGNING LEGEND



1151 2017	HAM-75-7.85	I.R. 75 SIGNING PLAN STA. 477+50 TO STA. 490+50	CALCULATED JF CHECKED JDS	0 50 25 100 HORIZONTAL SCALE IN FEET

EXISTING OVERHEAD SIGNS TO REMAIN

A B C D E F

NO TURN ON RED · ONLY

S-51 · 81-5-D10 · D10-5-18 STA. 494+40

S-56 · D10-H5A-30 STA. 497+00

S-49 · 81-5-D10 · D10-5-18 STA. 490+60

S-99 · RIGHT LANE ENDS · W9-1R-48 STA. 493+50

S-50 · W4-3R-48 STA. 494+00

R-71 · REMOVE · STA. 495+95

R-70 · REMOVE · STA. 492+66

SEYMOUR AVE.

Ex R/W

Ex LA-R/W

LA-R/W

RAMP C

END B-RAMP C 498+67.39

R-64 · REMOVE · STA. 494+66

S-52 · D10-5-18 STA. 498+15

I.R. 75 (SB)

I.R. 75 (NB)

MATCHLINE STA. 490+50 SEE SHEET 1151

MATCHLINE STA. 504+00 SEE SHEET 1153

R-144 · REMOVE · STA. 492+32

W1-8R-30 STA. 492+45

S-132

R-75 · REMOVE · STA. 494+00

REMOVE · STA. 494+40

R-66 · REMOVE · STA. 498+15

R-63

R-67 · REMOVE · STA. 499+07

S-53 · D10-5-18 STA. 499+07

R-68 · REMOVE · STA. 503+07

S-133

R-H015-50 · STA. 495+74

RAMP D

RAMP E

RAMP A

RAMP B

PADDOCK RD.

S-54 · E1-H5P 7'X2.5' · EXIT 7 · 562 TO 71 · Norwood · 1¼ MILES · LEVEL 1 · STA. 502+00

S-135 · WRONG WAY · WRONG WAY · R5-1A-42 · R5-1A-42 · STA. 503+50

R-73 · REMOVE · STA. 503+79

R-72 · REMOVE · STA. 503+69

R-74 · REMOVE · STA. 490+85

S-131 · W1-8R-30 STA. 491+50

R-143 · REMOVE · STA. 491+15

R6-1L-36 · ONE WAY

R1-1-48 · STOP

R5-1-36 · DO NOT ENTER

R6-1R-36 · ONE WAY

S-57

STA. 491+51 · REMOVE

R-145

S-134 · R5-1A-42 · R5-1A-42 · STA. 493+00

BEGIN B RAMP A STA 498+07.56

R-76 · REMOVE · STA. 502+61

D10-H5A-30 STA. 502+61

S-58

R-69 · REMOVE · STA. 503+73

D10-5-18 STA. 503+75

S-55

EXISTING OVERHEAD SIGNS TO REMAIN

1 NO TURN ON RED · 2 ONLY · 3 ONLY ONLY ONLY ONLY

4 · 5 LEFT TURN SIGNAL · LEFT ON GREEN ARROW ONLY · 6

NOTE:

1. SEE SHEET 1114 FOR SIGNING LEGEND

FOR INFORMATION ONLY

I.R. 75 SIGNING PLAN
STA. 490+50 TO STA. 504+00

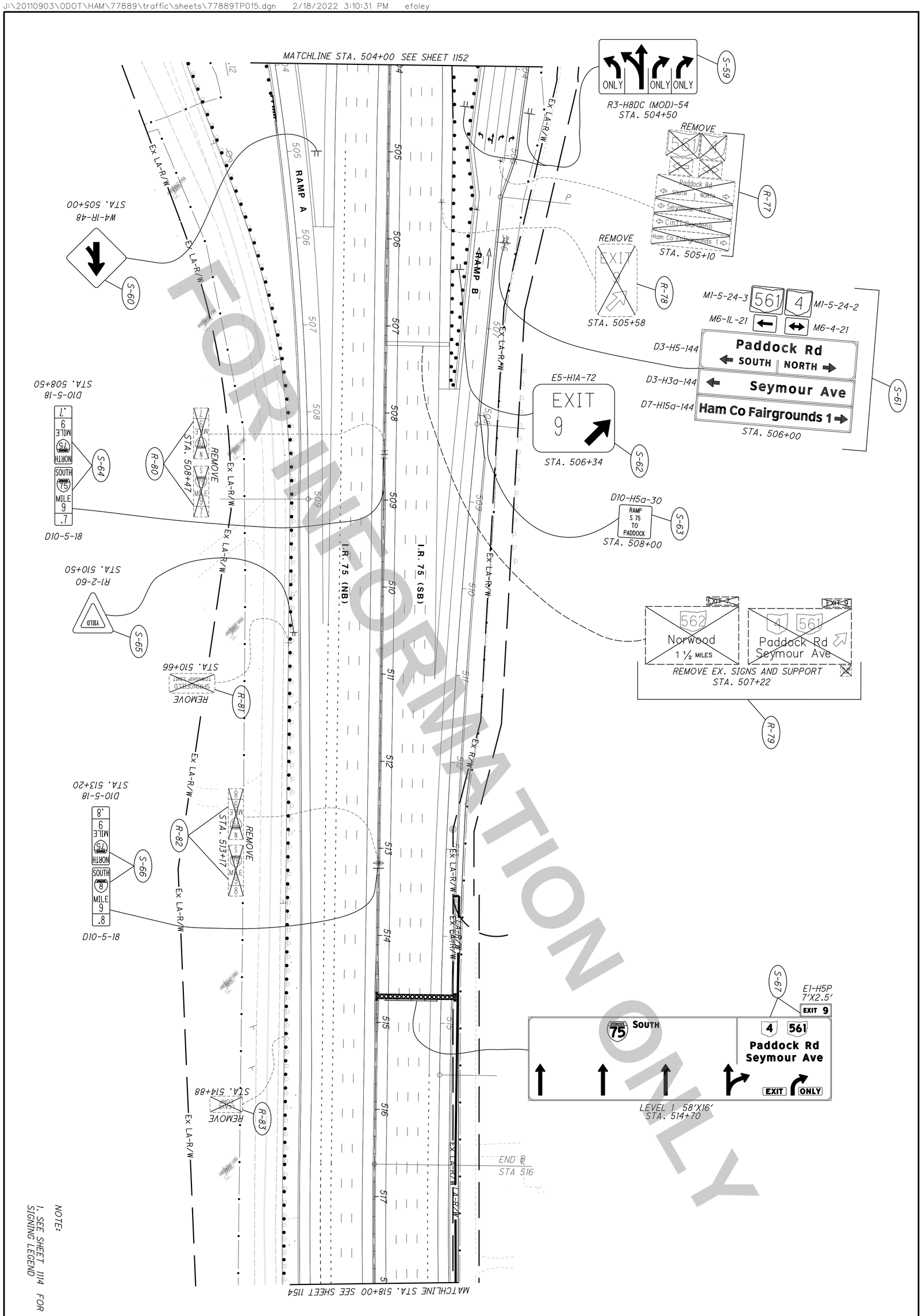
HAM-75-7.85

1152
2017

CALCULATED JF · CHECKED JDS

HORIZONTAL SCALE IN FEET
0 25 50 100

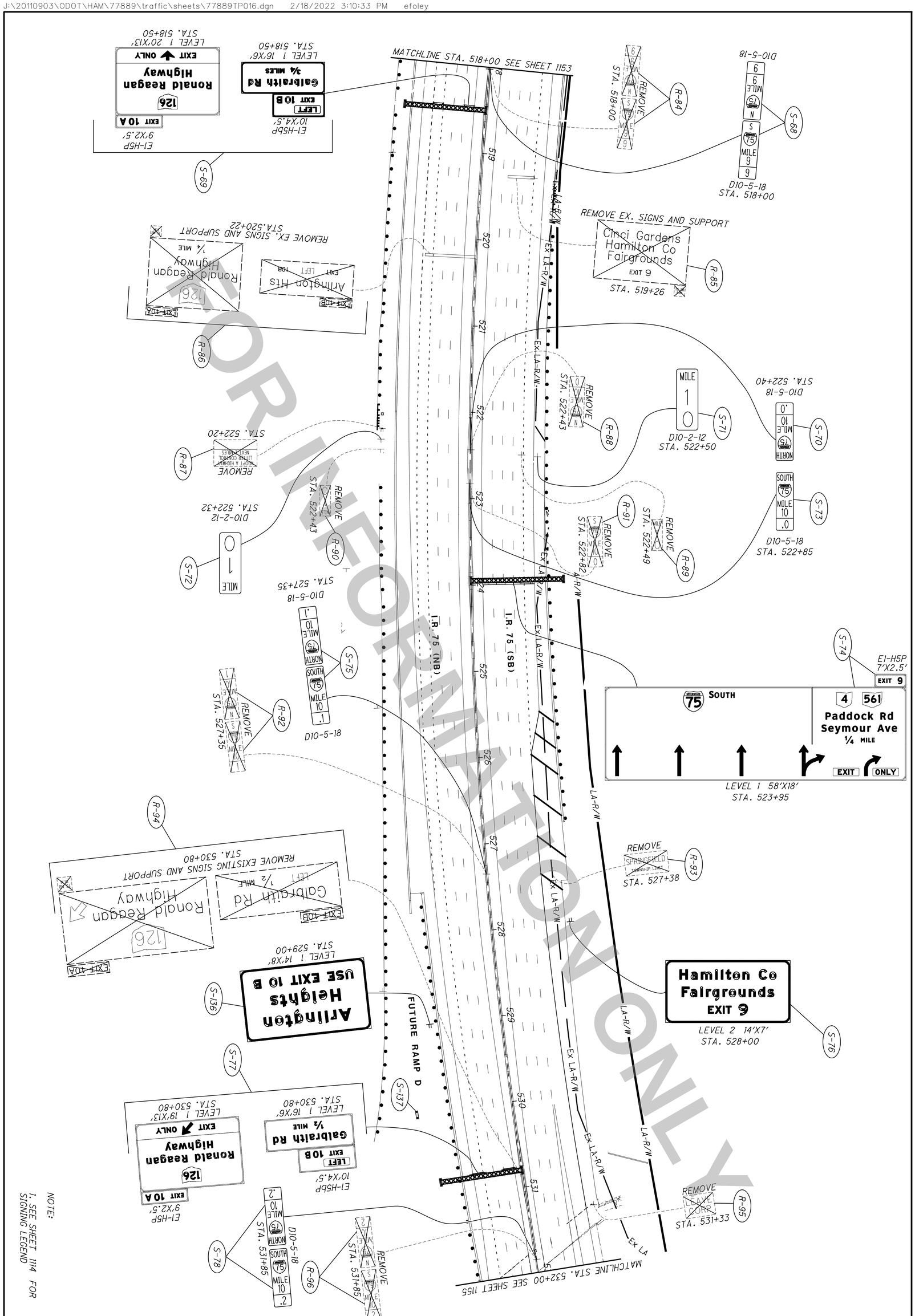
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NOTE:
1. SEE SHEET 1114 FOR SIGNING LEGEND

2017 1153	HAM-75-7.85	I.R. 75 SIGNING PLAN STA. 504+00 TO STA. 518+00	CALCULATED JF CHECKED JDS	0 50 25 100 HORIZONTAL SCALE IN FEET

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NOTE:
1. SEE SHEET 1114 FOR SIGNING LEGEND

FOR INFORMATION ONLY

1154 2017	HAM-75-7.85	I.R. 75 SIGNING PLAN STA. 518+00 TO STA. 532+00	CALCULATED JF CHECKED JDS	0 50 25 100 HORIZONTAL SCALE IN FEET

FOR INFORMATION ONLY

NOTE:

1. SEE SHEET 1114 FOR SIGNING LEGEND

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED JF
CHECKED JDS

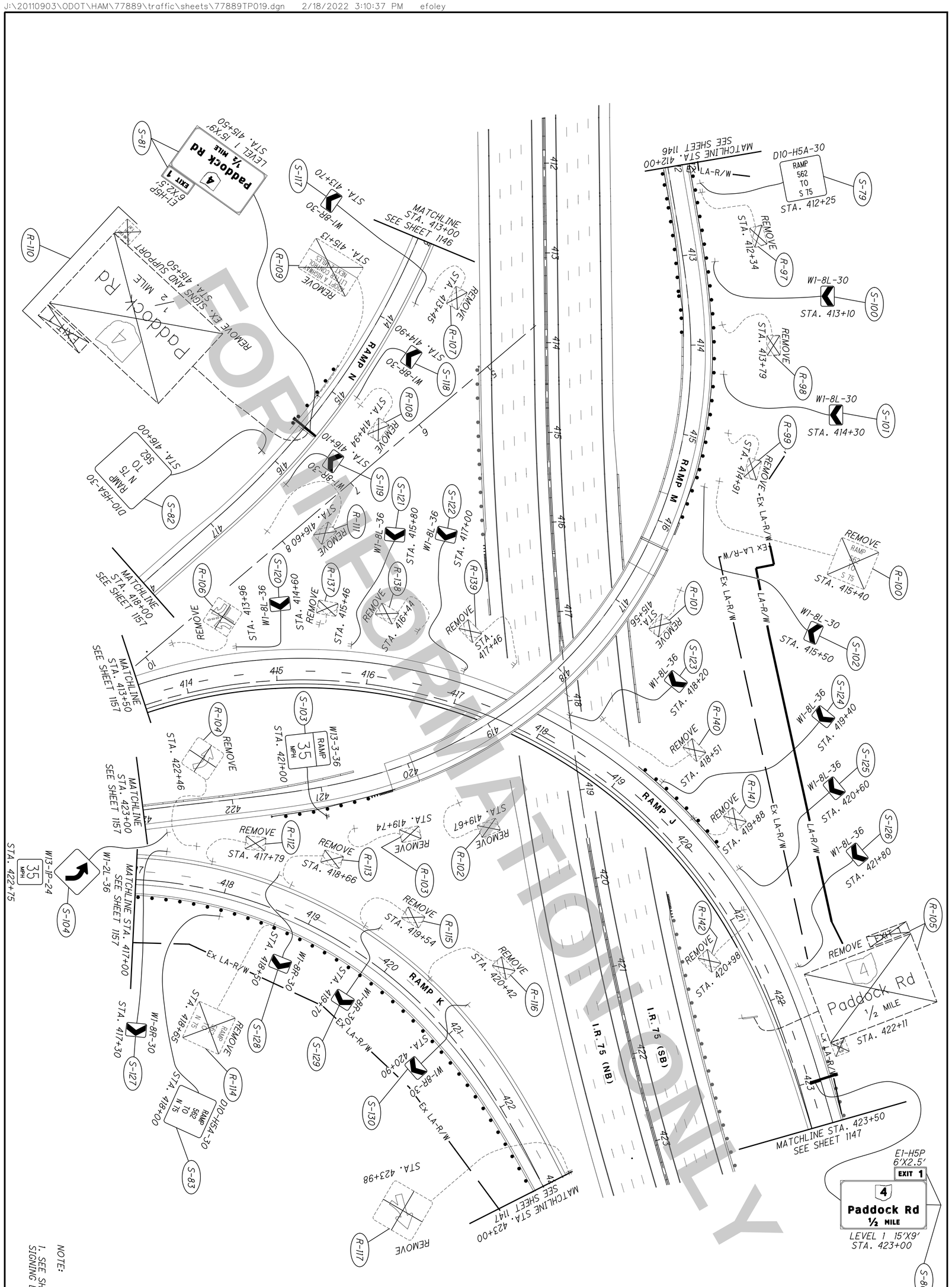
I.R. 75 SIGNING PLAN
STA. 532+00 TO STA. 541+00

HAM-75-7.85

1155
2017

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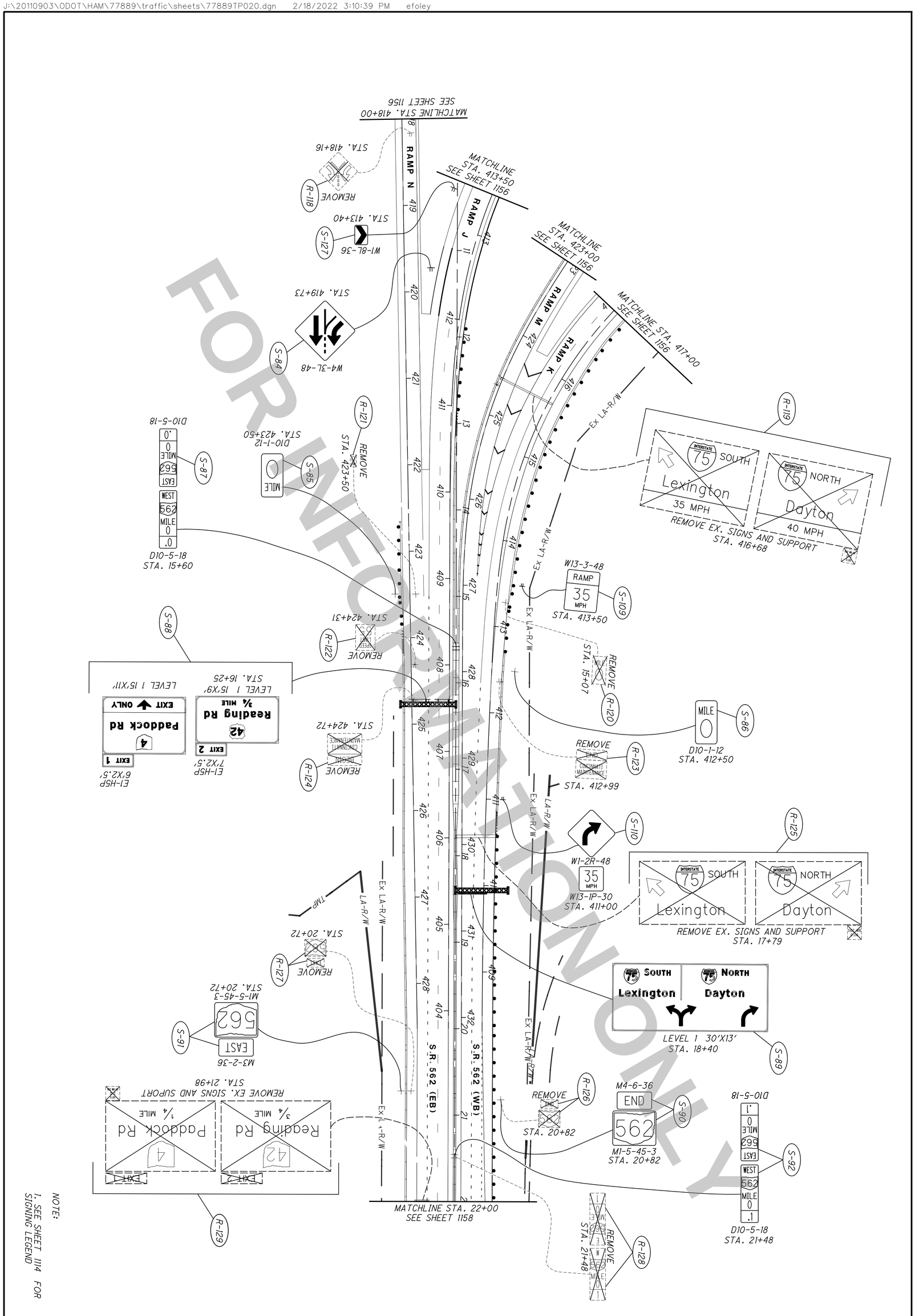
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NOTE:
1. SEE SHEET 1114 FOR SIGNING LEGEND

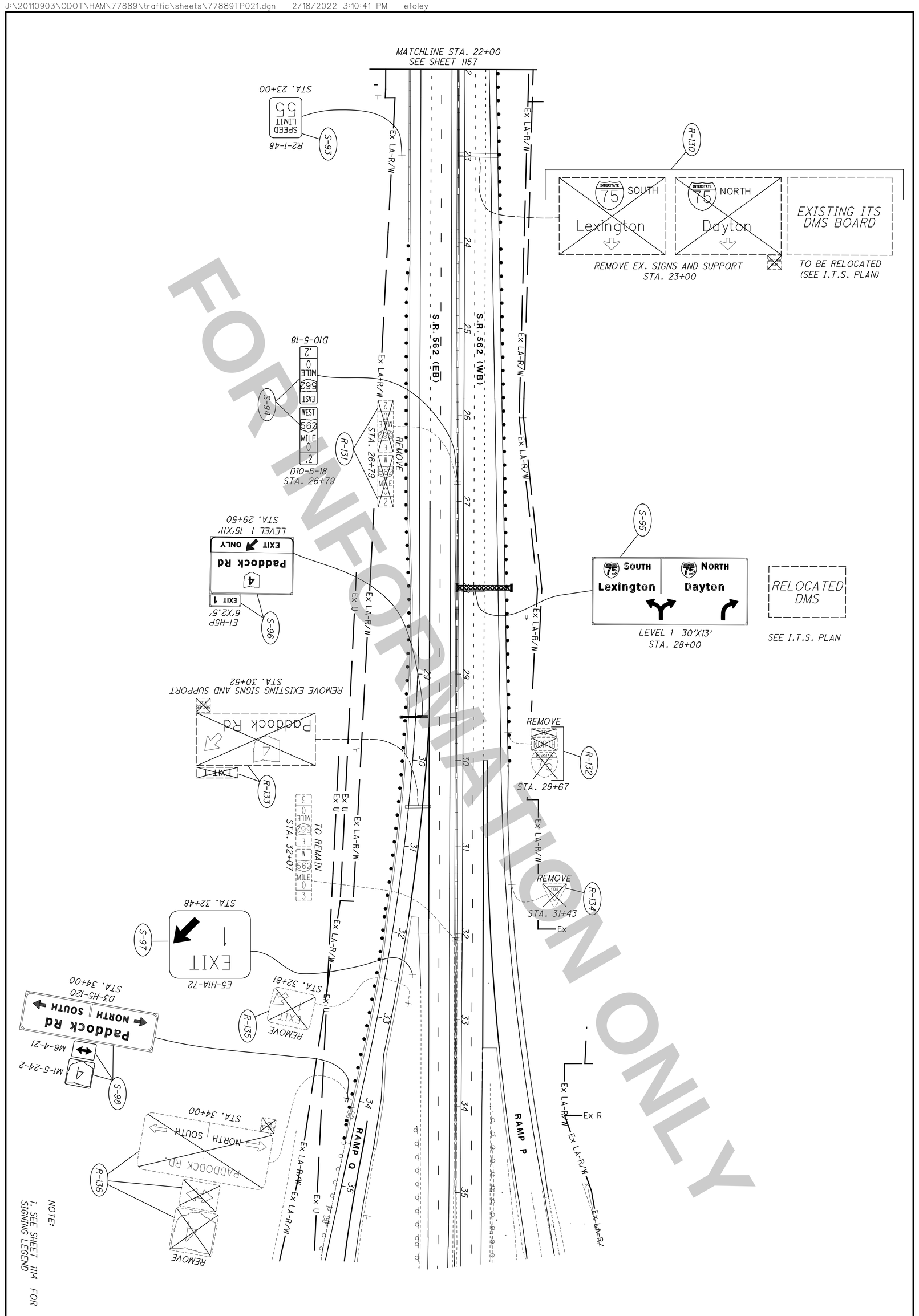
2017 1156	HAM-75-7.85	RAMPS J,K,M & N SIGNING PLAN STA. 412+00 TO STA. 423+00	CALCULATED JF / CHECKED JDS	0 50 25 100 HORIZONTAL SCALE IN FEET

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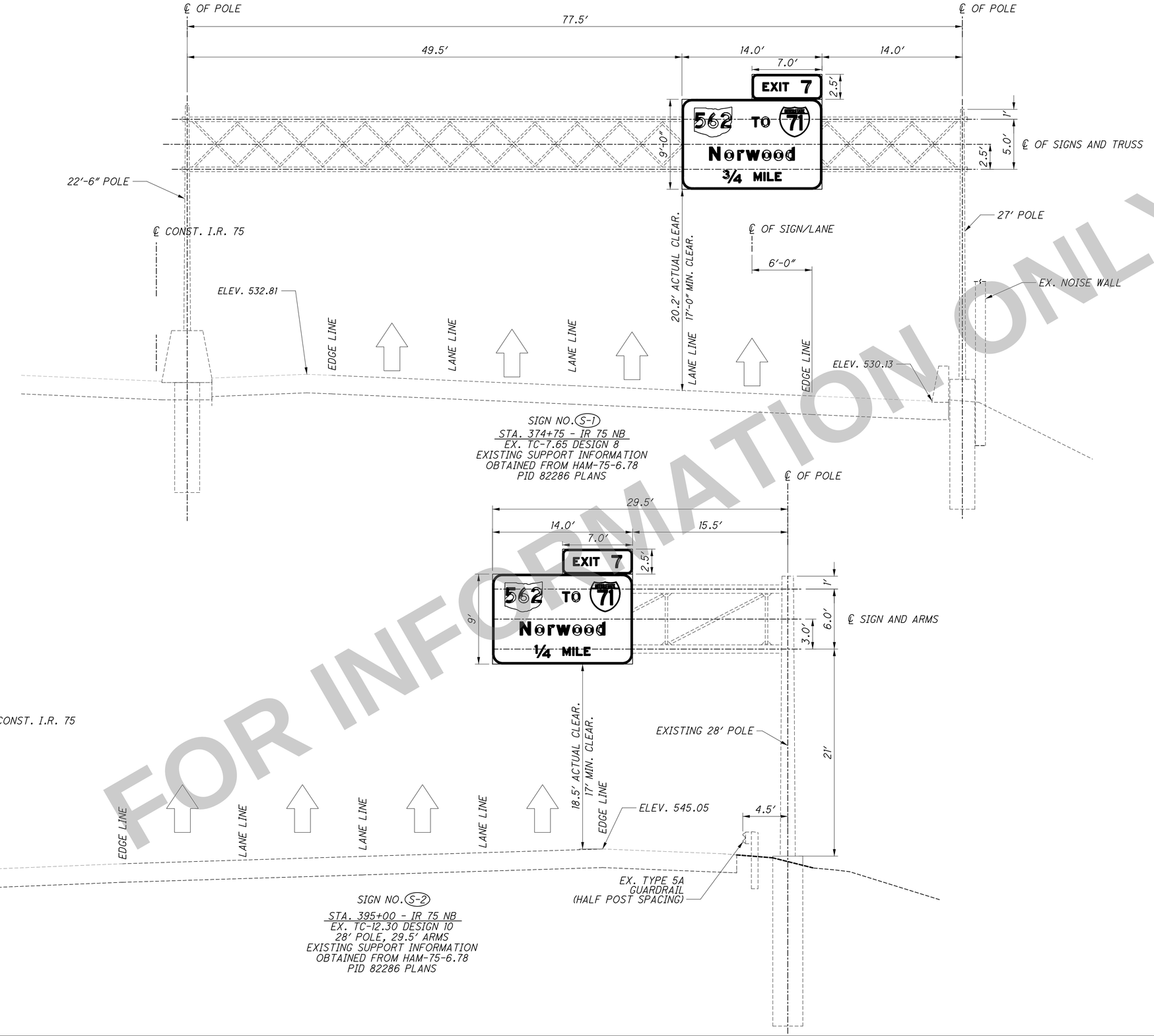
2017 1157	HAM-75-7.85	S.R. 562 SIGNING PLAN STA. 418+00 TO STA. 22+00	CALCULATED JF CHECKED JDS	0 50 25 100 HORIZONTAL SCALE IN FEET

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FOR INFORMATION ONLY

2017 1158	HAM-75-7.85	S.R. 562 SIGNING PLAN STA. 22+00 TO STA. 36+00	CALCULATED JF CHECKED JDS	0 50 25 100 HORIZONTAL SCALE IN FEET



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 5 10

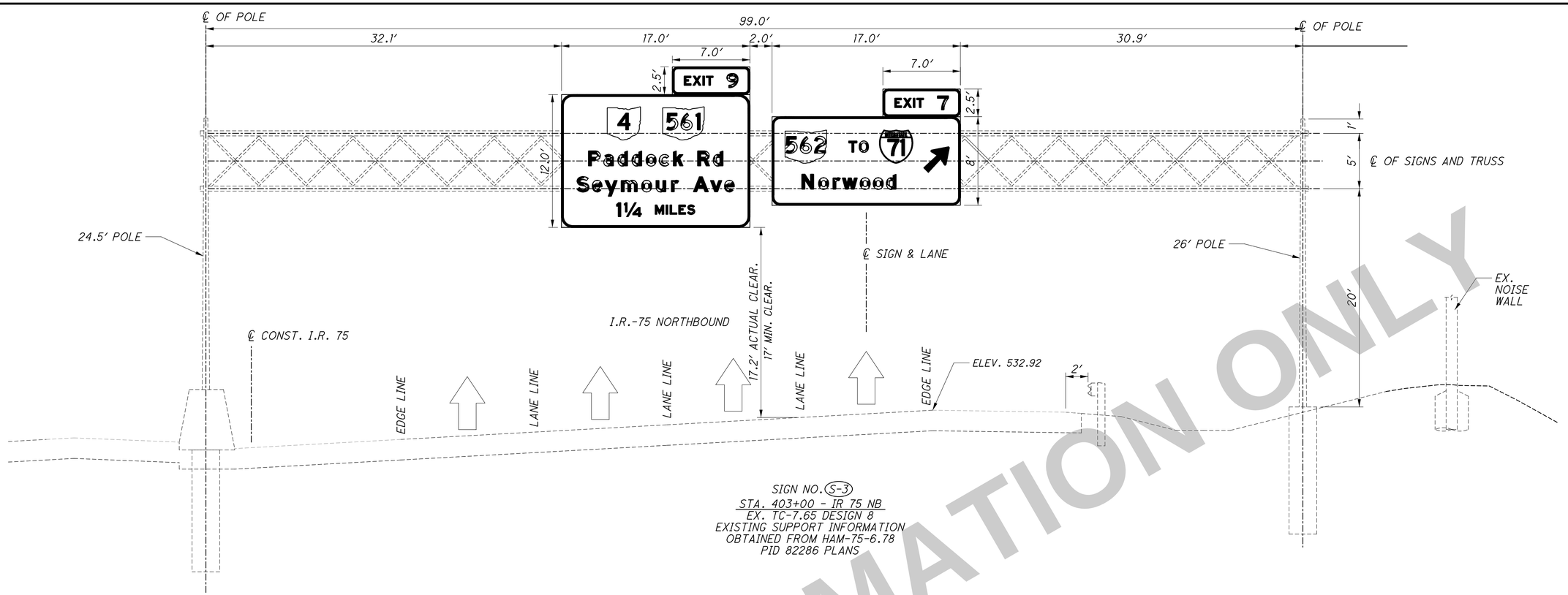
CALCULATED RLS
CHECKED JF

SIGN ELEVATION DETAILS
I-75 STA. 374+75 AND STA. 395+00

HAM-75-7.85

1159
2017

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FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 5 10

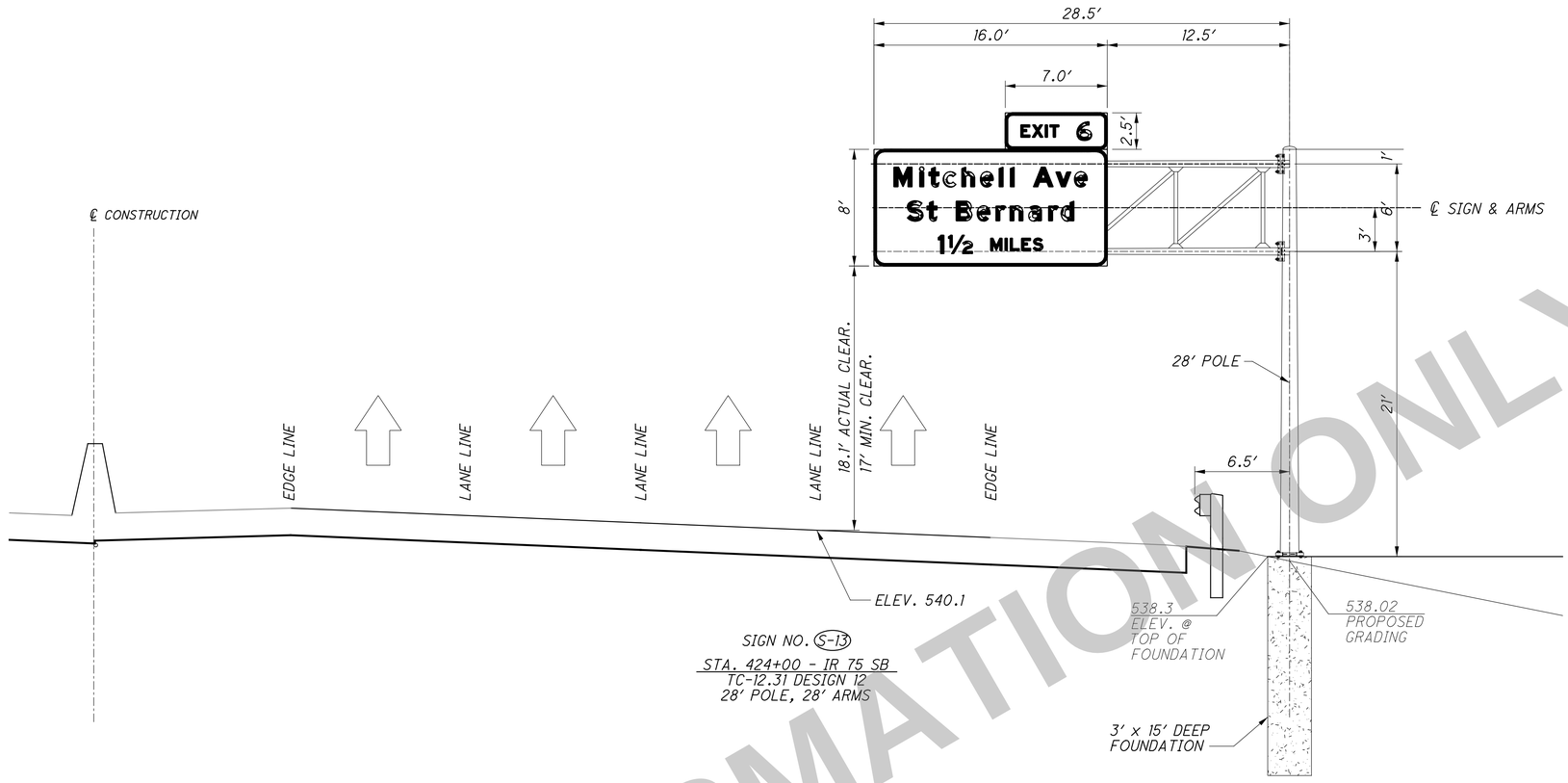
CALCULATED RLS
CHECKED JF

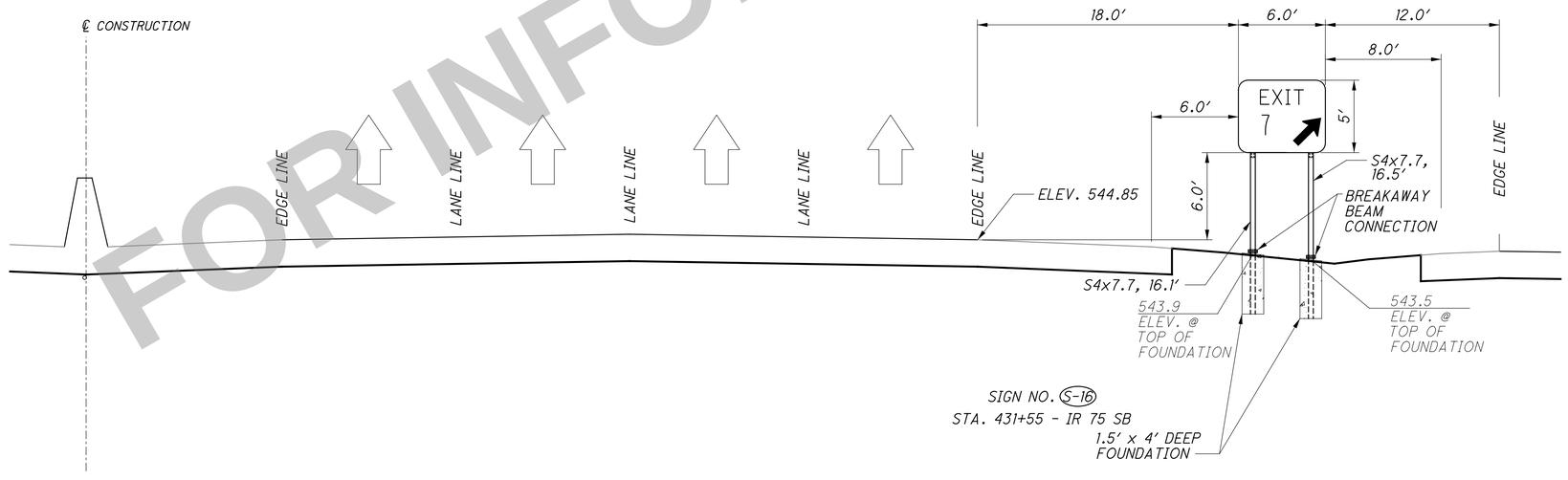
SIGN ELEVATION DETAILS
I-75 STA. 403+00 AND STA. 412+25

HAM-75-7.85

1160
2017

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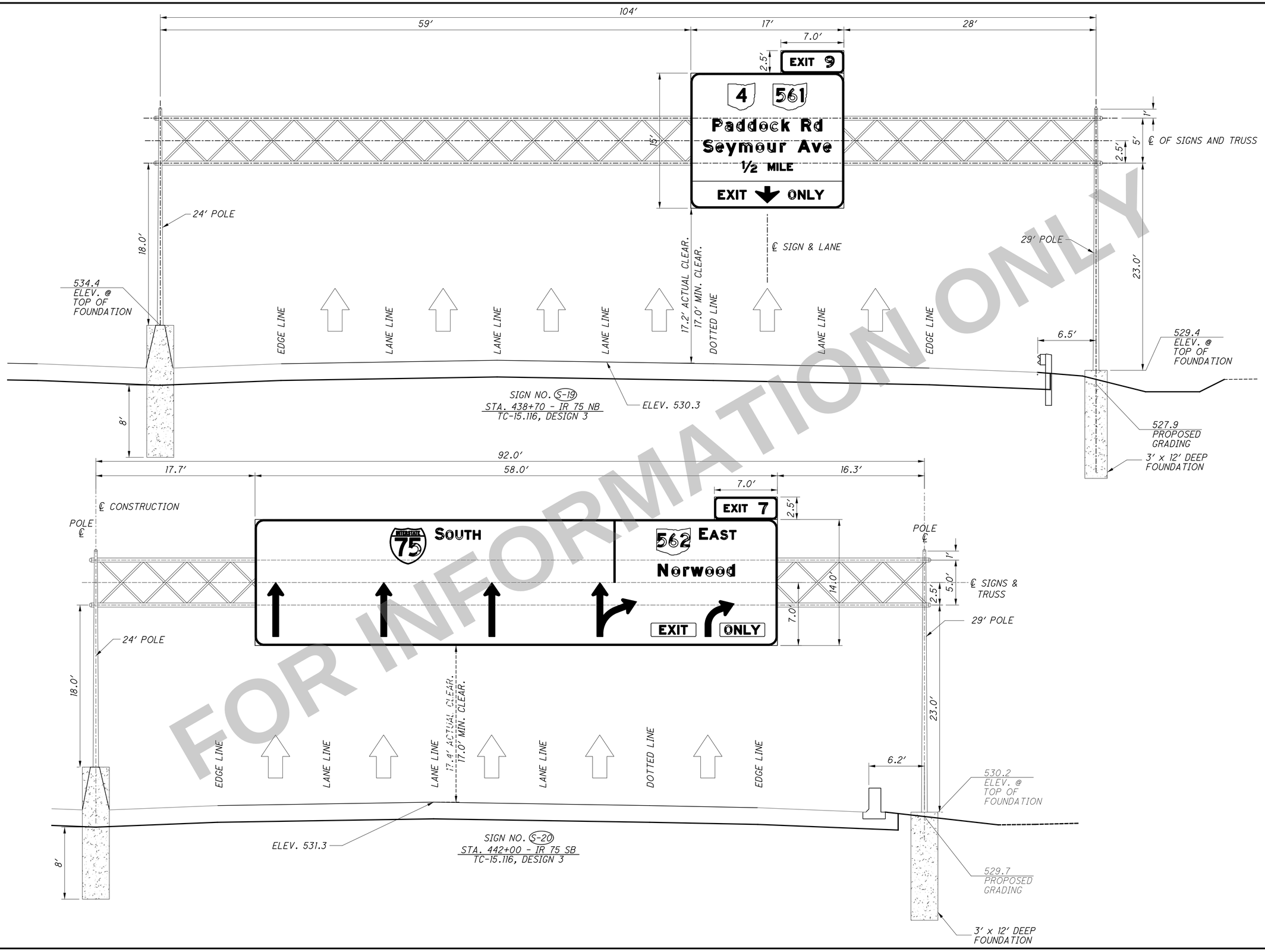
HORIZONTAL SCALE IN FEET
0 5 10

CALCULATED RLS
CHECKED JF

SIGN ELEVATION DETAILS
I-75 STA. 424+00 AND STA. 431+55

HAM-75-7.85

1161
2017



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 5 10

CALCULATED RLS
CHECKED JF

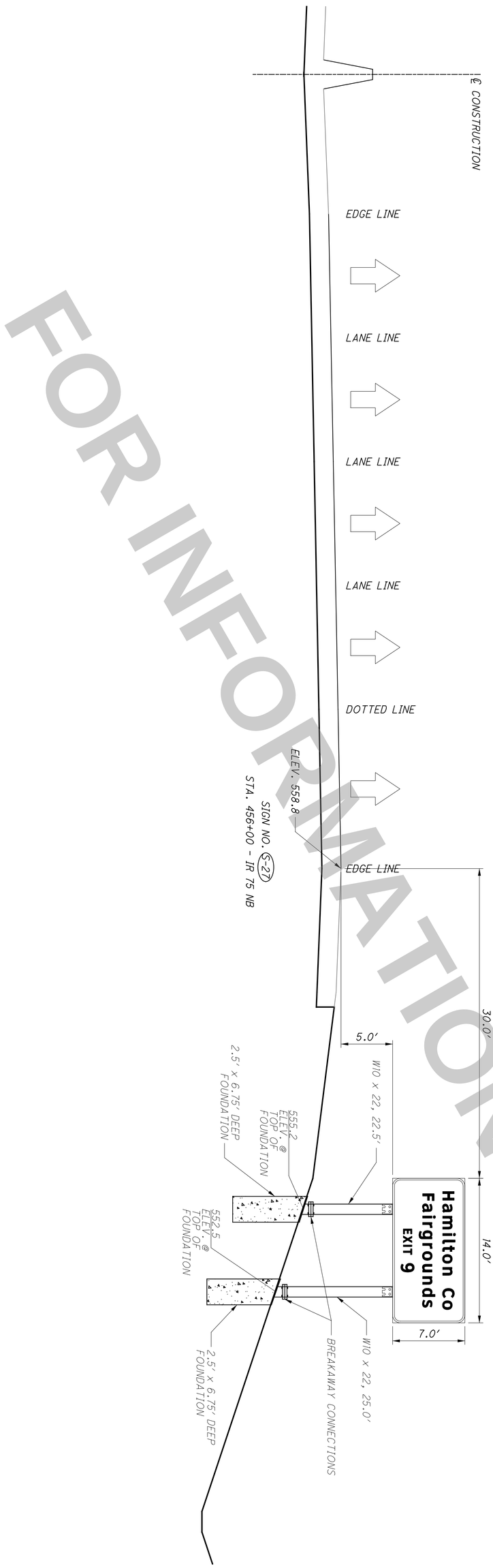
SIGN ELEVATION DETAILS
I-75 STA. 438+70 AND 442+00

HAM-75-7.85

1162
2017

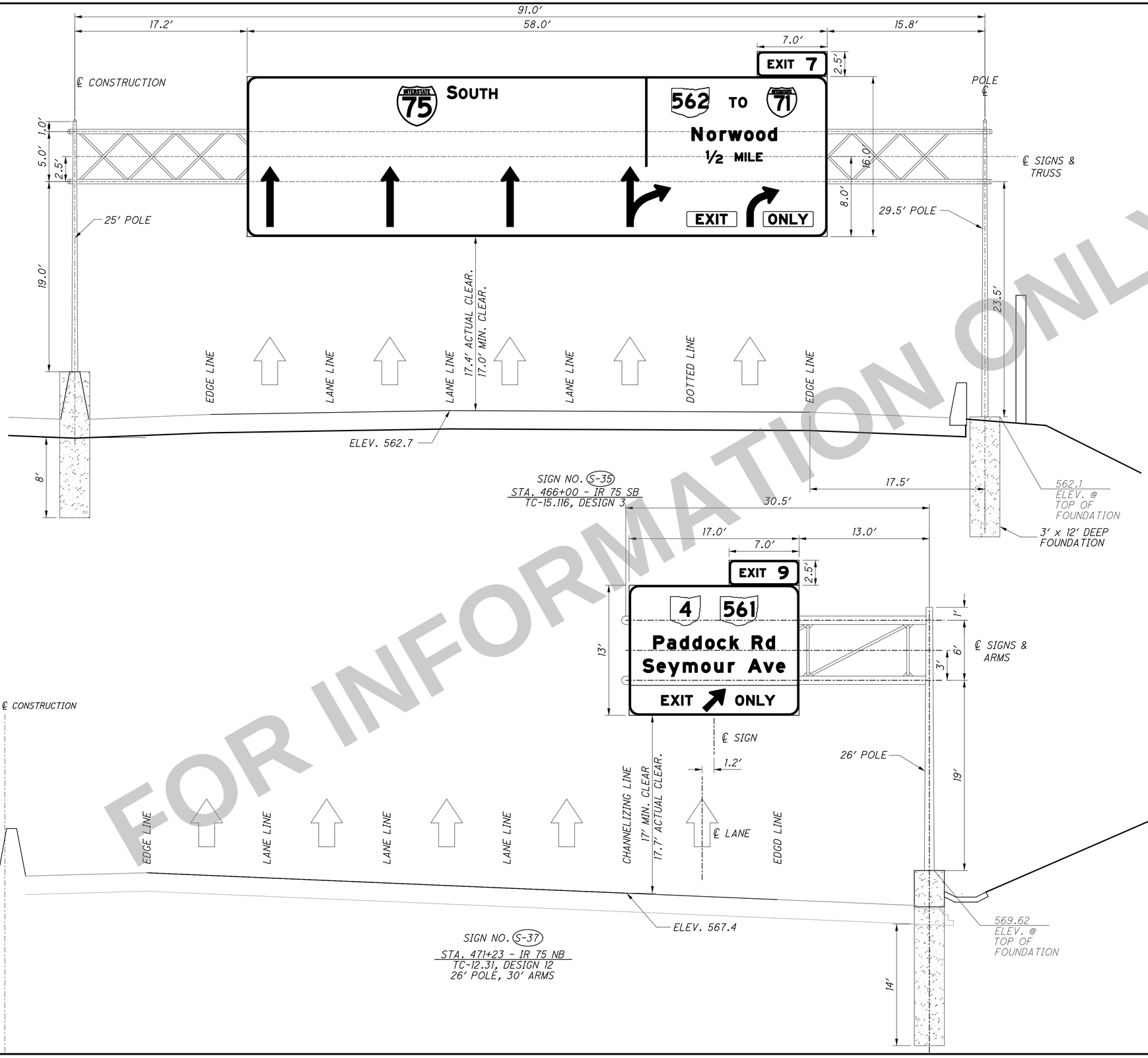
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FOR INFORMATION ONLY

2017 1163	HAM-75-7.85	SIGN ELEVATION DETAILS I-75 STA. 456+00	CALCULATED RLS CHECKED JF	0 5 10 HORIZONTAL SCALE IN FEET



FOR INFORMATION ONLY

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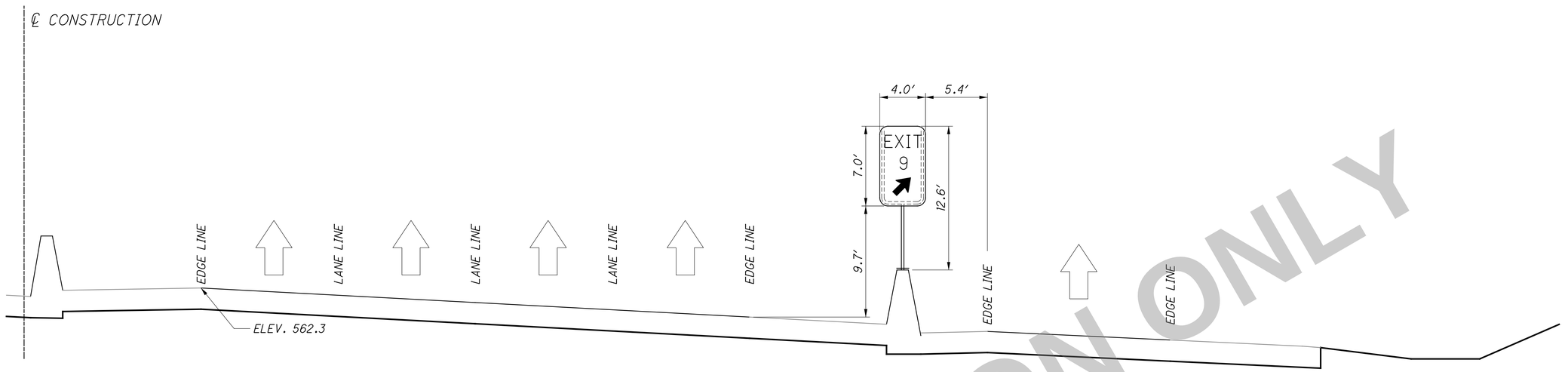
HORIZONTAL SCALE IN FEET
0 5 10

CALCULATED RLS
CHECKED JF

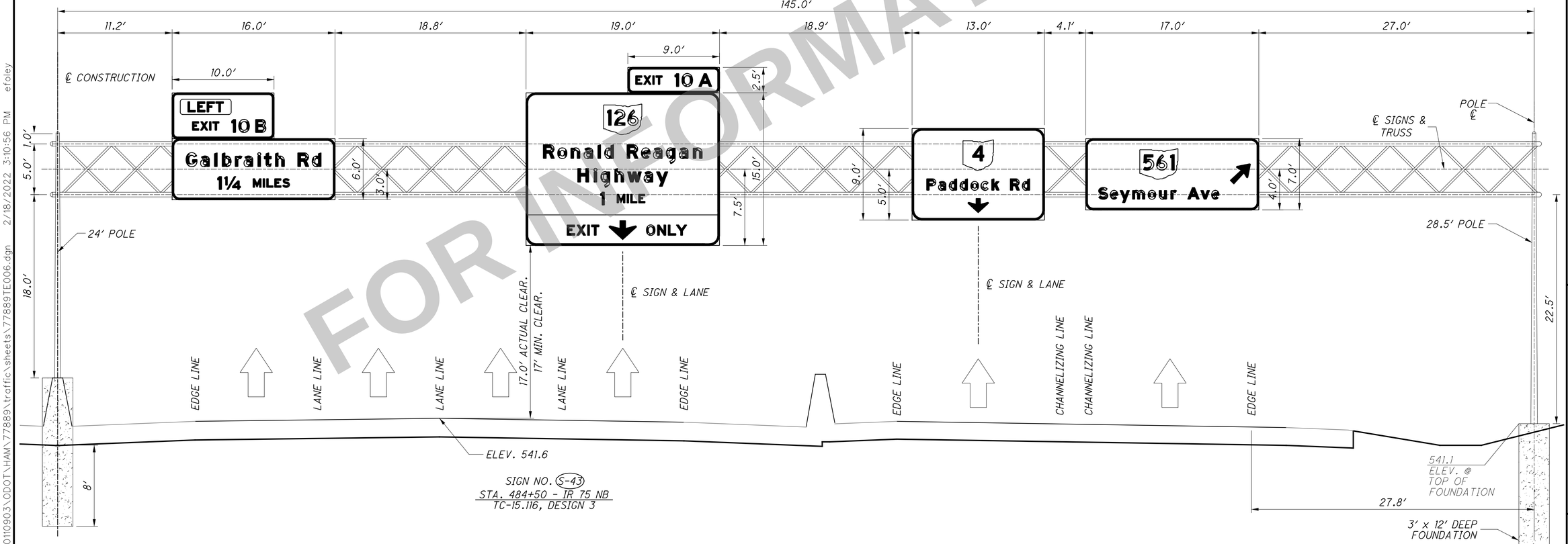
SIGN ELEVATION DETAILS
I-75 STA. 466+00 AND 471+23

HAM-75-7.85

1164
2017



SIGN NO. S-41
STA. 475+50 - IR 75 NB



SIGN NO. S-43
STA. 484+50 - IR 75 NB
TC-15.116, DESIGN 3

FOR INFORMATION ONLY

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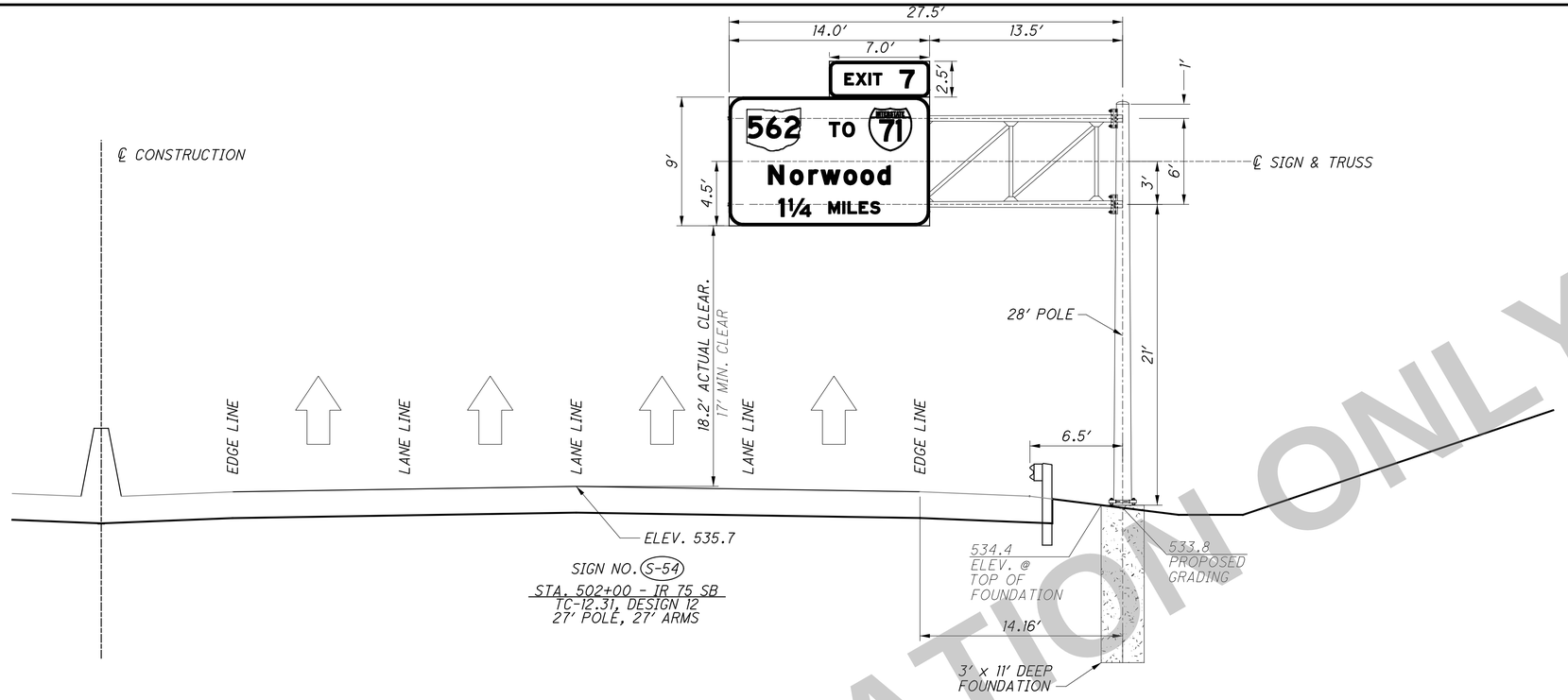
HORIZONTAL SCALE IN FEET
0 5 10

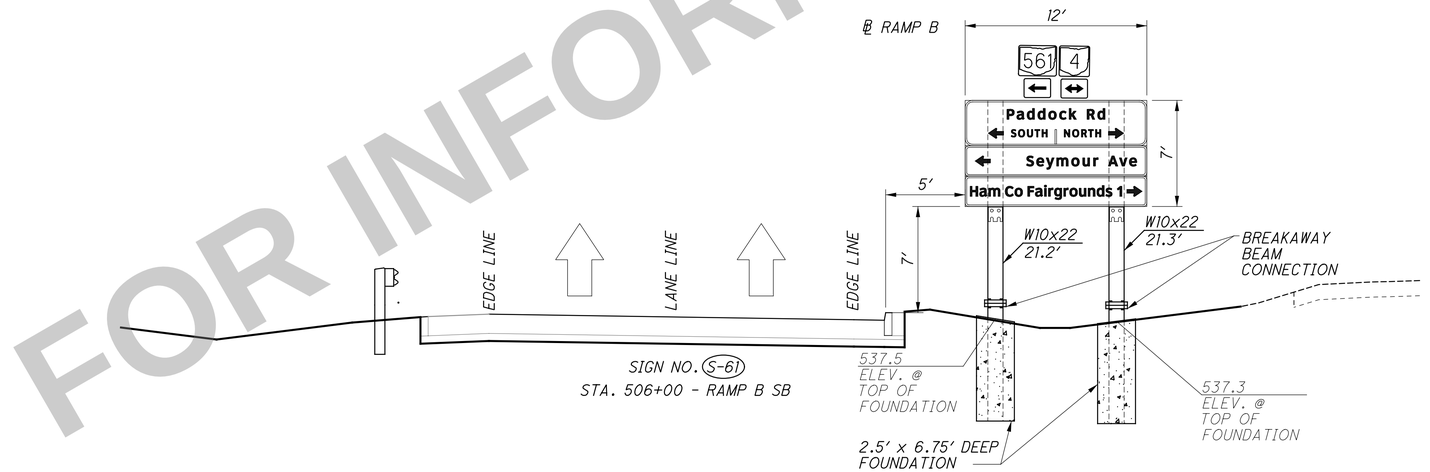
CALCULATED RLS
CHECKED JF

SIGN ELEVATION DETAILS
I-75 STA. 475+50 AND 484+50

HAM-75-7.85

1165
2017





FOR INFORMATION ONLY

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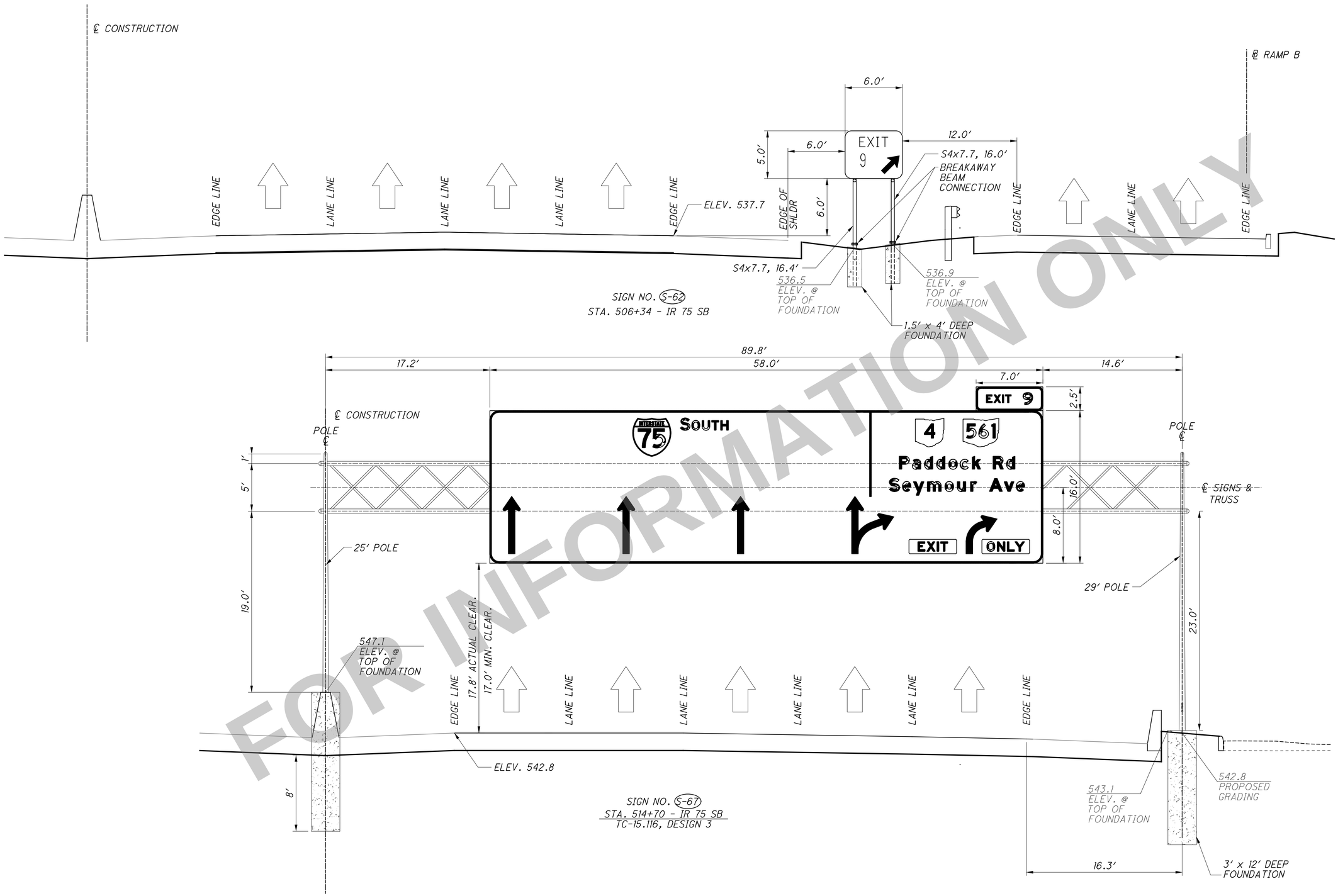
HORIZONTAL SCALE IN FEET
0 5 10

CALCULATED RLS
CHECKED JF

SIGN ELEVATION DETAILS
I-75 STA. 502+00 AND 506+50

HAM-75-7.85

1166
2017



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 5 10

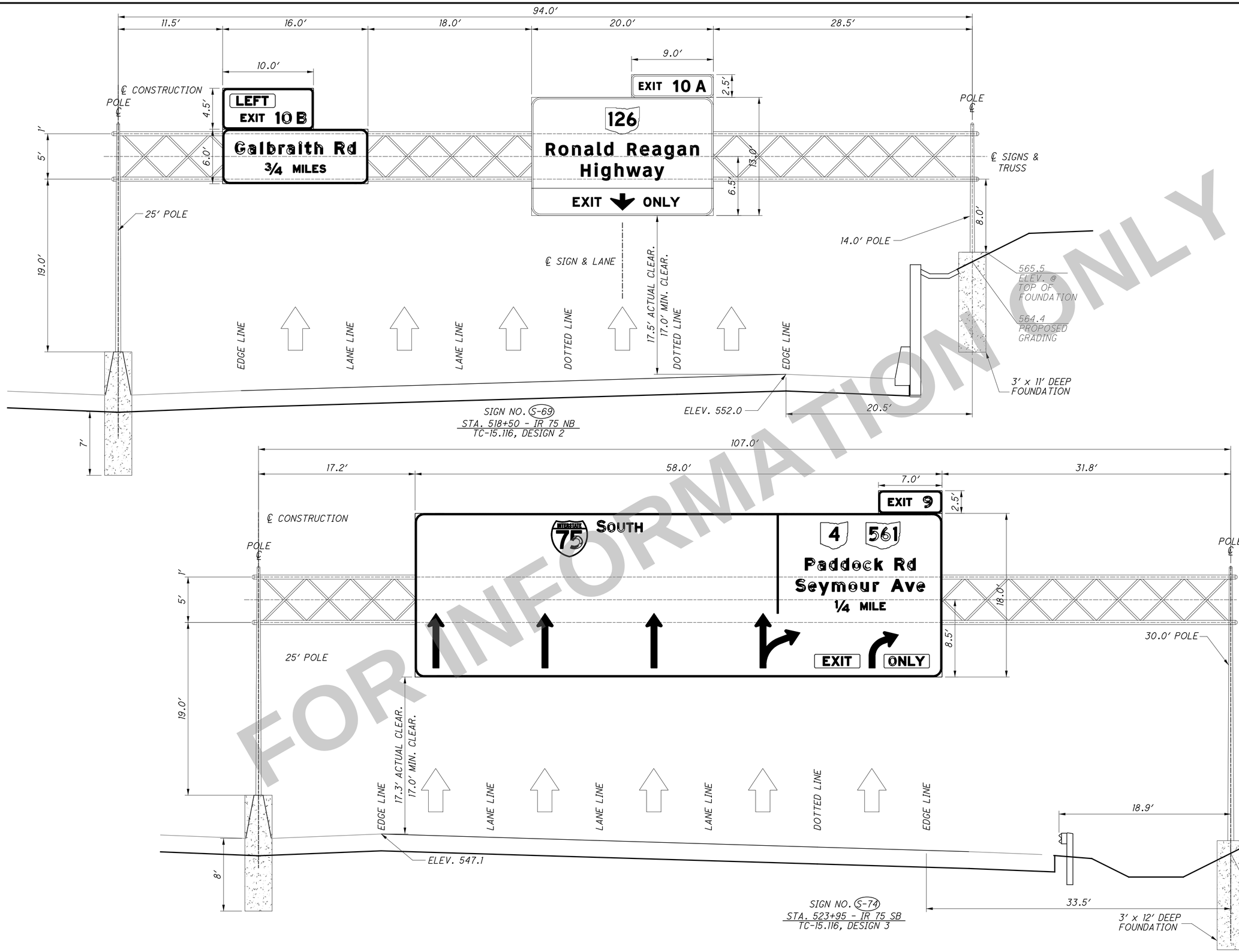
CALCULATED RLS
CHECKED JF

SIGN ELEVATION DETAILS
I-75 STA. 506+34 AND 514+70

HAM-75-7.85

1167
2017

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FOR INFORMATION ONLY

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HORIZONTAL SCALE IN FEET
0 5 10

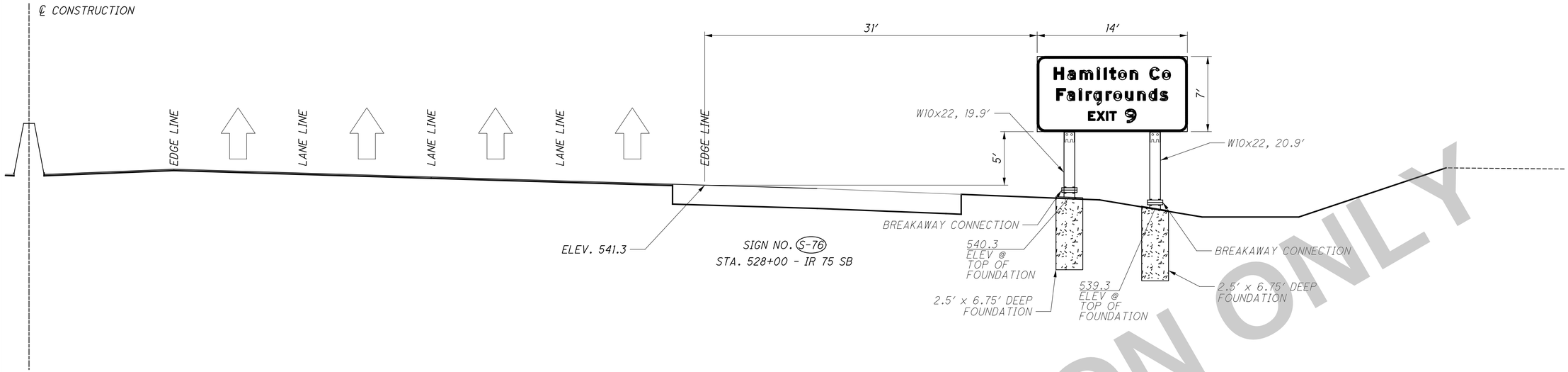
CALCULATED RLS
CHECKED JF

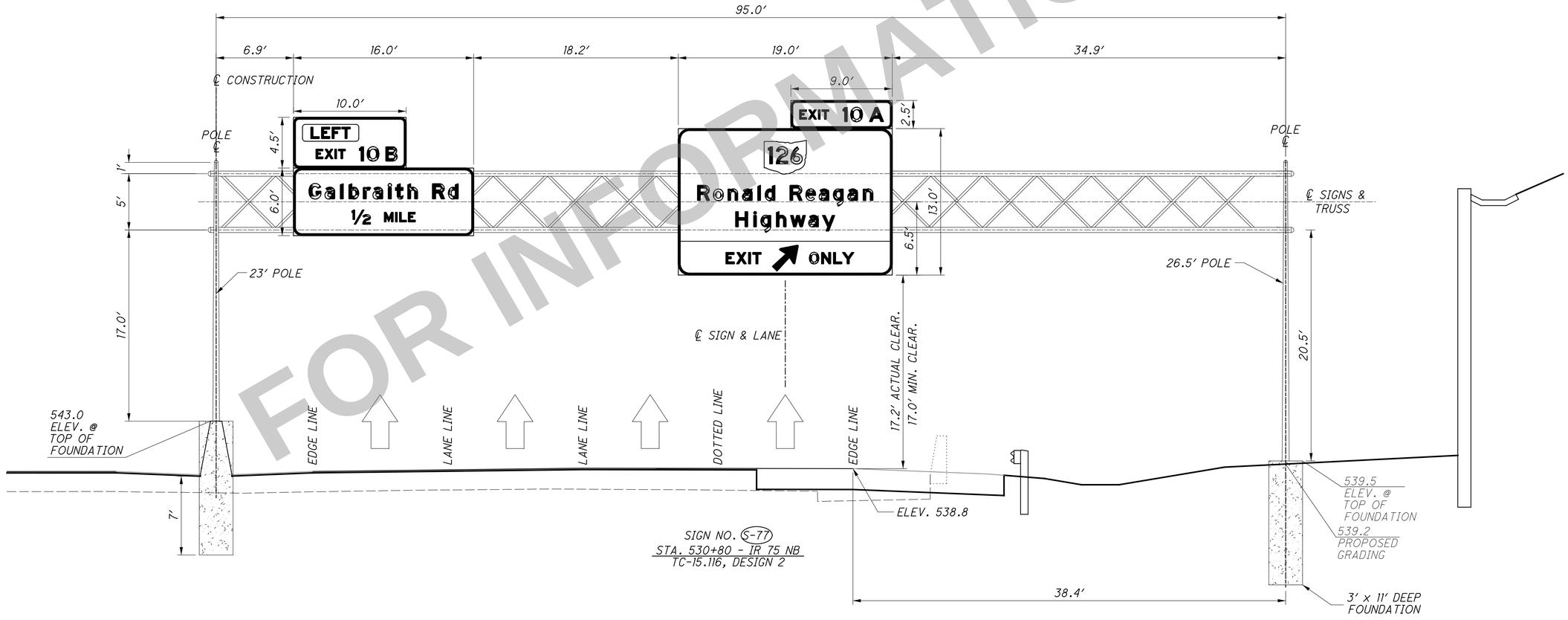
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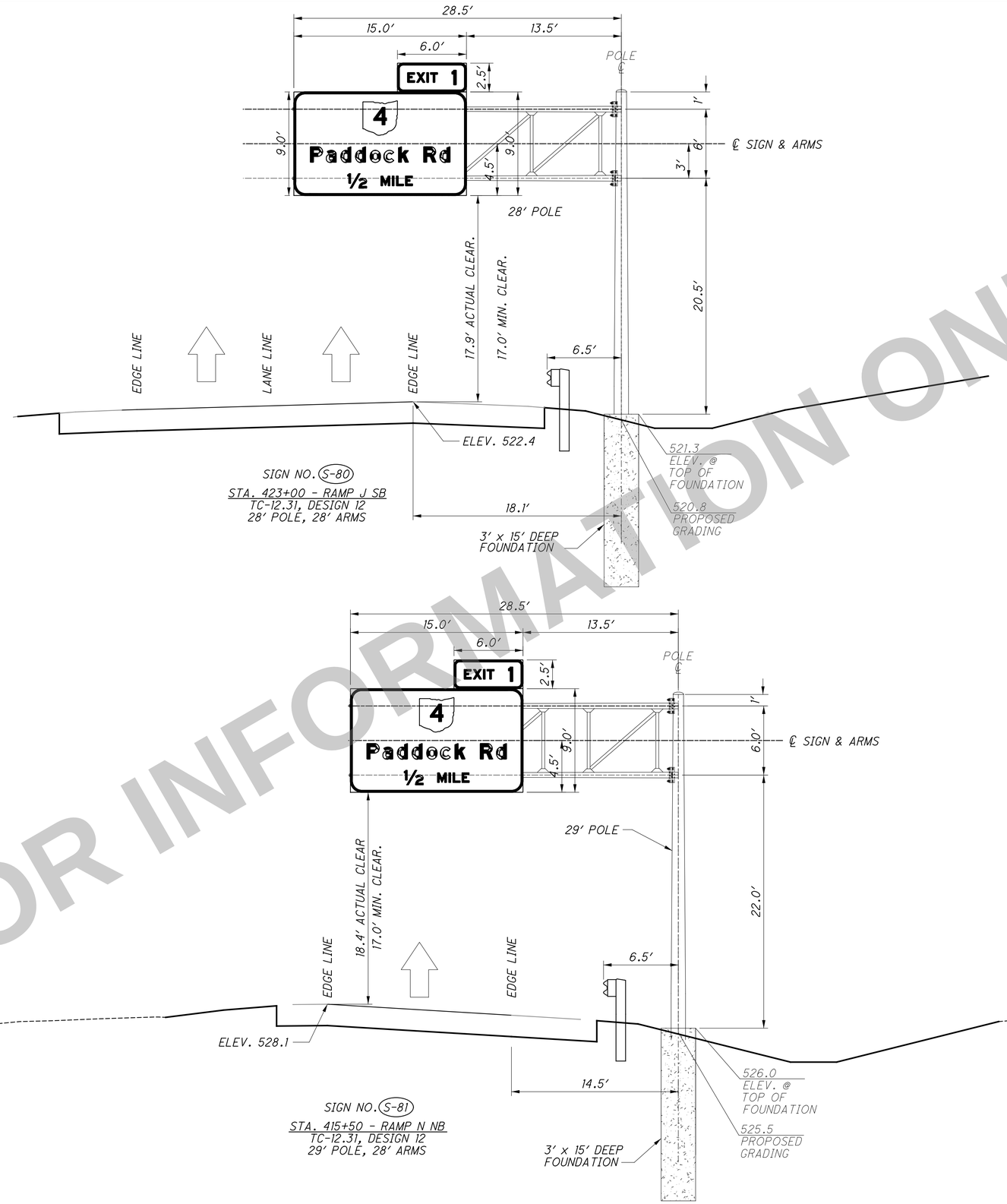
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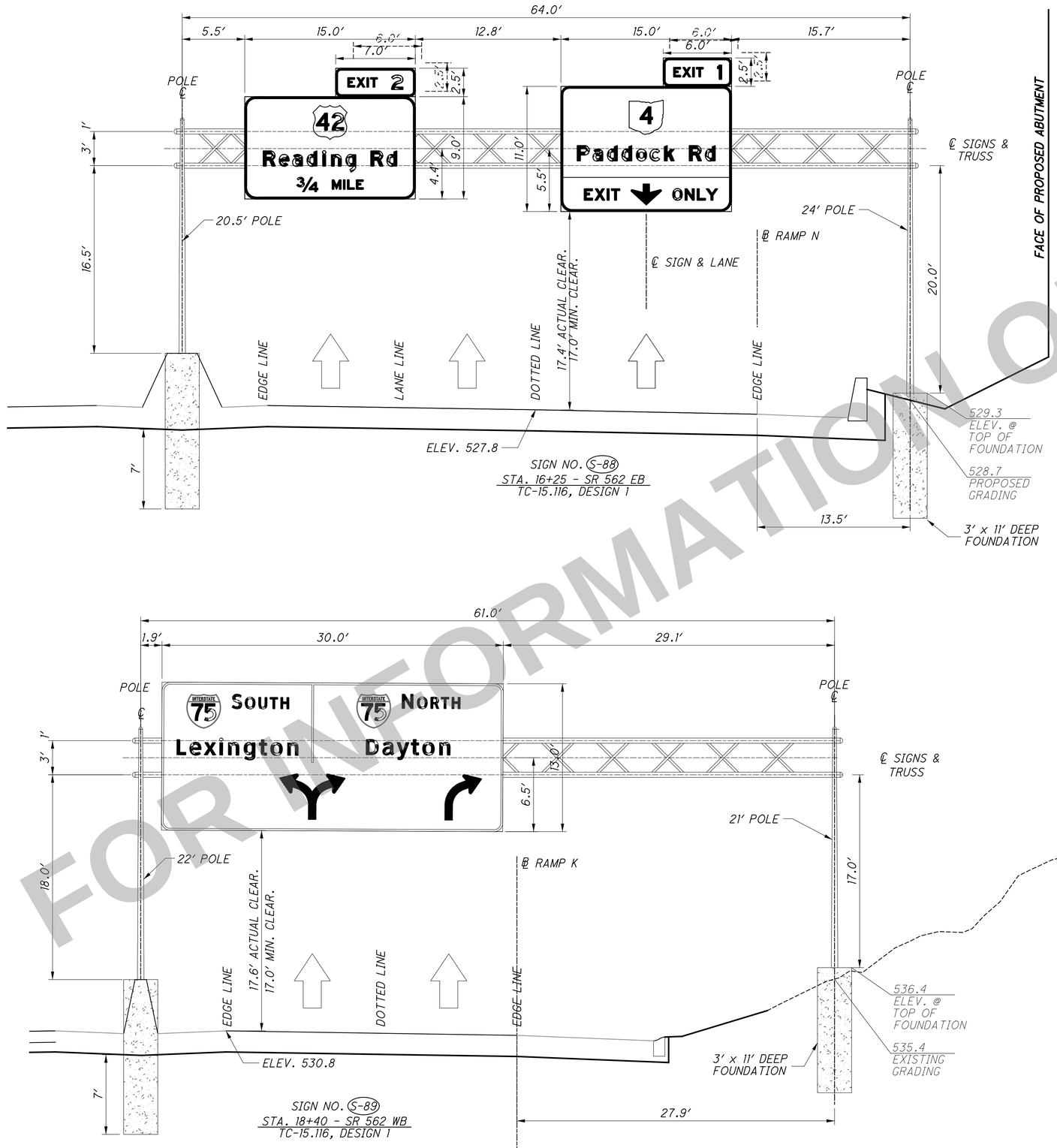
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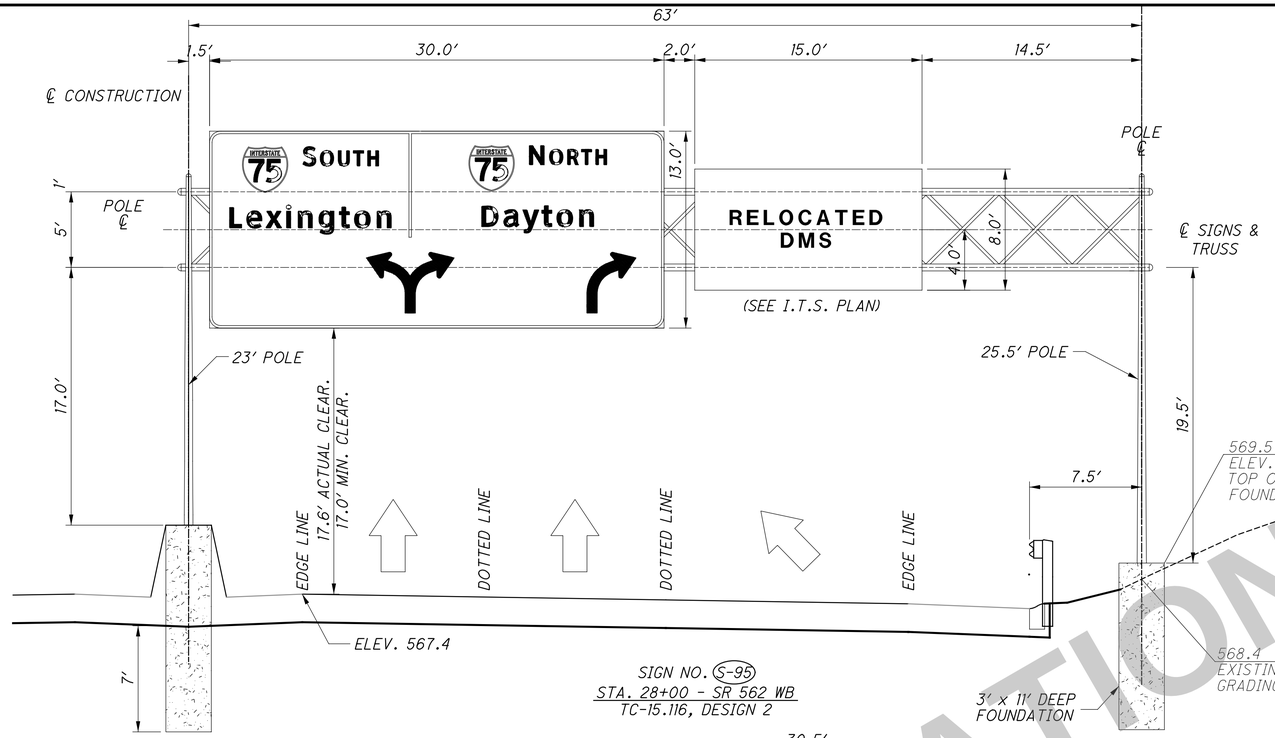
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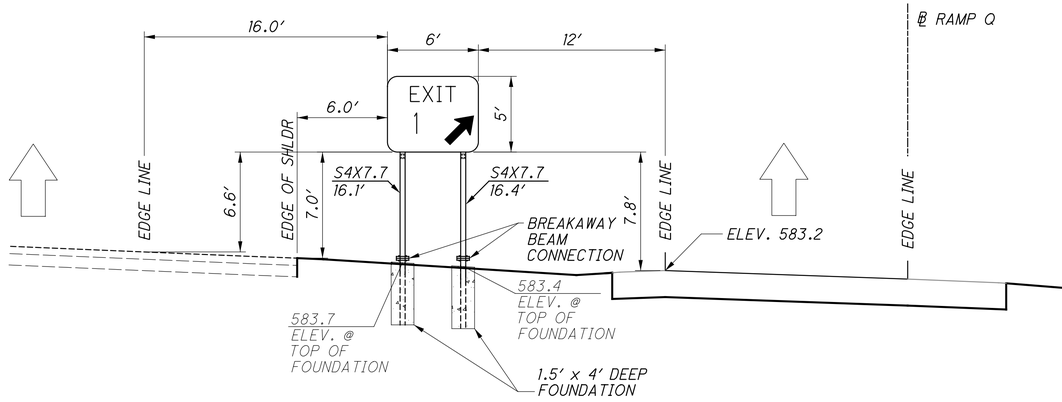
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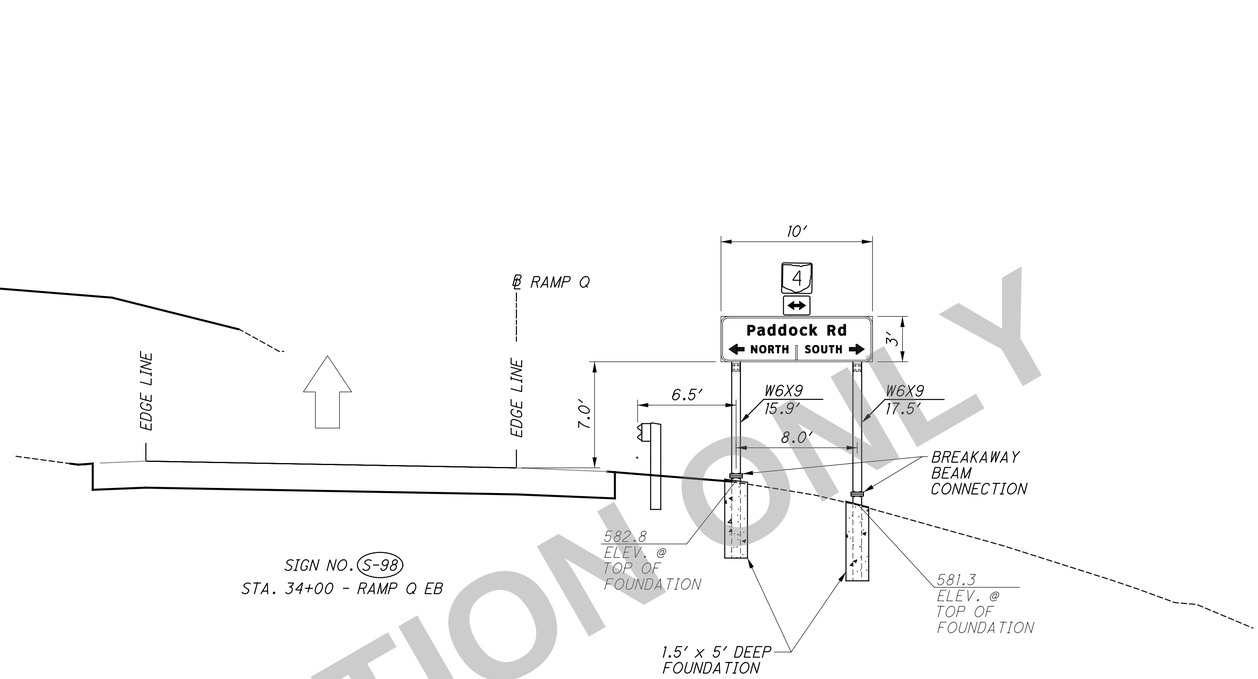
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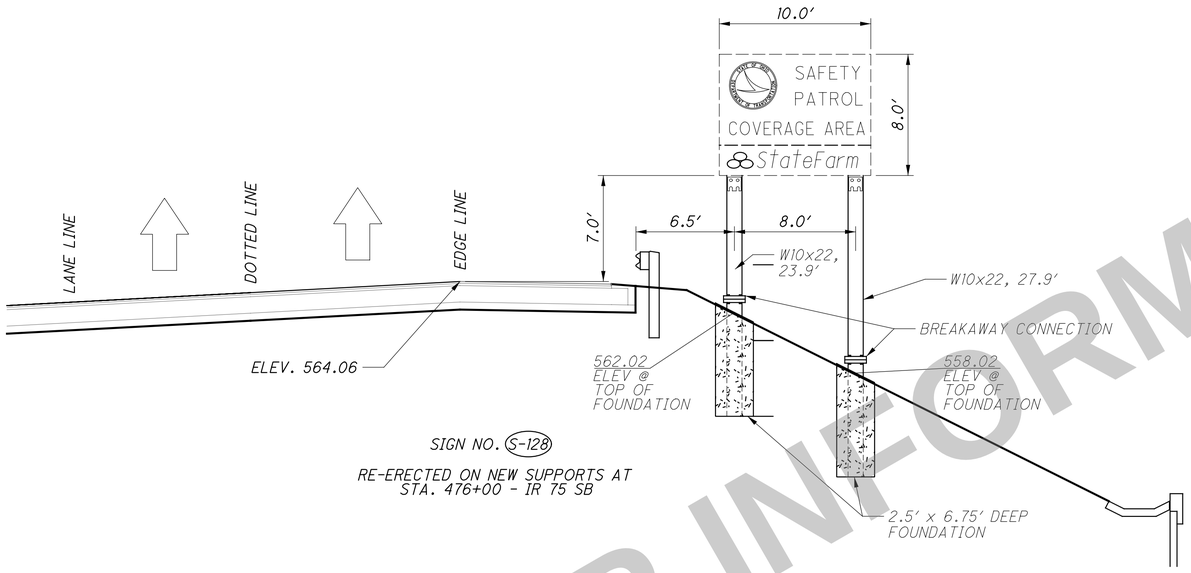
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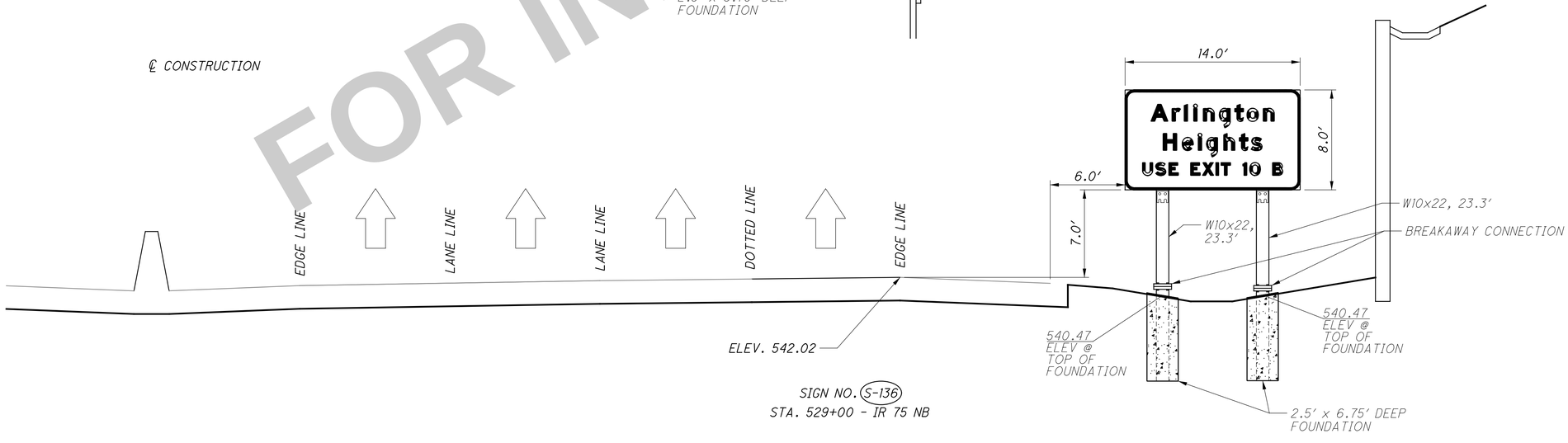
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SIGN NO. S-136
STA. 529+00 - IR 75 NB

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
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TRAFFIC SIGNAL NOTES

THESE SPECIFICATIONS, TOGETHER WITH THE ACCOMPANYING PLANS, ARE INTENDED TO DESCRIBE THE TYPE, SIZE, AND LOCATION OF THE PRODUCTS AND MATERIALS TO BE PROVIDED AND INSTALLED UNDER VARIOUS BID ITEMS RELATED TO TRAFFIC SIGNAL CONTROL. THE CONTRACTOR SHALL FURNISH AND INSTALL TRAFFIC SIGNAL DEVICES AND RELATED MATERIALS IN COMPLIANCE WITH THESE PLANS AND SPECIFICATIONS, AS WELL AS THE 2019 OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS, THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, AND THE STANDARD CONSTRUCTION DRAWINGS ISSUED BY THE OHIO DEPARTMENT OF TRANSPORTATION. THESE SPECIFICATIONS SET FORTH THE MINIMUM PERFORMANCE AND OPERATING REQUIREMENTS OF THE TRAFFIC SIGNAL CONTROL AND HIGHWAY LIGHTING ITEMS REFERRED TO HEREIN.

UTILITIES

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

GAS: DUKE ENERGY (GAS)
MEGAN PLASSMAN
139 EAST 4TH ST., ROOM 460A
CINCINNATI, OH 45202
513-287-3102

OIL: BP PIPELINES NORTH AMERICA, INC.
SEAN McDONALD
150 WEST WARRENVILLE ROAD
BUILDING 605, 3RD FLOOR
NAPERVILLE, IL 60563
630-536-2658

BP PIPELINES NORTH AMERICA, INC.
KIM MILLER
930 TENNESSEE AVENUE
CINCINNATI, OH 45229
513-649-6187

ELECTRIC: DUKE ENERGY (ELECTRIC)
AARON WRIGHT
139 EAST 4TH STREET, 467 ANNEX
CINCINNATI, OH 45202
513-287-3674

CABLE: TIME WARNER CABLE
KENT RIEGER
11252 CORNELL PARK DRIVE
CINCINNATI, OH 45242
513-386-5499

TELEPHONE: CINCINNATI BELL TELEPHONE
MARK CONNER
201 EAST 4TH STREET
BLDG. 121-900
CINCINNATI, OH 45201
513-565-7043

VERIZON
ALLEN GUEST
120 RAVINE STREET
AKRON, OH 44303
330-253-8267

SPRINT COMMUNICATIONS (ERICSSON)
JOSEPH THOMAS
11370 ENTERPRISE PARK DRIVE
SHARONVILLE, OH 45251
513-612-4204

CENTURY LINK
CHRIS STRAYER
441 W. BROAD STREET
PATASKALA, OH 43062
303-886-1299

SANITARY: METROPOLITAN SEWER DISTRICT SEWER
ROBERT FRANKLIN
1600 GEST STREET
CINCINNATI, OH 45204
513-577-7188

WATER: GREATER CINCINNATI WATER WORKS
JON HUNSEDER
4747 SPRING GROVE AVENUE
CINCINNATI, OH 45232
513-591-6856

SOUTHWEST OHIO WATER COMPANY
FRANK DIVO
600 W. LOVELAND AVENUE, SUITE 3
LOVELAND, OH 45140
513-300-3344

STORM: CINCINNATI STORMWATER MANAGEMENT UTILITY
JEFF OXENHAM, PE
225 WEST GALBRAITH ROAD
CINCINNATI, OHIO 45215
513-352-4246
ELECTRONIC PLANS PREFERRED TO
SMUPLANREVIEW@CINCINNATI-OH.GOV

GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC CONTROL SYSTEM INSTALLED AS PART OF THIS CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF 180 DAYS FOLLOWING COMPLETION OF THE 10-DAY PERFORMANCE TEST. IN THE EVENT OF UNSATISFACTORY OPERATION THE CONTRACTOR SHALL CORRECT FAULTY INSTALLATIONS, MAKE REPAIRS AND REPLACE DEFECTIVE PARTS WITH NEW PARTS OF EQUAL OR BETTER QUALITY. EQUIPMENT, MATERIAL AND LABOR COSTS INCURRED IN CORRECTING AN UNSATISFACTORY OPERATION SHALL BE BORNE BY THE CONTRACTOR.

THE GUARANTEE SHALL COVER THE FOLLOWING ITEMS OF THE TRAFFIC CONTROL SYSTEM: CONTROLLERS AND ASSOCIATED EQUIPMENT, DETECTION EQUIPMENT, INTERCONNECTION ITEMS AND MASTER CONTROL EQUIPMENT.

CUSTOMARY MANUFACTURER'S GUARANTEES FOR THE FOREGOING ITEMS SHALL BE TURNED OVER TO THE ENGINEER AND THE HAMILTON COUNTY ENGINEER'S OFFICE FOLLOWING ACCEPTANCE OF THE EQUIPMENT.

THE COST OF GUARANTEEING THE TRAFFIC CONTROL SYSTEM WILL BE INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MAKING UP THE SYSTEM.

DETECTION MAINTENANCE

IF VEHICLE DETECTION BECOMES UNEXPECTEDLY DISABLED, REQUIRES MODIFICATION, OR IS SCHEDULED TO BE TEMPORARILY REMOVED DURING THE CONSTRUCTION PROJECT, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT ENGINEER, THE COUNTY TRAFFIC ENGINEER AND DISTRICT TRAFFIC ENGINEER. IF THE LOSS OF VEHICLE DETECTION IS KNOWN PRIOR TO THE START OF CONSTRUCTION, IT SHALL BE DISCUSSED AT THE PRECONSTRUCTION MEETING. AT SUCH TIME, THE DISTRICT TRAFFIC ENGINEER SHALL ADVISE THE PROJECT ENGINEER AND CONTRACTOR ON THE APPROPRIATE ACTION TO RECTIFY ANY LOSS OF VEHICLE DETECTION. THIS MAY INCLUDE PLACING THE TRAFFIC SIGNAL ON MINIMUM OR MAXIMUM RECALL, MODIFYING THE MINIMUM GREEN TIMES, AND REMOVING THE MALFUNCTIONING DETECTION FROM SERVICE.

WHERE NONINTRUSIVE DETECTION (I.E. VIDEO, RADAR) ALREADY EXISTS, THE CONTRACTOR SHALL INSURE THAT DETECTION IS OPERATING AND MAINTAINED BY RECONFIGURING THE DETECTION UNITS ACCORDINGLY DURING ALL CONSTRUCTION PHASES. THIS IS TO AVOID THE SIGNAL FROM MAXING OUT THE EFFECTED SIGNAL PHASE AND CREATING UNNECESSARY DELAYS.
LOCATIONS WHERE NON-INTRUSIVE DETECTION IS PROPOSED AND THE EXISTING VEHICLE DETECTION IS TO BE ABANDON, THE NON-INTRUSIVE VEHICLE DETECTION SHALL BE INSTALLED, CONFIGURED AND MADE FULLY FUNCTIONAL PRIOR TO THE EXISTING DETECTION BEING DISABLED. THE CONTRACTOR SHALL CONTINUE TO MAINTAIN AND MODIFY THE DETECTION UNTIL FINAL ACCEPTANCE OF THE TRAFFIC SIGNAL. THIS IS TO ENSURE VEHICLE DETECTION REMAINS FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION.

WORK INSPECTION

THE CONTRACTOR SHALL PROVIDE THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER WITH 72-HOUR NOTICE OF ANY SIGNAL WORK TO BE PERFORMED AT THE INTERSECTION SITE(S) SO THAT INSPECTION SERVICES CAN BE SUPPLIED.

MAINTENANCE OF TRAFFIC SIGNAL INSTALLATION

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC SIGNAL INSTALLATIONS WITHIN THE PROJECT UNDER THE FOLLOWING CONDITIONS:

1. EXISTING SIGNAL INSTALLATIONS WHICH THE PLANS REQUIRE THE CONTRACTOR TO ADJUST, MODIFY, ADD ONTO OR REMOVE, OR WHICH THE CONTRACTOR ACTUALLY ADJUSTS, MODIFIES OR OTHERWISE DISTURBS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ENTIRE INSTALLATION (AT AN INTERSECTION) FROM THE TIME HIS OPERATIONS FIRST DISTURB THE INSTALLATION UNTIL THE INSTALLATION HAS BEEN SUBSEQUENTLY REMOVED OR MODIFIED AND THE WORK IS ACCEPTED.

2. NEW OR REUSED SIGNAL INSTALLATIONS OR DEVICES, INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THESE FROM THE TIME OF INSTALLATION UNTIL THE WORK IS ACCEPTED.

THE CONTRACTOR SHALL CORRECT AS QUICKLY AS POSSIBLE ALL OUTAGES OR MALFUNCTIONS. HE SHALL PROVIDE THE MAINTAINING AGENCY AND THE ENGINEER SUCH ADDRESSES AND PHONE NUMBERS WHERE HIS MAINTENANCE FORCES CAN BE CONTACTED. THE CONTRACTOR SHALL PROVIDE ONE OR MORE PERSONS TO RECEIVE ALL CALLS AND DISPATCH THE NECESSARY MAINTENANCE FORCES TO CORRECT OUTAGES. SUCH A PERSON OR PERSONS MAY BE USED TO PERFORM OTHER DUTIES AS LONG AS PROMPT ATTENTION IS GIVEN TO THESE CALLS AND A PERSON IS READILY AVAILABLE CONTINUOUSLY 24 HOURS A DAY, 7 DAYS A WEEK. ALL LAMP OUTAGES, CABLE OUTAGES, ELECTRICAL FAILURES, EQUIPMENT MALFUNCTIONS AND MISALIGNED SIGNAL HEADS SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK TO SERVICE WITHIN FOUR HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGE.

IN THE EVENT NEW SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE, ALL DAMAGED EQUIPMENT EXCEPT POLES AND CONTROL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK IN SERVICE WITHIN 8 HOURS AFTER THE CONTRACTOR'S NOTIFICATION OF THE OUTAGE. THE CONTRACTOR SHALL ARRANGE FOR FULL TRAFFIC CONTROL UNTIL THE SIGNAL IS BACK IN OPERATION.

IF POLES AND/OR CONTROL EQUIPMENT ARE DAMAGED AND MUST BE REPLACED, THE CONTRACTOR SHALL MAKE TEMPORARY REPAIRS AS NECESSARY TO BRING THE SIGNAL BACK INTO FULL OPERATION WITHIN THE ALLOWED 8-HOUR PERIOD, AND SHALL MAKE PERMANENT REPAIRS OR REPLACEMENT AS SOON THEREAFTER AS POSSIBLE.

NONE OF THE ABOVE SHALL BE CONSTRUED AS COLLECTIVE OR CONSECUTIVE OUTAGE TIME PERIODS AT ANY ONE LOCATION. THAT IS, WHERE MORE THAN ONE OUTAGE OCCURS AT ANY ONE LOCATION THEN THE ALLOTTED TIME LIMIT SHALL BE FOR THE WORST SINGLE OUTAGE.

WHERE OUTAGES ARE THE DIRECT RESULT OF A VEHICLE ACCIDENT THE RESPONSE OF THE CONTRACTOR SHALL BE AS OUTLINED ABOVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTION OF ANY COMPENSATION FOR THIS WORK FROM THOSE PARTIES RESPONSIBLE FOR THE DAMAGE.

WHERE THE CONTRACTOR HAS FAILED TO, OR CANNOT RESPOND TO, AN OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION, AT THESE LOCATIONS WITHIN HIS RESPONSIBILITY, WITHIN PERIODS AS SPECIFIED ABOVE, THE ENGINEER MAY INVOKE THE PROVISIONS OF SECTION 105.15

AND ANY SUBSEQUENT BILLINGS TO THE COUNTY OF HAMILTON, OHIO FOR POLICE SERVICES AND MAINTENANCE SERVICES BY COUNTY FORCES SHALL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS OF SECTION 105.15.

THE CONTRACTOR SHALL PROVIDE THE MAINTENANCE SERVICE ENTIRELY WITH HIS FORCES OR HE MAY CHOOSE TO ENTER INTO A COOPERATIVE UNDERSTANDING WITH THE LOCAL MAINTAINING AGENCY TO PROVIDE THE MAINTENANCE. THE CONTRACTOR SHALL INFORM THE ENGINEER, IN WRITING, OF THE MAINTENANCE METHOD SELECTED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY TRAFFIC SIGNAL COMPONENTS REQUIRED TO BE HANDLED DURING THE RELOCATION OF POLES AND REVISIONS TO THE SIGNAL SYSTEM. WHEN A TRAFFIC SIGNAL MUST BE TAKEN OUT OF SERVICE BY THE CONTRACTOR, DUE TO CONSTRUCTION PROCEDURES, THIS OUTAGE SHALL NOT EXCEED 2 HOURS AND SHALL NOT INCLUDE THE HOURS OF 6:30 AM TO 8:30 AM AND 3:00 PM TO 6:00 PM. ANY SIGNALIZED INTERSECTION, WHERE THE SIGNAL IS OUT OF SERVICE DUE TO CONSTRUCTION PROCEDURES, OR DUE TO AN OUTAGE OR MALFUNCTION OF EQUIPMENT AS DESCRIBED ABOVE, SHALL BE PROTECTED, BY THE CONTRACTOR, BY THE INSTALLATION OF TEMPORARY "STOP" SIGNS, EXCEPT FOR THE FOLLOWING INTERSECTIONS WHICH SHALL BE PROTECTED BY LAW ENFORCEMENT OFFICER, HIRED BY THE CONTRACTOR:

1. SUMMIT RD AND SECTION RD

ANY VEHICULAR TRAFFIC SIGNAL HEAD, EITHER NEW OR EXISTING WHICH WILL BE OUT OF OPERATION SHALL BE COVERED IN THE MANNER DESCRIBED IN 632.25.

THE CONTRACTOR SHALL MAINTAIN COMPLETE RECORDS OF MAULFUNCTIONS INCLUDE:

1. TIME OF NOTIFICATION OF MALFUNCTION;
2. TIME OF WORK CREWS ARRIVAL TO CORRECT THE MALFUNCTION;
3. ACTIONS TAKEN TO CORRECT THE MALFUNCTION, INCLUDING A LIST OF PARTS REPAIRED OR REPLACED;
4. A DIAGNOSIS OF REASON FOR THE MALFUNCTION AND PROBABILITY OF REOCCURENCE;
5. TIME OF COMPLETION OF THE REPAIR AND SYSTEM RESTORED TO FULL SERVICE.

STATE OF OHIO
JORDAN C. STEELE
E-76138
REGISTERED PROFESSIONAL ENGINEER

Jordan C. Steele, Date 12/13/21

For Power Distribution and Grounding Only on Sheets 1174 through 1268.

FOR INFORMATION ONLY

CALCULATED MSJ CHECKED JDS

TRAFFIC SIGNAL GENERAL NOTES

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A COPY OF THESE RECORDS SHALL BE PROVIDED TO THE ENGINEER WITHIN THREE (3) WORKING DAYS FOLLOWING COMPLETION OF EACH REPAIR.

ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

GROUNDING AND BONDING

THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (CMS) AND THE TC SERIES OF STANDARD CONSTRUCTION DRAWINGS ARE MODIFIED AS FOLLOWS:

1. GENERAL.
   - A. ALL METALLIC PARTS CONTAINING ELECTRICAL CONDUCTORS SHALL BE PERMANENTLY JOINED TO FORM AN EFFECTIVE GROUND FAULT CURRENT PATH BACK TO THE GROUNDED CONDUCTOR IN THE POWER SERVICE DISCONNECT SWITCH. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN METALLIC CONDUITS (725.04) IN ADDITION TO THE CONDUCTORS SPECIFIED AND BOND THE CONDUIT TO THIS GROUNDING CONDUCTOR.
   - B. WHEN AN EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED IN PLASTIC CONDUIT (725.05), THE INSTALLATION SHALL INCLUDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR IN ADDITION TO THE CONDUCTORS SPECIFIED.
   - C. METALLIC CONDUIT CARRYING THE LOOP WIRES FROM IN THE PAVEMENT TO THE PULL BOX SPLICE LOCATION WILL ONLY BE BONDED AT THE PULL BOX END, AND WILL NOT CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR.
   - D. IF MULTIPLE CONDUIT RUNS BEGIN AND END AT THE SAME POINTS, ONLY ONE EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED.
   - E. IF AN EQUIPMENT GROUNDING CONDUCTOR IS NEEDED IN CONDUIT BETWEEN SIGNALIZED INTERSECTIONS FOR UNDERGROUND INTERCONNECT CABLE, THE GROUNDING SYSTEM FOR EACH SIGNALIZED INTERSECTION WILL BE SEPARATED ABOUT MIDWAY BETWEEN THE INTERSECTIONS.
   - F. THE MESSENGER WIRE AT SIGNALIZED INTERSECTIONS WILL BE USED AS THE CONDUCTIVE PATH FROM CORNER TO CORNER IF CONDUIT IS NOT PROVIDED UNDER THE ROADWAY. WHEN CONDUIT CONNECTS THE CORNERS OF AN INTERSECTION, AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE USED IN THE CONDUIT.

2. CONDUITS.
   - A. THE 725.04 CONDUIT SHALL HAVE GROUNDING BUSHINGS INSTALLED AT ALL TERMINATION POINTS. THE BUSHING MATERIAL SHALL BE COMPATIBLE WITH GALVANIZED STEEL CONDUIT AND THE GROUNDING LUG MATERIAL SHALL BE COMPATIBLE FOR USE WITH COPPER WIRE. THREADED OR COMPRESSION TYPE BUSHINGS MAY BE USED.
   - B. THE 725.05 CONDUIT SHALL HAVE THE INSIDE AND OUTSIDE DIAMETERS OF THE CONDUIT DEBURRED AT ALL TERMINATION POINTS.
   - C. BOTH ENDS OF METALLIC CONDUIT SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.
   - D. METALLIC CONDUIT MAY BE BONDED TO METALLIC BOXES THROUGH THE USE OF CONDUIT FITTINGS UL APPROVED FOR THIS TYPE OF CONNECTION, WITH THE BOX ONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.

3. WIRE FOR GROUNDING AND BONDING.
   - A. USE INSULATED, COPPER WIRE FOR THE EQUIPMENT GROUNDING CONDUCTOR. BONDING JUMPERS IN BOXES AND ENCLOSURES MAY BE BARE OR INSULATED COPPER WIRE. WIRE SIZE SHALL BE AS FOLLOWS:
     - i. USE 4 AWG BETWEEN THE POWER SERVICE AND SUPPORTS, POLES, PEDESTALS, CONTROLLER OR FLASHER CABINETS.
     - ii. USE A MINIMUM 8 AWG BETWEEN LOOP DETECTOR PULL BOXES AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.
     - iii. USE A MINIMUM 8 AWG BETWEEN THE "PREPARE TO STOP WHEN FLASHING" INSTALLATION (INCLUDING SUPPORT) AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.
     - iv. THE INSULATION SHALL BE GREEN OR GREEN WITH YELLOW STRIPE(S). FOR 4 AWG OR LARGER, INSULATION MAY ALSO BE BLACK WITH GREEN TAPE/LABELS INSTALLED AT ALL ACCESS POINTS.
   - B. IN A HIGHWAY LIGHTING SYSTEM, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE THE SAME WIRE SIZE AS THE DUCT CABLE OR DISTRIBUTION CABLE CIRCUIT CONDUCTORS, WITH THE MINIMUM CONDUCTOR SIZE OF 4 AWG. BONDING JUMPERS WILL BE MINIMUM SIZE 4 AWG.

4. GROUND ROD.
   - A. A 3/4 INCH SCHEDULE 40 PVC CONDUIT WILL BE USED IN FOUNDATIONS AND CONCRETE WALLS FOR THE GROUNDING CONDUCTOR (GROUND WIRE) RACEWAY TO THE GROUND ROD. SHOULD METALLIC CONDUIT BE USED, BOTH ENDS OF THE CONDUIT SHALL BE BONDED TO THE GROUNDING CONDUCTOR.
   - B. THE TYPICAL GROUNDING CONDUCTOR (GROUND WIRE) SHALL BE 4 AWG INSULATED, COPPER.

5. THE GREEN CONDUCTOR IN SIGNAL CABLES (CONDUCTOR #4) SHALL NOT BE USED TO SUPPLY POWER TO A SIGNAL INDICATION. IT WILL BE CONNECTED TO THE SIGNAL BODY AS AN EQUIPMENT GROUND IN ALUMINUM HEADS AND IT WILL BE UNUSED IN PLASTIC HEADS. UNUSED CONDUCTORS SHALL BE GROUNDED IN THE CABINET.

TYPICAL USE OF CONDUCTORS IS AS FOLLOWS:

COND. NO.	COLOR	VEHICLE SIGNAL	PEDESTRIAN SIGNAL
1	BLACK	GREEN BALL	#1 WALK
2	WHITE	AC NEUTRAL	AC NEUTRAL
3	RED	RED BALL	#1 DW/FDW
4	GREEN	EQUIPMENT GROUND	EQUIPMENT GROUND
5	ORANGE	YELLOW BALL	#2 DW/FDW
6	BLUE	GREEN ARROW	#2 WALK
7	WHITE/ BLACK STRIPE	YELLOW ARROW	NOT USED

6. POWER SERVICE AND DISCONNECT SWITCH.
   - A. AT THE POWER SERVICE LOCATION, THE GROUNDING CONDUCTOR (GROUND WIRE) FROM THE DISCONNECT SWITCH NEUTRAL (AC-) BAR TO THE GROUND ROD SHALL BE A CONTINUOUS, UNSPLICED CONDUCTOR. IF SPLICED, IT SHALL BE AN EXOTHERMIC WELD BUTT SPICE.
   - B. THE SERVICE NEUTRAL (AC-) SHALL ONLY BE CONNECTED TO GROUND AT THE PRIMARY POWER SERVICE DISCONNECT SWITCH.
     - i. NEMA CONTROLLER CABINETS: IF A POWER SERVICE DISCONNECT SWITCH IS LOCATED BEFORE THE CONTROLLER CABINET, THE NEUTRAL (AC-) AND THE GROUNDING BARS IN THE CONTROLLER CABINET SHALL NOT BE CONNECTED TOGETHER AS SHOWN IN NEMA TS-2, FIGURE 5-4.
     - ii. IF SECONDARY DISCONNECT SWITCHES ARE CONNECTED AFTER THE PRIMARY DISCONNECT SWITCH, THE NEUTRAL (AC-) SHALL ONLY BE GROUNDED AT THE PRIMARY SWITCH. EQUIPMENT GROUNDING CONDUCTORS SHALL BE BROUGHT TO THE PRIMARY SWITCH, BUT SHALL BE GROUNDED AT BOTH SECONDARY AND PRIMARY SWITCHES.

7. PAYMENT ALL MATERIALS AND WORK REQUIRED TO COMPLETE THE EFFECTIVE GROUND FAULT CURRENT PATH SYSTEM ARE INCIDENTAL TO THE CONDUCTORS INSTALLED BY CONTRACT.

ITEM 632 VEHICULAR SIGNAL HEAD, (LED), (BY-SECTION), 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 632 AND 732, THE FOLLOWING REQUIREMENTS SHALL ALSO APPLY:

SIGNAL SECTIONS:
1. SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF BLACK POLYCARBONATE PLASTIC AND MEET ITE SPECIFICATIONS.
2. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.

MOUNTING HARDWARE
1. ALL SIGNAL HEADS SHALL BE RIGIDLY MOUNTED TO THE MAST ARM WITH THE YELLOW LENS LOCATED IN FRONT OF THE MAST ARM.
2. ALL UPPER SIGNAL SUPPORT HARDWARE AND PIPING UP TO AND INCLUDING THE WIRE INLET FITTING SHALL BE FERROUS METAL FOR SIGNAL DISPLAYS OF TWO OR MORE SECTIONS.
3. THE ENTRANCE FITTING SHALL BE OF THE TRI-STUD DESIGN WITH SERRATED RINGS IN ORDER TO ACHIEVE POSITIVE LOCKING.

PAYMENT SHALL BE PER ITEM 632.

ITEM 632 PEDESTRIAN SIGNAL HEAD (LED), (COUNTDOWN), TYPE D2, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF C&MS 632 AND 732 THE FOLLOWING SHALL APPLY:
1. SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF BLACK POLYCARBONATE PLASTIC AND MEET ITE SPECIFICATIONS.
2. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.
3. PIPE, SPACERS AND FITTINGS CONSTRUCTED OF POLYCARBONATE PLASTIC MAY BE USED IN LIEU OF GALVANIZED STEEL OR ALUMINUM.
4. THE PEDESTRIAN SIGNAL HEAD SHALL BE OF THE LED COUNTDOWN TYPE.
5. NEW ATTACHMENT HARDWARE AND FITTINGS SHALL BE USED
6. THE LIGHT EMITTING DIODE (LED) MODULES SHALL MEET THE REQUIREMENTS OF C&MS 732.04-C.

THE CONTRACTOR SHALL PROVIDE ODOT, IN WRITING, WITH THE LED MANUFACTURER NAME, SERIAL NUMBER, PART NUMBER, DESCRIPTION OF LAMP, AND DATE OF MANUFACTURE FOR ALL LED UNITS THAT ARE TO BE USED IN THE SIGNAL HEAD PRIOR TO INSTALLATION, FOR ACCEPTANCE AND WARRANTY PURPOSES.

PAYMENT FOR ITEM 632 PEDESTRIAN SIGNAL HEAD (LED), (COUNTDOWN), TYPE D2, AS PER PLAN

ITEM 632 PEDESTRIAN PUSHBUTTON, AS PER PLAN

A CLEAR BEAD OF SILICONE SEALANT SHALL BE APPLIED TO THE TOP OF THE PUSHBUTTON HOUSEING (1 INCHE EACH SIDE OF TOP CENTER) AGAINST THE POLE TO PREVENT WATER FROM ENTERING THE BACK OF THE PUSHBUTTON HOUSING. ONE ALUMINUM SIGN SHALL BE SUPPLIED WITH EACH PUSHBUTTON. THE BOTTOM OF THE SIGNS SHALL BE MOUNTED JUST ABOVE THE TOP OF THE PUSHBUTTON. MOUNT THE CETER OF THE PUSHBUTTON 42" ABOVE THE PEDESTRIAN PATHWAY SURFACE. THE SIGNS SHALL BE AS DETAILED IN THESE PLANS.

PAYMENT SHALL BE AS PER ITEM 632.

ITEM 632 SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 4, AS PER PLAN
ITEM 632 SIGNAL SUPPORT, TYPE TC-81.22 DESIGN 12 POLE, WITH MAST ARMS TC-81.22 DESIGN 4 AND DESIGN 2, AS PER PLAN

TRAFFIC SIGNAL SUPPORTS SHALL BE AS PER ITEM 632 EXCEPT THAT THE SUPPORT POLES AND ARMS SHALL HAVE A CIRCULAR CROSS SECTION AND SHALL BE TAPERED TUBES HAVING A TRUE AND CONTINUOUS TAPER. MULTI-SIDED OR FLUTED POLES AND POLES HAVING A TAPERED EFFECT ACCOMPLISHED WITH THE USE OF REDUCERS WILL NOT BE ACCEPTED. ARM LENGTH SHALL BE AS SPECIFIED BUT ARMS FORTY FEET IN LENGTH OR LESS SHALL BE OF ONE PIECE CONSTRUCTION. ARMS MORE THAN FORTY FEET LONG MAY BE CONSTRUCTED IN NO MORE THAN TWO PIECES.

BOLT COVERS SHALL BE PROVIDED. ANCHOR BOLTS SHALL BE ORIENTED AS REQUIRED BY THE PLANS HOWEVER THE FORMED TOP OF THE SUPPORT FOUNDATION SHALL BE ORIENTED SQUARE TO THE ADJACENT SIDEWALK WHERE APPLICABLE.

ALL SIGNAL CABLES SHALL BE RUN INSIDE THE POLES. STANDARD DRAWING TC-83.10 IS HEREBY MODIFIED TO PROHIBIT THE USE OF EXTERNAL CONDUIT RISERS FOR SIGNAL CABLING, OR ANY OTHER USE.

THE CONTRACTOR SHALL PROVIDE ALL NECESSARY ATTACHMENTS OR CONNECTIONS TO THE POLES. ADDITIONAL WIRING HOLES IN THE POLE SHALL BE DRILLED, REAMED, OR HOLE SAWED. FLAME CUTTING (OXYACETYLENE OR ELECTRICAL ARC) WILL NOT BE ACCEPTED. ALL CUT EDGES OR OTHER DEFECTS IN THE ZINC COATING SHALL BE CLEANED AND COVERED WITH TWO COATS OF ZINC RICH REPAIR PAINT MATCHING THE FACTORY FINISH. BRACKETS AND APPURTENANCES SHALL BE SECURELY ATTACHED WITH STAINLESS STEEL SCREWS OF SUFFICIENT SIZE FOR THE INTENDED LOADING.

DESIGN CRITERIA
IN ADDITION TO THE REQUIREMENTS OF ITEM 632, SIGNAL SUPPORT STRUCTURES SHALL BE DESIGNED AND CONSTRUCTED BY THE SUPPLIER TO SUPPORT THE LOADS CAUSED BY THE PROPOSED AND FUTURE SIGNS, SIGNALS, AND OTHER EQUIPMENT THAT THE PLAN REQUIRES THE CONTRACTOR TO INSTALL. THE USE OF STANDARD ODOT DESIGN DESIGNATIONS SUCH AS THOSE DESCRIBED ON STANDARD DRAWING TC-81.22, AND ANY DETAILS PROVIDED IN THIS PLAN, ARE INTENDED TO PROMOTE UNIFORMITY OF DESIGN AND ARE NOT WARRANTED TO BE STRUCTURALLY ADEQUATE. TO THE MAXIMUM EXTENT PRACTICABLE, THE CONTRACTOR AND SUPPLIER SHALL PROVIDE A STRUCTURALLY ADEQUATE SUPPORT THAT UTILIZES STANDARD ODOT ANCHOR BOLT SIZING AND SPACING.

THE MAST ARM SUPPORT POLE ASSEMBLY, AND THE MAST ARM ASSEMBLY SHALL BE MADE BY THE SAME MANUFACTURER AND DESIGNED AND SOLD AS A UNIT.

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TRAFFIC SIGNAL GENERAL NOTES

HAM-75-7.85

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ALL PRE-DRILLED HOLES FOR ALL ITEMS SHALL BE DEBURRED AND FREE OF ALL SHARP EDGES. ALL OUTSIDE WELDS SHALL BE ROLLED OR GROUND SMOOTH. ALL INSIDE WELDS SHALL BE VOID OF SHARP EDGES. ANY STRUCTURAL FASTENER (3/4" OR GREATER) SHALL BE GALVANIZED PER ASTM 153 AND SHALL BE MADE OF HIGH STRENGTH CARBON STEEL. ANY OTHER FASTENER (LESS THAN 3/4") SHALL BE STAINLESS STEEL. ALL VISIBLE FASTENERS SHALL MATCH THE COATING OF THE STRUCTURE.

FINISH
POLES AND ARMS, INCLUDING BASE AND FLANGE PLATES, BOLT COVERS, HANDHOLES, AND WIRE ENTRANCES, SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE

WITH 711.02. THE INSIDE OF EACH SIGNAL SUPPORT POLE ASSEMBLY, EACH MAST ARM ASSEMBLY, AND OTHER SIGNAL SUPPORT ACCESSORIES SHALL BE COATED WITH GALVANIZING MATERIAL. THE INSIDE AREA FORMED BY THE GUSSETS, POLE, AND POLE FLANGE PLATE SHALL BE COATED TO PROTECT THE AREA FROM CORROSION. IT IS TO BE NOTED THAT SOME TYPE OF OPENING SHALL BE REQUIRED TO COAT THE GUSSET AREA. THIS OPENING SHALL NOT HAMPER THE STRUCTURAL INTEGRITY OF THE FLANGE ASSEMBLY.

PAYMENT
THIS ITEM OF WORK SHALL BE MEASURED AS EACH COMPLETE SIGNAL SUPPORT, IN PLACE IN ESSENTIALLY A VERTICAL POSITION UNDER FULL PLAN LOADING. ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PICKUP, TRANSPORT, STORE, ERECT, ADJUST, AND REPAIR THE SIGNAL SUPPORT AND ANCHOR BOLTS SHALL BE INCLUDED FOR PAYMENT IN THE BID ITEM.

PAYMENT SHALL BE AS PER ITEM 632.

ITEM 632 PEDESTAL FOUNDATION, AS PER PLAN
ITEM 632 SIGNAL SUPPORT FOUNDATION, AS PER PLAN

THE FORMED TOP OF THE ANCHOR BASE POLE FOUNDATION SHALL BE ORIENTED PARALLEL TO THE SIDEWALK OR BACK-OF-CURB OR EDGE-OF-PAVEMENT AS SHOWN ON THE SIGNAL PLANS. THE TOP OF THE FOUNDATION SHALL BE FLUSH WITH ANY ADJACENT SIDEWALK OR CONCRETE AREA EXCEPT WHERE THE GROUND RISES STEEPLY BEHIND THE SIDEWALK OR CONCRETE AREA. THEN THE FOUNDATION SHALL MATCH THE BACK SIDE OF THE SLOPE AND THE STREET SIDE OF THE FOUNDATION SHALL BE ABOVE THE SIDEWALK OR CONCRETE AREA AND COMPLETELY OUT OF THE SIDEWALK OR CONCRETE AREA. THE BURIED DEPTH OF FOUNDATION, AS SHOWN IN SCD TC-21.21 SHALL APPLY TO THE LOW SIDE OF THE SLOPE. THE TOP OF THE FOUNDATION SHALL BE SET 2 INCHES ABOVE THE EXISTING SURFACE ON THE HIGH SIDE OF THE SLOPE. THE ADDITIONAL DEPTH OF FOUNDATION NECESSARY TO MEET THESE REQUIREMENTS SHALL BE ADDED TO THE FORMED TOP. ALL REINFORCING STEEL SHALL BE LENGTHENED AS NEEDED.

A MINIMUM OF TWO CONDUIT ELLS, USED OR UNUSED, SHALL BE INSTALLED IN EACH POLE FOUNDATION.

PRIOR TO ORDERING THE SIGNAL SUPPORTS, THE CONTRACTOR SHALL CONTACT OUPS TO HAVE ALL THE UTILITIES LOCATED IN THE FIELD THEN MEET WITH THE PROJECT ENGINEER TO LOCATE THE PROPOSED SUPPORT LOCATIONS TO INSURE THERE ARE NO CONFLICTS WITH UTILITIES. IF THERE ARE ISSUES, THE PROJECT ENGINEER SHALL PROVIDE GUIDANCE AS TO THE RELOCATION OF THE SUPPORT POLES.

CONTRACTOR SHALL VACUUM EXCAVATE PROPOSED FOUNDATION LOCATIONS PRIOR TO ORDERING SIGNAL SUPPORT. EXCAVATIONS SHALL NOT BE LEFT OPEN OVERNIGHT.

PAYMENT SHALL BE AS PER ITEM 632.

ITEM 632, POWER SERVICE, AS PER PLAN

POWER FOR TRAFFIC SIGNALS SHALL BE OBTAINED FROM DUKE ENERGY AT THE LOCATION IDNDICATED ON THE PLANS. POWER SUPPLIED SHALL BE 120 VOLTS.

A DISCONNECT SWITCH ENCLOSURE SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH CMS ITEM 632 AND SHALL INCLUDE A PADLOCK EQUAL TO MASTER NO. 4BKA OR WILSON BOHANNON 660, WITH LOCK BODY OF BRONZE OR BRASS AND KEYING SHALL BE TO THE HAMILTON COUNTY MASTER.

PROVIDE AN AVAILABLE FAULT CURRENT SIGN ON THE OUTSIDE OF THE DISCONNECT SWITCH ENCLOSURE IN ACCORDANCE WITH THE 2011 NATIONAL ELECTRICAL CODE PARAGRAPH 110.24.

THE CONTRACTOR WILL BE RESPONSIBLE FOR REQUESTING AND SCHEDULING ANY INSPECTIONS THE POWER COMPANY MAY REQUIRE FOR THE POWER SERVICE HOOK UP. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT THE POWER COMPANY FOR THE ELECTRICAL SERVICE CONNECTION.

UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR SPLICE POWER CABLE INTO THE POWER COMPANY'S CIRCUITS. THE VOLTAGE SUPPLIED SHALL BE NOMINALLY 120 VOLTS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS AND THE PAYING OF ALL FEES. THE CONTRACTOR SHALL PAY ALL POWER CHARGES UNTIL THE SIGNAL IS ACCEPTED BY THE ENGINEER AND THE HAMILTON COUNTY ENGINEER'S OFFICE. THERE SHALL BE NO METER AT THE LOCATION AND THE CONTRACTOR IS RESPONSIBLE FOR SUPPLYING THE ELECTRICAL USAGE OF DEVICES ASSOCIATED WITH THE SIGNAL TO THE HAMILTON COUNTY ENGINEERS OFFICE.

ITEM 632, PEDESTAL, 11', TRANSFORMER BASE, AS PER PLAN
ITEM 632 PEDESTAL, MISC.: PEDESTAL, 19', TRANSFORMER BASE

PEDESTALS SHALL BE AS PER THE DETAILS IN THIS PLAN. ALL EXTERIOR SURFACES SHALL BE BARE UNCOATED ALUMINUM.

ALL SIGNAL CABLES SHALL BE RUN INSIDE THE POLES. STANDARD DRAWING TC-83.10 IS HEREBY MODIFIED TO PROHIBIT THE USE OF EXTERNAL CONDUIT RISERS FOR SIGNAL CABLING, OR ANY OTHER USE.

PARMENT SHALL BE AS PER ITEM 632.

ITEM 632, REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN

TRAFFIC SIGNAL INSTALLATIONS, INCLUDING SIGNAL HEADS, CABLE, MESSENGER WIRE, POLES, CABINET, CONTROLLER, ETC., SHALL BE REMOVED IN ACCORDANCE WITH CMS 632.26 AND AS INDICATED ON THE PLANS. REMOVED ITEMS SHALL BE DELIVERED TO THE OFFICE OF THE HAMILTON COUNTY ENGINEER AT 223 W. GALBRAITH ROAD, CINCINNATI, OHIO 45215 IN ACCORDANCE WITH THE ITEMS LISTED BELOW.

- VEHICULAR SIGNAL HEADS
- PEDESTRIAN SIGNAL HEADS
- PEDESTRIAN PUSHBUTTONS
- CONTROLLER/CABINET

IN THE EVENT THE ITEMS ARE NOT SALVAGED BY THE HAMILTON COUNTY ENGINEERS OFFICE THE CONTRACTOR SHALL, WHEN DIRECTED BY THE ENGINEER IN WRITING, REMOVE AND DISPOSE OF THE ITEMS AT NO ADDITIONAL COST TO THE PROJECT.

ITEM 633, CABINET, TYPE 332, AS PER PLAN
ITEM 809 ATC CONTROLLER, AS PER PLAN

THE CONTROLLER UNIT SHALL BE EQUIPMENT MANUFACTURED IN CONFORMANCE TO THE CALIFORNIA DEPARTMENT OF TRANSPORTATION (CAL TRANS) SPECIFICATIONS TITLES "TRANSPORTATION ELECTRICAL EQUIPMENT SPECIFICATIONS (TEES)." THE CONTROLLER UNIT, MODEL 2070LDX, SHALL BE COMPLIANT WITH THE MODEL 2070LDX MANUFACTURER AND BUILD AS PER THE TRAFFIC AUTHORIZED PRODUCTS (TAP) LIST.

THE MODEL 2070DX CONTROLLER UNIT SHALL INCLUDE THE FOLLOWING
1. UNIT CHASSIS
2. 2070-1C CPU MODULE WITH MAXTIME SOFTWARE
3. 2070-2A FIELD I/O MODULE
4. 2070-3B FRONT PANEL
5. 2070-4A OR 2070-4B POWER SUPPLY
6. 2070-7A SERIAL COMMUNICATION MODULE

THE CONTROLLER SHALL BE SUPPLIED WITH MICROWARE EMBEDDED OS-9 RELEASE 1.3 OR LATER WITH KERNEL EDITION #376 OR LATER, AS REQUIRED BY CALTRANS TEES. FOR WARRANTY PURPOSES, A VENDOR-SPECIFIC DECAL, AS PER ODOT C&MS 733.02 SHALL BE APPLIED TO EACH CONTROLLER UNIT AT TIME OF DELIVERY TO THE PROJECT. THE CABINET SHALL BE FURNISHED WITH A MMU AS ALLOWED ON THE TAP/APPROVED PRODUCTS LIST.

PROVIDE AN ARC FLASH HAZARD WARNING SIGN ON THE OUTSIDE FRONT DOOR OF THE ENCLOSURE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.

THE CONTRACTOR SHALL NOT REASSIGN THE CABINET DETECTOR INPUTS IN ORDER TO REDUCE THE NUMBER OF 2-CHANNEL DETECTOR UNITS SUPPLIED, BUT SHALL USE THE STANDARD CALTRANS INPUT FILE DESIGNATIONS.

ALTERNATE BID ITEM
ITEM 809 ATC CONTROLLER, AS PER PLAN (ECONOLITE) (ALTERNATE 1)
IN ADDITION TO THE REQUIREMENTS OF THE BASE BID ITEM, THE CONTROLLER SHALL BE COBALT TOUCH AS MANUFACTURED BY ECONOLITE. PAYMENT WILL BE AT THE CONTRACT UNIT PRICE FOR EACH, IN PLACE, ALL CONNECTIONS MADE AND WIRING COMPLETED, TESTED AND ACCEPTED.

ITEM 633 UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF C&MS 633 AND 733, A CABINET RISER (8-INCH MINIMUM) AND ANCHOR BOLTS SHALL BE PROVIDED FOR BASE-MOUNTED CABINETS. BEFORE PERFORMING THE WORK, THE CONTRACTOR, THE DISTRICT TRAFFIC ENGINEER, AND THE PROJECT ENGINEER WILL PERFORM A SITE INSPECTION TO ESTABLISH THE LOCATION OF THE UPS CABINET AND FOUNDATION.

THE UPS CABINET SHALL INCLUDE A GENERATOR POWER PANEL WITH A HEAVY-DUTY POWER RELAY VERSUS THE LINE VOLTAGE GENERATOR SWITCH. THE GENERATOR INLET SHALL BE A RECESSED PANEL WITH A DOOR THAT IS FLUSH WITH THE EXTERNAL SIDE OF THE UPS CABINET. IT SHALL INCLUDE A RECESSED PLUG, AUTOMATIC TRANSFER SWITCH AND A DOOR THAT SECURELY CLOSES OVER THE POWER CORD.

THE CABINET SHALL HAVE A DOOR STOP MECHANISM AND THERMOSTATICALLY CONTROLLED FAN.

THE CABINET SHALL INCLUDE A BATTERY BALANCING DEVICE THAT REGULATES THE BATTERIES AND OPTIMIZES PERFORMANCE.

THE ENCLOSURE SHALL HAVE SLIDING DRAWERS TO ALLOW EASY REMOVAL AND INSTALLATION OF BATTERIES AND ACCESS TO CABLE IN THE BOTTOM OF THE CABINET.
*FTER FOUR (4) HOURS OF BATTERY RUNTIME, THE SYSTEM SHALL BE PROGRAMMED TO SWITCH THE INTERSECTION FROM FULL OPERATION TO CONTROLLER AUTOMATIC FLASH OPERATION THROUGH THE MONITOR. THE CONTROLLER SHALL BE PROGRAMMED SO THAT FLASH OPERATION SHALL BEGIN ONCE THE INTERSECTION RUNS MINOR STREET GREEN (TYP. PH. 4 &8), ALL-RED CLEARANCE, AND THEN FLASH OPERATION.

THE UPS OUTPUT NOTIFICATIONS FOR ON BATTERY, BATTERY 2-HOUR TIMER, AND LOW BATTERY SHALL BE WIRED INTO THE TRAFFIC SIGNAL CABINET BACK PANEL OR THROUGH THE CONTROLLER WITH A C11 TO PROVIDE SPECIAL STATUS ALARMS FOR EACH OUTPUT INTO THE SIGNAL CONTROLLER.

THIS ITEM SHALL INCLUDE A RED LED STATUS INDICATOR LAMP TO ALLOW MAINTENANCE PERSONNEL AND LAW ENFORCEMENT TO QUICKLY ASSESS WHETHER A TRAFFIC SIGNAL CABINET IS BEING POWERED BY A UPS. THE LED HOUSING SHALL BE NEMA 4X, IP65 OR IP66, RATED FOR OUTDOOR USE AND BE TAMPER/ SHATTER RESISTANT. IT SHALL BE A DOMED ENCLOSURE CONTAINING A RED LENS WITH LED THAT IS VISIBLE FROM 100 FOOT MINIMUM. THE ENCLOSURE AND LED MODULE SHOULD BE PLACED ON THE SIDE OF THE UPS CABINET FACING TOWARDS THE MAINLINE ROADWAY AND SEALED FROM WATER INTRUSION. IT SHOULD BE WIRED USING MINIMUM 20GA STRANDED, INSULATED HOOKUP WIRE TO THE STATUS RELAY OUTPUTS OF THE UPS. THE WIRES SHALL BE TERMINATED BY LUGS AT THE DISPLAY END AND PERMANENTLY LABELED "BACKUP POWER STATUS DISPLAY," WITH WIRE POLARITY INDICATED. THE RED LED SHALL ONLY ILLUMINATE TO INDICATE THE CABINET IS OPERATING UNDER UPS BACKUP POWER (THE "BACKUP" OPERATING CONDITION). THIS ITEM INCLUDES PROGRAMMING THE UPS STATUS RELAY OUTPUTS TO PRODUCE THE LAMP STATUS DISPLAYS. THESE STATUS DISPLAYS WILL BE SOLID 100% DUTY CYCLE (NOT FLASHING) DISPLAYS. THE OPERATING VOLTAGE OF THE LED LAMP SHALL BE 48V AC UNLESS OTHERWISE INDICATED.

ITEM 809 STOP-LINE RADAR DETECTION, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING A WAVETRONIX SMARTSENSOR MATRIX DETECTION UNIT. THE DETECTION UNIT SHALL INCLUDE THE FOLLOWING:

1. POWER SHALL BE PROVIDED FROM THE TRAFFIC CABINET.
2. ALL REQUIRED INPUTS CARDS SHALL BE INCLUDED IN THE TRAFFIC CABINET AND SHALL BE COMPATIBLE WITH CALTRANS, NEMA TS1 AND NEMA TS2 DETECTOR RACKS. THE CARDS SHALL PROVIDE TRUE PRESENCE DETECTOR CALLS OR CONTACT CLOSURE TO THE TRAFFIC CONTROLLER.

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3. THE UNIT SHALL BE MOUNTED DIRECTLY TO A POLE OR MAST ARM, AS RECOMMENDED BY THE MANUFACTURER. CABLE(S) SHALL BE PROVIDED AS REQUIRED AND RECOMMENDED BY THE MANUFACTURER.
4. SURGE PROTECTION DEVICES, AS RECOMMENDED BY THE MANUFACTURER SHALL BE INCLUDED BOTH AT THE POLE WHERE THE UNIT IS LOCATED TO PROTECT THE UNIT AND IN THE TRAFFIC CABINET TO PROTECT THE CABINET ELECTRONICS.
5. THE MANUFACTURER'S REPRESENTATIVE SHALL BE ON SITE DURING INSTALLATION AND TESTING AND SHALL PROVIDE ONSITE TRAINING ON THE SETUP, OPERATION AND MAINTENANCE OF THE UNIT.
6. A SERIAL TO ETHERNET COMMUNICATIONS MODULE AND ETHERNET CABLE (MINIMUM 7 FEET).
7. THE POWER SUPPLY AND COMMUNICATION MODULES SHALL BE SECURED TO A SINGLE PANEL THAT CAN BE MOUNTED INTERIOR TO THE TRAFFIC CABINET. THE PANEL SHALL INCLUDE MODULAR-PLUG STYLE CONNECTIONS FOR UP TO FOUR (4) SENSOR CABLES. ADDITIONAL SENSORS MAY BE HARD-WIRED TO THE COMMUNICATION MODULES, AS NECESSARY.
8. THE CONTRACTOR SHALL INSTALL THE RADAR DETECTION PRIOR TO MILLING/DISABLING EXISTING LOOPS.
9. THE INSTALLATION SHALL INCLUDE ALL CONTROLLER PROGRAMMING FOR COMPLETE INSTALLATION, WHICH INCLUDES MODIFICATIONS FOR REMOVAL OF EXISTING DETECTION.

PAYMENT FOR ITEM 809 STOP-LINE RADAR DETECTION, AS PER PLAN SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH UNIT, COMPLETE AND IN PLACE INCLUDING ALL REQUIRED CABINET HARDWARE, MOUNTING BRACKETS, CABLES, MESSENGER WIRE DELASHING/RELASHING, CONDUIT AND CONNECTIONS TESTED AND ACCEPTED.

ALTERNATE BID ITEM

ITEM 809 ATC CONTROLLER, AS PER PLAN (ECONOLITE) (ALTERNATE 2)

IN ADDITION TO THE REQUIREMENTS OF THE BASE BID ITEM, THE CONTROLLER SHALL BE COBALT TOUCH AS MANUFACTURED BY ECONOLITE. PAYMENT WILL BE AT THE CONTRACT UNIT PRICE FOR EACH, IN PLACE, ALL CONNECTIONS MADE AND WIRING COMPLETED, TESTED AND ACCEPTED.

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TRAFFIC SIGNAL GENERAL NOTES

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SHEET NUMBER						PARTICIPATION		ITEM	ITEM EXT.	TOTAL (CARRIED TO GENERAL SUMMARY)	UNIT	DESCRIPTION	SEE SHEET NO.
	1179		1182	1183	1184								
	325							625	25408	325	FT	CONDUIT, 2", 725.051	
	6							625	25504	6	FT	CONDUIT, 3", 725.051	
	96							625	25902	96	FT	CONDUIT, JACKED OR DRILLED, 725.04, 3"	
	166							625	29000	166	FT	TRENCH	
	3							625	30706	3	EACH	PULL BOX, 725.08, 24"	
	6							625	32000	6	EACH	GROUND ROD	
	166							625	36010	166	FT	UNDERGROUND WARNING/MARKING TAPE	
	28							630	02100	28	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
	6							630	79100	6	EACH	SIGN HANGER ASSEMBLY, MAST ARM	
	2							630	79500	2	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	
	9							630	80100	9	SF	SIGN, FLAT SHEET	
	3							630	80510	3	EACH	SIGN, STREET NAME	
	6							632	05007	6	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	1175
	1							632	05087	1	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	1175
	2							632	20731	2	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN	1175
	7							632	25000	7	EACH	COVERING OF VEHICULAR SIGNAL HEAD	
	2							632	25010	2	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD	
	2							632	26001	2	EACH	PEDESTRIAN PUSHBUTTON, AS PER PLAN	1175
	716							632	40700	716	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
	2							632	64011	2	EACH	SIGNAL SUPPORT FOUNDATION, AS PER PLAN	1176
	2							632	64021	2	EACH	PEDESTAL FOUNDATION, AS PER PLAN	1176
	246							632	65200	246	FT	LOOP DETECTOR LEAD-IN CABLE	
	62							632	68200	62	FT	POWER CABLE, 2 CONDUCTOR, NO. 6 AWG	
	119							632	69800	119	FT	SERVICE CABLE, 3 CONDUCTOR, NO. 6 AWG	
	1							632	70001	1	EACH	POWER SERVICE, AS PER PLAN	1176
	1							632	72111	1	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 4, AS PER PLAN	1175
	1							632	72421	1	EACH	SIGNAL SUPPORT, TYPE TC-81.22 DESIGN 12 POLE, WITH MAST ARMS TC-81.22 DESIGN 4 AND DESIGN 2, AS PER PLAN	1175
	1							632	90001	1	EACH	PEDESTAL, 11', TRANSFORMER BASE, AS PER PLAN	1176
	1							632	90010	1	EACH	PEDESTAL, MISC.: PEDESTAL, 19', TRANSFORMER BASE	1176
	1							632	90101	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	1176
	1							633	65521	1	EACH	CABINET, TYPE 332, AS PER PLAN	1176
	1							633	67100	1	EACH	CABINET FOUNDATION	
	1							633	67200	1	EACH	CONTROLLER WORK PAD	
	1							633	75001	1	EACH	UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN	1176
	3		1	1	1			809	69101	6	EACH	STOP LINE RADAR DETECTION, AS PER PLAN	1176
												ALTERNATE BID ITEM	
	1							809	69123	1	EACH	ATC CONTROLLER, AS PER PLAN (ALTERNATE 1)	1176
	1							809	69123	1	EACH	ATC CONTROLLER, AS PER PLAN (ECONOLITE) (ALTERNATE 2)	1177

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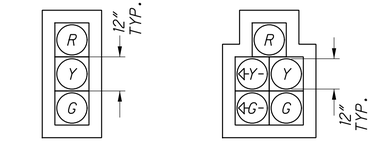
TRAFFIC SIGNAL SUBSUMMARY

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PROPOSED SIGNAL HEAD (12" WITH BACKPLATE)



HEADS
1, 2, 3, 5, 6 & 7

HEAD
4

PROPOSED PEDESTRIAN SIGNAL HEADS



N

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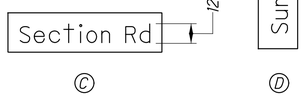


SIGN PLACED W/
EACH PUSHBUTTON
FOR NORTH CROSSSWALK

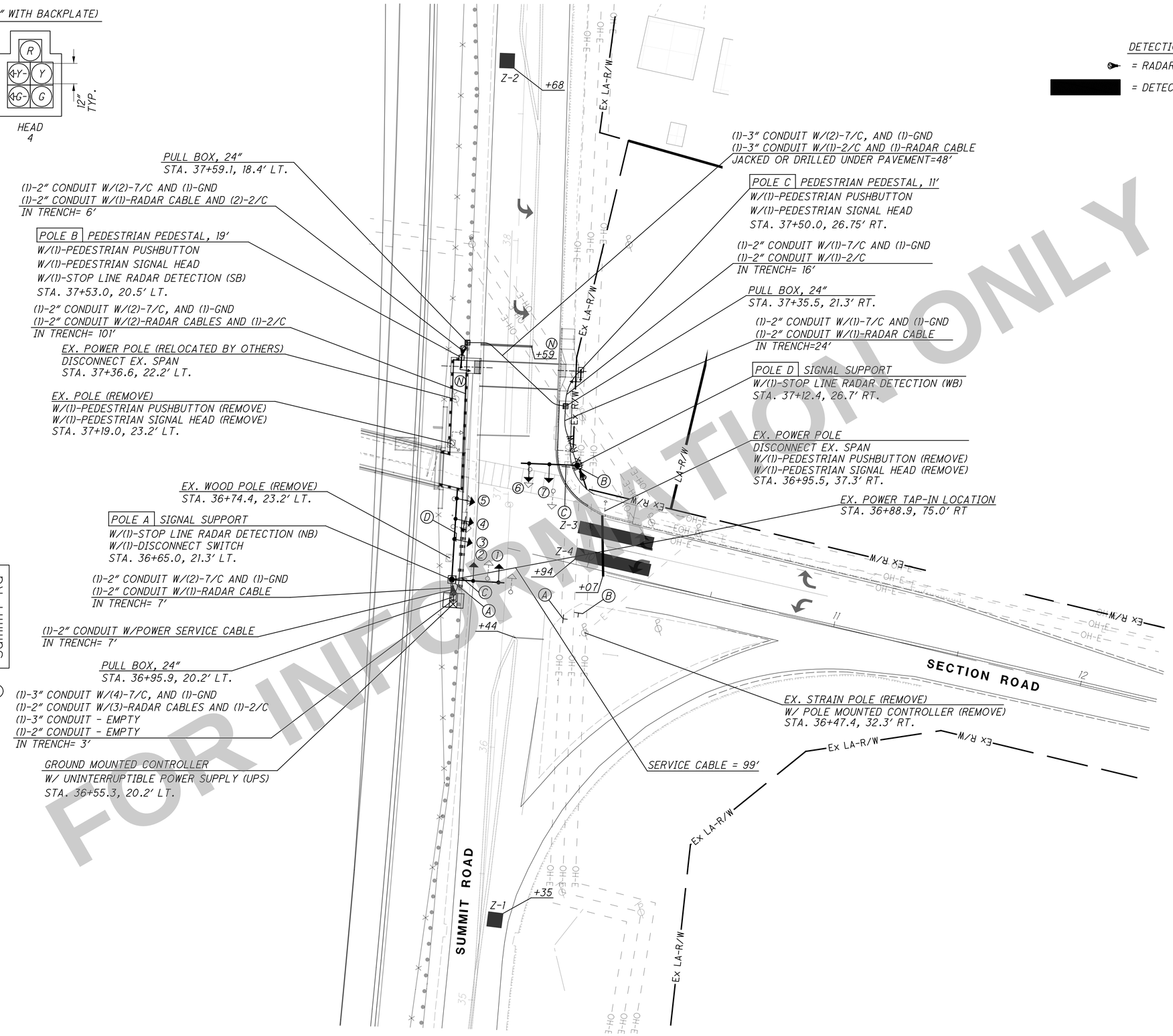


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TRAFFIC SIGNAL PLAN
SUMMIT RD AND SECTION RD

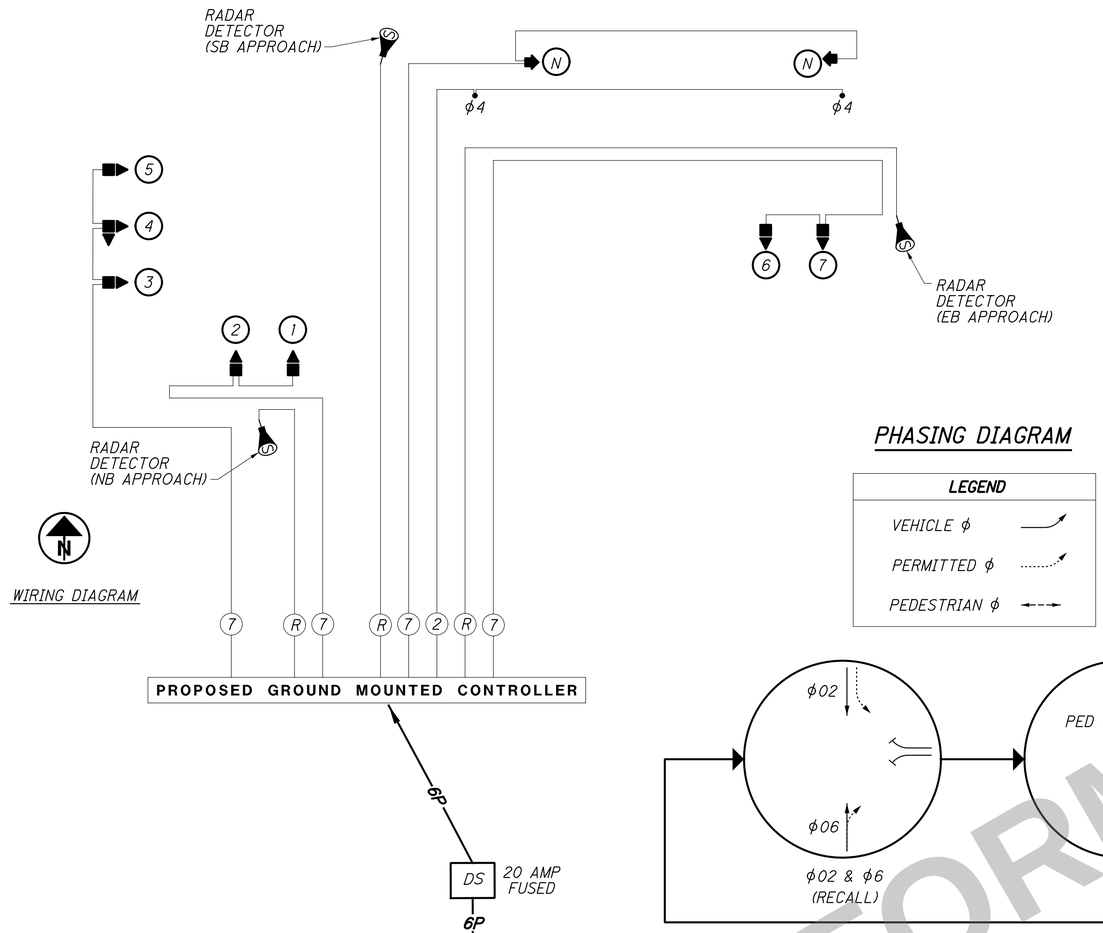
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HORIZONTAL SCALE IN FEET
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PHASING DIAGRAM

WIRING DIAGRAM LEGEND

- RADAR DETECTION CABLE
- SIGNAL CABLE #14 AWG NO.= QUANTITY OF CONDUCTORS
- VEHICULAR SIGNAL HEAD
- PEDESTRIAN SIGNAL HEAD
- PEDESTRIAN PUSH BUTTON
- STOP-LINE RADAR DETECTION UNIT
- 6P — 2/C #6 AWG
- DS — DISCONNECT SWITCH
- POWER TAP-IN

FIELD WIRING HOOK-UP CHART

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH	SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
1 (SB)	R	ϕ2 R	R	5 (WB)	R	ϕ4 R	R
	Y	ϕ2 Y			Y	ϕ4 Y	
	G	ϕ2 G			G	ϕ4 G	
2 (SB)	R	ϕ2 R	R	6 (NB)	R	ϕ6 R	R
	Y	ϕ2 Y			Y	ϕ6 Y	
	G	ϕ2 G			G	ϕ6 G	
3 (WB)	R	ϕ4 R	R	7 (NB)	R	ϕ6 R	R
	Y	ϕ4 Y			Y	ϕ6 Y	
	G	ϕ4 G			G	ϕ6 G	
4 (WB)	R	ϕ4 R	R	PEDESTRIAN MOVEMENTS			
	Y	ϕ4 Y		N	W	ϕ4 PED/LS 10G	OUT
	G	ϕ4 G			DW	ϕ4 PED/LS 10R	
LS = LOAD SWITCH							

SIGNAL TIMING CHART

INTERSECTION: SUMMIT RD AND SECTION RD
MAINTAINING AGENCY: HAMILTON COUNTY ENGINEER'S OFFICE

START UP
START IN: YELLOW/RED FLASH
TIME FOR FLASH OR ALL RED: 5
FIRST PHASE(S): 2 & 6
COLOR DISPLAYED: GREEN

DUAL ENTRY: YES — PHASES: 2 & 6
REST IN RED: RING 1 - RING 2 -

	A	B	C	D
OVERLAP				
PHASES	-	-	-	-

INTERVAL OR FEATURE	CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)	1	2	3	4	5	6	7	8
DIRECTION	-	SB	-	WB	-	NB	-	-
MINIMUM GREEN (INITIAL) (SEC.)	-	15	-	8	-	15	-	-
ADDED INITIAL *(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL (SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP) (SEC.)	-	3.0	-	3.0	-	3.0	-	-
TIME BEFORE REDUCTION *(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP *(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE *(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I (SEC.)	-	40	-	20	-	40	-	-
MAXIMUM GREEN II (SEC.)	-	40	-	20	-	40	-	-
YELLOW CHANGE (SEC.)	-	4.1	-	3.6	-	4.1	-	-
ALL RED CLEARANCE (SEC.)	-	1.0	-	1.4	-	1.0	-	-
DELAYED GREEN (LPI) # (SEC.)	-	-	-	3	-	-	-	-
WALK (SEC.)	-	-	-	8	-	-	-	-
PEDESTRIAN CLEARANCE (SEC.)	-	-	-	6	-	-	-	-
RECALL MAXIMUM (ON/OFF)	-	OFF	-	OFF	-	OFF	-	-
RECALL MINIMUM (ON/OFF)	-	ON	-	OFF	-	ON	-	-
RECALL PEDESTRIAN (ON/OFF)	-	ON	-	OFF	-	ON	-	-
MEMORY (ON/OFF)	-	LOCK	-	NON-LOCK	-	LOCK	-	-

*VOLUME DENSITY CONTROLS

NOTES:

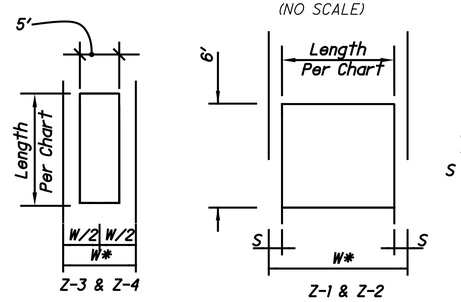
- COUNTDOWN PEDESTRIAN SIGNALS SHALL GO TO ZERO ON YELLOW PER OMUTCD FIGURE 4E-2.
- ALL DETECTOR DELAYS SHALL BE PLACED IN THE CONTROLLER.

RADAR DETECTION CHART

DETECTION ZONE	MOVEMENT	WIDTH	DELAY PROGRAMMED IN CONTROLLER (SEC)	EXTENSION PROGRAMMED IN CONTROLLER (SEC)	DETECTOR NUMBER	PURPOSE	DETECTION ZONE LENGTH (FT)
Z1	NB	6'	-	-	1	EXTENSION	6
Z2	SB	6'	-	-	2	EXTENSION	6
Z3	WB RT	5'	10	-	3	PRESENCE	30
Z4	WB LT	5'	3	-	4	PRESENCE	30

VEHICLE DETECTOR DETAILS

(NO SCALE)



* LANE WIDTH DOES NOT INCLUDE WIDTH OF CURB AND GUTTER.
S = SPACE ON EACH SIDE OF DETECTOR SHALL BE EQUAL.

FOR INFORMATION ONLY

CALCULATED MSJ CHECKED JDS

TRAFFIC SIGNAL DETAILS
SUMMIT RD AND SECTION RD

HAM-75-7.85

1180 2017

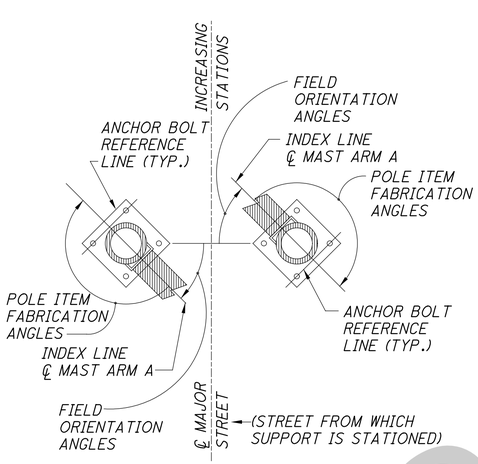
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INTER-SECTION	SHEET NO.	SUPPORT DESIGNATION	POLE DESIGN NO.	POLE HT. (FT.)	ARM LENGTH A (FT.)	ARM LENGTH B (FT.)	OBJECT ATTACHMENT HEIGHT MAST ARM A	OBJECT ATTACHMENT HEIGHT MAST ARM B	DISTANCE FROM BUTT PLATE (FT.) MAST ARM A S1	MAST ARM A L1	MAST ARM A L2	MAST ARM A L3	MAST ARM B S1	MAST ARM B L1	MAST ARM B L2	POLE FABRICATION DATA-CLOCKWISE FROM MAST ARM A AT 0 DEGREES ANCHOR BOLT REFERENCE LINE	PED. SIGNALS	PED. PUSH BUTTON	HANDHOLE	FIELD ORIENTATION INDEX LINE ANGLE MAST ARM A	INDEX LINE ANGLE MAST ARM B	ANCHOR BOLT REF. LINE	ELEVATION A	ELEVATION B TOP OF FOUNDATION
	1179	A (TC-81.22)	ODOT 12	22.5′	35′	21.5′	19.0′ (DES. 4)	21.0′ (DES. 2)	10′	16′	24′	32′	5.5′	8.5′	18.5′	90°	-	-	180°	270°	0°	0°	565.39	565.54
SUMMIT RD AT SECTION RD	1179	B (PEDESTAL)	DETAIL	19′	-	-	-	-	-	-	-	-	-	-	-	90°	90°	90°	180°	0° **	-	90°	-	*
	1179	C (PEDESTAL)	DETAIL	11′	-	-	-	-	-	-	-	-	-	-	-	90°	270°	270°	180°	0° **	-	90°	-	*
	1179	D (TC-81.22)	ODOT 4	21.5′	22′	-	20.0′	-	6′	11′	19′	-	-	-	-	90°	-	-	180°	0°	-	90°	565.64	565.86*

* FOUNDATION SHALL BE FLUSH WITH WALK - SEE CURB RAMP DETAIL SHEETS
** PEDESTAL HAS NO ARM, ANGLE FOR REFERENCE ONLY.

LEGEND

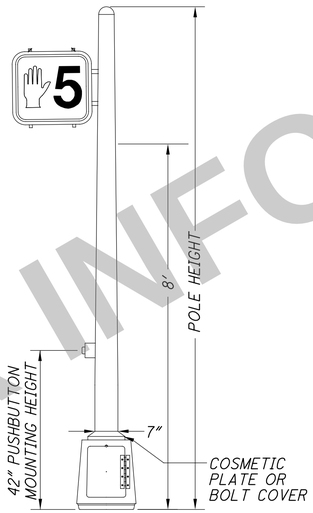
L1 = SIGNAL HEAD LOCATION
S1 = STREET NAME SIGN LOCATION



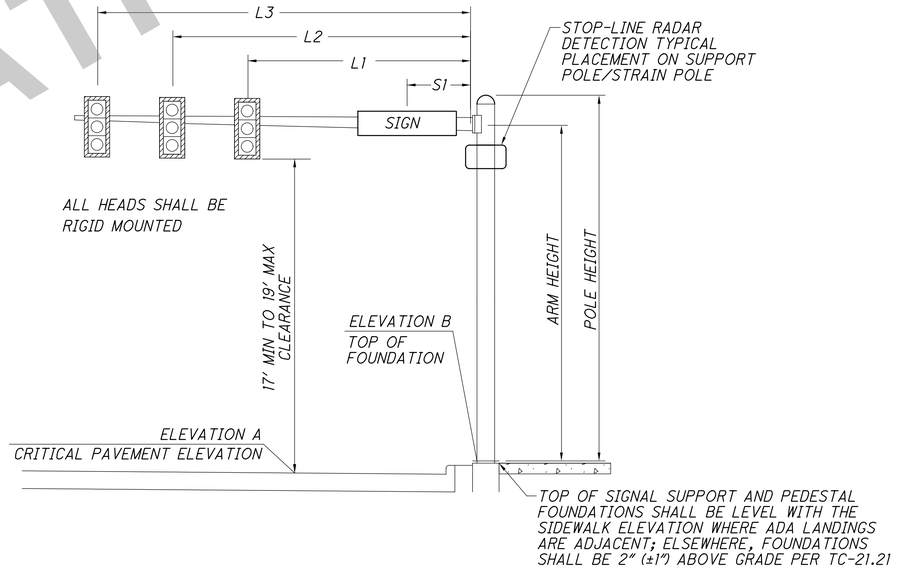
ALL ANGLES MEASURED CLOCKWISE.

BASE PLATE IS ORIENTATED SQUARE TO MAST ARM A. MAST ARM A IS THE LARGEST ARM IF THE SUPPORT HAS TWO MAST ARMS.

TYPICAL SIGNAL SUPPORT ORIENTATION DETAIL
NOT TO SCALE



PEDESTAL, TRANSFORMER BASE
NOT TO SCALE



TYPICAL SIGNAL ELEVATION DETAIL
NOT TO SCALE

FOR INFORMATION ONLY

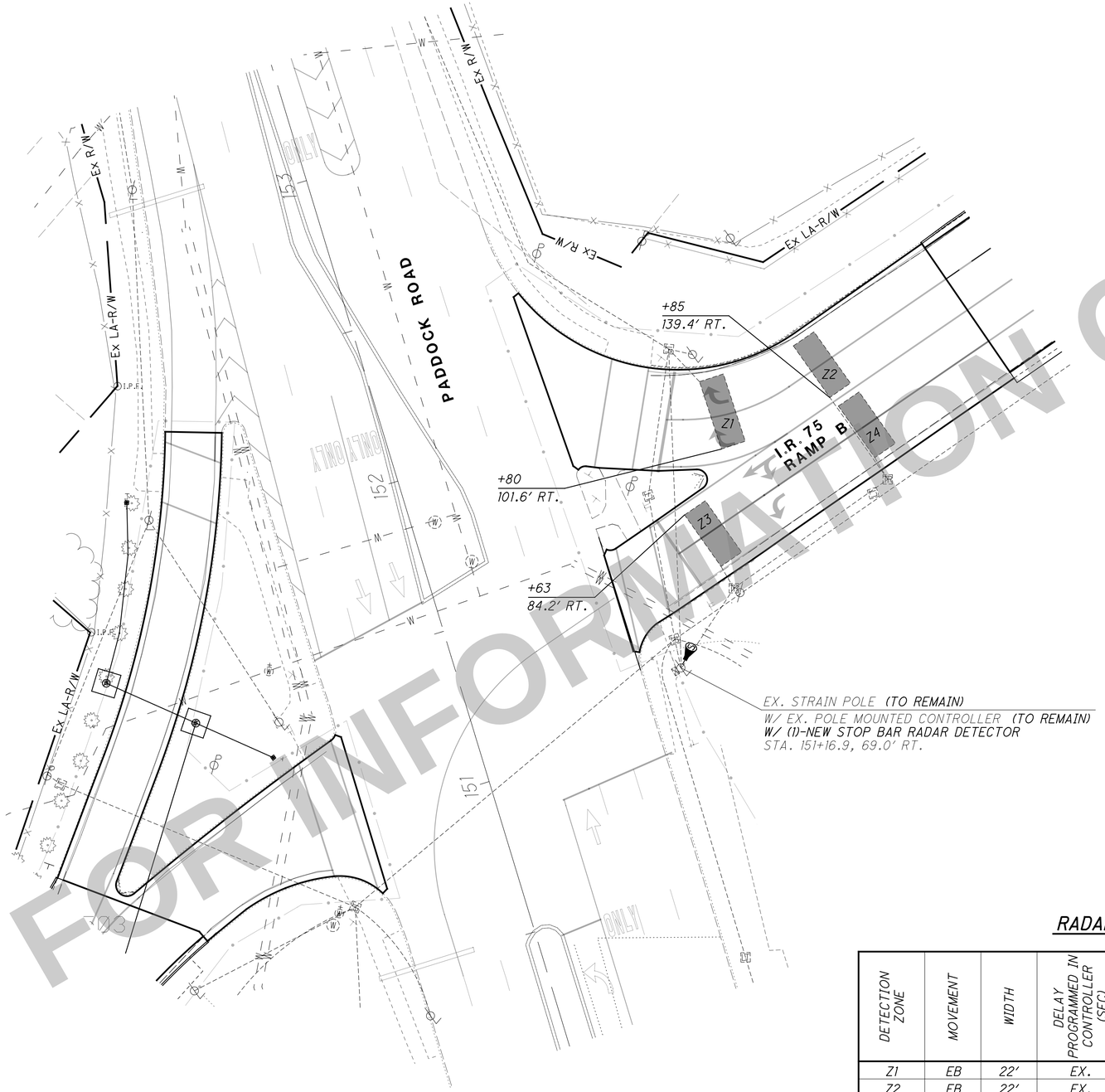
CALCULATED MSJ CHECKED JDS

TRAFFIC SIGNAL DETAILS
SUMMIT RD AND SECTION RD

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1181
2017

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FOR INFORMATION ONLY

RADAR DETECTION CHART

DETECTION ZONE	MOVEMENT	WIDTH	DELAY PROGRAMMED IN CONTROLLER (SEC)	EXTENSION PROGRAMMED IN CONTROLLER (SEC)	DETECTOR NUMBER	PURPOSE	DETECTION ZONE LENGTH (FT)
Z1	EB	22'	EX.	EX.	1	PRESENCE	8
Z2	EB	22'	EX.	EX.	2	EXTENSION	8
Z3	EB	22'	EX.	EX.	3	PRESENCE	8
Z4	EB	22'	EX.	EX.	4	EXTENSION	8

HORIZONTAL SCALE IN FEET
0 10 20 40

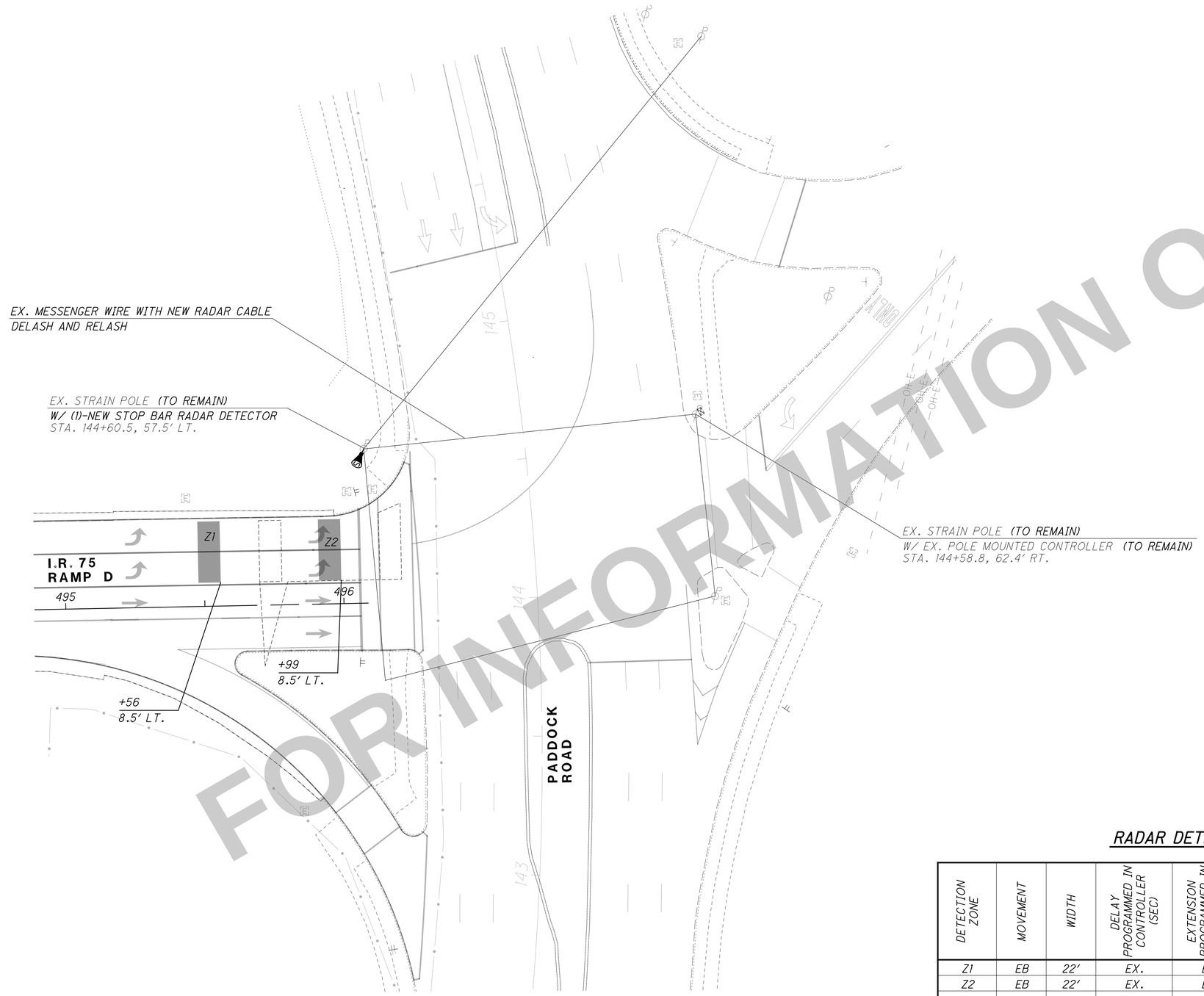
CALCULATED MSJ
CHECKED JDS

TRAFFIC SIGNAL PLAN
LOOP DETECTOR REPLACEMENTS

HAM-75-7.85

1182
2017

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FOR INFORMATION ONLY

RADAR DETECTION CHART

DETECTION ZONE	MOVEMENT	WIDTH	DELAY PROGRAMMED IN CONTROLLER (SEC)	EXTENSION PROGRAMMED IN CONTROLLER (SEC)	DETECTOR NUMBER	PURPOSE	DETECTION ZONE LENGTH (FT)
Z1	EB	22'	EX.	EX.	4	EXTENSION	8
Z2	EB	22'	EX.	EX.	4	PRESENCE	8

HORIZONTAL SCALE IN FEET
0 10 20 40

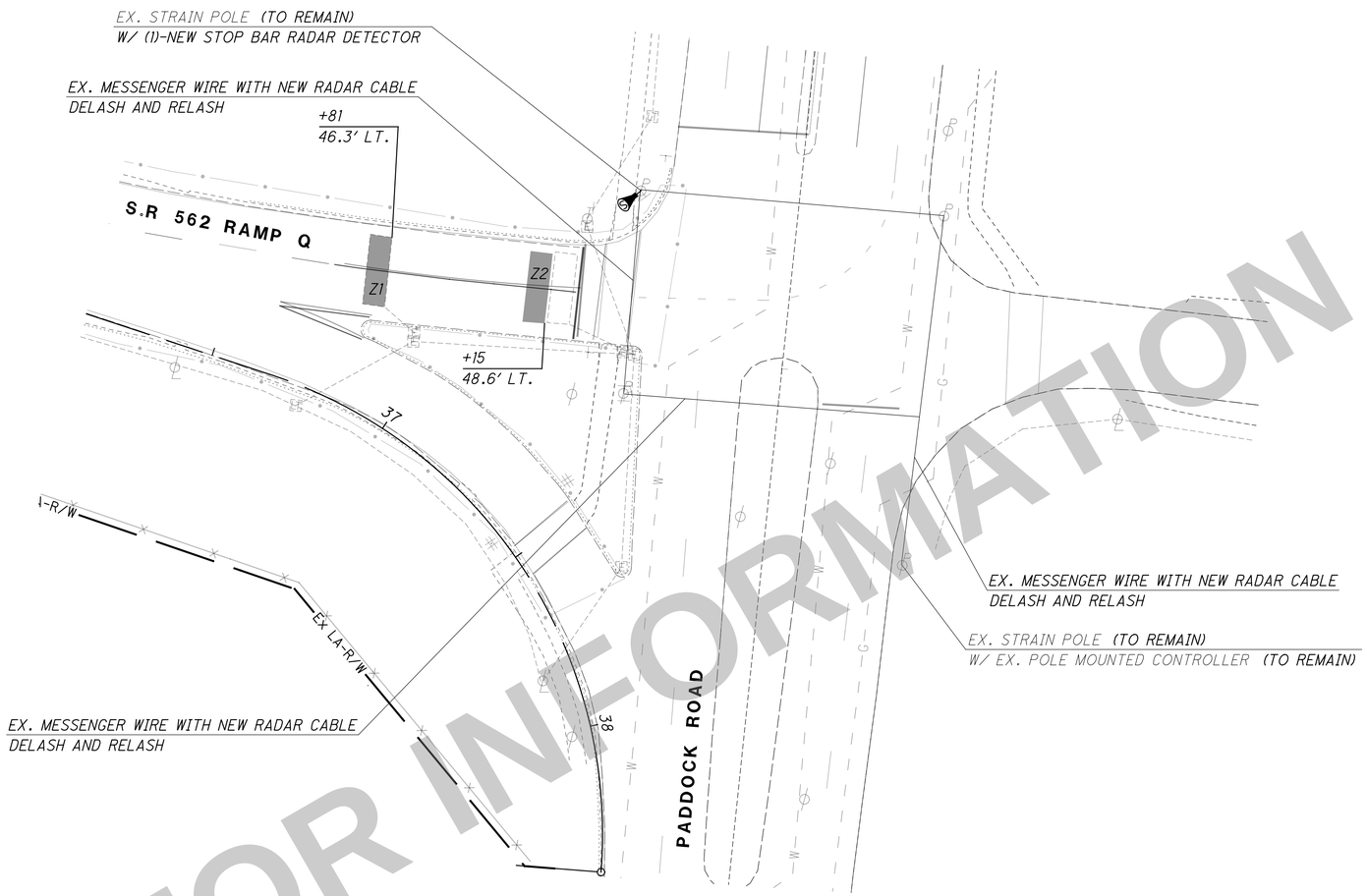
CALCULATED MSJ
CHECKED JDS

TRAFFIC SIGNAL PLAN
LOOP DETECTOR REPLACEMENTS

HAM-75-7.85

1183
2017

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FOR INFORMATION ONLY

RADAR DETECTION CHART

DETECTION ZONE	MOVEMENT	WIDTH	DELAY PROGRAMMED IN CONTROLLER (SEC)	EXTENSION PROGRAMMED IN CONTROLLER (SEC)	DETECTOR NUMBER	PURPOSE	DETECTION ZONE LENGTH (FT)
Z1	EB	22'	EX.	EX.	1	EXTENSION	8
Z2	EB	22'	EX.	EX.	2	PRESENCE	8

N

0 10 20 40
HORIZONTAL SCALE IN FEET

CALCULATED MSJ
CHECKED JDS

TRAFFIC SIGNAL PLAN
LOOP DETECTOR REPLACEMENTS

HAM-75-7.85

1184
2017

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GENERAL

THESE SPECIFICATIONS, TOGETHER WITH THE ACCOMPANYING PLANS ARE INTENDED TO DESCRIBE THE TYPE, SIZE, AND LOCATION OF THE PRODUCTS AND MATERIALS TO BE PROVIDED AND INSTALLED UNDER THE VARIOUS BID ITEMS RELATED TO ITS. THE CONTRACTOR SHALL FURNISH AND INSTALL ITS DEVICES AND RELATED MATERIALS IN COMPLIANCE WITH THESE PLANS AND SPECIFICATIONS, AS WELL AS:

- 2019 OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS
- STANDARD CONSTRUCTION DRAWINGS ISSUED BY THE OHIO DEPARTMENT OF TRANSPORTATION

THESE SPECIFICATIONS SET FORTH THE MINIMUM PERFORMANCE AND OPERATING REQUIREMENTS OF THE ITS ITEMS REFERRED TO HEREIN.

ANY WORK INVOLVING RELOCATING OR NEW ITS EQUIPMENT (CCTV, DMS, RAMP METERS, SFRVD) NEEDS TO BE COORDINATED WITH ODOT OFFICE OF TRAFFIC OPERATIONS/ITS SECTION AT LEAST 10 WORKING DAYS PRIOR. THE CONTRACTOR SHALL SUBMIT TWO (2) COMPLETE SETS OF CATALOG CUTS, DIAGRAMS, BROCHURES, OR OTHER DESCRIPTIVE DATA FOR THE ITEMS HE INTENDS TO FURNISH FOR THE ITS EQUIPMENT AND RAMP METER EQUIPMENT AT THE PRECONSTRUCTION MEETING.
ONE SET IS FOR THE PROJECT ENGINEER AND ONE SET IS TO BE SENT TO THE ODOT OFFICE OF TRAFFIC ENGINEERING, SIGNAL AND ITS SECTION, FOR APPROVAL PRIOR TO ANY EQUIPMENT BEING ORDERED.

UTILITY NOTIFICATION

THE OHIO DEPARTMENT OF TRANSPORTATION HAS UTILITY FACILITIES (HIGHWAY LIGHTING, TRAFFIC SIGNALS, ITS) WITHIN THE LIMITS OF THIS PROJECT. EVEN THOUGH ODOT IS LISTED AS A MEMBER OF THE OHIO UTILITIES PROTECTION SERVIES (OUPS), THE CONTRACTOR ON THIS PROJECT IS REQUIRED TO CONTACT ODOT, DISTRICT 8, TRAFFIC DEPARTMENT, AND ITS DIRECTLY SO THAT THE ODOT UTILITIES LOCATED WITHIN THIS PROJECT ARE MARKED.

THE CONTRACTOR SHALL NOTIFY DISTRICT 8, TRAFFIC AT (513) 933-6689, ITS AT (513) 564-6118, AND THE PROJECT ENGINEER, FOURTEEN (14) CALENDAR DAYS IN ADVANCE OF ANY WORK, FOR THE NEED TO MARK ODOT OWNED UTILITIES.

ODOT ITS LAB
1606 W BROAD ST
COLUMBUS, OH 43223
614-387-4113
cen.its.lab@dot.ohio.gov

THE ABOVE REQUIREMENTS ARE IN ADDITION TO SECTIONS 105.07 & 107.16 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (CMS).

THE CONTRACTOR SHALL NOTIFY OTHER UTILITIES THROUGH OUPS OR DIRECTLY A MINIMUM OF 48 HOURS IN ADVANCE OF ANY WORK.

THE COST FOR THE ABOVE DESCRIBED WORK IS INCIDENTAL TO THE OVERALL BID PRICE OF THE PROJECT.

ITS DOWNTIME

DOWNTIME SHALL BE PER THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION 809, EXCEPT AS NOTED BELOW.

DYNAMIC MESSAGE SIGNS (DMS):
EXTENDED DOWNTIME IS ANTICIPATED FOR BOTH DYNAMIC MESSAGE SIGNS DUE TO CONSTRUCTION SEQUENCING. SOUTHBOUND DMS #15 MAY BE REMOVED IN CONSTRUCTION PHASE 1 AND SHALL BE FULLY OPERATIONAL ON THE NEW TRUSS SUPPORT ONCE CONSTRUCTION PHASE 2 IS COMPLETED. NORTHBOUND DMS #12 MAY BE REMOVED IN CONSTRUCTION PHASE 2 AND SHALL BE FULLY OPERATIONAL ON THE NEW TRUSS SUPPORT ONCE ALL ROADWAY CONSTRUCTION IS COMPLETE. ANY ADDITIONAL DOWNTIME BEYOND WHAT IS SPECIFIED SHALL BE DISINCENTIVIZED AS GIVEN BELOW.
DISINCENTIVE: $400/DAY OR $17/HOUR - BEGINNING AFTER THE ALLOWABLE DOWNTIME.

ITEM 809 CONDUIT, MULTICELL, MISC.: 2" HDPE WITH 4-14MM/10MM INNERDUCTS
ITEM 809 CONDUIT, MULTICELL, MISC.: 2" HDPE WITH 4-14MM/10MM INNERDUCTS, JACKED OR DRILLED

FURNISH AND INSTALL 2" HDPE MULTICELL CONDUIT IN THE MEDIAN BARRIER WALL AND LATERAL CROSSINGS TO ITS DEVICES. THE OUTER DUCT SHALL BE 2" NOMINAL SIZE, SCHEDULE 40, AND PER CMS 725.052. THE 2" OUTER DUCT SHALL BE SCHEDULE 80 WHEN INSTALLED UNDER THE ROADWAY. THE OUTER DUCT SHALL BE ONE CONTINUOUS PIECE FROM JUNCTION BOX TO JUNCTION BOX IN THE BARRIER WALL AND BETWEEN PULL BOXES IN THE GROUND.

FURNISH AND INSTALL 4-14MM/10MM MICRODUCTS, FROM THE DEPARTMENTS TRAFFIC AUTHORIZED PRODUCTS (TAP) LIST PER SUPPLEMENTAL SPECIFICATION 904.03, INSIDE THE 2" OUTER DUCT. THE INNERDUCTS SHALL BE CONTINUOUS FROM A PULL BOX NEXT TO AN ITS CABINET TO ANOTHER PULL NEXT TO AN ITS CABINET.

INSTALLATION WITHIN 6 FEET OF GUARDRAIL WILL BE AT LEAST 30 INCHES DEEP TRENCH AND ENCASED IN CONCRETE.

WHEN ENTERING A PULL BOX, OUTER DUCT SHALL BE BROUGHT IN 3 INCHES. THE INNERDUCTS SHALL BE CONTINOUS STRAIGHT THROUGH PULL BOXES UNLESS THEY ARE NEXT TO ITS CABINETS, IN WHICH CASE THE INNERDUCTS SHALL EXTEND 3 INCHES PAST THE EDGE OF THE OUTER DUCT TO ACCOMMODATE THE ATTACHMENT OF JETTING MACHINES FOR FIBER INSTALLATION. UNLESS OTHERWISE DIRECTED BY THE ITS ENGINEER. INNERDUCTS SHALL BE CAPPED IN PULL BOXES PER MANUFACTURERS RECOMENDATIONS.

FOR LATERAL CROSSINGS UNDER THE ROADWAY FROM A JUNCTION BOX WHERE THE BACKBONE CABLING IS INTENDED TO CROSS TO AN ITS DEVICE AND THEN RETURN TO THE MEDIAN BARRIER WALL, THERE SHALL BE 2 -2" HDPE OUTER DUCTS INSTALLED EACH WITH 4-14MM/10MM INNERDUCTS. THE INNERDUCTS SHALL BE CONTINUOUS THROUGH THE JUNCTION BOX IN THE MEDIAN BARRIER WALL FROM EACH DIRECTION AND PROCEED UNDER THE ROADWAY. THE 2 -2" HDPE OUTER DUCTS WITH 4 INNDERCUTS SHALL CONTINUE THROUGH ADDITIONAL PULL BOXES UNTIL THEY REACH THE LOCATION OF SPLICE ENCLOSURE.
METHOD OF MEASUREMENT

THE CONDUIT WILL BE MEASURED BY THE AMOUNT OF CONDUIT IN FEET FURNISHED AND INSTALLED FROM CENTER TO CENTER OF PULL BOXES, FOUNDATION, ETC., AND WILL INCLUDE ALL FITTING AND APPURTENANCES, JOINTS, BENDS, GROUNDS, CONCRETE ENCASEMENT, AND EXPANSION FITTINGS AT BRIDGES WHERE SPECIFIED.
BASIS OF PAYMENT

THE PAYMENT FOR THESE ITEMS WILL BE MADE FOR THE ACCEPTED LINEAR FOOT QUANTITIES AT THE CONTRACT BID PRICE.

ITEM 809 CONDUIT, MULTICELL, MISC.: 4" HDPE
ITEM 809 CONDUIT, MULTICELL, MISC.: 4" HDPE, JACKED OR DRILLED

DESCRIPTION
THIS CONDUIT IS INTENDED FOR USE IN UNDERGROUND OR ENCASED INSIDE CONCRETE BARRIER WALL SITUATIONS REQUIRING MORE THAN ONE SINGLE CONDUIT. THIS INCLUDES THE MAIN CONDUIT RACEWAY ALONG THE FREEWAY, CONNECTION FROM PULL BOXES TO THE ROADSIDE CABINETS AND FOR RUNS OF CONDUIT FOR MULTIPLE PURPOSES, E.G., AT RAMP METER INSTALLATIONS, FOR LFOR LOOP LEAD-IN CABLE, SIGNALS CABLE FOR RAMP METER DISPLAYS, SIGNAL CABLE FOR RAMP METER SIGNING FLASHERS & ILLUMINATION AND POWER.

THE CONTRACTOR SHALL PLUG ALL UNUSED CELLS WITH CONDUIT CAPS TO ASSURE AIR AND WATER INTEGRITY OF EACH INDIVIDUAL INNERDUCT.

MATERIALS
THE TRAFFIC SURVEILLANCE RACEWAY SHALL CONSIST OF A FACTORY-ASSEMBLED SYSTEM OF FOUR (4) INNERDUCTS ASSEMBLED WITHIN A PROTECTIVE OUTER DUCT. THE CONDUIT SHALL ADHERE TO 725.20 AND BE POLYVINYL CHLORIDE (PVC) SCHEDULE 40 OR 80, HIGH DENSITY POLYETHYLENE (HDPE), OR APPROVED EQUIVALENT. THE INNERDUCTS SHALL BE A MINIMUM OF 1.10 INCH INSIDE DIAMETER.
THE OUTER DUCT SHALL BE NOMINAL 4 INCH INSIDE DIAMETER AND MAXIMUM OUTSIDE DIAMETER OF 4.8 INCH.

WHERE COUPLINGS ARE NEEDED, THE COUPLING SHALL BE DESIGNED IN A MANNER TO PERMIT EASY FIELD ASSEMBLY. THE COUPLING SHALL BE MARKED OR KEYED IN A MANNER TO ENSURE THE INNERDUCTS ARE PROPERLY ALIGNED, ANY COLOR CODES ARE CONTINUED, AND THE ADJOINING SECTION IS INSERTED TO THE PROPER DEPTH IN THE BELL. ALL KEYS AND/OR MARKINGS SHALL BE VISIBLE AFTER ASSEMBLY TO ALLOW THE INSPECTION OF EACH JOINT FOR PROPER ASSEMBLY BEFORE BURIAL. THE SEALING SYSTEM SHALL BE DESIGNED TO ASSURE AIR INTEGRITY OF EACH INDIVIDUAL INNERDUCT AND WATER INTEGRITY OF THE ENTIRE SYSTEM.

WHERE INNERDUCT(S) WITHIN A MULTI-CELL DUCT ARE TO REMAIN EMPTY, ONE 1/4-INCH NYLON ROPE SHALL BE INSTALLED IN EACH OF THE OPEN INNERDUCTS, THE ROPE WILL REMAIN TO BE USED FOR A FUTURE CABLE INSTALLATION. ALSO, EACH INNERDUCT SHALL BE PLUGGED TO MAINTAIN THE AIR AND WATER INTEGRITY. IN ADDITION, THE OUTER DUCT SHALL BE CAPPED TO MAINTAIN THE AIR AND WATER INTEGRITY OF THE ENTIRE SYSTEM. FOR MULTI-CELL DUCT INSTALLED IN MEDIAN WALLS, ALL ROPES AND PLUGS SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT.

INSTALLATION
FOR PVC CONDUITS, INSTALLATION WILL BE IN 30-INCH DEEP TRENCH, EXCEPT AS NOTED ON THE PLANS. PVC CONDUITS SHALL NOT BE INSTALLED INSIDE CONCRETE BARRIER WALL. ALL PVC MULTI-CELL CONDUIT
INSTALLED OUTSIDE OF THE ROADWAY IN TRENCH SHALL BE SCHEDULE 40 UNLESS DIRECTED BY THE PROJECT
ENGINEER.

FOR INSTALLATIONS UNDER ROADWAYS, INSTALLATION WILL BE AT LEAST 30 INCHES DEEP, JACKED OR DRILLED UNDER PAVEMENT, EXCEPT AS NOTED ON THE PLANS. ALL JOINTS WILL BE JOINED ACCORDING TO THE MANUFACTURERS RECOMMENDATIONS, IN ORDER TO PROVIDE AN AIR-TIGHT ENCLOSURE OF THE INTERIOR DUCTS AND A WATER-TIGHT ENCLOSURE OF THE OUTER DUCT. ALL PVC MULTI-CELL CONDUIT INSTALLED UNDER THE ROADWAY SHALL BE SCHEDULE 80.

FOR HDPE CONDUITS, INSTALLATION WILL BE IN 30-INCH DEEP TRENCH, DRILLED OR PLOWED TO A MINIMUM OF 30 INCHES DEEP, ENCASED INSIDE CONCRETE BARRIER WALL, OR AS NOTED ON THE PLANS. THE HDPE CONDUIT SHALL BE INSTALLED IN CONTINUOUS LENGTHS WITHOUT JOINTS OR COUPLINGS BETWEEN PULL BOXES OR JUNCTION BOXES.

INSTALLATION WITHIN 6 FEET OF GUARDRAIL WILL BE AT LEAST 30 INCHES DEEP TRENCH AND ENCASED IN CONCRETE.

WHEN ENTERING A PULL BOX, CONDUIT SHALL BE BROUGHT IN 3 INCHES MINIMUM AND A MAXIMUM OF 6 INCHES FROM THE EDGE OF THE PULL BOX WALL KNOCKOUT.

METHOD OF MEASUREMENT
THE CONDUIT WILL BE MEASURED BY THE AMOUNT OF CONDUIT IN FEET FURNISHED AND INSTALLED OF EACH TYPE SCHEDULE 40 OR 80 MEASURED FROM CENTER-TO-CENTER OF PULL BOXES, FOUNDATION, ETC., AND WILL INCLUDE ALL FITTINGS AND APPURTENANCES, JOINTS, BENDS, GROUNDS, CONCRETE ENCASEMENT, AND EXPANSION FITTINGS AT BRIDGES WHERE SPECIFIED.

BASIS OF PAYMENT
THE PAYMENT FOR THESE ITEMS WILL BE MADE FOR THE ACCEPTED LINEAR FOOT QUANTITIES AT THE CONTRACT BID PRICE.

ITEM 625 MEDIAN JUNCTION BOX, AS PER PLAN

THE CONTRACTOR SHALL SUPPLY THE MEDIAN BARRIER JUNCTION PULL BOXES THAT MEET THE FOLLOWING SPECIFICATIONS.

SHALL BE OF TYPE POLYMER-CONCRETE
SIZE: 17 INCHES (HEIGHT) X 30 INCHES (LENGTH)
MINIMUM WALL THICKNESS: 0.5 INCH
MINIMUM LID THICKNESS: 2 INCHES
ANSI TIER 22 RATING WITH A MINIMUM DESIGN LOAD OF 22,000 POUNDS
LID SHALL BE MARKED "TRAFFIC"

THE MEDIAN JUNCTION BOX SHALL BE SECURED IN THE MEDIAN BARRIER WALL USING DOWELS (NON-SHRINK GROUT MAY BE USED WHEN NECESSARY)

PAYMENT SHALL BE MADE PER ITEM 625 FOR EACH JUNCTION BOX FURNISHED AND INSTALLED BY THE CONTRACTOR.

ITEM 625 PULL BOX, 725.08, 32"

PULL BOX SHALL BE INSTALLED WITH A CONCRETE PAD AS PER STANDARD CONSTRUCTION DRAWING ITS-14.11.

UNDERDRAINS FOR PULL BOXES

REFERENCE IS MADE TO THE STANDARD DRAWINGS FOR DETAILS OF DRAINING PULL BOXES. UNDERDRAINS FOR PULL BOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED

WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED APPROXIMATELY 20 FEET. AN ANIMAL GUARD SHALL BE INCLUDED AT THE OUTLET END OF THE DRAIN PER CMS 625.11. PULL BOXES SHALL INCLUDE UNDERDRAINS AND NO SEPARATE PAY ITEM SHALL BE PROVIDED.

CCTV INSTALLATIONS
DYNAMIC MESSAGE SIGN INSTALLATIONS
VEHICLE DETECTION INSTALLATIONS
RAMP METERING INSTALLATIONS
ENTERNET CABLE INSTALLATIONS
FIBER OPTIC CABLE INSTALLATIONS
TERMINATION PANEL INSTALLATIONS
ITS GROUND MOUNTED CABINET INSTALLATIONS
RAMP METERING INSTALLATIONS
TRACER WIRE INSTALLATIONS
FIBER OPTIC CABLE MARKER INSTALLATIONS

THE CONTRACTOR SHALL FURNISH AND INSTALL THESE ITEMS ACCORDING TO ODOT SUPPLEMENTION SPECIFICATION 809, AS WELL AS ANY STANDARD CONSTRUCTION DRAWINGS NOTED ON THE PLANS.

MAINTAINING ITS DURING CONSTRUCTION

THE CONTRACTOR SHALL MAINTAIN ALL PREEXISTING OR NEWLY INSTALLED PERMANENT ITS/TRAFFIC DEVICES AND INFRASTRUCTURE DURING CONSTRUCTION ACCORDING TO ODOT SUPPLEMENTAL SPECIFICATION 809.

ITEM 809 ATC CONTROLLER, AS PER PLAN

THE RAMP METER CONTROLLER SHALL BE INTELIGHT LDX CONTROLLER WITH 1.1.15 FIRMWARE OR NEWER. RAMP METER CONTROL EQUIPMENT SHALL BE LOCATED AS SHOWN ON THE PLANS. CONTROLLER SHALL BE COMPATIBLE WITH THE CONTROL EQUIPMENT, CABINET, AND CABINET ITEMS AND SHALL CONFORM TO TRAFFIC SIGNAL CONTROL EQUIPMENT SPECIFICATIONS, CURRENT EDITION, PUBLISHED BY CALIFORNIA BUSINESS:

TRANSPORTATION & HOUSING AGENCY
DEPARTMENT OF TRANSPORTATION
P.O. BOX 942874
SACRAMENTO, CA 94272

EACH RAMP METER CONTROLLER SHALL CONSIST OF ALL HARDWARE NEEDED TO BE FULLY FUNCTIONAL. FOR FULL SPECIFICATION, SEE OHIO DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATION 809. AT A MINIMUM, THE FOLLOWING HARDWARE SHALL BE FURNISHED AND INSTALLED IN THE CABINET:

1 EACH MODEL 2070 ATC CONTROLLER
3 EACH MODEL 200 SWITCH PACK
1 EACH MODEL 204 FLASHER UNIT
1 EACH MODEL 206 POWER SUPPLY MODULE
2 EACH MODEL 622 TWO CHANNEL LOOP DETECTOR UNITS PER LANE
1 EACH MODEL 208 CONFLICT MONITOR

THE RAMP METER CABINET WILL BE BID AS A SEPARATE ITEM.

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ITS NOTES

HAM-75/7.85

1185
2017

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ITEM 630 OVERHEAD SIGN SUPPORT, DMS TRUSS, 115', AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 630.06, THE DYNAMIC MESSAGE SIGN TRUSS SHALL CONFORM TO THE REQUIREMENTS OF ODOT STANDARD DRAWING ITS-35.13. THE TRUSS SHALL ALSO MATCH THE LENGTH SPECIFIED IN THESE PLANS.

THE CONTRACTOR SHALL FURNISH SHOP DRAWINGS TO THE PROJECT ENGINEER FOR APPROVAL. THE DRAWINGS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER FROM THE MANUFACTURER. THE ITEM SHALL NOT BE RELEASED FOR CONSTRUCTION UNTIL APPROVED BY THE OFFICE OF TRAFFIC OPERATIONS.

ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH FOR ITEM 630 OVERHEAD SIGN SUPPORT, DMS TRUSS, 115', AS PER PLAN.

ITEM 630 CATWALK, DMS TRUSS, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 630.06, THE CATWALK FOR THE DYNAMIC MESSAGE SIGN TRUSS SHALL CONFORM TO THE REQUIREMENTS CONTAINED IN THESE PLANS AND ODOT STANDARD DRAWING ITS-35.11.

ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH FOR ITEM 630 CATWALK, DMS TRUSS, AS PER PLAN.

ITEM 632 POWER CABLE, MISC.: 3 CONDUCTOR, 1/0 AWG

IN ADDITION TO THE REQUIREMENTS OF CMS 632.23, POWER CABLE SHALL BE 1/0AWG

ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 632 POWER CABLE, MISC.: 3 CONDUCTOR, 1/0AWG

ITEM 632 POWER SERVICE, AS PER PLAN

POWER SERVICE FOR ALL ITS EQUIPMENT SHALL BE OBTAINED FROM DUKE ENERGY CORP. THE POWER SERVICE SHALL BE OBTAINED AT THE LOCATIONS AS SHOWN ON THE PLANS OR AN ALTERNATIVE LOCATION AS DETERMINED BY DUKE ENERGY CORP. THE CONTRACTOR SHALL COORDINATE WITH DUKE ENERGY CORP., JEFF VENTRE, TRAFFIC SERVICES AT (513) 200-5215 FOR THE FINAL LOCATIONS OF POWER SOURCES. POWER SUPPLIED SHALL BE 120/240 VOLTS, OR 240/480V WITH A CURRENT TRANSFORMER IF REQUIRED WHERE NOTED, AND SHALL BE METERED.

THE POWER SERVICE FOR ITS EQUIPMENT SHALL BE PER THE DETAILS FURNISHED IN ODOT STANDARD CONSTRUCTION DRAWINGS ITS 15.10 AND ITS-15.11. FOR 120/240V POWER SERVICE, THE DISCONNECT SWITCH AND METER SHALL BE MOUNTED ON THE POWER SERVICE POLE PER ITS 15.10. FOR 240/480V POWER SERVICE, CONTRACTOR SHALL INSTALL THE METER, DISCONNECT SWITCH, AND CURRENT TRANSFORMER ON A GROUND MOUNTED EQUIPMENT STAND. GROUND MOUNTED EQUIPMENT STAND SHALL BE PER ITS-15.10, EXCEPT THAT IT SHALL INCLUDE A CURRENT TRANSFORMER CABINET PER HL-40.20 WHEN REQUIRED BY THE POWER COMPANY FOR METERING. A 240/480V POWER SERVICE SHALL PROVIDE 480 VOLTS TO THE RELATED ITS SITE, WHERE IT WILL BE STEPPED DOWN TO 120 VOLTS VIA A SEPARATE PAY ITEM.

THIS ITEM OF WORK SHALL INCLUDE FURNISHING AND INSTALLING WOOD POLES AS NEEDED TO RECEIVE POWER COMPANY CIRCUITS. SEPARATE PAYMENT FOR WOOD POLES WILL NOT BE MADE.

THE CCTV RELATED POWER SERVICES SHALL BE MARKED WITH "ITS". DISCONNECT SWITCHES SHALL BE FUSIBLE, RATED FOR 60 AMPS WITH NEMA 4X ENCLOSURE, AND SHALL BE FUSED AT 30 AMPS.

THE DMS RELATED POWER SERVICES SHALL BE MARKED WITH "ITS". DISCONNECT SWITCHES SHALL BE FUSIBLE, RATED FOR 100 AMPS WITH NEMA 4X ENCLOSURE, AND SHALL BE FUSED AT 80 AMPS.

PAYMENT FOR THIS ITEM SHALL BE AT THE UNIT PRICE BID FOR EACH, COMPLETE AND IN PLACE, AFTER ALL CONNECTIONS HAVE BEEN TESTED AND ACCEPTED.

ITEM 632 SIGNALIZATION MISC.: REMOVAL OF FIBER OPTIC CABLE

ALL FIBER OPTIC CABLE THAT IS CALLED FOR REMOVAL IN THE PLANS SHALL BE REMOVED WITH CARE SO AS TO NOT DAMAGE THE CABLE DURING REMOVAL. THE FIBER SHALL BE COILED ON WOODEN REELS AND TURNED OVER TO THE ODOT ITS ENGINEER. CARE SHALL BE TAKEN AND THE FIBER OPTIC CABLE SHALL BE REMOVED IN SUCH MANNER THAT THE CABLE REMAINS IN THE LONGEST COMPLETE SECTIONS AS POSSIBLE.

EXISTING CONDUIT WITH FIBER OPTIC CABLES CALLED OUT FOR REMOVAL MAY BE ABANDONED IN PLACE, UNLESS IT CONFLICTS WITH ANY PROPOSED IMPROVEMENTS, IN WHICH CASE IT SHALL BE REMOVED. ANY CONDUIT THAT IS REQUIRED TO BE REMOVED SHALL BE INCIDENTAL TO THIS PAY ITEM.

PAYMENT FOR THIS ITEM SHALL BE AT THE LUMP SUM PRICE BID AND SHALL INCLUDE THE REMOVAL AND RETURN OF ALL FIBER OPTIC CABLE.

ITEM 804, FIBER OPTIC CABLE MISC: DISCONNECT EXISTING ITS FIBER

WHERE NOTED IN THE PLANS, THE CONTRACTOR SHALL DISCONNECT THE PORTION OF THE FIBER OPTIC CABLE TO BE REMOVED FROM THE PORTION OF CABLE TO REMAIN IN SERVICE AT THE DESIGNATED NODE POINT. THE CONTRACTOR SHALL REMOVE THE CABLE FROM THE LINK NO LONGER TO REMAIN IN SERVICE FROM THE NODE POINT ENCLOSURE. THE CONTRACTOR SHALL REMOVE THE CONDUIT OR DUCT FOR THE LINK NO LONGER IN SERVICE FROM THE NODE POINT ENCLOSURE AND PROPERLY CLOSE THE RESULTANT OPENINGS IN THE ENCLOSURE UNLESS THE CONDUIT IS TO BE LEFT IN PLACE TO ALLOW ANOTHER FIBER OPTIC CABLE LINK TO ENTER THE NODE ENCLOSURE. THE CONTRACTOR MAY ABANDON PORTIONS OF THE EXISTING CONDUIT IF DOING SO DOES NOT CREATE ANY CONFLICTS WITH PROPOSED IMPROVEMENTS.

PAYMENT SHALL BE MADE PER ITEM 804 AT EACH LOCATION WHERE THE CONTRACTOR IS TO DISCONNECT THE EXISTING ITS FIBER AND SHALL INCLUDE THE REMOVAL OF ALL CABLE WHERE SHOWN ON THE PLAN AND THE REMOVAL OF CONDUIT(S) WHERE REQUIRED.

ITEM 625 LIGHTING, MISC.: STEP-DOWN TRANSFORMER AND SUPPORT

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS NECESSARY FOR A POWER SERVICE PER ODOT CONSTRUCTION AND MATERIAL SPECIFICATION SECTION 625.15.

A 3.0 KVA, 480 VOLT TO 120/240 VOLT TRANSFORMER SHALL BE INCIDENTAL TO THIS PAY ITEM. AN EQUIPMENT STAND SHALL ALSO BE INCLUDED AND SHALL HAVE THE TRANSFORMER AND DISCONNECT MOUNTED UPON IT. THIS ITEM SHALL BE INSTALLED PER STANDARD CONSTRUCTION DRAWING ITS-50.11. THIS ITEM SHALL ALSO INCLUDE ALL CONDUIT AND MATERIALS NECESSARY TO RUN POWER WIRING OUT/IN THE NEAREST 18 INCH ELECTRIC PULL BOX, IN ORDER TO PROVIDE 120 VOLT POWER TO THE ITS CABINET AND A COMPLETE AND FUNCTIONAL POWER SERVICE.

THE CCTV RELATED POWER SERVICES SHALL BE MARKED WITH "ITS". SEPARATE DISCONNECT SWITCHES SHALL BE FUSIBLE, RATED FOR 60 AMPS WITH NEMA 4X ENCLOSURE, AND SHALL BE FUSED AT 30 AMPS, EXCEPT WHERE NOTED FOR DMS RELATED POWER SERVICE, AS PER PLAN D. THIS SERVICE SHALL PROVIDE 120 VOLTS TO EACH RELATED SITE.

ITEM 633 CONTROLLER WORK PAD, AS PER PLAN

THIS ITEM CONSISTS OF DESIGNING AND CONSTRUCTION OF A CONTROLLER WORK PAD IN A SLOPED AREA. THE WORK PAD SHOULD BE DESIGNED IN A MANNER SIMILAR TO THE PLANS SHOWN IN ODOT SCD ITS-50.12. THIS ITEM IS TO ALSO INCLUDE 2" DIAMETER X .1875" THICKNESS GALVANIZED STEEL RAILING TO BE CAST IN PLACE OR PLACED IN SOCKETS OF THE WORK PAD WITH MORTAR.

THE CONTRACTOR SHALL FURNISH SHOP DRAWINGS TO THE PROJECT ENGINEER FOR APPROVAL. THE DRAWINGS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER FROM THE MANUFACTURER. THIS ITEM SHALL NOT BE RELEASED FOR CONSTRUCTION UNTIL APPROVED BY THE OFFICE OF TRAFFIC OPERATIONS.

ENGINEER SHALL DETERMINE IN THE FIELD WHETHER THE GALVANIZED STEEL RAILINGS SHALL BE PROVIDED OR NOT AT EACH WORK PAD LOCATION.

ITEM 633 CABINET FOUNDATION, AS PER PLAN

THIS ITEM CONSISTS OF PROVIDING A CABINET FOUNDATION SUITABLE FOR INSTALLATION IN A SLOPED AREA.

THE CONTRACTOR SHALL FURNISH SHOP DRAWINGS TO THE PROJECT ENGINEER FOR APPROVAL. THE DRAWINGS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER FROM THE MANUFACTURER. THE ITEM SHALL NOT BE RELEASED FOR CONSTRUCTION UNTIL APPROVED BY THE OFFICE OF TRAFFIC OPERATIONS.

ITEM 809 ITS DEVICE MISC.: REMOVAL OF ITS CABINET ASSEMBLY
ITEM 809 ITS DEVICE MISC.: REMOVAL OF DMS SIGN
ITEM 809 ITS DEVICE MISC.: REMOVAL OF SIDE-FIRED RADAR VEHICLE DETECTOR
ITEM 809 ITS DEVICE MISC.: REMOVAL OF WIRELESS RADIO EQUIPMENT
ITEM 809 ITS DEVICE MISC.: REMOVAL OF CCTV POLE, CAMERA, FOUNDATION, AND CABINET ASSEMBLY

ALL EXISTING TRAFFIC ITS/SURVEILLANCE EQUIPMENT THAT IS TO BE REMOVED AS SHOWN IN THE PLANS SHALL BE TURNED OVER TO THE ODOT ITS ENGINEER. THE CONTRACTOR SHALL SECURELY STORE THE EQUIPMENT AND CONTACT THE ODOT ITS ENGINEER (CEN.ITS.LAB@DOT.STATE.OH.US) TO SCHEDULE DELIVERY. THE ODOT ITS ENGINEER SHALL PROVIDE THE CONTRACTOR WITH WRITTEN DOCUMENTATION OF ANY ITEMS THAT ARE TO BE DISPOSED OF BY THE CONTRACTOR.

EXISTING FOUNDATIONS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.

BEFORE ANY EQUIPMENT IS REMOVED THE CONTRACTOR SHALL REVIEW THE ITS DOWNTIME NOTES IN THESE PLANS TO ENSURE THAT THEY ARE IN COMPLIANCE WITH THE NOTIFICATION REQUIREMENTS.

ITEM 809 CCTV CONCRETE POLE WITH LOWERING UNIT, 70 FEET

THE CONTRACTOR SHALL FURNISH AND INSTALL THIS ITEM ACCORDING TO ODOT SUPPLEMENTAL SPECIFICATION 809, AS WELL AS ANY STANDARD CONSTRUCTION DRAWINGS NOTED ON THE PLANS. IN ADDITION, THE CONTRACTOR SHALL INCLUDE A 1/2" ISOLATION JOINT MATERIAL BETWEEN THE CONCRETE POLE AND CONCRETE WORK PAD. THE CONTRACTOR SHALL PROVIDE THREE (3) COMPLETE LOWERING UNIT TOOL ASSEMBLIES FOR LOWERING CAMERAS PER SUPPLEMENTAL SPECIFICATION 809 TO ODOT AT THE END OF THE PROJECT.

IF THE EMBEDMENT DEPTH IS NOT LISTED IN THE PLAN, THE CONTRACTOR SHALL OBTAIN SOIL BORING DATA FOR THIS CCTV LOCATION. SOIL BORING DATA SHALL BE SENT TO ODOT'S OFFICE OF GEOTECHNICAL ENGINEERING. ODOT WILL ANALYZE THE SOIL BORING DATA AND PROVIDE THE CONTRACTOR AN EMBEDMENT DEPTH FOR THIS LOCATION. COST OF SOIL BORING AND COORDINATION WITH ODOT TO OBTAIN EMBEDMENT DEPTH SHALL BE INCIDENTAL TO ITEM 809 CCTV CONCRETE POLE WITH LOWERING UNIT, 70 FEET. THE POLE HEIGHT SHALL REMAIN SEVENTY (70) FEET ABOVE GROUND AND THE EMBEDMENT DEPTH SHALL BE AS FURNISHED BY THE OHIO DEPARTMENT OF TRANSPORTATION. THE CONTRACTOR SHALL FURNISH/INSTALL THE POLE WITH THE CORRECT LENGTH/EMBEDMENT AND ALL COUPLINGS, HANDHOLES, ETC., IN THE APPROPRIATE LOCATION ABOVE GROUND ACCORDING TO SCD ITS- 12.10. THE CONTRACTOR MAY FURNISH/INSTALL LONGER OVERALL LENGTH POLES AT A DEEPER EMBEDMENT DEPTH IF MORE BENEFICIAL FOR MANFUCTURING, SHIPPING, ETC., AS LONG AS ALL ABOVE

GROUND COMPONENTS MAINTAIN APPROPRIATE HEIGHT LEVEL. IF NEEDED DUE TO UNFORESEEN CIRCUMSTANCES ARISING WITH BEDROCK, ETC, AND WITH APPROVAL FROM THE ODOT PROJECT ENGINEER, THE CONTRACTOR MAY FIELD CUT AN APPROPRIATE AMOUNT FROM THE BASE OF CONCRETE POLES WHICH WOULD REQUIRE LESS EMBEDMENT DEPTH IN ORDER TO MAINTAIN APPROPRIATE LEVELS ABOVE GROUND. IF A POLE IS CUT, THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO NOT DAMAGE THE INTEGRITY OF THE POLE PER MANUFACTURER RECOMMENDATIONS AND ANY EXPOSED STEEL STRANDS SHALL BE COATED WITH EPOXY.

THE CONTRACTOR SHALL SUBMIT ALL POLE MANUFACTURER FABRICATION DRAWING SUBMITTALS, AS WELL AS INSTALLATION PROCEDURES AND BACKFILL MATERIAL, TO THE ODOT PROJECT ENGINEER FOR ACCEPTANCE BEFORE ORDERING.

PAYMENT FOR EACH POLE COMPLETE, INSTALLED, AND ACCEPTED CONCRETE POLE WITH LOWERING UNIT, SHALL BE MADE AT THE UNIT BID PRICE FOR ITEM 809, CCTV CONCRETE POLE WITH LOWERING UNIT, 70 FEET.

GPS COORDINATES/AS-BUILT PLANS

PRIOR TO THE FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL PROVIDE AS-BUILT PLANS OF THE ENTIRE ITS PORTION OF THE PROJECT TO THE ODOT ITS ENGINEER IN THE FOLLOWING FORMATS: DGN FILE, PDF FILE, AND ONE (1) HALF-SIZE PLAN HARD COPIES. ALL HARD COPIES SHALL BE SUBMITTED IN SEPARATE 3-RING BINDERS, NOTING THE CONTENTS ON THE OUTSIDE OF THE BINDER.

INCLUDED WITH THE PDF AND HARD COPY VERSIONS OF THIS DOCUMENTATION, THE CONTRACTOR SHALL PROVIDE ACTUAL FIELD DATA OF ALL SITES. THIS DATA SHALL INCLUDE THE FOLLOWING:

- GPS COORDINATES OF ALL PULL BOXES, POLES, CABINETS AND POWER SERVICES WITH COORDINATING DEVICE I NUMBER. (DEVICE ID # SHALL BE PROVIDED BY THE ODOT ITS ENGINEER PRIOR TO THE COLLECTION OF THE DATA).

- METER NUMBERS AND UTILITY OF ALL POWER SERVICES WITH THEIR SERVICE LOCATIONS

THE COST OF PROVIDING THESE AS-BUILT DRAWINGS SHALL BE INCLUDED IN THE BID PRICE FOR THE ITEMS INSTALLED.

ITEM 632 - SIGNALIZATION, MISC.: RAMP METER SIGN

RAMP METER SIGNS AND WARNING BEACONS SHALL BE INSTALLED AT THE LOCATIONS AS SHOWN ON THE PLANS. THE SIGNS SHALL HAVE A MINIMUM REFLECTIVE SHEETING OF TYPE G.

TWO 12" YELLOW LED WARNING BEACONS SHALL BE LOCATED ON THE RAMP METERED WHEN FLASHING (W3-8) SIGN AS SHOWN ON THE PLANS. THE BEACONS SHALL FLASH SIMULTANEOUSLY.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH ITEM 632 SIGNALIZATION, MISC.: RAMP METER SIGN AND SHALL INCLUDE THE FOUNDATION EXCAVATION, FOUNDATION CONCRETE, ANCHOR BOLTS, BREAKAWAY BASE, POLE, SIGN, SIGN BRACKETS, FLASHERS, MOUNTING HARDWARE AND ALL OTHER ITEMS NECESSARY FOR A COMPLETE INSTALLATION.

VEHICLE DETECTION INSTALLATIONS - SIDE-FIRED RADAR DETECTOR (WAVETRONIX HD RADAR)

THE CONTRACTOR SHALL FURNISH AND INSTALL THE WAVETRONIX HD SIDE-FIRED RADAR DETECTOR ACCORDING TO THE MANUFACTURERS SPECIFICATIONS TO DETERMINE MATRIX OCCUPANCY ON I-75 AND MOUNT IT ON THE END OF THE MAST ARM OR ON THE SIGNAL SUPPORT AS SHOWN ON THE PLANS.

PAYMENT FOR ITEM 809 SIDE-FIRED RADAR DETECTOR SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH UNIT, COMPLETE AND IN PLACE INCLUDING EQUIPMENT, WIRING CABLING, SERIAL TO ETHERNET COMMUNICATION MODULE, LABOR, AND MISCELLANEOUS MATERIALS TO ESTABLISH A FULLY FUNCTIONAL DETECTION SYSTEM.

GROUNDING

ALL ITS EQUIPMENT SHALL BE GROUNDED PER ITS-50.10.

PAYMENT FOR SITE GROUNDING SHALL BE INCIDENTAL TO THE CONDUCTORS SUPPLIED BY THE PROJECT, UNLESS OTHERWISE NOTED.

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1186
2017

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SHEET NUMBER							ITEM	ITEM EXT.	TOTAL CARRIED TO GENERAL SUMMARY	UNIT	DESCRIPTION	SEE SHEET NO.
1189	1190	1191	1192	1193	1224	1225						
		5	23	5			625	25400	33	FT	CONDUIT, 2", 725.04	
					129	75	625	25408	204	FT	CONDUIT, 2", 725.051	
		308	268	728	249	8	625	25500	1561	FT	CONDUIT, 3", 725.04	
		305					625	25902	305	FT	CONDUIT, JACKED OR DRILLED, 725.04, 3"	
						172	625	25906	172	FT	CONDUIT, JACKED OR DRILLED, 725.051, 2"	
		829	969	1215	706	755	625	29000	4474	FT	TRENCH	
		11	12	11			625	29931	34	EACH	MEDIAN JUNCTION BOX, AS PER PLAN	1185
		5	6	3	1	1	625	30700	16	EACH	PULL BOX, 725.08, 18"	
		3	5	8	6	6	625	30711	28	EACH	PULL BOX, 725.08, 32", AS PER PLAN	1185
40	31						625	31510	71	EACH	PULL BOX REMOVED	
		7	16	9	10	12	625	32000	54	EACH	GROUND ROD	
		818	888	1200	706	755	625	36010	4367	FT	UNDERGROUND WARNING/MARKING TAPE	
3	4						625	75510	7	EACH	POWER SERVICE REMOVED	
					14	28	630	02100	42	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
			2				630	70021	2	EACH	OVERHEAD SIGN SUPPORT, DMS TRUSS, 115', AS PER PLAN	1186
			2				630	70051	2	EACH	CATWALK, DMS TRUSS, AS PER PLAN	1186
			2				630	70070	2	EACH	CONCRETE BARRIER MEDIAN OVERHEAD SIGN SUPPORT FOUNDATION, DMS TRUSS	
			2				630	70080	2	EACH	OVERHEAD SIGN SUPPORT FOUNDATION, DMS TRUSS	
					1	1	630	79100	2	EACH	SIGN HANGER ASSEMBLY, MAST ARM	
					1		630	79610	1	EACH	SIGN SUPPORT ASSEMBLY, BARRIER MOUNTED	
					34	34	630	80100	68	SF	SIGN, FLAT SHEET	
1	1						630	89702	2	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL	
6	5						630	89812	11	EACH	REMOVAL OF WOOD POLE AND DISPOSAL	
					3	3	632	04905	6	EACH	VEHICULAR SIGNAL HEAD, (LED), 2-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	1175
					3	3	632	25000	6	EACH	COVERING OF VEHICULAR SIGNAL HEAD	
					8	8	632	26500	16	EACH	DETECTOR LOOP	
					1443	1869	632	40500	3312	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	
					1	1	632	64010	2	EACH	SIGNAL SUPPORT FOUNDATION	
					1130	1646	632	65200	2776	FT	LOOP DETECTOR LEAD-IN CABLE	
			136		272	32	632	69300	440	FT	POWER CABLE, 3 CONDUCTOR, NO. 4 AWG	
			811				632	69320	811	FT	POWER CABLE, 3 CONDUCTOR, NO. 2 AWG	
		672		1289			632	69350	1961	FT	POWER CABLE, MISC.: 3 CONDUCTOR, 1/0 AWG	1186
		1	3	1		1	632	70001	6	EACH	POWER SERVICE, AS PER PLAN	1186
		1	3	1		1	632	70400	6	EACH	CONDUIT RISER, 2" DIAMETER	
					1		632	72110	1	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 4	
						1	632	72130	1	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 12	
							632	90300	LUMP		SIGNALIZATION, MISC.: REMOVAL OF FIBER OPTIC CABLE	1186
				1			632	90400	1	EACH	SIGNALIZATION, MISC.: STEP-DOWN TRANSFORMER AND SUPPORT	1186
					2	2	632	90400	4	EACH	SIGNALIZATION, MISC.: RAMP METER SIGN	1186
					1	1	633	67100	2	EACH	CABINET FOUNDATION	
		1	4	3			633	67101	8	EACH	CABINET FOUNDATION, AS PER PLAN	1186
					1	1	633	67200	2	EACH	CONTROLLER WORK PAD	
		1	3	3			633	67201	7	EACH	CONTROLLER WORK PAD, AS PER PLAN	1186
		8232	8443	9864		626	804	21030	27165	FT	FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE, 72 FIBER	
		170					804	21050	170	FT	FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE, 288 FIBER	
		181	524	522		178	804	32012	1405	FT	DROP CABLE, 24 FIBER	
			535				804	32016	535	FT	DROP CABLE, 48 FIBER	
			3	3	1	1	804	34042	8	EACH	FIBER TERMINATION PANEL, 72 FIBER	
		1					804	34082	1	EACH	FIBER TERMINATION PANEL, 288 FIBER	
		2	3	3		1	804	37000	9	EACH	SPLICE ENCLOSURE, BUTT STYLE	
		1018	664	19			809	25000	1701	FT	CONDUIT, MULTICELL, MISC.: 2" HDPE WITH 4-14MM/10MM INNERDUCTS	1185
		293	284	456		88	809	25000	1121	FT	CONDUIT, MULTICELL, MISC.: 2" HDPE WITH 4-14MM/10MM INNERDUCTS, JACKED OR DRILLED	1185
		1018	681	567	732	1364	809	25000	4362	FT	CONDUIT, MULTICELL, MISC.: 4" HDPE	1185
		463	284	596	302	88	809	25000	1733	FT	CONDUIT, MULTICELL, MISC.: 4" HDPE, JACKED OR DRILLED	1185
			2	1			809	60030	3	EACH	CCTV IP-CAMERA SYSTEM, ENHANCED	
			2	1			809	61000	3	EACH	CCTV CONCRETE POLE WITH LOWERING UNIT, 70 FEET	
			2				809	63000	2	EACH	DYNAMIC MESSAGE SIGN (DMS), FULL-SIZE WALK-IN	
		130	540	305			809	64550	975	FT	ETHERNET CABLE, OUTDOOR RATED	
		1	1	3			809	65000	5	EACH	ITS CABINET - GROUND MOUNTED	

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1187 2017

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SHEET NUMBER							ITEM	ITEM EXT.	TOTAL CARRIED TO GENERAL SUMMARY	UNIT	DESCRIPTION	SEE SHEET NO.
1189	1190	1191	1192	1193	1224	1225						
					1	1	809	65030	2	EACH	ITS CABINET - RAMP METER	
			2				809	65040	2	EACH	ITS CABINET - DMS	
				1			809	65990	1	EACH	ITS DEVICE MISC.: RELOCATE CCTV CAMERA AND WIRELESS RADIO EQUIPMENT	1186
1	2						809	65990	3	EACH	ITS DEVICE MISC.: REMOVAL OF CCTV POLE, CAMERA, FOUNDATION, AND CABINET ASSEMBLY	1186
1	2						809	65990	3	EACH	ITS DEVICE MISC.: REMOVAL OF DMS SIGN	1186
7	8						809	65990	15	EACH	ITS DEVICE MISC.: REMOVAL OF ITS CABINET ASSEMBLY	1186
3	2						809	65990	5	EACH	ITS DEVICE MISC.: REMOVAL OF SIDE-FIRED RADAR VEHICLE DETECTOR	1186
2	4						809	65990	6	EACH	ITS DEVICE MISC.: REMOVAL OF WIRELESS RADIO EQUIPMENT	1186
					1	1	809	68900	2	EACH	SIDE-FIRED RADAR DETECTOR	
					1	1	809	69123	2	EACH	ATC CONTROLLER, AS PER PLAN	1185
							809	70000	LUMP		MAINTAINING ITS DURING CONSTRUCTION	1185

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HAM-75-7.85

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2017

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REFERENCE NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	625 PULL BOX REMOVED EACH	625 POWER SERVICE REMOVED EACH	630 REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL EACH	630 REMOVAL OF WOOD POLE AND DISPOSAL EACH	809 ITS DEVICE MISC.: REMOVAL OF ITS CABINET ASSEMBLY EACH	809 ITS DEVICE MISC.: REMOVAL OF DMS SIGN EACH	809 ITS DEVICE MISC.: REMOVAL OF CCTV POLE, CAMERA, FOUNDATION, AND CABINET ASSEMBLY EACH	809 ITS DEVICE MISC.: REMOVAL OF SIDE-FIRED RADAR VEHICLE DETECTOR EACH	809 ITS DEVICE MISC.: REMOVAL OF WIRELESS RADIO EQUIPMENT EACH
1	1197	403+00		RT	1								
2	1197	409+00		RT	1								
1	1198	411+50		RT	1								
2	1198	411+59		RT	1								
3	1198	416+80		RT	1								
4	1198	417+27		RT	1								
5	1198	417+34		RT	1								
6	1198	418+41		RT	1								
7	1198	418+87		RT	1								
8	1198	419+00		RT				1	1		1	1	1
9	1198	419+33		RT	1								
10	1198	420+05		RT	1			1	1			1	1
11	1198	410+00		LT	1								
12	1198	414+00		LT	1								
13	1198	416+20		LT				1	1			1	
14	1198	417+36		LT	1								
15	1198	419+40		LT	1								
16	1198	419+41		LT					1				
17	1198	419+74		LT	1								
18	1198	419+78		LT		1		1					
19	1198	419+87		LT	1								
20	1198	419+95		LT	1								
1	1199	423+58		RT	1								
2	1199	423+64		RT	1								
3	1199	433+51		RT	1								
4	1199	435+76		RT	1								
5	1199	426+61		LT	1								
6	1199	426+68		LT	1								
7	1199	433+47		LT	1								
8	1199	435+46		LT		1		1					
9	1199	435+77		LT					1				
1	1200	440+48		RT	1								
2	1200	448+00		RT	1								
3	1200	448+09		RT	1								
4	1200	440+45		LT	1								
5	1200	446+62		LT	1								
1	1201	451+30		RT	1								
2	1201	453+66		RT	1								
3	1201	457+44		RT	1								
4	1201	457+47		RT	1								
5	1201	450+99		LT	1								
6	1201	453+68		LT	1								
7	1201	457+44		LT	1								
8	1201	458+58		LT					1				
9	1201	458+61		LT	1								
10	1201	460+37		LT		1		1					
1	1202	467+46		RT					1				
2	1202	467+54		RT			1			1			
3	1202	467+70		RT	1								
4	1202	468+82		RT	1								
	TOTALS CARRIED TO SUBSUMMARY				40	3	1	6	7	1	1	3	2

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ITS ESTIMATED QUANTITIES

HAM-75-7.85

1189
2017

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REFERENCE NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	625 PULL BOX REMOVED EACH	625 POWER SERVICE REMOVED EACH	630 REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL EACH	630 REMOVAL OF WOOD POLE AND DISPOSAL EACH	809 ITS DEVICE MISC.: REMOVAL OF ITS CABINET ASSEMBLY EACH	809 ITS DEVICE MISC.: REMOVAL OF DMS SIGN EACH	809 ITS DEVICE MISC.: REMOVAL OF CCTV POLE, CAMERA, FOUNDATION, AND CABINET ASSEMBLY EACH	809 ITS DEVICE MISC.: REMOVAL OF SIDE-FIRED RADAR VEHICLE DETECTOR EACH	809 ITS DEVICE MISC.: REMOVAL OF WIRELESS RADIO EQUIPMENT EACH
5	1202	473+45		RT	1								
6	1202	467+69		LT	1								
7	1202	467+76		LT			1			1			
8	1202	467+92		LT					1				
9	1202	468+82		LT	1								
10	1202	470+96		LT	1								
11	1202	470+97		LT		1		1					
12	1202	472+33		LT							1		
13	1202	472+54		LT					1				
14	1202	473+54		LT	1								
1	1203	478+52		RT	1								
2	1203	485+15		RT	1								
3	1203	488+28		RT	1								
4	1203	478+74		LT	1								
5	1203	485+20		LT	1								
6	1203	488+16		LT	1								
1	1204	490+60		RT	1								
2	1204	490+64		RT	1								
3	1204	491+58		RT	1								
4	1204	499+57		RT	1								
5	1204	493+98		LT	1								
6	1204	494+07		LT	1								
7	1204	497+37		LT	1								
8	1204	497+87		LT					1				
9	1204	498+00		LT		1		1					
10	1204	499+59		LT	1								
1	1205	505+87		RT	1								
2	1205	505+94		RT	1								
3	1205	505+93		LT	1								
4	1205	506+00		LT	1								
1	1206	517+14		RT	1								
2	1206	517+16		RT					1				
3	1206	517+28		RT							1		
4	1206	517+08		LT	1								
1	1207	532+10		RT	1								
2	1207	534+71		RT					1				
3	1207	535+86		RT	1								
4	1207	532+06		RT		1		1					
1	1208	12+95		LT	2								
2	1208	13+08		LT					1				
3	1208	13+18		LT		1		1					1
4	1208	17+87		LT					1			1	1
5	1208	22+54		LT					1				
6	1208	22+61		LT	1								
7	1208	22+63		LT									1
8	1208	22+68		LT	1								
9	1208	23+00		LT						1			
10	1208	23+31		LT				1				1	1
	TOTALS CARRIED TO SUBSUMMARY				31	4	1	5	8	2	2	2	4

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1190
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ITS ESTIMATED QUANTITIES

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REFERENCE NO.	SHEET NO.	SIDE	STATION TO STATION		625 CONDUIT, 2", 725.04 FT	625 CONDUIT, 3", 725.04 FT	625 CONDUIT, JACKED OR DRILLED, 725.04, 3" FT	625 TRENCH FT	625 MEDIAN JUNCTION BOX, AS PER PLAN EACH	625 PULL BOX, 725.08, 18" EACH	625 PULL BOX, 725.08, 32", AS PER PLAN EACH	625 GROUND ROD EACH	625 UNDERGROUND WARNING/MARKING TAPE FT	632 POWER CABLE, MISC.: 3 CONDUCTOR, 1/0 AWG FT	632 POWER SERVICE, AS PER PLAN EACH	633 CONDUIT RISER, 2" DIAMETER EACH	633 CABINET FOUNDATION, AS PER PLAN EACH	633 CONTROLLER WORK PAD, AS PER PLAN EACH	804 FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE, 72 FIBER FT	804 FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE, 288 FIBER FT	804 DROP CABLE, 24 FIBER FT	804 FIBER TERMINATION PANEL, 288 FIBER EACH	804 SPLICE ENCLOSURE, BUTT STYLE EACH	809 CONDUIT, MULTICELL, MISC.: 2" HDPE WITH 4-14MM/10MM INNERDUCTS FT	809 CONDUIT, MULTICELL, MISC.: 2" HDPE WITH 4-14MM/10MM INNERDUCTS, JACKED OR DRILLED FT	809 CONDUIT, MULTICELL, MISC.: 4" HDPE FT	809 CONDUIT, MULTICELL, MISC.: 4" HDPE, JACKED OR DRILLED FT	809 ETHERNET CABLE, OUTDOOR RATED FT	809 ITS CABINET - GROUND MOUNTED FT
1	1209	RT	394+35	394+50																	16								
2	1209	RT	394+35																150		150		1						
3	1209	RT	394+50																		15								
4	1209	RT	394+35	399+00															482										
5	1209	RT	399+00																150										
6	1209	RT/LT	399+00	399+00															170							170			
7	1209	LT	399+00																150										
8	1209	LT	399+00	403+00															380										
9	1209	LT	403+00																150										
10	1209	LT	403+00	406+75															355										
11	1209	LT	406+75																150										
12	1209 - 1210	LT	406+75	409+88															315										
1	1210	LT	409+88																150										
2	1210	LT	409+88	411+78				188					188						188					188		188			
3	1210	LT	411+78								1								150										
4	1210	LT	411+78	411+90															55						55		55		
5	1210	LT	411+90								1								150										
6	1210	LT/CL	411+90	411+90															110						110		110		
7	1210	CL	411+90						1																				
8	1210	CL	411+90	417+10															520										
9	1210	CL	417+10						1																				
10	1210	CL	417+10	419+75															265					265		265			
11	1210	CL	419+75						1																				
12	1210	CL/RT	419+75	419+66															256						128		128		
13	1210	RT	419+66		5	22		21		1	1	3		5			1	1	300	170		1	1	5		5		130	1
14	1210 - 1221	RT/LT	419+66	10+89				334					344						344					334		334			
15	1210	LT	419+78							1		1		61	1	1													
16	1210	LT	419+78	421+12		132		132					132	132															
17	1210	LT	421+12							1		1		5															
18	1210	LT	421+12	421+12			108							108															
19	1210	LT	421+12							1		1		5															
20	1210	LT/RT	421+12	421+13			197							197															
21	1210	RT	421+13							1		1		5															
22	1210	RT	419+66	421+13		154		154					154	154															
23	1210 - 1211	CL	419+75	424+00															425										
1	1211	CL	424+00						1																				
2	1211	CL	424+00	429+00															500										
3	1211	CL	429+00						1																				
4	1211	CL	429+00	433+92															492										
5	1211	CL	433+92						1																				
6	1211	CL	433+92	435+10															118					118		118			
7	1211	CL	435+10						1																				
8	1211 - 1212	CL	435+10	439+00															390										
1	1212	CL	439+00						1																				
2	1212	CL	439+00	444+00															500										
3	1212	CL	444+00						1																				
4	1212 - 1213	CL	444+00	451+59															759										
1	1213	CL	451+59						1																				
2	1213	CL	451+59	452+67															108					108		108			
3	1213	CL	452+67						1																				
TOTALS CARRIED TO SUBSUMMARY					5	308	305	829	11	5	3	7	818	672	1	1	1	1	8232	170	181	1	2	1018	293	1018	463	130	1

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REFERENCE NO.	SHEET NO.	SIDE	STATION TO STATION		625 CONDUIT, 2", 725.04 FT	625 CONDUIT, 3", 725.04 FT	625 TRENCH FT	625 MEDIAN JUNCTION BOX, AS PER PLAN EACH	625 PULL BOX, 725.08, 18" EACH	625 PULL BOX, 725.08, 32", AS PER PLAN EACH	625 GROUND ROD EACH	625 UNDERGROUND WARNING/MARKING TAPE FT	630 OVERHEAD SIGN SUPPORT, DMS TRUSS, 115', AS PER PLAN EACH	630 CATWALK, DMS TRUSS, AS PER PLAN EACH	630 CONCRETE BARRIER MEDIAN OVERHEAD SIGN SUPPORT FOUNDATION, DMS TRUSS EACH	630 OVERHEAD SIGN SUPPORT FOUNDATION, DMS TRUSS EACH	632 POWER CABLE, 3 CONDUCTOR, NO. 4 AWG FT	632 POWER CABLE, 3 CONDUCTOR, NO. 2 AWG FT	632 POWER SERVICE, AS PER PLAN EACH	632 CONDUIT RISER, 2" DIAMETER EACH	633 CABINET FOUNDATION, AS PER PLAN EACH	633 CONTROLLER WORK PAD, AS PER PLAN EACH	804 FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE, 72 FIBER FT	804 DROP CABLE, 24 FIBER FT	804 DROP CABLE, 48 FIBER FT	804 FIBER TERMINATION PANEL, 72 FIBER EACH	804 SPLICE ENCLOSURE, BUTT STYLE EACH	809 CONDUIT, MULTICELL, MISC.: 2" HDPE WITH 4-14MM/10MM INNERDUCTS FT	809 CONDUIT, MULTICELL, MISC.: 2" HDPE WITH 4-14MM/10MM INNERDUCTS, JACKED OR DRILLED FT	809 CONDUIT, MULTICELL, MISC.: 4" HDPE FT	809 CONDUIT, MULTICELL, MISC.: 4" HDPE, JACKED OR DRILLED FT	809 CCTV IP-CAMERA SYSTEM, ENHANCED EACH	809 CCTV CONCRETE POLE WITH LOWERING UNIT, 70 FEET EACH	809 DYNAMIC MESSAGE SIGN (DMS), FULL-SIZE WALK-IN EACH	809 ETHERNET CABLE, OUTDOOR RATED FT	809 ITS CABINET - GROUND MOUNTED FT	809 ITS CABINET - POWER DISTRIBUTION CABINET EACH	809 ITS CABINET - DMS EACH
4	1213	CL	452+67	457+95																				528													
5	1213	CL	457+95					1																														
6	1213	CL/RT	457+95	457+95																				202						101		101					
7	1213	RT	457+95							1														300													
8	1213	RT	457+95	462+02			415					415												830					415		415					
9	1213	RT	462+02			9	18		1	1	2							72				1	1	300	174		1	1	9		9				27		1
10	1213	RT	462+02	462+25			15					15																			15				120		
11	1213	RT	462+02	462+25	23		23					23						179																			
12	1213	RT	462+25								2		1	1	1	1																			1		
13	1213	RT	462+02	462+56		65	65					65						105																			
																		55																			
14	1213	RT	462+56						1		1								1	1																	
15	1213	CL	457+95	463+29																				534													
16	1213	CL	463+29					1																														
17	1213 - 1214	CL	463+29	467+00																				371													
1	1214	CL	467+00					1																														
2	1214	CL	467+00	472+00																				500													
3	1214	CL	472+00					1																														
4	1214	CL	472+00	475+30																				330													
5	1214	CL	475+30					1																														
6	1214	CL/LT	475+23	475+30																				188						94		94					
7	1214	LT	475+23			22	29		1	1	3							80				1	1	300	177		1	1	12		12		1	1	160		1
8	1214	LT	475+07	475+23			15					15																			15				103		
10	1214	LT	474+98	475+23		24	24					24						149																			
12	1214	LT	475+00								2		1	1	1	1																			1		
13	1214	LT	475+23	475+85		68	68					68						116																			
14	1214	LT	475+85						1		1							55	1	1																	
15	1214 - 1215	CL	475+30	479+00																				371													
1	1215	CL	479+00					1																														
2	1215	CL	479+00	483+50																				450													
3	1215	CL	483+50					1																														
4	1215	CL	483+50	488+50																				500													
5	1215	CL	488+50					1																														
6	1215 - 1216	CL	488+50	492+22																				372													
1	1216	CL	492+22					1																														
2	1216	CL	492+22	495+41																				319													
3	1216	CL	495+41					1																														
4	1216	CL/LT	495+41	495+43																				178						89		89					
5	1216	LT	495+43							1														150	150	150		1									
6	1216	LT	495+34	495+43			8																		23				8								
7	1216	LT	495+43	497+67			215					215														215			215		215						
8	1216	LT	497+67			32	26		1	1	4						33				2	1			170	1		5				1	1		130	1	1
9	1216	LT	497+67	498+00		48	48					48					48																				
10	1216	LT	498+00						1		1						55		1	1																	
11	1216 - 1217	CL	495+41	503+42																				812													
1	1217	CL	503+42					1																														
2	1217	CL	503+42	507+50																				408													
3	1217	CL	507+50					1																														
4	1217	CL	507+50	512+50																				500													
TOTALS CARRIED TO SUBSUMMARY					23	268	969	12	6	5	16	888	2	2	2	2	136	811	3	3	4	3	8443	524	535	3	3	664	284	681	284	2	2	2	540	1	1	2

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1192
2017

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REFERENCE NO.	SHEET NO.	SIDE	STATION TO STATION		625 CONDUIT, 2", 725.04 FT	625 CONDUIT, 3", 725.04 FT	625 TRENCH FT	625 MEDIAN JUNCTION BOX, AS PER PLAN EACH	625 PULL BOX, 725.08, 18" EACH	625 PULL BOX, 725.08, 32", AS PER PLAN EACH	625 GROUND ROD EACH	625 UNDERGROUND WARNING/MARKING TAPE FT	632 POWER CABLE, MISC.: 3 CONDUCTOR, 1/0 AWG FT	632 POWER SERVICE, AS PER PLAN EACH	632 CONDUIT RISER, 2" DIAMETER EACH	632 SIGNALIZATION, MISC.: STEP-DOWN TRANSFORMER AND SUPPORT EACH	633 CABINET FOUNDATION, AS PER PLAN EACH	633 CONTROLLER WORK PAD, AS PER PLAN EACH	804 FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE, 72 FIBER FT	804 DROP CABLE, 24 FIBER FT	804 FIBER TERMINATION PANEL, 72 FIBER EACH	804 SPLICE ENCLOSURE, BUTT STYLE EACH	809 CONDUIT, MULTICELL, MISC.: 2" HDPE WITH 4-14MM/10MM INNERDUCTS FT	809 CONDUIT, MULTICELL, MISC.: 2" HDPE WITH 4-14MM/10MM INNERDUCTS, JACKED OR DRILLED FT	809 CONDUIT, MULTICELL, MISC.: 4" HDPE FT	809 CONDUIT, MULTICELL, MISC.: 4" HDPE, JACKED OR DRILLED FT	809 CCTV IP-CAMERA SYSTEM, ENHANCED EACH	809 CCTV CONCRETE POLE WITH LOWERING UNIT, 70 FEET EACH	809 ETHERNET CABLE, OUTDOOR RATED FT	809 ITS CABINET - GROUND MOUNTED FT	809 ITS DEVICE MISC.: RELOCATE CCTV CAMERA AND WIRELESS RADIO EQUIPMENT FT			
5	1217	CL	512+50					1																														
6	1217 - 1218	CL	512+50	517+50																500																		
7	1217	CL/RT	503+42	503+47																				97		97												
8	1217	RT	503+47							1																												
1	1218	CL	517+50					1																														
2	1218	CL	517+50	521+50																400																		
3	1218	CL	521+50					1																														
4	1218	CL	521+50	526+50																500																		
5	1218	CL	526+50					1																														
6	1218	CL	526+50	529+50																300																		
7	1218	CL	529+50					1																														
8	1218 - 1219	CL	529+50	531+67																217																		
1	1219	CL	531+67					1																														
2	1219	CL/RT	531+67	531+67																75				75		75												
3	1219	RT	531+67							1										150																		
4	1219	RT	531+67	534+66																306																		
5	1219	RT	534+66																	150																		
6	1219	RT	534+66	540+00			540					540								540						540												
7	1219	RT	540+00		5	10	15		1	1	3		23			1	1	1	300	170	1	1	5		5		1	1	130	1							
8	1219	RT	534+66								1																											
9	1219	RT	534+66	532+98									238																										
10	1219	RT	532+98						1		2		55	1	1																								
11	1219	RT	532+98	540+00		462	462					462	472																										
12	1219	RT	539+94	540+00																140																		
13	1219	RT	539+94							1										150																		
14	1219 - 1220	RT/LT	539+94	CABINET K #115																4079																		
1	1221	LT	10+89							1										150																		
2	1221	LT	10+68	10+89																38				38		38												
3	1221	LT	10+68					1																														
4	1221	LT	10+68	15+38																515																		
5	1221	LT	15+38					1																														
6	1221	LT/CL	15+38	18+00																264																		
7	1221	CL	18+00					1																														
8	1221	CL/LT	18+00	18+01																180				90		90												
9	1221	LT	18+01							1										300	150		1															
10	1221	LT	18+01	18+01			14					14									14			14		14												
11	1221	LT	18+01								1						1	1			15	1														1		
12	1221	LT	18+01	21+70									374																									
13	1221	LT	21+70						1		1		5																									
14	1221	LT	21+70	22+63		104	104					104	122																									
15	1221	LT	22+63																																75		1	
16	1221	CL	18+00	21+89																389																		
17	1221	CL	21+89					1																														
18	1221	CL/LT	21+89	21+89																71				71		71												
19	1221	LT	21+81								1						1	1			15	1														5	1	
20	1221	LT	21+81	21+89		8	8					8									8					8									8		
21	1221	LT	21+89							1										150	150		1												5		
22	1221	LT	21+89	22+63		144	72					72																							82		
23	1221	CL	31+52					1																														
24	1221	CL/LT	31+52	31+52																				85		85												
25	1221	LT	31+52							1																												
TOTALS CARRIED TO SUBSUMMARY					5	728	1215	11	3	8	9	1200	1289	1	1	1	3	3	9864	522	3	3	19	456	567	596	1	1	305	3	1						

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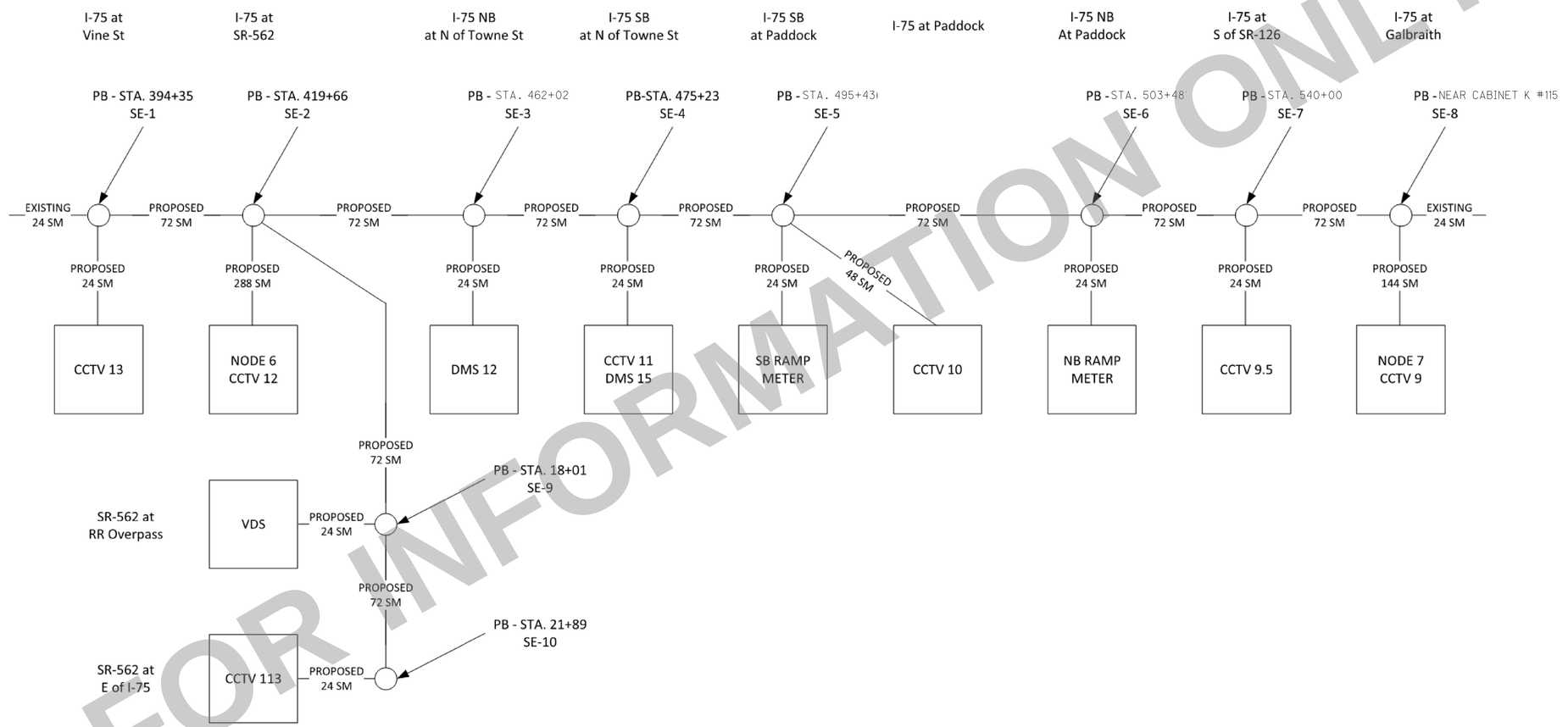
1193
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Notes:

- Node locations shall be maintained at all times.
- Tracer Wire - All conduit runs shall be locatable with tracer wire per Supplemental Specification 804.



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CALCULATED RJI
CHECKED JDS

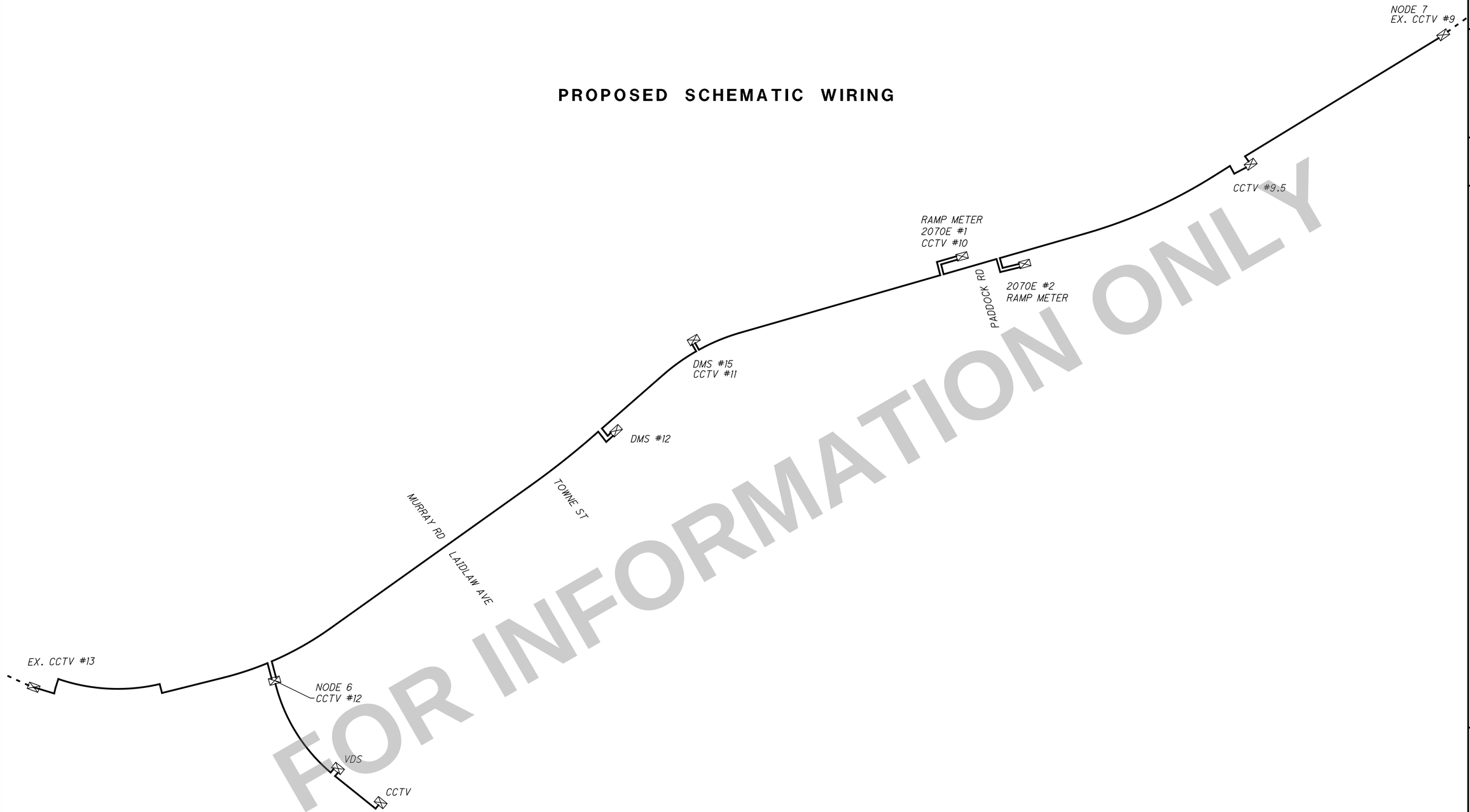
I.R. 75 ITS OVERVIEW SCHEMATIC

HAM-75-7.85

1194
2017

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PROPOSED SCHEMATIC WIRING



FOR INFORMATION ONLY

LEGEND

- ⊠ ITS FIELD CABINET
- ——— PROPOSED FIBER TRUNK CABLE
- - - - - - EXISTING FIBER TRUNK CABLE (TO REMAIN)

ITS conduit removed by this project, not show for clarity.

HORIZONTAL SCALE IN FEET
0 250 500 1000

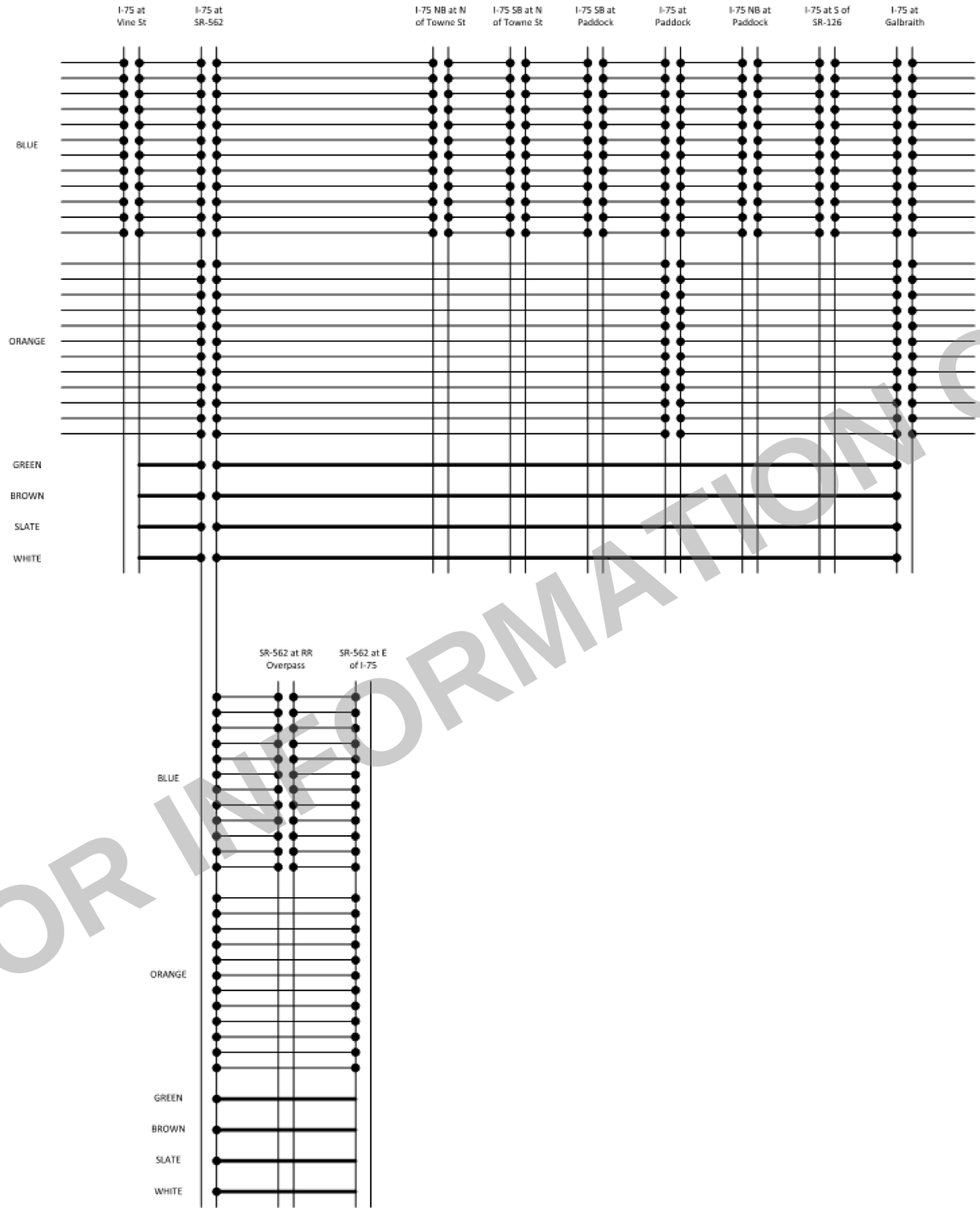
CALCULATED DRM
CHECKED JDS

ITS SCHEMATIC WIRING

HAM-75-7.85

1195
2017

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FOR INFORMATION ONLY

CALCULATED RJI
CHECKED JDS

I.R. 75 ITS FIBER SPLICING DIAGRAM

HAM-75-7.85

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2017

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THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE OPERATION OF THE ITS SYSTEM FOR THE DURATION OF THE PROJECT. THE ITS SYSTEM SHALL BE OPERATIONAL AT ALL TIMES. EXISTING LOOP DETECTORS IN THE CORRIDOR DO NOT NEED TO BE MAINTAINED. THE EXISTING CAMERAS SHALL BE MAINTAINED AT ALL TIMES. TEMPORARY SUPPORTS AND OR RELOCATION SHALL BE FURNISHED AND INSTALLED AS NEEDED TO MAINTAIN THE FIBER OPTIC CABLE AND CAMERA SYSTEMS.

NOTES:
1. EXISTING ITS EQUIPMENT LOCATIONS ARE APPROXIMATE.

2. THE ITS SYSTEM SHALL BE KEPT FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION. EXTENDED DMS OUTAGE IS ANTICIPATED.

3. ALL REMOVED ITS EQUIPMENT SHALL BE DELIVERED TO THE ODOT FIELD OFFICE.

EXISTING CONDITIONS ARE BASED UPON THE AVAILABLE INFORMATION FROM ODOT GIS, FIELD SURVEYS, AND RECORD PLANS.

ITS CONDUIT W/ FIBER (TO REMAIN)
(INSTALLED BY HAM-75-6.78)

ITS CONDUIT W/ FIBER (TO REMAIN)
(INSTALLED BY HAM-75-6.78)

POWER CONDUIT W/ CABLES (TO REMAIN)
(INSTALLED BY HAM-75-6.78)

PULL BOX (TO REMAIN)
INSTALLED BY HAM-75-6.78
STA. 394+35

ITS CONDUIT (TO REMAIN) W/ FIBER (TO BE REMOVED)
(INSTALLED BY HAM-75-6.78)

PULL BOX (TO REMAIN)
INSTALLED BY HAM-75-6.78
STA. 399+00

ITS CONDUIT (TO REMAIN) W/ FIBER (TO BE REMOVED)
(INSTALLED BY HAM-75-6.78)

PULL BOX (TO REMAIN)
INSTALLED BY HAM-75-6.78
STA. 403+00

ITS CONDUIT (TO REMAIN) W/ FIBER (TO BE REMOVED)
(INSTALLED BY HAM-75-6.78)

ITS CONDUIT (TO REMAIN) W/ FIBER (TO BE REMOVED)
(INSTALLED BY HAM-75-6.78)

PULL BOX (TO REMAIN)
INSTALLED BY HAM-75-6.78
STA. 406+75

CCTV POLE (TO REMAIN)
W/ (1)-CCTV CAMERA #13 (TO REMAIN)
W/ (1)-SFRV DETECTOR (TO REMAIN)
W/ (1)-GROUND MTD CABINET K#123 (TO REMAIN)
W/ (1)-CONTROLLER (TO REMAIN)
DISCONNECT EX. ITS FIBER
(INSTALLED BY HAM-75-6.78)
STA. 394+50, 83.4' RT

ITS CONDUIT (TO REMAIN) W/ FIBER (TO BE REMOVED)
(INSTALLED BY HAM-75-6.78)

PULL BOX (TO REMAIN)
INSTALLED BY HAM-75-6.78
STA. 394+36, 78.0' RT.

PULL BOX (TO REMAIN)
INSTALLED BY HAM-75-6.78
STA. 399+00

ITS CONDUIT (ABANDON) W/ FIBER (TO BE REMOVED)
(INSTALLED BY HAM-75-6.78)

(1) PULL BOX (TO BE REMOVED)
INSTALLED BY HAM-75-6.78
STA. 403+00

ITS CONDUIT (ABANDON) W/ FIBER (TO BE REMOVED)
(INSTALLED BY HAM-75-6.78)

(2) PULL BOX (TO BE REMOVED)
INSTALLED BY HAM-75-6.78
STA. 409+00 (℄ RAMP N)

I.R. 75 (SB)

I.R. 75 (NB)

Ex LA-R/W

MATCHLINE STA. 409+00
SEE SHEET 1198

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DRM
CHECKED JDS

I.R. 75 ITS DEMOLITION PLAN
STA. 394+00 TO STA. 409+00

HAM-75-7.85

1197
2017

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(13) WOOD POLE (TO BE REMOVED)
W/ SIDE-FIRED RADAR VEHICLE DETECTOR (TO BE REMOVED)
W/ CONTROLLER CABINET (TO BE REMOVED)
STA. 416+20, 167' LT.
INSTALLED BY HAM-562-0.65

(12) PULL BOX (TO BE REMOVED)
INSTALLED BY HAM-75-6.78
STA. 414+00

PULL BOX (TO REMAIN)
INSTALLED BY HAM-75-6.78
STA. 409+88

PULL BOX (TO BE REMOVED)
INSTALLED BY HAM-75-6.78
STA. 410+00 (11)

(16) GROUND MOUNTED CABINET K#122, NODE 6 (TO BE REMOVED)
W/ EX. CONTROLLER (TO BE REMOVED)
STA. 419+41, 32' LT
(SEE NOTE 3)

(17) PULL BOX (TO BE REMOVED)
STA. 419+74, 92' LT

(15) PULL BOX (TO BE REMOVED)
STA. 419+40, 32' LT

(14) PULL BOX (TO BE REMOVED)
INSTALLED BY HAM-75-6.78
STA. 417+36, 36' LT

EX. POWER SOURCE POLE, DUKE ENERGY (TO REMAIN)
STA. 419+47, 236' LT

EX. OVERHEAD POWER SERVICE CABLES, DUKE ENERGY (TO REMAIN)

EX. POWER SERVICE POLE & METER, ODOT (TO BE REMOVED) (18)
STA. 419+78, 155' LT

PULL BOX (TO BE REMOVED) (19)
STA. 419+87, 132' LT

PULL BOX (TO BE REMOVED) (20)
STA. 419+95, 108' LT

CCTV CAMERA ASSEMBLY (TO REMAIN)
STA. 419+58, 130' RT
INSTALLED BY
HAM-75-6.78

MATCHLINE STA. 409+00
SEE SHEET 1197

MATCHLINE STA. 423+00
SEE SHEET 1199

I.R. 75 (SB)

I.R. 75 (NB)

RAMP M

RAMP N

RAMP J

RAMP K

Ex LA-R/W

FO

(1) PULL BOX (TO BE REMOVED)
INSTALLED BY HAM-75-6.78
STA. 411+50

(2) PULL BOX (TO BE REMOVED)
INSTALLED BY HAM-75-6.78
STA. 411+59

(3) PULL BOX (TO BE REMOVED)
INSTALLED BY HAM-75-6.78
STA. 416+80, 78' RT

(6) PULL BOX (TO BE REMOVED)
STA. 418+41, 81' RT

(4) PULL BOX (TO BE REMOVED)
STA. 417+27, 186' RT.

(5) PULL BOX (TO BE REMOVED)
STA. 417+34, 188' RT.

MATCHLINE STA. 415+00
SEE SHEET 1208

(9) PULL BOX (TO BE REMOVED)
STA. 419+33, 82' RT

(7) PULL BOX (TO BE REMOVED)
STA. 418+87, 136' RT

(8) WOOD POLE (TO BE REMOVED)
W/ SIDE-FIRED RADAR VEHICLE DETECTOR (TO BE REMOVED)
W/ CONTROLLER CABINET (TO BE REMOVED)
W/ CCTV CAMERA
W/WIRELESS RADIO
(TO BE REMOVED)
STA. 419+00, 190' RT.
INSTALLED BY HAM-562-0.65

(10) WOOD POLE (TO BE REMOVED)
W/ SIDE-FIRED RADAR VEHICLE DETECTOR (TO BE REMOVED)
W/ CONTROLLER CABINET (TO BE REMOVED)
W/ WIRELESS RADIO
(TO BE REMOVED)
W/32" PULL BOX (TO BE REMOVED)
REMOVE POWER SERVICE CABLES BACK TO POWER SOURCE
STA. 420+05, 328' RT.
INSTALLED BY HAM-562-0.65

FOR INFORMATION ONLY

NOTES:
1. EXISTING ITS EQUIPMENT LOCATIONS ARE APPROXIMATE.

2. THE ITS SYSTEM SHALL BE KEPT FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION. EXTENDED DMS OUTAGE IS ANTICIPATED.

3. EXISTING ITS NODE CONTROLLERS SHALL BE MAINTAINED UNTIL TEMPORARY OR PROPOSED FIBER OPTIC SYSTEMS ARE IN PLACE AND OPERATIONAL.

EXISTING CONDITIONS ARE BASED UPON THE AVAILABLE INFORMATION FROM ODOT GIS, FIELD SURVEYS, AND RECORD PLANS.

HORIZONTAL SCALE IN FEET
0 25 50 100

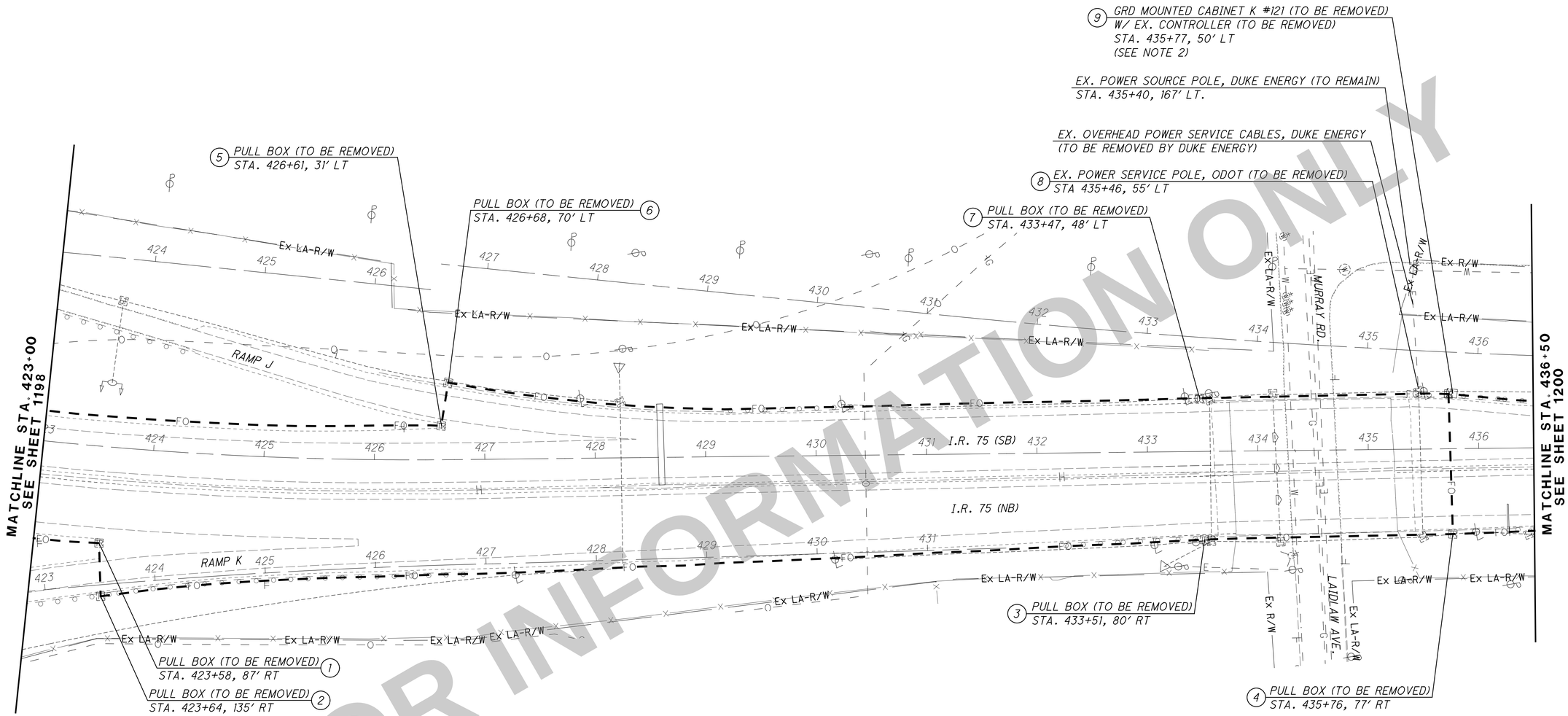
CALCULATED DRM
CHECKED JDS

I.R. 75 ITS DEMOLITION PLAN
STA. 409+00 TO STA. 423+00

HAM-75-7.85

1198
2017

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FOR INFORMATION ONLY

NOTES:
1. EXISTING ITS EQUIPMENT LOCATIONS ARE APPROXIMATE.

2. THE ITS SYSTEM SHALL BE KEPT FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION. EXTENDED DMS OUTAGE IS ANTICIPATED.

EXISTING CONDITIONS ARE BASED UPON THE AVAILABLE INFORMATION FROM ODOT GIS, FIELD SURVEYS, AND RECORD PLANS.

HORIZONTAL SCALE IN FEET
0 25 50 100

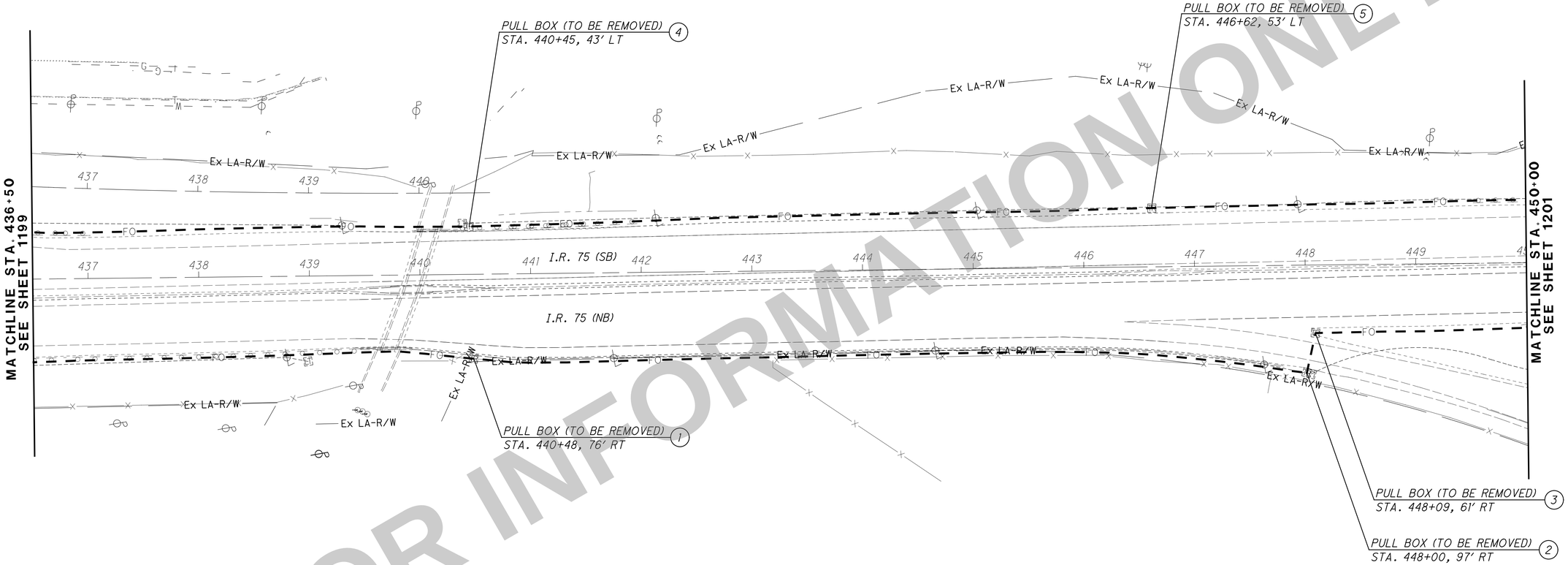
CALCULATED DRM
CHECKED JDS

I.R. 75 ITS DEMOLITION PLAN
STA. 423+00 TO STA. 436+50

HAM-75-7.85

1199
2017

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FOR INFORMATION ONLY

NOTES:

1. EXISTING ITS EQUIPMENT LOCATIONS ARE APPROXIMATE.

2. THE ITS SYSTEM SHALL BE KEPT FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION. EXTENDED DMS OUTAGE IS ANTICIPATED.

EXISTING CONDITIONS ARE BASED UPON THE AVAILABLE INFORMATION FROM ODOT GIS, FIELD SURVEYS, AND RECORD PLANS.

HORIZONTAL SCALE IN FEET
0 25 50 100

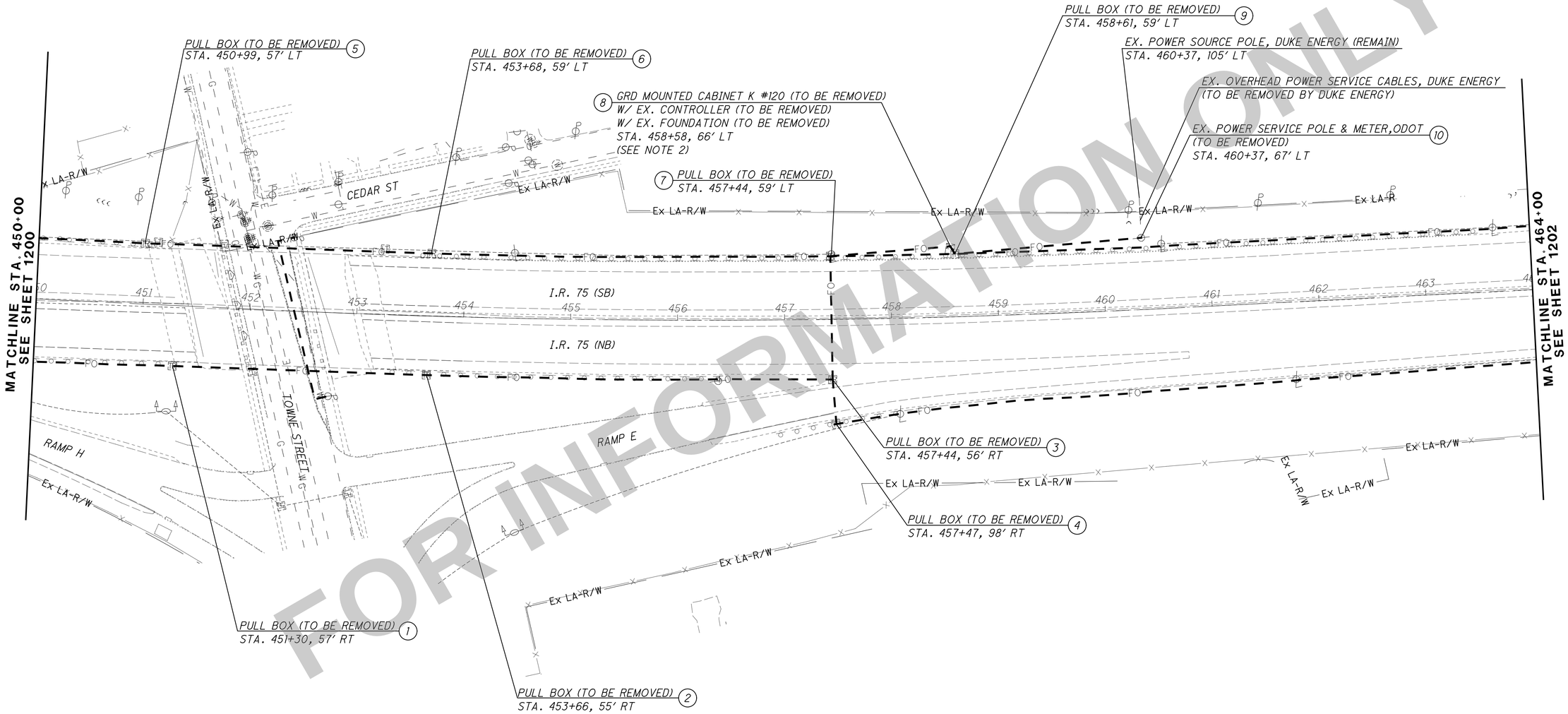
CALCULATED DRM
CHECKED JDS

I.R. 75 ITS DEMOLITION PLAN
STA. 436+50 TO STA. 450+00

HAM-75-7.85

1200
2017

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FOR INFORMATION ONLY

NOTES:
1. EXISTING ITS EQUIPMENT LOCATIONS ARE APPROXIMATE.

2. THE ITS SYSTEM SHALL BE KEPT FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION. EXTENDED DMS OUTAGE IS ANTICIPATED.

EXISTING CONDITIONS ARE BASED UPON THE AVAILABLE INFORMATION FROM ODOT GIS, FIELD SURVEYS, AND RECORD PLANS.

HORIZONTAL SCALE IN FEET
0 25 50 100

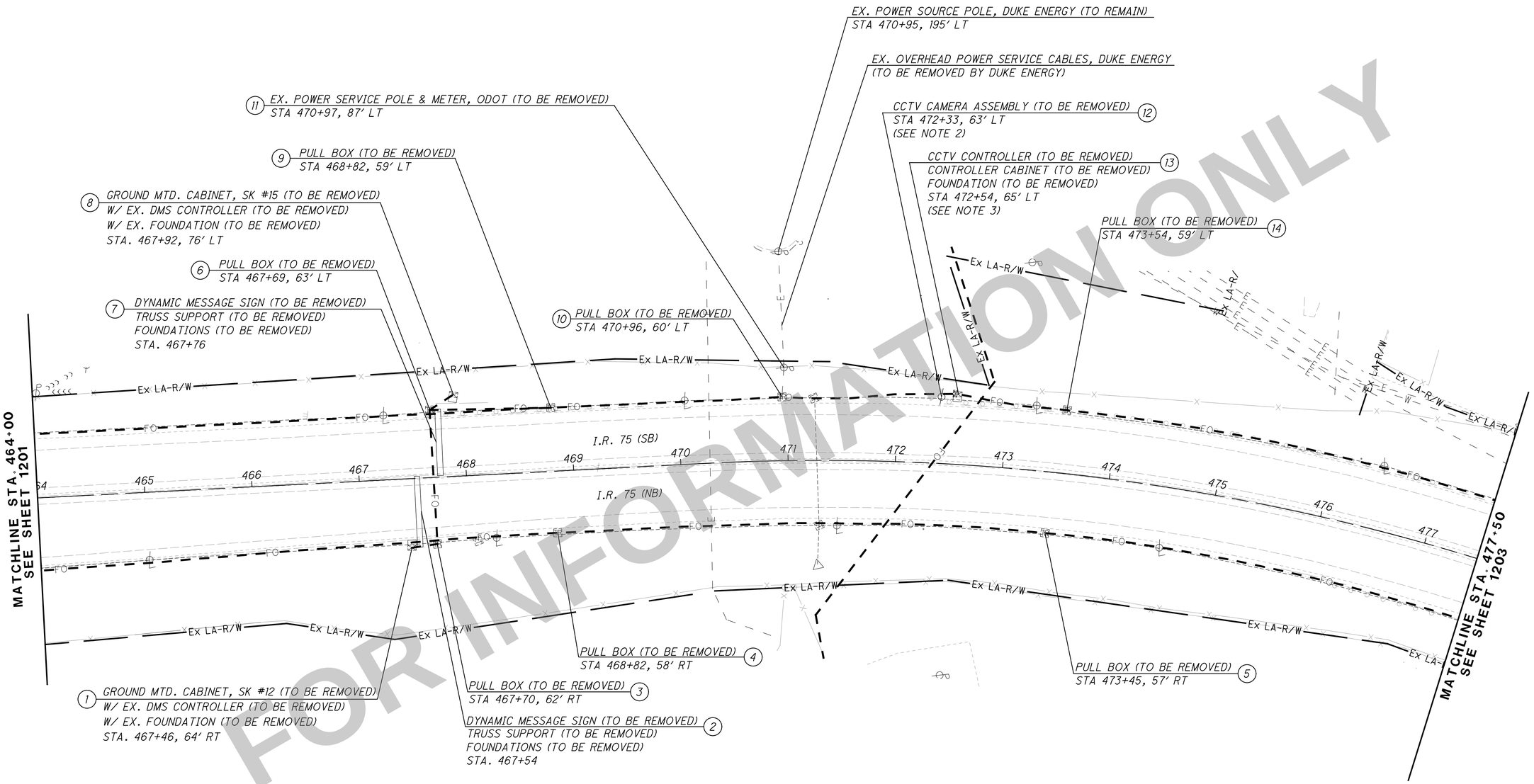
CALCULATED DRM
CHECKED JDS

I.R. 75 ITS DEMOLITION PLAN
STA. 450+00 TO STA. 464+00

HAM-75-7.85

1201
2017

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FOR INFORMATION ONLY

NOTES:

1. EXISTING ITS EQUIPMENT LOCATIONS ARE APPROXIMATE.
2. THE ITS SYSTEM SHALL BE KEPT FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION. EXTENDED DMS OUTAGE IS ANTICIPATED.
3. EXISTING ITS NODE CONTROLLER SHALL BE MAINTAINED UNTIL TEMPORARY OR PROPOSED FIBER OPTIC SYSTEMS ARE IN PLACE AND OPERATIONAL.

EXISTING CONDITIONS ARE BASED UPON THE AVAILABLE INFORMATION FROM ODOT GIS, FIELD SURVEYS, AND RECORD PLANS.

HORIZONTAL SCALE IN FEET
0 25 50 100

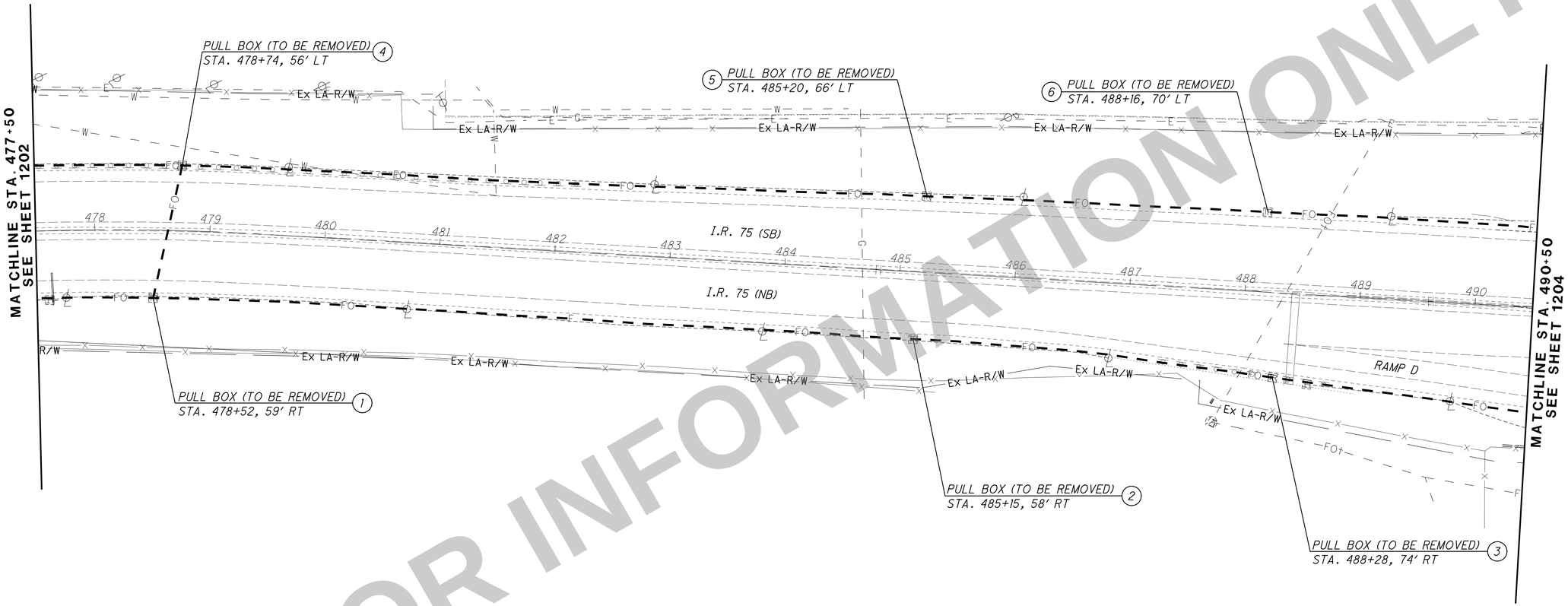
CALCULATED DRM
CHECKED JDS

I.R. 75 ITS DEMOLITION PLAN
STA. 464+00 TO STA. 477+50

HAM-75-7.85

1202
2017

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FOR INFORMATION ONLY

NOTES:
1. EXISTING ITS EQUIPMENT LOCATIONS ARE APPROXIMATE.

2. THE ITS SYSTEM SHALL BE KEPT FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION. EXTENDED DMS OUTAGE IS ANTICIPATED.

EXISTING CONDITIONS ARE BASED UPON THE AVAILABLE INFORMATION FROM ODOT GIS, FIELD SURVEYS, AND RECORD PLANS.

HORIZONTAL SCALE IN FEET
0 25 50 100

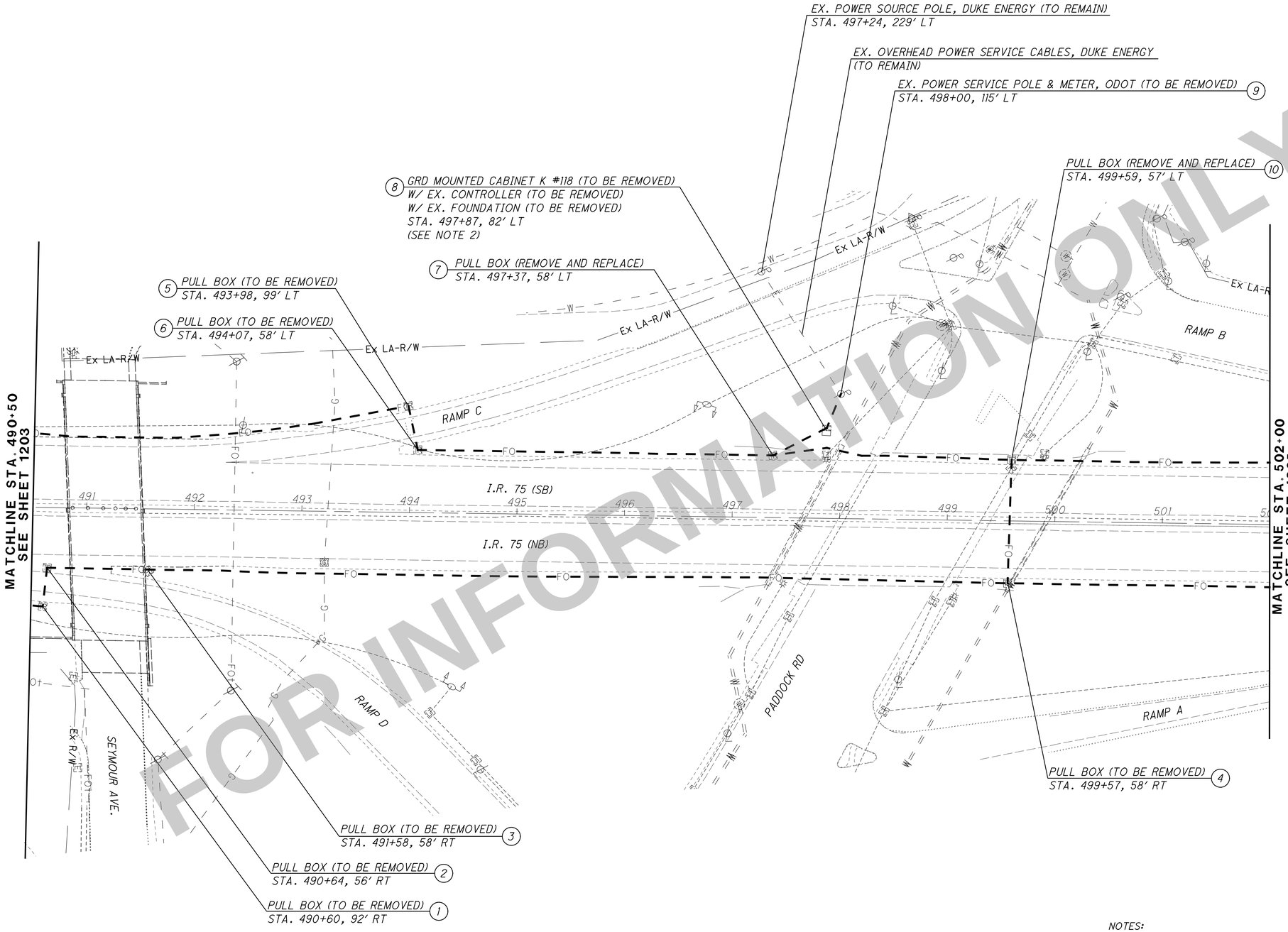
CALCULATED DRM
CHECKED JDS

I.R. 75 ITS DEMOLITION PLAN
STA. 477+50 TO STA. 490+50

HAM-75-7.85

1203
2017

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FOR INFORMATION ONLY

NOTES:
1. EXISTING ITS EQUIPMENT LOCATIONS ARE APPROXIMATE.

2. THE ITS SYSTEM SHALL BE KEPT FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION. EXTENDED DMS OUTAGE IS ANTICIPATED.

EXISTING CONDITIONS ARE BASED UPON THE AVAILABLE INFORMATION FROM ODOT GIS, FIELD SURVEYS, AND RECORD PLANS.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DRM
CHECKED JDS

I.R. 75 ITS DEMOLITION PLAN
STA. 490+50 TO STA. 502+00

HAM-75-7.85

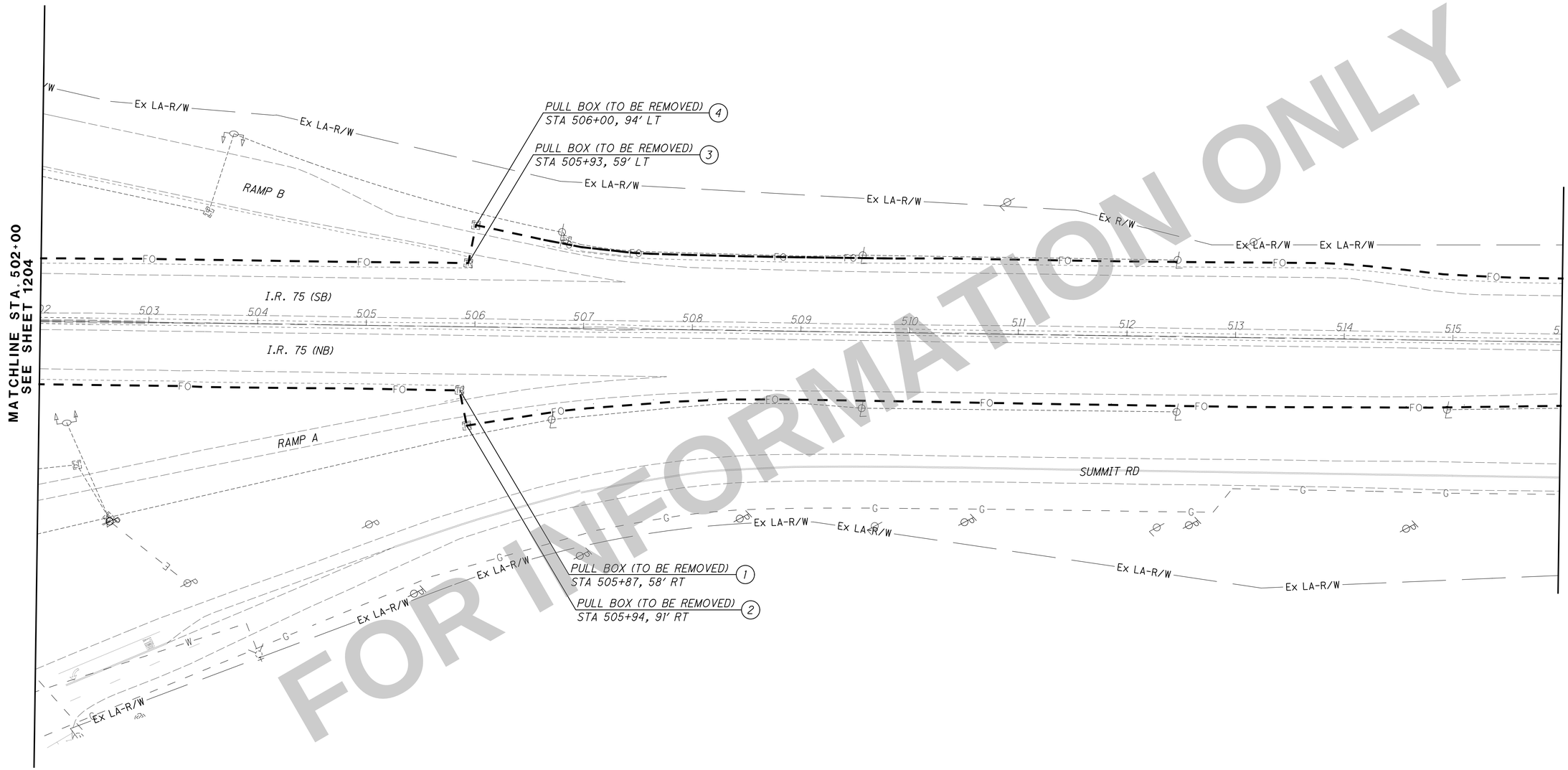
1204
2017

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NOTES:
1. EXISTING ITS EQUIPMENT LOCATIONS ARE APPROXIMATE.

2. THE ITS SYSTEM SHALL BE KEPT FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION. EXTENDED DMS OUTAGE IS ANTICIPATED.

EXISTING CONDITIONS ARE BASED UPON THE AVAILABLE INFORMATION FROM ODOT GIS, FIELD SURVEYS, AND RECORD PLANS.



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

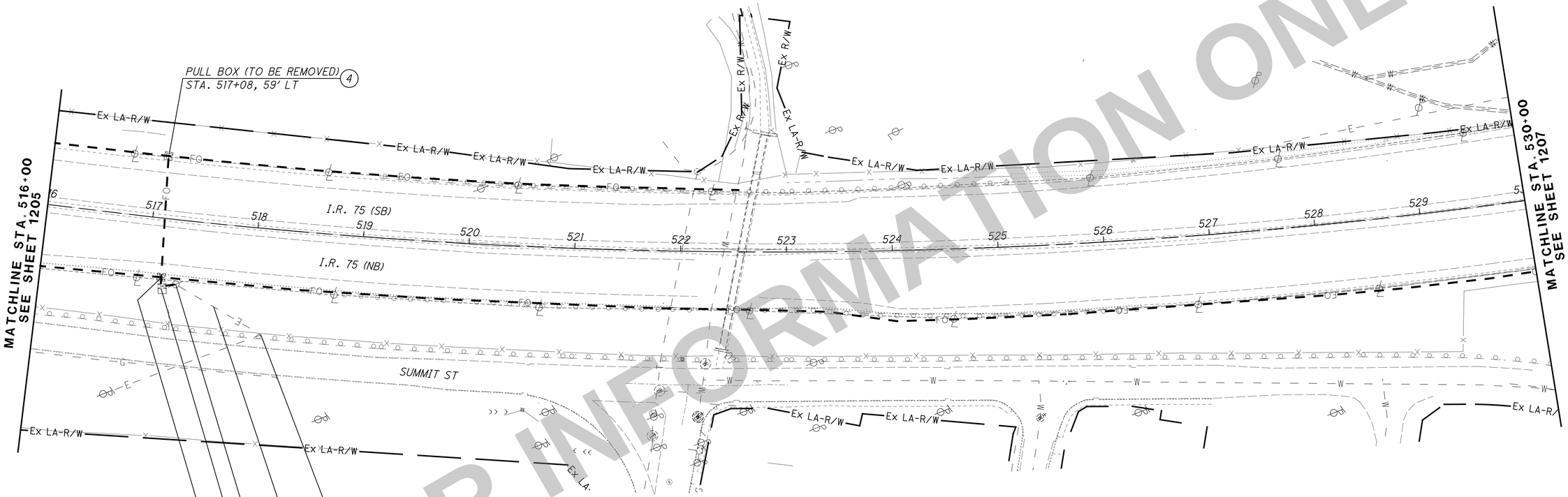
CALCULATED DRM
CHECKED JDS

I.R. 75 ITS DEMOLITION PLAN
STA. 502+00 TO STA. 516+00

HAM-75-7.85

1205
2017

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FOR INFORMATION ONLY

NOTES:

1. EXISTING ITS EQUIPMENT LOCATIONS ARE APPROXIMATE.

2. THE ITS SYSTEM SHALL BE KEPT FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION. EXTENDED DMS OUTAGE IS ANTICIPATED.

3. EXISTING CCTV CAMERA ASSEMBLY SHALL BE MAINTAINED UNTIL THE PROPOSED CCTV AT STA. 497+67 IS OPERATIVE. THE EXISTING CCTV MAY BE RELOCATED WITH SITE APPROVAL FROM ODOT CENTRAL OFFICE, ITS.

EXISTING CONDITIONS ARE BASED UPON THE AVAILABLE INFORMATION FROM ODOT GIS, FIELD SURVEYS, AND RECORD PLANS.

HORIZONTAL SCALE IN FEET
0 25 50 100

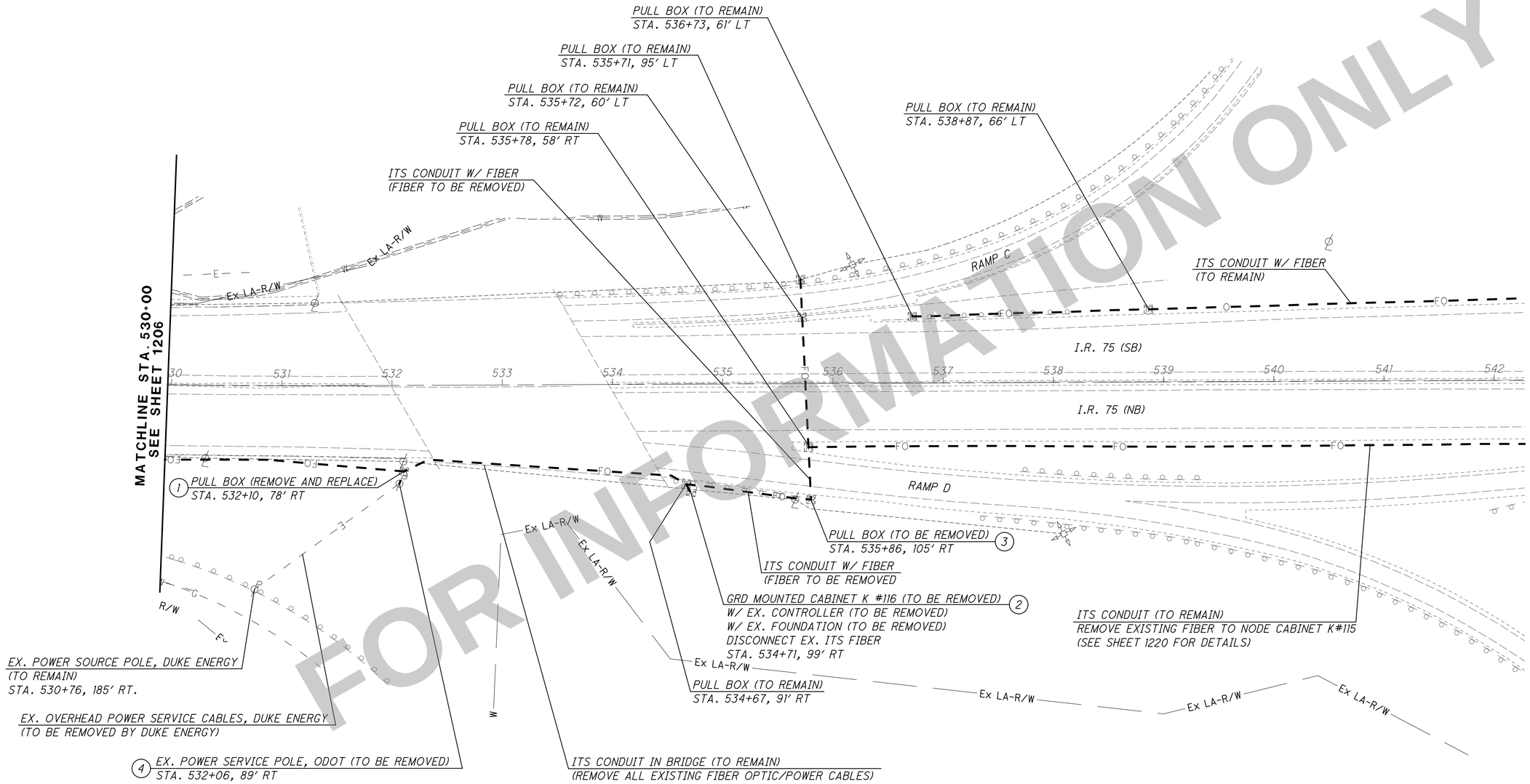
CALCULATED DRM
CHECKED JDS

I.R. 75 ITS DEMOLITION PLAN
STA. 516+00 TO STA. 530+00

HAM-75-7.85

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FOR INFORMATION ONLY

NOTES:
1. EXISTING ITS EQUIPMENT LOCATIONS ARE APPROXIMATE.

2. THE ITS SYSTEM SHALL BE KEPT FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION. EXTENDED DMS OUTAGE IS ANTICIPATED.

EXISTING CONDITIONS ARE BASED UPON THE AVAILABLE INFORMATION FROM ODOT GIS, FIELD SURVEYS, AND RECORD PLANS.

HORIZONTAL SCALE IN FEET
0 25 50 100

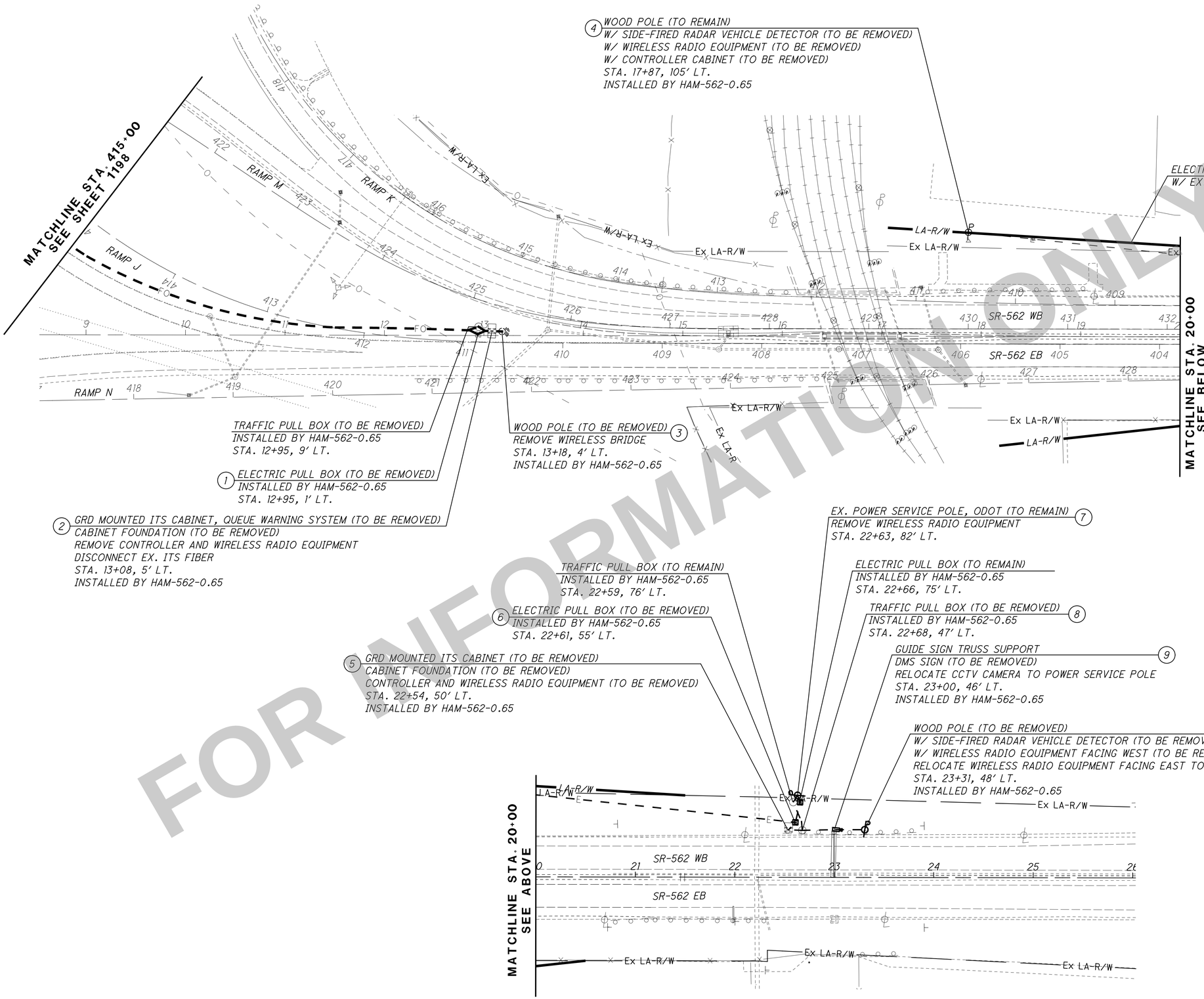
CALCULATED DRM
CHECKED JDS

I.R. 75 ITS DEMOLITION PLAN
STA. 530+00 TO END

HAM-75-7.85

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2017

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FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DRM
CHECKED JDS

I.R. 75 ITS DEMOLITION PLAN
STA. 415+00 TO STA. 26+00

HAM-75-7.85

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2017

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NOTES:
1. EXISTING ITS EQUIPMENT LOCATIONS ARE APPROXIMATE.

2. THE ITS SYSTEM SHALL BE KEPT FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION. EXTENDED DMS OUTAGE IS ANTICIPATED.

3. CONDUIT IN BARRIER IS INCIDENTAL TO ITEM 622 CONCRETE BARRIER.

FOR INFORMATION ONLY

MULTICELL CONDUIT W/ FIBER (TO REMAIN) INSTALLED BY HAM-75-6.78

CONDUIT W/ (1)-POWER CABLE (TO REMAIN) INSTALLED BY HAM-75-6.78

PULL BOX (TO REMAIN) INSTALLED BY HAM-75-6.78 STA. 394+35

4" MULTICELL CONDUIT W/ FIBER (TO BE REMOVED) INSTALLED BY HAM-75-6.78

SEE DETAIL A

4" MULTICELL CONDUIT (TO REMAIN) INSTALLED BY HAM-75-6.78
(4) W/ (1)-NEW 72 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE=482'
(REMOVE EXISTING FIBER OPTIC CABLE)

DETAIL A
SCALE: 1"=15'

4" MULTICELL CONDUIT (TO REMAIN) INSTALLED BY HAM-75-6.78

(2) PULL BOX (TO REMAIN) INSTALLED BY HAM-75-6.78
W/ (1)-NEW SPLICE ENCLOSURE
STA. 394+35

(1) 4" MULTICELL CONDUIT (TO REMAIN) INSTALLED BY HAM-75-6.78
W/ (1)-NEW 24 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE=16'

CCTV WORK PAD AND CCTV POLE
W/ (1)-GROUND MOUNTED CONTROLLER (TO REMAIN)
INSTALLED BY HAM-75-6.78

PULL BOX (TO REMAIN) INSTALLED BY HAM-75-6.78 STA. 399+00 (7)

4" MULTICELL CONDUIT
(6) W/ (1)-72 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE
JACKED/DRILLED UNDER PAVEMENT=170'

PULL BOX (TO REMAIN) INSTALLED BY HAM-75-6.78 (5)
STA. 399+00

CCTV POLE ASSEMBLY (TO REMAIN) (3)
W/ (1)-CCTV CAMERA #13 (TO REMAIN)
INSTALLED BY HAM-75-6.78
STA. 394+50, 83.5' RT

4" MULTICELL CONDUIT (TO REMAIN) INSTALLED BY HAM-75-6.78
(8) W/ (1)-NEW 72 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE=380'
(REMOVE EXISTING FIBER OPTIC CABLE)

PULL BOX (TO REMAIN) (9) INSTALLED BY HAM-75-6.78
STA. 403+00

4" MULTICELL CONDUIT (TO REMAIN) INSTALLED BY HAM-75-6.78
(10) W/ (1)-NEW 72 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE=355'
(REMOVE EXISTING FIBER OPTIC CABLE)

(12) 4" MULTICELL CONDUIT (TO REMAIN) INSTALLED BY HAM-75-6.78
W/ (1)-NEW 72 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE=315'
(REMOVE EXISTING FIBER OPTIC CABLE)

PULL BOX (TO REMAIN) (11) INSTALLED BY HAM-75-6.78
STA. 406+75

I.R. 75 (SB)

I.R. 75 (NB)

RAMP M

RAMP N

MATCHLINE STA. 409+00
SEE SHEET 1210

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DRM
CHECKED JDS

I.R. 75 ITS PLAN
STA. 394+00 TO STA. 409+00

HAM-75-7.85

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2017

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PULL BOX (TO REMAIN) (1)
INSTALLED BY HAM-75-6.78
STA. 409+88

(1)-2" MULTICELL CONDUIT
W/ (1)-72 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE
(1)-4" MULTICELL CONDUIT
(EMPTY FOR FUTURE USE) (2)
IN TRENCH= 188'

(1)-2" MULTICELL CONDUIT
W/ (1)-72 STRAND FIBER OPTIC
CABLE, AIRBLOWN/PUSHABLE
(1)-4" MULTICELL CONDUIT
(4) (EMPTY FOR FUTURE USE)
JACKED/DRILLED UNDER
PAVEMENT= 55'

(3) PULL BOX, 32"
STA. 411+78, 163' LT

PULL BOX, 32" (5)
STA. 411+90, 110' LT

(1)-2" MULTICELL CONDUIT
W/ (1)-72 STRAND FIBER OPTIC
CABLE, AIRBLOWN/PUSHABLE
(1)-4" MULTICELL CONDUIT
(10) (EMPTY FOR FUTURE USE)
IN BRIDGE PARAPET= 265'

(15) PROPOSED POWER SERVICE, 120/240V (ITS-15.11)
PROPOSED WOOD POWER SERVICE POLE
W/ (1)-CONDUIT RISER, 2"
W/ (1)-DISCONNECT SWITCH
W/ (1)-METER
W/ (1)-PULL BOX, 18", 725.08
STA. 419+78, 155' LT

EX. WOOD POLE, DUKE ENERGY
(POWER SOURCE) (TO REMAIN)
STA. 419+47, 236' LT.

EX. AERIAL SERVICE CABLE
(DUKE ENERGY)

(11) MEDIAN JUNCTION BOX
STA. 419+75, 0' RT

(16) 3" CONDUIT, 725.04 W/ (3)-#1/0 AWG POWER CABLES
IN TRENCH= 132' (WIRING INCLUDES HOT, NEUTRAL, GROUND)

(17) PULL BOX, 18", 725.08
STA. 421+12, 192' LT

(18) 3" CONDUIT, 725.04 W/ (3)-#1/0 AWG POWER CABLES
JACKED/DRILLED UNDER PAVEMENT= 108'
(WIRING INCLUDES HOT, NEUTRAL, GROUND)

(19) PULL BOX, 18", 725.08
STA. 421+12, 84' LT

3" CONDUIT, 725.04 (20)
W/ (3)-#1/0 AWG POWER CABLES
JACKED/DRILLED UNDER
PAVEMENT= 197' (WIRING INCLUDES
HOT, NEUTRAL, GROUND)

(1)-2" MULTICELL CONDUIT
W/ (1)-72 STRAND FIBER OPTIC
CABLE, AIRBLOWN/PUSHABLE
(1)-4" MULTICELL CONDUIT
(EMPTY FOR FUTURE USE) (23)
IN BARRIER= 425'

MATCHLINE STA. 409+00
SEE SHEET 1209

MATCHLINE STA. 423+00
SEE SHEET 1211

MATCHLINE STA. 415+00
SEE SHEET 1221

RAMP M

RAMP N

RAMP J

RAMP K

I.R. 75 (SB)

I.R. 75 (NB)

EX LA-R/W

LA-R/W

SEE DETAIL A

(9) MEDIAN JUNCTION BOX
STA. 417+10, 0' RT

(1)-2" MULTICELL CONDUIT
W/ (1)-72 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE
(1)-4" MULTICELL CONDUIT
(6) (EMPTY FOR FUTURE USE)
JACKED/DRILLED UNDER
PAVEMENT= 110'

(7) MEDIAN JUNCTION BOX
STA. 411+90, 0' RT

(1)-2" MULTICELL CONDUIT
W/ (1)-72 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE
(1)-4" MULTICELL CONDUIT
(EMPTY FOR FUTURE USE)
IN BARRIER= 520' (8)

PULL BOX, 18", 725.08 (21)
STA. 421+13, 113' RT

DETAIL A
SCALE: 1" = 15'

(13) (1)-3" PVC CONDUIT W/ (1)-CCTV CABLE
(1)-3" CONDUIT (EMPTY)
IN TRENCH= 11'

(13) (1)-2" MULTICELL CONDUIT W/ (1)-288 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE
(1)-4" MULTIELL CONDUIT W/ (1)-CCTV CABLE
IN TRENCH= 5'

EX. CCTV POLE ASSEMBLY #12 (TO REMAIN)
INSTALLED BY HAM-75-6.78
STA. 419+58, 130' RT.

(1)-2" MULTICELL CONDUIT W/ (2)-72 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE
(1)-4" MULTICELL CONDUIT (EMPTY FOR FUTURE USE)
JACKED/DRILLED UNDER PAVEMENT= 128' (12)

(14) (1)-2" MULTICELL CONDUIT W/ (1)-72 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE
(1)-4" MULTIELL CONDUIT (EMPTY FOR FUTURE USE)
IN TRENCH= 334'

(13) PROPOSED ITS DEVICE WORK PAD (ITS-10.11)
W/(1)-GROUND MOUNTED ITS FIELD CABINET (NEW NODE 6)
W/(1)-TERMINATION PANEL, 288 FIBER
W/(1)-PULL BOX, 32" W/(1)-SPLICE ENCLOSURE
W/(1)-PULL BOX, 18", 725.08
STA. 419+66, 130' RT

(13) 2" CONDUIT, 725.04 W/ (3)-#1/0 AWG POWER CABLES
IN TRENCH= 5' (WIRING INCLUDES HOT, NEUTRAL, GROUND)

3" CONDUIT, 725.04 W/ (2)-#1/0 AWG POWER CABLES (22)
IN TRENCH= 154'
(WIRING INCLUDES HOT, NEUTRAL, GROUND)

NOTES:
1. THE ITS SYSTEM SHALL BE KEPT FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION. EXTENDED DMS OUTAGE IS ANTICIPATED.

2. SEE SHEET 1370 FOR BRIDGE CONDUIT LOCATION DETAILS.

3. CONDUIT IN BARRIER IS INCIDENTAL TO ITEM 622 CONCRETE BARRIER.

EOT INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

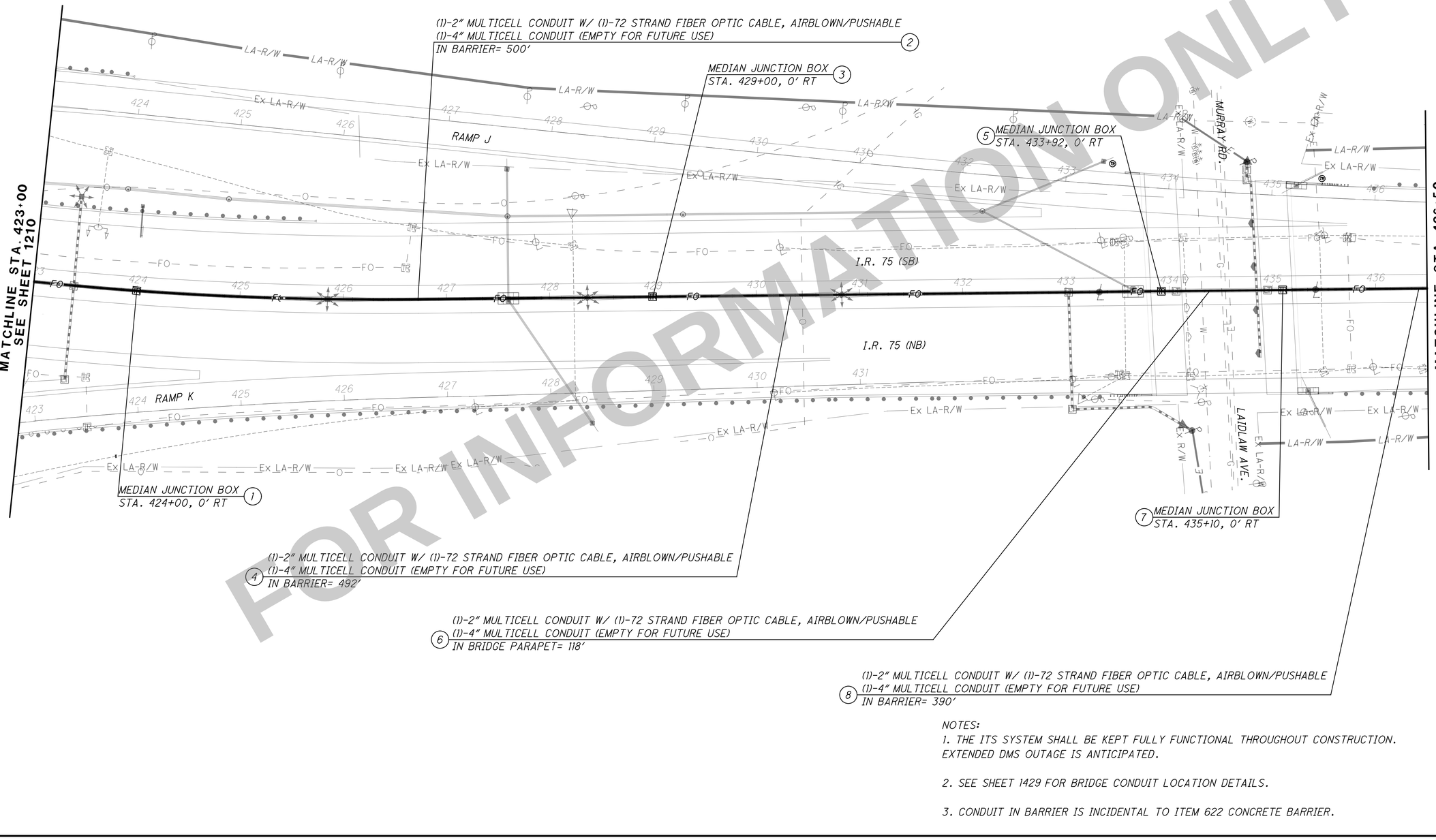
CALCULATED DRM CHECKED JDS

I.R. 75 ITS PLAN
STA. 409+00 TO STA. 423+00

HAM-75-7.85

1210
2017

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FOR INFORMATION ONLY

NOTES:

1. THE ITS SYSTEM SHALL BE KEPT FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION. EXTENDED DMS OUTAGE IS ANTICIPATED.

2. SEE SHEET 1429 FOR BRIDGE CONDUIT LOCATION DETAILS.

3. CONDUIT IN BARRIER IS INCIDENTAL TO ITEM 622 CONCRETE BARRIER.

HORIZONTAL SCALE IN FEET
0 25 50 100

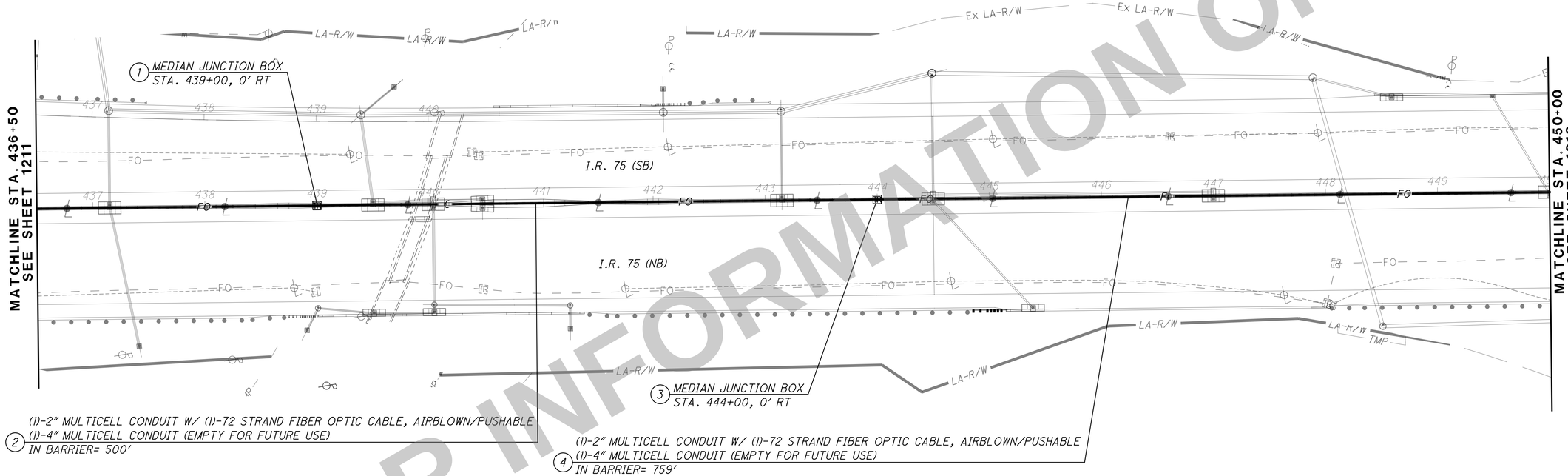
CALCULATED DRM
CHECKED JDS

I.R. 75 ITS PLAN
STA. 423+00 TO STA. 436+50

HAM-75-7.85

1211
2017

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FOR INFORMATION ONLY

NOTES:
1. THE ITS SYSTEM SHALL BE KEPT FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION. EXTENDED DMS OUTAGE IS ANTICIPATED.

2. CONDUIT IN BARRIER IS INCIDENTAL TO ITEM 622 CONCRETE BARRIER.

HORIZONTAL SCALE IN FEET
0 25 50 100

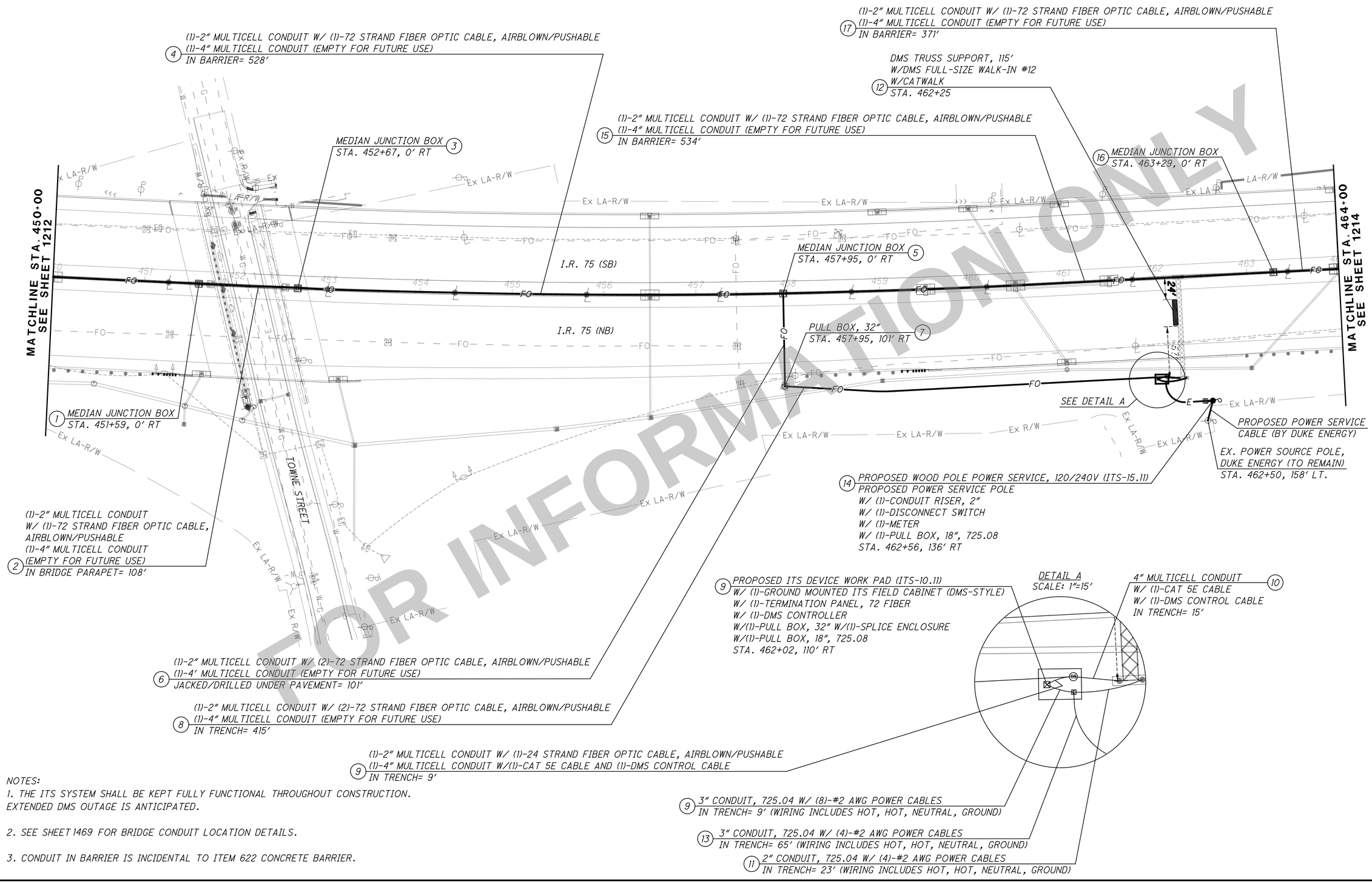
CALCULATED DRM
CHECKED JDS

I.R. 75 ITS PLAN
STA. 436+50 TO STA. 450+00

HAM-75-7.85

1212
2017

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NOTES:

1. THE ITS SYSTEM SHALL BE KEPT FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION. EXTENDED DMS OUTAGE IS ANTICIPATED.

2. SEE SHEET 1469 FOR BRIDGE CONDUIT LOCATION DETAILS.

3. CONDUIT IN BARRIER IS INCIDENTAL TO ITEM 622 CONCRETE BARRIER.

HORIZONTAL SCALE IN FEET
0 25 50 100

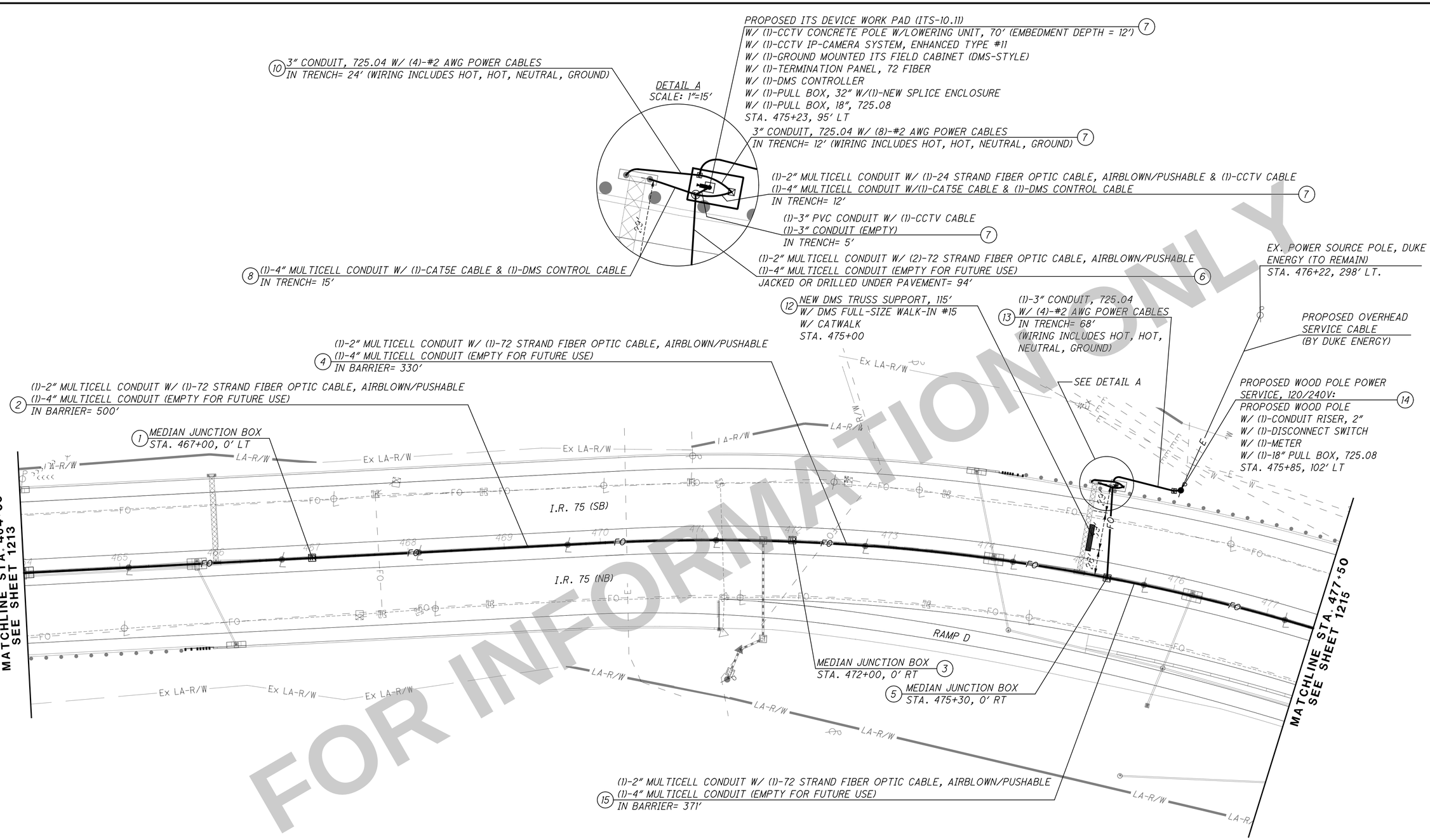
CALCULATED DRM
CHECKED JDS

I.R. 75 ITS PLAN
STA. 450+00 TO STA. 464+00

HAM-75-7.85

1213
2017

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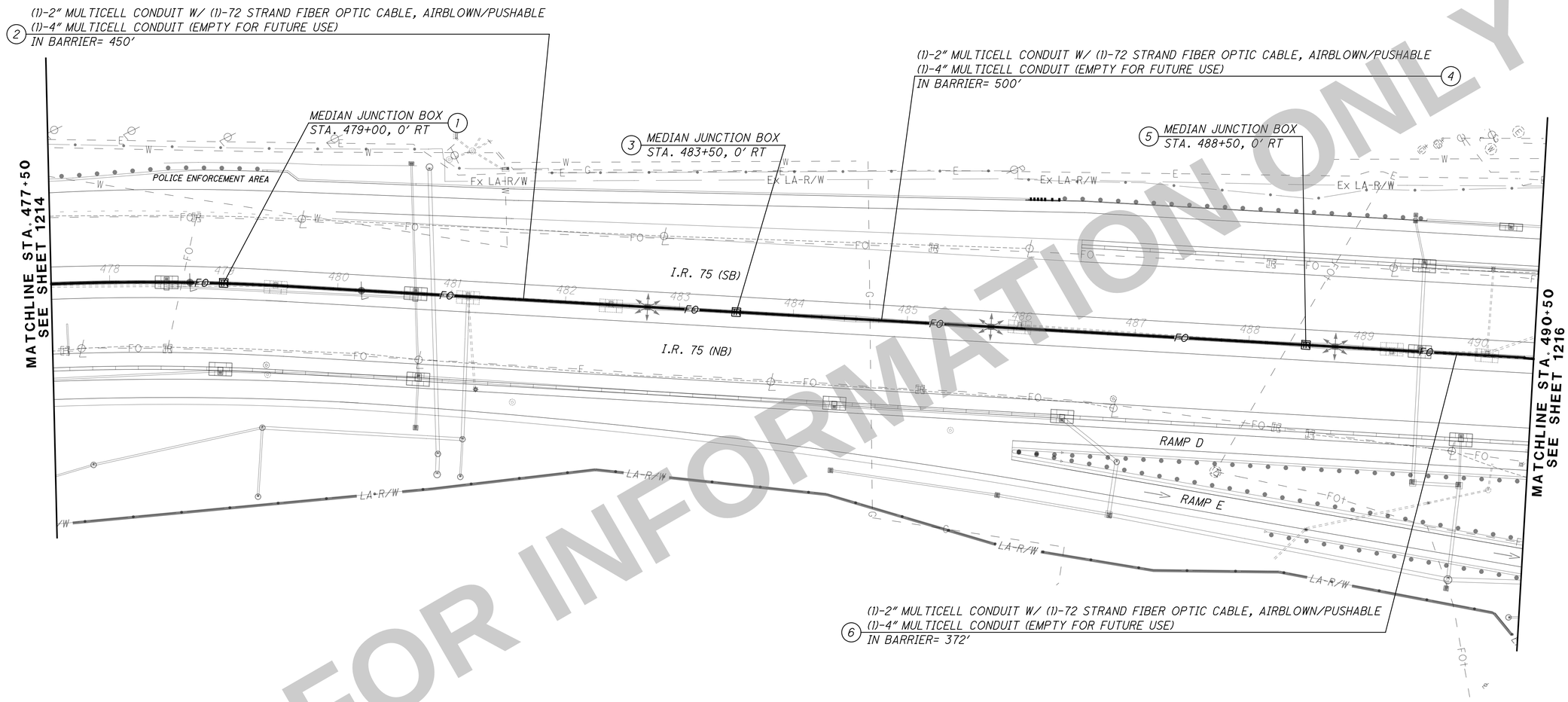
FOR INFORMATION ONLY

NOTES:

1. THE ITS SYSTEM SHALL BE KEPT FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION. EXTENDED DMS OUTAGE IS ANTICIPATED.

2. CONDUIT IN BARRIER IS INCIDENTAL TO ITEM 622 CONCRETE BARRIER.

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FOR INFORMATION ONLY

NOTES:
1. THE ITS SYSTEM SHALL BE KEPT FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION. EXTENDED DMS OUTAGE IS ANTICIPATED.

2. CONDUIT IN BARRIER IS INCIDENTAL TO ITEM 622 CONCRETE BARRIER.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DRM
CHECKED JDS

I.R. 75 ITS PLAN
STA. 477+50 TO STA. 490+50

HAM-75-7.85

1215
2017

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NOTES:
1. THE ITS SYSTEM SHALL BE KEPT FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION. EXTENDED DMS OUTAGE IS ANTICIPATED.

2. CONDUIT IN BARRIER IS INCIDENTAL TO ITEM 622 CONCRETE BARRIER.

SEE SHEET 1224 FOR RAMP METER DETAILS.

EX. OVERHEAD POWER SERVICE CABLES, DUKE ENERGY (TO REMAIN)

EX. POWER SOURCE, DUKE ENERGY (TO REMAIN) STA. 497+24, 229' LT.

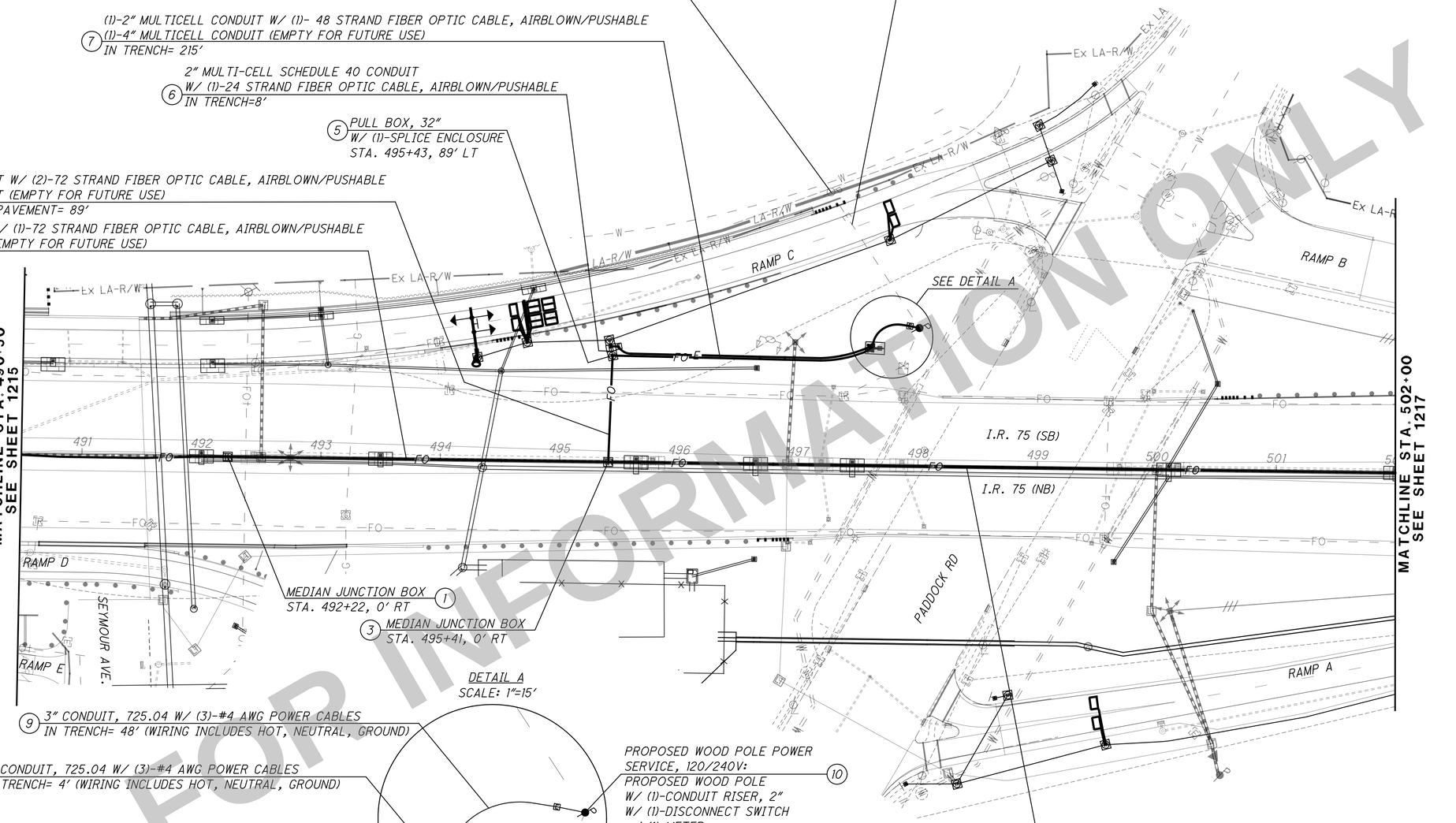
(7) (1)-2" MULTICELL CONDUIT W/ (1)- 48 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE
(1)-4" MULTICELL CONDUIT (EMPTY FOR FUTURE USE)
IN TRENCH= 215'

(6) 2" MULTI-CELL SCHEDULE 40 CONDUIT W/ (1)-24 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE IN TRENCH=8'

(5) PULL BOX, 32" W/ (1)-SPLICE ENCLOSURE STA. 495+43, 89' LT

(4) (1)-2" MULTICELL CONDUIT W/ (2)-72 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE
(1)-4" MULTICELL CONDUIT (EMPTY FOR FUTURE USE)
JACKED/DRILLED UNDER PAVEMENT= 89'

(2) (1)-2" MULTICELL CONDUIT W/ (1)-72 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE
(1)-4" MULTICELL CONDUIT (EMPTY FOR FUTURE USE)
IN BARRIER= 319'



(1) MEDIAN JUNCTION BOX STA. 492+22, 0' RT

(3) MEDIAN JUNCTION BOX STA. 495+41, 0' RT

DETAIL A
SCALE: 1"=15'

(9) 3" CONDUIT, 725.04 W/ (3)-#4 AWG POWER CABLES IN TRENCH= 48' (WIRING INCLUDES HOT, NEUTRAL, GROUND)

(8) 3" CONDUIT, 725.04 W/ (3)-#4 AWG POWER CABLES IN TRENCH= 4' (WIRING INCLUDES HOT, NEUTRAL, GROUND)

(8) 3" CONDUIT, 725.04 W/ (3)-#4 AWG POWER CABLES IN TRENCH= 6' (WIRING INCLUDES HOT, NEUTRAL, GROUND)

(10) PROPOSED WOOD POLE POWER SERVICE, 120/240V:
PROPOSED WOOD POLE
W/ (1)-CONDUIT RISER, 2"
W/ (1)-DISCONNECT SWITCH
w/ (1)-METER
W/ (1)-PULL BOX, 18", 725.08
STA. 498+00, 116' LT

(11) (1)-2" MULTICELL CONDUIT
W/ (1)-72 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE
(1)-4" MULTICELL CONDUIT
(EMPTY FOR FUTURE USE)
IN BARRIER= 812'

(8) (1)-2" MULTICELL CONDUIT W/ (1)-48 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE & (1)-CCTV CABLE IN TRENCH= 5'

(8) (1)-3" PVC CONDUIT W/ (1)-CCTV CABLE
(1)-3" CONDUIT (EMPTY)
IN TRENCH= 11'

(8) PROPOSED ITS DEVICE WORK PAD (ITS-10.11)
W/ (1)-POWER DISTRIBUTION CABINET WITH LOAD CENTER
W/ (1)-CONCRETE CCTV CAMERA POLE W/LOWERING UNIT, 70' (EMBEDMENT DEPTH = 12')
W/ (1)-CCTV IP-CAMERA SYSTEM, ENHANCED TYPE #10
W/ (1)-GROUND MOUNTED ITS FIELD CABINET
W/ (1)-TERMINATION PANEL, 72 FIBER
W/ (1)-PULL BOX, 32"
W/ (1)-PULL BOX, 18", 725.08
STA. 497+67, 98' LT

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

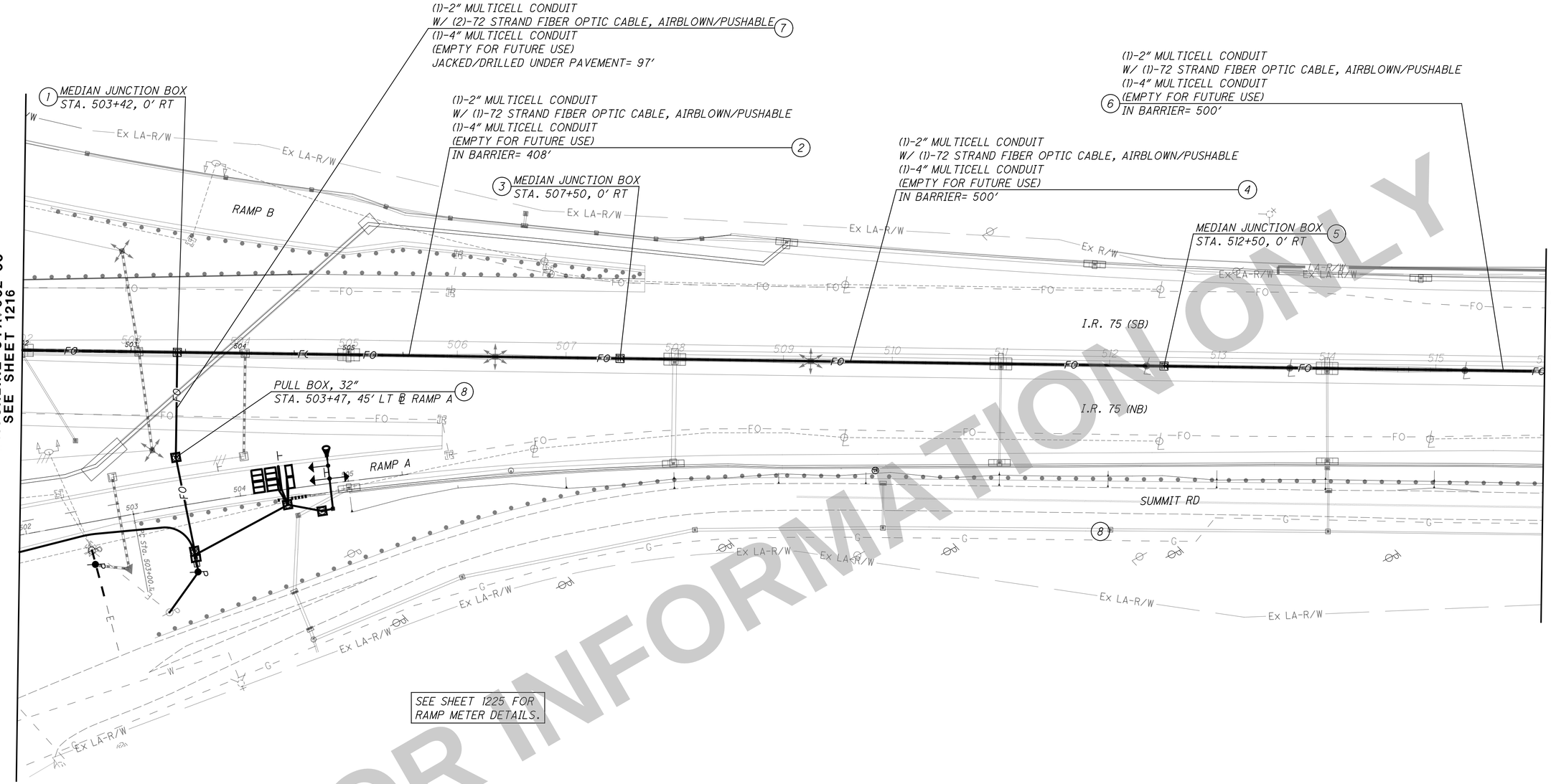
CALCULATED DRM
CHECKED JDS

I.R. 75 ITS PLAN
STA. 490+50 TO STA. 502+00

HAM-75-7.85

1216
2017

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FOR INFORMATION ONLY

NOTES:
1. THE ITS SYSTEM SHALL BE KEPT FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION. EXTENDED DMS OUTAGE IS ANTICIPATED.

2. CONDUIT IN BARRIER IS INCIDENTAL TO ITEM 622 CONCRETE BARRIER.

HORIZONTAL SCALE IN FEET
0 25 50 100

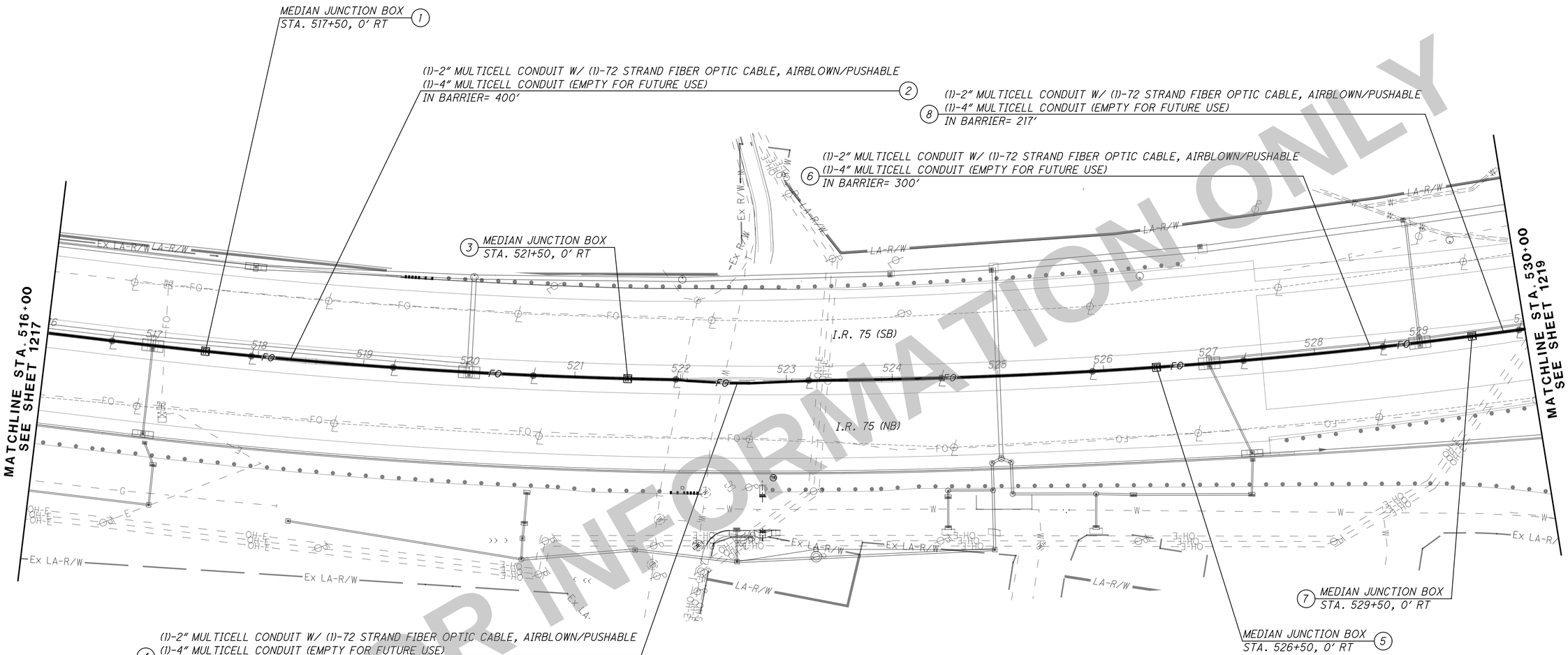
CALCULATED DRM
CHECKED JDS

I.R. 75 ITS PLAN
STA. 502+00 TO STA. 516+00

HAM-75-7.85

1217
2017

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FOR INFORMATION ONLY

NOTES:
1. THE ITS SYSTEM SHALL BE KEPT FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION. EXTENDED DMS OUTAGE IS ANTICIPATED.

2. CONDUIT IN BARRIER IS INCIDENTAL TO ITEM 622 CONCRETE BARRIER.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DRM
CHECKED JDS

I.R. 75 ITS PLAN
STA. 516+00 TO STA. 530+00

HAM-75-7.85

1218
2017

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NOTES:
1. EXISTING ITS EQUIPMENT LOCATIONS ARE APPROXIMATE.

2. THE ITS SYSTEM SHALL BE KEPT FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION. EXTENDED DMS OUTAGE IS ANTICIPATED.

5. THE CONTRACTOR SHALL OBTAIN SOIL BORING DATA FOR THIS CCTV LOCATION. SOIL BORING DATA SHALL BE SENT TO ODOT'S OFFICE OF GEOTECHNICAL ENGINEERING. ODOT WILL ANALYZE THE SOIL BORING DATA AND PROVIDE THE CONTRACTOR AN EMBEDMENT DEPTH FOR THIS LOCATION. COST OF SOIL BORING AND COORDINATION WITH ODOT TO OBTAIN EMBEDMENT DEPTH SHALL BE INCIDENTAL TO ITEM 809 CCTV CONCRETE POLE WITH LOWERING UNIT, 70 FEET.

6. CONDUIT IN BARRIER IS INCIDENTAL TO ITEM 622 CONCRETE BARRIER.

FOR INFORMATION ONLY

MATCHLINE STA. 530+00
SEE SHEET 1218

(1)-2" MULTICELL CONDUIT W/ (1)-72 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE
(1)-4" MULTICELL CONDUIT (EMPTY FOR FUTURE USE)
JACKED/DRILLED UNDER PAVEMENT= 75' (2)

MEDIAN JUNCTION BOX
STA. 531+67, 0' RT (1)

EX. ITS CONDUIT (IN BRIDGE)
W/ (1)-NEW 72 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE=306' (4)

EX. PULL BOX (TO REMAIN)
EX. PULL BOX (TO REMAIN)
EX. PULL BOX (TO REMAIN)
EX. PULL BOX (TO REMAIN)
EX. PULL BOX (TO REMAIN)
EX. ITS CONDUIT W/ FIBER (TO REMAIN)

LA-R/W
Ex LA-R/W
EX LA-R/W
Ex LA-R/W
LA-R/W
LA-R/W

I.R. 75 (SB)
I.R. 75 (NB)
S.R. 126 (EB)
S.R. 126 (WB)
RAMP D

530 531 532 533 534 535 536 537 538 539 540 541 542 543 544

FO E W

PULL BOX, 32" (3)
STA. 531+67, 74' RT
INTERCEPT EX. ITS CONDUIT

EX. POWER SOURCE POLE, DUKE ENERGY (TO REMAIN)
STA. 419+47, 236' LT.
PROPOSED OVERHEAD POWER SERVICE CABLES (BY DUKE ENERGY)

PROPOSED WOOD POLE (8)
STA. 534+66, 90' RT

PROPOSED OVERHEAD POWER (9)
SERVICE CABLES (3)-#1/0=238'

EX. PULL BOX (TO REMAIN) (5)
STA. 534+66, 90' RT

EXISTING ITS CABINET K#116 (TO BE REMOVED)
EXISTING CONTROLLER (TO BE REMOVED)
EXISTING FOUNDATION (TO BE REMOVED)
STA. 534+71, 99' RT

EX. ITS CONDUIT (TO BE ABANDONED)
W/ EX. FIBER OPTIC CABLE
(TO BE REMOVED)

EX. PULL BOX
(TO BE REMOVED)

PROPOSED POWER SERVICE, 240/480V: (10)
PROPOSED WOOD POLE
W/ (1)-DISCONNECT SWITCH
W/ (1)-METER
W/ (1)-CONDUIT RISER, 2"
W/ (1)-18" PULL BOX, 18", 725.08
STA. 532+98, 214' RT

PROPOSED ITS DEVICE WORK PAD (ITS-10.11) (7)
W/ (1)-CCTV CONCRETE POLE W/ LOWERING UNIT, 70' (EMBEDMENT DEPTH = SEE NOTE 5)
W/ (1)-CCTV IP-CAMERA SYSTEM, ENHANCED TYPE K#116
W/ (1)-GROUND MOUNTED ITS FIELD CABINET
W/ (1)-TERMINATION PANEL, 72 FIBER
W/ (1)-PULL BOX, 32" W/ (1)-SPLICE ENCLOSURE
W/ (1)-PULL BOX, 18", 725.08
W/ (1)-STEP DOWN TRANSFORMER
STA. 540+00, 200' RT

EX. ITS CONDUIT (TO BE ABANDONED)
W/ EX. FIBER OPTIC CABLE (TO BE REMOVED)

3" CONDUIT, 725.04 W/ (3)-#1/0 POWER CABLES (11)
IN TRENCH=462' (WIRING INCLUDES HOT, NEUTRAL, GROUND)

4" MULTICELL CONDUIT W/ (1)-72 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE (6)
IN TRENCH=540'

EX. ITS CONDUIT (TO BE ABANDONED)
W/ EX. FIBER OPTIC CABLE (TO BE REMOVED)

EX. ITS CONDUIT (TO REMAIN) (14)
(1)-NEW 72 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE=1488'

PULL BOX, 32" (13)
STA. 539+94, 58' RT
(INTERCEPT EX. CONDUIT)

4" MULTICELL CONDUIT W/ (1)-72 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE (12)
JACKED/DRILLED UNDER PAVEMENT=140'

MATCHLINE STA. 544+50
SEE SHEET 1220

HORIZONTAL SCALE IN FEET
0 25 50 100

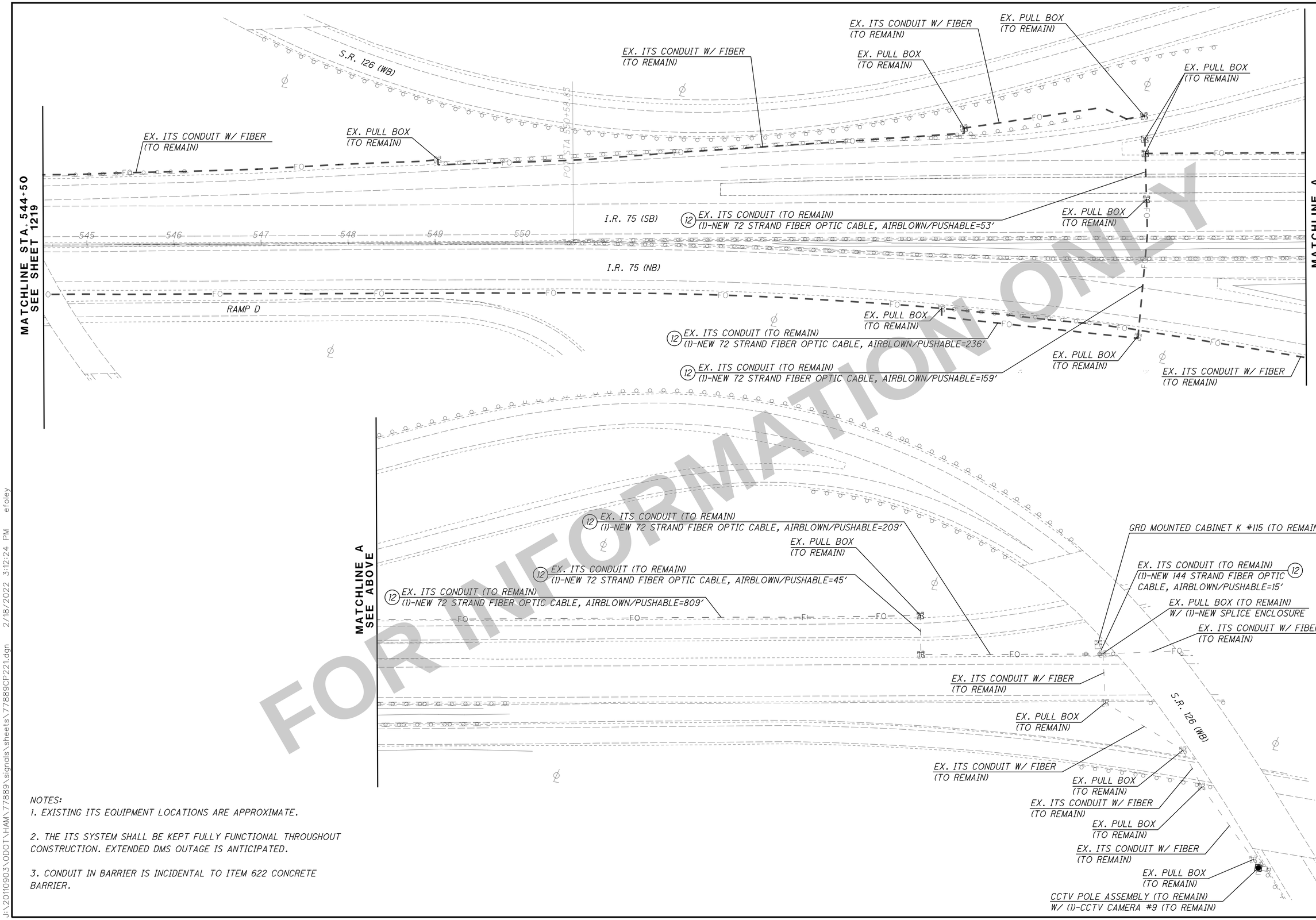
CALCULATED DRM
CHECKED JDS

I.R. 75 ITS PLAN
STA. 530+00 TO STA. 544+50

HAM-75-7.85

1219
2017

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FOR INFORMATION ONLY

NOTES:

1. EXISTING ITS EQUIPMENT LOCATIONS ARE APPROXIMATE.

2. THE ITS SYSTEM SHALL BE KEPT FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION. EXTENDED DMS OUTAGE IS ANTICIPATED.

3. CONDUIT IN BARRIER IS INCIDENTAL TO ITEM 622 CONCRETE BARRIER.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DRM
CHECKED JDS

I.R. 75 ITS PLAN
STA. 544+50 TO END

HAM-75-7.85

1220
2017

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NOTES:
1. CONDUIT IN BARRIER IS INCIDENTAL TO ITEM 622 CONCRETE BARRIER.

MATCHLINE STA. 415+00
SEE SHEET 1210

1 PULL BOX, 32"
STA 10+89, 183' LT.

2 (1)-2" MULTICELL CONDUIT
W/ (1)-72 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE
(1)-4" MULTICELL CONDUIT
(EMPTY FOR FUTURE USE)
JACKED/DRILLED UNDER PAVEMENT= 38'

3 MEDIAN JUNCTION BOX
STA 10+68, 151' LT.

4 (1)-2" MULTICELL CONDUIT W/ (1)-72 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE
(1)-4" MULTICELL CONDUIT (EMPTY FOR FUTURE USE)
IN BARRIER= 515'

5 MEDIAN JUNCTION BOX
STA 15+38, 2' LT.

6 (1)-2" MULTICELL CONDUIT
W/ (1)-72 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE
(1)-4" MULTICELL CONDUIT
(EMPTY FOR FUTURE USE)
IN BARRIER= 264'

7 MEDIAN JUNCTION BOX
STA 18+00, 0' LT.

8 (1)-2" MULTICELL CONDUIT
W/ (2)-72 STRAND FIBER OPTIC CABLES,
AIRBLOWN/PUSHABLE
(1)-4" MULTICELL CONDUIT
(EMPTY FOR FUTURE USE)
JACKED/DRILLED UNDER
PAVEMENT= 90'

9 PULL BOX, 32"
W/ (1)-SPLICE ENCLOSURE
STA 18+01, 90' LT.

10 (1)-2" MULTICELL CONDUIT
W/ (1)-24 STRAND FIBER OPTIC CABLES, AIRBLOWN/PUSHABLE
(1)-4" MULTICELL CONDUIT (EMPTY FOR FUTURE USE)
IN TRENCH= 14'

11 GROUND MOUNTED ITS FIELD CABINET
STA. 18+01, 103' LT.
(INTERCEPT EX. POWER CONDUIT)

EX. WOOD POLE (TO REMAIN)
(FOR FUTURE ITS)
STA. 22+63, 82' LT.

DETAIL A
SCALE: 1" = 15'

SEE DETAIL A

MATCHLINE STA. 20+00
SEE BELOW

RAMP J
RAMP K
RAMP M
RAMP N
SR-562 WB
SR-562 EB
Ex LA-R/W
LA-R/W
EX LA-R/W
FO

DETAIL B
SCALE: 1" = 15'

22 (1)-3" PVC CONDUIT W/ (1)-CCTV CABLE
(1)-3" PVC CONDUIT (EMPTY)
IN TRENCH= 72'

21 PULL BOX, 32"
W/ (1)-SPLICE ENCLOSURE
STA 21+89, 71' LT.

20 (1)-4" MULTICELL CONDUIT W/ (1)-24 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE
(1)-3" PVC CONDUIT W/ (1)-CCTV CABLE
IN TRENCH= 8'

19 GROUND MOUNTED ITS FIELD CABINET
STA 21+81, 71' LT.

12 EX. ELECTRIC CONDUIT (REMAIN)
W/ (3)-NEW #1/0 AWG POWER SERVICE CABLES
(WIRING INCLUDES HOT, NEUTRAL, GROUND)
(REMOVE EX. POWER SERVICE CABLES)

13 PULL BOX, 18", 725.08
STA 21+70, 65' LT.
(INTERCEPT EX. ELECTRIC CONDUIT)

SEE DETAIL B

18 (1)-2" MULTICELL CONDUIT W/ (1)-72 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE
(1)-4" MULTICELL CONDUIT (EMPTY FOR FUTURE USE)
JACKED/DRILLED UNDER PAVEMENT= 71'

17 MEDIAN JUNCTION BOX
STA 21+89, 0' RT.

16 (1)-2" MULTICELL CONDUIT W/ (1)-72 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE
(1)-4" MULTICELL CONDUIT (EMPTY FOR FUTURE USE)
IN BARRIER= 389'

(1)-2" MULTICELL CONDUIT (EMPTY FOR FUTURE USE)
(1)-4" MULTICELL CONDUIT (EMPTY FOR FUTURE USE)
IN BARRIER= 963'

14 3" CONDUIT, 725.04 W/ (3)-#1/0 AWG POWER SERVICE CABLES
IN TRENCH= 104' (WIRING INCLUDES HOT, NEUTRAL, GROUND)

15 EX. POWER SERVICE POLE (TO REMAIN)
W/ (1)-RELOCATED CCTV CAMERA
W/ (1)-DISCONNECT SWITCH AND METER (TO REMAIN)
W/ RELOCATED WIRELESS RADIO EQUIPMENT FACING EAST
STA. 22+63, 83' LT

EX. ELECTRIC PULL BOX (TO REMAIN)
STA. 22+66, 76' LT

EX. 32" PULL BOX
(TO REMAIN)
STA. 22+59, 59' LT.

24 (1)-2" MULTICELL CONDUIT (EMPTY FOR FUTURE USE)
(1)-4" MULTICELL CONDUIT (EMPTY FOR FUTURE USE)
JACKED/DRILLED UNDER PAVEMENT = 85'

25 PULL BOX, 32"
STA 31+52, 85' LT.

23 MEDIAN JUNCTION BOX
STA 31+52, 0' RT.

(1)-2" MULTICELL CONDUIT (EMPTY FOR FUTURE USE)
(1)-4" MULTICELL CONDUIT (EMPTY FOR FUTURE USE)
IN BARRIER= 48'

MATCHLINE STA. 20+00
SEE ABOVE

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

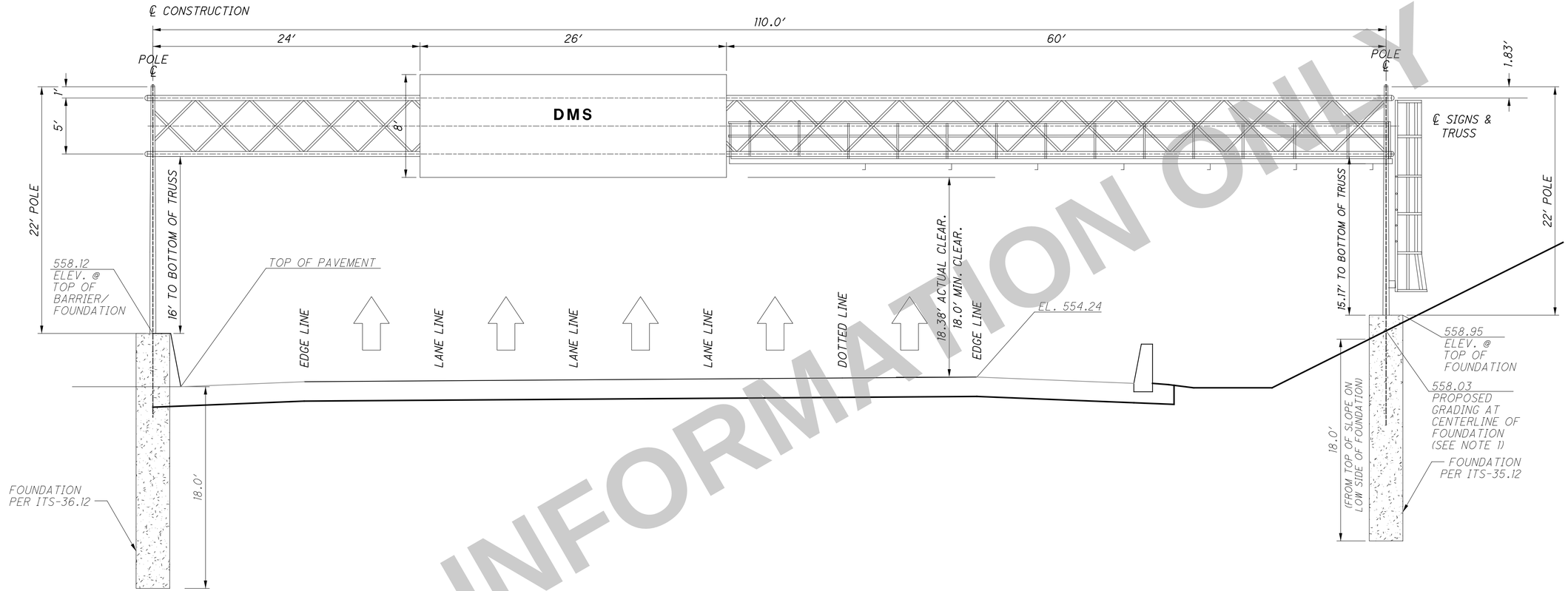
CALCULATED DRM
CHECKED JDS

I.R. 75 ITS PLAN
STA. 415+00 TO STA. 30+00

HAM-75-7.85

1221
2017

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STA. 462+25 - I-75 NORTHBOUND
(VIEW LOOKING NORTH)

NOTE 1:

PROVIDE A FLAT SURFACE FOR EASE OF DMS CATWALK/TRUSS MAINTENANCE.

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 5 10

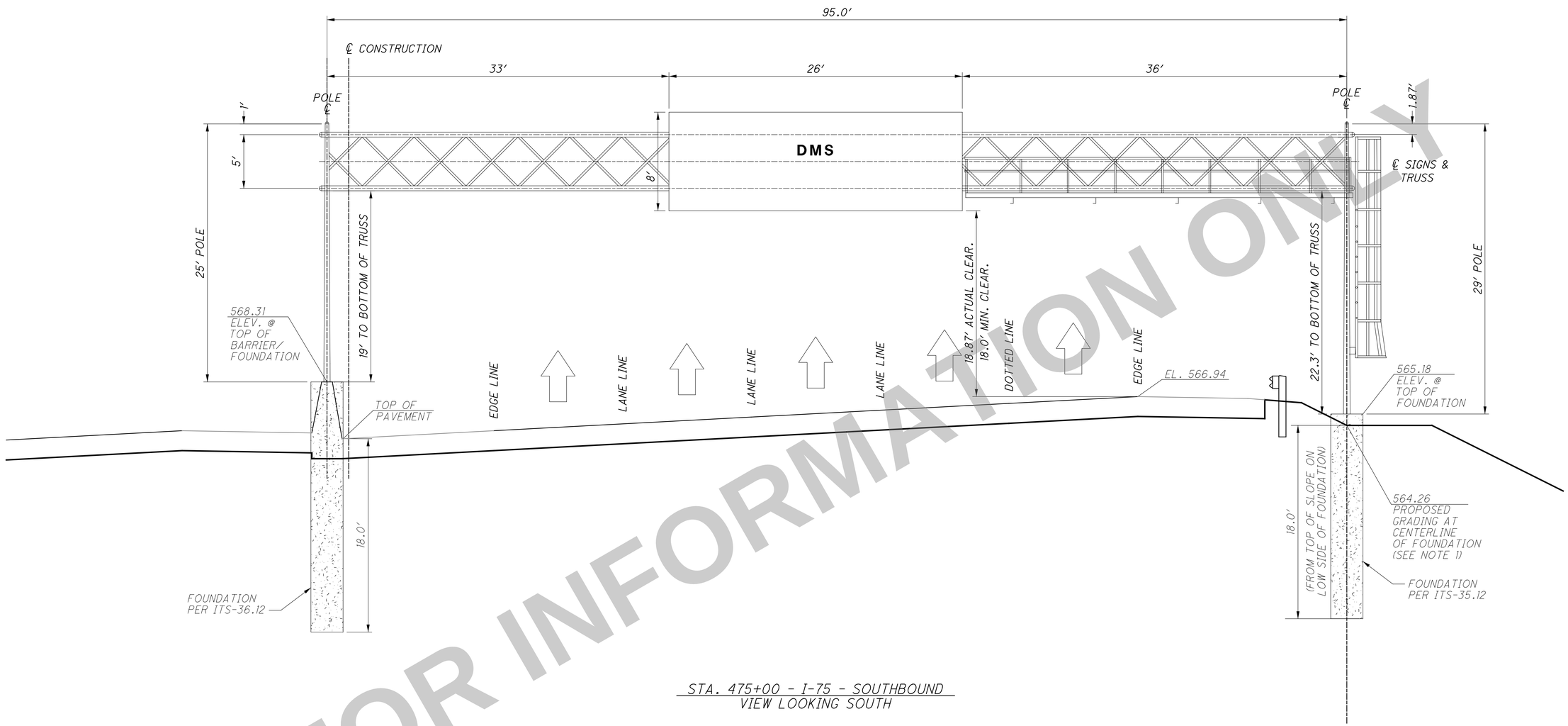
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CHECKED JDS

DMS ELEVATION DETAIL
I-75 STA. 462+25

HAM-75-7.85

1222
2017

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STA. 475+00 - I-75 - SOUTHBOUND
VIEW LOOKING SOUTH

FOR INFORMATION ONLY

NOTE 1:

PROVIDE A FLAT SURFACE FOR EASE OF DMS CATWALK/TRUSS MAINTENANCE.

HORIZONTAL SCALE IN FEET
0 5 10

CALCULATED DRM
CHECKED JDS

DMS ELEVATION DETAIL
I-75 STA. 475+00

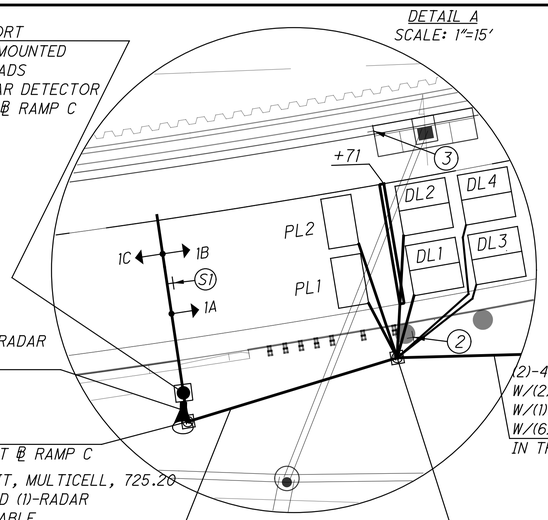
HAM-75-7.85

1223
2017

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POLE A SIGNAL SUPPORT
W/ (3)-12" MAST ARM MOUNTED
2-SECTION SIGNAL HEADS
W/(1)-SIDE FIRED RADAR DETECTOR
STA. 494+25, 35' RT ℄ RAMP C

DETAIL A
SCALE: 1"=15'



(2)-2" CONDUIT,
W/(2)-5/C AND (1)-RADAR
DETECTION CABLE
IN TRENCH= 6'

PULL BOX, 32"
STA. 494+25, 40' RT ℄ RAMP C

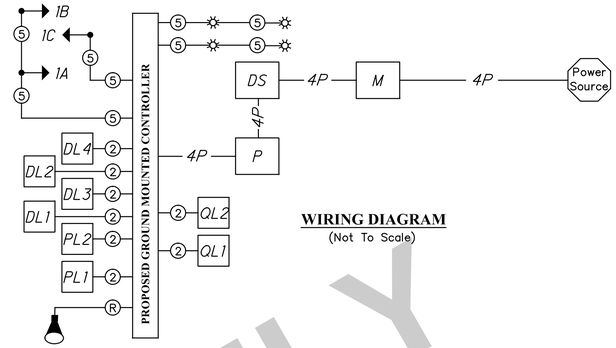
(2)-4" CONDUIT, MULTICELL, 725.20
W/(2)-5/C AND (1)-RADAR
DETECTION CABLE
IN TRENCH= 44'

PULL BOX, 32"
STA. 494+67, 35' RT ℄ RAMP C

(2)-4" CONDUIT, MULTICELL, 725.20
W/(2)-5/C
W/(1)-RADAR DETECTION CABLE
W/(6)-2/C
IN TRENCH= 68'

WIRING DIAGRAM LEGEND

(5) — NO.= QUANTITY OF CONDUCTORS	SIGNAL CABLE #14 AWG
	VEHICULAR SIGNAL HEAD
— 4P —	#4 AWG POWER (3-CONDUCTOR)
Power Source	POWER TAP-IN
M	METER
P	POWER DISTRIBUTION CABINET & LOAD CENTER
DS	DISCONNECT SWITCH
(R)	RADAR DETECTION CABLE
	RADAR DETECTION UNIT
☼	12" YELLOW LED WARNING BEACON



WIRING DIAGRAM
(Not To Scale)

LOOP DETECTORS			
LOOP	STATION (FRONT OF LOOP)	SIZE	NO. TURNS
PL1	STA. 494+59	10' X 6'	4
PL2	STA. 494+57	10' X 6'	4
DL1	STA. 494+74	5' X 5' X 10'	3-6-3
DL2	STA. 494+72	5' X 5' X 10'	3-6-3
DL3	STA. 494+86	5' X 5' X 10'	3-6-3
DL4	STA. 494+84	5' X 5' X 10'	3-6-3
QL1	STA. 497+75	10' X 6'	4
QL2	STA. 497+70	10' X 6'	4

PROPOSED ITS DEVICE WORK PAD
W/ (1)-GROUND MOUNTED ITS FIELD CABINET, RAMP METER
W/ (1)-2070 ATC CONTROLLER #1
W/ (1)-TERMINATION PANEL, 72 FIBER
STA. 495+34, 51' RT

(2)-4" CONDUIT, MULTICELL, 725.20
W/ (4)-5/C, (8)-2/C AND (1)-GND
W/ (1)-RADAR DETECTION CABLE
IN TRENCH= 5'

PULL BOX, 32"
STA. 495+34, 46' RT ℄ RAMP C

PULL BOX, 18", 725.08
STA. 495+40, 53' RT ℄ RAMP C

3" CONDUIT, 725.04
W/(1)- POWER CABLE, NO. 4, 3/C
(HOT, NEUTRAL, GROUND)
IN TRENCH=249'

(2)-4" CONDUIT, MULTICELL, 725.20
W/(2)-5/C AND (1)-GND
JACKED OR DRILLED UNDER PAVEMENT= 151'

(2)-2" CONDUIT, 725.051
W/(2)-5/C, (2)-2/C AND (1)-GND
IN TRENCH= 249'

PULL BOX, 32"
STA. 497+77, 32' RT
℄ RAMP C

2" CONDUIT, 725.051
W/(1)-5/C AND (1)-GND
IN TRENCH= 58'

(2)-2" CONDUIT, 725.051
W/(1)-5/C
JACKED/DRILLED UNDER PAVEMENT= 32'

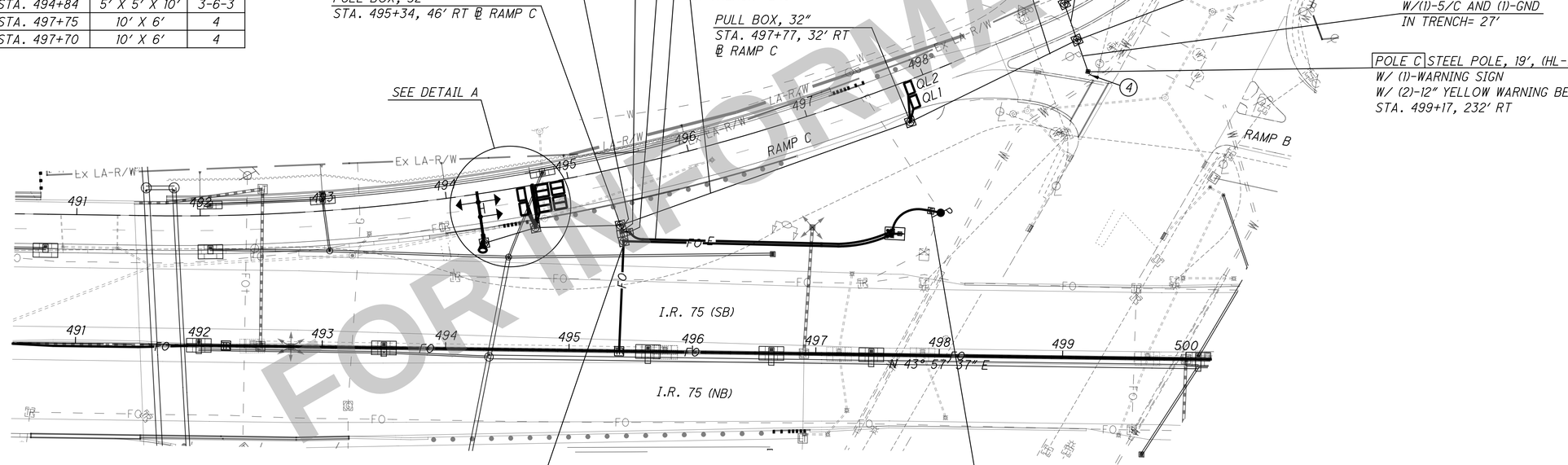
PULL BOX, 32"
STA. 498+98, 287' LT

POLE B STEEL POLE, 19', (HL-10.11), WITH TRANSFORMER BASE
W/ (1)-WARNING SIGN
W/ (2)-12" YELLOW WARNING BEACONS
STA. 499+44, 322' LT

PULL BOX, 32"
STA. 499+08, 255' LT

2" CONDUIT, 725.051
W/(1)-5/C AND (1)-GND
IN TRENCH= 27'

POLE C STEEL POLE, 19', (HL-10.11), WITH TRANSFORMER BASE
W/ (1)-WARNING SIGN
W/ (2)-12" YELLOW WARNING BEACONS
STA. 499+17, 232' RT



SEE SHEET 1216 FOR FIBER OPTIC CABLE DETAILS.

SEE SHEET 1216 FOR POWER SERVICE DETAILS.

NOTES:
1. SEE ODOT STANDARD CONSTRUCTION DRAWING ITS-76.10 FOR ADDITIONAL RAMP METER DETAILS.

2. RAMP METER TIMING TO BE FURNISHED BY THE OHIO DEPARTMENT OF TRANSPORTATION.

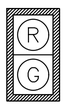
ONE VEHICLE PER GREEN EACH LANE
R10-H29a
(S1)

STOP HERE ON RED
R10-6-24
(2)

STOP HERE ON RED
R10-6-24
(3)

RAMP METERED WHEN FLASHING
W3-8-36
(4)

VEHICULAR TRAFFIC SIGNAL HEAD CONFIGURATION



12" HEADS
W/ BACKPLATES
1A, 1B & 1C

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

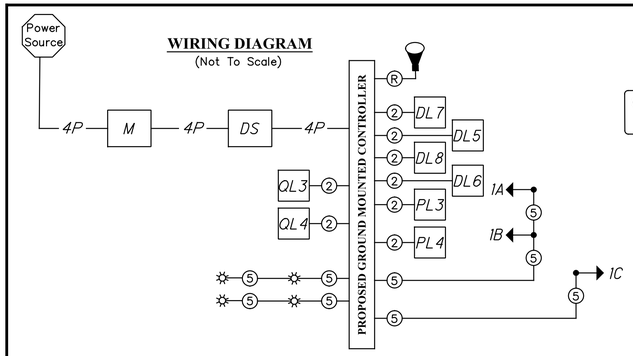
CALCULATED DRM
CHECKED JDS

RAMP METER PLAN
I-75 AT PADDOCK RD SB ENTRANCE (RAMP C)
HAM-75-7.85

1224
2017

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WIRING DIAGRAM
(Not To Scale)



WIRING DIAGRAM LEGEND

- (5) — SIGNAL CABLE #14 AWG NO.= QUANTITY OF CONDUCTORS
- → VEHICULAR SIGNAL HEAD
- 4P — #4 AWG POWER (3-CONDUCTOR)
- Power Source — POWER TAP-IN
- M — METER
- DS — DISCONNECT SWITCH
- (R) — RADAR DETECTION CABLE
- RADAR DETECTION UNIT
- ✲ — 12" YELLOW LED WARNING BEACON

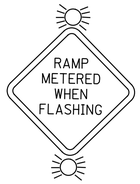
ONE VEHICLE PER GREEN EACH LANE
R10-H29a
(S1)



R10-6-24
(2)

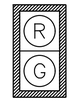


R10-6-24
(3)

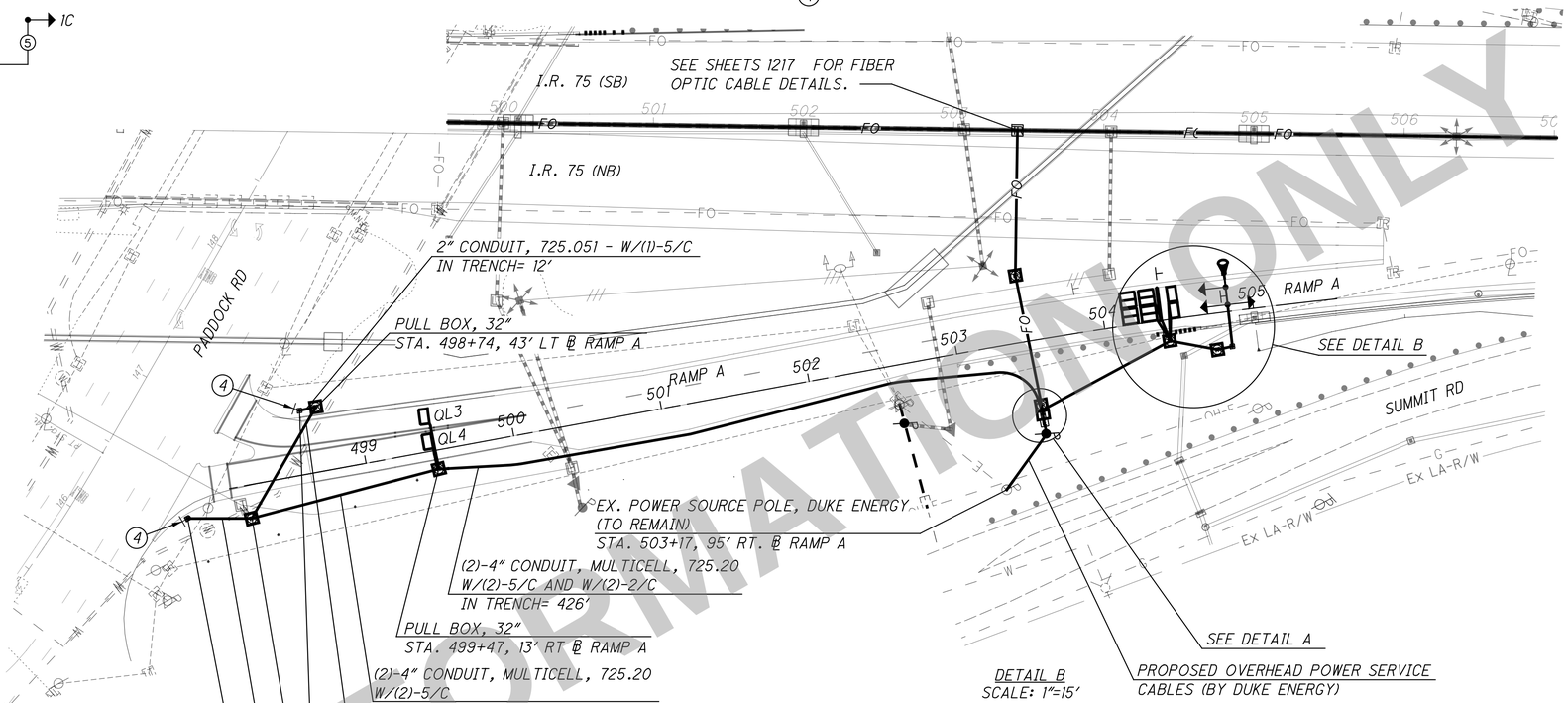


W3-8-36
(4)

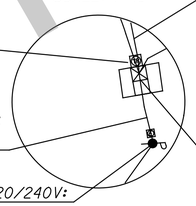
VEHICULAR TRAFFIC SIGNAL HEAD CONFIGURATION



12" HEADS
W/ BACKPLATES
1A, 1B & 1C



DETAIL A
SCALE: 1"=15'


PULL BOX, 32"
W/(1)-SPLICE ENCLOSURE
STA. 503+48, 46' RT ℄ RAMP A

3" CONDUIT, 725.04
W/POWER CABLE, NO.4, 3/C
(HOT, NEUTRAL, GROUND)
IN TRENCH= 8'

PROPOSED POWER SERVICE, 120/240V:
PROPOSED WOOD POLE
W/ (1)-CONDUIT RISER, 2"
W/ (1)-DISCONNECT SWITCH
W/ (1)-METER
W/ (1)-PULL BOX, 18", 725.08
STA. 503+50, 63' RT ℄ RAMP A

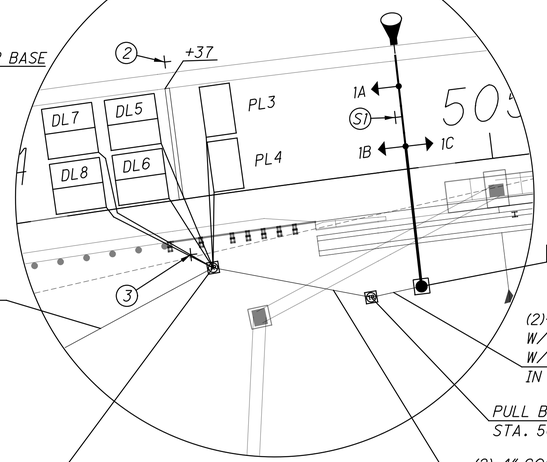
(1)-2" MULTICELL CONDUIT
W/ (2)-72 STRAND FIBER OPTIC CABLE, AIRBLOWN/PUSHABLE
(1)-4" MULTICELL CONDUIT
(EMPTY FOR FUTURE USE)
JACKED/DRILLED UNDER PAVEMENT= 88'

PROPOSED ITS DEVICE WORK PAD
W/ (1)-GROUND MOUNTED ITS FIELD CABINET, RAMP METER
W/ (1)-2070 ATC CONTROLLER #2
W/ (1)-TERMINATION PANEL, 72 FIBER
STA. 503+50, 49' RT ℄ RAMP A

(2)-4" CONDUIT, MULTICELL, 725.20
W/ (2)-5/C AND (6)-2/C
W/ (1)-RADAR DETECTION CABLE
IN TRENCH= 95'

PULL BOX, 32"
STA. 504+42, 14' RT ℄ RAMP A

DETAIL B
SCALE: 1"=15'



POLE F SIGNAL SUPPORT
W/ (3)-12" MAST ARM MOUNTED 2-SECTION SIGNAL HEAD
STA. 504+83, 24' RT ℄ RAMP A

(2)-4" CONDUITS, 725.051
W/ (2)-5/C
W/ (1)-RADAR DETECTION CABLE
IN TRENCH= 10'

PULL BOX, 32"
STA. 504+73, 24' RT ℄ RAMP A

(2)-4" CONDUIT, MULTICELL, 725.20
W/ (2)-5/C
W/ (1)-RADAR DETECTION CABLE
IN TRENCH= 32'

LOOP DETECTORS

LOOP	STATION (FRONT OF LOOP)	SIZE	NO. TURNS
PL3	STA. 504+50	10' X 6'	4
PL4	STA. 504+52	10' X 6'	4
DL5	STA. 504+35	5' X 5' X 10'	3-6-3
DL6	STA. 504+37	5' X 5' X 10'	3-6-3
DL7	STA. 504+23	5' X 5' X 10'	3-6-3
DL8	STA. 504+25	5' X 5' X 10'	3-6-3
QL3	STA. 499+47	10' X 6'	4
QL4	STA. 499+47	10' X 6'	4

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

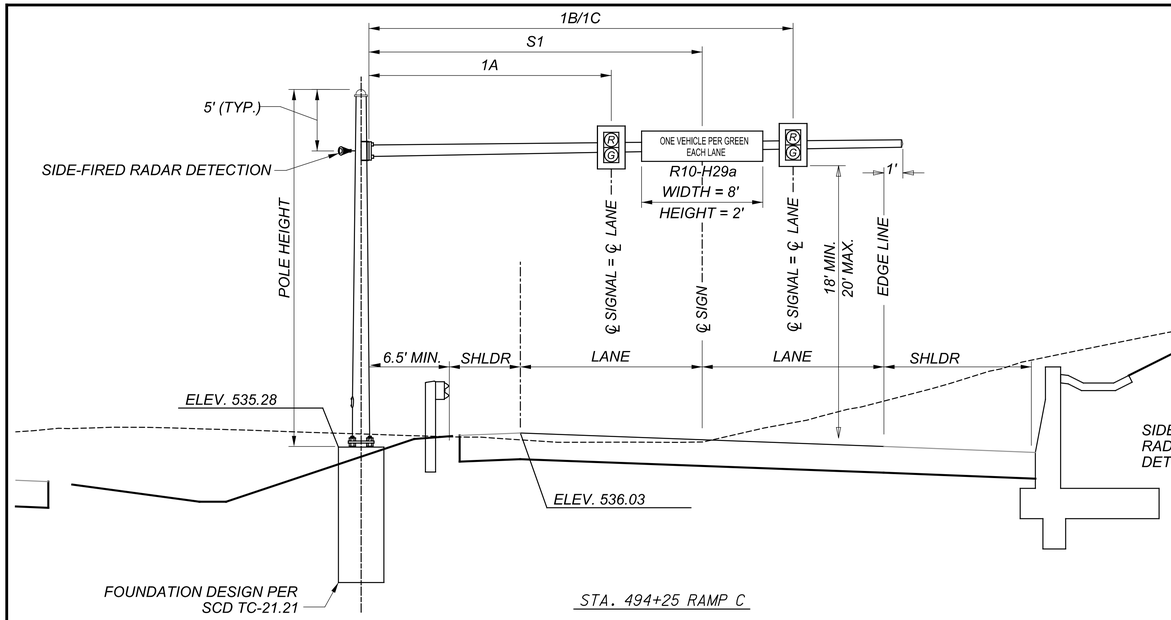
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CHECKED JDS

RAMP METER PLAN
I-75 AT PADDOCK RD NB ENTRANCE (RAMP A)

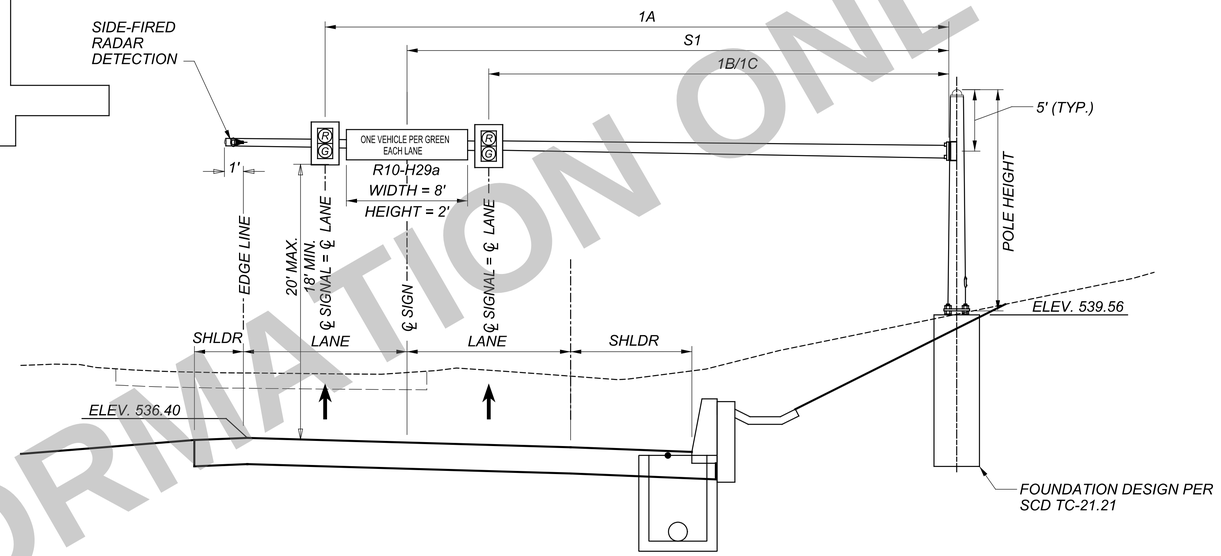
HAM-75-7.85

1225
2017

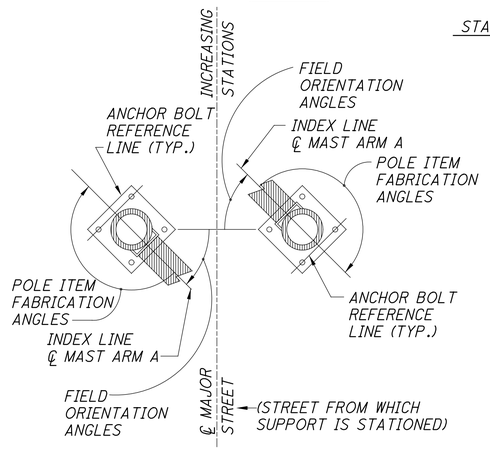
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STA. 494+25 RAMP C



INTERSECTION	SUPPORT DESIGNATION	ODOT STD DWG/ DESIGN NO.	POLE HT. (FT.)	ARM LENGTH MASTARM (FT.)	OBJECT ATTACHMENT HEIGHT MASTARM (FT.)	DISTANCE FROM BUTT PLATE (FT.) 1A	1B	1C	S1	POLE FABRICATION DATA-CLOCKWISE FROM MAST ARM AT 0 DEGREES ANCHOR BOLT REFERENCE LINE	HANDHOLE	FIELD ORIENTATION INDEX LINE ANGLE MAST ARM (RAMP ℄)	ANCHOR BOLT REF. LINE	FOUNDATION ELEVATION
I-75 AT PADDOCK RD SB ENTRANCE (RAMP C)	A	TC-81.22 DESIGN NO. 4	25.5	35	20.5	16	28	28	22	90°	180°	0°	90°	535.28
PADDOCK RD AT RAMP C	B	HL-10.11	19											*
PADDOCK RD AT RAMP C	C	HL-10.11	19											*
PADDOCK RD AT RAMP A	D	HL-10.11	19											*
PADDOCK RD AT RAMP A	E	HL-10.11	19											*
I-75 AT PADDOCK RD NB ENTRANCE (RAMP A)	F	TC-81.22 DESIGN NO. 12	21.5	46	16.5	40	28	28	34	90°	180°	0°	90°	539.56



STA. 504+83 RAMP A

ALL ANGLES MEASURED CLOCKWISE.

BASE PLATE IS ORIENTATED SQUARE TO MAST ARM A. MAST ARM A IS THE LARGEST ARM IF THE SUPPORT HAS TWO MAST ARMS.

TYPICAL SIGNAL SUPPORT ORIENTATION DETAIL
NOT TO SCALE

FOR INFORMATION ONLY

RAMP METER INSTALLATION
MAST ARM

NO SCALE

CALCULATED DRM
CHECKED JDS

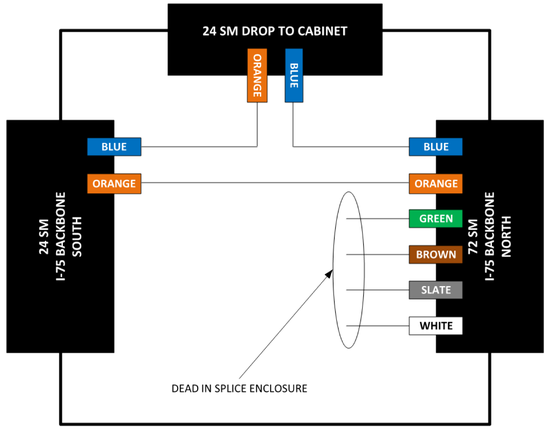
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2017

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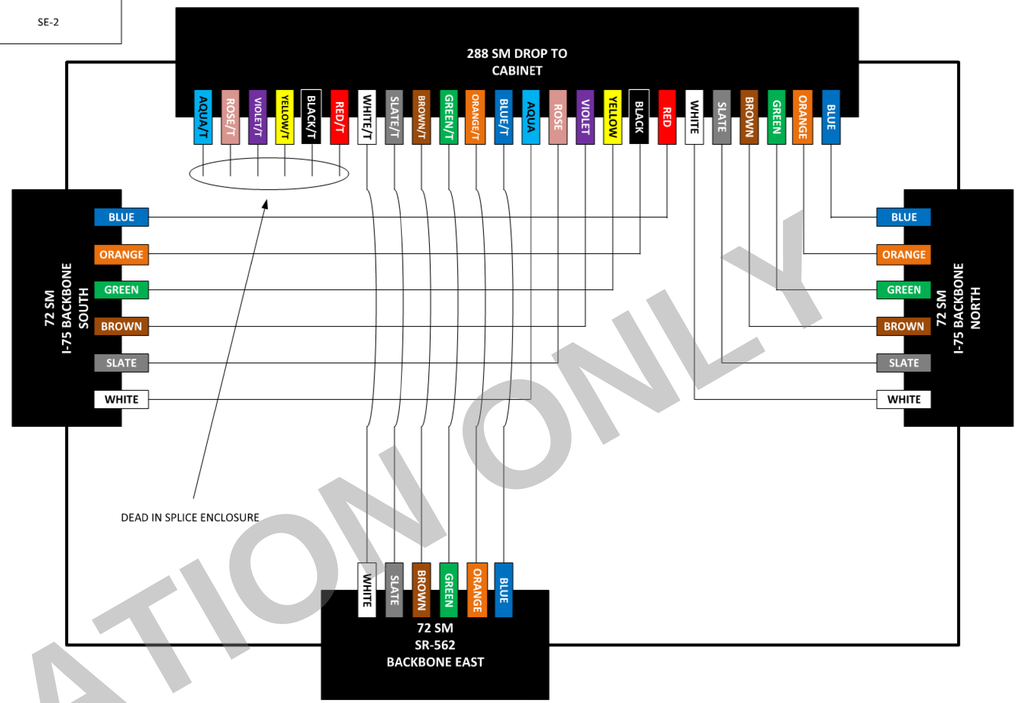
TYPICAL FOR:

SE-1



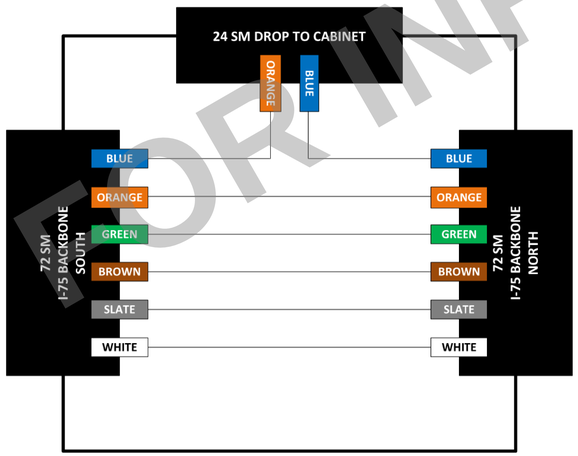
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SE-2



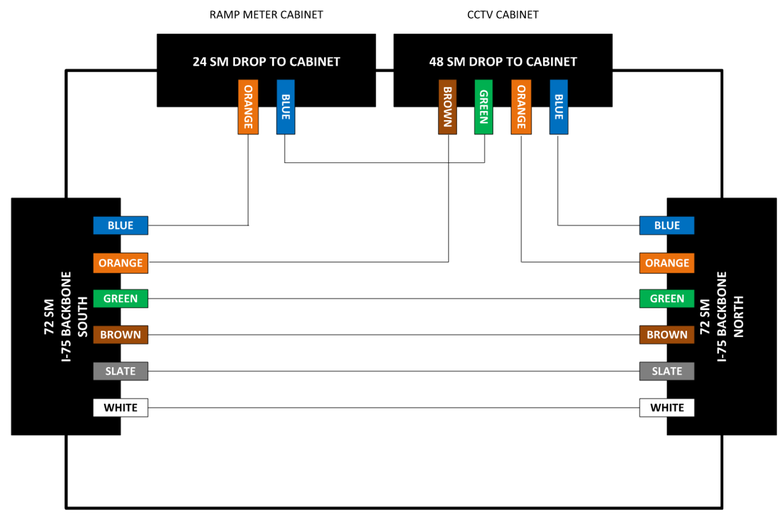
TYPICAL FOR:

SE-3
SE-4
SE-6



TYPICAL FOR:

SE-5



FOR INFORMATION ONLY

CALCULATED MSJ
CHECKED JDS

I.R. 75 ITS PLAN
COMMUNICATION DIAGRAMS

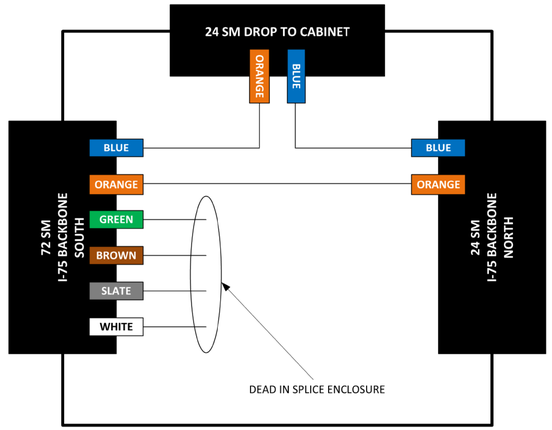
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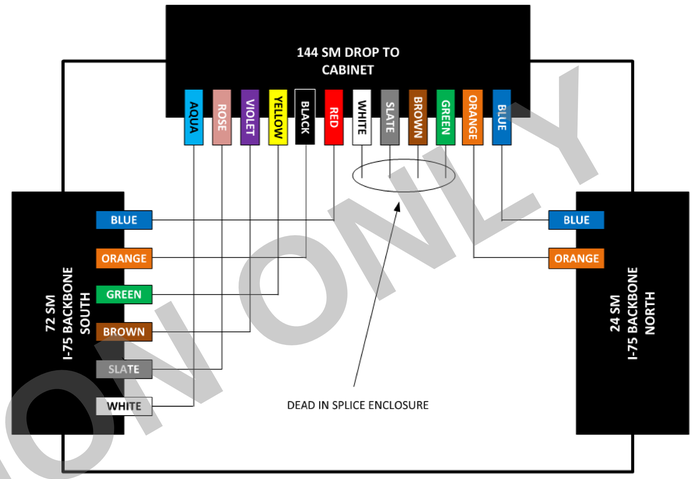
TYPICAL FOR:

SE-7



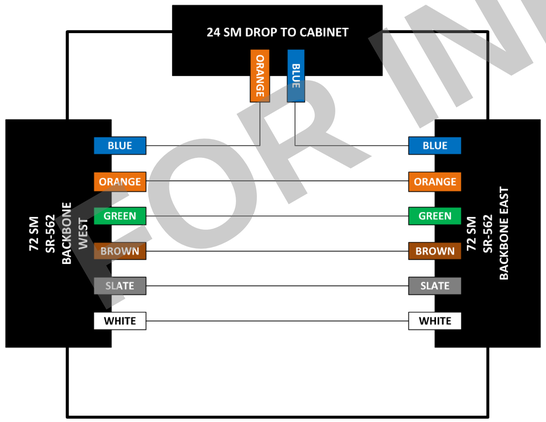
TYPICAL FOR:

SE-8



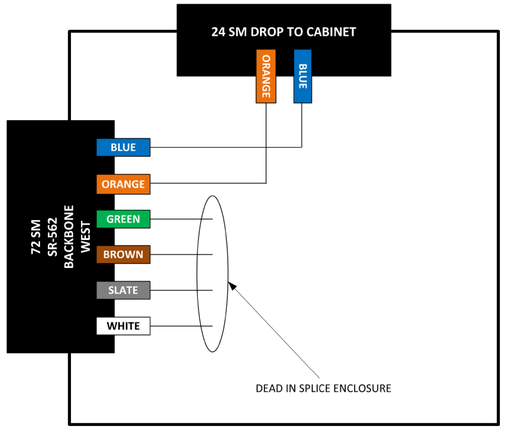
TYPICAL FOR:

SE-9



TYPICAL FOR:

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FOR INFORMATION ONLY

CALCULATED MSJ
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COMMUNICATION DIAGRAMS

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GENERAL LIGHTING NOTE

THE CONTRACTOR SHALL CONFORM TO THE NATIONAL ELECTRIC CODE, NATIONAL ELECTRICAL SAFETY CODE AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAY IN PERFORMING CONTRACT WORK. THE HIGHWAY LIGHTING SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE 2019 OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS. THIS DOCUMENT SHALL GOVERN ALL MATERIALS AND WORKMANSHIP INVOLVED IN THE IMPROVEMENTS SHOWN ON THESE PLANS, EXCEPT AS SUCH SPECIFICATIONS ARE MODIFIED BY THE FOLLOWING SPECIFICATIONS OR BY THE CONSTRUCTION DETAILS SET FORTH HEREIN.

ITEM 625 - POWER SERVICE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF THE SPECIFICATIONS, THE FOLLOWING SHALL BE INCLUDED IN THIS ITEM OF WORK:

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS:

DUKE ENERGY
139 EAST 4TH STREET, 467 ANNEX
CINCINNATI, OH 45202
PHONE: 513-419-1349
CONTACT: MITCH EBERENZ

THE ENGINEER SHALL ENSURE THAT EACH POWER SERVICE ELECTRICAL ENERGY ACCOUNT IS IN THE NAME OF AND THAT THE BILLING ADDRESS IS TO THE MAINTAINING AGENCY NOTED IN THE PLANS. THIS SHALL BE DONE NOT ONLY FOR EACH NEW POWER SERVICE ESTABLISHED BY THIS PROJECT BUT ALSO FOR EACH EXISTING POWER SERVICE, SINCE THERE MAY BE A REASSIGNMENT OF THE RESPONSIBILITY FOR AN EXISTING SERVICE AS A RESULT OF THE WORK PERFORMED BY THIS PROJECT.

THE CONTRACTOR SHALL FURNISH AND INSTALL WOOD POLES WITH CONDUIT RISERS WHERE INDICATED ON THE PLANS. FOR 120/240V POWER SERVICE, THE CONTRACTOR SHALL FURNISH AND INSTALL A METER BASE. FOR 240/480V POWER SERVICE, THE CONTRACTOR SHALL INSTALL A METER BASE FURNISHED BY DUKE ENERGY. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH C&MS ITEM 625, POWER SERVICE, AS PER PLAN WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THAT THE LIGHTING INSTALLED AS PART OF THIS CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF 90 DAYS FOLLOWING COMPLETION OF THE 10 DAY PERFORMANCE TEST. IN THE EVENT OF UNSATISFACTORY OPERATION, THE CONTRACTOR SHALL CORRECT FAULTY INSTALLATIONS, MAKE REPAIRS AND REPLACE DEFECTIVE PARTS WITH NEW PARTS OF EQUAL OR BETTER QUALITY. EQUIPMENT, MATERIAL AND LABOR COSTS INCURRED IN CORRECTING AN UNSATISFACTORY OPERATION SHALL BE BORNE BY THE CONTRACTOR.

CUSTOMARY MANUFACTURER'S GUARANTEES FOR THE FOREGOING ITEMS SHALL BE TURNED OVER TO THE STATE FOLLOWING ACCEPTANCE OF THE EQUIPMENT.

THE COST OF GUARANTEEING THE LIGHTING WILL BE INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MAKING UP THE SYSTEM.

PADLOCKS AND KEYS

PADLOCKS FURNISHED SHALL BE EITHER BRASS OR BRONZE, EQUAL TO MASTER NO. 4BKA OR WILSON BOHANNAN 660A, AND SHALL BE KEYED IN ACCORDANCE WITH CMS 631.06. PAYMENT SHALL BE INCLUDED IN THE BID FOR THE ITEM(S) BEING LOCKED.

ITEM 625, SERVICE TO UNDERPASS LIGHTING, AS PER PLAN

THIS ITEM SHALL CONSIST OF PROVIDING COMPLETE ELECTRICAL POWER, EXCEPT FOR LUMINAIRES AND STRUCTURE GROUNDING, FOR UNDERPASS LIGHTING SYSTEMS. THE INSTALLATION WORK SHALL INCLUDE DISCONNECT SWITCH, STRUCTURE JUNCTION BOXES, CONDUITS, CONDUIT EXPANSION FITTINGS, CONDUIT RISERS, CONDUIT GROUNDING, MOUNTINGS, FITTINGS, CABLES AND ALL INCIDENTALS NECESSARY TO COMPLETE, READY FOR USE, THE SERVICE AS DETAILED ON THE PLANS.

ALL EXPOSED, STRUCTURE MOUNTED PVC CONDUIT IN EXCESS OF 10 FOOT LENGTHS SHALL INCLUDE PVC EXPANSION JOINTS.

ALL STRUCTURE JUNCTION BOXES THAT ARE REQUIRED TO ESTABLISH A FULLY FUNCTIONING UNDERPASS LIGHTING SYSTEM SHALL BE CONSIDERED AS INCIDENTAL TO THIS ITEM. STRUCTURE JUNCTION BOXES SHALL CONFORM TO THE REQUIREMENTS OF HL-20.14 AND ODOT'S C&MS.

STRUCTURE JUNCTION BOXES SHALL HAVE AN EMBOSSMENT IN THE BACK OF THE BOX THAT SHALL BE DRILLED AND TAPPED FOR A 1/4"-20 CAP SCREW FOR CONNECTION OF GROUNDS.

WHEN ENCASED IN CONCRETE, THE JUNCTION BOX SHALL HAVE INWARD FLANGED COVERS AND MAY HAVE IN LIEU OF BOSSED DRILLED AND TAPPED CONNECTIONS, SLIP HOLES FIELD DRILLED TO ACCOMMODATE THE CONDUITS ENTERING THE BOX SO LONG AS EACH METALLIC CONDUIT IS EQUIPPED WITH A GROUNDING BUSHING JUMPED TO THE BOX ITSELF.

WHEN SURFACE MOUNTED, THE JUNCTION BOX MAY HAVE IN LIEU OF BOSSED DRILLED AND TAPPED CONNECTIONS, FIELD INSTALLED HUBS TO ACCOMMODATE THE CONDUITS ENTERING THE BOX.

THE PRICE BID FOR ITEM 625, SERVICE TO UNDERPASS LIGHTING, AS PER PLAN, SHALL INCLUDE PAYMENT FOR ALL EQUIPMENT, LABOR AND MATERIALS NECESSARY TO COMPLETE THE WORK AS SPECIFIED, COMPONENT PARTS NOT SPECIFICALLY MENTIONED, BUT REQUIRED FOR SATISFACTORY OPERATION OF THIS ITEM, SHALL BE FURNISHED AND CONSIDERED PAID FOR AS PART OF THE ITEM.

ITEM 625, LUMINAIRE, INSTALLATION ONLY, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF INSTALLING AN EXISTING LUMINAIRE REMOVED FROM A PREVIOUS LOCATION ON THE PROJECT OR SUPPLIED TO THE PROJECT SITE BY OTHERS.

THE LUMINAIRE SHALL BE CLEANED, REPAIRS TO ENSURE THAT IT IS IN GOOD SERVICEABLE CONDITION MADE, ADJUSTMENTS TO THE OPTICAL COMPONENTS TO ENSURE THAT THE SPECIFIED DISTRIBUTION IS BEING PRODUCED MADE, AND A NEW LAMP INSTALLED.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER ITEM 625, "LUMINAIRE, INSTALLATION ONLY, AS PER PLAN" FOR EACH LUMINAIRE INSTALLED AND SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM IN A WORKMANLIKE MANNER.

ITEM 625, CONDUIT, 4", 725.051, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ODOT'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, CONDUIT, 4", 725.051, AS PER PLAN SHALL INCLUDE ALL EXPANSION FITTINGS AS INCIDENTAL TO THIS ITEM OF WORK.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR FEET FOR CMS ITEM 625, CONDUIT, 4", 725.051, AS PER PLAN WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

GROUNDING AND BONDING

THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS) AND THE HL AND TC SERIES OF STANDARD CONSTRUCTION DRAWINGS ARE MODIFIED AS FOLLOWS:

1. ALL METALLIC PARTS CONTAINING ELECTRICAL CONDUCTORS SHALL BE PERMANENTLY JOINED TO FORM AN EFFECTIVE GROUND FAULT CURRENT PATH BACK TO THE GROUNDED CONDUCTOR IN THE POWER SERVICE DISCONNECT SWITCH.
   a. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN METALLIC CONDUITS (725.04) IN ADDITION TO THE CONDUCTORS SPECIFIED AND BOND THE CONDUIT TO THIS GROUNDING CONDUCTOR.
   b. WHEN AN EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED IN PLASTIC CONDUIT (725.05), THE INSTALLATION SHALL INCLUDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR IN ADDITION TO THE CONDUCTORS SPECIFIED.
   c. METAL PULL BOX LIDS SHALL BE BONDED BY ATTACHMENT OF THE EQUIPMENT GROUNDING CONDUCTOR TO THE FRAME DIAGONAL AS PROVIDED ON HL-30.11.
   d. IF MULTIPLE CONDUIT RUNS BEGIN AND END AT THE SAME POINTS, ONLY ONE EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED.
2. CONDUITS.
   a. ANY 725.04 CONDUIT SHALL HAVE GROUNDING BUSHINGS INSTALLED AT ALL TERMINATION POINTS. THE BUSHING MATERIAL SHALL BE COMPATIBLE WITH GALVANIZED STEEL CONDUIT AND THE GROUNDING LUG MATERIAL SHALL BE COMPATIBLE FOR USE WITH COPPER WIRE. THREADED OR COMPRESSION TYPE BUSHINGS MAY BE USED.
   b. ANY 725.05 CONDUIT SHALL HAVE THE INSIDE AND OUTSIDE DIAMETERS OF THE CONDUIT DEBURRED AT ALL TERMINATION POINTS.
   c. BOTH ENDS OF METALLIC CONDUIT SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.
   d. METALLIC CONDUIT MAY BE BONDED TO METALLIC BOXES THROUGH THE USE OF CONDUIT FITTINGS UL APPROVED FOR THIS TYPE OF CONNECTION, WITH THE BOX BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.
3. WIRE FOR GROUNDING AND BONDING.
   a. USE INSULATED, COPPER WIRE FOR THE EQUIPMENT GROUNDING CONDUCTOR. BONDING JUMPERS IN BOXES AND ENCLOSURES MAY BE BARE OR INSULATED COPPER WIRE. WIRE SIZE SHALL BE AS FOLLOWS:
      i. USE SAME SIZE EQUIPMENT GROUNDING CONDUCTOR AS THE DUCT CABLE OR DISTRIBUTION CABLE CIRCUIT CONDUCTORS, WITH THE MINIMUM CONDUCTOR SIZE OF #4 AWG. BONDING JUMPERS WILL BE MINIMUM SIZE #4 AWG.
      ii. THE INSULATION SHALL BE GREEN OR GREEN WITH YELLOW STRIPE(S). FOR #4 AWG OR LARGER, INSULATION MAY ALSO BE BLACK WITH GREEN TAPE/LABELS INSTALLED AT ALL ACCESS POINTS.
4. GROUND ROD.
   a. A 3/4 INCH SCHEDULE 40 PVC CONDUIT WILL BE USED IN FOUNDATIONS AND CONCRETE WALLS FOR THE GROUNDING CONDUCTOR (GROUND WIRE) RACEWAY TO THE GROUND ROD. SHOULD METALLIC CONDUIT BE USED, BOTH ENDS OF THE CONDUIT SHALL BE BONDED TO THE GROUNDING CONDUCTOR.
   b. THE TYPICAL GROUNDING CONDUCTOR (GROUND WIRE) SHALL BE #4 AWG, INSULATED, COPPER.
5. POWER SERVICE AND DISCONNECT SWITCH.
   a. AT THE POWER SERVICE LOCATION, THE GROUNDING CONDUCTOR (GROUND WIRE) FROM THE DISCONNECT SWITCH NEUTRAL (AC-) BAR TO THE GROUND ROD SHALL BE A CONTINUOUS, UNSPLICED CONDUCTOR. IF SPLICED, IT SHALL BE AN EXOTHERMIC WELD BUTT SPLICE.
   b. THE SERVICE NEUTRAL (AC-) SHALL ONLY BE CONNECTED TO GROUND AT THE PRIMARY POWER SERVICE DISCONNECT SWITCH.

GROUNDING AND BONDING (CONTINUED)

   i. IF SECONDARY DISCONNECT SWITCHES ARE CONNECTED AFTER THE PRIMARY DISCONNECT SWITCH, THE NEUTRAL (AC-) SHALL ONLY BE GROUNDED AT THE PRIMARY SWITCH. EQUIPMENT GROUNDING CONDUCTORS SHALL BE BROUGHT TO THE PRIMARY SWITCH, BUT SHALL BE GROUNDED AT BOTH SECONDAY AND PRIMARY SWITCHES.
6. STRUCTURE GROUNDING
   HL-50.21 SHOWS A 1/0 AWG STRANDED COPPER CABLE USED FOR STRUCTURE GROUNDING. ADDITIONALLY, THIS SAME CABLE SHALL BE INSULATED AND ANY CONNECTIONS AND BARE COPPER STRANDS EXPOSED TO CONCRETE SHALL BE COVERED WITH MASTIC TO PREVENT CONTACT WITH THE CONCRETE.
7. PAYMENT
   ALL MATERIALS AND WORK REQUIRED TO COMPLETE THE EFFECTIVE GROUND FAULT CURRENT PATH SYSTEM ARE INCIDENTAL TO THE CONDUCTORS INSTALLED BY THE CONTRACT.

ITEM 625, DISTRIBUTION CABLE REMOVED, AS PER PLAN

THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING DISTRIBUTION CABLE THAT IS NOT TO REMAIN IN SERVICE. DISTRIBUTION CABLE REMOVAL SHALL INCLUDE, BUT IS NOT LIMITED TO, THE FOLLOWING LOCATIONS:

IR-75: FROM STA. 407+00 TO STA. 536+00
SR-562: FROM STA. 18+00 TO STA. 35+00

THE CONTRACTOR SHALL NOT REMOVE DISTRIBUTION CABLE SERVICING THE PADDOCK ROAD STREET LIGHTING SYSTEM OR OTHER SURFACE STREET LIGHTING SYSTEMS UNLESS EXPLICITLY STATED IN THE PLANS.

EXISTING LIGHTING CONDUIT WITH CIRCUIT CABLES CALLED OUT FOR REMOVAL MAY BE ABANDONED IN PLACE, UNLESS IT CONFLICTS WITH ANY PROPOSED IMPROVEMENTS, IN WHICH CASE IT SHALL BE REMOVED. ANY CONDUIT THAT IS REQUIRED TO BE REMOVED SHALL BE INCIDENTAL TO THIS PAY ITEM.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED FOR USE AND CARRIED TO THE GENERAL SUMMARY:

ITEM 625, DISTRIBUTION CABLE REMOVED, AS PER PLAN, 30,000 FT.

ITEM SPECIAL, MAINTAIN EXISTING LIGHTING

EXISTING ROADWAYS WHICH ARE TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION OF THIS PROJECT AND WHICH ARE LIGHTED SHALL HAVE THE LIGHTING MAINTAINED AS DESCRIBED HEREIN.

BEFORE ANY WORK IS STARTED IN THE IMMEDIATE VICINITY OF THE EXISTING LIGHTING CIRCUITS, REPRESENTATIVES OF ODOT, THE MAINTAINING AGENCY AND THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF THE EXISTING ROADWAY LIGHTING CIRCUITS TO BE MAINTAINED. DURING THIS INSPECTION, A WRITTEN RECORD OF THE CONDITION OF EXISTING LIGHTING SHALL BE MADE BY ODOT'S REPRESENTATIVE. THIS WRITTEN REPORT SHALL NOTE INDIVIDUAL LUMINAIRES WHICH ARE NOT IN WORKING ORDER, INDIVIDUAL POLES WHICH ARE NOT STANDING, AND INDIVIDUAL CIRCUITS WHICH ARE NOT IN WORKING ORDER. THE COMPLETED REPORT SHALL BE SIGNED BY THE REPRESENTATIVES OF ODOT, THE MAINTAINING AGENCY AND THE CONTRACTOR.

IF, AS A RESULT OF THIS INSPECTION, IT IS DETERMINED THAT THE CONDITION OF THE EXISTING SYSTEM IS BELOW THAT REQUIRED FOR THE SAFETY OF THE TRAVELING PUBLIC, THEN THE MAINTAINING AGENCY SHALL MAKE THE REPAIRS NECESSARY TO RETURN THE SYSTEM TO AN ACCEPTABLE CONDITION. FOLLOWING THESE REPAIRS, THE SYSTEM SHALL AGAIN BE INSPECTED AND A REPORT SHALL BE MADE AND SIGNED AS OUTLINED HEREIN.

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LIGHTING NOTES

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ITEM SPECIAL, MAINTAIN EXISTING LIGHTING (CONTINUED)

WHEN THE EXISTING SYSTEM IS IN AN ACCEPTABLE CONDITION, IT SHALL BE TURNED OVER TO THE CONTRACTOR WHO SHALL THEN BE REQUIRED TO MAINTAIN THE EXISTING LIGHTING TO THE CONDITION OUTLINED IN THIS REPORT WITH THE EXCEPTION OF KNOCKDOWNS DUE TO TRAFFIC ACCIDENTS.

REPLACEMENT OF KNOCKED DOWN UNITS SHALL BE DONE ONLY WHEN THE ENGINEER HAS DETERMINED THAT THE REPLACEMENT OF THE KNOCKED DOWN UNIT IS NECESSARY AND SHALL BE PAID SEPARATELY ON A UNIT BASIS.

BETTERMENTS SHALL BE COVERED IN ITEMS OF WORK PERTAINING TO THE CONSTRUCTION OF PERMANENT IMPROVEMENT.

WHEN THE SEQUENCE OF CONSTRUCTION ACTIVITIES REQUIRES, OR SHOULD THE CONTRACTOR DESIRE, THE REMOVAL OF THE EXISTING LIGHTING BEFORE THE NEW LIGHTING IS OPERATIONAL, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY LIGHTING ON THIS PORTION OF THE ROADWAY.

PRIOR TO INSTALLING SUCH LIGHTING, THE CONTRACTOR SHALL PREPARE AND SUBMIT FOUR SETS OF THE TEMPORARY LIGHTING PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL.

THIS PLAN SHALL SHOW LOCATIONS OF POLES, LENGTHS OF BRACKET ARMS, STYLES OF LUMINAIRES, MOUNTING HEIGHTS, WIRING METHODS AND OTHER PERTINENT INFORMATION. THE TEMPORARY LIGHTING SHALL PROVIDE AN AVERAGE INITIAL INTENSITY OF 1.2 FOOTCANDLES WITH AN AVERAGE TO MINIMUM UNIFORMITY NOT TO EXCEED 3:1. MOUNTING HEIGHT OF TEMPORARY LUMINAIRES SHALL NOT BE LESS THAN 30 FEET, AND THE MINIMUM OVERHEAD CONDUCTOR CLEARANCE SHALL BE 20 FEET. TEMPORARY OVERHEAD CONSTRUCTION SHALL NOT BE LESS THAN GRADE "B" FOR STRENGTH REQUIREMENTS AS DEFINED BY THE NATIONAL ELECTRIC SAFETY CODE. WOOD POLES WITH OVERHEAD WIRING MAY BE USED. HOWEVER, TEMPORARY LIGHTING SHALL MEET FEDERAL AND STATE SAFETY CRITERIA. IF BREAKAWAY POLES ARE USED TO MEET THESE CRITERIA, THEN UNDERGROUND WIRING SHALL BE USED. RECONDITIONED OR USED MATERIALS MAY BE FURNISHED FOR TEMPORARY LIGHTING.

ALL MATERIALS NECESSARY TO COMPLETE THE TEMPORARY LIGHTING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. WHEN NO LONGER NEEDED, THE TEMPORARY LIGHTING INSTALLATION SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

THE MAINTAINING AGENCY WILL PAY FOR ELECTRICAL ENERGY CONSUMED BY EXISTING POWER SERVICES AND BY PROPOSED PERMANENT POWER SERVICES AFTER ACCEPTANCE OF THE LIGHTING WORK. THE CONTRACTOR WILL PAY FOR ELECTRICAL ENERGY, INSTALLATION, REMOVAL AND MAINTENANCE OF ANY TEMPORARY POWER SERVICES.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INVESTIGATE AND REPAIR ALL HIGHWAY LIGHTING OUTAGES WITHIN A 72 HOUR TIMEFRAME.

DISINCENTIVE: $7,500 PER DAY - BEGINNING AFTER THE ALLOWABLE 72 HOUR DOWNTIME.

THE LUMP SUM PRICE BID FOR ITEM 625, SPECIAL, MAINTAIN EXISTING LIGHTING SHALL INCLUDE PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO MAINTAIN THE EXISTING LIGHTING AS SPECIFIED HEREIN.

ITEM SPECIAL, REPLACEMENT OF EXISTING LIGHTING UNIT

THIS ITEM SHALL BE FOR THE REPLACEMENT OF ONE EXISTING LIGHTING UNIT AND SHALL INCLUDE A POLE, LUMINAIRE, AND ANY FOUNDATION REPAIR NECESSARY (UP TO AND INCLUDING FOUNDATION REPLACEMENT, CONNECTOR KITS AND CABLES).

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED FOR USE AND CARRIED TO THE GENERAL SUMMARY:

ITEM 625, SPECIAL - REPLACEMENT OF EXISTING LIGHTING UNIT, 2 EACH.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH CMS ITEM 625, SPECIAL, REPLACEMENT OF EXISTING LIGHTING UNIT WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

CONDUIT EXPANSION AND DEFLECTION

EXPANSION FITTINGS SHALL BE OZ TYPE AX, CROUSE HINDS TYPE XJG, OR EQUAL APPROVED BY THE ENGINEER. EACH EXPANSION FITTING SHALL PROVIDE EITHER 4 OR 8 INCHES TOTAL MOVEMENT AS SPECIFIED BY THE PLAN DETAILS AND SHALL HAVE AN EXTERNAL COPPER BONDING JUMPER, UNLESS SPECIFIED OTHERWISE BY THE PLAN DETAILS.

DEFLECTION COUPLINGS SHALL BE OZ TYPE DX, CROUSE HINDS TYPE XD, OR EQUAL APPROVED BY THE ENGINEER. EACH DEFLECTION COUPLING SHALL HAVE AN EXTERNAL COPPER BONDING JUMPER, UNLESS SPECIFIED OTHERWISE BY THE PLAN DETAILS. MINIMUM DEFLECTION CAPABILITY: 25°.

EXPANSION AND DEFLECTION FITTINGS FULLY OR PARTIALLY EMBEDDED IN CONCRETE, SOIL, OR SIMILAR MATERIAL SHALL BE COMPLETELY WRAPPED IN A NEOPRENE SLEEVE OR SHEET OF 1/2-INCH MINIMUM THICKNESS. SECURE NEOPRENE WRAP WITH TIE-WRAPS PRIOR TO EMBEDMENT OF THE FITTING.

LIGHT TOWER DECALS

NEW LIGHT TOWER DECALS SHALL BE PLACED ON ALL PROPOSED LIGHT TOWERS TO MATCH THE ALPHA NUMBERIC IDENTIFIER AS DETAILED WITHIN THE PLANS TO CONFORM WITH THE ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS. THE CONTRACTOR IS ALSO REQUIRED TO REMOVE AND DISPOSE OF EXISTING DECALS AND HAVE NEW ONES INSTALLED ON ALL EXISTING TOWERS CONNECTED TO EXISTING CONTROLLER "A". IDENTIFICATION OF THE LIGHT TOWERS AND THE REMOVAL OF ANY PREVIOUS IDENTIFIER SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.

ITEM 625, CONNECTION, FUSED PULL APART, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ITEM 625, THE CONTRACTOR SHALL REMOVE THE PORTION OF THE EXISTING CONNECTOR KIT FROM THE END OF THE POLE AND BRACKET CABLES TO PERMIT THE NEW CONNECTION TO BE INSTALLED.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER ITEM 625, "CONNECTION, FUSED PULL APART, AS PER PLAN" FOR EACH CONNECTION AND SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM IN A WORKMANLIKE MANNER.

ITEM 625, LIGHT TOWER FOUNDATION, MISC.: MEDIAN, 36" X 20' DEEP

LIGHT TOWER FOUNDATIONS INSTALLED IN THE MEDIAN BARRIER SHALL BE AS PER HL-20.24.

PAYMENT SHALL BE AS PER ITEM 625 FOR EACH FOUNDATION.

ITEM 625, LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN, (VOLTAGE)

IN ADDITION TO MEETING THE REQUIREMENTS OF ODOT SUPPLEMENTAL SPECIFICATIONS 813 AND 913, THE FOLLOWING SHALL APPLY:

LUMINAIRES FOR LOW-MAST LIGHTING UNITS WITH SYMMETRIC DISTRIBUTION SHALL BE:

HOLOPHANE, HMLED4-P1-30K-HVOLT-HGR-AW
GE, ERHM-02-5-30-VW-7-30-GRAY
COOPER, CST-8-3-D-8-T5-AP-7030

OR EQUAL AS APPROVED BY THE ENGINEER.

IN ADDITION, OTHER LUMINAIRES WILL BE CONSIDERED IF THE DESIGNED INTENSITY AND UNIFORMITY ARE PROVIDED USING THE DESIGNED POLE LOCATIONS AND THE DESIGNED NUMBER AND TYPE OF FIXTURES PER POLE.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER C&MS ITEM 625, LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN FOR EACH LUMINAIRE WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625, LUMINAIRE, LOW MAST, SOLID STATE (LED), AS PER PLAN, (VOLTAGE)

IN ADDITION TO MEETING THE REQUIREMENTS OF ODOT SUPPLEMENTAL SPECIFICATIONS 813 AND 913, THE FOLLOWING SHALL APPLY:

LUMINAIRES FOR LOW-MAST LIGHTING UNITS WITH SYMMETRIC DISTRIBUTION SHALL BE:

HOLOPHANE, HMLED4-P1-30K-HVOLT-HGR-AW
GE, ERHM-02-5-30-VW-7-30-GRAY
COOPER, CST-8-3-D-8-T5-AP-7030

OR EQUAL AS APPROVED BY THE ENGINEER.

IN ADDITION, OTHER LUMINAIRES WILL BE CONSIDERED IF THE DESIGNED INTENSITY AND UNIFORMITY ARE PROVIDED USING THE DESIGNED POLE LOCATIONS AND THE DESIGNED NUMBER AND TYPE OF FIXTURES PER POLE.

LOW MAST LUMINAIRES THAT ARE TO BE OWNED AND MAINTAINED BY ODOT SHALL OPERATE AT 480V, AND LOW MAST LUMINAIRES THAT ARE TO BE OWNED AND MAINTAINED BY THE CITY OF CINCINNATI SHALL OPERATE AT 240V.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER C&MS ITEM 625, LUMINAIRE, LOW MAST, SOLID STATE (LED), AS PER PLAN FOR EACH LUMINAIRE WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625, LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN, (VOLTAGE)

IN ADDITION TO THE REQUIREMENTS OF ODOT'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, LUMINAIRES FOR UNDERPASS LIGHTING SHALL BE AS FOLLOWS:

LUMINAIRES FOR UNDERPASS LIGHTING UNITS SHALL BE:

HOLOPHANE, TNLEDMED-PK1-33-K-WCR-AW
COOPER, GWC-SA1-C-730-8-T4FT-AP

OR EQUAL AS APPROVED BY THE ENGINEER.

LUMINAIRES FOR UNDERPASS LIGHTING UNITS WHICH ARE WALL MOUNTED SHALL BE FURNISHED WITH AN INTEGRAL FUSE HOLDER AND 10-AMPERE FUSES.

UNDERPASS LUMINAIRES THAT ARE TO BE OWNED AND MAINTAINED BY ODOT SHALL OPERATE AT 480V, AND UNDERPASS LUMINAIRES THAT ARE TO BE OWNED AND MAINTAINED BY THE CITY OF CINCINNATI SHALL OPERATE AT 240V.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER ITEM 625, LUMINAIRE, UNDERPASS, (VOLTAGE), AS PER PLAN FOR EACH LUMINAIRE WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

HIGH VOLTAGE TEST WAIVED FOR EXISTING CIRCUITS

THE HIGH VOLTAGE TEST SHALL NOT BE PERFORMED ON ANY CIRCUITS CONSTRUCTED BY THIS PROJECT THAT SPLICE WITH EXISTING CIRCUITRY TO REMAIN, SINCE THE TEST COULD DAMAGE THE PORTION OF THE COMPLETED CIRCUIT WHICH HAS BEEN IN SERVICE PRIOR TO THIS PROJECT.

ITEM 625, LIGHT POLE FOUNDATION, 24" X 6', AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF INSTALLING A NEW FOUNDATION AT THE LOCATION SPECIFIED.

CONTRACTOR IS REQUIRED TO FIELD MEASURE EXISTING LIGHT POLE BOLT CIRCLE AND MATCH WITH NEW FOUNDATION. NEW ANCHOR BOLTS SHALL BE FURNISHED/INSTALLED AND SHALL BE CONSIDERED INCIDENTAL TO THE FOUNDATION.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER ITEM 625, "LIGHT POLE FOUNDATION, 24" X 6', AS PER PLAN" FOR EACH LIGHT POLE FOUNDATION WHICH SHALL INCLUDE ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625, LIGHTING MISC.: REMOVAL OF UNDERPASS LIGHTING

THIS ITEM OF WORK SHALL CONSIST OF REMOVING ALL CONDUITS, WIRING, UNDERPASS LIGHTING FIXTURES, JUNCTION BOXES, AND ANY OTHER EXISTING MISCELLANEOUS APPURTENANCES THAT CONTRIBUTE TO THE OVERALL UNDERPASS LIGHTING SYSTEM.

UNDERPASS LIGHTING FIXTURES SHALL BE RETURNED TO ODOT AFTER REMOVAL. ALL OTHER EQUIPMENT SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR.

THE PRICE BID FOR ITEM 625 "LIGHTING MISC.: REMOVAL OF UNDERPASS LIGHTING" SHALL INCLUDE PAYMENT FOR ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER. THERE ARE 3 EXISTING UNDERPASS LIGHTING SYSTEMS THAT THE CONTRACTOR IS REQUIRED TO REMOVE. THESE EXISTING UNDERPASS LIGHTING SYSTEMS ARE ON RAMP J, LAIDLAW AVENUE, AND TOWNE STREET.

PAYMENT SHALL BE PER EACH SYSTEM.

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LIGHTING NOTES

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ITEM 625, LIGHT POLE (INSTALLATION ONLY), AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF INSTALLING AN EXISTING LIGHT POLE REMOVED FROM A PREVIOUS LOCATION ON THE PROJECT OR SUPPLIED TO THE PROJECT SITE BY OTHERS.

THE CONTRACTOR SHALL CLEAN THE LIGHT POLE AND MAKE ANY REPAIRS NEEDED FOR THE POLE TO BE IN GOOD SERVICEABLE CONDITION IF NEEDED. THE EXISTING POLE NUMBER DECAL SHALL BE REMOVED IF IT IS IN POOR CONDITION OR THE POLE NUMBER HAS CHANGED. A POLE NUMBER DECAL SHALL BE SUPPLIED AND APPLIED IF THE EXISTING DECAL IS REMOVED OR MISSING.

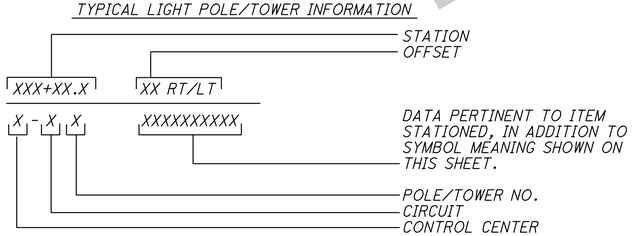
PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER ITEM 625, "LIGHT POLE, INSTALLATION ONLY, AS PER PLAN" FOR EACH POLE INSTALLED AND SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM IN A WORKMANLIKE MANNER.

POWER SERVICE DATA

POWER SERVICE	LINE VOLTAGE (VOLTS)	CONNECTED LOAD (KVA)	ENCLOSURE RATING (AMPS)	CIRCUIT NO.	CIRCUIT LOAD (AMPS)	CIRCUIT FUSE SIZE (AMPS)	CIRCUIT CABLE SIZE (AWG)	MAINTAINING AGENCY
PS-A	480	6.6	60	A-A	13.6	30	4	ODOT
PS-B	480	14.8	60	B-A	24.0	60	4	ODOT
				B-B	6.8	30	4	
PS-C	480	9.3	60	C-A	6.3	30	4	ODOT
				C-B	12.9	30	4	
PS-D	480	8.5	60	D-A	8.1	30	4	ODOT
				D-B	9.5	30	4	
PS-E	480	6.9	60	E-A	14.2	30	4	ODOT
PS-F	240	0.3	60	F-A	1.1	30	4	CITY OF CINCINNATI
PS-G	240	3.1	60	G-A	5.3	30	4	CITY OF CINCINNATI
				G-B	7.4	30	4	
PS-H	240	0.3	60	H-A	0.9	30	4	CITY OF CINCINNATI

FOR INFORMATION ONLY

TYPICAL LIGHT POLE/TOWER INFORMATION



PLAN LEGEND

EXISTING LIGHT TOWER

EXISTING LIGHT POLE

EXISTING UNDERPASS LIGHT

PROPOSED UNDERPASS LIGHT

PROPOSED MEDIAN MOUNTED 50' POLE WITH LOW MAST ARM, PER HL-10.11 WITH 1-LOW MAST LED SYMMETRIC MEDIUM CUT-OFF LUMINAIRE. PROVIDE BASE PLATE, ANCHOR BOLTS, JUNCTION BOX, AND FOUNDATION AS DETAILED ON HL-20.13 FOR MEDIAN BARRIER MOUNTED LIGHT POLES.

PROPOSED MEDIAN BARRIER OR GROUND MOUNTED 100' LIGHT TOWER WITH 4-LED SYMMETRIC MEDIUM CUT-OFF HIGH MAST LUMINAIRES. ANCHOR BOLTS SHALL BE PER HL-10.31, GROUND MOUNTED FOUNDATIONS SHALL BE PER HL-20.21 AND MEDIAN MOUNTED FOUNDATIONS SHALL BE PER HL 20.24, WITH ALL WIRING PER HL-60.21.

PROPOSED MEDIAN BARRIER OR GROUND MOUNTED 100' LIGHT TOWER WITH 6-LED SYMMETRIC MEDIUM CUT-OFF HIGH MAST LUMINAIRES. ANCHOR BOLTS SHALL BE PER HL-10.31, GROUND MOUNTED FOUNDATIONS SHALL BE PER HL-20.21 AND MEDIAN MOUNTED FOUNDATIONS SHALL BE PER HL 20.24, WITH ALL WIRING PER HL-60.21.

PROPOSED PULL BOX (TYPE & SIZE NOTED ON THE PLANS)

EXISTING PULL BOX

PROPOSED POWER SERVICE
GROUND MOUNTED PER HL-40.10 FOR ODOT MAINTAINED CONTROLLER
POLE MOUNTED PER ES-7 FOR CITY OF CINCINNATI MAINTAINED CONTROLLER

EXISTING POWER SERVICE

PROPOSED UNDERGROUND LIGHTING CURCIT IN DUCT CABLE (SIZE NOTED ON THE PLANS)

PROPOSED LIGHTING CONDUIT , OF SIZE AND TYPE AS NOTED ON THE PLANS, CONTAINING DISTRIBUTION CABLE OF SIZE, TYPE AND NUMBER AS NOTED ON THE PLANS; LOCATED UNDERGROUND OR ON STRUCTURE, AS NOTED ON THE PLANS.

EXISTING LIGHTING CONDUIT

CALCULATED DRM CHECKED JDS

LIGHTING NOTES AND LEGEND

HAM-75-7.85

1231
2017

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SHEET NUMBER												PARTICIPATION		ITEM	ITEM EXT.	TOTAL CARRIED TO GENERAL SUMMARY	UNIT	DESCRIPTION	SEE SHEET NO.
1229	1230	1233	1234	1235	1236	1237	1238	1239	1240	1241	1242								
		1												202	62000	1	EACH	JUNCTION BOX REMOVED	
						2	20	38	4	38	16			625	00450	118	EACH	CONNECTION, FUSED PULL APART	
											14			625	00451	14	EACH	CONNECTION, FUSED PULL APART, AS PER PLAN	1230
						18	6	3	9		6			625	00480	42	EACH	CONNECTION, UNFUSED PERMANENT	
						1	10	19	2	19	8			625	10494	59	EACH	LIGHT POLE, LOW MAST, ALM50	
											3			625	10503	3	EACH	LIGHT POLE (INSTALLATION ONLY), AS PER PLAN	1231
						5			3					625	13200	8	EACH	LIGHT TOWER, BBBB100	
						1	4		5	3				625	13400	13	EACH	LIGHT TOWER, BBBBBB100	
											3			625	14001	3	EACH	LIGHT POLE FOUNDATION, 24" X 6' DEEP, AS PER PLAN	1230
						1	10	18	2	18	8			625	14306	57	EACH	MEDIAN LIGHT POLE FOUNDATION, 10' DEEP	
								1		1				625	14307	2	EACH	MEDIAN LIGHT POLE FOUNDATION, 10' DEEP, AS PER PLAN	43
						3	1		2					625	15100	6	EACH	LIGHT TOWER FOUNDATION, 36" X 20' DEEP	
						3			1	1				625	15200	5	EACH	LIGHT TOWER FOUNDATION, 36" X 25' DEEP	
							3		5	2				625	15700	10	EACH	LIGHT TOWER FOUNDATION, MISC.: MEDIAN, 36" X 20' DEEP	1230
						4368	10047	8955	9864	10504	4791			625	23200	48529	FT	NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE	
											1872			625	23300	1872	FT	NO. 2 AWG 2400 VOLT DISTRIBUTION CABLE	
						150	1500	2850	300	2850	1200			625	23400	8850	FT	NO. 10 AWG POLE AND BRACKET CABLE	
						1984			738					625	24320	2722	FT	1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES	
						225	244		65		747			625	25500	1281	FT	CONDUIT, 3", 725.04	
						216	89	81						625	25605	386	FT	CONDUIT, 4", 725.051, AS PER PLAN	1229
						509	407		1064	95	476			625	25902	2551	FT	CONDUIT, JACKED OR DRILLED, 725.04, 3"	
						32	24		38	18				625	26263	112	EACH	LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN, 480V	1230
											8			625	26273	8	EACH	LUMINAIRE, LOW MAST, SOLID STATE (LED), AS PER PLAN, 240V	1230
						1	10	19	6	19				625	26273	55	EACH	LUMINAIRE, LOW MAST, SOLID STATE (LED), AS PER PLAN, 480V	1230
							4	3						625	27503	7	EACH	LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN, 240V	1230
						7								625	27503	7	EACH	LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN, 480V	1230
											3			625	27561	3	EACH	LUMINAIRE, INSTALLATION ONLY, AS PER PLAN	1229
						2129	122		746		747			625	29000	3744	FT	TRENCH	
						2	2	2						625	29910	6	EACH	TRANSITION JUNCTION BOX	
						4	15	20	10	22	10			625	29930	81	EACH	MEDIAN JUNCTION BOX	
						7	2	1	4	1	4			625	30700	19	EACH	PULL BOX, 725.08, 18"	
							1		2					625	30706	3	EACH	PULL BOX, 725.08, 24"	
		20	17	10	8									625	31510	55	EACH	PULL BOX REMOVED	
						31	20	19	28	33	11			625	32000	142	EACH	GROUND ROD	
						3	1	2		1				625	33000	7	EACH	STRUCTURE GROUNDING SYSTEM	
							2	1	3		1			625	34001	7	EACH	POWER SERVICE, AS PER PLAN	1229
						2129	122		746		747			625	36010	3744	FT	UNDERGROUND WARNING/MARKING TAPE	
						1	1	1	1					625	37101	4	EACH	SERVICE TO UNDERPASS LIGHTING, AS PER PLAN	1229
														625	38000	LUMP		HIGH VOLTAGE TEST	
														SPECIAL	62540000	LUMP		MAINTAIN EXISTING LIGHTING	1230
	2													SPECIAL	62540010	2	EACH	REPLACEMENT OF EXISTING LIGHTING UNIT	1230
		7	3	3										625	75350	13	EACH	LIGHT TOWER REMOVED	
		16	25	36										625	75400	77	EACH	LIGHT POLE REMOVED	
					3									625	75402	3	EACH	LIGHT POLE REMOVED FOR STORAGE	
		16	25	36	3									625	75500	80	EACH	LIGHT POLE FOUNDATION REMOVED	
					3									625	75504	3	EACH	LUMINAIRE REMOVED FOR STORAGE	
		40	34	43		4								625	75506	121	EACH	LUMINAIRE REMOVED	
		2	2	1										625	75510	5	EACH	POWER SERVICE REMOVED	
		7	3	3										625	75540	13	EACH	LIGHT TOWER FOUNDATION REMOVED	
30000														625	75551	30000	FT	DISTRIBUTION CABLE REMOVED, AS PER PLAN	1229
		1			4									625	75800	5	EACH	DISCONNECT CIRCUIT	
		2	1											625	98000	3	EACH	LIGHTING, MISC: REMOVAL OF UNDERPASS LIGHTING	1230

CALCULATED JMA CHECKED JDS

LIGHTING SUBSUMMARY

HAM-75-7.85

1232
2017

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REFERENCE NO.	SHEET NO.	SIDE	ROADWAY	STATION TO STATION	202 JUNCTION BOX REMOVED EACH	625 PULL BOX REMOVED EACH	625 LIGHT TOWER REMOVED EACH	625 LIGHT POLE REMOVED EACH	625 LIGHT POLE FOUNDATION REMOVED EACH	625 LUMINAIRE REMOVED EACH	625 POWER SERVICE REMOVED EACH	625 LIGHT TOWER FOUNDATION REMOVED EACH	625 DISCONNECT CIRCUIT EACH	625 LIGHTING, MISC: REMOVAL OF UNDERPASS LIGHTING EACH				
1	1246	LT	RAMP M	409+14									1					
2	1246	LT	RAMP M	409+66		1												
3	1246	RT	RAMP M	409+64		1												
4	1246	LT	I.R. 75	411+20			1			4		1						
5	1246	RT	I.R. 75	411+21	1													
6	1246	RT	I.R. 75	411+21		1												
7	1246	RT	RAMP N	411+38		1												
8	1246	LT	I.R. 75	414+99			1			4		1						
9	1246	RT	I.R. 75	417+16		1												
10	1246	RT	I.R. 75	418+07			1			2		1						
11	1246	RT	I.R. 75	418+03		1												
12	1246	RT	RAMP J	418+33						3				1				
13	1246	LT	I.R. 75	418+44			1			2		1						
14	1246	LT	I.R. 75	418+78		1												
15	1246	RT	I.R. 75	421+41			1			2		1						
1	1247	LT	I.R. 75	423+61		1												
2	1247	LT	I.R. 75	423+57			1			2		1						
3	1247	RT	I.R. 75	427+27				1	1	1								
4	1247	LT	I.R. 75	427+87				1	1	1								
5	1247	LT	I.R. 75	428+22							1							
6	1247	LT	I.R. 75	428+23		1												
7	1247	RT	I.R. 75	430+16				1	1	1								
8	1247	LT	I.R. 75	430+24				1	1	1								
9	1247	RT	I.R. 75	433+06				1	1	1								
10	1247	RT	I.R. 75	433+14							1							
11	1247	LT	I.R. 75	433+34				1	1	1								
12	1247	LT	I.R. 75	433+57		1												
13	1247	RT	I.R. 75	433+57		1												
14	1247	LT	I.R. 75	434+14		1												
15	1247	RT	I.R. 75	434+20		1												
16	1247	LT	I.R. 75	435+46		1												
17	1247	RT	I.R. 75	435+49		1												
18	1247	LT	I.R. 75	435+51				1	1	1								
19	1247	RT	I.R. 75	435+97				1	1	1								
20	1247	RT	I.R. 75	436+45		1												
21	1247	RT	I.R. 75	434+17						3				1				
1	1248	RT	I.R. 75	438+79				1	1	1								
2	1248	RT	I.R. 75	438+98		1												
3	1248	LT	I.R. 75	439+30				1	1	1								
4	1248	LT	I.R. 75	440+39		1												
5	1248	RT	I.R. 75	441+75				1	1	1								
6	1248	LT	I.R. 75	442+13				1	1	1								
7	1248	RT	I.R. 75	444+65				1	1	1								
8	1248	LT	I.R. 75	445+04				1	1	1								
9	1248	RT	I.R. 75	447+62				1	1	1								
10	1248	LT	I.R. 75	447+94				1	1	1								
11	1248	RT	I.R. 75	448+05		1												
1	1249	LT	I.R. 75	451+11		1												
2	1249	RT	I.R. 75	451+25			1			2		1						
TOTALS CARRIED TO SUBSUMMARY					1	20	7	16	16	40	2	7	1	2				

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CALCULATED JMA
CHECKED JDS

LIGHTING ESTIMATED QUANTITIES

HAM-75-7.85

1233
2017

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REFERENCE NO.	SHEET NO.	SIDE	ROADWAY	STATION TO STATION	625 PULL BOX REMOVED EACH	625 LIGHT TOWER REMOVED EACH	625 LIGHT POLE REMOVED EACH	625 LIGHT POLE FOUNDATION REMOVED EACH	625 LUMINAIRE REMOVED EACH	625 POWER SERVICE REMOVED EACH	625 LIGHT TOWER FOUNDATION REMOVED EACH	625 LIGHTING MISC: REMOVAL OF UNDERPASS LIGHTING EACH
3	1249	LT	I.R. 75	451+73	1							
4	1249	LT	I.R. 75	451+88					3			1
5	1249	RT	I.R. 75	452+05	1							
6	1249	RT	I.R. 75	452+38	1							
7	1249	RT	I.R. 75	452+97	1							
8	1249	RT	I.R. 75	453+23	1							
9	1249	LT	I.R. 75	453+24	1							
10	1249	RT	I.R. 75	453+50	1							
11	1249	RT	I.R. 75	453+71						1		
12	1249	LT	I.R. 75	454+47			1	1	1			
13	1249	RT	I.R. 75	454+51		1			2		1	
14	1249	LT	I.R. 75	457+45			1	1	1			
15	1249	RT	I.R. 75	458+06			1	1	1			
16	1249	LT	I.R. 75	460+56			1	1	1			
17	1249	RT	I.R. 75	461+74			1	1	1			
18	1249	LT	I.R. 75	463+65			1	1	1			
1	1250	RT	I.R. 75	465+01			1	1	1			
2	1250	LT	I.R. 75	467+26			1	1	1			
3	1250	RT	I.R. 75	468+08	1							
4	1250	RT	I.R. 75	468+25			1	1	1			
5	1250	LT	I.R. 75	470+07			1	1	1			
6	1250	LT	I.R. 75	471+25	1							
7	1250	RT	I.R. 75	471+29	1							
8	1250	RT	I.R. 75	471+27						1		
9	1250	RT	I.R. 75	471+46			1	1	1			
10	1250	LT	I.R. 75	473+26			1	1	1			
11	1250	RT	I.R. 75	474+56			1	1	1			
12	1250	LT	I.R. 75	476+46			1	1	1			
1	1251	RT	I.R. 75	477+59	1							
2	1251	RT	I.R. 75	477+74			1	1	1			
3	1251	LT	I.R. 75	479+65			1	1	1			
4	1251	RT	I.R. 75	480+74			1	1	1			
5	1251	LT	I.R. 75	482+83			1	1	1			
6	1251	RT	I.R. 75	483+84			1	1	1			
7	1251	LT	I.R. 75	486+03			1	1	1			
8	1251	RT	I.R. 75	486+85			1	1	1			
9	1251	RT	I.R. 75	488+58	1							
10	1251	LT	I.R. 75	489+23			1	1	1			
11	1251	RT	I.R. 75	489+83			1	1	1			
1	1252	LT	I.R. 75	491+55	1							
2	1252	LT	I.R. 75	492+39	1							
3	1252	LT	I.R. 75	492+44			1	1	1			
4	1252	RT	I.R. 75	494+41		1			2		1	
5	1252	RT	I.R. 75	494+22	1							
6	1252	RT	I.R. 75	494+65	1							
7	1252	RT	I.R. 75	494+69			1	1	1			
8	1252	RT	I.R. 75	495+75	1							
9	1252	LT	I.R. 75	496+75		1			2		1	
TOTALS CARRIED TO SUBSUMMARY					17	3	25	25	34	2	3	1

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CALCULATED JMA
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LIGHTING ESTIMATED QUANTITIES

HAM-75-7.85

1234
2017

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REFERENCE NO.	SHEET NO.	SIDE	ROADWAY	STATION TO STATION	625 PULL BOX REMOVED EACH	625 LIGHT TOWER REMOVED EACH	625 LIGHT POLE REMOVED EACH	625 LIGHT POLE FOUNDATION REMOVED EACH	625 LUMINAIRE REMOVED EACH	625 POWER SERVICE REMOVED EACH	625 LIGHT TOWER FOUNDATION REMOVED EACH
10	1252	RT	I.R. 75	502+26		1			2		1
11	1252	RT	I.R. 75	502+36	1						
12	1252	RT	I.R. 75	502+66	1						
13	1252	RT	I.R. 75	502+67						1	
14	1252	LT	I.R. 75	503+54	1						
15	1252	LT	I.R. 75	503+76		1			2		1
1	1253	RT	I.R. 75	506+72			1	1	1		
2	1253	LT	I.R. 75	506+80			1	1	1		
3	1253	LT	I.R. 75	506+83	1						
4	1253	LT	I.R. 75	509+56			1	1	1		
5	1253	RT	I.R. 75	509+57			1	1	1		
6	1253	LT	I.R. 75	512+46			1	1	1		
7	1253	RT	I.R. 75	512+47			1	1	1		
8	1253	RT	I.R. 75	514+96			1	1	1		
9	1253	LT	I.R. 75	516+76			1	1	1		
10	1253	RT	I.R. 75	516+91			1	1	1		
1	1254	LT	I.R. 75	518+62			1	1	1		
2	1254	RT	I.R. 75	518+77			1	1	1		
3	1254	LT	I.R. 75	520+44			1	1	1		
4	1254	RT	I.R. 75	520+68			1	1	1		
5	1254	LT	I.R. 75	522+29			1	1	1		
6	1254	RT	I.R. 75	522+64			1	1	1		
7	1254	RT	I.R. 75	524+56			1	1	1		
8	1254	LT	I.R. 75	525+91			1	1	1		
9	1254	RT	I.R. 75	526+85			1	1	1		
10	1254	LT	I.R. 75	527+71			1	1	1		
11	1254	RT	I.R. 75	528+54			1	1	1		
12	1254	LT	I.R. 75	529+50			1	1	1		
13	1254	RT	I.R. 75	530+31			1	1	1		
14	1254	LT	I.R. 75	531+30			1	1	1		
15	1254	RT	I.R. 75	532+10			1	1	1		
1	1255	LT	S.R. 562	11+53		1			3		1
2	1255	LT	S.R. 562	12+23	1						
3	1255	LT	S.R. 562	12+48	1						
4	1255	LT	S.R. 562	14+80			1	1	1		
5	1255	RT	S.R. 562	18+00			1	1	1		
6	1255	LT	S.R. 562	19+13			1	1	1		
7	1255	RT	S.R. 562	20+69			1	1	1		
1	1256	LT	S.R. 562	22+10			1	1	1		
2	1256	RT	S.R. 562	23+00	1						
3	1256	RT	S.R. 562	23+51			1	1	1		
4	1256	LT	S.R. 562	24+91			1	1	1		
5	1256	RT	S.R. 562	26+44			1	1	1		
6	1256	LT	S.R. 562	27+75			1	1	1		
7	1256	RT	S.R. 562	29+10			1	1	1		
8	1256	LT	S.R. 562	30+18			1	1	1		
9	1256	RT	S.R. 562	31+22	1						
10	1256	RT	S.R. 562	31+23			1	1	1		
11	1256	LT	S.R. 562	31+36	1						
12	1256	RT	S.R. 562	31+57	1						
TOTALS CARRIED TO SUBSUMMARY					10	3	36	36	43	1	3

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CALCULATED JMA
CHECKED JDS

LIGHTING ESTIMATED QUANTITIES

HAM-75-7.85

1235
2017

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REFERENCE NO.	SHEET NO.	SIDE	ROADWAY	STATION TO STATION	625 PULL BOX REMOVED EACH	625 LIGHT POLE REMOVED FOR STORAGE EACH	625 LIGHT POLE FOUNDATION REMOVED EACH	625 LUMINAIRE REMOVED FOR STORAGE EACH	625 DISCONNECT CIRCUIT EACH									
13	1256	RT	S.R. 562	31+82	1													
14	1256	RT	S.R. 562	31+86	1													
15	1256	LT	S.R. 562	32+07	1													
16	1256	LT	S.R. 562	32+45		1	1	1										
17	1256	LT	S.R. 562	32+76	1													
18	1256	RT	S.R. 562	32+88	1													
19	1256	LT	S.R. 562	32+80	1													
20	1256	RT	S.R. 562	32+86		1	1	1										
21	1256	RT	S.R. 562	33+86					1									
22	1256	LT	S.R. 562	34+03	1													
23	1256	RT	S.R. 562	34+19	1													
24	1256	LT	S.R. 562	34+47		1	1	1	1									
25	1256	RT	S.R. 562	34+59					1									
26	1256	LT	S.R. 562	35+23					1									
TOTALS CARRIED TO SUBSUMMARY					8	3	3	3	4									

FOR INFORMATION ONLY

CALCULATED JMA
CHECKED JDS

LIGHTING ESTIMATED QUANTITIES

HAM-75-7.85

1236
2017

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REFERENCE NO.	SHEET NO.	SIDE	ROADWAY	STATION TO STATION		625 CONNECTION, FUSED PULL APART EACH	625 CONNECTION, UNFUSED PERMANENT EACH	625 LIGHT POLE, LOW MAST, ALM50 EACH	625 LIGHT TOWER, BBBB100 EACH	625 LIGHT TOWER, BBBBBB100 EACH	625 MEDIAN LIGHT POLE FOUNDATION, 10' DEEP EACH	625 LIGHT TOWER FOUNDATION, 36" X 20' DEEP EACH	625 LIGHT TOWER FOUNDATION, 36" X 25' DEEP EACH	625 NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE FT	625 NO. 10 POLE AND BRACKET CABLE FT	625 1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES FT	625 CONDUIT, 3", 725.04 FT	625 CONDUIT, 4", 725.051, AS PER PLAN FT	625 CONDUIT, JACKED OR DRILLED, 725.04, 3" FT	625 LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN, 480V EACH	625 LUMINAIRE, LOW MAST, SOLID STATE (LED) AS PER PLAN, 480V EACH	625 LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN, 480V EACH	625 TRENCH FT	625 TRANSITION JUNCTION BOX EACH	625 MEDIAN JUNCTION BOX EACH	625 PULL BOX, 725.08, 18" EACH	625 GROUND ROD EACH	625 STRUCTURE GROUNDING SYSTEM EACH	625 UNDERGROUND WARNING/MARKING TAPE FT	625 SERVICE TO UNDERPASS LIGHTING, AS PER PLAN EACH	625 LUMINAIRE REMOVED EACH
1	1257	CL	I.R. 75	407+30.0	407+87.0									210																	
2	1257	CL	I.R. 75	407+87.0	409+73.9									543																	
1	1258	CL	I.R. 75	409+73.9			3																		1						
2	1258	RT	I.R. 75	409+73.9	409+73.9									336					102												
3	1258	RT	I.R. 75	409+73.9			3																		1						
4	1258	CL	I.R. 75	409+73.9	410+05.8									126																	
5	1258	CL	I.R. 75	410+05.8			3																		1						
6	1258	RT	RAMP M	409+95.8	410+05.8									324					98												
7	1258	RT	RAMP M	409+95.8			3																								
8	1258	RT	RAMP M	409+95.8	410+03.2									171					47												
9	1258	LT	RAMP M	410+03.2																											
10	1258	LT	RAMP M	409+14.0	410+03.2									300			90														
11	1258	RT	RAMP M	410+06.7	411+47.0											155															
12	1258	LT	I.R. 75	409+95.8					1			1								4								2			
13	1258	LT	I.R. 75	411+47.0	415+10.0											372								362						362	
14	1258	LT	I.R. 75	415+10.0					1				1							4								2			
15	1258	LT	RAMP M	415+09.2	418+44.7											328								318						318	
16	1258	LT	I.R. 75	418+44.7					1				1							4								2			
17	1258	CL	I.R. 75	410+05.8	413+18.0									969																	
18	1258	CL	I.R. 75	413+18.0																					1						
19	1258	CL	I.R. 75	413+18.0	413+67.0									489					153												
20	1258	RT	I.R. 75	416+08.0																6											4
21	1258	CL	I.R. 75	417+49.0																			1								
22	1258	CL	I.R. 75	417+49.0	419+65.0												216														
23	1258	CL	I.R. 75	419+65.0																			1								
24	1258	RT	RAMP J	419+80.0																		1									
25	1258	RT	RAMP J	419+52.0																		1									
26	1258	RT	RAMP J	419+21.0																		1									
27	1258	RT	RAMP J	418+99.0																		1									
28	1258	RT	RAMP J	418+51.0																		1									
29	1258	RT	RAMP J	418+17.0																		1									
30	1258	RT	RAMP J	417+87.0																		1									
31	1258	RT	I.R. 75	418+38.5			3																			1				1	
32	1258	RT	I.R. 75	418+10.0	418+38.5									435			135							135						135	
33	1258	RT	I.R. 75	418+10.0						1			1							6								2			
34	1258	RT	I.R. 75	418+10.0	418+43.1											172								162						162	
35	1258	RT	I.R. 75	418+43.1			3																			1					
36	1258	RT	I.R. 75	418+43.1	13+04.8 (SR 562)											346								336						336	
37	1258	RT	I.R. 75	418+43.1	418+88.2									183					51												
38	1258	RT	I.R. 75	418+88.3																						1					
39	1258	RT	I.R. 75	418+88.3	420+02.0											211								201						201	
40	1258	RT	I.R. 75	420+02.0					1			1								4								2			
41	1258	RT	I.R. 75	420+02.0	422+02.0											248								238						238	
42	1258	RT	I.R. 75	422+02.0					1			1								4								2			
43	1258	RT	I.R. 75	422+02.0	423+38.2											152								142						142	
44	1258	RT	I.R. 75	417+00.0	420+00.0																								3		
45	1258	LT	I.R. 75	415+63.0	464+06.0																							18			
46	1258	LT	RAMP M	415+09.2	415+10.0									204					58												
47	1258	LT	RAMP M	415+09.2																						1					
48	1258	CL	I.R. 75	409+58.1		2		1			1				150						1				1		1				
49	1258	CL	I.R. 75	409+58.1	409+73.9									78																	
TOTALS CARRIED TO SUBSUMMARY						2	18	1	5	1	1	3	3	4368	150	1984	225	216	509	32	1	7	2129	2	4	7	31	3	2129	1	4

CALCULATED JMA
CHECKED JDS

ESTIMATED QUANTITIES

LIGHTING

HAM-75-7.85

1237
2017

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REFERENCE NO.	SHEET NO.	SIDE	ROADWAY	STATION TO STATION		625 CONNECTION, FUSED PULL APART EACH	625 CONNECTION, UNFUSED PERMANENT EACH	625 LIGHT POLE, LOW MAST, ALM50 EACH	625 LIGHT TOWER, BBBBBB100 EACH	625 MEDIAN LIGHT POLE FOUNDATION, 10' DEEP EACH	625 LIGHT TOWER FOUNDATION, 36" X 20' DEEP EACH	625 LIGHT TOWER FOUNDATION, MISC.: MEDIAN, 36" X 20' DEEP EACH	625 NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE FT	625 NO. 10 POLE AND BRACKET CABLE FT	625 CONDUIT, 3", 725.04 FT	625 CONDUIT, 4", 725.051, AS PER PLAN FT	625 CONDUIT, JACKED OR DRILLED, 725.04, 3" FT	625 LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN, 480V EACH	625 LUMINAIRE, LOW MAST, SOLID STATE (LED) AS PER PLAN, 480V EACH	625 LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN, 240V EACH	625 TRENCH FT	625 TRANSITION JUNCTION BOX EACH	625 MEDIAN JUNCTION BOX EACH	625 PULL BOX, 725.08, 18" EACH	625 PULL BOX, 725.08, 24" EACH	625 GROUND ROD EACH	625 STRUCTURE GROUNDING SYSTEM EACH	625 POWER SERVICE, AS PER PLAN EACH	625 UNDERGROUND WARNING/MARKING TAPE FT	625 SERVICE TO UNDERPASS LIGHTING, AS PER PLAN EACH
1	1259	RT	I.R. 75	423+38.2																				1								
2	1259	RT	I.R. 75	423+38.2	423+38.8								306				92																
3	1259	CL	I.R. 75	423+38.8			3																1									
4	1259	LT	I.R. 75	423+38.5	423+38.8								291				87																
5	1259	LT	I.R. 75	423+38.5					1		1							6								2							
6	1259	CL	I.R. 75	423+38.8	425+84.0								768																				
7	1259	CL	I.R. 75	425+84.0					1			1						6						1		2							
8	1259	CL	I.R. 75	425+84.0	428+36.7								786																				
9	1259	CL	I.R. 75	428+36.7					1			1						6						1		2							
10	1259	CL	I.R. 75	428+36.7	430+82.8								768																				
11	1259	CL	I.R. 75	430+82.8					1			1						6						1		2							
12	1259	CL	I.R. 75	430+82.8	433+02.6								690																				
13	1259	CL	I.R. 75	433+02.6																			1									
14	1259	cl	I.R. 75	433+02.6	433+04.9								744				228																
15	1259	RT	I.R. 75	433+04.9																					1							
16	1259	RT	I.R. 75	433+04.9	434+11.4								792		244						122										122	
17	1259	RT	I.R. 75	434+11.4																										1		
18	1259	LT	I.R. 75	434+77.0																										1		
19	1259	LT	I.R. 75	434+76.4			3																		1							1
20	1259	LT	I.R. 75	434+82.0																1												
21	1259	LT	I.R. 75	434+83.8																1												
22	1259	RT	I.R. 75	434+85.7																1												
23	1259	RT	I.R. 75	434+84.9																1												
24	1259	CL	I.R. 75	433+02.6	433+34.0								120																				
25	1259	CL	I.R. 75	433+34.0		2		1		1								150					1			1							
26	1259	CL	I.R. 75	433+34.0	434+06.8								255																				
27	1259	CL	I.R. 75	434+06.8																							1						
28	1259	CL	I.R. 75	434+06.8	434+95.3								297			89																	
29	1259	CL	I.R. 75	434+95.3																							1						
30	1259	CL	I.R. 75	434+95.3	435+41.8								171																				
31	1259	CL	I.R. 75	435+41.8		2		1		1				150									1			1					1		
32	1259	CL	I.R. 75	435+41.8	436+76.9								435																				
33	1259	LT	I.R. 75	434+11.1																											1		
34	1259	RT	I.R. 75	434+24.1																											1		
35	1259	CL	I.R. 75	434+00.0	435+00.0																											1	
1	1260	CL	I.R. 75	436+76.9		2		1		1				150									1			1					1		
2	1260	CL	I.R. 75	436+76.9	438+17.9								453																				
3	1260	CL	I.R. 75	438+17.9		2		1		1				150									1			1					1		
4	1260	CL	I.R. 75	438+17.9	439+81.1								522																				
5	1260	CL	I.R. 75	439+81.1		2		1		1				150									1			1					1		
6	1260	CL	I.R. 75	439+81.1	441+51.1								540																				
7	1260	CL	I.R. 75	441+51.1		2		1		1				150									1			1					1		
8	1260	CL	I.R. 75	441+51.1	443+46.3								615																				
9	1260	CL	I.R. 75	443+46.3		2		1		1				150									1			1					1		
10	1260	CL	I.R. 75	443+46.3	445+03.0								501																				
11	1260	CL	I.R. 75	445+03.0		2		1		1				150									1			1					1		
12	1260	CL	I.R. 75	445+03.0	446+59.8								501																				
13	1260	CL	I.R. 75	446+59.8		2		1		1				150									1			1					1		
14	1260	CL	I.R. 75	446+59.8	448+13.0								492																				
15	1260	CL	I.R. 75	448+13.0		2		1		1				150									1			1					1		
TOTALS CARRIED TO SUBSUMMARY						20	6	10	4	10	1	3	10047	1500	244	89	407	24	10	4	122	2	15	2	1	20	1	2	122	1

FOR INFORMATION ONLY

CALCULATED JMA
CHECKED JDS

LIGHTING ESTIMATED QUANTITIES

HAM-75-7.85

1238
2017

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REFERENCE NO.	SHEET NO.	SIDE	ROADWAY	STATION TO STATION		625 CONNECTION, FUSED PULL APART EACH	625 CONNECTION, UNFUSED PERMANENT EACH	625 LIGHT POLE, LOW MAST, ALM50 EACH	625 MEDIAN LIGHT POLE FOUNDATION, 10' DEEP EACH	625 MEDIAN LIGHT POLE FOUNDATION, 10' DEEP, AS PER PLAN EACH	625 NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE FT	625 NO. 10 POLE AND BRACKET CABLE FT	625 CONDUIT, 4", 725.051, AS PER PLAN FT	625 LUMINAIRE, LOW MAST, SOLID STATE (LED) AS PER PLAN, 480V EACH	625 LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN, 240V EACH	625 TRANSITTION JUNCTION BOX EACH	625 MEDIAN JUNCTION BOX EACH	625 PULL BOX, 725.08, 18" EACH	625 GROUND ROD EACH	625 STRUCTURE GROUNDING SYSTEM EACH	625 POWER SERVICE, AS PER PLAN EACH	625 SERVICE TO UNDERPASS LIGHTING, AS PER PLAN EACH
16	1260	CL	I.R. 75	448+13.0	449+65.6						489											
17	1260	CL	I.R. 75	449+65.6		2		1	1			150		1			1		1			
18	1260	CL	I.R. 75	440+50.0																1		
1	1261	CL	I.R. 75	449+65.6	451+26.0						513											
2	1261	CL	I.R. 75	451+26.0		2		1	1			150		1			1		1			
3	1261	CL	I.R. 75	451+26.0	451+72.0						168											
4	1261	CL	I.R. 75	451+72.0												1						
5	1261	CL	I.R. 75	451+72.0	452+53.2						273		81									
6	1261	CL	I.R. 75	452+53.2												1						
7	1261	CL	I.R. 75	452+53.2	452+99.0						168											
8	1261	CL	I.R. 75	452+99.0		2		1	1			150		1			1		1			
9	1261	LT	TOWNE	17+96.5																	1	
10	1261	LT	TOWNE	18+04.1			3											1				1
11	1261	LT	TOWNE	18+78.6											1							
12	1261	LT	TOWNE	19+27.6											1							
13	1261	LT	TOWNE	19+76.6											1							
14	1261	CL	I.R. 75	454+37.8		2		1	1			150		1			1		1			
15	1261	CL	I.R. 75	454+37.8	455+81.1						462											
16	1261	CL	I.R. 75	455+81.1		2		1	1			150		1			1		1			
17	1261	CL	I.R. 75	455+81.1	457+25.9						465											
18	1261	CL	I.R. 75	457+25.9		2		1	1			150		1			1		1			
19	1261	CL	I.R. 75	457+25.9	458+69.3						462											
20	1261	CL	I.R. 75	458+69.3		2		1	1			150		1			1		1			
21	1261	CL	I.R. 75	458+69.3	460+16.7						474											
22	1261	CL	I.R. 75	460+16.7		2		1	1			150		1			1		1			
23	1261	CL	I.R. 75	460+16.7	461+75.3						507											
24	1261	CL	I.R. 75	461+75.3		2		1		1		150		1			1		1			
25	1261	CL	I.R. 75	461+75.3	463+44.5						537											
26	1261	CL	I.R. 75	463+44.5		2		1	1			150		1			1		1			
27	1261	CL	I.R. 75	451+60.0	452+60.0															1		
1	1262	CL	I.R. 75	463+44.5	465+09.1						525											
2	1262	CL	I.R. 75	465+09.1		2		1	1			150		1			1		1			
3	1262	CL	I.R. 75	465+09.1	466+68.5						510											
4	1262	CL	I.R. 75	466+68.5		2		1	1			150		1			1		1			
5	1262	CL	I.R. 75	466+68.5	468+11.1						459											
6	1262	CL	I.R. 75	468+11.1		2		1	1			150		1			1		1			
7	1262	CL	I.R. 75	468+11.1	469+65.9						495											
8	1262	CL	I.R. 75	469+65.9		2		1	1			150		1			1		1			
9	1262	CL	I.R. 75	469+65.9	471+20.4						495											
10	1262	CL	I.R. 75	471+20.4		2		1	1			150		1			1		1			
11	1262	CL	I.R. 75	471+20.4	471+69.3						177											
12	1262	CL	I.R. 75	471+69.3													1					
13	1262	CL	I.R. 75	471+69.3	472+75.7						351											
14	1262	CL	I.R. 75	472+75.7		2		1	1			150		1			1		1			
15	1262	CL	I.R. 75	472+75.7	474+30.3						495											
16	1262	CL	I.R. 75	474+30.3		2		1	1			150		1			1		1			
17	1262	CL	I.R. 75	474+30.3	475+68.7						447											
18	1262	CL	I.R. 75	475+68.7		2		1	1			150		1			1		1			
19	1262	CL	I.R. 75	475+68.7	477+19.8						483											
20	1262	CL	I.R. 75	477+19.8		2		1	1			150		1			1		1			
TOTALS CARRIED TO SUBSUMMARY						38	3	19	18	1	8955	2850	81	19	3	2	20	1	19	2	1	1

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CALCULATED JMA
CHECKED JDS

LIGHTING ESTIMATED QUANTITIES

HAM-75-7.85

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2017

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REFERENCE NO.	SHEET NO.	SIDE	ROADWAY	STATION TO STATION		625 CONNECTION, FUSED PULL APART EACH	625 CONNECTION, UNFUSED PERMANENT EACH	625 LIGHT POLE, LOW MAST, ALM50 EACH	625 LIGHT TOWER, BBBB100 EACH	625 LIGHT TOWER, BBBBBB100 EACH	625 MEDIAN LIGHT POLE FOUNDATION, 10' DEEP EACH	625 LIGHT TOWER FOUNDATION, 36" X 20' DEEP EACH	625 LIGHT TOWER FOUNDATION, 36" X 25' DEEP EACH	625 LIGHT TOWER FOUNDATION, MISC.: MEDIAN, 36" X 20' DEEP EACH	625 NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE FT	625 NO. 10 POLE AND BRACKET CABLE FT	625 1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES FT	625 CONDUIT, 3", 725.04 FT	625 CONDUIT, JACKED OR DRILLED, 725.04, 3" FT	625 LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN, 480V EACH	625 LUMINAIRE, LOW MAST, SOLID STATE (LED) AS PER PLAN, 480V EACH	625 TRENCH FT	625 MEDIAN JUNCTION BOX EACH	625 PULL BOX, 725.08, 18" EACH	625 PULL BOX, 725.08, 24" EACH	625 GROUND ROD EACH	625 POWER SERVICE, AS PER PLAN EACH	625 UNDERGROUND WARNING/MARKING TAPE FT	625 SERVICE TO UNDERPASS LIGHTING, AS PER PLAN EACH
21	1262	RT	I.R. 75	471+45.6																						1		
22	1262	RT	I.R. 75	471+45.6	471+71.1										282			54				27						27	
23	1262	RT	I.R. 75	471+71.1																					1				
24	1262	CL	I.R. 75	471+69.3	471+71.1										672				204										
25	1262	LT	I.R. 75	472+45.4																									
26	1262	RT	I.R. 75	471+28.5																							2		
27	1262	LT	I.R. 75	476+15.0	490+74.0																						2		
																											6		
1	1263	CL	I.R. 75	477+19.8	478+70.4										483														
2	1263	CL	I.R. 75	478+70.4		2		1			1					150					1		1				1		
3	1263	CL	I.R. 75	478+70.4	480+21.0										483														
4	1263	CL	I.R. 75	480+21.0		2		1			1					150					1		1				1		
5	1263	CL	I.R. 75	480+21.0	482+72.1										783														
6	1263	CL	I.R. 75	482+72.1						1				1							6		1				2		
7	1263	CL	I.R. 75	482+72.1	485+73.5										936														
8	1263	CL	I.R. 75	485+73.5						1				1							6		1				2		
9	1263	CL	I.R. 75	485+73.5	488+75.7										936														
10	1263	CL	I.R. 75	488+75.7						1				1							6		1				2		
1	1264	CL	I.R. 75	492+50.0																			1						
2	1264	CL	I.R. 75	492+50.0	492+74.6										105														
3	1264	CL	I.R. 75	492+74.6						1				1							6		1				2		
4	1264	CL	I.R. 75	492+74.6	496+90.4										1278														
5	1264	CL	I.R. 75	496+90.4			3																1						
6	1264	LT	I.R. 75	496+90.4	500+00.0										960														
7	1264	CL	I.R. 75	500+00.0																			1						
8	1264	CL	I.R. 75	503+07.1																			1						
9	1264	CL	I.R. 75	492+50.0	492+50.0										411				127										
10	1264	LT	I.R. 75	492+50.0			3																	1					1
11	1264	CL	I.R. 75	496+90.4	496+95.8										339				103										
12	1264	LT	I.R. 75	496+95.8					1					1							4						2		
13	1264	RT	I.R. 75	499+97.2	500+00.0										387				119										
14	1264	RT	I.R. 75	500+49.2																					1				
15	1264	RT	I.R. 75	500+49.2	500+51.3										126			11				11						11	
16	1264	RT	I.R. 75	500+51.3																						1			
17	1264	RT	I.R. 75	499+97.2																									
18	1264	RT	I.R. 75	499+97.2	500+49.2										396				122										
19	1264	RT	I.R. 75	500+12.6	500+49.2										381				117										
20	1264	RT	I.R. 75	500+12.6						1		1									6						2		
21	1264	RT	I.R. 75	500+12.6	503+20.7												320					310						310	
22	1264	RT	I.R. 75	503+20.7					1			1									4						2		
23	1264	RT	I.R. 75	503+07.1	503+20.7										306				92										
24	1264	LT	I.R. 75	502+90.4	503+07.1										312				94										
25	1264	LT	I.R. 75	502+90.4					1				1									4					2		
26	1264	LT	I.R. 75	500+20.7			3																	1					
27	1264	LT	I.R. 75	500+20.7	502+90.4												285					275						275	
28	1264	RT	I.R. 75	503+02.7																						1			
29	1264	RT	I.R. 75	502+84.3	503+02.7										288				86										
30	1264	RT	I.R. 75	502+84.3																				1					
31	1264	RT	I.R. 75	502+84.3	504+05.0												133					123						123	
TOTALS CARRIED TO SUBSUMMARY						4	9	2	3	5	2	2	1	5	9864	300	738	65	1064	38	6	746	10	4	2	28	3	746	1

CALCULATED JMA CHECKED JDS

LIGHTING ESTIMATED QUANTITIES

HAM-75-7.85

1240
2017

FOR INFORMATION ONLY

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REFERENCE NO.	SHEET NO.	SIDE	ROADWAY	STATION TO STATION		625 CONNECTION, FUSED PULL APART EACH	625 LIGHT POLE, LOW MAST, ALM50 EACH	625 LIGHT TOWER, BBBBBB100 EACH	625 MEDIAN LIGHT POLE FOUNDATION, 10' DEEP EACH	625 MEDIAN LIGHT POLE FOUNDATION, 10' DEEP, AS PER PLAN EACH	625 LIGHT TOWER FOUNDATION, 36" X 25' DEEP EACH	625 LIGHT TOWER FOUNDATION, MISC.: MEDIAN, 36" X 20' DEEP EACH	625 NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE FT	625 NO. 10 POLE AND BRACKET CABLE FT	625 CONDUIT, JACKED OR DRILLED, 725.04, 3" FT	625 LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN, 480V EACH	625 LUMINAIRE, LOW MAST, SOLID STATE (LED) AS PER PLAN, 480V EACH	625 MEDIAN JUNCTION BOX EACH	625 PULL BOX, 725.08, 18" EACH	625 GROUND ROD EACH	625 STRUCTURE GROUNDING SYSTEM EACH		
1	1265	RT	I.R. 75	504+05.0															1				
2	1265	RT	I.R. 75	504+05.0	504+05.0								315		95								
3	1265	CL	I.R. 75	504+05.0														1					
4	1265	CL	I.R. 75	504+05.0	506+34.9								720										
5	1265	CL	I.R. 75	506+34.9				1				1				6		1		2			
6	1265	CL	I.R. 75	506+34.9	509+25.1								903										
7	1265	CL	I.R. 75	509+25.1				1				1				6		1		2			
8	1265	CL	I.R. 75	509+25.1	512+34.0								957										
9	1265	CL	I.R. 75	512+34.0		2	1		1					150			1	1		1			
10	1265	CL	I.R. 75	512+34.0	513+65.7								426										
11	1265	CL	I.R. 75	513+65.7		2	1		1					150			1	1		1			
12	1265	CL	I.R. 75	513+65.7	515+26.7								513										
13	1265	CL	I.R. 75	515+26.7		2	1		1					150			1	1		1			
14	1265	CL	I.R. 75	515+26.7	516+61.3								435										
15	1265	CL	I.R. 75	516+61.3		2	1		1					150			1	1		1			
16	1265	CL	I.R. 75	516+61.3	517+93.7								427										
17	1265	CL	I.R. 75	517+93.7		2	1		1					150			1	1		1			
1	1266	CL	I.R. 75	517+93.7	519+28.2								435										
2	1266	CL	I.R. 75	519+28.2		2	1		1					150			1	1		1			
3	1266	CL	I.R. 75	519+28.2	520+60.7								429										
4	1266	CL	I.R. 75	520+60.7		2	1		1					150			1	1		1			
5	1266	CL	I.R. 75	520+60.7	521+95.6								435										
6	1266	CL	I.R. 75	521+95.6		2	1		1					150			1	1		1			
7	1266	CL	I.R. 75	521+95.6	523+21.1								408										
8	1266	CL	I.R. 75	523+21.1		2	1		1					150			1	1		1			
9	1266	CL	I.R. 75	523+31.1	524+46.4								408										
10	1266	CL	I.R. 75	524+46.4		2	1		1					150			1	1		1			
11	1266	CL	I.R. 75	524+46.4	525+89.4								459										
12	1266	CL	I.R. 75	525+89.4		2	1		1					150			1	1		1			
13	1266	CL	I.R. 75	525+89.4	527+32.5								459										
14	1266	CL	I.R. 75	527+32.5		2	1		1					150			1	1		1			
15	1266	CL	I.R. 75	527+32.5	528+64.9								429										
16	1266	CL	I.R. 75	528+64.9		2	1		1					150			1	1		1			
17	1266	CL	I.R. 75	528+64.9	529+94.5								420										
18	1266	CL	I.R. 75	529+94.5		2	1		1					150			1	1		1			
19	1266	CL	I.R. 75	529+94.5	531+31.0								441										
20	1266	CL	I.R. 75	531+31.0		2	1		1					150			1	1		1			
21	1266	LT	I.R. 75	523+12.8																2			
22	1266	RT	I.R. 75	522+65.9																2			
23	1266	RT	I.R. 75	528+96.7																2			
24	1266	LT	I.R. 75	531+22.2																2			
25	1266	CL	I.R. 75	522+00.0	523+00.0																1		
1	1267	LT	S.R. 562	13+04.8				1			1					6				2			
2	1267	CL	S.R. 562	15+57.6		2	1			1				150			1	1		1			
3	1267	CL	S.R. 562	15+57.6	17+77.3								690										
4	1267	CL	S.R. 562	17+77.3		2	1		1					150			1	1		1			
5	1267	CL	S.R. 562	17+77.3	18+97.3								390										
6	1267	CL	S.R. 562	18+97.3		2	1		1					150			1	1		1			
7	1267	CL	S.R. 562	18+97.3	20+21.7								405										
8	1267	CL	S.R. 562	20+21.7		2	1		1					150			1	1		1			
TOTALS CARRIED TO SUBSUMMARY						38	19	3	18	1	1	2	10504	2850	95	18	19	22	1	33	1		

FOR INFORMATION ONLY

CALCULATED JMA
CHECKED JDS

ESTIMATED QUANTITIES
LIGHTING

HAM-75-7.85

1241
2017

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REFERENCE NO.	SHEET NO.	SIDE	ROADWAY	STATION TO STATION		625 CONNECTION, FUSED PULL APART EACH	625 CONNECTION, FUSED PULL APART, AS PER PLAN EACH	625 CONNECTION, UNFUSED PERMANENT EACH	625 LIGHT POLE, LOW MAST, ALM50 EACH	625 LIGHT POLE (INSTALLATION ONLY), AS PER PLAN EACH	625 LIGHT POLE FOUNDATION, 24" X 6' DEEP, AS PER PLAN EACH	625 MEDIAN LIGHT POLE FOUNDATION, 10' DEEP EACH	625 NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE FT	625 NO. 2 AWG 2400 VOLT DISTRIBUTION CABLE FT	625 NO. 10 POLE AND BRACKET CABLE FT	625 CONDUIT, 3", 725.04 FT	625 CONDUIT, JACKED OR DRILLED, 725.04, 3" FT	625 LUMINAIRE, LOW MAST, SOLID STATE (LED) AS PER PLAN, 240V EACH	625 LUMINAIRE, INSTALLATION ONLY, AS PER PLAN EACH	625 TRENCH FT	625 MEDIAN JUNCTION BOX EACH	625 PULL BOX, 725.08, 18" EACH	625 GROUND ROD EACH	625 POWER SERVICE, AS PER PLAN EACH	625 UNDERGROUND WARNING/MARKING TAPE FT
9	1267	CL	S.R. 562	20+21.7	21+65.1								462												
10	1267	CL	S.R. 562	21+65.1		2			1			1			150			1			1		1		
11	1267	CL	S.R. 562	21+65.1	22+09.9								165												
1	1268	CL	S.R. 562	23+08.5		2			1			1			150			1			1		1		
2	1268	CL	S.R. 562	23+08.5	24+48.9								453												
3	1268	CL	S.R. 562	24+48.9		2			1			1			150			1			1		1		
4	1268	CL	S.R. 562	24+48.9	25+88.9								450												
5	1268	CL	S.R. 562	25+88.9		2			1			1			150			1			1		1		
6	1268	CL	S.R. 562	25+88.9	27+41.0								486												
7	1268	CL	S.R. 562	27+41.0		2			1			1			150			1			1		1		
8	1268	CL	S.R. 562	27+41.0	28+81.0								450												
9	1268	CL	S.R. 562	28+81.0		2			1			1			150			1			1		1		
10	1268	CL	S.R. 562	28+81.0	30+32.3								486												
11	1268	CL	S.R. 562	30+32.3		2			1			1			150			1			1		1		
12	1268	CL	S.R. 562	30+32.3	31+75.1								459												
13	1268	CL	S.R. 562	31+75.1		2			1			1			150			1			1		1		
14	1268	CL	S.R. 562	31+96.2																	1				
15	1268	RT	S.R. 562	31+80.1	31+96.2												92								
16	1268	RT	S.R. 562	31+80.1																			1		
17	1268	RT	S.R. 562	31+80.1	32+86.0											107				107					107
18	1268	RT	S.R. 562	32+86.0			2			1	1								1				1		
19	1268	RT	S.R. 562	32+86.0	33+77.6									312		94				94					94
20	1268	RT	S.R. 562	33+77.6				3															1		
21	1268	RT	S.R. 562	33+77.6	34+58.9									291		87				87					87
22	1268	RT	S.R. 562	34+58.9			2																		
23	1268	RT	S.R. 562	33+77.6	33+85.7								276				82								
24	1268	RT	S.R. 562	33+85.7			2																		
25	1268	LT	S.R. 562	31+79.4	31+96.2												73								
26	1268	LT	S.R. 562	31+79.4																			1		
27	1268	LT	S.R. 562	31+79.4	32+44.7											66				66					66
28	1268	LT	S.R. 562	32+44.7			2			1	1								1				1		
29	1268	LT	S.R. 562	32+44.7	34+46.6									645		205				205					205
30	1268	LT	S.R. 562	34+46.6			2			1	1								1				1		
31	1268	LT	S.R. 562	34+46.6	35+12.4									234		68				68					68
32	1268	LT	S.R. 562	35+12.4				3															1		
33	1268	LT	S.R. 562	35+12.4	36+28.3									390		120				120					120
34	1268	LT	S.R. 562	36+28.3			2																		
35	1268	LT	S.R. 562	35+12.4	35+22.7								255				75								
36	1268	LT	S.R. 562	35+22.7			2																		
37	1268	LT	S.R. 562	22+09.9																				1	
38	1268	LT	S.R. 562	22+09.9	22+09.9								522				154								
39	1268	CL	S.R. 562	22+09.9																		1			
40	1268	CL	S.R. 562	22+09.9	23+08.5								327												
TOTALS CARRIED TO SUBSUMMARY						16	14	6	8	3	3	8	4791	1872	1200	747	476	8	3	747	10	4	11	1	747

FOR INFORMATION ONLY

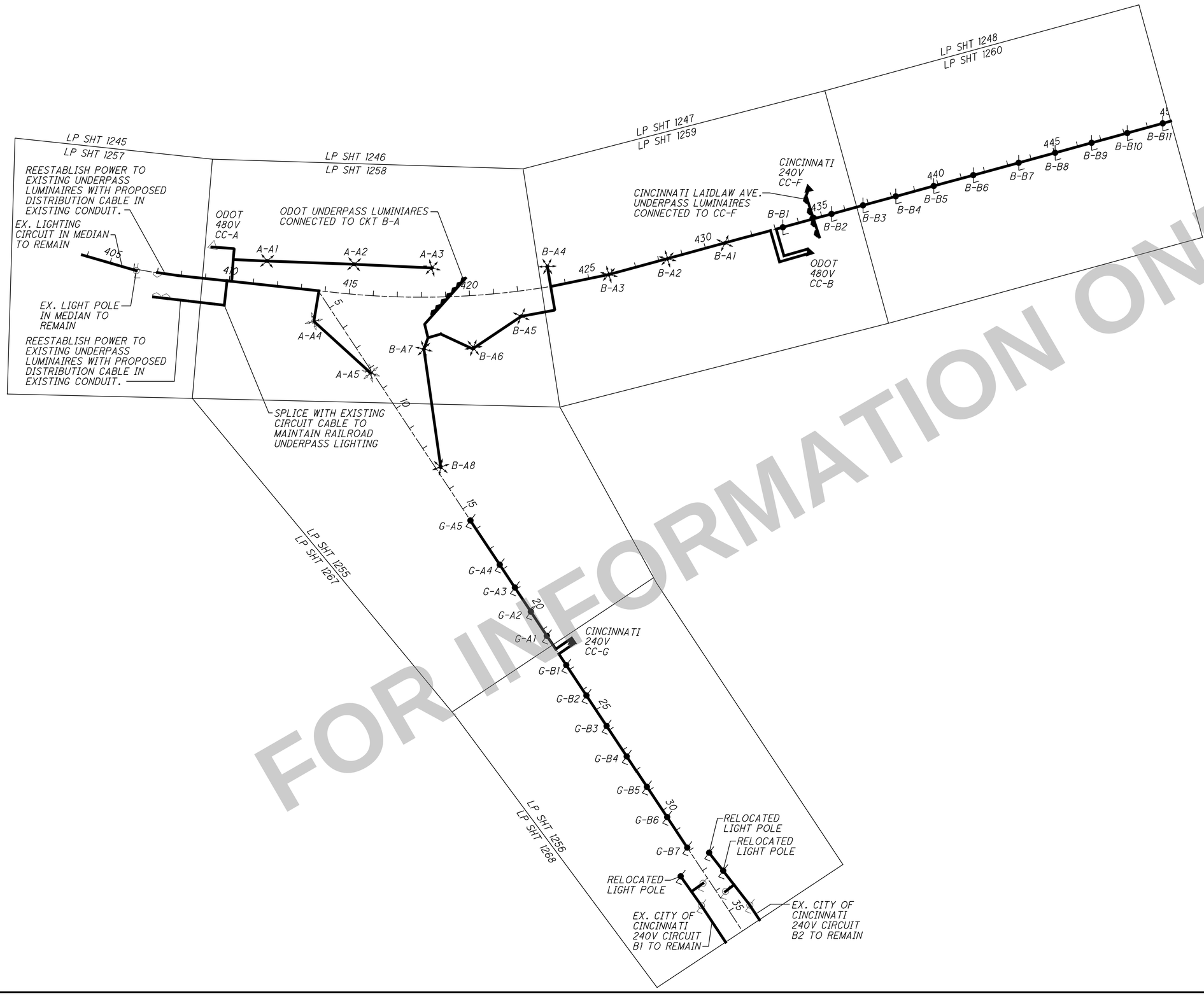
CALCULATED JMA
CHECKED JDS

LIGHTING ESTIMATED QUANTITIES

HAM-75-7.85

1242
2017

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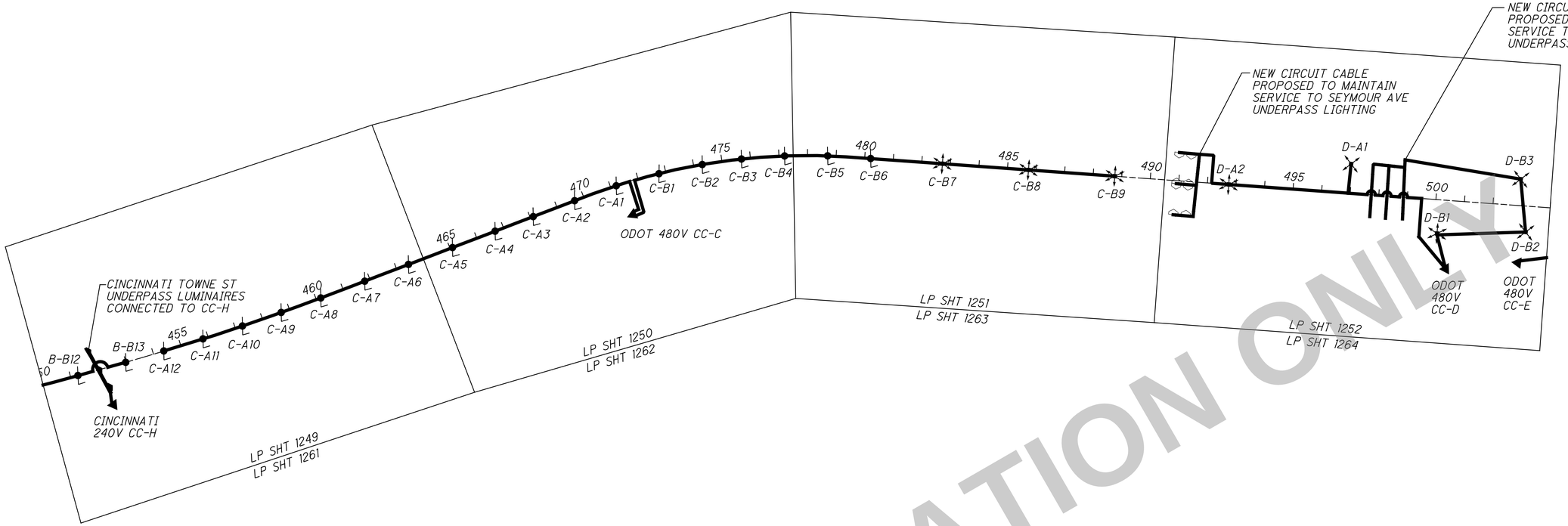
HORIZONTAL SCALE IN FEET
0 100 200 400

CALCULATED DRM
CHECKED JDS

LIGHTING SCHEMATIC PLAN
STA. 396+00.00 TO STA. 450+00.00

HAM-75-7.85

1243
2017



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HORIZONTAL SCALE IN FEET
0 100 200 400

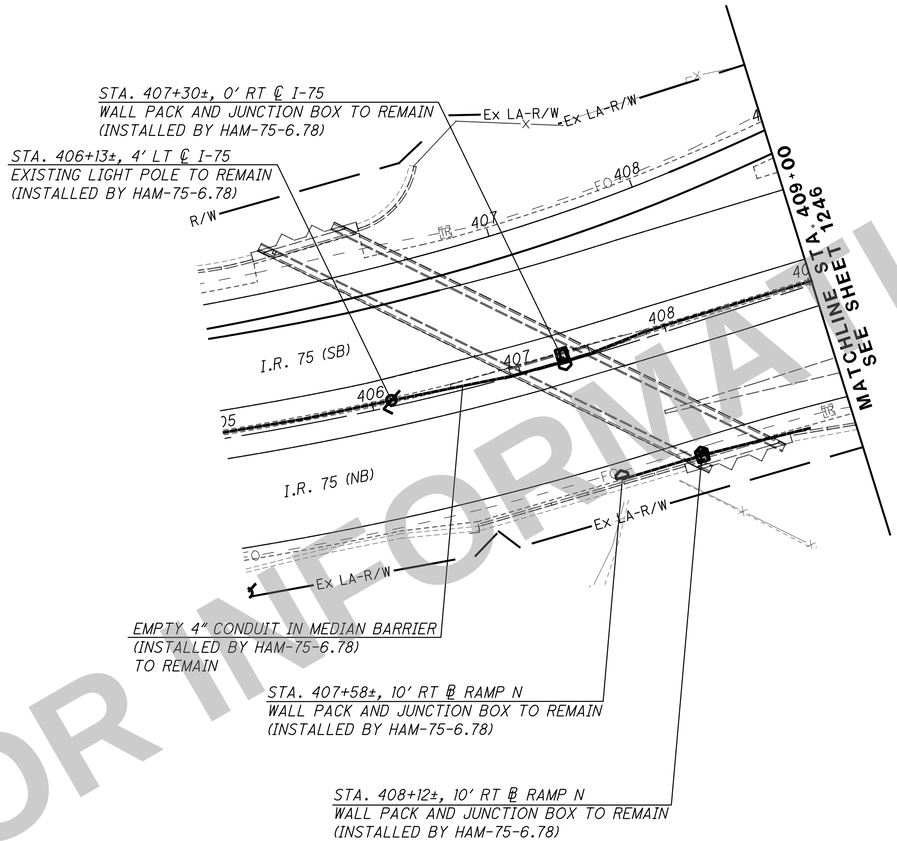
CALCULATED DRM
CHECKED JDS

LIGHTING SCHEMATIC PLAN
STA. 450+00.00 TO STA. 522+50.00

HAM-75-7.85

1244
2017

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NOTES:

1. ALL LIGHTING EQUIPMENT INSTALLED BY HAM-75-6.78 SOUTH OF STA. 406+50 SHALL REMAIN.

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HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DRM
CHECKED JDS

LIGHTING DEMOLITION PLAN- I.R. 75
STA. 405+00 TO STA. 409+00

HAM-75-7.85

1245
2017

STA. 409+14±, 29' LT ℄ RAMP M
(1) CONTROL CENTER "A" TO REMAIN
(INSTALLED BY HAM-75-6.78)
DISCONNECT EXISTING CIRCUIT

STA. 409+66±, 23' LT ℄ RAMP M
(2) REMOVE PULL BOX
(INSTALLED BY HAM-75-6.78)

STA. 409+64±, 29' RT ℄ RAMP M
(3) REMOVE PULL BOX
(INSTALLED BY HAM-75-6.78)

(4) STA. 411+20±, 80' LT ℄ I-75
REMOVE FOUR LUMINAIRES,
TOWER AND FOUNDATION
(INSTALLED BY HAM-75-6.78)

STA. 414+99±, 122' LT ℄ I-75
(8) REMOVE FOUR LUMINAIRES,
TOWER AND FOUNDATION
(INSTALLED BY HAM-75-6.78)

STA. 418+44±, 126' LT ℄ I-75
(13) REMOVE TWO LUMINAIRES, TOWER
AND FOUNDATION

STA. 418+78±, 79' LT ℄ I-75
(14) REMOVE PULL BOX

MATCHLINE STA. 409+00
SEE SHEET 1245

MATCHLINE STA. 423+00
SEE SHEET 1247

MATCHLINE STA. 11+00
SEE SHEET 1255

Ex LA-R/W
LA-R/W
RAMP M
RAMP N
RAMP J
RAMP K
I.R. 75 (SB)
I.R. 75 (NB)
FO
OH-E

STA. 409+87±, 23' RT ℄ RAMP N
JUNCTION BOX IN BARRIER TO REMAIN
(INSTALLED BY HAM-75-6.78)

(5) STA. 411+21±, 1.0' RT ℄ I-75
REMOVE JUNCTION BOX
(INSTALLED BY HAM-75-6.78)

(6) STA. 411+21±, 67' RT ℄ I-75
REMOVE PULL BOX
(INSTALLED BY HAM-75-6.78)

(7) STA. 411+38±, 14' RT ℄ RAMP N
REMOVE PULL BOX
(INSTALLED BY HAM-75-6.78)

STA. 413+96±, 143' RT ℄ I-75
HIGH MAST TOWER TO REMAIN
(INSTALLED BY HAM-75-6.78)

UNDERGROUND LIGHTING CIRCUIT
TO REMAIN

STA. 416+08±, 321' RT ℄ I-75
HIGH MAST TOWER TO REMAIN
(INSTALLED BY HAM-75-6.78)

(9) STA. 417+16±, 104' RT ℄ I-75
REMOVE PULL BOX

(10) STA. 418+07±, 136' RT ℄ I-75
REMOVE TWO LUMINAIRES, TOWER
AND FOUNDATION

STA. 418+33±, 9' RT ℄ RAMP J
(12) REMOVE THREE LUMINAIRES,
CONDUIT AND WIRING FROM
RAMP J UNDERPASS

STA. 418+03±, 82' RT ℄ I-75
(11) REMOVE PULL BOX

STA. 421+41±, 255' RT ℄ I-75
(15) REMOVE TWO LUMINAIRES,
TOWER AND FOUNDATION

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FOR INFORMATION

HORIZONTAL SCALE IN FEET
0 25 50 100

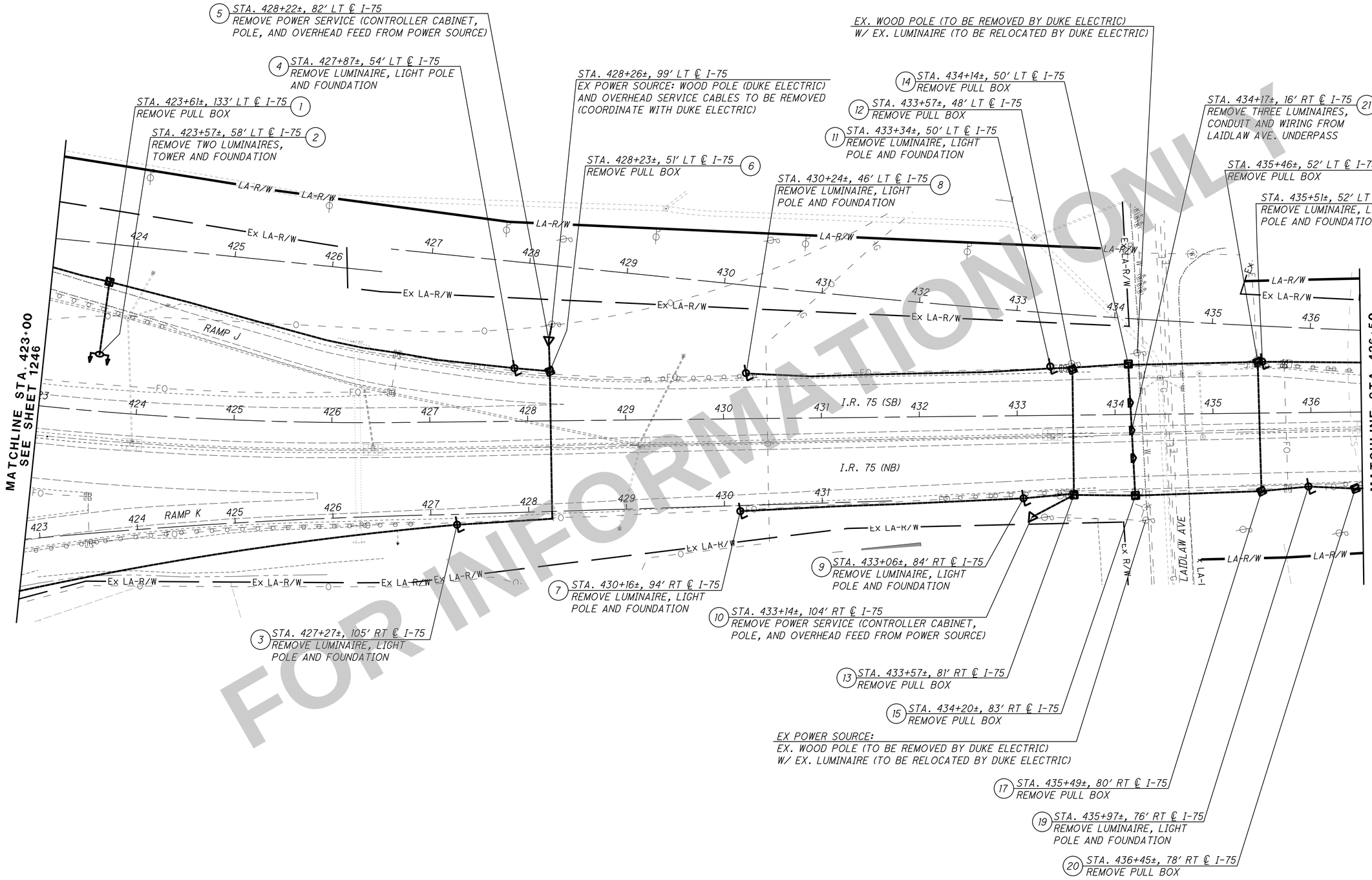
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CHECKED JDS

LIGHTING DEMOLITION PLAN - I.R. 75
STA. 409+00 TO STA. 423+00

HAM-75-7.85

1246
2017

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HORIZONTAL SCALE IN FEET
0 25 50 100

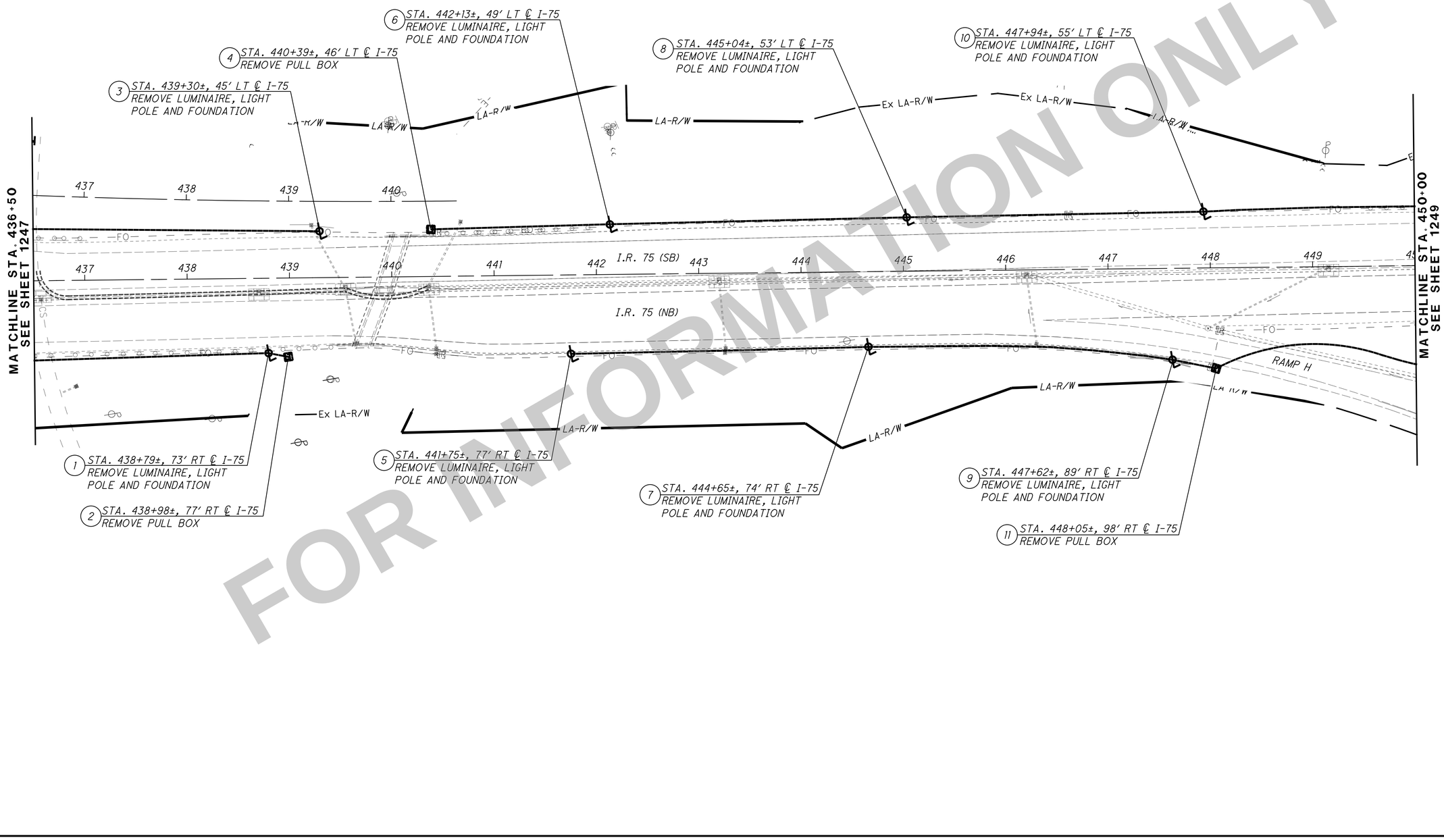
CALCULATED DRM CHECKED JDS

LIGHTING DEMOLITION PLAN - I.R. 75
STA. 423+00 TO STA. 436+50

HAM-75-7.85

1247
2017

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FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

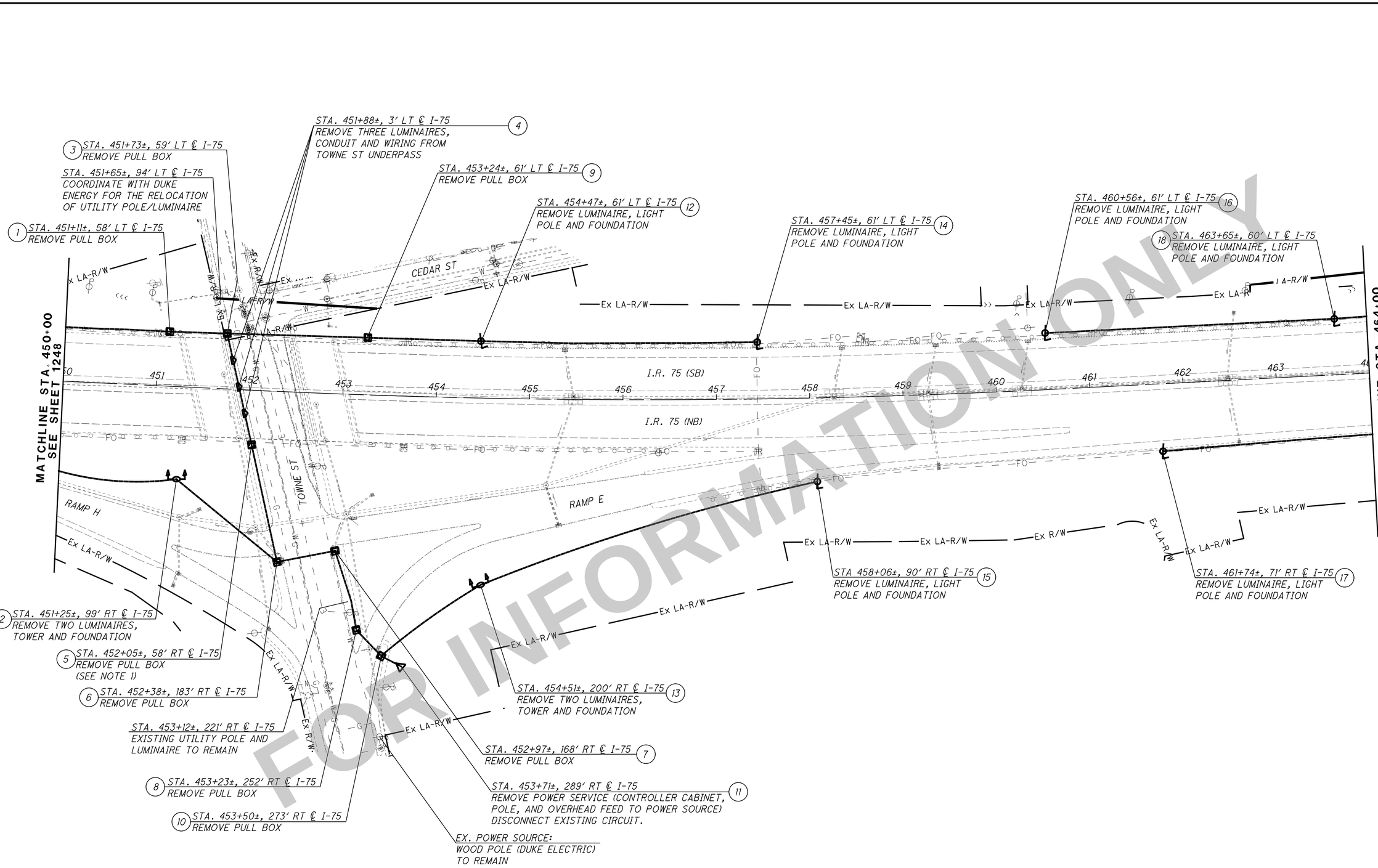
CALCULATED DRM
CHECKED JDS

LIGHTING DEMOLITION PLAN - I.R. 75
STA. 436+50 TO STA. 450+00

HAM-75-7.85

1248
2017

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FOR INFORMATION ONLY

NOTES:

1. THE CONTRACTOR SHALL REMOVE ALL UNDERPASS WALLPACKS, CONDUIT, WIRING, AND ANY OTHER MISCELLENEOUS UNDERPASS LIGHTING MATERIALS MOUNTED ON THE TOWNE ST. BRIDGE STRUCTURE.

HORIZONTAL SCALE IN FEET
0 25 50 100

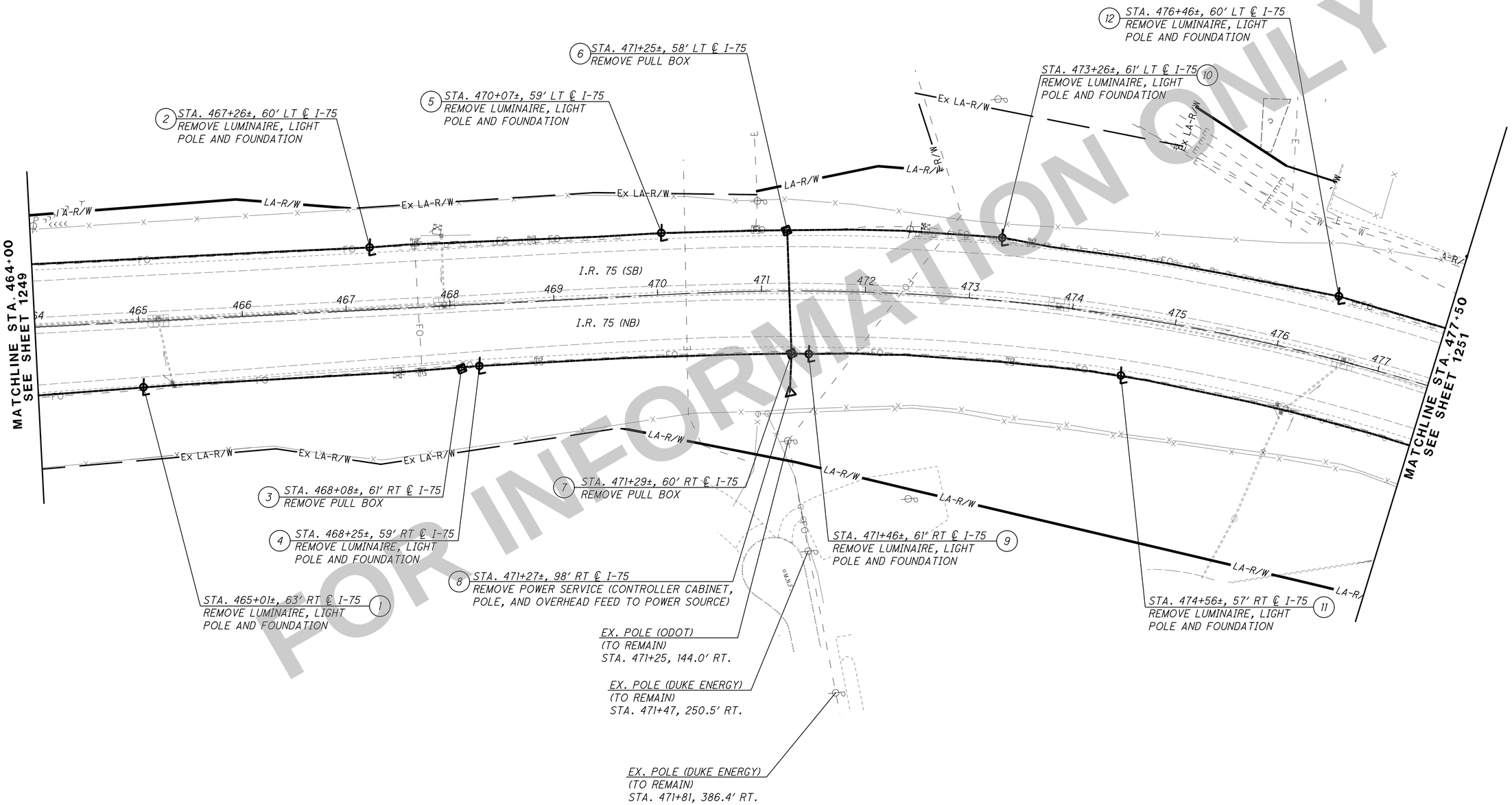
CALCULATED DRM
CHECKED JDS

LIGHTING DEMOLITION PLAN - I.R. 75
STA. 450+00 TO STA. 464+00

HAM-75-7.85

1249
2017

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HORIZONTAL SCALE IN FEET
0 25 50 100

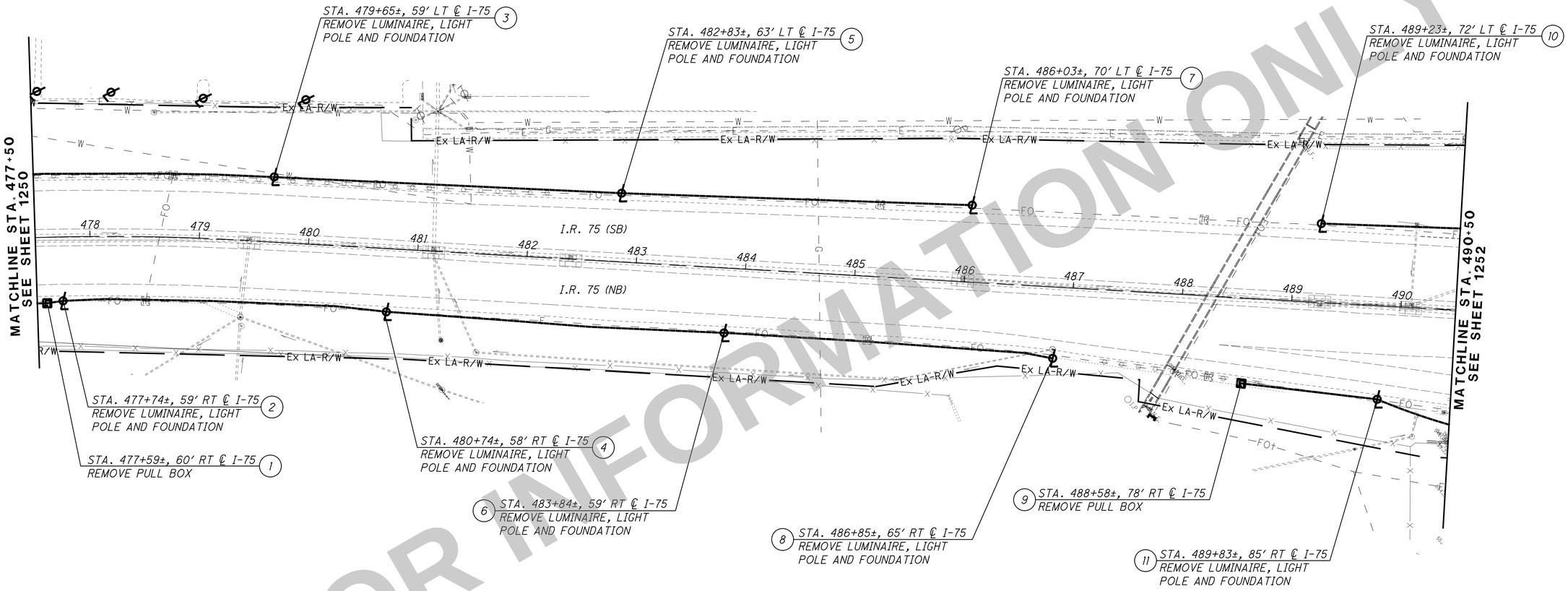
CALCULATED DRM
CHECKED JDS

LIGHTING DEMOLITION PLAN - I.R. 75
STA. 464+00 TO STA. 477+50

HAM-75-7.85

1250
2017

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FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DRM
CHECKED JDS

LIGHTING DEMOLITION PLAN - I.R. 75
STA. 477+50 TO STA. 490+50

HAM-75-7.85

1251
2017

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STA 491+55±, 115' LT ℄ I-75
REMOVE PULL BOX
(INSTALLED BY HAM-4/561-2.66/7.01)
1

LIGHTING CONDUIT (ABANDON IN PLACE)
REMOVE CIRCUIT CABLES
(INSTALLED BY HAM-4/561-2.66/7.01)
SEE SHEET 1230FOR PAYMENT.

STA. 492+39±, 79' LT ℄ I-75
REMOVE PULL BOX
(INSTALLED BY HAM-4/561-2.66/7.01)
2

STA. 492+44±, 78' LT ℄ I-75
REMOVE LUMINAIRE, LIGHT
POLE AND FOUNDATION
3

STA. 497+87±, 59' LT ℄ I-75
PULL BOX TO REMAIN
FLOOD LIGHT TO REMAIN

9 STA. 496+75±, 104' LT ℄ I-75
REMOVE TWO LUMINAIRES,
TOWER AND FOUNDATION

STA. 499+27±, 238' LT ℄ I-75
LIGHT POLE AND LUMINAIRE
TO REMAIN

STA. 499+01±, 180' LT ℄ I-75
PULL BOX TO REMAIN

STA. 498+63±, 280' LT ℄ I-75
CITY OF CINCINNATI CONTROLLER CABINET AND
POLE (TO REMAIN)

STA. 498+47±, 198' LT ℄ I-75
LIGHT POLE AND LUMINAIRE
TO REMAIN

STA. 498+93±, 139' LT ℄ I-75
LIGHT POLE AND LUMINAIRE
TO REMAIN

STA. 499+44±, 313' LT ℄ I-75
LIGHT POLE AND LUMINAIRE
TO REMAIN

UNDERGROUND LIGHTING CIRCUIT
TO REMAIN

15 STA. 503+76±, 175' LT ℄ I-75
REMOVE TWO LUMINAIRES,
TOWER AND FOUNDATION

14 STA. 503+54±, 102' LT ℄ I-75
REMOVE PULL BOX

UNDERGROUND LIGHTING CIRCUIT
TO REMAIN

STA. 500+60±, 204' LT ℄ I-75
PULL BOX TO REMAIN

STA. 500+98±, 232' LT ℄ I-75
PULL BOX TO REMAIN

STA. 501+02±, 225' LT ℄ I-75
LIGHT POLE AND LUMINAIRE
TO REMAIN

STA. 501+10±, 152' LT ℄ I-75
REMOVE PULL BOX
16

Ex LA-R/W

LA-R/W

Ex LA-R/W

SEYMOUR AVE

RAMP C

RAMP B

I.R. 75 (SB)

I.R. 75 (NB)

MATCHLINE STA. 490+50
SEE SHEET 1251

MATCHLINE STA. 504+00
SEE SHEET 1253

491 492 493 494 495 496 497 498 499 500 501 502 503

STA. 500+33±, 166' LT ℄ I-75
PULL BOX TO REMAIN

STA. 500+28±, 158' LT ℄ I-75
LIGHT POLE AND LUMINAIRE
TO REMAIN

STA. 499+89±, 62' LT ℄ I-75
PULL BOX TO REMAIN
FLOOD LIGHT TO REMAIN

STA. 499+76±, 80' LT ℄ I-75
PULL BOX TO REMAIN (SEE NOTE 3)

STA. 497+48±, 61' RT ℄ I-75
FLOOD LIGHT TO REMAIN

STA. 497+54±, 92' RT ℄ I-75
PULL BOX TO REMAIN (SEE NOTE 2)

STA. 497+20±, 164' RT ℄ I-75
PULL BOX TO REMAIN

STA. 496+99±, 201' RT ℄ I-75
LIGHT POLE AND LUMINAIRE
TO REMAIN

STA. 496+67±, 255' RT ℄ I-75
PULL BOX TO REMAIN

PADDOCK RD

RAMP D

RAMP A

4 STA. 494+41±, 161' RT ℄ I-75
REMOVE TWO LUMINAIRES,
TOWER AND FOUNDATION

5 STA. 494+22±, 186' RT ℄ I-75
REMOVE PULL BOX

6 STA. 494+65±, 229' RT ℄ I-75
REMOVE PULL BOX

7 STA. 494+69±, 238' RT ℄ I-75
REMOVE LUMINAIRE, LIGHT
POLE AND FOUNDATION

STA. 495+36±, 400' RT ℄ I-75
LIGHT POLE AND LUMINAIRE
TO REMAIN

STA. 494+85±, 418' RT ℄ I-75
LIGHT POLE AND LUMINAIRE
TO REMAIN

8 STA. 495+75±, 343' RT ℄ I-75
REMOVE PULL BOX

STA. 495+82±, 349' RT ℄ I-75
PULL BOX TO REMAIN

STA. 496+22±, 320' RT ℄ I-75
LIGHT POLE AND LUMINAIRE
TO REMAIN

STA. 499+05±, 76' RT ℄ I-75
PULL BOX/FLOOD LIGHT TO REMAIN

STA. 498+89±, 76' RT ℄ I-75
PULL BOX TO REMAIN (SEE NOTE 2)

STA. 498+57±, 149' RT ℄ I-75
LIGHT POLE TO REMAIN

STA. 498+44±, 179' RT ℄ I-75
PULL BOX TO REMAIN

STA. 498+07±, 259' RT ℄ I-75
LIGHT POLE AND LUMINAIRE TO REMAIN

STA. 497+83±, 300' RT ℄ I-75
PULL BOX TO REMAIN

STA. 497+74±, 321' RT ℄ I-75
CITY OF CINCINNATI CONTROLLER CABINET
AND POLE (TO REMAIN)

STA. 497+73±, 317' RT ℄ I-75
PULL BOX TO REMAIN

STA. 497+70±, 370' RT ℄ I-75
PULL BOX TO REMAIN

STA. 497+09±, 377' RT ℄ I-75
LIGHT POLE AND LUMINAIRE TO REMAIN

STA. 502+67, 184' RT ℄ I-75
REMOVE POWER SERVICE
(CITY OF CINCINNATI
CONTROLLER CABINET, POLE,
AND OVERHEAD FEED TO
POWER SOURCE)
13

STA. 502+66, 180' RT ℄ I-75
REMOVE PULL BOX
12

STA. 502+36, 132' RT ℄ I-75
REMOVE PULL BOX
11

STA. 502+26±, 93' RT ℄ I-75
REMOVE TWO LUMINAIRES,
TOWER AND FOUNDATION
10

NOTES:

1. ALL SEYMOUR AVENUE UNDERPASS WALLPACKS, CONDUIT AND WIRING INSTALLED BY HAM4/561-2.66/7.01 SHALL REMAIN UNLESS OTHERWISE NOTED ON PLAN.

2. EXISTING PULL BOX SERVICES PADDOCK AVENUE BRIDGE LIGHTING VIA A 3" DUCT CABLE. ALL PADDOCK AVENUE DECORATIVE BRIDGE LIGHTING FACILITIES SHALL REMAIN UNDISTURBED THROUGHOUT THE ENTIRETY OF THIS PROJECT.

3. EXISTING PULL BOX SERVICES PADDOCK AVENUE UNDERPASS PENDANT LIGHTING SYSTEM. ALL PADDOCK AVENUE PENDANT LIGHTING FACILITIES SHALL BE REMOVED FROM EX. CITY OF CINCINNATI STREET LIGHTING CONTROLLER AND RECONNECTED TO PROPOSED ODOT 480V LIGHTING CONTROL CENTER D.

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

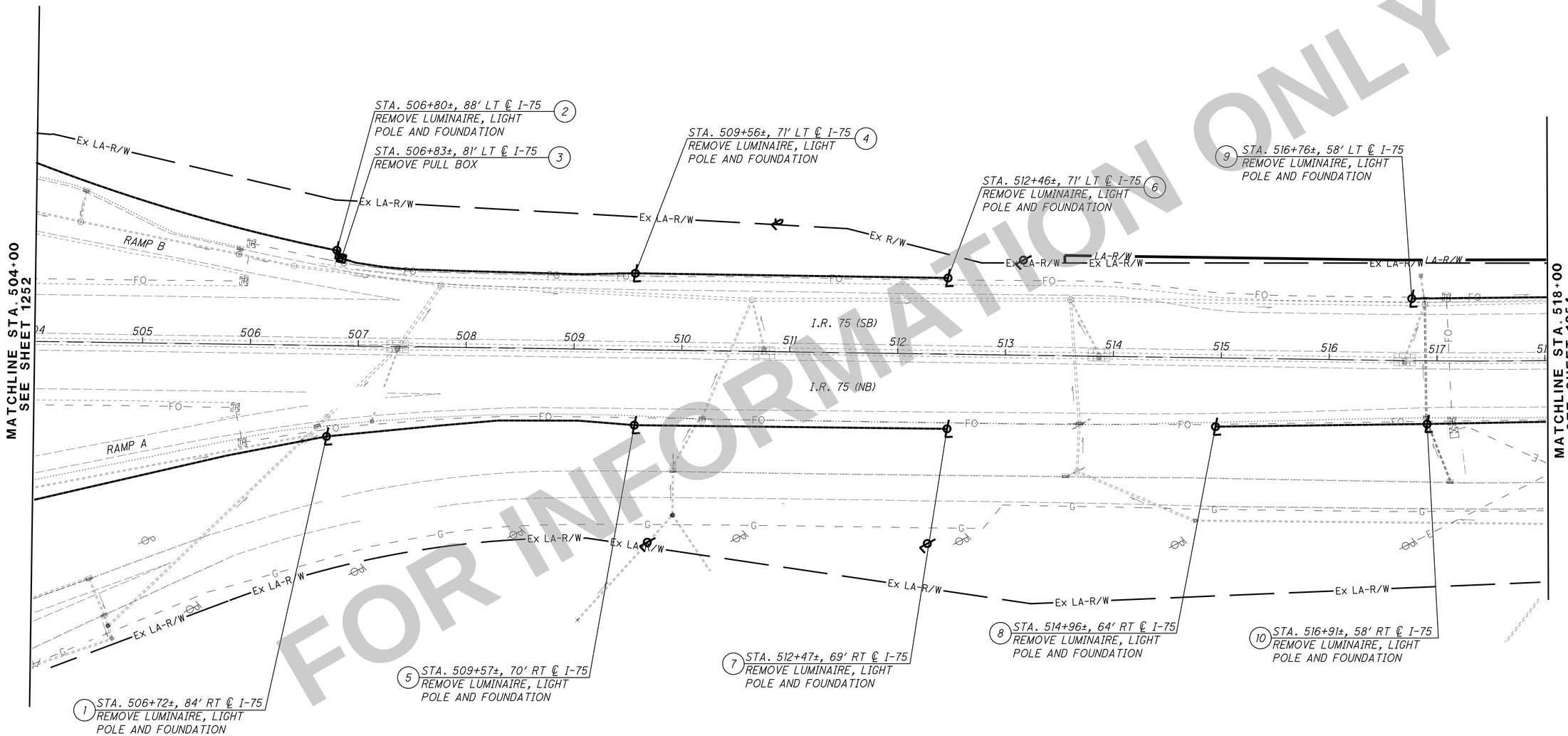
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CHECKED JDS

LIGHTING DEMOLITION PLAN - I.R. 75
STA. 490+50 TO STA. 504+00

HAM-75-7.85

1252
2017

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FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DRM
CHECKED JDS

LIGHTING DEMOLITION PLAN - I.R. 75
STA. 504+00 TO STA. 518+00

HAM-75-7.85

1253
2017

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HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DRM
CHECKED JDS

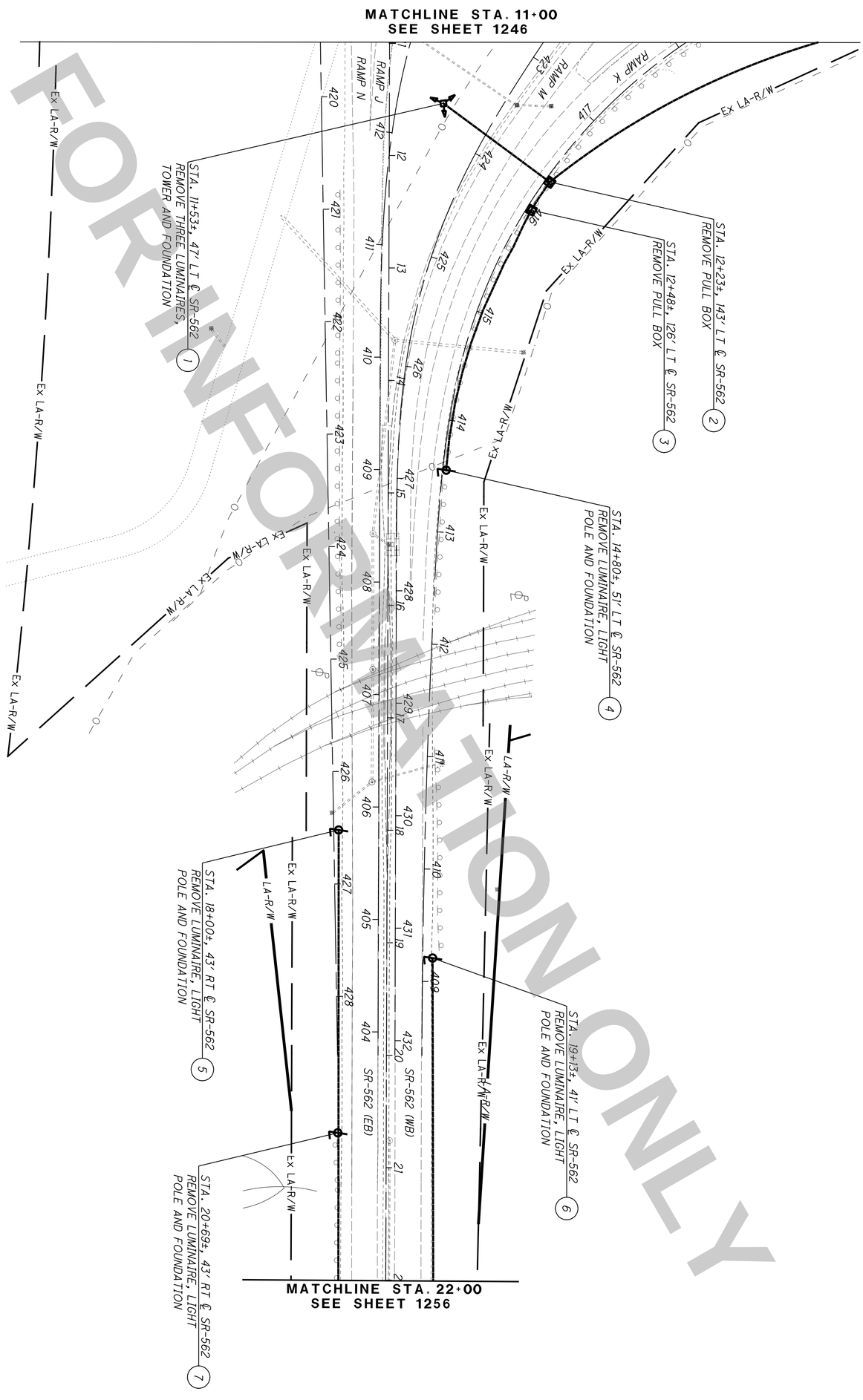
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STA. 518+00 TO STA. 537+00

HAM-75-7.85

1254
2017

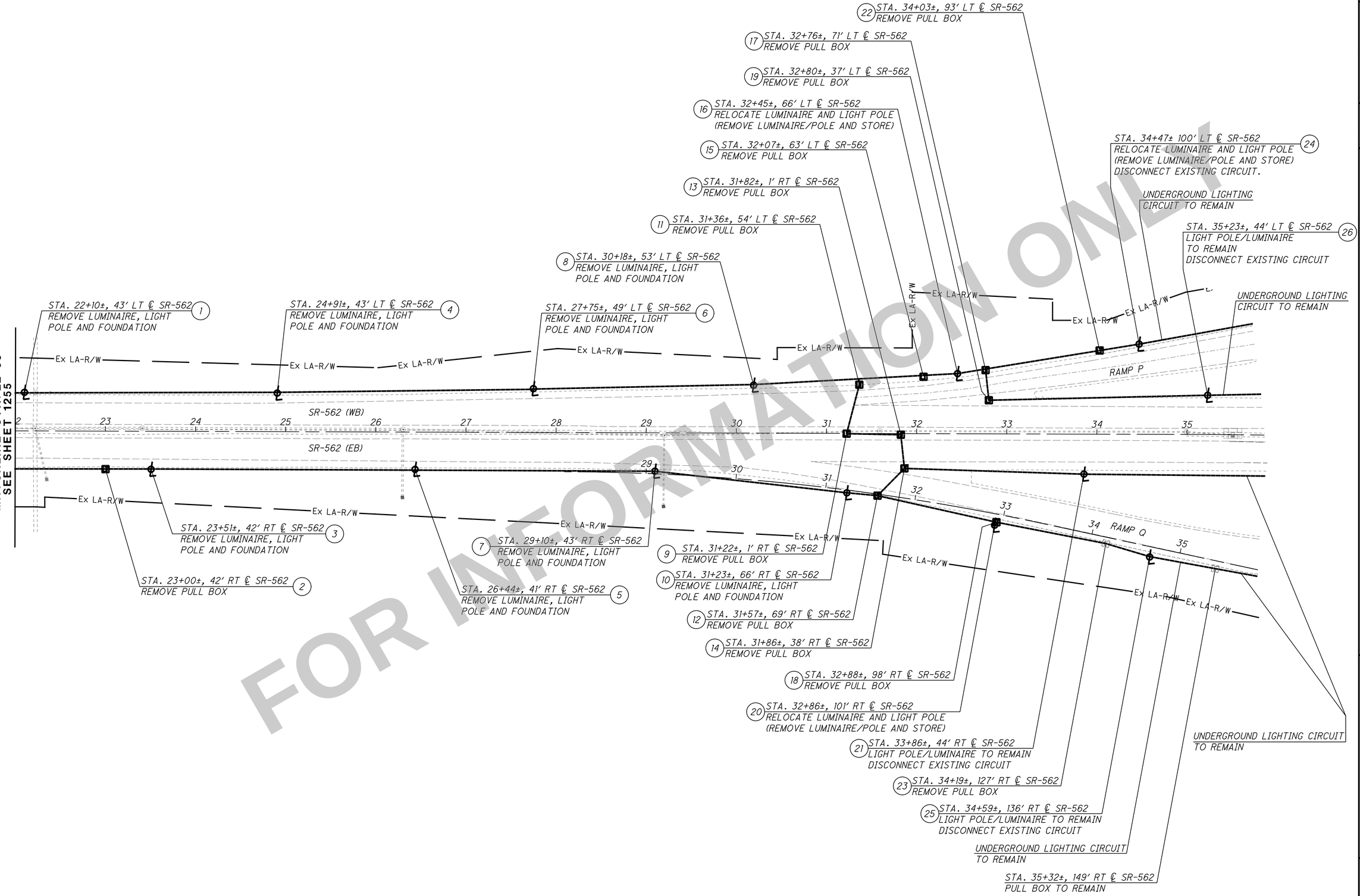
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FOR INFORMATION ONLY

1255 2017	HAM-75-7.85	LIGHTING DEMOLITION PLAN - S.R. 562 STA. 11+00 TO STA. 22+00	CALCULATED DRM CHECKED JDS	0 50 25 100 HORIZONTAL SCALE IN FEET



FOR INFORMATION ONLY

N

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DRM
CHECKED JDS

LIGHTING DEMOLITION PLAN - S.R. 562
STA. 22+00 TO STA. 36+00

HAM-75-7.85

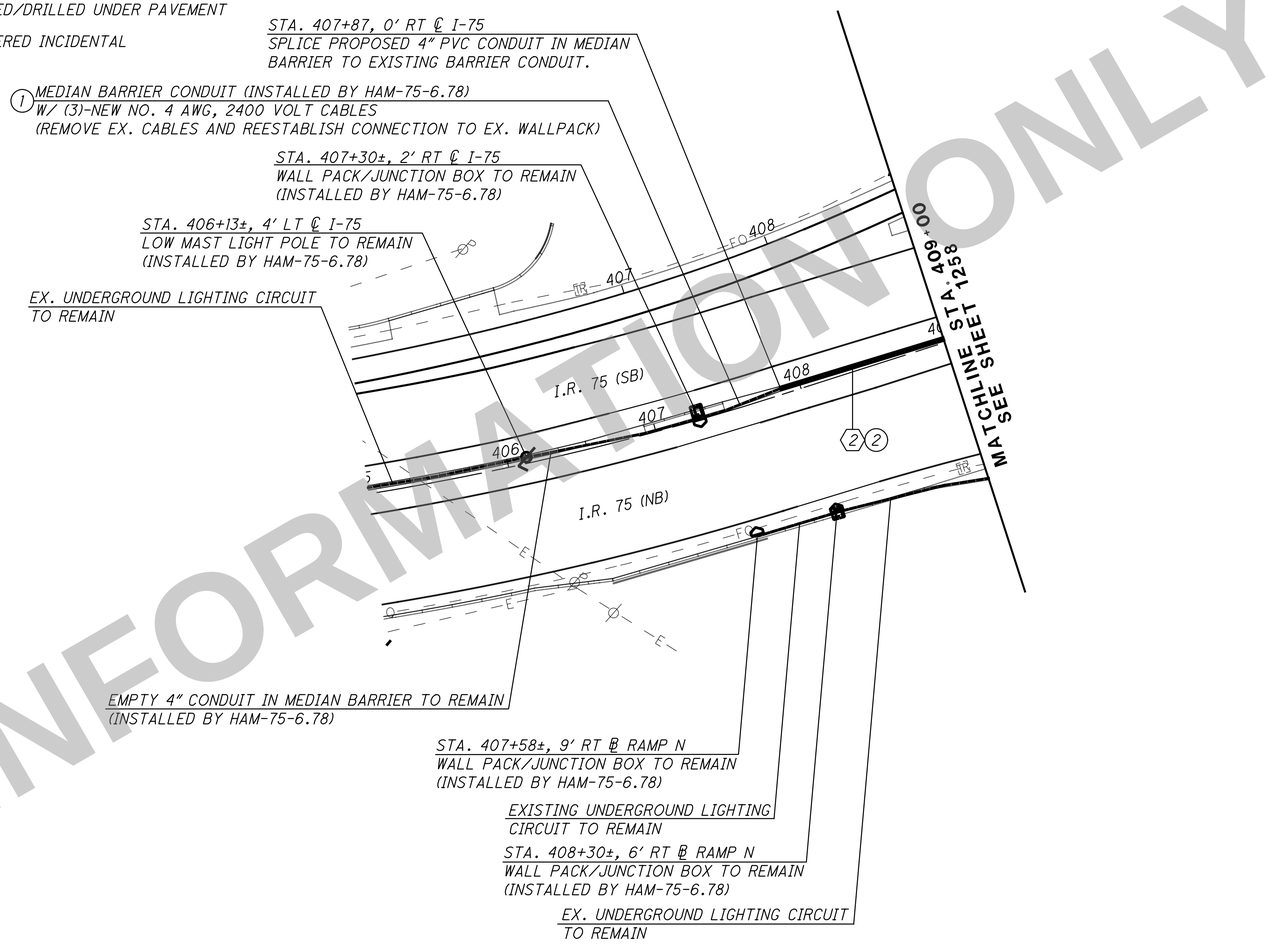
1256
2017

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CODED NOTES

1. (1)-EMPTY 4" PVC CONDUIT IN MEDIAN BARRIER*
2. (1)-4" PVC CONDUIT IN MEDIAN BARRIER* W/ (3)-NO. 4 AWG CABLES
3. (1)-1.5" DUCT CABLE IN TRENCH W/ (3)-NO. 4 AWG CABLES
4. (1)-3" CONDUIT, 725.04 IN TRENCH W/ (3)-NO. 4 AWG CABLES
5. NOT USED
6. NOT USED
7. (1)-3" CONDUIT, 725.04 IN TRENCH W/ (3)-NO. 2 AWG CABLES
8. NOT USED
9. (1)-EMPTY 4" PVC CONDUIT IN BRIDGE PARAPET
10. (1)-4" PVC CONDUIT IN BRIDGE PARAPET W/ (3)-NO. 4 AWG CABLES
11. (1)-EMPTY 3" CONDUIT, 725.04 IN TRENCH
12. (1)-3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT W/ (3)-NO. 4 AWG CABLES
13. (1)-3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT W/ (3)-NO. 2 AWG CABLES
14. (1)-EMPTY 3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT

*4" PVC CONDUIT SHALL BE CONSIDERED INCIDENTAL TO THE MEDIAN BARRIER.



FOR INFORMATION ONLY

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HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DRM
CHECKED JDS

LIGHTING PLAN- I.R. 75
STA. 405+00 TO STA. 409+00

HAM-75-7.85

1257
2017

STA. 409+14.0, 28.6' LT ℄ RAMP M
EXISTING CONTROL CENTER "A" TO REMAIN
(INSTALLED BY HAM-75-6.78)

STA. 409+58.1, 0' RT ℄ I-75, (48)
A-A6, 1-LED, TYPE V, 50'
W/ MEDIAN JUNCTION BOX

STA. 410+03.2, 21.8' LT ℄ RAMP M (9)
18" PULL BOX, 725.08

(12)(8)

STA. 409+95.8, 23.7' RT ℄ RAMP M (7)
18" PULL BOX, 725.08
W/ (3)-SPLICE KITS (A-A)

STA. 415+09.2, 21.8' LT ℄ RAMP M (47)
18" PULL BOX, 725.08

STA. 417+49.0, 2.5' RT ℄ I-75 (21)
TRANSITION JUNCTION BOX

STA. 419+65.0, 0' RT ℄ I-75 (23)
TRANSITION JUNCTION BOX

STA. 418+44.7, 121.0' LT ℄ I-75 (16)
A-A3, 4-LED, TYPE V, 100'

INSTALL FENCE GROUNDING (45)
PER HL-50.11 ALONG FENCE
FROM: STA. 415+63
TO: STA. 464+06

STA. 415+10.0, 124.5' LT ℄ I-75 (14)
A-A2, 4-LED, TYPE V, 100'

STA. 411+47.0, 97.5' LT ℄ I-75 (12)
A-A1, 4-LED, TYPE V, 100'

(12)(46)

(3)(11)

(4)(10)

(3)(15)

(3)(13)

(12)(6)

(2)(49)

(2)(17)

(1)

(9)(22)

(2)(12)

(2)(4)

(12)(19)

(3)(43)

(4)(32)

(3)(41)

(39)(3)

(3)(34)

(13)(37)

(3)(36)

STA. 413+18.0, 0' RT ℄ I-75 (18)
MEDIAN JUNCTION BOX

INSTALL STRUCTURE GROUNDING (44)
FOR BRIDGES AT I.R. 75 SB,
I.R. 75 NB, AND RAMP M

I.R. 75 (SB)

I.R. 75 (NB)

RAMP M

RAMP J

RAMP K

RAMP N

PROPOSED UNDERGROUND
RETENTION SITE

EX. UNDERGROUND
LIGHTING CIRCUIT
TO REMAIN

STA. 410+05.8, 0' RT ℄ I-75 (5)
MEDIAN JUNCTION BOX
W/ (3)-SPLICE KITS (A-A)

STA. 409+73.9, 0' RT ℄ I-75 (1)
MEDIAN JUNCTION BOX
W/ (3)-SPLICE KITS (A-A)

STA. 413+67±, 128' RT ℄ I-75
A-A4, EXISTING TOWER TO REMAIN
(CONNECT LIGHTING CIRCUIT)

STA. 409+73.9, 100.1' RT ℄ I-75 (3)
18" PULL BOX, 725.08
(INTERCEPT EX. DUCT CABLE)
W/ (3)-SPLICE KITS (A-A)
(SPLICE W/ EX. CIRCUIT)

EX. UNDERGROUND LIGHTING
CIRCUIT TO REMAIN

STA. 416+08±, 321' RT ℄ I-75 (20)
A-A5, EXISTING TOWER TO REMAIN
REMOVE (4)-EX. LUMINAIRES
INSTALL (6)-NEW LED LUMINAIRES

STA. 418+10.0, 216.0' RT ℄ I-75 (33)
B-A7, 6-LED, TYPE V, 100'

STA. 418+43.1, 373' RT ℄ I-75 (35)
18" PULL BOX, 725.08
W/ (3)-SPLICE KITS (B-A)

STA. 418+88.3, 374' RT ℄ I-75 (38)
18" PULL BOX, 725.08

STA. 422+02.0, 105.0' RT ℄ I-75 (42)
B-A5, 4-LED, TYPE V, 100'

STA. 420+02.0, 217.0' RT ℄ I-75 (40)
B-A6, 4-LED, TYPE V, 100'

STA. 418+38.5, 88' RT ℄ I-75 (31)
SERVICE TO UNDERPASS LIGHTING:
INSTALL 18" PULL BOX, 725.08 AND
(1)-STRUCTURE MOUNTED 30A FUSED
DISCONNECT SWITCH
(SEE RAMP J UNDERPASS DETAIL)

RAMP J UNDERPASS DETAIL

STA. 419+80, 23' RT ℄ RAMP J (24)
B-A14, 1-LED, UNDERPASS LIGHT

STA. 419+52, 28' RT ℄ RAMP J (25)
B-A13, 1-LED, UNDERPASS LIGHT

STA. 419+21, 31' RT ℄ RAMP J (26)
B-A12, 1-LED, UNDERPASS LIGHT

STA. 418+99, 32' RT ℄ RAMP J (27)
B-A11, 1-LED, UNDERPASS LIGHT

STA. 418+51, 31' RT ℄ RAMP J (28)
B-A10, 1-LED, UNDERPASS LIGHT

STA. 418+17, 29' RT ℄ RAMP J (29)
B-A9, 1-LED, UNDERPASS LIGHT

STA. 417+87, 25' RT ℄ RAMP J (30)
B-A8, 1-LED, UNDERPASS LIGHT
MOUNTED ALONG TOP OF WALL
W/ (1)-JUNCTION BOX IN BARRIER

(31) (CONTINUED)
ALL OVERHEAD UNDERPASS CONDUIT SHALL BE
3/4" SCH. 80 PVC. CIRCUIT CABLE SHALL BE
(3)-#10 AWG, 600V, TYPE XHHW. PAYMENT FOR THIS
WORK SHALL BE CONSIDERED INCIDENTAL TO ITEM 625,
SERVICE TO UNDERPASS LIGHTING, AS PER PLAN.

MATCHLINE STA. 409+00
SEE SHEET 1257

MATCHLINE STA. 423+00
SEE SHEET 1259

MATCHLINE STA. 11+00
SEE SHEET 1267

CODED NOTES

(1) (1)-EMPTY 4" PVC CONDUIT IN MEDIAN BARRIER*

(2) (1)-4" PVC CONDUIT IN MEDIAN BARRIER*
W/ (3)-NO. 4 AWG CABLES

(3) (1)-1.5" DUCT CABLE IN TRENCH
W/ (3)-NO. 4 AWG CABLES

(4) (1)-3" CONDUIT, 725.04 IN TRENCH
W/ (3)-NO. 4 AWG CABLES

(5) NOT USED

(6) NOT USED

(7) (1)-3" CONDUIT, 725.04 IN TRENCH
W/ (3)-NO. 4 AWG CABLES

(8) NOT USED

(9) (1)-EMPTY 4" PVC CONDUIT
IN BRIDGE PARAPET

(10) (1)-4" PVC CONDUIT IN BRIDGE PARAPET
W/ (3)-NO. 4 AWG CABLES

(11) (1)-EMPTY 3" CONDUIT, 725.04
IN TRENCH

(12) (1)-3" CONDUIT, 725.04
JACKED/DRILLED UNDER PAVEMENT
W/ (3)-NO. 4 AWG CABLES

(13) (1)-3" CONDUIT, 725.04
JACKED/DRILLED UNDER PAVEMENT
W/ (3)-NO. 2 AWG CABLES

(14) (1)-EMPTY 3" CONDUIT, 725.04
JACKED/DRILLED UNDER PAVEMENT

*4" PVC CONDUIT SHALL BE CONSIDERED
INCIDENTAL TO THE MEDIAN BARRIER.

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DRM
CHECKED JDS

LIGHTING PLAN - I.R. 75
STA. 409+00 TO STA. 423+00

HAM-75-7.85

1258
2017

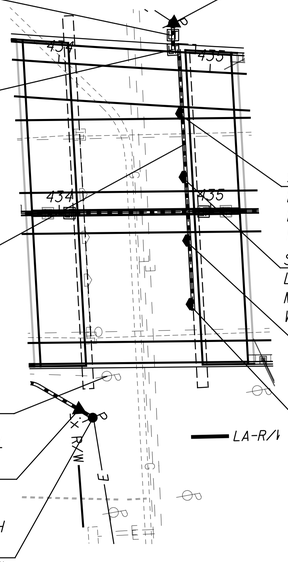
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CODED NOTES

1. (1)-EMPTY 4" PVC CONDUIT IN MEDIAN BARRIER*
2. (1)-4" PVC CONDUIT IN MEDIAN BARRIER* W/ (3)-NO. 4 AWG CABLES
3. (1)-1.5" DUCT CABLE IN TRENCH W/ (3)-NO. 4 AWG CABLES
4. (1)-3" CONDUIT, 725.04 IN TRENCH W/ (3)-NO. 4 AWG CABLES
5. NOT USED
6. NOT USED
7. (1)-3" CONDUIT, 725.04 IN TRENCH W/ (3)-NO. 2 AWG CABLES
8. NOT USED
9. (1)-EMPTY 4" PVC CONDUIT IN BRIDGE PARAPET
10. (1)-4" PVC CONDUIT IN BRIDGE PARAPET W/ (3)-NO. 4 AWG CABLES
11. (1)-EMPTY 3" CONDUIT, 725.04 IN TRENCH
12. (1)-3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT W/ (3)-NO. 4 AWG CABLES
13. (1)-3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT W/ (3)-NO. 2 AWG CABLES
14. (1)-EMPTY 3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT

*4" PVC CONDUIT SHALL BE CONSIDERED INCIDENTAL TO THE MEDIAN BARRIER.

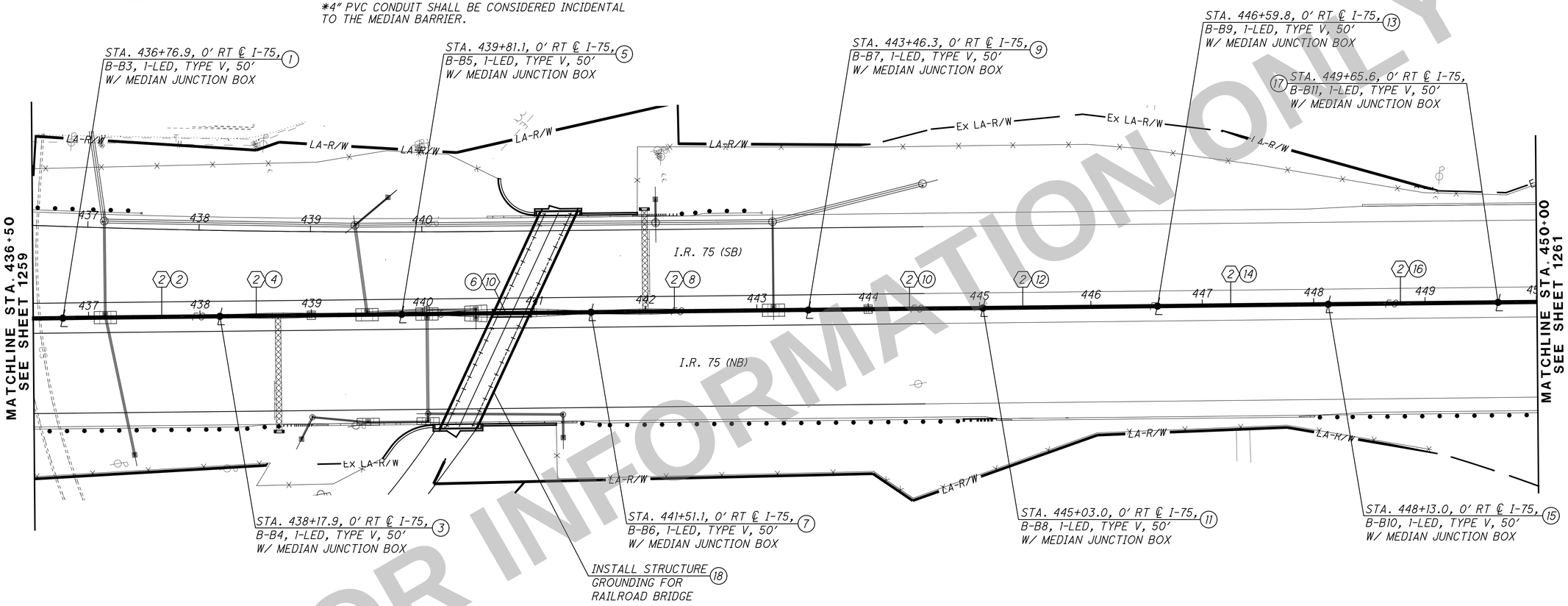
LAIDLAW AVE. POWER SERVICE AND UNDERPASS LIGHTING DETAIL


LA-R/W
EX LA-R/W
LAIDLAW AVE
EX LA-R/W
LA-R/W
LA-R/W

CODED NOTES

1. (1)-EMPTY 4" PVC CONDUIT IN MEDIAN BARRIER*
2. (1)-4" PVC CONDUIT IN MEDIAN BARRIER* W/ (3)-NO. 4 AWG CABLES
3. (1)-1.5" DUCT CABLE IN TRENCH W/ (3)-NO. 4 AWG CABLES
4. (1)-3" CONDUIT, 725.04 IN TRENCH W/ (3)-NO. 4 AWG CABLES
5. NOT USED
6. NOT USED
7. (1)-3" CONDUIT, 725.04 IN TRENCH W/ (3)-NO. 2 AWG CABLES
8. NOT USED
9. (1)-EMPTY 4" PVC CONDUIT IN BRIDGE PARAPET
10. (1)-4" PVC CONDUIT IN BRIDGE PARAPET W/ (3)-NO. 4 AWG CABLES
11. (1)-EMPTY 3" CONDUIT, 725.04 IN TRENCH
12. (1)-3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT W/ (3)-NO. 4 AWG CABLES
13. (1)-3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT W/ (3)-NO. 2 AWG CABLES
14. (1)-EMPTY 3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT

*4" PVC CONDUIT SHALL BE CONSIDERED INCIDENTAL TO THE MEDIAN BARRIER.



NOTE:
FOR LIGHTING LEGEND, SEE SHEET 1231

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DRM
CHECKED JDS

LIGHTING PLAN - I.R. 75
STA. 436+50 TO STA. 450+00

HAM-75-7.85

1260
2017

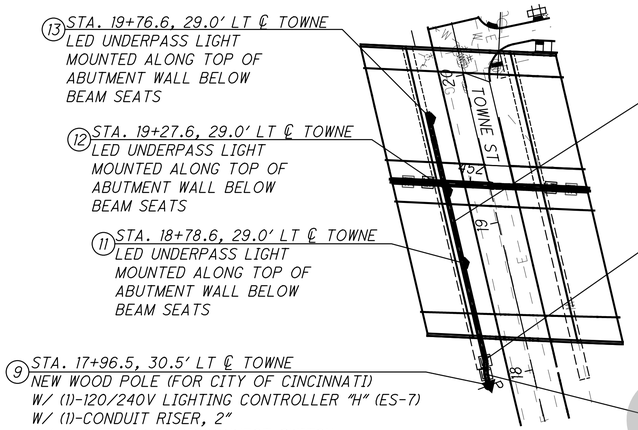
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CODED NOTES

1. (1)-EMPTY 4" PVC CONDUIT IN MEDIAN BARRIER*
2. (1)-4" PVC CONDUIT IN MEDIAN BARRIER* W/ (3)-NO. 4 AWG CABLES
3. (1)-1.5" DUCT CABLE IN TRENCH W/ (3)-NO. 4 AWG CABLES
4. (1)-3" CONDUIT, 725.04 IN TRENCH W/ (3)-NO. 4 AWG CABLES
5. NOT USED
6. NOT USED
7. (1)-3" CONDUIT, 725.04 IN TRENCH W/ (3)-NO. 2 AWG CABLES
8. NOT USED
9. (1)-EMPTY 4" PVC CONDUIT IN BRIDGE PARAPET
10. (1)-4" PVC CONDUIT IN BRIDGE PARAPET W/ (3)-NO. 4 AWG CABLES
11. (1)-EMPTY 3" CONDUIT, 725.04 IN TRENCH
12. (1)-3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT W/ (3)-NO. 4 AWG CABLES
13. (1)-3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT W/ (3)-NO. 2 AWG CABLES
14. (1)-EMPTY 3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT

*4" PVC CONDUIT SHALL BE CONSIDERED INCIDENTAL TO THE MEDIAN BARRIER.

TOWNE ST. POWER SERVICE AND UNDERPASS LIGHTING DETAIL



13. STA. 19+76.6, 29.0' LT ℄ TOWNE
LED UNDERPASS LIGHT MOUNTED ALONG TOP OF ABUTMENT WALL BELOW BEAM SEATS

12. STA. 19+27.6, 29.0' LT ℄ TOWNE
LED UNDERPASS LIGHT MOUNTED ALONG TOP OF ABUTMENT WALL BELOW BEAM SEATS

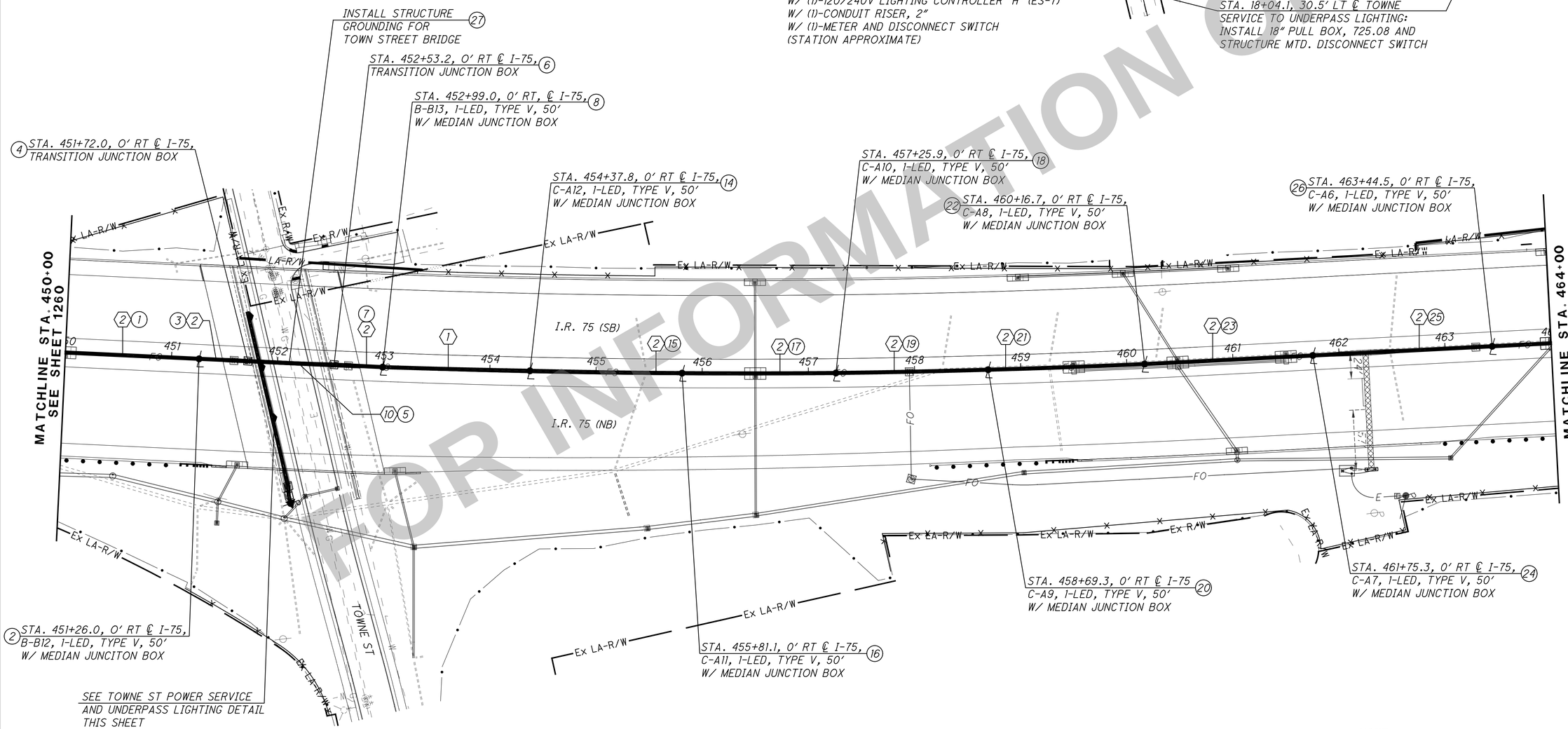
11. STA. 18+78.6, 29.0' LT ℄ TOWNE
LED UNDERPASS LIGHT MOUNTED ALONG TOP OF ABUTMENT WALL BELOW BEAM SEATS

9. STA. 17+96.5, 30.5' LT ℄ TOWNE
NEW WOOD POLE (FOR CITY OF CINCINNATI) W/ (1)-120/240V LIGHTING CONTROLLER "H" (ES-7) W/ (1)-CONDUIT RISER, 2" W/ (1)-METER AND DISCONNECT SWITCH (STATION APPROXIMATE)

ALL OVERHEAD UNDERPASS CONDUIT SHALL BE 3/4" SCH. 80 PVC. CIRCUIT CABLE SHALL BE(3)-#10 AWG, 600V, TYPE XHHW. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCIDENTAL TO ITEM 625, SERVICE TO UNDERPASS LIGHTING, AS PER PLAN.

STA. 18+12.7, 29.0' LT ℄ TOWNE
ROUND JUNCTION BOX WITH MOUNTING EARS AND GASKETED CAST MALLEABLE IRON COVER. PROVIDE UNFUSED BOLTED CONNECTIONS (WALL MOUNTED). JUNCTION BOX SHALL BE CONSIDERED INCIDENTAL TO ITEM 625, SERVICE TO UNDERPASS LIGHTING, AS PER PLAN. (10)

STA. 18+04.1, 30.5' LT ℄ TOWNE
SERVICE TO UNDERPASS LIGHTING: INSTALL 18" PULL BOX, 725.08 AND STRUCTURE MTD. DISCONNECT SWITCH



SEE TOWNE ST POWER SERVICE AND UNDERPASS LIGHTING DETAIL THIS SHEET

NOTE:
FOR LIGHTING LEGEND, SEE SHEET 1231

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED DRM CHECKED JDS

LIGHTING PLAN - I.R. 75
STA. 450+00 TO STA. 464+00

HAM-75-7.85

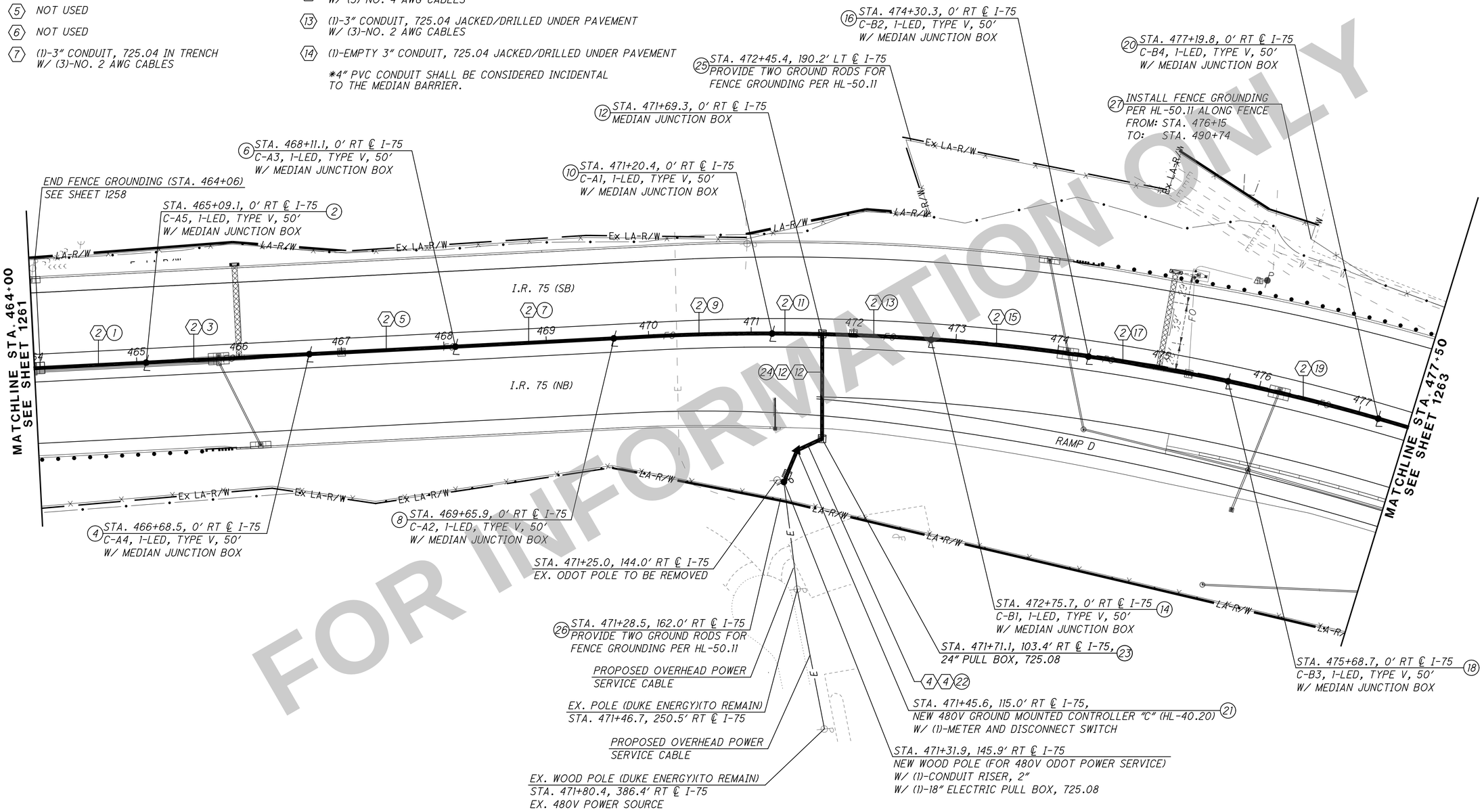
1261
2017

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CODED NOTES

1. (1)-EMPTY 4" PVC CONDUIT IN MEDIAN BARRIER*
2. (1)-4" PVC CONDUIT IN MEDIAN BARRIER* W/ (3)-NO. 4 AWG CABLES
3. (1)-1.5" DUCT CABLE IN TRENCH W/ (3)-NO. 4 AWG CABLES
4. (1)-3" CONDUIT, 725.04 IN TRENCH W/ (3)-NO. 4 AWG CABLES
5. NOT USED
6. NOT USED
7. (1)-3" CONDUIT, 725.04 IN TRENCH W/ (3)-NO. 2 AWG CABLES
8. NOT USED
9. (1)-EMPTY 4" PVC CONDUIT IN BRIDGE PARAPET
10. (1)-4" PVC CONDUIT IN BRIDGE PARAPET W/ (3)-NO. 4 AWG CABLES
11. (1)-EMPTY 3" CONDUIT, 725.04 IN TRENCH
12. (1)-3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT W/ (3)-NO. 4 AWG CABLES
13. (1)-3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT W/ (3)-NO. 2 AWG CABLES
14. (1)-EMPTY 3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT

*4" PVC CONDUIT SHALL BE CONSIDERED INCIDENTAL TO THE MEDIAN BARRIER.



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DRM CHECKED JDS

LIGHTING PLAN - I.R. 75
STA. 464+00 TO STA. 477+50

HAM-75-7.85

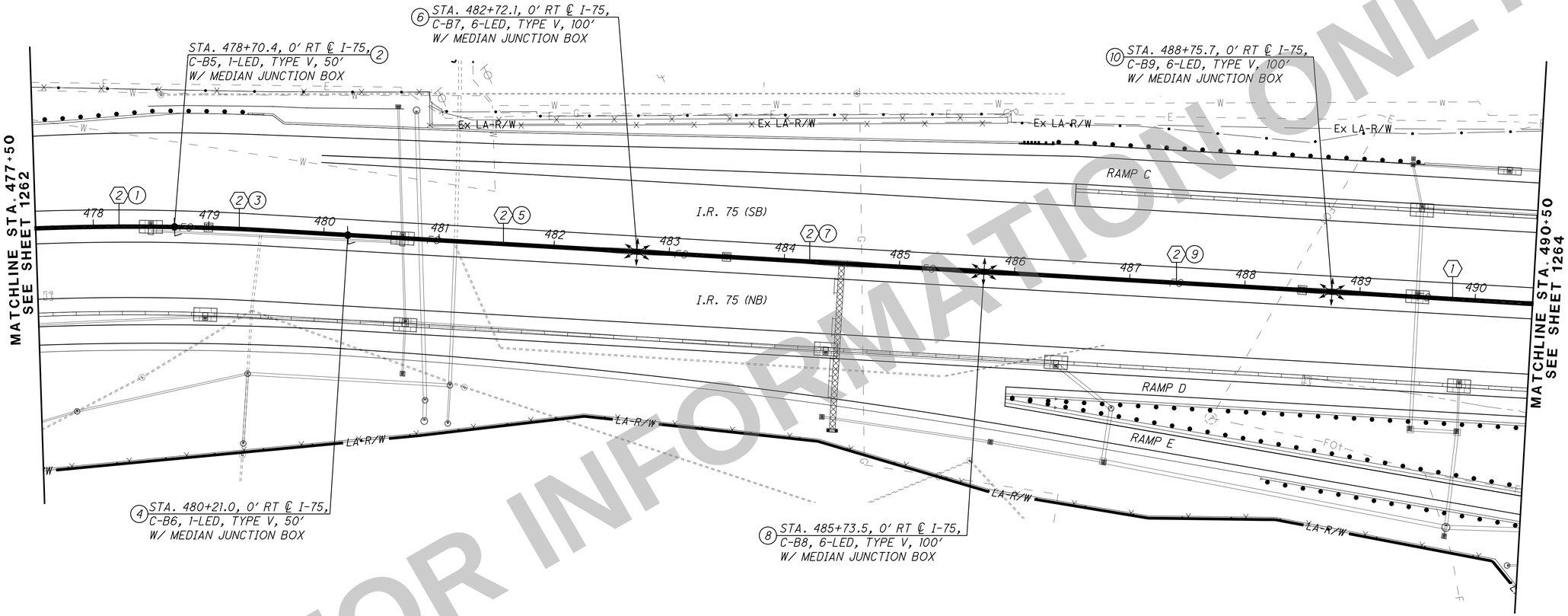
1262
2017

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CODED NOTES

1. (1)-EMPTY 4" PVC CONDUIT IN MEDIAN BARRIER*
2. (1)-4" PVC CONDUIT IN MEDIAN BARRIER* W/ (3)-NO. 4 AWG CABLES
3. (1)-1.5" DUCT CABLE IN TRENCH W/ (3)-NO. 4 AWG CABLES
4. (1)-3" CONDUIT, 725.04 IN TRENCH W/ (3)-NO. 4 AWG CABLES
5. NOT USED
6. NOT USED
7. (1)-3" CONDUIT, 725.04 IN TRENCH W/ (3)-NO. 2 AWG CABLES
8. NOT USED
9. (1)-EMPTY 4" PVC CONDUIT IN BRIDGE PARAPET
10. (1)-4" PVC CONDUIT IN BRIDGE PARAPET W/ (3)-NO. 4 AWG CABLES
11. (1)-EMPTY 3" CONDUIT, 725.04 IN TRENCH
12. (1)-3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT W/ (3)-NO. 4 AWG CABLES
13. (1)-3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT W/ (3)-NO. 2 AWG CABLES
14. (1)-EMPTY 3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT

*4" PVC CONDUIT SHALL BE CONSIDERED INCIDENTAL TO THE MEDIAN BARRIER.



NOTE:
FOR LIGHTING LEGEND, SEE SHEET 1231

FOR INFORMATION ONLY

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HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DRM
CHECKED JDS

LIGHTING PLAN - I.R. 75
STA. 477+50 TO STA. 490+50

HAM-75-7.85

1263
2017

CODED NOTES

1. (1)-EMPTY 4" PVC CONDUIT IN MEDIAN BARRIER*
2. (1)-4" PVC CONDUIT IN MEDIAN BARRIER* W/ (3)-NO. 4 AWG CABLES
3. (1)-1.5" DUCT CABLE IN TRENCH W/ (3)-NO. 4 AWG CABLES
4. (1)-3" CONDUIT, 725.04 IN TRENCH W/ (3)-NO. 4 AWG CABLES
5. NOT USED
6. NOT USED
7. (1)-3" CONDUIT, 725.04 IN TRENCH W/ (3)-NO. 2 AWG CABLES
8. NOT USED
9. (1)-EMPTY 4" PVC CONDUIT IN BRIDGE PARAPET
10. (1)-4" PVC CONDUIT IN BRIDGE PARAPET W/ (3)-NO. 4 AWG CABLES
11. (1)-EMPTY 3" CONDUIT, 725.04 IN TRENCH
12. (1)-3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT W/ (3)-NO. 4 AWG CABLES
13. (1)-3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT W/ (3)-NO. 2 AWG CABLES
14. (1)-EMPTY 3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT

*4" PVC CONDUIT SHALL BE CONSIDERED INCIDENTAL TO THE MEDIAN BARRIER.

END FENCE GROUNDING (STA. 490+74) SEE SHEET 1262

3/4" PVC CONDUIT W/ (3)-#10 AWG CABLES (INTERCEPT EX. CONDUIT RISER)

STA. 492+50.0, 127.3' LT ℄ I-75 (10) SERVICE TO UNDERPASS LIGHTING: INSTALL 18" PULL BOX, 725.08 W/ (3)-SPLICE KITS (WITH #10 AWG)

STA. 492+74.6, 0' RT ℄ I-75 (3) D-A2, 6-LED, TYPE V, 100' W/ MEDIAN JUNCTION BOX

STA. 496+95.8, 102.5' LT ℄ I-75 (12) D-A1, 4-LED, TYPE V, 100'

STA. 496+90.4, 0' RT ℄ I-75 (5) MEDIAN JUNCTION BOX W/ (3)-SPLICE KITS (CIRCUIT D-A)

EX. LIGHT POLE TO REMAIN

EX. PULL BOX TO REMAIN

EX. CONTROL CENTER AND PULL BOX TO REMAIN

EX. LIGHT POLE TO REMAIN

EX. LIGHT POLE TO REMAIN

EX. PULL BOX AND FLOODLIGHT TO REMAIN

EX. PULL BOX TO REMAIN

STA. 499+76.0, 79.5' LT ℄ I-75, EXISTING PULL BOX TO REMAIN (PULL BOX SERVICES EXISTING PADDOCK UNDERPASS LIGHTING SYSTEM TO REMAIN)

EX. PULL BOX TO REMAIN

EX. LIGHT POLE TO REMAIN

EX. PULL BOX TO REMAIN

EX. LIGHT POLE TO REMAIN

STA. 500+20.7, 147.1' RT ℄ I-75, (26) 18" PULL BOX, 725.08 W/ (3)-SPLICE KITS (INTERCEPT EX. CONDUIT & SPLICE WITH EXISTING UNDERPASS LIGHTING CIRCUIT CABLE)

EX. LIGHTING CIRCUIT (TO REMAIN) (TRANSFER TO ODOT CIRCUIT D-B TO FEED PADDOCK RD UNDERPASS LIGHTING)

STA. 502+90.4, 92.4' LT ℄ I-75, (25) D-B3, 4-LED, TYPE V, 100'

STA. 503+07.1, 0' RT ℄ I-75 (8) MEDIAN JUNCTION BOX

MATCHLINE STA. 490+50 SEE SHEET 1263

MATCHLINE STA. 504+00 SEE SHEET 1265

Ex LA-R/W

LA-R/W

RAMP C

RAMP B

RAMP D

RAMP A

PADDOCK RD

I.R. 75 (SB)

I.R. 75 (NB)

SEYMOUR AVE

491 492 493 494 495 496 497 498 499 500 501 502 503

STA. 500+00.0, 0' RT ℄ I-75 (7) MEDIAN JUNCTION BOX

STA. 502+84.3, 115.7' RT ℄ I-75 (30) 18" PULL BOX, 725.08

STA. 500+12.6, 118.0' RT ℄ I-75 (20) D-B1, 6-LED, TYPE V, 100'

STA. 503+20.7, 90.6' RT ℄ I-75, (22) D-B2, 4-LED, TYPE V, 100'

STA. 503+02.7, 199.8' RT ℄ I-75 (28) NEW 480V GROUND MOUNTED CONTROLLER "E" (HL-40.20) W/ (1)-METER AND DISCONNECT SWITCH

STA. 500+56, 255' RT NEW WOOD POLE (FOR 480V ODOT POWER SERVICE) W/ (1)-18" ELECTRIC PULL BOX, 725.08 W/ (1)-CONDUIT RISER, 2"

STA. 502+69.9, 196.2' RT NEW WOOD POLE (FOR 480V ODOT POWER SERVICE) W/ (1)-18" ELECTRIC PULL BOX, 725.08 W/ (1)-CONDUIT RISER, 2'

1 STA. 492+50.0, 0' RT ℄ I-75 MEDIAN JUNCTION BOX

EX. LIGHT POLE TO REMAIN

EX. PULL BOX TO REMAIN

EX. LIGHT POLE TO REMAIN

EX. LIGHT POLE TO REMAIN

EX. PULL BOX TO REMAIN

EX. LIGHT POLE TO REMAIN

EX. PULL BOX TO REMAIN

EX. PULL BOX TO REMAIN

EX. LIGHT POLE TO REMAIN

EX. PULL BOX TO REMAIN

EX. CITY OF CINCINNATI CONTROL CENTER TO REMAIN

EX. PULL BOX TO REMAIN

EX. PULL BOX TO REMAIN

EX. LIGHT POLE TO REMAIN

EX. LIGHT POLE TO REMAIN

EX. PULL BOX TO REMAIN

(17) STA. 499+97.2, 118.4' RT ℄ I-75 18" PULL BOX, 725.08

(14) STA. 500+49.2, 228.8' RT ℄ I-75, 24" PULL BOX, 725.08

(15) (2)-3" CONDUITS, 725.04 IN TRENCH W/ (6)-NO. 4 AWG DISTRIBUTION CABLES

STA. 500+51.3, 239.1' RT ℄ I-75 NEW CONTROL CENTER "D" (HL-40.20)

NOTES:
1. ODOT AND CINCINNATI STREET LIGHTING CIRCUITS SHALL NOT OCCUPY THE SAME CONDUIT OR PULL BOX. THEY SHALL BE KEPT SEPARATE AT ALL TIMES.

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED DRM CHECKED JDS

LIGHTING PLAN - I.R. 75 STA. 490+50 TO STA. 504+00

HAM-75-7.85

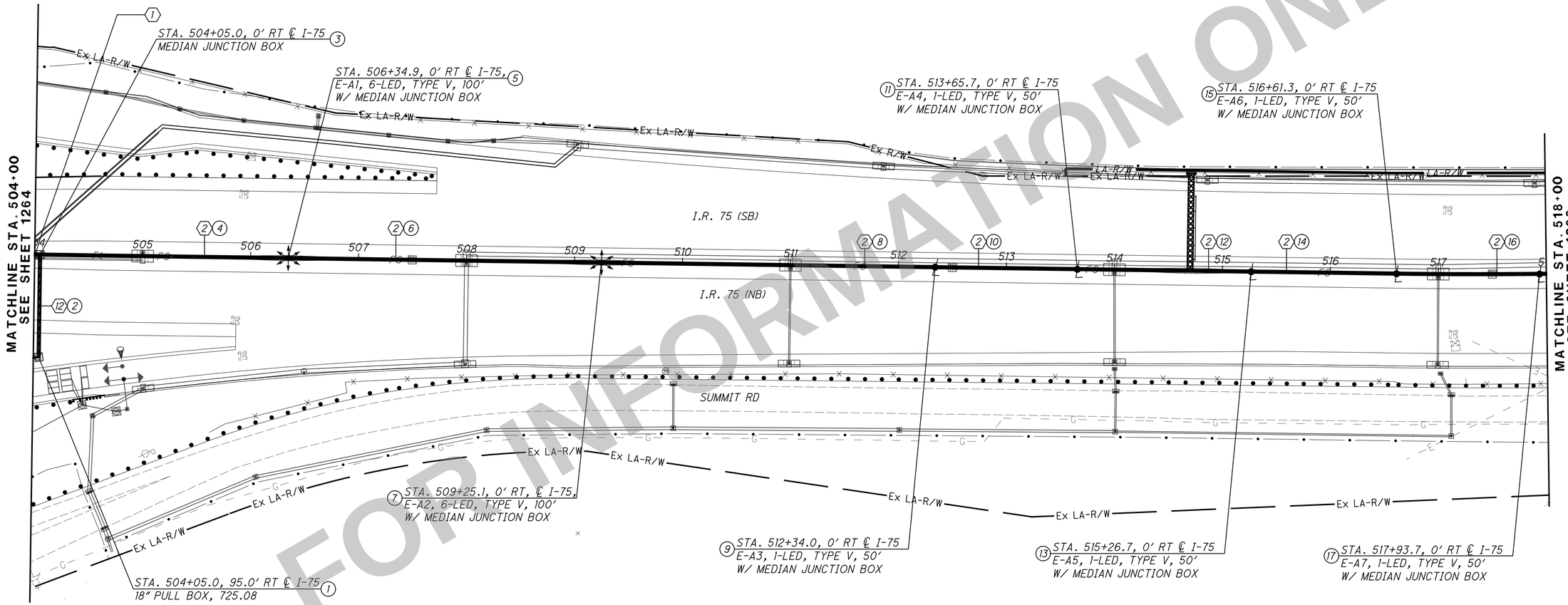
1264 2017

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CODED NOTES

1. *(1)-EMPTY 4" PVC CONDUIT IN MEDIAN BARRIER**
2. *(1)-4" PVC CONDUIT IN MEDIAN BARRIER* W/ (3)-NO. 4 AWG CABLES*
3. *(1)-1.5" DUCT CABLE IN TRENCH W/ (3)-NO. 4 AWG CABLES*
4. *(1)-3" CONDUIT, 725.04 IN TRENCH W/ (3)-NO. 4 AWG CABLES*
5. *NOT USED*
6. *NOT USED*
7. *(1)-3" CONDUIT, 725.04 IN TRENCH W/ (3)-NO. 2 AWG CABLES*
8. *NOT USED*
9. *(1)-EMPTY 4" PVC CONDUIT IN BRIDGE PARAPET*
10. *(1)-4" PVC CONDUIT IN BRIDGE PARAPET W/ (3)-NO. 4 AWG CABLES*
11. *(1)-EMPTY 3" CONDUIT, 725.04 IN TRENCH*
12. *(1)-3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT W/ (3)-NO. 4 AWG CABLES*
13. *(1)-3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT W/ (3)-NO. 2 AWG CABLES*
14. *(1)-EMPTY 3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT*

**4" PVC CONDUIT SHALL BE CONSIDERED INCIDENTAL TO THE MEDIAN BARRIER.*



FOR INFORMATION ONLY

NOTE:
FOR LIGHTING LEGEND, SEE SHEET 1231

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DRM
CHECKED JDS

LIGHTING PLAN - I.R. 75
STA. 504+00 TO STA. 518+00

HAM-75-7.85

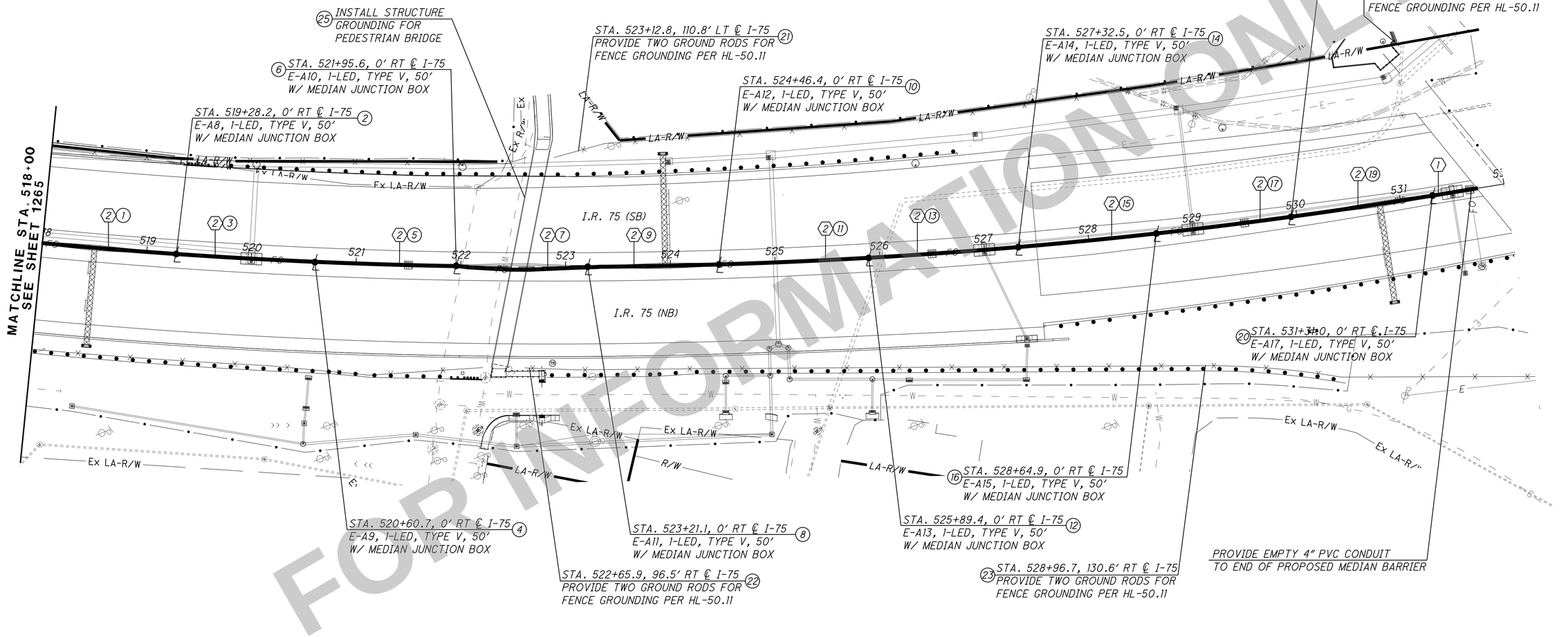
1265
2017

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CODED NOTES

1. (1)-EMPTY 4" PVC CONDUIT IN MEDIAN BARRIER*
2. (1)-4" PVC CONDUIT IN MEDIAN BARRIER* W/ (3)-NO. 4 AWG CABLES
3. (1)-1.5" DUCT CABLE IN TRENCH W/ (3)-NO. 4 AWG CABLES
4. (1)-3" CONDUIT, 725.04 IN TRENCH W/ (3)-NO. 4 AWG CABLES
5. NOT USED
6. NOT USED
7. (1)-3" CONDUIT, 725.04 IN TRENCH W/ (3)-NO. 2 AWG CABLES
8. NOT USED
9. (1)-EMPTY 4" PVC CONDUIT IN BRIDGE PARAPET
10. (1)-4" PVC CONDUIT IN BRIDGE PARAPET W/ (3)-NO. 4 AWG CABLES
11. (1)-EMPTY 3" CONDUIT, 725.04 IN TRENCH
12. (1)-3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT W/ (3)-NO. 4 AWG CABLES
13. (1)-3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT W/ (3)-NO. 2 AWG CABLES
14. (1)-EMPTY 3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT

*4" PVC CONDUIT SHALL BE CONSIDERED INCIDENTAL TO THE MEDIAN BARRIER.



NOTE:
FOR LIGHTING LEGEND, SEE SHEET 1231

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DRM
CHECKED JDS

LIGHTING PLAN - I.R. 75
STA. 518+00 STA. 532+00

HAM-75-7.85

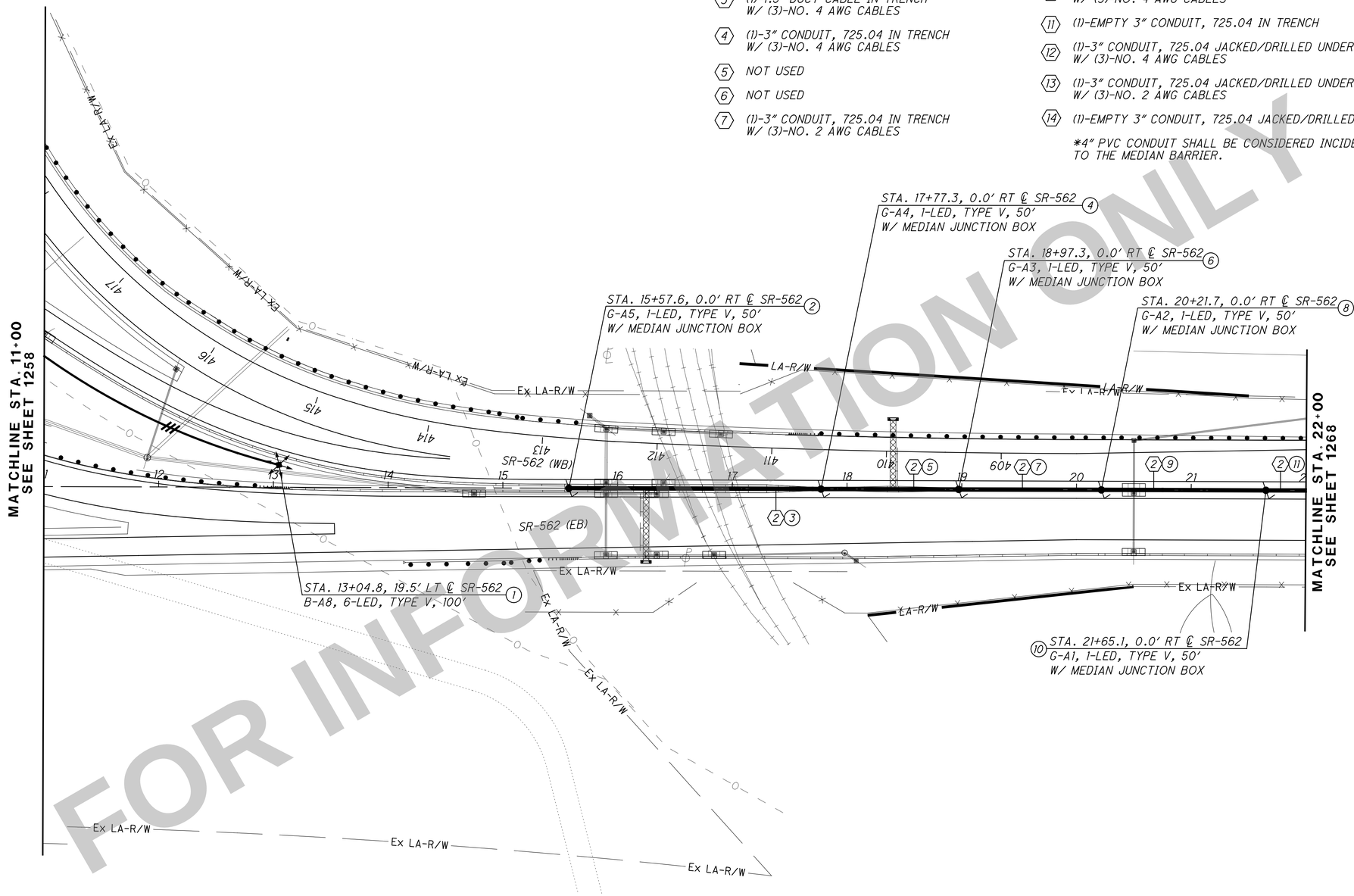
1266
2017

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CODED NOTES

1. (1)-EMPTY 4" PVC CONDUIT IN MEDIAN BARRIER*
2. (1)-4" PVC CONDUIT IN MEDIAN BARRIER* W/ (3)-NO. 4 AWG CABLES
3. (1)-1.5" DUCT CABLE IN TRENCH W/ (3)-NO. 4 AWG CABLES
4. (1)-3" CONDUIT, 725.04 IN TRENCH W/ (3)-NO. 4 AWG CABLES
5. NOT USED
6. NOT USED
7. (1)-3" CONDUIT, 725.04 IN TRENCH W/ (3)-NO. 2 AWG CABLES
8. NOT USED
9. (1)-EMPTY 4" PVC CONDUIT IN BRIDGE PARAPET
10. (1)-4" PVC CONDUIT IN BRIDGE PARAPET W/ (3)-NO. 4 AWG CABLES
11. (1)-EMPTY 3" CONDUIT, 725.04 IN TRENCH
12. (1)-3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT W/ (3)-NO. 4 AWG CABLES
13. (1)-3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT W/ (3)-NO. 2 AWG CABLES
14. (1)-EMPTY 3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT

*4" PVC CONDUIT SHALL BE CONSIDERED INCIDENTAL TO THE MEDIAN BARRIER.



FOR INFORMATION ONLY

NOTE:
FOR LIGHTING LEGEND, SEE SHEET 1231

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DRM
CHECKED JDS

S.R. 562 LIGHTING PLAN
STA. 11+00 TO STA. 22+00

HAM-75-7.85

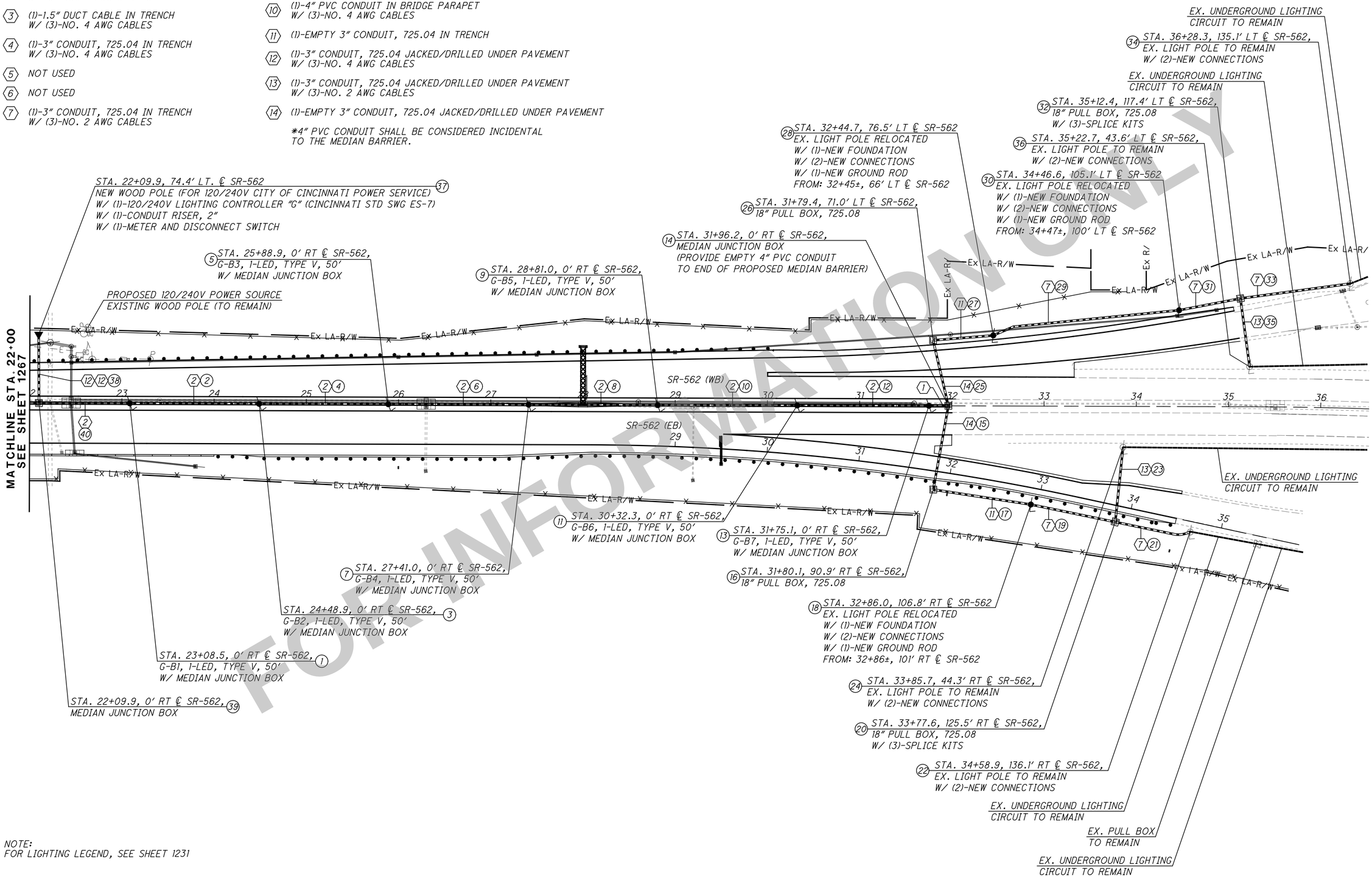
1267
2017

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CODED NOTES

1. (1)-EMPTY 4" PVC CONDUIT IN MEDIAN BARRIER*
2. (1)-4" PVC CONDUIT IN MEDIAN BARRIER* W/ (3)-NO. 4 AWG CABLES
3. (1)-1.5" DUCT CABLE IN TRENCH W/ (3)-NO. 4 AWG CABLES
4. (1)-3" CONDUIT, 725.04 IN TRENCH W/ (3)-NO. 4 AWG CABLES
5. NOT USED
6. NOT USED
7. (1)-3" CONDUIT, 725.04 IN TRENCH W/ (3)-NO. 2 AWG CABLES
8. NOT USED
9. (1)-EMPTY 4" PVC CONDUIT IN BRIDGE PARAPET
10. (1)-4" PVC CONDUIT IN BRIDGE PARAPET W/ (3)-NO. 4 AWG CABLES
11. (1)-EMPTY 3" CONDUIT, 725.04 IN TRENCH
12. (1)-3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT W/ (3)-NO. 4 AWG CABLES
13. (1)-3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT W/ (3)-NO. 2 AWG CABLES
14. (1)-EMPTY 3" CONDUIT, 725.04 JACKED/DRILLED UNDER PAVEMENT

*4" PVC CONDUIT SHALL BE CONSIDERED INCIDENTAL TO THE MEDIAN BARRIER.



NOTE:
FOR LIGHTING LEGEND, SEE SHEET 1231

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

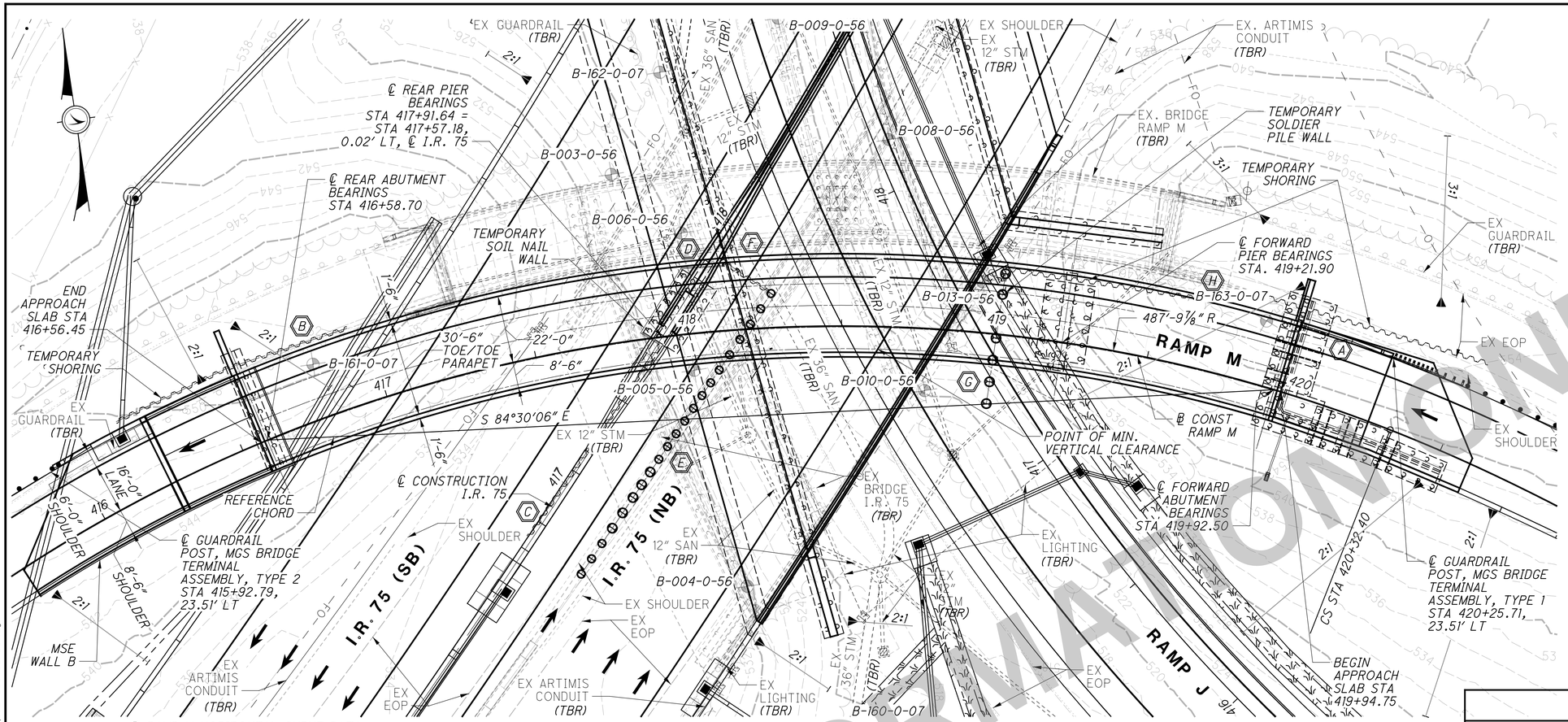
CALCULATED DRM
CHECKED JDS

S.R. 562 LIGHTING PLAN
STA. 22+00 TO STA. 36+00

HAM-75-7.85

1268
2017

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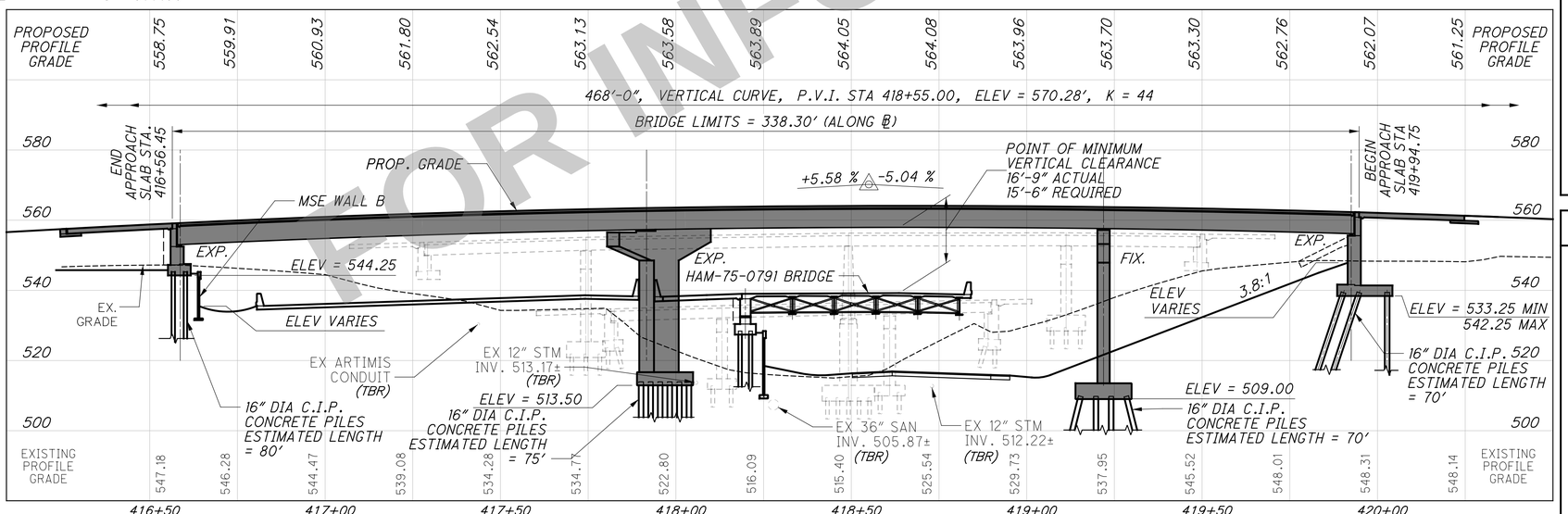
℄ RAMP M HORIZONTAL CURVE DATA

P.I. STA 418+44.83
Δ = 93° 04' 47" (RT)
Dc = 11° 44' 43"
R = 487.82'

Δc = 72° 31' 37" (RT)
Lc = 617.50'
E = 225.18'
C = 577.09'

C.B.1 = N 40° 24' 29" E
C.B. = N 83° 31' 25" E
C.B.2 = N 53° 21' 41" W

PLAN



PROFILE ALONG ℄ CONSTRUCTION RAMP M

FOR INFORMATION ONLY

TRAFFIC DATA

CURRENT YEAR ADT (2010) = 173,800
DESIGN YEAR ADT (2030) = 203,000
DESIGN YEAR ADTT (2030) = 107,590

BENCHMARK DATA

BM #404 STA.434+88.14,
ELEV 523.26 , OFFSET 312.54', RIGHT

BM #405 STA.434+03.68,
ELEV 521.92 , OFFSET 388.27', LEFT

FOR ADDITIONAL BENCHMARK INFORMATION, SEE ROADWAY PLAN SHEET 13 (2017)

LEGEND

- PROJECT SOIL BORING LOCATION

(X) - TEMPORARY WALL (FOR WALL TABLE SEE SHEET 2/64)

NOTES

1. EARTH WORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

2. SEE ROADWAY PLANS FOR GUARDRAIL DETAILS AND PAYMENT.

3. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

EXISTING STRUCTURE

TYPE: 4 SPAN CONTINUOUS STEEL BEAM SUPERSTRUCTURE WITH REINFORCED CONCRETE DECK ON REINFORCED CONCRETE ABUTMENTS AND COLUMN PIERS
SPANS: 47'-11¾", 79'-10⅞", 66'-5⅜", 39'-11⅞" C/C BEARINGS
ROADWAY: 21'-4" F/F PARAPET
SKEW: ALL CENTERLINE BEARINGS ARE ON RADIAL LINES
DESIGN LOADING: CF 2000-51 ADEQUATE FOR AASHO ALTERNATE LOADING
DECK: REINFORCED CONCRETE
SUBSTRUCTURE: CONCRETE ABUTMENTS AND DEEP FOUNDATION PIERS
DATE BUILT: 1958
STRUCTURE FILE NUMBER: 3113779
APPROACH SLABS: 20' LONG
WEARING SURFACE: 1" MONOLITHIC CONCRETE

PROPOSED STRUCTURE

TYPE: 3 SPAN CONTINUOUS STEEL GIRDER SUPERSTRUCTURE WITH COMPOSITE REINFORCED CONCRETE DECK ON REINFORCED CONCRETE STUB ABUTMENTS AND T-TYPE PIERS
SPANS: 110'-10 3/16", 144'-8¾", AND 71'- 8 15/16" C/C BEARINGS, MEASURED ALONG REFERENCE CHORD
ROADWAY: 30'-6" T/T PARAPET
DESIGN LOADING: HL-93
FUTURE WEARING SURFACE LOADING: 60 PSF
SKEW: VARIES (SEE REFERENCE CHORD DIAGRAM) ON GENERAL PLAN
WEARING SURFACE: MONOLITHIC CONCRETE (MACRO-FIBERS)
APPROACH SLABS: AS-1-15 (30' LONG) T=17" MODIFIED
ALIGNMENT: 487'-9⅞" CURVE RIGHT
CROWN: 1.40% AND 5.60%
LATITUDE: N 39°10'30.39"
LONGITUDE: W 84°29'22.08"

DESIGN AGENCY: EMH&T
DATE: 12-15-21
REVIEWED: CAS
DRAWN: GB
REVISED: -
DESIGNED: RMW
CHECKED: RJE
STRUCTURE FILE NUMBER: 3113787

HAMILTON COUNTY
STA. 416+56.45
STA. 419+94.75

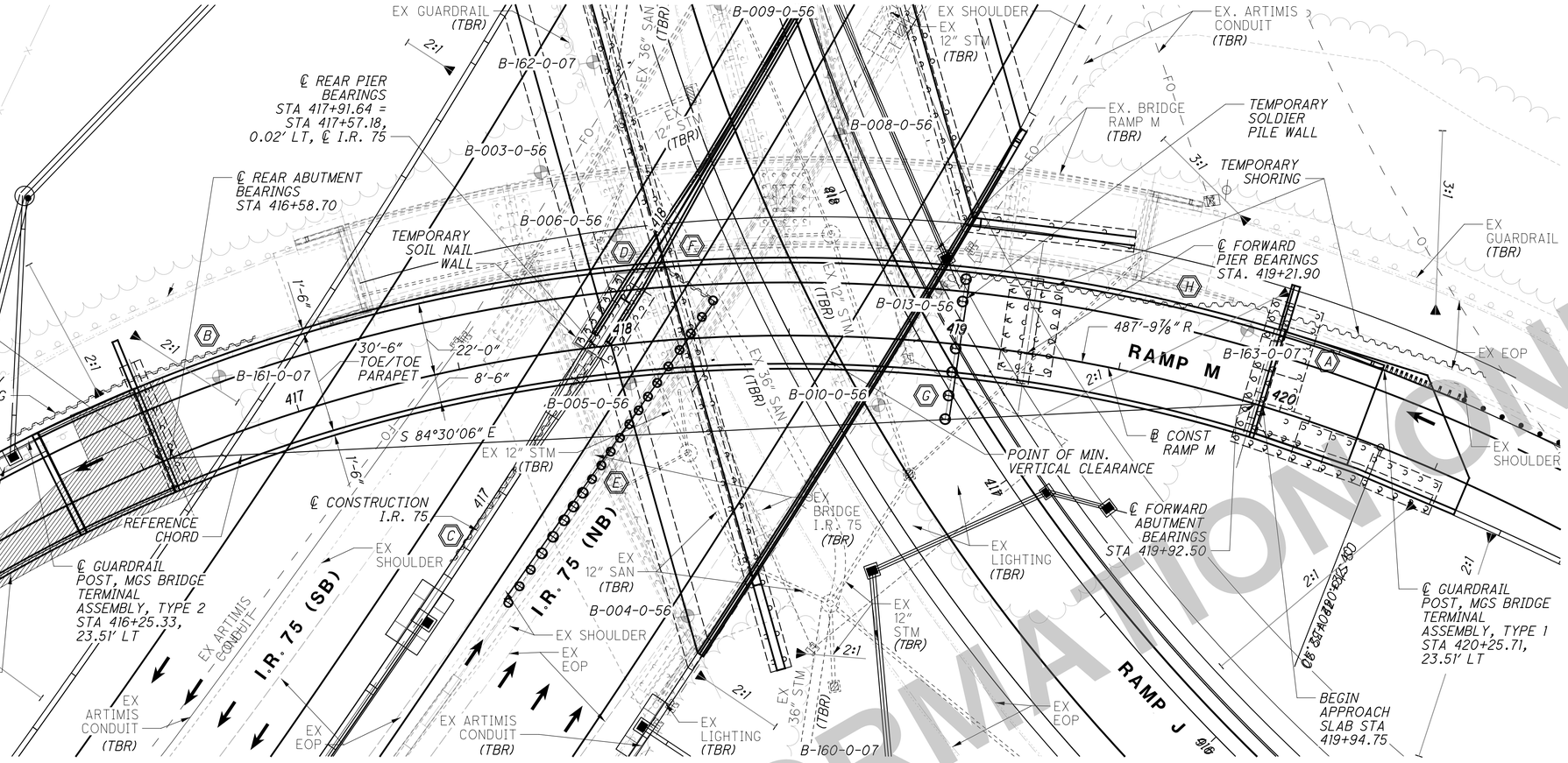
SITE PLAN
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

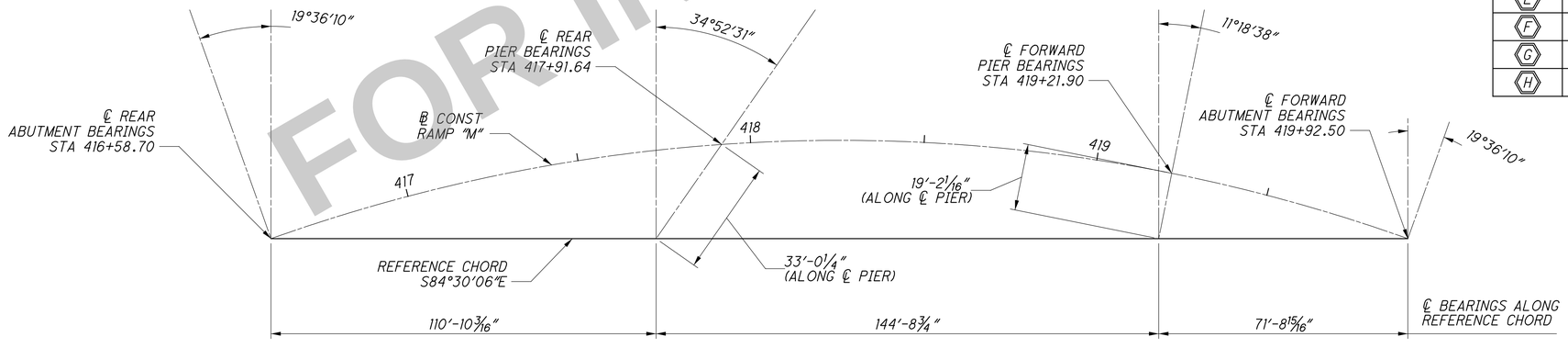
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PLAN



REFERENCE CHORD DIAGRAM

TEMPORARY WALLS

(A)	TEMPORARY WIRE FACED MSE WALL A
(B)	COFFERDAMS AND EXCAVATION BRACING WALL B
(C)	COFFERDAMS AND EXCAVATION BRACING WALL C
(D)	COFFERDAMS AND EXCAVATION BRACING WALL D
(E)	COFFERDAMS AND EXCAVATION BRACING WALL E
(F)	COFFERDAMS AND EXCAVATION BRACING WALL F
(G)	COFFERDAMS AND EXCAVATION BRACING WALL G
(H)	COFFERDAMS AND EXCAVATION BRACING WALL H

LEGEND

(X) - WALL

NOTE

SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

FOR INFORMATION ONLY

DESIGN AGENCY
EMH&T
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, Ohio 43054
Phone: 614.775.4500

DESIGNED	DRAWN	REVIEWED	DATE
RMW	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RJE	-	3113787	

HAMILTON COUNTY
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GENERAL PLAN
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

1270
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REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15	REVISED	7-17-15
AS-2-15	REVISED	1-18-19
EXJ-4-87	REVISED	1-19-18
PCB-91	REVISED	7-17-20
SBR-1-20	REVISED	7-17-20

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

866	DATED	4-21-17
867	DATED	1-15-21

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

SPECIAL DESIGN SPECIFICATIONS:

THIS BRIDGE REQUIRED THE USE OF A THREE DIMENSIONAL MODEL USING THE FINITE ELEMENT DESIGN METHOD TO ANALYZE THE STRUCTURE. THE COMPUTER PROGRAM USED FOR STRUCTURAL ANALYSIS WAS MIDAS CIVIL 2020 (v3.1). THE BRIDGE COMPONENTS DESIGNED BY THIS METHOD AND THE LIVE LOAD DISTRIBUTION FACTORS USED WERE:

DEAD LOAD DISTRIBUTION: SLAB LOADS ARE DISTRIBUTED BASED UPON GIRDER SPACING AND TRIBUTARY WIDTHS. FUTURE WEARING SURFACE, AND BARRIER LOADS ARE DISTRIBUTED EQUALLY TO ALL GIRDERS.

LIVE LOADS WERE GENERATED AUTOMATICALLY BY THE DESIGN PROGRAM AND WERE APPLIED WITHIN USER DETERMINED LANES. THE DESIGN PROGRAM DISTRIBUTED THE LIVE LOADS BASED ON THE LONGITUDINAL AND TRANSVERSE STIFFNESS.

OPERATIONAL IMPORTANCE:

A LOAD MODIFIER OF 1.05 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING:

HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ.FT.
LIVE LOAD SURCHARGE = 2 FEET

DESIGN DATA:

CONCRETE CLASS QC3 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE CLASS QC1/QC3 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI
STRUCTURAL STEEL - ASTM A709 GRADE 50W - YIELD STRENGTH 50 KSI

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL
2½" CONCRETE COVER
SEALING OF CONCRETE SURFACES

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

EXISTING STRUCTURE PLANS:

CONSTRUCTION PLANS FOR THE EXISTING BRIDGE ARE ON FILE AT THE DEPARTMENT OF TRANSPORTATION, DISTRICT 8 OFFICE, 505 SOUTH STATE ROUTE 741, LEBANON, OHIO AND ARE AVAILABLE FOR REFERENCE.

PILES DRIVEN TO TIP ELEVATION FOR PILE/SOIL SETUP:

THE FOLLOWING ARE ULTIMATE BEARING VALUES PER PILE AT THE SUBSTRUCTURE UNITS:

REAR ABUTMENT: 375 KIPS/PILE
REAR PIER: 370 KIPS/PILE
FORWARD PIER: 385 KIPS/PILE
FORWARD ABUTMENT: 325 KIPS/PILE

PART OF THE ULTIMATE BEARING VALUE WILL BE ACHIEVED THROUGH PILE/SOIL SETUP, WHICH IS A TIME-DEPENDENT INCREASE IN RESISTANCE THAT OCCURS IN SOME SOILS.

NOTIFY THE ENGINEER AT LEAST 5 DAYS BEFORE DRIVING PILES SO THAT THE ENGINEER CAN NOTIFY THE DISTRICT GEOTECHNICAL ENGINEER, THE OFFICER OF CONSTRUCTION ADMINISTRATION, AND THE OFFICE OF STRUCTURAL ENGINEERING.

DRIVE THE FIRST TWO PILES IN EACH SUBSTRUCTURE TO THE TIP ELEVATION GIVEN BELOW FOR THE SUBSTRUCTURE. DRIVE THE THIRD AND FOURTH PILES TO 75% AND 85% OF THE LENGTH OF THE FIRST TWO PILES. PERFORM DYNAMIC LOAD TESTING ON ALL FOUR PILES WHILE DRIVING. AFTER DRIVING THE FOUR PILES, CEASE ALL DRIVING OPERATIONS AT THE SUBSTRUCTURE FOR A MINIMUM OF 7 DAYS. INCLUDE THE WAITING PERIOD AS A SEPARATE ACTIVITY IN THE PROGRESS SCHEDULE. AFTER THE WAITING PERIOD, PERFORM PILE RESTRIKES ON THE FOUR PILES (TWO RESTRIKE ITEMS). SUBMIT ALL TEST RESULTS TO THE ENGINEER. THE ENGINEER WILL REVIEW THE TEST RESULTS AND ESTABLISH DRIVING CRITERIA FOR THE PILING IN THE SUBSTRUCTURE WITH THE ASSISTANCE OF THE DISTRICT GEOTECHNICAL ENGINEER, THE OFFICE OF CONSTRUCTION ADMINISTRATION, AND THE OFFICE OF STRUCTURAL ENGINEERING. THE DRIVING CRITERIA WITH PILE SETUP SHALL BE PEFORMED FOR THE FIRST STAGE OF BRIDGE CONSTRUCTION. THE CONTRACTOR SHALL NOT ORDER PILES FOR SUBSEQUENT PHASES UNTIL AFTER THE DRIVING CRITERIA HAS BEEN ESTABLISHED WITH SETUP. THE DEPARTMENT WILL ADJUST THE FURNISHED PILE QUANTITIES BASED ON THE RESTRIKE TEST RESULTS.

IF THE DYNAMIC LOAD TESTING INDICATES A PILE HAS ACHIEVED THE ULTIMATE BEARING VALUE ABOVE THE TIP ELEVATION DURING THE INITIAL DRIVING (BEFORE THE WAITING PERIOD), STOP DRIVING AND NOTIFY THE ENGINEER. IF THE RESTRIKE TEST RESULTS ON THE FOUR PILES INDICATE THAT A PILE DID NOT ACHIEVE THE REQUIRED ULTIMATE BEARING VALUE, DRIVE THE PILE TO THE ESTABLISHED DRIVING CRITERIA. SPLICING OF THE PILES BEYOND THE ESTIMATED LENGTH PROVIDED IN THE PLANS WILL BE PAID BY THE DEPARTMENT UNDER CMS 109.05 WITH A NEGOTIATED PRICE PER SPLICE.

REAR ABUTMENT
12 PILES, 85 FEET LONG, ORDER LENGTH
TIP ELEVATION 465.25
2 DYNAMIC LOAD TESTING ITEMS
2 RESTRIKE

PIER 1
26 PILES 80 FEET LONG, ORDER LENGTH
TIP ELEVATION, 439.50 FEET
2 DYNAMIC LOAD TESTING ITEMS
2 RESTRIKE

PIER 2
24 PILES 75 FEET LONG, ORDER LENGTH
TIP ELEVATION 440.00
2 DYNAMIC LOAD TESTING ITEMS
2 RESTRIKE

FORWARD ABUTMENT
53 PILES 75 FEET LONG, ORDER LENGTH
TIP ELEVATION 473.25 (MAX.), 464.25 (MIN.)
2 DYNAMIC LOAD TESTING ITEMS
2 RESTRIKE

PILE DRIVING CONSTRAINTS:

PILE DRIVING AT THE REAR ABUTMENT MAY NOT BEGIN UNTIL SUFFICIENT EMBANKMENT AND MSE WALL SETTLEMENT HAS OCCURRED AS DOCUMENTED BY THE SETTLEMENT PLATFORMS. THE ANTICIPATED WAITING PERIOD TO PERMIT SUFFICIENT EMBANKMENT SETTLEMENT IS 45 DAYS. THE DISTRICT GEOTECHNICAL ENGINEER MAY REDUCE OR EXTEND THE WAITING PERIOD BASED ON THE MAGNITUDE AND RATE OF THE EMBANKMENT SETTLEMENT AS DETERMINED BY THE SETTLEMENT PLATFORMS. THE SETTLEMENT WAITING PERIOD BEGINS ONCE THE APPROACH EMBANKMENT REACHES THE DESIGN SUBGRADE LEVEL FOR A MINIMUM DISTANCE OF 100 FT. BEHIND THE REAR ABUTMENT. THE PLANS HAVE PROVISIONS FOR A TEMPORARY WALL AT THE REAR ABUTMENT LOCATION TO PERMIT PLACEMENT OF EMBANKMENT TO THE DESIGN SUBGRADE LEVEL. BEGIN PILE DRIVING ONLY FOLLOWING TERMINATION OF THE SETTLEMENT MONITORING WAITING PERIOD BY THE DISTRICT GEOTECHNICAL ENGINEER.

ITEM 202 - STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

UPLIFT IS OCCURING AT BOTH THE REAR AND FORWARD ABUTMENT BEARINGS OF THE EXISTING BRIDGE RESULTING IN THE EXISTING BEARINGS TO CURRENTLY BE "FLOATING". THE CONTRACTOR SHALL KEEP THIS IN MIND WHEN PREPARING THE REMOVAL SEQUENCE IN HIS DEMOLITION PLAN TO ENSURE THAT THE REMOVAL OF THE BRIDGE IS PERFORMED IN A SAFE MANNER.

THE EXISTING REAR ABUTMENT SHALL BE REMOVED IN ITS ENTIRETY DURING PHASE 1 CONSTRUCTION OF THE HAM-75-0791 BRIDGE CONSTRUCTION PER THE HAM-75-0791 BRIDGE PLANS.

THE EXISTING PIER 1 SHALL BE REMOVED TO 1'-0" BELOW THE EXISTING GRADE DURING REMOVAL OF THE HAM-562-0004 BRIDGE.

THE EXISTING FORWARD ABUTMENT SHALL BE REMOVED 1'-0" BELOW THE EXISTING GRADE DURING REMOVAL OF THE HAM-562-0004 BRIDGE. THE REMAINDER OF THE ABUTMENT SHALL BE REMOVED IN ITS ENTIRETY DURING THE CONSTRUCTION OF RAMP J.

THE CONTRACTOR MUST REVIEW THE STRUCTURE WHEN PREPARING HIS BID. THE CONTRACTOR WILL REVIEW THE CONDITION OF THE STRUCTURE TO DETERMINE WHAT DEBRIS WILL FALL FROM THE STRUCTURE DURING REMOVAL. THE CONTRACTOR WILL DETERMINE THE CORRESPONDING COST TO CLEAN-UP ANY AND ALL DEBRIS WHICH FALLS FROM THE STRUCTURE DURING ANY REMOVAL OPERATION. THE COST TO CLEAR AND CLEAN-UP ALL DEBRIS DURING REMOVAL SHALL BE INCLUDED WITH THE BID FOR THIS ITEM OF WORK. NO ADDITIONAL COST WILL BE RECOGNIZED TO CLEAN DEBRIS RESULTING FROM THE STRUCTURE REMOVAL OPERATION.

THE EXISTING PIER 2 SHALL BE REMOVED TO 1'-0" BELOW FINAL GRADE OF RAMP J DURING REMOVAL OF THE HAM-562-0004 BRIDGE.

THE EXISTING PIER 3 SHALL BE REMOVED 1'-0" BELOW THE EXISTING GRADE DURING REMOVAL OF THE HAM-562-0004 BRIDGE. THE REMAINDER OF THE PIER SHALL BE REMOVED IN ITS ENTIRETY DURING THE CONSTRUCTION OF RAMP J.

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN

AT ALL TEMPORARY SHORING LOCATIONS, THE DESIGNS SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATIVE DESIGN TO SUPPORT THE SIDES OF EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION BRACING. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN. INDIVIDUAL PAY ITEMS ARE PROVIDE FOR EACH SHORING LOCATION DUE TO THE COMPLICATED NATURE AND VARYING TYPES OF SHORING NEEDED FOR THIS STRUCTURE.

ITEM 509 - UNCOATED REINFORCING STEEL, AS PER PLAN

ALL REINFORCING STEEL IN THE SUPERSTRUCTURE SHALL BE LEAN DUPLEX STAINLESS STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A955/A955M STANDARD SPECIFICATION FOR DEFORMED AND PLAIN SOLID STAINESS STEEL BARS FOR CONCRETE REINFORCEMENT. UNS (UNIFIED NUMBERING SYSTEM FOR METALS AND ALLOYS) DESIGNATIONS: S31803 OR S32304. ALL STAINLESS STEEL REINFORCING SHALL BE PAID FOR UNDER ITEM 509 - REINFORCING STEEL, AS PER PLAN.

ALL REINFORCING STEEL IN THE ABUTMENTS AND PIERS SHALL BE EPOXY COATED REINFORCING STEEL AND PAID FOR UNDER ITEM 509 - EPOXY COATED REINFORCING STEEL.

ITEM 523 - DYNAMIC LOAD TESTS

PERFORM DYNAMIC LOAD TESTS PER ITEM 523 AT LOCATIONS AND FREQUENCY OUTLINED IN THE PLANS. EACH UNIT OF PAYMENT FOR THE DYNAMIC LOAD TEST INCLUDES TESTING OF TWO PILES WITH SIGNAL MATCHING ON ONE OF THE TWO PILES TESTED.

FOR INFORMATION ONLY

DESIGN AGENCY EMH&T
DESIGNED RMW | DRAWN GB | CHECKED RJE | REVIEWED CAS | DATE 12-15-21 | REVISED - | STRUCTURE FILE NUMBER 3113787

GENERAL NOTES
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

1271
2017

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ITEM 511 - CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN

THIS ITEM MODIFIES THE STANDARD 511 CONCRETE FOR STRUCTURES SPECIFICATION TO INCLUDE MACRO-SYNTHETIC, AND CORROSION INHIBITORS INTO THE SUPERSTRUCTURE CONCRETE. THIS ITEM SHALL CONFORM TO CMS 511 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

PROVIDE MATERIALS CONFORMING TO 511.02 EXCEPT AS MODIFIED BELOW:

PORTLAND CEMENT CONCRETE:	499.03, CLASS QC 3 MEETING A DESIGN STRENGTH OF 4,500 PSI, WITH MACRO-SYNTHETIC FIBERS WITH MODIFICATION PER 511.02
FIBERS FOR CONCRETE:	ASTM C 1116, TYPE III
CORROSION INHIBITOR:	515.15

THE CLASS QC3 CONCRETE FOR THE SUPERSTRUCTURE SHALL MEET THE FOLLOWING CRITERIA:
WATER/CEMENT RATIO = 0.40 MAXIMUM; MINIMUM 4 LBS/CY MACRO-SYNTHETIC FIBERS (1.5 IN. MIN. TO 2.5 IN. MAX.) MEETING ASTM C1116 TYPE III SHALL BE ADDED TO THE MIX.

MIX SHALL INCLUDE A MIGRATING CORROSION INHIBITOR AS MANUFACTURED BY AN APPROVED SUPPLIER LISTED ON ODOT'S QUALIFIED APPROVED SUPPLIERS, ITEM 515.15. THE DOSAGE RATE LISTED ON THE ODOT QUALIFIED APPROVED SUPPLIERS LIST WILL APPLY.

THE MACRO-SYNTHETIC FIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO 'BALLING' OCCURS. UPON INSPECTION OF THE MIX AT THE TIME OF PLACEMENT, IF ANY 'BALLING' OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR. IT IS IMPORTANT TO FOLLOW INDUSTRY STANDARDS AND ASTM SPECIFICATIONS ON THE PREMIXING OF THE CEMENT, AGGREGATE, AND MACRO-SYNTHETIC FIBERS PRIOR TO THE ADDITION OF WATER AND ADMIXTURES. PROVIDE MACRO-SYNTHETIC -FIBERS THAT ARE MONOFILAMENT FIBERS MADE FROM VIRGIN POLYPROPYLENE, POLYETHYLENE, OR CO-POLYMERS THAT ARE INERT TO ALKALI ATTACK. ENSURE THE MACRO-SYNTHETIC FIBERS HAVE A MINIMUM TENSILE STRENGTH OF 70 KSI, A MINIMUM MODULUS OF ELASTICITY OF 800 KSI, A MINIMUM FILAMENT DIAMETER OF 0.012 INCHES, AND ASPECT RATIO BETWEEN 60 AND 100, AND ARE BETWEEN 1.0 AND 2.5 INCHES IN LENGTH. STORE THE MACRO-SYNTHETIC FIBERS ACCORDING TO THE MANUFACTURE'S RECOMMENDATION AND KEEP THE MATERIAL FREE FROM DUST, DIRT AND MOISTURE.

USE A MINIMUM DOSAGE RATE OF MACRO-SYNTHETIC FIBERS OF 4.0 LBS/CY OF CONCRETE. DETERMINE THE FINAL PROPOSED DOSAGE RATE THROUGH MIX TESTING. ENSURE THE FIBER REINFORCED CONCRETE MEETS OR EXCEEDS A MINIMUM EQUIVALENT FLEXURAL STRENGTH RATIO OF 25% ACCORDING TO ASTM C 1609. ENSURE THE FINAL PROPOSED MIX IS WORKABLE AND ABLE TO BE PRODUCED SUCH THAT BALLING OR CLUMPING OF THE FIBERS IS NOT A PROBLEM AS DETERMINED BY THE ENGINEER. UTILIZE A LABORATORY REGULARLY INSPECTED BY THE CEMENT AND CONCRETE REFERENCE LABORATORY (CCRL) OF THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, OR OTHER APPROVED REFERENCE LABORATORY, TO PERFORM THE TESTING. BEFORE USE, SUBMIT DOCUMENTATION TO THE PROJECT ENGINEER CERTIFYING BOTH THE MACRO-SYNTHETIC FIBERS AND THE MIX MEET OR EXCEED THE REQUIRED PROPERTIES. SAMPLING WILL BE ALLOWED FOR TESTING PURPOSES. A DEMONSTRATION OF THE MIX PRODUCTION OR TRIAL MIX, MAY BE REQUIRED BY THE ENGINEER PRIOR TO PLACING ANY OF THE MIX ON THE PROJECT.

ITEM 511 - CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN (CONT.)

THE BATCH WEIGHTS SHALL BE CORRECTED TO COMPENSATE FOR THE MOISTURE CONTAINED IN THE AGGREGATE AT THE TIME OF USE. A CHEMICAL ADMIXTURE (705.12, TYPE A OR D) SHALL BE USED.

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT THE CORROSION INHIBITOR AND ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CORROSION INHIBITOR IS SUGGESTED TO BE A MCI PRODUCT BY CORTEC OR AN APPROVED EQUAL FROM THE QUALIFIED PRODUCTS LIST. THE CONCRETE SUPPLIER'S CHOICE OF ONE OF THESE CORROSION INHIBITORS DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS. PLEASE BE ADVISED THAT SOME PRODUCTS ON THE LIST EFFECT THE DELIVERED MIX PROPERTIES GREATLY WHILE OTHER PRODUCTS DO NOT.

APPROACH SLABS, DIAPHRAGMS, AND BRIDGE RAILING CONCRETE (WHEN APPLICABLE) ARE TO USE THE SAME MIX DESIGN AS THE BRIDGE DECK. THE CONTRACTOR SHOULD BE ADVISED THAT CONCRETE RETARDING AGENTS MAY NEED TO BE ADDED TO OFFSET THE EFFECTS OF THE MIGRATING CORROSION INHIBITOR SELECTED. USE SELF-COMPACTING CONCRETE ON DECORATIVE RAILING SIMILAR TO TEXAS RAILING AND MACRO-SYNTHETIC CONCRETE PER THIS SPECIFICATION ON TRADITIONAL CONCRETE RAILING WHEN APPLICABLE.

THE CONTRACTOR SHALL PROVIDE TRADITIONAL BRIDGE DECK FORMS CONFORMING TO CMS 508. PERMANENT STAY-IN-PLACE (SIP) FORMS ARE NOT ALLOWED. THE PLACING OF THE DECK AND THE APPROACH SLABS IN THE SAME CONCRETE POUR IS NOT PERMITTED.

ITEM 511 - CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN

THE EXTERIOR FACE OF THE BRIDGE RAILING SHALL HAVE A FORM LINER PATTERN APPLIED THAT MATCHES THE ARCHITECTURAL "TEXAS RAIL" DETAILS SHOWN IN THE PLANS. THIS ITEM SHALL INCLUDE ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO CONSTRUCT THE "TEXAS" TYPE BRIDGE RAILING. QUANTITY SHALL INCLUDE SAW CUTTING, JOINT SEALER, FORM LINERS AND ANY OTHER MISCELLANEOUS ITEMS REQUIRED TO FULLY CONSTRUCT THE RAILING. THIS ITEM SHALL ONLY INCLUDE THE PARAPET ON THE BRIDGE. PARAPET ON APPROACH SLABS SHALL BE PAID FOR UNDER ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN.

IN ADDITION TO THE WORK ITEMS REQUIRED IN ITEM 511, THIS ITEM WILL INCLUDE THE DEVELOPMENT, DELIVERY AND PLACMENT OF A SPECIAL CONCRETE MIX AS DESCRIBED IN THE FOLLOWING NOTE:

PROVIDE A CONCRETE WITH THE FOLLOWING PROPERTIES:

MINIMUM PORTLAND CEMENT CONTENT NO MICRO SILICA AND NO FLY ASH	800 LB/CU. YD.
MAXIMUM COARSE AGGREGATE SIZE	#8
MAXIMUM WATER/CEMENT RATIO	0.38
COARSE TO FINE AGGREGATE RATIO TO PRODUCE SELF CONSOLIDATING CONCRETE	
MINIMUM 3 DAY STRENGTH PSI	4000
MINIMUM 28 DAY STRENGTH PSI	5500
AIR CONTENT	8% ±2%
MINIMUM SPREAD	24"

PROVIDE A CONCRETE MIX AT A SLUMP THAT ALLOWS THE CONCRETE MIX TO BE PUMPED THROUGH A 3 1/2" DIAMETER ACCESS HOLE THROUGH THE FORM AND SELF CONSOLIDATE THE PARAPET CONCRETE. THE FINAL CONCRETE MIX WILL BE A SELF CONSOLIDATING CONCRETE USING AN APPROVED SELF CONSOLIDATING ADMIXTURE.

SUBMIT THE MIX DESIGN AND TEST RESULTS TO THE ENGINEER FOR REVIEW AND ACCEPTANCE.

DURING THE CONCRETE OPERATIONS, ASSURE THE REPRESENTATIVES OF THE READY MIX PRODUCER AND THE CHEMICAL ADMIXTURE MANUFACTURER ARE ON SITE TO DETERMINE ANY ADJUSTMENTS REQUIRED TO COMPLETE THE CONCRETE PLACEMENT.

PAYMENT FOR THIS WORK SHALL INCLUDE ALL NECESSARY MATERIAL, LABOR, AND EQUIPMENT TO COMPLETE THIS TASK. PAYMENT SHALL BE MADE UNDER ITEM 511 - CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN

ITEM 511 - CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS, AS PER PLAN
ITEM 511 - CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN

THIS ITEM MODIFIES THE STANDARD 511 CONCRETE FOR STRUCTURES SPECIFICATION TO INCLUDE MACRO-SYNTHETIC, AND CORROSION INHIBITORS INTO THE SUBSTRUCTURE CONCRETE. THIS ITEM SHALL CONFORM TO CMS 511 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

PROVIDE MATERIALS CONFORMING TO 511.02 EXCEPT AS MODIFIED BELOW:

PORTLAND CEMENT CONCRETE:	499.03, CLASS QC 3 MEETING A DESIGN STRENGTH OF 4,500 PSI, WITH MACRO-SYNTHETIC FIBERS WITH MODIFICATION PER 511.02
FIBERS FOR CONCRETE:	ASTM C 1116, TYPE III
CORROSION INHIBITOR:	515.15

THE CLASS QC3 CONCRETE FOR THE SUBSTRUCTURE SHALL MEET THE FOLLOWING CRITERIA:
WATER/CEMENT RATIO = 0.40 MAXIMUM; MINIMUM 4 LBS/CY MACRO-SYNTHETIC FIBERS (1.0 IN. MIN. TO 2.5 IN. MAX.) MEETING ASTM C1116 TYPE III SHALL BE ADDED TO THE MIX.

MIX SHALL INCLUDE A MIGRATING CORROSION INHIBITOR AS MANUFACTURED BY AN APPROVED SUPPLIER LISTED ON ODOT'S QUALIFIED APPROVED SUPPLIERS, ITEM 515.15. THE DOSAGE RATE LISTED ON THE ODOT QUALIFIED APPROVED SUPPLIERS LIST WILL APPLY.

THE MACRO-SYNTHETIC FIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO 'BALLING' OCCURS. UPON INSPECTION OF THE MIX AT THE TIME OF PLACEMENT, IF ANY 'BALLING' OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR. IT IS IMPORTANT TO FOLLOW INDUSTRY STANDARDS AND ASTM SPECIFICATIONS ON THE PREMIXING OF THE CEMENT, AGGREGATE, AND MACRO-SYNTHETIC FIBERS PRIOR TO THE ADDITION OF WATER AND ADMIXTURES. PROVIDE MACRO-SYNTHETIC -FIBERS THAT ARE MONOFILAMENT FIBERS MADE FROM VIRGIN POLYPROPYLENE, POLYETHYLENE, OR CO-POLYMERS THAT ARE INERT TO ALKALI ATTACK. ENSURE THE MACRO-SYNTHETIC FIBERS HAVE A MINIMUM TENSILE STRENGTH OF 70 KSI, A MINIMUM MODULUS OF ELASTICITY OF 800 KSI, A MINIMUM FILAMENT DIAMETER OF 0.012 INCHES, AND ASPECT RATIO BETWEEN 60 AND 100, AND ARE BETWEEN 1.0 AND 2.5 INCHES IN LENGTH. STORE THE MACRO-SYNTHETIC FIBERS ACCORDING TO THE MANUFACTURE5#32S RECOMMENDATION AND KEEP THE MATERIAL FREE FROM DUST, DIRT AND MOISTURE.

USE A MINIMUM DOSAGE RATE OF MACRO-SYNTHETIC FIBERS OF 4.0 LBS/CY OF CONCRETE. DETERMINE THE FINAL PROPOSED DOSAGE RATE THROUGH MIX TESTING. ENSURE THE FIBER REINFORCED CONCRETE MEETS OR EXCEEDS A MINIMUM EQUIVALENT FLEXURAL STRENGTH RATIO OF 25% ACCORDING TO ASTM C 1609. ENSURE THE FINAL PROPOSED MIX IS WORKABLE AND ABLE TO BE PRODUCED SUCH THAT BALLING OR CLUMPING OF THE FIBERS IS NOT A PROBLEM AS DETERMINED BY THE ENGINEER. UTILIZE A LABORATORY REGULARLY INSPECTED BY THE CEMENT AND CONCRETE REFERENCE LABORATORY (CCRL) OF THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, OR OTHER APPROVED REFERENCE LABORATORY, TO PERFORM THE TESTING. BEFORE USE, SUBMIT DOCUMENTATION TO THE PROJECT ENGINEER CERTIFYING BOTH THE MACRO-SYNTHETIC FIBERS AND THE MIX MEET OR EXCEED THE REQUIRED PROPERTIES. SAMPLING WILL BE ALLOWED FOR TESTING PURPOSES. A DEMONSTRATION OF THE MIX PRODUCTION OR TRIAL MIX, MAY BE REQUIRED BY THE ENGINEER PRIOR TO PLACING ANY OF THE MIX ON THE PROJECT.

THE BATCH WEIGHTS SHALL BE CORRECTED TO COMPENSATE FOR THE MOISTURE CONTAINED IN THE AGGREGATE AT THE TIME OF USE. A CHEMICAL ADMIXTURE (705.12, TYPE A OR D) SHALL BE USED. THE ENGINEER CAN REDUCE THE BATCH LOAD SIZE AT ANY TIME AS NEEDED TO CORRECT/IMPROVE CONCRETE QUALITY.

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT THE CORROSION INHIBITOR AND ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CORROSION INHIBITOR IS SUGGESTED TO BE A MCI PRODUCT BY CORTEC OR AN APPROVED EQUAL FROM THE QUALIFIED PRODUCTS LIST. THE CONCRETE SUPPLIER5#32S CHOICE OF ONE OF THESE CORROSION INHIBITORS DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS. PLEASE BE ADVISED THAT SOME PRODUCTS ON THE LIST EFFECT THE DELIVERED MIX PROPERTIES GREATLY WHILE OTHER PRODUCTS DO NOT.

THE CONTRACTOR SHOULD BE ADVISED THAT CONCRETE RETARDING AGENTS MAY NEED TO BE ADDED TO OFFSET THE EFFECTS OF THE MIGRATING CORROSION INHIBITOR SELECTED.

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DESIGN AGENCY EMH&T
REVIEWED CAS DATE 12-15-21
DRAWN GB REVISED -
DESIGNED RMW CHECKED RJE
STRUCTURE FILE NUMBER 3113787

GENERAL NOTES
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

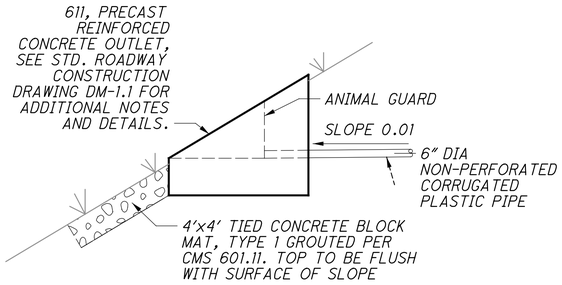
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ITEM 514 - FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT, AS PER PLAN
ITEM 514 - FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN

ALL EXPOSED STEEL GIRDER SURFACES WITHIN THE END 10' OF EACH GIRDER ADJACENT TO THE ABUTMENTS, AS WELL AS THE ENTIRE LENGTH OF THE FASCIA GIRDER OUTSIDE SURFACES, LOWER FLANGES, AND 6" FROM THE BASE OF INSIDE WEB SHALL HAVE A THREE COAT IZEU PAINT SYSTEM APPLIED. THE PRIME COAT SHALL BE SHOP APPLIED. THE APPLICATION OF THE PRIME COAT SHALL BE PAID FOR UNDER ITEM 513, STRUCTURAL STEEL MEMBERS, LEVEL 5. THE INTERMEDIATE AND FINISH COATS SHALL BE FIELD APPLIED PER ITEM 514. SEE TRANSVERSE DECK SECTION ON SHEET 50/64 FOR EXACT LIMITS OF PAINTING OF THE FACIA GIRDERS. THE COLOR OF THE FINISH COAT SHALL BE FEDERAL COLOR NUMBER 14277 (GREEN).

ITEM 518, 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN

PAYMENT FOR ALL ITEMS SHOWN FOR PIPE TERMINATION ARE INCLUDED WITH ITEM 518, 6" NON-PERFORATED CORRUGATED PLASTIC PIPE.



TERMINATION OF 6" NPCPP DETAIL

ITEM 523 - DYNAMIC LOAD TESTING

PERFORM DYNAMIC LOAD TESTS PER ITEM 523 AT LOCATIONS AND FREQUENCY OUTLINED IN THE PLANS. EACH UNIT OF PAYMENT FOR THE DYNAMIC LOAD TEST INCLUDES TESTING OF TWO PILES WITH SIGNAL MATCHING ON ONE OF THE TWO PILES TESTED.

ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN

THIS ITEM SHALL INCLUDE ALL THE COST OF ALL CONCRETE AND REINFORCING STEEL FOR THE APPROACH SLABS AND PARAPETS ON APPROACH SLABS. SEALING OF THE PARAPETS SHALL BE PAID FOR UNDER ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).

DECK PLACEMENT DESIGN ASSUMPTIONS:

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 1.0 KIP FOR A TOTAL MACHINE LOAD OF 7.6 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103 IN.

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65 IN.

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DESIGNED	DRAWN	REVIEWED	DATE
RMW	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
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GENERAL NOTES
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RAMP M OVER I.R. 75

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2017

TEMPORARY SOIL NAIL WALL NOTES:

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 9TH EDITION, 2020, AND THE ODOT BRIDGE DESIGN MANUAL, 2020. THIS STRUCTURE ALSO CONFORMS TO THE FEDERAL HIGHWAY ADMINISTRATION PUBLICATION NO. FHWA-NHI -14-007 (FHWA GEC 7).

DESIGN DATA

SOIL NAIL WALLS ARE DESIGNED FOR AN EQUIVALENT FLUID EARTH PRESSURE OF 50 POUNDS PER CUBIC FEET. THE DESIGN ULTIMATE SOIL NAIL BOND STRESS IS 8.5 PSI. THE REQUIRED ALLOWABLE SOIL NAIL PULLOUT RESISTANCE IS 1.5 KIPS PER LINEAL FOOT.

DESIGN STRESSES

SHOTCRETE - COMPRESSIVE STRENGTH 4,000 PSI
REINFORCING STEEL - ASTM A615, A616 OR A617 GRADE 60 MINIMUM YIELD STRENGTH 60,000 PSI
SOIL NAILS - ASTM A615, A616, GRADE 60 MINIMUM
STRUCTURAL STEEL - A36 - YIELD STRENGTH 36,000 PSI

DESIGN DATA

SOIL NAIL WALLS ARE DESIGNED FOR AN EQUIVALENT FLUID EARTH PRESSURE OF 50 POUNDS PER CUBIC FEET. THE DESIGN ULTIMATE SOIL NAIL BOND STRESS IS 8.5 PSI. THE REQUIRED ALLOWABLE SOIL NAIL PULLOUT RESISTANCE IS 1.5 KIPS PER LINEAL FOOT.

REFERENCE: FHWA-NHI-14-007 (FHWA GEC 7). THE DESIGN LOADS FOR THE SOIL NAILS ARE AS SHOWN IN THE TABLE ON SHEET 21/64. THE NAILS SHALL CONSIST OF A MINIMUM OF 60 KSI STEEL, WITH A MAXIMUM 5'-0" VERTICAL SPACING AND A MAXIMUM 5'-0" HORIZONTAL SPACING. THE NAILS SHALL BE INSTALLED AT AN INCLINATION OF 15 DEGREES FROM THE HORIZONTAL. HOLLOW BAR SOIL NAILS (HBSN) ARE NOT ALLOWED. THE SHOTCRETE FACING REINFORCEMENT SHALL CONSIST OF WELDED WIRE FABRIC PER ASTM A1060. THE SHOTCRETE WALL FACING SHALL BE PER ITEM 520, WITH A MINIMUM THICKNESS OF 4". FOR ALL EVALUATIONS OF OVERALL STABILITY, THE DEPARTMENT CONSIDERS THE PROPOSED SOIL NAIL WALL TO BE A "CRITICAL" STRUCTURE AS DEFINED IN FHWA-NHI-14-007.

TESTING:

PERFORM A MINIMUM OF 2 SOIL NAIL VERIFICATION TESTS; AND PROOF TESTS OF 5% OF THE SOIL NAILS IN EACH NAIL ROW OR A MINIMUM OF ONE PER ROW; AT LOCATIONS DESIGNATED BY THE ENGINEER.

SOIL NAILS

1.0 DESCRIPTION

THIS WORK CONSISTS OF CONSTRUCTING PERMANENT SOIL NAIL RETAINING WALLS AS SPECIFIED HEREIN AND SHOWN ON THE PLANS. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED FOR COMPLETING THE WORK. THE CONTRACTOR SHALL SELECT THE METHOD OF EXCAVATION, DRILLING METHOD AND EQUIPMENT, DRILLED HOLE DIAMETER(S), FINAL SOIL NAIL LENGTH(S), AND GROUTING PROCEDURES TO MEET THE PERFORMANCE REQUIREMENT SPECIFIED HEREIN.

THE REQUIRED SOIL NAIL LOCATIONS, ORIENTATIONS, AND MINIMUM LENGTHS AND THE DESIGN LOADS ARE SHOWN ON THE PLANS. THE TERM "SOIL NAIL" AS USED IN THESE SPECIFICATIONS IS INTENDED AS A GENERIC TERM AND REFERS TO A REINFORCING BAR GROUTED INTO A DRILLED HOLE INSTALLED IN ANY TYPE OF GROUND. SOIL NAIL WALLS ARE BUILT FROM THE TOP DOWN IN EXISTING GROUND.

SOIL NAILS ARE TYPICALLY SOLID BARS. HOLLOW BAR SOIL NAILS (HBSN) SHALL NOT BE USED UNLESS SPECIFICALLY ALLOWED IN THE PLANS. WHEN HBSN ARE USED, THE SUBSECTIONS HEREIN REFERRING TO HBSN SHALL SUPERSEDE THE PRECEDING SECTION WHERE THEY DIFFER. OTHERWISE, THE REQUIREMENTS FOR HBSN SHALL BE THE SAME AS FOR SOLID BAR SOIL NAILS.

SOIL NAILING WORK SHALL INCLUDE EXCAVATING IN ACCORDANCE WITH THE PLANS; DRILLING SOIL NAIL DRILLED HOLES TO THE SPECIFIED MINIMUM LENGTH AND ORIENTATION INDICATED ON THE PLANS; FURNISHING, PLACING, AND GROUTING THE ENCAPSULATED OR EPOXY COATED NAIL BAR TENDONS INTO THE DRILLED HOLES; PLACING SHOTCRETE REINFORCEMENT; APPLYING SHOTCRETE FACING OVER THE REINFORCEMENT; ATTACHING BEARING PLATES AND NUTS; PERFORMING NAIL TESTING; AND CASTING THE FINAL CAST-IN-PLACE CONCRETE FACING.

SOIL AND ROCK PROPERTIES, STRENGTH PARAMETERS, DESIGN REQUIREMENTS, AND OTHER CRITERIA ARE SHOWN ON THE PLANS. CAST-IN-PLACE (CIP) CONCRETE FACING, AND SHOTCRETE FACING CONSTRUCTION ARE COVERED BY THE STANDARD SPECIFICATIONS.

2.0 QUALIFICATION OF CONTRACTOR

PRIOR TO THE COMMENCEMENT OF SOIL NAILING WORK, THE CONTRACTOR PERFORMING THE SOIL NAILING WORK SHALL SUBMIT TO THE ENGINEER A PROJECT REFERENCE LIST VERIFYING THE SUCCESSFUL CONSTRUCTION COMPLETION OF AT LEAST 5 SOIL NAIL RETAINING WALL PROJECTS DURING THE PAST 3 YEARS TOTALING AT LEAST 1200 SQUARE FEET OF WALL FACE AREA AND THE INSTALLATION OF AT LEAST 500 SOIL NAILS. AT LEAST 3 OF THESE SOIL NAILING PROJECTS SHALL INCLUDE INSTALLING SOIL NAIL WALLS UNDER THE FOUNDATION OF EXISTING STRUCTURES. A BRIEF DESCRIPTION OF EACH PROJECT WITH THE OWNER'S NAME AND CURRENT PHONE NUMBER SHALL BE INCLUDED.

THE CONTRACTOR SHALL ALSO SUBMIT TO THE ENGINEER A REPORT WHICH IDENTIFIES THE CONTRACTOR'S PERSONNEL WHO WILL BE PERFORMING AND SUPERVISING THE SOIL NAILING WORK. THE CONTRACTOR SHALL NOT USE CONSULTANTS OR MANUFACTURER'S REPRESENTATIVES TO SATISFY THE REQUIREMENTS OF THIS SECTION. THE REPORT SHALL INCLUDE THE NAMES OF A SOIL NAIL ENGINEER, SOIL NAIL SITE SUPERVISOR, AND DRILL OPERATORS. THE REPORT SHALL ALSO CONTAIN A LIST OF EMPLOYER'S NAMES AND TELEPHONE NUMBERS, LOCATION AND DATES OF PREVIOUS PERMANENT SOIL NAILING OR TIEBACK PROJECTS, AND THE EXTENT OF WORK PERFORMED. THIS INFORMATION MUST BE VERIFIABLE. FURTHER, IN ORDER TO MEET THE REQUIREMENTS OF ODOT SPECIFICATION 108.05, THE PERSONNEL PERFORMING SOIL NAILING WORK SHALL HAVE ACQUIRED WORK EXPERIENCE, WHICH IS NOT LESS THAN THE LEVEL OF EXPERIENCE AS DEFINED BELOW.

THE ENGINEER WILL ACCEPT OR REJECT THE CONTRACTOR'S PERSONNEL WITHIN THIRTY (30) CALENDAR DAYS FOLLOWING THE SUBMISSION OF THE REPORT OF NAMES AND VERIFIABLE RESUME INFORMATION. SOIL NAILING WORK SHALL NOT COMMENCE UNTIL THE ENGINEER HAS PROVIDED A WRITTEN LETTER OF ACCEPTANCE. IN THE EVENT THE CONTRACTOR ELECTS TO SUBSTITUTE PERSONNEL, VERIFIABLE RESUME INFORMATION SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO THAT INDIVIDUAL'S PERFORMANCE OF SOIL NAILING WORK. THE ENGINEER WILL ACCEPT OR REJECT THE CONTRACTOR'S PROPOSED SUBSTITUTE WITHIN FIFTEEN (15) CALENDAR DAYS. THE ENGINEER WILL TAKE ACTION AFFORDED TO HIM PURSUANT TO ODOT SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO SPECIFICATION 108.05, IN ORDER TO BE ASSURED THAT ALL PERSONNEL HAVE THE SUFFICIENT AND REQUISITE SKILL AND EXPERIENCE TO PERFORM PROPERLY THE WORK ASSIGNED TO THEM. THE ENGINEER MAY SUSPEND THE WORK IF THE CONTRACTOR USES UNACCEPTABLE PERSONNEL. IF WORK IS SUSPENDED FOR USE OF UNACCEPTABLE PERSONNEL, NO ADJUSTMENT IN CONTRACT COSTS OR CONTRACT TIME ATTRIBUTED TO THE SUSPENSION WILL BE MADE.

2.1 SOIL NAIL ENGINEER:

THE SOIL NAIL ENGINEER SHALL BE AN OHIO REGISTERED PROFESSIONAL ENGINEER AND SHALL BE RESPONSIBLE FOR OVERSEEING THE SOIL NAILING WORK AND VERIFYING THE RESULTS OF THE TESTING. THE SOIL NAIL ENGINEER SHALL HAVE THREE (3) YEARS OF CONSTRUCTION EXPERIENCE IN THE INSTALLATION OF PERMANENT SOIL NAILS OR TIEBACKS AND SHALL HAVE OVERSEEN THE SUCCESSFUL INSTALLATION OF OVER 100 PERMANENT SOIL NAILS OR TIEBACKS. THE WORK EXPERIENCE TIME PERIOD IS COMPUTED BY THE ADDITION OF ALL DOCUMENTED DURATIONS OF SOIL NAILING OR TIEBACK WORK TIME ON CONSTRUCTION PROJECTS.

2.2 SOIL NAIL SITE SUPERVISOR:

THE SOIL NAIL SITE SUPERVISOR SHALL BE PRESENT AT THE JOB SITE AT ALL TIMES DURING THE PERFORMANCE OF SOIL NAILING WORK. THE SOIL NAIL SITE SUPERVISOR SHALL HAVE ONE (1) YEAR OF CONSTRUCTION EXPERIENCE IN THE INSTALLATION OF PERMANENT SOIL NAILS OR TIEBACKS AND SHALL HAVE SUPERVISED THE SUCCESSFUL INSTALLATION OF OVER 100 PERMANENT SOIL NAILS OR TIEBACKS. THE WORK EXPERIENCE TIME PERIOD IS COMPUTED BY THE ADDITION OF ALL DOCUMENTED DURATIONS OF SOIL NAILING OR TIEBACK WORK TIME ON CONSTRUCTION PROJECTS.

2.3 DRILL OPERATORS:

DRILL OPERATORS SHALL HAVE SUCCESSFULLY INSTALLED AT LEAST 50 PERMANENT SOIL NAILS OR TIEBACKS.

2.4 CONSTRUCTION SUBMITTALS:

UPON ACCEPTANCE OF THE SOIL NAILING CONTRACTOR'S QUALIFICATIONS SUBMITTAL SET FORTH IN SECTION 2.0; SUBMIT 5 COPIES OF THE FOLLOWING INFORMATION, IN WRITING, TO THE ENGINEER FOR REVIEW AND ACCEPTANCE.

PROVIDE SUBMITTAL ITEM NUMBERS 1 THROUGH 1.F AT LEAST 15 CALENDAR DAYS PRIOR TO INITIATING THE NAIL WALL CONSTRUCTION AND SUBMITTAL ITEMS 2 THROUGH 6 AT LEAST 15 CALENDAR DAYS PRIOR TO START OF NAIL INSTALLATION OR INCORPORATION OF THE RESPECTIVE MATERIALS INTO THE WORK:

1. THE PROPOSED START DATE AND PROPOSED DETAILED WALL CONSTRUCTION SEQUENCE INCLUDING:

A. PLAN DESCRIBING HOW SURFACE WATER WILL BE DIVERTED, CONTROLLED, AND DISPOSED OF.

B. PROPOSED METHODS AND EQUIPMENT FOR EXCAVATING THE SOIL AND/OR ROCK TO EACH STAGED EXCAVATION LIFT, INCLUDING THE PROPOSED GRADE ELEVATIONS FOR EACH EXCAVATION LIFT SHOWN ON A WALL ELEVATION VIEW.

C. MEASURES TO ENSURE WALL AND SLOPE STABILITY DURING VARIOUS STAGES OF WALL CONSTRUCTION AND EXCAVATION WHERE DISCONTINUOUS ROWS OF NAILS WILL BE INSTALLED (IF APPLICABLE); INFORMATION ON SPACE REQUIREMENTS FOR INSTALLATION EQUIPMENT; TEMPORARY SHORING PLANS (IF APPLICABLE); INFORMATION ON PROVISIONS FOR WORKING IN THE PROXIMITY OF UNDERGROUND FACILITIES OR UTILITIES (IF APPLICABLE).

D. PROPOSED NAIL DRILLING METHODS AND EQUIPMENT INCLUDING DRILL HOLE DIAMETER PROPOSED TO ACHIEVE THE SPECIFIED PULLOUT RESISTANCE VALUES AND ANY VARIATION OF THESE ALONG THE WALL ALIGNMENT.

E. ENGINEERED DRAWINGS SHOWING THE PROPOSED SEQUENCE AND GEOMETRY OF THE WALL EXCAVATION, AND INDICATING THE PROPOSED SOIL NAIL LAYOUT, INCLUDING ANY VARIATION FROM THE LAYOUT SHOWN ON THE PLANS. ENGINEERED DRAWINGS MUST BE SIGNED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER.

F. CALCULATIONS IN SUPPORT OF THE SELECTED DRILL HOLE DIAMETER AND LENGTH; NAIL BAR GRADE, DIAMETER, AND LENGTH; AND ALL OF THE ITEMS IN SECTIONS 7.4 AND 7.5 OF THIS SPECIAL PROVISION.

2. NAIL GROUT MIX DESIGN INCLUDING:

A. TYPE OF PORTLAND CEMENT.

B. AGGREGATE SOURCE AND GRADATION.

C. PROPORTIONS OF MIX BY WEIGHT AND WATER--CEMENT RATIO.

D. MANUFACTURER, BRAND NAME AND TECHNICAL LITERATURE FOR PROPOSED ADMIXTURES.

E. COMPRESSIVE STRENGTH TEST RESULTS (PER AASHTO T106/ASTM C109) SUPPLIED BY A QUALIFIED INDEPENDENT TESTING LAB VERIFYING THE SPECIFIED MINIMUM 3 AND 28--DAY GROUT COMPRESSIVE STRENGTHS. PREVIOUS TEST RESULTS FOR THE PROPOSED GROUT MIX COMPLETED WITHIN ONE YEAR OF THE START OF GROUTING MAY BE SUBMITTED FOR INITIAL VERIFICATION AND ACCEPTANCE OF THE REQUIRED COMPRESSIVE STRENGTHS AND START OF PRODUCTION WORK.

3. PROPOSED NAIL GROUT PLACEMENT PROCEDURES AND EQUIPMENT.

4. PROPOSED NAIL TESTING METHODS AND EQUIPMENT SETUP INCLUDING:

A. DETAILS OF THE JACKING FRAME AND APPURTENANT BRACING.

FOR INFORMATION ONLY

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B. DETAILS SHOWING METHODS OF ISOLATING TEST NAILS DURING SHOTCRETE APPLICATION (I.E., METHODS TO PREVENT BONDING OF THE SOIL NAIL BAR AND THE SHOTCRETE FACING DURING TESTING).

C. DETAILS SHOWING METHODS OF PROVIDING THE TEMPORARY UNBOUNDED LENGTH AND OF GROUTING THE TEMPORARY UNBONDED LENGTH OF TEST NAILS AFTER COMPLETION OF TESTING.

D. EQUIPMENT LIST.

5. IDENTIFICATION NUMBER AND CERTIFIED CALIBRATION RECORDS FOR EACH TEST JACK AND PRESSURE GAUGE AND LOAD CELL TO BE USED. JACK AND PRESSURE GAUGE SHALL BE CALIBRATED AS A UNIT. CALIBRATION RECORDS SHALL INCLUDE THE DATE TESTED, DEVICE IDENTIFICATION NUMBER AND THE CALIBRATION TEST RESULTS AND SHALL BE CERTIFIED FOR AN ACCURACY OF AT LEAST 2 PERCENT OF THE APPLIED CERTIFICATION LOADS BY A QUALIFIED INDEPENDENT TESTING LABORATORY WITHIN 90 DAYS PRIOR TO SUBMITTAL.

6. MANUFACTURER CERTIFICATES OF COMPLIANCE FOR THE SOIL NAIL CENTRALIZERS, EPOXY COATING OR ENCAPSULATION.

7. CERTIFICATE OF COMPLIANCE FOR BEARING NUTS AND PLATES.

THE ENGINEER WILL ACCEPT OR REJECT THE CONTRACTOR'S SUBMITTALS WITHIN 15 CALENDAR DAYS AFTER RECEIPT OF A COMPLETE SUBMISSION. THE CONTRACTOR WILL NOT BE ALLOWED TO BEGIN WALL CONSTRUCTION OR INCORPORATE MATERIALS INTO THE WORK UNTIL THE SUBMITTAL REQUIREMENTS ARE SATISFIED AND FOUND ACCEPTABLE TO THE ENGINEER. CHANGES OR DEVIATIONS FROM THE ACCEPTED SUBMITTALS MUST BE RESUBMITTED FOR ACCEPTANCE. NO ADJUSTMENTS IN CONTRACT TIME WILL BE ALLOWED DUE TO INCOMPLETE SUBMITTALS.

UPON DELIVERY OF NAIL BARS AND SOIL NAIL BAR COUPLERS (IF ALLOWED) TO THE PROJECT SITE, PROVIDE CERTIFIED MILL TEST RESULTS FOR NAIL BARS AND COUPLERS FROM EACH HEAT SPECIFYING THE ULTIMATE STRENGTH, YIELD STRENGTH, ELONGATION AND COMPOSITION.

2.5 PRE-CONSTRUCTION MEETING:

A PRE-CONSTRUCTION MEETING MAY BE SCHEDULED BY THE ENGINEER AND HELD PRIOR TO THE START OF WALL CONSTRUCTION. THE ENGINEER, PRIME CONTRACTOR, AND SOIL NAIL SPECIALTY CONTRACTOR SHALL ATTEND THE MEETING. THE EXCAVATION CONTRACTOR, STRUCTURE FOUNDATION INSTALLATION CONTRACTOR, SHOTCRETING CONTRACTOR, AND SURVEY CONTRACTOR, IF DIFFERENT THAN THE PRIME OR SOIL NAIL SPECIALTY CONTRACTOR, SHALL ALSO ATTEND. THE PRE--CONSTRUCTION MEETING WILL BE CONDUCTED TO CLARIFY THE CONSTRUCTION REQUIREMENTS FOR THE WORK, TO COORDINATE THE CONSTRUCTION SCHEDULE AND ACTIVITIES, AND TO IDENTIFY CONTRACTUAL RELATIONSHIPS AND DELINEATION OF RESPONSIBILITIES AMONGST THE PRIME CONTRACTOR AND THE VARIOUS SUBCONTRACTORS PARTICULARLY THOSE PERTAINING TO WALL EXCAVATION, NAIL INSTALLATION AND TESTING, EXCAVATION AND WALL ALIGNMENT SURVEY CONTROL, AND SHOTCRETE AND CIP FACING CONSTRUCTION. SOIL NAIL WALL CONSTRUCTION REQUIRES EXCAVATION IN STAGED LIFTS AND EXCAVATION IN THE VICINITY OF THE WALL FACE REQUIRES SPECIAL CARE AND EFFORT COMPARED TO GENERAL EARTHWORK EXCAVATION.

3.0 DEFINITIONS

3.1 SOIL NAIL:

THE INDIVIDUAL STEEL BAR TENDON WITH ENCAPSULATION.

3.1.1 HOLLOW BAR SOIL NAIL (HBSN):

HOLLOW, STEEL THREADED TENDONS THAT ARE DRILLED AND GROUTED IN A SINGLE OPERATION. GROUT IS INJECTED THROUGH THE TENDON AS THE DRILLING PROCEEDS. THE GROUT EXITS THROUGH PORTS THAT ARE LOCATED IN A SACRIFICIAL DRILL BIT, FLUSHES SOIL CUTTINGS OUT OF THE DRILL HOLE, AND FILLS THE ANNULAR SPACE BETWEEN THE TENDON AND THE DRILL HOLE.

3.2 BONDED TEST LENGTH:

THE LENGTH OF THE TEST NAIL TENDON THAT IS BONDED TO THE GROUND WITH GROUT AND DEVELOPS ADHESION DURING TESTING.

3.3 UNBONDED TEST LENGTH:

THE LENGTH OF THE TEST NAIL TENDON THAT IS NOT BONDED TO THE GROUND WITH GROUT AND IS FREE TO ELONGATE DURING TESTING.

3.4 ANCHORAGE:

THE BEARING PLATE, NUT, AND BEVELED WASHER THAT SECURE THE CONCRETE FACING TO THE SOIL NAIL.

3.5 SOIL NAIL GROUT:

CEMENT GROUT THAT IS INJECTED INTO THE DRILLED HOLE BY TREMIE METHODS TO COVER THE FULL LENGTH OF THE SOIL NAIL AND PROVIDE BONDING OF THE SOIL NAIL TO THE SURROUNDING GROUND.

3.6 DESIGN LOAD:

THE MAXIMUM LOAD ANTICIPATED TO BE APPLIED TO THE SOIL NAIL DURING ITS SERVICE LIFE. FOR SOIL NAIL WALLS DESIGNED UNDER LRFD, THIS IS EXPRESSED AS THE FACTORED DESIGN LOAD (FDL).

3.7 MAXIMUM PERMISSIBLE LOAD:

THE MAXIMUM PERMISSIBLE LOAD IS THE MAXIMUM LOAD THAT MAY BE APPLIED TO THE SOIL NAIL DURING ANY STAGE OF THE WORK. THE MAXIMUM PERMISSIBLE LOAD IS 90 PERCENT OF THE YIELD STRENGTH FOR AASHTO M31/ASTM A615 GRADE 60 THROUGH GRADE 100 BARS, OR 80 PERCENT OF THE ULTIMATE STRENGTH FOR ASTM A722 GRADE 150 BARS.

3.8 MAXIMUM TEST LOAD:

THE LARGEST LOAD APPLIED TO THE SOIL NAIL WHEN STRESSING DURING A LOAD TEST. THIS IS DEFINED AS THE VERIFICATION TEST LOAD (VTL) FOR PRE-PRODUCTION VERIFICATION TESTS OF SACRIFICIAL TEST NAILS, AND THIS IS DEFINED AS THE PROOF TEST LOAD (PTL) FOR PROOF TESTS OF PRODUCTION NAILS.

3.9 ALIGNMENT LOAD:

THE LOAD MAINTAINED ON A SOIL NAIL DURING TESTING TO ASSURE THAT THE TESTING EQUIPMENT REMAINS IN PROPER POSITION, NOT TO EXCEED 2.5 PERCENT OF THE MAXIMUM TEST LOAD (VTL OR PTL).

3.10 PROOF TEST:

A SOIL NAIL LOAD TEST THAT REQUIRES THE APPLICATION OF DEFINED INCREMENTAL LOADS TO THE TEST SOIL NAIL UP TO THE PTL AND UNLOADING OF THE TEST SOIL NAIL. THE MOVEMENT OF THE NAIL TENDON IS RECORDED AT EACH LOAD INCREMENT. AT THE PTL, THE APPLIED LOAD IS MAINTAINED CONSTANT FOR A DEFINED TIME PERIOD WHILE CREEP MOVEMENT IS RECORDED.

3.11 VERIFICATION TEST:

THIS LOAD TEST REQUIRES THE APPLICATION OF DEFINED INCREMENTAL LOADS TO THE TEST SOIL NAIL UP TO THE VTL AND UNLOADING OF THE TEST SOIL NAIL. THE MOVEMENT OF THE NAIL TENDON IS RECORDED AT EACH LOADING AND UNLOADING INCREMENT. AT 0.75 VTL, THE APPLIED LOAD IS MAINTAINED CONSTANT FOR A DEFINED TIME PERIOD WHILE CREEP MOVEMENT IS RECORDED.

3.12 CREEP MOVEMENT:

THE TIME-DEPENDENT MOVEMENTS OF THE SOIL NAIL TENDON AT A CONSTANT LOAD.

3.13 CREEP CURVE:

A SEMI LOGARITHMIC PLOT OF THE CREEP MOVEMENT VERSUS TIME, WITH THE UNITS OF TIME PLOTTED ON THE LOGARITHMIC AXIS.

3.14 CREEP RATE:

THE SLOPE OF THE CREEP CURVE PER LOG CYCLE OF TIME OVER THE FINAL DECADE OF THE OBSERVATION PERIOD.

4.0 MATERIALS

MATERIALS FOR SOIL NAIL STRUCTURES SHALL CONSIST OF THE FOLLOWING:

4.1 SOIL NAIL TENDON:

AASHTO M31/ASTM A615 FOR GRADE 60, 75, 80, OR 100, OR ASTM A722 FOR GRADE 150. DEFORMED BAR, CONTINUOUS OR SPLICED USING APPROVED BAR COUPLERS, NEW, STRAIGHT, UNDAMAGED, BARE OR EPOXY COATED OR ENCAPSULATED AS SHOWN ON THE PLANS. PROVIDE THREADING FOR A MINIMUM OF 6 INCHES ON THE WALL ANCHORAGE END TO ALLOW PROPER ATTACHMENT OF BEARING PLATE AND NUT. THREADING MAY BE CONTINUOUS SPIRAL DEFORMED RIBBING PROVIDED BY THE BAR DEFORMATIONS (E.G. DYWIDAG OR WILLIAMS CONTINUOUS THREAD BARS) OR MAY BE CUT INTO A REINFORCING BAR. IF THREADS ARE CUT INTO A REINFORCING BAR, PROVIDE THE NEXT LARGER BAR NUMBER DESIGNATION AT NO ADDITIONAL COST.

4.1.1 HOLLOW BAR SOIL NAIL (HBSN):

FULLY THREADED, HOLLOW STEEL TUBING USED AS THE DRILLING STEEL, GROUT TRANSFER MEDIUM, AND THE REINFORCING ELEMENT OF THE SOIL NAIL. TENDONS SHALL HAVE A YIELD TENSILE STRENGTH BETWEEN 60 KSI AND 90 KSI. TENDONS SHALL BE NEW, STRAIGHT, UNDAMAGED, BARE, EPOXY COATED, GALVANIZED, OR ENCAPSULATED AS SHOWN ON THE PLANS. THE LENGTH OF THE THREADED PORTION OF THE BAR AT THE WALL ANCHORAGE SHALL BE AS NEEDED TO ALLOW PROPER ATTACHMENT OF THE BEARING PLATE AND NUT. HOLLOW BARS SHALL MEET THE FOLLOWING REQUIREMENTS:

A. THE HOLLOW BAR SHALL BE OF A FINE-GRAINED STRUCTURAL STEEL.

B. THE DUCTILITY OF THE STEEL OR THE UNIFORM ELONGATION WITHOUT NECKING SHALL BE AGT >= 5%.

C. THE MINIMUM CHARPY IMPACT RESISTANCE SHALL BE 40 JOULES AT -20°C PER ASTM E23.

4.1.2 HSBN DRILL BITS:

DRILL BITS SHALL BE SELECTED BASED ON THE SUBSURFACE INFORMATION ON SITE AND THE MINIMUM GROUT COLUMN REQUIRED IN THE DESIGN. BITS REQUIRE A MINIMUM OF TWO PORTS TO ALLOW GROUT TO EXIT THE SYSTEM. ADDITIONAL PORTS (WITH SMALLER DIAMETERS) CAN BE USED TO INCREASE GROUT PRESSURE AND HOLE DIAMETER.

4.2 BAR COUPLERS:

COUPLERS SHALL DEVELOP THE FULL ULTIMATE TENSILE STRENGTH OF THE BAR AS CERTIFIED BY THE MANUFACTURER. CORROSION PROTECTION TO THE COUPLER SHALL BE PROVIDED BY MEANS OF A HEAT SHRINK SLEEVE OR HEAVY DUTY COLD APPLIED COATING TAPE. THE USE OF COUPLERS SHALL BE AS STATED IN SECTION 5.8.

4.2.1 HBSN COUPLERS:

COUPLERS SHALL DEVELOP THE NOMINAL TENSILE CAPACITY OF THE HOLLOW BAR AS CERTIFIED BY THE MANUFACTURER AND SHALL HAVE A SEAL OR A SIMILAR MECHANISM TO ENSURE MINIMUM GROUT LOSS THROUGH THEM. COUPLERS SHALL HAVE A MEANS OF TRANSFERRING THE PERCUSSIVE FORCES WHEN DRILLING, AND TENSILE/COMPRESSIVE CYCLIC-LOADING FORCES WHEN IN SERVICE.

4.3 CENTRALIZERS:

CENTRALIZERS SHALL BE FABRICATED FROM SCHEDULE 40 PVC PIPE OR TUBE, STEEL OR OTHER MATERIAL NOT DETRIMENTAL TO THE NAIL STEEL (WOOD SHALL NOT BE USED). THEY SHALL POSITION THE SOIL NAILS WITHIN 1 INCH OF THE CENTER OF THE DRILLED HOLE SO AS TO PROVIDE A MINIMUM REQUIRED GROUT COVER OF 1 INCH, ALLOW TREMIE PIPE INSERTION TO THE BOTTOM OF THE DRILL HOLE, AND ALLOW GROUT TO FREELY FLOW UP THE DRILL HOLE. POSITION CENTRALIZERS ALONG THE SOIL NAIL SO THEIR MAXIMUM CENTER-TO-CENTER SPACING DOES NOT EXCEED 10 FEET. ALSO LOCATE CENTRALIZERS WITHIN 1.5 FEET FROM THE TOP AND BOTTOM OF THE DRILL HOLE.

4.4 GROUT:

THE CEMENT FOR THE GROUT SHALL BE TYPE I, TYPE II, TYPE III, OR TYPE V CONFORMING TO ASTM C150. THE GROUT SHALL CONSIST OF A NEAT CEMENT OR SAND/CEMENT MIXTURE WITH A MINIMUM 3-DAY COMPRESSIVE STRENGTH OF 1,500 PSI AND A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI PER AASHTO T106/ASTM C109. FINE AGGREGATE FOR THE GROUT SHALL BE PER AASHTO M6/ASTM C33. THE SPECIFIC GRAVITY OF THE GROUT SHALL RANGE BETWEEN 1.8 AND 1.9.

4.4.1 HBSN GROUT:

THE SPECIFIC GRAVITY OF THE GROUT USED FOR DRILLING AND INSTALLING THE HOLLOW BARS MAY BE LOWER THAN THE FINAL GROUT AND RANGE FROM 1.4 TO 1.6. AFTER THE BAR IS INSTALLED TO THE DESIRED DEPTH, THE FINAL GROUT MIXTURE SHALL BE PUMPED THROUGH THE HOLLOW BAR, AND THE NAIL IS CONSIDERED COMPLETE WHEN THE HEAVIER MIXTURE RETURNS TO THE EXCAVATION FACE, SIGNALING THAT THE LIGHTER DRILLING GROUT WAS FLUSHED FROM THE HOLE AND THAT ALL DRILLING SPOILS HAVE ALSO BEEN REMOVED.

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4.4.2 HBSN GROUT MIXER AND PUMP:

A HIGH SHEAR COLLOIDAL MIXER WITH SEPARATE HOLDING TANK AND WATER AND CEMENT DOSING SYSTEM SHOULD BE USED TO ENSURE CONTINUOUS GROUTING INDEPENDENT FROM MIXING. PUMPS SHOULD HAVE FLOW RATES OF AT LEAST 15 GAL/MINUTE FOR THE SMALLER DIAMETER BARS, AND 45 GAL/MINUTE FOR THE LARGER DIAMETER BARS (2 IN. AND ABOVE) SHALL BE PROVIDED. A MINIMUM OF 250 PSI PRESSURE CAPABILITY FOR SAND AND GRAVEL AND 1,500 PSI CAPABILITY SHOULD BE AVAILABLE IN CLAYS AND SILTS. TO RECORD THE GROUT VOLUME AND PRESSURE, AN AUTOMATED MONITORING SYSTEM MAY BE USED.

4.5 ADMIXTURES:

AASHTO M194/ASTM C494. ADMIXTURES WHICH CONTROL BLEED, IMPROVE FLOWABILITY, REDUCE WATER CONTENT AND RETARD SET MAY BE USED IN THE GROUT SUBJECT TO REVIEW AND ACCEPTANCE BY THE ENGINEER. ACCELERATORS ARE NOT PERMITTED. EXPANSIVE ADMIXTURES MAY ONLY BE USED IN GROUT USED FOR FILLING SEALED ENCAPSULATIONS. ADMIXTURES SHALL BE COMPATIBLE WITH THE GROUT AND MIXED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

4.6 ENCAPSULATION:

MINIMUM 0.04 INCH THICK CORRUGATED HDPE TUBE CONFORMING TO AASHTO M252 OR CORRUGATED PVC TUBE CONFORMING TO ASTM D1784, CLASS 13464-B. ENCAPSULATION SHALL PROVIDE AT LEAST 0.2 INCHES OF GROUT COVER OVER THE NAIL BAR. FACTORY FABRICATION OF THE ENCAPSULATION IS PREFERRED. UPON THE ENGINEER'S ACCEPTANCE, THE ENCAPSULATION MAY BE FIELD FABRICATED IF DONE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE ENCAPSULATION SHALL BE:

A. RESISTANT TO CHEMICAL ATTACK FROM AGGRESSIVE ENVIRONMENTS, GROUT, OR GREASE.

B. FABRICATED FROM MATERIALS NONDETRIMENTAL TO THE PRESTRESSING STEEL.

C. CAPABLE OF WITHSTANDING ABRASION, IMPACT, AND BENDING DURING HANDLING AND INSTALLATION.

D. FREE OF FLAWS WHICH WOULD PERMIT WATER TO ENTER INTO THE SOIL NAIL SYSTEM.

E. CAPABLE OF TRANSFERRING STRESSES FROM THE GROUT INSIDE THE CAPSULE TO THE GROUT OUTSIDE THE CAPSULE.

F. RESISTANT TO ULTRAVIOLET LIGHT.

4.7 FILM PROTECTION:

POLYETHYLENE FILM PER AASHTO M171.

4.8 FUSION BONDED EPOXY COATING:

ASTM A775. MINIMUM 0.012 INCH THICKNESS ELECTROSTATICALLY APPLIED. BEND TEST REQUIREMENTS ARE WAIVED. COATING AT THE WALL ANCHORAGE END OF EPOXY-COATED BARS MAY BE OMITTED OVER THE LENGTH PROVIDED FOR THREADING THE NUT AGAINST THE BEARING PLATE.

4.9 BEARING PLATE:

THE BEARING PLATE SHALL CONFORM TO THE REQUIREMENTS OF 711 FOR STRUCTURAL STEEL.

4.10 ANCHORAGE:

THE STEEL NUT AND BEVELED WASHER USED IN THE ANCHORAGE SHALL BE THE STANDARD PRODUCT OF THE BAR MANUFACTURER AND CONFORM TO THE REQUIREMENTS OF 711 FOR HIGH-STRENGTH STEEL BOLTS, NUTS, AND WASHERS. THE NUT SHALL BE HEXAGONAL AND FITTED WITH BEVELED WASHER OR SPHERICAL SEAT TO PROVIDE UNIFORM BEARING. THE ANCHORAGE SHALL BE CAPABLE OF TRANSFERRING 100 PERCENT OF THE GUARANTEED ULTIMATE TENSILE STRENGTH (GUTS) FROM THE SOIL NAIL TENDON TO THE BEARING PLATE.

4.11 WELDED WIRE FABRIC:

ASTM A1060.

4.12 REINFORCING STEEL:

CONFORM TO C&MS ITEM 509.

4.13 MATERIALS HANDLING AND STORAGE:

STORE CEMENT TO PREVENT MOISTURE DEGRADATION AND PARTIAL HYDRATION. DO NOT USE CEMENT THAT HAS BECOME CAKED OR LUMPY. STORE AGGREGATES SO THAT SEGREGATION AND INCLUSION OF FOREIGN MATERIALS ARE PREVENTED. DO NOT USE THE BOTTOM 6 INCHES OF AGGREGATE PILES IN CONTACT WITH THE GROUND.

STORE STEEL REINFORCEMENT ON SUPPORTS TO KEEP THE STEEL FROM CONTACTING THE GROUND. DAMAGE TO THE NAIL STEEL AS A RESULT OF ABRASION, CUTS, NICKS, WELDS, AND WELD SPLATTER SHALL BE CAUSE FOR REJECTION. DO NOT GROUND WELDING LEADS TO NAIL BARS. PROTECT NAIL STEEL FROM DIRT, RUST, AND OTHER DELETERIOUS SUBSTANCES PRIOR TO INSTALLATION. HEAVY CORROSION OR PITTING OF NAILS SHALL BE CAUSE FOR REJECTION. LIGHT RUST THAT HAS NOT RESULTED IN PITTING IS ACCEPTABLE. PLACE PROTECTIVE WRAP OVER THE ANCHORAGE END OF NAIL BARS, TO WHICH BEARING PLATES AND NUTS WILL BE ATTACHED, TO PROTECT DURING HANDLING, INSTALLATION, GROUTING AND SHOTCRETING.

DO NOT MOVE OR TRANSPORT ENCAPSULATED NAILS UNTIL THE ENCAPSULATION GROUT HAS REACHED SUFFICIENT STRENGTH TO RESIST DAMAGE DURING HANDLING. HANDLE ENCAPSULATED NAILS IN A MANNER THAT WILL PREVENT LARGE DEFLECTIONS, DISTORTIONS OR DAMAGE. REPAIR ENCAPSULATED NAILS THAT ARE DAMAGED OR DEFECTIVE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OR REMOVE THEM FROM THE SITE.

HANDLE AND STORE EPOXY COATED BARS IN A WAY THAT WILL PREVENT THEM FROM BEING DAMAGED BEYOND WHAT IS PERMITTED BY ASTM 3963. REPAIR DAMAGED EPOXY COATING IN ACCORDANCE WITH ASTM A775 AND THE COATER'S RECOMMENDATIONS USING AN EPOXY FIELD REPAIR KIT APPROVED BY THE EPOXY MANUFACTURER. REPAIRED AREAS SHALL HAVE A MINIMUM 0.012 INCH COATING THICKNESS.

5.0 CONSTRUCTION REQUIREMENTS

5.1 CONSTRUCTION SITE SURVEY:

BEFORE BIDDING THE WORK, THE CONTRACTOR SHALL REVIEW THE AVAILABLE SUBSURFACE INFORMATION AND VISIT THE SITE TO ASSESS THE SITE GEOMETRY, EQUIPMENT ACCESS CONDITIONS, AND LOCATION OF EXISTING STRUCTURES AND ABOVE GROUND FACILITIES.

THE CONTRACTOR IS RESPONSIBLE FOR FIELD LOCATING AND VERIFYING THE LOCATION OF ALL UTILITIES SHOWN ON THE PLANS PRIOR TO STARTING THE WORK. MAINTAIN UNINTERRUPTED SERVICE FOR THOSE UTILITIES DESIGNATED TO REMAIN IN SERVICE THROUGHOUT THE WORK. NOTIFY THE ENGINEER OF ANY UTILITY LOCATIONS DIFFERENT FROM SHOWN ON THE PLANS THAT MAY REQUIRE NAIL RELOCATIONS OR WALL DESIGN MODIFICATION. THE CONTRACTOR IS ALSO RESPONSIBLE FOR FIELD LOCATING AND VERIFYING THE LOCATION OF ALL STRUCTURE FOUNDATIONS ADJACENT TO THE SOIL NAIL WALL, WHICH MAY CONFLICT WITH THE SOIL NAIL LOCATIONS.

PRIOR TO START OF ANY WALL CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND INSPECT THE SITE TO OBSERVE, SURVEY, BENCHMARK, MONUMENT AND VIDEOTAPE THE PRE-CONSTRUCTION CONDITION OF THE SITE, EXISTING STRUCTURES AND FACILITIES. DURING CONSTRUCTION, THE CONTRACTOR SHALL OBSERVE THE CONDITIONS ABOVE THE SOIL NAIL WALL ON A DAILY BASIS FOR SIGNS OF GROUND MOVEMENT IN THE VICINITY OF THE WALL. IMMEDIATELY NOTIFY THE ENGINEER IF A SIGN OF MOVEMENTS SUCH AS NEW CRACKS IN STRUCTURES, INCREASED SIZE OF OLD CRACKS OR SEPARATION OF JOINTS IN STRUCTURES, FOUNDATIONS, STREETS OR PAVED AND UNPAVED SURFACES ARE OBSERVED. IF THE ENGINEER DETERMINES THAT THE MOVEMENTS EXCEED 1/2 INCH AND REQUIRE CORRECTIVE ACTION, THE CONTRACTOR SHALL TAKE CORRECTIVE ACTIONS NECESSARY TO STOP THE MOVEMENT OR PERFORM REPAIRS. WHEN DUE TO THE CONTRACTOR'S METHODS OR OPERATIONS OR FAILURE TO FOLLOW THE SPECIFIED/ACCEPTED CONSTRUCTION SEQUENCE, AS DETERMINED BY THE ENGINEER, THE COSTS OF PROVIDING CORRECTIVE ACTIONS WILL BE BORNE BY THE CONTRACTOR. WHEN DUE TO DIFFERING SITE CONDITIONS, AS DETERMINED BY THE ENGINEER, THE COSTS OF PROVIDING CORRECTIVE ACTIONS WILL BE PAID AS EXTRA WORK.

5.2 SITE DRAINAGE CONTROL:

PROVIDE POSITIVE CONTROL AND DISCHARGE OF ALL SURFACE WATER THAT WILL AFFECT CONSTRUCTION OF THE SOIL NAIL RETAINING WALL. MAINTAIN ALL PIPES OR CONDUITS USED TO CONTROL SURFACE WATER DURING CONSTRUCTION. REPAIR DAMAGE CAUSED BY SURFACE WATER AT NO ADDITIONAL COST. UPON SUBSTANTIAL COMPLETION OF THE WALL, REMOVE SURFACE WATER CONTROL PIPES OR CONDUITS FROM THE SITE. ALTERNATIVELY, WITH THE ACCEPTANCE OF THE ENGINEER, PIPES OR CONDUITS THAT ARE LEFT IN PLACE MAY BE FULLY GROUTED AND ABANDONED OR LEFT IN A WAY THAT PROTECTS THE STRUCTURE AND ALL ADJACENT FACILITIES FROM MIGRATION OF FINES THROUGH THE PIPE OR CONDUIT AND POTENTIAL GROUND LOSS.

IMMEDIATELY CONTACT THE ENGINEER IF UNANTICIPATED EXISTING SUBSURFACE DRAINAGE STRUCTURES ARE DISCOVERED DURING EXCAVATION. SUSPEND WORK IN THESE AREAS UNTIL REMEDIAL MEASURES MEETING THE ENGINEER'S ACCEPTANCE ARE IMPLEMENTED.

CAPTURE SURFACE WATER RUNOFF FLOWS AND FLOWS FROM EXISTING SUBSURFACE DRAINAGE STRUCTURES INDEPENDENTLY OF THE WALL DRAINAGE NETWORK AND CONVEY THEM TO AN OUTFALL STRUCTURE OR STORM SEWER, AS ACCEPTED BY THE ENGINEER. COST OF REMEDIAL MEASURES REQUIRED TO CAPTURE AND DISPOSE OF WATER RESULTING FROM ENCOUNTERING UNANTICIPATED SUBSURFACE DRAINAGE STRUCTURES WILL BE PAID FOR AS EXTRA WORK.

5.3 EXCAVATION AND WALL ALIGNMENT SURVEY CONTROL:

UNLESS SPECIFIED OTHERWISE, THE CONTRACTOR SHALL PROVIDE SURVEY REFERENCE AND CONTROL POINTS AT OR OFFSET ALONG THE TOP OF WALL ALIGNMENT AT APPROXIMATELY 30-FOOT INTERVALS PRIOR TO STARTING WALL EXCAVATION. THE CONTRACTOR SHALL THEN BE RESPONSIBLE FOR PROVIDING THE NECESSARY SURVEY AND ALIGNMENT CONTROL DURING EXCAVATION OF EACH LIFT, LOCATING AND DRILLING EACH DRILL HOLE WITHIN THE ALLOWABLE TOLERANCES AND FOR PERFORMING THE WALL EXCAVATION AND NAIL INSTALLATION IN A MANNER WHICH WILL ALLOW FOR CONSTRUCTING THE SHOTCRETE CONSTRUCTION FACING TO THE SPECIFIED MINIMUM THICKNESS AND SUCH THAT THE FINISHED CIP STRUCTURAL FACING CAN BE CONSTRUCTED TO THE SPECIFIED MINIMUM THICKNESS AND TO THE LINE AND GRADE INDICATED IN THE PLANS. WHERE THE AS-BUILT LOCATION OF THE FRONT FACE OF THE SHOTCRETE EXCEEDS THE PLACEMENT TOLERANCES FROM THE WALL CONTROL LINE SHOWN IN THE PLANS AS DEFINED IN TABLE 511.07-1, THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING AND BEARING THE COST OF REMEDIAL MEASURES NECESSARY TO PROVIDE PROPER ATTACHMENT OF NAIL HEAD BEARING PLATE CONNECTIONS AND SATISFACTORY PLACEMENT OF THE FINAL FACING, AS CALLED FOR IN THE PLANS.

5.4 EXCAVATION:

COORDINATE THE WORK AND THE EXCAVATION SO THE SOIL NAIL WALL IS SAFELY CONSTRUCTED. PERFORM THE WALL CONSTRUCTION AND EXCAVATION SEQUENCE IN ACCORDANCE WITH THE PLANS AND ACCEPTED SUBMITTALS. CONSTRUCTION EQUIPMENT SHALL NOT BE ALLOWED ON THE GROUND ABOVE THE WALL DURING OR FOLLOWING EXCAVATION AND PLACEMENT OF THE WALL, WITHIN A DISTANCE EQUAL TO THE HEIGHT OF THE WALL EXCAVATION. NO EXCAVATIONS STEEPER THAN THOSE SHOWN ON THE ENGINEERED DRAWINGS OR SHOWN ON THE PLANS WILL BE MADE ABOVE OR BELOW THE SOIL NAIL WALL WITHOUT WRITTEN ACCEPTANCE OF THE ENGINEER.

5.4.1 GENERAL ROADWAY EXCAVATION:

COMPLETE CLEARING, GRUBBING, GRADING AND EXCAVATION ABOVE AND BEHIND THE WALL BEFORE COMMENCING WALL EXCAVATION. REMOVE AND STOCKPILE ANY EXISTING ROCK CHANNEL PROTECTION OR ROCK SLOPE PROTECTION FOR AN ABUTMENT ADJACENT TO THE SOIL NAIL WALL PRIOR TO BEGINNING WALL EXCAVATION. DO NOT STOCKPILE MATERIAL ABOVE THE WALL EXCAVATION. ESTABLISH THE GROUND LINE BEHIND THE WALL AT FINAL GRADE SHOWN ON THE PLANS PRIOR TO BEGINNING WALL EXCAVATION. DO NOT OVER-EXCAVATE THE ORIGINAL GROUND BEHIND THE WALL OR AT THE ENDS OF THE WALL BEYOND THE LIMITS SHOWN ON THE PLANS. COORDINATE ROADWAY EXCAVATION WITH THE SOIL NAILING WORK. DO NOT PERFORM GENERAL ROADWAY EXCAVATION THAT WILL AFFECT THE SOIL NAIL WALL UNTIL WALL CONSTRUCTION IS COMPLETED.

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5.4.2 SOIL NAIL WALL STRUCTURE EXCAVATION:

STRUCTURE EXCAVATION IN THE VICINITY OF THE WALL FACE WILL REQUIRE SPECIAL CARE AND EFFORT COMPARED TO GENERAL EARTHWORK EXCAVATION. THE CONTRACTOR SHOULD TAKE THIS INTO ACCOUNT DURING BIDDING. COSTS ASSOCIATED WITH WALL EXCAVATION, FILL PLACEMENT, AND REMOVAL OF ROCK CHANNEL PROTECTION OR ROCK SLOPE PROTECTION SHALL BE INCIDENTAL TO THE COST OF INSTALLING THE SOIL NAILS. THE EXCAVATION FOR THE SOIL NAIL WALL SHALL BE DONE UNDER THE DIRECTION OF THE SOIL NAIL ENGINEER. THE STRUCTURE EXCAVATION PAY LIMITS ARE SHOWN IN THE PLANS.

EXCAVATE TO THE FINAL WALL FACE USING PROCEDURES THAT: (1) PREVENT OVER EXCAVATION; (2) PREVENT GROUND LOSS, SWELLING, AIR SLAKING, OR LOOSENING; (3) PREVENT LOSS OF SUPPORT FOR COMPLETED PORTIONS OF THE WALL; (4) PREVENT LOSS OF SOIL MOISTURE AT THE FACE; AND (5) PREVENT GROUND FREEZING. COSTS ASSOCIATED WITH ADDITIONAL THICKNESS OF SHOTCRETE OR CONCRETE OR OTHER REMEDIAL MEASURES REQUIRED DUE TO IRREGULARITIES IN THE CUT FACE, EXCAVATION OVERBREAK OR INADVERTENT OVER EXCAVATION, SHALL BE BORNE BY THE CONTRACTOR.

PROCEED WITH THE WALL EXCAVATION FROM THE TOP DOWN IN A HORIZONTAL STAGED EXCAVATION LIFT SEQUENCE WITH THE GROUND LEVEL FOR EACH LIFT EXCAVATED NO MORE THAN 2 FEET BELOW EACH NAIL ROW. DO NOT EXCAVATE THE FULL WALL HEIGHT TO THE FINAL WALL ALIGNMENT AS SHOWN IN THE PLANS UNTIL READY TO PLACE THE REINFORCING STEEL AND SHOTCRETE FACING FOR THE LOWEST EXCAVATION LIFT. EXCAVATE THE EXISTING EMBANKMENT IN FRONT TO THE SOIL NAIL WALL AT EACH STAGE TO FORM A WORKING BENCH TO SERVE AS A PLATFORM FOR THE DRILLING EQUIPMENT. THE BENCH SHALL BE WIDE ENOUGH TO PROVIDE A SAFE WORKING AREA FOR THE DRILLING EQUIPMENT AND WORKERS.

THE EXPOSED UNSUPPORTED FINAL EXCAVATION FACE CUT HEIGHT SHALL NOT EXCEED THE VERTICAL NAIL SPACING PLUS THE REQUIRED REINFORCING LAP OR THE SHORT-TERM STAND-UP HEIGHT OF THE GROUND, WHICHEVER IS LESS. COMPLETE EXCAVATION TO THE FINAL WALL EXCAVATION LINE AND APPLICATION OF THE SHOTCRETE IN THE SAME WORK SHIFT UNLESS OTHERWISE ACCEPTED BY THE ENGINEER. APPLICATION OF THE SHOTCRETE MAY BE DELAYED UP TO 24 HOURS IF THE CONTRACTOR CAN SHOW THAT THE DELAY WILL NOT ADVERSELY AFFECT THE EXCAVATION FACE STABILITY. A POLYETHYLENE FILM OVER THE FACE OF THE EXCAVATION MAY REDUCE DEGRADATION OF THE CUT FACE CAUSED BY CHANGES IN MOISTURE.

AT THE CONTRACTOR'S OPTION, DURING EACH EXCAVATION LIFT, NAILS MAY BE DRILLED AND INSTALLED THROUGH A TEMPORARY STABILIZING BERM. THE PURPOSE OF THE STABILIZING BERM IS TO PREVENT OR MINIMIZE INSTABILITY OR SLOUGHING OF THE FINAL EXCAVATION FACE DUE TO GROUND CONDITIONS AND/OR DRILLING ACTION. THE STABILIZING BERM GEOMETRY SHALL HAVE THE TOP OF BERM EXTENDING HORIZONTALLY OUT FROM THE BOTTOM FRONT FACE OF THE OVERLYING SHOTCRETE A DISTANCE OF 1 FOOT AND CUT DOWN FROM THAT POINT TO THE BASE GRADE FOR THAT EXCAVATION LIFT AT A SLOPE NOT STEEPER THAN 1H: 1V. THE CONTRACTOR MAY USE DIFFERENT BERM GEOMETRY UPON SATISFACTORY DEMONSTRATION THAT THE DIFFERENT GEOMETRY PROVIDES SATISFACTORY PERFORMANCE.

FOLLOWING THE INSTALLATION OF NAILS IN THAT LIFT, EXCAVATE THE TEMPORARY STABILIZING BERM TO THE FINAL WALL FACE EXCAVATION LINE AND CLEAN THE FINAL EXCAVATION FACE OF ALL LOOSE MATERIALS, MUD, REBOUND, AND OTHER FOREIGN MATTER WHICH COULD PREVENT OR REDUCE SHOTCRETE BOND. ENSURE THAT INSTALLED NAILS AND CORROSION PROTECTION ARE NOT DAMAGED DURING EXCAVATION OF THE STABILIZING BERM. REPAIR OR REPLACE NAILS OR CORROSION PROTECTION DAMAGED OR DISTURBED DURING EXCAVATION OF THE STABILIZING BERM, TO THE ENGINEER'S SATISFACTION, AT NO ADDITIONAL COST. DO NOT EXCAVATE THE STABILIZING BERM UNTIL THE NAIL GROUT HAS AGED FOR AT LEAST 24 HOURS. REMOVE HARDENED NAIL GROUT PROTRUDING FROM THE FINAL WALL EXCAVATION LINE MORE THAN 2 INCHES IN A MANNER THAT PREVENTS FRACTURING THE GROUT AT THE NAIL HEAD. SLEDGE HAMMER REMOVAL OF THE GROUT IS NOT ALLOWED. THE USE OF HAND HELD ROCK CHIPPERS IS ACCEPTABLE PROVIDED THEIR USE DOES NOT DAMAGE OR DISTURB THE REMAINING GROUT AT THE NAIL HEAD, THE NAIL BAR OR CORROSION PROTECTION. ALTERNATIVE EXCAVATION AND SOIL NAIL INSTALLATION METHODS THAT MEET THESE OBJECTIVES MAY BE SUBMITTED TO THE ENGINEER FOR REVIEW IN ACCORDANCE WITH THE CONSTRUCTION SUBMITTAL GUIDELINES IN SECTION 2.4.

EXCAVATION TO THE NEXT LIFT SHALL NOT PROCEED UNTIL NAIL INSTALLATION, REINFORCED SHOTCRETE PLACEMENT, ATTACHMENT OF BEARING PLATES AND NUTS AND NAIL TESTING HAS BEEN COMPLETED AND ACCEPTED IN THE CURRENT LIFT. NAIL GROUT AND SHOTCRETE SHALL HAVE CURED FOR AT LEAST 72 HOURS OR ATTAINED AT LEAST THEIR SPECIFIED 3-DAY COMPRESSIVE STRENGTH BEFORE EXCAVATING THE NEXT UNDERLYING LIFT. EXCAVATING THE NEXT LIFT IN LESS THAN 72 HOURS WILL ONLY BE ALLOWED IF THE CONTRACTOR SUBMITS COMPRESSIVE STRENGTH TEST RESULTS, FOR TESTS PERFORMED BY A QUALIFIED INDEPENDENT TESTING LAB, VERIFYING THAT THE NAIL GROUT AND SHOTCRETE MIXES BEING USED WILL PROVIDE THE SPECIFIED 3-DAY COMPRESSIVE STRENGTHS IN THE LESSER TIME.

NOTIFY THE ENGINEER IMMEDIATELY IF RAVELING OR LOCAL INSTABILITY OF THE FINAL WALL FACE EXCAVATION OCCURS. TEMPORARILY STABILIZE UNSTABLE AREAS BY MEANS OF BUTTRESSING THE EXPOSED FACE WITH AN EARTH BERM OR BY OTHER METHODS ACCEPTABLE TO THE ENGINEER. SUSPEND WORK IN UNSTABLE AREAS UNTIL REMEDIAL MEASURES ARE DEVELOPED.

5.5 EXCAVATION FACE PROTRUSIONS, VOIDS OR OBSTRUCTIONS:

REMOVE ALL OR PORTIONS OF COBBLES, BOULDERS, RUBBLE OR OTHER SUBSURFACE OBSTRUCTIONS ENCOUNTERED AT THE WALL FINAL EXCAVATION FACE WHICH WILL PROTRUDE INTO THE DESIGN SHOTCRETE FACING. DETERMINE THE METHOD OF REMOVAL OF FACE PROTRUSIONS, INCLUDING THE METHOD TO SAFELY SECURE REMNANT PIECES LEFT BEHIND THE EXCAVATION FACE AND FOR PROMPTLY BACKFILLING VOIDS RESULTING FROM REMOVAL OF PROTRUSIONS EXTENDING BEHIND THE EXCAVATION FACE. NOTIFY THE ENGINEER OF THE PROPOSED METHOD(S) FOR REMOVAL OF FACE PROTRUSIONS AT LEAST 24 HOURS PRIOR TO BEGINNING REMOVAL. VOIDS, OVERBREAK OR OVER-EXCAVATION BEYOND THE PLAN WALL EXCAVATION LINE RESULTING FROM THE REMOVAL OF FACE PROTRUSIONS OR EXCAVATION OPERATIONS SHALL BE BACKFILLED WITH SHOTCRETE OR CONCRETE, AS ACCEPTED BY THE ENGINEER.

REMOVAL OF FACE PROTRUSIONS AND BACKFILLING OF VOIDS OR OVER-EXCAVATION IS CONSIDERED INCIDENTAL TO THE WORK.

THE COST TO REMOVE KNOWN MAN-MADE OBSTRUCTIONS IS CONSIDERED INCIDENTAL TO THE WORK. THE REMOVAL OF DRAINAGE LINES SHALL NOT EXTEND BEYOND THE BACK OF THE WALL. THE REMAINING PORTIONS OF ABANDONED DRAINAGE LINES ARE TO BE FULLY BACKFILLED WITH GROUT. THE COST TO REMOVE UNANTICIPATED MAN-MADE OBSTRUCTIONS WILL BE PAID AS EXTRA WORK.

5.6 NAIL INSTALLATION:

DETERMINE THE REQUIRED DRILL HOLE DIAMETER(S), DRILLING METHOD, GROUT COMPOSITION AND INSTALLATION METHOD NECESSARY TO ACHIEVE THE NAIL PULLOUT RESISTANCE(S) SPECIFIED ON THE PLANS, IN ACCORDANCE WITH THE TEST NAIL ACCEPTANCE CRITERIA IN SECTION 7.6.

THE CONTRACTOR IS RESPONSIBLE FOR FIELD LOCATING AND VERIFYING THE LOCATIONS OF ALL STRUCTURE FOUNDATIONS ADJACENT TO THE SOIL NAIL WALL. DO NOT RENDER THE EXISTING SLOPE, STRUCTURES, AND SOIL NAIL WALL EXCAVATIONS UNSTABLE, AND DO NOT INTERRUPT USAGE OF STRUCTURES REMAINING IN SERVICE; RESTORE ANY EXCAVATION PERFORMED FOR THIS PURPOSE TO THE CONDITION THAT EXISTED PRIOR TO THE WORK PER 107.10. SOIL NAILS SHALL BE SPACED SO THEY DO NOT CONFLICT WITH THESE FOUNDATIONS. ADD, ELIMINATE, OR RELOCATE NAILS TO ACCOMMODATE ACTUAL FIELD CONDITIONS, WITH THE ACCEPTANCE OF THE ENGINEER. COST ADJUSTMENTS ASSOCIATED WITH THESE MODIFICATIONS SHALL BE MADE IN ACCORDANCE WITH C&MS ITEM 109.05, CHANGES AND EXTRA WORK.

THE SOIL NAIL LOCATIONS SHOWN ON THE PLANS ARE CONSIDERED TO BE THE MINIMUM NUMBER OF SOIL NAILS. IF THE CONTRACTOR DETERMINES ADDITIONAL SOIL NAILS ARE NEEDED TO CONSTRUCT A STABLE WALL, THE ADDITIONAL LOCATIONS SHALL BE SHOWN ON THE SHOP DRAWINGS AND ACCEPTED BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR DESIGNING, CONSTRUCTING, AND MAINTAINING A STABLE SOIL NAIL WALL. THE COST OF ANY REDESIGN, ADDITIONAL MATERIAL, OR INSTALLATION MODIFICATIONS RESULTING FROM ACTIONS OF THE CONTRACTOR SHALL BE BORNE BY THE CONTRACTOR.

NO DRILLING OR INSTALLATION OF PRODUCTION NAILS WILL BE PERMITTED IN ANY SOIL/ROCK UNIT UNTIL SUCCESSFUL PRE-PRODUCTION VERIFICATION TESTING OF NAILS IS COMPLETED IN THAT UNIT AND ACCEPTED BY THE ENGINEER. INSTALL VERIFICATION TEST NAILS USING THE SAME EQUIPMENT, METHODS, NAIL INCLINATION AND DRILL HOLE DIAMETER AS PLANNED FOR THE PRODUCTION NAILS. PERFORM PRE-PRODUCTION VERIFICATION TESTS IN ACCORDANCE WITH SECTION 7.4 PRIOR TO STARTING WALL EXCAVATION AND PRIOR TO INSTALLATION OF PRODUCTION NAILS IN THE SPECIFIC LIFT IN WHICH THE DESIGNATED VERIFICATION TEST NAILS ARE LOCATED. THE NUMBER AND LOCATION OF THE VERIFICATION TESTS SHALL BE AS SPECIFIED IN THE PLANS OR AS ACCEPTED BY THE ENGINEER. VERIFICATION TEST NAILS MAY BE INSTALLED THROUGH EITHER THE EXISTING SLOPE FACE PRIOR TO START OF WALL EXCAVATION, DRILL PLATFORM WORK BENCH, STABILIZATION BERM OR INTO SLOT CUTS MADE FOR THE PARTICULAR LIFT IN WHICH THE VERIFICATION TEST NAILS ARE LOCATED.

SLOT CUTS WILL ONLY BE LARGE ENOUGH TO SAFELY ACCOMMODATE THE DRILL AND TEST NAIL REACTION SETUP. SUBJECT TO THE ENGINEER'S ACCEPTANCE, VERIFICATION TEST NAILS MAY ALSO BE INSTALLED AT DIFFERENT ANGLE ORIENTATIONS OR LOCATIONS OTHER THAN THOSE SPECIFIED, AS LONG AS THE CONTRACTOR CAN DEMONSTRATE THAT THE TEST NAILS WILL BE BONDED INTO GROUND WHICH IS REPRESENTATIVE OF THE GROUND AT THE VERIFICATION TEST NAIL LOCATIONS DESIGNATED ON THE PLANS OR HEREIN. INSTALL THE PRODUCTION SOIL NAILS BEFORE THE APPLICATION OF THE REINFORCED SHOTCRETE FACING.

AT THE CONTRACTOR'S REQUEST AND SUBJECT TO THE ENGINEER'S WRITTEN ACCEPTANCE, THE SHOTCRETE FACING MAY BE PLACED BEFORE DRILLING AND INSTALLING THE NAILS. PROVIDE A BLOCKOUT THROUGH THE SHOTCRETE FACING AT DRILL HOLE LOCATIONS USING PVC PIPE OR OTHER SUITABLE MATERIAL, TO PREVENT DAMAGE TO THE FACING DURING DRILLING. AS PART OF THE REQUIRED CONSTRUCTION SUBMITTALS, PROVIDE THE ENGINEER WITH ACCEPTABLE STRUCTURAL DESIGN CALCULATIONS DEMONSTRATING THAT THE FACING STRUCTURAL CAPACITY WILL NOT BE REDUCED AND THAT THE BEARING PLATES ARE ADEQUATE TO SPAN THE NAIL DRILL HOLE BLOCKOUT THROUGH THE CONSTRUCTION FACING. IF THIS REQUIRES LARGER SIZE BEARING PLATES AND/OR ADDITIONAL REINFORCEMENT BEYOND THAT DETAILED ON THE PLANS, THE EXTRA COST WILL BE INCIDENTAL.

WHERE NECESSARY FOR STABILITY OF THE EXCAVATION FACE, THE CONTRACTOR SHALL HAVE THE OPTION OF PLACING A SEALING LAYER (FLASHCOAT) OF UNREINFORCED SHOTCRETE OR STEEL FIBER REINFORCED SHOTCRETE OR OF DRILLING AND GROUTING OF NAILS THROUGH A TEMPORARY STABILIZING BERM OF NATIVE SOIL TO PROTECT AND STABILIZE THE FACE OF THE EXCAVATION. THE COST SHALL BE INCIDENTAL TO THE WORK.

5.7 DRILLING:

THE DRILL HOLES FOR THE SOIL NAILS SHALL BE MADE AT THE LOCATIONS, ORIENTATIONS, AND MINIMUM LENGTHS SHOWN ON THE PLANS OR THE ENGINEERED DRAWINGS OR AS ACCEPTED BY THE ENGINEER. SELECT DRILLING EQUIPMENT AND METHODS SUITABLE FOR THE GROUND CONDITIONS SHOWN IN THE SOIL PROFILE SHEETS AND BORING LOGS. SELECT DRILL HOLE DIAMETER(S) REQUIRED TO DEVELOP THE SPECIFIED PULLOUT RESISTANCE AND TO ALSO PROVIDE A MINIMUM 1 INCH GROUT COVER OVER BARE OR EPOXY COATED BARS OR MINIMUM 1/2 INCH GROUT COVER OVER THE ENCAPSULATION OR ENCAPSULATED NAILS. USE OF DRILLING MUDS SUCH AS BENTONITE SLURRY TO ASSIST IN DRILL CUTTING REMOVAL IS NOT ALLOWED BUT AIR MAY BE USED. WITH THE ENGINEER'S ACCEPTANCE, THE CONTRACTOR MAY BE ALLOWED TO USE WATER OR FOAM FLUSHING UPON SUCCESSFUL DEMONSTRATION, AT THE CONTRACTOR'S COST, THAT THE INSTALLATION METHOD STILL PROVIDES ADEQUATE NAIL PULLOUT RESISTANCE. WHERE CAVING GROUND IS ENCOUNTERED, CASED DRILLING METHODS MAY BE USED TO SUPPORT THE SIDES OF THE DRILL HOLES.

IMMEDIATELY SUSPEND OR MODIFY DRILLING OPERATIONS IF GROUND SUBSIDENCE IS OBSERVED, IF THE SOIL NAIL WALL IS ADVERSELY AFFECTED, OR IF ADJACENT STRUCTURES ARE DAMAGED FROM THE DRILLING OPERATION. IMMEDIATELY STABILIZE THE ADVERSE CONDITIONS AT NO ADDITIONAL COST.

FOR INFORMATION ONLY

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5.8 NAIL BAR INSTALLATION:

PROVIDE NAIL BARS IN ACCORDANCE WITH THE LAYOUT SHOWN ON THE PLANS OR THE ENGINEERED DRAWINGS. PROVIDE CENTRALIZERS SIZED TO POSITION THE BAR WITHIN 1 INCH OF THE CENTER OF THE DRILL HOLE. POSITION CENTRALIZERS ALONG THE SOIL NAIL SO THEIR MAXIMUM CENTER-TO-CENTER SPACING DOES NOT EXCEED 10 FEET. ALSO LOCATE CENTRALIZERS WITHIN 1.5 FEET FROM THE TOP AND BOTTOM OF THE DRILL HOLE. SECURELY ATTACH CENTRALIZERS TO THE BAR SO THEY WILL NOT SHIFT DURING HANDLING OR INSERTION INTO THE DRILL HOLE YET WILL STILL ALLOW GROUT TREMIE PIPE INSERTION TO THE BOTTOM OF DRILL HOLE AND ALLOW GROUT TO FLOW FREELY UP THE HOLE.

SOIL NAIL BARS SHALL BE CONTINUOUS EXCEPT IN RESTRICTED AREAS WHERE THERE IS NOT ENOUGH ROOM FOR THE FULL NAIL LENGTH TO BE INSERTED INTO THE DRILL HOLE. IN THESE RESTRICTED AREAS, THE CONTRACTOR SHALL BE PERMITTED TO COUPLE BARS TOGETHER TO ACHIEVE THE DESIRED LENGTH. THE MINIMUM ALLOWABLE BAR LENGTH SHALL BE 10 FEET, WITH NOT MORE THAN TWO COUPLERS PER SOIL NAIL. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO USE NO COUPLERS OR ONLY ONE WHERE POSSIBLE. ALL COUPLED BARS SHALL BE ACCEPTED BY THE ENGINEER PRIOR TO INSTALLATION.

INSPECT EACH NAIL BAR BEFORE INSTALLATION AND REPAIR OR REPLACE DAMAGED BARS OR CORROSION PROTECTION. CHECK UNCASED DRILL HOLES FOR CLEANLINESS PRIOR TO INSERTION OF THE SOIL NAIL BAR. INSERT NAIL BARS WITH CENTRALIZERS INTO THE DRILL HOLE TO THE REQUIRED LENGTH WITHOUT DIFFICULTY AND IN A WAY THAT PREVENTS DAMAGE TO THE DRILL HOLE, BAR, OR CORROSION PROTECTION. DO NOT DRIVE OR FORCE PARTIALLY INSERTED SOIL NAILS INTO THE HOLE. REMOVE NAILS WHICH CANNOT BE FULLY INSERTED TO THE DESIGN DEPTH AND CLEAN THE DRILL HOLE TO ALLOW UNOBSTRUCTED INSTALLATION.

WHEN USING CASED OR HOLLOW STEM AUGER DRILLING EQUIPMENT WHICH DOES NOT ALLOW FOR THE CENTRALIZERS TO PASS THROUGH THE CASING OR AUGER STEM, THE CONTRACTOR MAY DELETE THE CENTRALIZERS IF THE NEAT CEMENT GROUT PUMPED THROUGH THE CASING IS PLACED USING GROUT PRESSURES GREATER THAN 150 PSI OR IF THE SAND-CEMENT GROUT PLACED THROUGH THE STEM OF THE AUGER HAS A SLUMP OF 9 INCHES OR LESS.

PLACE A BEARING PLATE AGAINST THE REINFORCED SHOTCRETE FACING, OVER THE HEAD OF THE SOIL NAIL TENDON PROTRUDING FROM THE DRILL HOLE. IF SOIL NAILS ARE INSTALLED PRIOR TO THE APPLICATION OF THE REINFORCED SHOTCRETE FACING, LIGHTLY PRESS THE BEARING PLATE INTO THE FRESH SHOTCRETE AS THE SHOTCRETE STARTS TO CURE. INSTALL A HEX NUT AND WASHER TO ENGAGE THE NAIL HEAD AGAINST THE BEARING PLATE. WRENCH-TIGHTEN THE HEX NUT WITHIN 24 HOURS OF PLACING THE BEARING PLATE.

5.8.1 HBSN INSTALLATION:

THE USE OF COUPLERS FOR HSBN IS NOT CONFINED TO ONLY RESTRICTED AREAS. AS DRILLING, GROUTING, AND BAR INSERTION ARE PERFORMED AS A SINGLE OPERATION, DRILL HOLES ARE NOT CHECKED FOR CLEANLINESS PRIOR TO INSERTION OF THE HBSN.

5.9 NAIL INSTALLATION TOLERANCES:

NAILS SHALL NOT EXTEND BEYOND THE RIGHT-OF-WAY OR EASEMENT LIMITS SHOWN ON THE PLANS. NAIL LOCATION AND ORIENTATION TOLERANCES ARE:

A. NAIL HEAD LOCATION, DEVIATION FROM PLAN DESIGN LOCATION; 6 INCHES ANY DIRECTION.

B. NAIL INCLINATION, DEVIATION FROM PLAN; + OR -3 DEGREES.

C. CENTER NAIL BARS WITHIN 1 INCH OF THE CENTER OF THE DRILL HOLE.

D. LOCATION TOLERANCES ARE APPLICABLE TO ONLY ONE NAIL AND NOT ACCUMULATIVE OVER LARGE WALL AREAS.

SOIL NAILS WHICH DO NOT SATISFY THE SPECIFIED TOLERANCES, DUE TO THE CONTRACTOR'S INSTALLATION METHODS, WILL BE REPLACED AT NO ADDITIONAL COST. BACKFILL ABANDONED NAIL DRILL HOLES WITH TREMIED GROUT. NAILS WHICH ENCOUNTER UNANTICIPATED OBSTRUCTIONS DURING DRILLING SHALL BE RELOCATED, AS ACCEPTED BY THE ENGINEER. THE COST OF DRILLING AND BACKFILLING DRILL HOLES ABANDONED DUE TO UNANTICIPATED OBSTRUCTIONS WILL BE PAID AS EXTRA WORK.

5.10 NAIL INSTALLATION RECORDS:

RECORDS DOCUMENTING THE SOIL NAIL WALL CONSTRUCTION WILL BE MAINTAINED BY THE ENGINEER, UNLESS SPECIFIED OTHERWISE. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH AS-BUILT DRAWINGS SHOWING AS-BUILT NAIL LOCATIONS AND AS-BUILT SHOTCRETE FACING LINE AND GRADE WITHIN 5 DAYS AFTER COMPLETION OF THE SHOTCRETE FACING AND AS-BUILT CIP FACING LINE AND GRADE WITHIN 5 DAYS AFTER COMPLETION OF THE CIP FACING.

6.0 GROUTING

6.1 GROUT MIX DESIGN:

USE A NEAT CEMENT GROUT OR A SAND-CEMENT GROUT. SUBMIT THE PROPOSED NAIL GROUT MIX DESIGN TO THE ENGINEER FOR REVIEW AND ACCEPTANCE IN ACCORDANCE WITH THE CONSTRUCTION SUBMITTAL GUIDELINES IN SECTION 2.4. THE DESIGN MIX SUBMITTAL SHALL INCLUDE COMPRESSIVE STRENGTH TEST RESULTS VERIFYING THAT THE PROPOSED MIX WILL HAVE A MINIMUM 3-DAY COMPRESSIVE STRENGTH OF 1,500 PSI AND MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI.

6.2 GROUT TESTING:

PREVIOUS TEST RESULTS FOR THE PROPOSED GROUT MIX COMPLETED WITHIN ONE YEAR OF THE START OF WORK MAY BE SUBMITTED FOR INITIAL VERIFICATION OF THE REQUIRED COMPRESSIVE STRENGTHS FOR INSTALLATION OF PRE-PRODUCTION VERIFICATION TEST NAILS AND INITIAL PRODUCTION NAILS. DURING PRODUCTION, NAIL GROUT SHALL BE TESTED BY THE CONTRACTOR IN ACCORDANCE WITH AASHTO T106/ASTM C109 AT A FREQUENCY OF NO LESS THAN ONE TEST FOR EVERY 50 CUBIC YARDS OF GROUT PLACED. PROVIDE GROUT CUBE TEST RESULTS TO THE ENGINEER WITHIN 24 HOURS OF TESTING.

6.3 GROUTING EQUIPMENT:

GROUT EQUIPMENT SHALL PRODUCE A UNIFORMLY MIXED GROUT FREE OF LUMPS AND UNDISPERSED CEMENT, AND BE CAPABLE OF CONTINUOUSLY AGITATING THE MIX. USE A POSITIVE DISPLACEMENT GROUT PUMP EQUIPPED WITH A PRESSURE GAUGE THAT CAN MEASURE AT LEAST TWICE BUT NO MORE THAN THREE TIMES THE INTENDED GROUT PRESSURE. SIZE THE GROUTING EQUIPMENT TO ENABLE THE ENTIRE NAIL TO BE GROUTED IN ONE CONTINUOUS OPERATION. PLACE THE GROUT WITHIN 60 MINUTES AFTER MIXING OR WITHIN THE TIME RECOMMENDED BY THE ADMIXTURE MANUFACTURER, IF ADMIXTURES ARE USED. GROUT NOT PLACED IN THE ALLOWED TIME LIMIT WILL BE REJECTED.

6.4 GROUTING METHODS:

GROUT THE DRILL HOLE AFTER INSTALLATION OF THE NAIL BAR. EACH DRILL HOLE WILL BE GROUTED WITHIN 2 HOURS OF COMPLETION OF DRILLING, UNLESS OTHERWISE ACCEPTED BY THE ENGINEER. INJECT THE GROUT AT THE LOWEST POINT OF EACH DRILL HOLE THROUGH A GROUT TUBE, CASING, HOLLOW-STEM AUGER, OR DRILL RODS. KEEP THE OUTLET END OF THE CONDUIT DELIVERING THE GROUT BELOW THE SURFACE OF THE GROUT AS THE CONDUIT IS WITHDRAWN TO PREVENT THE CREATION OF VOIDS. COMPLETELY FILL THE DRILL HOLE IN ONE CONTINUOUS OPERATION. COLD JOINTS IN THE GROUT COLUMN ARE NOT ALLOWED EXCEPT AT THE TOP OF THE TEST BOND LENGTH OF PROOF TESTED PRODUCTION NAILS. AT THE CONTRACTOR'S OPTION, THE GROUT TUBE MAY REMAIN IN THE HOLE PROVIDED IT IS FILLED WITH GROUT. GROUTING BEFORE INSERTION OF THE NAIL IS ALLOWED PROVIDED THE NAIL BAR IS IMMEDIATELY INSERTED THROUGH THE GROUT TO THE SPECIFIED LENGTH WITHOUT DIFFICULTY.

DURING CASING REMOVAL FOR DRILL HOLES ADVANCED BY EITHER CASED OR HOLLOW-STEM AUGER METHODS, MAINTAIN SUFFICIENT GROUT LEVEL WITHIN THE CASING TO OFFSET THE EXTERNAL GROUNDWATER/SOIL PRESSURE AND PREVENT HOLE CAVING. MAINTAIN GROUT HEAD OR GROUT PRESSURES SUFFICIENT TO ENSURE THAT THE DRILL HOLE WILL BE COMPLETELY FILLED WITH GROUT AND TO PREVENT UNSTABLE SOIL OR GROUNDWATER FROM CONTAMINATING OR DILUTING THE GROUT. RECORD THE GROUT PRESSURES FOR SOIL NAILS INSTALLED USING PRESSURE GROUTING TECHNIQUES. CONTROL GROUT PRESSURES TO PREVENT EXCESSIVE GROUND HEAVE OR FRACTURING.

REMOVE THE GROUT AND NAIL IF GROUTING IS SUSPENDED FOR MORE THAN 30 MINUTES OR DOES NOT SATISFY THE REQUIREMENTS OF THIS SPECIFICATION OR THE PLANS, AND REPLACE WITH FRESH GROUT AND UNDAMAGED NAIL BAR AT NO ADDITIONAL COST.

7.0 TESTING

7.1 NAIL TESTING:

PERFORM BOTH VERIFICATION AND PROOF TESTING OF DESIGNATED TEST NAILS. PERFORM PRE-PRODUCTION VERIFICATION TESTS ON SACRIFICIAL TEST NAILS AT LOCATIONS SHOWN ON THE PLANS OR SELECTED BY THE ENGINEER. PERFORM PROOF TESTS ON PRODUCTION NAILS AT LOCATIONS SELECTED BY THE ENGINEER. ANY SOIL NAIL SHALL ONLY BE SUBJECTED TO EITHER A VERIFICATION TEST OR PROOF TEST BUT NOT BOTH. REQUIRED NAIL TEST DATA SHALL BE RECORDED BY THE ENGINEER.

DO NOT PERFORM NAIL TESTING UNTIL THE NAIL GROUT AND SHOTCRETE FACING HAVE CURED FOR AT LEAST 72 HOURS AND ATTAINED AT LEAST THEIR SPECIFIED 3-DAY COMPRESSIVE STRENGTH. TESTING IN LESS THAN 72 HOURS WILL ONLY BE ALLOWED IF THE CONTRACTOR SUBMITS COMPRESSIVE STRENGTH TEST RESULTS, FOR TESTS PERFORMED BY A QUALIFIED INDEPENDENT TESTING LAB, VERIFYING THAT THE NAIL GROUT AND SHOTCRETE MIXES BEING USED WILL PROVIDE THE SPECIFIED 3-DAY COMPRESSIVE STRENGTHS IN THE LESSER TIME. CONSTRUCT A GRAPH SHOWING A PLOT OF SOIL NAIL MOVEMENT VERSUS LOAD FOR EACH LOAD INCREMENT AND A CREEP CURVE PLOT OF SOIL NAIL MOVEMENT VERSUS TIME FOR EACH CREEP TEST. SUPPLY THE TESTING DATA AND PLOTS OF SOIL NAIL MOVEMENT TO THE ENGINEER FOR EACH VERIFICATION TEST OR PROOF TEST.

7.2 TEST NAIL UNBONDED LENGTH:

PROVIDE TEMPORARY UNBONDED LENGTHS FOR EACH TEST NAIL. ISOLATE THE TEST NAIL BAR FROM THE SHOTCRETE FACING AND/OR THE REACTION FRAME USED DURING TESTING. ISOLATION OF A TEST NAIL THROUGH THE SHOTCRETE FACING SHALL NOT AFFECT THE LOCATION OF THE REINFORCING STEEL UNDER THE BEARING PLATE. ACCEPTED PROOF TEST NAILS MAY BE INCORPORATED AS PRODUCTION NAILS PROVIDED THE TEMPORARY TEST UNBONDED LENGTH IS FULLY GROUTED SUBSEQUENT TO TESTING. SUBMIT THE PROPOSED TEST NAIL ISOLATION METHODS, METHODS FOR PROVIDING AN UNBONDED TEST LENGTH, AND METHODS FOR GROUTING THE UNBONDED LENGTH SUBSEQUENT TO TESTING TO THE ENGINEER FOR REVIEW AND ACCEPTANCE IN ACCORDANCE WITH THE CONSTRUCTION SUBMITTAL GUIDELINES IN SECTION 2.4. WHERE TEMPORARY CASING OF THE UNBONDED LENGTH OF TEST NAILS IS PROVIDED, INSTALL THE CASING IN A WAY THAT PREVENTS ANY REACTION BETWEEN THE CASING AND THE GROUTED BOND LENGTH OF THE NAIL AND/OR THE STRESSING APPARATUS.

7.2.1 TEST HBSN UNBONDED LENGTH:

SINCE THE DRILLING INSTALLATION OF HBSNS RESULTS IN A FULLY GROUTED HOLE, UTILIZE ONE OF THE FOLLOWING THREE METHODS TO PROVIDE AN UNBONDED LENGTH FOR HBSN TESTING:

A. FOLLOWING HBSN INSTALLATION, REMOVE A LENGTH OF THE GROUT WITHIN THE DRILL HOLE BY FLUSHING USING A TREMIE PIPE AND WATER.

B. USE AN ADDITIONAL LENGTH OF HBSN OUTSIDE OF THE GROUTED HOLE AS AN UNBONDED LENGTH. IN THIS CASE, OFFSET THE TESTING EQUIPMENT FROM THE TOP OF THE DRILLED HOLE BY A DISTANCE EQUAL TO THE ADDITIONAL UNBONDED LENGTH.

C. PROVIDE A PRE-INSTALLED TEMPORARY SMOOTH CASING AS A BOND-BREAKER TO CREATE AN UNBONDED LENGTH WITHIN THE DRILL HOLE.

CONFORMANCE

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7.3 TESTING EQUIPMENT:

TESTING EQUIPMENT SHALL INCLUDE DIAL GAUGES, DIAL GAUGE SUPPORT, JACK, PRESSURE GAUGE, ELECTRONIC LOAD CELL, AND A REACTION FRAME. PROVIDE A DESCRIPTION OF THE TEST SETUP AND THE JACK, PRESSURE GAUGE, AND LOAD CELL CALIBRATION CURVES IN ACCORDANCE WITH SECTION 2.4.

DESIGN THE TESTING REACTION FRAME TO BE SUFFICIENTLY RIGID AND OF ADEQUATE DIMENSIONS SUCH THAT EXCESSIVE DEFORMATION OF THE TESTING EQUIPMENT DOES NOT OCCUR. IF THE REACTION FRAME WILL BEAR DIRECTLY ON THE SHOTCRETE FACING, DESIGN IT TO PREVENT CRACKING OF THE SHOTCRETE. INDEPENDENTLY SUPPORT AND CENTER THE JACK OVER THE NAIL BAR SO THAT THE BAR DOES NOT CARRY THE WEIGHT OF THE TESTING EQUIPMENT. ALIGN THE JACK, BEARING PLATES, AND STRESSING ANCHORAGE WITH THE BAR SUCH THAT UNLOADING AND REPOSITIONING OF THE EQUIPMENT WILL NOT BE REQUIRED DURING THE TEST.

APPLY AND MEASURE THE TEST LOAD WITH A HYDRAULIC JACK AND A PRESSURE GAUGE. THE PRESSURE GAUGE SHALL BE GRADUATED IN 100 PSI INCREMENTS OR LESS. THE JACK AND PRESSURE GAUGE SHALL HAVE A PRESSURE RANGE NOT EXCEEDING TWICE THE ANTICIPATED MAXIMUM TEST PRESSURE. JACK RAM TRAVEL SHALL BE SUFFICIENT TO ALLOW THE TEST TO BE DONE WITHOUT RESETTING THE EQUIPMENT. MONITOR THE NAIL LOAD DURING VERIFICATION TESTS WITH BOTH THE PRESSURE GAUGE AND THE LOAD CELL. USE THE LOAD CELL TO MAINTAIN CONSTANT LOAD HOLD DURING THE CREEP TEST LOAD HOLD INCREMENT OF THE VERIFICATION TEST.

MEASURE THE NAIL HEAD MOVEMENT WITH A DIAL GAUGE CAPABLE OF MEASURING TO 0.001 INCH. THE DIAL GAUGE SHALL HAVE A TRAVEL SUFFICIENT TO ALLOW THE TEST TO BE DONE WITHOUT HAVING TO RESET THE GAUGE. VISUALLY ALIGN THE GAUGE TO BE PARALLEL WITH THE AXIS OF THE NAIL AND SUPPORT THE GAUGE INDEPENDENTLY FROM THE JACK, WALL OR REACTION FRAME. USE TWO DIAL GAUGES WHEN THE TEST SETUP REQUIRES REACTION AGAINST A SOIL CUT FACE.

7.4 PRE-PRODUCTION VERIFICATION TESTING OF SACRIFICIAL TEST NAILS:

PRE-PRODUCTION VERIFICATION TESTING SHALL BE PERFORMED PRIOR TO INSTALLATION OF PRODUCTION NAILS TO VERIFY THE CONTRACTOR'S INSTALLATION METHODS AND NAIL PULLOUT RESISTANCE. PERFORM PRE-PRODUCTION VERIFICATION TESTS AT THE LOCATIONS AND ELEVATIONS SELECTED BY THE ENGINEER. PERFORM A MINIMUM OF ONE VERIFICATION TEST IN EACH DIFFERENT SOIL/ROCK UNIT AND FOR EACH DIFFERENT DRILLING/GROUTING METHOD PROPOSED TO BE USED, AT EACH WALL LOCATION. VERIFICATION TEST NAILS WILL BE SACRIFICIAL AND NOT INCORPORATED AS PRODUCTION NAILS. BARE BARS CAN BE USED FOR THE SACRIFICIAL VERIFICATION TEST NAILS.

DEVELOP AND SUBMIT THE DETAILS OF THE VERIFICATION TESTING ARRANGEMENT INCLUDING THE METHOD OF DISTRIBUTING TEST LOAD PRESSURES TO THE EXCAVATION SURFACE (REACTION FRAME), TEST NAIL BAR SIZE, GROUTED DRILL HOLE DIAMETER, AND REACTION FRAME DIMENSIONING TO THE ENGINEER FOR ACCEPTANCE IN ACCORDANCE WITH THE CONSTRUCTION SUBMITTAL GUIDELINES IN SECTION 2.4.

CONSTRUCT VERIFICATION TEST NAILS USING THE SAME EQUIPMENT, INSTALLATION METHODS, NAIL INCLINATION, AND DRILL HOLE DIAMETER AS PLANNED FOR THE PRODUCTION NAILS. CHANGES IN THE DRILLING OR INSTALLATION METHOD MAY REQUIRE ADDITIONAL VERIFICATION TESTING AS DETERMINED BY THE ENGINEER AND SHALL BE PROVIDED AT NO ADDITIONAL COST. PAYMENT FOR ADDITIONAL VERIFICATION TESTS REQUIRED DUE TO DIFFERING SITE CONDITIONS, IF DETERMINED BY THE ENGINEER, SHALL BE PER THE CONTRACT UNIT PRICE.

TEST NAILS SHALL HAVE BOTH BONDED AND TEMPORARY UNBONDED LENGTHS. PRIOR TO TESTING ONLY THE BONDED LENGTH OF THE TEST NAIL SHALL BE GROUTED. THE TEMPORARY UNBONDED LENGTH OF THE TEST NAIL SHALL BE AT LEAST 3 FEET. THE BONDED LENGTH OF THE TEST NAIL SHALL BE DETERMINED BASED ON THE PRODUCTION NAIL BAR GRADE AND SIZE SUCH THAT THE ALLOWABLE BAR STRUCTURAL LOAD IS NOT EXCEEDED DURING TESTING, BUT SHALL NOT BE LESS THAN 10 FEET. THE MAXIMUM PERMISSIBLE BAR STRUCTURAL LOAD DURING TESTING SHALL NOT BE GREATER THAN 90 PERCENT OF THE YIELD STRENGTH FOR GRADE 60 THROUGH GRADE 100 BARS, OR 80 PERCENT OF THE ULTIMATE STRENGTH FOR GRADE 150 BARS. THE CONTRACTOR SHALL PROVIDE LARGER VERIFICATION TEST BAR SIZES, IF REQUIRED TO SAFELY ACCOMMODATE THE 10-FOOT MINIMUM TEST BOND LENGTH AND TESTING TO 2 TIMES THE ALLOWABLE PULLOUT RESISTANCE REQUIREMENTS, AT NO ADDITIONAL COST.

THE MAXIMUM BONDED LENGTH FOR VERIFICATION TESTING Lbvt-max SHALL BE DETERMINED BY THE FOLLOWING EQUATION TO AVOID STRUCTURALLY OVERSTRESSING THE VERIFICATION TEST NAIL BAR:

Lbvt-max = Crt x At x (Fy OR Fu) / (Rpo), WHERE:

Lbvt-max = MAXIMUM VERIFICATION TEST NAIL BONDED LENGTH (FT). IF Lbvt-max IS LESS THAN 10.0 FT, THEN THE SIZE OF THE VERIFICATION TEST NAIL BAR SHALL BE INCREASED UNTIL Lbvt-max IS AT LEAST 10.0 FT.

Crt = REDUCTION COEFFICIENT, 0.9 FOR GRADE 60 TO 100 BARS OR 0.8 FOR GRADE 150 BARS

At = CROSS-SECTIONAL AREA OF THE VERIFICATION TEST NAIL BAR (SQ IN)

Fy = NOMINAL YIELD RESISTANCE OF THE VERIFICATION TEST NAIL BAR (KSI) FOR GRADE 60 TO 100 BARS

Fu = MINIMUM ULTIMATE TENSILE STRENGTH OF THE VERIFICATION TEST NAIL BAR (KSI) FOR GRADE 150 BARS

Rpo = NOMINAL LOAD TRANSFER RATE (KIPS/FT) = (π x Qu x Ddh) / 12

Qu = NOMINAL BOND STRENGTH PER UNIT AREA (KSF)

Ddh = DRILL HOLE DIAMETER (IN)

THE VERIFICATION TEST LOAD (VTL) DURING VERIFICATION TESTING SHALL BE DETERMINED BY THE FOLLOWING EQUATION:

VTL = Lbvt x Rpo (KIPS/FT)

Lbvt = VERIFICATION TEST NAIL BONDED LENGTH (FT). Lbvt SHALL BE BETWEEN 10.0 FT AND Lbvt-max.

VERIFICATION TEST NAILS SHALL BE INCREMENTALLY LOADED TO A MAXIMUM TEST LOAD OF THE VERIFICATION TEST LOAD (VTL) IN ACCORDANCE WITH THE FOLLOWING LOADING SCHEDULE. THE SOIL NAIL MOVEMENTS SHALL BE RECORDED AT EACH LOAD INCREMENT AT 1 MINUTE, 2, 5, AND 10 MINUTES.

VERIFICATION TEST LOADING SCHEDULE

LOAD	HOLD TIME
AL (< = 0.025 VTL)	1 MINUTE
0.125 VTL	10 MINUTES
0.250 VTL	10 MINUTES
0.375 VTL	10 MINUTES
0.500 VTL	10 MINUTES
0.625 VTL	10 MINUTES
0.750 VTL (CREEP TEST)	60 MINUTES
0.875 VTL	10 MINUTES
1.00 VTL (MAX TEST LOAD)	10 MINUTES
AL (< = 0.025 VTL)	1 MINUTE

THE ALIGNMENT LOAD (AL) SHOULD BE THE MINIMUM LOAD REQUIRED TO ALIGN THE TESTING APPARATUS AND SHOULD NOT EXCEED 2.5 PERCENT OF VTL. DIAL GAUGES SHOULD BE SET TO "ZERO" AFTER THE ALIGNMENT LOAD HAS BEEN APPLIED.

EACH LOAD INCREMENT SHALL BE HELD FOR AT LEAST 10 MINUTES. THE VERIFICATION TEST NAIL SHALL BE MONITORED FOR CREEP AT THE 0.750 VTL LOAD INCREMENT. NAIL MOVEMENTS DURING THE CREEP PORTION OF THE TEST SHALL BE MEASURED AND RECORDED AT 1 MINUTE, 2, 3, 5, 6, 10, 20, 30, 50 AND 60 MINUTES. THE LOAD DURING THE CREEP TEST SHALL BE MAINTAINED WITHIN 2 PERCENT OF THE INTENDED LOAD BY USE OF THE LOAD CELL.

AT THE END OF THE TEST, REDUCE THE LOAD BACK TO AL, AND RECORD THE PERMANENT SET OF THE SOIL NAIL.

7.5 PROOF TESTING OF PRODUCTION NAILS:

PERFORM PROOF TESTING ON 5 PERCENT (1 IN 20) OF THE PRODUCTION NAILS IN EACH NAIL ROW OR MINIMUM OF 1 PER ROW. THE LOCATIONS SHALL BE DESIGNATED BY THE ENGINEER.

PRODUCTION PROOF TEST NAILS SHALL HAVE BOTH BONDED AND TEMPORARY UNBONDED LENGTHS. PRIOR TO TESTING ONLY THE BONDED LENGTH OF THE TEST NAIL SHALL BE GROUTED. THE TEMPORARY UNBONDED LENGTH OF THE TEST NAIL SHALL BE AT LEAST 3 FEET. THE BONDED LENGTH OF THE TEST NAIL SHALL BE DETERMINED BASED ON THE PRODUCTION NAIL BAR GRADE AND SIZE SUCH THAT THE ALLOWABLE BAR STRUCTURAL LOAD IS NOT EXCEEDED DURING TESTING, BUT SHALL NOT BE LESS THAN 10 FEET. THE MAXIMUM PERMISSIBLE BAR STRUCTURAL LOAD DURING TESTING SHALL NOT BE GREATER THAN 90 PERCENT OF THE YIELD STRENGTH FOR GRADE 60 THROUGH GRADE 100 BARS, OR 80 PERCENT OF THE ULTIMATE STRENGTH FOR GRADE 150 BARS.

THE PROOF TEST BONDED LENGTH Lbpt SHALL NOT EXCEED Lbpt-max, OR THE ABOVE MINIMUM LENGTHS, WHICHEVER IS GREATER. HOWEVER, PRODUCTION PROOF TEST NAILS SHORTER THAN 13 FEET IN LENGTH MAY BE CONSTRUCTED WITH LESS THAN THE MINIMUM 10 FEET BOND LENGTH WITH THE MINIMUM UNBONDED LENGTH STILL LIMITED TO 3 FEET.

THE MAXIMUM BONDED LENGTH FOR PROOF TESTING Lbpt-max SHALL BE DETERMINED BY THE FOLLOWING EQUATION TO AVOID STRUCTURALLY OVERSTRESSING THE PROOF TEST NAIL BAR:

Lbpt-max = Crt x At x (Fy OR Fu) / (Rpo x 0.75), WHERE:

Lbpt-max = MAXIMUM PROOF TEST NAIL BONDED LENGTH (FT).

Crt, At, Fy, Fu, AND Rpo ARE AS DEFINED IN SECTION 7.4.

THE PROOF TEST LOAD (PTL) DURING PROOF TESTING SHALL BE DETERMINED BY THE FOLLOWING EQUATION:

PTL = Lbpt x Rpo (KIPS/FT) x 0.75

Lbpt = PROOF TEST NAIL BONDED LENGTH (FT).

PROOF TESTS SHALL BE PERFORMED BY INCREMENTALLY LOADING THE PROOF TEST NAIL TO A MAXIMUM TEST LOAD OF THE PROOF TEST LOAD (PTL) IN ACCORDANCE WITH THE FOLLOWING LOADING SCHEDULE. THE NAIL MOVEMENT AT EACH LOAD INCREMENT SHALL BE MEASURED AND RECORDED BY THE ENGINEER IN THE SAME MANNER AS FOR VERIFICATION TESTS. THE TEST LOAD SHALL BE MONITORED BY A JACK PRESSURE GAUGE WITH A SENSITIVITY AND RANGE MEETING THE REQUIREMENTS OF PRESSURE GAUGES USED FOR VERIFICATION TEST NAILS. AT LOAD INCREMENTS OTHER THAN THE MAXIMUM TEST LOAD, THE LOAD SHALL BE HELD LONG ENOUGH TO OBTAIN A STABLE READING.

PROOF TEST LOADING SCHEDULE

LOAD	HOLD TIME
AL (< = 0.025 PTL)	UNTIL STABLE
0.167 PTL	UNTIL STABLE
0.333 PTL	UNTIL STABLE
0.500 PTL	UNTIL STABLE
0.667 PTL	UNTIL STABLE
0.833 PTL	UNTIL STABLE
1.00 PTL (MAX TEST LOAD)	SEE BELOW
AL (<= 0.025 PTL)	UNTIL STABLE

THE ALIGNMENT LOAD (AL) SHOULD BE THE MINIMUM LOAD REQUIRED TO ALIGN THE TESTING APPARATUS AND SHOULD NOT EXCEED 2.5 PERCENT OF PTL. DIAL GAUGES SHOULD BE SET TO "ZERO" AFTER THE ALIGNMENT LOAD HAS BEEN APPLIED.

ALL LOAD INCREMENTS SHALL BE MAINTAINED WITHIN 5 PERCENT OF THE INTENDED LOAD. DEPENDING ON PERFORMANCE, EITHER 10 MINUTE OR 60 MINUTE CREEP TESTS SHALL BE PERFORMED AT THE MAXIMUM TEST LOAD (PTL). THE CREEP PERIOD SHALL START AS SOON AS THE MAXIMUM TEST LOAD IS APPLIED AND THE NAIL MOVEMENT SHALL BE MEASURED AND RECORDED AT 1 MINUTE, 2, 3, 5, 6 AND 10 MINUTES. WHERE THE SOIL NAIL MOVEMENT MEASURED FOR THE CREEP TEST BETWEEN 1 MINUTE AND 10 MINUTES EXCEEDS 0.04 INCH, THE MAXIMUM TEST LOAD SHALL BE MAINTAINED AN ADDITIONAL 50 MINUTES AND MOVEMENTS SHALL BE RECORDED AT 20 MINUTES, 30, 50 AND 60 MINUTES.

AT THE END OF THE TEST, REDUCE THE LOAD BACK TO AL, AND RECORD THE PERMANENT SET OF THE SOIL NAIL.

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DESIGNED RMW | DRAWN GB | CHECKED RJE | REVIEWED CAS | DATE 12-15-21 | REVISED - | STRUCTURE FILE NUMBER 3113787

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2017

7.6 TEST NAIL ACCEPTANCE CRITERIA:

A TEST NAIL SHALL BE CONSIDERED ACCEPTABLE WHEN:

1. FOR VERIFICATION TESTS, A TOTAL CREEP MOVEMENT OF LESS THAN 0.08 INCHES PER LOG CYCLE OF TIME BETWEEN THE 6 AND 60 MINUTE READINGS IS MEASURED DURING CREEP TESTING AND THE CREEP RATE IS LINEAR OR DECREASING THROUGHOUT THE CREEP TEST LOAD HOLD PERIOD.

2. FOR PROOF TESTS, A TOTAL CREEP MOVEMENT OF LESS THAN 0.04 INCHES IS MEASURED BETWEEN THE 1 AND 10 MINUTE READINGS OR A TOTAL CREEP MOVEMENT OF LESS THAN 0.08 INCHES IS MEASURED BETWEEN THE 6 AND 60 MINUTE READINGS AND THE CREEP RATE IS LINEAR OR DECREASING THROUGHOUT THE CREEP TEST LOAD HOLD PERIOD.

3. THE TOTAL MEASURED MOVEMENT AT THE MAXIMUM TEST LOAD EXCEEDS 80 PERCENT OF THE THEORETICAL ELASTIC ELONGATION OF THE TEST NAIL UNBONDED LENGTH.

4. A PULLOUT FAILURE DOES NOT OCCUR AT PTL OR BEFORE REACHING VTL. PULLOUT FAILURE IS DEFINED AS THE LOAD AT WHICH ATTEMPTS TO FURTHER INCREASE THE TEST LOAD SIMPLY RESULT IN CONTINUED PULLOUT MOVEMENT OF THE TEST NAIL. THE PULLOUT FAILURE LOAD SHALL BE RECORDED AS PART OF THE TEST DATA. ALTERNATELY, WITH THE ACCEPTANCE OF THE ENGINEER, THE CONTRACTOR MAY OPT TO INCREASE THE TEST LOAD BEYOND VTL TO DETERMINE PULLOUT RESISTANCE FOR A VERIFICATION TEST NAIL; IN THIS EVENT THE TEST LOAD SHALL NOT EXCEED THE MAXIMUM PERMISSIBLE BAR STRUCTURAL LOAD.

SUCCESSFUL PROOF TESTED NAILS MEETING THE ABOVE TEST ACCEPTANCE CRITERIA MAY BE INCORPORATED AS PRODUCTION NAILS, PROVIDED THAT (1) THE UNBONDED LENGTH OF THE TEST NAIL DRILL HOLE HAS NOT COLLAPSED DURING TESTING, (2) THE MINIMUM REQUIRED DRILL HOLE DIAMETER HAS BEEN MAINTAINED, (3) THE SPECIFIED CORROSION PROTECTION IS PROVIDED, AND (4) THE TEST NAIL LENGTH IS EQUAL TO OR GREATER THAN THE SCHEDULED PRODUCTION NAIL LENGTH. TEST NAILS MEETING THESE REQUIREMENTS SHALL BE COMPLETED BY SATISFACTORILY GROUTING UP THE UNBONDED TEST LENGTH. MAINTAINING THE TEMPORARY UNBONDED TEST LENGTH FOR SUBSEQUENT GROUTING IS THE CONTRACTOR'S RESPONSIBILITY. IF THE UNBONDED TEST LENGTH OF PRODUCTION PROOF TEST NAILS CANNOT BE SATISFACTORILY GROUTED SUBSEQUENT TO TESTING, THE PROOF TEST NAIL SHALL BECOME SACRIFICIAL AND SHALL BE REPLACED WITH AN ADDITIONAL PRODUCTION NAIL INSTALLED AT NO ADDITIONAL COST.

7.7 TEST NAIL REJECTION:

IF A TEST NAIL DOES NOT SATISFY THE ACCEPTANCE CRITERIA, IT WILL BE REJECTED. THE CONTRACTOR SHALL DETERMINE THE CAUSE FOR THE FAILURE.

7.8 VERIFICATION TEST NAILS:

THE ENGINEER WILL EVALUATE THE RESULTS OF EACH VERIFICATION TEST. INSTALLATION METHODS WHICH DO NOT SATISFY THE NAIL TESTING REQUIREMENTS SHALL BE REJECTED. THE CONTRACTOR SHALL PROPOSE ALTERNATIVE METHODS AND INSTALL REPLACEMENT VERIFICATION TEST NAILS. REPLACEMENT TEST NAILS SHALL BE INSTALLED AND TESTED AT NO ADDITIONAL COST.

7.9 PROOF TEST NAILS:

THE ENGINEER MAY REQUIRE THE CONTRACTOR TO REPLACE SOME OR ALL OF THE INSTALLED PRODUCTION NAILS BETWEEN A FAILED PROOF TEST NAIL AND THE ADJACENT PASSING PROOF TEST NAIL. ALTERNATIVELY, THE ENGINEER MAY REQUIRE THE INSTALLATION AND TESTING OF ADDITIONAL PROOF TEST NAILS TO VERIFY THAT ADJACENT PREVIOUSLY INSTALLED PRODUCTION NAILS HAVE SUFFICIENT LOAD CARRYING CAPACITY. CONTRACTOR MODIFICATIONS MAY INCLUDE, BUT ARE NOT LIMITED TO; THE INSTALLATION OF ADDITIONAL PROOF TEST NAILS; INCREASING THE DRILL HOLE DIAMETER TO PROVIDE INCREASED CAPACITY; MODIFYING THE INSTALLATION OR GROUTING METHODS; REDUCING THE PRODUCTION NAIL SPACING FROM THAT SHOWN ON THE PLANS AND INSTALLING MORE PRODUCTION NAILS AT A REDUCED CAPACITY; OR INSTALLING LONGER PRODUCTION NAILS IF SUFFICIENT RIGHT-OF-WAY IS AVAILABLE AND THE PULLOUT CAPACITY BEHIND THE FAILURE SURFACE CONTROLS THE ALLOWABLE NAIL DESIGN CAPACITY. THE NAILS MAY NOT BE LENGTHENED BEYOND THE TEMPORARY CONSTRUCTION EASEMENTS OR THE PERMANENT RIGHT-OF-WAY ON THE PLANS. INSTALLATION AND TESTING OF ADDITIONAL PROOF TEST NAILS OR INSTALLATION OF ADDITIONAL OR MODIFIED NAILS AS A RESULT OF PROOF TEST NAIL FAILURE(S) WILL BE AT NO ADDITIONAL COST.

SHOTCRETE CONSTRUCTION FACING

1.0 DESCRIPTION

SHOTCRETE FACING AND WORK CONSISTS OF FURNISHING ALL MATERIALS AND LABOR REQUIRED FOR PLACING AND SECURING REINFORCING STEEL AND SHOTCRETE FOR THE TEMPORARY SHOTCRETE CONSTRUCTION FACING FOR THE SOIL NAIL WALLS SHOWN ON THE PLANS. THE WORK SHALL INCLUDE ANY PREPARATORY TRIMMING AND CLEANING OF SOIL/ROCK SURFACES AND SHOTCRETE COLD JOINTS TO RECEIVE NEW SHOTCRETE.

SHOTCRETE SHALL COMPLY WITH THE REQUIREMENTS OF ACI 506.2 "SPECIFICATIONS FOR MATERIALS, PROPORTIONING AND APPLICATION OF SHOTCRETE", EXCEPT AS OTHERWISE SPECIFIED. SHOTCRETE SHALL CONSIST OF AN APPLICATION OF ONE OR MORE LAYERS OF CONCRETE CONVEYED THROUGH A HOSE AND PNEUMATICALLY PROJECTED AT A HIGH VELOCITY AGAINST A PREPARED SURFACE.

SHOTCRETE MAY BE PRODUCED BY EITHER A WET-MIX OR A DRY-MIX PROCESS. THE WET-MIX PROCESS CONSISTS OF THOROUGHLY MIXING ALL THE INGREDIENTS EXCEPT ACCELERATING ADMIXTURES, BUT INCLUDING THE MIXING WATER. INTRODUCING THE MIXTURE INTO THE DELIVERY EQUIPMENT AND DELIVERING IT, BY POSITIVE DISPLACEMENT, TO THE NOZZLE. THE WET-MIX SHOTCRETE SHALL THEN BE AIR JETTED FROM THE NOZZLE AT HIGH VELOCITY ONTO THE SURFACE. THE DRY-MIX PROCESS CONSISTS OF SHOTCRETE WITHOUT MIXING WATER WHICH, IS CONVEYED THROUGH THE HOSE PNEUMATICALLY WITH THE MIXING WATER INTRODUCED AT THE NOZZLE. FOR ADDITIONAL DESCRIPTIVE INFORMATION, THE CONTRACTOR 'S ATTENTION IS DIRECTED TO THE AMERICAN CONCRETE INSTITUTE ACI 506R "GUIDE TO SHOTCRETE".

SOIL NAILS AND WALL EXCAVATION ARE COVERED BY THE PERMANENT SOIL NAILS AND WALL EXCAVATION SPECIFICATION.

WHERE THE IMPERATIVE MOOD IS USED WITHIN THIS SPECIFICATION FOR CONCISENESS, "THE CONTRACTOR SHALL" IS IMPLIED.

1.1 CONTRACTOR'S EXPERIENCE REQUIREMENTS. WORKERS, INCLUDING FOREMEN, NOZZLEMEN, AND DELIVERY EQUIPMENT OPERATORS SHALL BE FULLY EXPERIENCED TO PERFORM THE WORK. ALL SHOTCRETE NOZZLEMEN ON THIS PROJECT SHALL HAVE EXPERIENCE ON AT LEAST 3 PROJECTS IN THE PAST 3 YEARS IN SIMILAR SHOTCRETE APPLICATION WORK AND SHALL DEMONSTRATE ABILITY TO SATISFACTORILY PLACE THE SHOTCRETE.

INITIAL QUALIFICATION OF NOZZLEMEN WILL BE BASED EITHER ON PREVIOUS ACI CERTIFICATION OR SATISFACTORY COMPLETION OF PRECONSTRUCTION TEST PANELS. THE REQUIREMENT FOR NOZZLEMEN TO SHOOT PRECONSTRUCTION QUALIFICATION TEST PANELS WILL BE WAIVED FOR NOZZLEMEN WHO CAN SUBMIT DOCUMENTED PROOF THEY HAVE BEEN CERTIFIED IN ACCORDANCE WITH THE ACI 506.3R GUIDE TO CERTIFICATION OF SHOTCRETE NOZZLEMEN. THE CERTIFICATION SHALL HAVE BEEN DONE BY AN ACI RECOGNIZED SHOTCRETE TESTING LAB AND/OR RECOGNIZED SHOTCRETING CONSULTANT AND HAVE COVERED THE TYPE OF SHOTCRETE TO BE USED. ALL NOZZLEMEN WILL BE REQUIRED TO PERIODICALLY SHOOT PRODUCTION TEST PANELS DURING THE COURSE OF THE WORK AT THE FREQUENCY SPECIFIED HEREIN.

NOTIFY THE ENGINEER NO LESS THAN 2 DAYS PRIOR TO THE SHOOTING OF PRECONSTRUCTION TEST PANELS TO BE USED TO QUALITY NOZZLEMEN WITHOUT PREVIOUS ACI CERTIFICATION. USE THE SAME SHOTCRETE MIX AND EQUIPMENT TO MAKE THE QUALIFICATION TEST PANELS AS THOSE TO BE USED FOR THE SOIL NAIL WALL SHOTCRETE FACING. INITIAL QUALIFICATION OF THE NOZZLEMEN WILL BE BASED ON A VISUAL INSPECTION OF THE SHOTCRETE DENSITY AND VOID STRUCTURE AND ON ACHIEVING THE SPECIFIED 3-DAY AND 28-DAY COMPRESSIVE STRENGTH REQUIREMENTS DETERMINED FROM TEST SPECIMENS EXTRACTED FROM THE PRE-CONSTRUCTION TEST PANELS.

PRECONSTRUCTION AND PRODUCTION TEST PANELS, CORE EXTRACTION AND COMPRESSIVE STRENGTH TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH ACI 506.2 AND AASHTO T24/ASTM C42, UNLESS OTHERWISE SPECIFIED HEREIN. NOZZLEMEN WITHOUT ACI CERTIFICATION WILL BE ALLOWED TO BEGIN PRODUCTION SHOOTING BASED ON SATISFACTORY COMPLETION OF THE PRECONSTRUCTION TEST PANELS AND PASSING 3-DAY STRENGTH TEST REQUIREMENTS. CONTINUED QUALIFICATION WILL BE SUBJECT TO PASSING THE 28-DAY STRENGTH TESTS AND SHOOTING SATISFACTORY DURING PRODUCTION TEST PANELS.

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GENERAL NOTES
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RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

1280
2017

1.2 CONSTRUCTION SUBMITTALS. AT LEST 15 CALENDAR DAYS BEFORE THE PLANNED START OF SHOTCRETE PLACEMENT, SUBMIT 5 COPIES OF THE FOLLOWING INFORMATION, IN WRITING, TO THE ENGINEER FOR REVIEW:

A. WRITTEN DOCUMENTATION OF THE NOZZLEMEN'S QUALIFICATIONS INCLUDING PROOF OF ACI CERTIFICATION (IF APPLICABLE).

B. PROPOSED METHODS OF SHOTCRETE PLACEMENT AND OF CONTROLLING AND MAINTAINING FACING ALIGNMENT AND LOCATION AND SHOTCRETE THICKNESS.

C. SHOTCRETE MIX DESIGN INCLUDING:
TYPE OF PORTLAND CEMENT. AGGREGATE SOURCE AND GRADATION. PROPORTIONS OF MIX BY WEIGHT AND WATER-CEMENT RATIO. PROPOSED ADMIXTURES MANUFACTURER, DOSAGE, TECHNICAL LITERATURE.

PREVIOUS STRENGTH TEST RESULTS FOR THE PROPOSED SHOTCRETE MIX COMPLETED WITHIN ONE YEAR OF THE START OF SHOTCRETING MAY BE SUBMITTED FOR INITIAL VERIFICATION OF THE REQUIRED COMPRESSIVE STRENGTHS AT START OF PRODUCTION WORK.

THE ENGINEER WILL APPROVE OR REJECT THE CONTRACTOR'S SUBMITTALS WITHIN 10 CALENDAR DAYS AFTER RECEIPT OF A COMPLETE SUBMISSION. THE CONTRACTOR WILL NOT BE ALLOWED TO BEGIN WALL CONSTRUCTION OR INCORPORATE MATERIALS INTO THE WORK UNTIL THE SUBMITTAL REQUIREMENTS ARE SATISFIED AND FOUND ACCEPTABLE TO THE ENGINEER. CHANGES OR DEVIATIONS FROM THE APPROVED SUBMITTALS MUST BE RESUBMITTED FOR APPROVAL. NO ADJUSTMENTS IN CONTRACT TIME WILL BE ALLOWED DUE TO INCOMPLETE SUBMITTALS.

UPON DELIVERY TO THE PROJECT SITE, PROVIDE CERTIFIED MILL TEST RESULTS FOR ALL REINFORCING STEEL SPECIFYING THE MINIMUM ULTIMATE STRENGTH, YIELD STRENGTH, ELONGATION AND CHEMICAL COMPOSITION.

1.3 PRE-CONSTRUCTION MEETING. A PRE-CONSTRUCTION MEETING, SCHEDULED BY THE ENGINEER, WILL BE HELD PRIOR TO THE START OF WALL CONSTRUCTION. ATTENDANCE IS MANDATORY. THE SHOTCRETE CONTRACTOR, IF DIFFERENT THAN THE SOIL NAIL SPECIALTY CONTRACTOR, SHALL ATTEND. SEE SECTION 2.5 OF THE PERMANENT SOIL NAIL AND WALL EXCAVATION SPECIFICATION.

2.0 MATERIALS.

ALL MATERIALS FOR SHOTCRETE SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

CEMENT	AASHTO M85/ASTM C150, TYPE I, II, III OR V.
FINE AGGREGATE	AASHTO M6/ASTM C33 CLEAN, NATURAL.
COARSE AGGREGATE	AASHTO M80, CLASS B FOR QUALITY.
WATER	CLEAN AND POTABLE, AASHTO M157/ASTM C94.
CHEMICAL ADMIXTURES:	
ACCELERATOR	FLUID TYPE, APPLIED AT NOZZLE, MEETING REQUIREMENTS OF AASHTO M194/ASTM C494/ASTM C1141.
WATER-REDUCER AND SUPERPLASTICIZER	AASHTO M194/ASTM C494 TYPE A, C, D, E, F, OR G.
RETARDERS	AASHTO M194 / ASTM C494 TYPE B OR D.
MINERAL ADMIXTURES:	
FLY ASH	AASHTO M295 / ASTM C618 TYPE F OR C, CEMENT REPLACEMENT UP TO 35 PERCENT BY WEIGHT OF CEMENT.
SILICA FUME	ASTM C 1240, 90 PERCENT, MINIMUM SILICON DIOXIDE SOLIDS CONTENT, NOT TO EXCEED 12 PERCENT BY WEIGHT OF CEMENT.
WELDED WIRE FABRIC	AASHTO M55 / ASTM A185 OR A497.
REINFORCING BARS FOR SHOTCRETE FACING	AASHTO M31 / ASTM A615, GRADE 60, DEFORMED.
PREPACKAGED SHOTCRETE	ASTM C928

MATERIALS SHALL BE DELIVERED, STORED AND HANDLED TO PREVENT CONTAMINATION, SEGREGATION, CORROSION OR DAMAGE. STORE LIQUID ADMIXTURES TO PREVENT EVAPORATION AND FREEZING.

2.1 SHOTCRETE MIX DESIGN. THE CONTRACTOR MUST RECEIVE NOTIFICATION FROM THE ENGINEER THAT THE PROPOSED MIX DESIGN AND METHOD OF PLACEMENT ARE ACCEPTABLE BEFORE SHOTCRETE PLACEMENT CAN BEGIN.

2.1.1 AGGREGATE. AGGREGATE FOR SHOTCRETE SHALL MEET THE STRENGTH AND DURABILITY REQUIREMENTS OF AASHTO M6 / M80 AND THE FOLLOWING GRADATION REQUIREMENTS:

SIEVE SIZE	PERCENT PASSING BY WEIGHT
1/2 INCH	100
3/8 INCH	90-100
NO. 4	70-85
NO. 8	50-70
NO. 16	35-55
NO. 30	20-35
NO. 50	8-20
NO. 100	2-10

2.1.2 PROPORTIONING AND USE OF ADMIXTURES. PROPORTION THE SHOTCRETE TO BE PUMPABLE WITH THE CONCRETE PUMP FURNISHED FOR THE WORK, WITH A CEMENTING MATERIALS CONTENT OF AT LEAST 720 POUNDS PER CUBIC YARD AND WATER/CEMENT RATIO NOT GREATER THAN 0.50. DO NOT USE ADMIXTURES UNLESS APPROVED BY THE ENGINEER. THOROUGHLY MIX ADMIXTURES INTO THE SHOTCRETE AT THE RATE SPECIFIED BY THE MANUFACTURER. ACCELERATORS (IF USED) SHALL BE COMPATIBLE WITH THE CEMENT USED, BE NON-CORROSIVE TO STEEL AND NOT PROMOTE OTHER DETRIMENTAL EFFECTS SUCH AS CRACKING OR EXCESSIVE SHRINKAGE. THE MAXIMUM ALLOWABLE CHLORIDE ION CONTENT OF ALL INGREDIENTS SHALL NOT EXCEED 0.10% WHEN TESTED TO AASHTO T260.

2.1.3 AIR ENTRAINMENT. AIR ENTRAINMENT IS NOT REQUIRED FOR TEMPORARY SHOTCRETE CONSTRUCTION FACINGS.

2.1.4 STRENGTH REQUIREMENTS. PROVIDE A SHOTCRETE MIX CAPABLE OF ATTAINING 2,000 PSI COMPRESSIVE STRENGTH IN 3 DAYS AND 4,000 PSI IN 28 DAYS. THE AVERAGE COMPRESSIVE STRENGTH OF EACH SET OF THREE TEST CORES EXTRACTED FROM TEST PANELS OR WALL FACE MUST EQUAL OR EXCEED 85 PERCENT OF THE SPECIFIED COMPRESSIVE STRENGTH, WITH NO INDIVIDUAL CORE LESS THAN 75 PERCENT OF THE SPECIFIED COMPRESSIVE STRENGTH, IN ACCORDANCE WITH ACI 506.2.

2.1.5 MIXING AND BATCHING. AGGREGATE AND CEMENT MAY BE BATCHED BY WEIGHT OR BY VOLUME IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM C94 OR AASHTO M241 / ASTM C685. MIXING EQUIPMENT SHALL THOROUGHLY BLEND THE MATERIALS IN SUFFICIENT QUANTITY TO MAINTAIN PLACING CONTINUITY. READY MIX SHOTCRETE SHALL COMPLY WITH AASHTO M157. SHOTCRETE SHALL BE BATCHED, DELIVERED, AND PLACED WITHIN 90 MINUTES OF MIXING. THE USE OF RETARDING ADMIXTURES MAY EXTEND APPLICATION TIME BEYOND 90 MINUTES IF APPROVED BY THE ENGINEER.

PREMIXING AND PACKAGED SHOTCRETE MIX MAY BE PROVIDED FOR ON-SITE MIXING. THE PACKAGES SHALL CONTAIN MATERIALS CONFORMING TO THE MATERIALS SECTION OF THIS SPECIFICATION. PLACING TIME LIMIT AFTER MIXING SHALL BE PER THE MANUFACTURER'S RECOMMENDATIONS.

2.2 FIELD QUALITY CONTROL. BOTH PRECONSTRUCTION TEST PANELS (FOR NOZZLEMEN WITHOUT PREVIOUS ACI CERTIFICATION) AND PRODUCTION TEST PANELS OR TEST CORES FROM THE WALL FACING ARE REQUIRED. SHOTCRETING AND CORING OF TEST PANELS SHALL BE PERFORMED BY QUALIFIED PERSONNEL IN THE PRESENCE OF THE ENGINEER. THE CONTRACTOR SHALL PROVIDE EQUIPMENT, MATERIALS, AND PERSONNEL AS NECESSARY TO OBTAIN SHOTCRETE CORES FOR TESTING INCLUDING CONSTRUCTION OF TEST PANEL BOXES, FIELD CURING REQUIREMENTS AND CORING. COMPRESSIVE STRENGTH TESTING WILL BE PERFORMED BY THE ENGINEER. SHOTCRETE FINAL ACCEPTANCE WILL BE BASED ON THE 28-DAY STRENGTH.

SHOTCRETE PRODUCTION WORK MAY COMMENCE UPON INITIAL APPROVAL OF THE DESIGN MIX AND NOZZLEMEN AND CONTINUE IF THE SPECIFIED STRENGTHS ARE OBTAINED. THE SHOTCRETE WORK BY A CREW WILL BE SUSPENDED IF THE TEST RESULTS FOR THEIR WORK DOES NOT SATISFY THE STRENGTH REQUIREMENTS. THE CONTRACTOR SHALL CHANGE ALL OR SOME OF THE FOLLOWING: THE MIX, THE CREW, THE EQUIPMENT, OR THE PROCEDURES. BEFORE RESUMING WORK, THE CREW MUST SHOOT ADDITIONAL TEST PANELS AND DEMONSTRATE THAT THE SHOTCRETE IN THE PANELS SATISFIES THE SPECIFIED STRENGTH REQUIREMENTS. THE COST OF ALL WORK REQUIRED TO OBTAIN SATISFACTORY STRENGTH TESTS WILL BE BORNE BY THE CONTRACTOR.

2.2.1 PRECONSTRUCTION TEST PANELS. EACH NOZZLEMAN WITHOUT PREVIOUS ACI CERTIFICATION SHALL FURNISH AT LEAST ONE PRECONSTRUCTION TEST PANEL FOR EACH PROPOSED MIXTURE BEING CONSIDERED AND FOR EACH SHOOTING POSITION TO BE ENCOUNTERED ON THE JOB. PRECONSTRUCTION TEST PANELS SHALL BE MADE PRIOR TO THE COMMENCEMENT OF PRODUCTION WORK USING THE SAME EQUIPMENT, MATERIALS, MIXTURE PROPORTIONS AND PROCEDURES PROPOSED FOR THE JOB.

MAKE PRECONSTRUCTION TEST PANELS WITH MINIMUM DIMENSIONS OF 30 X 30 INCHES SQUARE AND AT LEAST 4 INCHES THICK. SLOPE THE SIDES OF PRECONSTRUCTION AND PRODUCTION TEST PANELS AT 45 DEGREES OVER THE FULL PANEL THICKNESS TO RELEASE REBOUND.

2.2.2 PRODUCTION TEST PANELS. FURNISH AT LEAST ONE PRODUCTION TEST PANEL OR, IN LIEU OF PRODUCTION TEST PANELS, SIX 3 INCH DIAMETER CORES TAKEN FROM THE SHOTCRETE FACING, DURING THE FIRST PRODUCTION APPLICATION OF SHOTCRETE AND HENCEFORTH FOR EVERY 2,500 SQUARE FEET OF SHOTCRETE PLACED. CONSTRUCT THE PRODUCTION TEST PANELS SIMULTANEOUSLY WITH THE SHOTCRETE FACING INSTALLATION AT TIMES DESIGNATED BY THE ENGINEER. MAKE PRODUCTION TEST PANELS WITH MINIMUM DIMENSIONS OF 18 X 18 INCHES SQUARE AND AT LEAST 4 INCHES THICK.

2.2.3 TEST PANEL CURING. TEST SPECIMEN EXTRACTION AND TESTING. IMMEDIATELY AFTER SHOOTING, FIELD MOIST CURE THE TEST PANELS BY COVERING AND TIGHTLY WRAPPING WITH A SHEET OF MATERIAL MEETING THE REQUIREMENTS OF ASTM C171 UNTIL THEY ARE DELIVERED TO THE TESTING LAB OR TEST SPECIMENS ARE EXTRACTED. DO NOT IMMERSE THE TEST PANELS IN WATER. DO NOT FURTHER DISTURB TEST PANELS FOR THE FIRST 24 HOURS AFTER SHOOTING. PROVIDE AT LEAST SIX 3 INCH DIAMETER CORE SAMPLES CUT FROM EACH PRECONSTRUCTION TEST PANEL AND PRODUCTION TEST PANEL. CONTRACTOR HAS THE OPTION OF EXTRACTING TEST SPECIMENS FROM TEST PANELS IN THE FIELD OR TRANSPORTING TO ANOTHER LOCATION FOR EXTRACTION. KEEP PANELS IN THEIR FORMS WHEN TRANSPORTED. DO NOT TAKE CORES FROM THE OUTER 6 INCHES OF TEST PANELS MEASURED IN FROM THE TOP AND OUTSIDE EDGES OF THE PANEL FORM. TRIM THE ENDS OF THE CORES TO PROVIDE TEST CYLINDERS AT LEAST 3 INCHES LONG. IF THE CONTRACTOR CHOOSES TO TAKE CORES FROM THE WALL FACE IN LIEU OF MAKING PRODUCTION TEST PANELS, LOCATIONS WILL BE DESIGNATED BY THE ENGINEER. CLEARLY MARK THE CORES AND CONTAINER TO IDENTIFY THE CORE LOCATIONS AND WHETHER THEY ARE FOR PRECONSTRUCTION OR PRODUCTION TESTING. IF THE PRODUCTION TESTING, MARK THE SECTION OF THE WALL REPRESENTED BY THE CORES ON THE CORES AND CONTAINER. IMMEDIATELY WRAP CORES IN WET BURLAP OR MATERIAL MEETING REQUIREMENTS OF ASTM C171 AND SEAL IN A PLASTIC BAG. DELIVER CORES TO THE ENGINEER OR TESTING LAB, AS DIRECTED BY THE ENGINEER, WITHIN 48 HOURS OF SHOOTING THE PANELS. THE REMAINDER OF THE PANELS WILL BECOME THE PROPERTY OF THE CONTRACTOR. COMPRESSIVE STRENGTH TESTING WILL BE PERFORMED BY THE ENGINEER. UPON DELIVERY TO THE TESTING LAB, SAMPLES WILL BE PLACED IN THE MOIST ROOM UNTIL THE TIME OF TEST.

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DESIGN AGENCY EMH&T
DESIGNED RMW | DRAWN GB | CHECKED RJE | REVIEWED CAS | DATE 12-15-21 | REVISED - | STRUCTURE FILE NUMBER 3113787

GENERAL NOTES
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

13 / 64

1281
2017

WHEN THE TEST LENGTH OF A CORE IS LESS THAN TWICE THE DIAMETER, THE CORRECTION FACTORS GIVEN IN AASHTO T24/ASTM C42 WILL BE APPLIED TO OBTAIN THE COMPRESSIVE STRENGTH OF INDIVIDUAL CORES. THREE CORES WILL BE TESTED AT 3 DAYS AND THREE CORES WILL BE TESTED AT 28 DAYS IN ACCORDANCE WITH AASHTO T24/ASTM C42.

FILL CORE HOLES IN THE WALL BY DRY-PACKING WITH NO-SHRINK PATCHING MORTAR AFTER THE HOLES ARE CLEANED AND DAMPENED. DO NOT FILL CORE HOLES WITH SHOTCRETE.

3.0 CONSTRUCTION REQUIREMENTS

3.1. TEMPORARY SHOTCRETE CONSTRUCTION FACING

3.1.1 SHOTCRETE ALIGNMENT AND THICKNESS CONTROL. ENSURE THAT THE THICKNESS OF SHOTCRETE SATISFIES THE MINIMUM REQUIREMENTS SHOWN ON THE PLANS USING SHOOTING WIRES, THICKNESS CONTROL PINS, OR OTHER DEVICES ACCEPTABLE TO THE ENGINEER. INSTALL THICKNESS CONTROL DEVICES NORMAL TO THE SURFACE SUCH THAT THEY PROTRUDE THE REQUIRED SHOTCRETE THICKNESS OUTSIDE THE SURFACE. ENSURE THAT THE FRONT FACE OF THE SHOTCRETE DOES NOT EXTEND BEYOND THE LIMITS SHOWN ON THE PLANS.

3.1.2 SURFACE PREPARATION. CLEAN THE FACE OF THE EXCAVATION AND OTHER SURFACES TO BE SHOTCRETED OF LOOSE MATERIALS, MUD, REBOUND, OVERSPRAY OR OTHER FOREIGN MATTER THAT COULD PREVENT OR REDUCE SHOTCRETE BOND. PROTECT ADJACENT SURFACES FROM OVERSPRAY DURING SHOOTING. AVOID LOOSENING, CRACKING, OR SHATTERING THE GROUND DURING EXCAVATION AND CLEANING. REMOVE ANY SURFACE MATERIAL WHICH IS SO LOOSENED OR DAMAGED, TO A SUFFICIENT DEPTH TO PROVIDE A BASE THAT IS SUITABLE TO RECEIVE THE SHOTCRETE. REMOVE MATERIAL THAT LOOSENS AS THE SHOTCRETE IS APPLIED. COST OF ADDITIONAL SHOTCRETE IS INCIDENTAL TO THE WORK. DIVERT WATER FLOW AND REMOVE STANDING WATER SO THAT SHOTCRETE PLACEMENT WILL NOT BE DETRIMENTALLY AFFECTED BY STANDING WATER. DO NOT PLACE SHOTCRETE ON FROZEN SURFACES.

3.1.3 DELIVERY AND APPLICATION. MAINTAIN A CLEAN, DRY, OIL-FREE SUPPLY OF COMPRESSED AIR SUFFICIENT FOR MAINTAINING ADEQUATE NOZZLE VELOCITY AT ALL TIMES. THE EQUIPMENT SHALL BE CAPABLE OF DELIVERING THE PREMIXED MATERIAL ACCURATELY, UNIFORMLY, AND CONTINUOUSLY THROUGH THE DELIVERY HOSE. CONTROL SHOTCRETE APPLICATION THICKNESS, NOZZLE TECHNIQUE, AIR PRESSURE, AND RATE OF SHOTCRETE PLACEMENT TO PREVENT SAGGING OR SLOUGHING OF FRESHLY-APPLIED SHOTCRETE.

APPLY THE SHOTCRETE FROM THE LOWER PART OF THE AREA UPWARDS TO PREVENT ACCUMULATION OF REBOUND. ORIENT NOZZLE AT A DISTANCE AND APPROXIMATELY PERPENDICULAR TO THE WORKING FACE SO THAT REBOUND WILL BE MINIMAL AND COMPACTION WILL BE MAXIMIZED. PAY SPECIAL ATTENTION TO ENCAPSULATING REINFORCEMENT. DO NOT WORK REBOUND BACK INTO THE CONSTRUCTION. WHERE SHOTCRETE IS USED TO COMPLETE THE TOP UNGROUTED ZONE OF THE NAIL DRILL HOLE NEAR THE FACE, POSITION THE NOZZLE INTO THE MOUTH OF THE DRILLHOLE TO COMPLETELY FILL THE VOID.

A CLEARLY DEFINED PATTERN OF CONTINUOUS HORIZONTAL AND VERTICAL RIDGES OR DEPRESSIONS AT THE REINFORCING ELEMENTS AFTER THEY ARE COVERED WITH SHOTCRETE WILL BE CONSIDERED AN INDICATION OF INSUFFICIENT REINFORCEMENT COVER OR POOR NOZZLE TECHNIQUES. IN THIS CASE THE APPLICATION OF SHOTCRETE SHALL BE IMMEDIATELY SUSPENDED AND THE CONTRACTOR SHALL IMPLEMENT CORRECTIVE MEASURES BEFORE RESUMING THE SHOTCRETE OPERATIONS. THE SHOTCRETING PROCEDURE MAY BE CORRECTED BY ADJUSTING THE NOZZLE DISTANCE AND ORIENTATION, BY INSURING ADEQUATE COVER OVER THE REINFORCEMENT, BY ADJUSTING THE WATER CONTENT OF THE SHOTCRETE MIX OR OTHER MEANS. ADJUSTMENT IN WATER CONTENT OF WET-MIX WILL REQUIRE PREQUALIFYING THE SHOTCRETE MIX.

3.1.4 DEFECTIVE SHOTCRETE. REPAIR SHOTCRETE SURFACE DEFECTS AS SOON AS POSSIBLE AFTER PLACEMENT. REMOVE AND REPLACE SHOTCRETE WHICH EXHIBITS SEGREGATION, HONEYCOMBING, LAMINATION, VOIDS, OR SAND POCKETS. IN-PLACE SHOTCRETE DETERMINED NOT TO MEET THE SPECIFIED STRENGTH REQUIREMENT WILL BE SUBJECT TO REMEDIATION AS DETERMINED BY THE ENGINEER. POSSIBLE REMEDIATION OPTIONS INCLUDE PLACEMENT OF ADDITIONAL SHOTCRETE THICKNESS OR OTHER REMOVAL AND REPLACEMENT, AT THE CONTRACTOR'S COST.

3.1.5. CONSTRUCTION JOINTS. TAPER CONSTRUCTION JOINTS UNIFORMLY TOWARD THE EXCAVATION FACE OVER A MINIMUM DISTANCE EQUAL TO THE THICKNESS OF THE SHOTCRETE LAYER. PROVIDE A MINIMUM REINFORCEMENT OVERLAP AT REINFORCEMENT SPLICE JOINTS AS SHOWN ON THE PLANS. CLEAN AND WET THE SURFACE OF A JOINT BEFORE ADJACENT SHOTCRETE IS APPLIED. WHERE SHOTCRETE IS USED TO COMPLETE THE TOP UNGROUTED ZONE OF THE NAIL DRILL HOLE NEAR THE FACE, TO THE MAXIMUM EXTENT PRACTICAL, CLEAN AND DAMPEN THE UPPER GROUT SURFACE TO RECEIVE SHOTCRETE, SIMILAR TO A CONSTRUCTION JOINT.

3.1.6. FINISH. SHOTCRETE FINISH SHALL BE EITHER AN UNDISTURBED GUN FINISH AS APPLIED FROM THE NOZZLE OR A ROUGH SCREEDED FINISH.

3.1.7. ATTACHMENT OF NAIL HEAD BEARING PLATE AND NUT. ATTACH A BEARING PLATE AND NUT TO EACH NAIL HEAD AS SHOWN ON THE PLANS. WHILE THE SHOTCRETE IS STILL PLASTIC AND BEFORE ITS INITIAL SET, UNIFORMLY SEAT THE PLATE ON THE SHOTCRETE BY HAND WRENCH TIGHTENING THE NUT. WHERE UNIFORM CONTACT BETWEEN THE PLATE AND THE SHOTCRETE CANNOT BE PROVIDED, SET THE PLATE IN A BED OF GROUT. AFTER GROUT HAS SET FOR 24 HOURS, HAND WRENCH TIGHTEN THE NUT. ENSURE BEARING PLATES ARE IN INTIMATE CONTACT WITH THE CONSTRUCTION FACING AND ARE LOCATED WITHIN THE TOLERANCES SHOWN ON THE PLANS OR SPECIFIED HEREIN.

3.1.8 WEATHER LIMITATIONS. PROTECT THE SHOTCRETE IF IT MUST BE PLACED WHEN THE AMBIENT TEMPERATURE IS BELOW 32° F AND FALLING OR WHEN IT IS LIKELY TO BE SUBJECTED TO FREEZING TEMPERATURES BEFORE GAINING SUFFICIENT STRENGTH. MAINTAIN COLD WEATHER PROTECTION UNTIL THE IN PLACE COMPRESSIVE STRENGTH OF THE SHOTCRETE IS GREATER THAN 700 PSI. COLD WEATHER PROTECTION INCLUDES BLANKETS, HEATING UNDER TENTS, OR OTHER MEANS ACCEPTABLE TO THE ENGINEER. THE TEMPERATURE OF THE SHOTCRETE MIX, WHEN DEPOSITED, SHALL BE NOT LESS THAN 50° F OR MORE THAN 95°.

SUSPEND SHOTCRETE APPLICATION DURING HIGH WINDS AND HEAVY RAINS UNLESS SUITABLE PROTECTIVE COVERS, ENCLOSURES OR WIND BREAKS ARE INSTALLED. REMOVE AND REPLACE NEWLY PLACED SHOTCRETE EXPOSED TO RAIN THAT WASHES OUT CEMENT OR OTHERWISE MAKES THE SHOTCRETE UNACCEPTABLE. PROVIDE A POLYETHYLENE FILM OR EQUIVALENT TO PROTECT THE WORK FROM EXPOSURE TO ADVERSE WEATHER.

3.1.9 CURING. CURING IS NOT REQUIRED FOR TEMPORARY CONSTRUCTION FACINGS TO BE COVERED BY A CAST IN PLACE CONCRETE FACING OR WHOSE SERVICE LIFE IS LESS THAN 36 MONTHS.

3.1.10 CONSTRUCTION FACING TOLERANCES. CONSTRUCTION TOLERANCES

FOR THE TEMPORARY SHOTCRETE CONSTRUCTION FACING ARE AS FOLLOWS:

HORIZONTAL LOCATION OF WIRE MESH; REBAR; HEADED STUDS ON BEARING PLATES, FROM PLAN LOCATION: + OR - 1/2 INCH

HEADED STUDS LOCATION ON BEARING PLATE, FROM PLAN LOCATION: 1/4 INCH

SPACING BETWEEN REINFORCING BARS, FROM PLAN DIMENSION: 1 INCH

REINFORCING LAP, FROM SPECIFIED DIMENSION: -1 INCH

THICKNESS OF SHOTCRETE: 3/8 INCH

NAIL HEAD BEARING PLATE, DEVIATION FROM PARALLEL TO WALL FACE: 10 DEGREES

3.2 SAFETY REQUIREMENTS. NOZZLEMEN AND HELPERS SHALL BE EQUIPPED WITH GLOVES, EYE PROTECTION, AND ADEQUATE PROTECTIVE CLOTHING DURING THE APPLICATION OF SHOTCRETE. THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL FEDERAL, STATE AND LOCAL SAFETY CODE REQUIREMENTS.

BASIS OF PAYMENT

PAYMENT FOR THE SOIL NAIL WALL INCLUDING ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SPECIFIED AND DETAILED ON THESE PLANS SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN".

ABBREVIATION LEGEND

ABUT. - ABUTMENT
ADT - AVERAGE DAILY TRAFFIC
ADTT - AVERAGE DAILY TRUCK TRAFFIC
APP SLAB - APPROACH SLAB
AVE. - AVENUE
℄ - BASELINE
BM - BENCH MARK
BOT. - BOTTOM
BTW. - BETWEEN
BRG - BEARING
BTA - BRIDGE TERMINAL ASSEMBLY
C/C - CENTER TO CENTER
CB - CATCH BASIN
CIP - CAST IN PLACE
CJ - CONSTRUCTION JOINT
℄ - CENTERLINE
CLR - CLEARANCE
CONST - CONSTRUCTION
DIA - DIAMETER
EB - EAST BOUND
EF - EACH FACE
ELEV - ELEVATION
E/P - EDGE OF PAVEMENT
E/S - EDGE OF SHOULDER
EQ. - EQUAL
EST. - ESTIMATED
EX - EXISTING
EXP - EXPANSION
FA - FORWARD ABUTMENT
F/F - FACE TO FACE
FF - FAR FACE
FTG - FOOTING
FWD - FORWARD
GEN - GENERAL
GR - GUARD RAIL
HMWM - HIGH MOLECULAR WEIGHT METHACRYLATE
INCR. - INCREMENT
INT. - INTEGRAL
I.R. - INTERSTATE ROUTE
LT - LEFT
MAX - MAXIMUM
MECH. CONN. - MECHANICAL CONNECTOR
MIN - MINIMUM
MISC - MISCELLANEOUS
M.O.T. - MAINTENANCE OF TRAFFIC
MSE - MECHANICALLY STABALIZED EARTH
N/A - NOT APPLICABLE
NB - NORTHBOUND
NF - NEAR FACE
NO - NUMBER
NPCPP - NON-PERFORATED CORRUGATED PLASTIC PIPE
O/O - OUT TO OUT
O.C. - ON CENTER
OD - OUTSIDE DIAMETER
PC - POINT OF CURVE
PT - POINT OF TANGENT
P.V.I. - POINT OF VERTICAL INTERSECTION
PCB - PORTABLE CONCRETE BARRIER
PCPP - PERFORATED CORRUGATED PLASTIC PIPE
PVMT - PAVEMENT
PEJF - PREFORMED EXPANSION JOINT FILLER
PG - PROFILE GRADE
PROP - PROPOSED
PT. - POINT
PVMT. - PAVEMENT
RA - REAR ABUTMENT
RD - ROAD
REF. - REFERENCE
REQ'D - REQUIRED
RT - RIGHT
SB - SOUTHBOUND
SER. - SERIES
SHLD - SHOULDER
SPA - SPACES
S.R. - STATE ROUTE
ST - STREET
STA - STATION
SCD - STANDARD CONSTRUCTION DRAWING
STD - STANDARD
SUPER. - SUPERSTRUCTURE
TEMP - TEMPORARY
TOW - TOP OF WALL
T/S - TOE OF SLOPE
T/T - TOP TO TOE
TYP - TYPICAL
UNO - UNLESS NOTED OTHERWISE
VC - VERTIAL CURVE
VERT - VERTICAL
W/ - WITH
WB - WEST BOUND

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DESIGN AGENCY EMH&T
DESIGNED RMW | DRAWN GB | REVIEWED CAS | DATE 12-15-21
CHECKED RJE | REVISED - | STRUCTURE FILE NUMBER 3113787

GENERAL NOTES
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

1282
2017

ESTIMATED QUANTITIES

CALC. BY: RMW | DATE: 6/17/21
CHECKED BY: GB | DATE: 6/17/21

ITEM	EXT.	PARTICIPATION 04/IMS/BR	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPER-STRUCTURE	GENERAL	SEE STRUCTURE SHEET NO.
202	11003	LUMP	LUMP		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					3/64
202	22900	109	109	SQ YD	APPROACH SLAB REMOVED				109	
503	11101	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL B)					3/64
503	11101	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL C)					3/64
503	11101	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL D)					3/64
503	11101	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL E)					3/64
503	11101	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL F)					3/64
503	11101	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL G)					3/64
503	11101	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL H)					3/64
503	21300	LUMP	LUMP		UNCLASSIFIED EXCAVATION					3/64
505	11100	LUMP	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION					
507	00700	8300	8300	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	4670	3630			
507	00750	8875	8875	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	4995	3880			
509	10000	100,994	100,994	POUND	EPOXY COATED REINFORCING STEEL	46,934	54,060			
509	25001	112,426	112,426	POUND	UNCOATED REINFORCING STEEL, AS PER PLAN			112,426		3/64
509	30020	15,296	15,296	FT	NO. 4 GFRP DEFORMED BARS	1201		12,550	1,545	
509	30030	2048	2048	FT	NO. 5 GFRP DEFORMED BARS	166		1,741	141	
511	46512	340	340	CU YD	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	219	121			
511	53014	346	346	CU YD	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN			346		4/64
511	53014	136	136	CU YD	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN			136		4/64
511	53014	193	193	CU YD	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS, AS PER PLAN		193			4/64
511	53014	271	271	CU YD	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN	271				4/64
512	10100	1530	1530	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	314	304	824	88	
513	10300	788,910	788,910	POUND	STRUCTURAL STEEL MEMBERS, LEVEL 5			788,910		
513	20000	5436	5436	EACH	WELDED STUD SHEAR CONNECTORS			5436		
514	00061	9362	9362	SQ FT	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT, AS PER PLAN			9362		4/64
514	00067	9362	9362	SQ FT	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN			9362		4/64
516	10010	34	34	FT	ARMORLESS PREFORMED JOINT SEAL				34	
516	11210	66	66	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL				66	
516	13600	111	111	SQ FT	1" PREFORMED EXPANSION JOINT FILLER				111	
516	44201	3	3	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN, 15"x11"x3.94" ELASTOMERIC PAD WITH 26"x12"x2 1/4" (@ CL BEARINGS) BEVELED LOAD PLATE	3				40/64
516	44201	2	2	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN, 15"x11"x3.67" ELASTOMERIC PAD WITH 26"x12"x2 1/4" (@ CL BEARINGS) BEVELED LOAD PLATE AND 1 1/2" MASONRY PLATE	2				40/64
516	44201	3	3	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN, 17"x15"x3.94" ELASTOMERIC PAD WITH 26"x16"x3 3/16" (@ CL BEARINGS) BEVELED LOAD PLATE		3			40/64
516	44201	2	2	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN, 17"x15"x3.67" ELASTOMERIC PAD WITH 26"x16"x3 3/16" (@ CL BEARINGS) BEVELED LOAD PLATE AND 1 1/2" MASONRY PLATE		2			40/64
516	44201	5	5	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN, 15"x11"x3.67" ELASTOMERIC PAD WITH 26"x12"x1 1/16" (@ CL BEARINGS) BEVELED LOAD PLATE AND 1 1/2" MASONRY PLATE	5				41/64
516	44201	5	5	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN, 15"x11"x3.94" ELASTOMERIC PAD WITH 32"x12"x2 3/8" (@ CL BEARINGS) BEVELED LOAD PLATE		5			41/64

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DESIGN AGENCY
EMH&T
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RMW	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RJE	-	3113787	

ESTIMATED QUANTITIES
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

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2017

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ESTIMATED QUANTITIES (CONTINUED)

CALC. BY: RMW | DATE: 6/17/21
CHECKED BY: GB | DATE: 6/17/21

ITEM	EXT.	PARTICIPATION 04/IMS/BR	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPER-STRUCTURE	GENERAL	SEE STRUCTURE SHEET NO.
518	21200	136	136	CU YD	POROUS BACKFILL WITH GEOTEXTILE FABRIC	136				
518	40000	94	94	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	94				
518	40011	21	21	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	21				4/64
523	20000	8	8	EACH	DYNAMIC LOAD TESTING				8	
523	20500	8	8	EACH	RESTRIKE				8	
526	30001	224	224	SQ YD	REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN				224	4/64
526	90010	33	33	FT	TYPE A INSTALLATION				33	
526	90030	34	34	FT	TYPE C INSTALLATION				34	
867	00100	LUMP	LUMP		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL A)					4/64

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DESIGN AGENCY
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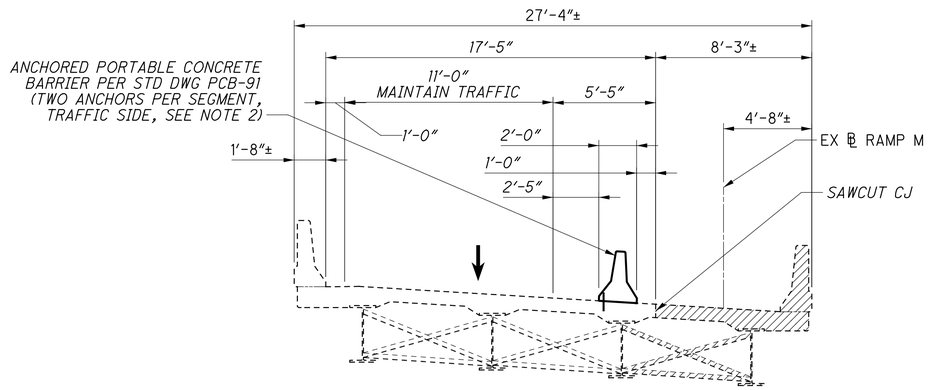
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RMW	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RJE	-	3113787	

ESTIMATED QUANTITIES (CONTINUED)
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

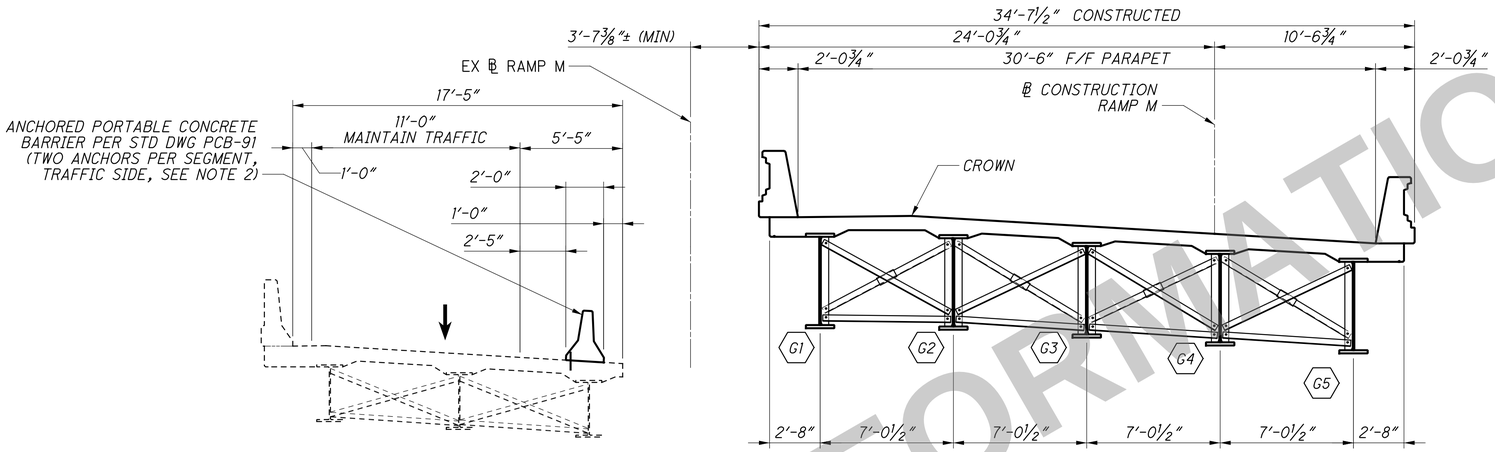
HAM-75-7.85
PID No. 77889

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2017

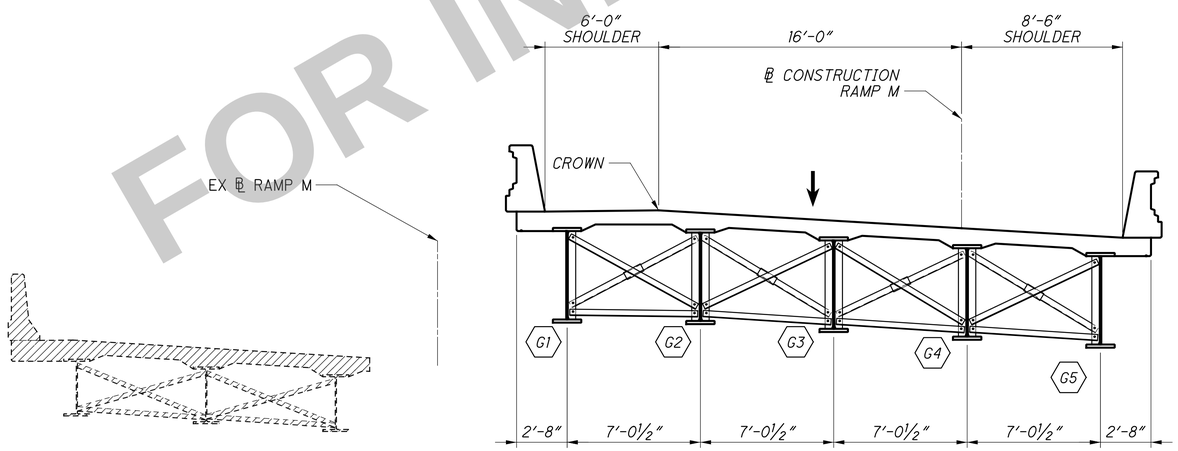
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PHASE 1 REMOVAL



PHASE 1B CONSTRUCTION



PHASE 2 REMOVAL

SEQUENCE OF CONSTRUCTION *

PHASE 1A CONSTRUCTION

1. CONSTRUCT REAR PIER AND ASSOCIATED SHORING AS SHOWN IN THE PLANS.

PHASE 1 REMOVAL (SEE NOTE 1)

1. INSTALL ANCHORED PORTABLE CONCRETE BARRIER AND MAINTAIN TRAFFIC ON THE NORTH SIDE OF THE EXISTING BRIDGE.

2. SAW CUT AND REMOVE SOUTH PORTION OF THE EXISTING BRIDGE AS SHOWN IN THE BRIDGE PLANS.

PHASE 1B CONSTRUCTION

1. CONSTRUCT REMAINDER OF BRIDGE WITH THE EXCEPTION OF THE NORTHWEST AND NORTHEAST WINGWALLS.

PHASE 2 REMOVAL

1. REMOVE REMAINDER OF EXISTING BRIDGE AS SHOWN IN THE PLANS.

PHASE 2 CONSTRUCTION

1. CONSTRUCT NORTHWEST WINGWALL AS SHOWN IN THE PLANS, AND NORTHEAST WINGWALL AS SHOWN IN THE PLANS.

LEGEND

* PRIOR TO PHASE 1 CONSTRUCTION, A PORTION OF THE HAM-75-0791 BRIDGE MUST BE REMOVED. REFER TO PHASED CONSTRUCTION DETAILS SHEET 8/57 OF THE HAM-75-0791 BRIDGE SUBSET FOR MORE DETAILS.

DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

NOTES

1. THE CONTRACTOR MAY DETERMINE THAT ADEQUATE CLEARANCE EXISTS BETWEEN THE EXISTING BRIDGE AND THE PROPOSED BRIDGE, SUCH THAT REMOVAL OF A PORTION THE EXISTING BRIDGE IS NOT REQUIRED PRIOR TO CONSTRUCTION OF THE PROPOSED BRIDGE. SHOULD THIS BE THE CASE, IN LIEU OF PERFORMING THE REMOVAL OPERATIONS FOR THE EXISTING BRIDGE AS DETAILED ON THIS SHEET, AND AT THE CONTRACTOR'S OPTION AND EXPENSE, REMOVAL OF THE EXISTING BRIDGE IN IT'S ENTIRETY MAY BE DELAYED UNTIL IMMEDIATELY AFTER THE PROPOSED BRIDGE IS CONSTRUCTED. REGARDLESS OF THE BRIDGE REMOVAL OPTION, THE CONSTRUCTION PHASING OPERATIONS SHALL STILL BE MAINTAINED AS SHOWN ON THIS SHEET.

2. THE PORTABLE CONCRETE BARRIER MAY BE UNANCHORED IF THE EXISTING PARAPET REMAINS IN PLACE PER NOTE 1.

3. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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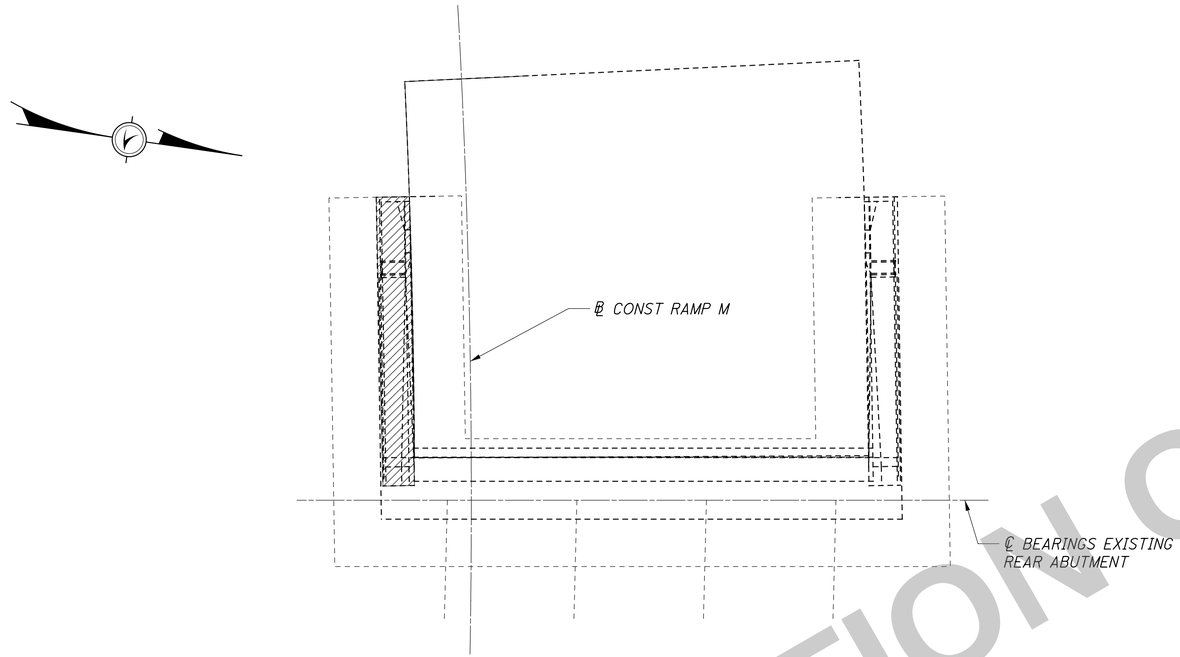
PHASED CONSTRUCTION DETAILS
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

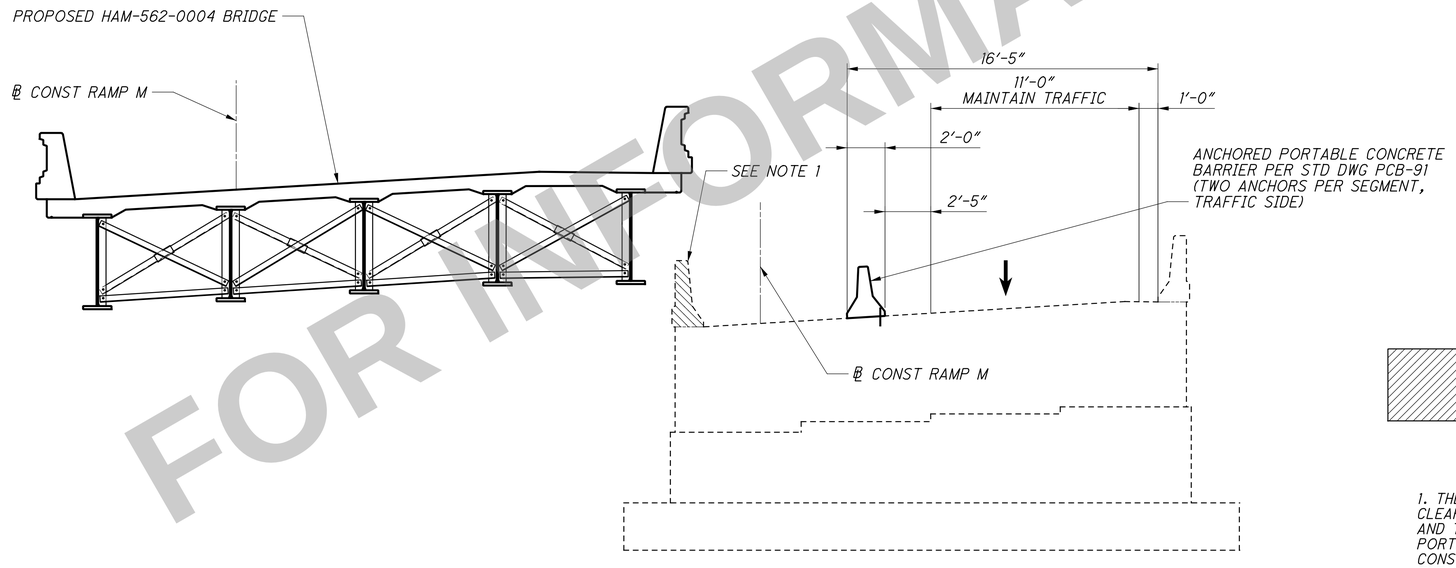
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PLAN - PHASE 1 REAR ABUTMENT REMOVAL



ELEVATION - PHASE 1 REAR ABUTMENT REMOVAL

LEGEND

DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

NOTE

1. THE CONTRACTOR MAY DETERMINE THAT ADEQUATE CLEARANCE EXISTS BETWEEN THE EXISTING BRIDGE PARAPET AND THE PROPOSED BRIDGE SUCH THAT THIS REMOVAL OF A PORTION THE EXISTING BRIDGE IS NOT REQUIRED PRIOR TO CONSTRUCTION OF THE PROPOSED BRIDGE. SHOULD THIS BE THE CASE, IN LIEU OF PERFORMING THE REMOVAL OPERATIONS FOR THE EXISTING BRIDGE AS DETAILED ON THIS SHEET, AT THE CONTRACTOR'S OPTION AND EXPENSE, REMOVAL OF THE EXISTING BRIDGE IN IT'S ENTIRETY MAY BE DELAYED UNTIL IMMEDIATELY AFTER THE PROPOSED BRIDGE IS CONSTRUCTED. REGARDLESS OF THE BRIDGE REMOVAL OPTION, THE CONSTRUCTION PHASING OPERATIONS SHALL STILL BE MAINTAINED AS SHOWN ON THIS SHEET.

2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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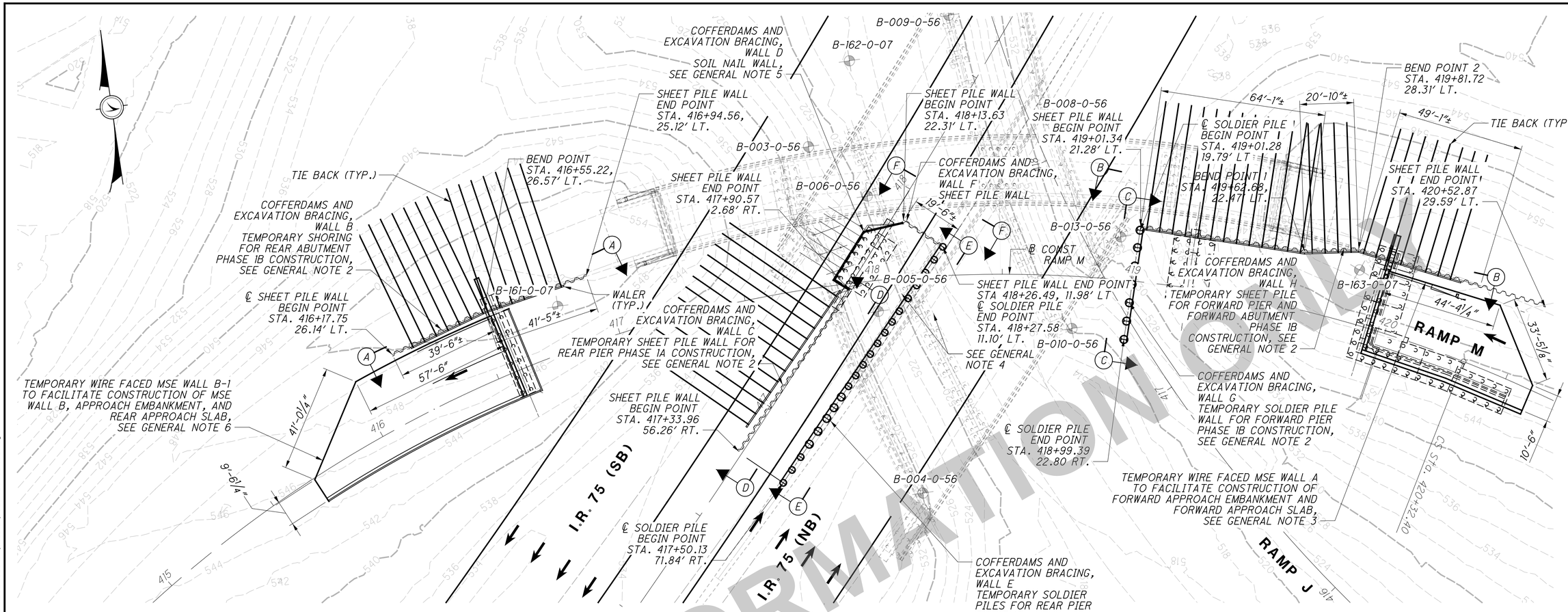
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REAR ABUTMENT REMOVAL DETAILS
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TEMPORARY SHORING PLAN
FOR PHASE 1A AND 1B CONSTRUCTION

(ALL REFERENCES TO NOTES REFER TO GENERAL NOTES)

TEMPORARY SHORING CONSTRUCTION SEQUENCE:

AT REAR ABUTMENT - SHEET PILING

1. REMOVE PORTIONS OF EXISTING APPROACH SLAB, PAVEMENT AND DECK IN PHASE 1B TO ALLOW INSTALLATION OF SHEETING.
2. INSTALL SHEET PILING FOR PHASE 1B CONSTRUCTION AS SHOWN IN THE PLANS.
3. EXCAVATE TO THE DEPTH OF WALER FOR THE UPPER TIE-BACKS.
4. INSTALL THE WALER AND UPPER TIE-BACK SYSTEM ON THE SHEET PILING.
5. REPEAT STEP 3 AND STEP 4 TO THE DEPTH OF THE WALER FOR THE LEVEL OF TIE-BACKS AND COMPLETE EXCAVATION FOR THE REAR ABUTMENT AND MSE WALL CONSTRUCTION AS SHOWN ON ELEVATION VIEW A-A ON SHEET 23/64
6. COMPLETE PHASE 1B REAR ABUTMENT AND REAR ABUTMENT MSE WALL CONSTRUCTION OF RAMP M BRIDGE.
7. INSTALL THE TEMPORARY WIRE FACED MSE WALL AND EMBANKMENT AS PLAN SHOWN TO SUPPORT PROPOSED ROADWAY APPROACH EMBANKMENT IN PHASE 1B CONSTRUCTION.
8. BACKFILL AS REQUIRED TO MATCH THE EXISTING GRADE AND REMOVE THE SHEET PILING.
9. COMPLETE PHASE 1B SUPERSTRUCTURE CONSTRUCTION OF BRIDGE AND APPROACH.

AT REAR PIER - SHEET PILING

1. REMOVE PORTIONS OF EXISTING PAVEMENT AND DECK IN PHASE 1A TO ALLOW INSTALLATION OF SHEETING.
2. INSTALL PILING AND SOLDIER PILES FOR PHASE 1A CONSTRUCTION AS SHOWN IN THE PLANS.
3. EXCAVATE TO THE DEPTH OF WALER FOR THE UPPER TIE-BACKS OF THE SHEETING.
4. INSTALL THE WALER AND UPPER SOIL ANCHOR SYSTEM ON THE SHEETING AND INSTALL THE LAGGING WALL BETWEEN THE SOLDIER PILES AS SHOWN.
5. REPEAT STEP 3 AND STEP 4 TO THE DEPTH OF THE WALER FOR THE LEVEL OF TIE-BACKS AND COMPLETE EXCAVATION FOR THE REAR PIER CONSTRUCTION AS SHOWN ON ELEVATION VIEW D-D AND VIEW E-E ON SHEET 24/64.
6. COMPLETE PHASE 1A REAR PIER CONSTRUCTION OF RAMP M BRIDGE.
7. BACKFILL AS REQUIRED TO MATCH THE PROSED GRADE.
8. COMPLETE PHASE 1B SUPERSTRUCTURE CONSTRUCTION OF BRIDGE.

AT FORWARD PIER - SHEET PILING AND SOLDIER PILE WALL

1. INSTALL SHEET PILING AND SOLDIER PILES FOR PHASE 1B CONSTRUCTION AS REQUIRED AS PLAN SHOWN.
2. EXCAVATE TO THE DEPTH OF WALER FOR THE UPPER TIE-BACKS.
3. INSTALL THE WALER AND UPPER TIE-BACK SYSTEM ON THE SHEET PILING AS SHOWN ON ELEVATION VIEW B-B ON SHEET 23/64 AND INSTALL LAGGING BETWEEN THE SOLDIER PILES AS SHOWN ON ELEVATION VIEW C-C ON SHEET 25/64.
4. REPEAT STEP 2 AND STEP 3 TO THE DEPTH OF THE WALER FOR THE LEVEL OF SOIL ANCHORS.
5. COMPLETE EXCAVATION FOR THE FORWARD PIER CONSTRUCTION AS SHOWN ON ELEVATION VIEW B-B ON SHEET 23/64 AND C-C ON SHEET 25/64 AND INSTALL THE REST OF LAGGING BETWEEN SOLDIER PILES.
6. COMPLETE PHASE 1B FORWARD PIER CONSTRUCTION OF RAMP M BRIDGE.
7. BACKFILL AS REQUIRED TO PROPOSED GRADE.
8. COMPLETE PHASE 1B SUPERSTRUCTURE CONSTRUCTION OF RAMP M BRIDGE.

AT FORWARD ABUTMENT - SHEET PILING

1. REMOVE PORTIONS OF EXISTING APPROACH SLABS, PAVEMENT AND DECK IN PHASE 1B TO ALLOW INSTALLATION OF SHEET PILES.
2. INSTALL SHEET PILING FOR PHASE 1B CONSTRUCTION AS SHOWN IN THE PLANS.
3. EXCAVATE TO THE DEPTH OF WALER FOR THE UPPER TIE-BACKS.
4. INSTALL THE WALER AND UPPER TIE-BACK SYSTEM ON THE SHEET PILING.
5. REPEAT STEP 3 AND STEP 4 TO THE DEPTH OF THE WALER FOR THE LEVEL OF TIE-BACKS AND COMPLETE EXCAVATION FOR FORWARD ABUTMENT CONSTRUCTION AS SHOWN ON ELEVATION VIEW B-B ON SHEET 23/64.
6. COMPLETE PHASE 1B FORWARD ABUTMENT CONSTRUCTION OF RAMP M BRIDGE.
7. INSTALL THE TEMPORARY WIRED FACED MSE WALL AND EMBANKMENT AS PLAN SHOWN TO SUPPORT PROPOSED ROADWAY APPROACH EMBANKMENT IN PHASE 1B CONSTRUCTION.
8. BACKFILL AS REQUIRED TO MATCH THE EXISTING GRADE AND REMOVE THE SHEET PILING.
9. COMPLETE PHASE 1B SUPERSTRUCTURE CONSTRUCTION OF BRIDGE AND APPROACH.

GENERAL NOTES:

1. ALL STATIONS AND OFFSETS SHOWN ARE AT THE CENTERLINE OF SHEET PILING OR SOLDIER PILE AND ALL STATIONS AND OFFSETS ARE BASED ON THE ℄ CONSTRUCTION RAMP M OVER IR 75, UNLESS NOTED OTHERWISE.
2. FOR SOLDIER PILE, SHEET PILING, AND TEMPORARY MSE WALL ELEVATION VIEWS AND DETAILS, SEE SHEET 23/64 THROUGH SHEET 28/64
3. SEE SHEET 28/64 FOR TEMPORARY WIRE FACED MSE WALL A DETAILS. TEMPORARY WIRE FACED MSE WALL SHALL BE PAID FOR UNDER ITEM 867 - TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL.
4. CONTRACTOR SHALL REMOVE THE EXISTING REAR PIER FOOTING AND PILES LOCATED AT TEMPORARY SOLDIER PILES FOR REAR PIER PHASE 1B CONSTRUCTION PRIOR TO INSTALLATION OF SOLDIER PILES.
5. SEE SOIL NAIL WALL DETAILS ON SOIL NAIL WALL PLAN SHEET 20/64 THROUGH SHEET 22/64.
6. SEE MSE WALL B SUBSET FOR TEMPORARY WIRE FACED MSE WALL B-1 DETAILS AT REAR ABUTMENT.
7. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
8. INSTALL ANCHORED SHEET PILE WALLS, SOLDIER PILE WALLS, AND SOIL NAIL WALLS IN A TOP-DOWN MANNER.

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TEMPORARY SHORING PLAN
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

19 / 64

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EX REAR ABUTMENT FOOTING, HAM-75-0791 EX ELEV = 522.65±

BEND POINT STA 417+85.26 2.18' LT

SOIL NAIL (TYP)

SKEW SOIL NAILS #15 AND #16 @ 25°0'0"

BEND POINT 418+00.23 21.29' LT

24'-6"

SKEW SOIL NAILS #5 AND #6 @ 45°0'0"

SOIL NAIL WALL, COFFERDAMS AND EXCAVATION BRACING, WALL D

4" THICK SOIL NAIL WALL SHOTCRETE (TYP)

SKEW SOIL NAILS #17 AND #18 @ 15°0'0"

6'-9"

2'-6"

90°0'0"

125°0'0"

13'-10"

HAM-75-0791 EX PIER 1 FOOTING TO REMAIN, HAM-75-0791 EX ELEV = 511.80± (BOTTOM) EX ELEV = 514.80± (TOP)

TEMPORARY SHEETING

BEGIN TEMPORARY SOIL NAIL WALL STA 417+90.48, 2.10' RT

STA 417+91.64 0.00' RT

℄ PROP REAR PIER (SEE REAR PIER SHEETS)

DECK PHASE CONSTRUCTION LINE

PROP BOTTOM OF FOOTING ELEV = 513.50

END TEMPORARY SOIL NAIL WALL STA 418+13.48, 20.79' LT

COFFERDAMS AND EXCAVATION BRACING, WALL F TEMPORARY SHEETING

PROPOSED TOP OF SOIL NAIL WALL

BEND POINT, STA 417+85.26, 2.18' LT ELEV = 527.00

℄ CONST RAMP M

PLAN - SOIL NAIL WALL D

NOTES

1. TOP OF WALL ELEVATIONS MATCH THE EXISTING GRADE.
2. WALL ELEVATION VIEWS ARE SHOWN AND DIMENSIONED FROM THE FRONT FACE OF WALL.
3. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

BEGIN TEMPORARY SOIL NAIL WALL STA 417+90.48, 2.10' RT ELEV = 527.00

6'-9"

6" x 6" W4.0xW4.0 GRADE 60 WELDED WIRE MESH (TYP THROUGHOUT SHOTCRETE FACING)

24'-6" (MEASURED ALONG FRONT FACE OF WALL)

7'-4⅜"

7'-4⅜"

9'-9⅜"

PROPOSED TOP OF SOIL NAIL WALL

1'-7⅛"

ELEV = 527.00

ELEV = 526.08

BEND POINT, STA 418+00.23 21.29' LT ELEV = 520.71

HAM-75-0791 EX PIER 1 FOOTING PORTION TO BE REMOVED TO PROPOSED HAM-562-0004 BOTTOM OF FOOTING ELEV 513.50

13'-10" (MEASURED ALONG FRONT FACE OF WALL)

BEND POINT, STA 418+00.23 21.29' LT ELEV = 520.71

CAST PORTION OF WALL ON TOP OF EXISTING HAM-75-0791 REAR PIER FOOTING

PROPOSED TOP OF SOIL NAIL WALL (TYP)

END TEMPORARY SOIL NAIL WALL STA 418+13.48, 20.79' LT ELEV = 516.29

2 - SN601 AT EACH SOIL NAIL LOCATION

ELEV = 523.80

ELEV = 522.65±

3'-3"

ELEV = 522.65±

ELEV = 521.00

ELEV = 521.00

13'-6"

13'-6"

13'-6"

5'-0"

SOIL NAIL SPACING

4'-0"

1'-6¾"

1'-2¼"

8⅛"

SOIL NAIL SPACING

5'-0"

5'-0"

5'-0"

2'-9⅞"

2'-9¾"

3'-2¼"

ELEV = 516.00

ELEV = 516.00

2'-6"

2'-6"

ELEV = 513.50

ELEV = 513.50

ELEV. = 513.50

7'-2½"

7'-2½"

ELEV = 519.50

2'-0"

ELEV = 516.00

ELEV = 513.50

ELEV = 514.80

2'-9½"

3'-0"

ELEV = 511.80±

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

2 - SN602 AT EACH SOIL NAIL LOCATION

SOIL NAIL NUMBER (TYP)

6'-9" MEASURED ALONG FRONT FACE OF WALL

24'-6" MEASURED ALONG FRONT FACE OF WALL

VIEW G-G

VIEW H-H

VIEW I-I

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TEMPORARY SOIL NAIL WALL PLAN AND ELEVATIONS
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

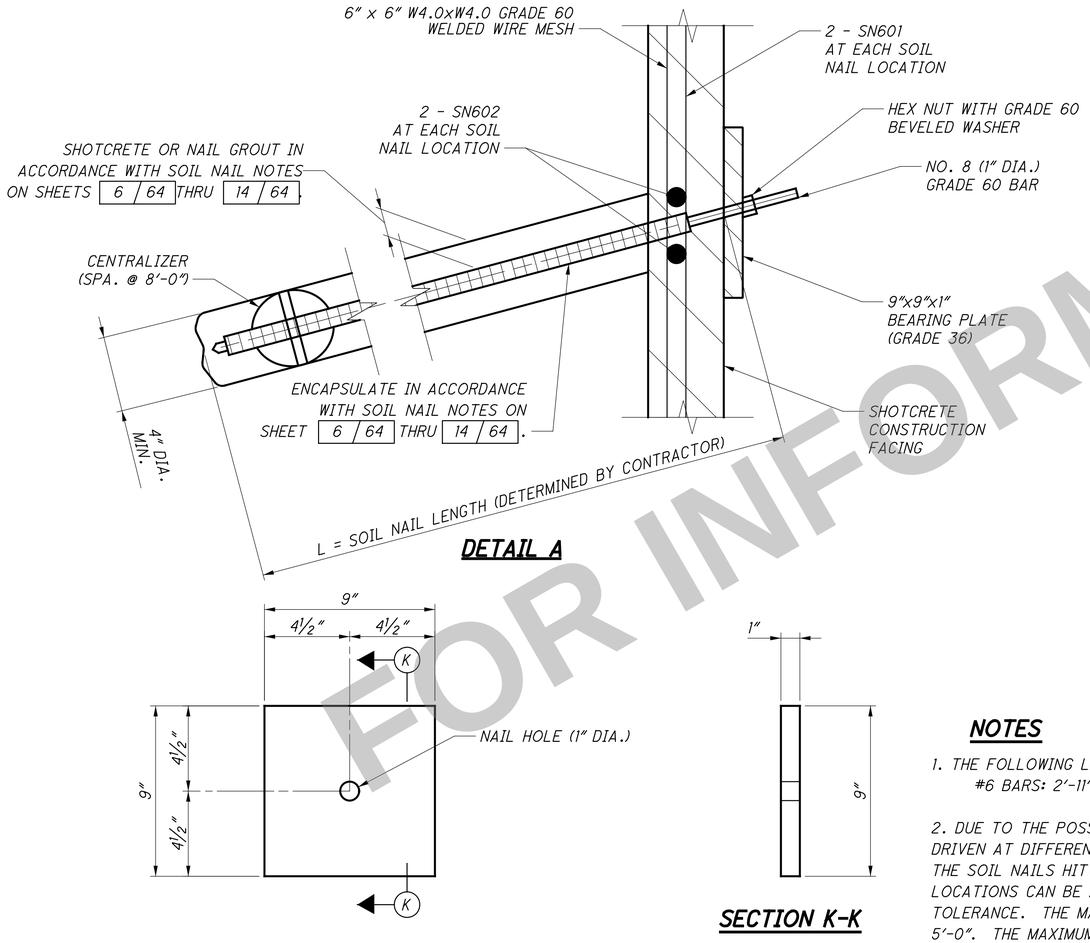
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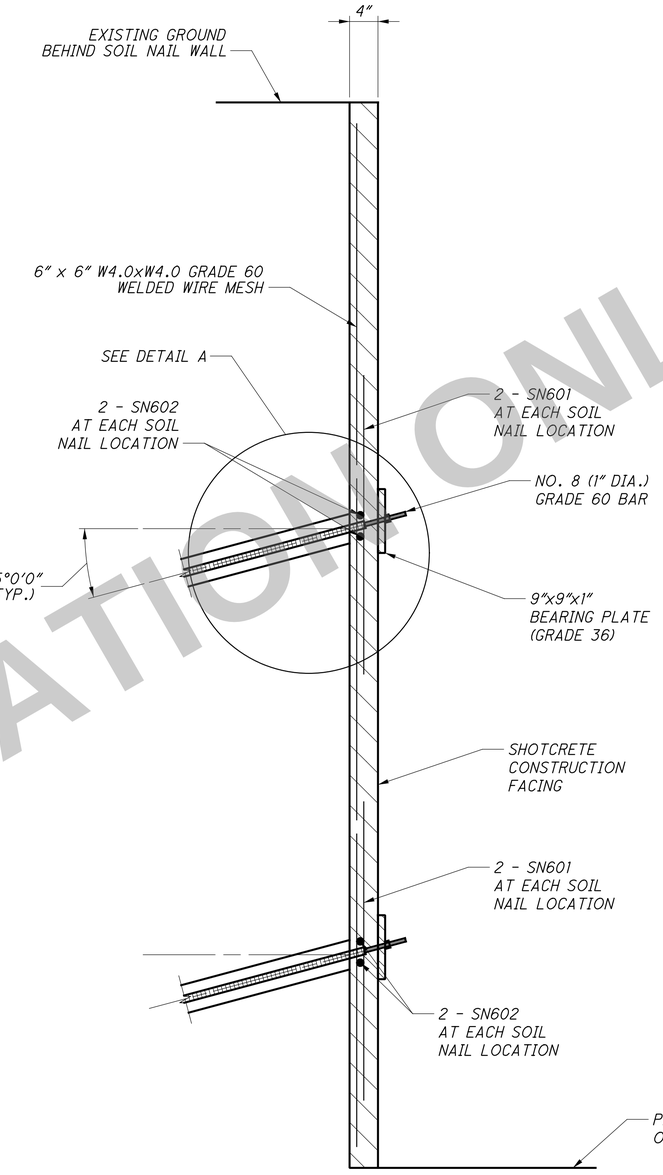
SOIL NAIL WALL DESIGN DATA TABLE	
SOIL NAIL NUMBER	DESIGN LOAD (KIPS)
1-14	20
15-18	15



DETAIL A

BEARING PLATE DETAILS

SECTION K-K



SECTION J-J

(SOIL NAIL WALL D)

NOTES

1. THE FOLLOWING LAP LENGTHS SHALL APPLY:
   #6 BARS: 2'-11", 6"x6" W4.0xW4.0: 8"

2. DUE TO THE POSSIBILITY OF THE EXISTING ABUTMENT PILES BEING DRIVEN AT DIFFERENT LOCATIONS THAN WHAT IS SHOWN ON THE PLANS OR THE SOIL NAILS HITTING OBSTACLES (ROCKS OR BURIED DEBRIS), THE NAIL LOCATIONS CAN BE ADJUSTED AS PER SOIL NAIL WALL INSTALLATION TOLERANCE. THE MAXIMUM HORIZONTAL SPACING OF THE SOIL NAILS IS 5'-0". THE MAXIMUM VERTICAL SPACING IS 5'-0". THE CONTRACTOR SHALL MAKE EVERY EFFORT TO CONSTRUCT THE SOIL NAILS AT THE PLAN LOCATIONS. THE TOTAL NUMBER OF SOIL NAILS SHALL ALWAYS BE CONSTRUCTED.

3. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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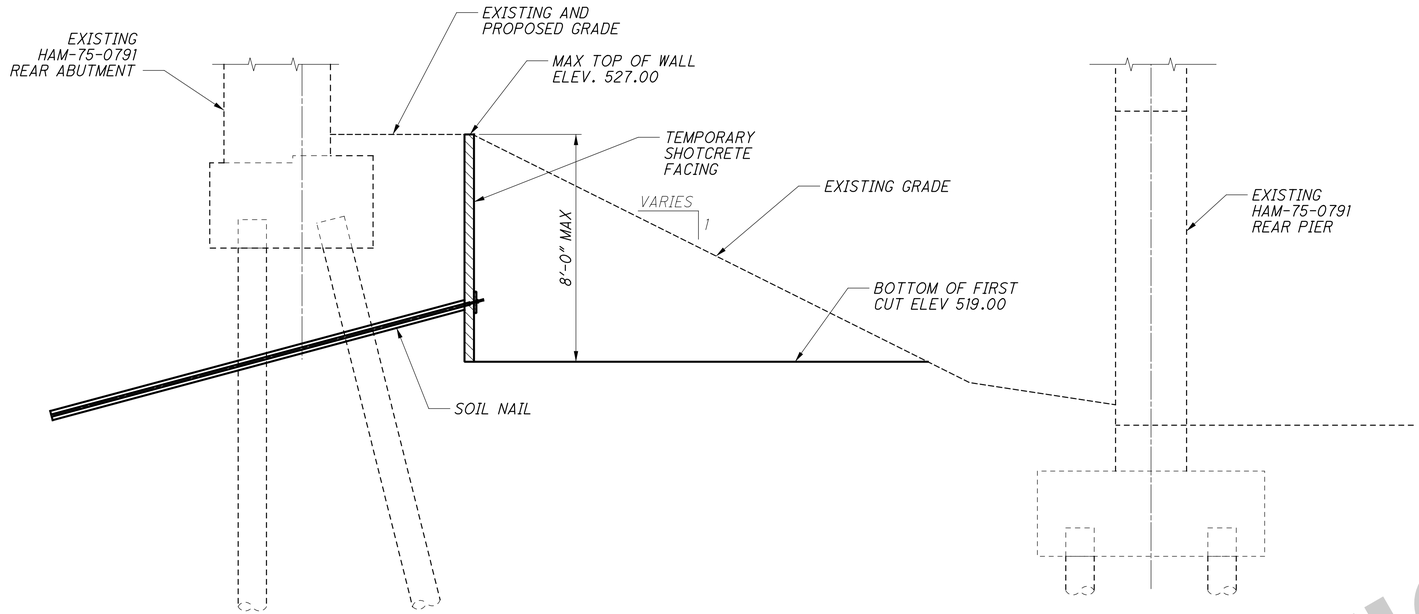
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TEMPOARARY SOIL NAIL WALL DETAILS
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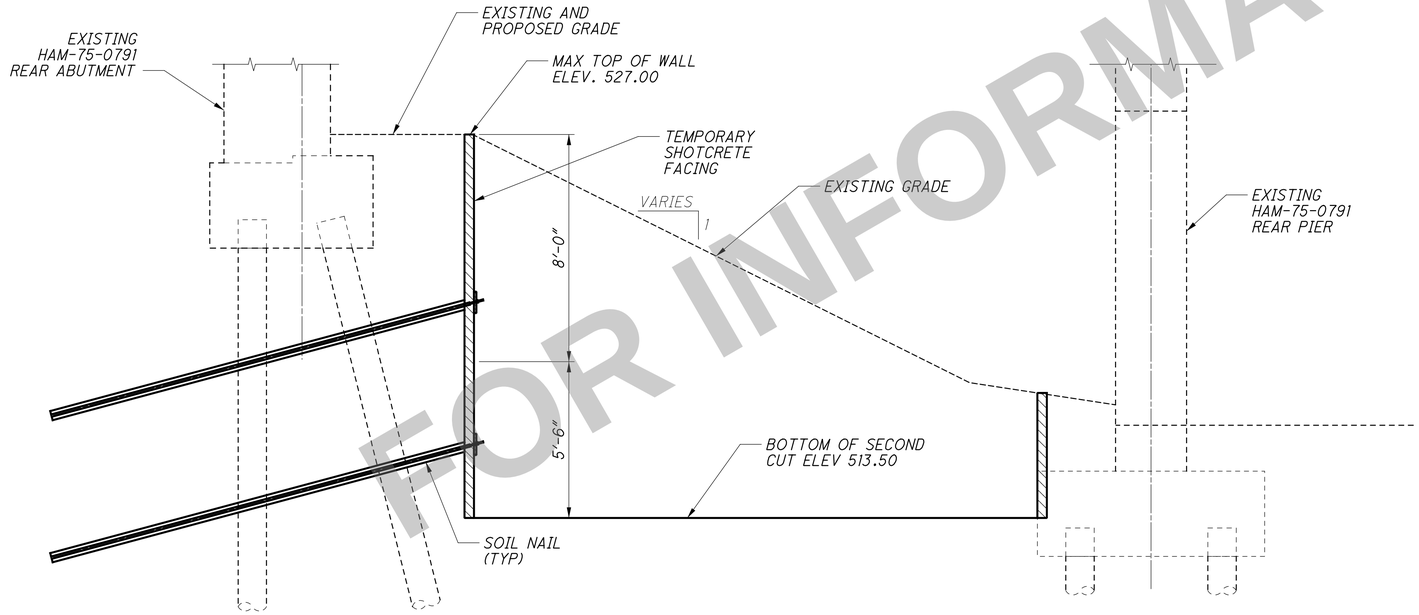
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SOIL NAIL WALL D STAGE 1 CONSTRUCTION



SOIL NAIL WALL D STAGE 2 CONSTRUCTION

CONSTRUCTION CONSIDERATIONS

IN GENERAL, THE CONTRACTOR SHALL FOLLOW THE FOLLOWING RECOMMENDED CONSTRUCTION SEQUENCE:

1. INSTALL THE SOIL NAILS AS THE SOIL IN FRONT OF THE WALL IS EXCAVATED AND CAN STAND.

2. APPLY FOUR (4) INCH THICK LAYER OF SHOTCRETE THROUGHOUT THE LIMITS OF THE TEMP SHOTCRETE SOIL NAILED RETAINING WALL. INSTALL BEARING PLATES, NUTS, AND ANY ADDITIONAL HARDWARE AND ALLOW TO CURE.

THE CONTRACTOR MAY PROPOSE AN ALTERNATIVE CONSTRUCTION SEQUENCE TO THE PROJECT ENGINEER. IT MUST BE SUBMITTED THIRTY (30) CALENDAR DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE PROJECT ENGINEER SHALL APPROVE OR REJECT THE ALTERNATIVE CONSTRUCTION SEQUENCE PROPOSAL BEFORE THE CONTRACTOR CAN INITIATE THE ALTERNATIVE CONSTRUCTION SEQUENCE.

ANY ADDITIONAL COST INVOLVED WITH THE RECOMMENDED CONSTRUCTION SEQUENCE SHALL BE INCLUDED WITH THE CONTRACT PRICE FOR "COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN"

NOTES

1. NAILS SHOWN FOR REFERENCE. FOR LOCATIONS OF NAILS SEE SHEET 20 / 64 AND FOR WALL DETAILS SEE SHEET 21 / 64 .

2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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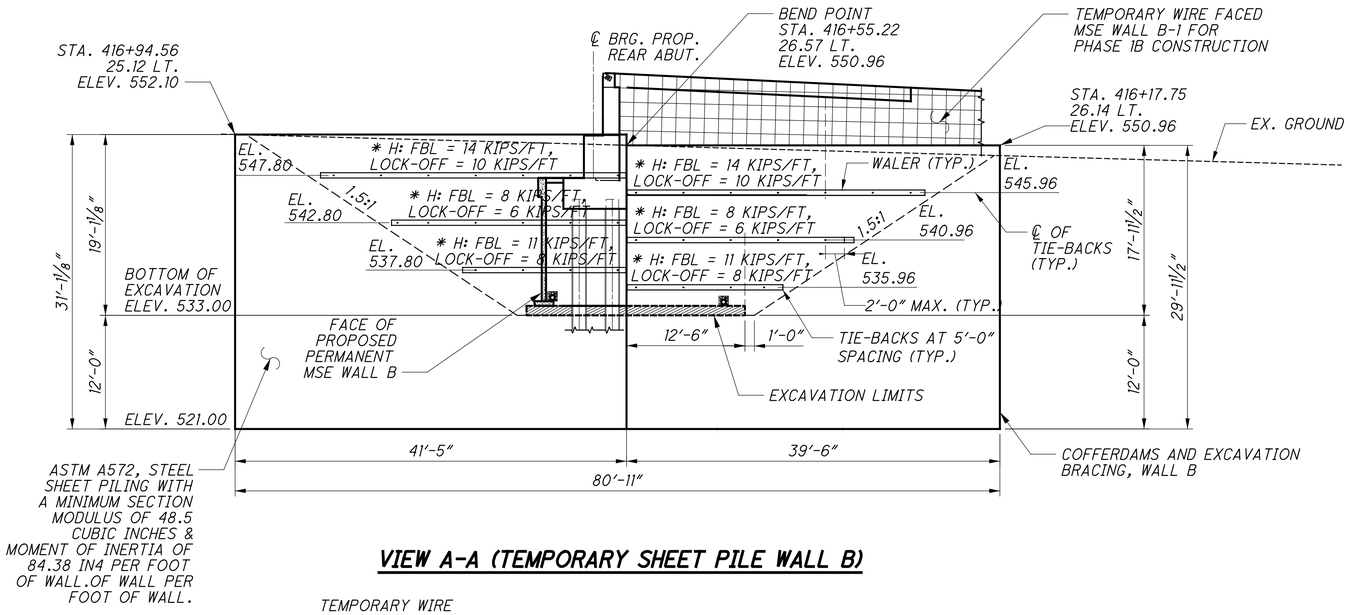
TEMPOARARY SOIL NAIL WALL DETAILS
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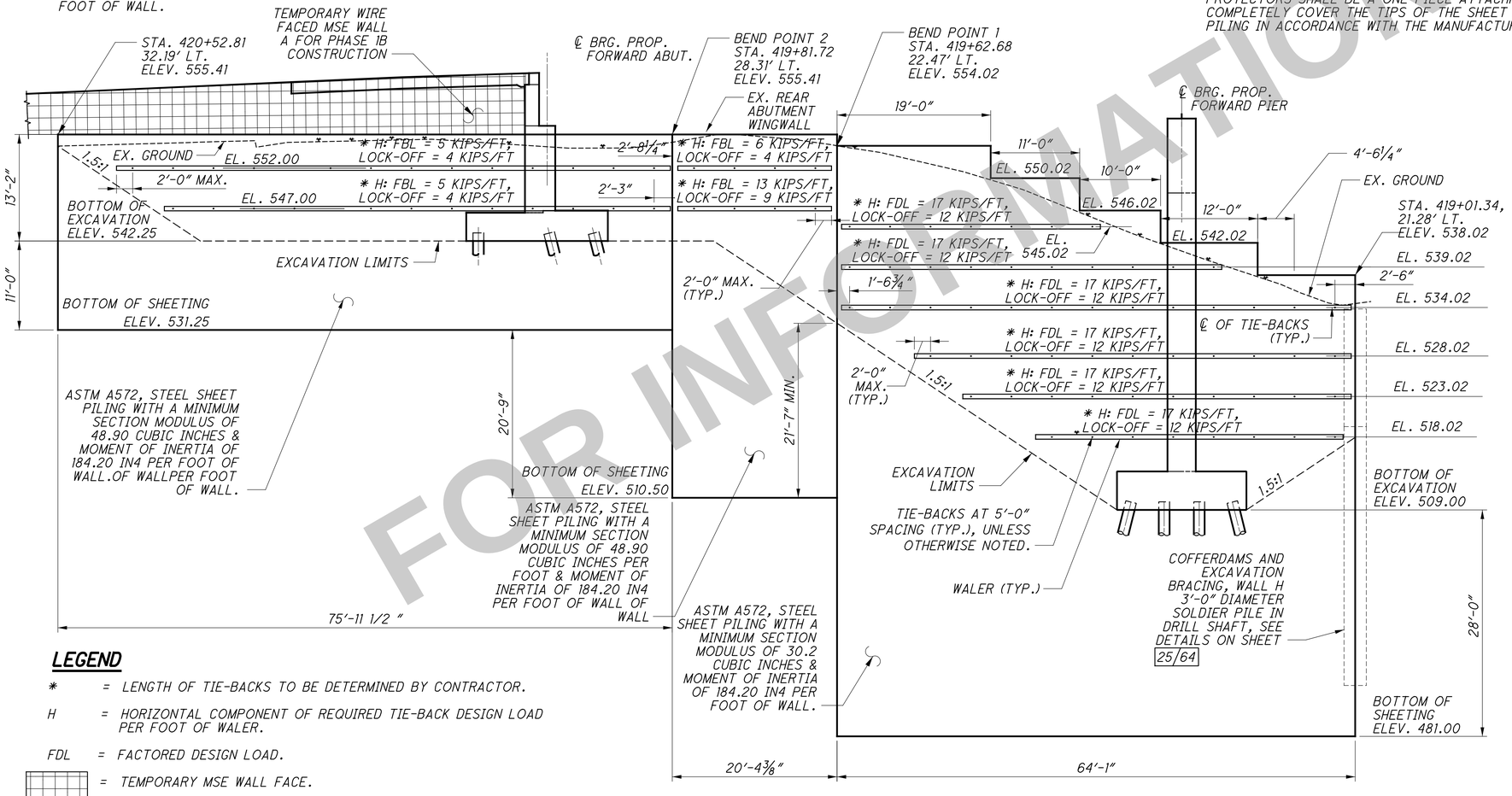
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VIEW A-A (TEMPORARY SHEET PILE WALL B)



VIEW B-B (TEMPORARY SHEET PILE WALL H)

LEGEND

* = LENGTH OF TIE-BACKS TO BE DETERMINED BY CONTRACTOR.

H = HORIZONTAL COMPONENT OF REQUIRED TIE-BACK DESIGN LOAD PER FOOT OF WALER.

FDL = FACTORED DESIGN LOAD.

= TEMPORARY MSE WALL FACE.

NOTES

1. FOR SHEET PILING LOCATIONS, SEE TEMPORARY SHORING PLAN VIEW ON SHEET 19/64.
2. SHEET PILING SHALL BE ASTM A572 MATERIAL AND MEET THE REQUIREMENTS OF CMS 711.03. MINIMUM YIELD STRENGTH SHALL BE 50 KSI.
3. THE MAXIMUM SPACING OF THE TIE-BACKS IS 5'-0" AND MINIMUM OF 3 TIE-BACKS PER WALER IS REQUIRED.
4. INSTALL AND TEST TIE-BACKS IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 866, GROUND ANCHORS, 2017, ODOT.
5. ADJUST THE VERTICAL AND HORIZONTAL ANGLES OF TIE-BACKS TO ACCOMMODATE THE PROPOSED METHOD OF THE INSTALLATION AND TO AVOID ANY OBSTRUCTIONS. HOWEVER, AS THE VERTICAL AND HORIZONTAL ANGLES OF THE TIE-BACKS INCREASE, THE COMPONENT OF THE TIE-BACK DESIGN LOAD PERPENDICULAR TO THE WALL WILL DECREASE. THE COMPONENT OF THE DESIGN LOAD PERPENDICULAR TO THE WALL MUST BE EQUAL TO OR GREATER THAN THE HORIZONTAL DESIGN LOAD FOR EACH WALER MULTIPLIED BY THE TIE-BACK SPACING ALONG THE WALER.
6. TEMPORARY TIE-BACKS DO NOT REQUIRE CORROSION PROTECTION.
7. FILL THE VOID BETWEEN THE DRILL HOLE AND THE SHEATHING OF THE UNBOUNDED LENGTH WITH GROUT.
8. PAYMENT FOR SHEET PILING, TIE-BACKS, WALERS, EXPANSION ANCHORS, STEEL ANGLES, REMOVAL OF ALL COMPONENTS AFTER NO LONGER NECESSARY FOR SPECIFIC CONSTRUCTION PHASE, AND ALL OTHER ITEMS ASSOCIATED WITH TEMPORARY SHORING WILL BE INCLUDING IN THE CONTRACT LUMP SUM PRICE FOR "COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN".
9. EXISTING CONCRETE SLABS OR DEBRIS MAY BE ENCOUNTERED DURING DRIVING THE SHEET PILING AND EXCAVATION FOR THE TIE-BACK INSTALLATION. THE CONTRACTOR SHALL ADVANCE THE DRIVEN SHEET PILES THROUGH ANY OBSTRUCTIONS TO THE REQUIRED DEPTHS SHOWN & LOCALLY REMOVE ANY OBSTRUCTIONS NECESSARY TO INSTALL THE TIEBACK.
10. SHEET PILING USED FOR PHASE 1B CONSTRUCTION SHALL INCLUDE END PROTECTORS TO FACILITATE DRIVING THE SHEET PILING THROUGH THE LAYER OF GRAVEL AND/OR STONE FRAGMENTS WITH SAND. THE END PROTECTORS SHALL BE A ONE-PIECE ATTACHMENT SPECIFICALLY MADE FOR Z-TYPE SHEET PILE SECTIONS AND COMPLETELY COVER THE TIPS OF THE SHEET PILES. END PROTECTORS SHALL BE ATTACHED TO THE SHEET PILING IN ACCORDANCE WITH THE MANUFACTURES INSTRUCTIONS.

NOTES

1. EXISTING BRIDGE AS SHOWN ON THE ELEVATION VIEW B-B IS AT NORTH SIDE OF THE SHEET PILES, PROPOSED BRIDGE AS SHOWN ON THE ELEVATION VIEW B-B IS AT SOUTH SIDE OF THE SHEET PILES.
2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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DESIGNED	DRAWN	REVIEWED	DATE
RMW	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RJE	-	3113787	

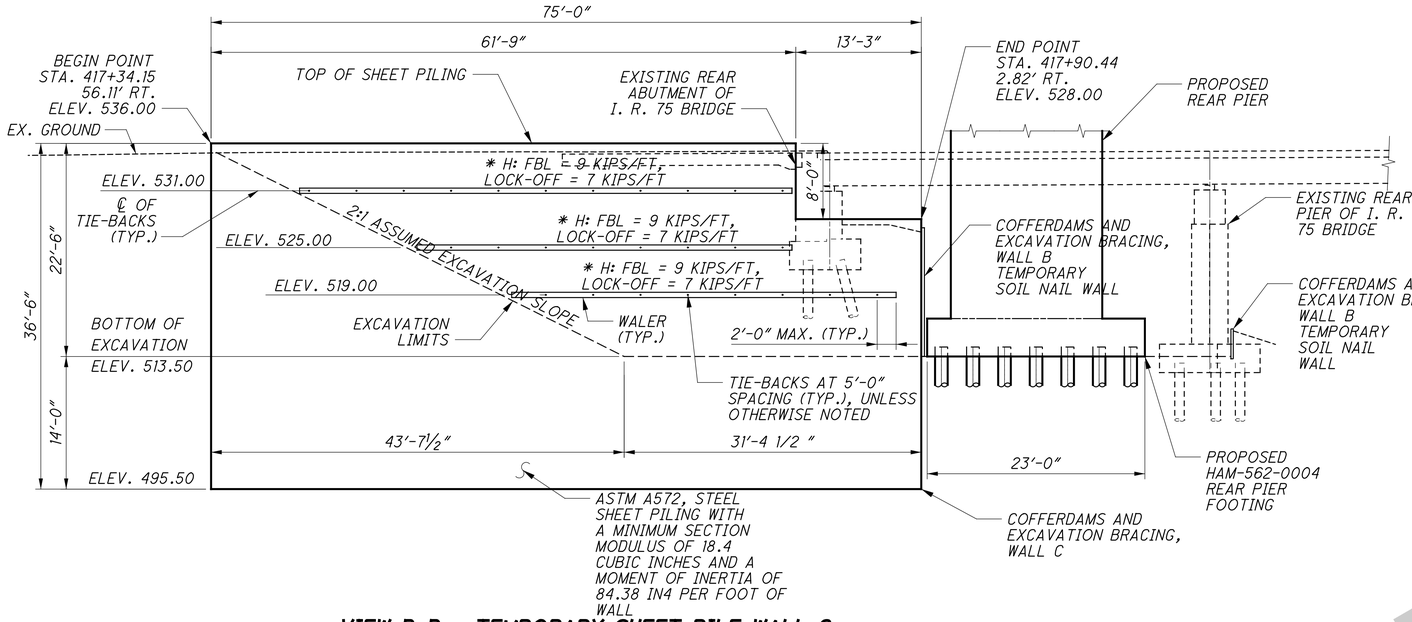
TEMPORARY SHORING AT ABUTMENTS AND FORWARD PIER
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

23/64

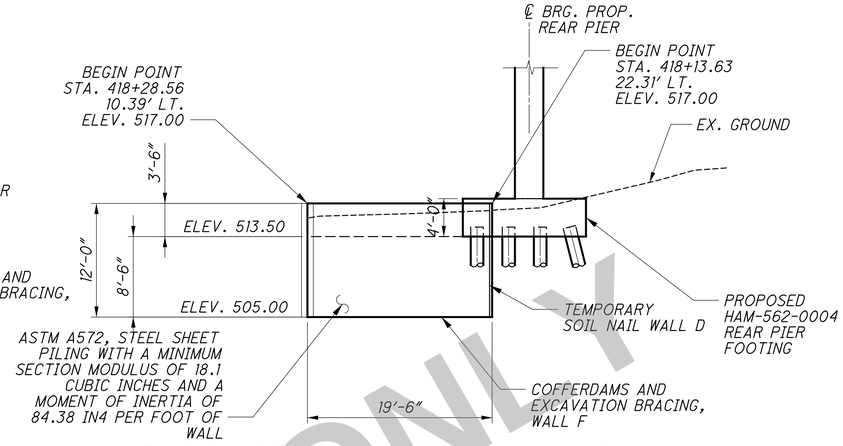
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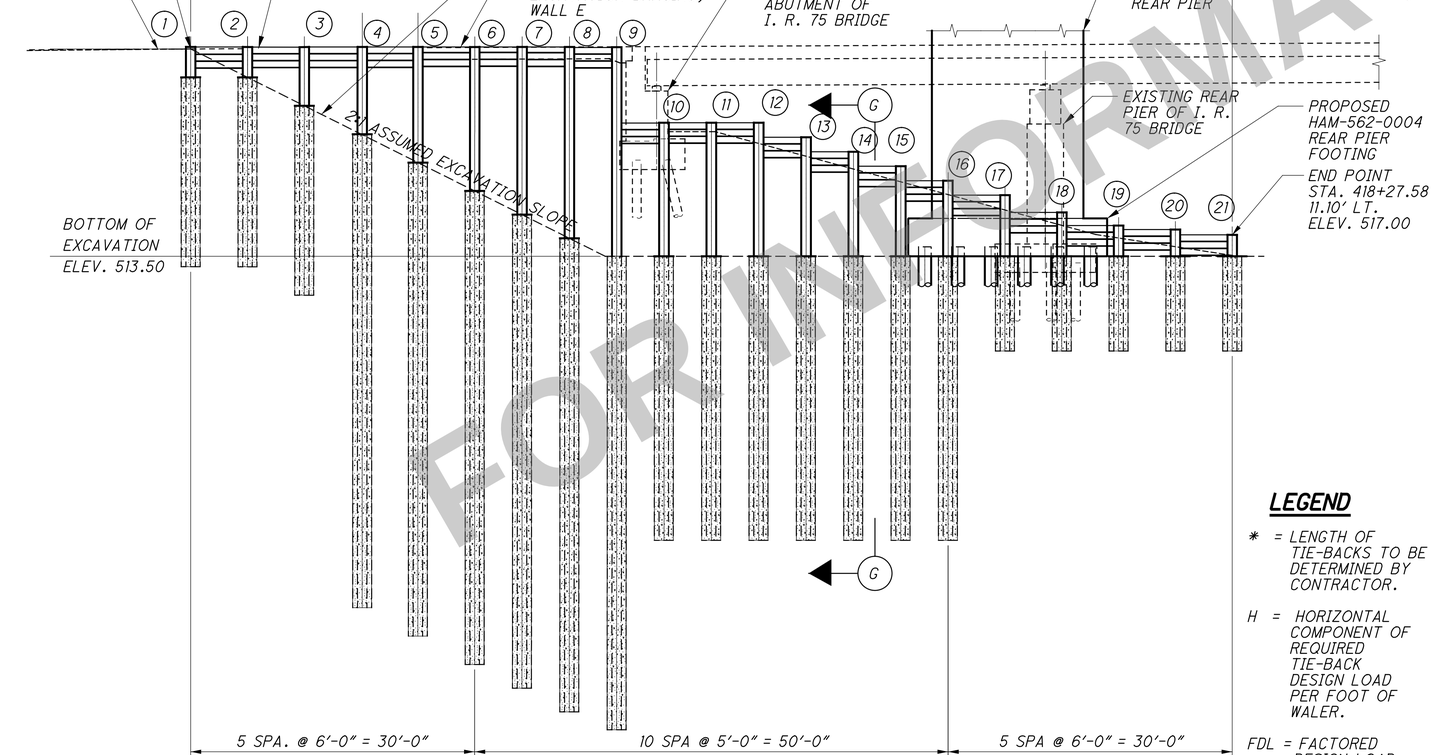


VIEW D-D - TEMPORARY SHEET PILE WALL C

(SHORING NECESSARY TO INSTALL ACCESS DRIVE FOR EQUIPMENT TO CONSTRUCT REAR PIER)



VIEW F-F - TEMPORARY SHEET PILE WALL F



VIEW E-E (TEMPORARY SOLDIER PILE WALL E)

(SHORING NECESSARY TO INSTALL ACCESS DRIVE FOR EQUIPMENT TO CONSTRUCT REAR PIER)
(LOW STRENGTH MORTAR BACKFILL IN EXPOSED WALL SURFACE NOT SHOWN FOR CLARITY)

LEGEND

* = LENGTH OF TIE-BACKS TO BE DETERMINED BY CONTRACTOR.

H = HORIZONTAL COMPONENT OF REQUIRED TIE-BACK DESIGN LOAD PER FOOT OF WALER.

FDL = FACTORED DESIGN LOAD.

(X) = SOLDIER PILE NUMBER.

NOTES

1. FOR SHEET PILING AND SOLDIER PILE LOCATIONS, SEE TEMPORARY SHORING PLAN VIEW ON SHEET 19/64 .
2. SHEET PILING SHALL BE ASTM A572 MATERIAL AND MEET THE REQUIREMENTS OF CMS 711.03. MINIMUM YIELD STRENGTH SHALL BE 39 KSI. SOLDIER PILES SHALL BE GRADE 50 (50KSI) STEEL.
3. THE MAXIMUM SPACING OF THE TIE-BACKS IS 5'-0" AND MINIMUM OF 3 TIE-BACKS PER WALER IS REQUIRED.
4. INSTALL AND TEST TIE-BACKS IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 866, GROUND ANCHORS, 2012, ODOT.
5. ADJUST THE ANGLES OF TIE-BACKS TO ACCOMMODATE THE PROPOSED METHOD OF THE INSTALLATION AND TO AVOID ANY OBSTRUCTIONS. HOWEVER, AS THE ANGLES OF THE TIE-BACKS INCREASE, THE COMPONENT OF THE TIE-BACKS DESIGN LOAD PERPENDICULAR TO THE WALL WILL DECREASE. THE COMPONENT OF THE DESIGN LOAD PERPENDICULAR TO THE WALL MUST BE EQUAL TO OR GREATER THAN THE HORIZONTAL DESIGN LOAD FOR EACH WALER MULTIPLIED BY THE TIE-BACK SPACING ALONG THE WALER.
6. ENSURE THAT TIE-BACKS DO NOT CONFLICT WITH EXISTING AND PROPOSED STRUCTURES AND EXISTING UTILITIES.
7. TEMPORARY TIE-BACKS DO NOT REQUIRE CORROSION PROTECTION.
8. FILL THE VOID BETWEEN THE DRILL HOLE AND THE SHEATHING OF THE UNBOUNDED LENGTH WITH GROUT.
9. PAYMENT FOR SHEET PILING, TIE-BACKS, WALERS, EXPANSION ANCHORS, STEEL ANGLES, SOLDIER PILES, DRILL SHAFT, LAGGING, STRUCTURAL CONCRETE FILL AND REMOVAL OF ALL COMPONENTS AFTER NO LONGER NECESSARY FOR SPECIFIC CONSTRUCTION PHASE, AND ALL OTHER ITEMS ASSOCIATED WITH TEMPORARY SHORING WILL BE INCLUDING IN THE CONTRACT LUMP SUM PRICE FOR "COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN".
10. EXISTING CONCRETE SLABS OR DEBRIS MAY BE ENCOUNTERED DURING DRIVING THE SHEET PILING AND EXCAVATION FOR THE TIEBACK INSTALLATION. THE CONTRACTOR SHALL ADVANCE THE DRIVEN SHEET PILES THROUGH ANY OBSTRUCTIONS TO THE REQUIRED DEPTHS SHOWN & LOCALLY REMOVE ANY OBSTRUCTIONS NECESSARY TO INSTALL THE TIEBACK.
11. SHEET PILING USED FOR PHASE 1A CONSTRUCTION SHALL INCLUDE END PROTECTORS TO FACILITATE DRIVING THE SHEET PILING OR SOLDIER PILES THROUGH THE LAYER OF GRAVEL AND/OR STONE FRAGMENTS WITH SAND. THE END PROTECTORS SHALL BE A ONE-PIECE ATTACHMENT SPECIFICALLY MADE FOR Z-TYPE SHEET PILE SECTIONS OR HP SECTIONS AND COMPLETELY COVER THE TIPS OF THE SHEET PILES OR SOLDIER PILES. END PROTECTORS SHALL BE ATTACHED TO THE SHEET PILING OR SOLDIER PILES IN ACCORDANCE WITH THE MANUFACTURES INSTRUCTIONS.
12. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
13. SEE SOLDIER PILE TYPICAL SECTION AND SECTION G-G ON SHEET 25/64 .
14. DRILL ALL SOLDIER PILES PER ITEM 524 FROM THE EXISTING GROUND SURFACE TO THE DESIGN TIP ELEVATION. PLACE THE SOLDIER PILE IN THE EXCAVATED HOLE AND FILL THE DRILLED HOLE TO THE GROUND SURFACE WITH ITEM 613 LOW STRENGTH MORTAR.
15. EXCAVATE THE LOW STRENGTH MORTAR IN A TOP-DOWN MANNER TO PERMIT LAGGING INSTALLATION. PERFORM EXCAVATION WITH A SMOOTH PLATE BUCKET TO MINIMIZE OVER EXCAVATION.
16. INSTALL WOOD LAGGING IN TOP-DOWN MANNER, ATTACHING THE LAGGING TO THE FRONT FLANGE OF THE SOLDIER PILE. NO MORE THAN 5'-0" OF UNSUPPORTED EXCAVATION SHALL BE EXPOSED AT ANY GIVEN TIME. REDUCE EXPOSED EXCAVATION AS NECESSARY DUE TO WATER OR WEAK SOIL CONDITIONS.
17. SEE SHEET 26/64 FOR SOLDIER PILE WALL TABLE

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RJE	-	3113787	

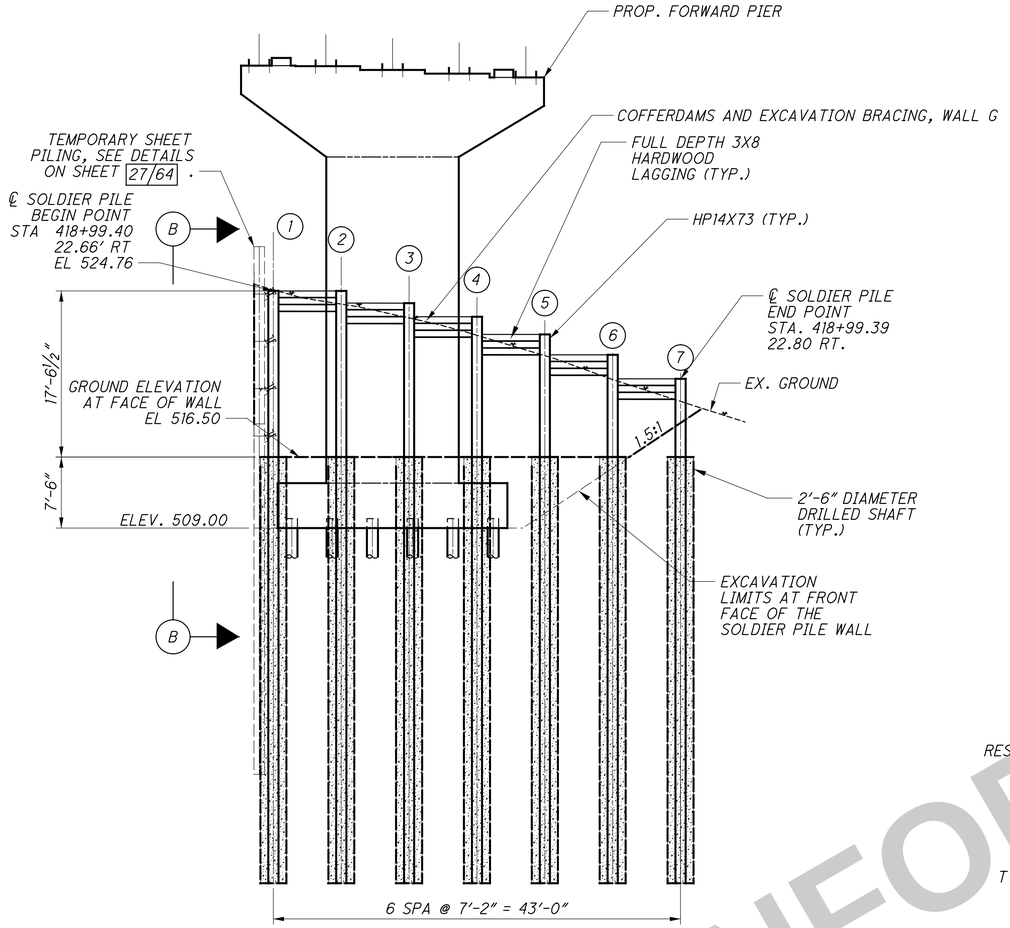
TEMPORARY SHORING AT REAR PIER
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

24/64

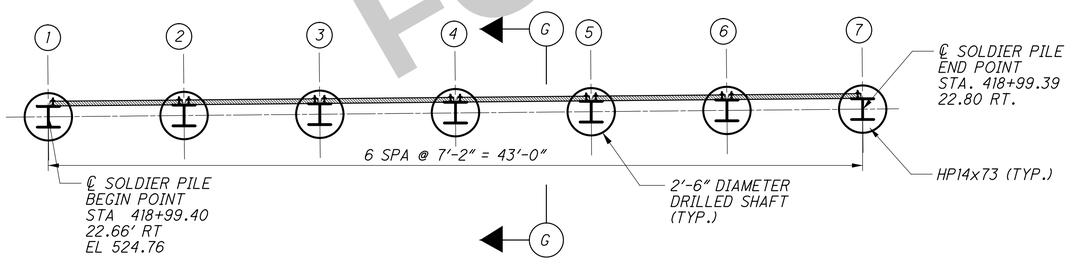
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VIEW C-C - TEMPORARY SOLDIER PILE WALL G

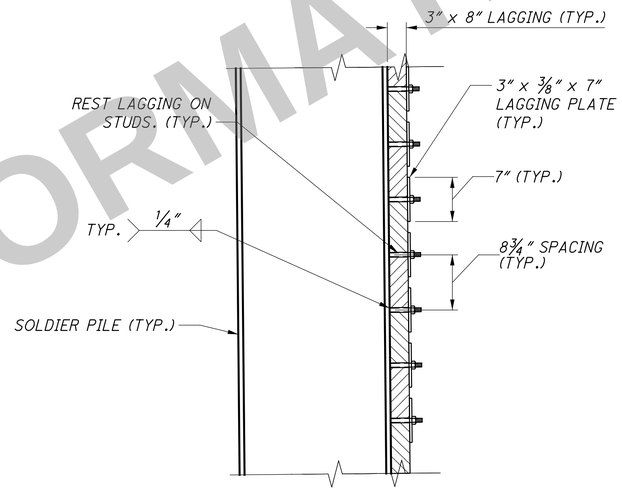
(LOW STRENGTH MORTAR BACKFILL IN EXPOSED WALL SURFACE NOT SHOWN FOR CLARITY)



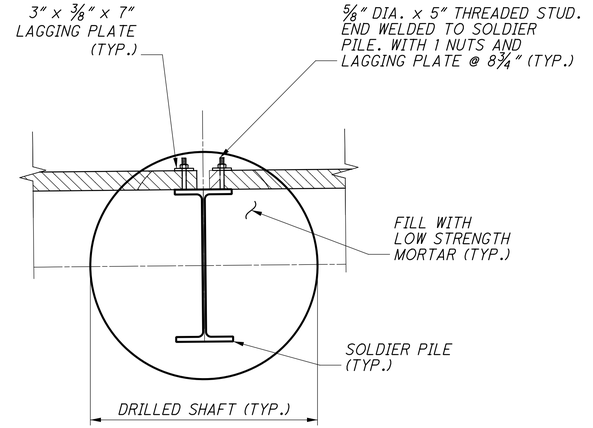
PLAN VIEW (TEMPORARY SOLDIER PILE WALL G)

NOTES

1. FOR SOLDIER PILE LOCATIONS, SEE TEMPORARY SHORING PLAN VIEW ON SHEET 19/64.
2. SOLDIER PILES, ATTACHED PLATES, AND THREADED STUDS SHALL BE GRADE 50 (50 KSI) STEEL.
3. PAYMENT FOR SOLDIER PILES, DRILLED SHAFTS, LOW STRENGTH MORTAR BACKFILL, REMOVAL OF ALL COMPONENTS AFTER NO LONGER NECESSARY FOR A SPECIFIC CONSTRUCTION PHASE, AND ALL OTHER ITEMS ASSOCIATED WITH TEMPORARY SHORING WILL BE INCLUDING IN THE CONTRACT LUMP SUM PRICE FOR "COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN".
4. EXISTING CONCRETE SLABS OR DEBRIS MAY BE ENCOUNTERED DURING DRILLED SHAFT EXCAVATION FOR THE SOLDIER PILE INSTALLATION. THE CONTRACTOR SHALL ADVANCE THE DRILLED SHAFT THROUGH ANY OBSTRUCTIONS TO THE REQUIRED DEPTHS SHOWN & LOCALLY REMOVE ANY OBSTRUCTIONS NECESSARY TO INSTALL THE SOLDIER PILES.
5. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
6. DRILL ALL SOLDIER PILES PER ITEM 524 FROM THE EXISTING GROUND SURFACE TO THE DESIGN TIP ELEVATION. PLACE THE SOLDIER PILE IN THE EXCAVATED HOLE AND FILL THE DRILLED HOLE TO THE GROUND SURFACE WITH TIEM 613 LOW STRENGTH MORTAR.
7. EXCAVATE THE LOW STRENGTH MORTAR IN A TOP-DOWN MANNER TO PERMIT LAGGING INSTALLATION. PERFORM EXCAVATION WITH A SMOOTH PLATE BUCKET TO MINIMIZE OVER EXCAVATION.
8. INSTALL WOOD LAGGING IN TOP-DOWN MANNER, ATTACHING THE LAGGING TO THE FRONT FLANGE OF THE SOLDIER PILE. NO MORE THAN 5 FEET OF UNSUPPORTED EXCAVATION SHALL BE EXPOSED AT ANY GIVEN TIME. REDUCE EXPOSED EXCAVATION AS NECESSARY DUE TO WATER OR WEAK SOIL CONDITIONS.
9. SEE SHEET 26/64 FOR SOLDIER PILE WALL TABLE.
10. FOR VIEW B-B, SEE SHEET 23/64 .



SECTION G-G



TYPICAL SECTION
TEMPORARY SOLDIER PILE WALL

LEGEND

(X) = SOLDIER PILE NUMBER

FOR INFORMATION ONLY

DESIGN AGENCY: EMH&T
DESIGNED: RMW | DRAWN: GB | CHECKED: RJE | REVIEWED: CAS | REVISED: - | DATE: 12-15-21
STRUCTURE FILE NUMBER: 3113787

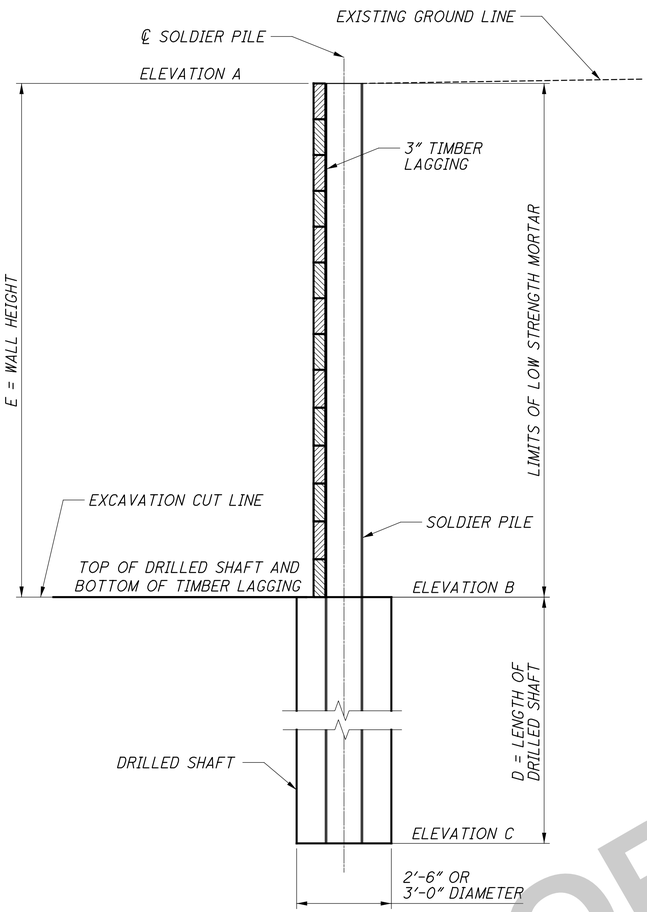
TEMPORARY SHORING AT FORWARD PIER
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

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TEMPORARY SOLDIER PILE WALL E LOCATION AND ELEVATION DATA TABLE

SOLDIER PILE NUMBER	SOLDIER PILE STATION (ALONG ℄ CONST RAMP M)	SOLDIER PILE OFFSET (ALONG ℄ CONST RAMP M)	TOP OF SOLDIER PILE ELEVATION A	TOP OF DRILLED SHAFT ELEVATION B	PILE TIP ELEVATION C	LENGTH OF DRILLED SHAFT D	WALL HEIGHT E	SOLDIER PILE SIZE	DRILLED SHAFT DIAMETER
1	417+50.13	71.84' RT	535.60	532.40	512.40	20'-0"	3.20'	HP14x73	2'-6"
2	417+55.13	67.64' RT	535.60	532.40	512.40	20'-0"	3.20'	HP14x73	2'-6"
3	417+60.02	63.39' RT	535.60	529.38	509.38	20'-0"	6.22'	HP14x73	2'-6"
4	417+64.82	59.10' RT	535.60	526.39	476.39	50'-0"	9.21'	W27X178	3'-0"
5	417+69.53	54.77' RT	535.60	523.39	473.39	50'-0"	12.21'	W27X178	3'-0"
6	417+74.13	50.41' RT	535.60	520.39	470.39	50'-0"	15.21'	W27X178	3'-0"
7	417+77.91	46.74' RT	535.60	517.89	467.89	50'-0"	17.71'	W27X178	3'-0"
8	417+81.61	43.04' RT	535.60	515.39	465.39	50'-0"	20.21	W27X178	3'-0"
9	417+85.26	39.32' RT	535.60	513.50	463.50	50'-0"	22.10'	W27X178	3'-0"
10	417+88.85	35.57' RT	527.60	513.50	483.50	30'-0"	14.10'	W27X178	3'-0"
11	417+92.38	31.80' RT	527.60	513.50	483.50	30'-0"	14.10'	W27X178	3'-0"
12	417+95.85	28.01' RT	527.60	513.50	483.50	30'-0"	14.10'	W27X178	3'-0"
13	417+99.26	24.19' RT	526.07	513.50	483.50	30'-0"	12.57'	W27X178	3'-0"
14	418+02.62	20.35' RT	524.54	513.50	483.50	30'-0"	11.04'	W27X178	3'-0"
15	418+05.92	16.49' RT	523.01	513.50	483.50	30'-0"	9.51'	W27X178	3'-0"
16	418+09.17	12.61' RT	521.48	513.50	483.50	30'-0"	7.98'	HP14x73	2'-6"
17	418+13.00	7.93' RT	519.96	513.50	503.50	10'-0"	6.46'	HP14x73	2'-6"
18	418+16.75	3.21' RT	518.13	513.50	503.50	10'-0"	4.63'	HP14x73	2'-6"
19	418+20.43	1.53' LT	516.74	513.50	503.50	10'-0"	3.24'	HP14x73	2'-6"
20	418+24.04	6.30' LT	516.32	513.50	503.50	10'-0"	2.82'	HP14x73	2'-6"
21	418+27.58	11.10' LT	515.75	513.50	503.50	10'-0"	2.25'	HP14x73	2'-6"

TEMPORARY SOLDIER PILE WALL G LOCATION AND ELEVATION DATA TABLE

SOLDIER PILE NUMBER	SOLDIER PILE STATION (ALONG ℄ CONST RAMP M)	SOLDIER PILE OFFSET (ALONG ℄ CONST RAMP M)	TOP OF SOLDIER PILE ELEVATION A	TOP OF DRILLED SHAFT ELEVATION B	PILE TIP ELEVATION C	LENGTH OF DRILLED SHAFT D	WALL HEIGHT E	SOLDIER PILE SIZE	DRILLED SHAFT DIAMETER
1	419+01.28	19.79' LT	534.04	516.50	471.50	45'-0"	17.54'	HP14x73	3'-0"
2	419+01.00	13.00' LT	534.04	516.50	471.50	45'-0"	17.54'	HP14x73	3'-0"
3	419+00.70	5.84' LT	532.75	516.50	471.50	45'-0"	16.25'	HP14x73	3'-0"
4	419+00.39	1.32' RT	531.32	516.50	471.50	45'-0"	14.82'	HP14x73	3'-0"
5	419+00.07	8.48' RT	529.44	516.50	471.50	45'-0"	12.94'	HP14x73	3'-0"
6	418+99.74	15.64' RT	527.29	516.50	471.50	45'-0"	10.79'	HP14x73	3'-0"
7	418+99.39	22.80' RT	524.76	516.50	471.50	45'-0"	8.26'	HP14x73	3'-0"

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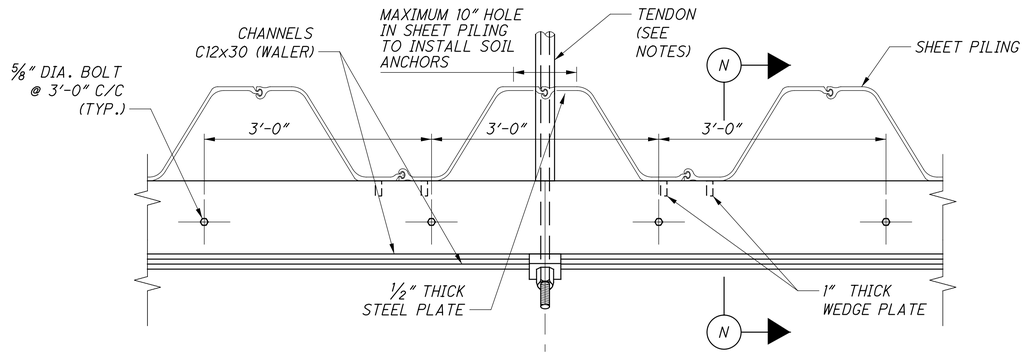
DESIGN AGENCY EMH&T
DESIGNED RMW | DRAWN GB | CHECKED RJE | REVIEWED CAS | DATE 12-15-21 | REVISED - | STRUCTURE FILE NUMBER 3113787

TEMPORARY SHORING DETAILS
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

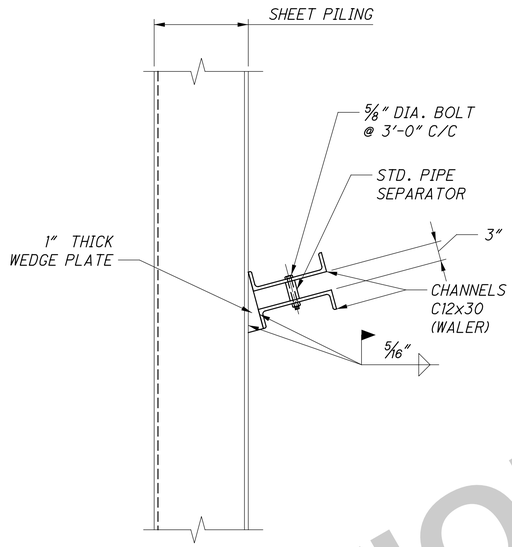
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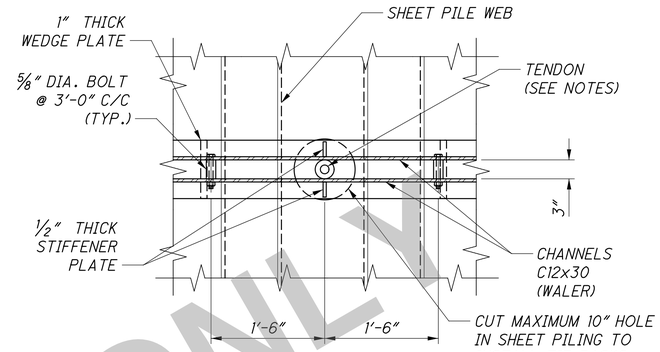
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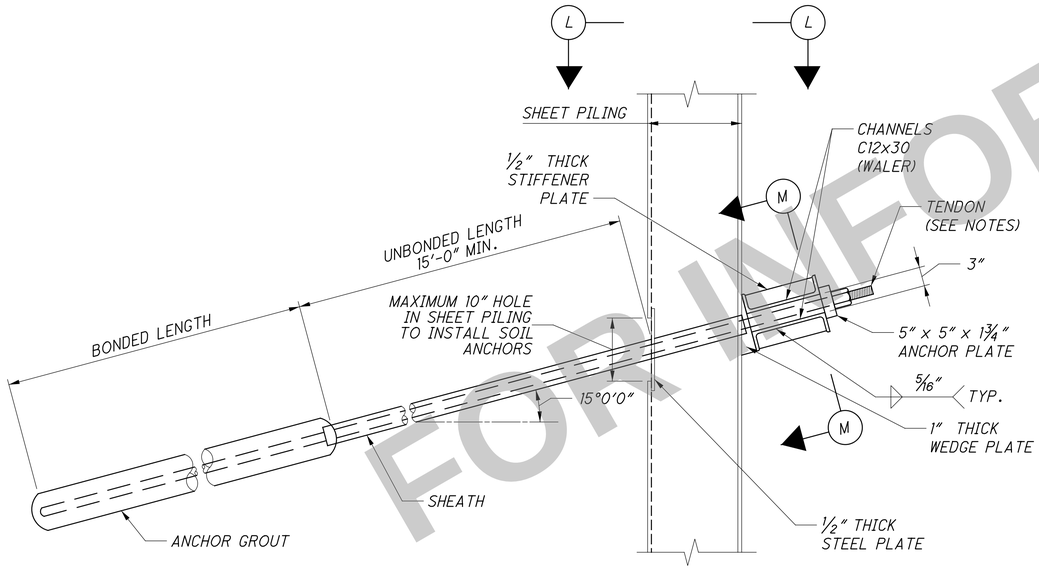
VIEW L-L



SECTION N-N



SECTION M-M



TYPICAL TIE-BACK DETAIL

NOTES

1. TENDON SHALL BE EITHER A 1 3/8" DIAMETER THREADED BAR (ASTM A722 GRADE 150) OR A LOW RELAXATION FOUR-STRAND (ASTM A416 GRADE 270) SEVEN-WIRE UNCOATED STRAND.

2. SEE SHEET 19/64 FOR ADDITIONAL NOTES AND SHORING SEQUENCE.

3. ALL STEEL SHALL BE GRADE 50. ALL BOLTS SHALL BE 5/8" DIA. HIGH STRENGTH BOLTS ASTM A325.

4. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

5. THE HOLES FOR THE ANCHORS WILL NOT BE CUT UNTIL AFTER DRIVING IS COMPLETE.

6. INSTALL AND TEST TIE-BACKS IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 866.

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
RJE	-	3113787	

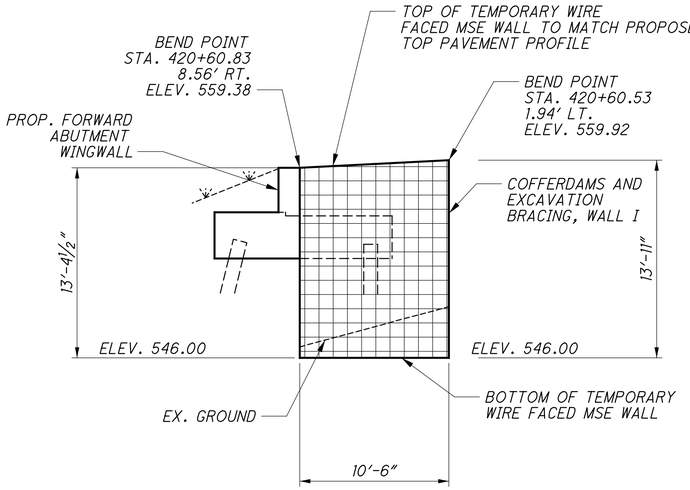
TEMPORARY PILING AND TIE-BACK DETAILS
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

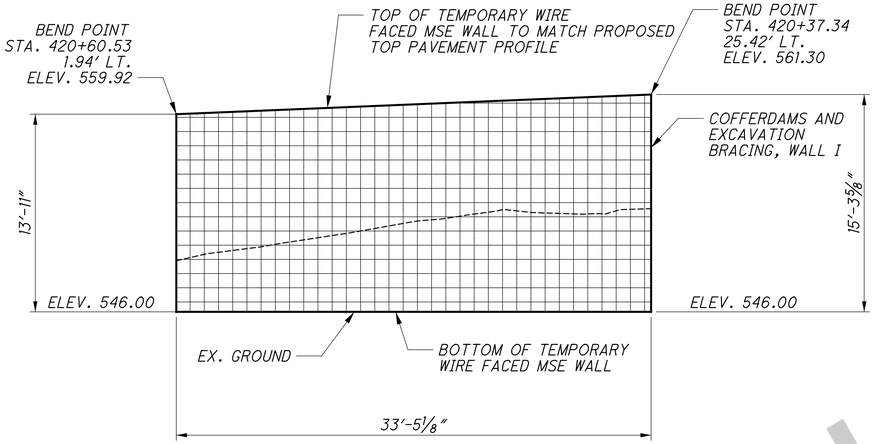
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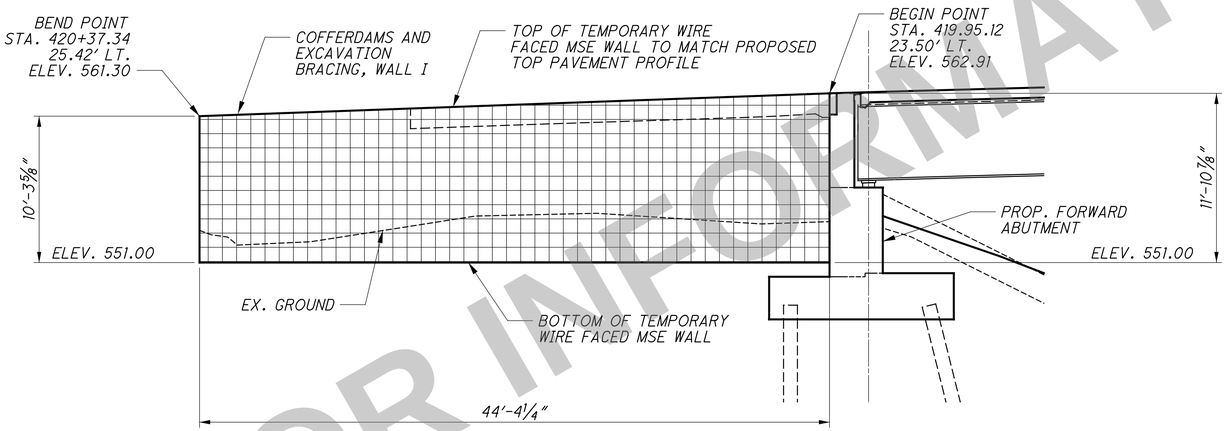
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TEMPORARY WIRE FACED MSE WALL A - EAST SEGMENT



TEMPORARY WIRE FACED MSE WALL A - NORTHEAST SEGMENT



TEMPORARY WIRE FACED MSE WALL A - NORTH SEGMENT

FOR INFORMATION ONLY

LEGEND

- TEMPORARY WIRE FACED MSE WALL

NOTES

1. TOP OF THE TEMPORARY WIRE FACED MSE WALL TO MATCH THE PROPOSED PAVEMENT ELEVATION OF RAMP M OR TOP OF THE APPROACH SLAB OF HAM-562-0004 BRIDGE.
2. SEE SHEET 19/64 AND 23/64 FOR TEMPORARY SHORING PLAN AND ELEVATION DETAILS AT FORWARD ABUTMENT.
3. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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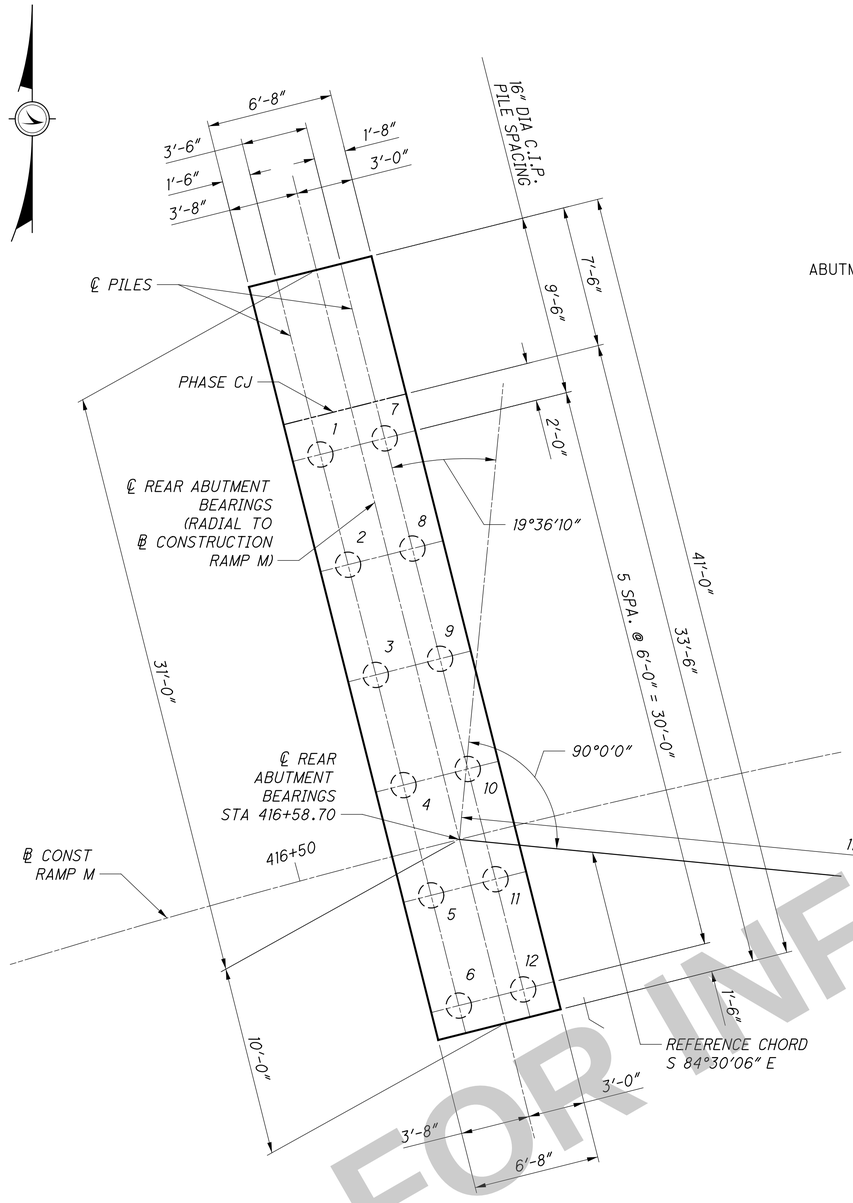
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RAMP M OVER I.R. 75

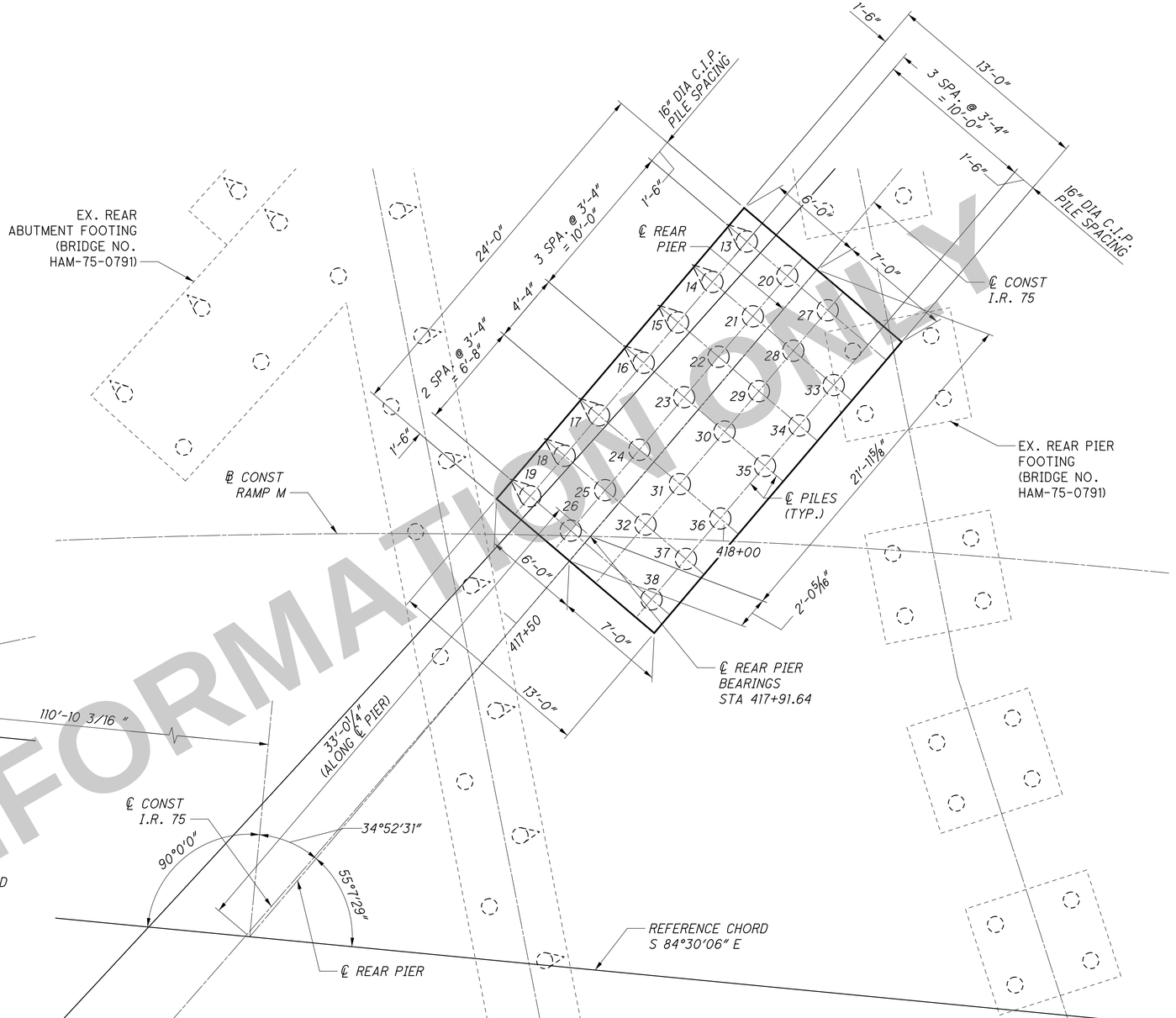
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FOR INFORMATION ONLY

LEGEND

- ◯ - PROPOSED 16" DIA CIP VERTICAL PILE
- ◯ - PROPOSED 16" DIA CIP PILE, BATTERED 4:1
- ◌ - EXISTING 12" CIP VERTICAL PILE
- ◌ - EXISTING 12" CIP BATTERED PILE

FOUNDATION PLAN REAR ABUTMENT AND PIER

TEMPORARY SHORING NOT SHOWN FOR CLARITY

NOTES

1. REMOVE EXISTING FOUNDATIONS AND PORTIONS OF EXISTING FOUNDATIONS THAT INTERFERE WITH PROPOSED FOUNDATIONS PER 202.03.
2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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Phone: 614.775.4500

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RJE	-	3113787	

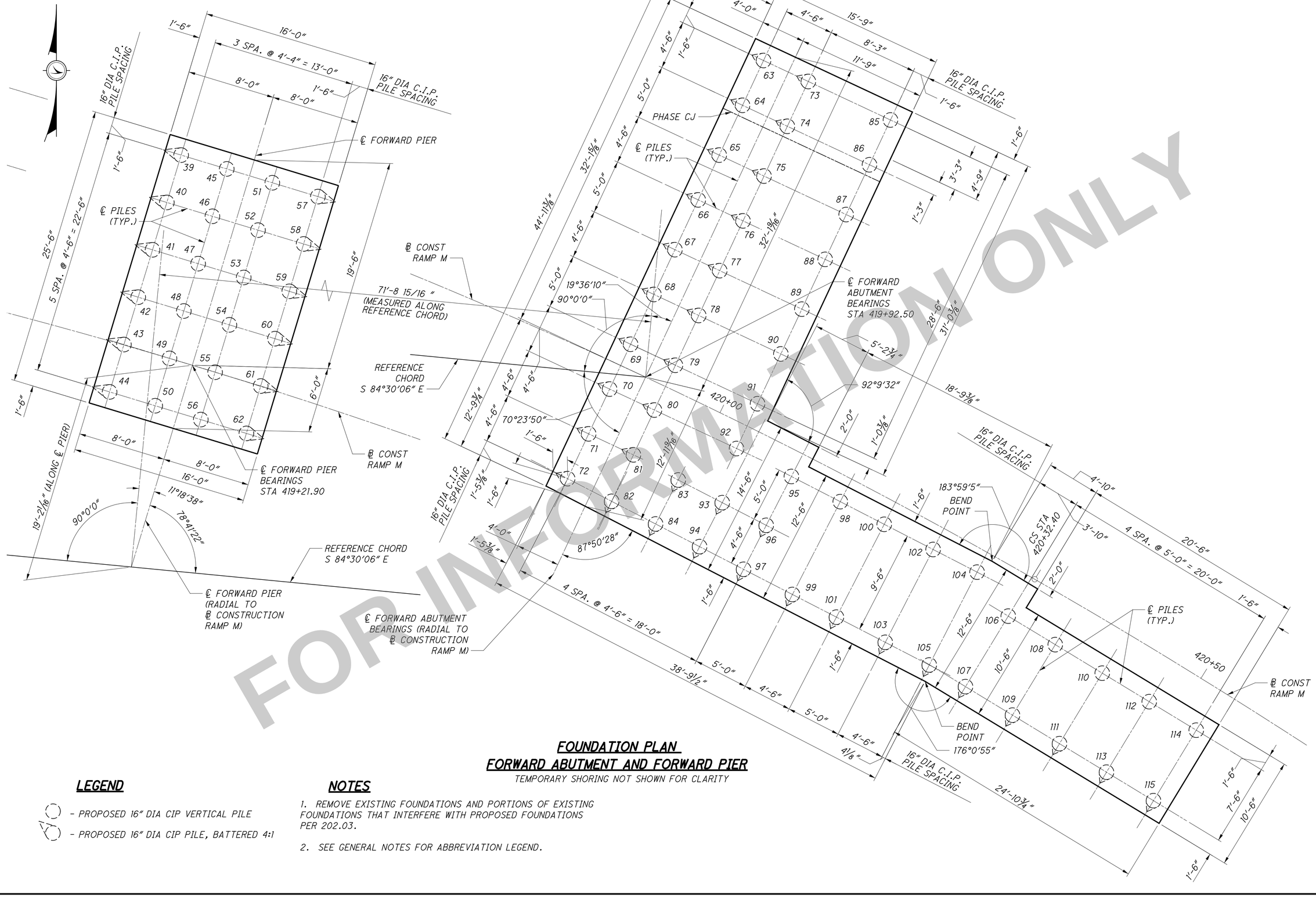
FOUNDATION PLAN REAR ABUTMENT AND REAR PIER
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

29 / 64

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2017

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FOR INFORMATION ONLY

FOUNDATION PLAN
FORWARD ABUTMENT AND FORWARD PIER

TEMPORARY SHORING NOT SHOWN FOR CLARITY

LEGEND

- PROPOSED 16" DIA CIP VERTICAL PILE
- PROPOSED 16" DIA CIP PILE, BATTERED 4:1

NOTES

1. REMOVE EXISTING FOUNDATIONS AND PORTIONS OF EXISTING FOUNDATIONS THAT INTERFERE WITH PROPOSED FOUNDATIONS PER 202.03.

2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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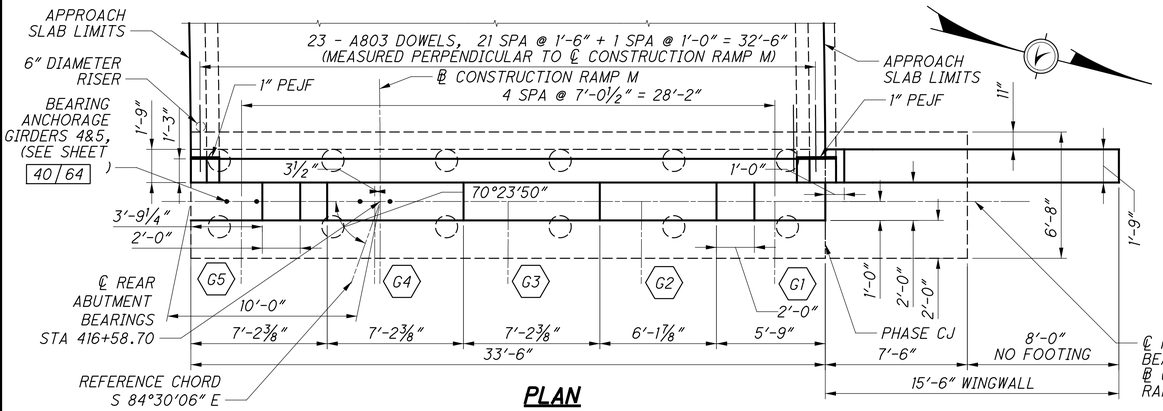
FOUNDATION PLAN FORWARD ABUTMENT AND FORWARD PIER
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

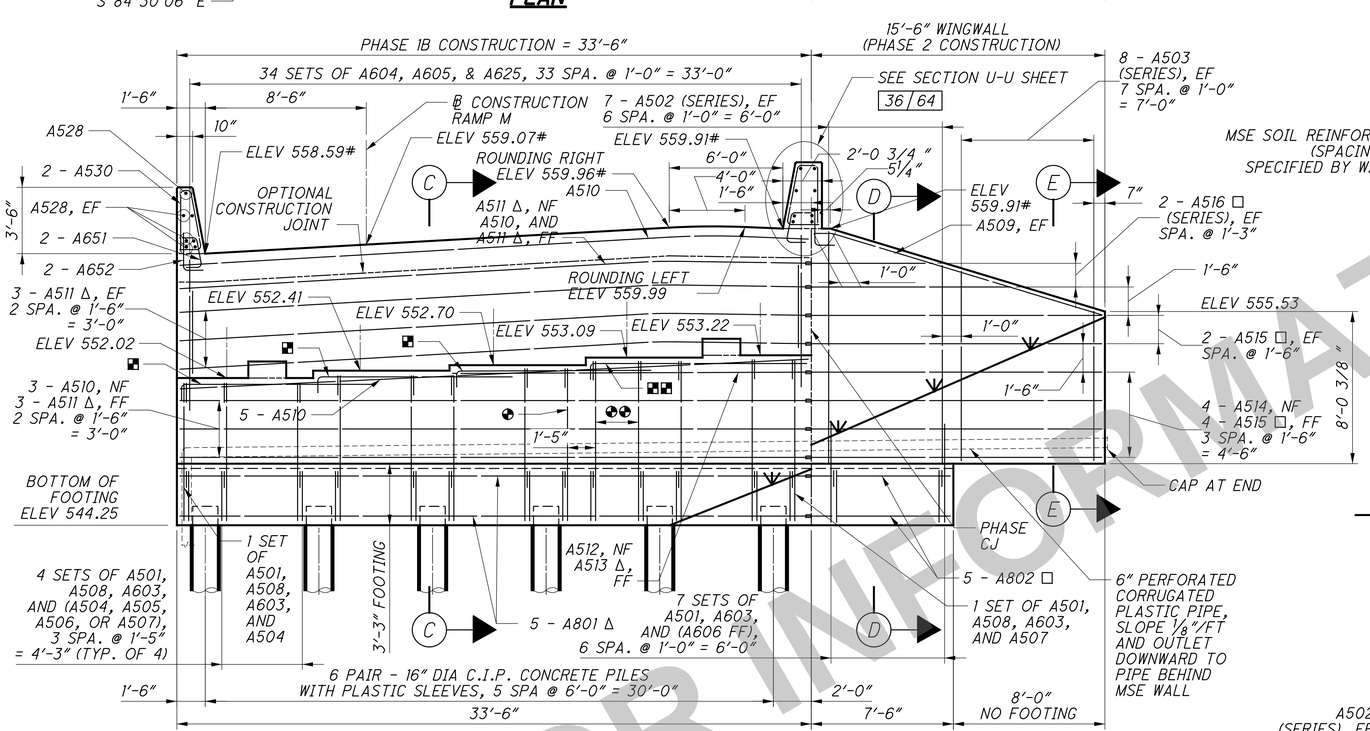
30 / 64

1298
2017

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PLAN



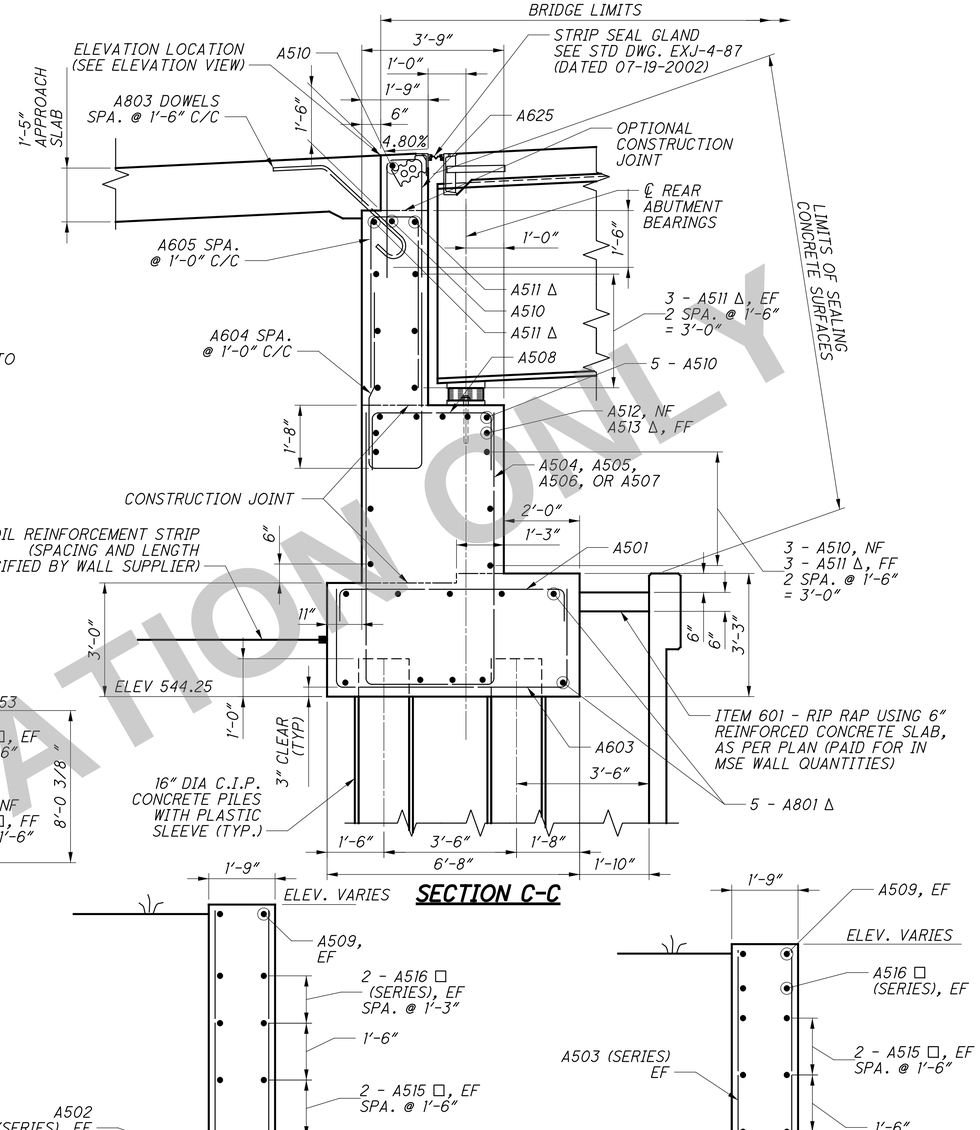
ELEVATION

FRONT VIEW OF SEISMIC PEDESTAL
SEE NOTE 2

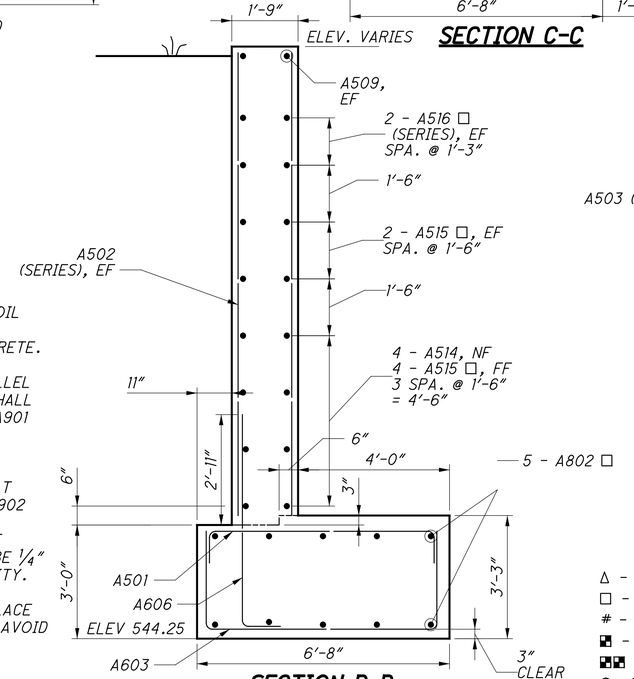
SECTION J-J
SEE NOTE 3

NOTES

1. STRIPS: SEE PROPRIETARY WALL SHOP DRAWINGS FOR MSE SOIL REINFORCEMENT STRIPS DETAILS IN ABUTMENT FOOTING HEEL. STRIPS ARE TO BE PLACED PRIOR TO POURING FOOTING CONCRETE.
2. THE 2'-0" WIDTH OF THE PEDESTAL SHALL BE MEASURED PARALLEL TO THE CENTERLINE OF BEARING. THE A902 AND A602 BARS SHALL BE PLACED PARALLEL TO THE CENTERLINE OF BEARING. THE A901 AND A601 BARS SHALL BE PLACED PARALLEL TO THE BEAMS. ABUTMENT REINFORCING NOT SHOWN FOR CLARITY.
3. THE LOCATION OF THE MAIN REINFORCEMENT IN THE BEAM SEAT MAY BE ADJUSTED HORIZONTALLY ±1" TO ACCOMMODATE THE A902 BARS.
   ## - THE SURFACE OF THE BEAM SEAT IN THIS AREA SHALL BE FINISHED WITH A SERRATED TROWEL. THE SERRATIONS SHALL BE ¼" DEEP MINIMUM. ABUTMENT REINFORCING NOT SHOWN FOR CLARITY.
4. BRIDGE SEAT REINFORCING, SETTING ANCHORS: ACCURATELY PLACE REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES. PRESETTING OF BEARING ANCHORS. SEE SHEET 40/64 FOR BEARING DETAILS.



SECTION C-C



SECTION D-D

SECTION E-E

LEGEND

Δ - INCLUDES MECHANICAL CONNECTOR ON ONE END
□ - PLUS EXTENSION FOR MECHANICAL CONNECTOR
- MEASURED ALONG BACK FACE OF BACKWALL
▪ - 5 - A531
▪▪ - 5 - A532
◒ - 1 SET OF A501, A508, A603, AND A507
◒◒ - 3 SET OF A501, A508, A603, AND A508

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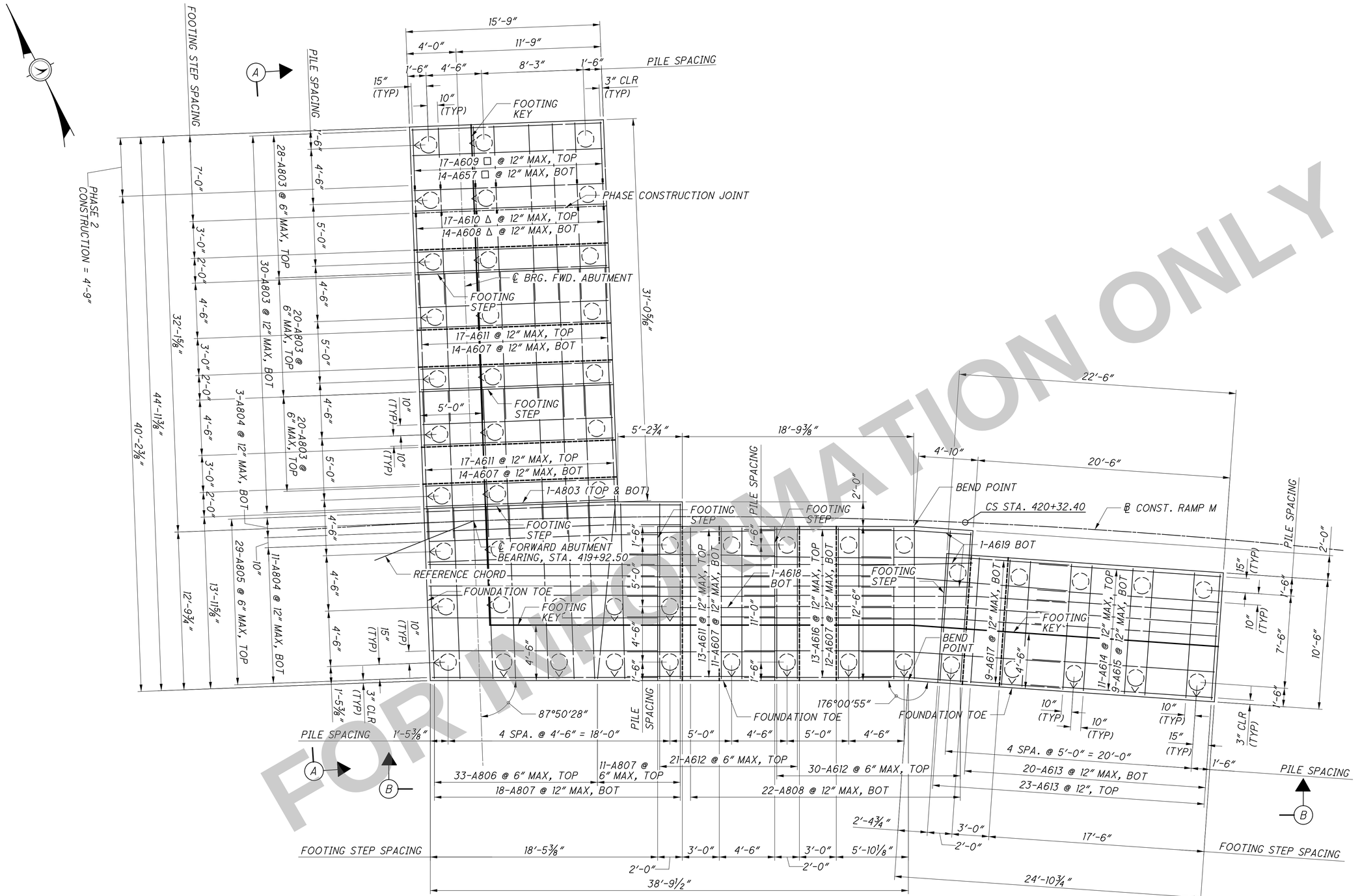
REAR ABUTMENT DETAILS
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RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

31/64

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LEGEND

Δ - INCLUDES MECHANICAL CONNECTOR ON ONE END
□ - INCLUDES EXTENSION FOR MECHANICAL CONNECTOR

FOOTING PLAN

NOTES:

1. FOR VIEWS A-A AND B-B, SEE SHEET 33/64
2. FOR ADDITIONAL DETAILS ON BAR SPACING, SEE VIEWS A-A AND B-B, SHEET 33/64
3. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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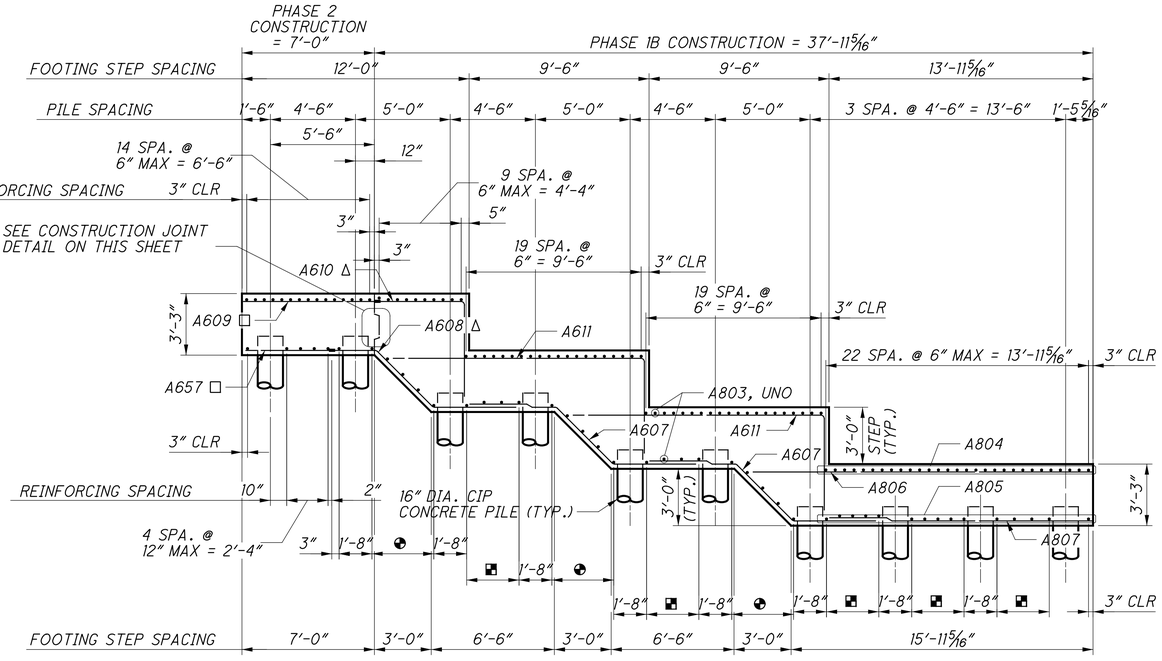
FORWARD ABUTMENT FOOTING PLAN
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

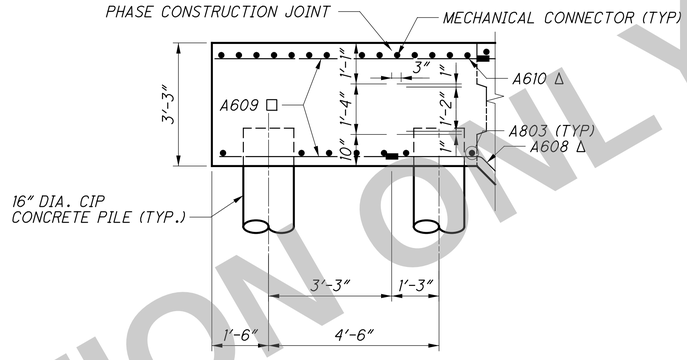
32/64

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2017

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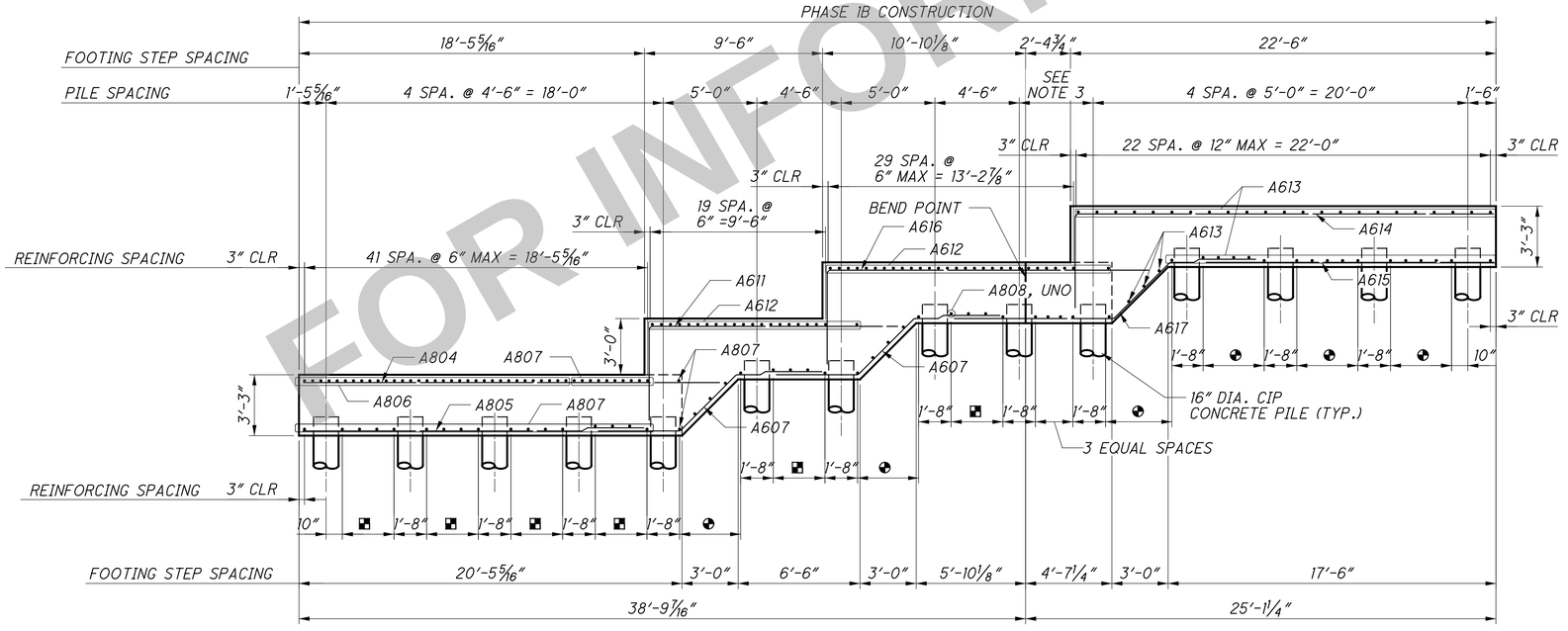


VIEW A-A



FOOTING PHASE CONSTRUCTION JOINT DETAIL

PHASE CONSTRUCTION JOINT KEY SHALL EXTEND FULL LENGTH OF FOOTING



VIEW B-B

LEGEND

- ■ = 4 SPA. @ 12" MAX = 2'-10"
- ◕ = 5 SPA. @ 12" MAX = 3'-4"
- Δ = INCLUDES MECHANICAL CONNECTOR ON ONE END
- □ = INCLUDES EXTENSION FOR MECHANICAL CONNECTOR
- UNO = UNLESS NOTED OTHERWISE

NOTES:

1. FOR FOOTING PLAN, SEE SHEET 32/64
2. ALL DINENSIONS SHOWN WITH RESPECT TO FOUNDATION TOE.
3. PILE TO PILE DIMENSION ALONG TWO SEPERATE BEARINGS, THUS NOT SHOWN. FOR ADDITIONAL DETAILS ON PILE SPACING AND PLACEMENT, SEE THE FOUDATION PLAN, SHEET 30/64
4. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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RJE	-	3113787	

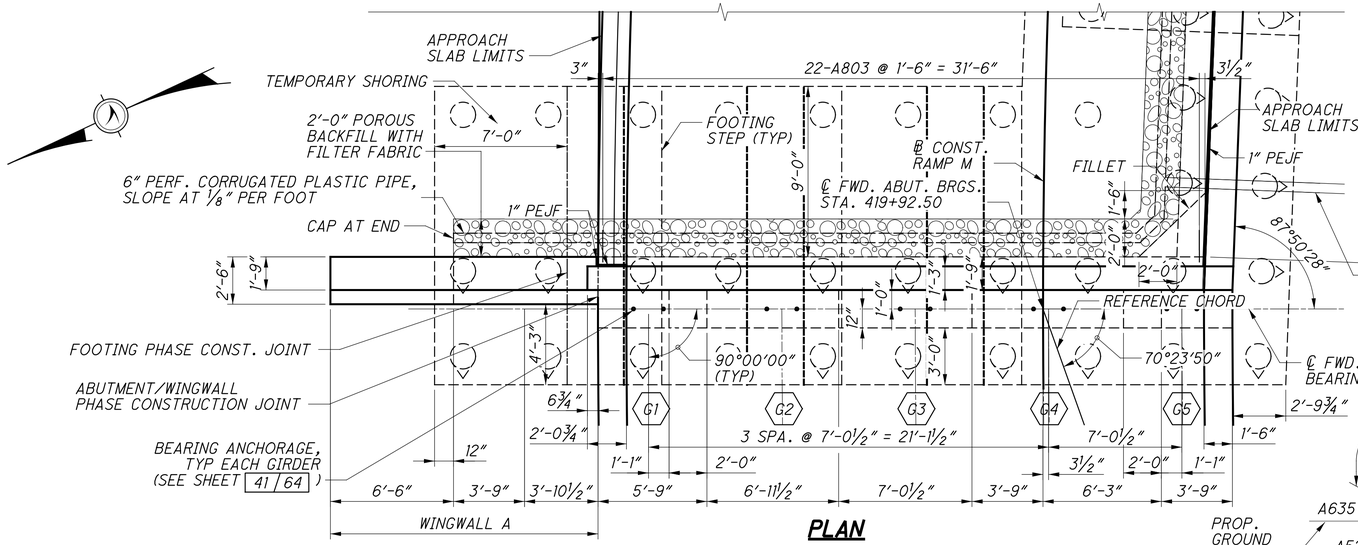
FORWARD ABUTMENT FOOTING ELEVATION
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

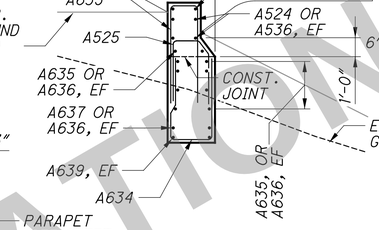
33/64

1301
2017

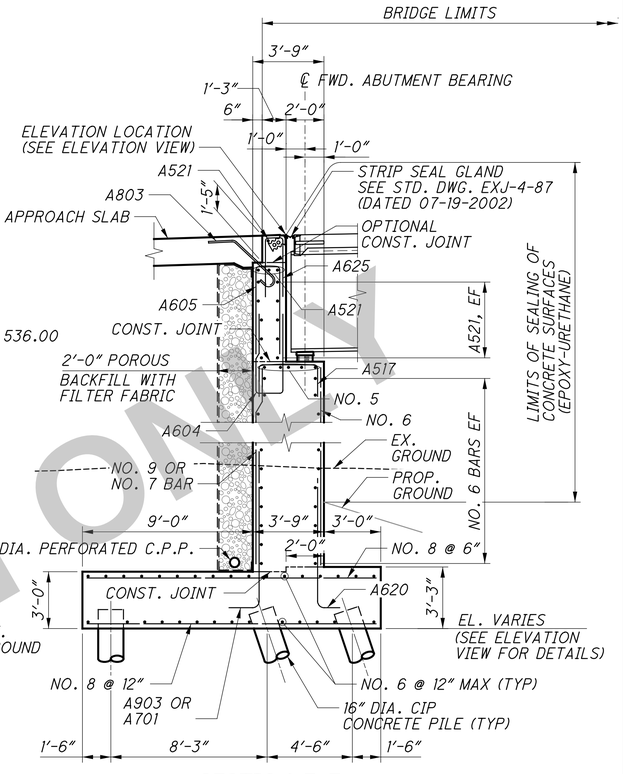
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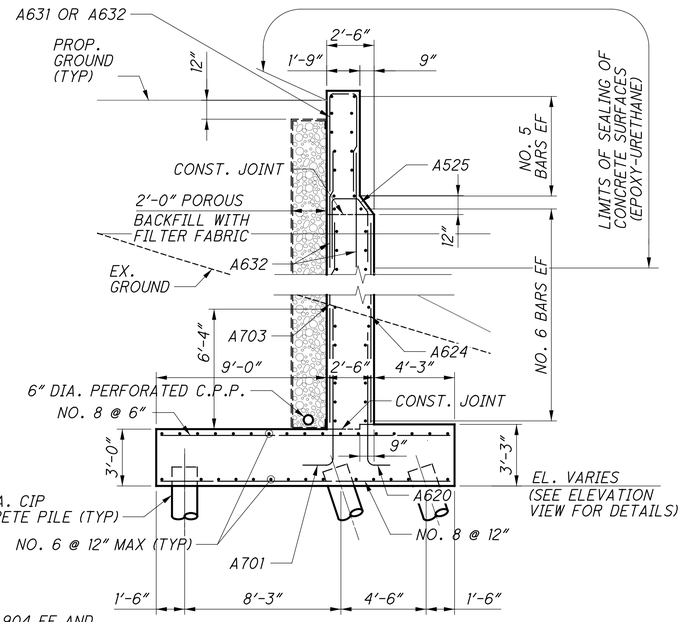
PLAN



SECTION C-C



SECTION E-E



SECTION D-D

LEGEND

* = MEASURED ALONG BACK FACE OF BACKWALL
◔ = 5 SPA. @ 6" MAX, FF AND 3 SPA. @ 12" MAX, NF = 2'-2 3/8"
◪ = 10 SPA. @ 6", FF AND 5 SPA. @ 12", NF = 5'-0"

ELEVATION

(FOOTING REINFORCING NOT SHOWN FOR CLARITY, SEE FOOTING PLAN/ELEVATION)

NOTES

1. FOR SECTION F-F, SEE SHEET 36 / 64
2. FOR WINGWALL B DETAILS, SEE SHEET 35 / 64
3. FOR SEISMIC PEDESTAL DETAILS, SEE SHEET 36 / 64
4. FOR FOOTING REINFORCING DETAILS, SEE SHEET 32 / 64
5. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
6. BRIDGE SEAT REINFORCING, SETTING ANCHORS: ACCURATELY PLACE REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES. PRESETTING OF BEARING ANCHORS. SEE SHEET 41 / 64 FOR BEARING DETAILS.

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DESIGN AGENCY: EMH&T
DESIGNED: RMW | DRAWN: GB | REVIEWED: CAS | DATE: 12-15-21
CHECKED: RJE | REVISED: - | STRUCTURE FILE NUMBER: 3113787

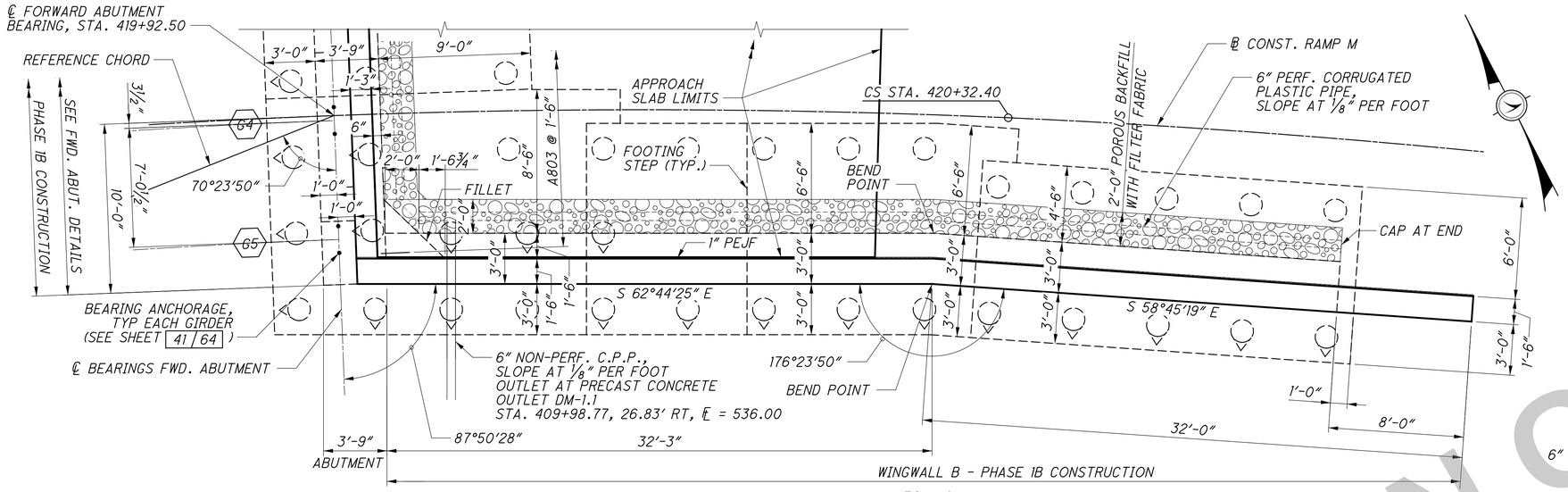
FORWARD ABUTMENT DETAILS
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

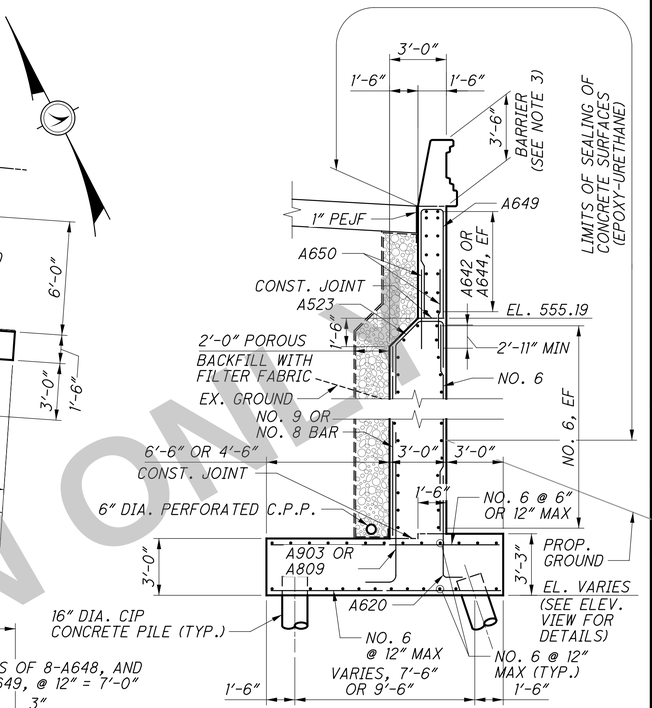
34 / 64

1302 2017

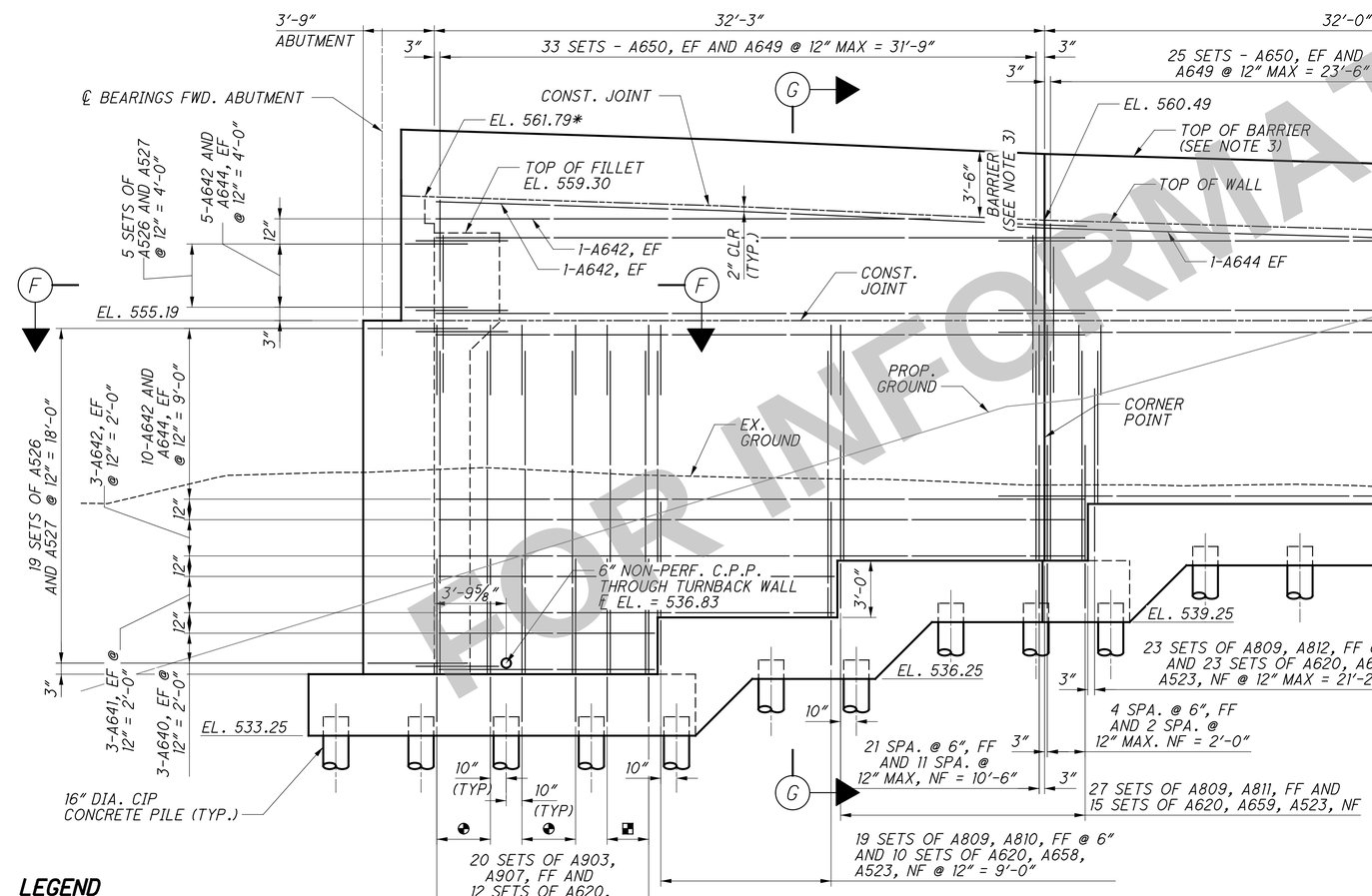
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PLAN

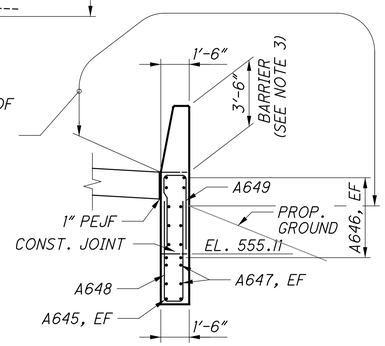


SECTION G-G



WINGWALL B ELEVATION

(FOOTING REINFORCING NOT SHOWN FOR CLARITY, SEE FOOTING PLAN/ELEVATION)



SECTION H-H

LEGEND

* = MEASURED ALONG BACK FACE OF BACKWALL
◔ = 6 SPA. @ 6" MAX, FF AND 3 SPA. @ 12" MAX, NF = 2'-10"
◪ = 5 SPA. @ 6", FF AND 3 SPA. @ 12", NF = 2'-4"

NOTES

1. FOR ADDITIONAL ABUTMENT DETAILS, SEE SHEET 34 / 64
2. FOR FOOTING REINFORCING DETAILS, SEE SHEET 32 / 64
3. FOR PARAPET/BARRIER DETAILS, SEE SHEET 36 / 64
4. FOR SECTION F-F, SEE SHEET 36 / 64
5. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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DESIGN AGENCY: EMH&T
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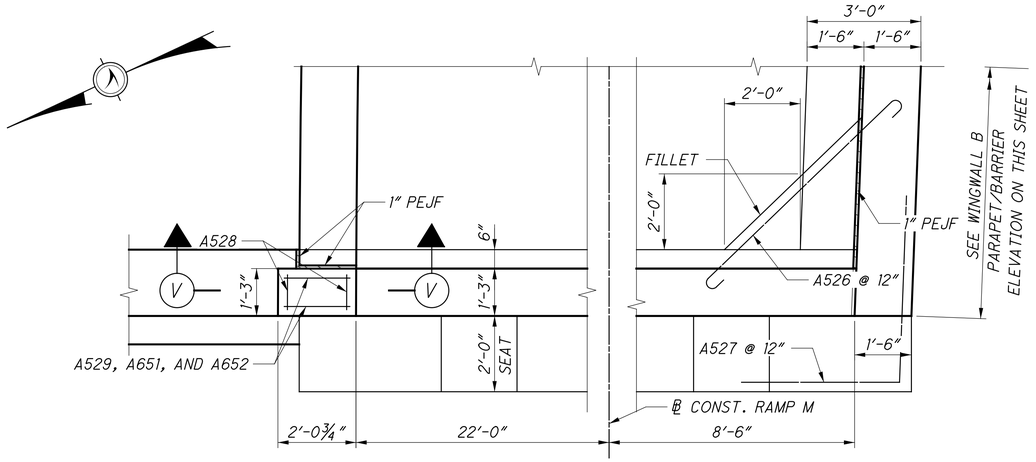
FORWARD ABUTMENT DETAILS (CONT.) - WINGWALL B
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

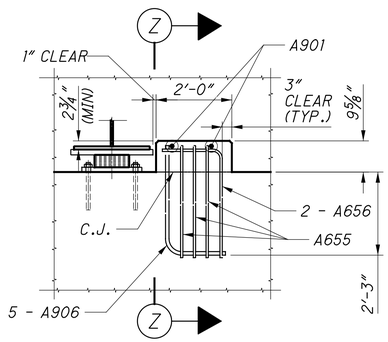
35 / 64

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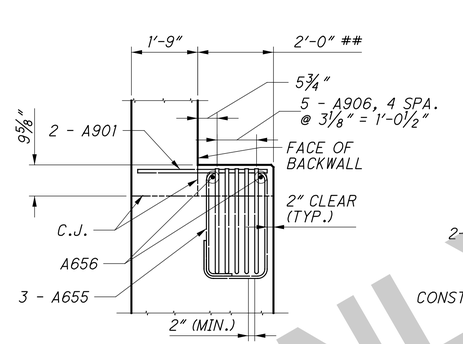


SECTION F-F



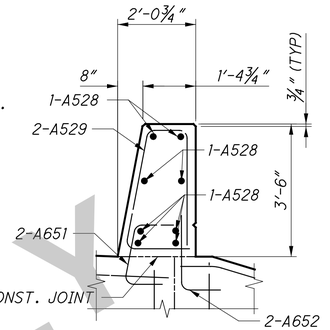
FRONT VIEW OF SEISMIC PEDESTAL

SEE NOTE 1



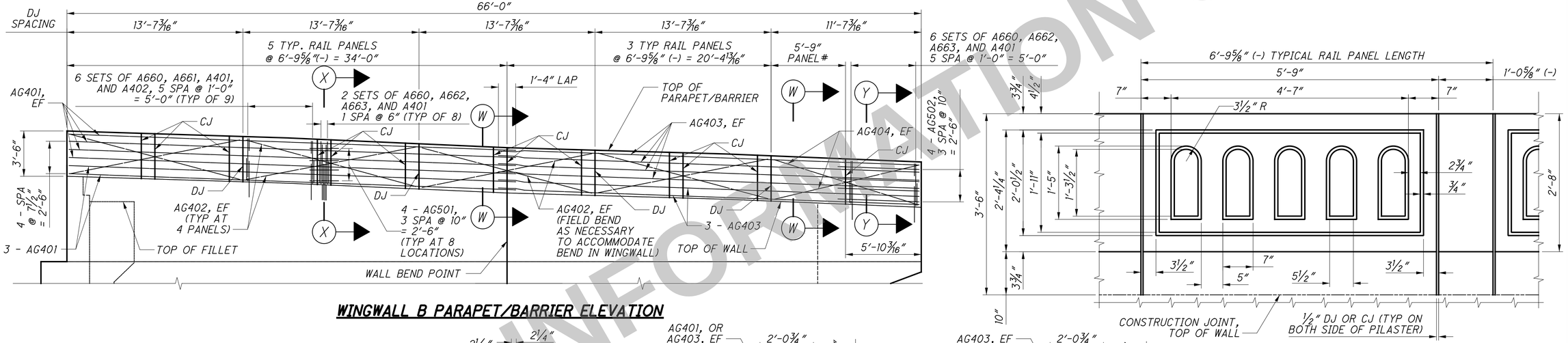
SECTION Z-Z

SEE NOTE 2



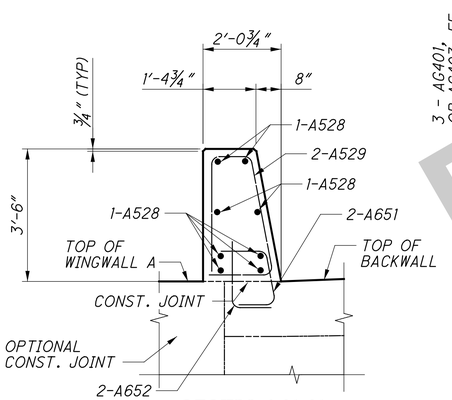
SECTION U-U

AT REAR ABUTMENT BACKWALL

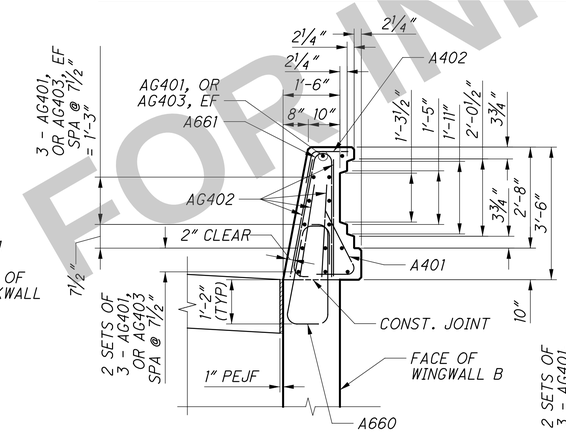


WINGWALL B PARAPET/BARRIER ELEVATION

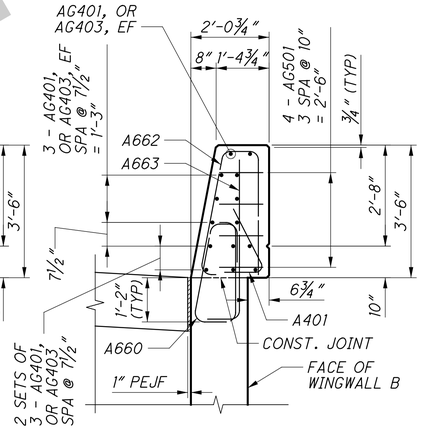
TYP. RAIL PANEL (TYP OF 8)



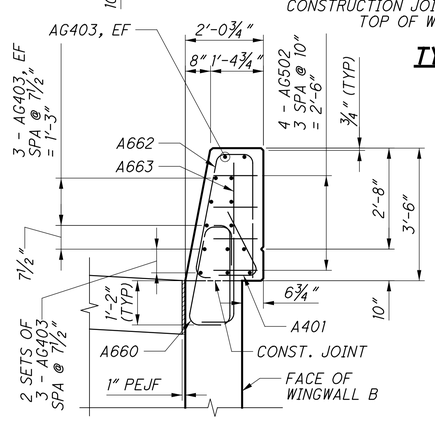
SECTION V-V



SECTION W-W



SECTION X-X



SECTION Y-Y

LEGEND

- SEE TYP. RAIL PANEL ELEVATION FOR AESTHETIC DETAILS
DJ - DEFLECTION JOINT, DETAILS SEE SHEET 60/64
CJ - CONTRACTION JOINT, DETAILS SEE SHEET 60/64

NOTES

1. THE 2'-0" WIDTH OF THE PEDESTAL SHALL BE MEASURED PARALLEL TO THE CENTERLINE OF BEARING. THE A906 AND A656 BARS SHALL BE PLACED PARALLEL TO THE CENTERLINE OF BEARING. THE A901 AND A655 BARS SHALL BE PLACED PARALLEL TO THE BEAMS. ABUTMENT REINFORCING NOT SHOWN FOR CLARITY.

2. THE LOCATION OF THE MAIN REINFORCEMENT IN THE BEAM SEAT MAY BE ADJUSTED HORIZONTALLY ±1" TO ACCOMMODATE THE A902 BARS.

   ## - THE SURFACE OF THE BEAM SEAT IN THIS AREA SHALL BE FINISHED WITH A SERRATED TROWEL. THE SERRATIONS SHALL BE 1/4" DEEP MINIMUM. ABUTMENT REINFORCING NOT SHOWN FOR CLARITY.

3. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

4. FOR ADDITIONAL PARAPET DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWINGS SBR-1-20, REVISIONS 07/17/20.

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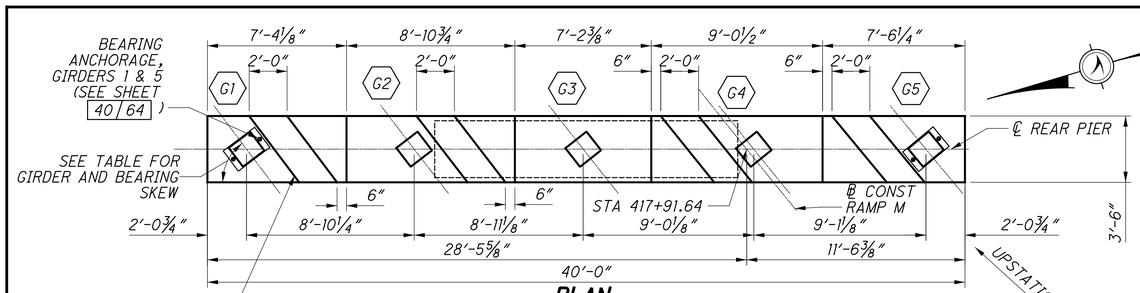
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RMW	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RJE	-	3113787	

FORWARD ABUTMENT AND RAIL DETAILS
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

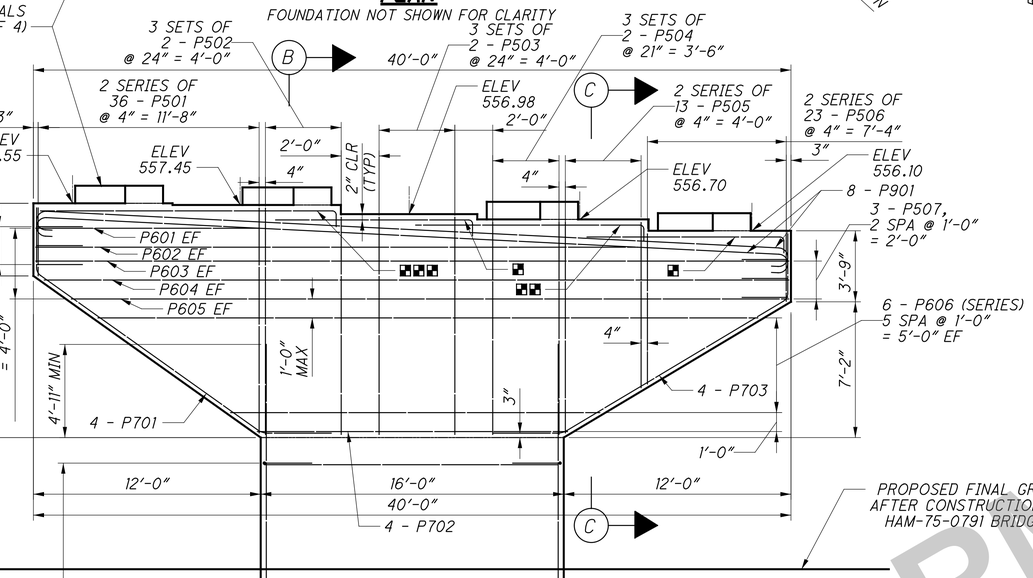
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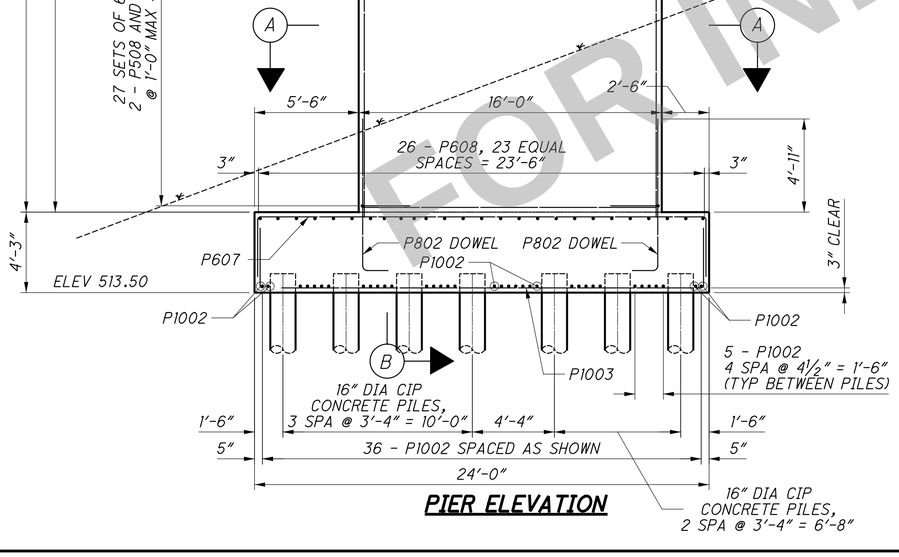
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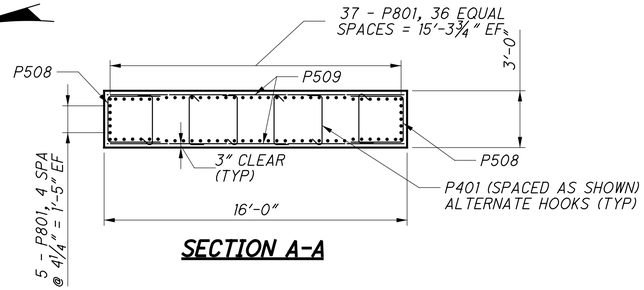


PLAN





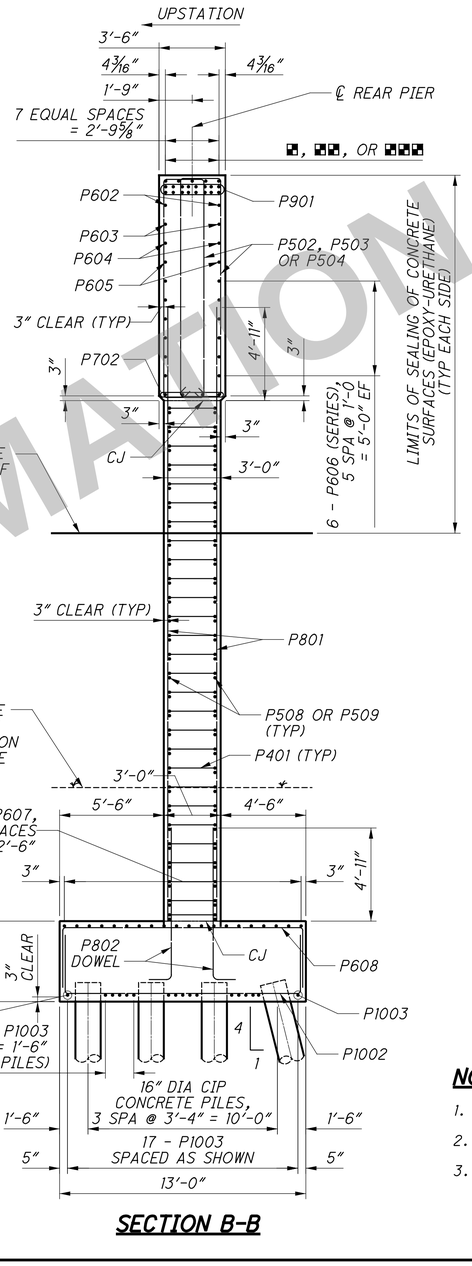
PIER ELEVATION



SECTION A-A

GIRDER/BEARING SKEW	
GIRDER	SKEW
G1	53°0'12"
G2	52°23'42"
G3	51°45'50"
G4	51°6'32"
G5	50°25'42"

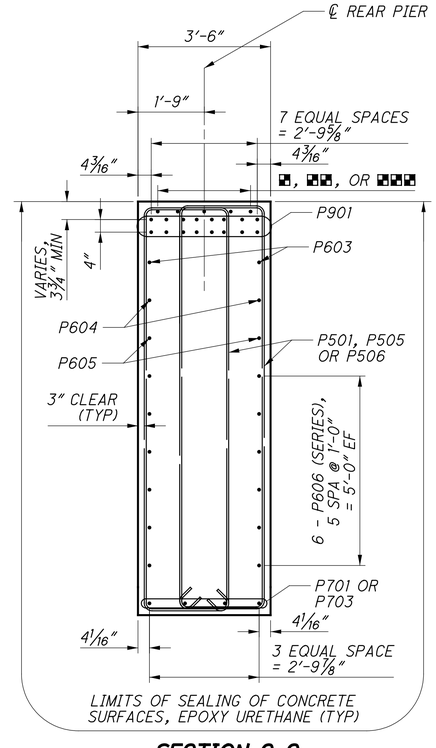
NOTE: SEISMIC PEDESTALS ADJACENT TO A GIVEN GIRDER SHALL BE SKEWED AT THE SAME SKEW AS THE GIRDER.



SECTION B-B

LEGEND

■ - 5 - P517
■■ - 5 - P518
■■■ - 5 - P519



SECTION C-C

NOTES

1. FOR ADDITIONAL SEISMIC PEDESTAL DETAILS SEE SHEET 39/64
2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
3. BRIDGE SEAT REINFORCING, SETTING ANCHORS: ACCURATELY PLACE REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES. PRESETTING OF BEARING ANCHORS. SEE SHEET 40/64 FOR BEARING DETAILS.

FOR INFORMATION ONLY

DESIGN AGENCY: EMH&T
DESIGNED: RMW
DRAWN: GB
CHECKED: RJE
REVIEWED: CAS
DATE: 12-15-21
REVISED: -
STRUCTURE FILE NUMBER: 3113787

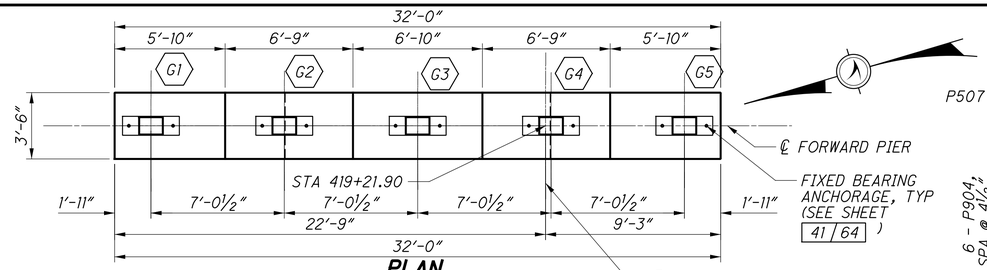
REAR PIER DETAILS
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

37/64

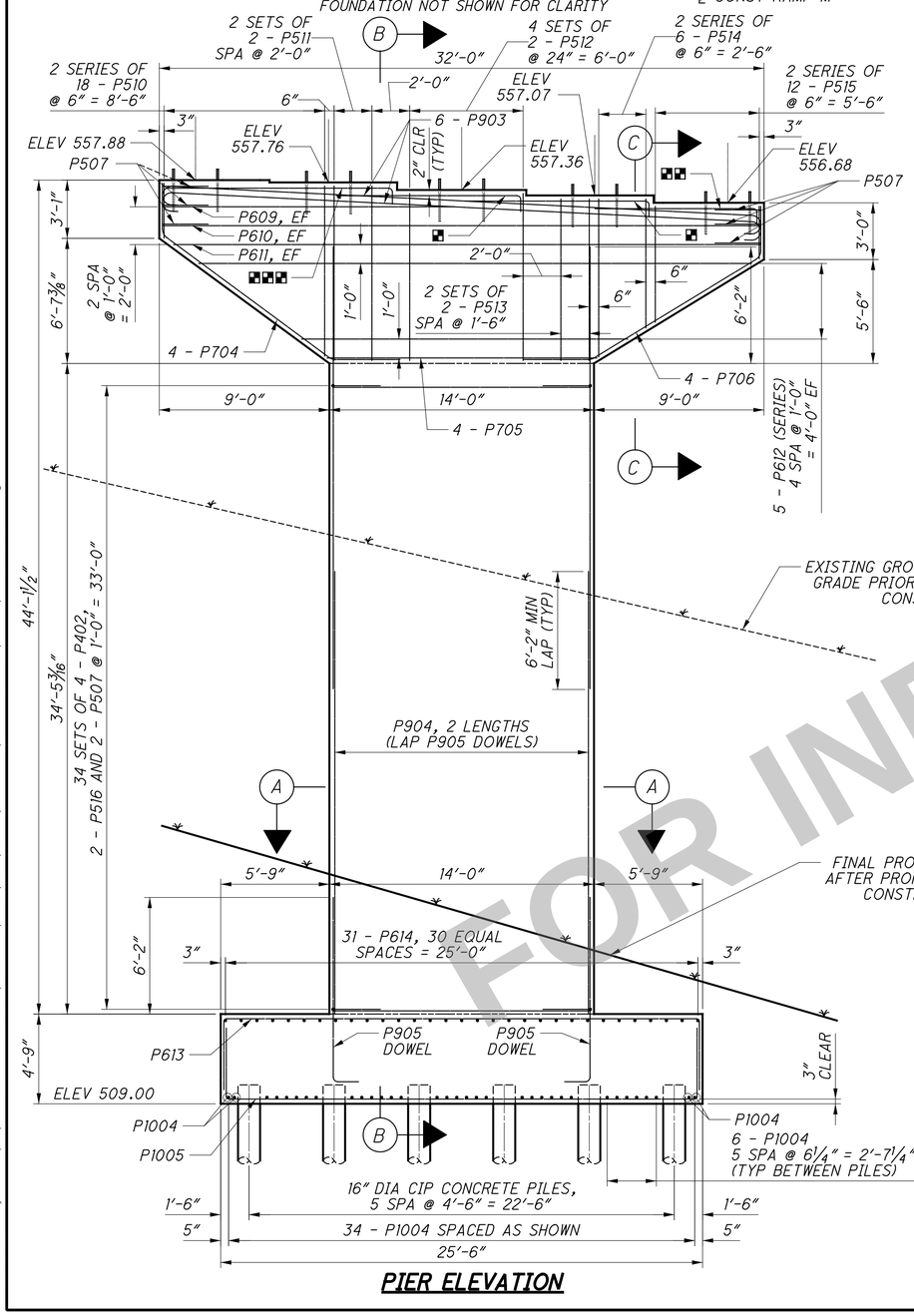
1305
2017

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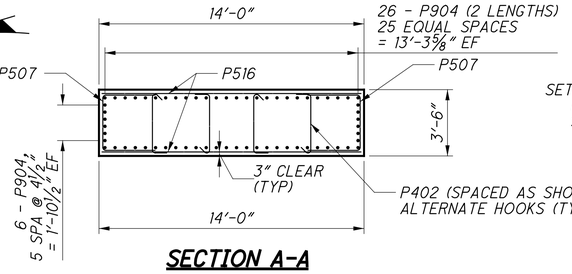


PLAN

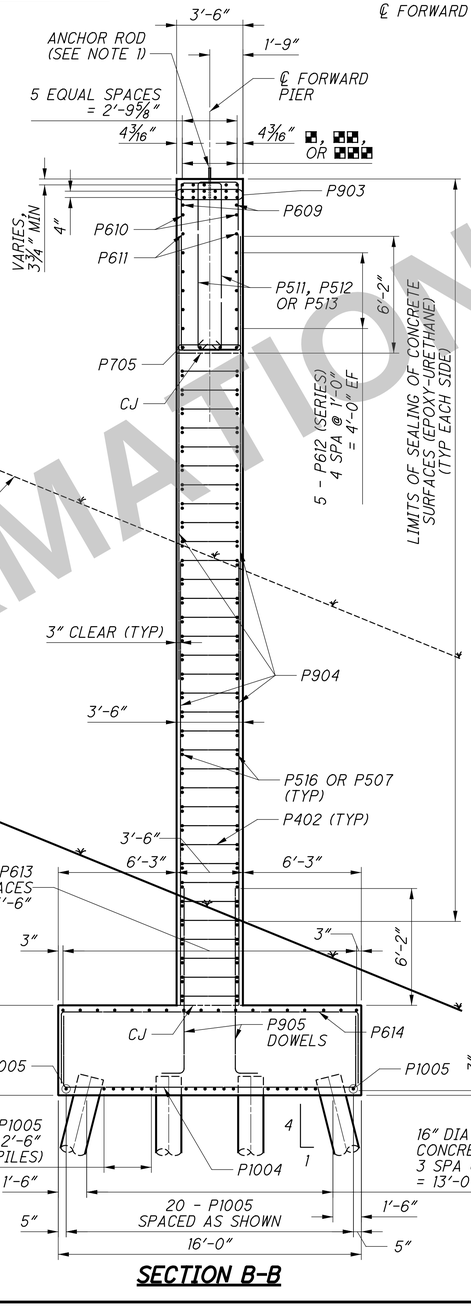
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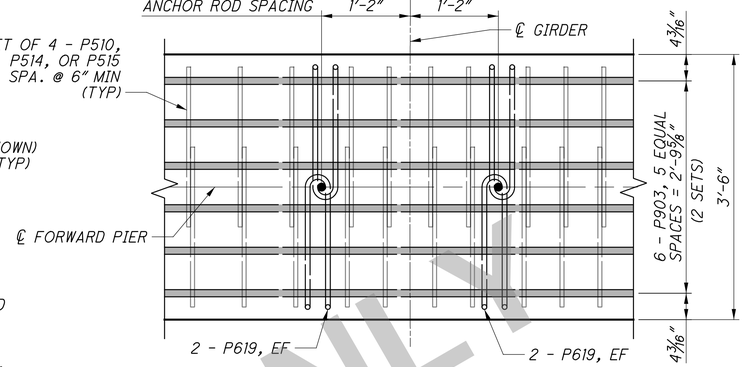
PIER ELEVATION



SECTION A-A

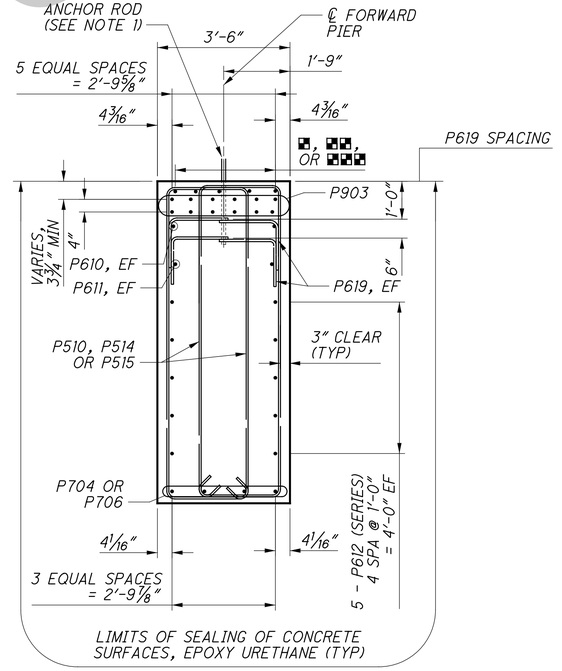


SECTION B-B



BEARING ANCHOR PLAN

(TYPICAL ALL GIRDERS, SEE NOTE 1)



SECTION C-C

LEGEND

- , - 5 - P520
- , - 5 - P521
- , - 5 - P522

NOTES

1. BRIDGE SEAT REINFORCING, SETTING ANCHORS: ACCURATELY PLACE REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT TO AVOID INTERFERENCE WITH THE PRESETTING OF BEARING ANCHORS. SEE SHEET 41 / 64 FOR BEARING DETAILS.

2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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DESIGN AGENCY: EMH&T
DESIGNED: RMW
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DATE: 12-15-21
REVISED: -
STRUCTURE FILE NUMBER: 3113787

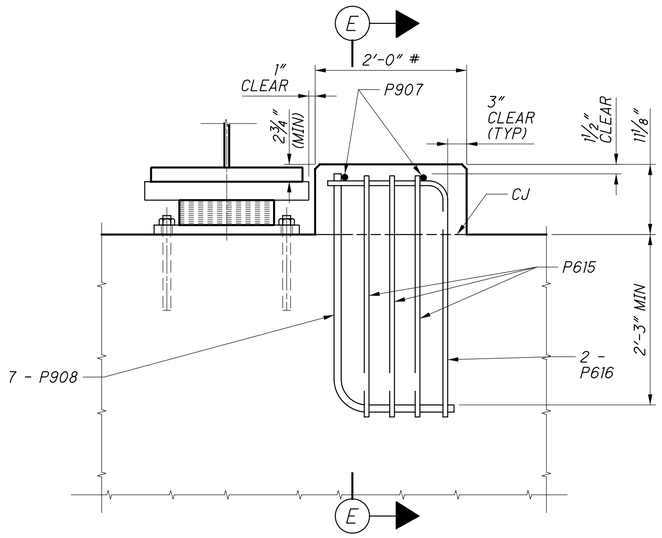
FORWARD PIER DETAILS
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

38 / 64

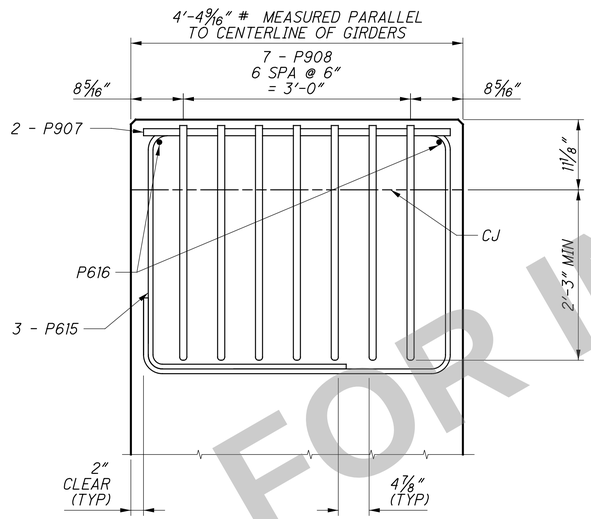
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REAR PIER - FRONT VIEW OF SEISMIC PEDESTAL

THE 2'-0" WIDTH OF THE PEDESTAL SHALL BE MEASURED PARALLEL TO THE CENTERLINE OF BEARING. THE P908 AND P616 BARS SHALL BE PLACED PARALLEL TO THE CENTERLINE OF BEARING. THE P907 AND P615 BARS SHALL BE PLACED PARALLEL TO THE BEAMS.



SECTION E-E

THE LOCATION OF THE REINFORCEMENT IN THE SEISMIC PEDESTAL MAY BE ADJUSTED HORIZONTALLY ±1" TO ACCOMMODATE THE BARS IN THE PIER CAP.
- THE SURFACE OF THE BEAM SEAT IN THIS AREA SHALL BE FINISHED WITH A SERRATED TROWEL. THE SERRATIONS SHALL BE ¼" DEEP MINIMUM.

NOTE

SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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RMW	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RJE	-	3113787	

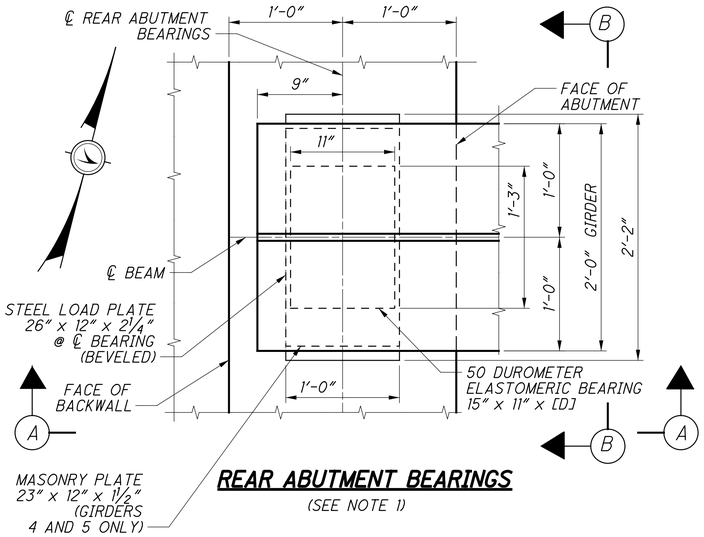
MISCELLANEOUS PIER DETAILS
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

39/64

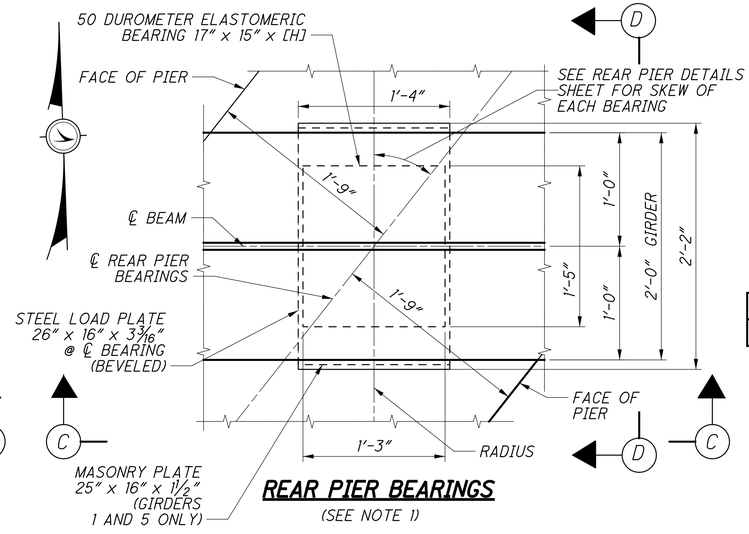
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REAR ABUTMENT BEARINGS

(SEE NOTE 1)



REAR PIER BEARINGS

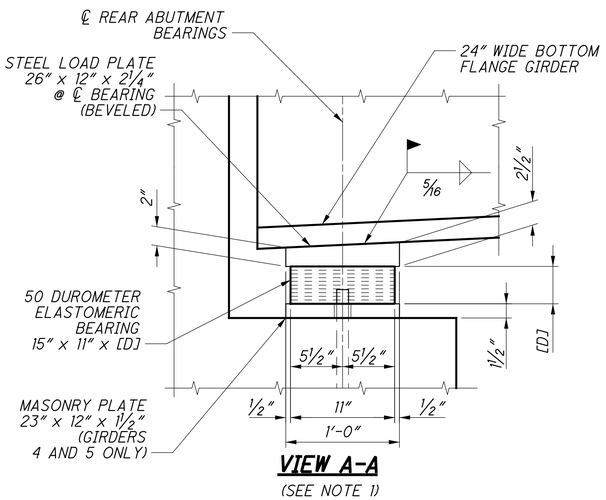
(SEE NOTE 1)

REAR ABUTMENT BEARINGS		EXPANSION BEARING 50 DUROMETER	
INTERIOR ELASTOMERIC LAYERS	10 @ 0.300" = 3.000"	UNFACTORED DEAD LOAD	127.90 KIPS
STEEL PLATE LAMINATES	[A] @ 0.0747" = [B]	UNFACTORED FUTURE WEARING SURFACE	27.25 KIPS
EXTERIOR ELASTOMERIC LAYERS	1 @ [C] = [C]	UNFACTORED LIVE LOAD	74.59 KIPS
TOTAL THICKNESS	T = [D]	MAXIMUM DESIGN LOAD	229.74 KIPS

	[A]	[B]	[C]	[D]
GIRDERS 1-3	10	0.747"	0.1875"	3.94"
GIRDERS 4-5	9	0.672"	-	3.67"

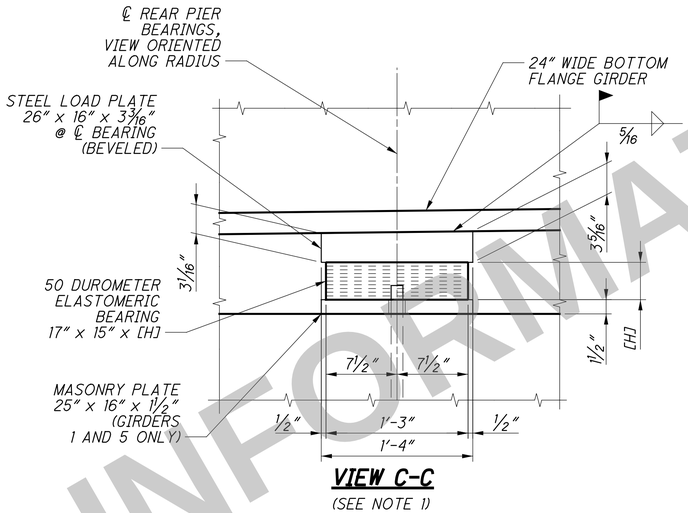
REAR PIER BEARINGS		FIXED BEARING 50 DUROMETER	
INTERIOR ELASTOMERIC LAYERS	10 @ 0.300" = 3.000"	UNFACTORED DEAD LOAD	422.69 KIPS
STEEL PLATE LAMINATES	[E] @ 0.0747" = [F]	UNFACTORED FUTURE WEARING SURFACE	91.1 KIPS
EXTERIOR ELASTOMERIC LAYERS*	1 @ [G] = [G]	UNFACTORED LIVE LOAD	166.2 KIPS
TOTAL THICKNESS*	T = [H]	MAXIMUM DESIGN LOAD	679.99 KIPS

	[E]	[F]	[G]	[H]
GIRDERS 2-3	10	0.747"	0.1875"	3.94"
GIRDERS 1&5	9	0.672"	-	3.67"



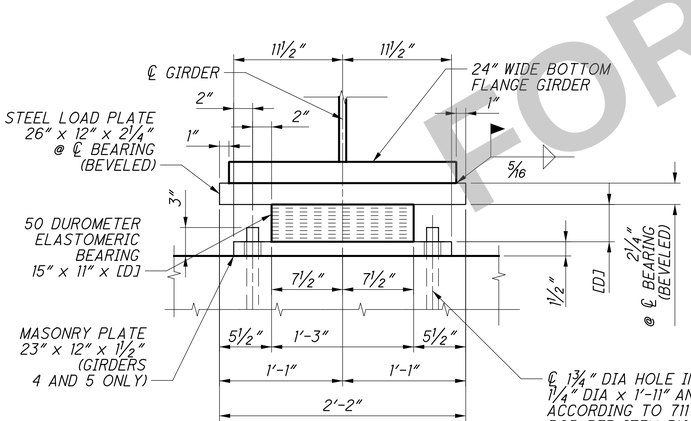
VIEW A-A

(SEE NOTE 1)



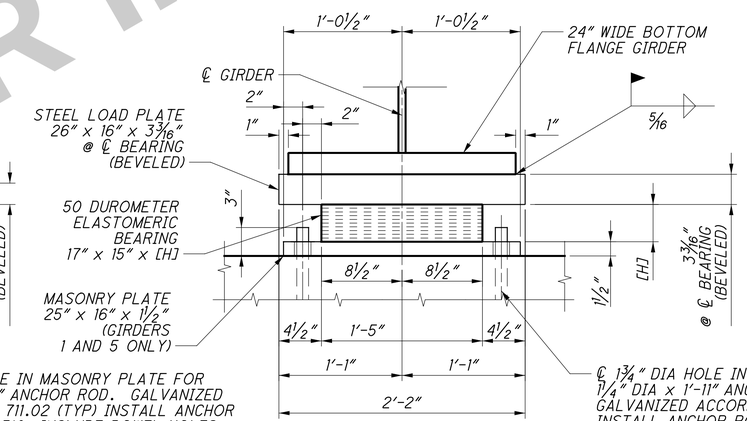
VIEW C-C

(SEE NOTE 1)



VIEW B-B

(SEE NOTE 1)



VIEW D-D

(SEE NOTE 1)

℄ 1¾" DIA HOLE IN MASONRY PLATE FOR 1¼" DIA x 1'-11" ANCHOR ROD. GALVANIZED ACCORDING TO 711.02 (TYP) INSTALL ANCHOR ROD PER ITEM 510, INCLUDE DOWEL HOLES AND ANCHOR RODS WITH ITEM 516 FOR PAYMENT (GIRDERS 4 AND 5 ONLY).

℄ 1¾" DIA HOLE IN MASONRY PLATE FOR 1¼" DIA x 1'-11" ANCHOR ROD. GALVANIZED ACCORDING TO 711.02 (TYP) INSTALL ANCHOR ROD PER ITEM 510, INCLUDE DOWEL HOLES AND ANCHOR RODS WITH ITEM 516 FOR PAYMENT (GIRDERS 1 AND 5 ONLY).

ELASTOMERIC BEARING NOTES

ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED IN ACCORDANCE WITH SECTION 14.7.5 (METHOD B) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. PERFORM THE LONG-TERM COMPRESSION PROOF LOAD TEST IN ACCORDANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6 AND 18.7.4.5.

THE STEEL LOAD PLATE AND MASONRY PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.

WELDING: CONTROL WELDING SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300°F AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.

THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE, AS PER PLAN (SEE ESTIMATED QUANTITIES).

LOAD PLATES: SHOP MARK THE LOAD PLATES WITH THE FOLLOWING INFORMATION: TOP, UPSTATION DIRECTION AND LOCATION (REAR ABUTMENT, REAR PIER, FORWARD PIER, OR FORWARD ABUTMENT). THE STEEL LOAD PLATES ARE ASTM A709 GRADE 50 STRUCTURAL STEEL. LOAD PLATE SHALL BE PAINTED SIMILAR TO GIRDER. PAYMENT INCLUDED IN ITEM 514.

BEARING REPOSITIONING: IF THE STEEL BEAMS ARE ERECTED AT AN AMBIENT TEMPERATURE HIGHER THAN 80°F OR LOWER THAN 40°F AND THE BEARING SHEAR DEFLECTION EXCEEDS 1/6 OF THE BEARING HEIGHT AT 60°F (±) 10°F, RAISE THE BEAMS TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60°F (±) 10°F.

ANCHOR RODS SHALL BE ASTM F1554 GRADE 105 AND GALVANIZED AS PER CMS 711.02. WHERE DOWELS ARE SPECIFIED, HOLES TO BE DRILLED AND GROUTED WITH AN EPOXY NON-SHRINKING GROUT IN 2" x 1'-8" HOLES. GROUT SHALL MEET THE REQUIREMENTS OF 705.20. ANCHOR RODS SHALL EXTEND 1" ABOVE THE MASONRY PLATE UNLESS OTHERWISE SPECIFIED. ANCHOR RODS AND THE SETTING OF ANCHOR BOLTS SHALL BE INCLUDED WITH THE BEARINGS FOR PAYMENT.

CARE SHALL BE TAKEN TO AVOID PIER CAP AND BEAM SEAT REINFORCING WHEN PLACING ANCHOR RODS. A PACHOMETER SHALL BE USED TO LOCATE THE EXISTING STEEL TO CONFIRM CONFLICT IS AVOIDED.

NOTES

1. MASONRY PLATE AND ANCHORAGE SHOWN FOR CLARITY AT SELECT LOCATIONS. ELASTOMERIC PAD SHALL BE PLACED DIRECTLY ON BEAM SEAT WITHOUT MASONRY PLATE AND ANCHORAGE UNLESS NOTED OTHERWISE.

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EMH&T
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, Ohio 43054
Phone: 614.775.4500

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RMW	GB	CAS	12-15-21
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RJE	-	3113787	

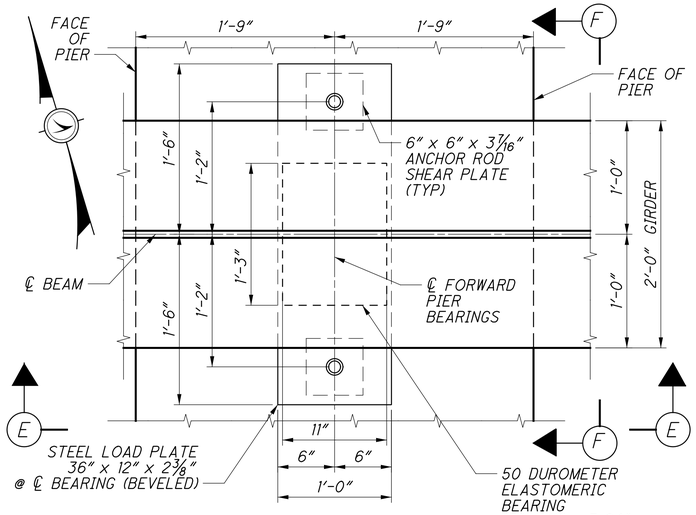
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BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

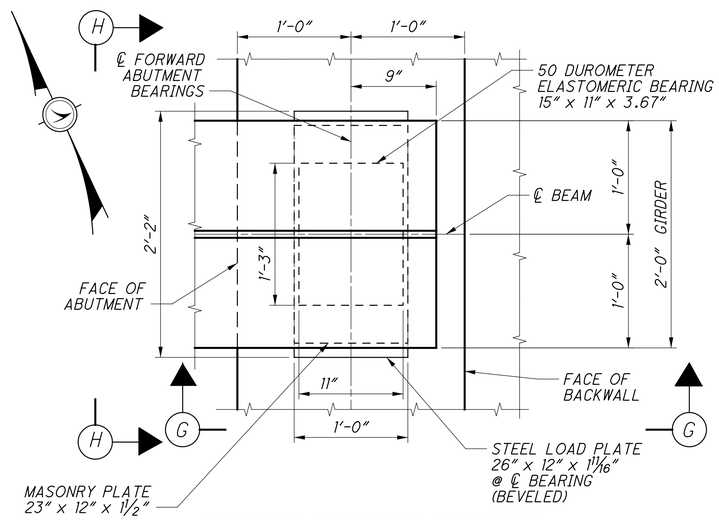
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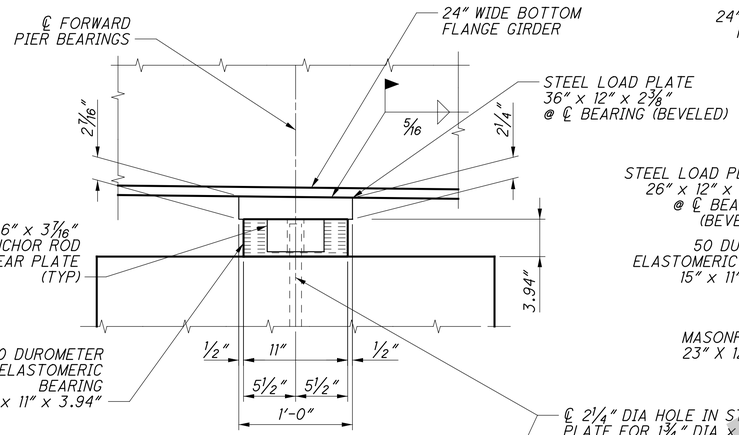
FORWARD PIER BEARINGS



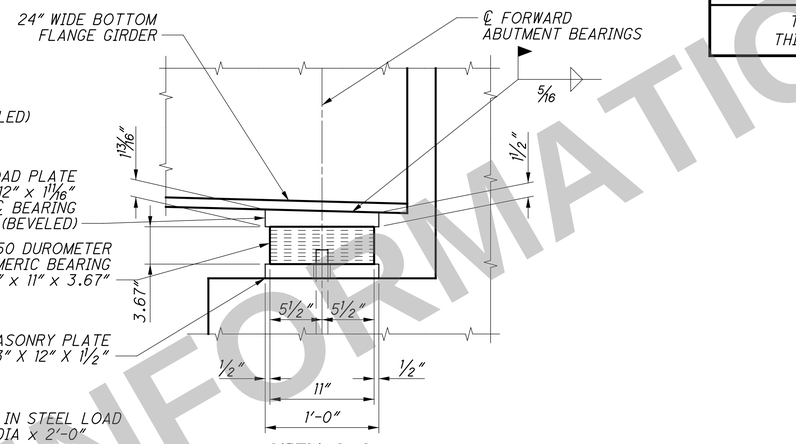
FORWARD ABUTMENT BEARINGS

FORWARD PIER BEARINGS		EXPANSION BEARING 50 DUROMETER	
INTERIOR ELASTOMERIC LAYERS	10 @ 0.300" = 3.000"	UNFACTORED DEAD LOAD	166.0 KIPS
STEEL PLATE LAMINATES	10 @ 0.0747" = 0.747"	UNFACTORED FUTURE WEARING SURFACE	40.8 KIPS
EXTERIOR ELASTOMERIC LAYERS	1 @ 0.1875" = 0.1875"	UNFACTORED LIVE LOAD	101.4 KIPS
TOTAL THICKNESS	T = 3.94"	MAXIMUM DESIGN LOAD	308.2 KIPS

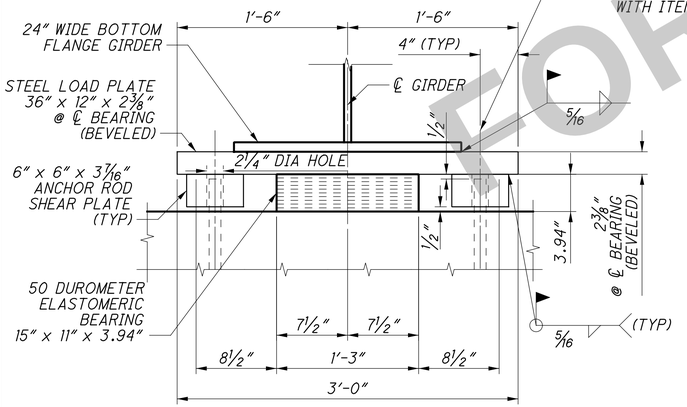
FORWARD ABUTMENT BEARINGS		EXPANSION BEARING 50 DUROMETER	
INTERIOR ELASTOMERIC LAYERS	10 @ 0.300" = 3.000"	UNFACTORED DEAD LOAD	45.8 KIPS
STEEL PLATE LAMINATES	9 @ 0.0747" = 0.672"	UNFACTORED FUTURE WEARING SURFACE	10.7 KIPS
EXTERIOR ELASTOMERIC LAYERS	N/A	UNFACTORED LIVE LOAD	61.6 KIPS
TOTAL THICKNESS	T = 3.67"	MAXIMUM DESIGN LOAD	118.1 KIPS



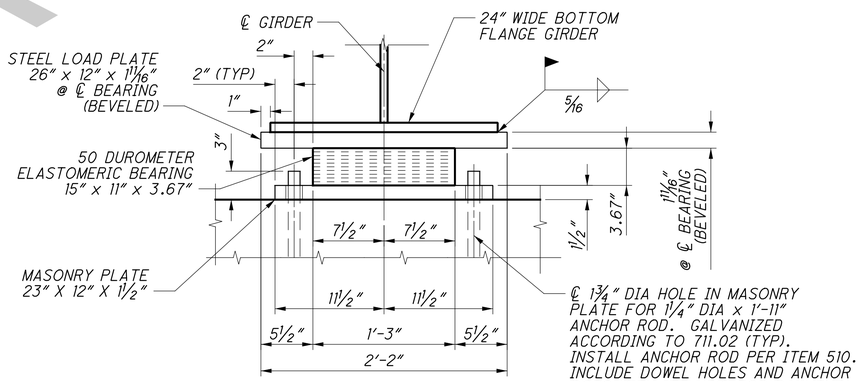
VIEW E-E



VIEW G-G



VIEW F-F



VIEW H-H

NOTES

1. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
2. SEE ADDITIONAL NOTES ON SHEET 40/64

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RJE	-	3113787	

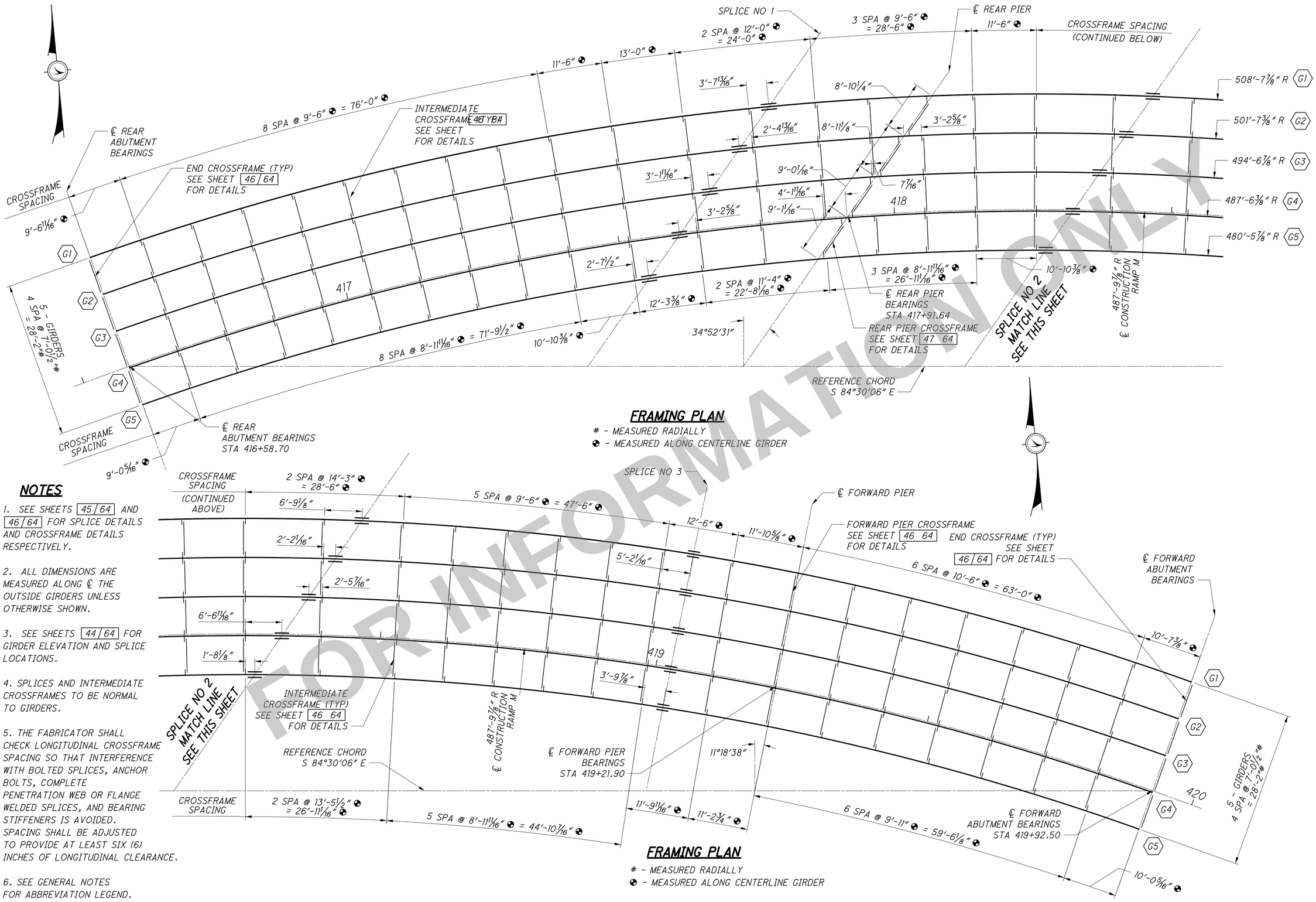
ELASTOMERIC BEARING DETAILS
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

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NOTES

1. SEE SHEETS 45/64 AND 46/64 FOR SPLICE DETAILS AND CROSSFRAME DETAILS RESPECTIVELY.

2. ALL DIMENSIONS ARE MEASURED ALONG ℄ THE OUTSIDE GIRDERS UNLESS OTHERWISE SHOWN.

3. SEE SHEETS 44/64 FOR GIRDER ELEVATION AND SPLICE LOCATIONS.

4. SPLICES AND INTERMEDIATE CROSSFRAMES TO BE NORMAL TO GIRDERS.

5. THE FABRICATOR SHALL CHECK LONGITUDINAL CROSSFRAME SPACING SO THAT INTERFERENCE WITH BOLTED SPLICES, ANCHOR BOLTS, COMPLETE PENETRATION WEB OR FLANGE WELDED SPLICES, AND BEARING STIFFENERS IS AVOIDED. SPACING SHALL BE ADJUSTED TO PROVIDE AT LEAST SIX (6) INCHES OF LONGITUDINAL CLEARANCE.

6. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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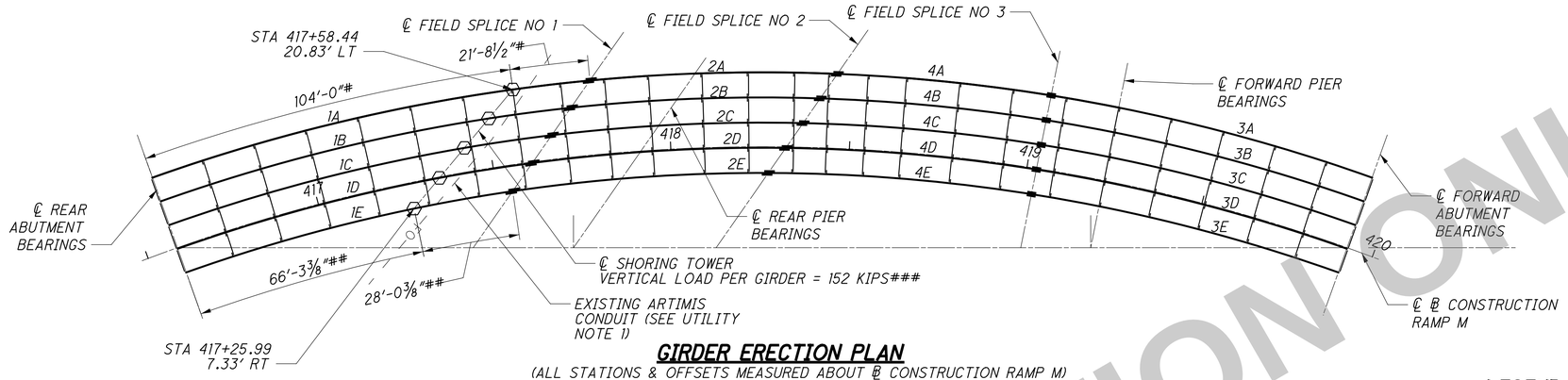
FRAMING PLAN
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

42/64

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2017

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GIRDER ERECTION PLAN

(ALL STATIONS & OFFSETS MEASURED ABOUT ℄ CONSTRUCTION RAMP M)

UTILITY NOTE:

1. THE CONTRACTOR SHALL EXPOSE AND VERIFY THE LOCATION OF THE NEARBY EXISTING ARTIMIS CONDUIT PRIOR TO CONSTRUCTION OF THE PROPOSED SHORING TOWER. SHOULD INADEQUATE CLEARANCE EXIST BETWEEN THIS CONDUIT AND THE SHORING TOWER, THE SHORING TOWER MAY BE RELOCATED BUT ANALYSIS SHALL BE PERFORMED.

LEGEND

⬡ - SHORING POINT LOCATION
\# - MEASURED ALONG ℄ GIRDER 1A
- MEASURED ALONG ℄ GIRDER 1E
- REACTIONS SHOWN INCLUDE STEEL WEIGHT PLUS 25% FACTOR FOR ERECTION LOADS.

ERECTION NOTES:

1. THE CONTRACTOR'S ATTENTION IS DIRECTED TO REQUIREMENTS FOR STABILITY OF STEEL GIRDERS DURING ERECTION (CMS 513.26) AND THE SUBMITTAL REQUIREMENTS OF CMS 501.05.B.4. THE GIRDERS ON THIS BRIDGE SHALL BE STABILIZED DURING ERECTION BY THE USE OF FALSE WORK, TEMPORARY BRACING, COMPRESSION FLANGE STIFFENING TRUSS, OR BY THE USE OF A HOLDING CRANE UNTIL A SUFFICIENT NUMBER OF GIRDERS HAVE BEEN ERECTED AND CROSS FRAMES INSTALLED.

2. WHEN ERECTING GIRDERS OVER ACTIVE TRAFFIC, TWO OR MORE GIRDERS MUST BE ERECTED, INCLUDING CROSS FRAMES, BEFORE OPERATIONS ARE SUSPENDED.

3. THE METHODS USED BY THE CONTRACTOR SHALL BE DOCUMENTED ON THE ERECTION DRAWINGS WITH ALL SUPPORTING STABILITY CALCULATIONS SUBMITTED IN ACCORDANCE WITH CMS ITEMS 501 AND 513. THE CONTRACTOR MAY SUBMIT AN ALTERNATE MEANS OF ERECTION FROM THE ONE SHOWN IN THE PLANS.

4. WIND LOADING ON THE PARTIALLY ERECTED STRUCTURE SHALL BE CONSIDERED IN THE DEVELOPMENT OF THE ERECTION PLAN AND SHORING TOWERS. THE FOLLOWING HAS BEEN INCLUDED IN PRELIMINARY INVESTIGATIONS OF THE PARTIALLY ERECTED STRUCTURE AND ARE RECOMMENDED AS MINIMUM GUIDELINES. FOR STAGES IN WHICH A SINGLE GIRDER IS NOT CONNECTED TO ANOTHER GIRDER BY CROSS FRAMES, DETERMINE PRESSURES BASED UPON A 20 MPH DESIGN WIND VELOCITY. FOR ANY OTHER STAGE IN WHICH TWO GIRDERS ARE CONNECTED TOGETHER, DETERMINE PRESSURES BASED UPON A 40 MPH DESIGN WIND VELOCITY. SHOW WORK LIMITATIONS RELATIVE TO WIND SPEED AND PROCEDURES FOR HIGH WIND EVENTS.

5. THE GIRDER NUMBER SYSTEM USED HEREIN IS IDENTIFIED WITH NUMERIC PREFIX IDENTIFYING THE LIFT SEQUENCE FOLLOWED BY LETTER (A THOUGH E) WHICH IDENTIFIES ADDITIONAL LIFTS OF SIMILAR MEMBERS. THE NUMBERING SYSTEM IS INTENDED TO SHOW THE SEQUENTIAL INSTALLATION AND DOES NOT CORRESPOND TO ANY OTHER LABELING SYSTEM SHOWN IN THE PLANS.

6. THE SHORING TOWER SHOWN HEREIN ASSUMES THAT ERECTION ON THE WEST SIDE OF THE BRIDGE WILL BEGIN AT THE REAR ABUTMENT AND PROCEED TOWARD THE REAR PIER. THE CONTRACTOR AT HIS DISCRETION MAY CHOOSE AN ALTERNATE ERECTION SEQUENCE. ALL GIRDER ERECTION SHALL STRICTLY ADHERE TO THE PROVISIONS OF THE MAINTENANCE OF TRAFFIC PLANS.

7. FIELD SPLICES AND CROSS FRAME CONNECTIONS SHALL BE INSTALLED WITH AT LEAST THREE-FOURTHS OF THE HOLES WITH COMPLETELY TIGHTENED BOLTS TO RESIST THE CONSTRUCTION LOADS DURING ERECTION.

8. FIELD SPLICES AND CROSS FRAME CONNECTIONS THAT ARE MADE ON THE GROUND SHALL BE INSTALLED WITH ONE HUNDRED PERCENT (100%) OF THE HOLES WITH COMPLETELY TIGHTENED BOLTS.

ERECTION SEQUENCE:

1. SET ALL BEARING ON EACH SUBSTRUCTURE IN ORDER OF ERECTION.

2. SET GIRDERS 1A AND 1B. ERECT AS A UNIT AND STABILIZE GIRDERS LATERALLY AT REAR ABUTMENT AND SHORING TOWER BEFORE REMOVING LIFTING APPARATUS.

3. SET GIRDERS 1C THRU 1E INTO POSITION PLACING CROSS FRAMES BETWEEN EACH PAIR OF GIRDERS BEFORE REMOVING LIFTING APPARATUS.

4. SET GIRDERS 2A AND 2B. ERECT AS A UNIT AND STABILIZE GIRDERS LATERALLY AT REAR PIER AND BEFORE REMOVING LIFTING APPARATUS.

5. SET GIRDERS 2C THRU 2E INTO POSITION PLACING CROSS FRAMES BETWEEN EACH PAIR OF GIRDERS BEFORE REMOVING LIFTING APPARATUS.

6. SET GIRDERS 3A AND 3B. ERECT AS A UNIT AND STABILIZE GIRDERS LATERALLY AT FORWARD ABUTMENT AND FORWARD PIER BEFORE REMOVING LIFTING APPARATUS.

7. SET GIRDERS 3C THRU 3E INTO POSITION PLACING CROSS FRAMES BETWEEN EACH PAIR OF GIRDERS BEFORE REMOVING LIFTING APPARATUS.

8. CONNECT GIRDERS 4A AND 4B AS A UNIT TO GIRDERS 3A/3B AND 5A/5B BEFORE REMOVING LIFTING APPARATUS.

9. SET GIRDERS 4C THRU 4E INTO POSITION PLACING CROSS FRAMES BETWEEN EACH PAIR OF GIRDERS BEFORE REMOVING LIFTING APPARATUS.

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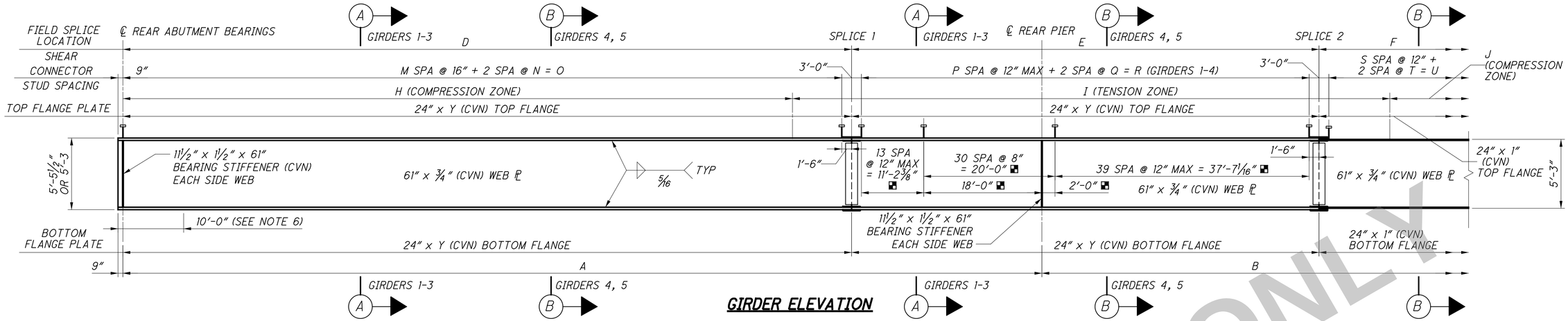
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RMW	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RJE	-	3113787	

ERECTION PLAN
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

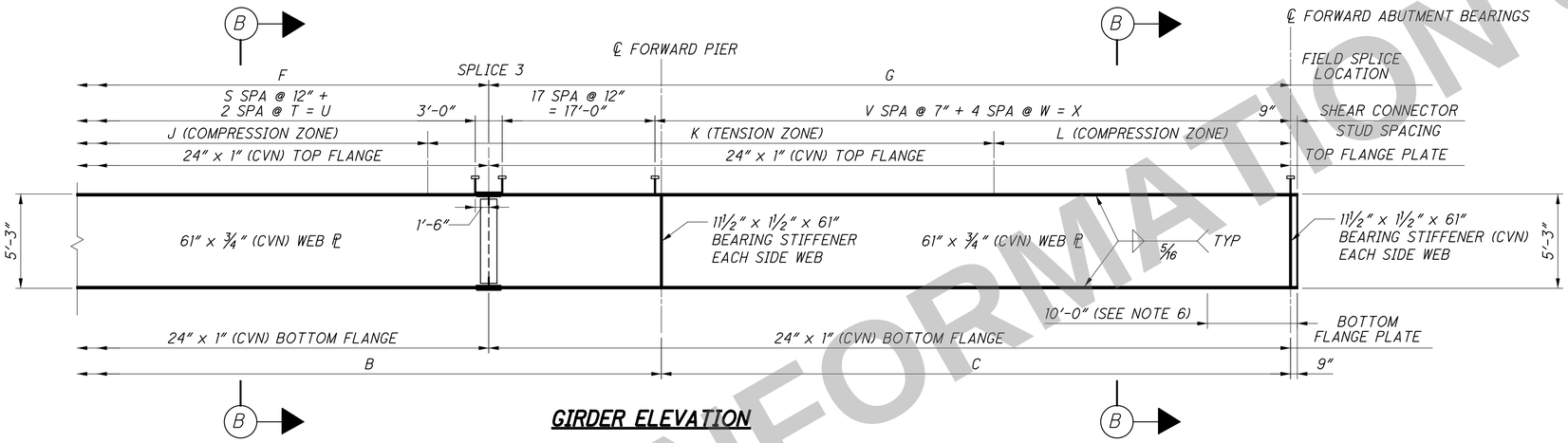
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GIRDER ELEVATION



GIRDER ELEVATION

LEGEND

■ - APPLIES AT GIRDER 5 ONLY

GIRDER DIMENSIONS

GIRDER NUMBER	SPAN LENGHTS			FIELD SPLICE LOCATIONS				TENSION AND COMPRESSION ZONE					SHEAR CONNECTOR STUD SPACING										
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
1	155′-2 5/16″	119′-2 15/16″	73′-7 3/8″	125′-8 1/2″	69′-4 5/16″	60′-1 15/16″	92′-9 15/16″	111′-9 15/16″	105′-0 1/4″	31′-11 3/4″	65′-0″	34′-2 5/8″	92	9 1/4″	124′-2 1/2″	65	8 1/8″	66′-4 5/16″	56	6 15/16″+	57′-1 15/16″	124	6″-	74′-3 15/16″
2	147′-8 5/8″	122′-11 1/16″	72′-7 1/8″	117′-11 9/16″	69′-10 7/8″	63′-6 3/4″	91′-9 11/16″	109′-7 5/16″	94′-3 3/8″	42′-8 1/16″	60′-8 1/2″	35′-11 1/2″	86	10 3/4″+	116′-5 9/16″	65	11 7/16″	66′-10 7/8″	59	9 3/8″	60′-6 3/4″	122	6 7/16″-	73′-3 11/16″
3	140′-2 3/8″	126′-7 3/4″	71′-6 15/16″	110′-1 13/16″	70′-5 7/8″	66′-11 7/8″	90′-9 7/16″	105′-10 9/16″	83′-4 3/16″	54′-3 1/8″	58′-0 1/8″	36′-11″	80	11 7/8″+	108′-7 13/16″	66	8 15/16″	67′-5 7/8″	62	11 15/16″	63′-11 7/8″	120	6 7/8″-	72′-3 7/16″
4	132′-7 9/16″	130′-4 15/16″	70′-6 11/16″	102′-3 1/4″	71′-1 3/8″	70′-5 3/8″	89′-9 1/4″	98′-9 3/4″	81′-9 3/8″	58′-6″	62′-2 1/16″	32′-4 1/16″	74	12 9/16″+	100′-9 1/4″	67	6 11/16″	68′-1 3/8″	66	8 11/16″	67′-5 3/8″	119	5 9/16″	71′-3 1/4″
5	125′-0 1/16″	134′-2 7/8″	69′-6 7/16″	94′-3 11/16″	71′-9 7/16″	73′-11 1/4″	88′-9″	85′-1 13/16″	89′-1 11/16″	60′-0 3/8″	67′-1 9/16″	27′-3 15/16″	68	12 13/16″+	92′-9 11/16″	SEE GIRDER ELEVATION			69	11 5/8″	70′-11 1/4″	117	6″	70′- 3″

GIRDER NUMBER	GIRDER DIMENSION "Y"
1	2¼″
2	2¼″
3	2¼″
4	1″
5	1″

NOTES

1. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.

2. WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1″ FROM EDGE OF FLANGE, BE NO MORE THAN 2″ LONG, AND BE AT LEAST ¼″ FOR THICKNESSES UP TO ¾″ OR 5/16″ FOR GREATER THAN ¾″ THICK.

3. ALL DIMENSIONS MEASURED ALONG CENTERLINE OF BEAM.

4. SEE SHEET 45/64 FOR SPLICE AND STIFFENER DETAILS.

5. SEE SHEETS 40/64 AND 41/64 FOR BEARING DETAILS.

6. PARTIAL PAINTING OF A709 GRADE 50W STEEL: PAINT THE LAST 10 FT OF EACH BEAM/GIRDER END ADJACENT TO THE ABUTMENTS INCLUDING ALL CROSS FRAMES AND OTHER STEEL WITHIN THESE LIMITS. THE PRIME COAT SHALL BE 708.01. THE TOP COAT COLOR SHALL BE FEDERAL COLOR NUMBER 14277 (GREEN).

7. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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DESIGN AGENCY: EMH&T
DESIGNED: RMW | DRAWN: GB | CHECKED: RJE | REVIEWED: CAS | DATE: 12-15-21 | REVISED: - | STRUCTURE FILE NUMBER: 3113787

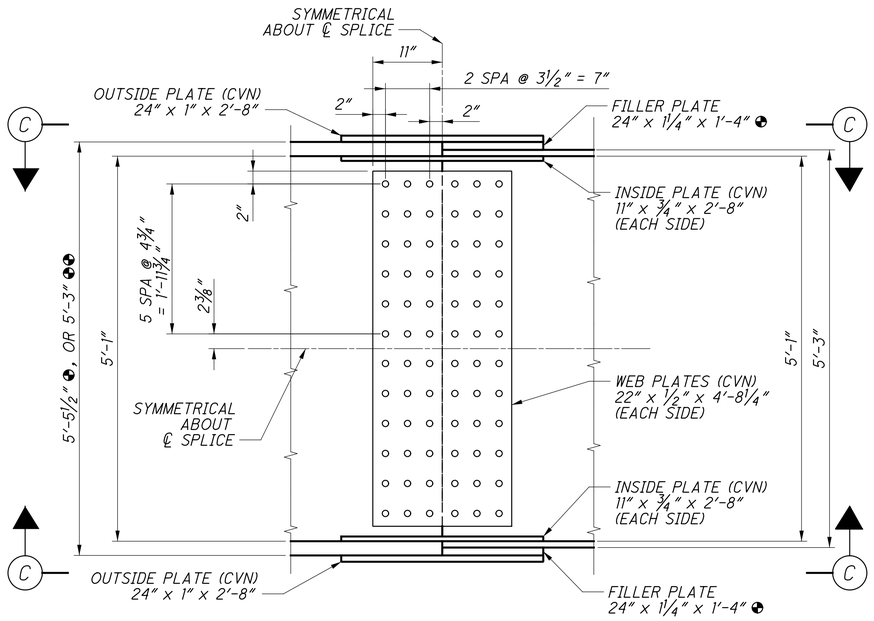
GIRDER ELEVATION
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

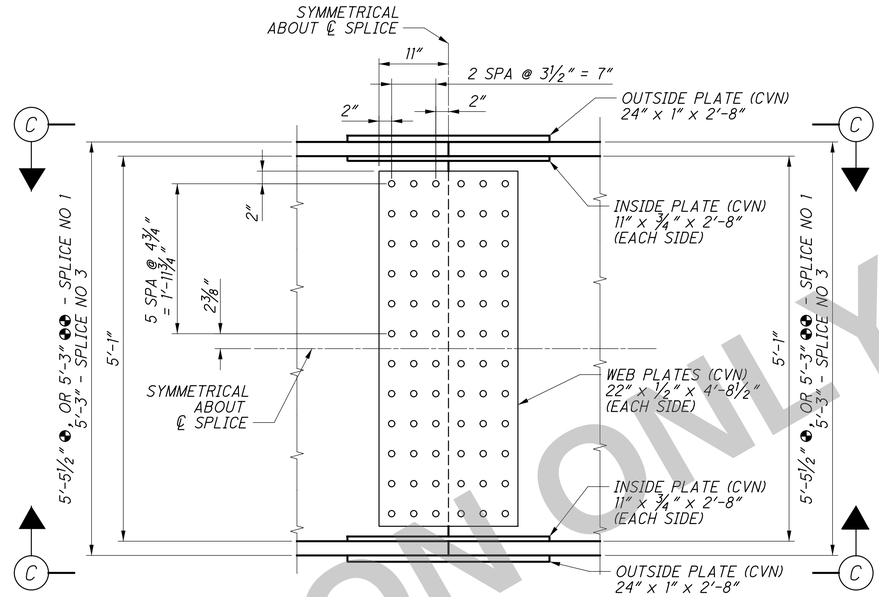
44/64

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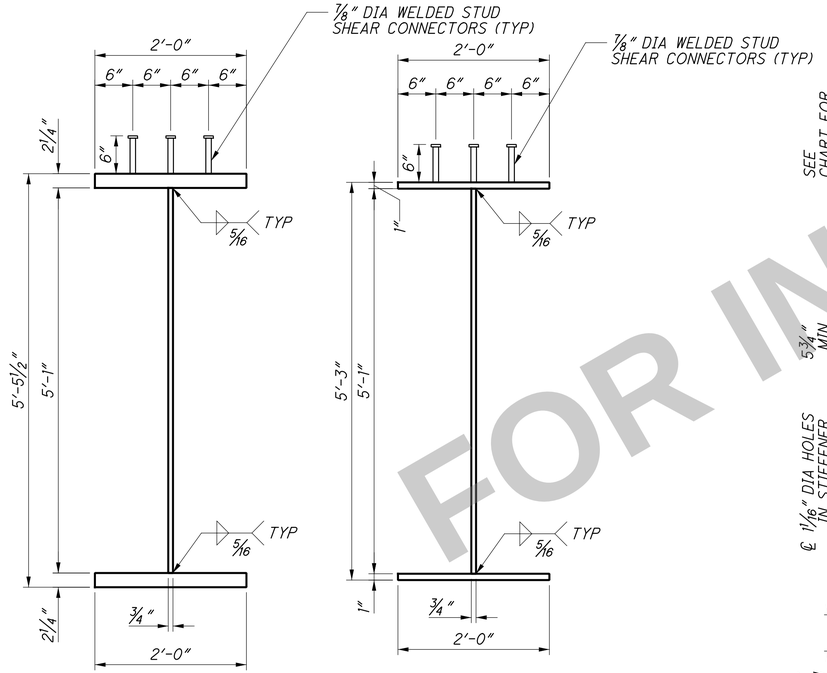
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FIELD SPLICE NO 2 DETAIL

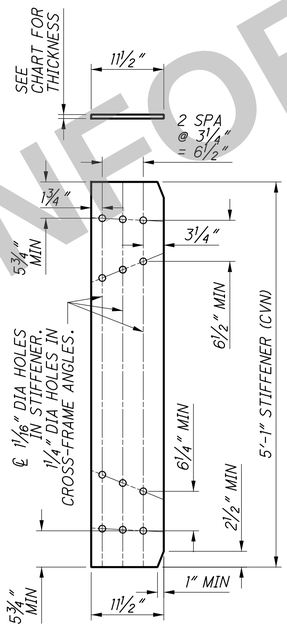


FIELD SPLICE NO 1 AND NO 3 DETAILS

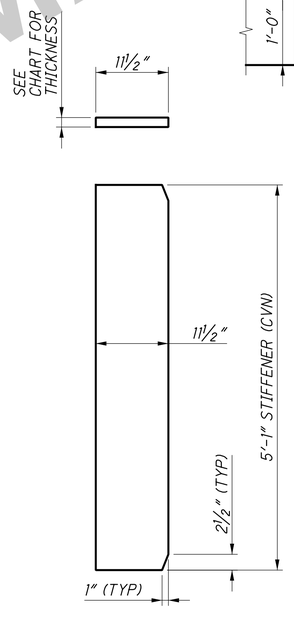


SECTION A-A

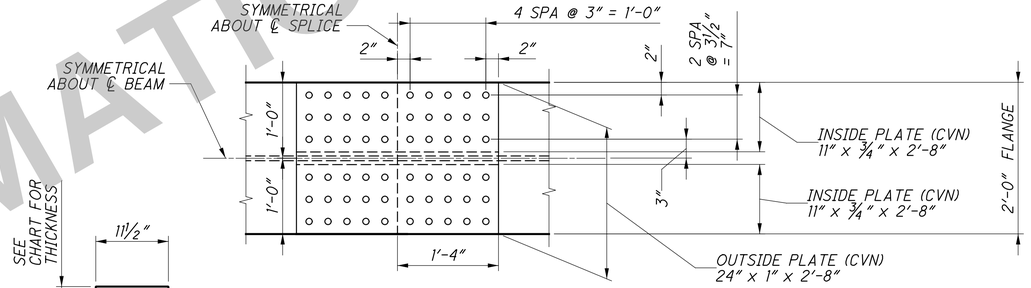
SECTION B-B



INTERMEDIATE CROSSFRAME AND FORWARD PIER BEARING STIFFENER DETAIL



REAR AND FORWARD ABUTMENT AND REAR PIER BEARING STIFFENER DETAIL



VIEW C-C

STIFFENER THICKNESS	
REAR ABUTMENT BEARING STIFFENER	1½″
REAR PIER BEARING STIFFENER	1½″
FORWARD PIER BEARING STIFFENER	1½″
FORWARD ABUTMENT BEARING STIFFENER	1½″
INTERMEDIATE STIFFENER DETAIL	⅝″

LEGEND

◕ - APPLIES AT GIRDERS 1, 2, & 3
◕◕ - APPLIES AT GIRDER 4 & 5

NOTES

1. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
2. HIGH STRENGTH BOLTS FOR FIELD SPLICES SHALL BE 1″ DIAMETER ASTM A325, TYPE 3, UNLESS OTHERWISE NOTED.
3. MILL STIFFENERS FOR SNUG FIT PRIOR TO SHOP WELDING.
4. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
5. ALL INTERMEDIATE CROSSFRAME BOLTS SHALL BE ASTM F3125, GRADE 325, WITH THREADS EXCLUDED FROM THE SHEAR PLANE. ALL BOLTS SHALL BE TYPE 3 BOLTS. EACH ANCHOR ASSEMBLY SHALL INCLUDE A BOLT, NUT, AND TWO (2) WASHERS, TIGHTENED ACCORDING TO CMS 513 PRIOR TO DECK PLACEMENT. MINIMUM EDGE DISTANCES FOR BOLTS SHALL BE 1½″.

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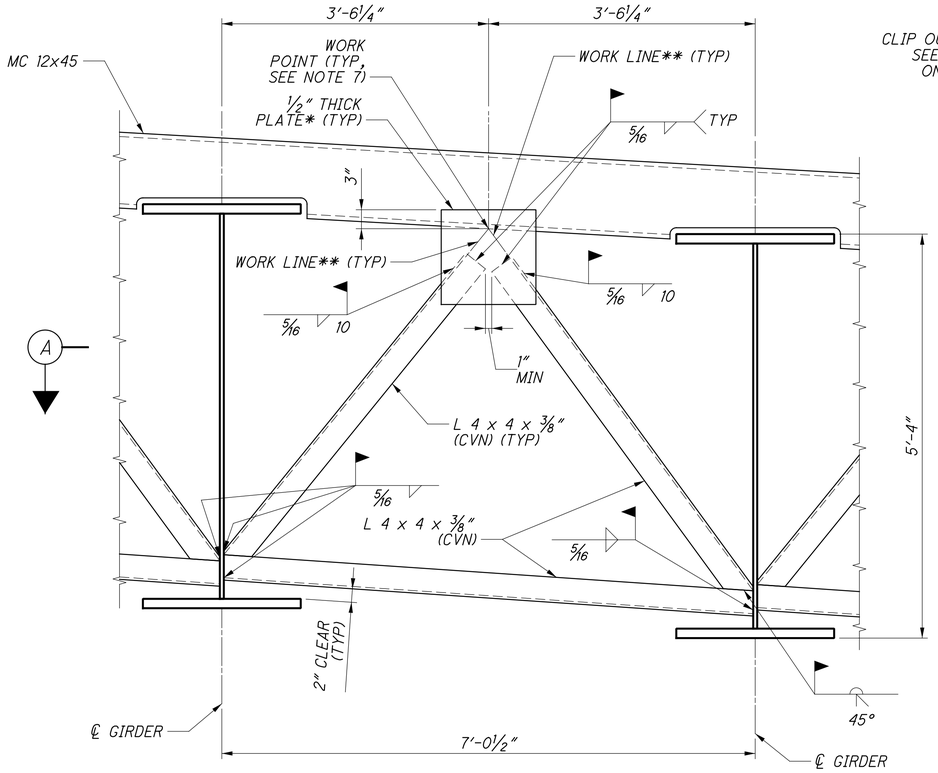
SPLICE DETAILS AND STIFFENER DETAILS
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

45 / 64

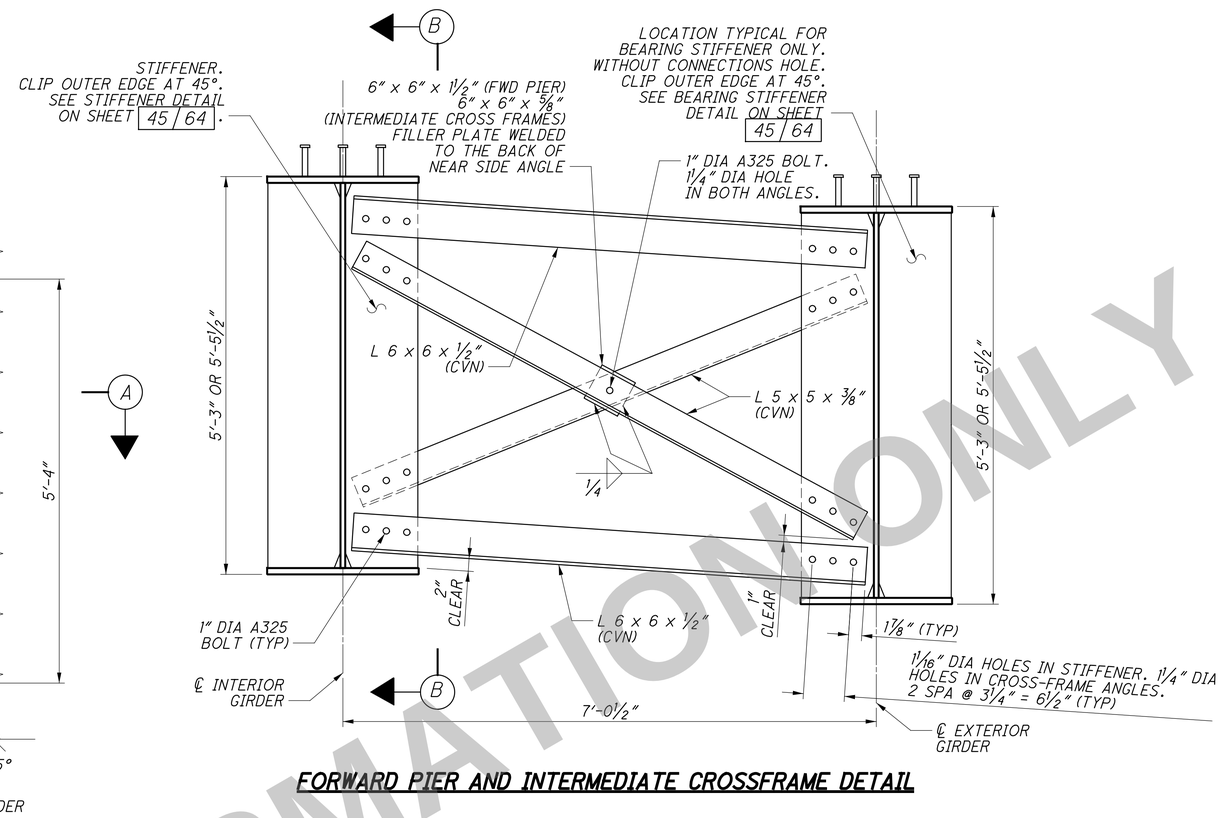
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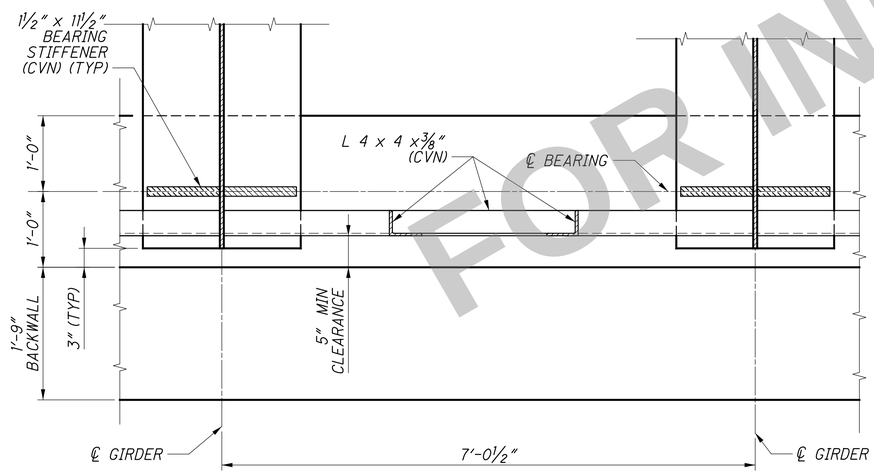


END CROSSFRAME DETAIL

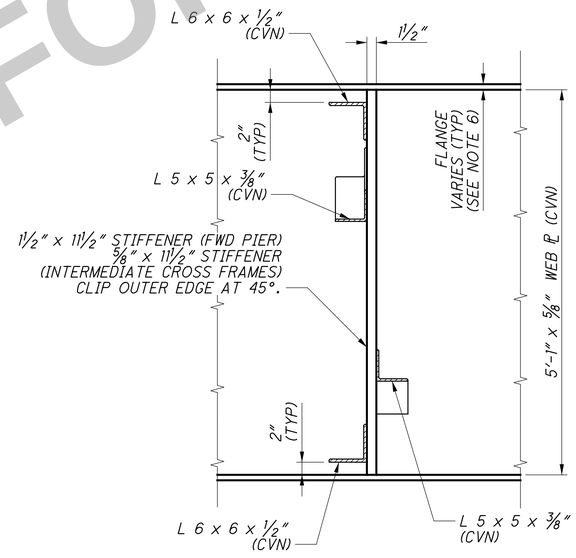
VIEW FROM REAR ABUTMENT BACKWALL



FORWARD PIER AND INTERMEDIATE CROSSFRAME DETAIL



SECTION A-A



SECTION B-B

LEGEND

* - THE ½" THICK PLATE IS PART OF THE EXPANSION JOINT SYSTEM. SEE STANDARD DRAWING EXJ-4-87 FOR DETAILS INCLUDING MATERIAL AND COATING REQUIREMENTS.

** - THE WORK LINE SHALL BE THE INSIDE FACE OF THE PROTRUDING ANGLE LEG EXTENDED AS SHOWN. THE WORK POINT SHALL BE AT THE INTERSECTION OF THESE LINES.

NOTES

1. MATERIAL: ALL END CROSSFRAME MATERIAL SHALL BE A709 GRADE 50W.
2. GIRDER ENDS: FOR STRUCTURES ON GRADE, THE GIRDER ENDS SHALL BE FABRICATED TO BE VERTICAL AFTER ERECTION. A THREE INCH MINIMUM CLEARANCE AT 60° F SHALL BE MAINTAINED BETWEEN THE VERTICAL ENDS OF THE GIRDERS AND THE VERTICAL FACE OF THE BACKWALL UNLESS THE CONTRACT CRITERIA/PLANS SHOW OTHERWISE.
3. REFER TO STD DWG. EXJ-4-87 FOR ADDITIONAL END CROSSFRAME DETAILS NOT SHOWN.
4. MILL STIFFENERS FOR SNUG FIT PRIOR TO WELDING.
5. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
6. FOR ADDITIONAL FLANGE DIMENSIONS SEE BEAM ELEVATION ON SHEET 44/64
7. WORK POINTS: WORK POINTS SHALL BE COORDINATED BETWEEN EXPANSION JOINT AND STRUCTURAL STEEL SUPPLIERS TO ASSURE FIT UP AT ALL DESIGN LOCATIONS.
8. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.

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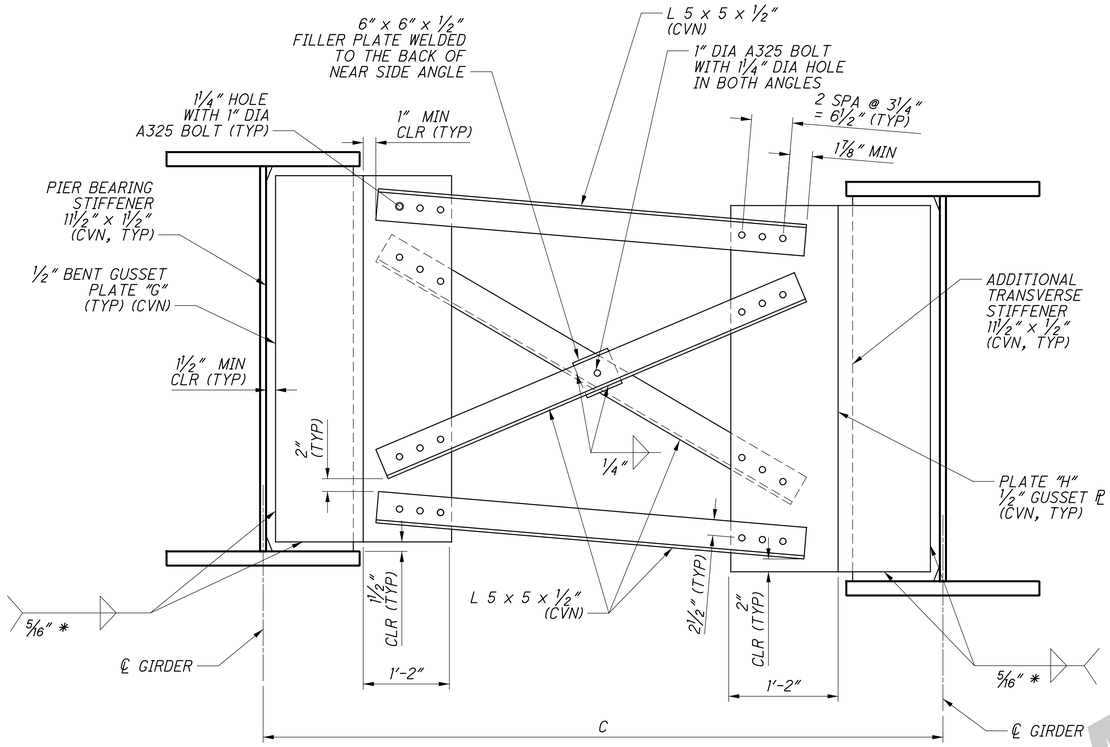
END, INTERMEDIATE, AND FORWARD PIER CROSSFRAME DETAILS
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

46/64

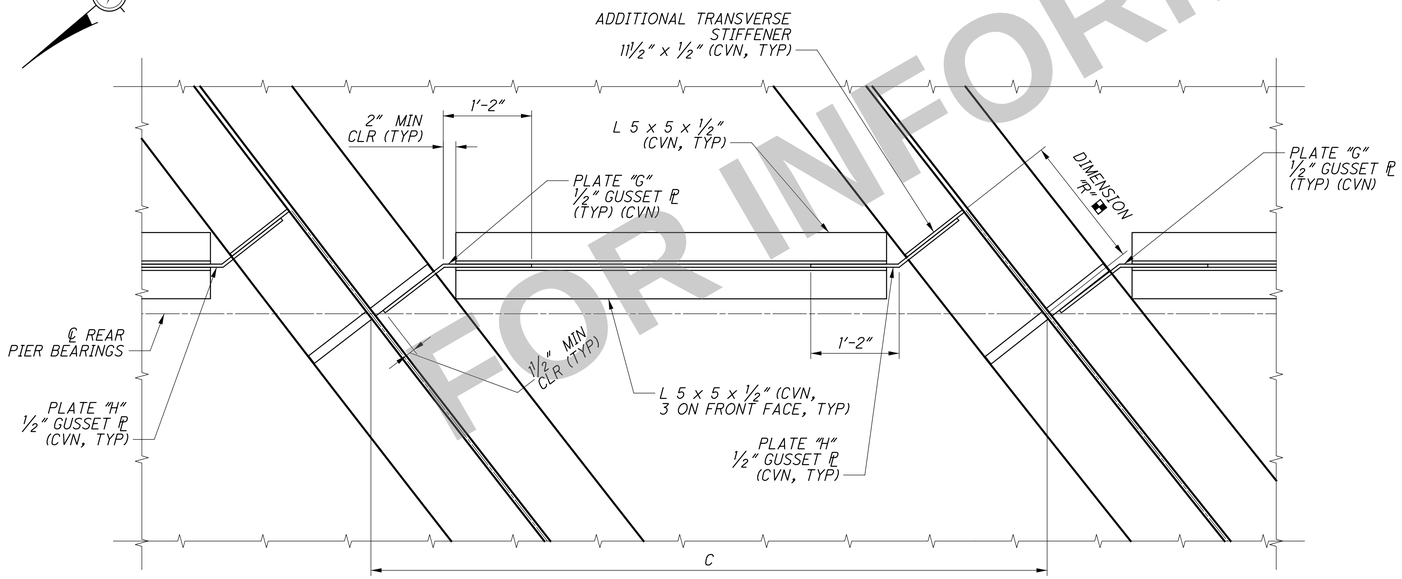
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REAR PIER CROSSFRAME ELEVATION

(PIER CAP AND BEARING NOT SHOWN FOR CLARITY, CROSSFRAMES AND STIFFENERS NOT TO SCALE)



REAR PIER CROSSFRAME PLAN

(PIER CAP AND BEARING NOT SHOWN FOR CLARITY)

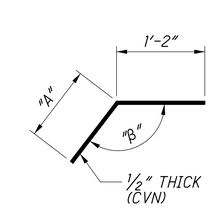


PLATE "G"

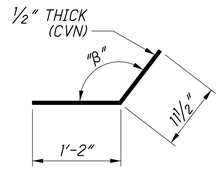


PLATE "H"

"A" - DIMENSION OF BENT ℄ PARALLEL TO STIFFENER. VARIES. SEE TABLE.
"B" - ANGLE VARIES SEE TABLE.

REAR PIER CROSSFRAME DETAILS

BAY NUMBER	GIRDER NUMBER	"C"	PLATE "G" "A"	PLATE "G" "B"	PLATE "H" "B"	PLATE "H" DIMENSION "R" ◪
	⟨1⟩		1'-0 7/16"	143°00'12.36"	-	-
1		8'-10¼"				
	⟨2⟩		1'-0 3/16"	142°23'41.88"	142°35'27.04"	1'-8 9/16"
2		8'-11⅛"				
	⟨3⟩		1'-0"	141°45'50.17"	141°57'56.51"	1'-8⅞"
3		9'-0 1/16"				
	⟨4⟩		11 13/16"	141°06'32.08"	141°19'00.88"	1'-9¼"
4		9'-1 1/16"				
	⟨5⟩		-	-	140°38'34.63"	1'-9 5/8"

LEGEND

* - DO NOT WRAP WELDS AROUND CORNER.

◪ - DIMENSION "R" VARIES. MEASURED ALONG ℄ GIRDER FROM ℄ BEARING TO ℄ ADDITIONAL STIFFENER ℄.

NOTES

1. ALL MATERIAL SHALL BE ASTM A709, GRADE 50W.
2. HIGH STRENGTH BOLTS SHALL BE 1" DIAMETER A325, TYPE III WITH THREADS EXCLUDED FROM SHEAR PLANE UNLESS OTHERWISE NOTED.
3. FOR BEARING STIFFENER DETAILS SEE SHEET 45/64.
4. FOR TRANSVERSE STIFFENER DETAILS SEE SHEET 45/64.
5. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN C&MS 711.01.

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DESIGN AGENCY EMH&T

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RMW	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RJE	-	3113787	

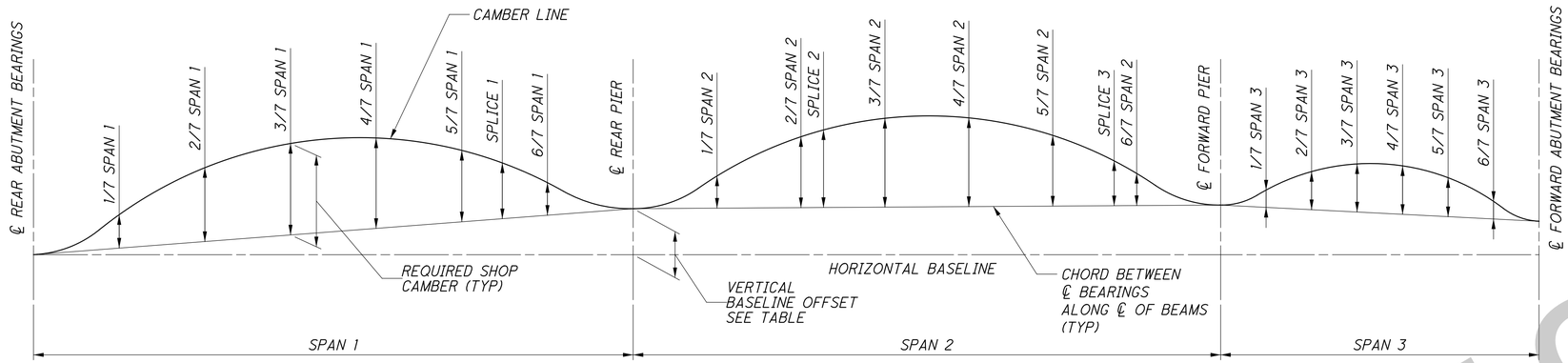
REAR PIER CROSSFRAME DETAILS
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

47 / 64

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GIRDER 1 = 155′-2 5/16″
GIRDER 2 = 147′-8 5/8″
GIRDER 3 = 140′-2 3/8″
GIRDER 4 = 132′-7 9/16″
GIRDER 5 = 125′-0 1/16″

GIRDER 1 = 119′-2 15/16″
GIRDER 2 = 122′-11 1/16″
GIRDER 3 = 126′-7 3/4″
GIRDER 4 = 130′-4 15/16″
GIRDER 5 = 134′-2 7/8″

GIRDER 1 = 73′-7 3/8″
GIRDER 2 = 72′-7 1/8″
GIRDER 3 = 71′-6 15/16″
GIRDER 4 = 70′-6 11/16″
GIRDER 5 = 69′-6 7/16″

CAMBER DIAGRAM

NOTES

1. ALL VALUES IN THE DEFLECTION AND CAMBER TABLE ARE GIVEN TO THE NEAREST 1/16″.
2. POSITIVE VALUES FOR DEFLECTIONS INDICATE DOWNWARD DEFLECTIONS.
3. FOR FIELD SPLICE LOCATIONS, SEE BEAM ELEVATION AND SPLICE DETAILS SHEET.
4. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

VERTICAL BASELINE OFFSET (IN.)

GIRDER	PIER 1	PIER 2	FORWARD ABUTMENT
GIRDER 1	54 3/16 ″	54 13/16 ″	37 7/16 ″
GIRDER 2	53 5/16 ″	54 13/16 ″	37 7/16 ″
GIRDER 3	52 5/16 ″	54 13/16 ″	37 7/16 ″
GIRDER 4	51 3/16 ″	54 13/16 ″	37 7/16 ″
GIRDER 5	49 15/16 ″	54 13/16 ″	37 7/16 ″

CAMBER TABLE

		SPAN 1								SPAN 2									SPAN 3						
GIRDER 1	REAR ABUT.	1/7 SPAN	2/7 SPAN	3/7 SPAN	4/7 SPAN	5/7 SPAN	SPLICE 1	6/7 SPAN	PIER 1	1/7 SPAN	2/7 SPAN	SPLICE 2	3/7 SPAN	4/7 SPAN	5/7 SPAN	SPLICE 3	6/7 SPAN	PIER 2	1/7 SPAN	2/7 SPAN	3/7 SPAN	4/7 SPAN	5/7 SPAN	6/7 SPAN	FWD. ABUT.
DEFLECTION DUE TO WEIGHT OF STEEL	0″	7/8″	1 1/2″	1 3/4″	1 9/16″	1 1/8″	11/16″	1/2″	0″	-3/16″	-3/16″	-1/8″	-1/8″	-1/16″	0″	0″	0″	0″	1/16″	1/16″	1/8″	1/8″	1/8″	1/16″	0″
DEFLECTION DUE TO WEIGHT OF SLAB	0″	1 1/16″	1 7/8″	2 3/16″	2″	1 3/8″	7/8″	5/8″	0″	-3/16″	-1/8″	1/16″	0″	1/8″	1/8″	1/16″	1/16″	0″	1/16″	1/8″	3/16″	3/16″	3/16″	1/8″	0″
DEFLECTION DUE TO REMAINING DEAD LOAD	0″	1/4″	3/8″	7/16″	3/8″	1/4″	3/16″	1/8″	0″	0″	0″	0″	0″	0″	1/16″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0″	3 11/16″	6 1/8″	7 3/8″	7 3/8″	6 1/8″	4 5/8″	3 11/16″	0″	2 3/16″	3 5/8″	3 15/16″	4 3/8″	4 3/8″	3 5/8″	2 3/8″	2 3/16″	0″	13/16″	1 3/8″	0″	0″	0″	0″	0″
CAMBER LOSS DUE TO HEAT CURVING	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″
REQUIRED SHOP CAMBER	0″	5 7/8″	9 7/8″	11 3/4″	11 5/16″	8 7/8″	6 3/8″	4 15/16″	0″	1 13/16″	3 5/16″	3 7/8″	4 1/4″	4 7/16″	3 13/16″	2 1/2″	2 1/4″	0″	15/16″	1 5/8″	5/16″	3/8″	5/16″	3/16″	0″
GIRDER 2																									
DEFLECTION DUE TO WEIGHT OF STEEL	0″	11/16″	1 3/16″	1 7/16″	1 5/16″	15/16″	5/8″	7/16″	0″	-1/8″	-1/16″	0″	0″	1/16″	1/16″	0″	0″	0″	0″	1/16″	1/16″	1/8″	1/16″	1/16″	0″
DEFLECTION DUE TO WEIGHT OF SLAB	0″	15/16″	1 5/8″	1 7/8″	1 11/16″	1 3/16″	13/16″	1/2″	0″	-1/16″	1/16″	3/16″	3/16″	5/16″	1/4″	1/8″	1/8″	0″	0″	1/16″	1/8″	3/16″	1/8″	1/16″	0″
DEFLECTION DUE TO REMAINING DEAD LOAD	0″	3/16″	5/16″	3/8″	3/8″	1/4″	3/16″	1/8″	0″	0″	0″	1/16″	1/16″	1/16″	1/16″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0″	3 7/16″	5 3/4″	6 7/8″	6 7/8″	5 3/4″	4 1/2″	3 7/16″	0″	2 3/8″	4″	4 1/4″	4 3/4″	4 3/4″	4″	2 9/16″	2 3/8″	0″	13/16″	1 3/8″	0″	0″	0″	0″	0″
CAMBER LOSS DUE TO HEAT CURVING	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″
REQUIRED SHOP CAMBER	0″	5 1/4″	8 7/8″	10 9/16″	10 1/4″	8 1/8″	6 1/8″	4 1/2″	0″	2 3/16″	3 15/16″	4 1/2″	5″	5 3/16″	4 5/16″	2 3/4″	2 9/16″	0″	7/8″	1 9/16″	1/4″	5/16″	1/4″	1/8″	0″
GIRDER 3																									
DEFLECTION DUE TO WEIGHT OF STEEL	0″	9/16″	15/16″	1 1/16″	1″	3/4″	9/16″	5/16″	0″	-1/16″	0″	1/16″	1/8″	3/16″	1/8″	1/16″	1/16″	0″	0″	1/16″	1/16″	1/16″	1/16″	1/16″	0″
DEFLECTION DUE TO WEIGHT OF SLAB	0″	13/16″	1 3/8″	1 9/16″	1 7/16″	1″	3/4″	7/16″	0″	0″	3/16″	5/16″	7/16″	1/2″	3/8″	3/16″	3/16″	0″	0″	1/16″	1/16″	1/8″	1/8″	1/16″	0″
DEFLECTION DUE TO REMAINING DEAD LOAD	0″	1/8″	1/4″	5/16″	5/16″	3/16″	1/8″	1/16″	0″	0″	0″	1/16″	1/16″	1/16″	1/16″	1/16″	0″	0″	0″	0″	0″	0″	0″	0″	0″
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0″	3 3/16″	5 5/16″	6 3/8″	6 3/8″	5 5/16″	4 3/8″	3 3/16″	0″	2 5/8″	4 5/16″	4 5/8″	5 3/16″	5 3/16″	4 5/16″	2 3/4″	2 5/8″	0″	13/16″	1 3/8″	0″	0″	0″	0″	0″
CAMBER LOSS DUE TO HEAT CURVING	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″
REQUIRED SHOP CAMBER	0″	4 5/8″	7 7/8″	9 3/8″	9 1/8″	7 1/4″	5 13/16″	4 1/16″	0″	2 9/16″	4 9/16″	5 1/16″	5 13/16″	5 15/16″	4 15/16″	3 1/16″	2 7/8″	0″	13/16″	1 7/16″	3/16″	3/16″	3/16″	1/8″	0″
GIRDER 4																									
DEFLECTION DUE TO WEIGHT OF STEEL	0″	3/8″	11/16″	13/16″	3/4″	1/2″	3/8″	1/4″	0″	0″	1/8″	1/8″	1/4″	5/16″	1/4″	1/8″	1/8″	0″	0″	0″	0″	1/16″	1/16″	0″	0″
DEFLECTION DUE TO WEIGHT OF SLAB	0″	5/8″	1 1/8″	1 5/16″	1 3/16″	13/16″	5/8″	5/16″	0″	1/16″	3/8″	7/16″	5/8″	11/16″	9/16″	1/4″	1/4″	0″	0″	0″	1/16″	1/16″	1/16″	1/16″	0″
DEFLECTION DUE TO REMAINING DEAD LOAD	0″	1/8″	3/16″	1/4″	1/4″	3/16″	1/8″	1/16″	0″	0″	1/16″	1/16″	1/16″	1/8″	1/16″	1/16″	1/16″	0″	0″	0″	0″	0″	0″	0″	0″
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0″	2 15/16″	4 7/8″	5 7/8″	5 7/8″	4 7/8″	4 1/4″	2 15/16″	0″	2 13/16″	4 3/4″	5″	5 11/16″	5 11/16″	4 3/4″	2 15/16″	2 13/16″	0″	13/16″	1 3/8″	0″	0″	0″	0″	0″
CAMBER LOSS DUE TO HEAT CURVING	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″
REQUIRED SHOP CAMBER	0″	4 1/8″	6 7/8″	8 3/16″	8″	6 3/8″	5 3/8″	3 9/16″	0″	2 15/16″	5 1/4″	5 9/16″	6 5/8″	6 3/4″	5 9/16″	3 5/16″	3 1/4″	0″	13/16″	1 3/8″	1/16″	1/8″	1/8″	1/16″	0″
GIRDER 5																									
DEFLECTION DUE TO WEIGHT OF STEEL	0″	1/4″	7/16″	1/2″	7/16″	1/4″	1/4″	1/8″	0″	1/16″	3/16″	3/16″	3/8″	7/16″	5/16″	1/8″	1/8″	0″	0″	0″	0″	0″	0″	0″	0″
DEFLECTION DUE TO WEIGHT OF SLAB	0″	9/16″	15/16″	1 1/16″	15/16″	5/8″	1/2″	1/4″	0″	1/8″	1/2″	7/16″	13/16″	7/8″	11/16″	5/16″	5/16″	0″	-1/16″	-1/16″	0″	0″	1/16″	0″	0″
DEFLECTION DUE TO REMAINING DEAD LOAD	0″	1/16″	1/8″	3/16″	3/16″	1/8″	1/16″	1/16″	0″	0″	1/16″	1/16″	1/8″	1/8″	1/8″	1/16″	1/16″	0″	0″	0″	0″	0″	0″	0″	0″
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0″	2 11/16″	4 1/2″	5 3/8″	5 3/8″	4 1/2″	4 1/16″	2 11/16″	0″	3 1/8″	5 3/16″	5 3/8″	6 3/16″	6 3/16″	5 3/16″	3 1/8″	3 1/8″	0″	13/16″	1 3/8″	0″	0″	0″	0″	0″
CAMBER LOSS DUE TO HEAT CURVING	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″	0″
REQUIRED SHOP CAMBER	0″	3 9/16″	5 15/16″	7 1/16″	6 7/8″	5 1/2″	4 7/8″	3 1/16″	0″	3 5/16″	5 15/16″	6″	7 7/16″	7 5/8″	6 1/4″	3 5/8″	3 5/8″	0″	3/4″	1 5/16″	0″	1/16″	1/16″	1/16″	0″

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DESIGNED: RMW | DRAWN: GB | CHECKED: RJE | REVIEWED: CAS | DATE: 12-15-21 | REVISED: - | STRUCTURE FILE NUMBER: 3113787

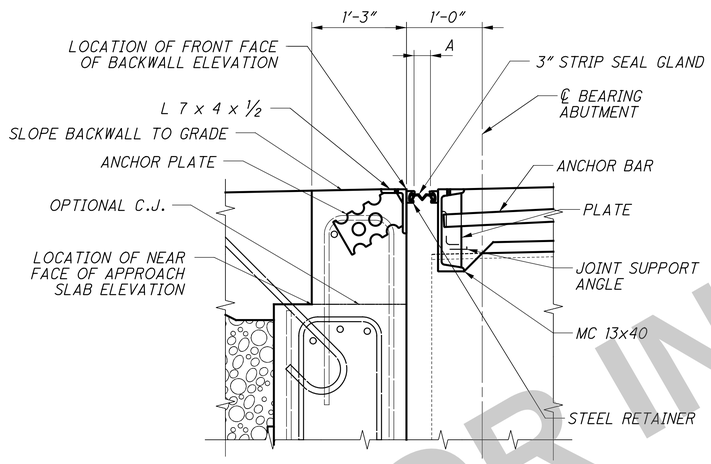
CAMBER DIAGRAM AND DEFLECTION
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

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DETAIL A

SEE STD. DWG. EXJ-4-87 (REVISED 01-19-2018) FOR ADDITIONAL DETAILS AND NOTES

DIMENSION "A" (INCHES)		
TEMPERATURE (DEGREE F)	REAR ABUTMENT 4" SEAL	FORWARD ABUTMENT 3" SEAL
30	2.59	1.85
40	2.38	1.79
50	2.15	1.73
60	1.93	1.68
70	1.71	1.62
80	1.49	1.56
90	1.27	1.50

LEGEND

- DENOTES AREAS OF NEW POROUS BACKFILL WITH FILTER FABRIC (FORWARD ABUTMENT ONLY)

NOTES

1. BACKWALL CONCRETE:
IN ADDITION TO 511.10, DO NOT PLACE BACKWALL CONCRETE ABOVE THE OPTIONAL CONSTRUCTION JOINT AT THE APPROACH SLAB SEAT UNTIL AFTER THE DECK CONCRETE IN THE SPAN ADJACENT TO THE ABUTMENT HAS BEEN PLACED.

2. INSTALLATION OF SEAL:
DURING INSTALLATION OF THE SUPPORT/ARMOR FOR THE SUPERSTRUCTURE SIDE OF THE EXPANSION JOINT SEAL, OBSERVE THE SEATING OF BEAMS ON BEARINGS TO ASSURE THAT POSITIVE BEARING IS MAINTAINED.

3. STRIP SEALS:
STRIP SEAL GLANDS SHALL BE INSTALLED IN ONE CONTINUOUS PIECE.

4. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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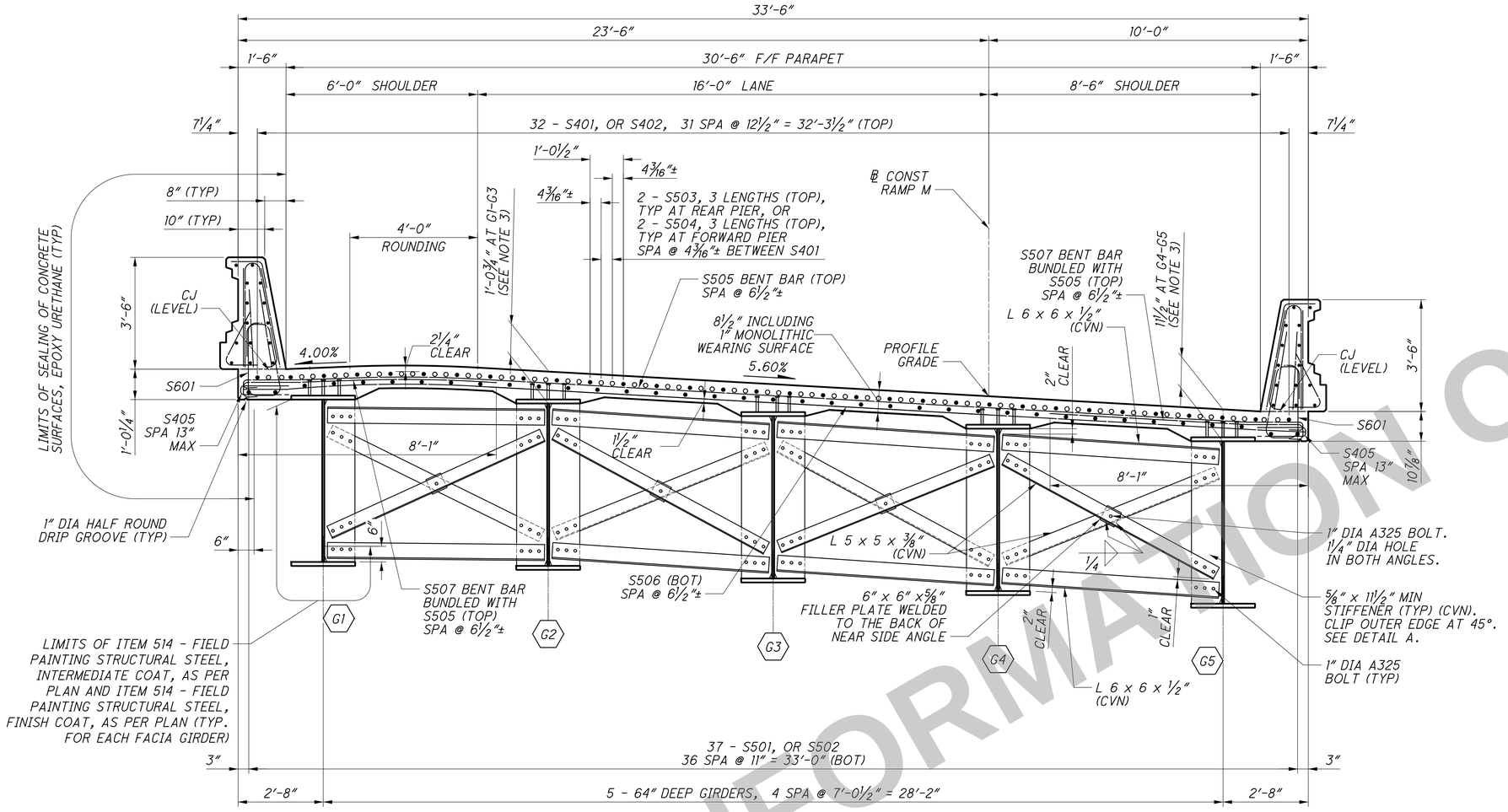
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RJE	-	3113787	

EXPANSION JOINT DETAILS
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RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

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TYPICAL TRANSVERSE SECTION

SEE PARAPET DETAILS SHEETS
FOR PARAPET REINFORCING CALLOUTS

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NOTES

1. FOR ADDITIONAL INTERMEDIATE CROSS FRAME AND STIFFENER DETAILS SEE SHEETS 45/64 TO 47/64.
2. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN C&MS 711.01.
3. DECK SLAB CONCRETE QUANTITY:

   THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH GIRDER HAUNCH. THE ESTIMATE ASSUMES A CONSTANT HAUNCH THICKNESS OF 4¼″ AT GIRDERS 1-3 AND 3″ AT GIRDERS 4 & 5. A CONSTANT HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE OF 9 INCHES IS ASSUMED. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. THE ALLOWABLE TOLERANCE FOR THE HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE IS ±3 INCHES.

   THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE GIRDER, FROM THE SURFACE OF THE DECK TO THE BOTTOM OF THE TOP FLANGE MINUS THE DECK SLAB THICKNESS. THE AREA OF ALL EMBEDDED TOP FLANGE SPLICE PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.24.
4. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
5. FOR ADDITIONAL FLANGE DIMENSIONS SEE BEAM ELEVATION ON SHEET 44/64
6. ALL INTERMEDIATE CROSSFRAME BOLTS SHALL BE ASM F3125, GRADE 325, WITH THREADS EXCLUDED FROM THE SHEAR PLANE. ALL BOLTS SHALL BE TYPE 3 BOLTS. EACH ANCHOR ASSEMBLY SHALL INCLUDE A BOLT, NUT, AND TWO (2) WASHERS, TIGHTENED ACCORDING TO CMS 513 PRIOR TO DECK PLACEMENT. MINIMUM EDGE DISTANCES FOR BOLTS SHALL BE 1½″

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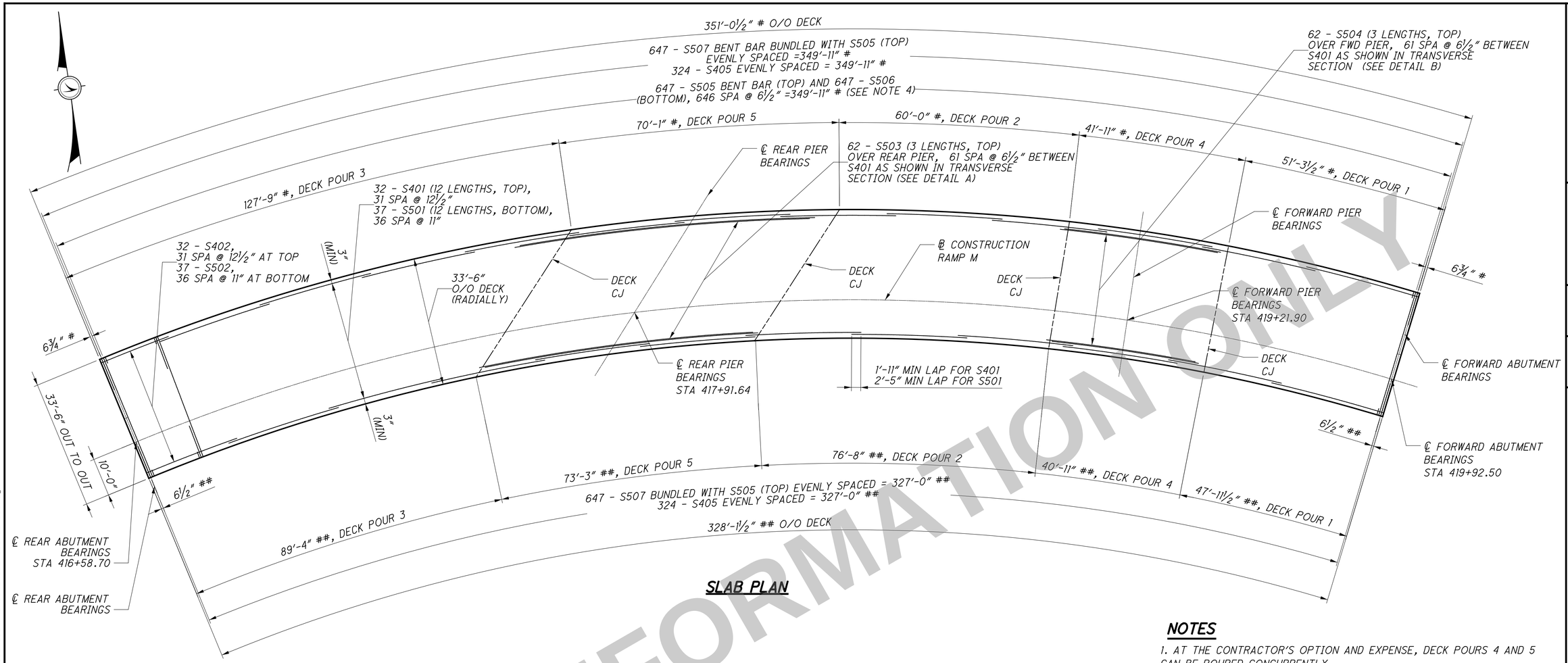
TYPICAL TRANSVERSE SECTION
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

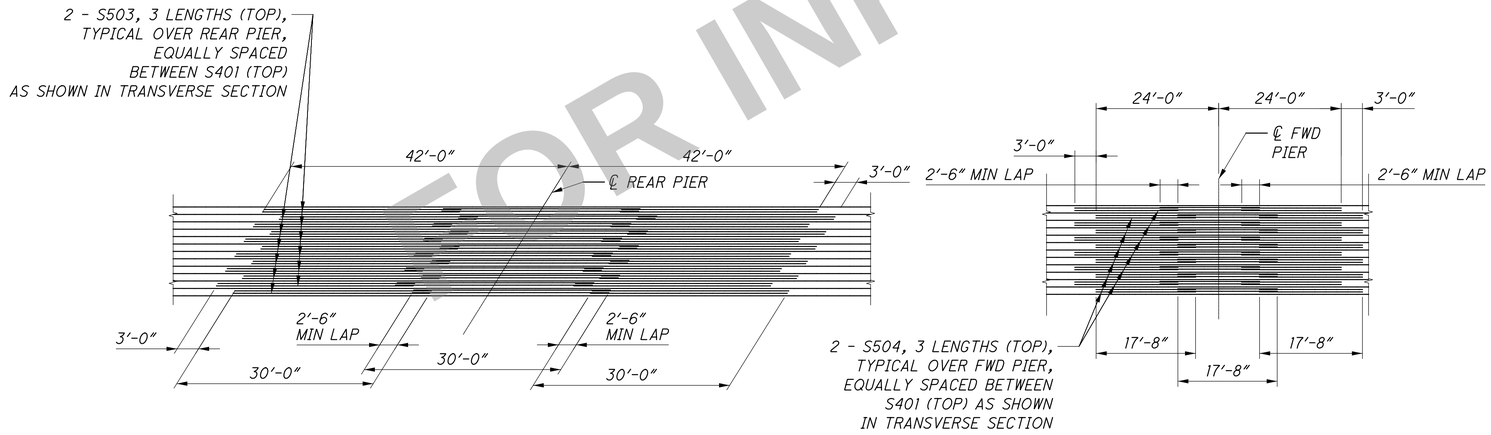
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SLAB PLAN



DETAIL A

STAGGER OF S503 OVER REAR PIER

DETAIL B

STAGGER OF S504 OVER FORWARD PIER

NOTES

1. AT THE CONTRACTOR'S OPTION AND EXPENSE, DECK POURS 4 AND 5 CAN BE POURED CONCURRENTLY.

2. THE CONCRETE DECK SHALL NOT BE POURED IN A SINGLE POUR FROM END TO END.

3. CONSTRUCTION JOINTS SHALL BE SEALED WITH A 2'-0" WIDE STRIP OF HIGH MOLECULAR WEIGHT METHACRYLIC RESIN ACCORDING TO 511.22.

4. THE TRANSVERSE REINFORCEMENT SHALL BE PLACED RADIALLY.

5. THE CONCRETE DECK AND APPROACH SLABS SHALL NOT BE PLACED IN THE SAME CONCRETE POUR.

6. THE USE OF STAY-IN-PLACE FORMS SHALL NOT BE ALLOWED.

7. DIAPHRAGMS: DO NOT PLACE THE DECK CONCRETE UNTIL ALL DIAPHRAGMS HAVE BEEN PROPERLY INSTALLED.

8. MATERIALS: DECK CONCRETE SHALL BE CLASS QC/QA CONCRETE, CLASS QC3.

9. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

LEGEND

\# - PLACED RADIALLY AND MEASURED ALONG THE LEFT EDGE OF DECK

- MEASURED RADIALLY ALONG THE RIGHT EDGE OF DECK

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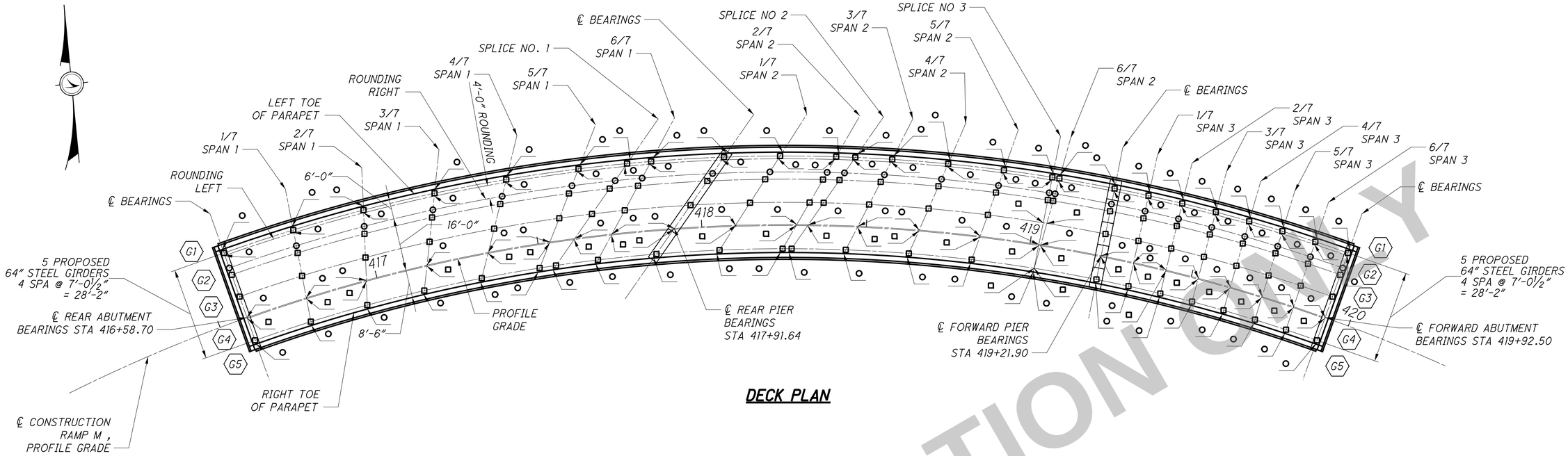
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DECK PLAN
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

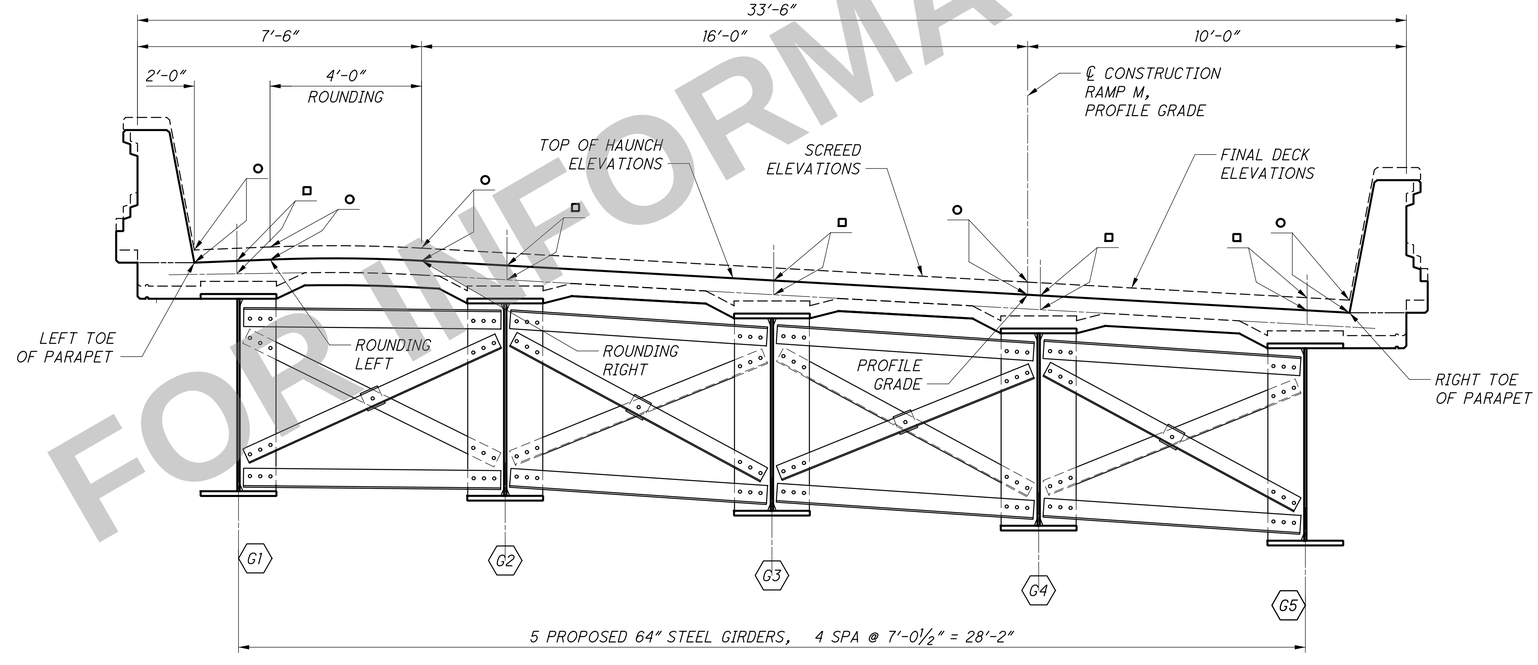
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DECK PLAN



TYPICAL TRANSVERSE SECTION

LEGEND

- ○ - SCREED ELEVATIONS AND FINAL DECK ELEVATIONS.
- □ - TOP OF HAUNCH ELEVATIONS AND FINAL DECK ELEVATIONS.

NOTE

SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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DECK ELEVATION LOCATIONS
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

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SCREED ELEVATIONS*

		LEFT TOE OF PARAPET		GIRDER 1		ROUNDING LEFT		ROUNDING RIGHT		GIRDER 2		GIRDER 3		PROFILE GRADE		GIRDER 4		GIRDER 5		RIGHT TOE OF PARAPET	
		STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
	REAR ABUTMENT	416+58.70	560.02	416+58.70	560.07	416+58.70	560.10	416+58.70	560.07	416+58.70	559.94	416+58.70	559.55	416+58.70	559.17	416+58.70	559.16	416+58.70	558.76	416+58.70	558.70
SPAN 1	1/7	416+80.08	561.09	416+79.96	561.13	416+79.67	561.15	416+79.46	561.09	416+79.22	560.96	416+78.46	560.52	416+77.69	560.09	416+77.66	560.07	416+76.83	559.63	416+76.69	559.56
	2/7	417+01.47	562.02	417+01.23	562.06	417+00.64	562.07	417+00.22	561.99	416+99.75	561.85	416+98.21	561.37	416+96.68	560.91	416+96.62	560.89	416+94.96	560.41	416+94.68	560.34
	3/7	417+22.85	562.80	417+22.49	562.83	417+21.61	562.84	417+20.97	562.75	417+20.27	562.61	417+17.97	562.11	417+15.67	561.62	417+15.58	561.60	417+13.09	561.10	417+12.67	561.02
	4/7	417+44.23	563.43	417+43.75	563.46	417+42.57	563.46	417+41.73	563.38	417+40.79	563.23	417+37.72	562.72	417+34.67	562.22	417+34.53	562.20	417+31.22	561.68	417+30.66	561.60
	5/7	417+65.61	563.91	417+65.01	563.94	417+63.54	563.94	417+62.49	563.86	417+61.31	563.71	417+57.48	563.21	417+53.66	562.71	417+53.49	562.69	417+49.35	562.17	417+48.65	562.08
	SPLICE 1	417+79.26	564.15	417+79.26	564.19	417+73.42	564.11	417+73.42	564.07	417+73.42	563.95	417+67.35	563.41	417+61.03	562.88	417+61.03	562.86	417+54.45	562.29	417+54.45	562.23
	6/7	417+87.00	564.27	417+86.28	564.30	417+84.51	564.30	417+83.25	564.24	417+81.84	564.09	417+77.23	563.60	417+72.65	563.11	417+72.45	563.09	417+67.48	562.58	417+66.64	562.49
	PIER 1	418+08.38	564.54	418+07.54	564.58	418+05.48	564.58	418+04.00	564.53	418+02.36	564.38	417+96.99	563.91	417+91.64	563.44	417+91.41	563.42	417+85.61	562.93	417+84.63	562.84
SPAN 2	1/7	418+24.60	564.71	418+23.88	564.75	418+22.11	564.77	418+20.85	564.73	418+19.44	564.60	418+14.83	564.16	418+10.25	563.73	418+10.05	563.71	418+05.08	563.25	418+04.24	563.18
	2/7	418+40.81	564.84	418+40.21	564.89	418+38.74	564.91	418+37.69	564.89	418+36.51	564.76	418+32.68	564.35	418+28.86	563.95	418+28.69	563.94	418+24.55	563.52	418+23.85	563.44
	SPLICE 2	418+45.78	564.89	418+45.78	564.93	418+41.40	564.94	418+41.40	564.93	418+41.40	564.80	418+36.88	564.39	418+32.19	563.99	418+32.19	563.97	418+27.33	563.53	418+27.33	563.47
	3/7	418+57.03	564.92	418+56.55	564.97	418+55.37	565.00	418+54.53	564.98	418+53.59	564.86	418+50.52	564.47	418+47.47	564.10	418+47.33	564.08	418+44.02	563.69	418+43.46	563.62
	4/7	418+73.25	564.94	418+72.89	564.99	418+72.01	565.02	418+71.37	565.01	418+70.67	564.88	418+68.37	564.51	418+66.07	564.15	418+65.98	564.13	418+63.49	563.76	418+63.07	563.69
	5/7	418+89.47	564.89	418+89.23	564.94	418+88.64	564.97	418+88.22	564.95	418+87.75	564.83	418+86.21	564.46	418+84.68	564.10	418+84.62	564.08	418+82.96	563.71	418+82.68	563.64
	SPLICE 3	419+03.48	564.79	419+03.48	564.83	419+03.22	564.87	419+03.22	564.84	419+03.22	564.72	419+02.95	564.33	419+02.69	563.96	419+02.68	563.95	419+02.40	563.56	419+02.29	563.50
	6/7	419+05.68	564.77	419+05.56	564.81	419+05.27	564.85	419+05.06	564.83	419+04.82	564.70	419+04.06	564.32	419+03.29	563.96	419+03.26	563.94	419+02.43	563.56	419+02.40	563.49
	PIER 2	419+21.90	564.59	419+21.90	564.63	419+21.90	564.67	419+21.90	564.64	419+21.90	564.51	419+21.90	564.12	419+21.90	563.74	419+21.90	563.72	419+21.90	563.33	419+21.90	563.26
SPAN 3	1/7	419+31.99	564.45	419+31.99	564.50	419+31.99	564.53	419+31.99	564.50	419+31.99	564.38	419+31.99	563.98	419+31.99	563.60	419+31.99	563.58	419+31.99	563.19	419+31.99	563.12
	2/7	419+42.07	564.30	419+42.07	564.35	419+42.07	564.38	419+42.07	564.34	419+42.07	564.22	419+42.07	563.82	419+42.07	563.44	419+42.07	563.42	419+42.07	563.03	419+42.07	562.96
	3/7	419+52.16	564.12	419+52.16	564.17	419+52.16	564.20	419+52.16	564.17	419+52.16	564.04	419+52.16	563.64	419+52.16	563.26	419+52.16	563.24	419+52.16	562.85	419+52.16	562.78
	4/7	419+62.24	563.92	419+62.24	563.97	419+62.24	564.00	419+62.24	563.96	419+62.24	563.84	419+62.24	563.44	419+62.24	563.06	419+62.24	563.04	419+62.24	562.64	419+62.24	562.58
	5/7	419+72.33	563.69	419+72.33	563.73	419+72.33	563.77	419+72.33	563.73	419+72.33	563.61	419+72.33	563.21	419+72.33	562.83	419+72.33	562.81	419+72.33	562.41	419+72.33	562.35
	6/7	419+82.41	563.43	419+82.41	563.47	419+82.41	563.51	419+82.41	563.47	419+82.41	563.35	419+82.41	562.95	419+82.41	562.57	419+82.41	562.56	419+82.41	562.16	419+82.41	562.09
	FWD. ABUTMENT	419+92.50	563.14	419+92.50	563.19	419+92.50	563.22	419+92.50	563.19	419+92.50	563.06	419+92.50	562.67	419+92.50	562.29	419+92.50	562.28	419+92.50	561.88	419+92.50	561.82

FOR INFORMATION ONLY

NOTES

1. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

LEGEND

* - SEE DECK ELEVATION LOCATIONS SHEET FOR LOCATIONS OF ELEVATIONS

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DESIGNED	DRAWN	REVIEWED	DATE
RMW	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RJE	-	3113787	

SCREED ELEVATIONS
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

1321
2017

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TOP OF HAUNCH ELEVATIONS*

		GIRDER 1		GIRDER 2		GIRDER 3		GIRDER 4		GIRDER 5	
		STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
	REAR ABUTMENT	416+58.70	559.36	416+58.70	559.24	416+58.70	558.84	416+58.70	558.45	416+58.70	558.05
SPAN 1	1/7	416+79.96	560.42	416+79.22	560.25	416+78.46	559.81	416+77.66	559.37	416+76.83	558.92
	2/7	417+01.23	561.35	416+99.75	561.14	416+98.21	560.66	416+96.62	560.19	416+94.96	559.70
	3/7	417+22.49	562.13	417+20.27	561.90	417+17.97	561.40	417+15.58	560.89	417+13.09	560.39
	4/7	417+43.75	562.75	417+40.79	562.52	417+37.72	562.01	417+34.53	561.49	417+31.22	560.97
	5/7	417+65.01	563.23	417+61.31	563.01	417+57.48	562.50	417+53.49	561.98	417+49.35	561.46
	SPLICE 1	417+79.26	563.49	417+73.42	563.24	417+67.35	562.70	417+61.03	562.15	417+54.45	561.58
	6/7	417+86.28	563.59	417+81.84	563.38	417+77.23	562.89	417+72.45	562.38	417+67.48	561.87
	PIER 1	418+07.54	563.87	418+02.36	563.68	417+96.99	563.20	417+91.41	562.71	417+85.61	562.22
SPAN 2	1/7	418+23.88	564.04	418+19.44	563.89	418+14.83	563.45	418+10.05	563.00	418+05.08	562.55
	2/7	418+40.21	564.18	418+36.51	564.05	418+32.68	563.64	418+28.69	563.23	418+24.55	562.81
	SPLICE 2	418+45.78	564.23	418+41.40	564.09	418+36.88	563.68	418+32.19	563.26	418+27.33	562.83
	3/7	418+56.55	564.26	418+53.59	564.15	418+50.52	563.76	418+47.33	563.37	418+44.02	562.98
	4/7	418+72.89	564.28	418+70.67	564.18	418+68.37	563.80	418+65.98	563.42	418+63.49	563.05
	5/7	418+89.23	564.23	418+87.75	564.12	418+86.21	563.75	418+84.62	563.37	418+82.96	563.00
	SPLICE 3	419+03.48	564.13	419+03.22	564.01	419+02.95	563.62	419+02.68	563.24	419+02.40	562.85
	6/7	419+05.56	564.11	419+04.82	564.00	419+04.06	563.61	419+03.26	563.23	419+02.43	562.85
	PIER 2	419+21.90	563.93	419+21.90	563.80	419+21.90	563.41	419+21.90	563.01	419+21.90	562.62
SPAN 3	1/7	419+31.99	563.79	419+31.99	563.67	419+31.99	563.27	419+31.99	562.87	419+31.99	562.48
	2/7	419+42.07	563.64	419+42.07	563.51	419+42.07	563.11	419+42.07	562.72	419+42.07	562.32
	3/7	419+52.16	563.46	419+52.16	563.33	419+52.16	562.94	419+52.16	562.54	419+52.16	562.14
	4/7	419+62.24	563.26	419+62.24	563.13	419+62.24	562.73	419+62.24	562.33	419+62.24	561.93
	5/7	419+72.33	563.02	419+72.33	562.90	419+72.33	562.50	419+72.33	562.10	419+72.33	561.70
	6/7	419+82.41	562.76	419+82.41	562.64	419+82.41	562.24	419+82.41	561.85	419+82.41	561.45
	FWD. ABUTMENT	419+92.50	562.48	419+92.50	562.36	419+92.50	561.96	419+92.50	561.57	419+92.50	561.17

FINAL DECK SURFACE ELEVATIONS*

		LEFT TOE OF PARAPET		GIRDER 1		ROUNDING LEFT		ROUNDING RIGHT		GIRDER 2		GIRDER 3		PROFILE GRADE		GIRDER 4		GIRDER 5		RIGHT TOE OF PARAPET	
		STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
	REAR ABUTMENT	416+58.70	560.02	416+58.70	560.07	416+58.70	560.10	416+58.70	560.07	416+58.70	559.94	416+58.70	559.55	416+58.70	559.17	416+58.70	559.16	416+58.70	558.76	416+58.70	558.70
SPAN 1	1/7	416+80.08	560.98	416+79.96	561.02	416+79.67	561.04	416+79.46	561.00	416+79.22	560.87	416+78.46	560.44	416+77.69	560.03	416+77.66	560.01	416+76.83	559.58	416+76.69	559.51
	2/7	417+01.47	561.83	417+01.23	561.87	417+00.64	561.88	417+00.22	561.83	416+99.75	561.69	416+98.21	561.24	416+96.68	560.80	416+96.62	560.78	416+94.96	560.32	416+94.68	560.25
	3/7	417+22.85	562.58	417+22.49	562.62	417+21.61	562.62	417+20.97	562.57	417+20.27	562.42	417+17.97	561.95	417+15.67	561.49	417+15.58	561.47	417+13.09	560.99	417+12.67	560.91
	4/7	417+44.23	563.23	417+43.75	563.26	417+42.57	563.26	417+41.73	563.21	417+40.79	563.05	417+37.72	562.57	417+34.67	562.10	417+34.53	562.08	417+31.22	561.59	417+30.66	561.51
	5/7	417+65.61	563.77	417+65.01	563.80	417+63.54	563.80	417+62.49	563.75	417+61.31	563.59	417+57.48	563.11	417+53.66	562.63	417+53.49	562.61	417+49.35	562.11	417+48.65	562.02
	SPLICE 1	417+79.26	564.06	417+79.26	564.11	417+73.42	564.02	417+73.42	563.99	417+73.42	563.87	417+67.35	563.34	417+61.03	562.81	417+61.03	562.80	417+54.45	562.24	417+54.45	562.18
	6/7	417+87.00	564.21	417+86.28	564.24	417+84.51	564.24	417+83.25	564.19	417+81.84	564.04	417+77.23	563.55	417+72.65	563.08	417+72.45	563.06	417+67.48	562.55	417+66.64	562.47
	PIER 1	418+08.38	564.54	418+07.54	564.58	418+05.48	564.58	418+04.00	564.53	418+02.36	564.38	417+96.99	563.91	417+91.64	563.44	417+91.41	563.42	417+85.61	562.93	417+84.63	562.84
SPAN 2	1/7	418+24.60	564.73	418+23.88	564.77	418+22.11	564.78	418+20.85	564.74	418+19.44	564.60	418+14.83	564.16	418+10.25	563.72	418+10.05	563.70	418+05.08	563.24	418+04.24	563.16
	2/7	418+40.81	564.85	418+40.21	564.90	418+38.74	564.92	418+37.69	564.88	418+36.51	564.75	418+32.68	564.33	418+28.86	563.92	418+28.69	563.90	418+24.55	563.47	418+23.85	563.40
	SPLICE 2	418+45.78	564.88	418+45.78	564.93	418+41.40	564.94	418+41.40	564.91	418+41.40	564.78	418+36.88	564.36	418+32.19	563.95	418+32.19	563.93	418+27.33	563.50	418+27.33	563.43
	3/7	418+57.03	564.92	418+56.55	564.97	418+55.37	565.00	418+54.53	564.96	418+53.59	564.84	418+50.52	564.43	418+47.47	564.04	418+47.33	564.02	418+44.02	563.61	418+43.46	563.55
	4/7	418+73.25	564.93	418+72.89	564.97	418+72.01	565.01	418+71.37	564.98	418+70.67	564.85	418+68.37	564.46	418+66.07	564.08	418+65.98	564.07	418+63.49	563.67	418+63.07	563.61
	5/7	418+89.47	564.87	418+89.23	564.92	418+88.64	564.96	418+88.22	564.93	418+87.75	564.81	418+86.21	564.42	418+84.68	564.05	418+84.62	564.03	418+82.96	563.64	418+82.68	563.58
	SPLICE 3	419+03.48	564.78	419+03.48	564.83	419+03.22	564.86	419+03.22	564.83	419+03.22	564.71	419+02.95	564.31	419+02.69	563.94	419+02.68	563.92	419+02.40	563.53	419+02.29	563.46
	6/7	419+05.68	564.76	419+05.56	564.81	419+05.27	564.84	419+05.06	564.81	419+04.82	564.69	419+04.06	564.30	419+03.29	563.93	419+03.26	563.92	419+02.43	563.53	419+02.40	563.46
	PIER 2	419+21.90	564.59	419+21.90	564.63	419+21.90	564.67	419+21.90	564.64	419+21.90	564.51	419+21.90	564.12	419+21.90	563.74	419+21.90	563.72	419+21.90	563.33	419+21.90	563.26
SPAN 3	1/7	419+31.99	564.45	419+31.99	564.50	419+31.99	564.53	419+31.99	564.50	419+31.99	564.37	419+31.99	563.98	419+31.99	563.60	419+31.99	563.59	419+31.99	563.19	419+31.99	563.13
	2/7	419+42.07	564.29	419+42.07	564.34	419+42.07	564.37	419+42.07	564.34	419+42.07	564.21	419+42.07	563.82	419+42.07	563.44	419+42.07	563.42	419+42.07	563.03	419+42.07	562.96
	3/7	419+52.16	564.11	419+52.16	564.15	419+52.16	564.19	419+52.16	564.15	419+52.16	564.03	419+52.16	563.64	419+52.16	563.26	419+52.16	563.24	419+52.16	562.85	419+52.16	562.78
	4/7	419+62.24	563.90	419+62.24	563.95	419+62.24	563.98	419+62.24	563.95	419+62.24	563.82	419+62.24	563.43	419+62.24	563.05	419+62.24	563.03	419+62.24	562.64	419+62.24	562.57
	5/7	419+72.33	563.67	419+72.33	563.72	419+72.33	563.75	419+72.33	563.72	419+72.33	563.59	419+72.33	563.20	419+72.33	562.82	419+72.33	562.80	419+72.33	562.41	419+72.33	562.34
	6/7	419+82.41	563.42	419+82.41	563.46	419+82.41	563.50	419+82.41	563.46	419+82.41	563.34	419+82.41	562.95	419+82.41	562.57	419+82.41	562.55	419+82.41	562.16	419+82.41	562.09
	FWD. ABUTMENT	419+92.50	563.14	419+92.50	563.19	419+92.50	563.22	419+92.50	563.19	419+92.50	563.06	419+92.50	562.67	419+92.50	562.29	419+92.50	562.28	419+92.50	561.88	419+92.50	561.82

FOR INFORMATION ONLY

LEGEND

* - SEE DECK ELEVATION LOCATIONS SHEET FOR LOCATIONS OF ELEVATIONS

NOTES

1. TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
2. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.
3. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

DESIGN AGENCY
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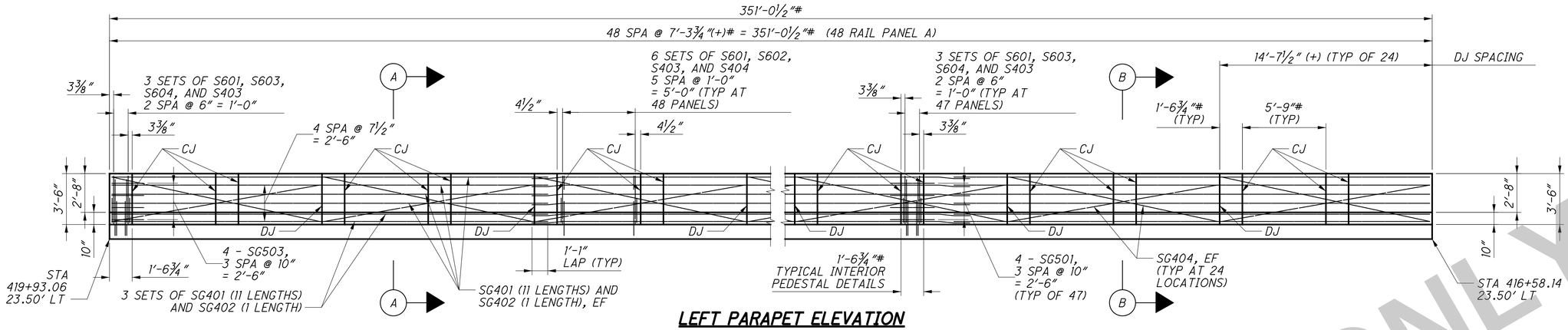
DESIGNED	DRAWN	REVIEWED	DATE
RMW	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RJE	-	3113787	

TOP OF HAUNCH AND FINAL DECK ELEVATIONS
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

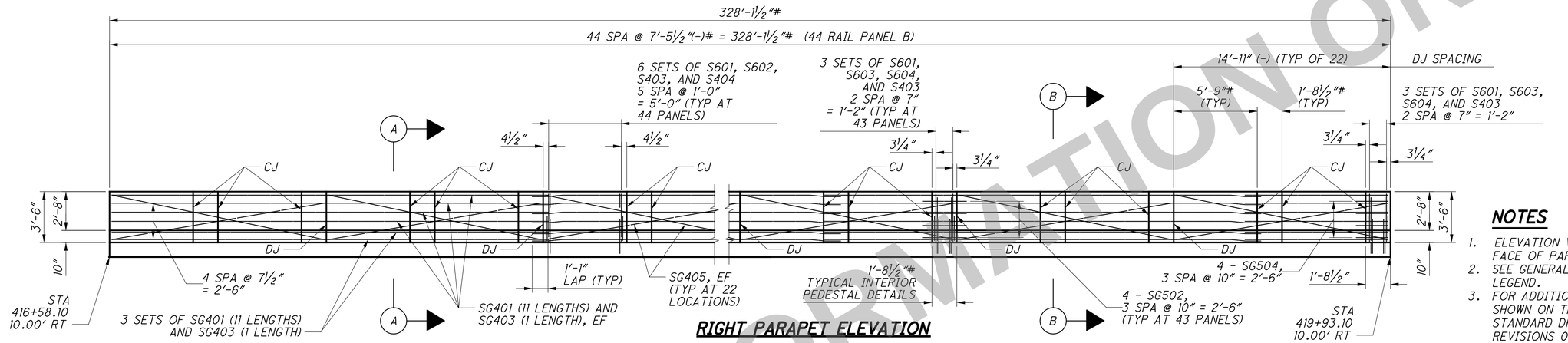
HAM-75-7.85
PID No. 77889

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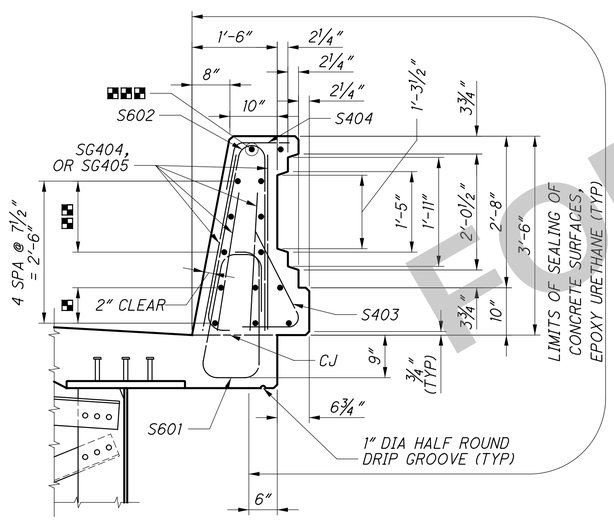
LEFT PARAPET ELEVATION



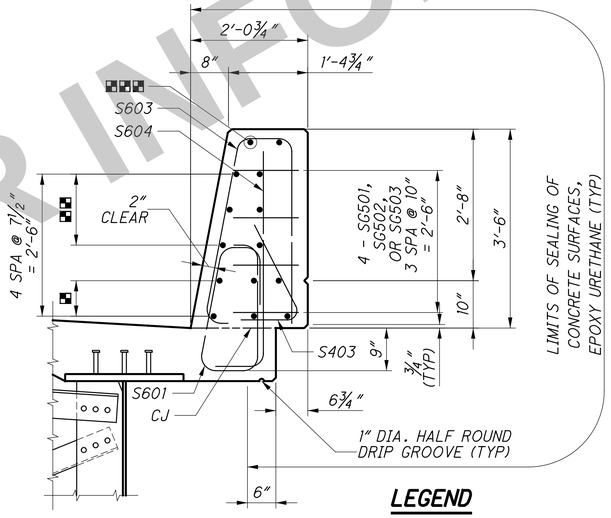
RIGHT PARAPET ELEVATION

NOTES

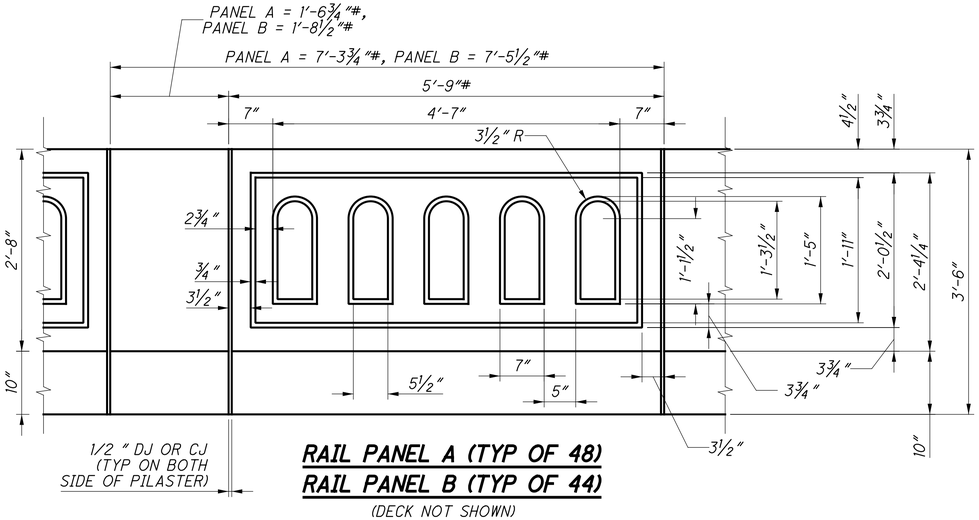
1. ELEVATION VIEWS LOOKING AT EXTERIOR FACE OF PARAPET.
2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
3. FOR ADDITIONAL PARAPET DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWINGS SBR-1-20, REVISIONS 07/17/20.



SECTION A-A



SECTION B-B



RAIL PANEL A (TYP OF 48)
RAIL PANEL B (TYP OF 44)

(DECK NOT SHOWN)

LEGEND

- DIMENSIONS MEASURED ALONG THE LEFT OR RIGHT EDGE OF DECK

■ - 6 SETS OF SG401 (11 LENGTHS) AND SG402 (1 LENGTH), OR 6 SETS OF SG401 (11 LENGTHS) AND SG403 (1 LENGTH)

■■■ - 3 - SG401 (11 LENGTHS) AND SG402 (1 LENGTH), EF, OR 3 - SG401 (11 LENGTHS) AND SG403 (1 LENGTH), EF

■■■■ - SG401 (11 LENGTHS) AND SG402 (1 LENGTH), EF, OR SG401 (11 LENGTHS) AND SG403 (1 LENGTH), EF

DJ - DEFLECTION JOINT, DETAILS SEE SHEET 60/64

CJ - CONTRACTION JOINT, DETAILS SEE SHEET 60/64

FOR INFORMATION ONLY

DESIGN AGENCY: EMH&T
DESIGNED: RMW | DRAWN: GB | CHECKED: RJE | REVIEWED: CAS | DATE: 12-15-21 | REVISED: - | STRUCTURE FILE NUMBER: 3113787

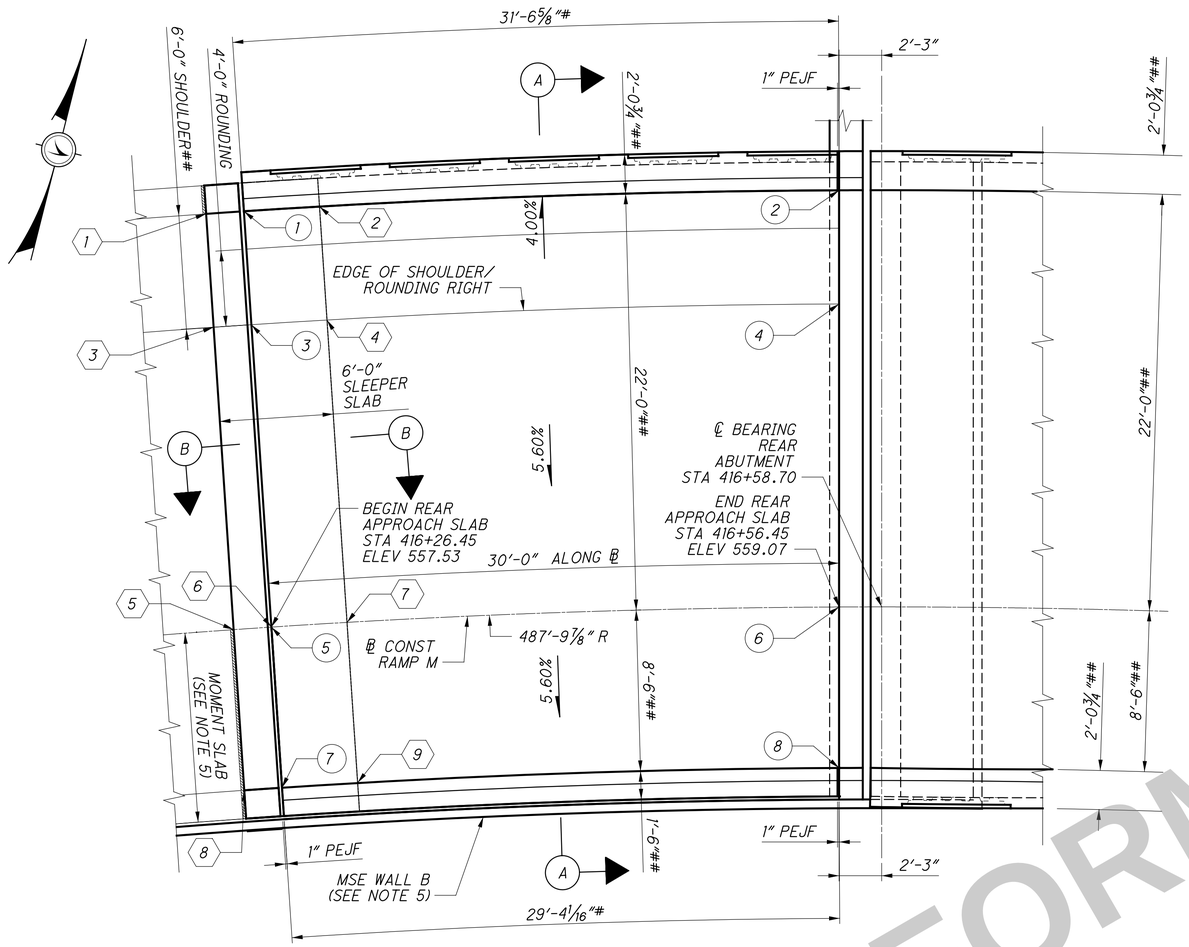
PARAPET DETAILS
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

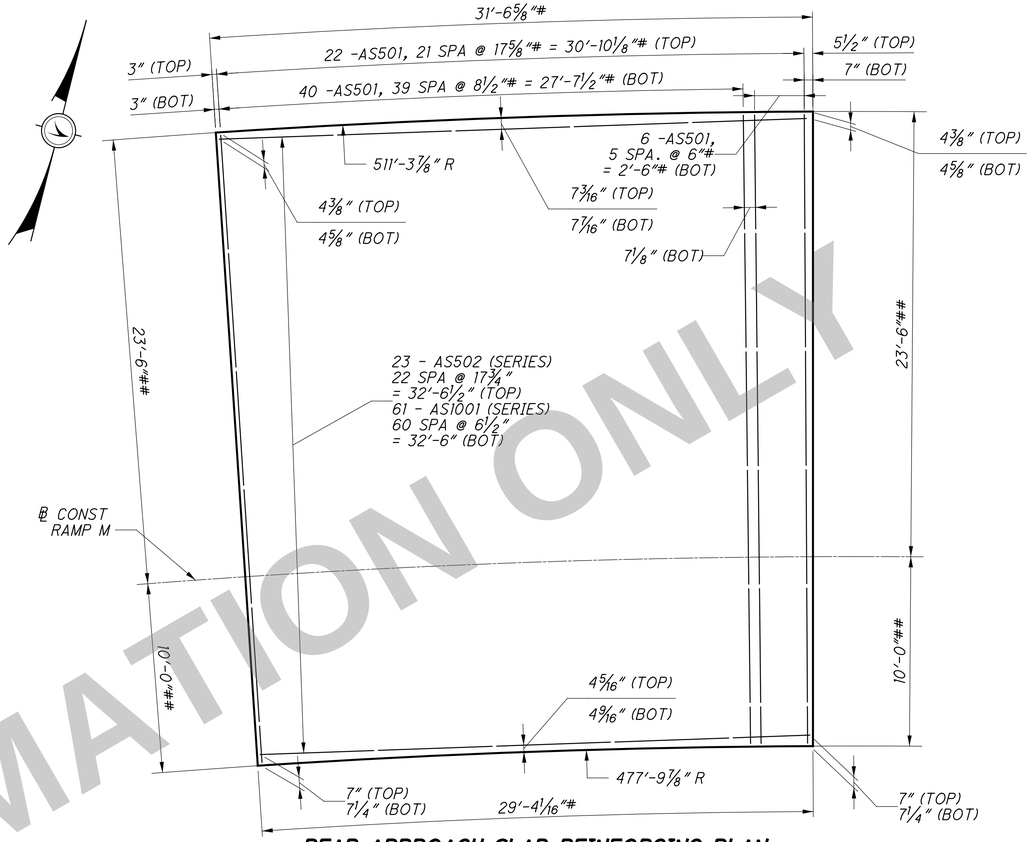
55/64

1323
2017

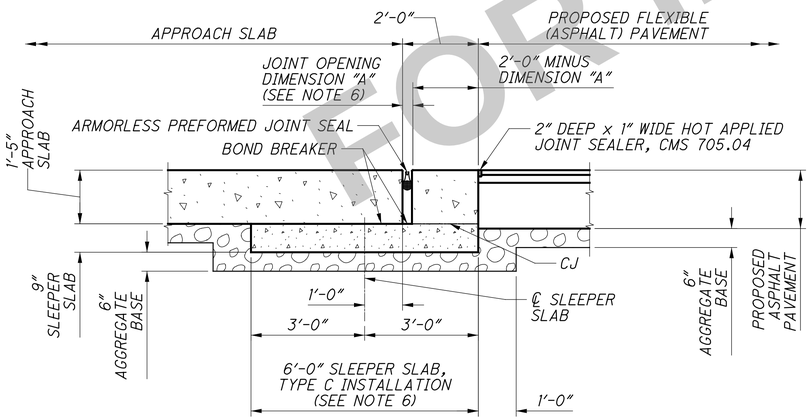
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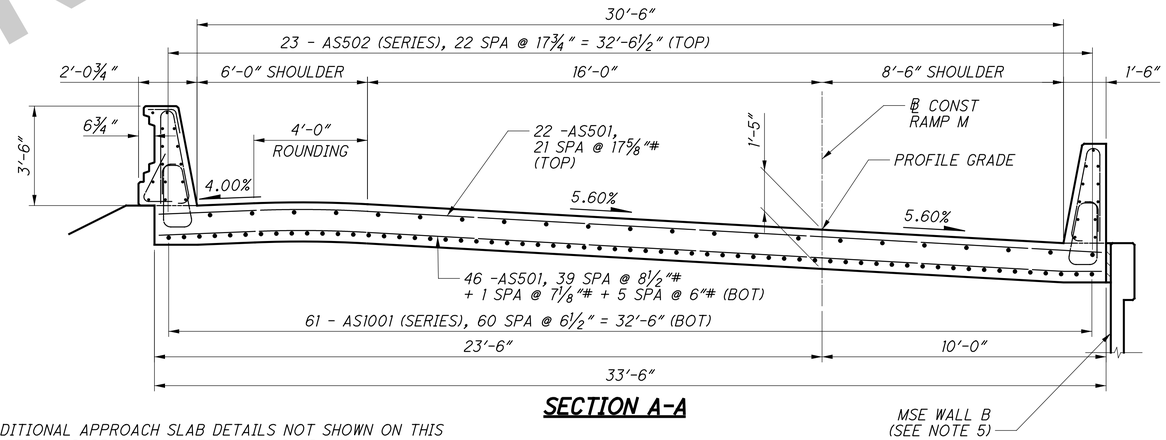
REAR APPROACH SLAB PLAN



REAR APPROACH SLAB REINFORCING PLAN



SECTION B-B



SECTION A-A

NOTES

1. FOR ADDITIONAL APPROACH SLAB DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWING AS-1-15.
2. ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO CONSTRUCT THE APPROACH SLAB AS SHOWN ON THIS SHEET AND AS-1-15 SHALL BE INCLUDED WITH ITEM 526 FOR PAYMENT.
3. AS501 BARS SHALL BE PLACED RADIALLY.
4. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
5. SEE MSE WALL B SHEET 1037/2017 FOR MOMENT SLAB DETAILS.
6. SEE STD DWG AS-2-15 FOR EXPANSION JOINT OPENING DIMENSIONS AND OTHER APPROACH SLAB INSTALLATION DETAILS NOT SHOWN.

LEGEND

- DIMENSION MEASURED ALONG THE LEFT OR RIGHT EDGE OF APPROACH SLAB

- DIMENSION MEASURED RADIALLY

(X) - APPROACH SLAB SURFACE ELEVATION LOCATION NO. "X"

⟨X⟩ - SLEEPER SLAB SURFACE ELEVATION LOCATION NO. "X"

FOR INFORMATION ONLY

DESIGN AGENCY
EMH&T
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DESIGNED	DRAWN	REVIEWED	DATE
RMW	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RJE	-	3113787	

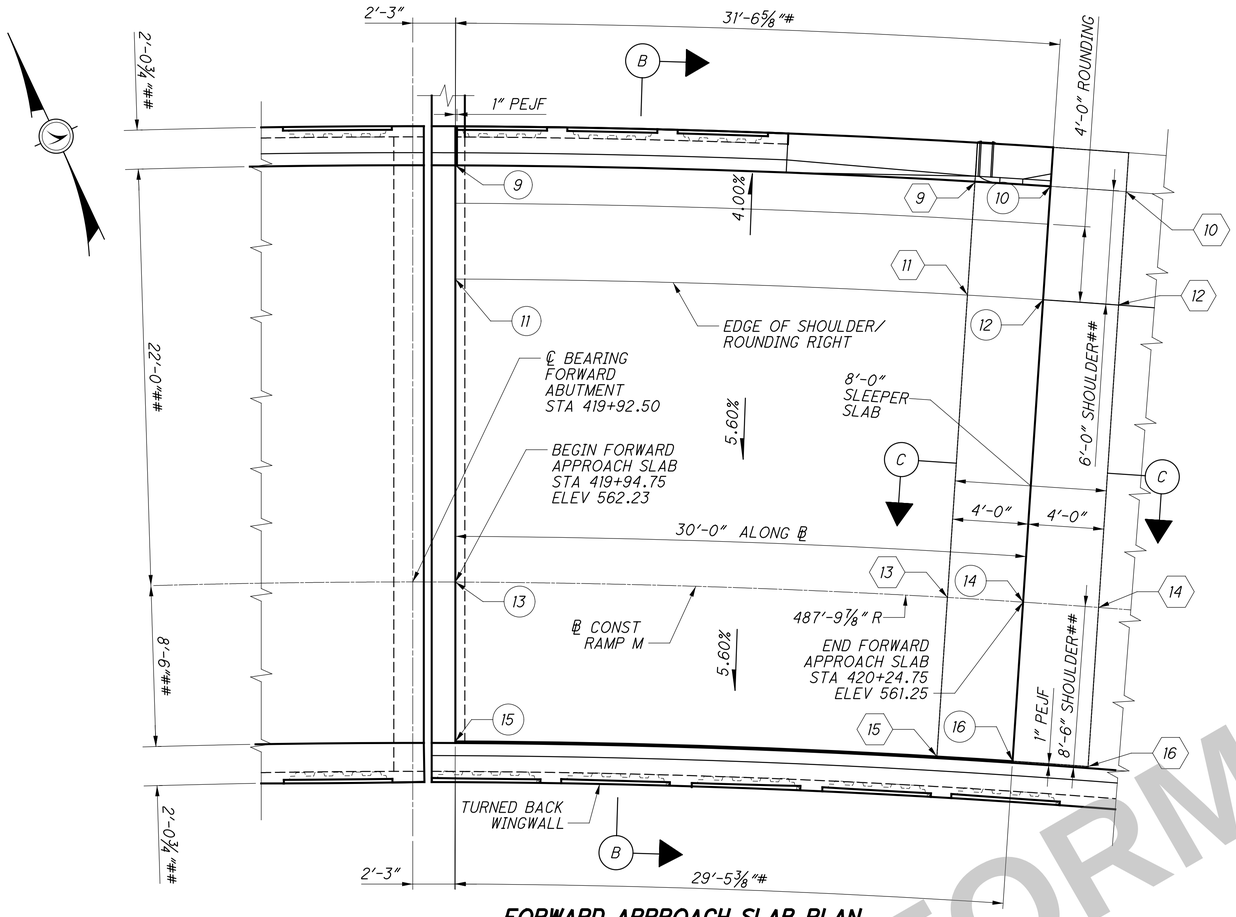
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BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

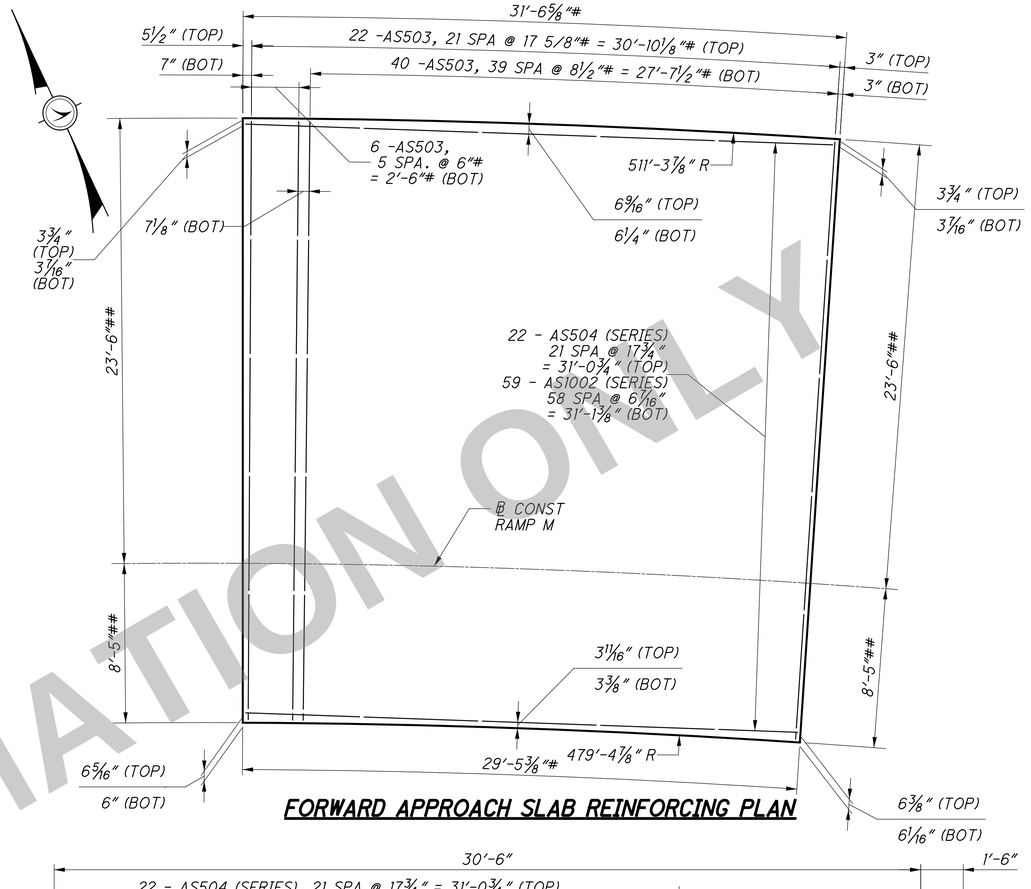
56/64

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FORWARD APPROACH SLAB PLAN



FORWARD APPROACH SLAB REINFORCING PLAN

APPROACH SLAB SURFACE ELEVATIONS			
MARK	STATION	OFFSET	ELEVATION
1	416+26.45	22.00' LT	558.38
2	416+56.55	22.00' LT	559.92
3	416+26.45	16.00' LT	558.43
4	416+56.52	16.00' LT	559.96
5	416+26.45	NONE	557.53
6	416+56.45	NONE	559.07
7	416+26.45	8.50' RT	557.06
8	416+56.41	8.50' RT	558.59
9	419+94.65	22.00' LT	563.08
10	420+24.75	22.00' LT	562.10
11	419+94.68	16.00' LT	563.12
12	420+24.75	16.00' LT	562.15
13	419+94.75	NONE	562.23
14	420+24.75	NONE	561.25
15	419+94.79	8.46' RT	561.75
16	420+24.75	8.53' RT	560.78

SLEEPER SLAB SURFACE ELEVATIONS			
MARK	STATION	OFFSET	ELEVATION
1	416+24.54	22.00' LT	556.86
2	416+30.28	22.00' LT	557.17
3	416+24.51	16.00' LT	556.90
4	416+30.32	16.00' LT	557.22
5	416+24.45	NONE	556.01
6	416+30.45	NONE	556.33
7	416+24.41	8.50' RT	555.53
8	416+30.52	8.50' RT	555.86
9	420+20.92	22.00' LT	560.82
10	420+28.58	22.00' LT	560.55
11	420+20.88	16.00' LT	560.87
12	420+28.62	16.00' LT	560.59
13	420+20.75	NONE	559.98
14	420+28.75	NONE	559.69
15	420+20.68	8.62' RT	559.51
16	420+28.82	8.43' RT	559.21

LEGEND

- DIMENSION MEASURED ALONG THE LEFT OR RIGHT EDGE OF APPROACH SLAB

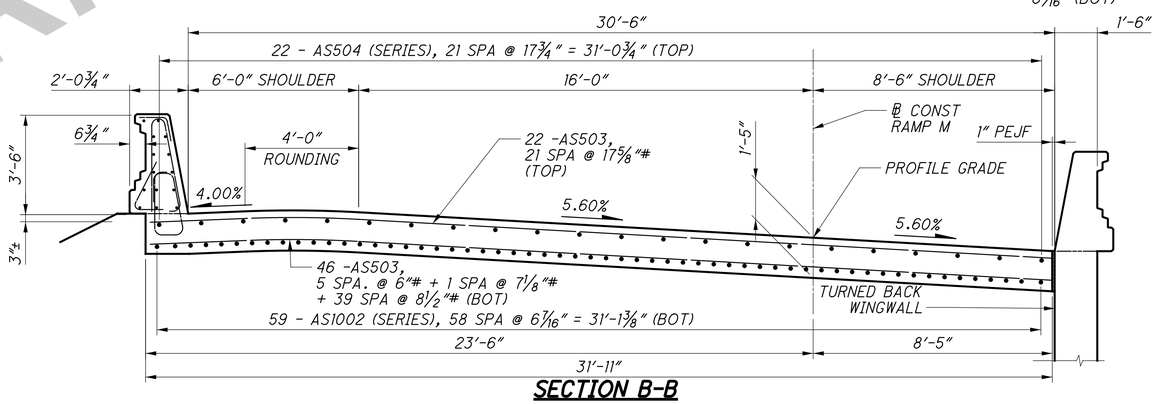
- DIMENSION MEASURED RADIALLY

(X) - APPROACH SLAB SURFACE ELEVATION LOCATION NO. "X"

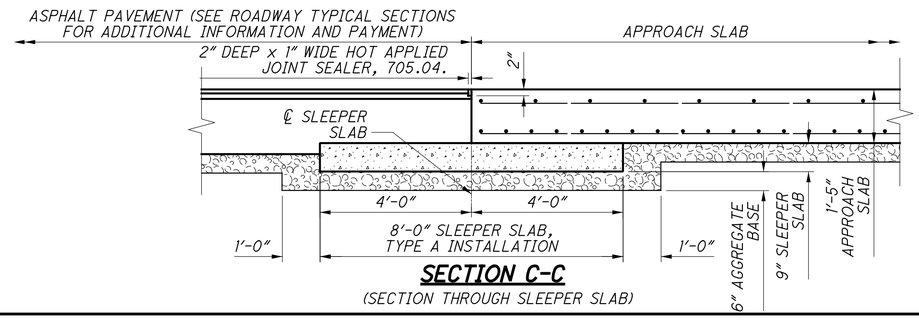
⬡X⬡ - SLEEPER SLAB SURFACE ELEVATION LOCATION NO. "X"

NOTES

1. FOR ADDITIONAL APPROACH SLAB DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWING AS-1-15.
2. ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO CONSTRUCT THE APPROACH SLAB AS SHOWN ON THIS SHEET AND AS-1-15 SHALL BE INCLUDED WITH ITEM 526 FOR PAYMENT.
3. BARS AS503 PLACED RADIALLY.
4. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.



SECTION B-B



SECTION C-C

(SECTION THROUGH SLEEPER SLAB)

FOR INFORMATION ONLY

DESIGN AGENCY: EMH&T
DESIGNED: RMW | DRAWN: GB | REVIEWED: CAS | DATE: 12-15-21
CHECKED: RJE | REVISED: - | STRUCTURE FILE NUMBER: 3113787

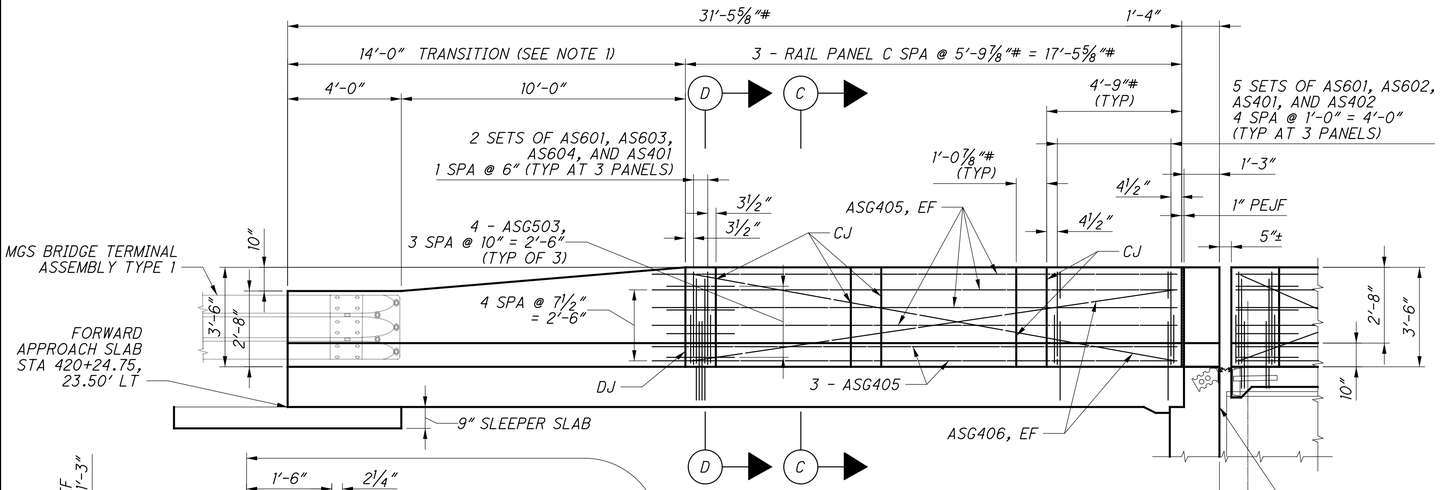
FORWARD APPROACH SLAB DETAILS
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

57 / 64

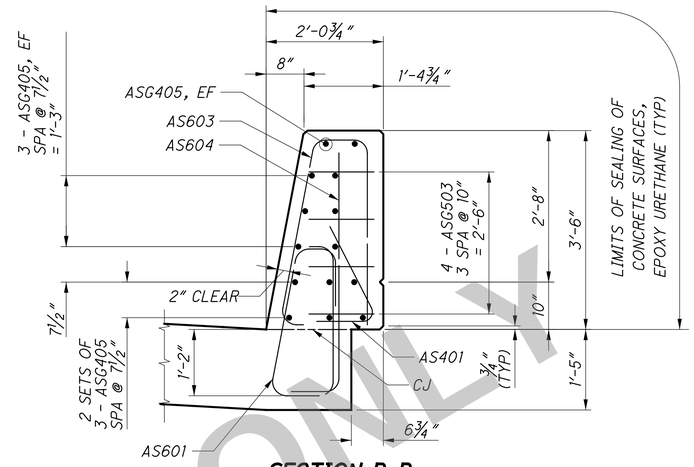
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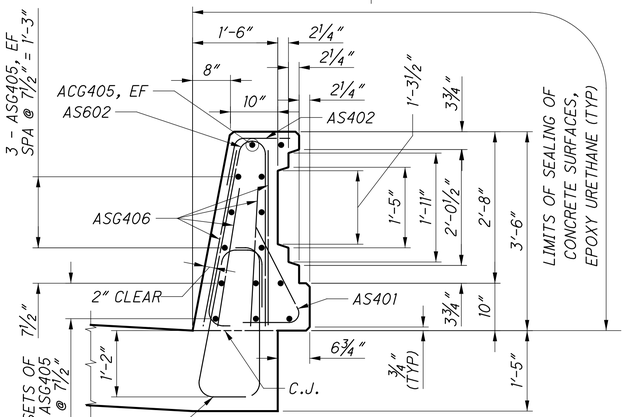


FORWARD APPROACH SLAB LEFT PARAPET ELEVATION

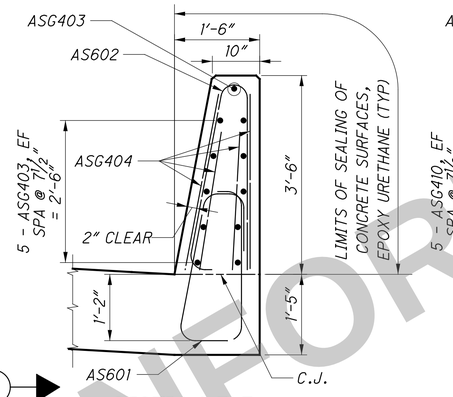
LOOKING AT EXTERIOR FACE OF PARAPET



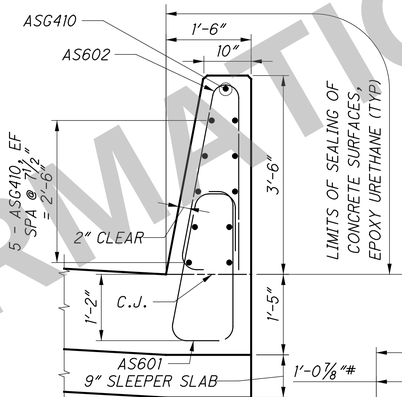
SECTION D-D



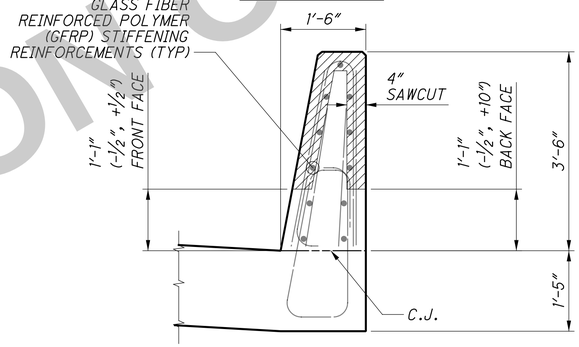
SECTION C-C



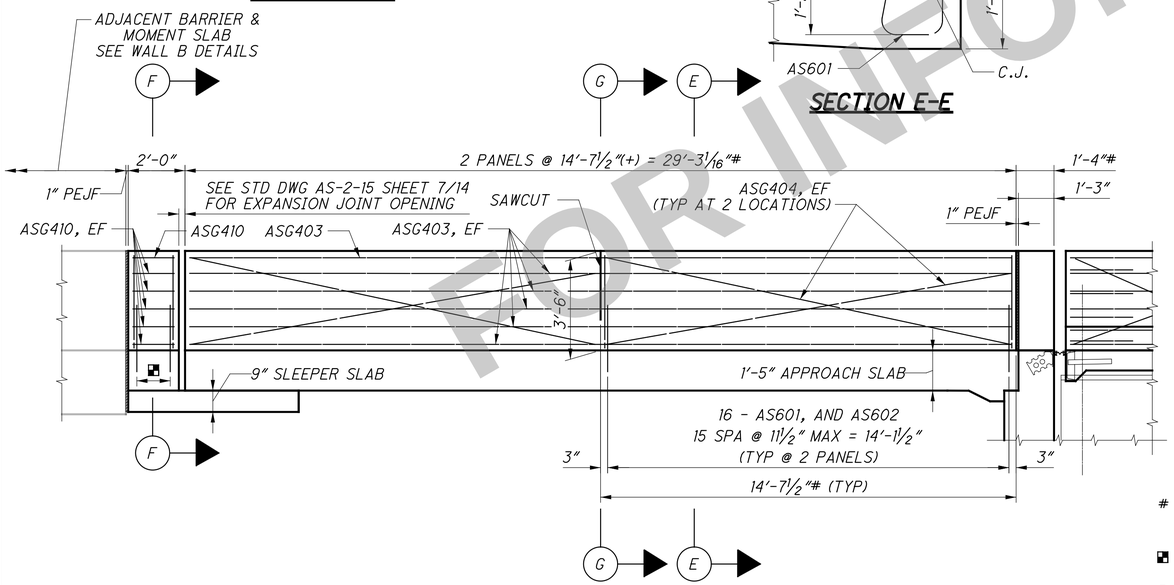
SECTION E-E



SECTION F-F

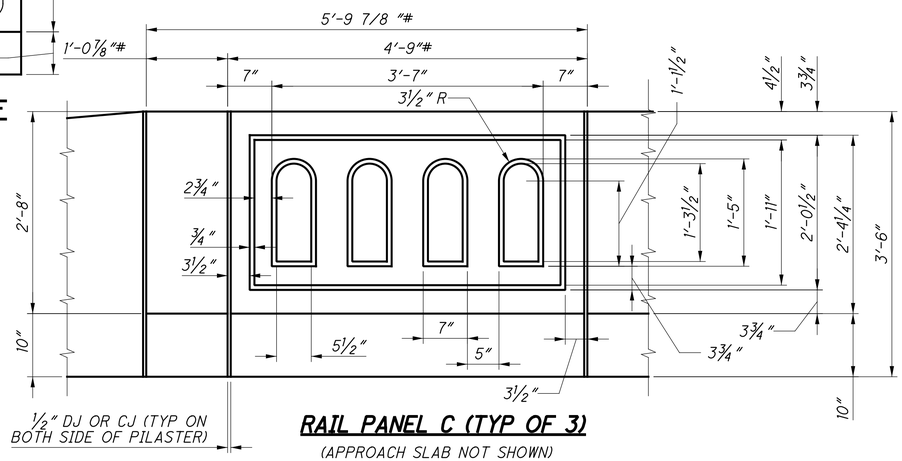


SECTION G-G (SAWCUT)



REAR APPROACH SLAB RIGHT PARAPET ELEVATION

LOOKING AT EXTERIOR FACE OF PARAPET



RAIL PANEL C (TYP OF 3)

(APPROACH SLAB NOT SHOWN)

LEGEND

- DIMENSION MEASURED ALONG THE LEFT OR RIGHT EDGE OF APPROACH SLAB

▪ - 3 - AS601, AND AS602, 2 SPA @ 9" = 1'-6"

DJ - DEFLECTION JOINT, DETAILS SEE SHEET 60/64

CJ - CONTRACTION JOINT, DETAILS SEE SHEET 60/64

NOTES

1. FOR PARAPET TRANSITION DETAILS, SEE SHEET 60/64
2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
3. FOR ADDITIONAL PARAPET DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWING SBR-1-20.

FOR INFORMATION ONLY

DESIGN AGENCY: EMH&T
DESIGNED: RMW
DRAWN: GB
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DATE: 12-15-21
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STRUCTURE FILE NUMBER: 3113787

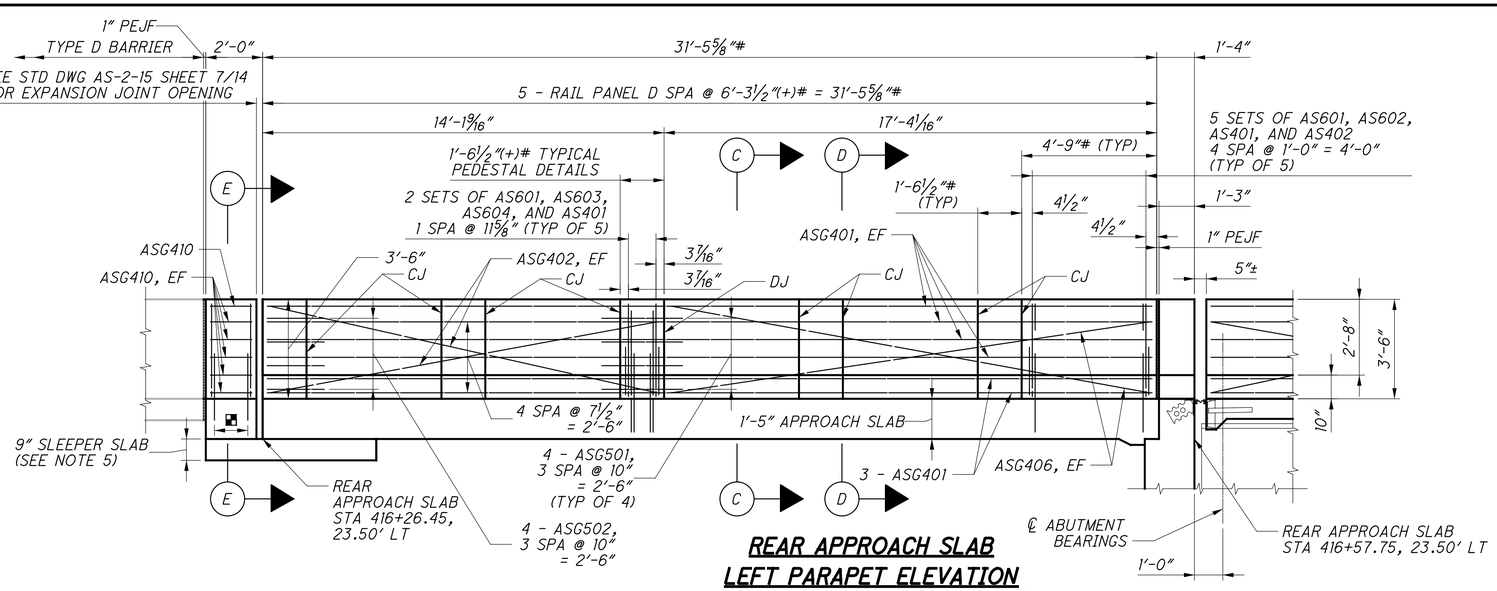
APPROACH SLAB PARAPET DETAILS
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

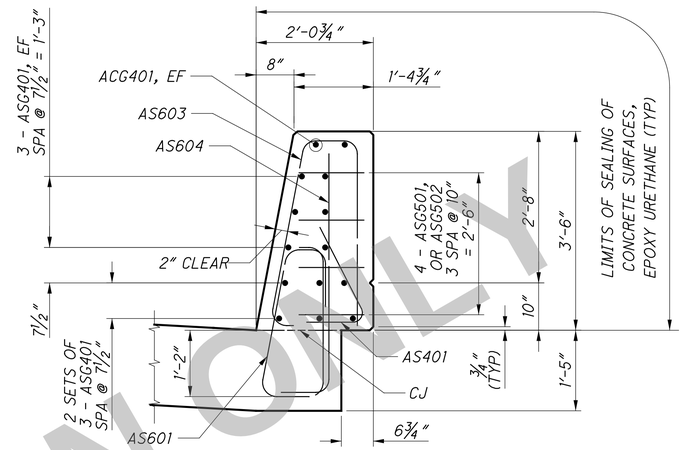
58/64

1326/2017

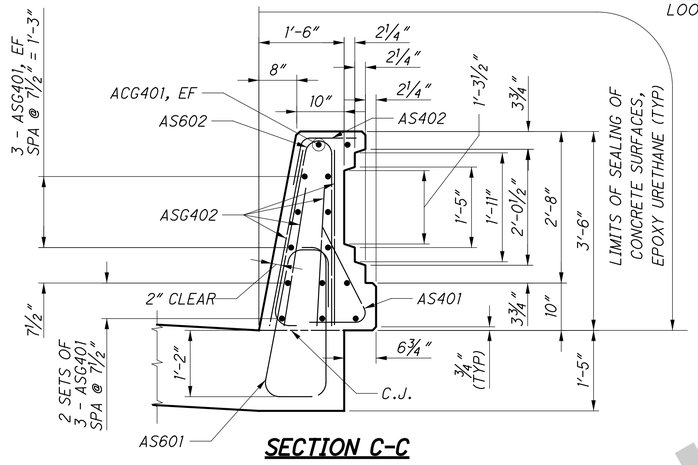
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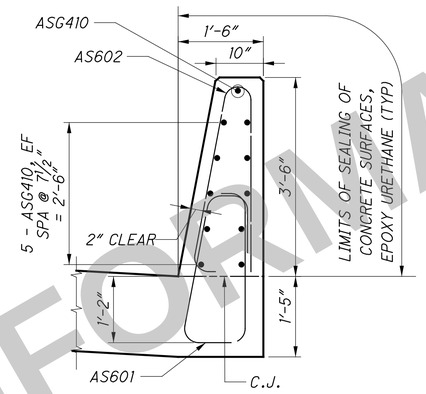
REAR APPROACH SLAB
LEFT PARAPET ELEVATION
LOOKING AT INTERIOR FACE OF PARAPET



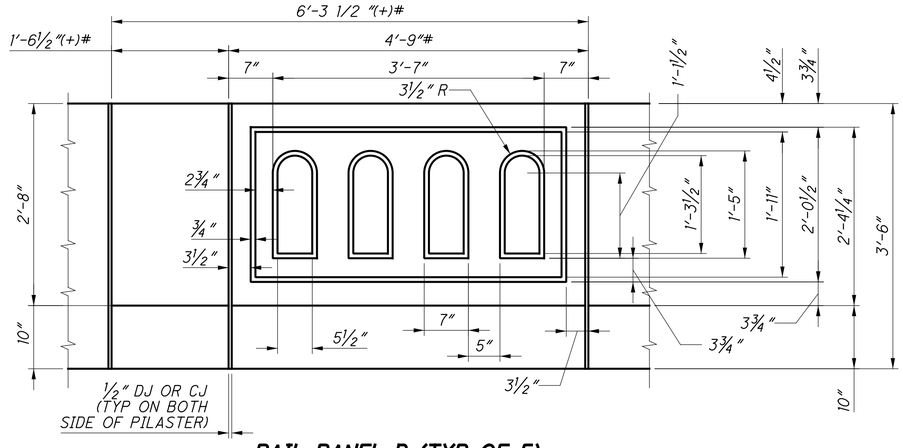
SECTION D-D



SECTION C-C



SECTION E-E



RAIL PANEL D (TYP OF 5)
(APPROACH SLAB NOT SHOWN)

LEGEND

 # - DIMENSION MEASURED ALONG THE LEFT OR RIGHT EDGE OF APPROACH SLAB

■ *- 3 - AS601, AND AS602, 2 SPA @ 9" = 1'-6"*

DJ - DEFLECTION JOINT, DETAILS SEE SHEET 60/64

CJ - CONTRACTION JOINT, DETAILS SEE SHEET 60/64

NOTES

1. *ELEVATION VIEW LOOKING AT EXTERIOR FACE OF PARAPET.*
2. *FOR PARAPET TRANSITION DETAILS SEE SHEET* 60/64
3. *SEE GENERAL NOTES FOR ABBREVIATION LEGEND.*
4. *FOR ADDITIONAL PARAPET DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWINGS SBR-1-20, REVISIONS 07/17/20.*
5. *SEE SHEET* 56/64 *AND STD DWG AS-2-15 (TYPE C INSTALLATION) FOR ADDITIONAL SLEEPER SLAB DETAILS*

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DESIGN AGENCY
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DESIGNED	DRAWN	REVIEWED	DATE
RMW	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RJE	-	3113787	

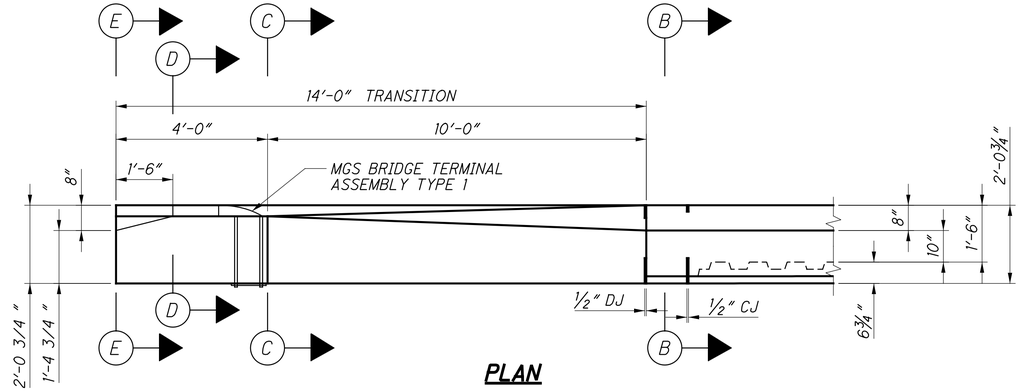
APPROACH SLAB PARAPET DETAILS
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

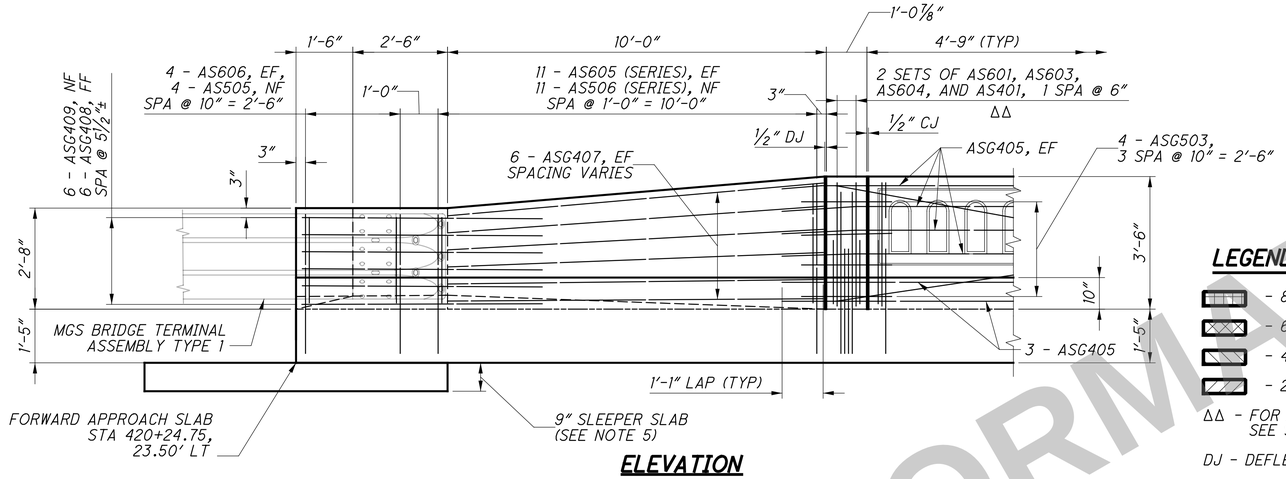
59/64

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2017

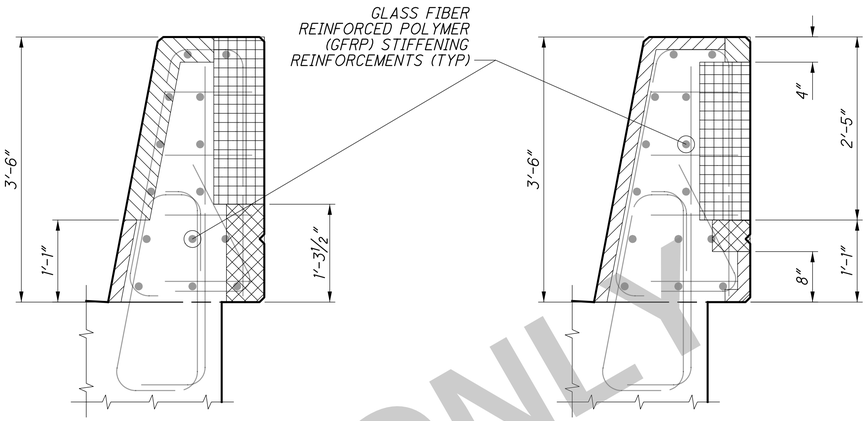
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PLAN



ELEVATION



DEFLECTION JOINT

(SEE NOTE 6)

CONTRACTION JOINT

(SEE NOTE 6)

LEGEND

- 8" WIDE PREFORMED JOINT MATERIAL
- 6" WIDE PREFORMED JOINT MATERIAL
- 4" WIDE PREFORMED JOINT MATERIAL
- 2" WIDE PREFORMED JOINT MATERIAL

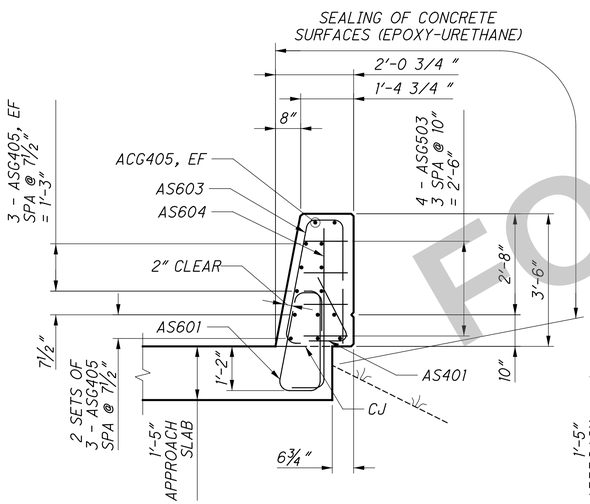
ΔΔ - FOR ADDITIONAL DETAILS SEE SHEET 58/64

DJ - DEFLECTION JOINT

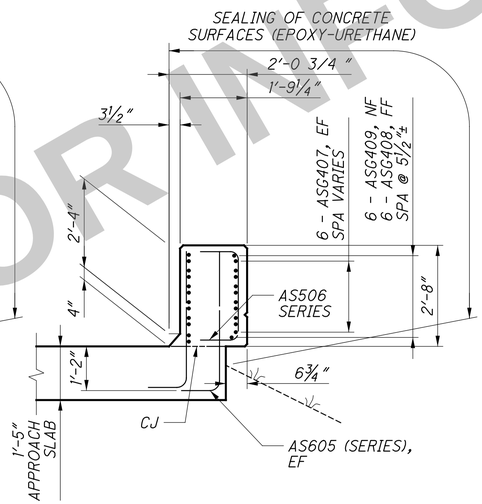
CJ - CONTRACTION JOINT

NOTES

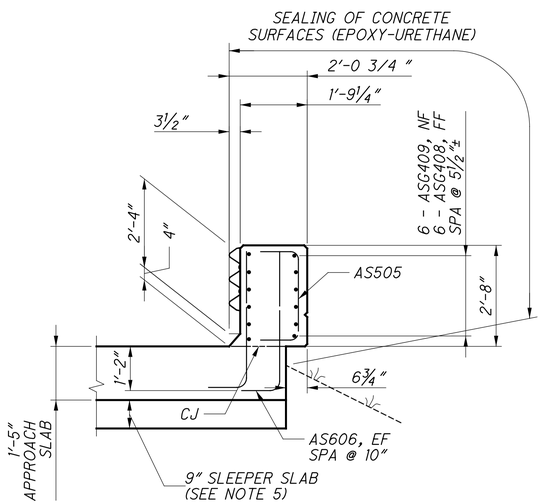
1. FOR ADDITIONAL PARAPET DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWINGS SBR-1-20, REVISIONS 07/17/20.
2. DIMENSION GIVEN ARE ALONG ARC OUTSIDE FACE OF BARRIER.
3. ELEVATION VIEW LOOKING AT EXTERIOR FACE OF PARAPET.
4. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
5. SEE SHEET 57/64 AND STD DWG AS-2-15 (TYPE A INSTALLATION) FOR ADDITIONAL SLEEPER SLAB DETAILS.
6. DEFLECTION JOINTS AND CONTRACTION JOINTS ARE TO BE CAST INTO THE PARAPETS AND HELD IN WITH CHAMFER STRIPS. THE EXCESS MATERIAL WILL BE TRIMMED TO THE BASE OF THE CHAMFER. THE MATERIAL THAT WILL BE USED NEEDS TO NOT ABSORB WATER AND AS SUFFICIENT RIGIDITY TO NOT SIGNIFICANTLY MOVE DURING THE CASTING OF THE PARAPET. THE JOINT MATERIAL IS TO BE 0.5" IN THICKNESS AND WILL BE NOMAFLEX BY NOMACO OR FIBER LITE BY W.R. MEADOWS OR SIMILAR PRODUCT APPROVED BY THE ENGINEER. THE GFRP FIBER SPLICE BARS THAT WERE SHOWN IN THE AS BID PLANS AND ARE INTENDED TO HOLD THE LONGITUDINAL BARS TOGETHER DURING SLIP FORMING ARE TO BE NON-PERFORMED.



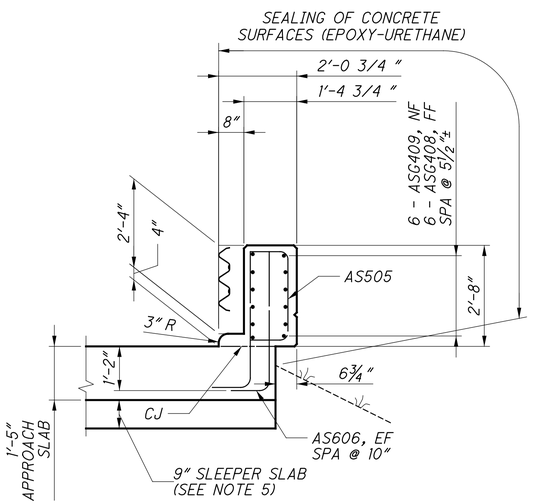
SECTION B-B



SECTION C-C



SECTION D-D



SECTION E-E

FOR INFORMATION ONLY

DESIGN AGENCY: EMH&T
DESIGNED: RMW
DRAWN: GB
CHECKED: RJE
REVIEWED: CAS
DATE: 12-15-21
REVISED: -
STRUCTURE FILE NUMBER: 3113787

FORWARD APPROACH SLAB PARAPET TRANSITION DETAILS
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

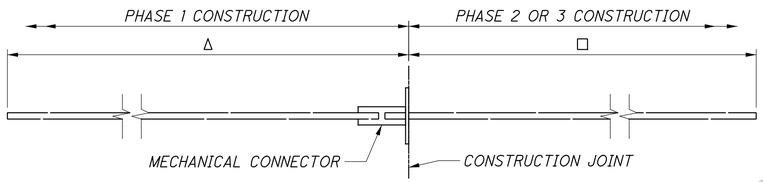
HAM-75-7.85
PID No. 77889

60/64

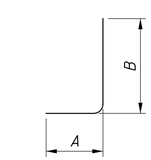
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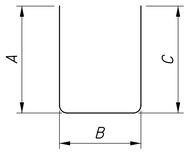
MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
SUPERSTRUCTURE REINFORCING STEEL											
S401	384	30'-0"	7695	STR							
S402	32	13'-4"	285	STR							
S403	828	2'-8"	1475	11	0'-9"	1'-8"	1'-1"				
S404	552	1'-9"	645	19	0'-11"	0'-2"	0'-11"				
S405	648	3'-1"	1335	2	1'-5"	0'-5"	1'-5"				
S501	444	30'-0"	13893	STR							
S502	37	19'-7"	756	STR							
S503	186	30'-0"	5820	STR							
S504	186	17'-8"	3427	STR							
S505	647	34'-4"	23169	17	33'-2"						
S506	647	33'-2"	22382	STR							
S507	1294	8'-6"	11472	16	7'-11"						
S601	828	7'-5"	9224	41	0'-9½"	0'-7"	1'-0"	2'-4"	1'-2½"		
S602	552	7'-0"	5804	39	0'-6"	3'-3"	3'-3"	1'-0½"		0'-2"	
S603	276	7'-6"	3109	40	0'-6"	3'-3"	3'-3"	1'-6½"			
S604	276	4'-8"	1935	1	1'-0"	3'-10"					
	SUB-TOTAL		112,426								



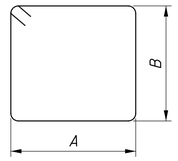
PLAN MECHANICAL CONNECTOR



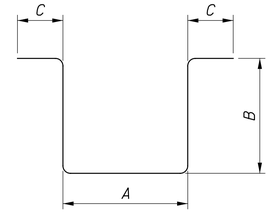
TYPE-1



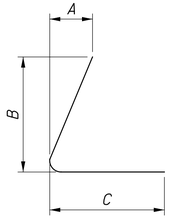
TYPE-2



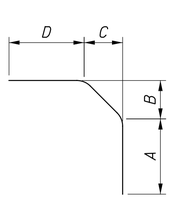
TYPE-3



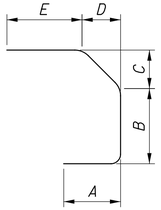
TYPE-6



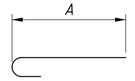
TYPE-11



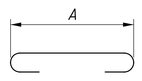
TYPE-13



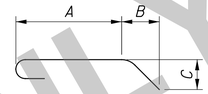
TYPE-14



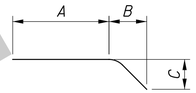
TYPE-16



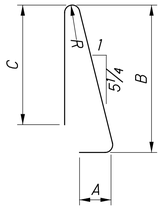
TYPE-17



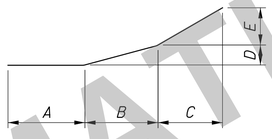
TYPE-18



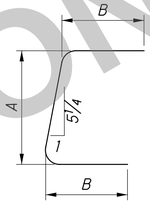
TYPE-19



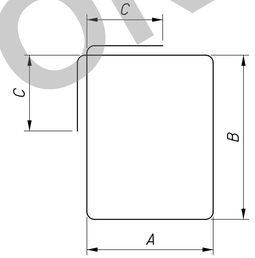
TYPE-23



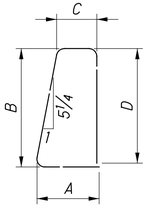
TYPE-25



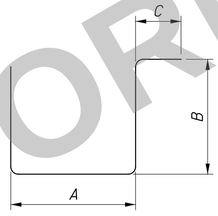
TYPE-28



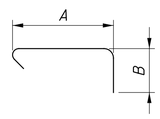
TYPE-33



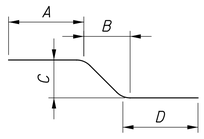
TYPE-35



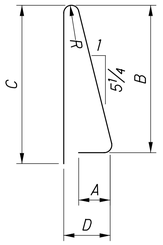
TYPE-36



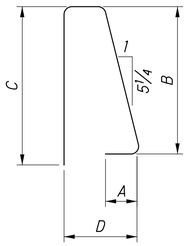
TYPE-37



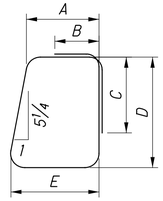
TYPE-38



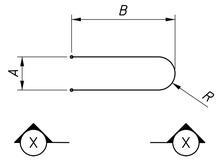
TYPE-39



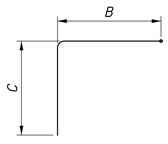
TYPE-40



TYPE-41



TYPE-42



VIEW X-X

LEGEND

Δ - INCLUDES MECHANICAL CONNECTOR ON ONE END.

□ - PLUS EXTENSION FOR MECHANICAL CONNECTOR.

◕ - AG4XX, AG5XX, SG4XX, SG5XX, ASG4XX, OR ASG5XX - GLASS FIBER REINFORCED POLYMER (GFRP) BAR.

NOTES

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE S601 IS A NO. 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT, UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD" WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.
2. UNLESS OTHERWISE NOTED, THE FOLLOWING LAP LENGTHS SHALL APPLY:
   #4 BARS: 1'-11", #5 BARS: 2'-5", #6 BARS: 2'-11"
3. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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Phone: 614.775.4500 www.emht.com

DESIGNED	DRAWN	REVIEWED	DATE
RMW	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RJE	-	3113787	

REINFORCING STEEL LIST
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

61 / 64

1329
2017

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MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FORWARD	TOTAL				A	B	C	D	E	R	INC
ABUTMENT REINFORCING STEEL													
A401		76	76	2′-8″	135	11	0′-9″	1′-8″	1′-1″				
A402		54	54	1′-9″	63	19	0′-11″	0′-2″	0′-11″				
A501	29		29	7′-7″	229	2	0′-10″	6′-2″	0′-10″				
A502	2 SR OF 7		2 SR OF 7	10′-5″ TO 12′-2″	165	STR							0′-3 ½″
A503	2 SR OF 8		2 SR OF 8	7′-10″ TO 9′-11″	148	STR							0′-3 ½″
A504	5		5	17′-10″	93	2	7′-4″	3′-5″	7′-4″				
A505	4		4	18′-8″	78	2	7′-9″	3′-5″	7′-9″				
A506	5		5	19′-2″	100	2	8′-0″	3′-5″	8′-0″				
A507	8		8	20′-0″	167	2	8′-5″	3′-5″	8′-5″				
A508	22		22	6′-2″	142	2	1′-6″	3′-5″	1′-6″				
A509	2		2	15′-9″	33	19	0′-11″	14′-3″	4′-3″				
A510	10		10	33′-2″	346	STR							
A511	8		8	33′-4″	278	STR							
A512	1		1	18′-9″	20	STR							
A513	1		1	18′-11″	20	STR							
A514	4		4	15′-2″	63	STR							
A515	4		4	15′-4″	64	STR							
A516	1 SR OF 4		1 SR OF 4	6′-4″ TO 10′-6″	35	STR							1′-4 ¾″
A517		36	36	6′-6″	244	2	1′-8″	3′-5″	1′-8″				
A518		5	5	9′-2″	48	STR							
A519		10	10	9′-9″	102	1	0′-10″	9′-1″					
A520		5	5	12′-11″	67	1	0′-10″	12′-3″					
A521		14	14	33′-2″	484	STR							
A522		2	2	15′-1″	31	19	3′-10″	10′-0″	5′-3″				
A523		60	60	8′-11″	558	14	3′-5″	1′-3″	1′-4″	1′-4″	2′-7″		
A524		2 SR OF 5	2 SR OF 5	6′-6″ TO 13′-11″	106	STR							1′-10 ¼″
A525		15	15	8′-4″	130	14	3′-5″	1′-6″	0′-7″	0′-10″	2′-7″		
A526		24	24	8′-3″	207	17	7′-1″						
A527		24	24	9′-8″	242	1	4′-11″	4′-11″					
A528	15	8	23	0′-11″	22	STR							
A529	2	2	4	8′-5″	35	35	1′-7″	3′-2″	1′-0″	3′-0″			
A530	2		2	7′-4″	15	23	0′-11″	3′-3″	3′-0″			0′-3″	
A531	15		15	10′-11″	171	1	0′-10″	10′-3″					
A532	5		5	12′-3″	64	1	0′-10″	11′-7″					
A533	NOT USED												
A534	NOT USED												
A535	NOT USED												
A536		12	12	6′-0″	75	STR							
A601	6		6	10′-6″	95	33	1′-8″	3′-0″	1′-0″				
A602	4		4	4′-4″	26	1	1′-7″	2′-11″					
A603	29		29	11′-0″	479	2	2′-7″	6′-2″	2′-7″				
A604	34	34	68	11′-1″	1132	2	5′-0″	1′-5″	5′-0″				
A605	34	34	68	10′-9″	1098	2	4′-10″	1′-5″	4′-10″				
A606	7		7	6′-6″	68	1	1′-0″	5′-8″					
A607		51	51	13′-4″	1021	38	4′-7″	3′-0″	3′-0″	4′-7″			
A608		14	14	11′-1″	233	38	2′-6″	3′-0″	3′-0″	4′-5″			
A609		31	31	6′-10″	318	STR							
A610		17	17	9′-7″	245	1	5′-0″	4′-9″					
A611		47	47	18′-1″	1277	1	5′-0″	13′-3″					
A612		51	51	12′-2″	932	STR							
A613		43	43	10′-2″	657	STR							

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FORWARD	TOTAL				A	B	C	D	E	R	INC
ABUTMENT REINFORCING STEEL (CONTINUED)													
A614		11	11	26′-10″	443	1	5′-0″	22′-0″					
A615		9	9	15′-4″	207	STR							
A616		13	13	21′-10″	426	1	5′-0″	17′-0″					
A617		9	9	17′-3″	233	38	4′-7″	3′-0″	3′-0″	8′-6″			
A618		1	1	7′-8″	12	STR							
A619		3	3	9′-0″	41	STR							
A620		104	104	5′-10″	911	1	1′-0″	5′-0″					
A621		24	24	18′-6″	667	STR							
A622		10	10	15′-10″	238	STR							
A623		10	10	13′-6″	203	STR							
A624		12	12	10′-8″	192	STR							
A625	34	34	68	7′-5″	758	2	3′-5″	0′-11″	3′-5″				
A626		6	6	10′-9″	97	STR							
A627		6	6	20′-3″	182	STR							
A628		6	6	29′-9″	268	STR							
A629		20	20	33′-2″	996	STR							
A630		2	2	19′-5″	58	STR							
A631		5	5	11′-5″	86	2	5′-2″	1′-5″	5′-2″				
A632		18	18	6′-1″	164	STR							
A633		1 SR OF 4	1 SR OF 4	8′-7″ TO 11′-7″	61	2	3′-9″ TO 5′-3″	1′-5″	3′-9″ TO 5′-3″				0′-6″
A634		1 SR OF 7	1 SR OF 7	7′-8″ TO 13′-0″	109	2	2′-11″ TO 5′-7″	2′-2″	2′-11″ TO 5′-7″				0′-5 ¼″
A635		10	10	14′-0″	210	STR							
A636		14	14	6′-0″	126	STR							
A637		2 SR OF 3	2 SR OF 3	9′-5″ TO 14′-0″	106	STR							2′-3 ½″
A638		12	12	7′-6″	135	STR							
A639		2	2	9′-7″	29	STR							
A640		6	6	11′-4″	102	STR							
A641		6	6	20′-11″	189	STR							
A642		40	40	34′-2″	2053	STR							
A643		23	23	9′-6″	328	STR							
A644		32	32	26′-3″	1262	STR							
A645		2	2	10′-11″	33	STR							
A646		12	12	10′-2″	183	STR							
A647		2 SR OF 3	2 SR OF 3	4′-8″ TO 10′-2″	67	STR							2′-9″
A648		1 SR OF 8	1 SR OF 8	8′-0″ TO 13′-4″	128	2	3′-7″ TO 6′-3″	1′-2″	3′-7″ TO 6′-3″				0′-4½″
A649		66	66	8′-6″	843	2	3′-10″	1′-2″	3′-10″				
A650		116	116	8′-7″	1495	STR							
A651	4	2	6	3′-8″	33	28	1′-8″	1′-2″					
A652	4		4	2′-6″	15	1	1′-0″	1′-8″					
A653	NOT USED												
A654		70	70	2′-11″	307	STR							
A655		6	6	10′-5″	94	33	1′-8″	2′-11″	1′-0″				
A656		4	4	4′-3″	26	1	1′-7″	2′-10″					
A657		14	14	4′-7″	96	STR							
A658		10	10	15′-6″	233	STR							
A659		15	15	12′-6″	282	STR							
A660		76	76	8′-3″	942	41	0′-9½″	0′-7″	1′-0″	2′-9″	1′-3½″		
A661		54	54	7′-0″	568	39	0′-6″	3′-3″	3′-3″	1′-0½″		0′-2″	
A662		22	22	7′-6″	248	40	0′-6″	3′-3″	3′-3″	1′-6½″			
A663		22	22	5′-1″	168	1	1′-0″	4′-3″					

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DESIGNED	DRAWN	REVIEWED	DATE
RMW	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RJE	-	3113787	

REINFORCING STEEL LIST

BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

1330
2017

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FORWARD	TOTAL				A	B	C	D	E	R	INC
ABUTMENT REINFORCING STEEL (CONTINUED)													
A701		36	36	7'-5"	546	1	1'-2"	6'-5"					
A702		17	17	13'-6"	469	STR							
A703		19	19	10'-9"	417	STR							
A801	10		10	33'-4"	890	STR							
A802	10		10	7'-4"	196	STR							
A803	23	22	45	5'-2"	621	18	3'-0"	1'-0"	1'-0"				
A804		14	14	20'-8"	773	STR							
A805		29	29	18'-1"	1400	STR							
A806		33	33	17'-11"	1579	STR							
A807		29	29	13'-9"	1065	STR							
A808		22	22	12'-2"	715	STR							
A809		69	69	9'-0"	1658	1	1'-4"	7'-11"					
A810		19	19	14'-0"	710	STR							
A811		27	27	11'-0"	793	STR							
A812		23	23	8'-0"	491	STR							
A901	4	2	6	3'-5"	70	STR							
A902	10		10	4'-3"	144	1	1'-7"	2'-11"					
A903		56	56	10'-3"	1952	1	1'-7"	8'-11"					
A904		19	19	18'-8"	1206	STR							
A905		17	17	16'-1"	930	STR							
A906		10	10	4'-1"	139	1	1'-7"	2'-9"					
A907		20	20	17'-0"	1156	STR							
				SUB-TOTAL	46,934								

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FORWARD	TOTAL				A	B	C	D	E	R	INC
PIER REINFORCING STEEL													
P401	162		162	3'-8"	397	37	2'-8"	0'-8"					
P402		136	136	4'-2"	379	37	3'-2"	0'-8"					
P501	2 SR OF 36		2 SR OF 36	12'-6" TO 29'-2"	1564	3	2'-4"	3'-7" TO 11'-11"					0'-2¾"
P502	6		6	29'-2"	183	3	2'-4"	11'-11"					
P503	6		6	28'-2"	176	3	2'-4"	11'-5"					
P504	6		6	27'-8"	173	3	2'-4"	11'-2"					
P505	2 SR OF 13		2 SR OF 13	22'-10" TO 27'-8"	685	3	2'-4"	8'-9" TO 11'-2"					0'-2½"
P506	2 SR OF 23		2 SR OF 23	12'-4" TO 22'-4"	832	3	2'-4"	3'-6" TO 8'-6"					0'-2¾"
P507	6	74	80	7'-9"	647	2	2'-5"	3'-2"	2'-5"				
P508	54		54	7'-3"	408	2	2'-5"	2'-8"	2'-5"				
P509	54		54	15'-8"	882	STR							
P510		2 SR OF 18	2 SR OF 18	10'-10" TO 23'-10"	651	3	2'-4"	2'-9" TO 9'-3"					0'-4½"
P511		4	4	23'-10"	99	3	2'-4"	9'-3"					
P512		8	8	23'-0"	192	3	2'-4"	8'-10"					
P513		4	4	22'-4"	93	3	2'-4"	8'-6"					
P514		2 SR OF 6	2 SR OF 6	18'-8" TO 21'-10"	253	3	2'-4"	6'-8" TO 8'-3"					0'-3¾"

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FORWARD	TOTAL				A	B	C	D	E	R	INC
PIER REINFORCING STEEL (CONTINUED)													
P515		2 SR OF 12	2 SR OF 12	10'-10" TO 17'-8"	357	3	2'-4"	2'-9" TO 6'-2"					0'-3¾"
P516		68	68	13'-8"	969	STR							
P517	10		10	10'-8"	111	1	0'-10"	10'-0"					
P518	5		5	12'-2"	63	1	0'-10"	11'-6"					
P519	5		5	16'-7"	86	1	0'-10"	15'-11"					
P520		10	10	9'-11"	103	1	0'-10"	9'-3"					
P521		5	5	8'-11"	47	1	0'-10"	8'-3"					
P522		5	5	12'-11"	67	1	0'-10"	12'-3"					
P601	2		2	11'-9"	35	STR							
P602	2		2	34'-0"	102	STR							
P603	2		2	39'-8"	119	STR							
P604	2		2	39'-3"	118	STR							
P605	2		2	37'-10"	114	STR							
P606	2 SR OF 6		2 SR OF 6	19'-5" TO 34'-10"	489	STR							3'-1"
P607	20		20	31'-0"	931	2	3'-10"	23'-8"	3'-10"				
P608	26		26	20'-0"	781	2	3'-10"	12'-8"	3'-10"				
P609		2	2	15'-5"	46	STR							
P610		2	2	31'-8"	95	STR							
P611		2	2	31'-1"	93	STR							
P612		2 SR OF 5	2 SR OF 5	17'-3" TO 29'-3"	349	STR							3'-0"
P613		18	18	33'-6"	906	2	4'-4"	25'-2"	4'-4"				
P614		31	31	24'-0"	1117	2	4'-4"	15'-8"	4'-4"				
P615	12		12	15'-2"	273	33	3'-11"	3'-1"	1'-0"				
P616	8		8	4'-7"	55	1	1'-7"	3'-2"					
P617	NOT USED												
P618	NOT USED												
P619		40	40	5'-11"	355	42	0'-6"	1'-9"	1'-3"				0'-3"
P701	4		4	21'-6"	176	13	3'-5"	8'-5"	11'-10"	3'-8"			
P702	4		4	16'-0"	131	STR							
P703	4		4	20'-9"	170	13	3'-5"	7'-1"	11'-10"	3'-8"			
P704		4	4	17'-3"	141	13	2'-8"	6'-6"	8'-10"	3'-8"			
P705		4	4	14'-0"	114	STR							
P706		4	4	16'-7"	136	13	2'-8"	5'-4"	8'-10"	3'-8"			
P801	84		84	32'-8"	7326	STR							
P802	84		84	9'-1"	2037	1	1'-4"	8'-0"					
P901	16		16	42'-2"	2294	17	39'-8"						
P902	NOT USED												
P903		12	12	34'-2"	1394	17	31'-8"						
P904		128	128	23'-5"	10191	STR							
P905		64	64	11'-1"	2412	1	1'-7"	9'-9"					
P906	NOT USED												
P907	8		8	4'-0"	109	STR							
P908	28		28	4'-6"	428	1	1'-7"	3'-2"					
P909	NOT USED												
P910	NOT USED												
P1001	NOT USED												
P1002	36		36	19'-8"	3047	2	3'-10"	12'-8"	3'-10"				
P1003	17		17	30'-8"	2243	2	3'-10"	23'-8"	3'-10"				
P1004		34	34	23'-8"	3462	2	4'-4"	15'-8"	4'-4"				
P1005		20	20	33'-2"	2854	2	4'-4"	25'-2"	4'-4"				
				SUB-TOTAL	54,060								

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DESIGN AGENCY
EMH&T
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, Ohio 43054
Phone: 614.775.4500 www.emht.com

DESIGNED	DRAWN	REVIEWED	DATE
RMW	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RJE	-	3113787	

REINFORCING STEEL LIST
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

1331
2017

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FORWARD	TOTAL				A	B	C	D	E	R	INC
APPROACH SLAB REINFORCING STEEL*													
AS401	35	21	56	2′-8″	100	11	0′-9″	1′-8″	1′-1″				
AS402	25	15	40	1′-9″	47	19	0′-11″	0′-2″	0′-11″				
AS501	68		68	33′-2″	2352	STR							
AS502	1 SR OF 23		1 SR OF 23	28′-10″ TO 31′-1½″	719	STR							0′-1¼″
AS503		68	68	31′-7″	2240	STR							
AS504		1 SR OF 22	1 SR OF 22	28′-11¼″ TO 31′-1½″	689	STR							0′-1¼″
AS505		4	4	4′-1″	17	2	1′-0″	2′-4″	1′-0″				
AS506		1 SR OF 11	1 SR OF 11	4′-1″ TO 4′-11″	52	2	1′-0″	2′-4″ TO 3′-2″	1′-0″				0′-1″
AS601	73	21	94	8′-3″	1164	41	0′-9½″	0′-7″	1′-0″	2′-9″	1′-3½″		
AS602	63	15	78	7′-0″	820	39	0′-6″	3′-3″	3′-3″	1′-0½″		0′-2″	
AS603	10	6	16	7′-6″	180	40	0′-6″	3′-3″	3′-3″	1′-6½″			
AS604	10	6	16	5′-1″	122	1	1′-0″	4′-3″					
AS605		2 SR OF 11	2 SR OF 11	4′-6″ TO 5′-4″	162	1	1′-0″	3′-8″ TO 4′-6″					0′-1″
AS606		8	8	4′-6″	54	1	1′-0″	3′-8″					
AS1001	1 SR OF 61		1 SR OF 61	30′-4″ TO 32′-6″	8246	16	28′-10½″ TO 31′-0¾″						0′-0 7/16″
AS1002		1 SR OF 59	1 SR OF 59	30′-4″ TO 32′-6″	7976	16	28′-11½″ TO 31′-0⅞″						0′-0 7/16″
				SUB-TOTAL	24,803*								

* - INCLUDED FOR PAYMENT WITH ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN

MARK	NUMBER TOTAL	LENGTH PER BAR (FEET)	TOTAL LENGTH (FEET)	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
ABUTMENT, SUPERSTRUCTURE, AND APPROACH SLAB GFRP #4 ◕											
AG401	14	34′-6″	483	STR							
AG402	16	13′-7″	217	STR							
AG403	14	32′-6″	455	STR							
AG404	4	11′-7″	46	STR							
SUB-TOTAL ABUTMENT			1,201								
SG401	308	30′-0″	9240	STR							
SG402	14	32′-9″	459	STR							
SG403	14	9′-10″	138	STR							
SG404	96	14′-7″	1400	STR							
SG405	88	14′-11″	1313	STR							
SUB-TOTAL SUPERSTRUCTURE			12,550								
ASG401	14	31′-1″	435	STR							
ASG402	4	14′-1″	56	STR							
ASG403	11	28′-11″	318	STR							
ASG404	8	14′-6″	116	STR							
ASG405	14	18′-6″	259	STR							
ASG406	8	17′-4″	139	STR							
ASG407	12	10′-0″	120	STR							
ASG408	6	6′-4″	38	25	2′-6″	2′-5″	1′-4¼″	0′-1½″	0′-5″		
ASG409	6	5′-1″	31	STR							
ASG410	22	1′-6″	33	STR							
SUB-TOTAL APPROACH SLAB			1,545								

MARK	NUMBER TOTAL	LENGTH PER BAR (FEET)	TOTAL LENGTH (FEET)	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
ABUTMENT, SUPERSTRUCTURE, AND APPROACH SLAB GFRP #5 ◕											
AG501	32	4′-2″	133	6	0′-8½″	1′-2″	0′-10″				
AG502	4	8′-4″	33	36	5′-6″	1′-2″	0′-10″				
SUB-TOTAL ABUTMENT			166								
SG501	188	4′-8″	877	6	1′-2″	1′-2″	0′-10″				
SG502	172	4′-10″	831	6	1′-4″	1′-2″	0′-10″				
SG503	4	4′-0″	16	36	1′-2″	1′-2″	0′-10″				
SG504	4	4′-2″	17	36	1′-4″	1′-2″	0′-10″				
SUB-TOTAL SUPERSTRUCTURE			1,741								
ASG501	16	4′-8″	75	6	1′-2″	1′-2″	0′-10″				
ASG502	4	3′-11″	16	36	1′-2″	1′-2″	0′-10″				
ASG503	12	4′-2″	50	6	0′-8½″	1′-2″	0′-10″				
SUB-TOTAL APPROACH SLAB			141								

LEGEND

◕ - AG4XX, AG5XX, SG4XX, SG5XX, ASG4XX, OR ASG5XX - GLASS FIBER REINFORCED POLYMER (GFRP) BAR.

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5500 New Albany Road, Columbus, Ohio 43054
Phone: 614.775.4500

DESIGNED	DRAWN	REVIEWED	DATE
RMW	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RJE	-	3113787	

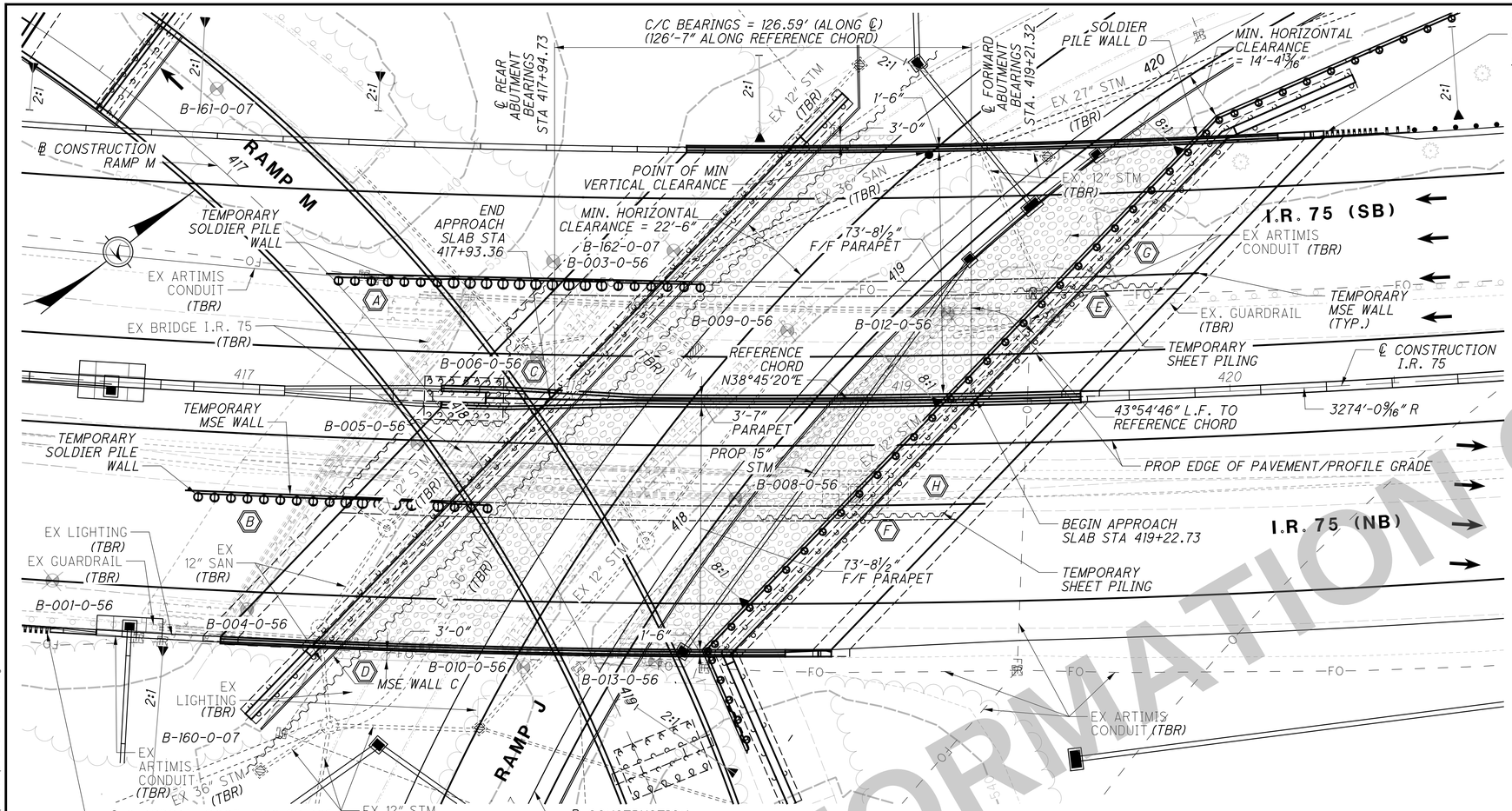
REINFORCING STEEL LIST
BRIDGE NO. HAM-562-0004
RAMP M OVER I.R. 75

HAM-75-7.85
PID No. 77889

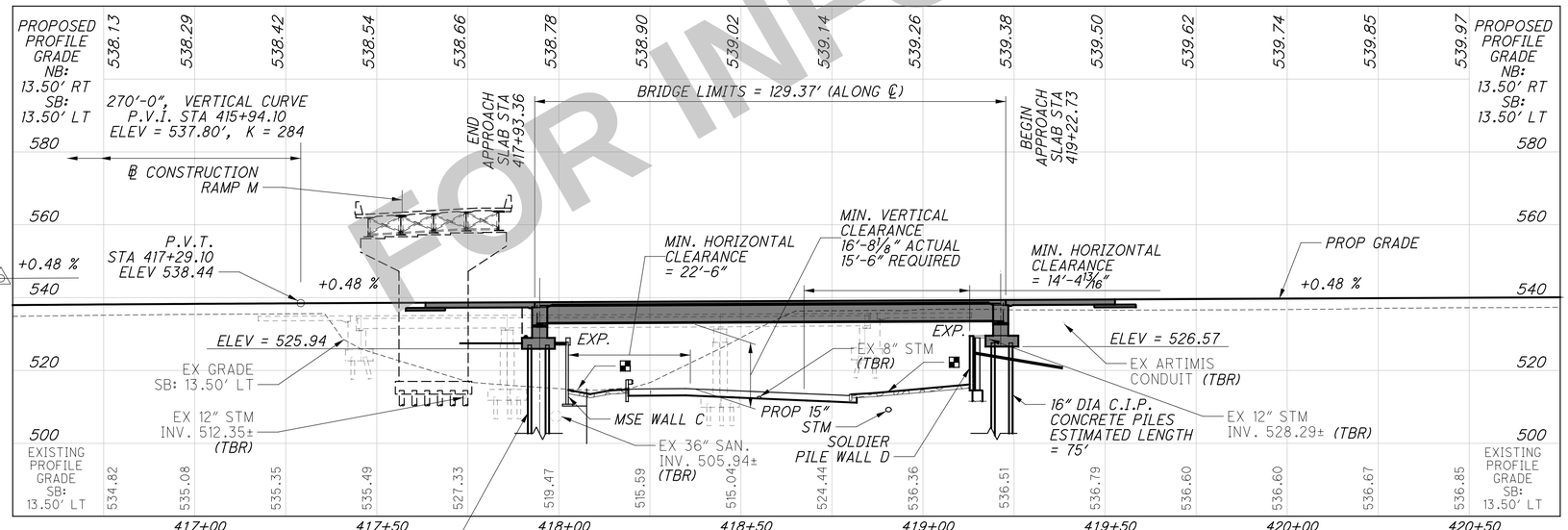
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1332
2017

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PLAN



PROFILE ALONG ℄ CONSTRUCTION I.R. 75

TRAFFIC DATA

CURRENT YEAR ADT (2010) = 173,800
DESIGN YEAR ADT (2030) = 203,000
DESIGN YEAR ADTT (2030) = 107,590

BENCHMARK DATA

BM #404, STA 434+88.14, ELEV 523.26,	OFFSET 312.54′	RIGHT
BM #405, STA 434+03.68, ELEV 521.92 ,	OFFSET 388.27′	LEFT

FOR ADDITIONAL BENCHMARK INFORMATION, SEE ROADWAY PLAN SHEET 13 / 2017

NOTES

1. EARTH WORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. SEE ROADWAY PLANS FOR GUARDRAIL DETAILS AND PAYMENT.
3. SEE SHEET 2 / 57 FOR REFERENCE CHORD DIAGRAM.
4. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

LEGEND

℄ I.R. 75 HORIZONTAL CURVE DATA

PI STA 420+66.71
Δ = 21° 27′ 24″ (LT)
Dc = 1° 45′ 00″
R = 3,274.04′
T = 620.31′
L = 1,226.09′
E = 58.25′
C = 1,218.94′
C.B. = N 35° 13′ 50″ E

- PROJECT SOIL BORING LOCATION
- CRUSHED AGGREGATE SLOPE PROTECTION, 1′-0″ THICK
- LIMITS OF ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION
- (X) - TEMPORARY WALL (FOR TABLE SEE SHEET 2 / 57)

EXISTING STRUCTURE

TYPE: 3 SPAN CONTINUOUS STEEL BEAM SUPERSTRUCTURE WITH REINFORCED CONCRETE DECK ON REINFORCED CONCRETE ABUTMENTS AND COLUMN PIERS
SPANS: 37′-2 1/8″, 54′-0″, 37′-3 1/2″ C/C BEARINGS
ROADWAY: SB: 52′-8″, NB: 51′-8″ F/F PARAPET
SKEW: VARIES
DESIGN LOADING: CF 2000-51 ADEQUATE FOR AASHTO ALTERNATE LOADING
DECK: REINFORCED CONCRETE
SUBSTRUCTURE: DEEP FOUNDATION ABUTMENTS AND DEEP FOUNDATION PIERS
DATE BUILT: 1958
STRUCTURE FILE NUMBER: 3110036
APPROACH SLABS: 25′ LONG
WEARING SURFACE: SB: 1 1/4″ LATEX MODIFIED CONCRETE OR 1 3/4″ DENSE CONCRETE OVERLAY
NB: MONOLITHIC CONCRETE DECK WITH EPOXY COATED RE-BAR

PROPOSED STRUCTURE

TYPE: SINGLE SPAN STEEL GIRDER SUPERSTRUCTURE WITH COMPOSITE REINFORCED CONCRETE DECK ON REINFORCED CONCRETE STUB ABUTMENTS
SPAN: 126′-7″ C/C BEARINGS ALONG REFERENCE CHORD
ROADWAY: 73′-11 1/2″ T/T PARAPET (N.B. AND S.B.)
DESIGN LOADING: HL-93
FUTURE WEARING SURFACE LOADING: 60 PSF
SKEW: 43°54′46″ L.F. TO REFERENCE CHORD PER NOTE 3
WEARING SURFACE: MONOLITHIC CONCRETE (MACRO-FIBERS)
APPROACH SLABS: AS-1-15 (30′ LONG) T=17″ (MODIFIED)
ALIGNMENT: 3274′-0 9/16″ CURVE LEFT
CROWN: 4.20% AND 4.00%
LATITUDE: N 39°10′30.84″
LONGITUDE: W 84°29′20.12″

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DESIGN AGENCY EMH&T

DESIGNED	DRAWN	REVIEWED	DATE
RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW		3110044	

HAMILTON COUNTY
STA. 417+93.36
STA. 419+22.73

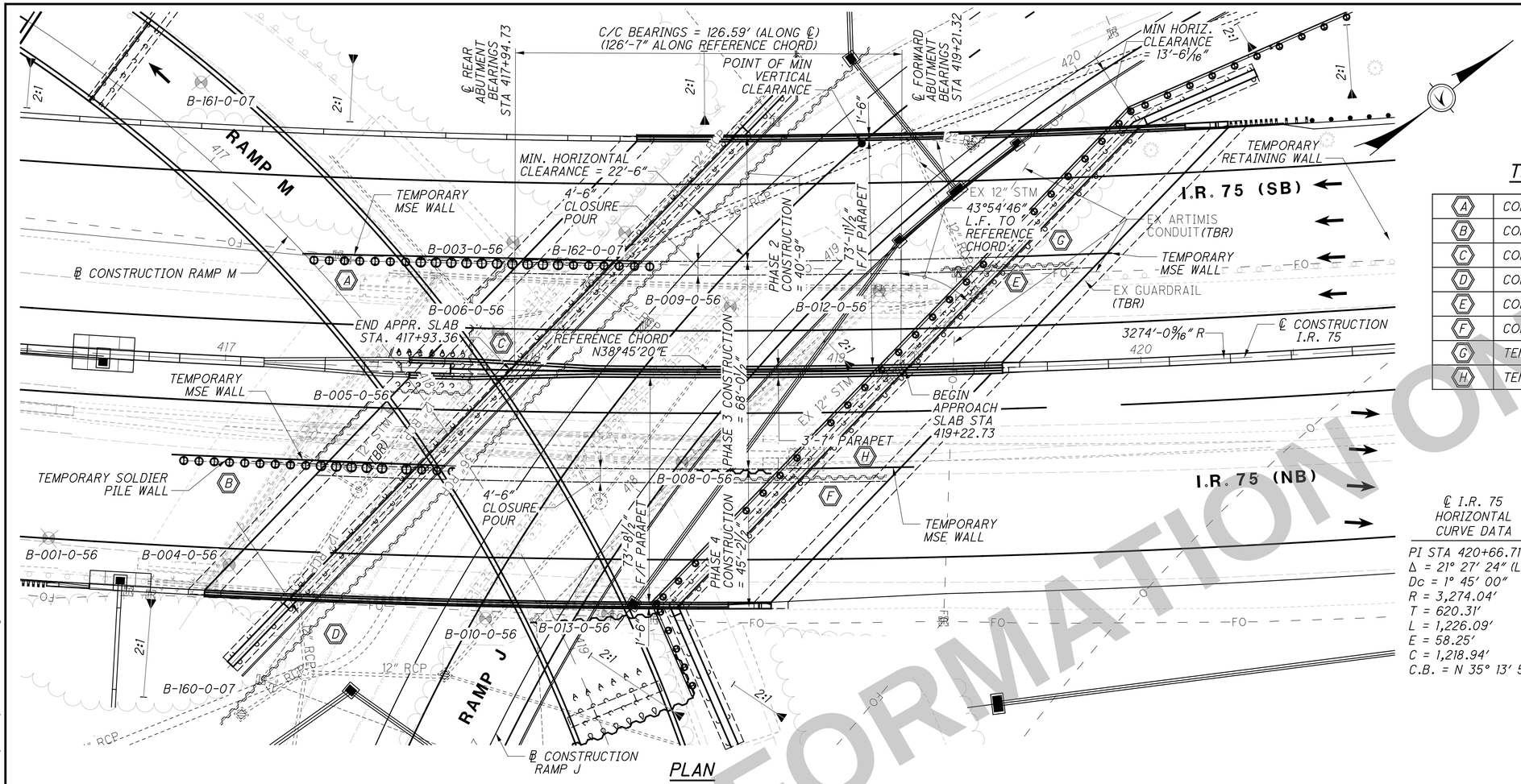
SITE PLAN
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

1 / 57

1333 / 2017

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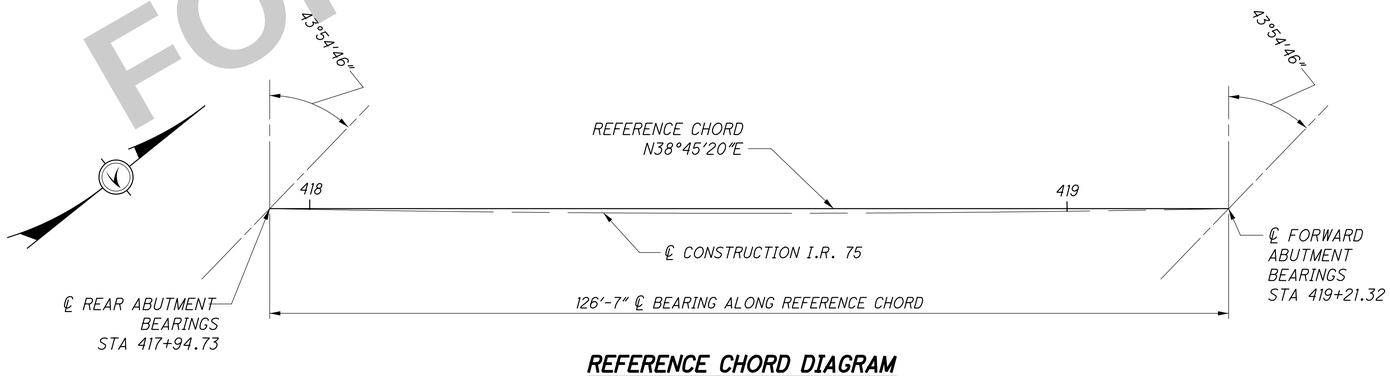
PLAN

TEMPORARY WALLS

A	COFFERDAMS AND EXCAVATION BRACING WALL A
B	COFFERDAMS AND EXCAVATION BRACING WALL B
C	COFFERDAMS AND EXCAVATION BRACING WALL C
D	COFFERDAMS AND EXCAVATION BRACING WALL D
E	COFFERDAMS AND EXCAVATION BRACING WALL E
F	COFFERDAMS AND EXCAVATION BRACING WALL F
G	TEMPORARY MSE WALL G
H	TEMPORARY MSE WALL H

℄ I.R. 75 HORIZONTAL CURVE DATA

PI STA 420+66.71
Δ = 21° 27' 24" (LT)
Dc = 1° 45' 00"
R = 3,274.04'
T = 620.31'
L = 1,226.09'
E = 58.25'
C = 1,218.94'
C.B. = N 35° 13' 50" E



REFERENCE CHORD DIAGRAM

LEGEND

(X) - WALL

NOTE

SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

FOR INFORMATION ONLY

DESIGN AGENCY EMH&T

DESIGNED	DRAWN	REVIEWED	DATE
RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	3110044	

GENERAL PLAN
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

2 / 57

1334
2017

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REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15	REVISED	7-17-15
AS-2-15	REVISED	1-18-19
PCB-91	REVISED	7-17-20
SBR-1-20	REVISED	7-17-20
SBR-2-20	REVISED	1-15-21
SICD-1-96	REVISED	7-18-14
SICD-2-14	REVISED	1-15-21

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

867 DATED 1-15-21

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

SPECIAL DESIGN SPECIFICATIONS:

THIS BRIDGE REQUIRED THE USE OF A THREE DIMENSIONAL MODEL USING THE FINITE ELEMENT DESIGN METHOD TO ANALYZE THE STRUCTURE. THE COMPUTER PROGRAM USED FOR STRUCTURAL ANALYSIS WAS MIDAS CIVIL 2019 (v2.2). THE BRIDGE COMPONENTS DESIGNED BY THIS METHOD AND THE LIVE LOAD DISTRIBUTION FACTORS USED WERE:

DEAD LOAD DISTRIBUTION: SLAB LOADS ARE DISTRIBUTED BASED UPON GIRDER SPACING AND TRIBUTARY WIDTHS. FUTURE WEARING SURFACE, AND BARRIER LOADS ARE DISTRIBUTED EQUALLY TO ALL GIRDERS.

LIVE LOADS WERE GENERATED AUTOMATICALLY BY THE DESIGN PROGRAM AND WERE APPLIED WITHIN USER DETERMINED LANES. THE DESIGN PROGRAM DISTRIBUTED THE LIVE LOADS BASED ON THE LONGITUDINAL AND TRANSVERSE STIFFNESS.

OPERATIONAL IMPORTANCE:

A LOAD MODIFIER OF 1.05 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING:

HL-93 - FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ.FT.

DESIGN DATA:

CONCRETE CLASS QC3 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE CLASS QC1/QC3 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI
STRUCTURAL STEEL - ASTM A709 GRADE 50W - YIELD STRENGTH 50 KSI

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL
2½" CONCRETE COVER
SEALING OF CONCRETE SURFACES

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

ITEM 202 - STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN:

THE EXISTING REAR ABUTMENT SHALL BE REMOVED A MINIMUM OF 5'-0" BELOW EXISTING GROUND OR AS NEEDED TO FACILITATE THE PROPOSED REAR ABUTMENT MSE WALL CONSTRUCTION.

THE MIDDLE PORTION OF THE EXISTING PIER 1 WILL FIRST BE REMOVED TO 1'-0" BELOW THE EXISTING GRADE TO FACILITATE CONSTRUCTION OF THE PROPOSED HAM-562-0004 BRIDGE REAR PIER. THE REMAINING PORTION OF PIER 1 SHALL THEN BE REMOVED 2'-6" BELOW THE TOP OF PROPOSED REAR ABUTMENT MSE WALL LEVELING PAD ELEVATION.

THE EXISTING PIER 2 AND EXISTING FORWARD ABUTMENT SHALL BE REMOVED TO 1'-0" BELOW FINAL GRADE OF RAMP J.

THE CONTRACTOR MUST REVIEW THE STRUCTURE WHEN PREPARING HIS BID. THE CONTRACTOR WILL REVIEW THE CONDITION OF THE STRUCTURE TO DETERMINE WHAT DEBRIS WILL FALL FROM THE STRUCTURE DURING REMOVAL. THE CONTRACTOR WILL DETERMINE THE CORRESPONDING COST TO CLEAN-UP ANY AND ALL DEBRIS WHICH FALLS FROM THESTRUCTURE DURING ANY REMOVAL OPERATION. THE COST TO CLEAR AND CLEAN-UP ALL DEBRIS DURING REMOVAL SHALL BE INCLUDED WITH THE BID FOR THIS ITEM OF WORK. NO ADDITIONAL COST WILL BE RECOGNIZED TO CLEAN DEBRIS RESULTING FROM THE STRUCTURE REMOVAL OPERATION.

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

EXISTING STRUCTURE PLANS:

CONSTRUCTION PLANS FOR THE EXISTING BRIDGE ARE ON FILE AT THE DEPARTMENT OF TRANSPORTATION, DISTRICT 8 OFFICE, 505 SOUTH STATE ROUTE 741, LEBANON, OHIO AND ARE AVAILABLE FOR REFERENCE.

PILE DRIVING CONSTRAINTS:

PILE DRIVING MAY NOT BEGIN UNTIL SUFFICIENT EMBANKMENT AND MSE WALL SETTLEMENT HAS OCCURRED AS DOCUMENTED BY THE SETTLEMENT PLATFORMS. THE ANTICIPATED WAITING PERIOD TO PERMIT SUFFICIENT EMBANKMENT SETTLEMENT IS 45 DAYS. THE DISTRICT GEOTECHNICAL ENGINEER MAY REDUCE OR EXTEND THE WAITING PERIOD BASED ON THE MAGNITUDE AND RATE OF THE EMBANKMENT SETTLEMENT AS DETERMINED BY THE SETTLEMENT PLATFORMS. THE SETTLEMENT WAITING PERIOD BEGINS ONCE THE APPROACH EMBANKMENT REACHES THE DESIGN SUBGRADE LEVEL FOR A MINIMUM DISTANCE OF 100 FT. BEHIND EACH ABUTMENT. THE PLANS HAVE PROVISIONS FOR A TEMPORARY WALL AT THE ABUTMENT LOCATION TO PERMIT PLACEMENT OF EMBANKMENT TO THE DESIGN SUBGRADE LEVEL. BEGIN PILE DRIVING ONLY FOLLOWING TERMINATION OF THE SETTLEMENT MONITORING WAITING PERIOD BY THE DISTRICT GEOTECHNICAL ENGINEER.

PRIOR TO DRIVING THE FORWARD ABUTMENT PILES, IN AREA AT THE END OF THE NORTHEAST WINGWALL, CONSTRUCT THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT. DO NOT BEGIN THE EXCAVATION FOR THE ABUTMENT FOOTINGS AND THE INSTALLATION OF THE ABUTMENT PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED.

ITEM 203 - EMBANKMENT, AS PER PLAN:

PLACE AND COMPACT EMBANKMENT MATERIAL IN 6 INCH LIFTS FOR THE CONSTRUCTION OF BOTH THE APPROACH EMBANKMENT AS WELL AS EMBANKMENT REQUIRED AT THE NORTHEAST WINGWALL UP TO THE PROPOSED BOTTOM OF FOOTING ELEVATION.

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN:

THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATIVE DESIGN TO SUPPORT THE SIDES OF EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION BRACING. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATIVE DESIGN.

PILES DRIVEN TO TIP ELEVATION FOR PILE/SOIL SETUP:

THE ULTIMATE BEARING VALUE IS 395 KIPS PER PILE FOR BOTH THE REAR ABUTMENT AND FORWARD ABUTMENT PILES. PART OF THE ULTIMATE BEARING VALUE WILL BE ACHIEVED THROUGH PILE/SOIL SETUP, WHICH IS A TIME-DEPENDENT INCREASE IN RESISTANCE THAT OCCURS IN SOME SOILS.

NOTIFY THE ENGINEER AT LEAST 5 DAYS BEFORE DRIVING PILES SO THAT THE ENGINEER CAN NOTIFY THE DISTRICT GEOTECHNICAL ENGINEER, THE OFFICER OF CONSTRUCTION ADMINISTRATION, AND THE OFFICE OF STRUCTURAL ENGINEERING.

DRIVE THE FIRST TWO PILES IN EACH SUBSTRUCTURE TO THE TIP ELEVATION GIVEN BELOW FOR THE SUBSTRUCTURE. DRIVE THE THIRD AND FOURTH PILES TO 75% AND 85% OF THE LENGTH OF THE FIRST TWO PILES. PERFORM DYNAMIC LOAD TESTING ON ALL FOUR PILES WHILE DRIVING. AFTER DRIVING THE FOUR PILES, CEASE ALL DRIVING OPERATIONS AT THE SUBSTRUCTURE FOR A MINIMUM OF 7 DAYS. INCLUDE THE WAITING PERIOD AS A SEPARATE ACTIVITY IN THE PROGRESS SCHEDULE. AFTER THE WAITING PERIOD, PERFORM PILE RESTRIKES ON THE FOUR PILES (TWO RESTRIKE ITEMS). SUBMIT ALL TEST RESULTS TO THE ENGINEER. THE ENGINEER WILL REVIEW THE TEST RESULTS AND ESTABLISH DRIVING CRITERIA FOR THE PILING IN THE SUBSTRUCTURE WITH THE ASSISTANCE OF THE DISTRICT GEOTECHNICAL ENGINEER, THE OFFICE OF CONSTRUCTION ADMINISTRATION, AND THE OFFICE OF STRUCTURAL ENGINEERING. THE DRIVING CRITERIA WITH PILE SETUP SHALL BE PERFORMED FOR THE FIRST STAGE OF BRIDGE CONSTRUCTION. THE CONTRACTOR SHALL NOT ORDER PILES FOR SUBSEQUENT PHASES UNTIL AFTER THE DRIVING CRITERIA HAS BEEN ESTABLISHED WITH SETUP. THE DEPARTMENT WILL ADJUST THE FURNISHED PILE QUANTITIES BASED ON THE RESTRIKE TEST RESULTS.

IF THE DYNAMIC LOAD TESTING INDICATES A PILE HAS ACHIEVED THE ULTIMATE BEARING VALUE ABOVE THE TIP ELEVATION DURING THE INITIAL DRIVING (BEFORE THE WAITING PERIOD), STOP DRIVING AND NOTIFY THE ENGINEER. IF THE RESTRIKE TEST RESULTS ON THE FOUR PILES INDICATE THAT A PILE DID NOT ACHIEVE THE REQUIRED ULTIMATE BEARING VALUE, DRIVE THE PILE TO THE ESTABLISHED DRIVING CRITERIA. SPLICING OF THE PILES BEYOND THE ESTIMATED LENGTH PROVIDED IN THE PLANS WILL BE PAID BY THE DEPARTMENT UNDER CMS 109.05 WITH A NEGOTIATED PRICE PER SPLICE.

REAR ABUTMENT
56 PILES, 95 FEET LONG, ORDER LENGTH
TIP ELEVATION 436.94
2 DYNAMIC LOAD TESTING ITEM
2 RESTRIKE

FORWARD ABUTMENT
68 PILES, 80 FEET LONG, ORDER LENGTH
TIP ELEVATION 452.57
2 DYNAMIC LOAD TESTING ITEM
2 RESTRIKE

ITEM 523 - DYNAMIC LOAD TESTS

PERFORM DYNAMIC LOAD TESTS PER ITEM 523 AT LOCATIONS AND FREQUENCY OUTLINED IN THE PLANS. EACH UNIT OF PAYMENT FOR THE DYNAMIC LOAD TEST INCLUDES TESTING OF TWO PILES WITH SIGNAL MATCHING ON ONE OF THE TWO PILES TESTED.

FOR INFORMATION ONLY

DESIGN AGENCY
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DESIGNED	DRAWN	REVIEWED	DATE
RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	3110044	

GENERAL NOTES
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ITEM 511 - CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN
ITEM 511 - CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK (MEDIAN PARAPET), AS PER PLAN

THIS ITEM APPLIES TO THE CONCRETE IN THE BRIDGE DECK AND MEDIAN PARAPET. THIS ITEM MODIFIES THE STANDARD 511 CONCRETE FOR STRUCTURES SPECIFICATION TO INCLUDE MACRO-SYNTHETIC, AND CORROSION INHIBITORS INTO THE SUPERSTRUCTURE CONCRETE. THIS ITEM SHALL CONFORM TO CMS 511 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

PROVIDE MATERIALS CONFORMING TO 511.02 EXCEPT AS MODIFIED BELOW:

PORTLAND CEMENT CONCRETE:	499.03, CLASS QC 3 MEETING A DESIGN STRENGTH OF 4,500 PSI, WITH MACRO-SYNTHETIC FIBERS WITH MODIFICATION PER 511.02
FIBERS FOR CONCRETE:	ASTM C 1116, TYPE III
CORROSION INHIBITOR:	515.15

THE CLASS QC3 CONCRETE FOR THE SUPERSTRUCTURE SHALL MEET THE FOLLOWING CRITERIA:
WATER/CEMENT RATIO = 0.40 MAXIMUM; MINIMUM 4 LBS/CY MACRO-SYNTHETIC FIBERS (1.5 IN. MIN. TO 2.5 IN. MAX.) MEETING ASTM C1116 TYPE III SHALL BE ADDED TO THE MIX.

MIX SHALL INCLUDE A MIGRATING CORROSION INHIBITOR AS MANUFACTURED BY AN APPROVED SUPPLIER LISTED ON ODOT'S QUALIFIED APPROVED SUPPLIERS, ITEM 515.15. THE DOSAGE RATE LISTED ON THE ODOT QUALIFIED APPROVED SUPPLIERS LIST WILL APPLY.

THE MACRO-SYNTHETIC FIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO 'BALLING' OCCURS. UPON INSPECTION OF THE MIX AT THE TIME OF PLACEMENT, IF ANY 'BALLING' OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR. IT IS IMPORTANT TO FOLLOW INDUSTRY STANDARDS AND ASTM SPECIFICATIONS ON THE PREMIXING OF THE CEMENT, AGGREGATE, AND MACRO-SYNTHETIC FIBERS PRIOR TO THE ADDITION OF WATER AND ADMIXTURES. PROVIDE MACRO-SYNTHETIC -FIBERS THAT ARE MONOFILAMENT FIBERS MADE FROM VIRGIN POLYPROPYLENE, POLYETHYLENE, OR CO-POLYMERS THAT ARE INERT TO ALKALI ATTACK. ENSURE THE MACRO-SYNTHETIC FIBERS HAVE A MINIMUM TENSILE STRENGTH OF 70 KSI, A MINIMUM MODULUS OF ELASTICITY OF 800 KSI, A MINIMUM FILAMENT DIAMETER OF 0.012 INCHES, AND ASPECT RATIO BETWEEN 60 AND 100, AND ARE BETWEEN 1.0 AND 2.5 INCHES IN LENGTH. STORE THE MACRO-SYNTHETIC FIBERS ACCORDING TO THE MANUFACTURE'S RECOMMENDATION AND KEEP THE MATERIAL FREE FROM DUST, DIRT AND MOISTURE.

USE A MINIMUM DOSAGE RATE OF MACRO-SYNTHETIC FIBERS OF 4.0 LBS/CY OF CONCRETE. DETERMINE THE FINAL PROPOSED DOSAGE RATE THROUGH MIX TESTING. ENSURE THE FIBER REINFORCED CONCRETE MEETS OR EXCEEDS A MINIMUM EQUIVALENT FLEXURAL STRENGTH RATIO OF 25% ACCORDING TO ASTM C 1609. ENSURE THE FINAL PROPOSED MIX IS WORKABLE AND ABLE TO BE PRODUCED SUCH THAT BALLING OR CLUMPING OF THE FIBERS IS NOT A PROBLEM AS DETERMINED BY THE ENGINEER. UTILIZE A LABORATORY REGULARLY INSPECTED BY THE CEMENT AND CONCRETE REFERENCE LABORATORY (CCRL) OF THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, OR OTHER APPROVED REFERENCE LABORATORY, TO PERFORM THE TESTING. BEFORE USE, SUBMIT DOCUMENTATION TO THE PROJECT ENGINEER CERTIFYING BOTH THE MACRO-SYNTHETIC FIBERS AND THE MIX MEET OR EXCEED THE REQUIRED PROPERTIES. SAMPLING WILL BE ALLOWED FOR TESTING PURPOSES. A DEMONSTRATION OF THE MIX PRODUCTION OR TRIAL MIX, MAY BE REQUIRED BY THE ENGINEER PRIOR TO PLACING ANY OF THE MIX ON THE PROJECT.

ITEM 511 - CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN
ITEM 511 - CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK (MEDIAN PARAPET), AS PER PLAN

THE BATCH WEIGHTS SHALL BE CORRECTED TO COMPENSATE FOR THE MOISTURE CONTAINED IN THE AGGREGATE AT THE TIME OF USE. A CHEMICAL ADMIXTURE (705.12, TYPE A OR D) SHALL BE USED.

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT THE CORROSION INHIBITOR AND ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CORROSION INHIBITOR IS SUGGESTED TO BE A MCI PRODUCT BY CORTEC OR AN APPROVED EQUAL FROM THE QUALIFIED PRODUCTS LIST. THE CONCRETE SUPPLIER'S CHOICE OF ONE OF THESE CORROSION INHIBITORS DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS. PLEASE BE ADVISED THAT SOME PRODUCTS ON THE LIST EFFECT THE DELIVERED MIX PROPERTIES GREATLY WHILE OTHER PRODUCTS DO NOT.

APPROACH SLABS, DIAPHRAGMS, AND MEDIAN PARAPET CONCRETE ARE TO USE THE SAME MIX DESIGN AS THE BRIDGE DECK. THE CONTRACTOR SHOULD BE ADVISED THAT CONCRETE RETARDING AGENTS MAY NEED TO BE ADDED TO OFFSET THE EFFECTS OF THE MIGRATING CORROSION INHIBITOR SELECTED.

THE CONTRACTOR SHALL PROVIDE TRADITIONAL BRIDGE DECK FORMS CONFORMING TO CMS 508. PERMANENT STAY-IN-PLACE (SIP) FORMS ARE NOT ALLOWED. THE PLACING OF THE DECK AND THE APPROACH SLABS IN THE SAME CONCRETE POUR IS NOT PERMITTED.

ITEM 511 - CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK (EXTERIOR PARAPET), AS PER PLAN

THIS WORK SHALL INCLUDE THE CONSTRUCTION OF THE EXTERIOR BRIDGE PARAPETS WITH A FORM LINER PATTERN APPLIED TO THE EXTERIOR FACE THAT MATCHES THE ARCHITECTURAL "TEXAS RAIL" DETAILS SHOWN IN THE PLANS. THIS ITEM SHALL INCLUDE ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO CONSTRUCT THE "TEXAS" TYPE BRIDGE RAILING. QUANTITY SHALL INCLUDE SAW CUTTING, JOINT SEALER, FORM LINERS AND ANY OTHER MISCELLANEOUS ITEMS REQUIRED TO FULLY CONSTRUCT THE RAILING. THIS ITEM SHALL ONLY INCLUDE THE EXTERIOR PARAPET ON THE BRIDGE. EXTERIOR PARAPET ON APPROACH SLABS SHALL BE PAID FOR UNDER ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN.

IN ADDITION TO THE WORK ITEMS REQUIRED IN ITEM 511, THIS ITEM WILL INCLUDE THE DEVELOPMENT, DELIVERY AND PLACMENT OF A SPECIAL CONCRETE MIX AS DESCRIBED IN THE FOLLOWING NOTE:

PROVIDE A CONCRETE WITH THE FOLLOWING PROPERTIES:

MINIMUM PORTLAND CEMENT CONTENT	800 LB/CU. YD.
NO MICRO SILICA AND NO FLY ASH	
MAXIMUM COARSE AGGREGATE SIZE	#8
MAXIMUM WATER/CEMENT RATIO	0.38
COARSE TO FINE AGGREGATE RATIO TO PRODUCE SELF CONSOLIDATING CONCRETE	
MINIMUM 3 DAY STRENGTH	4000 PSI
MINIMUM 28 DAY STRENGTH	5500 PSI
AIR CONTENT	8% ±2%
MINIMUM SPREAD	24"

PROVIDE A CONCRETE MIX AT A SLUMP THAT ALLOWS THE CONCRETE MIX TO BE PUMPED THROUGH A 3 1/2" DIAMETER ACCESS HOLE THROUGH THE FORM AND SELF CONSOLIDATE THE PARAPET CONCRETE. THE FINAL CONCRETE MIX WILL BE A SELF CONSOLIDATING CONCRETE USING AN APPROVED SELF CONSOLIDATING ADMIXTURE.

SUBMIT THE MIX DESIGN AND TEST RESULTS TO THE ENGINEER FOR REVIEW AND ACCEPTANCE.

DURING THE CONCRETE OPERATIONS, ASSURE THE REPRESENTATIVES OF THE READY MIX PRODUCER AND THE CHEMICAL ADMIXTURE MANUFACTURER ARE ON SITE TO DETERMINE ANY ADJUSTMENTS REQUIRED TO COMPLETE THE CONCRETE PLACEMENT.

PAYMENT FOR THIS WORK SHALL INCLUDE ALL NECESSARY MATERIAL, LABOR, AND EQUIPMENT TO COMPLETE THIS TASK. PAYMENT SHALL BE MADE UNDER ITEM 511 - CLASS QC3 CONCRETE WITH QC/QA, BRIDGE DECK (EXTERIOR PARAPET), AS PER PLAN.

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CHECKED RMW | REVISED - | STRUCTURE FILE NUMBER 3110044

GENERAL NOTES
BRIDGE NO. HAM-75-0791
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ITEM 511 - SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN
ITEM 511 - CLASS QC3 CONCRETE, MISC.: CONCRETE CLASS QC3 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN

THESE ITEMS MODIFY THE STANDARD 511 CONCRETE FOR STRUCTURES SPECIFICATION TO INCLUDE MACRO-SYNTHETIC, AND CORROSION INHIBITORS INTO THE SUBSTRUCTURE CONCRETE. THESE ITEMS SHALL CONFORM TO CMS 511 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

PROVIDE MATERIALS CONFORMING TO 511.02 EXCEPT AS MODIFIED BELOW:

PORTLAND CEMENT CONCRETE:	499.03, CLASS QC 3 MEETING A DESIGN STRENGTH OF 4,000 PSI, WITH MACRO-SYNTHETIC FIBERS WITH MODIFICATION PER 511.02
FIBERS FOR CONCRETE	ASTM C 1116, TYPE III
CORROSION INHIBITOR	515.15

THE CLASS QC3 CONCRETE FOR THE SUBSTRUCTURE SHALL MEET THE FOLLOWING CRITERIA:
WATER/CEMENT RATIO = 0.40 MAXIMUM; MINIMUM 4 LBS/CY MACRO-SYNTHETIC FIBERS (1.0 IN. MIN. TO 2.5 IN. MAX.) MEETING ASTM C1116 TYPE III SHALL BE ADDED TO THE MIX.

MIX SHALL INCLUDE A MIGRATING CORROSION INHIBITOR AS MANUFACTURED BY AN APPROVED SUPPLIER LISTED ON ODOT'S QUALIFIED APPROVED SUPPLIERS, ITEM 515.15. THE DOSAGE RATE LISTED ON THE ODOT QUALIFIED APPROVED SUPPLIERS LIST WILL APPLY.

THE MACRO-SYNTHETIC FIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO 'BALLING' OCCURS. UPON INSPECTION OF THE MIX AT THE TIME OF PLACEMENT, IF ANY 'BALLING' OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR. IT IS IMPORTANT TO FOLLOW INDUSTRY STANDARDS AND ASTM SPECIFICATIONS ON THE PREMIXING OF THE CEMENT, AGGREGATE, AND MACRO-SYNTHETIC FIBERS PRIOR TO THE ADDITION OF WATER AND ADMIXTURES. PROVIDE MACRO-SYNTHETIC-FIBERS THAT ARE MONOFILAMENT FIBERS MADE FROM VIRGIN POLYPROPYLENE, POLYETHYLENE, OR CO-POLYMERS THAT ARE INERT TO ALKALI ATTACK. ENSURE THE MACRO-SYNTHETIC FIBERS HAVE A MINIMUM TENSILE STRENGTH OF 70 KSI, A MINIMUM MODULUS OF ELASTICITY OF 800 KSI, A MINIMUM FILAMENT DIAMETER OF 0.012 INCHES, AND ASPECT RATIO BETWEEN 60 AND 100, AND ARE BETWEEN 1.0 AND 2.5 INCHES IN LENGTH. STORE THE MACRO-SYNTHETIC FIBERS ACCORDING TO THE MANUFACTURE'S RECOMMENDATION AND KEEP THE MATERIAL FREE FROM DUST, DIRT AND MOISTURE.

USE A MINIMUM DOSAGE RATE OF MACRO-SYNTHETIC FIBERS OF 4.0 LBS/CY OF CONCRETE. DETERMINE THE FINAL PROPOSED DOSAGE RATE THROUGH MIX TESTING. ENSURE THE FIBER REINFORCED CONCRETE MEETS OR EXCEEDS A MINIMUM EQUIVALENT FLEXURAL STRENGTH RATIO OF 25% ACCORDING TO ASTM C 1609. ENSURE THE FINAL PROPOSED MIX IS WORKABLE AND ABLE TO BE PRODUCED SUCH THAT BALLING OR CLUMPING OF THE FIBERS IS NOT A PROBLEM AS DETERMINED BY THE ENGINEER. UTILIZE A LABORATORY REGULARLY INSPECTED BY THE CEMENT AND CONCRETE REFERENCE LABORATORY (CCRL) OF THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, OR OTHER APPROVED REFERENCE LABORATORY, TO PERFORM THE TESTING. BEFORE USE, SUBMIT DOCUMENTATION TO THE PROJECT ENGINEER CERTIFYING BOTH THE MACRO-SYNTHETIC FIBERS AND THE MIX MEET OR EXCEED THE REQUIRED PROPERTIES. SAMPLING WILL BE ALLOWED FOR TESTING PURPOSES. A DEMONSTRATION OF THE MIX PRODUCTION OR TRIAL MIX, MAY BE REQUIRED BY THE ENGINEER PRIOR TO PLACING ANY OF THE MIX ON THE PROJECT.

ITEM 511 - SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN
ITEM 511 - CLASS QC3 CONCRETE, MISC.: CONCRETE CLASS QC3 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN

THE BATCH WEIGHTS SHALL BE CORRECTED TO COMPENSATE FOR THE MOISTURE CONTAINED IN THE AGGREGATE AT THE TIME OF USE. A CHEMICAL ADMIXTURE (705.12, TYPE A OR D) SHALL BE USED. THE ENGINEER CAN REDUCE THE BATCH LOAD SIZE AT ANY TIME AS NEEDED TO CORRECT/IMPROVE CONCRETE QUALITY.

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT THE CORROSION INHIBITOR AND ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CORROSION INHIBITOR IS SUGGESTED TO BE A MCI PRODUCT BY CORTEC OR AN APPROVED EQUAL FROM THE QUALIFIED PRODUCTS LIST. THE CONCRETE SUPPLIER5#32S CHOICE OF ONE OF THESE CORROSION INHIBITORS DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS. PLEASE BE ADVISED THAT SOME PRODUCTS ON THE LIST EFFECT THE DELIVERED MIX PROPERTIES GREATLY WHILE OTHER PRODUCTS DO NOT.

THE CONTRACTOR SHOULD BE ADVISED THAT CONCRETE RETARDING AGENTS MAY NEED TO BE ADDED TO OFFSET THE EFFECTS OF THE MIGRATING CORROSION INHIBITOR SELECTED.

ITEM 514 - FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT, AS PER PLAN
ITEM 514 - FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN

THE FASCIA GIRDER OUTSIDE SURFACES, LOWER FLANGE, AND 6" FROM THE BASE OF INSIDE WEB SHALL HAVE A THREE COAT IZEU PAINT SYSTEM APPLIED. THE PRIME COAT SHALL BE SHOP APPLIED. THE APPLICATION OF THE PRIME COAT SHALL BE PAID FOR UNDER ITEM 513, STRUCTURAL STEEL MEMBERS, LEVEL 5. THE INTERMEDIATE AND FINISH COATS SHALL BE FIELD APPLIED PER ITEM 514. SEE TRANSVERSE DECK SECTION ON SHEET 37/57 FOR EXACT LIMITS OF PAINTING OF THE FACIA GIRDERS. THE COLOR OF THE FINISH COAT SHALL BE FEDERAL COLOR NUMBER 14277 (GREEN).

ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN

THIS ITEM SHALL INCLUDE ALL THE COST OF ALL CONCRETE AND REINFORCING STEEL FOR THE APPROACH SLABS AND PARAPETS ON APPROACH SLABS. SEALING OF THE PARAPETS SHALL BE PAID FOR UNDER ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).

DECK PLACEMENT DESIGN ASSUMPTIONS:

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 1.3 KIPS FOR A TOTAL MACHINE LOAD OF 10.5 KIPS.

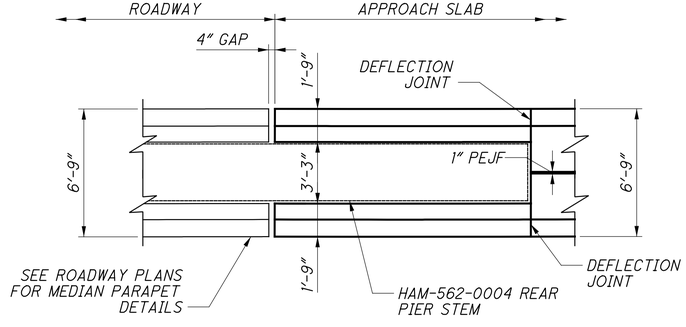
A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103 IN.

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

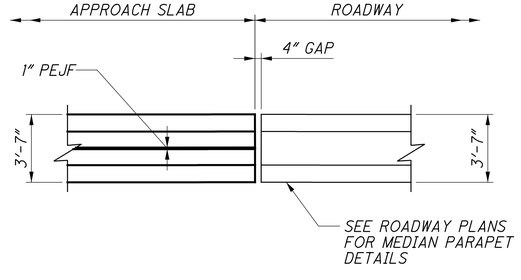
A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65 IN.

ABBREVIATION LEGEND

ABUT. - ABUTMENT
ADT - AVERAGE DAILY TRAFFIC
ADTT - AVERAGE DAILY TRUCK TRAFFIC
APP SLAB - APPROACH SLAB
AVE. - AVENUE
℄ - BASELINE
BM - BENCH MARK
BOT. - BOTTOM
BTW. - BETWEEN
BRG - BEARING
BTA - BRIDGE TERMINAL ASSEMBLY
C/C - CENTER TO CENTER
CB - CATCH BASIN
CIP - CAST IN PLACE
CJ - CONSTRUCTION JOINT
℄ - CENTERLINE
CLR - CLEARANCE
CONST - CONSTRUCTION
DIA - DIAMETER
EB - EAST BOUND
EF - EACH FACE
ELEV - ELEVATION
E/P - EDGE OF PAVEMENT
E/S - EDGE OF SHOULDER
EQ. - EQUAL
EST. - ESTIMATED
EX - EXISTING
EXP - EXPANSION
FA - FORWARD ABUTMENT
F/F - FACE TO FACE
FF - FAR FACE
FTG - FOOTING
FWD - FORWARD
GEN - GENERAL
GR - GUARD RAIL
HMWM - HIGH MOLECULAR WEIGHT METHACRYLATE
INCR. - INCREMENT
INT. - INTEGRAL
I.R. - INTERSTATE ROUTE
LT - LEFT
MAX - MAXIMUM
MECH. CONN. - MECHANICAL CONNECTOR
MIN - MINIMUM
MISC - MISCELLANEOUS
M.O.T. - MAINTENANCE OF TRAFFIC
MSE - MECHANICALLY STABALIZED EARTH
N/A - NOT APPLICABLE
NB - NORTHBOUND
NF - NEAR FACE
NO - NUMBER
NPCPP - NON-PERFORATED CORRUGATED PLASTIC PIPE
O/O - OUT TO OUT
O.C. - ON CENTER
OD - OUTSIDE DIAMETER
PC - POINT OF CURVE
PGL - PROFILE GRADE LINE
PT - POINT OF TANGENT
P.V.I. - POINT OF VERTICAL INTERSECTION
PCB - PORTABLE CONCRETE BARRIER
PCPP - PERFORATED CORRUGATED PLASTIC PIPE
PVMT - PAVEMENT
PEJF - PREFORMED EXPANSION JOINT FILLER
PG - PROFILE GRADE
PROP - PROPOSED
PT. - POINT
PVMT. - PAVEMENT
RA - REAR ABUTMENT
RD - ROAD
REF. - REFERENCE
REQ'D - REQUIRED
RT - RIGHT
SB - SOUTHBOUND
SER. - SERIES
SHLD - SHOULDER
SPA - SPACES
S.R. - STATE ROUTE
ST - STREET
STA - STATION
SCD - STANDARD CONSTRUCTION DRAWING
STD - STANDARD
SUPER. - SUPERSTRUCTURE
TEMP - TEMPORARY
TOW - TOP OF WALL
T/S - TOE OF SLOPE
T/T - TOP TO TOE
TYP - TYPICAL
UNO - UNLESS NOTED OTHERWISE
VC - VERTIAL CURVE
VERT - VERTICAL
W/ - WITH
WB - WEST BOUND



MEDIAN PARAPET PLAN
REAR APPROACH SLAB



MEDIAN PARAPET PLAN
FORWARD APPROACH SLAB

FOR INFORMATION ONLY

DESIGN AGENCY EMH&T
DESIGNED RJE | DRAWN GB | CHECKED RMW | REVIEWED CAS | DATE 12-15-21 | REVISED - | STRUCTURE FILE NUMBER 3110044

GENERAL NOTES
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I.R. 75 OVER RAMP J

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ESTIMATED QUANTITIES

CALC. BY: RMW — DATE: 6/17/21

CHECKED BY: GB — DATE: 6/17/21

ITEM	ITEM EXT.	PARTICIPATION 03/IMS/BR	PARTICIPATION 04/IMS/BR	TOTAL	UNIT	DESCRIPTION	LEFT BRIDGE ABUTMENT	LEFT BRIDGE SUPER.	LEFT BRIDGE GENERAL	RIGHT BRIDGE ABUTMENT	RIGHT BRIDGE SUPER.	RIGHT BRIDGE GENERAL	SHEET REF
202	11003	LUMP	LUMP	LUMP		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN							3/57
202	22900	372	210	582	SQ YD	APPROACH SLAB REMOVED			294			288	
203	20001	28	16	44	CU YD	EMBANKMENT, AS PER PLAN	44						3/57
503	11101	LUMP	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL A)							3/57
503	11101	LUMP	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL B)							3/57
503	11101	LUMP	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL C)							3/57
503	11101	LUMP	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL D)							3/57
503	11101	LUMP	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL E)							3/57
503	11101	LUMP	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL F)							3/57
503	21300	LUMP	LUMP	LUMP		UNCLASSIFIED EXCAVATION							
505	11100	LUMP	LUMP	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION							
507	00700	6490	3650	10140	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	4980			5160			
507	00750	6886	3874	10760	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	5285			5475			
509	10000	143,938	80,965	224,903	POUND	EPOXY COATED REINFORCING STEEL	18,861	92,838		21,633	91,571		
509	30020	4,370	2,458	6,828	FT	NO. 4 GFRP DEFORMED BARS		2439	1046		2338	1005	
509	30030	586	330	916	FT	NO. 5 GFRP DEFORMED BARS		339	132		321	124	
509	30040	4,006	2,253	6,259	FT	NO. 6 GFRP DEFORMED BARS		2061	1065		2079	1054	
511	33501	3	1	4	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN	2			2			5/57
511	46512	266	149	415	CU YD	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	204			211			
511	53014	564	318	882	CU YD	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN		445			437		4/57
511	53014	42	24	66	CU YD	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK (MEDIAN PARAPET), AS PER PLAN		33			33		4/57
511	53014	33	18	51	CU YD	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK (EXTERIOR PARAPET), AS PER PLAN		26			25		4/57
511	53014	147	83	230	CU YD	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN	75			155			4/57
512	10100	863	485	1348	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	290	239	111	371	232	105	
512	10300	92	51	143	SQ YD	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN			72			71	
512	33000	15	9	24	SQ YD	TYPE 2 WATERPROOFING	11			13			
513	10280	534,399	300,600	834,999	POUND	STRUCTURAL STEEL MEMBERS, LEVEL 4		415,870			419,129		
513	20000	4285	2411	6696	EACH	WELDED STUD SHEAR CONNECTORS		3351			3345		
514	00061	1683	946	2629	SQ FT	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT, AS PER PLAN		1329			1300		3/57
514	00067	1683	946	2629	SQ FT	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN		1329			1300		3/57
516	13600	335	189	524	SQ FT	1" PREFORMED EXPANSION JOINT FILLER			262			262	
516	13800	91	51	142	SQ FT	1 1/2" PREFORMED EXPANSION JOINT FILLER			71			71	
516	13900	127	71	198	SQ FT	2" PREFORMED EXPANSION JOINT FILLER	105			93			
516	14020	314	177	491	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	249			242			
516	44401	23	13	36	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN, 14"x13"x4.77" ELASTOMERIC PAD WITH 15"x14"x1½" BOTTOM LOAD PLATE & 15"x25"x1½" TOP LOAD PLATE	18			18			28/57

FOR INFORMATION ONLY

DESIGN AGENCY
EMH&T
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, Ohio 43054
Phone: 614.775.4500

DESIGNED	DRAWN	REVIEWED	DATE
RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	3110044	

ESTIMATED QUANTITIES
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

1338
2017

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ESTIMATED QUANTITIES (CONTINUED)

CALC. BY: RMW — DATE: 6/17/21

CHECKED BY: GB — DATE: 6/17/21

ITEM	ITEM EXT.	PARTICIPATION 03/IMS/BR	PARTICIPATION 04/IMS/BR	TOTAL	UNIT	DESCRIPTION	LEFT BRIDGE ABUTMENT	LEFT BRIDGE SUPER.	LEFT BRIDGE GENERAL	RIGHT BRIDGE ABUTMENT	RIGHT BRIDGE SUPER.	RIGHT BRIDGE GENERAL	SHEET REF
518	21200	115	65	180	CU YD	POROUS BACKFILL WITH GEOTEXTILE FABRIC	70			110			
518	40000	203	114	317	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	158			159			
518	40010	45	26	71	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	6			65			
523	20000	5	3	8	EACH	DYNAMIC LOAD TESTING			4			4	
523	20500	5	3	8	EACH	RESTRIKE			4			4	
526	30001	658	370	1028	SQ YD	REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN			520			508	4/57
526	90010	270	152	422	FT	TYPE A INSTALLATION			213			209	
SPECIAL	530E00200	LUMP		LUMP		STRUCTURE, MISC.: TEMPORARY DECK SUPPORT							12/57
601	20000	607	341	948	SQ YD	CRUSHED AGGREGATE SLOPE PROTECTION			439			509	
867	00100	LUMP		LUMP		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL G)							
867	00100	LUMP		LUMP		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL H)							

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STRUCTURE FILE NUMBER 3110044

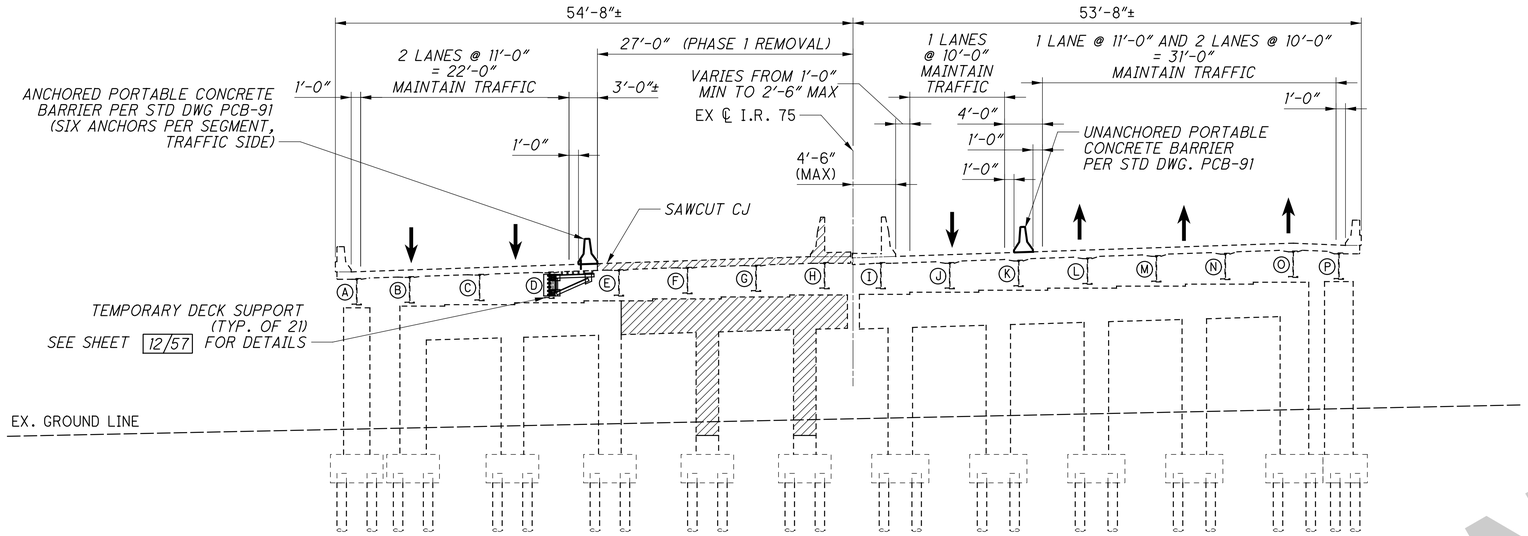
GENERAL NOTES (CONTINUED)
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

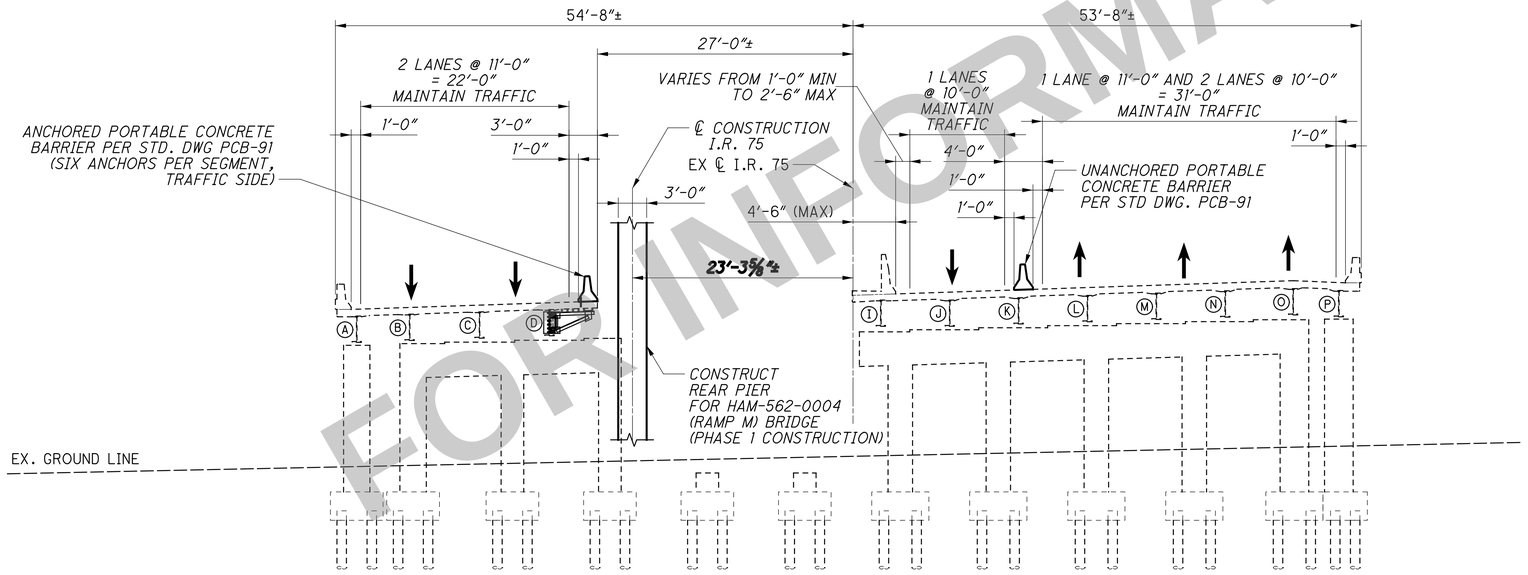
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PHASE 1 REMOVAL



PHASE 1 CONSTRUCTION (HAM-562-0004 REAR PIER CONSTRUCTION)

INCLUDED FOR REFERENCE ONLY
(VIEW FROM STA. 417+75.00, LOOKING UPSTATION)

SEQUENCE OF CONSTRUCTION

PHASE 1 REMOVAL

1. TEMPORARILY CLOSE RAMP J TO ERECT TEMPORARY DECK SUPPORTS UNDER EXISTING BRIDGE.

2. INSTALL PORTABLE CONCRETE BARRIER AND MAINTAIN TRAFFIC PER THE MAINTENANCE OF TRAFFIC PLANS.

3. SAW CUT AND REMOVE SOUTHERN PORTION OF THE EXISTING SOUTHBOUND BRIDGE.

PHASE 1 CONSTRUCTION (HAM-562-0004 REAR PIER CONSTRUCTION, INCLUDED FOR REFERENCE ONLY)

1. CONSTRUCT REAR PIER OF THE HAM-562-0004 (RAMP M) BRIDGE. REFER TO THE PHASED CONSTRUCTION DETAILS OF THIS STRUCTURE FOR MORE DETAILS.

PHASE 2 CONSTRUCTION

1. CONSTRUCT THE ABUTMENTS FOR THE WEST PORTION OF THE PROPOSED SOUTHBOUND BRIDGE AS SHOWN.

2. CONSTRUCT SUPERSTRUCTURE AND APPROACH SLABS FOR THE WEST PORTION OF THE PROPOSED SOUTHBOUND BRIDGE.

PHASE 3 REMOVAL

1. INSTALL ANCHORED PORTABLE CONCRETE BARRIER AND MOVE SOUTHBOUND TRAFFIC TO THE NEWLY CONSTRUCTED PORTION OF BRIDGE PER THE MAINTENANCE OF TRAFFIC PLANS. REMOVE AND RE-INSTALL ANCHORED PORTABLE CONCRETE BARRIER 1'-0" TO THE NORTH AND RE-ALIGN NORTHBOUND TRAFFIC ON THE REMAINING PORTION OF EXISTING BRIDGE PER THE MAINTENANCE OF TRAFFIC PLANS.

2. REMOVE REMAINDER OF THE EXISTING SOUTHBOUND BRIDGE AND NORTHERN PORTION OF EXISTING NORTHBOUND BRIDGE.

PHASE 3 CONSTRUCTION

1. CONSTRUCT THE ABUTMENTS FOR THE REMAINDER OF THE PROPOSED SOUTHBOUND BRIDGE AND THE WEST PORTION OF THE PROPOSED NORTHBOUND BRIDGE AS SHOWN IN THE BRIDGE PLANS.

2. CONSTRUCT SUPERSTRUCTURE FOR THE REMAINDER OF THE PROPOSED SOUTHBOUND BRIDGE (INCLUDING CLOSURE POUR) AND THE WEST PORTION OF THE PROPOSED NORTHBOUND BRIDGE, AND APPROACH SLABS.

PHASE 4 REMOVAL

1. INSTALL UN-ANCHORED PORTABLE CONCRETE BARRIER AND MOVE NORTHBOUND TRAFFIC TO THE EAST PORTION OF THE SOUTHBOUND BRIDGE AND NEWLY CONSTRUCTED WEST PORTION OF THE NORTHBOUND BRIDGE PER THE MAINTENANCE OF TRAFFIC PLANS.

2. REMOVE REMAINDER OF THE EXISTING NORTHBOUND BRIDGE.

PHASE 4 CONSTRUCTION

1. CONSTRUCT THE ABUTMENTS FOR THE REMAINDER OF THE PROPOSED NORTHBOUND BRIDGE AS SHOWN.

2. CONSTRUCT THE SUPERSTRUCTURE FOR THE REMAINDER OF THE PROPOSED NORTHBOUND BRIDGE (INCLUDING CLOSURE POUR), AND APPROACH SLABS.

LEGEND

- DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

Ⓧ - EXISTING BEAMLINE DESIGNATION

NOTE

1. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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DESIGN AGENCY EMH&T
DESIGNED RJE | DRAWN GB | CHECKED RMW | REVIEWED CAS | DATE 12-15-21 | REVISED - | STRUCTURE FILE NUMBER 3110044

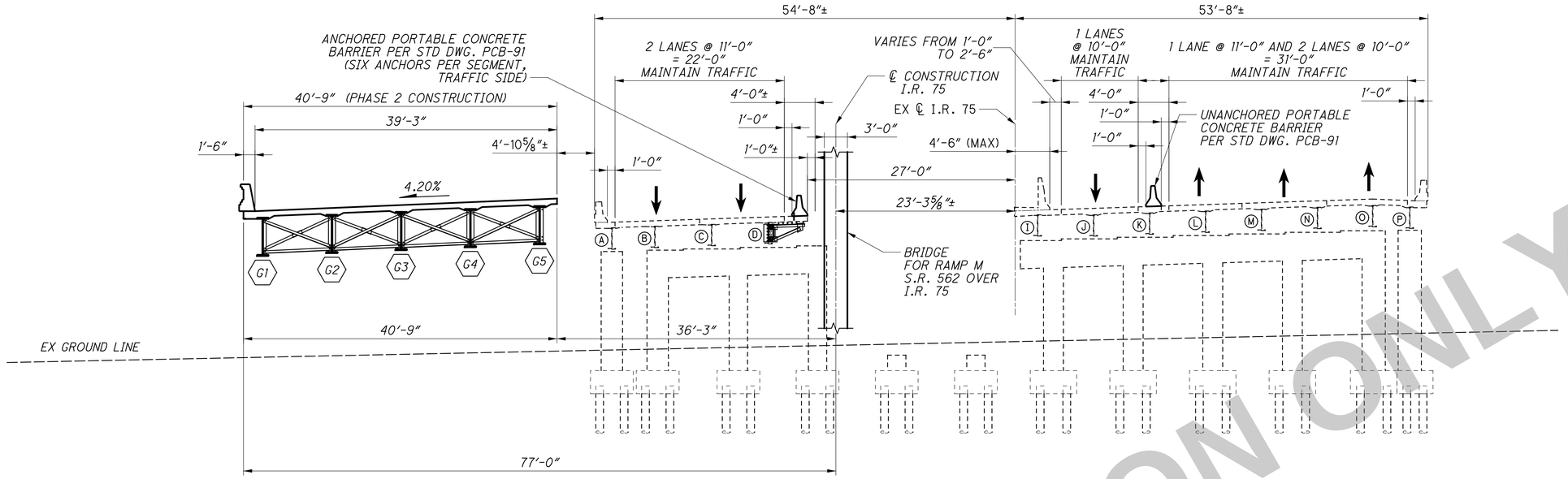
PHASED CONSTRUCTION DETAILS
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

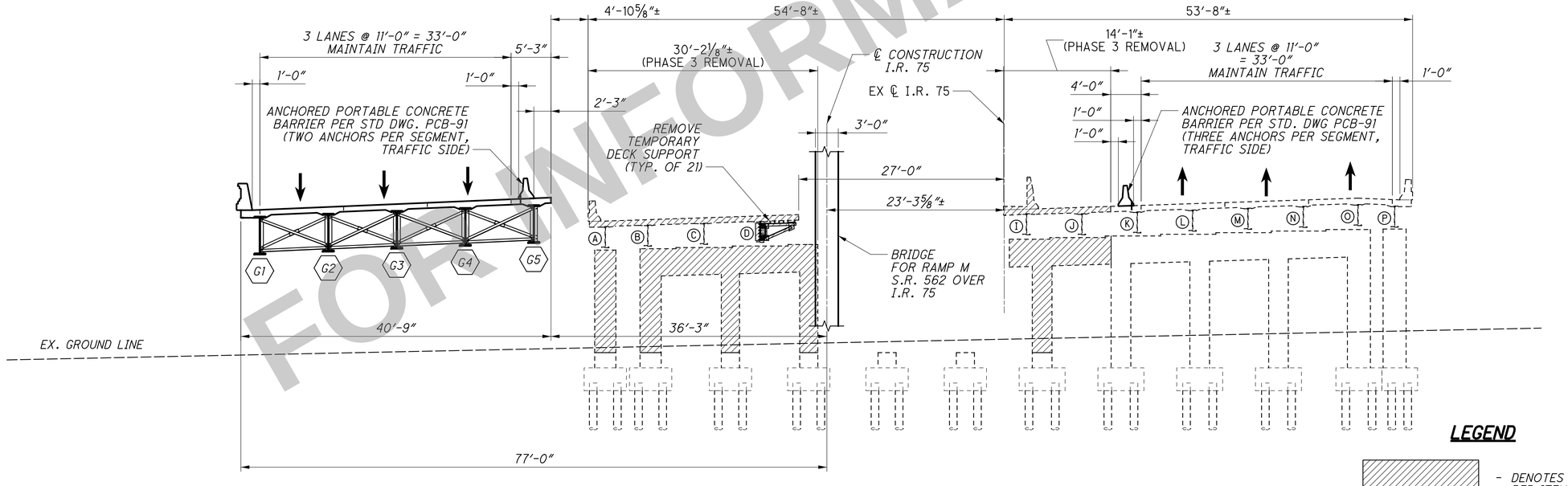
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PHASE 2 CONSTRUCTION



PHASE 3 REMOVAL

LEGEND

- DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN
- (X) - EXISTING BEAMLINE DESIGNATION
- (GX) - PROPOSED GIRDER DESIGNATION

NOTE

1. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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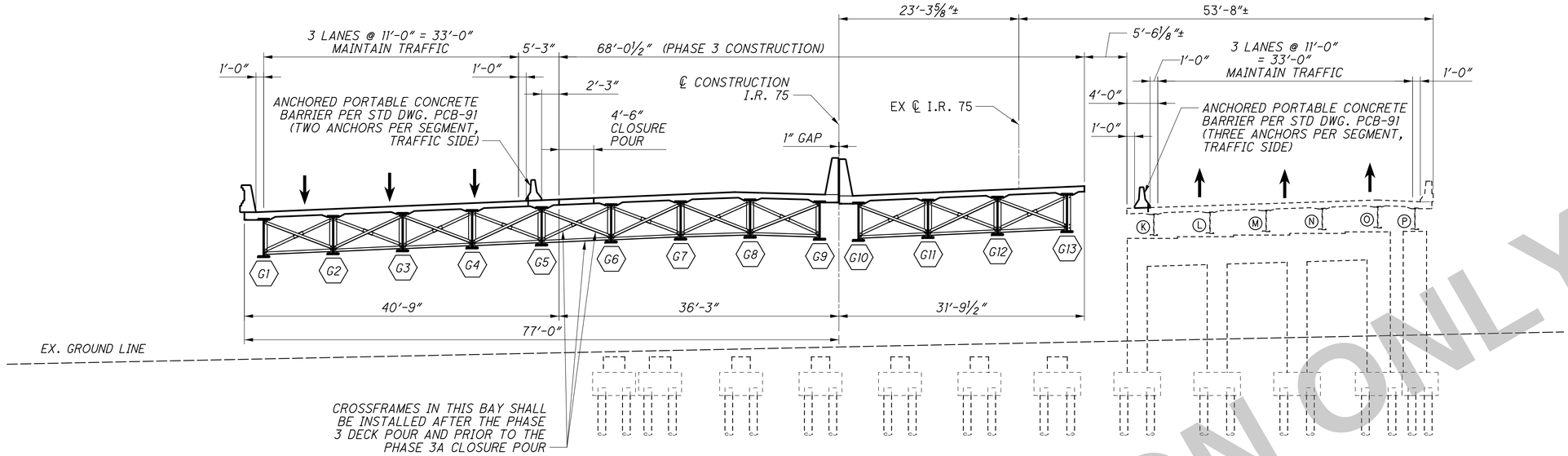
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RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	3110044	

PHASED CONSTRUCTION DETAILS
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

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PHASE 3 CONSTRUCTION

PHASE 4 REMOVAL

LEGEND

- DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN
- Ⓧ - EXISTING BEAMLINE DESIGNATION
- ⟨GX⟩ - PROPOSED GIRDER DESIGNATION

NOTE

1. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

FOR INFORMATION ONLY

DESIGN AGENCY
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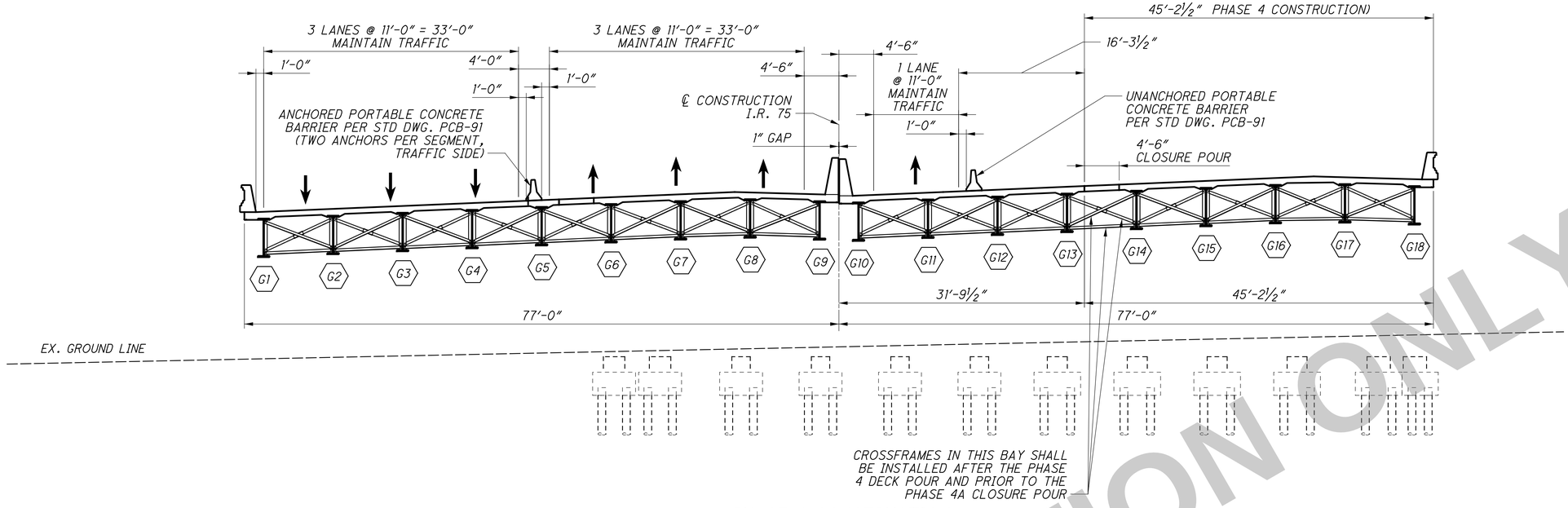
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
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PHASED CONSTRUCTION DETAILS
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

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PHASE 4 CONSTRUCTION

FOR INFORMATION ONLY

LEGEND

- DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

GX - PROPOSED GIRDER DESIGNATION

NOTE

1. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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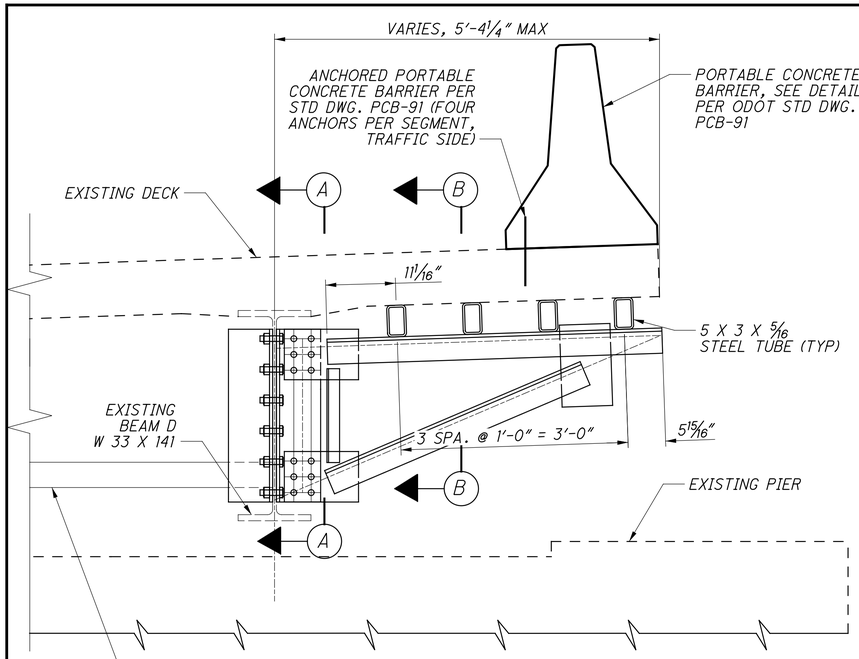
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RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
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PHASED CONSTRUCTION DETAILS
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

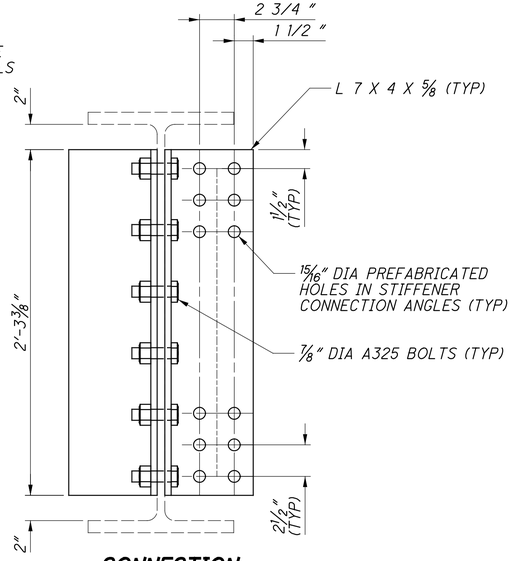
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PID No. 77889

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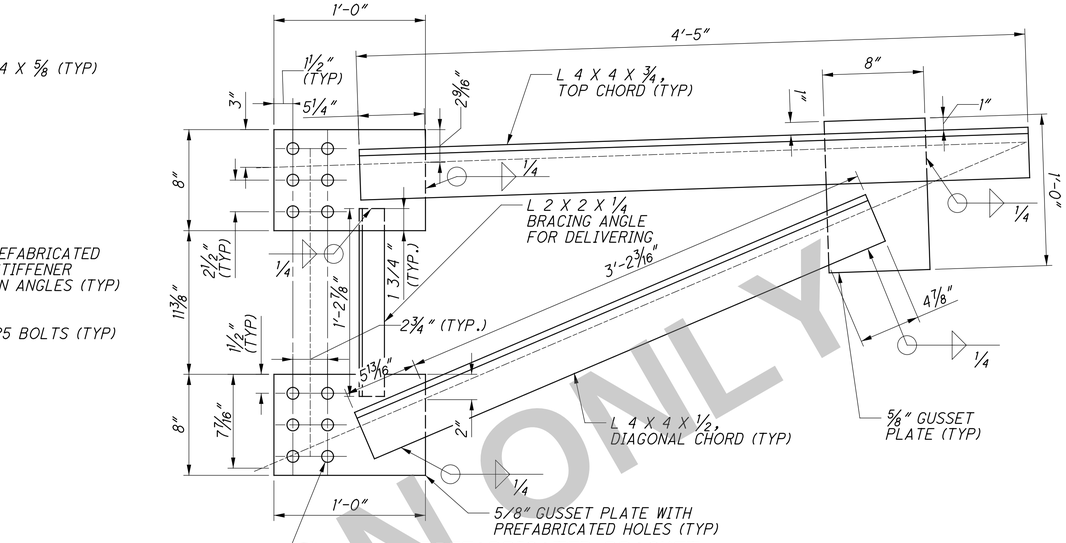
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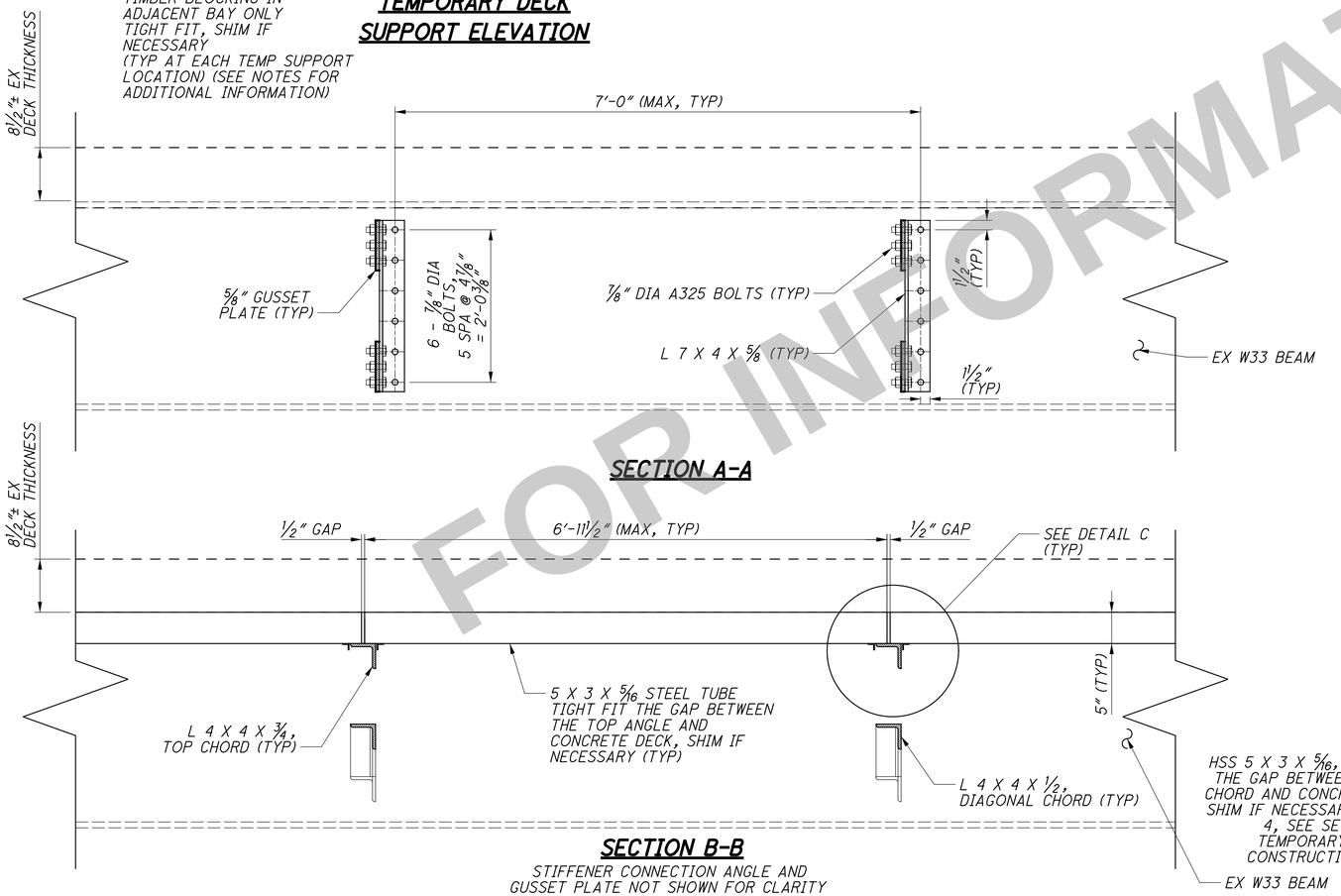
TEMPORARY DECK SUPPORT ELEVATION



CONNECTION STIFFENER ANGLE DETAILS



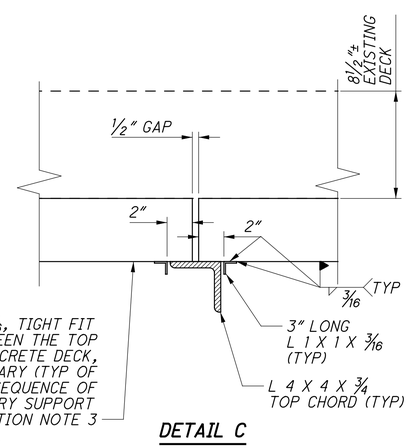
PREFABRICATED BRACKET TRUSS ASSEMBLY DETAILS



SECTION A-A

SECTION B-B

STIFFENER CONNECTION ANGLE AND GUSSET PLATE NOT SHOWN FOR CLARITY



DETAIL C

SEQUENCE OF TEMPORARY SUPPORT CONSTRUCTION :

1. TEMPORARILY CLOSE RAMP J.
2. FIELD DRILL THE HOLES AS REQUIRED ON THE EXISTING BEAM WEB AND INSTALL THE STIFFENER CONNECTION ANGLE ON THE EXISTING BEAM WEB AS SHOWN IN THE CONNECTION STIFFENER ANGLE DETAILS ON THIS SHEET. TEMPORARY SUPPORTS SHALL BE SPACED AT 7'-0" MAX. AVOID PLACING TEMPORARY SUPPORTS WITHIN 1'-0" OF EXISTING CROSSFRAMES AND FIELD SPLICES AND WITHIN 2'-0" OF THE CENTERLINE OF BEARINGS AT THE EXISTING PIERS.
3. ERECT BRACKET TRUSS UNDER EXISTING BRIDGE AND INSTALL THE CONNECTION BOLTS BETWEEN THE STIFFENER ANGLE AND BRACKET TRUSS ASSEMBLY. PRIOR TO ORDERING 5x3x5/16 STEEL TUBE, FIELD MEASURE VERTICAL GAP BETWEEN BOTTOM OF DECK AND TOP OF PREFABRICATED BRACKET TRUSS ASSEMBLY.
4. INSTALL THE STEEL TUBE AS REQUIRED BETWEEN THE TOP ANGLE OF THE BRACKET TRUSS AND BOTTOM OF THE CONCRETE DECK.
5. INSTALL PORTABLE CONCRETE BARRIER AND MAINTAIN TRAFFIC PER THE MAINTENANCE OF TRAFFIC PLANS.

NOTES:

1. MATERIALS:
   ALL TEMPORARY SUPPORT TRUSS MATERIALS SHALL BE A709 GRADE 50.
   FASTENERS:
   ALL BOLTS SHALL BE A325. FOR GALVANIZED, METALIZED AND PAINTED STEEL, TYPE 1 GALVANIZED BOLTS SHALL BE USED. FOR BARE A709 GRADE 50W STEEL, TYPE 3 BOLTS SHALL BE USED. EACH ANCHOR ASSEMBLY SHALL INCLUDE A BOLT, NUT AND TWO (2) WASHERS, TIGHTENED ACCORDING TO 513.
   TIMBER BLOCKING:
   TIMBER BLOCKING SHALL BE AN 8" x 8" SOUTHERN PINE NO. 2 GRADE (Fc MIN = 525 PSI).
   TIMBER BLOCKING IN THE ADJACENT BAY FROM THE TEMPORARY DECK SUPPORT IS ONE FEASIBLE OPTION TO BRACE THE EXISTING BEAM. THE CONTRACTOR MAY CHOSE TO USE ALTERNATE BRACING SYSTEMS AT THEIR OWN EXPENSE. ALTERNATE SYSTEMS SHALL BE APPROVED BY THE DISTRICT PRIOR TO INSTALLATION OF THE TEMPORARY DECK SUPPORT. IF A DIFFERENT BRACING SYSTEM IS USED IT SHALL BE DESIGNED TO RESIST 30 KIPS OF AXIAL LOAD, WITHOUT DAMAGING THE EXISTING BEAMS.
2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
3. PAYMENT FOR ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO CONSTRUCT THE TEMPORARY DECK SUPPORT SYSTEMS AS SHOWN ON THIS SHEET SHALL BE INCLUDED WITH PAYMENT FOR ITEM 530 - STRUCTURE, MISC.: TEMPORARY DECK SUPPORT.

FOR INFORMATION ONLY

DESIGN AGENCY: EMH&T
DESIGNED: RJE | DRAWN: GB | CHECKED: RMW | REVIEWED: CAS | REVISED: - | DATE: 12-15-21 | STRUCTURE FILE NUMBER: 3110044

TEMPORARY DECK SUPPORT DETAILS
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

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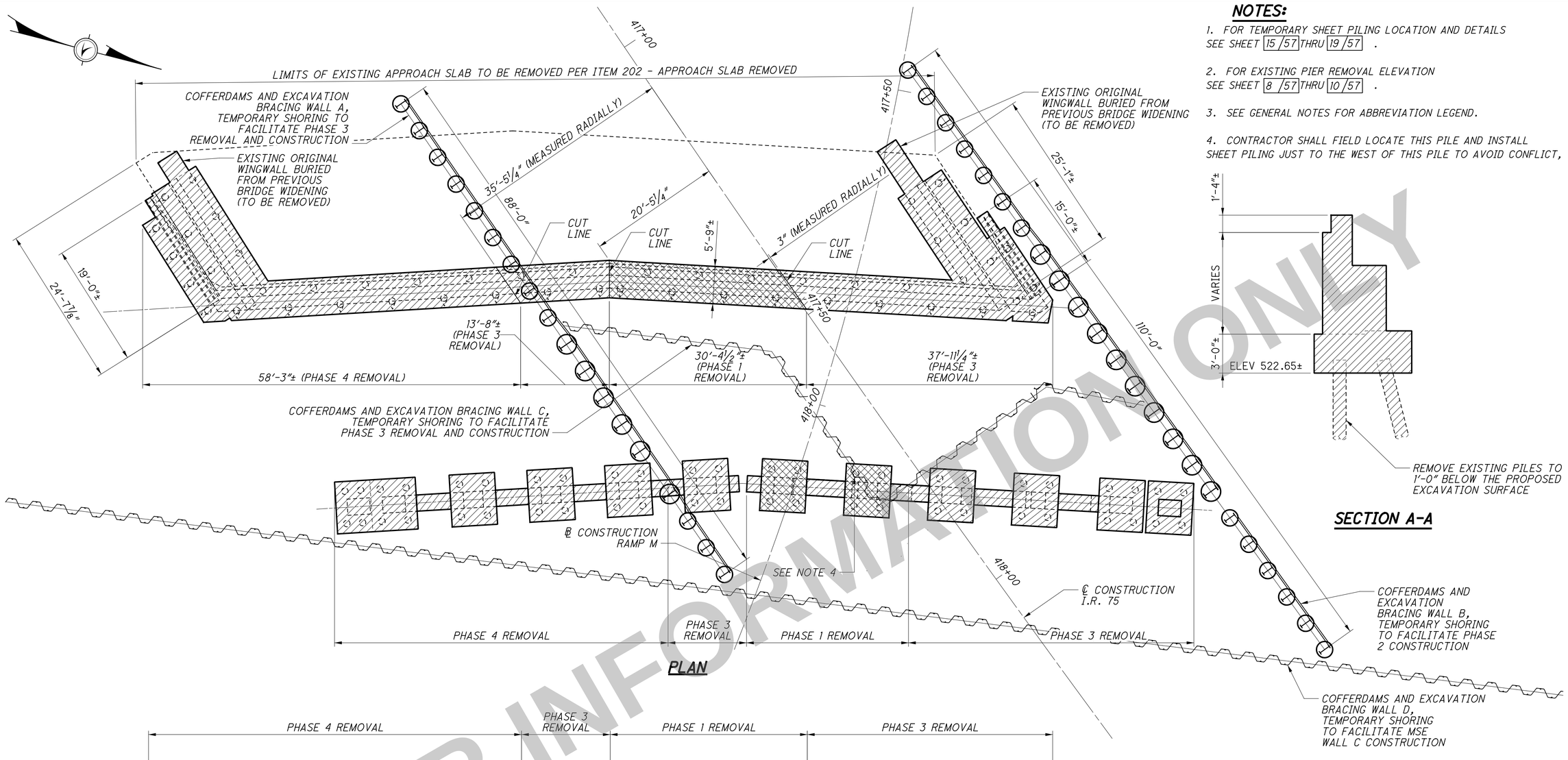
NOTES:

1. FOR TEMPORARY SHEET PILING LOCATION AND DETAILS SEE SHEET 15/57 THRU 19/57 .

2. FOR EXISTING PIER REMOVAL ELEVATION SEE SHEET 8/57 THRU 10/57 .

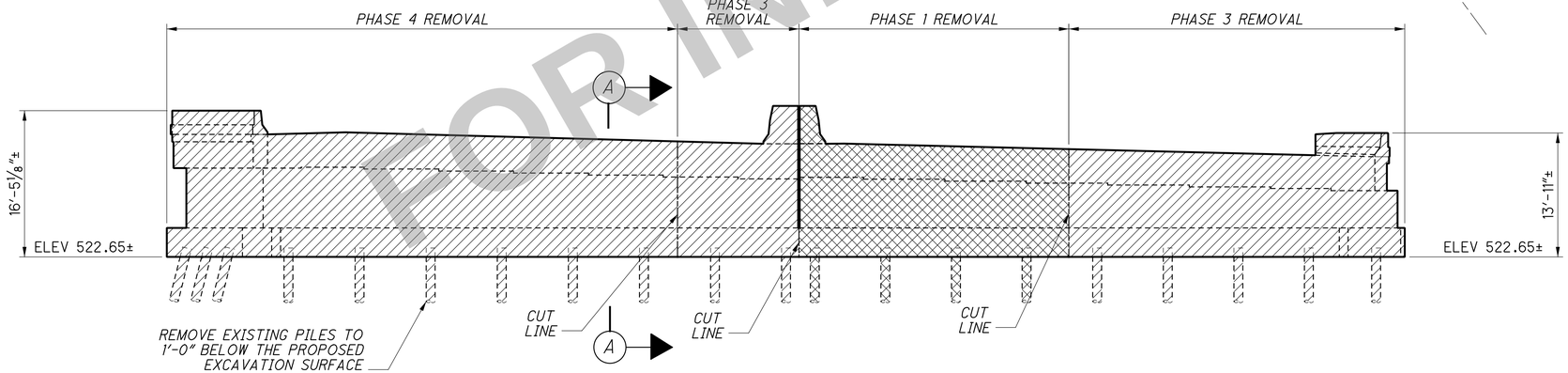
3. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

4. CONTRACTOR SHALL FIELD LOCATE THIS PILE AND INSTALL SHEET PILING JUST TO THE WEST OF THIS PILE TO AVOID CONFLICT,



PLAN

SECTION A-A



REAR ABUTMENT ELEVATION

LEGEND

- DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (REMOVAL TO FACILITATE PROPOSED HAM-75-0791 BRIDGE CONSTRUCTION)

- DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (REMOVAL TO FACILITATE PROPOSED HAM-562-0004 BRIDGE CONSTRUCTION)

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RJE	GB	CAS	12-15-21
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REAR ABUTMENT AND REAR PIER REMOVAL DETAILS
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

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2017

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END POINT
STA. 419+78.85
33.17' LT.

℄ CONSTRUCTION
I.R. 75

419+50

COFFERDAMS AND EXCAVATION
BRACING WALL E
TEMPORARY SHEET
PILING FOR PHASE 2
CONSTRUCTION

END POINT
STA. 419+15.71
34.88' RT.

COFFERDAMS AND EXCAVATION
BRACING WALL F.
TEMPORARY SHEET
PILING FOR PHASE 3
CONSTRUCTION

℄ CONSTRUCTION
RAMP M

LIMITS OF EXISTING APPROACH SLAB
(TO BE REMOVED PER ITEM 202 - APPROACH SLAB REMOVED)

EXISTING ORIGINAL
WINGWALL BURIED FROM
PREVIOUS BRIDGE WIDENING
(TO BE REMOVED)

EXISTING ORIGINAL
WINGWALL BURIED FROM
PREVIOUS BRIDGE WIDENING
(TO BE REMOVED)

43'-0"

59'-0"

25'-0 7/16"

19'-0"

419+00

BEGIN POINT
STA. 419+35.41
32.92' LT.

22'-2 1/16"

15'-0"

BEGIN POINT
STA. 418+57.33
35.27' RT.

5'-9"±

CUT
LINE

417+50

106'-1 3/16"± (PHASE 3 REMOVAL)

418+00

54'-8"± (PHASE 4 REMOVAL)

419+50

℄ CONSTRUCTION
RAMP J

419+00

418+50

35'-8 1/8"±

418+50

PHASE 3 REMOVAL

PHASE 4 REMOVAL

PLAN

1'-4"±

VARIES

3'-0"±

ELEV
522.95±

REMOVE EXISTING PILES TO
4'-0" BELOW THE PROPOSED TOP
OF GROUND LINE AT RAMP J

SECTION A-A

PHASE 3 REMOVAL

PHASE 4 REMOVAL

A

CUT
LINE

14'-4 3/4"±

ELEV
522.95±

16'-8 5/8"±

ELEV 522.95±

A

REMOVE EXISTING PILES TO
4'-0" BELOW THE PROPOSED TOP
OF GROUND LINE AT RAMP J

FORWARD ABUTMENT ELEVATION

LEGEND

- DENOTES AREAS TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (REMOVAL TO FACILITATE PROPOSED HAM-75-0791 BRIDGE CONSTRUCTION)

NOTES:

1. FOR TEMPORARY SHEET PILING LOCATION AND DETAILS SEE SHEET 15/57 THRU 19/57 .
2. FOR EXISTING PIER REMOVAL ELEVATION SEE SHEET 8/57 THRU 10/57 .
3. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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DESIGN AGENCY
EMH&T
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, Ohio 43054
Phone: 614.775.4500

DESIGNED	DRAWN	REVIEWED	DATE
RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	3110044	

FORWARD ABUTMENT AND FORWARD PIER REMOVAL DETAILS

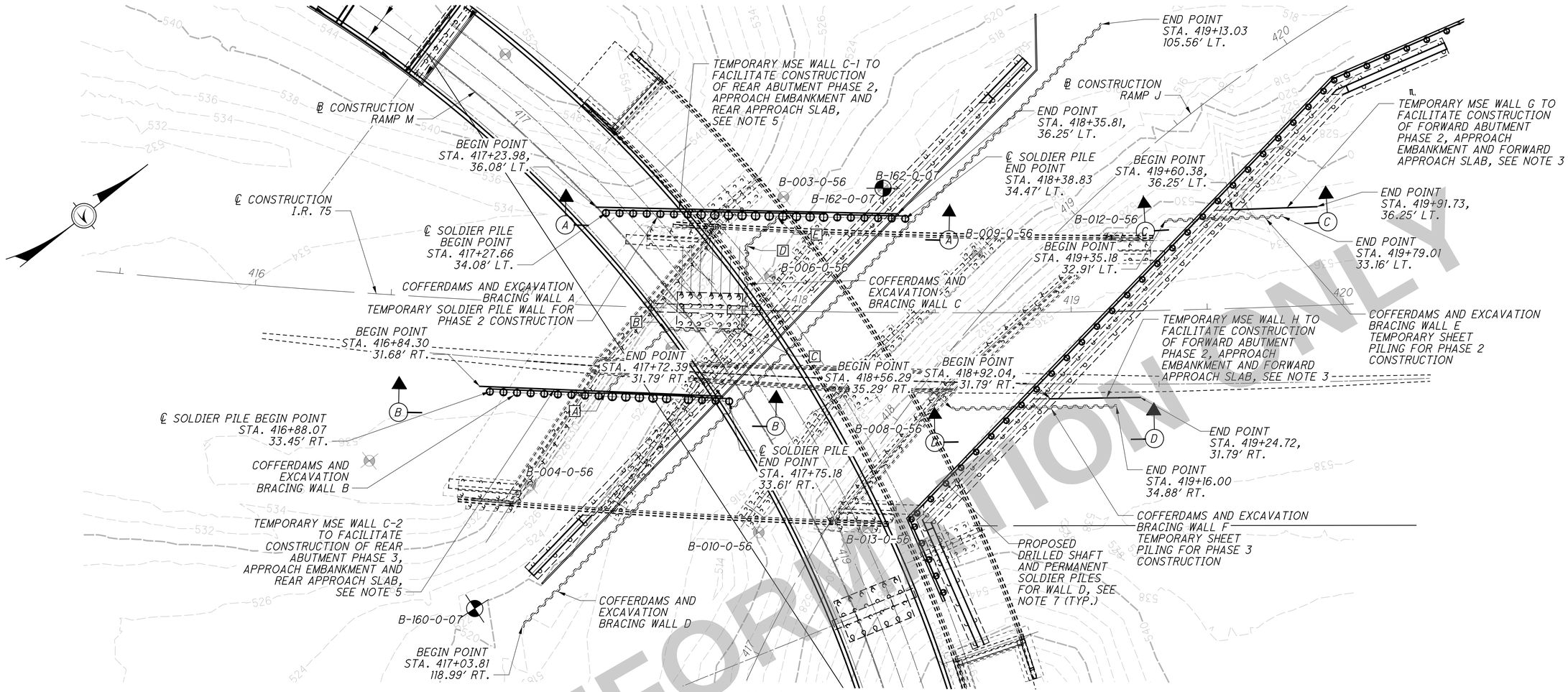
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

14 / 57

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2017

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FOR INFORMATION ONLY

PLAN

TEMPORARY SHORING CONSTRUCTION SEQUENCE:

AT REAR ABUTMENT - SHEET PILE

1. REMOVE PORTIONS OF EXISTING APPROACH SLABS, PAVEMENT AND DECK IN PHASE 2 TO ALLOW INSTALLATION OF SHEET PILE.
2. INSTALL SHEET PILES FOR PHASE 2 CONSTRUCTION AS REQUIRED AS PLAN SHOWN.
3. EXCAVATE TO THE DEPTH OF WALER FOR THE UPPER SOIL ANCHORS.
4. INSTALL THE WALER AND UPPER SOIL ANCHOR SYSTEM ON THE SHEET PILES.
5. REPEAT STEP 3 AND STEP 4 TO THE DEPTH OF THE WALER FOR THE LEVEL OF SOIL ANCHORS AND EXCAVATE TO REQUIRED BOTTOM EXCAVATION AS SHOWN ON THE ELEVATION VIEW A-A ON SHEET 16/57
6. COMPLETE PHASE 2 REAR ABUTMENT AND REAR ABUTMENT MSE WALL CONSTRUCTION OF RAMP M BRIDGE.
7. INSTALL THE TEMPORARY WIRED FACED WALL AND EMBANKMENT AS PLAN SHOWN TO SUPPORT PROPOSED ROADWAY APPROACH EMBANKMENT IN PHASE 2 CONSTRUCTION.
8. COMPLETE PHASE 2 SUPERSTRUCTURE CONSTRUCTION OF BRIDGE AND APPROACH.
9. REPEAT STEP 1 THRU. STEP 8 FOR PHASE 3 CONSTRUCTION .

AT FORWARD ABUTMENT - SHEET PILE

1. REMOVE PORTIONS OF EXISTING APPROACH SLABS, PAVEMENT AND DECK IN PHASE 2 TO ALLOW INSTALLATION OF SHEET PILES.
2. INSTALL SHEET PILE FOR PHASE 2 CONSTRUCTION AS REQUIRED AS PLAN SHOWN.
3. COMPLETE EXCAVATION FOR THE FORWARD ABUTMENT FOOTING CONSTRUCTION AS SHOWN ON THE ELEVATION VIEW C-C ON SHEET 18/57
4. COMPLETE PHASE 2 FORWARD ABUTMENT CONSTRUCTION AND INSTALL THE DRILLED SHAFTS AND SOLDIER PILES FOR WALL D IN FRONT OF FORWARD ABUTMENT FOOING.
5. INSTALL THE TEMPORARY WIRED FACED WALL AND EMBANKMENT AS PLAN SHOWN TO SUPPORT PROPOSED ROADWAY APPROACH EMBANKMENT IN PHASE 2 CONSTRUCTION.
6. COMPLETE PHASE 2 SUPERSTRUCTURE CONSTRUCTION OF BRIDGE AND APPROACH.
7. REPEAT STEP 1 THRU. STEP 6 FOR PHASE 3 CONSTRUCTION .

LEGEND (WALL C STATIONS/OFFSETS)

- A - STA 417+30.02, 31.93' RT
- B - STA 417+51.43, 7.87' RT
- C - STA 417+80.28, 8.04' RT
- D - STA 417+80.40, 23.58' LT
- E - STA 417+91.49, 34.06' LT

COFFERDAMS AND EXCAVATION BRACING WALLS C & D (GRADE 50)

WALL #	APPROX. TOP OF PILING ELEV.	MAX. EXPOSED HEIGHT	MIN. BOTTOM OF PILING ELEVATION	MIN. SECTION MODULUS (CU IN/FT)
C	515.50	11'-3"±	479.25	60.70
D	516.25	12'-0"±	479.25	60.70

NOTES:

1. ALL STATIONS AND OFFSETS SHOWN ARE AT THE CENTERLINE OF SHEET PILE AND ALL STATIONS AND OFFSETS ARE BASED ON THE ℄ CONSTRUCTION I.R. 75 UNLESS NOTED OTHERWISE.
2. FOR TEMPORARY SOLDIER PILE WALL ELEVATION VIEWS AND DETAILS, SEE SHEET 16/57 .
3. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND INSTALLATION OF TEMP. WIRE FACED WALL AS SHOWN ON THE PLAN TO SUPPORT THE EMBANKMENT OF THE PROPOSED STRUCTURE IN PHASE 2 & 3 CONSTRUCTION. TEMPORARY WIRED FACED WALL SHALL BE PAID FOR UNDER ITEM 867 - TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL
4. SEE SOIL NAIL WALL DETAILS ON HAM-562-0004 BRIDGE PLAN SHEETS 1288 THROUGH 1290 .
5. SEE REAR TEMPORARY MSE WALL DETAILS ON MSE WALL C PLAN SHEET 1042 AND FORWARD TEMPORARY MSE WALL DETAILS ON PLAN SHEET 19/57 .
6. SEE PERMANENT SOLDIER PILE DETAILS ON WALL D PLAN SHEET 946 THROUGH 951 .
7. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

DESIGN AGENCY EMH&T

DESIGNED	DRAWN	REVIEWED	DATE
RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	3110044	

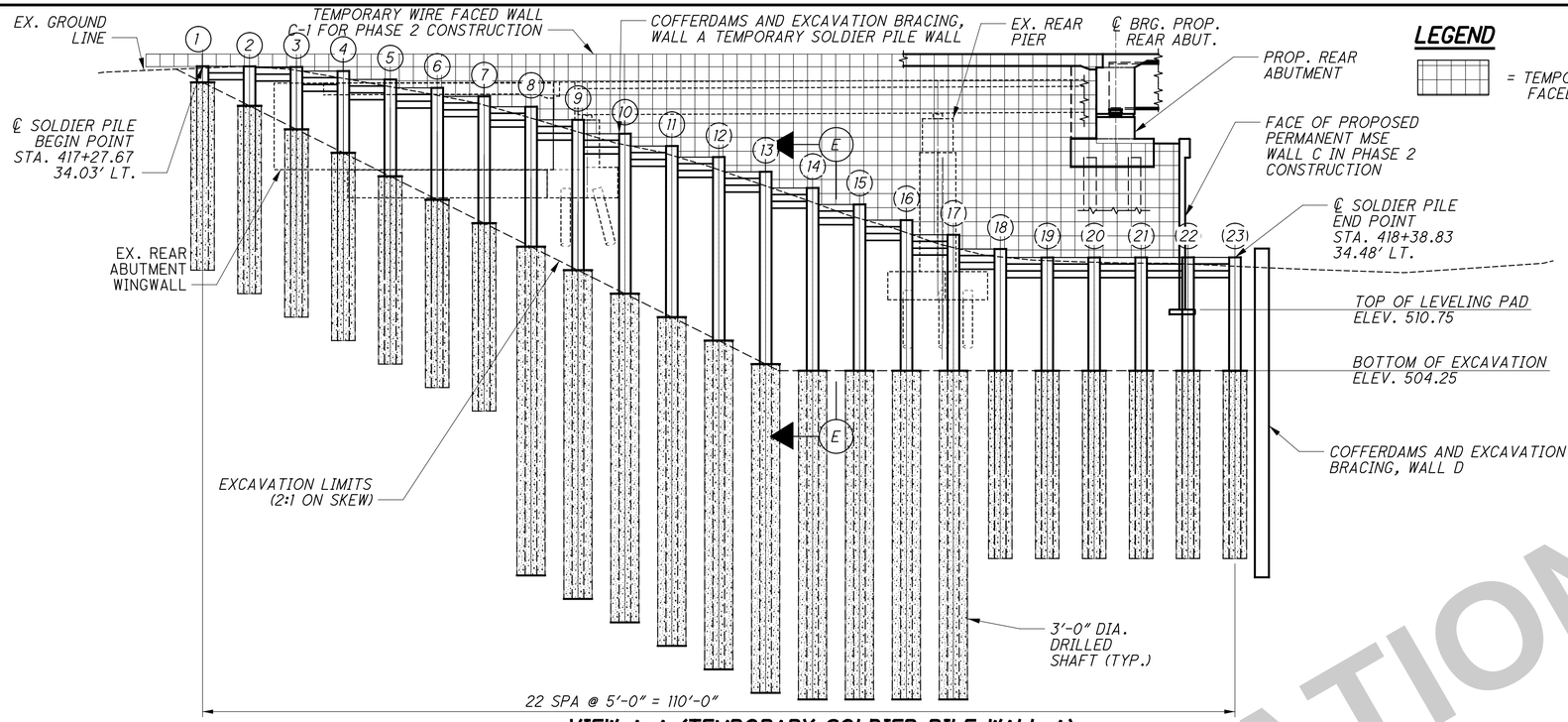
TEMPORARY SHORING PLAN
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

15 / 57

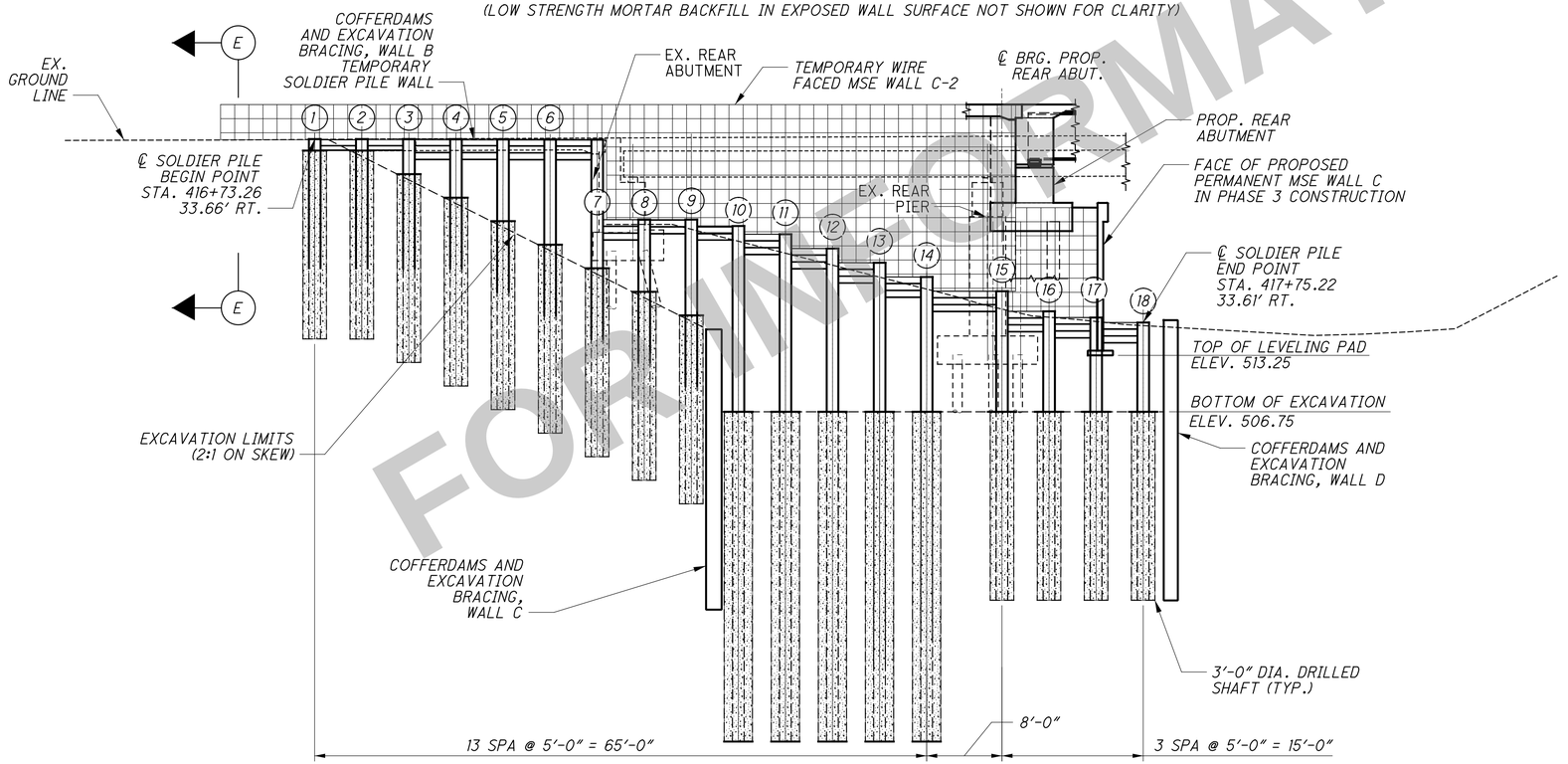
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2017

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VIEW A-A (TEMPORARY SOLDIER PILE WALL A)

(LOW STRENGTH MORTAR BACKFILL IN EXPOSED WALL SURFACE NOT SHOWN FOR CLARITY)



VIEW B-B (TEMPORARY SOLDIER PILE WALL B)

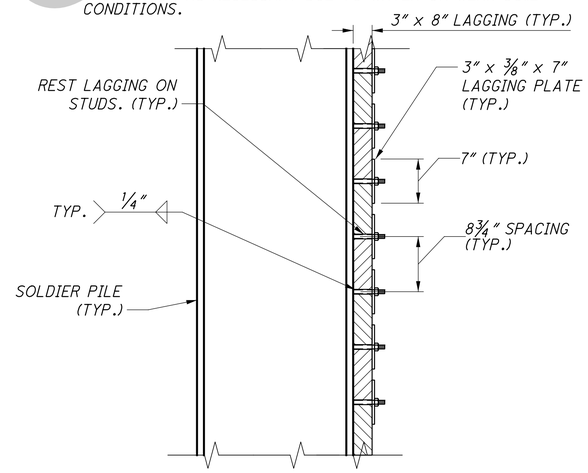
(LOW STRENGTH MORTAR BACKFILL IN EXPOSED WALL SURFACE NOT SHOWN FOR CLARITY)

LEGEND

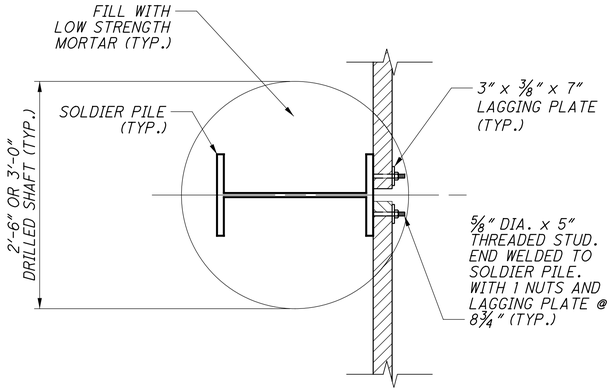
= TEMPORARY WIRE FACED MSE WALL

NOTES:

1. FOR SOLDIER PILE LOCATIONS, SEE TEMPORARY SHORING PLAN ON SHEET 15/57.
2. SOLDIER PILES SHALL BE GRADE 50 (50KSI) STEEL.
3. PAYMENT FOR SOLDIER PILES, DRILLED SHAFT, LAGGING, STRUCTURAL CONCRETE FILL AND REMOVAL OF ALL COMPONENTS AFTER NO LONGER NECESSARY FOR SPECIFIC CONSTRUCTION PHASE, AND ALL OTHER ITEMS ASSOCIATED WITH TEMPORARY SHORING WILL BE INCLUDING IN THE CONTRACT LUMP SUM PRICE FOR "COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN".
4. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
5. DRILL ALL SOLDIER PILES PER ITEM 524 FROM THE EXISTING GROUND SURFACE TO THE DESIGN TIP ELEVATION. PLACE THE SOLDIER PILE IN THE EXCAVATED HOLE AND FILL THE DRILLED HOLE TO THE GROUND SURFACE WITH ITEM 613 LOW STRENGTH MORTAR.
6. EXCAVATE THE LOW STRENGTH MORTAR IN A TOP-DOWN MANNER TO PERMIT LAGGING INSTALLATION. PERFORM EXCAVATION WITH A SMOOTH PLATE BUCKET TO MINIMIZE OVER EXCAVATION.
7. INSTALL WOOD LAGGING IN TOP-DOWN MANNER, ATTACHING THE LAGGING TO THE FRONT FLANGE OF THE SOLIDER PILE. NO MORE THAN 5 FT. OF UNSUPPORTED EXCAVATION SHALL BE EXPOSED AT ANY GIVEN TIME. REDUCE EXPOSED EXCAVATION AS NECESSARY DUE TO WATER OR WEAK SOIL CONDITIONS.



SECTION E-E



TYPICAL SECTION TEMPORARY SOLDIER PILE WALL

DESIGN AGENCY: EMH&T
DESIGNED: RJE | DRAWN: GB | REVIEWED: CAS | DATE: 12-15-21
CHECKED: RMW | REVISED: - | STRUCTURE FILE NUMBER: 3110044

REAR ABUTMENT TEMPORARY SHORING DETAILS
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

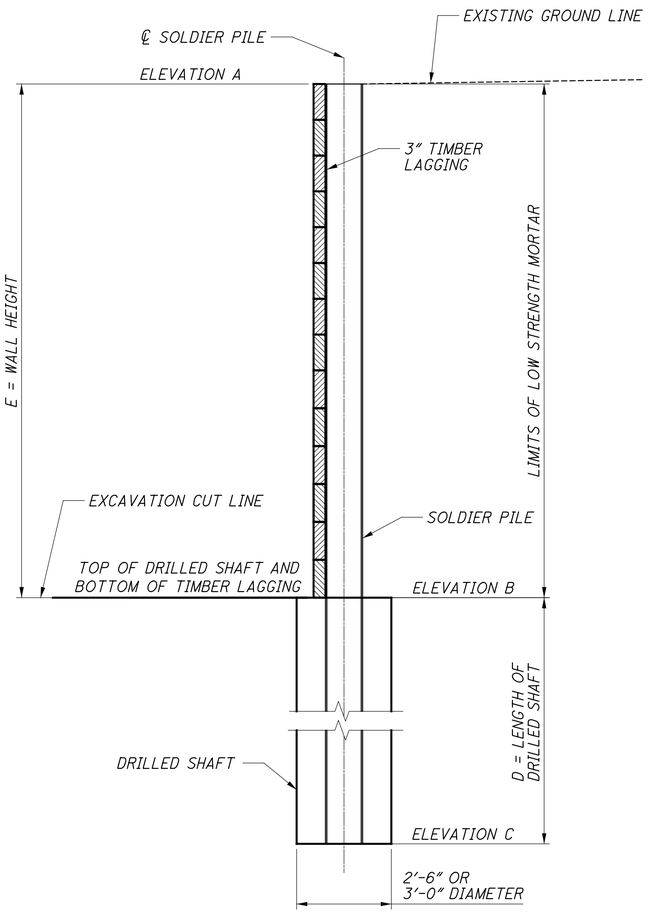
HAM-75-7.85
PID No. 77889

16 / 57

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2017

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TEMPORARY SOLDIER PILE WALL A LOCATION AND ELEVATION DATA TABLE

SOLDIER PILE NUMBER	SOLDIER PILE STATION (ALONG ℄ CONST I.R. 75	SOLDIER PILE OFFSET (ALONG ℄ CONST I.R. 75	TOP OF SOLDIER PILE ELEVATION A	TOP OF DRILLED SHAFT ELEVATION B	PILE TIP ELEVATION C	LENGTH OF DRILLED SHAFT D	WALL HEIGHT E	SOLDIER PILE SIZE	DRILLED SHAFT DIAMETER
1	417+27.66	34.08' LT	536.65	534.95	514.95	20'	1.71'	W21X50	2'-6"
2	417+32.72	34.18' LT	536.65	532.45	512.45	20'	4.21'	W21X50	2'-6"
3	417+37.77	34.27' LT	536.59	529.95	509.95	20'	6.64'	W21X50	2'-6"
4	417+42.82	34.35' LT	536.15	527.45	507.45	20'	8.70'	W21X50	2'-6"
5	417+47.87	34.43' LT	535.26	524.95	504.95	20'	11.31'	W21X50	2'-6"
6	417+52.93	34.50' LT	534.37	522.45	502.45	20'	11.92'	W21X50	2'-6"
7	417+57.98	34.56' LT	533.45	519.95	499.95	20'	13.50'	W21X50	2'-6"
8	417+63.03	34.61' LT	532.35	517.45	482.45	35'	14.90'	W27X129	3'-0"
9	417+68.08	34.65' LT	530.96	514.95	479.95	35'	16.00'	W27X129	3'-0"
10	417+73.14	34.69' LT	529.49	512.45	477.45	35'	17.04'	W27X129	3'-0"
11	417+78.19	34.72' LT	528.17	509.95	474.95	35'	18.22'	W27X129	3'-0"
12	417+83.25	34.74' LT	526.99	507.45	472.45	35'	19.54'	W27X129	3'-0"
13	417+88.30	34.76' LT	525.43	504.95	469.95	35'	20.48'	W27X129	3'-0"
14	417+93.35	34.76' LT	523.71	504.25	469.25	35'	19.46'	W27X129	3'-0"
15	417+98.41	34.76' LT	521.95	504.25	469.25	35'	17.70'	W27X129	3'-0"
16	418+03.46	34.75' LT	520.28	504.25	469.25	35'	16.03'	W27X129	3'-0"
17	418+08.51	34.74' LT	518.72	504.25	469.25	35'	14.47'	W27X129	3'-0"
18	418+13.57	34.71' LT	517.21	504.25	484.25	20'	12.96'	W21X50	2'-6"
19	418+18.62	34.68' LT	516.30	504.25	484.25	20'	12.05'	W21X50	2'-6"
20	418+23.67	34.64' LT	516.30	504.25	484.25	20'	12.05'	W21X50	2'-6"
21	418+28.73	34.59' LT	516.30	504.25	484.25	20'	12.05'	W21X50	2'-6"
22	418+33.78	34.54' LT	516.30	504.25	484.25	20'	12.06'	W21X50	2'-6"
23	418+38.83	34.47' LT	516.30	504.25	484.25	20'	12.06'	W21X50	2'-6"

TEMPORARY SOLDIER PILE WALL B LOCATION AND ELEVATION DATA TABLE

SOLDIER PILE NUMBER	SOLDIER PILE STATION (ALONG ℄ CONST I.R. 75	SOLDIER PILE OFFSET (ALONG ℄ CONST I.R. 75	TOP OF SOLDIER PILE ELEVATION A	TOP OF DRILLED SHAFT ELEVATION B	PILE TIP ELEVATION C	LENGTH OF DRILLED SHAFT D	WALL HEIGHT E	SOLDIER PILE SIZE	DRILLED SHAFT DIAMETER
1	416+88.07	33.45' RT	535.70	534.48	514.48	20'	1.22'	W21X50	2'-6"
2	416+93.01	33.40' RT	535.70	534.48	514.48	20'	1.22'	W21X50	2'-6"
3	416+97.96	33.35' RT	535.70	531.99	511.99	20'	3.71'	W21X50	2'-6"
4	417+02.91	33.31' RT	535.70	529.49	509.49	20'	6.21'	W21X50	2'-6"
5	417+07.86	33.28' RT	535.68	526.99	506.99	20'	8.69'	W21X50	2'-6"
6	417+12.81	33.26' RT	535.67	524.49	504.49	20'	11.18'	W21X50	2'-6"
7	417+17.76	33.24' RT	535.65	521.99	501.99	20'	13.67'	W21X50	2'-6"
8	417+22.71	33.23' RT	527.16	519.49	499.49	20'	7.67'	W21X50	2'-6"
9	417+27.66	33.23' RT	527.16	516.99	496.99	20'	10.17'	W21X50	2'-6"
10	417+32.61	33.17' RT	526.48	506.75	471.75	35'	19.73'	W27X129	3'-0"
11	417+37.56	33.19' RT	525.61	506.75	471.75	35'	18.86	W27X129	3'-0"
12	417+42.51	33.21' RT	524.09	506.75	471.75	35'	17.34'	W27X129	3'-0"
13	417+47.46	33.24' RT	522.58	506.75	471.75	35'	15.83'	W27X129	3'-0"
14	417+52.41	33.27' RT	521.07	506.75	471.75	35'	14.32'	W27X129	3'-0"
15	417+60.33	33.35' RT	519.56	506.75	486.75	20'	12.81'	W21X50	2'-6"
16	417+65.28	33.47' RT	517.42	506.75	486.75	20'	10.67'	W21X50	2'-6"
17	417+70.23	33.54' RT	516.76	506.75	486.75	20'	10.01'	W21X50	2'-6"
18	417+75.18	33.61' RT	516.24	506.75	486.75	20'	9.49'	W21X50	2'-6"

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DESIGN AGENCY
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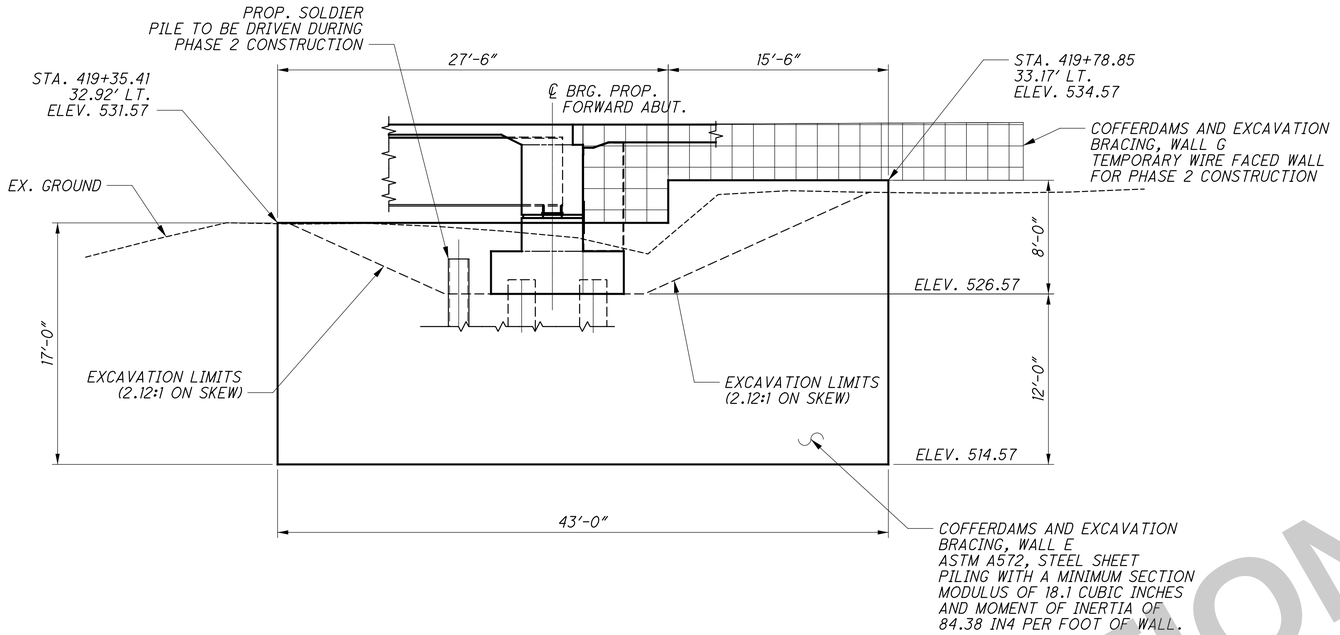
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RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	3110044	

TEMPORARY SHORING DETAILS
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

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2017

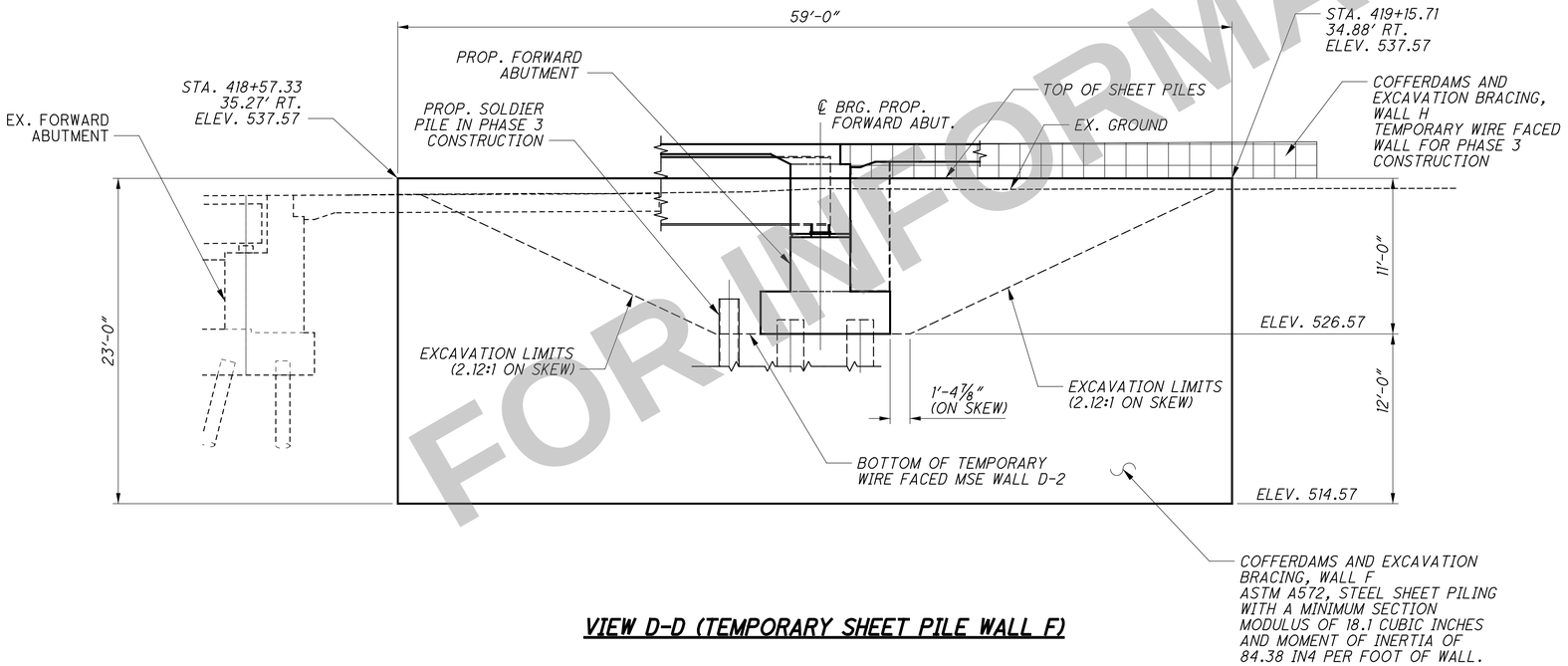
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VIEW C-C (TEMPORARY SHEET PILE WALL E)

NOTES:

1. FOR SHEET PILING LOCATIONS, SEE TEMPORARY SHORING PLAN ON SHEET 15/57.
2. SHEET PILING SHALL BE ASTM A572 MATERIAL AND MEET THE REQUIREMENTS OF CMS 711.03. MINIMUM YIELD STRENGTH SHALL BE 50 KSI.
3. PAYMENT FOR SHEET PILING, REMOVAL OF ALL COMPONENTS AFTER NO LONGER NECESSARY FOR SPECIFIC CONSTRUCTION PHASE, AND ALL OTHER ITEMS ASSOCIATED WITH TEMPORARY SHORING WILL BE INCLUDING IN THE CONTRACT LUMP SUM PRICE FOR "COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN".
4. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.



VIEW D-D (TEMPORARY SHEET PILE WALL F)

LEGEND

- TEMPORARY MSE WALL FACE

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	3110044	

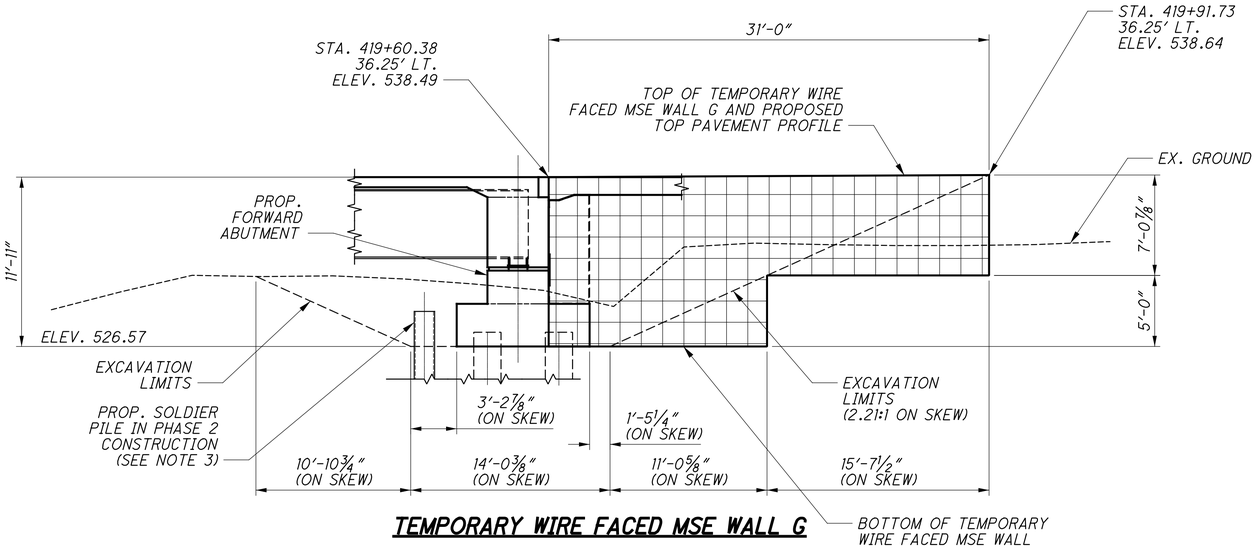
FORWARD ABUTMENT TEMPORARY SHORING DETAILS
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

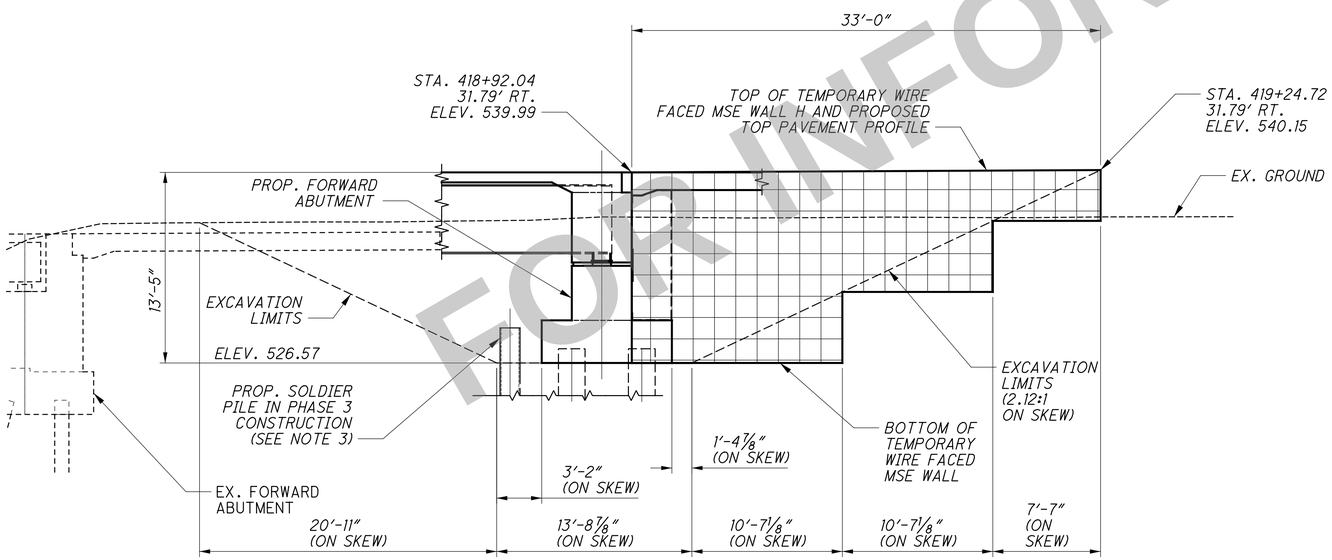
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2017

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TEMPORARY WIRE FACED MSE WALL G



TEMPORARY WIRE FACED MSE WALL H

LEGEND

- TEMPORARY MSE WALL FACE

NOTES

1. TOP OF THE TEMPORARY WIRE FACED MSE WALL TO MATCH THE PROPOSED PAVEMENT ELEVATION OF IR 75 OR TOP OF THE APPROACH SLAB OF HAM-75-0791 BRIDGE.
2. SEE TEMPORARY SHORING DETAILS ON SHEETS 15/57 THROUGH 18/57
3. SEE SOLDIER PILE WALL D SUBSET FOR DETAILS.
4. SEE MSE WALL C SUBSET FOR TEMPORARY WIRE FACED MSE WALL NOTES.
5. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	3110044	

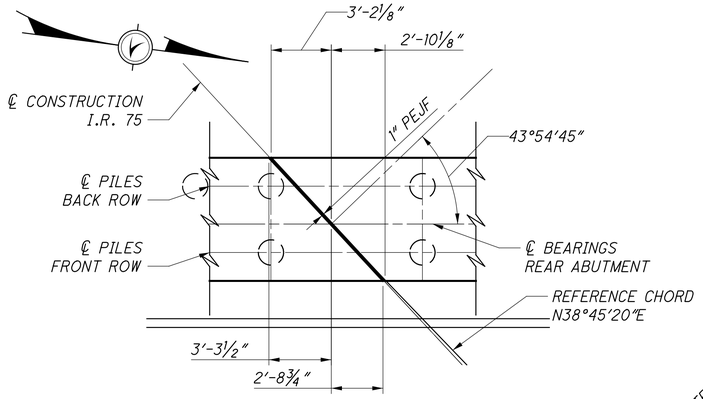
TEMPORARY MSE WALL DETAILS
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

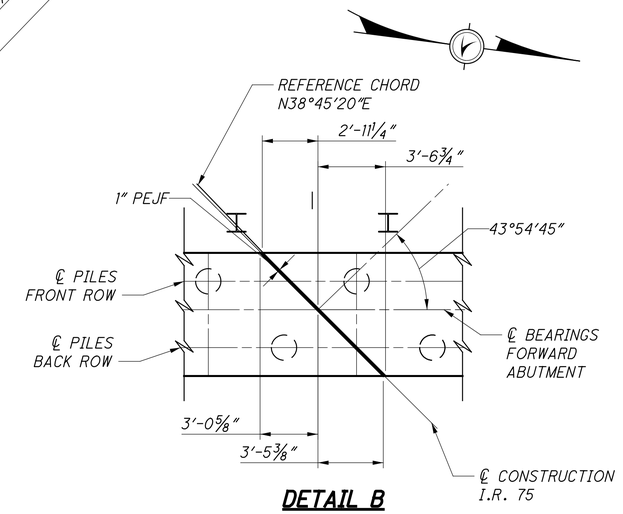
19/57

1351
2017

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DETAIL A



DETAIL B

LEGEND

- ○ - PROPOSED 16" DIA CIP VERTICAL PILE
- ◌ - PROPOSED 16" DIA CIP PILE BATTERED AT 1:4
- ○ - EXISTING 12" DIA CIP VERTICAL PILE
- ◌ - EXISTING 12" DIA CIP BATTERED PILE
- (XX) - PILE NUMBER

FOUNDATION PLAN - LEFT BRIDGE

NOTES

1. REMOVE EXISTING FOUNDATIONS AND PORTIONS OF EXISTING FOUNDATIONS THAT INTERFERE WITH PROPOSED FOUNDATIONS PER 202.03.
2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

FOR INFORMATION ONLY

DESIGN AGENCY: EMH&T
DESIGNED: RJE | DRAWN: GB | REVIEWED: CAS | DATE: 12-15-21
CHECKED: RMW | REVISED: - | STRUCTURE FILE NUMBER: 3110044

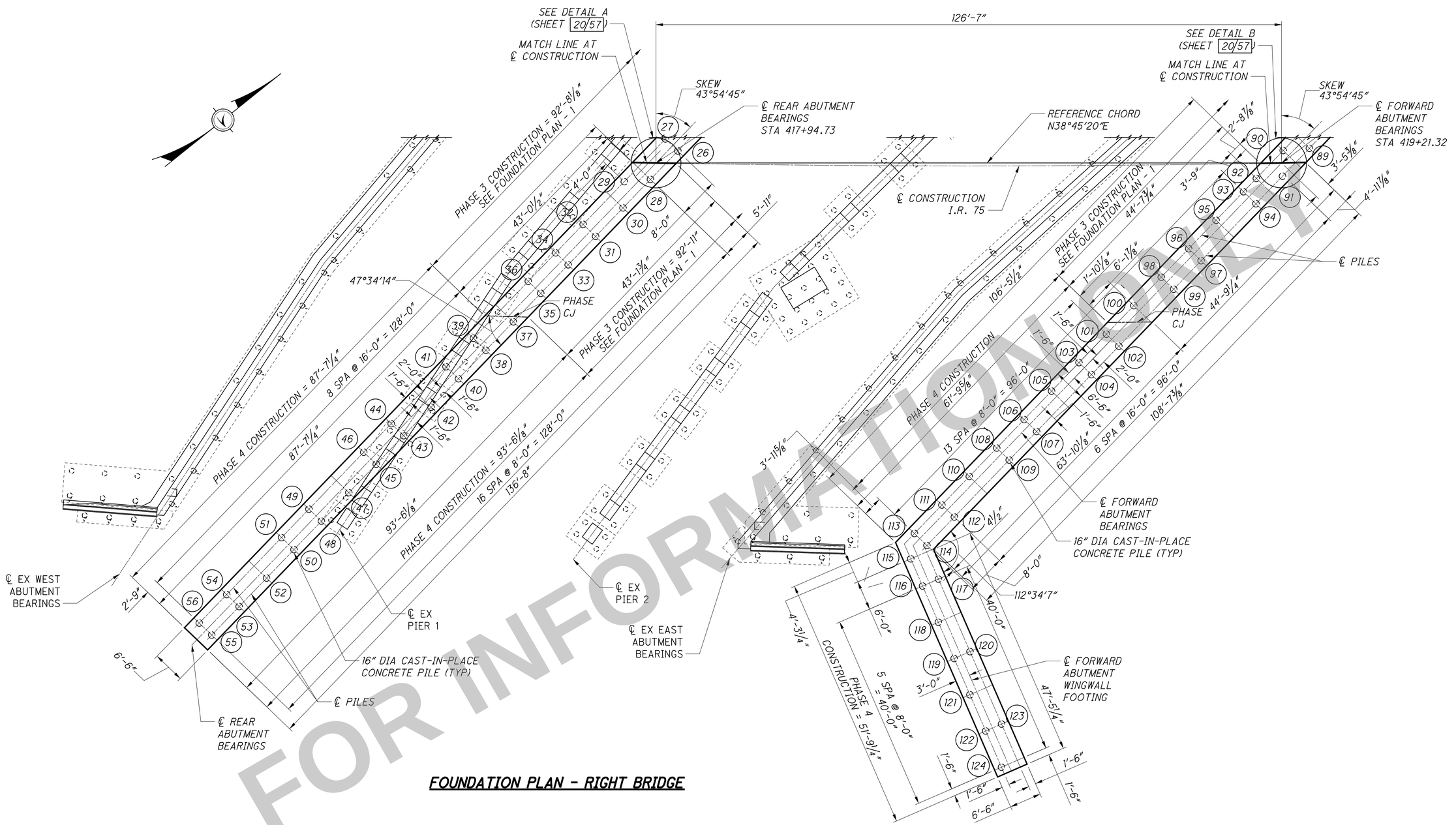
FOUNDATION PLAN - 1
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

20 / 57

1352
2017

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FOUNDATION PLAN - RIGHT BRIDGE

LEGEND

- ○ - PROPOSED 16" DIA CIP VERTICAL PILE
- ◌ - PROPOSED 16" DIA CIP PILE BATTERED AT 1:4
- ◌ - EXISTING 12" DIA CIP VERTICAL PILE
- ◌ - EXISTING 12" DIA CIP BATTERED PILE
- (XX) - PILE NUMBER

NOTES

1. REMOVE EXISTING FOUNDATIONS AND PORTIONS OF EXISTING FOUNDATIONS THAT INTERFERE WITH PROPOSED FOUNDATIONS PER 202.03.
2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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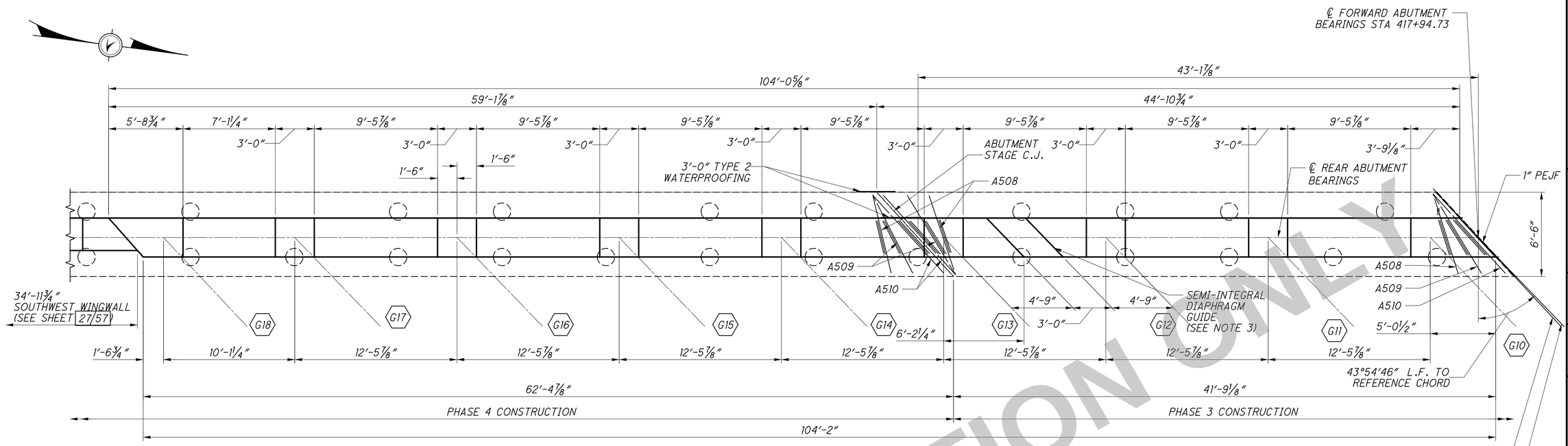
FOUNDATION PLAN - 2
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

21 / 57

1353
2017

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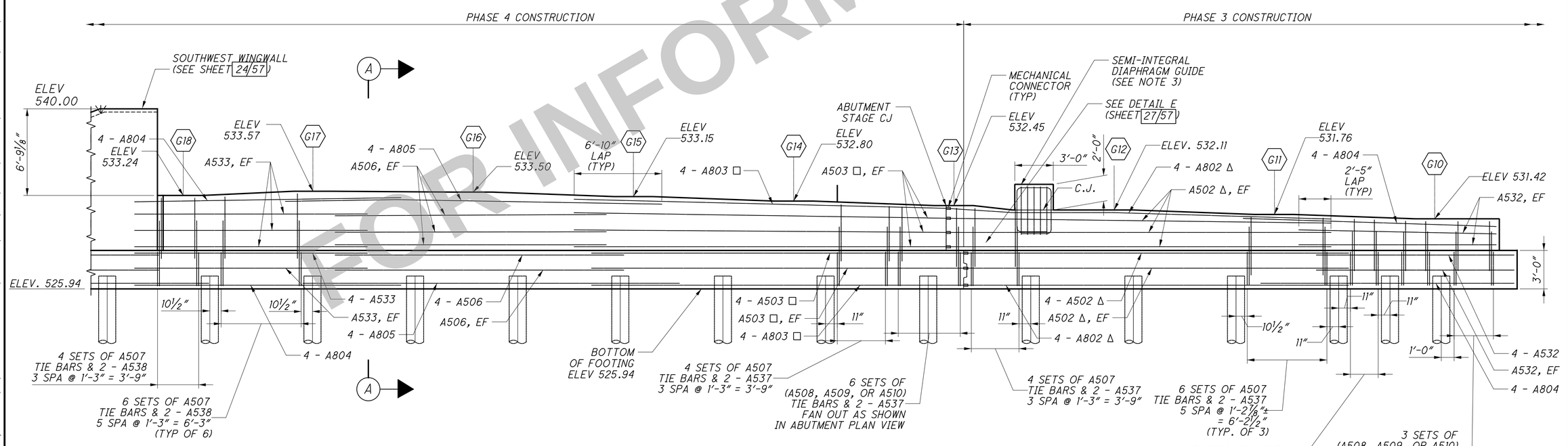


REAR ABUTMENT PLAN

MSE WALL NOT SHOWN FOR CLARITY
SEE WALL C FOR ADDITIONAL INFORMATION

NOTES

1. FOR SECTION A-A SEE SHEET 24/57 .
2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
3. SEE STANDARD DRAWING SICD-2-14 FOR ADDITIONAL SEMI-INTEGRAL DIAPHRAGM DETAILS NOT SHOWN, INCLUDING REINFORCING AND RUB PLATE DETAILS.



Δ - INCLUDES MECHANICAL CONNECTOR ON ONE END
□ - PLUS EXTENSION FOR MECHANICAL CONNECTOR

REAR ABUTMENT ELEVATION

DIMENSIONS MEASURED ALONG FRONT FACE OF ABUTMENT

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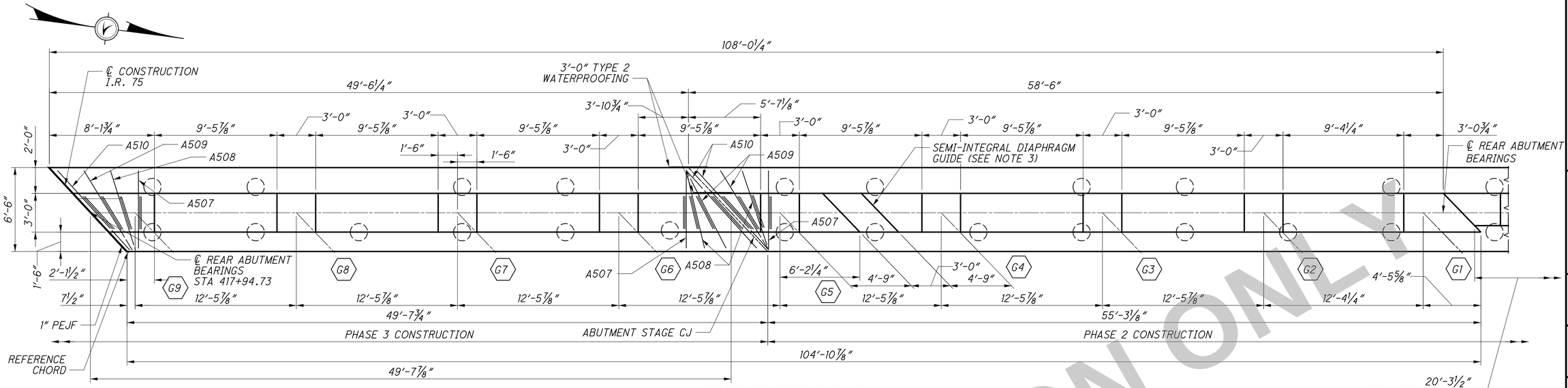
REAR ABUTMENT RIGHT BRIDGE
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

22 / 57

1354
2017

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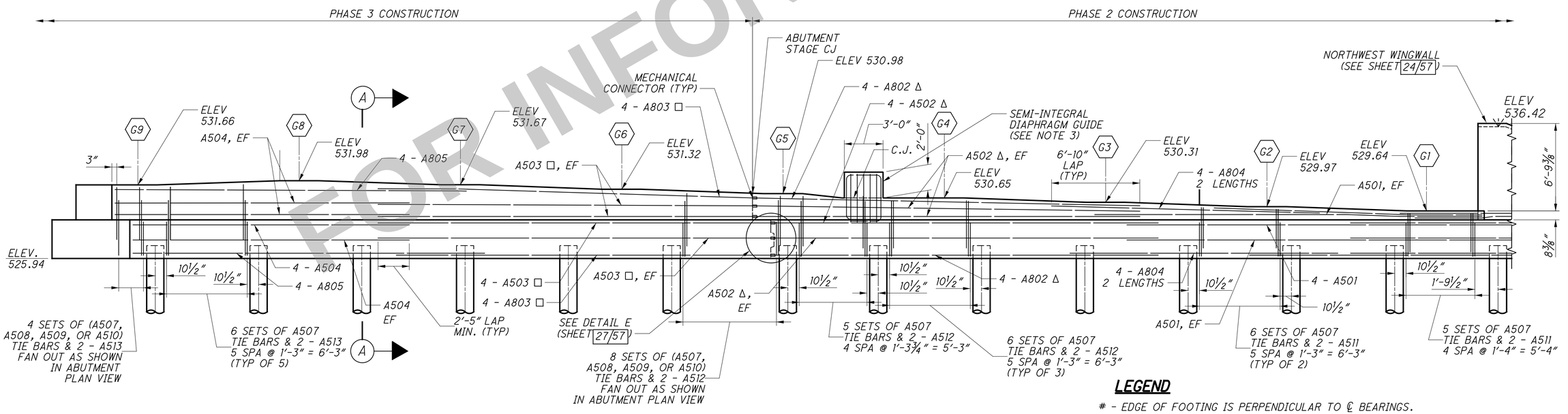


REAR ABUTMENT PLAN

MSE WALL NOT SHOWN FOR CLARITY
SEE WALL C FOR ADDITIONAL INFORMATION

NOTES

1. FOR SECTION A-A SEE SHEET 24/57
2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
3. SEE STANDARD DRAWING SICD-2-14 FOR ADDITIONAL SEMI-INTEGRAL DIAPHRAGM DETAILS NOT SHOWN, INCLUDING REINFORCING AND RUB PLATE DETAILS.



REAR ABUTMENT ELEVATION

DIMENSIONS MEASURED ALONG FRONT FACE OF ABUTMENT

LEGEND

- EDGE OF FOOTING IS PERPENDICULAR TO ℄ BEARINGS.
Δ - INCLUDES MECHANICAL CONNECTOR ON ONE END
□ - PLUS EXTENSION FOR MECHANICAL CONNECTOR

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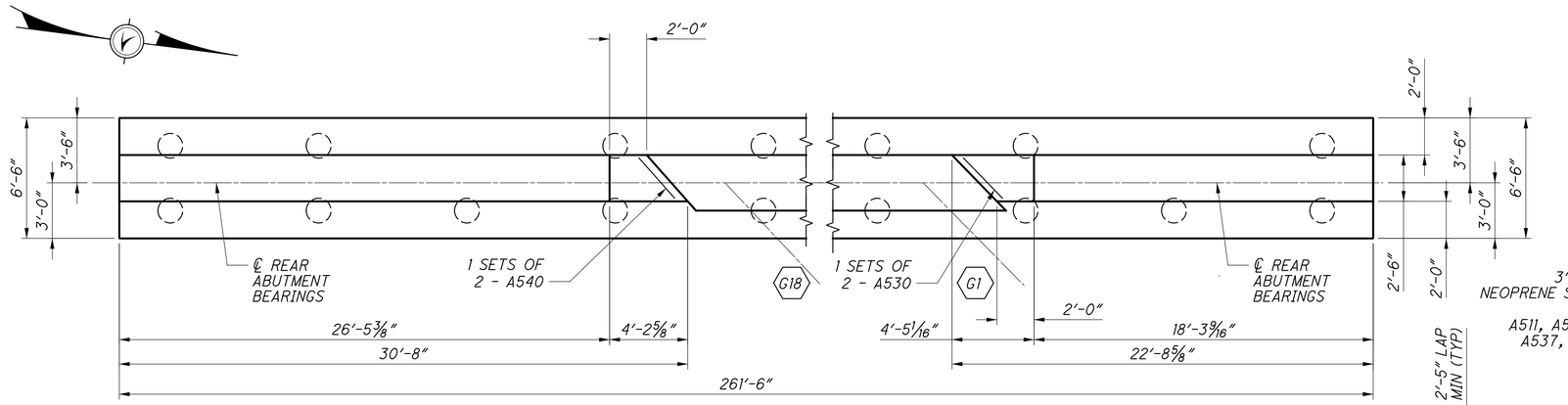
REAR ABUTMENT LEFT BRIDGE
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

23 / 57

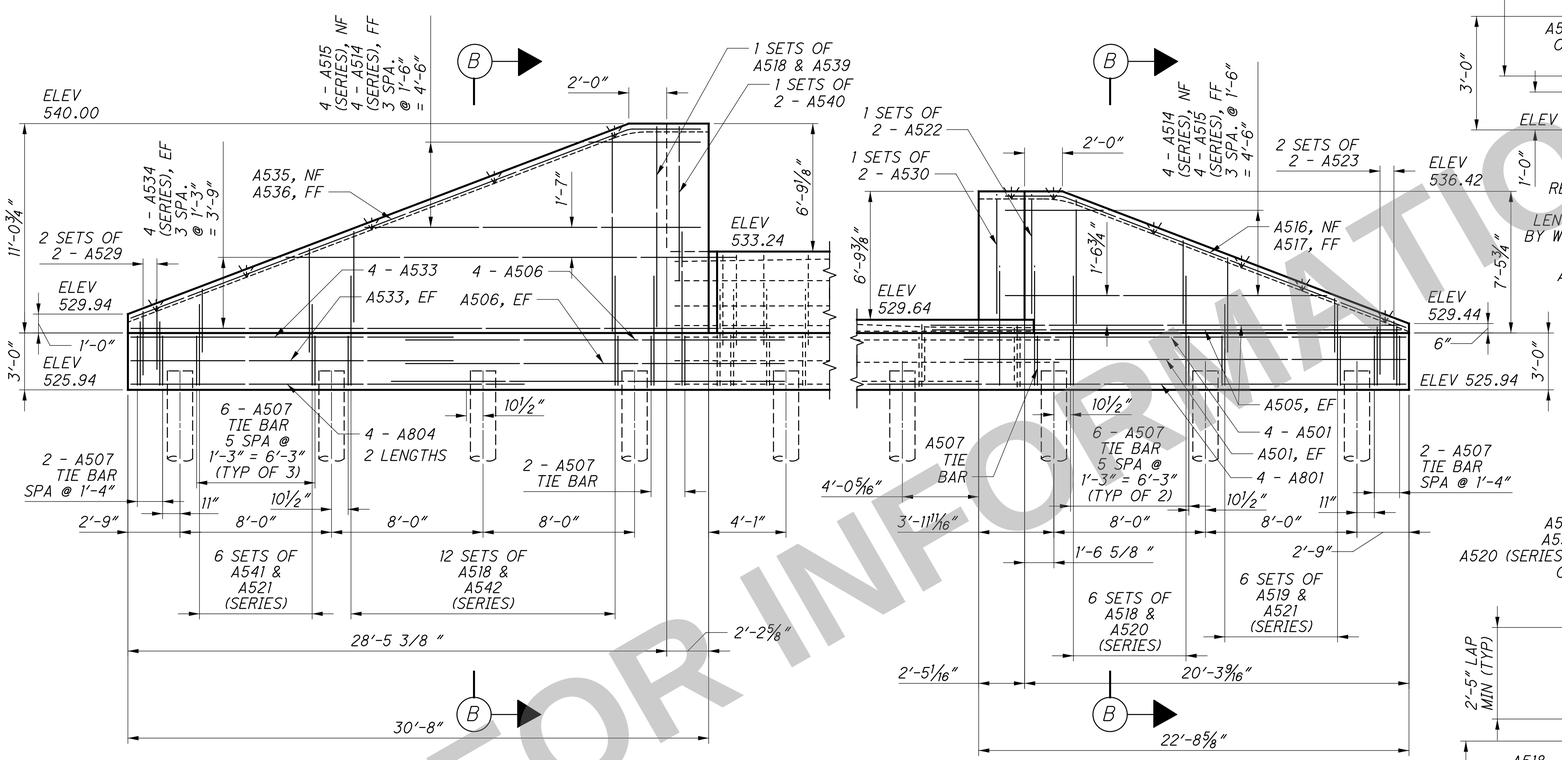
1355
2017

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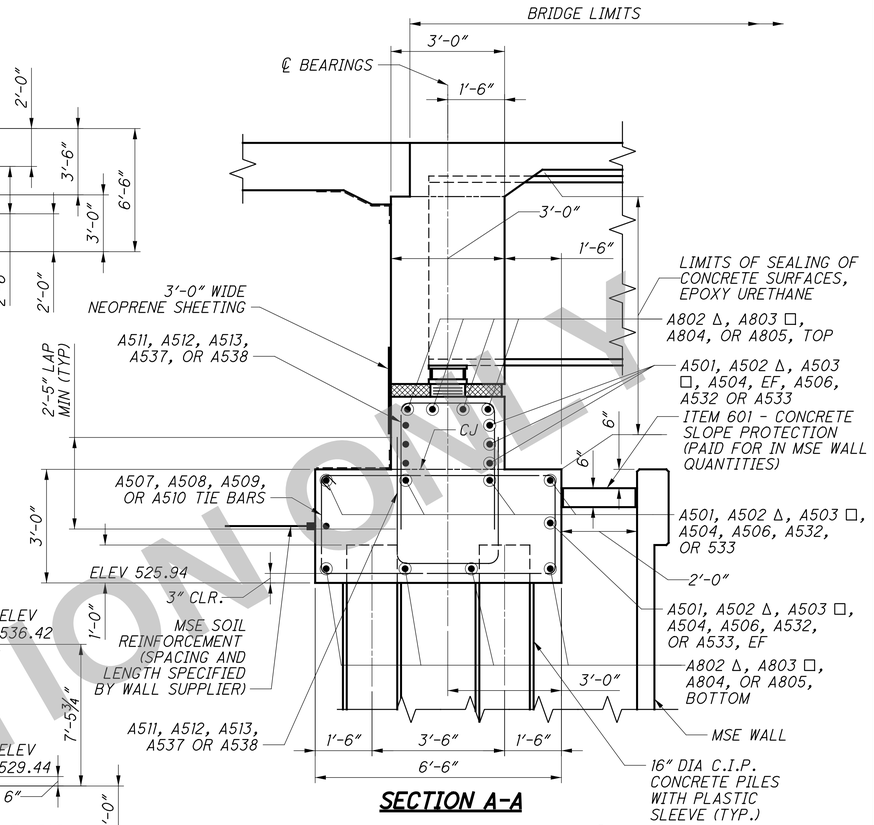
SOUTHWEST WINGWALL PLAN

NORTHWEST WINGWALL PLAN

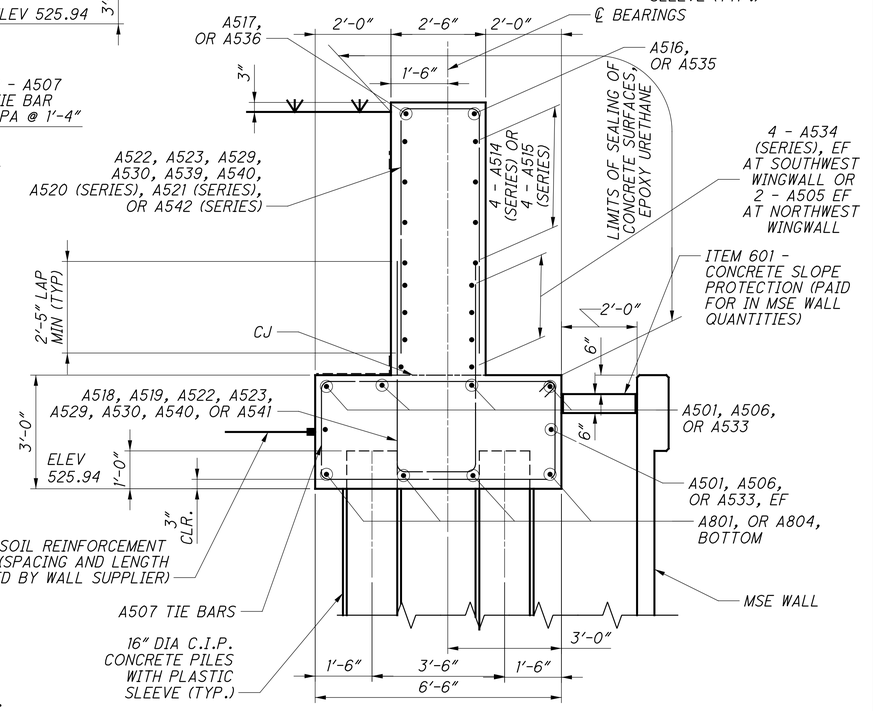


SOUTHWEST WINGWALL ELEVATION

NORTHWEST WINGWALL ELEVATION



SECTION A-A



SECTION B-B

NOTES

1. FOR LOCATIONS OF SECTION A-A SEE SHEETS 23/57 AND 22/57

2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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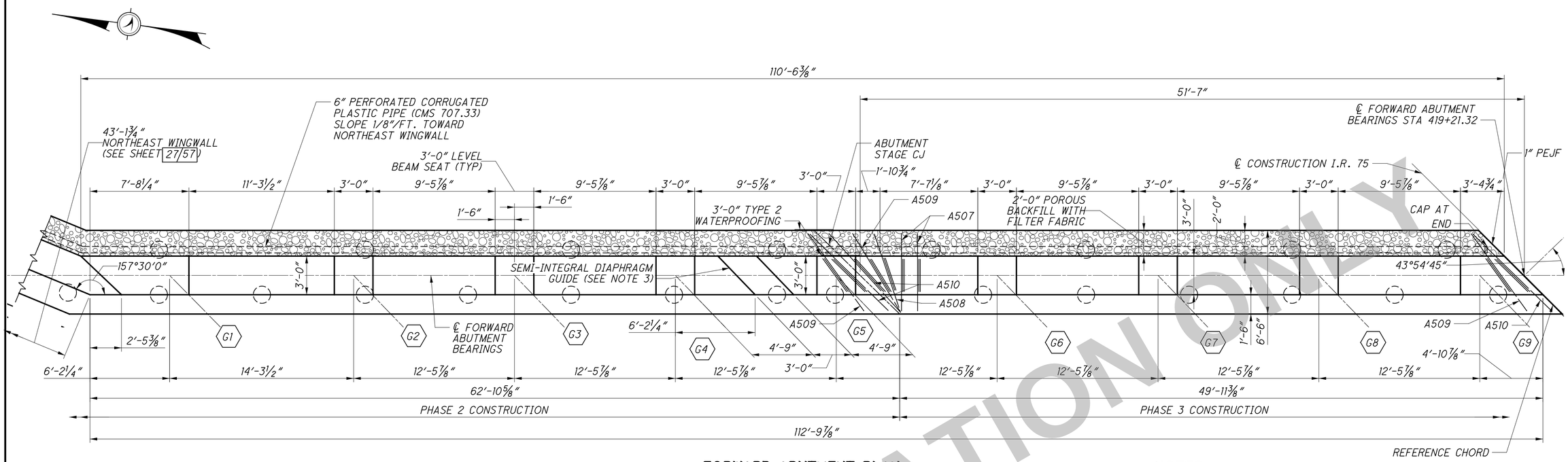
REAR ABUTMENT WINGWALLS AND DETAILS
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

24 / 57

1356
2017

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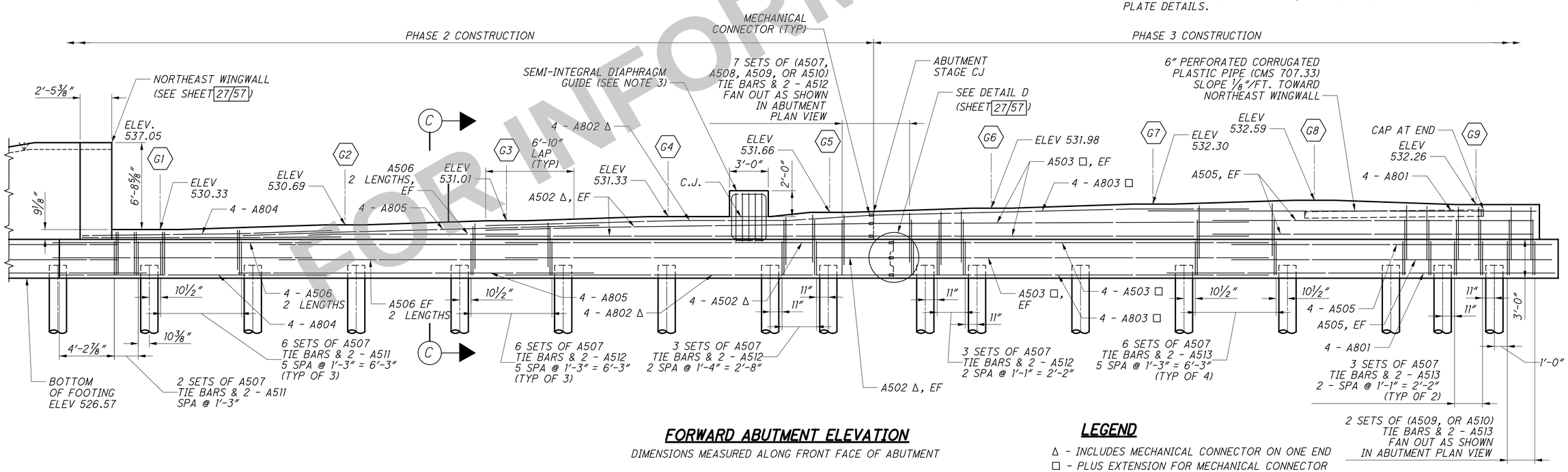


FORWARD ABUTMENT PLAN

SOLDIER PILE WALL NOT SHOWN FOR CLARITY
SEE WALL D FOR ADDITIONAL INFORMATION

NOTES

1. FOR SECTION C-C SEE SHEET 27/57.
2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
3. SEE STANDARD DRAWING SICD-2-14 FOR ADDITIONAL SEMI-INTEGRAL DIAPHRAGM DETAILS NOT SHOWN, INCLUDING REINFORCING AND RUB PLATE DETAILS.



FORWARD ABUTMENT ELEVATION

DIMENSIONS MEASURED ALONG FRONT FACE OF ABUTMENT

LEGEND

Δ - INCLUDES MECHANICAL CONNECTOR ON ONE END
□ - PLUS EXTENSION FOR MECHANICAL CONNECTOR

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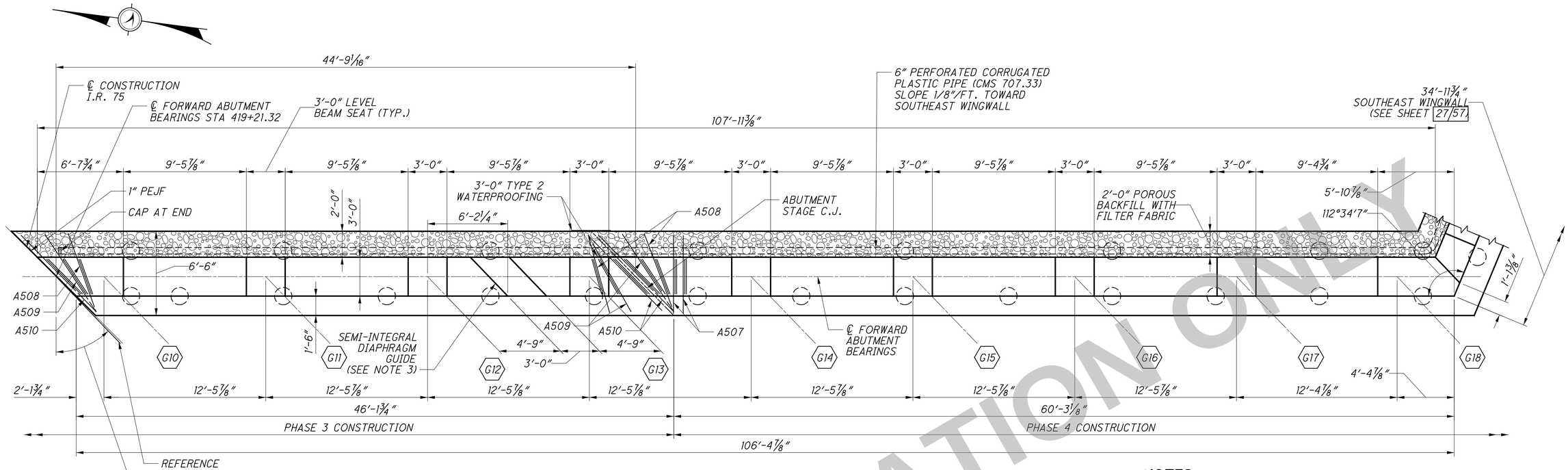
FORWARD ABUTMENT LEFT BRIDGE
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

25 / 57

1357
2017

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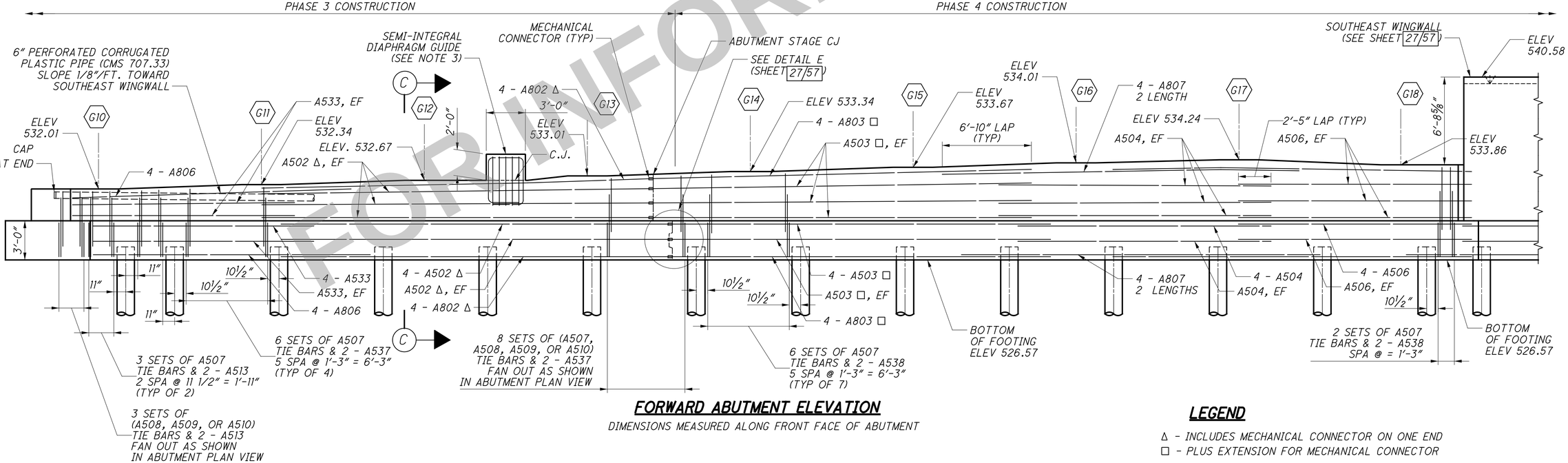


FORWARD ABUTMENT ELEVATION

SOLDIER PILE WALL NOT SHOWN FOR CLARITY
SEE WALL D FOR ADDITIONAL INFORMATION

NOTES

1. FOR SECTION C-C SEE SHEET 27/57 .
2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
3. SEE STANDARD DRAWING SICD-2-14 FOR ADDITIONAL SEMI-INTEGRAL DIAPHRAGM DETAILS NOT SHOWN, INCLUDING REINFORCING AND RUB PLATE DETAILS.



FORWARD ABUTMENT ELEVATION

DIMENSIONS MEASURED ALONG FRONT FACE OF ABUTMENT

LEGEND

Δ - INCLUDES MECHANICAL CONNECTOR ON ONE END
□ - PLUS EXTENSION FOR MECHANICAL CONNECTOR

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RMW	-	3110044	

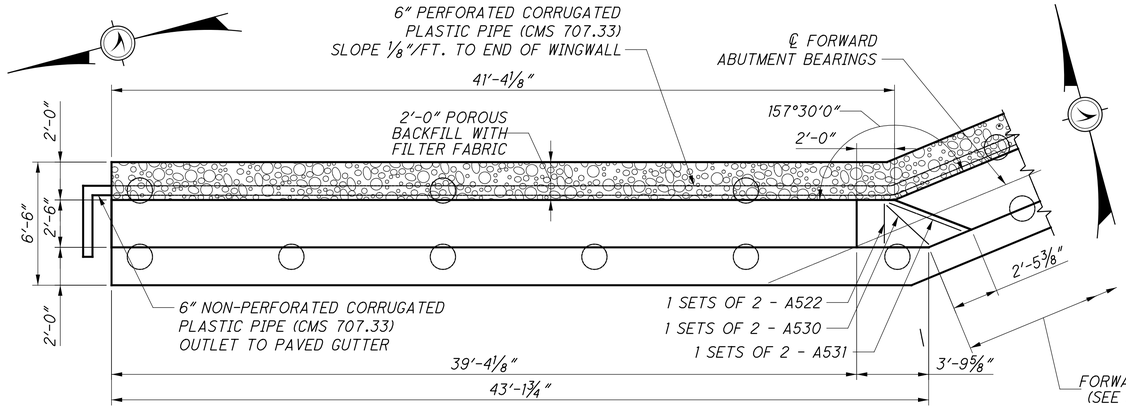
FORWARD ABUTMENT RIGHT BRIDGE
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

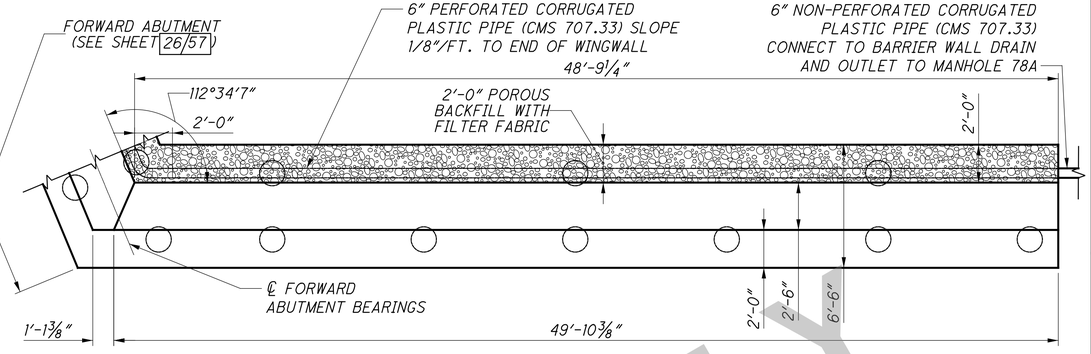
HAM-75-7.85
PID No. 77889

26 / 57

1358
2017

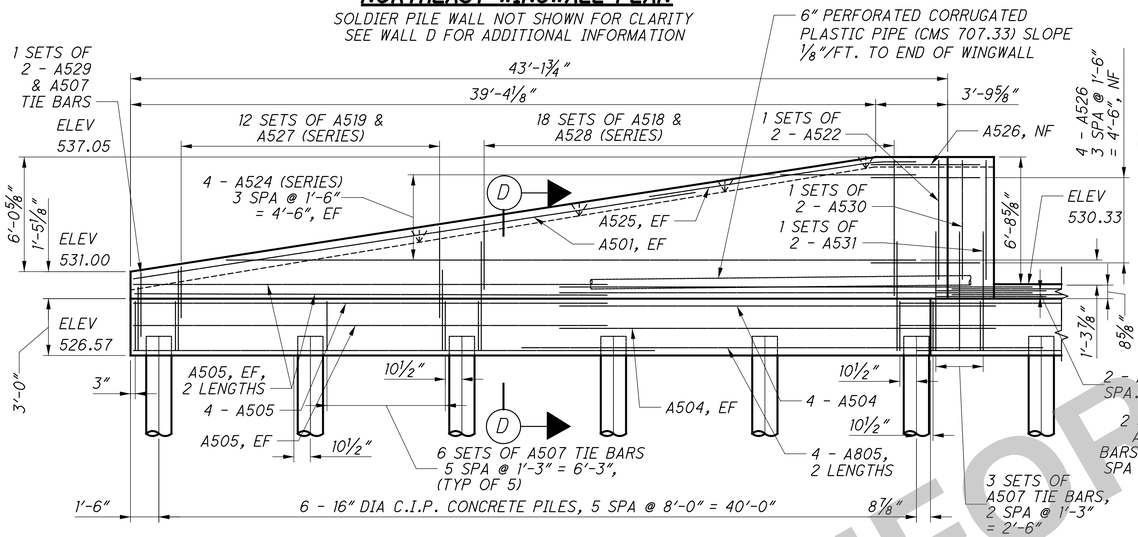
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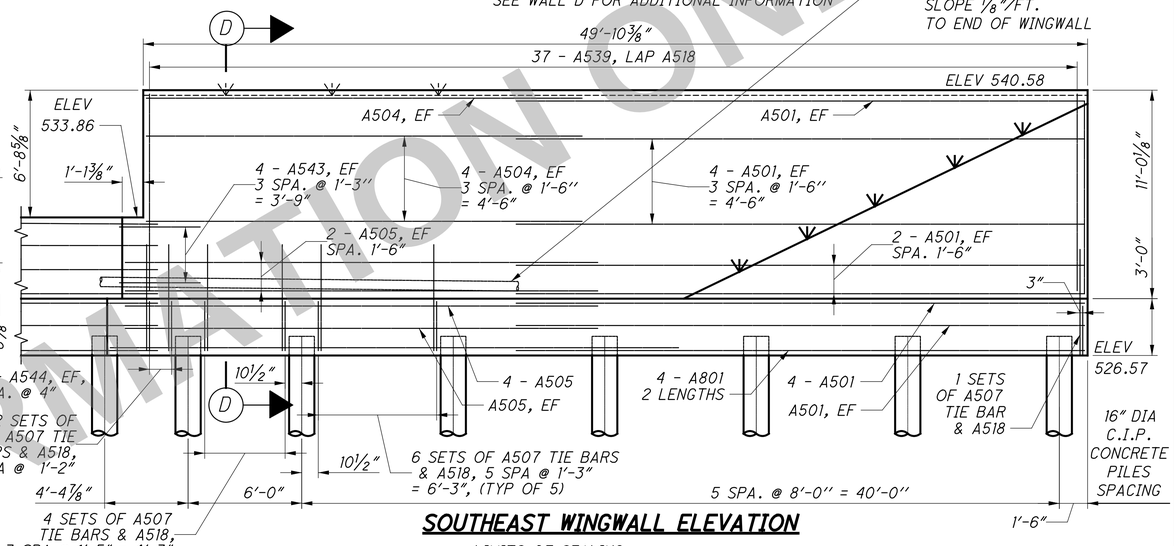
NORTHEAST WINGWALL PLAN

SOLDIER PILE WALL NOT SHOWN FOR CLARITY
SEE WALL D FOR ADDITIONAL INFORMATION

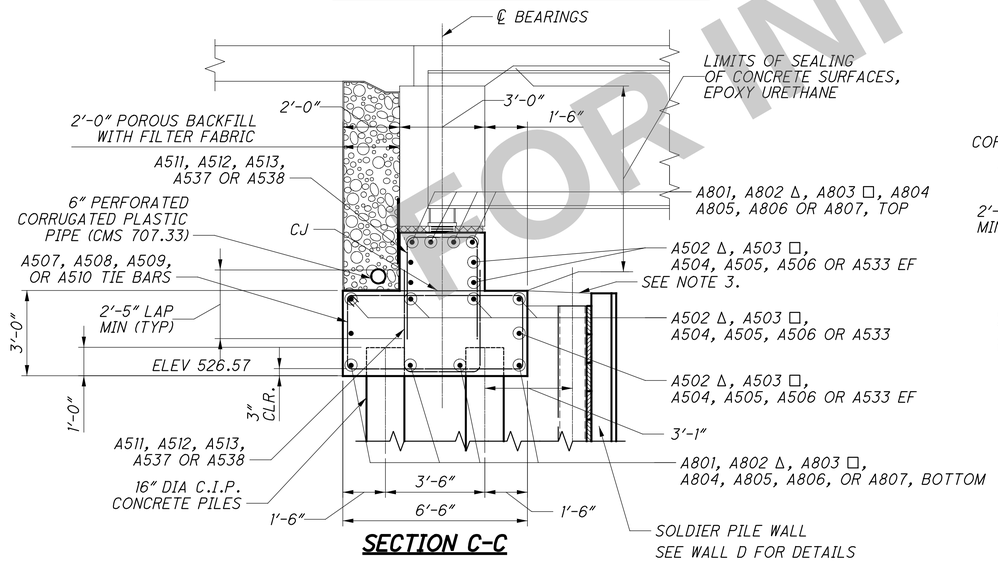


SOUTHEAST WINGWALL PLAN

SOLDIER PILE WALL NOT SHOWN FOR CLARITY
SEE WALL D FOR ADDITIONAL INFORMATION

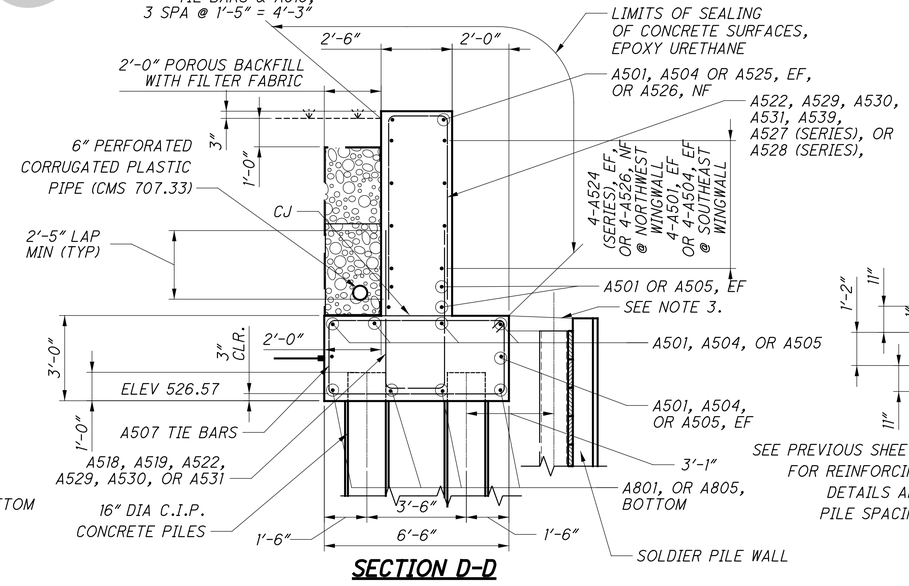


NORTHEAST WINGWALL ELEVATION



SECTION C-C

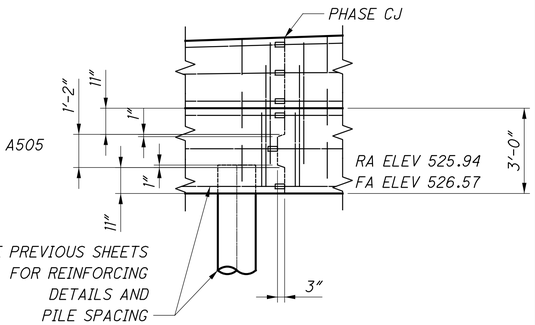
SOUTHEAST WINGWALL ELEVATION



SECTION D-D

NOTES

1. FOR LOCATIONS OF SECTION C-C SEE SHEETS 25/57 AND 26/57
2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
3. ITEM 601 - CONCRETE SLOPE PROTECTION, AS PER PLAN (PAID FOR IN WALL D QUANTITIES)



DETAIL E

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RMW	-	3110044	

DETAILS

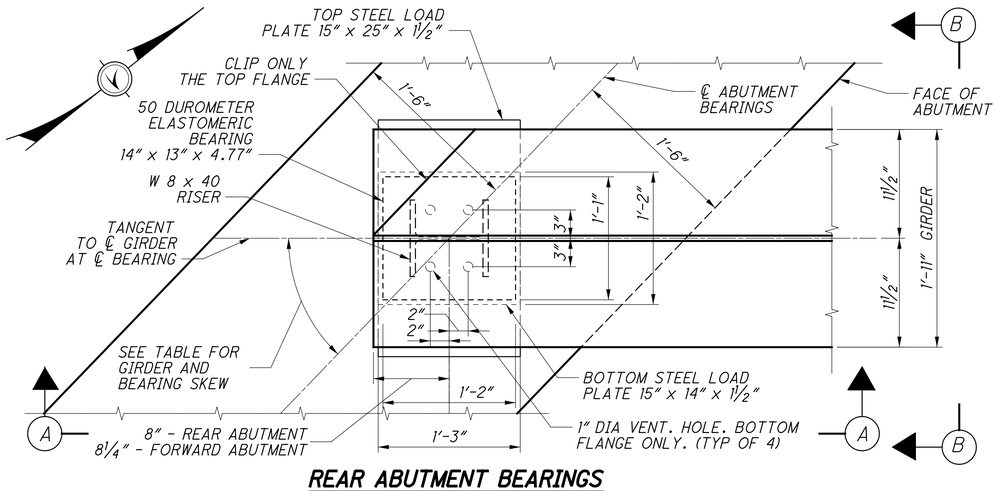
FORWARD ABUTMENT WINGWALLS AND DETAILS
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

27 / 57

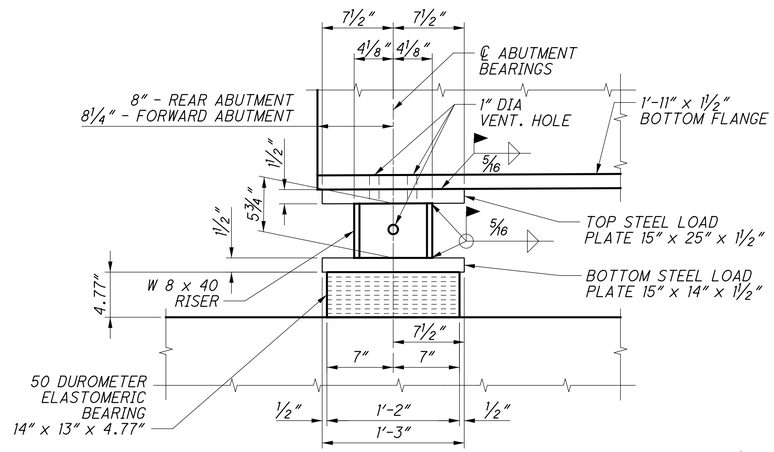
1359
2017

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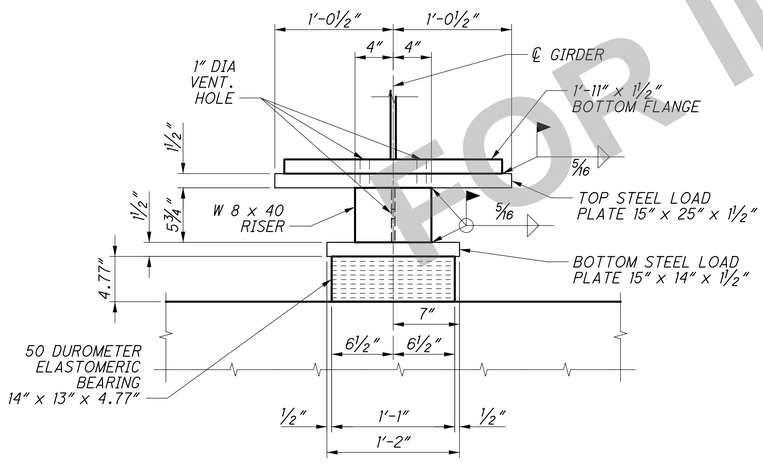


REAR ABUTMENT BEARINGS

REAR ABUTMENT SHOWN
FORWARD ABUTMENT OPPOSITE HAND



VIEW A-A



VIEW B-B

GIRDER/BEARING SKEW	
GIRDER	SKEW
1	45°27'51''
2-17	46°5'14''
18	46°50'40''

ABUTMENT BEARINGS		EXPANSION BEARING 50 DUROMETER	
INTERIOR ELASTOMERIC LAYERS	12 @ 0.308" = 3.696"	UNFACTORED DEAD LOAD	160.7 KIPS
STEEL PLATE LAMINATES	12 @ 0.074" = 0.888"	UNFACTORED FUTURE WEARING SURFACE	49.1 KIPS
EXTERIOR ELASTOMERIC LAYERS	1 @ 0.1875" = 0.1875"	UNFACTORED LIVE LOAD	121.4 KIPS
TOTAL THICKNESS	T = 4.77"	MAXIMUM DESIGN LOAD	331.2 KIPS

ELASTOMERIC BEARINGS

ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED IN ACCORDANCE WITH SECTION 14.7.5 (METHOD B) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. PERFORM THE LONG-TERM COMPRESSION PROOF LOAD TEST IN ACCORDANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6 AND 18.7.4.5.

THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.

WELDING: CONTROL WELDING SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300°F AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.

LOAD PLATES: SHOP MARK THE LOAD PLATES WITH THE FOLLOWING INFORMATION: TOP, UPSTATION DIRECTION AND LOCATION (REAR ABUTMENT OR FORWARD ABUTMENT). THE STEEL LOAD PLATES ARE ASTM A709 GRADE 50W STRUCTURAL STEEL.

BEARING REPOSITIONING: IF THE STEEL BEAMS ARE ERECTED AT AN AMBIENT TEMPERATURE HIGHER THAN 80°F OR LOWER THAN 40°F AND THE BEARING SHEAR DEFLECTION EXCEEDS 1/6 OF THE BEARING HEIGHT AT 60°F (±) 10°F, RAISE THE BEAMS TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60°F (±) 10°F.

NOTE

1. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	3110044	

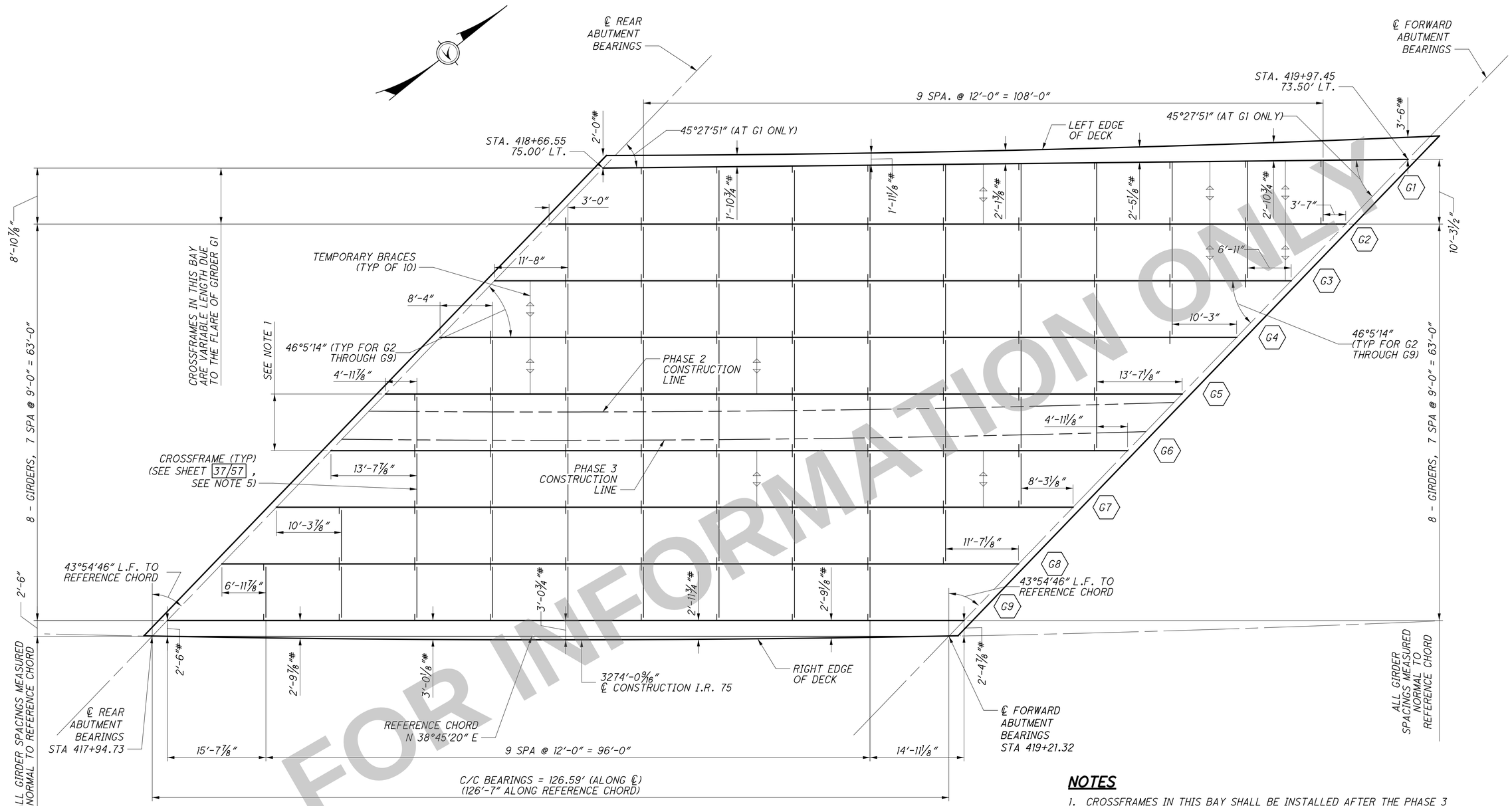
ELASTOMERIC BEARING DETAILS
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

28 / 57

1360
2017

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FRAMING PLAN
(LEFT BRIDGE SOUTHBOUND)

- DECK OVERHANG WIDTH AT 1/6TH POINTS OF FACIA GIRDER

LEGEND

◁▷ - TEMPORARY BRACING (SEE NOTE 5)

NOTES

1. CROSSFRAMES IN THIS BAY SHALL BE INSTALLED AFTER THE PHASE 3 DECK POUR AND PRIOR TO THE PHASE 3 CLOSURE POUR.
2. SEE SHEET 31/57 FOR GIRDER ELEVATIONS.
3. ALL CROSSFRAMES ARE ORIENTED NORMAL TO REFERENCE CHORD.
4. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
5. TEMPORARY BRACING SHALL BE PLACED MID SPACING OF THE ADJACENT CROSS FRAMES IN THE BAY INDICATED. SEE SHEET 31/57 FOR ADDITIONAL DETAILS. ALL TEMPORARY BRACING SHALL BE INCLUDED IN THE CY BID FOR ITEM 511 - CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK AS PER PLAN, FOR PAYMENT.

FOR INFORMATION ONLY

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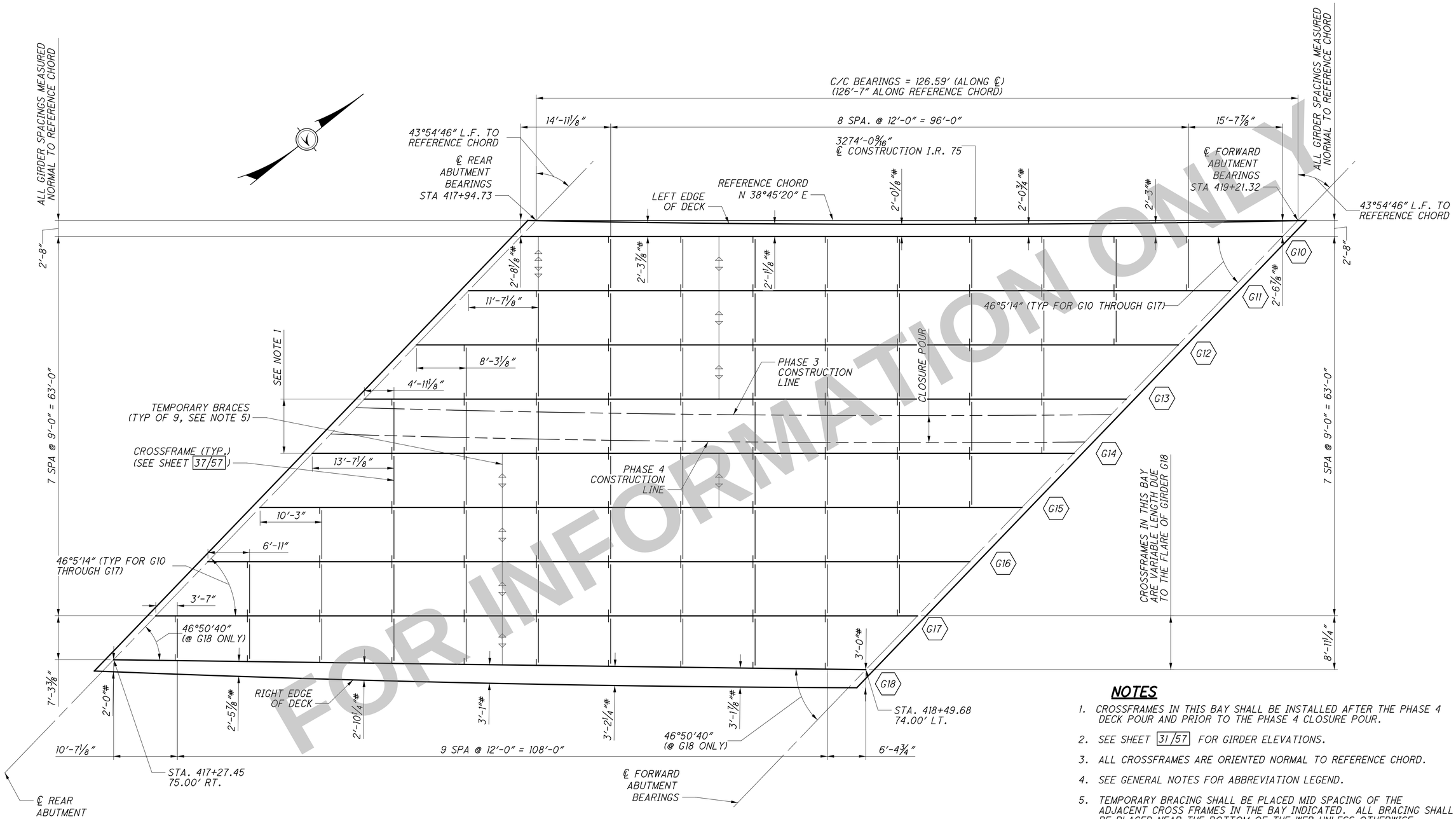
FRAMING PLAN (LEFT BRIDGE SOUTHBOUND)
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

29/57

1361
2017

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FOR INFORMATION ONLY

FRAMING PLAN (RIGHT BRIDGE NORTHBOUND)

- DECK OVERHANG WIDTH AT 1/6TH POINTS OF FACIA GIRDER

LEGEND

- TEMPORARY BRACING (SEE NOTE 5).
- TEMPORARY BRACING (SEE NOTE 5). BRACING SHALL BE INSTALLED NEAR THE TOP OF WEB.

NOTES

1. CROSSFRAMES IN THIS BAY SHALL BE INSTALLED AFTER THE PHASE 4 DECK POUR AND PRIOR TO THE PHASE 4 CLOSURE POUR.
2. SEE SHEET 31/57 FOR GIRDER ELEVATIONS.
3. ALL CROSSFRAMES ARE ORIENTED NORMAL TO REFERENCE CHORD.
4. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
5. TEMPORARY BRACING SHALL BE PLACED MID SPACING OF THE ADJACENT CROSS FRAMES IN THE BAY INDICATED. ALL BRACING SHALL BE PLACED NEAR THE BOTTOM OF THE WEB UNLESS OTHERWISE INDICATED. SEE SHEET 31/57 FOR ADDITIONAL DETAILS. ALL TEMPORARY BRACING SHALL BE INCLUDED IN THE CY BID FOR ITEM 511 - CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK AS PER PLAN, FOR PAYMENT.
6. THE FABRICATOR SHALL CHECK LONGITUDINAL CROSSFRAME SPACING SO THAT INTERFERENCE WITH BOLTED SPLICES, ANCHOR BOLTS, COMPLETE PENETRATION WEB OR FLANGE WELDED SPLICES, AND BEARING STIFFENERS IS AVOIDED. SPACING SHALL BE ADJUSTED TO PROVIDE AT LEAST SIX (6) INCHES OF LONGITUDINAL CLEARANCE.

DESIGN AGENCY
EMH&T
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, Ohio 43054
Phone: 614.775.4500

DESIGNED	DRAWN	REVIEWED	DATE
RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	3110044	

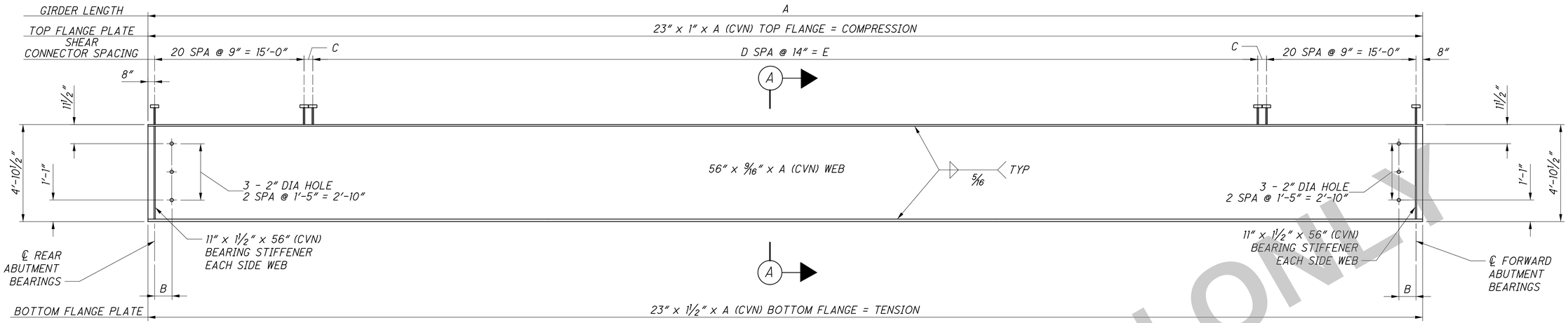
FRAMING PLAN (RIGHT BRIDGE NORTHBOUND)
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

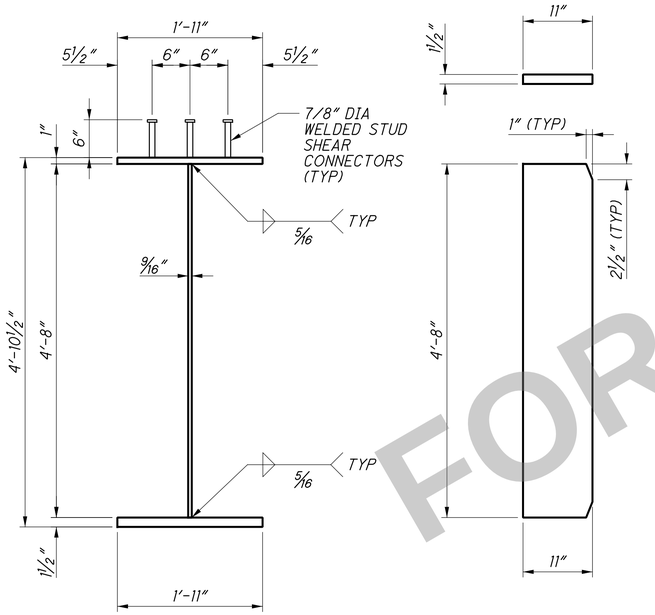
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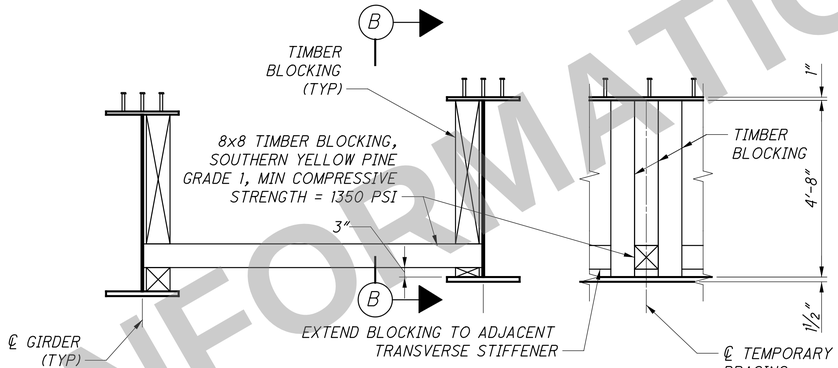


GIRDER ELEVATION



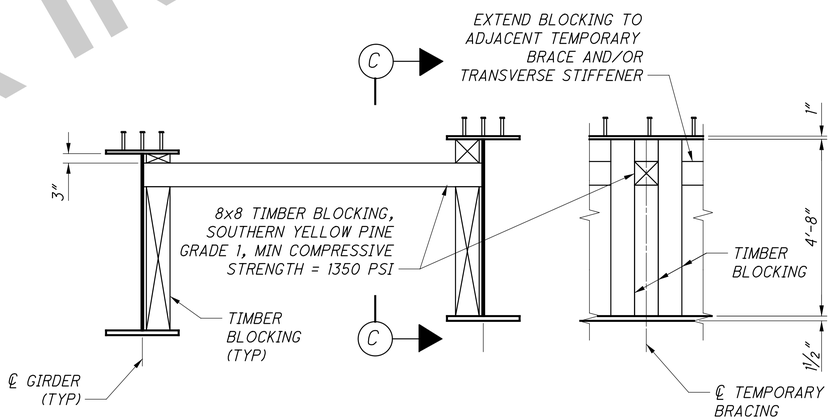
SECTION A-A

BEARING STIFFENER DETAIL



TEMPORARY BOTTOM BRACING DETAIL

VIEW B-B



TEMPORARY TOP BRACING DETAIL

VIEW C-C

GIRDER DIMENSIONS

GIRDER NUMBER	GIRDER LENGTH A	B	C	D	E
GIRDER G1	129'-3⅛"	1'-8⅞"	13⅜16"	82	95'-8"
GIRDERS G2-G17	127'-11"	1'-8⅝"	12½"	81	94'-6"
GIRDER G18	126'-4"	1'-8⅝"	10"	80	93'-4"

NOTES

1. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
2. WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE NO MORE THAN 2" LONG, AND BE AT LEAST ¼" FOR THICKNESSES UP TO ¾" OR 5/16" FOR GREATER THAN ¾" THICK.
3. ALL DIMENSIONS MEASURED ALONG CENTERLINE OF BEAM.
4. MILL STIFFENERS FOR SNUG FIT PRIOR TO WELDING.
5. WHERE A WELDED BUTT JOINT IS DESIGNATED CP, THE WELD SHALL BE COMPLETE PENETRATION. COMPLETE PENETRATION WELDS SHALL BE GROUND SMOOTH IN THE LONGITUDINAL DIRECTION TO REMOVE THE WELD REINFORCEMENT.
6. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
7. TEMPORARY BRACES SHALL BE INSTALLED PRIOR THE DECK POURS THAT OCCUR OVER THE APPLICABLE BAYS. TEMPORARY BRACES SHALL BE MAINTAINED UNTIL THE POUR HAS ACHIEVED THE REQUIRED CUBE PERIOD AND PRIOR TO CLOSURE POUR PLACEMENT. TEMPORARY BRACES HAVE BEEN DESIGNED FOR A MAXIMUM SERVICE LOAD OF 13.0 KIPS ACTING IN COMPRESSION.

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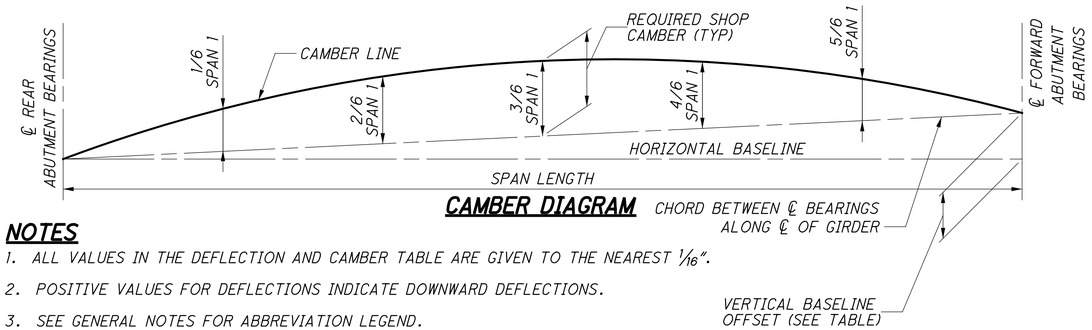
DESIGNED	DRAWN	REVIEWED	DATE
RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	3110044	

GIRDER ELEVATION
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

1363
2017

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CAMBER DIAGRAM

NOTES

1. ALL VALUES IN THE DEFLECTION AND CAMBER TABLE ARE GIVEN TO THE NEAREST 1/16".
2. POSITIVE VALUES FOR DEFLECTIONS INDICATE DOWNWARD DEFLECTIONS.
3. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

SPAN LENGTH	
GIRDER 1	127'-11 1/8"
GIRDERS 2-17	126'-7"
GIRDER 18	125'-0"

VERTICAL BASELINE OFFSET (IN.)			
GIRDER 1	8 1/4 "	GIRDER 10	7 3/16 "
GIRDER 2	8 5/8 "	GIRDER 11	7 "
GIRDER 3	8 7/16 "	GIRDER 12	6 13/16 "
GIRDER 4	8 1/4 "	GIRDER 13	6 5/8 "
GIRDER 5	8 1/16 "	GIRDER 14	6 7/16 "
GIRDER 6	7 7/8 "	GIRDER 15	6 1/4 "
GIRDER 7	7 11/16 "	GIRDER 16	6 1/16 "
GIRDER 8	7 5/16 "	GIRDER 17	8 1/16 "
GIRDER 9	7 3/16 "	GIRDER 18	7 1/2 "

CAMBER TABLE (LEFT BRIDGE)

		SPAN 1					
GIRDER 1	REAR ABUT.	1/ SPAN	2/6 SPAN	3/6 SPAN	4/6 SPAN	5/6 SPAN	FWD. ABUT.
DEFLECTION DUE TO WEIGHT OF STEEL	0"	11/16"	1 3/16"	1 3/8"	1 3/16"	11/16"	0"
DEFLECTION DUE TO STAGED DECK PLACEMENT	0"	1 7/8"	3 1/4"	3 11/16"	3 1/4"	1 7/8"	0"
DEFLECTION DUE TO REMAINING DEAD LOAD	0"	3/16"	1/4"	5/16"	1/4"	3/16"	0"
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0"	-3/16"	-5/16"	-5/16"	-5/16"	-3/16"	0"
REQUIRED SHOP CAMBER	0"	2 3/4"	4 11/16"	5 3/8"	4 11/16"	2 11/16"	0"
GIRDER 2							
DEFLECTION DUE TO WEIGHT OF STEEL	0"	5/8"	1 1/8"	1 5/16"	1 1/8"	11/16"	0"
DEFLECTION DUE TO STAGED DECK PLACEMENT	0"	1 11/16"	3"	3 7/16"	3"	1 3/4"	0"
DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/8"	1/4"	5/16"	1/4"	1/8"	0"
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0"	-3/16"	-1/4"	-5/16"	-1/4"	-3/16"	0"
REQUIRED SHOP CAMBER	0"	2 1/2"	4 5/16"	5"	4 3/8"	2 9/16"	0"
GIRDER 3							
DEFLECTION DUE TO WEIGHT OF STEEL	0"	5/8"	1 1/16"	1 1/4"	1 1/16"	5/8"	0"
DEFLECTION DUE TO STAGED DECK PLACEMENT	0"	1 11/16"	2 7/8"	3 5/16"	2 7/8"	1 11/16"	0"
DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/8"	1/4"	5/16"	1/4"	1/8"	0"
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0"	-3/16"	-1/4"	-5/16"	-1/4"	-3/16"	0"
REQUIRED SHOP CAMBER	0"	2 7/16"	4 3/16"	4 13/16"	4 3/16"	2 7/16"	0"
GIRDER 4							
DEFLECTION DUE TO WEIGHT OF STEEL	0"	5/8"	1 1/8"	1 1/4"	1 1/8"	5/8"	0"
DEFLECTION DUE TO STAGED DECK PLACEMENT	0"	1 11/16"	2 7/8"	3 5/16"	2 7/8"	1 11/16"	0"
DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/8"	1/4"	5/16"	1/4"	1/8"	0"
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0"	-3/16"	-1/4"	-5/16"	-1/4"	-3/16"	0"
REQUIRED SHOP CAMBER	0"	2 1/2"	4 1/4"	4 7/8"	4 1/4"	2 7/16"	0"
GIRDER 5							
DEFLECTION DUE TO WEIGHT OF STEEL	0"	11/16"	1 3/16"	1 3/8"	1 3/16"	11/16"	0"
DEFLECTION DUE TO STAGED DECK PLACEMENT	0"	1 3/4"	3"	3 7/16"	3"	1 3/4"	0"
DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/8"	1/4"	5/16"	1/4"	1/8"	0"
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0"	-3/16"	-1/4"	-5/16"	-1/4"	-3/16"	0"
REQUIRED SHOP CAMBER	0"	2 5/8"	4 1/2"	5 3/16"	4 1/2"	2 5/8"	0"
GIRDER 6							
DEFLECTION DUE TO WEIGHT OF STEEL	0"	11/16"	1 1/8"	1 5/16"	1 1/8"	11/16"	0"
DEFLECTION DUE TO STAGED DECK PLACEMENT	0"	1 9/16"	2 5/8"	3 1/16"	2 11/16"	1 9/16"	0"
DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/8"	1/4"	5/16"	1/4"	1/8"	0"
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0"	-3/16"	-1/4"	-5/16"	-1/4"	-3/16"	0"
REQUIRED SHOP CAMBER	0"	2 7/16"	4 1/4"	4 7/8"	4 1/4"	2 1/2"	0"
GIRDER 7							
DEFLECTION DUE TO WEIGHT OF STEEL	0"	5/8"	1 1/8"	1 1/4"	1 1/8"	5/8"	0"
DEFLECTION DUE TO STAGED DECK PLACEMENT	0"	1 5/8"	2 3/4"	3 3/16"	2 3/4"	1 9/16"	0"
DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/8"	1/4"	5/16"	1/4"	1/8"	0"
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0"	-3/16"	-1/4"	-5/16"	-1/4"	-3/16"	0"
REQUIRED SHOP CAMBER	0"	2 3/8"	4 1/8"	4 3/4"	4 1/8"	2 3/8"	0"
GIRDER 8							
DEFLECTION DUE TO WEIGHT OF STEEL	0"	5/8"	1 1/8"	1 1/4"	1 1/8"	5/8"	0"
DEFLECTION DUE TO STAGED DECK PLACEMENT	0"	1 3/4"	3"	3 3/8"	2 15/16"	1 11/16"	0"
DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/8"	1/4"	5/16"	1/4"	1/8"	0"
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0"	-1/16"	-1/16"	-1/8"	-1/16"	-1/16"	0"
REQUIRED SHOP CAMBER	0"	2 9/16"	4 3/8"	5 1/16"	4 3/8"	2 9/16"	0"
GIRDER 9							
DEFLECTION DUE TO WEIGHT OF STEEL	0"	11/16"	1 1/8"	1 5/16"	1 1/8"	11/16"	0"
DEFLECTION DUE TO STAGED DECK PLACEMENT	0"	1 7/8"	3 1/4"	3 3/4"	3 5/16"	1 15/16"	0"
DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/8"	1/4"	5/16"	1/4"	1/8"	0"
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0"	3/16"	1/4"	5/16"	1/4"	3/16"	0"
REQUIRED SHOP CAMBER	0"	2 15/16"	5"	5 3/4"	5"	2 15/16"	0"

CAMBER TABLE (RIGHT BRIDGE)

		SPAN 1					
GIRDER 10	REAR ABUT.	1/ SPAN	2/6 SPAN	3/6 SPAN	4/6 SPAN	5/6 SPAN	FWD. ABUT.
DEFLECTION DUE TO WEIGHT OF STEEL	0"	11/16"	1 1/8"	1 5/16"	1 1/8"	11/16"	0"
DEFLECTION DUE TO STAGED DECK PLACEMENT	0"	1 13/16"	3 1/16"	3 1/2"	3"	1 3/4"	0"
DEFLECTION DUE TO REMAINING DEAD LOAD	0"	3/16"	5/16"	5/16"	5/16"	3/16"	0"
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0"	-3/16"	-1/4"	-5/16"	-1/4"	-3/16"	0"
REQUIRED SHOP CAMBER	0"	2 7/16"	4 1/4"	4 7/8"	4 1/4"	2 7/16"	0"
GIRDER 11							
DEFLECTION DUE TO WEIGHT OF STEEL	0"	5/8"	1 1/8"	1 1/4"	1 1/8"	5/8"	0"
DEFLECTION DUE TO STAGED DECK PLACEMENT	0"	1 5/8"	2 13/16"	3 1/4"	2 7/8"	1 11/16"	0"
DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/8"	1/4"	5/16"	1/4"	3/16"	0"
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0"	-3/16"	-1/4"	-5/16"	-1/4"	-3/16"	0"
REQUIRED SHOP CAMBER	0"	2 3/8"	4 1/8"	4 3/4"	4 1/8"	2 3/8"	0"
GIRDER 12							
DEFLECTION DUE TO WEIGHT OF STEEL	0"	5/8"	1 1/8"	1 1/4"	1 1/8"	5/8"	0"
DEFLECTION DUE TO STAGED DECK PLACEMENT	0"	1 5/8"	2 3/4"	3 3/16"	2 3/4"	1 5/8"	0"
DEFLECTION DUE TO REMAINING DEAD LOAD	0"	3/16"	1/4"	5/16"	1/4"	1/8"	0"
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0"	-3/16"	-1/4"	-5/16"	-1/4"	-3/16"	0"
REQUIRED SHOP CAMBER	0"	2 7/16"	4 3/16"	4 13/16"	4 1/8"	2 3/8"	0"
GIRDER 13							
DEFLECTION DUE TO WEIGHT OF STEEL	0"	11/16"	1 1/8"	1 5/16"	1 1/8"	11/16"	0"
DEFLECTION DUE TO STAGED DECK PLACEMENT	0"	1 5/8"	2 13/16"	3 1/4"	2 13/16"	1 5/8"	0"
DEFLECTION DUE TO REMAINING DEAD LOAD	0"	3/16"	5/16"	5/16"	1/4"	1/8"	0"
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0"	-3/16"	-1/4"	-5/16"	-1/4"	-3/16"	0"
REQUIRED SHOP CAMBER	0"	2 9/16"	4 7/16"	5 1/16"	4 7/16"	2 9/16"	0"
GIRDER 14							
DEFLECTION DUE TO WEIGHT OF STEEL	0"	11/16"	1 3/16"	1 3/8"	1 3/16"	11/16"	0"
DEFLECTION DUE TO STAGED DECK PLACEMENT	0"	1 11/16"	2 15/16"	3 5/16"	2 7/8"	1 11/16"	0"
DEFLECTION DUE TO REMAINING DEAD LOAD	0"	3/16"	1/4"	5/16"	1/4"	1/8"	0"
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0"	-3/16"	-1/4"	-5/16"	-1/4"	-3/16"	0"
REQUIRED SHOP CAMBER	0"	2 5/8"	4 7/16"	5 1/8"	4 7/16"	2 9/16"	0"
GIRDER 15							
DEFLECTION DUE TO WEIGHT OF STEEL	0"	5/8"	1 1/8"	1 1/4"	1 1/8"	5/8"	0"
DEFLECTION DUE TO STAGED DECK PLACEMENT	0"	1 5/8"	2 13/16"	3 3/16"	2 13/16"	1 5/8"	0"
DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/8"	1/4"	5/16"	1/4"	1/8"	0"
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0"	-3/16"	-1/4"	-5/16"	-1/4"	-3/16"	0"
REQUIRED SHOP CAMBER	0"	2 3/8"	4 1/8"	4 13/16"	4 3/16"	2 7/16"	0"
GIRDER 16							
DEFLECTION DUE TO WEIGHT OF STEEL	0"	5/8"	1 1/16"	1 1/4"	1 1/16"	5/8"	0"
DEFLECTION DUE TO STAGED DECK PLACEMENT	0"	1 5/8"	2 13/16"	3 3/16"	2 3/4"	1 5/8"	0"
DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/8"	1/4"	1/4"	1/4"	1/8"	0"
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0"	-3/16"	-1/4"	-5/16"	-1/4"	-3/16"	0"
REQUIRED SHOP CAMBER	0"	2 5/16"	4 1/16"	4 5/8"	4 1/16"	2 3/8"	0"
GIRDER 17							
DEFLECTION DUE TO WEIGHT OF STEEL	0"	5/8"	1 1/16"	1 1/4"	1 1/16"	5/8"	0"
DEFLECTION DUE TO STAGED DECK PLACEMENT	0"	1 11/16"	2 7/8"	3 5/16"	2 7/8"	1 11/16"	0"
DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/8"	1/4"	1/4"	1/4"	1/8"	0"
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0"	3/16"	5/16"	5/16"	1/4"	1/8"	0"
REQUIRED SHOP CAMBER	0"	2 3/4"	4 11/16"	5 3/8"	4 5/8"	2 11/16"	0"
GIRDER 18							
DEFLECTION DUE TO WEIGHT OF STEEL	0"	11/16"	1 1/8"	1 5/16"	1 1/8"	11/16"	0"
DEFLECTION DUE TO STAGED DECK PLACEMENT	0"	1 3/4"	3 1/16"	3 1/2"	3 1/16"	1 13/16"	0"
DEFLECTION DUE TO REMAINING DEAD LOAD	0"	1/8"	1/4"	1/4"	1/4"	1/8"	0"
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0"	1/8"	1/4"	1/4"	1/4"	3/16"	0"
REQUIRED SHOP CAMBER	0"	2 13/16"	4 13/16"	5 9/16"	4 7/8"	2 7/8"	0"

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DESIGNED: RJE
DRAWN: GB
CHECKED: RMW
REVIEWED: CAS
DATE: 12-15-21
REVISED: -
STRUCTURE FILE NUMBER: 3110044

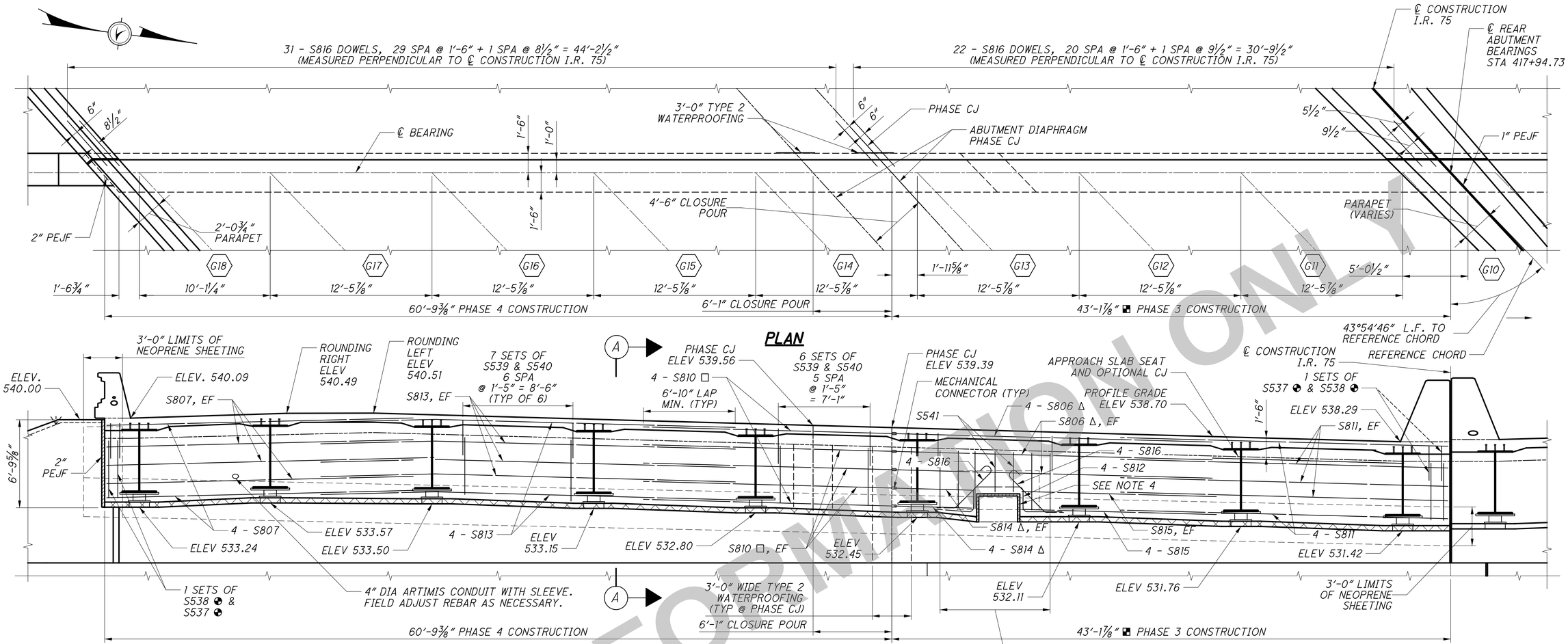
CAMBER DIAGRAM AND DEFLECTION
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

32 / 57

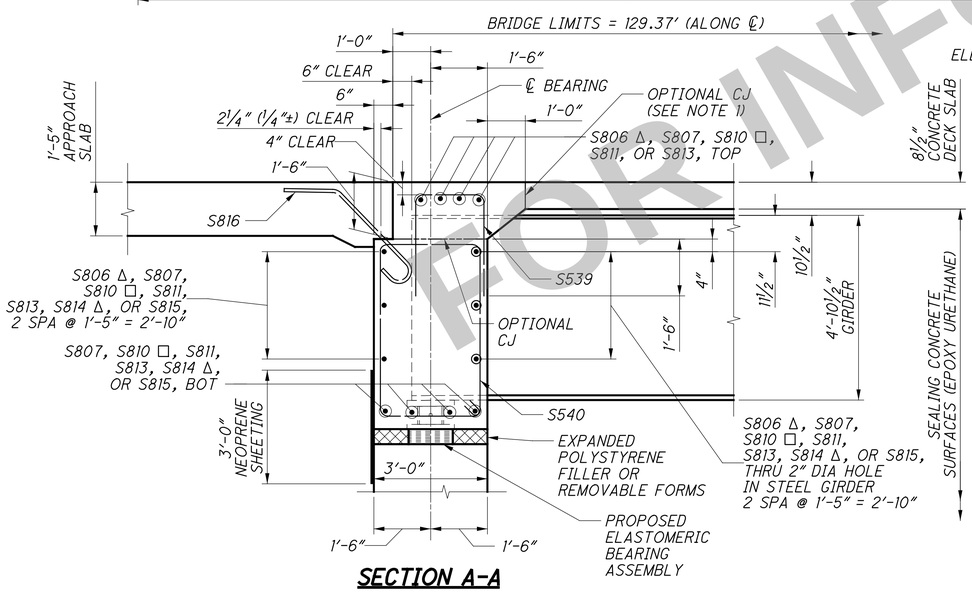
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ELEVATION

ELEVATIONS GIVEN AT ℄ ABUTMENT BEARINGS



SECTION A-A

SHEAR STUDS NOT SHOWN FOR CLARITY

LEGEND

Δ - INCLUDES MECHANICAL CONNECTOR ON ONE END

□ - PLUS EXTENSION FOR MECHANICAL CONNECTOR

◪ - MEASURED TO ℄ CONSTRUCTION I.R. 75

◒ - BARS SHALL BE PLACED PARALLEL TO BEAMS

NOTES

1. ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE AFTER THE DECK PLACEMENT IN THE ADJACENT SPAN IS COMPLETE. PROCEDURES THAT PLACE THE ABUTMENT DIAPHRAGM WITH THE DECK CONCRETE MAY BE APPROVED BY THE ENGINEER IF THE PLACEMENT SUBMITTAL CAN ASSURE THAT THE DECK CONCRETE IN THE ADJACENT SPAN WILL BE PLACED BEFORE CONCRETE IN THE DIAPHRAGM HAS REACHED ITS INITIAL SET. PLACE CLOSURE POUR CONCRETE IN THE DIAPHRAGM AND DECK CONCURRENTLY.

2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

3. SEE STANDARD DRAWING SICD-2-14 AND REAR ABUTMENT DETAILS SHEET FOR ADDITIONAL SEMI-INTEGRAL DIAPHRAGM GUIDE DETAILS NOT SHOWN ON THIS SHEET, INCLUDING PEJF AND RUB PLATE DETAILS.

FOR INFORMATION ONLY

DESIGN AGENCY: EMH&T

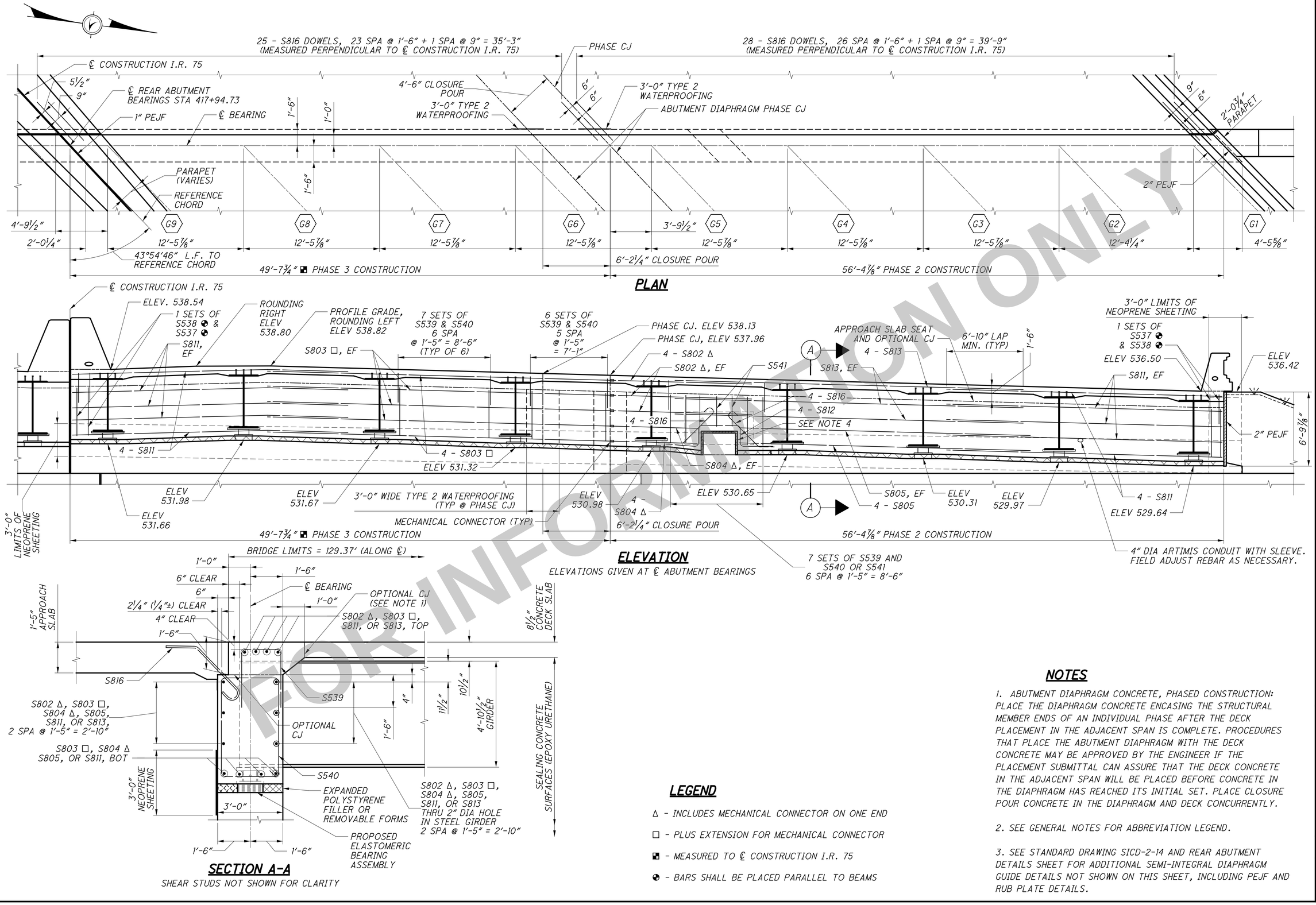
DESIGNED	DRAWN	REVIEWED	DATE
RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	3110044	

REAR ABUTMENT DIAPHRAGM RIGHT BRIDGE
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

1365
2017

PLOTTED BY REly 4/12/2022 8:39:17 AM J:\20110903\ODOT\HAM\77889\structures\HAM075_0791C\sheets\075_0791CSD013.dgn



PLAN

ELEVATION

ELEVATIONS GIVEN AT ℄ ABUTMENT BEARINGS

SECTION A-A

SHEAR STUDS NOT SHOWN FOR CLARITY

LEGEND

Δ - INCLUDES MECHANICAL CONNECTOR ON ONE END

□ - PLUS EXTENSION FOR MECHANICAL CONNECTOR

■ - MEASURED TO ℄ CONSTRUCTION I.R. 75

◕ - BARS SHALL BE PLACED PARALLEL TO BEAMS

NOTES

1. ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE AFTER THE DECK PLACEMENT IN THE ADJACENT SPAN IS COMPLETE. PROCEDURES THAT PLACE THE ABUTMENT DIAPHRAGM WITH THE DECK CONCRETE MAY BE APPROVED BY THE ENGINEER IF THE PLACEMENT SUBMITTAL CAN ASSURE THAT THE DECK CONCRETE IN THE ADJACENT SPAN WILL BE PLACED BEFORE CONCRETE IN THE DIAPHRAGM HAS REACHED ITS INITIAL SET. PLACE CLOSURE POUR CONCRETE IN THE DIAPHRAGM AND DECK CONCURRENTLY.

2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

3. SEE STANDARD DRAWING SICD-2-14 AND REAR ABUTMENT DETAILS SHEET FOR ADDITIONAL SEMI-INTEGRAL DIAPHRAGM GUIDE DETAILS NOT SHOWN ON THIS SHEET, INCLUDING PEJF AND RUB PLATE DETAILS.

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DESIGN AGENCY
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Phone: 614.775.4500

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RMW	-	3110044	

REAR ABUTMENT DIAPHRAGM LEFT BRIDGE

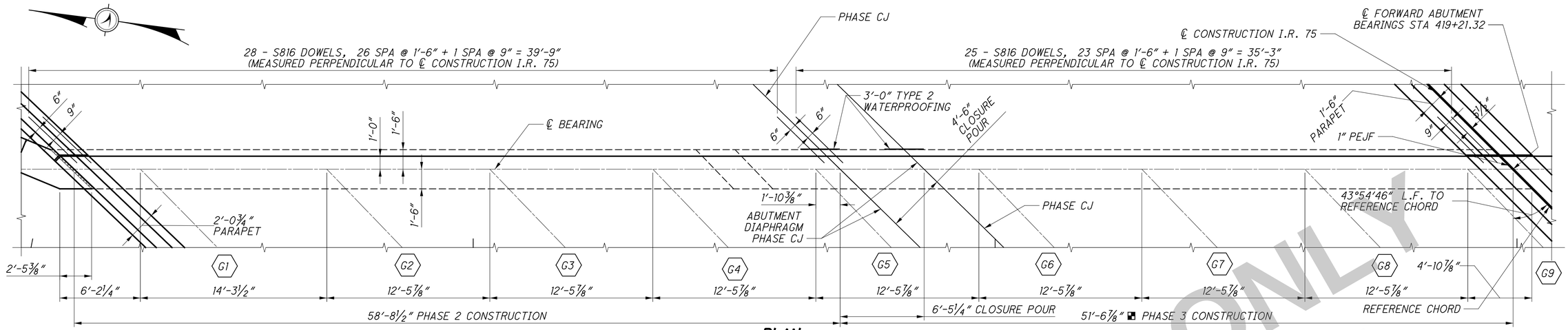
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

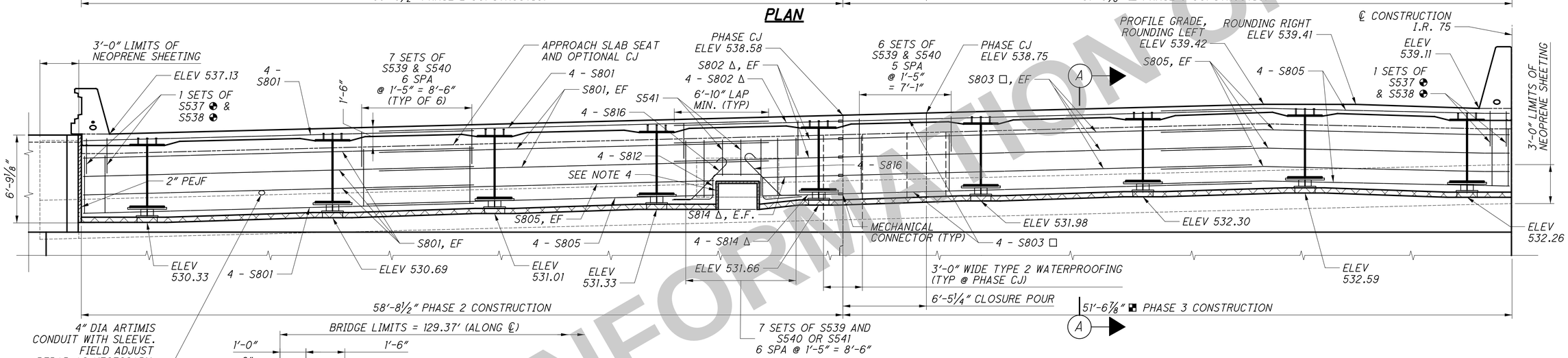
34 / 57

1366
2017

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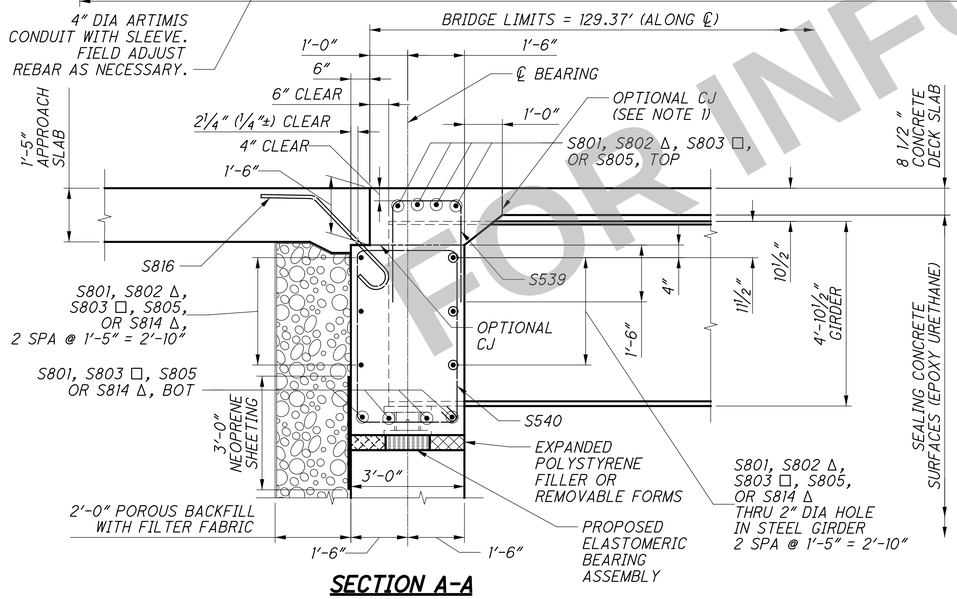


PLAN



ELEVATION

ELEVATIONS GIVEN AT ℄ ABUTMENT BEARINGS



SECTION A-A

SHEAR STUDS NOT SHOWN FOR CLARITY

LEGEND

Δ - INCLUDES MECHANICAL CONNECTOR ON ONE END

□ - PLUS EXTENSION FOR MECHANICAL CONNECTOR

■ - MEASURED TO ℄ CONSTRUCTION I.R. 75

◔ - BARS SHALL BE PLACED PARALLEL TO BEAMS

NOTES

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DESIGNED: RJE | DRAWN: GB | REVIEWED: CAS | DATE: 12-15-21
CHECKED: RMW | REVISED: - | STRUCTURE FILE NUMBER: 3110044

FORWARD ABUTMENT DIAPHRAGM LEFT BRIDGE

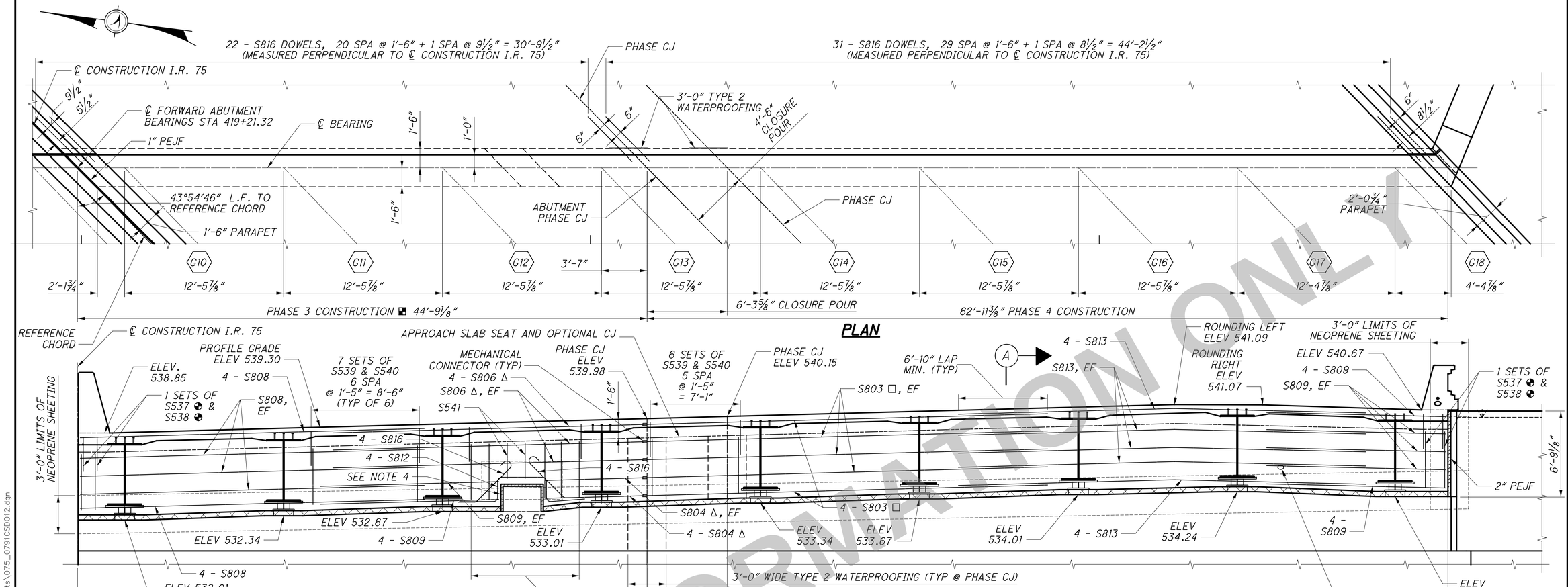
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

35 / 57

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2017

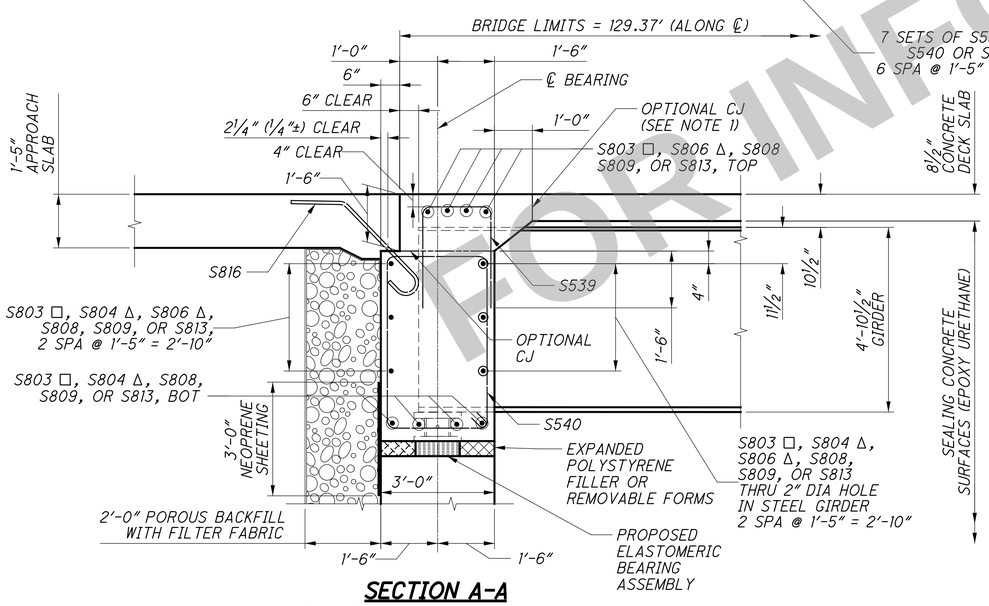
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PLAN

ELEVATION

ELEVATIONS GIVEN AT ℄ ABUTMENT BEARINGS



SECTION A-A

SHEAR STUDS NOT SHOWN FOR CLARITY

7 SETS OF S539 AND S540 OR S541 6 SPA @ 1'-5" = 8'-6"

LEGEND

△ - INCLUDES MECHANICAL CONNECTOR ON ONE END

□ - PLUS EXTENSION FOR MECHANICAL CONNECTOR

◪ - MEASURED TO ℄ CONSTRUCTION I.R. 75

◕ - BARS SHALL BE PLACED PARALLEL TO BEAMS

NOTES

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FORWARD ABUTMENT DIAPHRAGM RIGHT BRIDGE

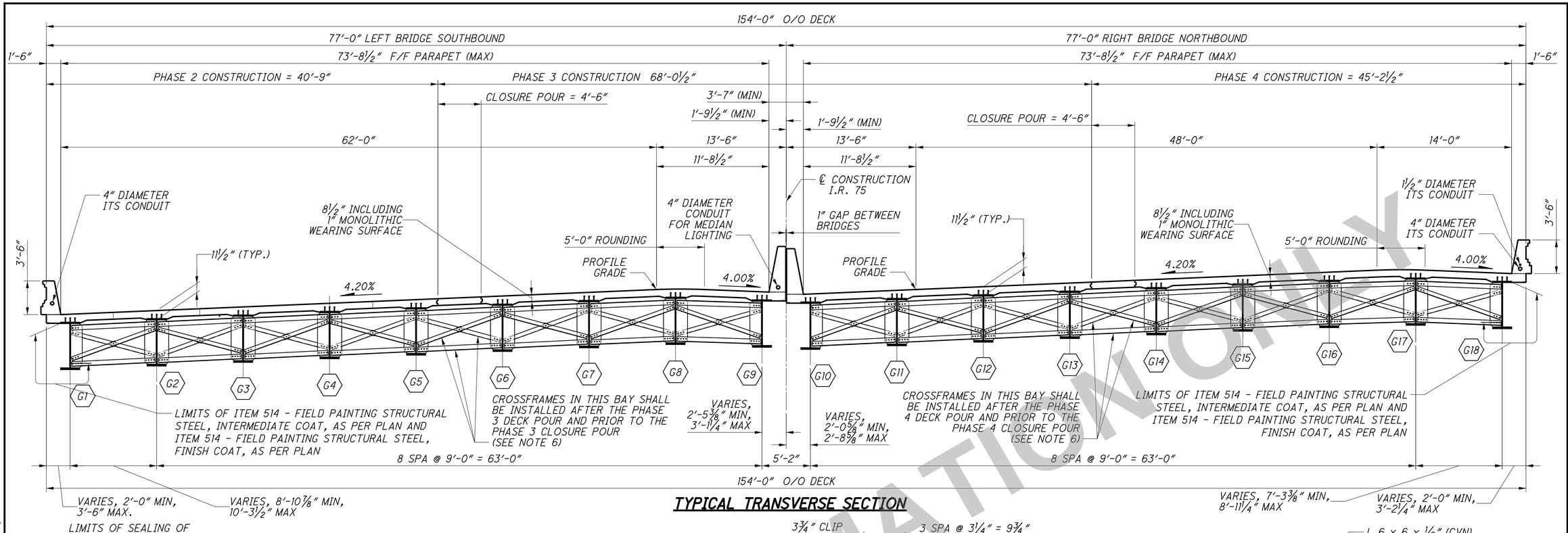
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

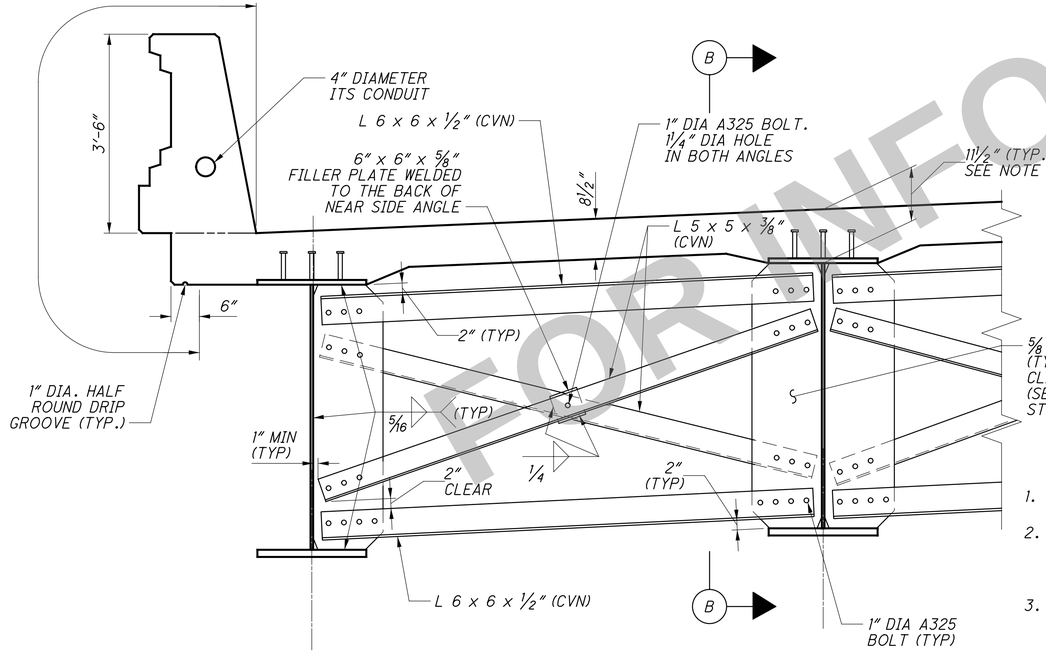
36 / 57

1368 / 2017

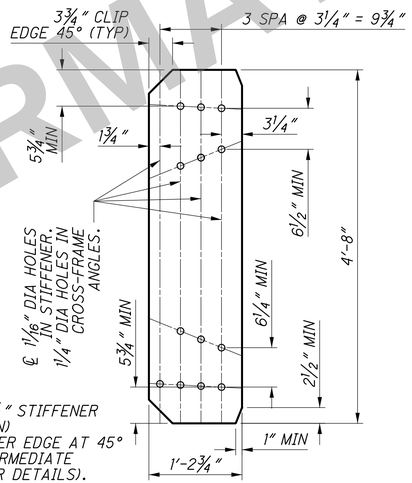
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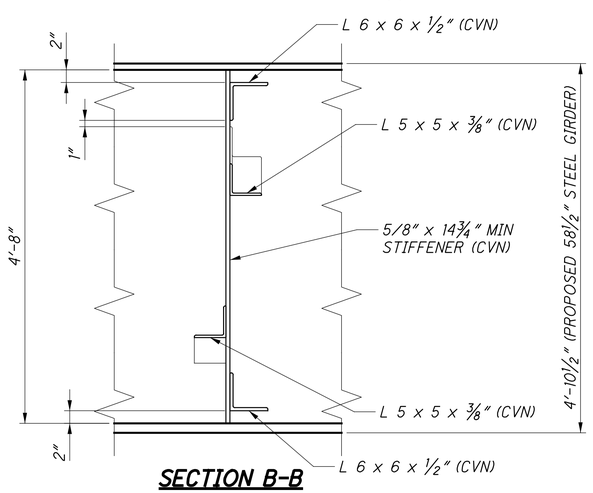
TYPICAL TRANSVERSE SECTION



CROSSFRAME DETAILS



INTERMEDIATE STIFFENER DETAILS



SECTION B-B

NOTES

1. ALL INTERMEDIATE CROSSFRAME MATERIAL SHALL BE A709 GRADE 50W.
2. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN C&MS 711.01.
3. DECK SLAB CONCRETE QUANTITY:
   THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH GIRDER HAUNCH. THE ESTIMATE ASSUMES A CONSTANT HAUNCH THICKNESS OF 3 INCHES AND A CONSTANT HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE OF 9 INCHES.
   DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. THE ALLOWABLE TOLERANCE FOR THE HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE IS ±3 INCHES. THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE GIRDER, FROM THE SURFACE OF THE DECK TO THE BOTTOM OF THE TOP FLANGE MINUS THE DECK SLAB THICKNESS. THE AREA OF ALL EMBEDDED TOP FLANGE SPLICE PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.24.
4. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
5. ALL INTERMEDIATE CROSSFRAME BOLTS SHALL BE ASTM F3125, GRADE 325, WITH THREADS EXCLUDED FROM THE SHEAR PLANE. ALL BOLTS SHALL BE TYPE 3 BOLTS. EACH ANCHOR ASSEMBLY SHALL INCLUDE A BOLT, NUT, AND TWO (2) WASHERS, TIGHTENED ACCORDING TO CMS 513 PRIOR TO DECK PLACEMENT. MINIMUM EDGE DISTANCES FOR BOLTS SHALL BE 1½"
6. BOLT HOLES MUST BE DRILLED FULL SIZE. FIELD DRILL BOLT LINES FOR GIRDER 6 AND 13 STIFFENER PLATES WITHIN THE CLOSURE POUR BAY ONLY. ALL OTHER STIFFENER PLATE LOCATIONS SHALL BE SHOP DRILLED.

FOR INFORMATION ONLY

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STRUCTURE FILE NUMBER: 3110044
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REVISED: -
DESIGNED: RJE
CHECKED: RMW

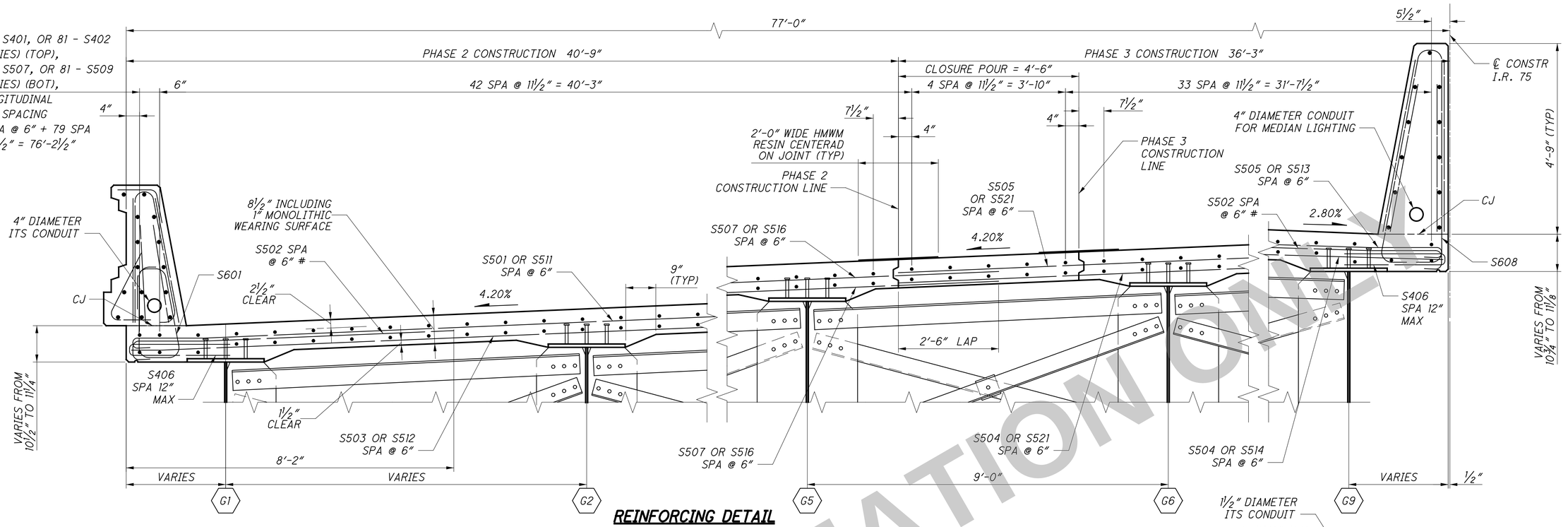
TYPICAL TRANSVERSE SECTION
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

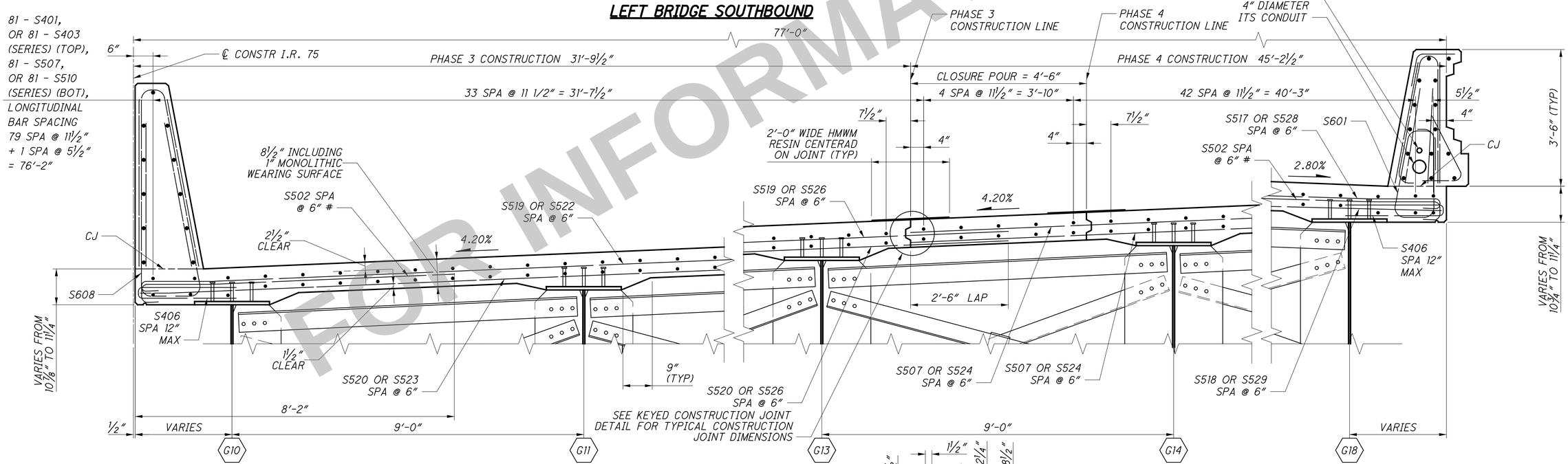
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2017

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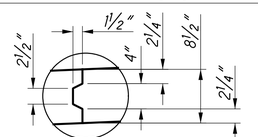
REINFORCING DETAIL LEFT BRIDGE SOUTHBOUND



REINFORCING DETAIL RIGHT BRIDGE NORTHBOUND

LEGEND

- ADDITIONAL OVERHANG BARS (S502 BENT BAR, 8'-0" LONG) ARE TO BE BUNDLED WITH EACH TOP TRANSVERSE BARS.



KEYED CONSTRUCTION JOINT DETAIL

DIMENSIONS SHOWN ARE TYPICAL AT ALL CONSTRUCTION JOINTS

NOTES

1. SEE PARAPET DETAILS SHEETS FOR PARAPET REINFORCING CALLOUTS.
2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

FOR INFORMATION ONLY

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5500 New Albany Road, Columbus, Ohio 43054
Phone: 614.775.4500

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RMW	-	3110044	

SECTION

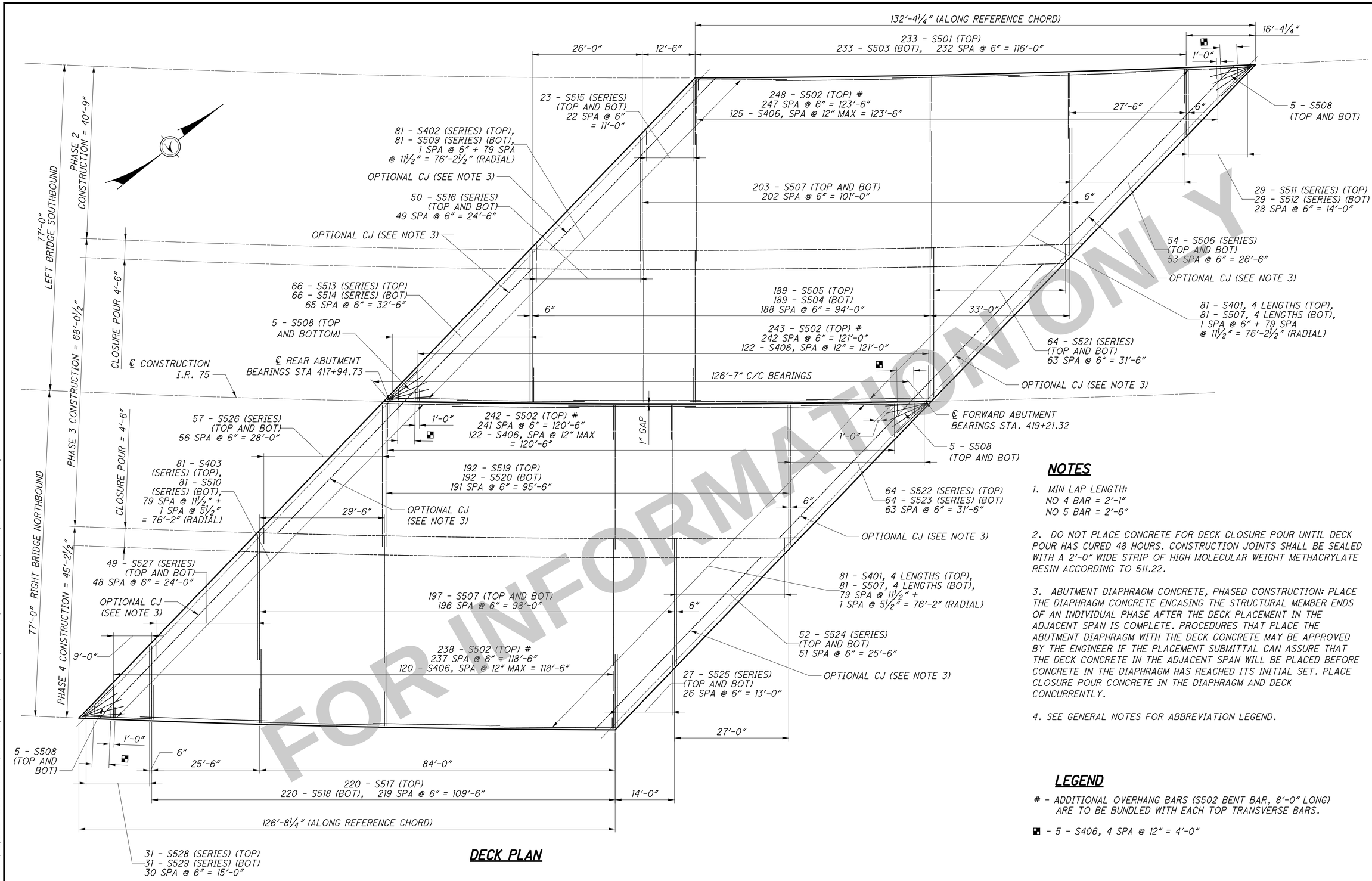
REINFORCING DETAIL TRANSVERSE SECTION
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

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2017

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DECK PLAN

NOTES

1. MIN LAP LENGTH:
   NO 4 BAR = 2'-1"
   NO 5 BAR = 2'-6"

2. DO NOT PLACE CONCRETE FOR DECK CLOSURE POUR UNTIL DECK POUR HAS CURED 48 HOURS. CONSTRUCTION JOINTS SHALL BE SEALED WITH A 2'-0" WIDE STRIP OF HIGH MOLECULAR WEIGHT METHACRYLATE RESIN ACCORDING TO 511.22.

3. ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE AFTER THE DECK PLACEMENT IN THE ADJACENT SPAN IS COMPLETE. PROCEDURES THAT PLACE THE ABUTMENT DIAPHRAGM WITH THE DECK CONCRETE MAY BE APPROVED BY THE ENGINEER IF THE PLACEMENT SUBMITTAL CAN ASSURE THAT THE DECK CONCRETE IN THE ADJACENT SPAN WILL BE PLACED BEFORE CONCRETE IN THE DIAPHRAGM HAS REACHED ITS INITIAL SET. PLACE CLOSURE POUR CONCRETE IN THE DIAPHRAGM AND DECK CONCURRENTLY.

4. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

LEGEND

- ADDITIONAL OVERHANG BARS (S502 BENT BAR, 8'-0" LONG) ARE TO BE BUNDLED WITH EACH TOP TRANSVERSE BARS.

■ - 5 - S406, 4 SPA @ 12" = 4'-0"

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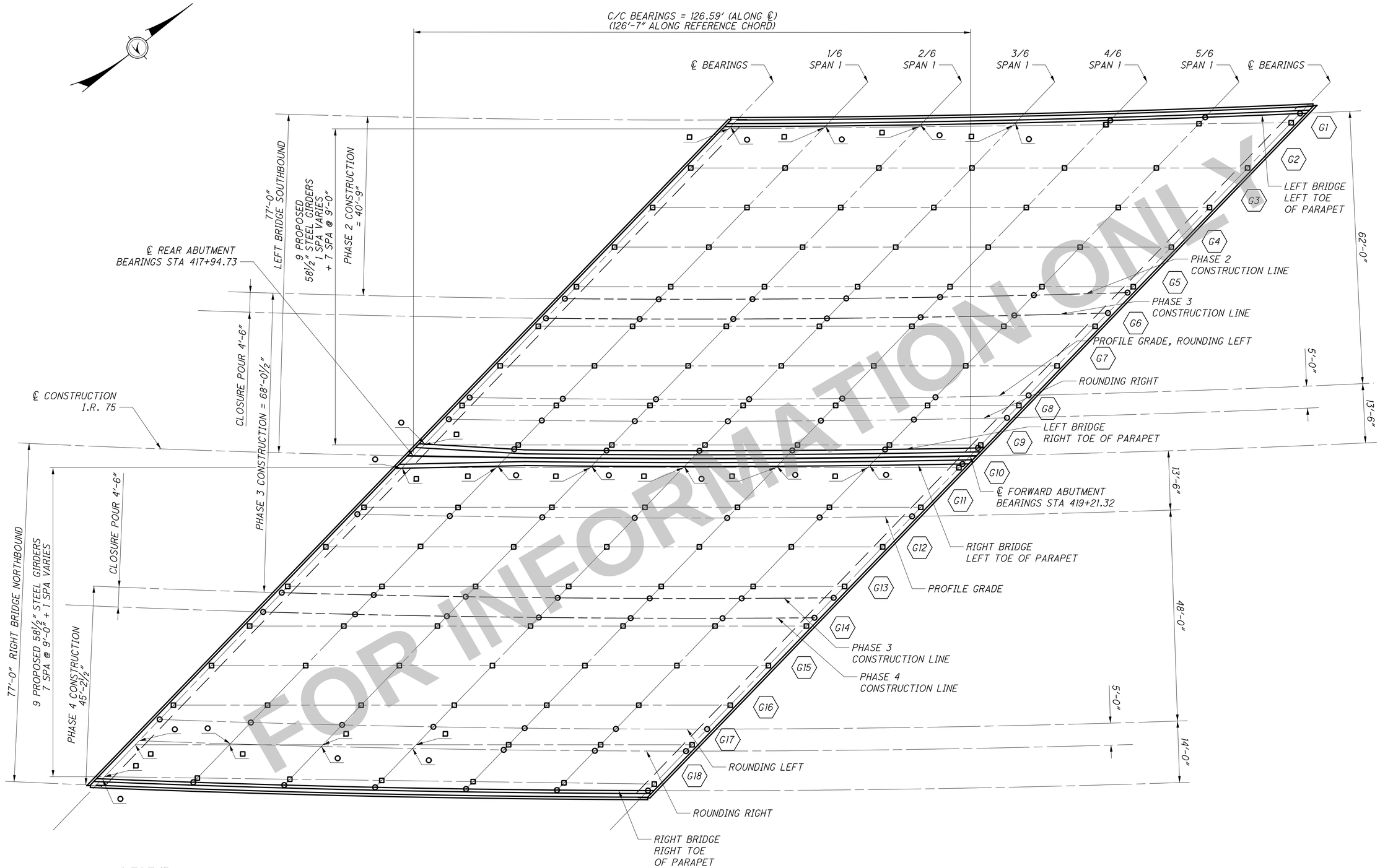
DECK PLAN
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

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2017

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FOR INFORMATION ONLY

LEGEND

- ○ - SCREED ELEVATIONS AND FINAL DECK ELEVATIONS.
- □ - TOP OF HAUNCH ELEVATIONS AND FINAL DECK ELEVATIONS.

DECK PLAN

NOTES

1. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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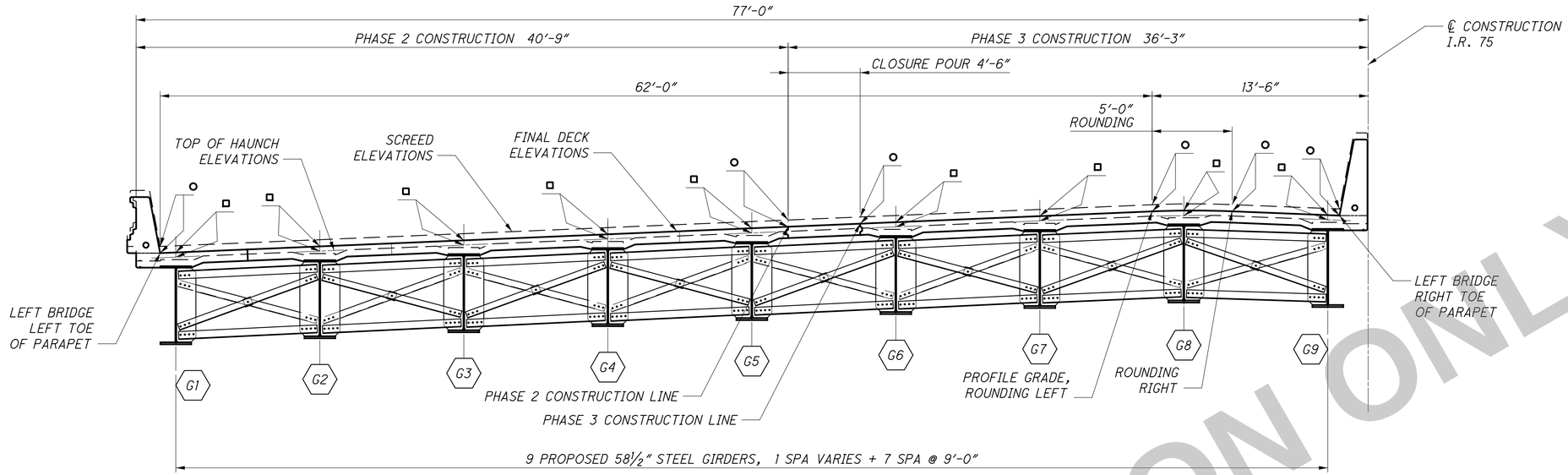
DECK ELEVATION LOCATION PLAN
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

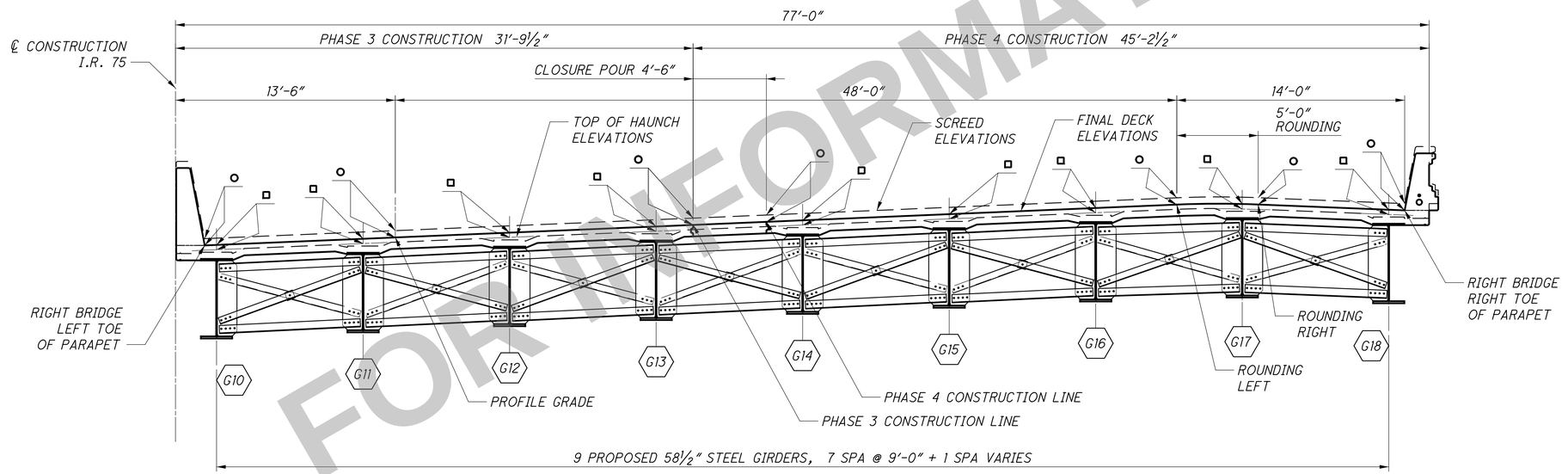
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2017

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TYPICAL TRANSVERSE SECTION
LEFT BRIDGE SOUTHBOUND



TYPICAL TRANSVERSE SECTION
RIGHT BRIDGE NORTHBOUND

FOR INFORMATION ONLY

NOTES

1. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

LEGEND

- ○ - SCREED ELEVATIONS AND FINAL DECK ELEVATIONS.
- □ - TOP OF HAUNCH ELEVATIONS AND FINAL DECK ELEVATIONS.

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DECK ELEVATION LOCATION TRANSVERSE SECTION
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

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2017

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SCREED ELEVATIONS LEFT BRIDGE

LOCATION	LEFT TOE OF PARAPET		GIRDER 1		GIRDER 2		GIRDER 3		GIRDER 4		GIRDER 5		PHASE 1 CONST LINE		PHASE 2 CONST LINE	
	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
℄ BEARING REAR ABUTMENT	418+67.05	536.50	418+66.55	536.52	418+57.78	536.85	418+48.96	537.18	418+40.20	537.52	418+31.48	537.86	418+28.84	537.96	418+24.55	538.13
1/6 SPAN	418+89.14	536.78	418+88.37	536.80	418+79.31	537.12	418+70.44	537.45	418+61.61	537.79	418+52.83	538.13	418+50.40	538.24	418+46.05	538.40
2/6 SPAN	419+11.23	537.02	419+10.20	537.03	419+00.84	537.35	418+91.91	537.68	418+83.02	538.02	418+74.18	538.36	418+71.96	538.47	418+67.55	538.62
3/6 SPAN	419+33.32	537.17	419+32.02	537.19	419+22.37	537.51	419+13.37	537.83	419+04.43	538.17	418+95.53	538.52	418+93.52	538.62	418+89.05	538.77
4/6 SPAN	419+55.42	537.23	419+53.84	537.26	419+43.89	537.60	419+34.84	537.91	419+25.83	538.24	419+16.88	538.59	419+15.09	538.68	419+10.56	538.83
5/6 SPAN	419+77.51	537.21	419+75.65	537.26	419+65.40	537.60	419+56.29	537.92	419+47.23	538.25	419+38.22	538.58	419+36.65	538.65	419+32.06	538.81
℄ BEARING FORWARD ABUTMENT	419+99.60	537.13	419+97.45	537.20	419+86.91	537.57	419+77.74	537.89	419+68.62	538.21	419+59.56	538.53	419+58.21	538.58	419+53.56	538.75

SCREED ELEVATIONS LEFT BRIDGE

LOCATION	GIRDER 6		GIRDER 7		PROFILE GRADE, ROUNDING LEFT		GIRDER 8		ROUNDING RIGHT		GIRDER 9		RIGHT TOE OF PARAPET	
	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
℄ BEARING REAR ABUTMENT	418+22.81	538.20	418+14.18	538.54	418+07.30	538.82	418+05.61	538.86	418+02.63	538.80	417+97.08	538.53	417+97.28	538.54
1/6 SPAN	418+44.10	538.46	418+35.41	538.80	418+28.57	539.08	418+26.78	539.12	418+23.84	539.07	418+18.19	538.82	418+17.61	538.78
2/6 SPAN	418+65.39	538.68	418+56.65	539.01	418+49.84	539.30	418+47.96	539.34	418+45.04	539.28	418+39.31	539.05	418+38.63	539.00
3/6 SPAN	418+86.68	538.83	418+77.88	539.15	418+71.11	539.44	418+69.13	539.48	418+66.25	539.43	418+60.43	539.20	418+59.75	539.15
4/6 SPAN	419+07.97	538.90	418+99.11	539.22	418+92.37	539.50	418+90.31	539.54	418+87.45	539.48	418+81.54	539.25	418+80.87	539.20
5/6 SPAN	419+29.26	538.90	419+20.34	539.22	419+13.64	539.49	419+11.48	539.53	419+08.66	539.47	419+02.66	539.22	419+01.99	539.18
℄ BEARING FORWARD ABUTMENT	419+50.54	538.86	419+41.57	539.18	419+34.91	539.42	419+32.64	539.47	419+29.86	539.41	419+23.77	539.13	419+23.11	539.11

SCREED ELEVATIONS RIGHT BRIDGE

LOCATION	LEFT TOE OF PARAPET		GIRDER 10		GIRDER 11		PROFILE GRADE RIGHT		GIRDER 12		GIRDER 13		PHASE 2 CONST LINE		PHASE 3 CONST LINE	
	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
℄ BEARING REAR ABUTMENT	417+92.09	538.30	417+92.21	538.29	417+83.76	538.64	417+82.30	538.70	417+75.36	538.98	417+67.00	539.33	417+65.68	539.39	417+61.64	539.56
1/6 SPAN	418+13.95	538.53	418+13.29	538.54	418+04.78	538.88	418+03.23	538.96	417+96.32	539.23	417+87.90	539.58	417+86.40	539.66	417+82.30	539.83
2/6 SPAN	418+35.22	538.74	418+34.37	538.75	418+25.80	539.08	418+24.16	539.17	418+17.28	539.43	418+08.80	539.79	418+07.11	539.88	418+02.95	540.05
3/6 SPAN	418+56.30	538.88	418+55.46	538.89	418+46.83	539.22	418+45.09	539.31	418+38.25	539.56	418+29.71	539.93	418+27.82	540.03	418+23.61	540.19
4/6 SPAN	418+77.37	538.94	418+76.54	538.95	418+67.85	539.28	418+66.03	539.37	418+59.21	539.62	418+50.62	539.98	418+48.53	540.08	418+44.27	540.25
5/6 SPAN	418+98.45	538.92	418+97.62	538.94	418+88.88	539.27	418+86.96	539.36	418+80.18	539.60	418+71.53	539.95	418+69.25	540.05	418+64.93	540.22
℄ BEARING FORWARD ABUTMENT	419+19.53	538.86	419+18.70	538.89	419+09.90	539.22	419+07.89	539.30	419+01.15	539.55	418+92.44	539.88	418+89.96	539.98	418+85.59	540.15

SCREED ELEVATIONS RIGHT BRIDGE

LOCATION	GIRDER 14		GIRDER 15		GIRDER 16		ROUNDING LEFT		GIRDER 17		ROUNDING RIGHT		GIRDER 18		RIGHT TOE OF PARAPET	
	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
℄ BEARING REAR ABUTMENT	417+58.69	539.68	417+50.42	540.03	417+42.21	540.38	417+39.25	540.51	417+34.03	540.45	417+34.86	540.49	417+27.45	540.12	417+27.02	540.09
1/6 SPAN	417+79.53	539.93	417+71.20	540.26	417+62.93	540.61	417+59.62	540.77	417+54.69	540.74	417+55.17	540.75	417+47.82	540.40	417+47.23	540.36
2/6 SPAN	418+00.37	540.14	417+91.99	540.46	417+83.65	540.80	417+79.98	540.98	417+75.36	540.97	417+75.48	540.96	417+68.19	540.63	417+67.44	540.57
3/6 SPAN	418+21.22	540.27	418+12.78	540.59	418+04.39	540.92	418+00.35	541.11	417+96.04	541.13	417+95.80	541.10	417+88.56	540.78	417+87.65	540.71
4/6 SPAN	418+42.08	540.31	418+33.58	540.63	418+25.13	540.97	418+20.72	541.17	418+16.72	541.19	418+16.11	541.15	418+08.93	540.84	418+07.86	540.77
5/6 SPAN	418+62.93	540.28	418+54.38	540.61	418+45.87	540.95	418+41.08	541.15	418+37.40	541.18	418+36.42	541.13	418+29.31	540.82	418+28.07	540.74
℄ BEARING FORWARD ABUTMENT	418+83.79	540.22	418+75.18	540.55	418+66.61	540.89	418+61.45	541.09	418+58.09	541.12	418+56.73	541.07	418+49.68	540.74	418+48.28	540.67

FOR INFORMATION ONLY

NOTES

1. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.

2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

DESIGN AGENCY
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DESIGNED	DRAWN	REVIEWED	DATE
RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	3110044	

SCREED ELEVATIONS
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

1374
2017

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FINAL DECK SURFACE ELEVATIONS LEFT BRIDGE

LOCATION	LEFT TOE OF PARAPET		GIRDER 1		GIRDER 2		GIRDER 3		GIRDER 4		GIRDER 5		PHASE 1 CONST LINE		PHASE 2 CONST LINE	
	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
℄ BEARING REAR ABUTMENT	418+67.05	536.50	418+66.55	536.52	418+57.78	536.85	418+48.96	537.18	418+40.20	537.52	418+31.48	537.86	418+28.84	537.96	418+24.55	538.13
1/6 SPAN	418+89.14	536.60	418+88.37	536.62	418+79.31	536.95	418+70.44	537.29	418+61.61	537.62	418+52.83	537.96	418+50.40	538.07	418+46.05	538.23
2/6 SPAN	419+11.23	536.71	419+10.20	536.72	419+00.84	537.06	418+91.91	537.40	418+83.02	537.73	418+74.18	538.06	418+71.96	538.17	418+67.55	538.34
3/6 SPAN	419+33.32	536.81	419+32.02	536.83	419+22.37	537.18	419+13.37	537.51	419+04.43	537.84	418+95.53	538.17	418+93.52	538.27	418+89.05	538.44
4/6 SPAN	419+55.42	536.92	419+53.84	536.95	419+43.89	537.30	419+34.84	537.63	419+25.83	537.96	419+16.88	538.29	419+15.09	538.37	419+10.56	538.54
5/6 SPAN	419+77.51	537.02	419+75.65	537.07	419+65.40	537.43	419+56.29	537.76	419+47.23	538.08	419+38.22	538.41	419+36.65	538.48	419+32.06	538.64
℄ BEARING FORWARD ABUTMENT	419+99.60	537.13	419+97.45	537.20	419+86.91	537.57	419+77.74	537.89	419+68.62	538.21	419+59.56	538.53	419+58.21	538.58	419+53.56	538.75

FINAL DECK SURFACE ELEVATIONS LEFT BRIDGE

LOCATION	GIRDER 6		GIRDER 7		PROFILE GRADE, ROUNDING LEFT		GIRDER 8		ROUNDING RIGHT		GIRDER 9		RIGHT TOE OF PARAPET	
	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
℄ BEARING REAR ABUTMENT	418+22.81	538.20	418+14.18	538.54	418+07.30	538.82	418+05.61	538.86	418+02.63	538.80	417+97.08	538.53	417+97.28	538.54
1/6 SPAN	418+44.10	538.30	418+35.41	538.63	418+28.57	538.92	418+26.78	538.95	418+23.84	538.90	418+18.19	538.65	418+17.61	538.61
2/6 SPAN	418+65.39	538.40	418+56.65	538.73	418+49.84	539.02	418+47.96	539.05	418+45.04	539.00	418+39.31	538.76	418+38.63	538.70
3/6 SPAN	418+86.68	538.50	418+77.88	538.84	418+71.11	539.12	418+69.13	539.15	418+66.25	539.10	418+60.43	538.86	418+59.75	538.80
4/6 SPAN	419+07.97	538.61	418+99.11	538.95	418+92.37	539.22	418+90.31	539.26	418+87.45	539.20	418+81.54	538.96	418+80.87	538.90
5/6 SPAN	419+29.26	538.73	419+20.34	539.06	419+13.64	539.32	419+11.48	539.36	419+08.66	539.30	419+02.66	539.05	419+01.99	539.00
℄ BEARING FORWARD ABUTMENT	419+50.54	538.86	419+41.57	539.18	419+34.91	539.42	419+32.64	539.47	419+29.86	539.41	419+23.77	539.13	419+23.11	539.11

FINAL DECK SURFACE ELEVATIONS RIGHT BRIDGE

LOCATION	LEFT TOE OF PARAPET		GIRDER 10		GIRDER 11		PROFILE GRADE RIGHT		GIRDER 12		GIRDER 13		PHASE 2 CONST LINE		PHASE 3 CONST LINE	
	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
℄ BEARING REAR ABUTMENT	417+92.09	538.30	417+92.21	538.29	417+83.76	538.64	417+82.30	538.70	417+75.36	538.98	417+67.00	539.33	417+65.68	539.39	417+61.64	539.56
1/6 SPAN	418+13.95	538.37	418+13.29	538.38	418+04.78	538.72	418+03.23	538.80	417+96.32	539.06	417+87.90	539.41	417+86.40	539.49	417+82.30	539.65
2/6 SPAN	418+35.22	538.46	418+34.37	538.47	418+25.80	538.81	418+24.16	538.90	418+17.28	539.15	418+08.80	539.49	418+07.11	539.58	418+02.95	539.75
3/6 SPAN	418+56.30	538.56	418+55.46	538.57	418+46.83	538.90	418+45.09	539.00	418+38.25	539.24	418+29.71	539.58	418+27.82	539.68	418+23.61	539.85
4/6 SPAN	418+77.37	538.66	418+76.54	538.67	418+67.85	539.00	418+66.03	539.10	418+59.21	539.34	418+50.62	539.68	418+48.53	539.78	418+44.27	539.95
5/6 SPAN	418+98.45	538.76	418+97.62	538.78	418+88.88	539.11	418+86.96	539.20	418+80.18	539.44	418+71.53	539.78	418+69.25	539.88	418+64.93	540.05
℄ BEARING FORWARD ABUTMENT	419+19.53	538.86	419+18.70	538.89	419+09.90	539.22	419+07.89	539.30	419+01.15	539.55	418+92.44	539.88	418+89.96	539.98	418+85.59	540.15

FINAL DECK SURFACE ELEVATIONS RIGHT BRIDGE

LOCATION	GIRDER 14		GIRDER 15		GIRDER 16		ROUNDING LEFT		GIRDER 17		ROUNDING RIGHT		GIRDER 18		RIGHT TOE OF PARAPET	
	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
℄ BEARING REAR ABUTMENT	417+58.69	539.68	417+50.42	540.03	417+42.21	540.38	417+39.25	540.51	417+34.03	540.45	417+34.86	540.49	417+27.45	540.12	417+27.02	540.09
1/6 SPAN	417+79.53	539.76	417+71.20	540.10	417+62.93	540.45	417+59.62	540.61	417+54.69	540.58	417+55.17	540.59	417+47.82	540.23	417+47.23	540.19
2/6 SPAN	418+00.37	539.84	417+91.99	540.18	417+83.65	540.53	417+79.98	540.70	417+75.36	540.70	417+75.48	540.69	417+68.19	540.35	417+67.44	540.29
3/6 SPAN	418+21.22	539.92	418+12.78	540.27	418+04.39	540.61	418+00.35	540.80	417+96.04	540.81	417+95.80	540.78	417+88.56	540.45	417+87.65	540.38
4/6 SPAN	418+42.08	540.02	418+33.58	540.36	418+25.13	540.70	418+20.72	540.90	418+16.72	540.92	418+16.11	540.88	418+08.93	540.55	418+07.86	540.48
5/6 SPAN	418+62.93	540.11	418+54.38	540.45	418+45.87	540.79	418+41.08	540.99	418+37.40	541.02	418+36.42	540.98	418+29.31	540.65	418+28.07	540.58
℄ BEARING FORWARD ABUTMENT	418+83.79	540.22	418+75.18	540.55	418+66.61	540.89	418+61.45	541.09	418+58.09	541.12	418+56.73	541.07	418+49.68	540.74	418+48.28	540.67

TOP OF HAUNCH ELEVATIONS LEFT BRIDGE

LOCATION	GIRDER 1		GIRDER 2		GIRDER 3		GIRDER 4		GIRDER 5		GIRDER 6		GIRDER 7		GIRDER 8		GIRDER 9	
	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
℄ BEARING REAR ABUTMENT	418+66.55	535.81	418+57.78	536.14	418+48.96	536.48	418+40.20	536.81	418+31.48	537.15	418+22.81	537.49	418+14.18	537.83	418+05.61	538.15	417+97.08	537.83
1/6 SPAN	418+88.37	536.09	418+79.31	536.41	418+70.44	536.74	418+61.61	537.08	418+52.83	537.43	418+44.10	537.75	418+35.41	538.09	418+26.78	538.41	418+18.19	538.11
2/6 SPAN	419+10.20	536.32	419+00.84	536.64	418+91.91	536.97	418+83.02	537.31	418+74.18	537.66	418+65.39	537.97	418+56.65	538.30	418+47.96	538.63	418+39.31	538.34
3/6 SPAN	419+32.02	536.48	419+22.37	536.81	419+13.37	537.13	419+04.43	537.46	418+95.53	537.81	418+86.68	538.12	418+77.88	538.45	418+69.13	538.77	418+60.43	538.49
4/6 SPAN	419+53.84	536.55	419+43.89	536.89	419+34.84	537.20	419+25.83	537.53	419+16.88	537.88	419+07.97	538.19	418+99.11	538.51	418+90.31	538.83	418+81.54	538.55
5/6 SPAN	419+75.65	536.55	419+65.40	536.90	419+56.29	537.21	419+47.23	537.54	419+38.22	537.87	419+29.26	538.19	419+20.34	538.51	419+11.48	538.82	419+02.66	538.51
℄ BEARING FORWARD ABUTMENT	419+97.45	536.49	419+86.91	536.86	419+77.74	537.18	419+68.62	537.50	419+59.56	537.82	419+50.54	538.15	419+41.57	538.47	419+32.64	538.76	419+23.77	538.43

TOP OF HAUNCH ELEVATIONS RIGHT BRIDGE

LOCATION	GIRDER 10		GIRDER 11		GIRDER 12		GIRDER 13		GIRDER 14		GIRDER 15		GIRDER 16		GIRDER 17		GIRDER 18	
	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
℄ BEARING REAR ABUTMENT	417+92.21	537.58	417+83.76	537.93	417+75.36	538.28	417+67.00	538.62	417+58.69	538.97	417+50.42	539.32	417+42.21	539.67	417+34.03	539.74	417+27.45	539.41
1/6 SPAN	418+13.29	537.83	418+04.78	538.17	417+96.32	538.52	417+87.90	538.88	417+79.53	539.22	417+71.20	539.55	417+62.93	539.90	417+54.69	540.03	417+47.82	539.69
2/6 SPAN	418+34.37	538.04	418+25.80	538.37	418+17.28	538.72	418+08.80	539.08	418+00.37	539.43	417+91.99	539.75	417+83.65	540.09	417+75.36	540.26	417+68.19	539.92
3/6 SPAN	418+55.46	538.18	418+46.83	538.51	418+38.25	538.86	418+29.71	539.22	418+21.22	539.56	418+12.78	539.88	418+04.39	540.21	417+96.04	540.42	417+88.56	540.07
4/6 SPAN	418+76.54	538.24	418+67.85	538.57	418+59.21	538.91	418+50.62	539.27	418+42.08	539.60	418+33.58	539.93	418+25.13	540.26	418+16.72	540.48	418+08.93	540.13
5/6 SPAN	418+97.62	538.23	418+88.88	538.56	418+80.18	538.90	418+71.53	539.24	418+62.93	539.58	418+54.38	539.91	418+45.87	540.24	418+37.40	540.47	418+29.31	540.11
℄ BEARING FORWARD ABUTMENT	419+18.70	538.18	419+09.90	538.51	419+01.15	538.84	418+92.44	539.18	418+83.79	539.51	418+75.18	539.84	418+66.61	540.18	418+58.09	540.41	418+49.68	540.03

NOTES

1. TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
2. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.
3. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

FOR INFORMATION ONLY

DESIGN AGENCY EMH&T

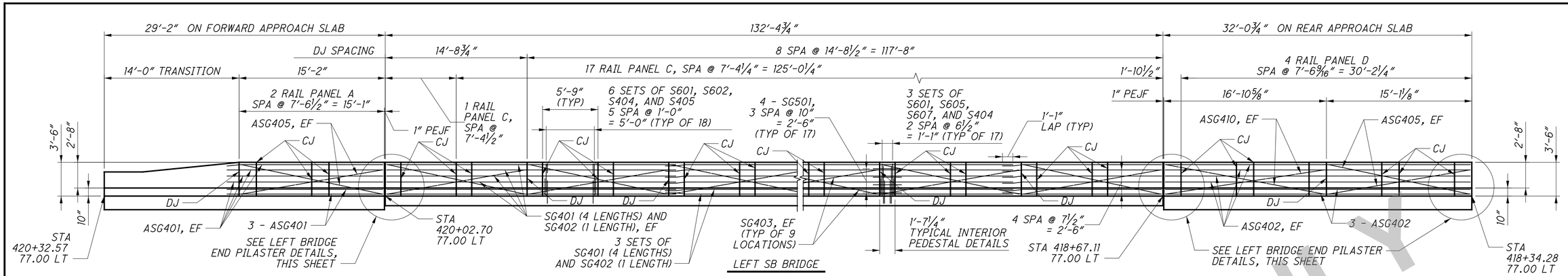
DESIGNED	DRAWN	REVIEWED	DATE
RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	3110044	

FINAL DECK AND TOP OF HAUNCH ELEVATIONS
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

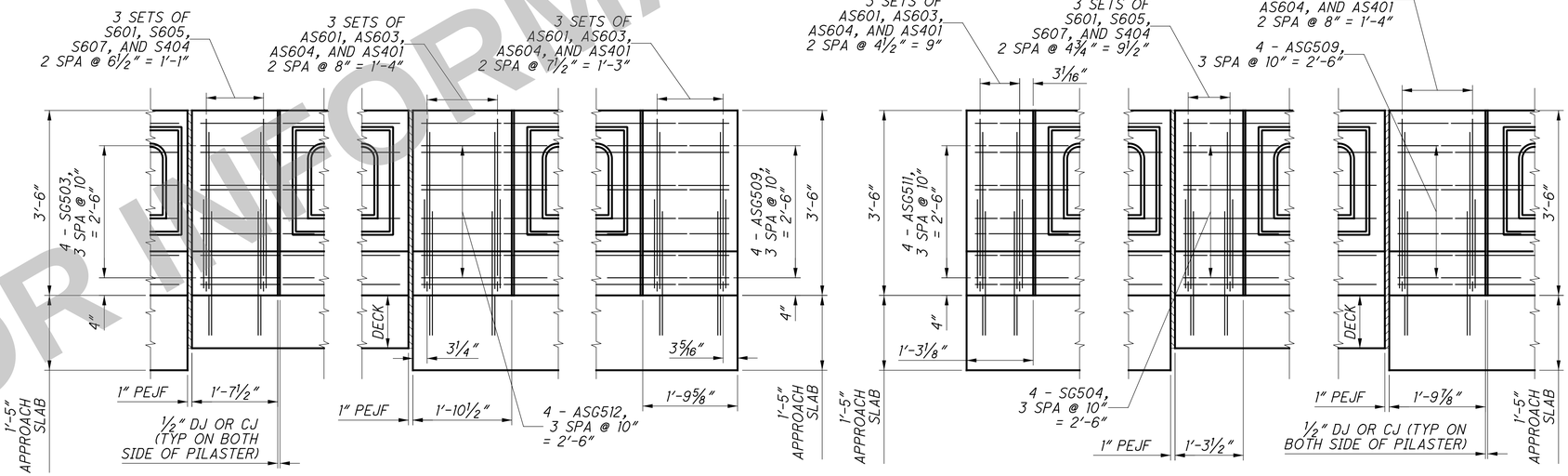
HAM-75-7.85
PID No. 77889

1375
2017

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EXTERIOR PARAPET DETAIL



LEFT BRIDGE END PILASTER DETAILS

SEE PANELS A, C, D FOR ADDITIONAL PARAPET DETAILS

RIGHT BRIDGE END PILASTER DETAILS

SEE PANELS B, E, F FOR ADDITIONAL PARAPET DETAILS

LEGEND

DJ - DEFLECTION JOINT, DETAILS SEE SHEET 45/57

CJ - CONTRACTION JOINT, DETAILS SEE SHEET 51/57

NOTE

1. DIMENSIONS SHOWN ARE ALONG EXTERIOR FACE OF BARRIER.
2. ELEVATION VIEW LOOKING AT EXTERIOR FACE OF PARAPET.
3. FOR PARAPET TRANSITION DETAILS SEE SHEET 52/57
4. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
5. FOR ADDITIONAL PARAPET DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWINGS SBR-1-20, REVISIONS 07/17/20.

FOR INFORMATION ONLY

DESIGN AGENCY: EMH&T
DESIGNED: RJE
DRAWN: GB
CHECKED: RMW
REVIEWED: CAS
DATE: 12-15-21
STRUCTURE FILE NUMBER: 3110044
REVISED: -

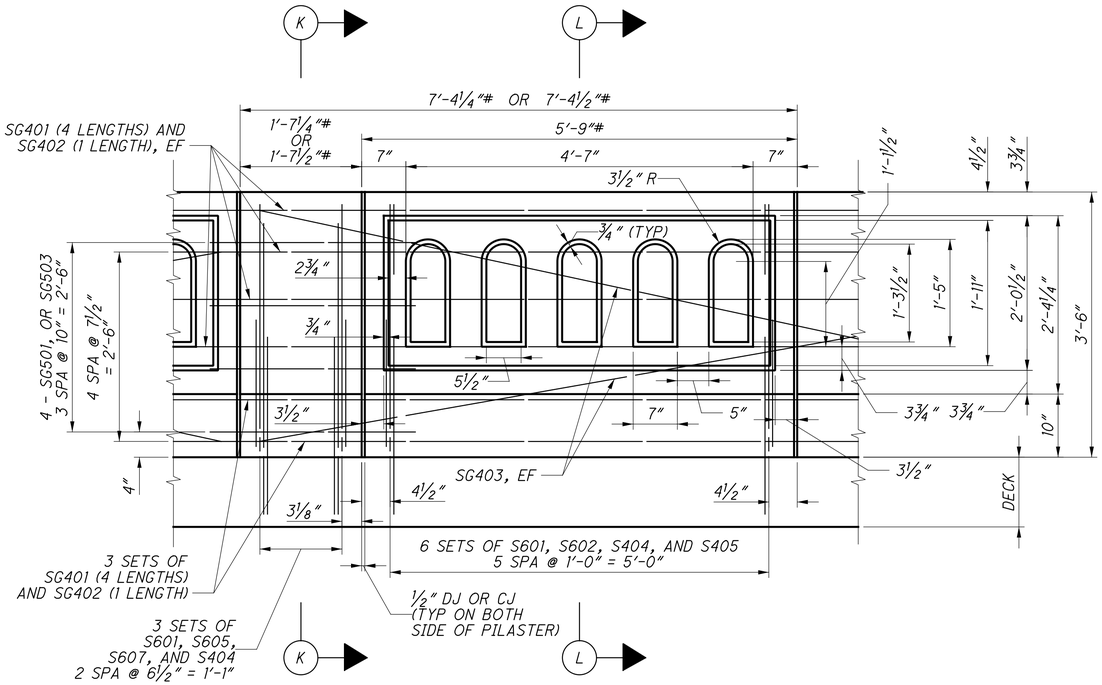
EXTERIOR PARAPET DETAILS
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

44/57

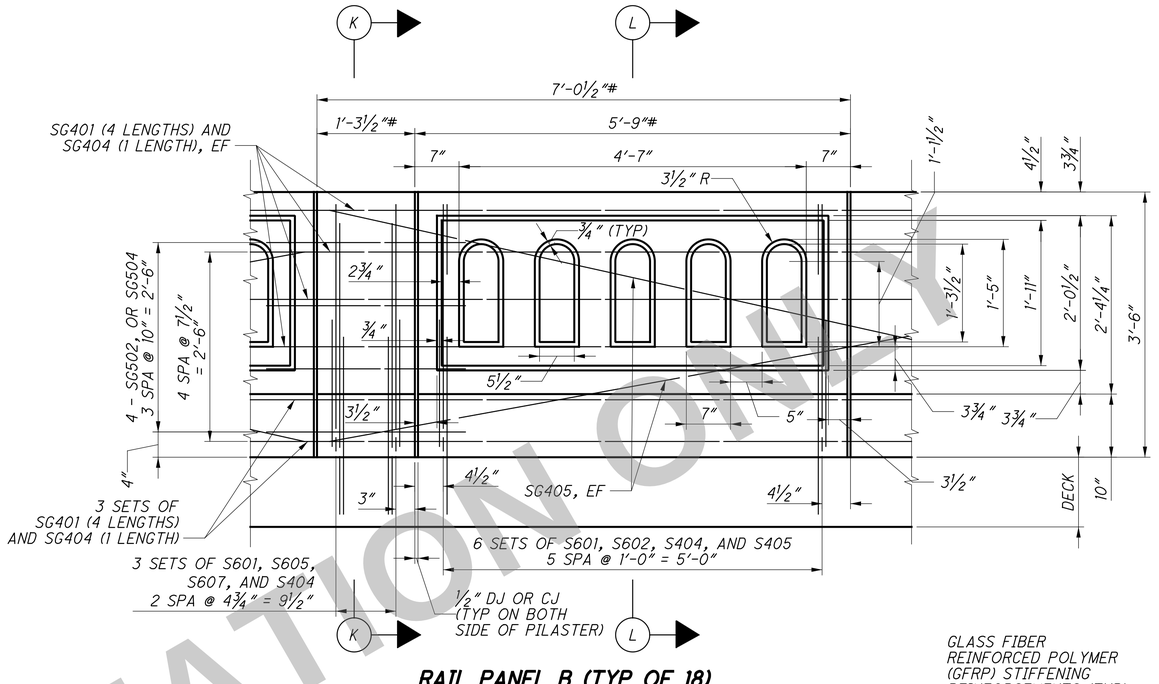
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2017

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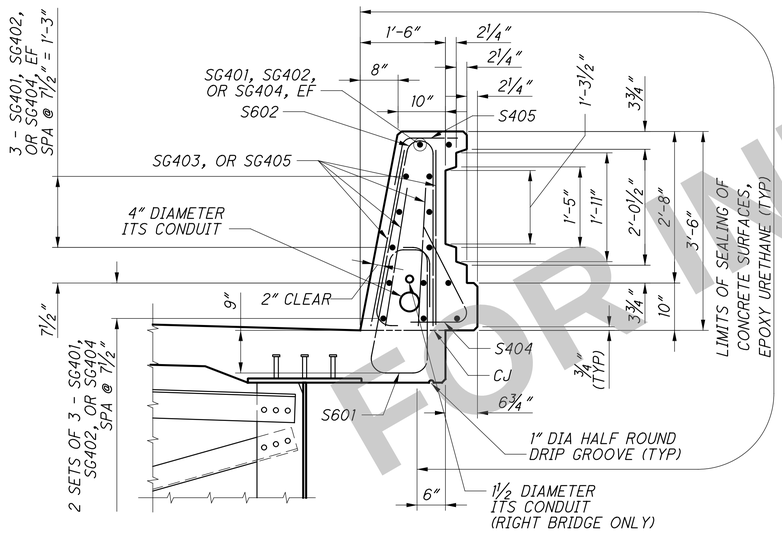
RAIL PANEL C (TYP OF 18)

SEE SHEET 44/57 FOR PANEL LOCATIONS

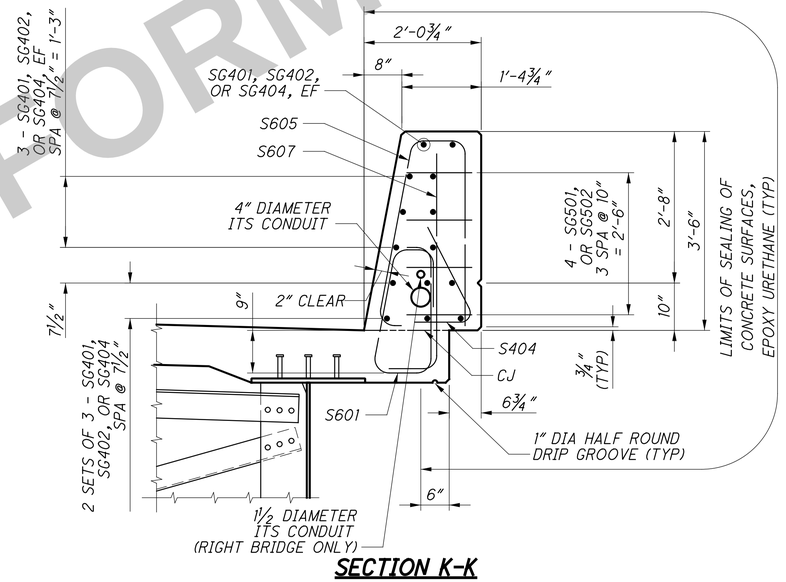


RAIL PANEL B (TYP OF 18)

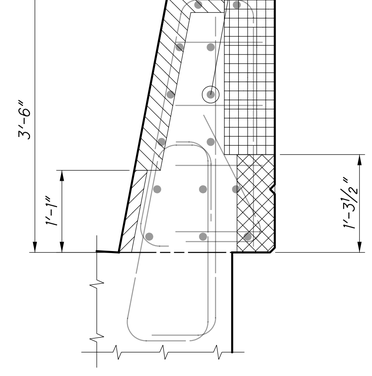
SEE SHEET 44/57 FOR PANEL LOCATIONS



SECTION L-L



SECTION K-K



DEFLECTION JOINT

(SEE NOTE 4)

NOTES

1. ELEVATION VIEW LOOKING AT EXTERIOR FACE OF PARAPET.
2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
3. FOR ADDITIONAL PARAPET DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWINGS SBR-1-20, REVISIONS 07/17/20.
4. DEFLECTION JOINTS AND CONTRACTION JOINTS ARE TO BE CAST INTO THE PARAPETS AND HELD IN WITH CHAMFER STRIPS. THE EXCESS MATERIAL WILL BE TRIMMED TO THE BASE OF THE CHAMFER. THE MATERIAL THAT WILL BE USED NEEDS TO NOT ABSORB WATER AND AS SUFFICIENT RIGIDITY TO NOT SIGNIFICANTLY MOVE DURING THE CASTING OF THE PARAPET. THE JOINT MATERIAL IS TO BE 0.5" IN THICKNESS AND WILL BE NOMAFLEX BY NOMACO OR FIBER LITE BY W.R. MEADOWS OR SIMILAR PRODUCT APPROVED BY THE ENGINEER. THE GFRP FIBER SPLICE BARS THAT WERE SHOWN IN THE AS BID PLANS AND ARE INTENDED TO HOLD THE LONGITUDINAL BARS TOGETHER DURING SLIP FORMING ARE TO BE NON-PERFORMED.

LEGEND

- DIMENSIONS PROVIDED ARE ALONG OUTSIDE FACE OF BARRIER.

- 8" WIDE PREFORMED JOINT MATERIAL
- 6" WIDE PREFORMED JOINT MATERIAL
- 4" WIDE PREFORMED JOINT MATERIAL
- 2" WIDE PREFORMED JOINT MATERIAL

DJ - DEFLECTION JOINT, DETAILS SEE SHEET 45/57

CJ - CONTRACTION JOINT, DETAILS SEE SHEET 51/57

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DESIGNED	DRAWN	REVIEWED	DATE
RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	3110044	

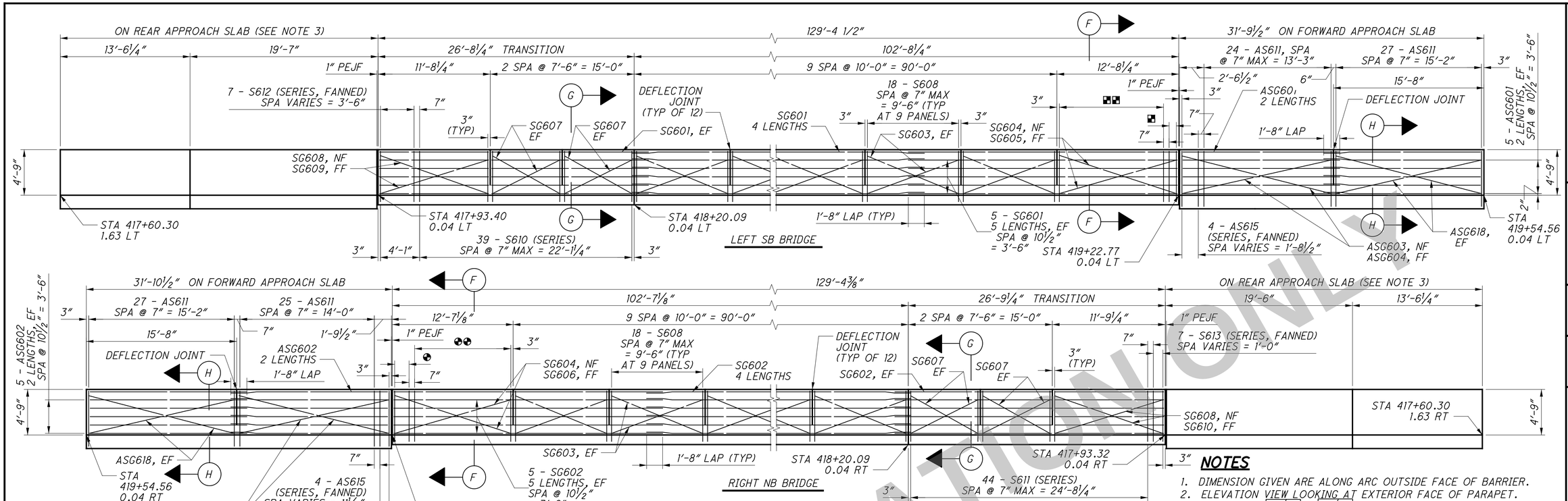
EXTERIOR PARAPET DETAILS
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

45/57

1377
2017

PLOTTED BY efoley 2/18/2022 3:22:20 PM J:\20110903\ODOT\HAM\77889\structures\HAM075_0791C\sheets\075_0791CRA002.dgn



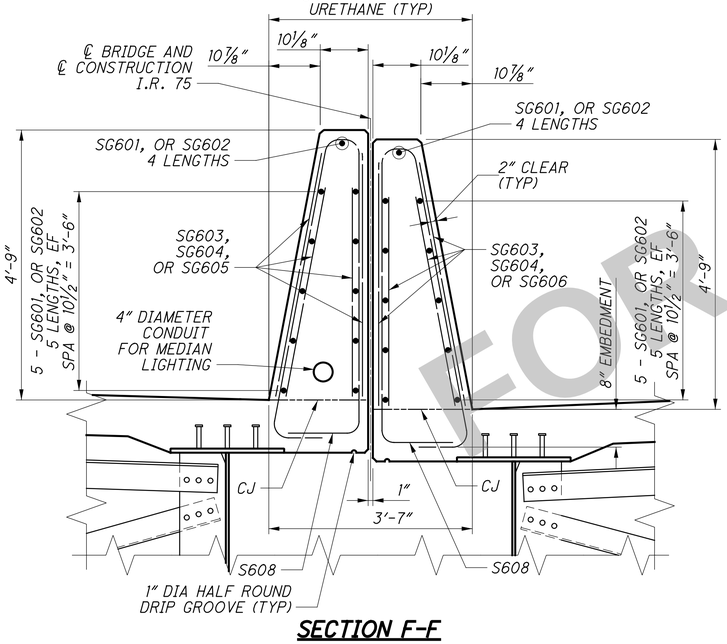
MEDIAN PARAPET ELEVATION

LEGEND

- ■ - 4 - S609 (FANNED), SPA VARIES = 9"
- ■■ - 20 - S608, SPA @ 7" MAX = 10'-10¼"
- ◕ - 4 - S609 (FANNED), SPA VARIES = 1'-6"
- ◕◕ - 19 - S608, SPA @ 7" MAX = 10'-0⅛"

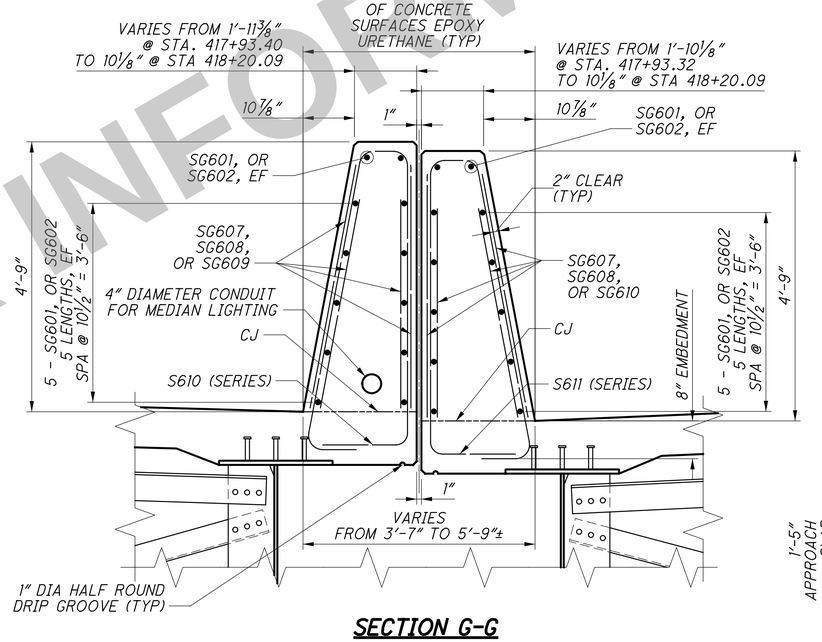
NOTES

1. DIMENSION GIVEN ARE ALONG ARC OUTSIDE FACE OF BARRIER.
2. ELEVATION VIEW LOOKING AT EXTERIOR FACE OF PARAPET.
3. SEE SHEETS 47/57 & 48/57 FOR CONTROL JOINT DETAIL AND MEDIAN PARAPET DETAILS ON REAR APPROACH SLAB.
4. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
5. FOR ADDITIONAL PARAPET DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWINGS SBR-2-20 REVISED 01/15/21.
6. DECK AND APPROACH SLAB REINFORCING NOT SHOWN FOR CLARITY.



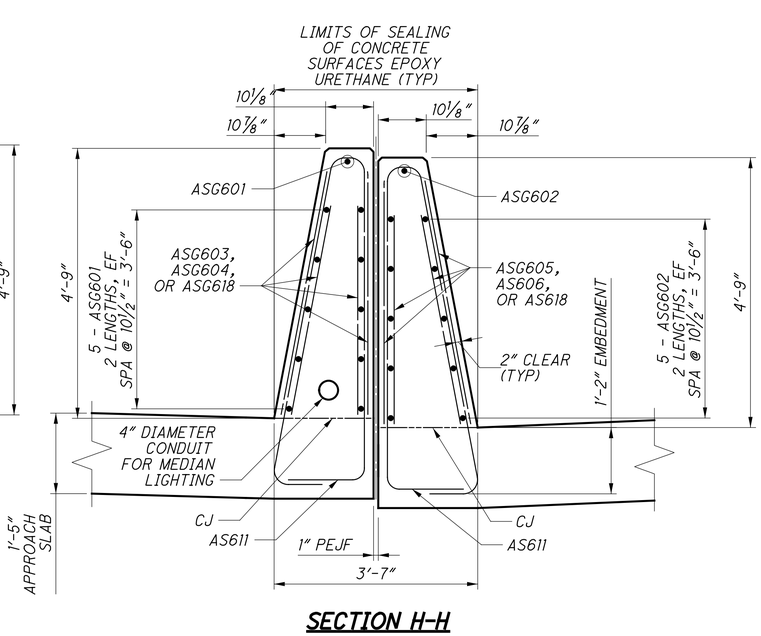
SECTION F-F

FROM STA 418+20.09 TO STA 419+22.77



SECTION G-G

FROM STA 417+93.32 TO STA 418+20.09



SECTION H-H

FROM STA 419+22.69 TO STA 419+54.56 ON FORWARD ABUTMENT APPROACH SLAB

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DESIGN AGENCY: EMH&T

DESIGNED	DRAWN	REVIEWED	DATE
RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	3110044	

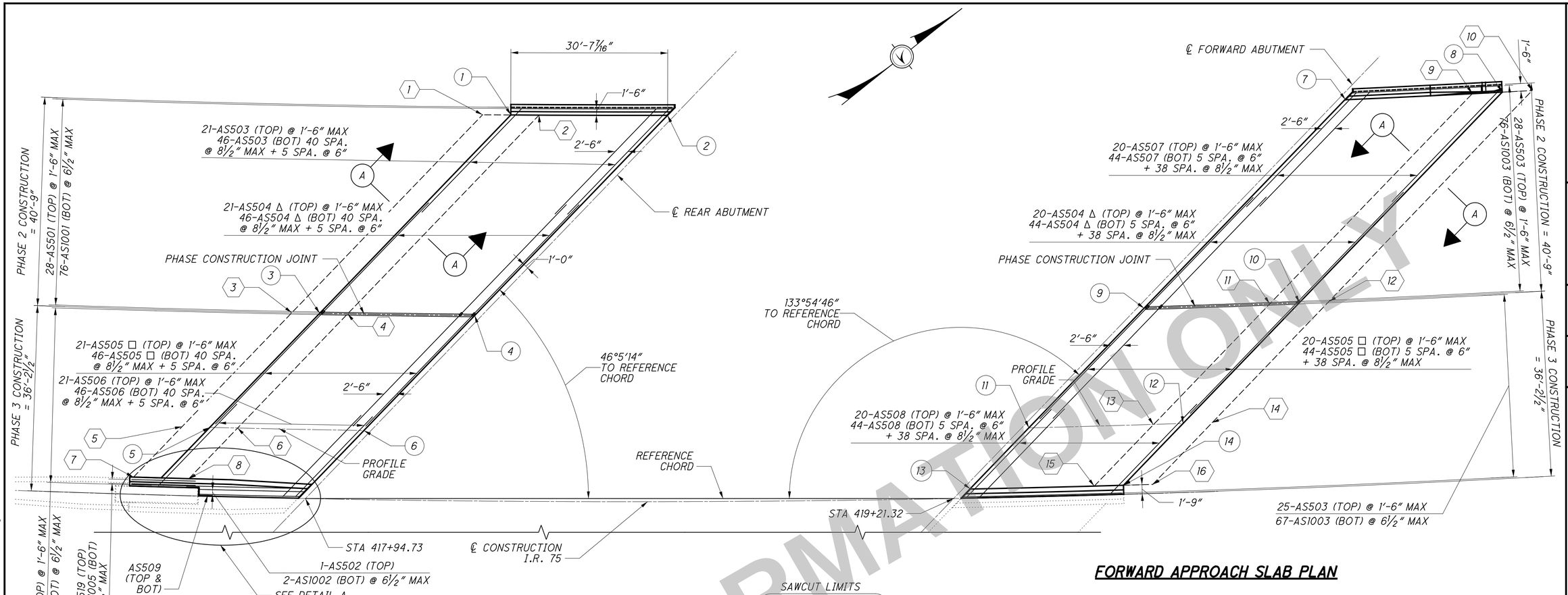
MEDIAN PARAPET DETAILS
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

46/57

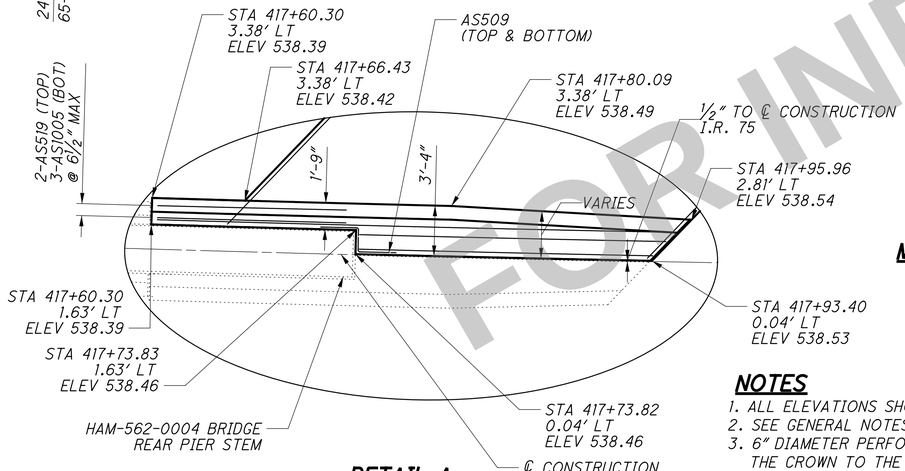
1378/2017

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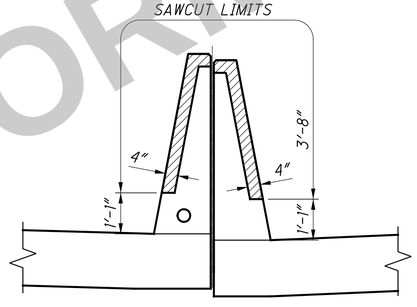


REAR APPROACH SLAB PLAN

FORWARD APPROACH SLAB PLAN

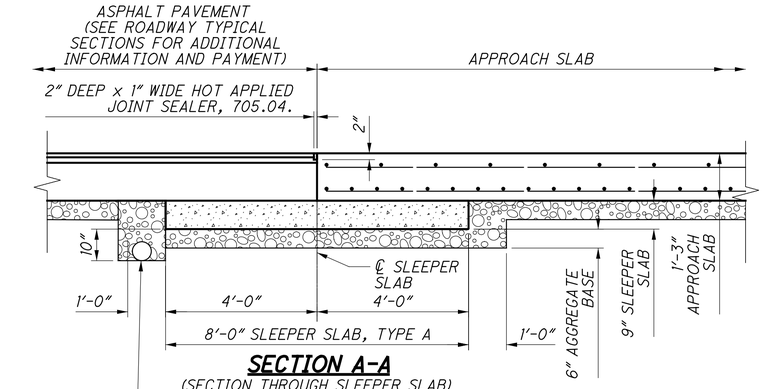


DETAIL A



MEDIAN BARRIER SAWCUT/DEFLECTION JOINT LIMITS

(SECTION THROUGH SAWCUT)



SECTION A-A

(SECTION THROUGH SLEEPER SLAB)

NOTES

1. ALL ELEVATIONS SHOWN REPRESENT TOP OF APPROACH SLAB ELEVATIONS.
2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
3. 6" DIAMETER PERFORATED PIPE AT THE FORWARD ABUTMENT RUNNING FROM THE CROWN TO THE MEDIAN SHALL TEE INTO TO A NON-PERFORATED CORRUGATED PLASTIC PIPE RUNNING ALONG THE CENTERLINE OF CONSTRUCTION WHICH WILL OUTLET TO THE POROUS BACKFILL BEHIND THE FORWARD ABUTMENT. THE PORTION OF 6" DIAMETER PERFORATED PIPE FROM THE CROWN TO THE OUTSIDE EDGES OF THE BRIDGE SHALL OUTLET TO THE SLOPE PER STANDARD DRAWING AS-2-15. ALL SLEEPER SLAB DRAINAGE SHALL BE INCLUDED FOR PAYMENT WITH ITEM 526 - TYPE A INSTALLATION.

LEGEND

Δ - INCLUDES MECHANICAL CONNECTOR ON ONE END

□ - PLUS EXTENSION FOR MECHANICAL CONNECTOR

(X) - APPROACH SLAB SURFACE ELEVATION LOCATION NO. "X"

⬡X⬡ - SLEEPER SLAB SURFACE ELEVATION LOCATION NO.

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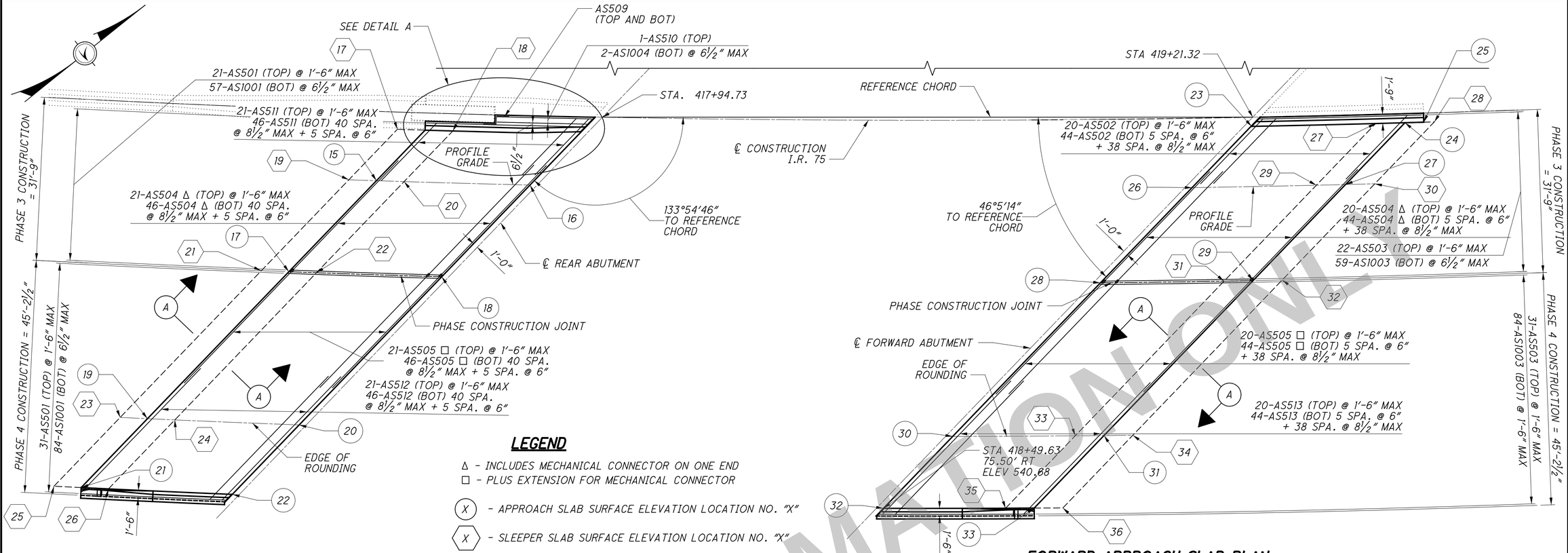
APPROACH SLAB - LEFT BRIDGE
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

47 / 57

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2017

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LEGEND

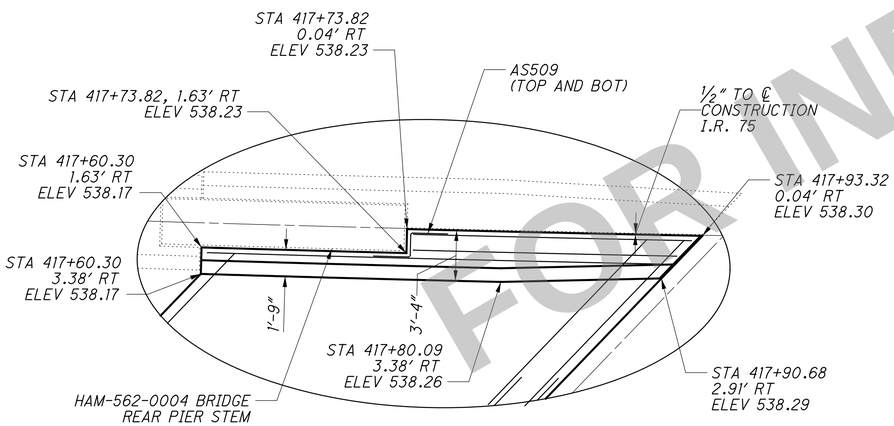
Δ - INCLUDES MECHANICAL CONNECTOR ON ONE END

☐ - PLUS EXTENSION FOR MECHANICAL CONNECTOR

(X) - APPROACH SLAB SURFACE ELEVATION LOCATION NO. "X"

⬡X⬡ - SLEEPER SLAB SURFACE ELEVATION LOCATION NO. "X"

REAR APPROACH SLAB PLAN



DETAIL A

NOTES

1. SEE SHEET 47/57 SECTION A-A.
2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

FORWARD APPROACH SLAB PLAN

APPROACH SLAB SURFACE ELEVATIONS			
MARK	STATION	OFFSET	ELEV
1	418+34.28	75.50' LT	536.34
2	418+65.62	75.50' LT	536.49
3	417+96.82	36.25' LT	537.81
4	418+27.45	36.25' LT	537.96
5	417+75.70	13.50' LT	538.67
6	418+05.93	13.50' LT	538.81
7	420+01.08	75.50' LT	537.14
8	420+32.57	75.50' LT	537.29
9	419+59.66	36.25' LT	538.59
10	419+90.35	36.25' LT	538.73
11	419+36.34	13.50' LT	539.43
12	419+66.59	13.50' LT	539.58
13	419+24.53	1.79' LT	539.11
14	419+54.56	1.79' LT	539.26
15	417+51.17	13.50' LT	538.55
16	417+80.94	13.50' LT	538.69
17	417+34.87	31.79' LT	539.24
18	417+64.35	31.79' LT	539.38
19	417+08.93	61.50' LT	540.36
20	417+37.93	61.50' LT	540.50
21	416+96.92	75.50' LT	539.95
22	417+25.71	75.50' LT	540.09
23	419+20.94	1.79' RT	538.87
24	419+50.91	1.79' RT	539.01
25	419+54.56	1.79' RT	539.03
26	419+09.29	13.50' RT	539.30
27	419+39.05	13.50' RT	539.44
28	418+91.35	31.79' RT	539.99
29	419+20.77	31.79' RT	540.13
30	418+62.82	61.50' RT	541.10
31	418+91.73	61.50' RT	541.24
32	418+49.63	75.50' RT	540.68
33	418+78.31	75.50' LT	540.82

SLEEPER SLAB SURFACE ELEVATIONS			
MARK	STATION	OFFSET	ELEV
1	418+28.63	75.50' LT	534.90
2	418+39.93	75.50' LT	534.95
3	418+91.31	36.25' LT	536.84
4	418+05.34	36.25' LT	536.43
5	417+80.26	13.50' LT	537.27
6	417+81.15	13.50' LT	537.28
7	417+61.02	3.37' LT	536.98
8	417+71.85	3.38' LT	537.03
9	420+26.58	75.50' LT	535.84
10	420+38.56	75.50' LT	535.90
11	419+84.53	36.25' LT	537.29
12	419+96.20	36.25' LT	537.34
13	419+60.83	13.50' LT	538.13
14	419+72.36	13.50' LT	538.19
15	419+24.53	1.79' LT	537.70
16	419+54.56	1.79' LT	537.84
17	417+54.90	3.38' RT	536.72
18	417+65.70	3.37' RT	536.78
19	417+45.81	13.50' RT	537.11
20	417+56.54	13.50' RT	537.16

SLEEPER SLAB SURFACE ELEVATIONS (CONT)			
MARK	STATION	OFFSET	ELEV
21	417+29.56	31.79' RT	537.80
22	417+40.18	31.79' RT	537.85
23	417+03.70	61.50' RT	538.92
24	417+14.16	61.50' RT	538.97
25	416+91.73	75.50' RT	538.51
26	417+02.11	75.50' RT	538.56
27	419+45.20	1.79' RT	537.57
28	419+56.61	1.80' RT	537.62
29	419+33.38	13.50' RT	538.00
30	419+44.72	13.50' RT	538.06
31	419+15.21	31.79' RT	538.68
32	419+26.38	31.79' RT	538.74
33	418+86.23	61.50' RT	539.79
34	418+97.24	61.50' RT	539.84
35	418+73.85	75.50' RT	539.38
36	418+83.76	75.50' RT	539.43

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DESIGNED: RJE | DRAWN: GB | REVIEWED: CAS | DATE: 12-15-21
CHECKED: RMW | REVISED: - | STRUCTURE FILE NUMBER: 3110044

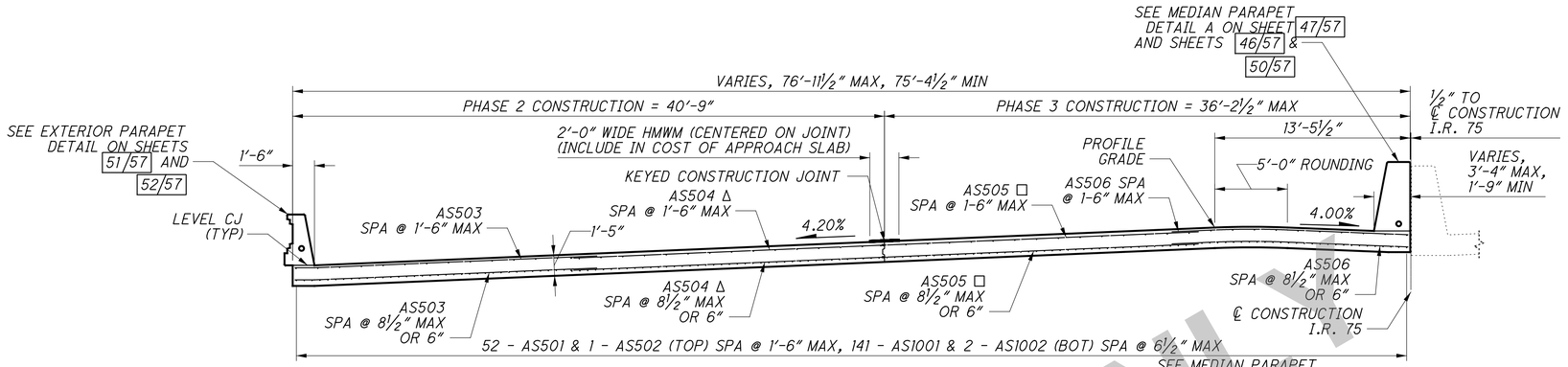
APPROACH SLAB - RIGHT BRIDGE
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

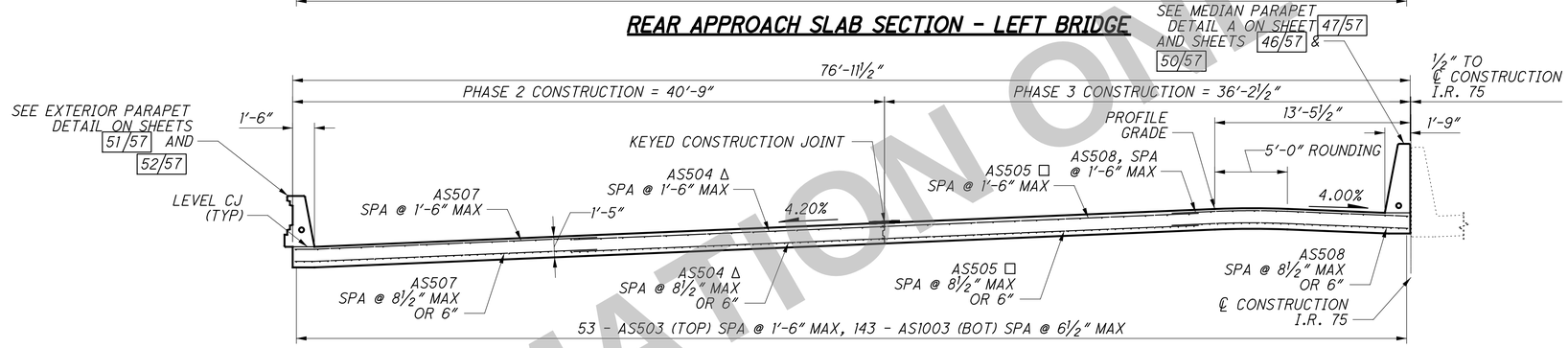
48/57

1380
2017

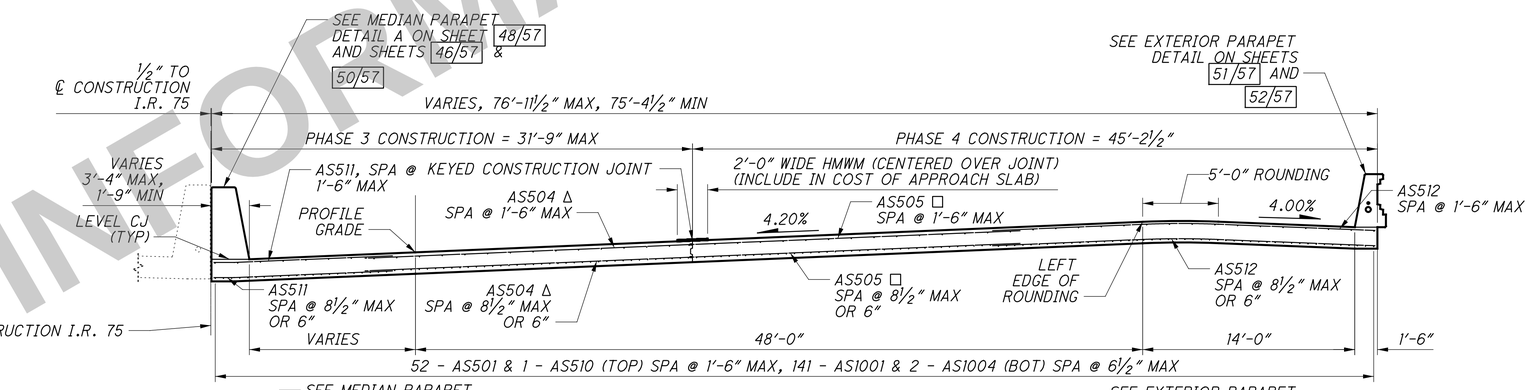
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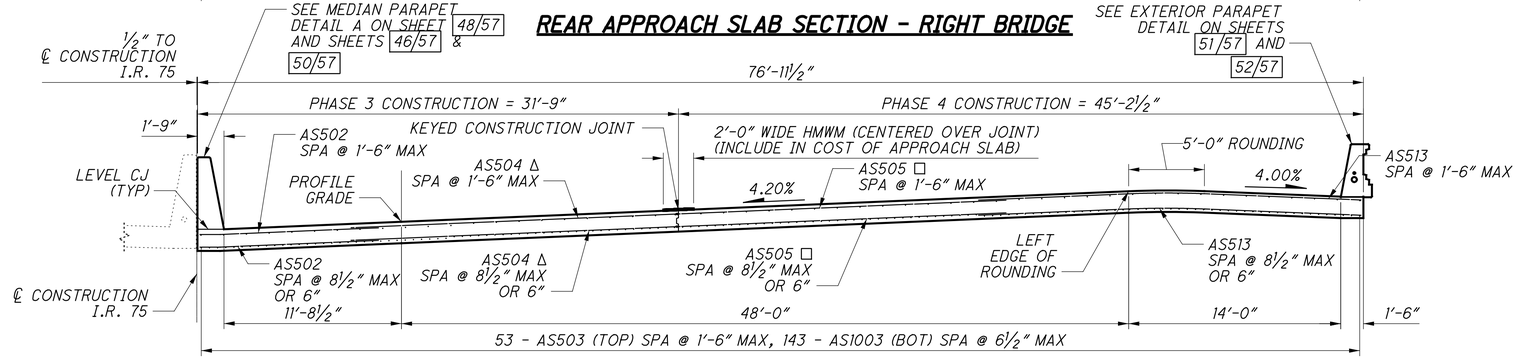
REAR APPROACH SLAB SECTION - LEFT BRIDGE



FORWARD APPROACH SLAB SECTION - LEFT BRIDGE



REAR APPROACH SLAB SECTION - RIGHT BRIDGE



FORWARD APPROACH SLAB SECTION - RIGHT BRIDGE

LEGEND

△ - INCLUDES MECHANICAL CONNECTOR ON ONE END
□ - PLUS EXTENSION FOR MECHANICAL CONNECTOR

NOTES

1. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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RMW	-	3110044	

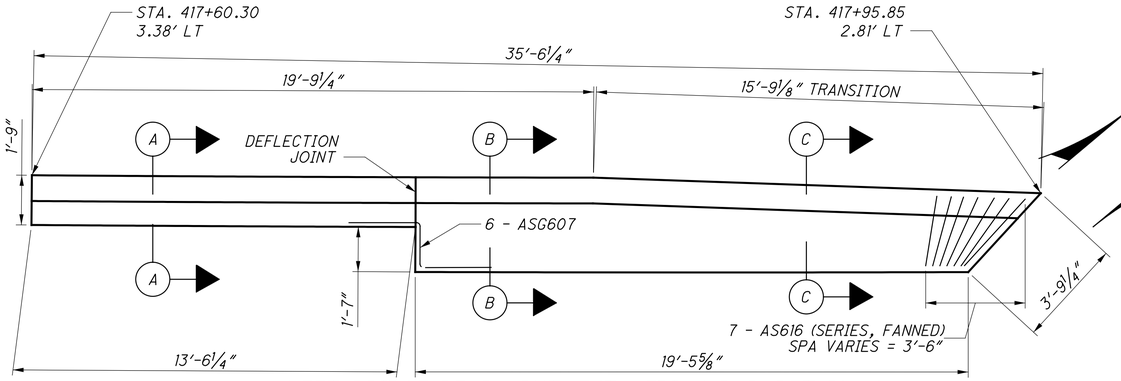
APPROACH SLAB SECTIONS
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

49 / 57

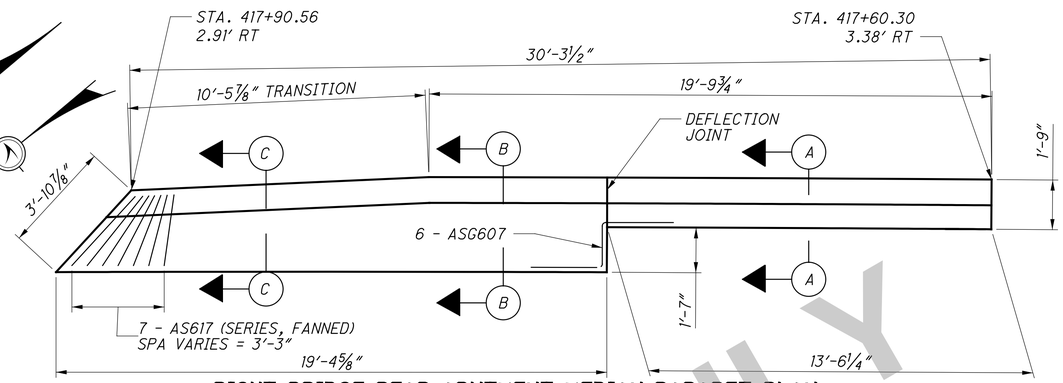
1381
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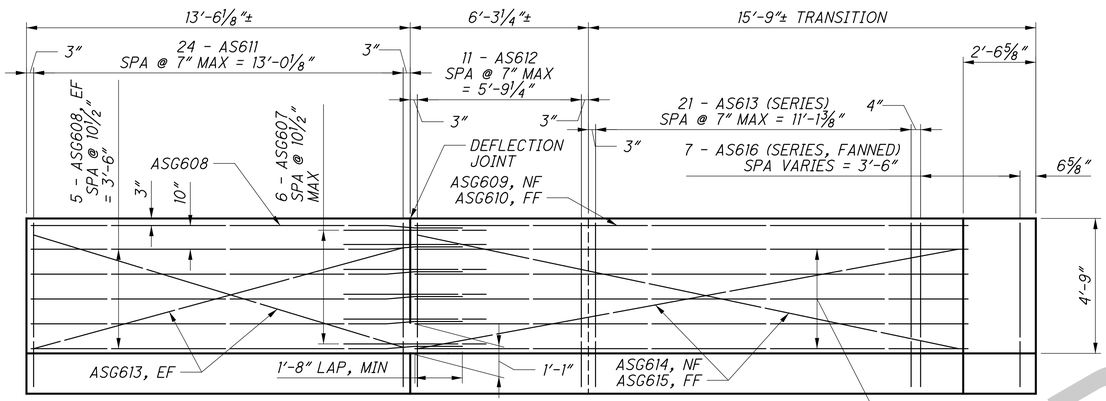
LEFT BRIDGE REAR ABUTMENT MEDIAN PARAPET PLAN

SEE SHEETS 47/57 & 48/57 FOR ADDITIONAL DETAILS



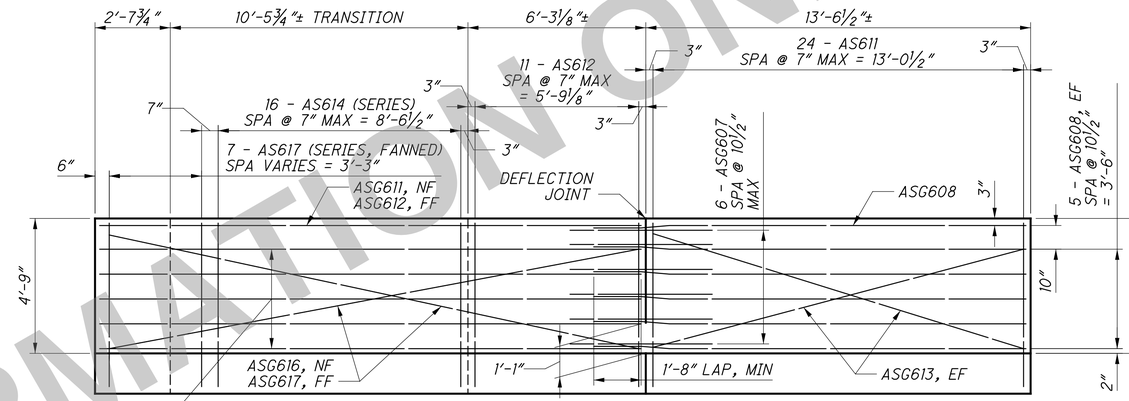
RIGHT BRIDGE REAR ABUTMENT MEDIAN PARAPET PLAN

SEE SHEETS 47/57 & 48/57 FOR ADDITIONAL DETAILS



LEFT BRIDGE REAR ABUTMENT MEDIAN PARAPET ELEVATION

ELEVATION VIEW LOOKING AT EXTERIOR FACE OF PARAPET

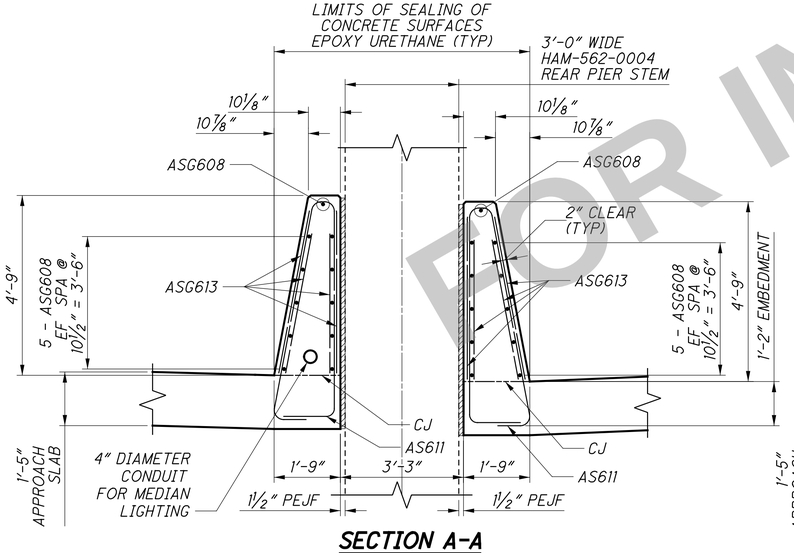


RIGHT BRIDGE REAR ABUTMENT MEDIAN PARAPET ELEVATION

ELEVATION VIEW LOOKING AT EXTERIOR FACE OF PARAPET

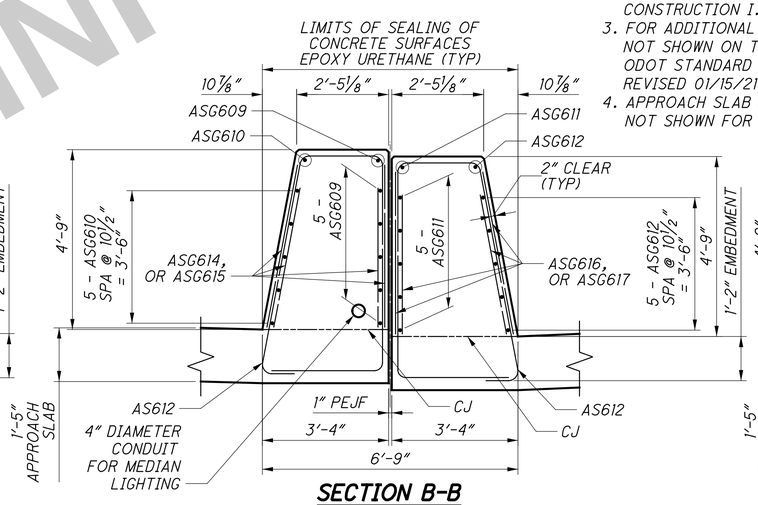
NOTES

1. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
2. DEFLECTION JOINT RADIAL TO ℄ CONSTRUCTION I.R. 75.
3. FOR ADDITIONAL PARAPET DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWINGS SBR-2-20 REVISED 01/15/21.
4. APPROACH SLAB REINFORCING NOT SHOWN FOR CLARITY.



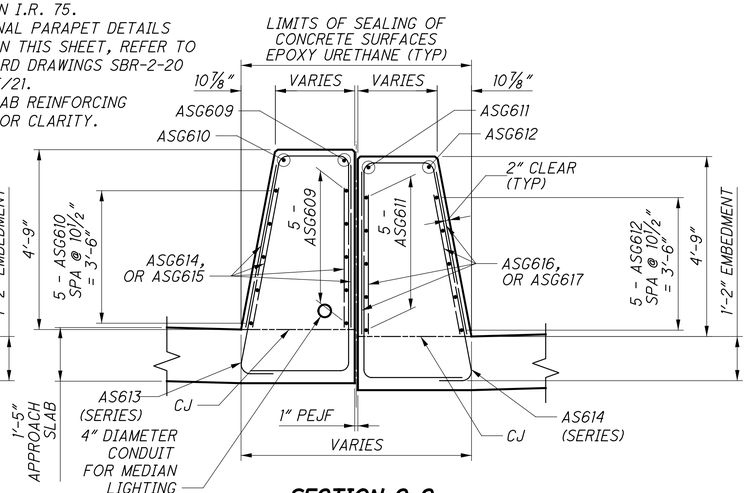
SECTION A-A

FROM STA 417+60.30 TO STA 417+73.82 LEFT BRIDGE
FROM STA 417+60.30 TO STA 417+73.82 RIGHT BRIDGE



SECTION B-B

FROM STA 417+73.82 TO STA 417+80.09 LEFT BRIDGE
FROM STA 417+73.82 TO STA 417+80.09 RIGHT BRIDGE



SECTION C-C

FROM STA 417+80.09 TO STA 417+95.96 LEFT BRIDGE
FROM STA 417+80.09 TO STA 417+93.32 RIGHT BRIDGE

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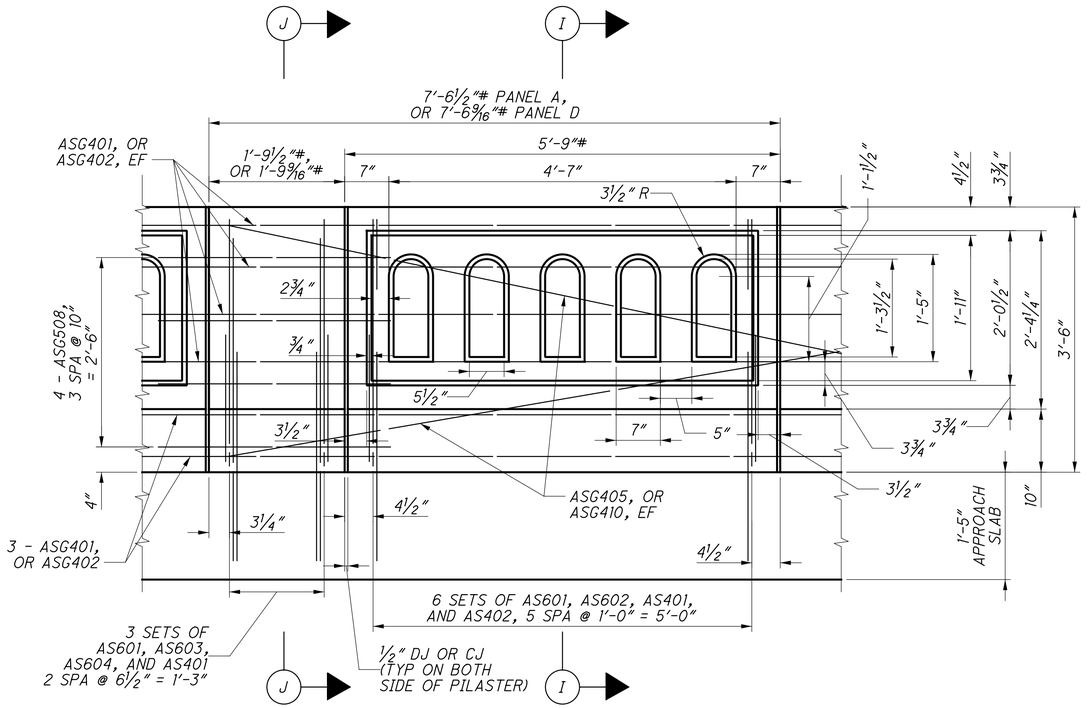
REAR APPROACH SLAB MEDIAN PARAPET DETAILS
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

50 / 57

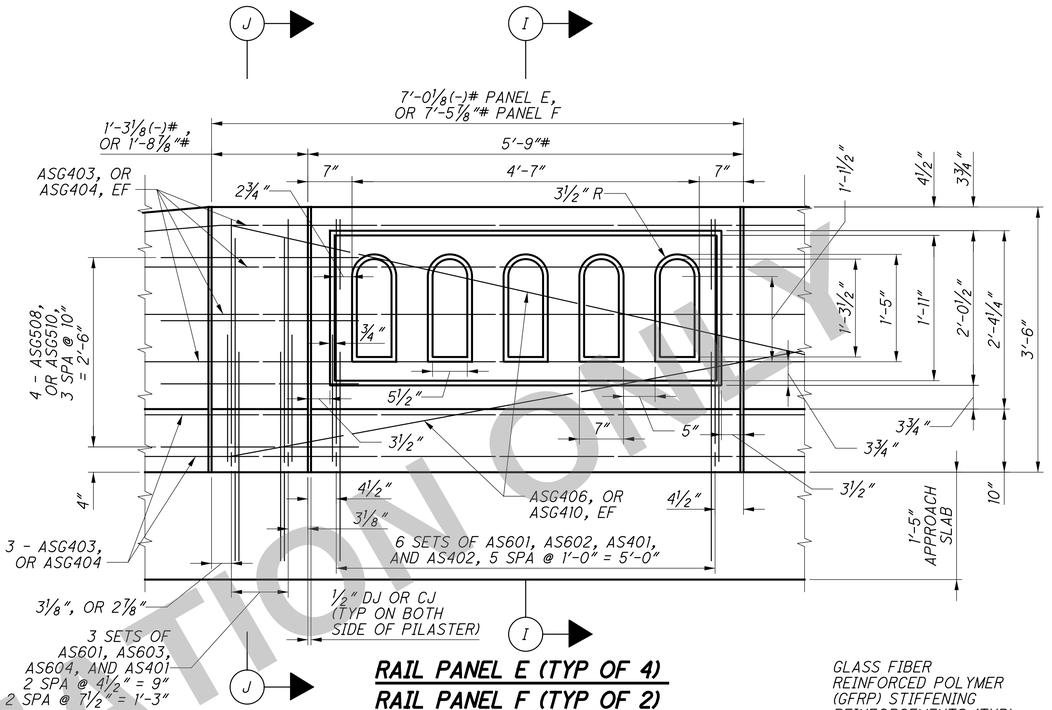
1382
2017

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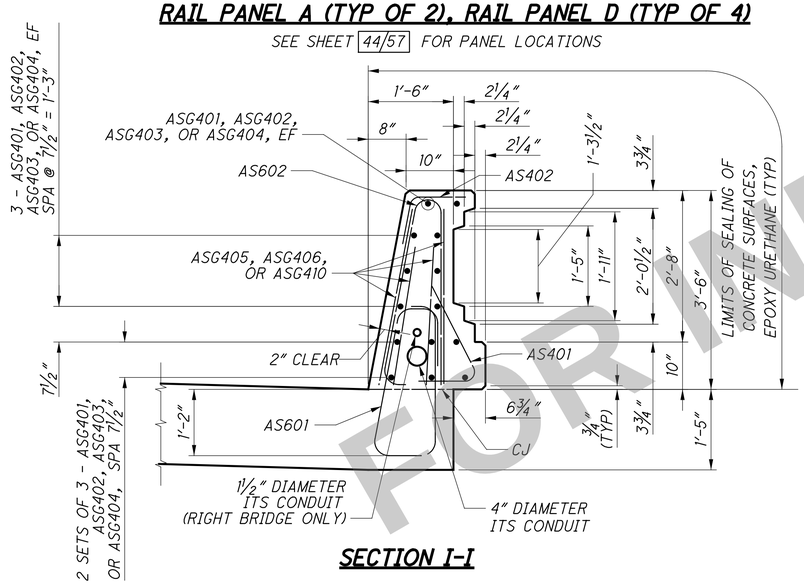
RAIL PANEL A (TYP OF 2), RAIL PANEL D (TYP OF 4)

SEE SHEET 44/57 FOR PANEL LOCATIONS

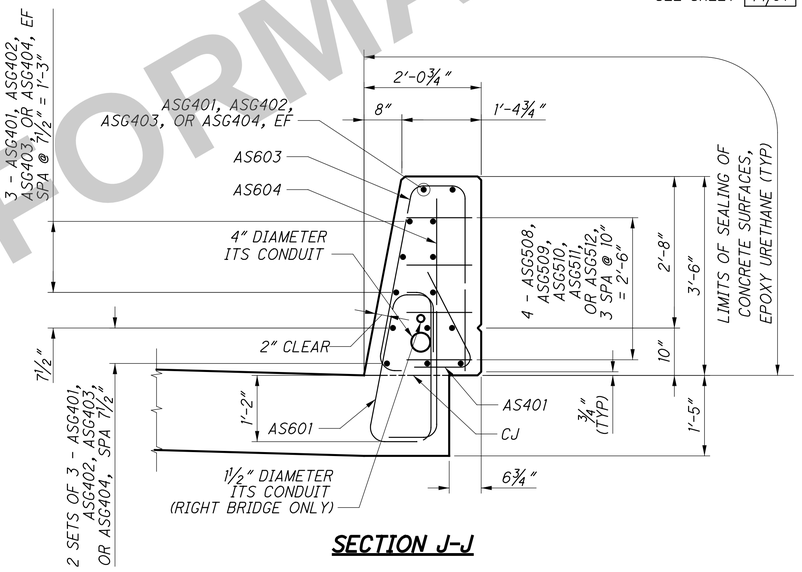


RAIL PANEL E (TYP OF 4)
RAIL PANEL F (TYP OF 2)

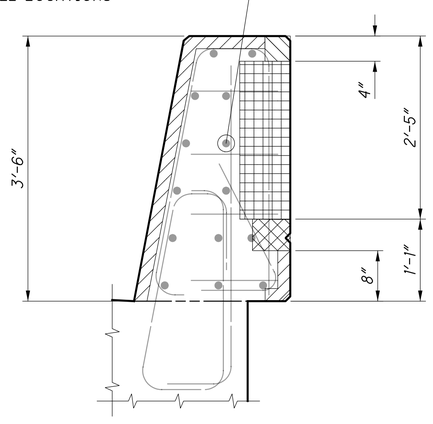
SEE SHEET 44/57 FOR PANEL LOCATIONS



SECTION I-I



SECTION J-J



CONTRACTION JOINT

(SEE NOTE 4)

NOTES

1. ELEVATION VIEW LOOKING AT EXTERIOR FACE OF PARAPET.
2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
3. FOR ADDITIONAL PARAPET DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWINGS SBR-1-20, REVISIONS 07/17/20.
4. DEFLECTION JOINTS AND CONTRACTION JOINTS ARE TO BE CAST INTO THE PARAPETS AND HELD IN WITH CHAMFER STRIPS. THE EXCESS MATERIAL WILL BE TRIMMED TO THE BASE OF THE CHAMFER. THE MATERIAL THAT WILL BE USED NEEDS TO NOT ABSORB WATER AND AS SUFFICIENT RIGIDITY TO NOT SIGNIFICANTLY MOVE DURING THE CASTING OF THE PARAPET. THE JOINT MATERIAL IS TO BE 0.5" IN THICKNESS AND WILL BE NOMAFLEX BY NOMACO OR FIBER LITE BY W.R. MEADOWS OR SIMILAR PRODUCT APPROVED BY THE ENGINEER. THE GFRP FIBER SPLICE BARS THAT WERE SHOWN IN THE AS BID PLANS AND ARE INTENDED TO HOLD THE LONGITUDINAL BARS TOGETHER DURING SLIP FORMING ARE TO BE NON-PERFORMED.

LEGEND

- DIMENSION GIVEN ARE ALONG ARC OUTSIDE FACE OF BARRIER.

- 8" WIDE PREFORMED JOINT MATERIAL
- 6" WIDE PREFORMED JOINT MATERIAL
- 4" WIDE PREFORMED JOINT MATERIAL
- 2" WIDE PREFORMED JOINT MATERIAL

DJ - DEFLECTION JOINT, DETAILS SEE SHEET 45/57

CJ - CONTRACTION JOINT, SEE DETAILS THIS SHEET

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DESIGNED	DRAWN	REVIEWED	DATE
RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	3110044	

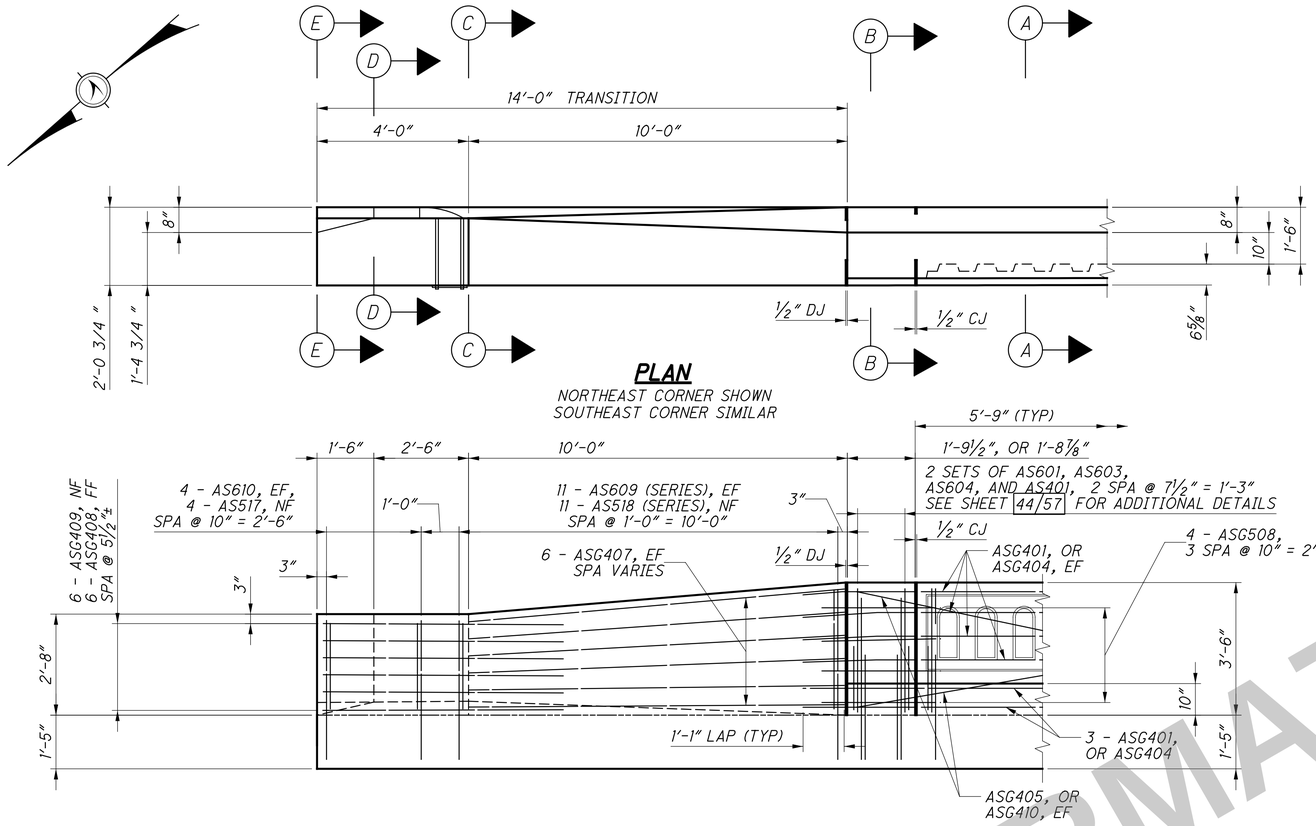
APPROACH SLAB EXTERIOR PARAPET DETAILS
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

51/57

1383
2017

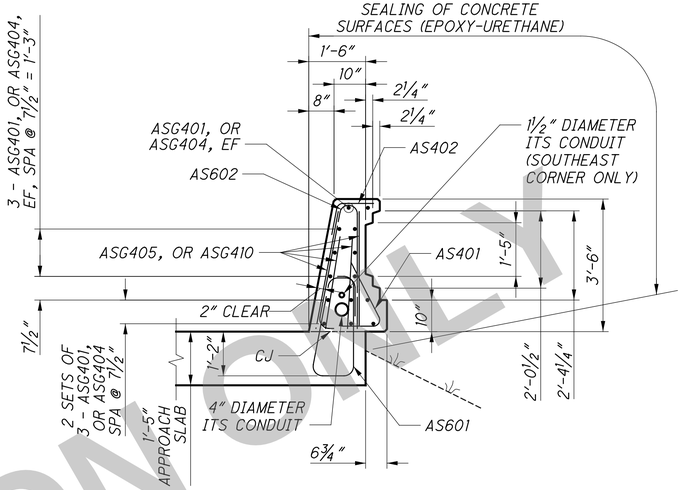
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PLAN

NORTHEAST CORNER SHOWN
SOUTHEAST CORNER SIMILAR

ELEVATION



SECTION A-A

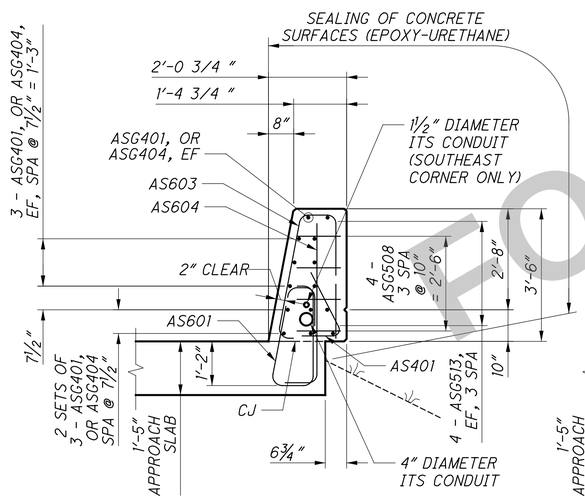
LEGEND

DJ - DEFLECTION JOINT, DETAILS SEE SHEET 45/57

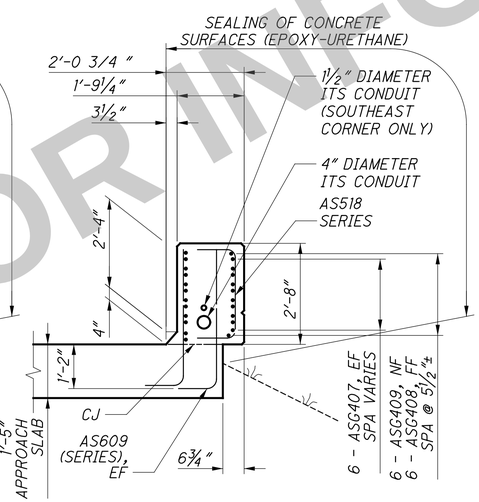
CJ - CONTRACTION JOINT, DETAILS SEE SHEET 51/57

NOTE

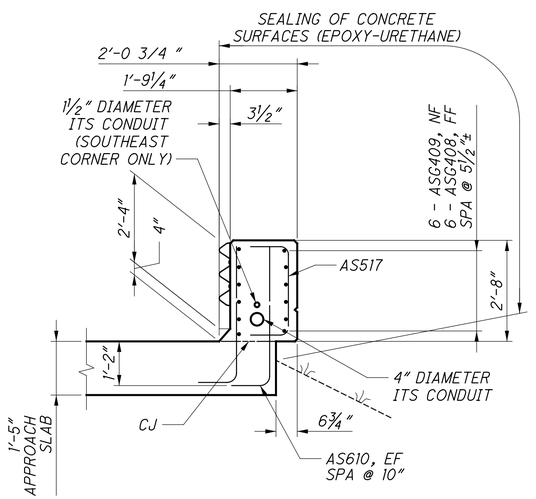
1. FOR ADDITIONAL PARAPET DETAILS NOT SHOWN ON THIS SHEET, REFER TO ODOT STANDARD DRAWINGS SBR-1-20, REVISIONS 07/17/20.
2. DIMENSIONS PROVIDED ARE ALONG THE TOE OF BARRIER.
3. ELEVATION VIEW LOOKING AT EXTERIOR FACE OF PARAPET.
4. SEE SHEET 44/57 FOR PARAPET TRANSITION LOCATIONS.
5. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.



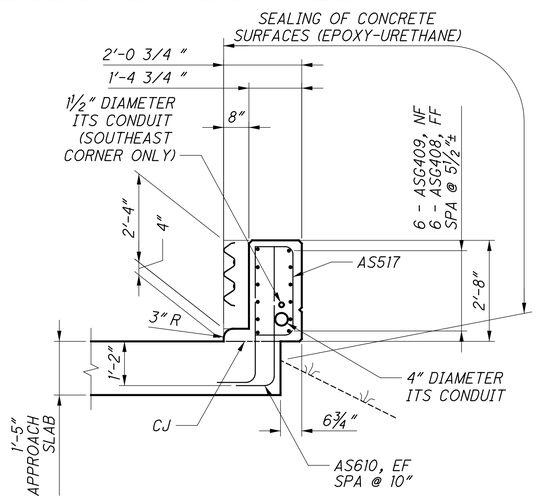
SECTION B-B



SECTION C-C



SECTION D-D



SECTION E-E

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RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
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APPROACH SLAB PARAPET TRANSITION DETAILS
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

52 / 57

1384
2017

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ABUTMENTS REINFORCING STEEL LIST (LEFT BRIDGE)

MARK	NUMBER REAR ABUT	NUMBER FORWARD ABUT	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
A501	14	2	16	30′-0″	501	STR							
A502 Δ	10	10	20	30′-0″	626	STR							
A503 □	10	10	20	29′-0″	605	STR							
A504	10	6	16	23′-0″	384	STR							
A505	4	24	28	25′-0″	730	STR							
A506		16	16	20′-0″	334	STR							
A507	88	110	198	18′-2″	3752	3	6′-2″	2′-7″					
A508	3	1	4	18′-7″	78	3	6′-4 ½″	2′-7″					
A509	3	3	6	20′-1″	126	3	7′-1 ½″	2′-7″					
A510	3	3	6	23′-0″	144	3	8′-7″	2′-7″					
A511	34	40	74	8′-9″	675	2	3′-2″	2′-8″	3′-2″				
A512	62	62	124	9′-9″	1261	2	3′-8″	2′-8″	3′-8″				
A513	68	64	132	10′-5″	1434	2	4′-0″	2′-8″	4′-0″				
A514	1 SR OF 4		1 SR OF 4	4′-3″ TO 16′-0″	42	STR							3′-11″
A515	1 SR OF 4		1 SR OF 4	6′-2″ TO 17′-11″	50	STR							3′-11″
A516	1		1	21′-5″	22	19	1′-11 ½″	18′-2″	6′-11″				
A517	1		1	23′-4″	24	19	3′-11″	18′-2″	6′-11″				
A518	6	18	24	13′-3″	332	2	5′-8″	2′-2″	5′-8″				
A519	6	12	18	10′-3″	192	2	4′-2″	2′-2″	4′-2″				
A520	1 SR OF 6		1 SR OF 6	10′-5″ TO 15′-5″	81	2	4′-3″ TO 6′-9″	2′-2″	4′-3″ TO 6′-9″				0′-6″
A521	1 SR OF 6		1 SR OF 6	7′-3″ TO 12′-3″	61	2	2′-8″ TO 5′-2″	2′-2″	2′-8″ TO 5′-2″				0′-6″
A522	2	2	4	14′-5″	60	2	6′-3″	2′-2″	6′-3″				
A523	4		4	8′-1″	34	2	3′-1″	2′-2″	3′-1″				
A524		2 SR OF 4	2 SR OF 4	7′-2″ TO 36′-5″	182	STR							9′-9″
A525		2	2	14′-4″	30	19	2′-2″	12′-0″	1′-10″				
A526		5	5	6′-0″	31	19	4′-1″	1′-9″	0′-8 ½″				
A527		1 SR OF 12	1 SR OF 12	7′-3″ TO 11′-10″	119	2	2′-8″ TO 4′-11 ½″	2′-2″	2′-8″ TO 4′-11 ½″				0′-2 ½″
A528		1 SR OF 18	1 SR OF 18	9′-1″ TO 16′-2″	236	2	3′-7″ TO 7′-1 ½″	2′-2″	3′-7″ TO 7′-1 ½″				0′-2 ½″
A529		2	2	8′-7″	18	2	3′-4″	2′-2″	3′-4″				
A530	2	2	4	15′-3″	64	2	6′-3″	3′-0″	6′-3″				
A531		2	2	16′-3″	34	2	6′-3″	4′-0″	6′-3″				
A532	NOT USED												
THRU													
A543	NOT USED												
A544		4	4	6′-0″	25	19	3′-0″	2′-9″	1′-2″				
A801	4	8	12	30′-0″	961	STR							
A802 Δ	8	8	16	30′-0″	1282	STR							
A803 □	8	8	16	29′-0″	1239	STR							
A804	16	8	24	20′-9″	1330	STR							
A805	8	16	24	27′-6″	1762	STR							
A806	NOT USED												
A807	NOT USED												
				TOTAL	18,861								

ABUTMENTS REINFORCING STEEL LIST (RIGHT BRIDGE)

MARK	NUMBER REAR ABUT	NUMBER FORWARD ABUT	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
A501		20	20	30′-0″	626	STR							
A502 Δ	12	12	24	30′-0″	751	STR							
A503 □	12	12	24	29′-0″	726	STR							
A504		22	22	23′-0″	528	STR							
A505		10	10	25′-0″	261	STR							
A506	18	12	30	20′-0″	626	STR							
A507	94	113	207	18′-2″	3922	3	6′-2″	2′-7″					
A508	3	3	6	18′-7″	116	3	6′-4 ½″	2′-7″					
A509	3	3	6	20′-1″	126	3	7′-1 ½″	2′-7″					
A510	3	3	6	23′-0″	144	3	8′-7″	2′-7″					
A511	NOT USED												
A512	NOT USED												
A513	18	18	36	10′-5″	391	2	4′-0″	2′-8″	4′-0″				
A514	1 SR OF 4		1 SR OF 4	4′-3″ TO 16′-0″	42	STR							3′-11″
A515	1 SR OF 4		1 SR OF 4	6′-2″ TO 17′-11″	50	STR							3′-11″
A516	NOT USED												
A517	NOT USED												
A518	13	37	50	13′-3″	691	2	5′-8″	2′-2″	5′-8″				
A519	NOT USED												
A520	NOT USED												
A521	1 SR OF 6		1 SR OF 6	7′-3″ TO 12′-3″	61	2	2′-8″ TO 5′-2″	2′-2″	2′-8″ TO 5′-2″				0′-6″
A522	NOT USED												
THRU													
A528	NOT USED												
A529	4		4	8′-7″	36	2	3′-4″	2′-2″	3′-4″				
A530	NOT USED												
A531	NOT USED												
A532	10		10	15′-6″	162	STR							
A533	18	10	28	17′-0″	496	STR							
A534	2 SR OF 4		2 SR OF 4	24′-0″ TO 34′-6″	244	STR							3′-6″
A535	1		1	31′-11″	33	19	3′-9″	26′-4″	10′-0″				
A536	1		1	30′-2″	31	19	2′-0″	26′-4″	10′-0″				
A537	64	64	128	11′-3″	1502	2	4′-5″	2′-8″	4′-5″				
A538	80	88	168	12′-1″	2117	2	4′-10″	2′-8″	4′-10″				
A539	1	37	38	22′-11″	908	2	10′-6″	2′-2″	10′-6″				
A540	2		2	18′-10″	39	2	8′-1″	2′-11″	8′-1″				
A541	6		6	11′-5″	71	2	4′-9″	2′-2″	4′-9″				
A542	1 SR OF 12		1 SR OF 12	11′-7″ TO 22′-7″	214	2	4′-10″ TO 10′-4″	2′-2″	4′-10″ TO 10′-4″				0′-6″
A543		8	8	5′-11″	49	19	3′-0″	1′-2″	2′-9″				
A544	NOT USED												
A801		8	8	30′-0″	641	STR							
A802 Δ	8	8	16	30′-0″	1282	STR							
A803 □	8	8	16	29′-0″	1239	STR							
A804	24		24	20′-9″	1330	STR							
A805	8		8	27′-6″	587	STR							
A806		8	8	21′-6″	459	STR							
A807		16	16	26′-6″	1132	STR							
				TOTAL	21,633								

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DESIGNED	DRAWN	REVIEWED	DATE
RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	3110044	

REINFORCING STEEL LIST
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

1385 2017

SUPERSTRUCTURE REINFORCING STEEL LIST (LEFT BRIDGE)

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
S401	324	30'-0"	6493	STR							
S402	1 SR OF 81	17'-6" TO 20'-10"	1037	STR							0'-0½"
S403	NOT USED										
S404	162	2'-8"	289	11	0'-9"	1'-8"	1'-1"				
S405	108	1'-9"	126	19	0'-11"	0'-2"	0'-11"				
S406	257	5'-3"	901	2	2'-6"	0'-5"	2'-6"				
S501	233	16'-3"	3949	16	15'-8"						
S502	491	8'-7"	4396	16	8'-0"						
S503	233	15'-8"	3807	STR							
S504	189	36'-0"	7097	STR							
S505	189	36'-7"	7212	16	36'-0"						
S506	2 SR OF 54	3'-4" TO 29'-10"	1868	STR							0'-6"
S507	730	30'-0"	22842	STR							
S508	20	10'-0"	209	STR							
S509	1 SR OF 81	19'-3" TO 22'-7"	1767	STR							0'-0½"
S510	NOT USED										
S511	1 SR OF 29	2'-0" TO 16'-0"	272	16	1'-5" TO 15'-5"						0'-6"
S512	1 SR OF 29	1'-5" TO 15'-5"	255	STR							0'-6"
S513	1 SR OF 66	2'-4" TO 36'-2"	1325	16	1'-9" TO 35'-7"						0'-6¼"
S514	1 SR OF 66	1'-9" TO 35'-7"	1286	STR							0'-6¼"
S515	2 SR OF 23	3'-8" TO 15'-2"	451	STR							0'-6¼"
S516	2 SR OF 50	3'-11" TO 29'-6"	1744	STR							0'-6¼"
FROM S517 THRU S520 NOT USED											
S521	2 SR OF 64	3'-11" TO 36'-1"	2669	STR							0'-6⅛"
FROM S522 THRU S536 NOT USED											
S537	8	7'-7"	63	2	2'-8"	2'-6"	2'-8"				
S538	8	17'-4"	145	3	3'-8"	4'-8"					
S539	110	6'-11"	794	2	2'-8"	1'-10"	2'-8"				
S540	106	15'-4"	1695	3	2'-8"	4'-8"					
S541	4	11'-8"	49	3	2'-8"	2'-10"					
TOTAL THIS SHEET			72,741								

SUPERSTRUCTURE REINFORCING STEEL LIST (RIGHT BRIDGE)

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
S401	324	30'-0"	6493	STR							
S402	NOT USED										
S403	1 SR OF 81	15'-0" TO 18'-4"	902	STR							0'-0½"
S404	162	2'-8"	289	11	0'-9"	1'-8"	1'-1"				
S405	108	1'-9"	126	19	0'-11"	0'-2"	0'-11"				
S406	252	5'-3"	884	2	2'-6"	0'-5"	2'-6"				
S501	NOT USED										
S502	480	8'-7"	4297	16	8'-0"						
FROM S503 THRU S506 NOT USED											
S507	718	30'-0"	22466	STR							
S508	20	10'-0"	209	STR							
S509	NOT USED										
S510	1 SR OF 81	16'-8" TO 20'-0"	1549	STR							0'-0½"
FROM S511 THRU S516 NOT USED											
S517	220	18'-2"	4169	16	17'-7"						
S518	220	17'-7"	4035	STR							
S519	192	34'-8"	6942	16	34'-1"						
S520	192	34'-1"	6825	STR							
S521	NOT USED										
S522	1 SR OF 64	1'-11" TO 34'-1"	1202	16	1'-4" TO 33'-5¾"						0'-6⅛"
S523	1 SR OF 64	1'-4" TO 33'-6"	1162	STR							0'-6⅛"
S524	2 SR OF 52	3'-6" TO 29'-10"	1806	STR							0'-6³⁄₁₆"
S525	2 SR OF 27	3'-5" TO 16'-11"	574	STR							0'-6¼"
S526	2 SR OF 57	3'-11" TO 33'-8"	2234	STR							0'-6⅜"
S527	2 SR OF 49	4'-6" TO 30'-0"	1763	STR							0'-6⅜"
S528	1 SR OF 31	1'-11" TO 18'-2"	323	16	1'-4" TO 17'-7"						0'-6½"
S529	1 SR OF 31	1'-4" TO 17'-7"	306	STR							0'-6½"
FROM S530 THRU S536 NOT USED											
S537	8	7'-7"	63	2	2'-8"	2'-6"	2'-8"				
S538	8	17'-4"	145	3	3'-8"	4'-8"					
S539	110	6'-11"	794	2	2'-8"	1'-10"	2'-8"				
S540	106	15'-4"	1695	3	2'-8"	4'-8"					
S541	4	11'-8"	49	3	2'-8"	2'-10"					
TOTAL THIS SHEET			71,302								

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NOTES

1. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	3110044	

REINFORCING STEEL LIST
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

54 / 57

1386
2017

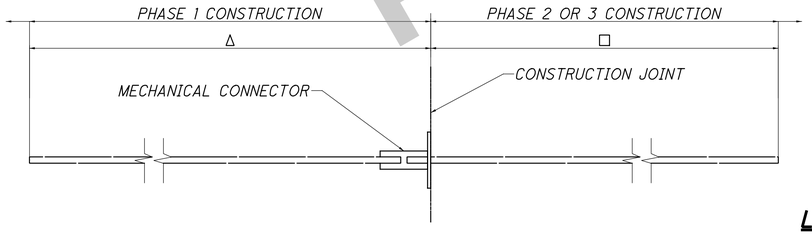
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SUPERSTRUCTURE REINFORCING STEEL LIST (LEFT BRIDGE)

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
S601	162	7′-5″	1805	41	0′-9½″	0′-7″	1′-0″	2′-4″	1′-2½″		
S602	108	7′-0″	1136	39	0′-6″	3′-3″	3′-3″	1′-0½″		0′-2″	
S603	NOT USED										
S604	NOT USED										
S605	54	7′-6″	608	40	0′-6″	3′-3″	3′-3″	1′-6½″			
S606	NOT USED										
S607	54	4′-8″	379	1	1′-0″	3′-10″					
S608	182	12′-10″	3508	35	0′-8″	4′-7″	0′-10″			0′-2¾″	
S609	4	13′-1″	79	42	0′-8″	1′-6½″	0′-10″	4′-7″	0′-6½″		
S610	1 SR OF 39	12′-10″ TO 14′-9″	808	42	0′-8″	1′-5″ TO 2′-4½″	0′-10″	4′-7″	0′-5″ TO 1′-4½″		B & E = 0′-0¼″
S611	NOT USED										
S612	1 SR OF 7	14′-11 TO 16′-2″	163	42	0′-8″	2′-5½″ TO 3-1″	0′-10″	4′-7″	1′-5½″ TO 2-1″		B & E = 0′-1¼″
S613	NOT USED										
S801	22	30′-0″	1762	STR							
S802 Δ	16	13′-0″	555	STR							
S803 □	28	31′-6″	2355	STR							
S804 Δ	6	8′-0″	128	STR							
S805	26	26′-9″	1857	STR							
S806 Δ	NOT USED										
THRU											
S810 □	NOT USED										
S811	28	25′-3″	1888	STR							
S812	8	12′-10″	274	6	3′-10″	1′-11″	3′-0″				
S813	8	32′-0″	684	STR							
S814 Δ	6	6′-2″	99	STR							
S815	NOT USED										
S816	122	6′-3″	2036	18	4′-1″	1′-0″	1′-0″				
		TOTAL	20,124								
SUB-TOTAL SUPERSTRUCTURE			92,865								

SUPERSTRUCTURE REINFORCING STEEL LIST (RIGHT BRIDGE)

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
S601	162	7′-5″	1805	41	0′-9½″	0′-7″	1′-0″	2′-4″	1′-2½″		
S602	108	7′-0″	1136	39	0′-6″	3′-3″	3′-3″	1′-0½″		0′-2″	
S603	NOT USED										
S604											
S605	54	7′-6″	608	40	0′-6″	3′-3″	3′-3″	1′-6½″			
S606	NOT USED										
S607	54	4′-8″	379	1	1′-0″	3′-10″					
S608	181	12′-10″	3489	35	0′-8″	4′-7″	0′-10″			0′-2¾″	
S609	4	13′-1″	79	42	0′-8″	1′-6½″	0′-10″	4′-7″	0′-6½″		
S610	NOT USED										
S611	1 SR OF 44	12′-10″ TO 14′-8″	909	42	0′-8″	1′-5″ TO 2′-4	0′-10″	4′-7″	0′-5″ TO 1′-4″		B & E = 0′-0¼″
S612	NOT USED										
S613	1 SR OF 7	14′-11″ TO 16′-6″	165	42	0′-8″	2′-5½″ TO 3′-3″	0′-10″	4′-7″	1′-5½″ TO 2′-3″		B & E = 0′-1⁹⁄₁₆″
S801	NOT USED										
S802 Δ	NOT USED										
S803 □	14	31′-6″	1177	STR							
S804 Δ	6	8′-0″	128	STR							
S805	NOT USED										
S806 Δ	16	24′-8″	1054	STR							
S807	14	23′-6″	878	STR							
S808	14	27′-0″	1009	STR							
S809	20	14′-0″	748	STR							
S810 □	14	19′-3″	720	STR							
S811	14	25′-3″	944	STR							
S812	8	12′-10″	274	6	3′-10″	1′-11″	3′-0″				
S813	28	32′-0″	2392	STR							
S814 Δ	6	6′-2″	99	STR							
S815	6	15′-0″	240	STR							
S816	122	6′-3″	2036	18	4′-1″	1′-0″	1′-0″				
		TOTAL	20,269								
SUB-TOTAL SUPERSTRUCTURE			91,571								



PLAN MECHANICAL CONNECTOR

LEGEND

Δ - INCLUDES MECHANICAL CONNECTOR ON ONE END.

□ - PLUS EXTENSION FOR MECHANICAL CONNECTOR.

NOTES

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE S601 IS A NO. 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT, UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD" WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

2. ALL REINFORCING STEEL TO BE EPOXY COATED.

3. UNLESS OTHERWISE NOTED, THE FOLLOWING LAP LENGTHS SHALL APPLY:
   #4 BARS: 1′-11″, #5 BARS: 2′-5″, #6 BARS: 2′-11″

4. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

FOR INFORMATION ONLY

DESIGN AGENCY
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DESIGNED	DRAWN	REVIEWED	DATE
RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	3110044	

REINFORCING STEEL LIST
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

1387
2017

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APPROACH SLAB REINFORCING STEEL LIST (LEFT BRIDGE)*

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
AS401	57	2′-8″	102	11	0′-9″	1′-8″	1′-1″				
AS402	36	1′-9″	42	19	0′-11″	0′-2″	0′-11″				
AS501	52	30′-2″	1636	STR							
AS502	1	16′-0″	17	STR							
AS503	120	28′-9″	3598	STR							
AS504 Δ	131	30′-0″	4099	STR							
AS505 □	131	30′-0″	4099	STR							
AS506	67	22′-0″	1537	STR							
AS507	64	31′-9″	2119	STR							
AS508	64	24′-0″	1602	STR							
AS509	2	6′-4″	13	8	2′-6″	1′-7″	2′-6″				
FROM AS510 THRU AS513 NOT USED											
AS514	NOT USED										
AS515	NOT USED										
AS516	NOT USED										
AS517	4	4′-1″	17	2	1′-0″	2′-4″	1′-0″				
AS518	1 SR OF 11	4′-1″ TO 4′-11″	52	2	1′-0″	2′-4″ TO 3′-2″	1′-0″				0′-1″
AS601	57	8′-3″	706	41	0′-9½″	0′-7″	1′-0″	2′-9″	1′-3½″		
AS602	36	7′-0″	379	39	0′-6″	3′-3″	3′-3″	1′-0½″		0′-2″	
AS603	21	7′-6″	237	40	0′-6″	3′-3″	3′-3″	1′-6½″			
AS604	21	5′-1″	160	1	1′-0″	4′-3″					
AS605	NOT USED										
AS606	NOT USED										
AS607	NOT USED										
AS608	NOT USED										
AS609	2 SR OF 11	4′-6″ TO 5′-4″	162	1	1′-0″	3′-8″ TO 4′-6″					0′-1″
AS610	8	4′-6″	54	1	1′-0″	3′-8″					
AS611	75	13′-10″	1558	35	1′-2″	4′-7″	0′-10″			0′-2¾″	
AS612	11	17′-0″	281	42	1′-2″	3′-0½″	0′-10″	4′-7″	2′-0½″		
AS613	1 SR OF 21	16′-1″ TO 16′-11″	520	42	1′-2″	2′-7″ TO 3′-0″	0′-10″	4′-7″	1′-7″ TO 2′-0″		B & E = 0′-0¼″
AS614	NOT USED										
AS615	1 SR OF 4	13′-10″ TO 14′-7″	85	42	1′-2″	1′-4″ TO 1′-10″	0′-10″	4′-7″	0′-6″ TO 0′-9″		B= 0′-2″ E= 0′-1″
AS616	1 SR OF 7	16′-1″ TO 17′-4″	175	42	1′-2″	2′-7½″ TO 3′-3″	0′-10″	4′-7″	1′-6½″ TO 2′-2″		B & E = 0′-1¼″
AS617	NOT USED										
AS1001	141	31′-7″	19162	16	30′-2″						
AS1002	2	20′-5″	176	16	19′-0″						
AS1003	143	30′-2″	18562	16	28′-9″						
AS1004	NOT USED										
AS1005	3	14′-0″	181	STR							
		TOTAL	61,331*								

* - INCLUDED FOR PAYMENT WITH ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=17″), AS PER PLAN

APPROACH SLAB REINFORCING STEEL LIST (RIGHT BRIDGE)*

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
AS401	57	2′-8″	102	11	0′-9″	1′-8″	1′-1″				
AS402	36	1′-9″	42	19	0′-11″	0′-2″	0′-11″				
AS501	52	30′-2″	1636	STR							
AS502	64	16′-0″	1068	STR							
AS503	53	28′-9″	1589	STR							
AS504 Δ	131	30′-0″	4099	STR							
AS505 □	131	30′-0″	4099	STR							
FROM AS506 THRU AS508 NOT USED											
AS509	2	6′-4″	13	8	2′-6″	1′-7″	2′-6″				
AS510	1	17′-10″	19	STR							
AS511	67	15′-6″	1083	STR							
AS512	67	33′-3″	2324	STR							
AS513	64	36′-0″	2403	STR							
AS514	NOT USED										
AS515	NOT USED										
AS516	NOT USED										
AS517	4	4′-1″	17	2	1′-0″	2′-4″	1′-0″				
AS518	1 SR OF 11	4′-1″ TO 4′-11″	52	2	1′-0″	2′-4″ TO 3′-2″	1′-0″				0′-1″
AS601	57	8′-3″	706	41	0′-9½″	0′-7″	1′-0″	2′-9″	1′-3½″		
AS602	36	7′-0″	379	39	0′-6″	3′-3″	3′-3″	1′-0½″		0′-2″	
AS603	21	7′-6″	237	40	0′-6″	3′-3″	3′-3″	1′-6½″			
AS604	21	5′-1″	160	1	1′-0″	4′-3″					
AS605	NOT USED										
AS606	NOT USED										
AS607	NOT USED										
AS608	NOT USED										
AS609	2 SR OF 11	4′-6″ TO 5′-4″	162	1	1′-0″	3′-8″ TO 4′-6″					0′-1″
AS610	8	4′-6″	54	1	1′-0″	3′-8″					
AS611	76	13′-10″	1579	35	1′-2″	4′-7″	0′-10″			0′-2¾″	
AS612	11	17′-0″	281	42	1′-2″	3′-0½″	0′-10″	4′-7″	2′-0½″		
AS613	NOT USED										
AS614	1 SR OF 16	16′-3½″ TO 16′-11″	399	42	1′-2″	2′-8¼″ TO 3′-0″	0′-10″	4′-7″	1′-8¼″ TO 2′-0″		B & E = 0′-0¼″
AS615	1 SR OF 4	13′-10″ TO 14′-7″	85	42	1′-2″	1′-4″ TO 1′-10″	0′-10″	4′-7″	0′-6″ TO 0′-9″		B= 0′-2″ E= 0′-1″
AS616	NOT USED										
AS617	1 SR OF 7	16′-3″ TO 17′-6″	178	42	1′-2″	2′-8½″ TO 3′-4″	0′-10″	4′-7″	1′-7½″ TO 2′-3″		B & E = 0′-1¼″
AS1001	141	31′-7″	19162	16	30′-2″						
AS1002	NOT USED										
AS1003	143	30′-2″	18562	16	28′-9″						
AS1004	2	19′-3″	166	16	17′-10″						
AS1005	NOT USED										
		TOTAL	60,656*								

* - INCLUDED FOR PAYMENT WITH ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=17″), AS PER PLAN

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NOTES

1. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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DESIGN AGENCY EMH&T Engineers • Surveyors • Planners • Scientists 5500 New Albany Road Columbus, Ohio 43054 Phone: 614.775.4500 www.emht.com

DESIGNED RJE | DRAWN GB | CHECKED RMW | REVIEWED CAS | DATE 12-15-21 | REVISED - | STRUCTURE FILE NUMBER 3110044

REINFORCING STEEL LIST
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

1388 2017

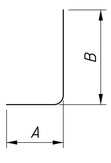
MARK	NUMBER TOTAL (LEFT BRIDGE)	NUMBER TOTAL (RIGHT BRIDGE)	LENGTH PER BAR (FEET)	TOTAL LENGTH (FEET) (LEFT BRIDGE)	TOTAL LENGTH (FEET) (RIGHT BRIDGE)	TYPE	DIMENSIONS A	B	C	D	E	R	INC
SUPERSTRUCTURE AND APPROACH SLAB GFRP #4 ◓													
SG401	56	56	30′-0″	1680	1680	STR							
SG402	14		16′-6″	231		STR							
SG403	36		14′-8″	528		STR							
SG404		14	11′-0″		154	STR							
SG405		36	14′-0″		504	STR							
SUB-TOTAL SUPERSTRUCTURE				2,439	2,338								
ASG401	14		16′-2″	226		STR							
ASG402	14		31′-8″	443		STR							
ASG403		14	27′-8″		387	STR							
ASG404		14	17′-10″		250	STR							
ASG405	8		15′-1″	121		STR							
ASG406		8	14′-0″		112	STR							
ASG407	12	12	10′-0″	120	120	STR							
ASG408	6	6	6′-4″	38	38	25	2′-6″	2′-5″	1′-4¼″	0′-1½″	0′-5″		
ASG409	6	6	5′-1″	31	31	STR							
ASG410	4	4	16′-9″	67	67	STR							
SUB-TOTAL APPROACH SLAB				1,046	1,005								

MARK	NUMBER TOTAL (LEFT BRIDGE)	NUMBER TOTAL (RIGHT BRIDGE)	LENGTH PER BAR (FEET)	TOTAL LENGTH (FEET) (LEFT BRIDGE)	TOTAL LENGTH (FEET) (RIGHT BRIDGE)	TYPE	DIMENSIONS A	B	C	D	E	R	INC
SUPERSTRUCTURE AND APPROACH SLAB GFRP #5 ◓													
SG501	68		4′-9″	323		6	1′-3″	1′-2″	0′-10″				
SG502		68	4′-6″		306	6	11½″	1′-2″	0′-10″				
SG503	4		4′-1″	16		36	1′-3″	1′-2″	0′-10″				
SG504		4	3′-10″		15	36	11½″	1′-2″	0′-10″				
SUB-TOTAL SUPERSTRUCTURE				339	321								
FROM ASG501 THRU ASG507 NOT USED													
ASG508	20	8	4′-11″	98	39	6	1′-5″	1′-2″	0′-10″				
ASG509	4	4	4′-3″	17	17	36	1′-5″	1′-2″	0′-10″				
ASG510		12	4′-5″		53	6	0′-11″	1′-2″	0′-10″				
ASG511		4	3′-9″		15	36	0′-11″	1′-2″	0′-10″				
ASG512	4		4′-4″	17		36	1′-6½″	1′-2″	0′-10″				
SUB-TOTAL APPROACH SLAB				132	124								

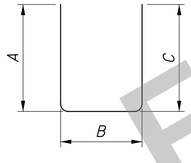
MARK	NUMBER TOTAL (LEFT BRIDGE)	NUMBER TOTAL (RIGHT BRIDGE)	LENGTH PER BAR (FEET)	TOTAL LENGTH (FEET) (LEFT BRIDGE)	TOTAL LENGTH (FEET) (RIGHT BRIDGE)	TYPE	DIMENSIONS A	B	C	D	E	R	INC
SUPERSTRUCTURE AND APPROACH SLAB GFRP #6 ◓													
SG601	56		27′-3″	1526		STR							
SG602		56	27′-6″		1540	STR							
SG603	36	36	10′-4″	372	372	STR							
SG604	2	2	12′-9″	26	26	STR							
SG605	2		14′-2″	28		STR							
SG606		2	11′-3″		23	STR							
SG607	8	8	8′-1″	65	65	STR							
SG608	2	2	11′-10″	24	24	STR							
SG609	2		9′-11″	20		STR							
SG610		2	14′-3″		29	STR							
SUB-TOTAL SUPERSTRUCTURE				2,061	2,079								
ASG601	22		16′-5″	361		STR							
ASG602		22	17′-4″		381	STR							
ASG603	2		15′-5″	31		STR							
ASG604	2		14′-3″	29		STR							
ASG605		2	16′-1″		32	STR							
ASG606		2	17′-3″		35	STR							
ASG607	6	6	6′-3″	38	38	8	2′-6″	1′-7″	2′-6″				
ASG608	11	11	15′-2″	167	167	STR							
ASG609	6		19′-4″	116		STR							
ASG610	6		20′-10″	125		STR							
ASG611		6	18′-8″		112	STR							
ASG612		6	16′-8″		100	STR							
ASG613	4	4	13′-7″	54	54	STR							
ASG614	2		19′-8″	39		STR							
ASG615	2		21′-1″	42		STR							
ASG616		2	19′-0″		38	STR							
ASG617		2	16′-11″		34	STR							
ASG618	4	4	15′-8″	63	63	STR							
SUB-TOTAL APPROACH SLAB				1,065	1,054								

LEGEND

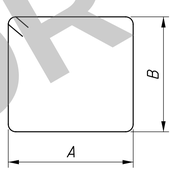
◓ - SG4XX, SG5XX, SG6XX ASG4XX, ASG5XX OR ASG6XX - GLASS FIBER REINFORCED POLYMER (GFRP) BAR.



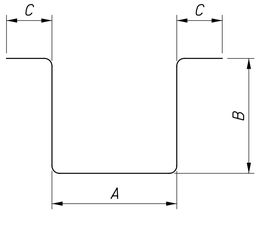
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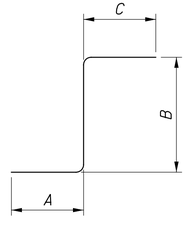
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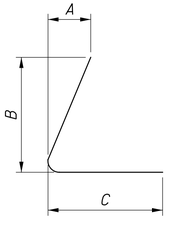
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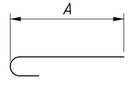
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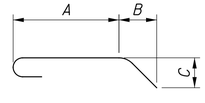
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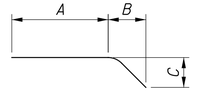
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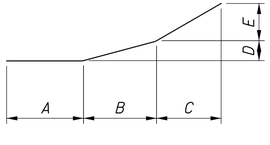
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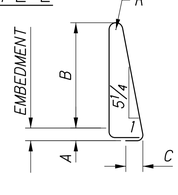
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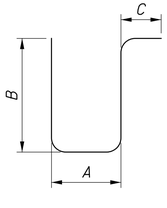
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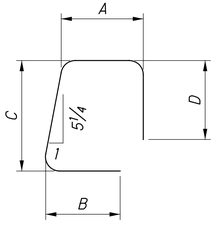
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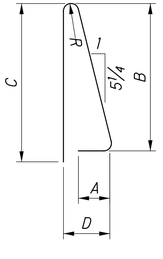
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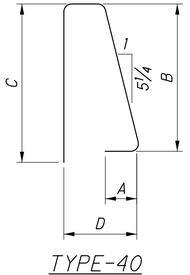
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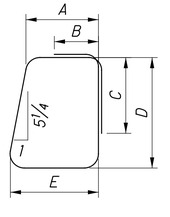
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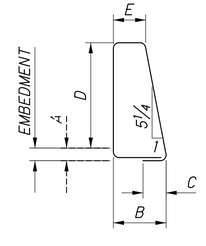
TYPE-39



TYPE-40



TYPE-41



TYPE-42

FOR INFORMATION ONLY

DESIGN AGENCY
EMH&T
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, Ohio 43054
Phone: 614.775.4500

DESIGNED	DRAWN	REVIEWED	DATE
RJE	GB	CAS	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RMW	-	3110044	

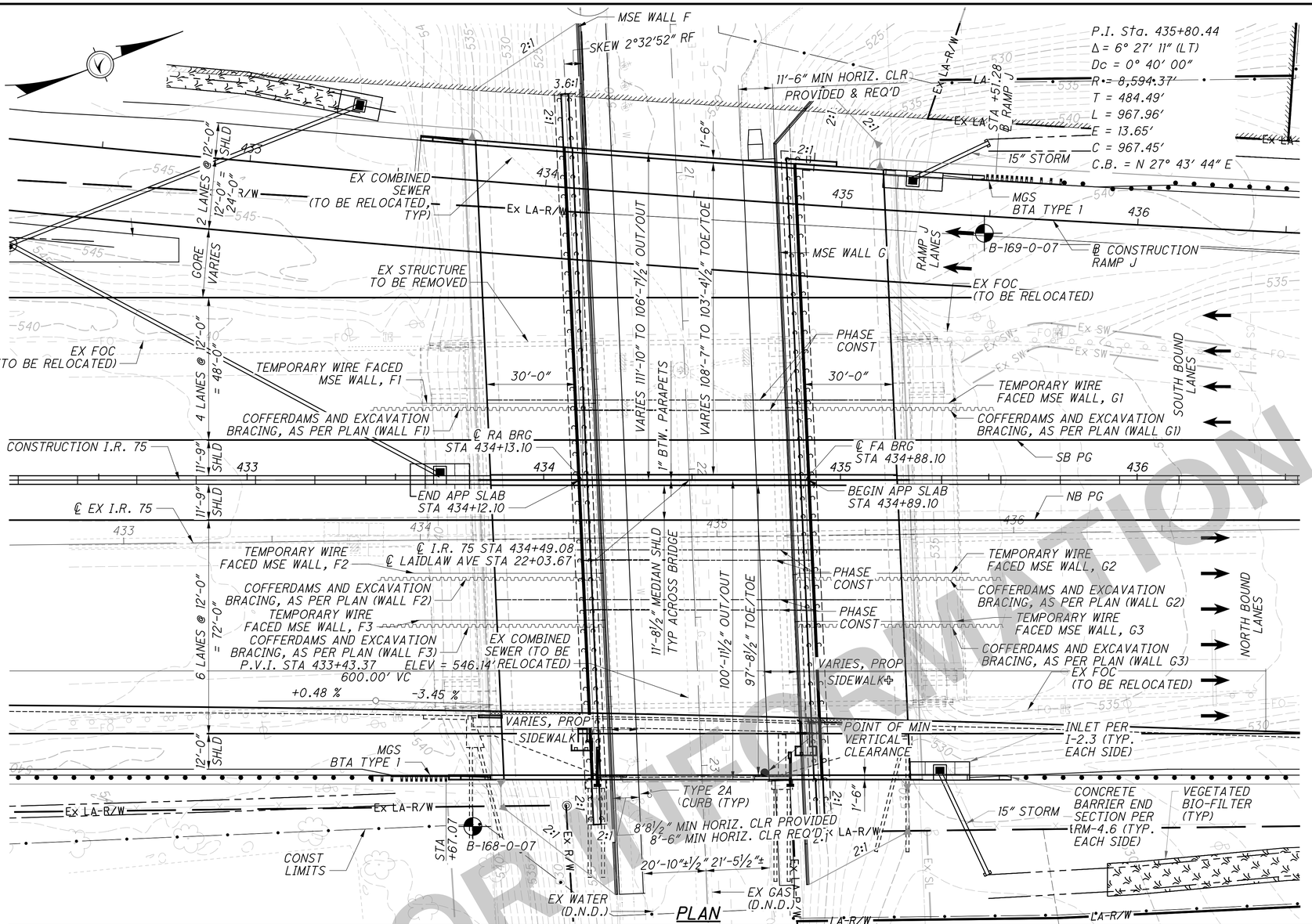
REINFORCING STEEL LIST
BRIDGE NO. HAM-75-0791
I.R. 75 OVER RAMP J

HAM-75-7.85
PID No. 77889

57 / 57

1389
2017

PLOTTED BY efoley 2/18/2022 3:22:27 PM d:\20110903\ODOT\HAM\77889\structures\HAM075_0791C\sheets\075_0791CRL005.dgn



BENCHMARK DATA

BM #404 STA.434+88.14, ELEV 523.26 , OFFSET 312.54, RIGHT
BM #405 STA.434+03.68, ELEV 521.92 , OFFSET 388.27, LEFT

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET 13 (2017)

NOTES:

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. SEE SHEET 2/55 FOR PHASE CONSTRUCTION DIMENSIONS.
3. SEE SHEET 3/55 FOR A LIST OF ABBREVIATIONS.

DESIGN TRAFFIC:
2010 ADT = 173,800 2010 ADTT = 24,332
2030 ADT = 203,000 2030 ADTT = 28,420
DIRECTIONAL DISTRIBUTION = 0.53

LEGEND

- BORING LOCATION
- ● 14'-6" REQUIRED MINIMUM VERTICAL CLEARANCE
  14'-6⅜" ACTUAL MINIMUM VERTICAL CLEARANCE
- ✣ SEE MSE WALL F AND WALL G PLANS FOR LIMITS OF PROPOSED SIDEWALK AND TYPE 2A CURB.

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAMS, WITH CONCRETE DECK AND CONCRETE SUBSTRUCTURE
SPANS: 41'-0", 62'-7", 41'-0" C/C BRGS.
ROADWAY: 63'-6" (SB), 54'-6" (NB) TOE/TOE PARAPET
LOADING: CR 2000-51
SKEW: 1°44'00" RF
APPROACH SLABS: AS-1-54 (15'-0" LONG)
WEARING SURFACE: 1.2" MICROSILICA MODIFIED CONCRETE OVERLAY
ALIGNMENT: TANGENT
CROWN: 0.016 FT/FT
STRUCTURE FILE NUMBER: 3110087
DATE BUILT: 1959
DISPOSITION: TO BE REMOVED

PROPOSED STRUCTURE

TYPE: SINGLE SPAN, AASHTO TYPE 3 PRESTRESSED I-BEAMS WITH COMPOSITE REINFORCED CONCRETE DECK SUPPORTED ON SEMI-INTEGRAL ABUTMENTS FOUNDED ON PILES AND MSE WALL EMBANKMENTS
SPANS: 75'-0" C/C BRGS. (ALONG ℄ CONSTRUCTION I.R. 75)
ROADWAY: VARIES (SB), 97'-8½" (NB) TOE/TOE PARAPET
LOADING: HL-93 AND FWS 0.060 KSF
SKEW: 2°32'52" RF
WEARING SURFACE: MONOLITHIC CONCRETE (MACRO-FIBERS)
APPROACH SLABS: 30'-0" LONG (AS-1-15)
TYPE A INSTALLATION (AS-2-15)
ALIGNMENT: TANGENT
CROWN: VARIES 0.016 TO 0.02
COORDINATES: LATITUDE N 39°10'44"
LONGITUDE W 84°29'10"

FOR INFORMATION ONLY

DESIGN AGENCY
2600 Corporate Exchange Drive, Suite 300, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
JAD	SBH	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JWE		3110095	

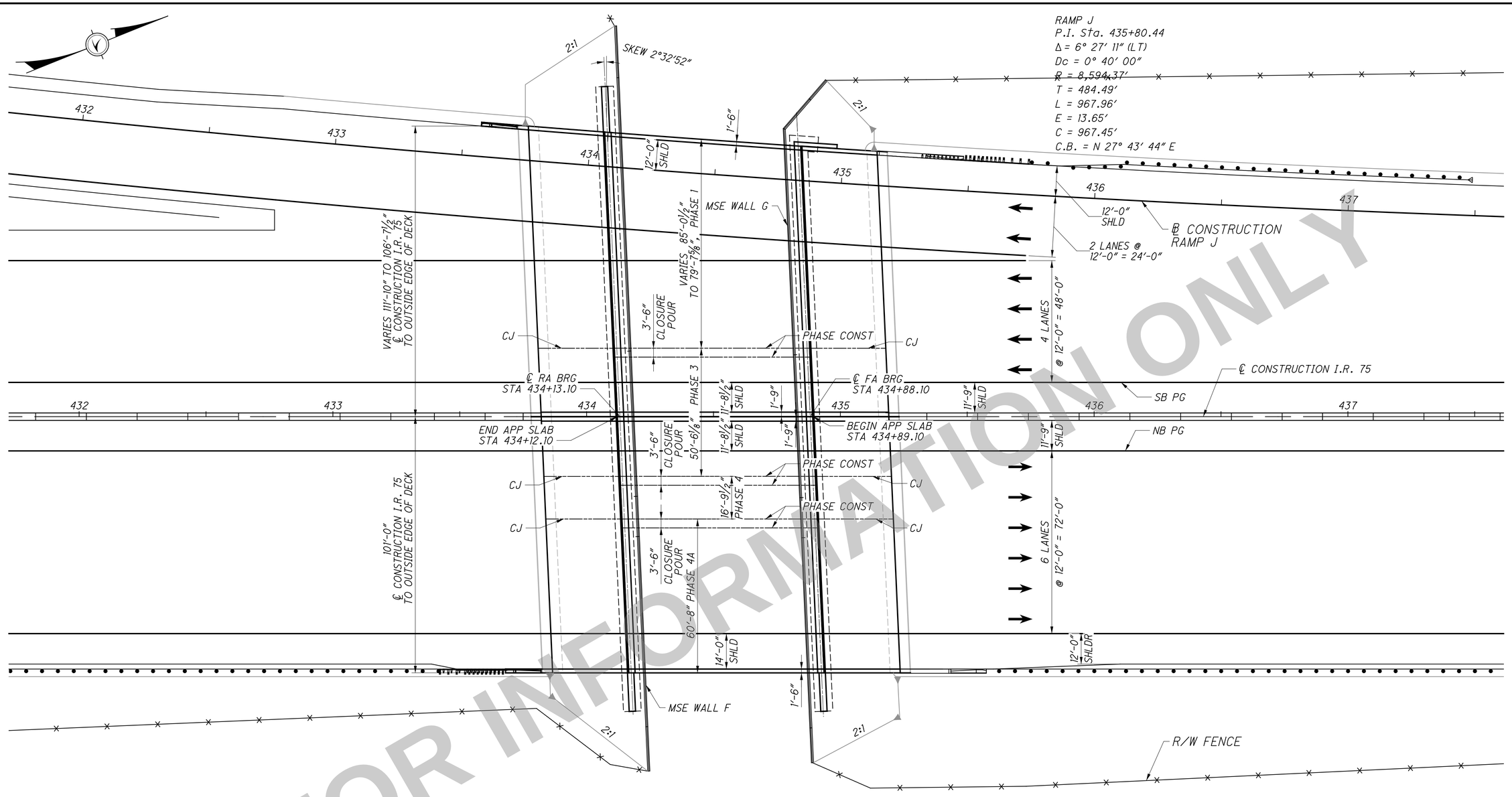
HAMILTON COUNTY
STA. 434+12.10
STA. 434+89.10

SITE PLAN
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

1/55
1390/2017

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GENERAL PLAN

FOR INFORMATION ONLY

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DESIGN AGENCY
2000 Corporate Exchange Drive, Suite 300, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
SBH	SBH	NCM	12-15-21
CHECKED	REVISED		STRUCTURE FILE NUMBER
JAD			3110095

GENERAL PLAN

BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

1391
2017

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-1-15	DATED (REVISED)	07-17-15
AS-2-15	DATED (REVISED)	01-18-19
SBR-1-20	DATED (REVISED)	7-17-20
SBR-2-20	DATED (REVISED)	1-15-21
SICD-1-96	DATED (REVISED)	07-18-14
SICD-2-14	DATED (REVISED)	01-15-21

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

840	DATED	04-16-21
866	DATED	04-21-17
867	DATED	01-15-21

DESIGN SPECIFICATIONS:
THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DESIGN DATA:
OPERATIONAL IMPORTANCE: A LOAD MODIFIER OF 1.05 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN LOADING:
HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KSF.

DESIGN STRESSES

CONCRETE CLASS QC3	COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE AND APPROACH SLABS)
CONCRETE CLASS QC1/QC3	COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
PRESTRESSED CONCRETE I-BEAMS	COMPRESSIVE STRENGTH 7.0 KSI (FINAL) 5.5 KSI (RELEASE)
PRESTRESSING STRANDS	AREA = 0.167 SQ. IN. ULTIMATE STRENGTH = 270 KSI INITIAL STRESS = 202.5 KSI (LOW RELAXATION STRANDS)
REINFORCING STEEL	ASTM 615 OR A996 GRADE 60, MINIMUM YIELD STRENGTH, 60 KSI
STEEL PLATES	A709, GRADE 36 (FOR BEARINGS)

DECK PROTECTION METHOD:
EPOXY COATED REINFORCING STEEL AND 2½" CONCRETE COVER.

MONOLITHIC WEARING SURFACE
MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1" THICK.

EXISTING STRUCTURE VERIFICATION:
DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

DECK PLACEMENT DESIGN ASSUMPTIONS:
THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 1.81 KIPS FOR A TOTAL MACHINE LOAD OF 14.44 KIPS (LEFT BRIDGE).

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 1.68 KIPS FOR A TOTAL MACHINE LOAD OF 13.45 KIPS (RIGHT BRIDGE).

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

ITEM 202, STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN:
THIS ITEM INCLUDES ALL LABOR AND MATERIALS TO REMOVE THE EXISTING STRUCTURE IN STAGES AS INDICATED IN THE PLANS. PAYMENT FOR ALL LABOR AND MATERIAL FOR THE PIER TEMPORARY STUPPORT IS ALSO INCLUDED WITH ITEM 202 - STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

THE CONTRACTOR MUST REVIEW THE STRUCTURE WHEN PREPARING HIS BID. THE CONTRACTOR WILL REVIEW THE CONDITION OF THE STRUCTURE TO DETERMINE WHAT DEBRIS WILL FALL FROM THE STRUCTURE DURING REMOVAL. THE CONTRACTOR WILL DETERMINE THE CORRESPONDING COST TO CLEAN-UP ANY AND ALL DEBRIS WHICH FALLS FROM THESTRUCTURE DURING ANY REMOVAL OPERATION. THE COST TO CLEAR AND CLEAN-UP ALL DEBRIS DURING REMOVAL SHALL BE INCLUDED WITH THE BID FOR THIS ITEM OF WORK. NO ADDITIONAL COST WILL BE RECOGNIZED TO CLEAN DEBRIS RESULTING FROM THE STRUCTURE REMOVAL OPERATION.

ITEM 203 EMBANKMENT, AS PER PLAN:
PLACE AND COMPACT EMBANKMENT MATERIAL IN 6 INCH LIFTS FOR THE CONSTRUCTION OF THE APPROACH EMBANKMENT.

ITEM 503, COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN:
THE DESIGNS SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN. INDIVIDUAL PAY ITEMS ARE PROVIDED FOR EACH SHORING LOCATION DUE TO THE COMPLICATED NATURE AND VARYING TYPES OF SHORING NEEDED FOR THIS STRUCTURE.

ITEM 507, 16" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED, AS PER PLAN:

ITEM 507, 16" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN, AS PER PLAN:

PILES DRIVEN TO TIP ELEVATION FOR PILE/SOIL SETUP:
THE ULTIMATE BEARING VALUE IS 326 KIPS PER PILE FOR THE REAR ABUTMENT PILES. THE ULTIMATE BEARING VALUE IS 332 KIPS PER PILE FOR THE FORWARD ABUTMENT PILES. PART OF THE ULTIMATE BEARING VALUE WILL BE ACHIEVED THROUGH PILE/SOIL SETUP, WHICH IS A TIME-DEPENDENT INCREASE IN RESISTANCE THAT OCCURS IN SOME SOILS.

NOTIFY THE ENGINEER AT LEAST 5 DAYS BEFORE DRIVING PILES SO THAT THE ENGINEER CAN NOTIFY THE DISTRICT GEOTECHNICAL ENGINEER, THE OFFICER OF CONSTRUCTION ADMINISTRATION, AND THE OFFICE OF STRUCTURAL ENGINEERING.

LEFT BRIDGE:
REAR ABUTMENT
42 PILES 75 FEET LONG, ORDER LENGTH
TIP ELEVATION, 464.30 FEET
2 DYNAMIC LOAD TESTING ITEMS
2 RESTRIKE

FORWARD ABUTMENT
37 PILES 75 FEET LONG, ORDER LENGTH
TIP ELEVATION, 461.70 FEET
2 DYNAMIC LOAD TESTING ITEMS
2 RESTRIKE

RIGHT BRIDGE:
REAR ABUTMENT
38 PILES 75 FEET LONG, ORDER LENGTH
TIP ELEVATION, 464.30 FEET
2 DYNAMIC LOAD TESTING ITEMS
2 RESTRIKE

FORWARD ABUTMENT
38 PILES 75 FEET LONG, ORDER LENGTH
TIP ELEVATION, 461.70 FEET
2 DYNAMIC LOAD TESTING ITEMS
2 RESTRIKE

PILE DRIVING CONSTRAINTS
PILE DRIVING MAY NOT BEGIN UNTIL SUFFICIENT EMBANKMENT AND MSE WALL SETTLEMENT HAS OCCURRED AS DOCUMENTED BY THE SETTLEMENT PLATFORMS. THE ANTICIPATED WAITING PERIOD TO PERMIT SUFFICIENT EMBANKMENT SETTLEMENT IS 30 DAYS. THE DISTRICT GEOTECHNICAL ENGINEER MAY REDUCE OR EXTEND THE WAITING PERIOD BASED ON THE MAGNITUDE AND RATE OF THE EMBANKMENT SETTLEMENT AS DETERMINED BY THE SETTLEMENT PLATFORMS. THE SETTLEMENT WAITING PERIOD BEGINS ONCE THE APPROACH EMBANKMENT REACHES THE DESIGN SUBGRADE LEVEL FOR A MINIMUM DISTANCE OF 100 FT. BEHIND EACH ABUTMENT. THE PLANS HAVE PROVISIONS FOR A TEMPORARY WALL AT THE ABUTMENT LOCATION TO PERMIT PLACEMENT OF EMBANKMENT TO THE DESIGN SUBGRADE LEVEL. BEGIN PILE DRIVING ONLY FOLLOWING TERMINATION OF THE SETTLEMENT MONITORING WAITING PERIOD BY THE DISTRICT GEOTECHNICAL ENGINEER.

ITEM 511 - CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN
ITEM 511 - CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK (MEDIAN PARAPET), AS PER PLAN

THIS ITEM APPLIES TO THE CONCRETE IN THE BRIDGE DECK AND MEDIAN PARAPET. THIS ITEM MODIFIES THE STANDARD 511 CONCRETE FOR STRUCTURES SPECIFICATION TO INCLUDE MACRO-SYNTHETIC, AND CORROSION INHIBITORS INTO THE SUPERSTRUCTURE CONCRETE. THIS ITEM SHALL CONFORM TO CMS 511 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

PROVIDE MATERIALS CONFORMING TO 511.02 EXCEPT AS MODIFIED BELOW:

PORTLAND CEMENT CONCRETE	499.03, CLASS QC3 MEETING A DESIGN STRENGTH OF 4,500 PSI, WITH MACRO-SYNTHETIC FIBERS WITH MODIFICATION PER 511.02
FIBERS FOR CONCRETE	ASTM C 1116, TYPE III
CORROSION INHIBITOR	515.15

THE CLASS QC3 CONCRETE FOR THE SUPERSTRUCTURE SHALL MEET THE FOLLOWING CRITERIA:
WATER/CEMENT RATIO = 0.40 MAXIMUM; MINIMUM 4 LBS/CY MACRO-SYNTHETIC FIBERS (1.5 IN. MIN. TO 2.5 IN. MAX.) MEETING ASTM C1116 TYPE III SHALL BE ADDED TO THE MIX.

MIX SHALL INCLUDE A MIGRATING CORROSION INHIBITOR AS MANUFACTURED BY AN APPROVED SUPPLIER LISTED ON ODOT'S QUALIFIED APPROVED SUPPLIERS, ITEM 515.15. THE DOSAGE RATE LISTED ON THE ODOT QUALIFIED APPROVED SUPPLIERS LIST WILL APPLY.

THE MACRO- SYNTHETIC FIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO "BALLING" OCCURS. UPON INSPECTION OF THE MIX AT THE TIME OF PLACEMENT, IF ANY "BALLING" OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR. IT IS IMPORTANT TO FOLLOW INDUSTRY STANDARDS AND ASTM SPECIFICATIONS ON THE PREMIXING OF THE CEMENT, AGGREGATE, AND MACRO-SYNTHETIC FIBERS PRIOR TO THE ADDITION OF WATER AND ADMIXTURES. PROVIDE MACRO-SYNTHETIC FIBERS THAT ARE MONOFILAMENT FIBERS MADE FROM VIRGIN POLYPROPYLENE, OR CO-POLYMERS THAT ARE INERT TO ALKALI ATTACK. ENSURE THE MACRO-SYNTHETIC FIBERS HAVE A MINIMUM TENSILE STRENGTH OF 70 KSI, A MINIMUM MODULUS OF ELASTICITY OF 800 KSI, A MINIMUM FILAMENT DIAMETER OF 0.012 INCHES, AND ASPECT RATIO BETWEEN 60 AND 100, AND ARE BETWEEN 1.0 AND 2.5 INCHES IN LENGTH. STORE THE MACRO-SYNTHETIC FIBERS ACCORDING TO THE MANUFACTURE'S RECOMMENDATION AND KEEP THE MATERIAL FREE FROM DUST, DIRT AND MOISTURE.
(CONT.)

FOR INFORMATION ONLY

F:\HAM\77889\MARCH 2021_from EMH\structures\HAM075_0823C\sheets\4-21-2022 prebid for median quantity\075_0823CGN601.dgn 4/21/2022 10:08:31 AM pantonelli

DESIGN AGENCY
2000 Corporate Exchange Drive, Suite 200, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
TML	TML	NCM	12-15-21
CHECKED	REVISED		STRUCTURE FILE NUMBER
JAD			3110095

GENERAL NOTES
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

1392
2017

ITEM 511 - CLASS OC3 CONCRETE, MISC.: CONCRETE WITH OC/OA, BRIDGE DECK, AS PER PLAN (CONT.):

ITEM 511 - CLASS OC3 CONCRETE, MISC.: CONCRETE WITH OC/OA, BRIDGE DECK (MEDIAN PARAPET), AS PER PLAN (CONT.):

USE A MINIMUM DOSAGE RATE OF MACRO-SYNTHETIC FIBERS OF 4.0 LBS/CY OF CONCRETE. DETERMINE THE FINAL PROPOSED DOSAGE RATE THROUGH THE MIX TESTING. ENSURE THE FIBER REINFORCED CONCRETE MEETS OR EXCEEDS A MINIMUM EQUIVALENT FLEXURAL STRENGTH RATIO OF 25% ACCORDING TO ASTM C 1609. ENSURE THE FINAL PROPOSED MIX IS WORKABLE AND ABLE TO BE PRODUCED SUCH THAT BALLING OR CLUMPING OF THE FIBERS IS NOT A PROBLEM AS DETERMINED BY THE ENGINEER. UTILIZE A LABORATORY REGULARLY INSPECTED BY THE CEMENT AND CONCRETE REFERENCE LABORATORY (CCRL) OF THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, OR OTHER APPROVED REFERENCE LABORATORY, TO PERFORM THE TESTING. BEFORE USE, SUBMIT DOCUMENTATION TO THE PROJECT ENGINEER CERTIFYING BOTH THE MACRO-SYNTHETIC FIBERS AND THE MIX MEET OR EXCEED THE REQUIRED PROPERTIES. SAMPLING WILL BE ALLOWED FOR TESTING PURPOSES. A DEMONSTRATION OF THE MIX PRODUCTION OR TRIAL MIX, MAY BE REQUIRED BY THE ENGINEER PRIOR TO PLACING ANY OF THE MIX ON THE PROJECT.

THE BATCH WEIGHTS SHALL BE CORRECTED TO COMPENSATE FOR THE MOISTURE CONTAINED IN THE AGGREGATE AT THE TIME OF USE. A CHEMICAL ADMIXTURE (705.12, TYPE A OR D) SHALL BE USED.

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT THE CORROSION INHIBITOR AND ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CORROSION INHIBITOR IS SUGGESTED TO BE A MCI PRODUCT BY CORTEC OR AN APPROVED EQUAL FROM THE QUALIFIED PRODUCTS LIST. THE CONCRETE SUPPLIERS CHOICE OF ONE OF THESE CORROSION INHIBITORS DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS. PLEASE BE ADVISED THAT SOME PRODUCTS ON THE LIST EFFECT THE DELIVERED MIX PROPERTIES GREATLY WHILE OTHER PRODUCTS DO NOT.

APPROACH SLABS, DIAPHRAGMS, AND MEDIAN PARAPET CONCRETE ARE TO USE THE SAME MIX DESIGN AS THE BRIDGE DECK. THE CONTRACTOR SHOULD BE ADVISED THAT CONCRETE RETARDING AGENTS MAY NEED TO BE ADDED TO OFFSET THE EFFECTS OF THE MIGRATING CORROSION INHIBITOR SELECTED. USE SELF-COMPACTING CONCRETE ON DECORATIVE RAILING SIMILAR TO TEXAS RAILING AND MACRO-SYNTHETIC CONCRETE PER THIS SPECIFICATION ON TRADITIONAL CONCRETE RAILING WHEN APPLICABLE.

THE CONTRACTOR SHALL PROVIDE TRADITIONAL BRIDGE DECK FORMS CONFORMING TO CMS 508. PERMANENT STAY-IN-PLACE (SIP) FORMS ARE NOT ALLOWED. THE PLACING OF THE DECK AND THE APPROACH SLABS IN THE SAME CONCRETE POUR IS NOT PERMITTED.

ITEM 511 - CLASS OC3 CONCRETE, MISC.: CONCRETE WITH OC/OA, BRIDGE DECK (EXTERIOR PARAPET), AS PER PLAN:

THIS WORK SHALL CONSIST OF CONSTRUCTING THE EXTERIOR BRIDGE PARAPETS WITH A FORM LINER PATTERN APPLIED TO THE EXTERIOR FACE THAT MATCHES THE ARCHITECTURAL "TEXAS RAIL" DETAILS SHOWN IN THE PLANS. THIS ITEM SHALL INCLUDE ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO CONSTRUCT THE "TEXAS" TYPE BRIDGE RAILING. QUANTITY SHALL INCLUDE SAW CUTTING, JOINT SEALER, FORM LINERS AND ANY OTHER MISCELLANEOUS ITEMS REQUIRED TO FULLY CONSTRUCT THE RAILING. THIS ITEM SHALL ONLY INCLUDE THE EXTERIOR PARAPET ON THE BRIDGE. EXTERIOR PARAPET ON APPROACH SLABS SHALL BE PAID FOR UNDER ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN.

ITEM 511 - CLASS OC3 CONCRETE, MISC.: CONCRETE WITH OC/OA, BRIDGE DECK (EXTERIOR PARAPET), AS PER PLAN (CONT.):

IN ADDITION TO THE WORK ITEMS REQUIRED IN ITEM 511, THIS ITEM WILL INCLUDE THE DEVELOPMENT, DELIVERY AND PLACMENT OF A SPECIAL CONCRETE MIX AS DESCRIBED IN THE FOLLOWING NOTE:

PROVIDE A CONCRETE WITH THE FOLLOWING PROPERTIES:

MINIMUM PORTLAND CEMENT CONTENT	800 LB/CU. YD.
NO MICRO SILICA AND NO FLY ASH	
MAXIMUM COARSE AGGREGATE SIZE	#8
MAXIMUM WATER/CEMENT RATIO	0.38
COARSE TO FINE AGGREGATE RATIO	
TO PRODUCE SELF CONSOLIDATING CONCRETE	
MINIMUM 3 DAY STRENGTH	4000 PSI
MINIMUM 28 DAY STRENGTH	5500 PSI
AIR CONTENT	8% ±2%
MINIMUM SPREAD	24"

PROVIDE A CONCRETE MIX AT A SLUMP THAT ALLOWS THE CONCRETE MIX TO BE PUMPED THROUGH A 3 1/2" DIAMETER ACCESS HOLE THROUGH THE FORM AND SELF CONSOLIDATE THE PARAPET CONCRETE. THE FINAL CONCRETE MIX WILL BE A SELF CONSOLIDATING CONCRETE USING AN APPROVED SELF CONSOLIDATING ADMIXTURE.

SUBMIT THE MIX DESIGN AND TEST RESULTS TO THE ENGINEER FOR REVIEW AND ACCEPTANCE.

DURING THE CONCRETE OPERATIONS, ASSURE THE REPRESENTATIVES OF THE READY MIX PRODUCER AND THE CHEMICAL ADMIXTURE MANUFACTURER ARE ON SITE TO DETERMINE ANY ADJUSTMENTS REQUIRED TO COMPLETE THE CONCRETE PLACEMENT.

PAYMENT FOR THIS WORK SHALL INCLUDE ALL NECESSARY MATERIAL, LABOR, AND EQUIPMENT TO COMPLETE THIS TASK. PAYMENT SHALL BE MADE UNDER ITEM 511 - CLASS OC3 CONCRETE WITH OC/OA, BRIDGE DECK (EXTERIOR PARAPET), AS PER PLAN.

ITEM 511 - SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN

ITEM 511 - CLASS OC3 CONCRETE, MISC: CONCRERETE WITH OC/OA, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN:

THIS ITEM MODIFIES THE STANDARD 511 CONCRETE FOR STRUCTURES SPECIFICATION TO INCLUDE MACRO-SYNTHETIC, AND CORROSION INHIBITORS INTO THE SUBSTRUCTURE CONCRETE. THIS ITEM SHALL CONFORM TO CMS 511 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

PROVIDE MATERIALS CONFORMING TO 511.02 EXCEPT AS MODIFIED BELOW:

PORTLAND CEMENT CONCRETE	499.03, CLASS OC3 MEETING A DESIGN STRENGTH OF 4,000 PSI, WITH MACRO-SYNTHETIC FIBERS WITH MODIFICATION PER 511.02
FIBERS FOR CONCRETE	ASTM C 1116, TYPE III
CORROSION INHIBITOR	515.15

THE CLASS OC3 CONCRETE FOR THE SUBSTRUCTURE SHALL MEET THE FOLLOWING CRITERIA:
WATER/CEMENT RATIO = 0.40 MAXIMUM; MINIMUM 4 LBS/CY MACRO-SYNTHETIC FIBERS (1.0 IN. MIN. TO 2.5 IN. MAX.) MEETING ASTM C1116 TYPE III SHALL BE ADDED TO THE MIX.

MIX SHALL INCLUDE A MIGRATING CORROSION INHIBITOR AS MANUFACTURED BY AN APPROVED SUPPLIER LISTED ON ODOT'S QUALIFIED APPROVED SUPPLIERS, ITEM 515.15. THE DOSAGE RATE LISTED ON THE ODOT QUALIFIED APPROVED SUPPLIERS LIST WILL APPLY.

ITEM 511 - SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN (CONT.)

ITEM 511 - CLASS OC3 CONCRETE, MISC: CONCRERETE WITH OC/OA, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN (CONT.)

THE MACRO-SYNTHETIC FIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO "BALLING" OCCURS. UPON INSPECTION OF THE MIX AT THE TIME OF PLACEMENT, IF ANY "BALLING" OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR. IT IS IMPORTANT TO FOLLOW INDUSTRY STANDARDS AND ASTM SPECIFICATIONS ON THE PREMIXING OF THE CEMENT, AGGREGATE, AND MACRO-SYNTHETIC FIBERS PRIOR TO THE ADDITION OF WATER AND ADMIXTURES. PROVIDE MACRO-SYNTHETIC FIBERS THAT ARE MONOFILAMENT FIBERS MADE FROM VIRGIN POLYPROPYLENE, POLYETHYLENE, OR CO-POLYMERS THAT ARE INERT TO ALKALI ATTACK. ENSURE THE MACRO-SYNTHETIC FIBERS HAVE A MINIMUM TENSILE STRENGTH OF 70 KSI, A MINIMUM MODULUS OF ELASTICITY OF 800 KSI, A MINIMUM FILAMENT DIAMETER OF 0.012 INCHES, AND ASPECT RATIO BETWEEN 60 AND 100, AND ARE BETWEEN 1.0 AND 2.5 INCHES IN LENGTH. STORE THE MACRO-SYNTHETIC FIBERS ACCORDING TO THE MANUFACTURE'S RECOMMENDATION AND KEEP THE MATERIAL FREE FROM DUST, DIRT AND MOISTURE.

USE A MINIMUM DOSAGE RATE OF MACRO-SYNTHETIC FIBERS OF 4.0 LBS/CY OF CONCRETE. DETERMINE THE FINAL PROPOSED DOSAGE RATE THROUGH THE MIX TESTING. ENSURE THE FIBER REINFORCED CONCRETE MEETS OR EXCEEDS A MINIMUM EQUIVALENT FLEXURAL STRENGTH RATIO OF 25% ACCORDING TO ASTM C 1609. ENSURE THE FINAL PROPOSED MIX IS WORKABLE AND ABLE TO BE PRODUCED SUCH THAT BALLING OR CLUMPING OF THE FIBERS IS NOT A PROBLEM AS DETERMINED BY THE ENGINEER. UTILIZE A LABORATORY REGULARLY INSPECTED BY THE CEMENT AND CONCRETE REFERENCE LABORATORY (CCRL) OF THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, OR OTHER APPROVED REFERENCE LABORATORY, TO PERFORM THE TESTING. BEFORE USE, SUBMIT DOCUMENTATION TO THE PROJECT ENGINEER CERTIFYING BOTH THE MACRO-SYNTHETIC FIBERS AND THE MIX MEET OR EXCEED THE REQUIRED PROPERTIES. SAMPLING WILL BE ALLOWED FOR TESTING PURPOSES. A DEMONSTRATION OF THE MIX PRODUCTION OR TRIAL MIX, MAY BE REQUIRED BY THE ENGINEER PRIOR TO PLACING ANY OF THE MIX ON THE PROJECT.

THE BATCH WEIGHTS SHALL BE CORRECTED TO COMPENSATE FOR THE MOISTURE CONTAINED IN THE AGGREGATE AT THE TIME OF USE. A CHEMICAL ADMIXTURE (705.12, TYPE A OR D) SHALL BE USED. THE ENGINEER CAN REDUCE THE BATCH LOAD SIZE AT ANY TIME AS NEEDED TO CORRECT/IMPROVE CONCRETE QUALITY.

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT THE CORROSION INHIBITOR AND ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CORROSION INHIBITOR IS SUGGESTED TO BE A MCI PRODUCT BY CORTEC OR AN APPROVED EQUAL FROM THE QUALIFIED PRODUCTS LIST. THE CONCRETE SUPPLIER'S CHOICE OF ONE OF THESE CORROSION INHIBITORS DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS. PLEASE BE ADVISED THAT SOME PRODUCTS ON THE LIST EFFECT THE DELIVERED MIX PROPERTIES GREATLY WHILE OTHER PRODUCTS DO NOT.

THE CONTRACTOR SHOULD BE ADVISED THAT CONCRETE RETARDING AGENTS MAY NEED TO BE ADDED TO OFFSET THE EFFECTS OF THE MIGRATING CORROSION INHIBITOR SELECTED.

ITEM 523, DYNAMIC LOAD TESTS

PERFORM DYNAMIC LOAD TESTS PER ITEM 523 AT LOCATIONS AND FREQUENCY OUTLINED IN THE PLANS. EACH UNIT OF PAYMENT FOR THE DYNAMIC LOAD TEST INCLUDES TESTING OF TWO PILES WITH SIGNAL MATCHING ON ONE OF THE TWO PILES TESTED.

ITEM 526, REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN

THIS ITEM SHALL INCLUDE THE COST OF ALL CONCRETE AND REINFORCING STEEL FOR THE APPROACH SLABS AND PARAPETS ON APPROACH SLABS. SEALING OF THE PARAPETS SHALL BE PAID FOR UNDER ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

ITEM 622, CONCRETE BARRIER END SECTION, TYPE D, AS PER PLAN:

THIS ITEM SHALL INCLUDE ALL THE COST OF ALL LABOR, MATERIALS AND REINFORCING STEEL FOR THE BARRIER TRANSITIONS. SEALING OF THE PARAPETS SHALL BE PAID FOR UNDER ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

SEQUENCE OF CONSTRUCTION:

1. REMOVE THE EXISITNG PEDESTRIAN BRIDGE IN ACCORDANCE WITH CMS 501.05
2. INSTALL CAST-IN-PLACE PILING AT BOTH THE ABUTMENTS AND PIER.
3. CONSTRUCT OF PIER FOUNDATION. INSTALL MSE WALL AT REAR ABUTMENT AND SOLDIER PILE WALL AT THE FORWARD ABUTMENT. THE SOLDIER PILE WALL WILL BE TOP DOWN CONSTRUCTION.
4. CONSTRUCT OF BOTH THE REAR AND FORWARD ABUTMENTS. CONSTRUCT PIER STEM AND HAMMERHEAD SECTIONS.
5. INSTALL THE PREFABRICATED STEEL BRIDGE.
6. CONSTRUCT THE FORWARD ABUTMENT RAMP.
7. INSTALL FENCING AND RAILING ALONG THE BRIDGE DECK AND APPROACHES.

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DESIGN AGENCY
JMT
2000 Corporate Exchange Drive, Suite 200, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
TML	TML	NCM	12-15-21
CHECKED	REVISED		STRUCTURE FILE NUMBER
JAD			3110095

GENERAL NOTES
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

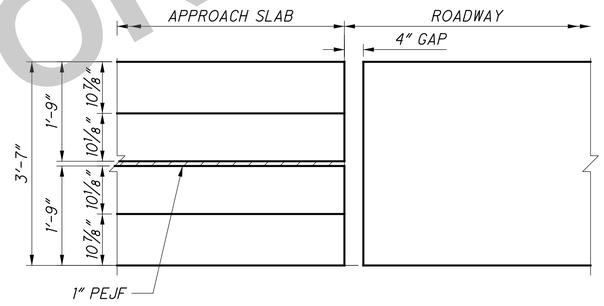
HAM-75-7.85
PID No. 77889

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2017

ABBREVIATIONS

ABUT. - ABUTMENT
ADT - AVERAGE DAILY TRAFFIC
ADTT - AVERAGE DAILY TRUCK TRAFFIC
APP SLAB - APPROACH SLAB
AVE. - AVENUE
℄ - BASELINE
BM - BENCH MARK
BOT. - BOTTOM
BTW. - BETWEEN
BRG - BEARING
BTA - BRIDGE TERMINAL ASSEMBLY
C/C - CENTER TO CENTER
CB - CATCH BASIN
CIP - CAST IN PLACE
CJ - CONSTRUCTION JOINT
℄ - CENTERLINE
CLR - CLEARANCE
CONST - CONSTRUCTION
DIA - DIAMETER
DND - DO NOT DISTURB
EB - EAST BOUND
EF - EACH FACE
ELEV - ELEVATION
E/P - EDGE OF PAVEMENT
E/S - EDGE OF SHOULDER
EQ. - EQUAL
EST. - ESTIMATED
EX - EXISTING
EXP - EXPANSION
FA - FORWARD ABUTMENT
F/F - FACE TO FACE
FF - FAR FACE
FOC - FIBER OPTIC CABLE
FTG - FOOTING
FWD - FORWARD
GEN - GENERAL
GR - GUARD RAIL
HMWM - HIGH MOLECULAR WEIGHT METHACRYLATE
INCR. - INCREMENT
INT. - INTEGRAL
I.R. - INTERSTATE ROUTE
LT - LEFT
MAX - MAXIMUM
MECH. CONN. - MECHANICAL CONNECTOR
MIN - MINIMUM
MISC - MISCELLANEOUS
M.O.T. - MAINTENANCE OF TRAFFIC
MSE - MECHANICALLY STABALIZED EARTH
N/A - NOT APPLICABLE
NB - NORTHBOUND
NF - NEAR FACE
NO - NUMBER
NPCPP - NON-PERFORATED CORRUGATED PLASTIC PIPE
O/O - OUT TO OUT
O.C. - ON CENTER
OD - OUTSIDE DIAMETER
PC - POINT OF CURVE
PT - POINT OF TANGENT
P.V.I. - POINT OF VERTICAL INTERSECTION
PCB - PORTABLE CONCRETE BARRIER
PCPP - PERFORATED CORRUGATED PLASTIC PIPE
PVMT - PAVEMENT
PEJF - PREFORMED EXPANSION JOINT FILLER
PERP. - PERPENDICULAR
PG - PROFILE GRADE
PROP - PROPOSED
PT. - POINT
PVMT. - PAVEMENT
RA - REAR ABUTMENT
RD - ROAD
REF. - REFERENCE
REQ'D - REQUIRED
RT - RIGHT
SB - SOUTHBOUND
SER. - SERIES
SHLD - SHOULDER
SPA - SPACES
S.R. - STATE ROUTE
ST - STREET
STA - STATION
SCD - STANDARD CONSTRUCTION DRAWING
STD - STANDARD
SUPER. - SUPERSTRUCTURE
TEMP - TEMPORARY
TOW - TOP OF WALL
T/S - TOE OF SLOPE
T/T - TOP TO TOE
TYP - TYPICAL
UNO - UNLESS NOTED OTHERWISE
VC - VERTIAL CURVE
VERT - VERTICAL
W/ - WITH
WB - WEST BOUND

℄ CONSTRUCTION I.R. 75



MEDIAN PARAPET PLAN
(TYPICAL BOTH ENDS)

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DESIGN AGENCY
JMT
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GENERAL NOTES
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

1394
2017

ESTIMATED QUANTITIES

CALC BY: JAD/CBY — DATE: 12/8/2014_6/14/2021
CHECKED BY: PPA — DATE: 12/9/2014_6/18/2021

ITEM	EXT.	PARTICIPATION 03/IMS/BR	PARTICIPATION 04/IMS/BR	QUANTITY	UNIT	DESCRIPTION	ABUTMENTS	SUPER	GENERAL	SHEET REF
202	11003	LUMP	LUMP	LUMP		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				3 / 55
202	22900	240	167	407	SY	APPROACH SLAB REMOVED			407	
503	11101	LUMP	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL F1)				3 / 55
503	11101	LUMP	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL F2)				3 / 55
503	11101	LUMP	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL F3)				3 / 55
503	11101	LUMP	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL G1)				3 / 55
503	11101	LUMP	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL G2)				3 / 55
503	11101	LUMP	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL G3)				3 / 55
503	21300	LUMP	LUMP	LUMP		UNCLASSIFIED EXCAVATION				
505	11100	LUMP	LUMP	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION				
507	00701	6402	4448	10,850	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN, AS PER PLAN	10,850			3 / 55
507	00751	6859	4766	11,625	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED, AS PER PLAN	11,625			3 / 55
509	10000	117507	81657	199,164	LB	EPOXY COATED REINFORCING STEEL	32,881	166,283		
509	30020	2933	2038	4,971	FT	NO. 4 GFRP DEFORMED BARS		2829	2142	
509	30030	420	292	712	FT	NO. 5 GFRP DEFORMED BARS		408	304	
509	30040	2460	1708	4,168	FT	NO. 6 GFRP DEFORMED BARS		2388	1780	
511	33501	2	2	4	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN		4		4 / 55
511	46512	219	153	372	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	372			
511	53014	407	282	689	CY	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN		689		3, 4 / 55
511	53014	21	15	36	CY	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK (MEDIAN PARAPET), AS PER PLAN		36		3, 4 / 55
511	53014	18	12	30	CY	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK (EXTERIOR PARAPET), AS PER PLAN		30		4 / 55
511	53014	87	61	148	CY	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN	148			4 / 55
512	10100	846	588	1,434	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	442	992		
512	33000	15	10	25	SY	TYPE 2 WATERPROOFING	25			
515	15010	14	10	24	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 3 (LENGTH = 76'-8")		24		
515	15010	1	0	1	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 3 (LENGTH = 77'-1 1/4")		1		
515	20000	14	9	23	EACH	INTERMEDIATE DIAPHRAGMS		23		
516	13600	24	17	41	SF	1" PREFORMED EXPANSION JOINT FILLER			41	
516	13900	54	37	91	SF	2" PREFORMED EXPANSION JOINT FILLER	91			
516	14020	268	186	454	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	454			
516	44200	30	20	50	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), (1'-1" x 1'-8" x 3 13/16")		50		
523	20000	2	2	4	EACH	DYNAMIC LOAD TESTING	4			4 / 55
523	20500	2	2	4	EACH	RESTRIKE	4			
526	30001	828	576	1,404	SY	REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN			1,404	4 / 55
526	90010	249	173	422	FT	TYPE A INSTALLATION			422	
622	25001	1	1	2	EACH	CONCRETE BARRIER END SECTION, TYPE D, AS PER PLAN			2	4 / 55
846	00110	104	72	176	CF	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM			176	

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DESIGN AGENCY
2000 Corporate Exchange Drive, Suite 200, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
JAD	TML	NCM	12-15-21
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PPA		3110095	

ESTIMATED QUANTITIES
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

1395
2017

SUGGESTED SEQUENCE OF CONSTRUCTION:

PHASE 1 - REMOVAL:

1. INSTALL PCB AND SHIFT TRAFFIC AS SHOWN.
2. EXCAVATE DOWN TO EXPOSE THE EXISTING PIER FOOTING.
3. INSTALL TEMPORARY PIER SUPPORT AS SHOWN ON 11/55.
4. REMOVE EXISTING DECK, PIER, COLUMNS AND FOUNDATION AS SHOWN.

PHASE 1 - CONSTRUCTION:

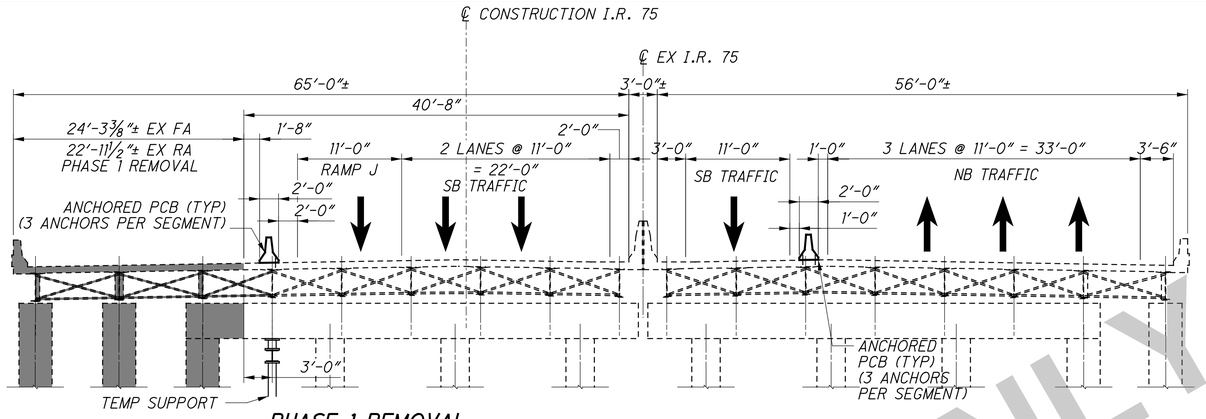
1. CONSTRUCT MSE WALL G AND WALL F AS SHOWN IN THE MSE WALL PLANS AND ABUTMENTS AS SHOWN ON SHEET 18/55 THROUGH 22/55.
2. INSTALL BEAMS AS SHOWN.
3. CONSTRUCT THE DECK, APPROACH SLABS & PARAPET AS SHOWN.

PHASE 3 - REMOVAL:

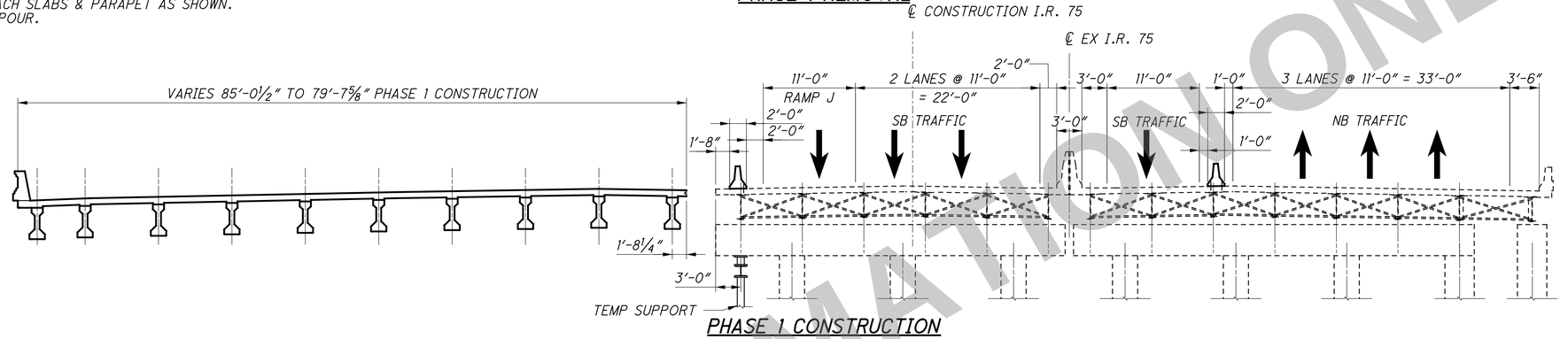
1. INSTALL PCB AND SHIFT TRAFFIC AS SHOWN.

PHASE 3 - CONSTRUCTION:

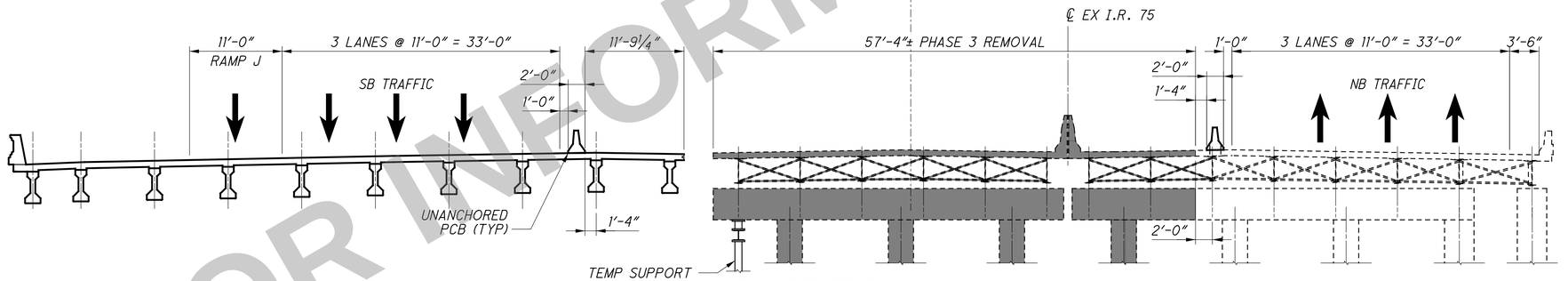
1. CONSTRUCT MSE WALL G AND WALL F AS SHOWN IN THE MSE WALL PLANS AND ABUTMENTS AS SHOWN ON SHEET 18/55 THROUGH 22/55.
2. INSTALL BEAMS AS SHOWN.
3. CONSTRUCT THE DECK, APPROACH SLABS & PARAPET AS SHOWN.
4. POUR DIAPHRAGM IN CLOSURE POUR.
5. CONSTRUCT CLOSURE POUR.



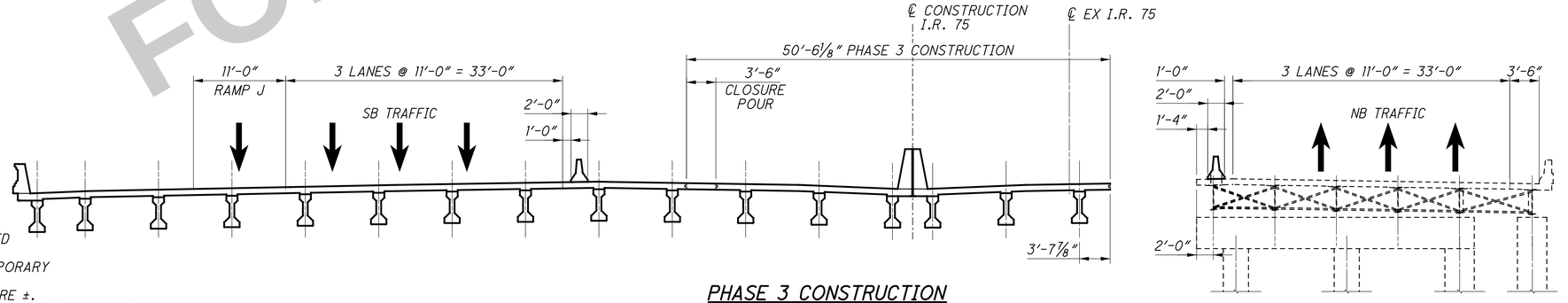
PHASE 1 REMOVAL



PHASE 1 CONSTRUCTION



PHASE 3 REMOVAL



PHASE 3 CONSTRUCTION

NOTES:

1. MAINTENCE OF TRAFFIC SPEED WILL BE POSTED AT 45 MPH.
2. SEE SHEET 11/55 FOR TEMPORARY SUPPORT DETAILS.
3. ALL EXISTING DIMENSIONS ARE ±.
4. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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JMT
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JAD	SBH	NCM	12-15-21
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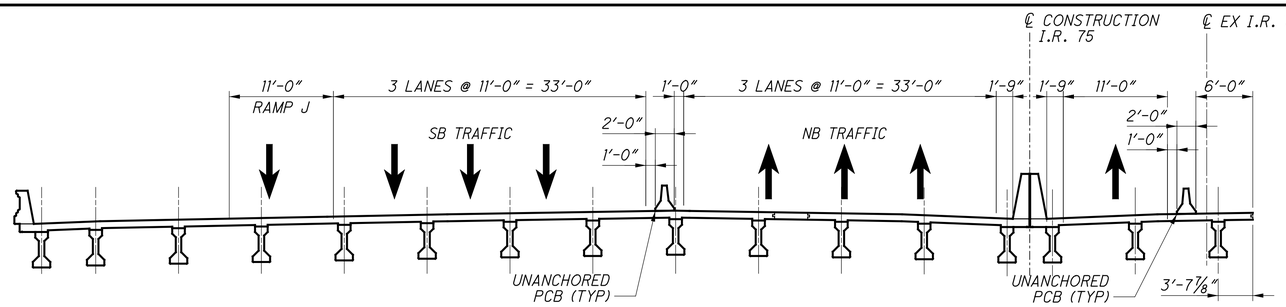
PHASE CONSTRUCTION DETAILS
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

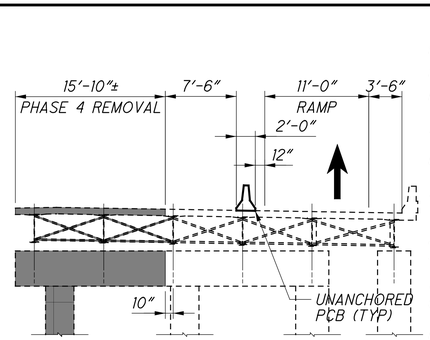
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2017

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PHASE 4 REMOVAL



SUGGESTED SEQUENCE OF CONSTRUCTION:

PHASE 4 - REMOVAL:

1. INSTALL PCB AND SHIFT TRAFFIC AS SHOWN.

PHASE 4 - CONSTRUCTION:

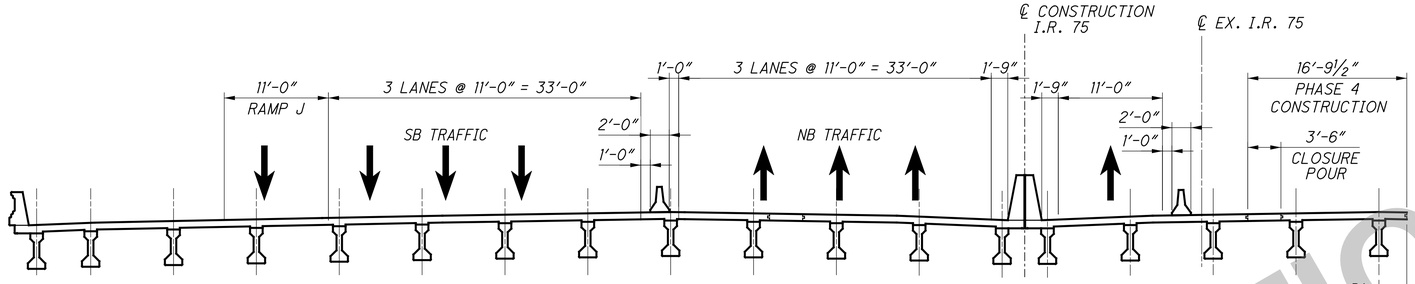
1. CONSTRUCT MSE WALL F AND WALL G AS SHOWN ON THE MSE WALL PLANS AND ABUTMENTS AS SHOWN ON SHEET 18/55 THROUGH 22/55.
2. INSTALL BEAMS AS SHOWN.
3. CONSTRUCT THE DECK, APPROACH SLABS & PARAPET AS SHOWN.
4. POUR DIAPHRAGMS IN CLOSURE POUR.
5. CONSTRUCT CLOSURE POUR.

PHASE 4A - REMOVAL:

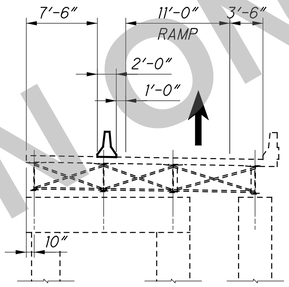
1. INSTALL PCB AND SHIFT TRAFFIC AS SHOWN.

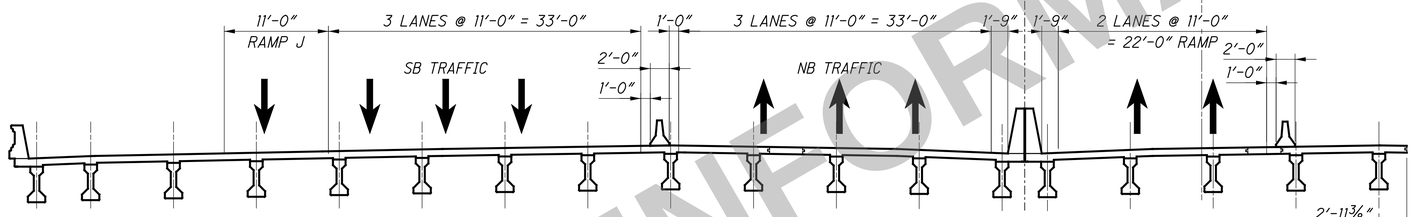
PHASE 4A - CONSTRUCTION:

1. CONSTRUCT MSE WALL F AND WALL G AS SHOWN ON THE MSE WALL PLANS AND ABUTMENTS AS SHOWN ON SHEET 18/55 THROUGH 22/55.
2. INSTALL BEAMS AS SHOWN.
3. CONSTRUCT THE DECK, APPROACH SLABS & PARAPET AS SHOWN.
4. POUR DIAPHRAGMS IN CLOSURE POUR.
5. CONSTRUCT CLOSURE POUR.

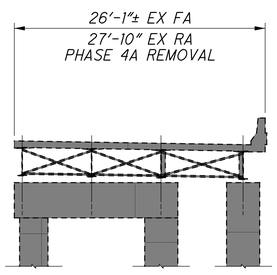


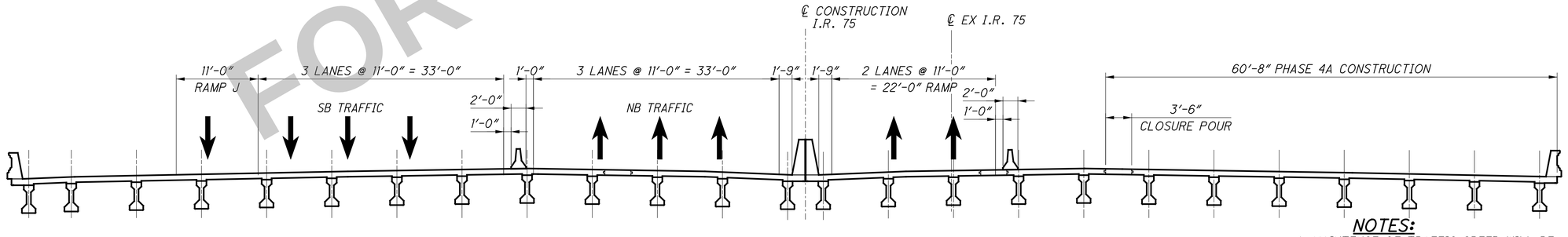
PHASE 4 CONSTRUCTION





PHASE 4A REMOVAL





PHASE 4A CONSTRUCTION

NOTES:

1. MAINTENCE OF TRAFFIC SPEED WILL BE POSTED AT 45 MPH.
2. ALL EXISTING DIMENSIONS ARE ±.
3. SEE SHEET 11/55 FOR TEMPORARY SUPPORT DETAILS.
4. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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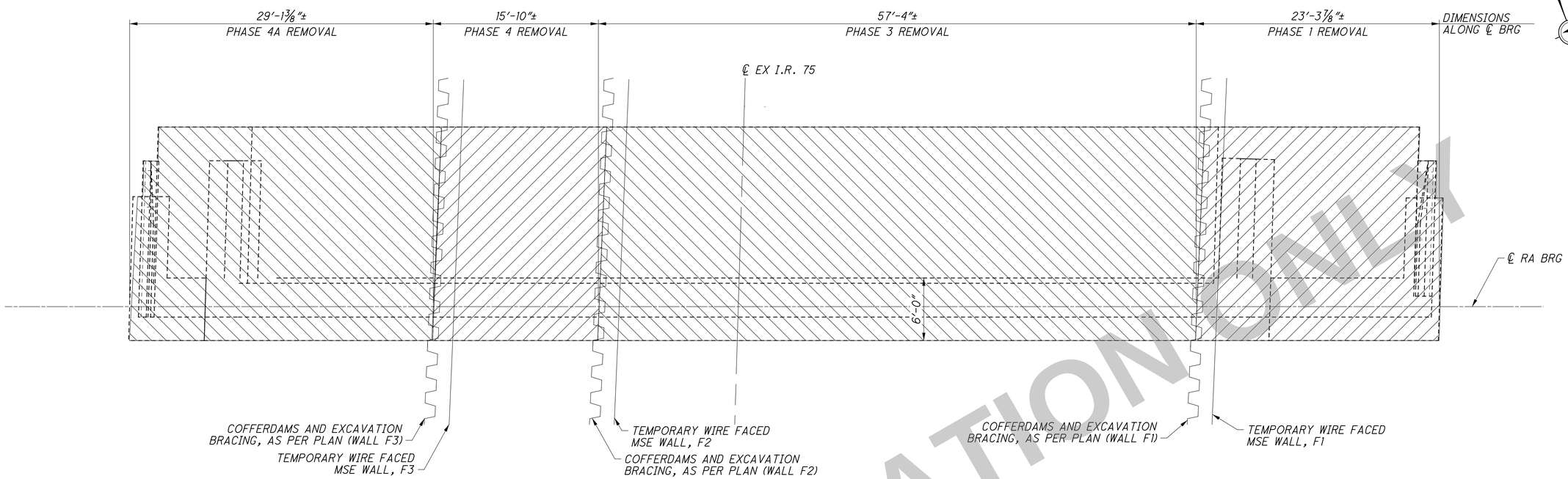
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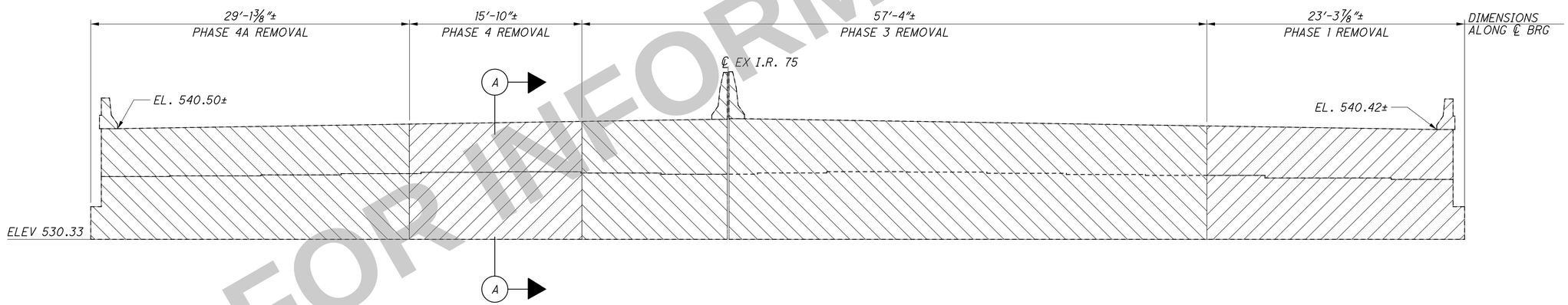
8 / 55

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2017

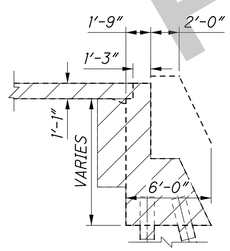
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REAR ABUTMENT REMOVAL PLAN



ELEVATION VIEW



SECTION A-A

LEGEND

LIMITS OF REMOVAL

NOTES:

1. FOR EXISTING STRUCTURE VERIFICATION NOTE, SEE STRUCTURE GENERAL NOTE SHEET 3/55.
2. TEMPORARY SHEETING SHALL BE PAID FOR UNDER ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN. SEE SHEET 12/55 TO 14/55 FOR DETAILS.
3. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

FOR INFORMATION ONLY

DESIGN AGENCY
JMT
2000 Corporate Exchange Drive, Suite 300, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
RT	RT	NCM	12-15-21
CHECKED	REVISED		STRUCTURE FILE NUMBER
JAD			3110095

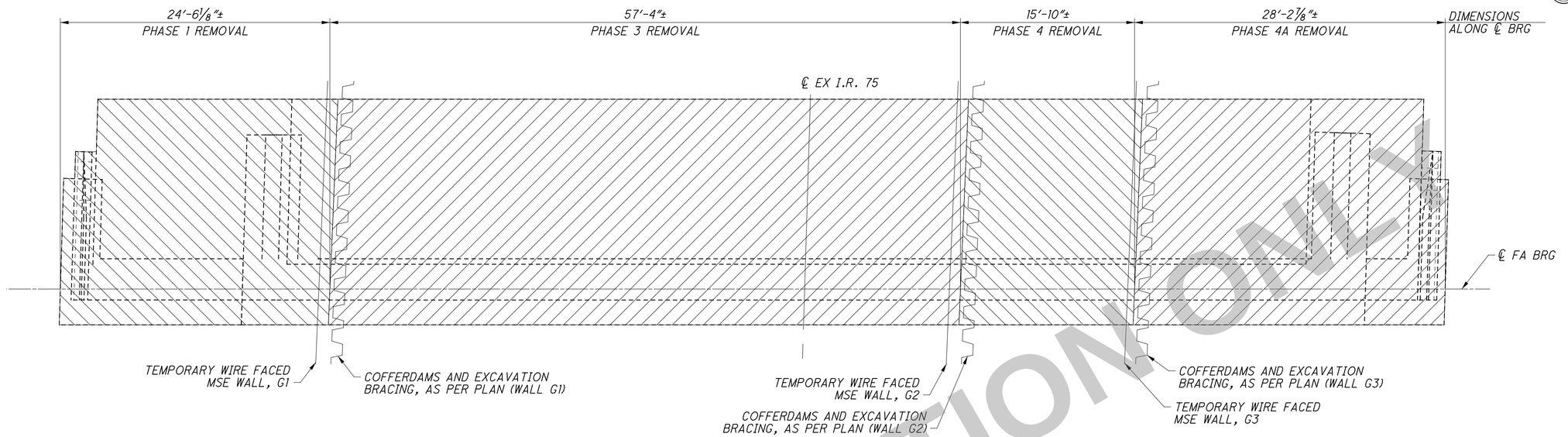
REAR ABUTMENT REMOVAL DETAILS

BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

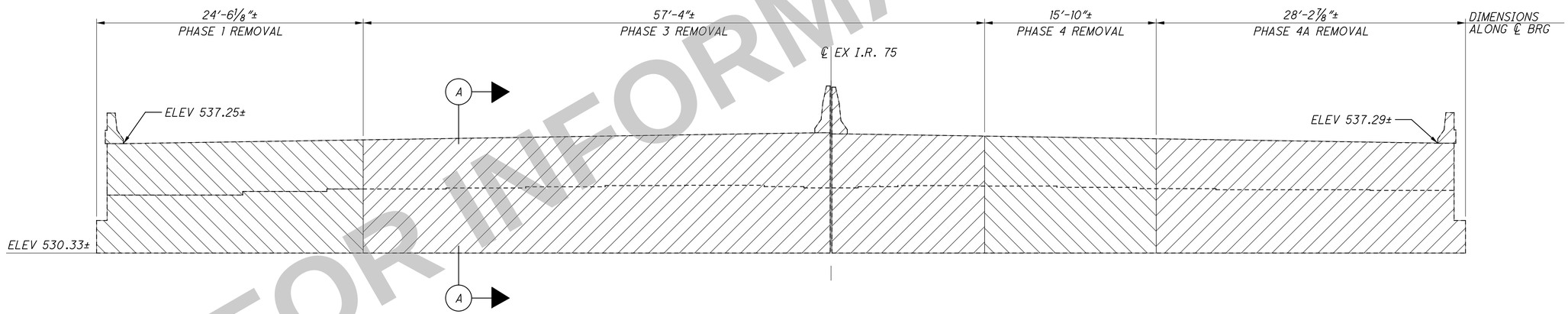
HAM-75-7.85
PID No. 77889

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2017

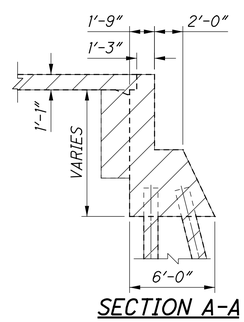
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FORWARD ABUTMENT REMOVAL PLAN



ELEVATION VIEW



SECTION A-A

LEGEND

LIMITS OF REMOVAL

NOTES:

1. FOR EXISTING STRUCTURE VERIFICATION NOTE, SEE STRUCTURE GENERAL NOTE SHEET 3/55.
2. TEMPORARY SHEETING SHALL BE PAID FOR UNDER ITEM 503 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN. SEE SHEET 12/55 TO 14/55 FOR DETAILS.
3. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

FOR INFORMATION ONLY

DESIGN AGENCY
2000 Corporate Exchange Drive, Suite 200, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
RT	RT	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAD		3110095	

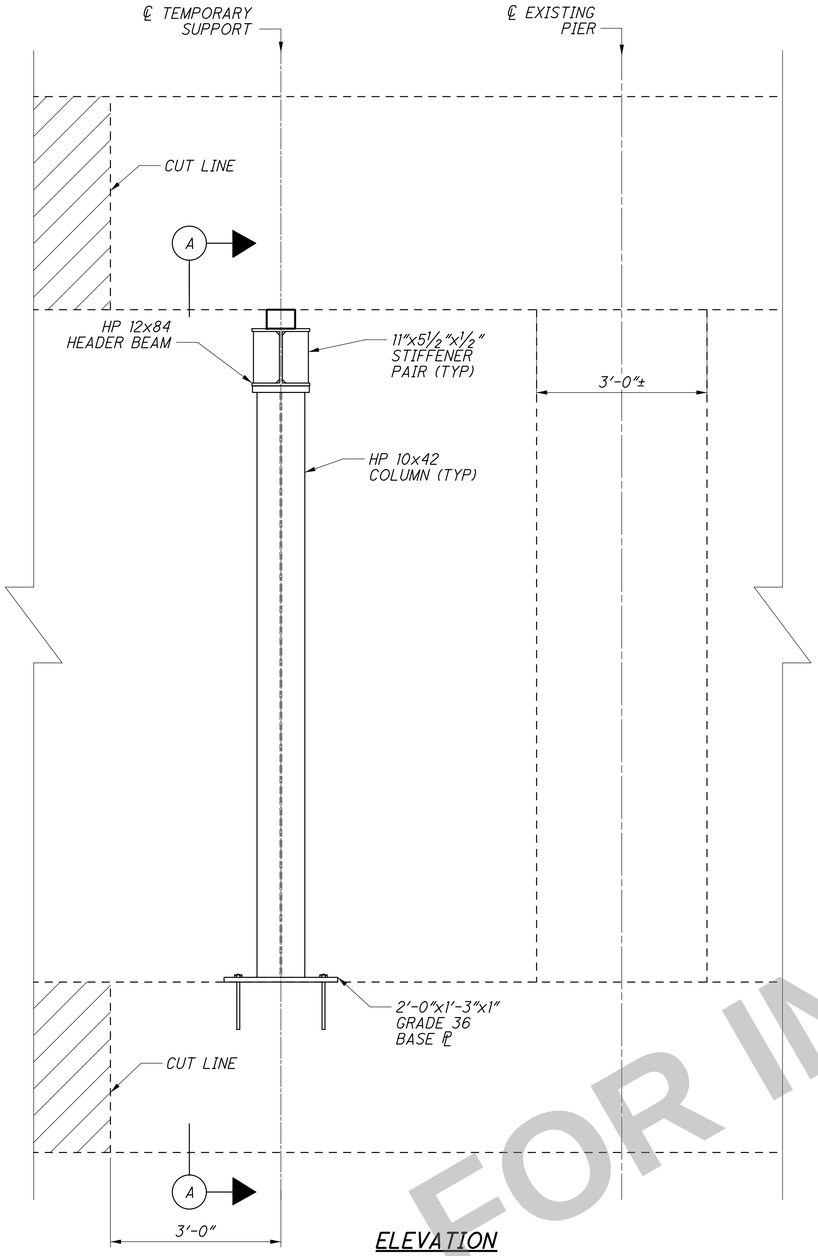
FORWARD ABUTMENT REMOVAL DETAILS
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

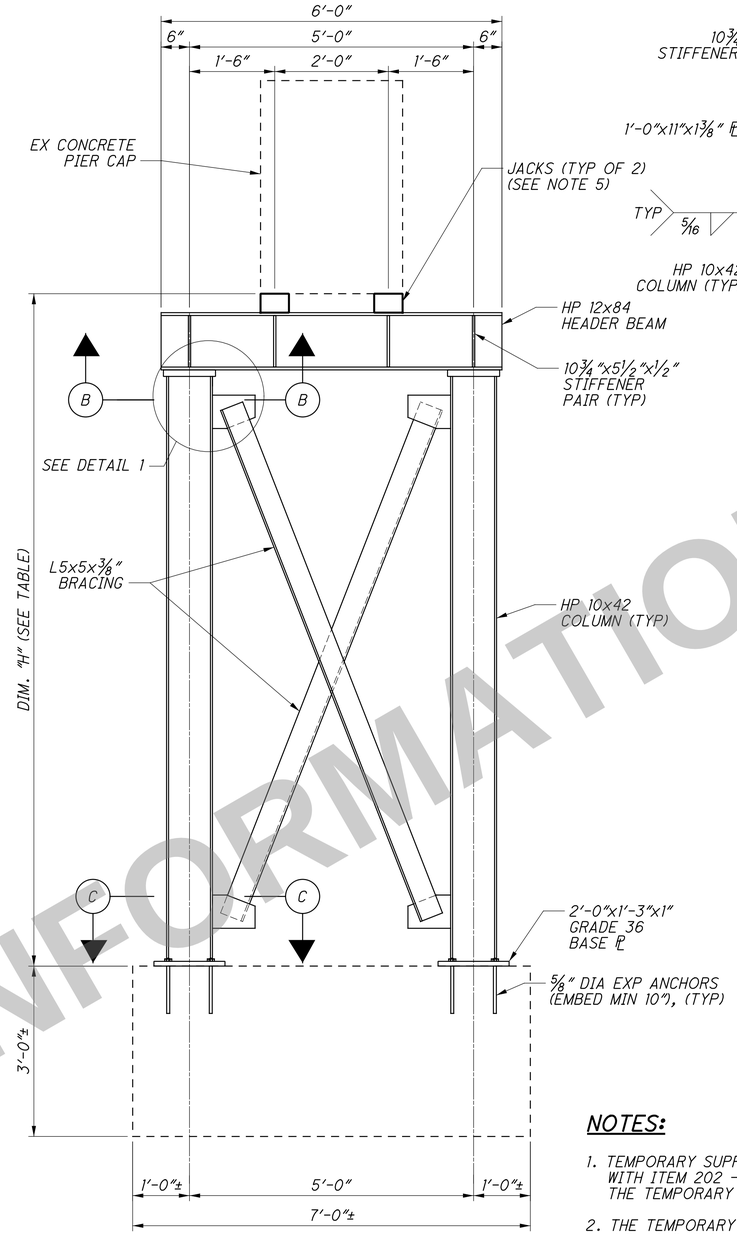
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2017

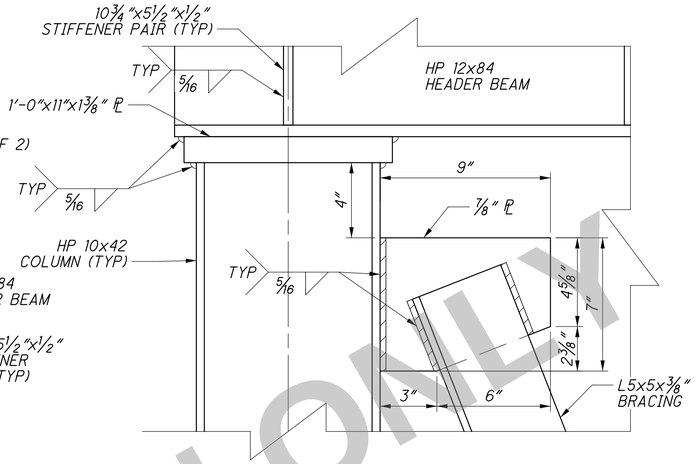
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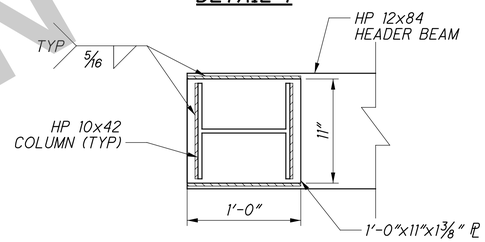
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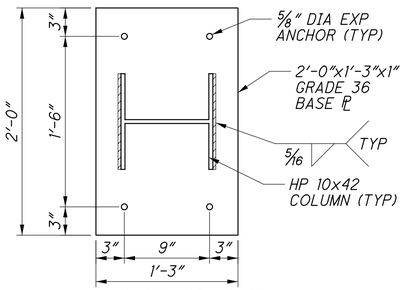
SECTION A-A



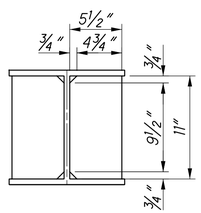
DETAIL 1



SECTION B-B



SECTION C-C



STIFFENER DETAIL

TEMPORARY SUPPORT HEIGHT (ALL VALUES ±)			
PIER	EX PIER CAP BOTTOM ELEV	EX FOOTING TOP ELEV	DIM "H"
1	531.39	519.56	11'-10"
2	530.02	519.19	10'-10"

LEGEND:

= PHASE 1 REMOVAL

NOTES:

1. TEMPORARY SUPPORT SHALL BE PLACED PRIOR TO PHASE 1 PIER CAP REMOVAL. PAYMENT IS INCLUDED WITH ITEM 202 - STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN. ALL COSTS RELATED TO THE TEMPORARY SUPPORT, INCLUDING EXCAVATION, SHALL BE INCLUDED WITH THIS PAY ITEM.
2. THE TEMPORARY SUPPORT IS DESIGNED TO RESIST THE FOLLOWING FACTORED LOADING, WHICH INCLUDES DEAD, LIVE, BRAKING, TEMPERATURE, AND WIND LOADS (LFD METHOD):
   AXIAL LOAD = 237.0 KIP
   HORIZONTAL LOAD (ORIENTED IN DIRECTION OF BRIDGE) = 14.9 KIP
   HORIZONTAL LOAD (TRANSVERSE) = 3.3 KIP
   MOMENT ABOUT PIER CAP = 265.1 K-FT
   OUT OF PLANE MOMENT = 26.8 K-FT
3. SEE SHEETS 7/55 AND 8/55 FOR PHASE CONSTRUCTION DETAILS.
4. TEMPORARY SUPPORT STEEL SHALL BE ASTM A709 GR. 50 UNLESS OTHERWISE NOTED. HP SECTIONS SHALL BE ASTM A572 GR. 50, AND ANGLES SHALL BE ASTM A36. ALL STEEL SHALL BE CVN.
5. SHIM AND JACK TO PROVIDE FULL CONTACT AND SUPPORT OF EX PIER CAP. ACTUAL LENGTH OF THE HP10x42 COLUMN SHALL BE DETERMINED BY THE CONTRACTOR BASED ON THE DEPTH OF JACKS USED.
6. ONCE TEMPORARY SUPPORT IS IN PLACE, THE CONTRACTOR SHALL USE JACKS WITH MECHANICAL LOCKS TO CARRY THE LOAD.
7. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

FOR INFORMATION ONLY

DESIGN AGENCY
2000 Corporate Exchange Drive, Suite 200, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
TML	TML	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAD		3110095	

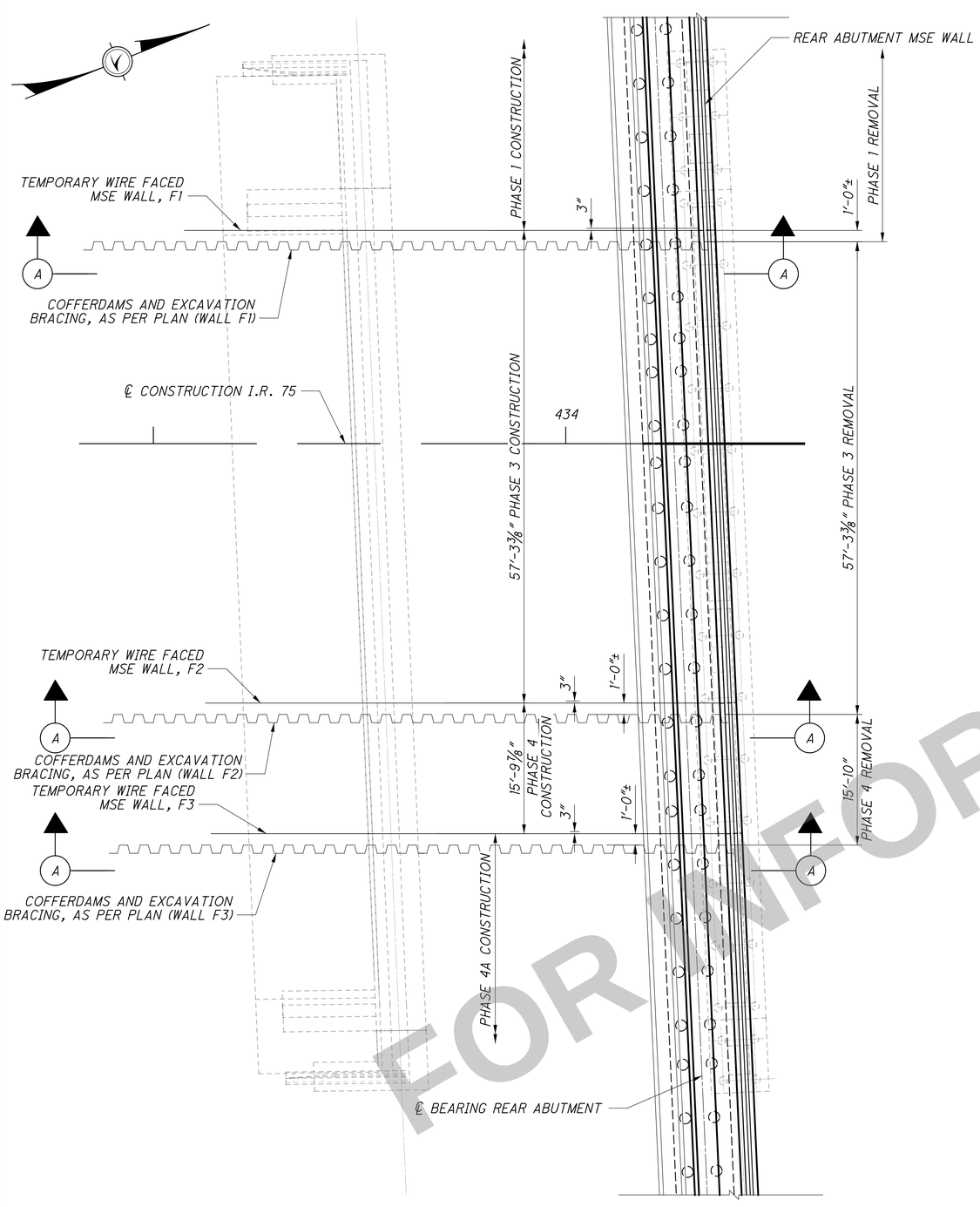
TEMPORARY SUPPORT DETAILS
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

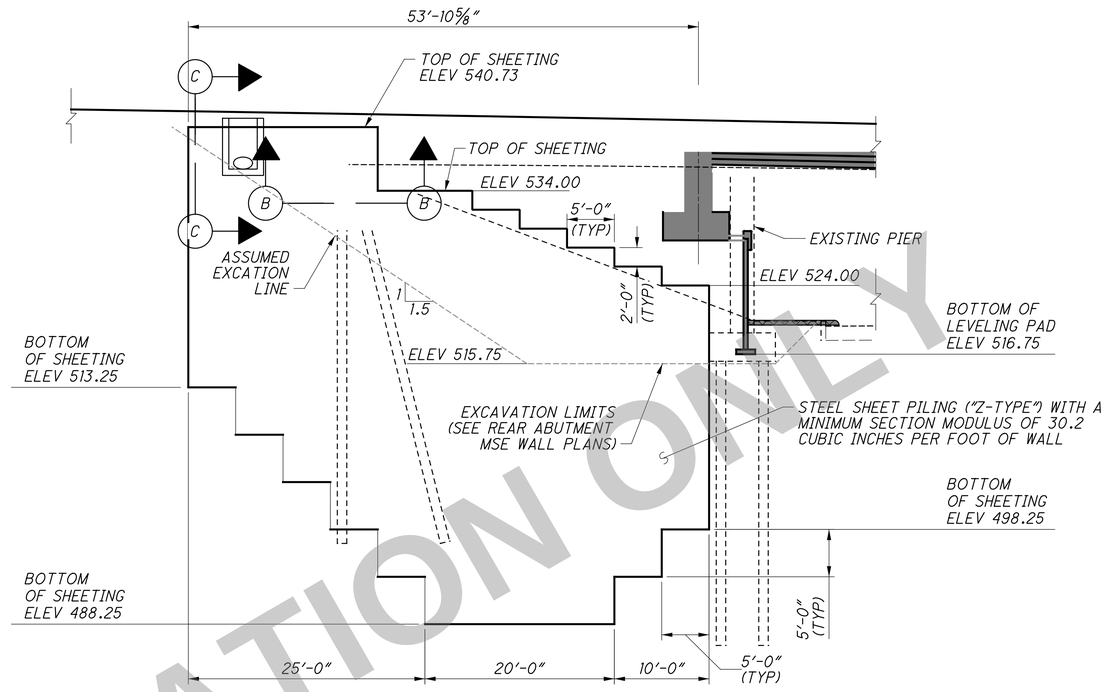
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SHORING PLAN
REAR ABUTMENT



SECTION A-A
REAR ABUTMENT

SHORING SEQUENCE:
REAR ABUTMENT

1. REMOVE PORTIONS OF EXISTING APPROACH SLABS, PAVEMENT AND DECK TO ALLOW INSTALLATION OF SHORING.
2. INSTALL SHORING BEHIND ABUTMENT.
3. ATTACH EXPANSION ANCHORS TO EXISTING APPROACH SLABS.
4. INSTALL REMAINING SHORING ADJACENT TO AND IN FRONT OF ABUTMENT.
5. ATTACH EXPANSION ANCHORS TO EXISTING FOOTINGS.
6. COMPLETE PHASE CONSTRUCTION OF THE BRIDGE AND APPROACHES.

NOTES:
1. FOR ABUTMENT REMOVAL DETAILS SEE SHEETS 9/55 AND 10/55 .
2. FOR ABUTMENT DETAILS SEE SHEETS 18/55 TO 22/55 .
3. FOR ADDITIONAL TEMPORARY SHORING NOTES AND SECTIONS B-B & C-C SEE SHEET 14/55 .
4. FOR TEMPORARY WIRE FACED MSE WALL DETAILS MSE WALL F AND WALL G PLANS.
5. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
6. INSTALL ALL ANCHORS PER SS 866.

FOR INFORMATION ONLY

DESIGN AGENCY
2000 Corporate Exchange Drive, Suite 300, Columbus, OH 43231
DESIGNED CMH | DRAWN SBH | REVIEWED NCM | DATE 12-15-21
CHECKED JAD | REVISED | STRUCTURE FILE NUMBER 3110095

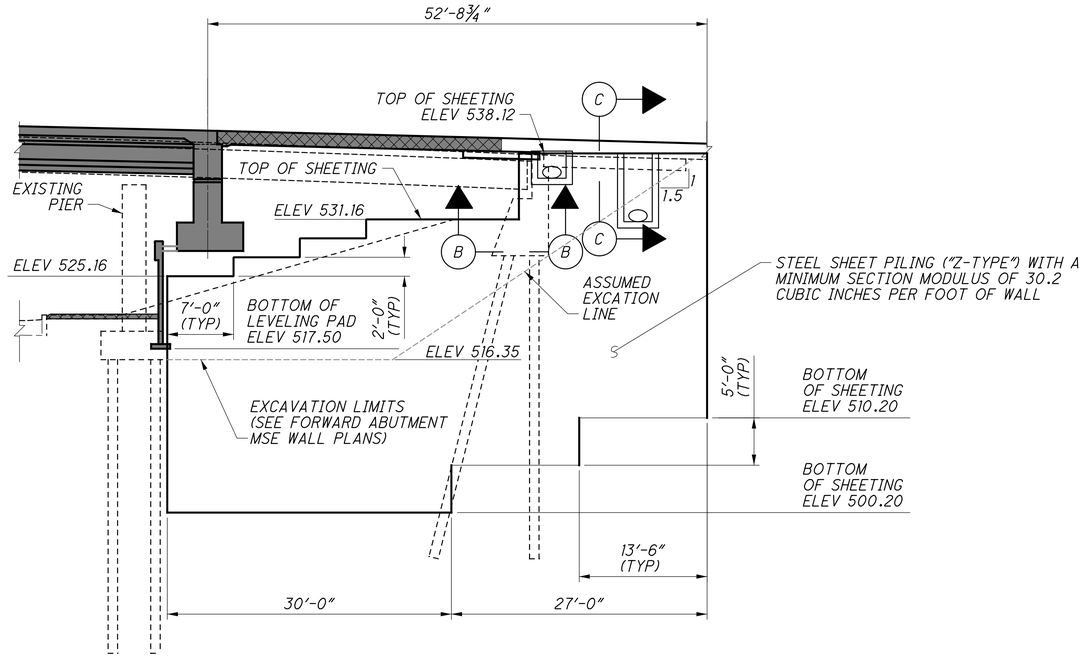
SHORING DETAILS REAR ABUTMENT
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

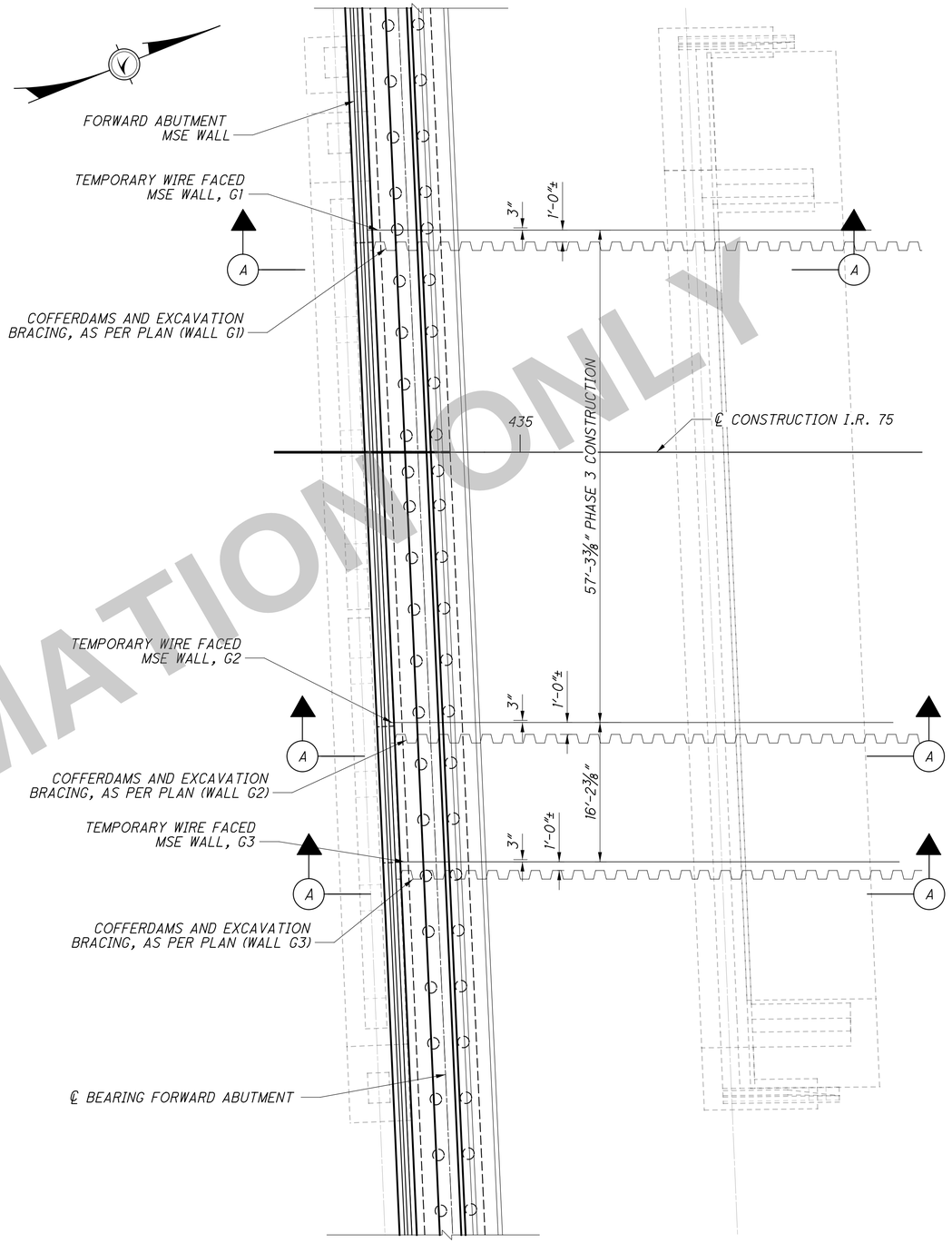
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SECTION A-A
FORWARD ABUTMENT



SHORING PLAN
FORWARD ABUTMENT

SHORING SEQUENCE:
FORWARD ABUTMENT

1. REMOVE PORTIONS OF EXISTING APPROACH SLABS, PAVEMENT AND DECK TO ALLOW INSTALLATION OF SHORING.
2. INSTALL SHORING BEHIND ABUTMENT.
3. ATTACH EXPANSION ANCHORS TO EXISTING APPROACH SLABS.
4. INSTALL REMAINING SHORING ADJACENT TO AND IN FRONT OF ABUTMENT.
5. COMPLETE PHASE CONSTRUCTION OF THE BRIDGE AND APPROACHES.

NOTES:
1. FOR ABUTMENT REMOVAL DETAILS SEE SHEETS 9/55 AND 10/55.
2. FOR ABUTMENT DETAILS SEE SHEETS 18/55 TO 22/55.
3. FOR ADDITIONAL TEMPORARY SHORING NOTES AND SECTIONS B-B & C-C SEE SHEET 14/55.
4. FOR TEMPORARY WIRE FACED MSE WALL DETAILS MSE WALL F AND WALL G PLANS.
5. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
6. INSTALL ALL ANCHORS PER SS 866.

FOR INFORMATION ONLY

DESIGN AGENCY
2000 Corporate Exchange Drive, Suite 200, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
CMH	SBH	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAD		3110095	

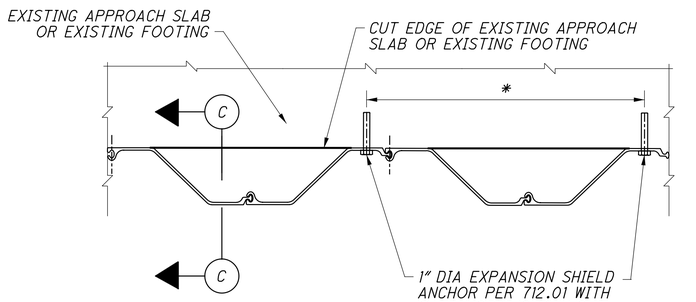
SHORING DETAILS FORWARD ABUTMENT
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

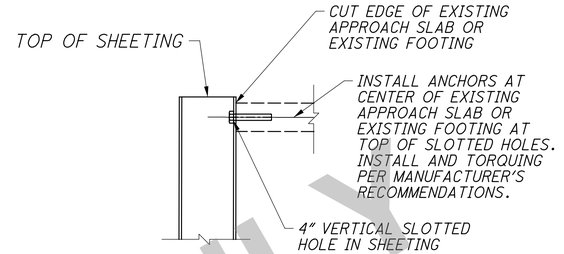
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2017

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SECTION B-B



SECTION C-C

FOR INFORMATION ONLY

NOTES:

1. SHEET PILING SHALL BE ASTM A328 MATERIAL AND MEET THE REQUIREMENTS OF CMS 711.03. MINIMUM YIELD STRENGTH SHALL BE 39 KSI.

2. SHEET PILES USED FOR PHASE 2 CONSTRUCTION SHALL INCLUDE END PROTECTORS TO FACILITATE DRIVING THE SHEET PILES THROUGH THE BONDED LENGTH OF THE TENDONS FROM PHASE 1 CONSTRUCTION. THE END PROTECTORS SHALL BE A ONE-PIECE ATTACHMENT SPECIFICALLY MADE FOR Z-TYPE SHEET PILE SECTIONS AND COMPLETELY COVER THE TIPS OF THE SHEET PILES. END PROTECTORS SHALL BE ATTACHED TO THE SHEET PILES IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS.

3. PAYMENT FOR SHEET PILIING, EXPANSION ANCHORS, REMOVAL OF ALL COMPONENTS AFTER NO LONGER NECESSARY FOR SPECIFIC CONSTRUCTION PHASE, AND ALL OTHER ITEMS ASSOCIATED WITH TEMPORARY SHORING WILL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN.

6. FIELD VERIFY THE LOCATION AND ELEVATIONS OF THE EXISTING CONCRETE SLABS, SEE GENERAL NOTES FOR MORE DETAILS.

7. ALL STEEL SHALL BE A36. ALL BOLTS SHAL BE 5/8" DIA. HIGH STRENGTH BOLTS ASTM A325.

8. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

DESIGN AGENCY
JMT
2000 Corporate Exchange Drive, Suite 300, Columbus, OH 43231

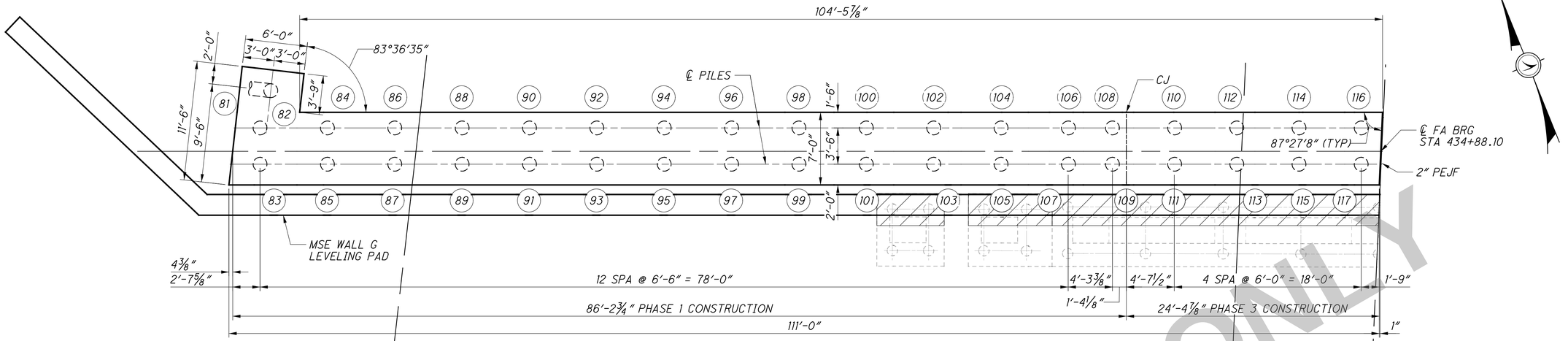
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CMH	SBH	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAD		3110095	

TEMPOARY SHORING DETAILS
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

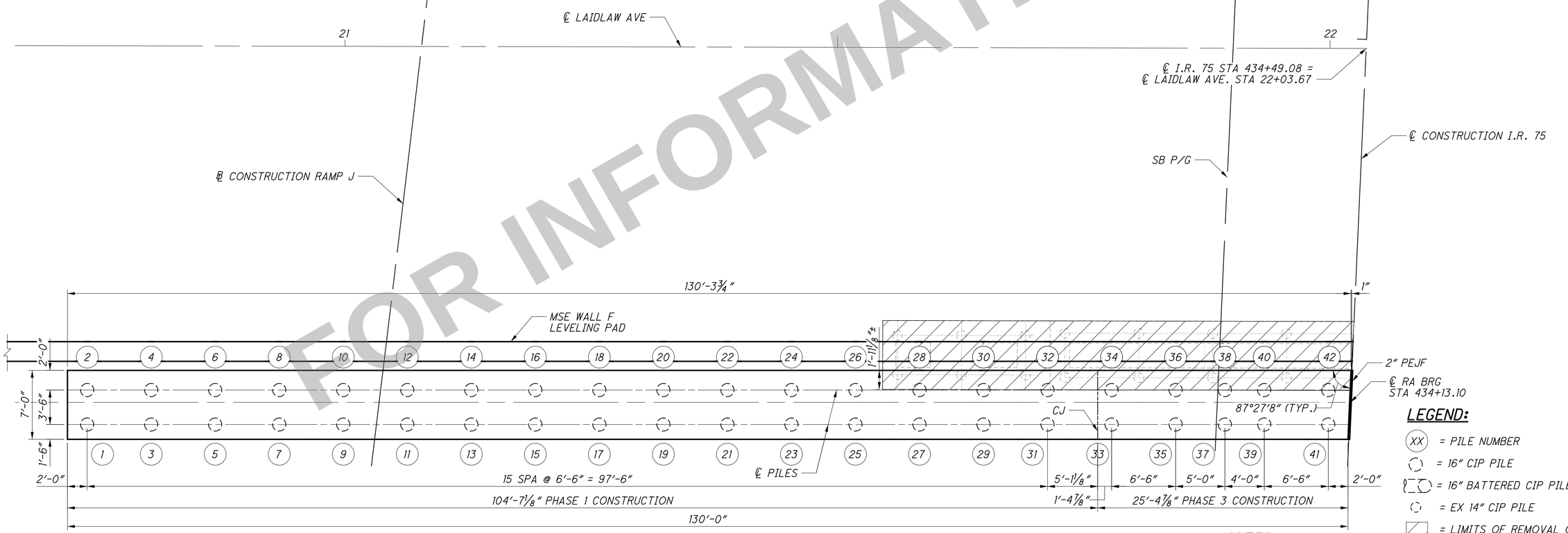
HAM-75-7.85
PID No. 77889

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2017

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FOUNDATION PLAN
(FORWARD ABUTMENT)



FOUNDATION PLAN
(REAR ABUTMENT)

LEGEND:

- (XX) = PILE NUMBER
- = 16" CIP PILE
- = 16" BATTERED CIP PILE
- = EX 14" CIP PILE
- = LIMITS OF REMOVAL OF EX FOOTING

NOTES:

1. SEE SHEET 21/55 FOR ABUTMENT SECTION.
2. SEE SHEET MSE WALL F AND WALL G PLANS FOR EXISTING FOOTING REMOVAL SECTION.
3. SEE GENERAL NOTES FOR ABBREVIATION LEGEND

FOR INFORMATION ONLY

DESIGN AGENCY
2001 Crown Centre Drive, Suite 201, Columbus, OH 43201

DESIGNED	DRAWN	REVIEWED	DATE
TML	TML	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAD		3110095	

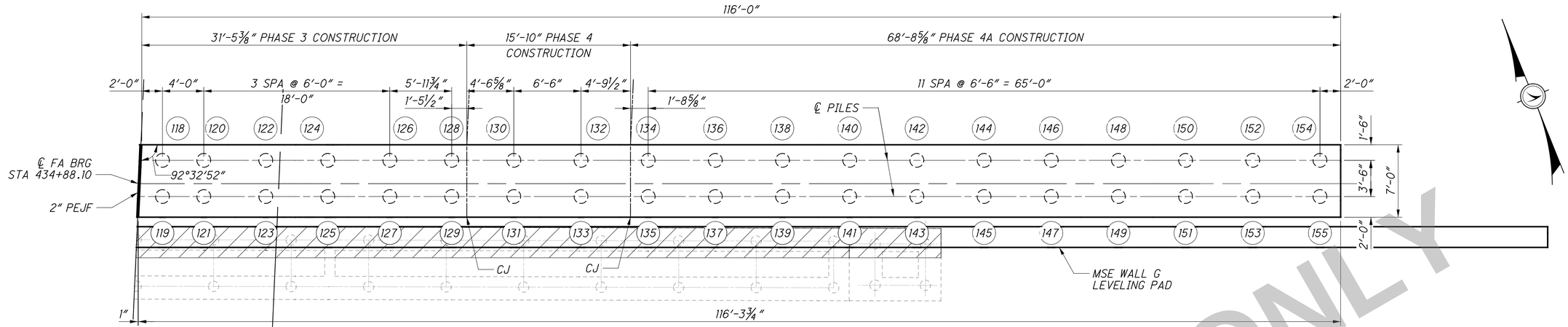
LEFT BRIDGE FOUNDATION PLAN
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

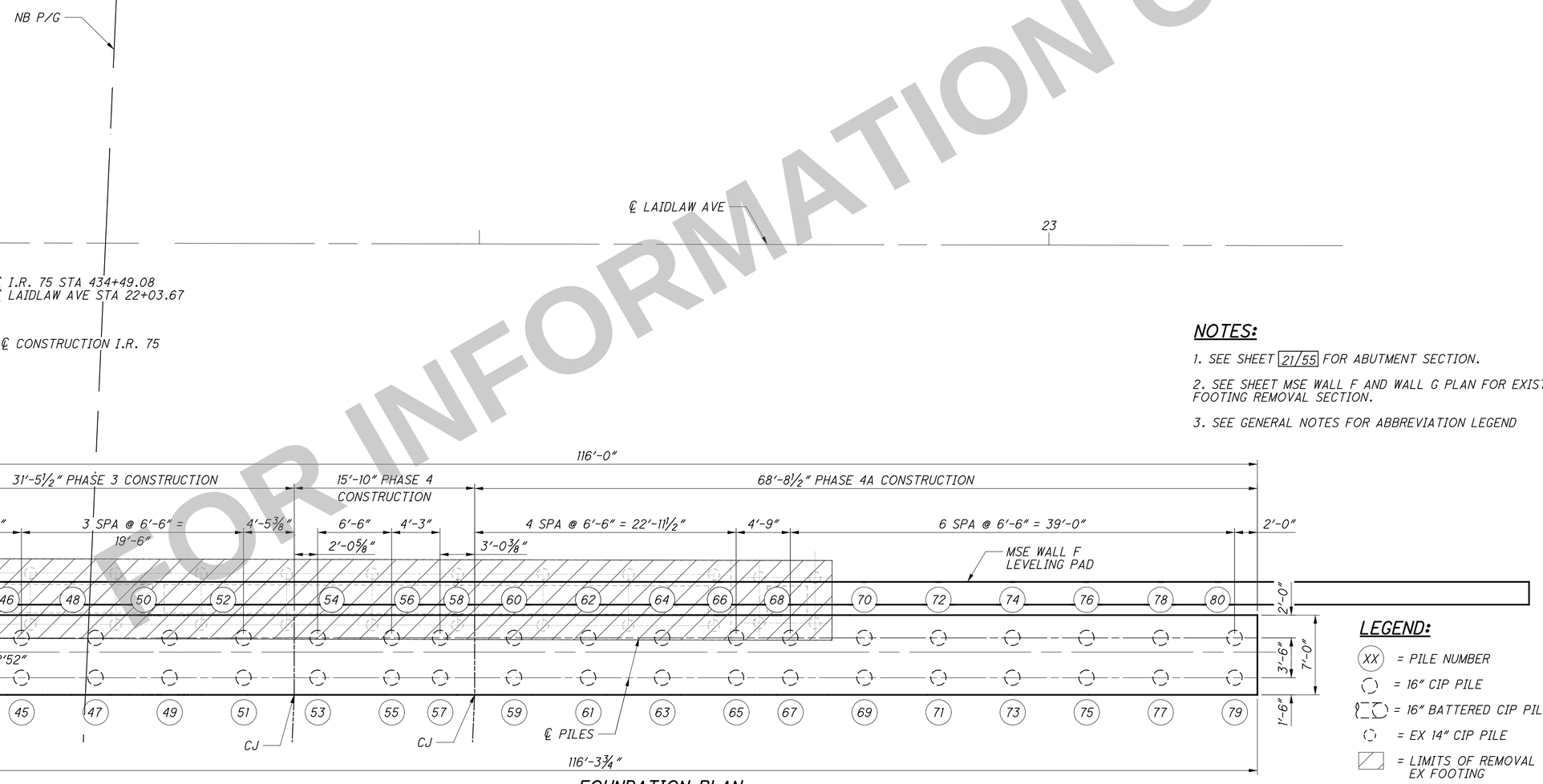
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2017

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FOUNDATION PLAN
(FORWARD ABUTMENT)



FOUNDATION PLAN
(REAR ABUTMENT)

NOTES:

1. SEE SHEET 21/55 FOR ABUTMENT SECTION.
2. SEE SHEET MSE WALL F AND WALL G PLAN FOR EXISTING FOOTING REMOVAL SECTION.
3. SEE GENERAL NOTES FOR ABBREVIATION LEGEND

LEGEND:

- (XX) = PILE NUMBER
- = 16" CIP PILE
- = 16" BATTERED CIP PILE
- = EX 14" CIP PILE
- = LIMITS OF REMOVAL OF EX FOOTING

FOR INFORMATION ONLY

DESIGN AGENCY
2001 Crocker Exchange Drive, Suite 200, Columbus, OH 43221

DESIGNED	DRAWN	REVIEWED	DATE
TML	TML	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAD		3110095	

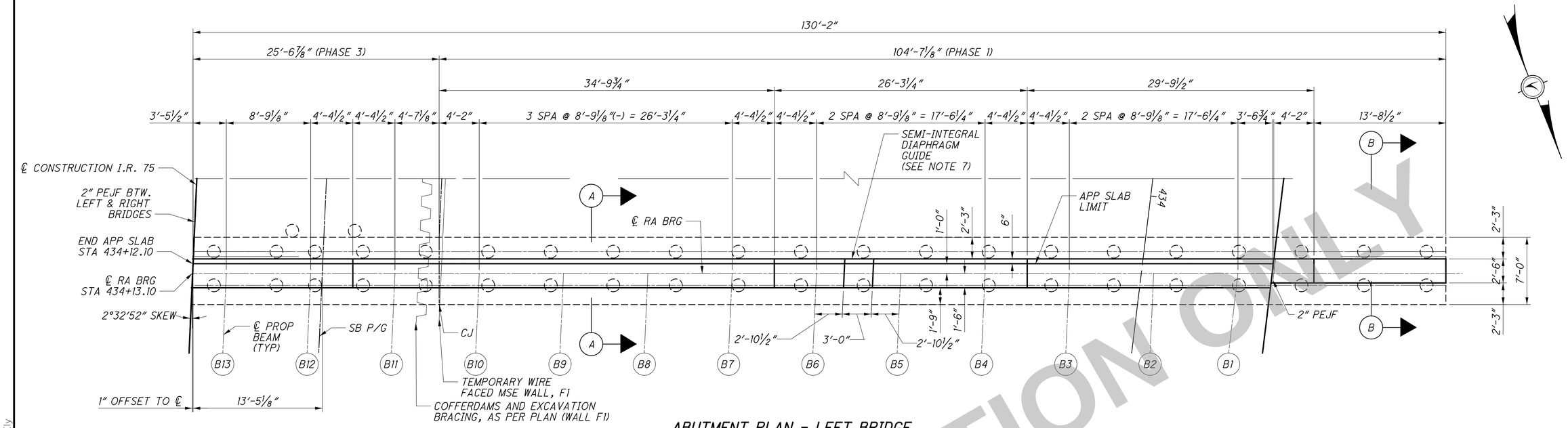
RIGHT BRIDGE FOUNDATION PLAN
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

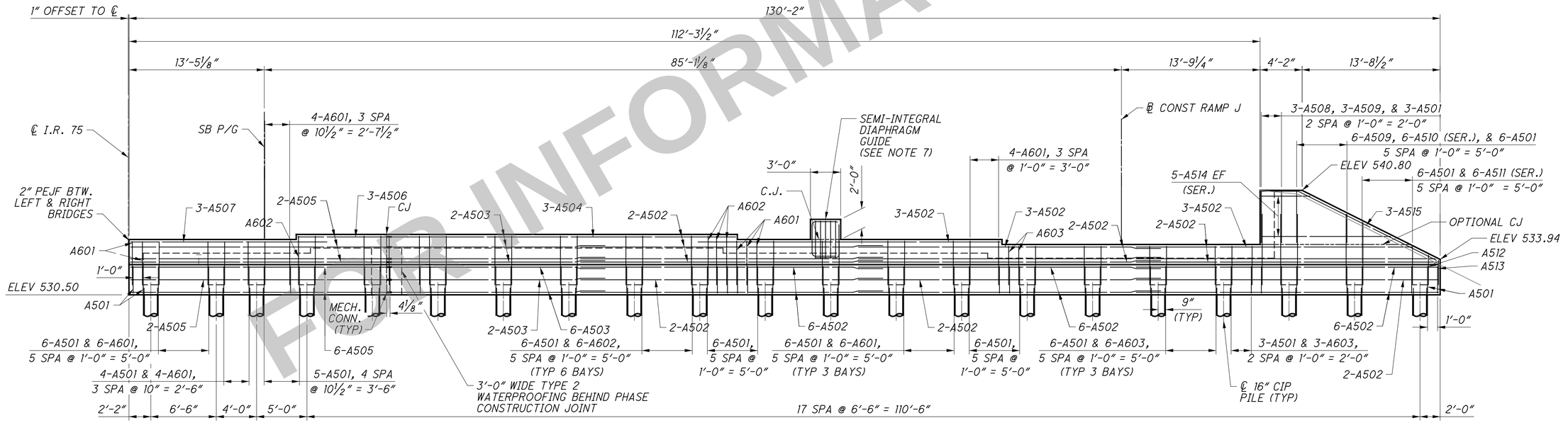
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ABUTMENT PLAN - LEFT BRIDGE



ABUTMENT ELEVATION - LEFT BRIDGE

(ELEVATIONS SHOWN ALONG ℄ BRG)

LEGEND:

◯ = 16" DIA CIP PILE

(BXX) = BEAM NUMBER

NOTES:

1. SEE SHEET 21/55 FOR SECTIONS A-A AND B-B.
2. SEE SHEET 36/55 FOR DIAPHRAGM REINFORCING DETAILS.
3. SEE SHEET 45/55 FOR RAILING DETAILS AND SCD SBR-1-20 AND SBR-2-20 FOR ADDITIONAL DETAILS.
4. SEE SHEET 15/55 FOR PILE LAYOUT.
5. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
6. SEE STANDARD DRAWING SICD-2-14 FOR ADDITIONAL SEMI-INTEGRAL DIAPHRAGM DETAILS NOT SHOWN, INCLUDING REINFORCING AND RUB PLATE DETAILS.

REAR ABUTMENT LEFT BRIDGE BEAM SEAT ELEVATIONS

BEAM	1	2	3	4	5	6	7	8	9	10	11	12	13
ELEV	535.50	535.50	535.50	536.00	536.00	536.00	536.50	536.50	536.50	536.50	536.50	536.00	536.00

FOR INFORMATION ONLY

DESIGN AGENCY
JMT
2200 Corporate Exchange Drive, Suite 310, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
TML	TML	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
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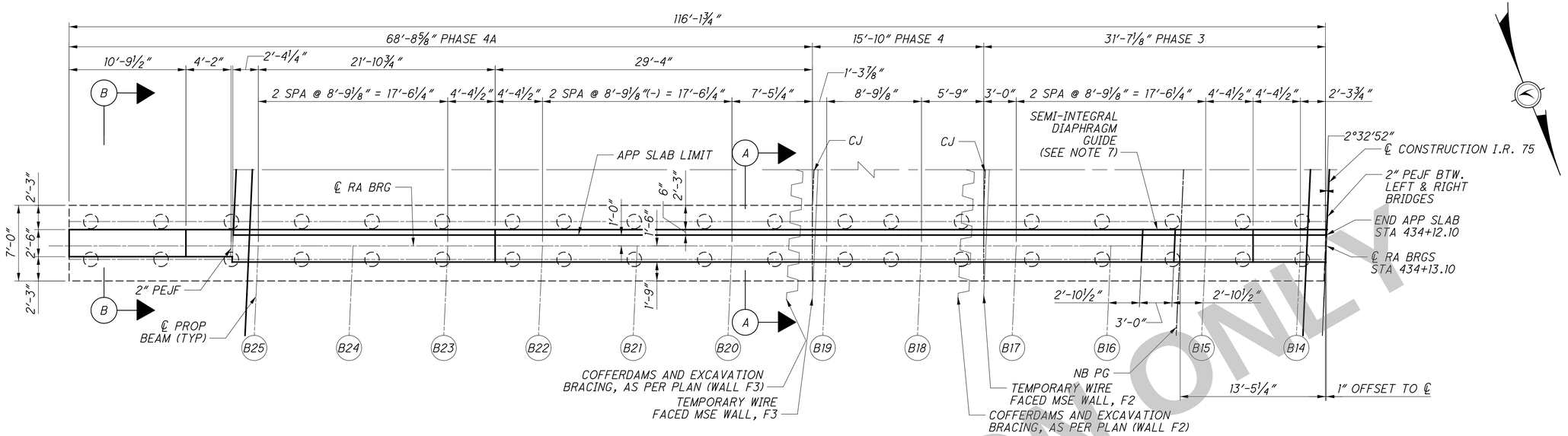
REAR ABUTMENT DETAILS
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

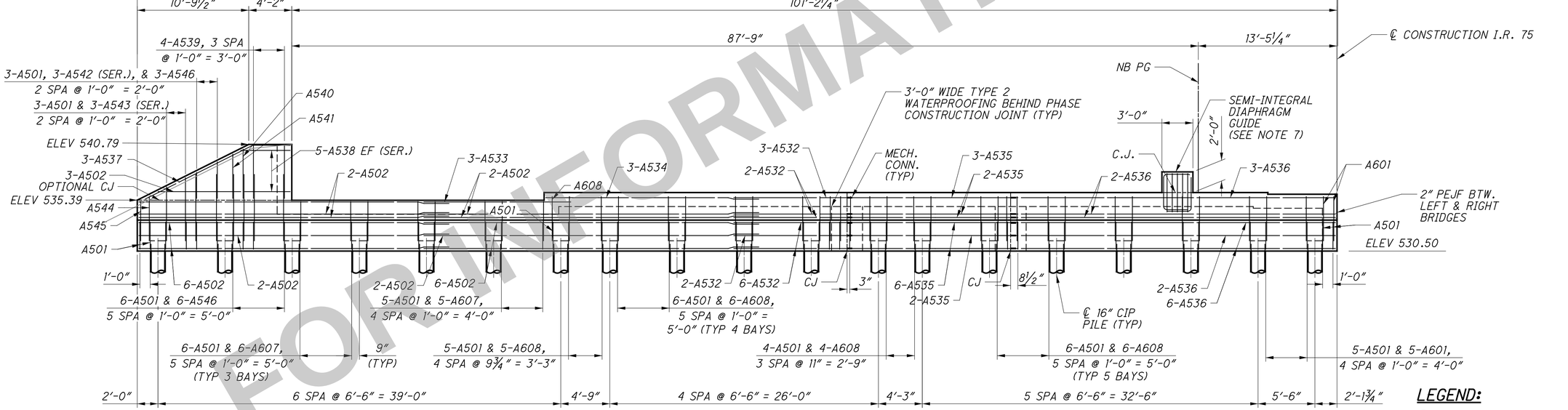
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2017

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ABUTMENT PLAN - RIGHT BRIDGE



ABUTMENT ELEVATION - RIGHT BRIDGE

(ELEVATIONS SHOWN ALONG ℄ BRG)

LEGEND:

○ = 16″ DIA CIP PILE

(BXX) = BEAM NUMBER

REAR ABUTMENT RIGHT BRIDGE BEAM SEAT ELEVATIONS												
BEAM	14	15	16	17	18	19	20	21	22	23	24	25
ELEV	536.00	536.17	536.17	536.17	536.17	536.17	536.17	536.17	536.17	535.42	535.42	535.42

NOTES:

1. SEE SHEET 21/55 FOR SECTIONS A-A AND B-B.
2. SEE SHEET 36/55 FOR DIAPHRAGM REINFORCING DETAILS.
3. SEE SHEET 46/55 FOR RAILING DETAILS AND SCD SBR-1-20 AND SBR-2-20 FOR ADDITIONAL DETAILS.
4. SEE SHEET 16/55 FOR PILE LAYOUT.
5. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
6. SEE STANDARD DRAWING SICD-2-14 FOR ADDITIONAL SEMI-INTEGRAL DIAPHRAGM DETAILS NOT SHOWN, INCLUDING REINFORCING AND RUB PLATE DETAILS.

FOR INFORMATION ONLY

DESIGN AGENCY
2000 Corporate Exchange Drive, Suite 501, Columbus, OH 43231

DESIGNED TML | DRAWN TML | CHECKED JAD | REVIEWED NCM | DATE 12-15-21 | STRUCTURE FILE NUMBER 3110095 | REVISED

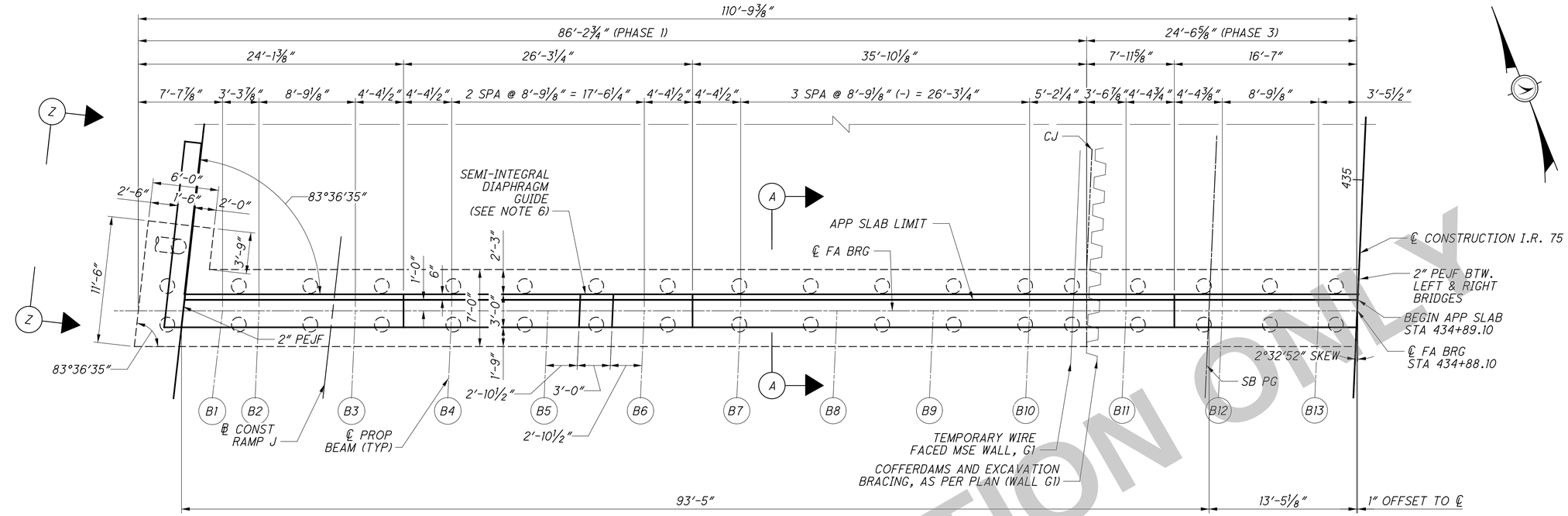
REAR ABUTMENT DETAILS
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

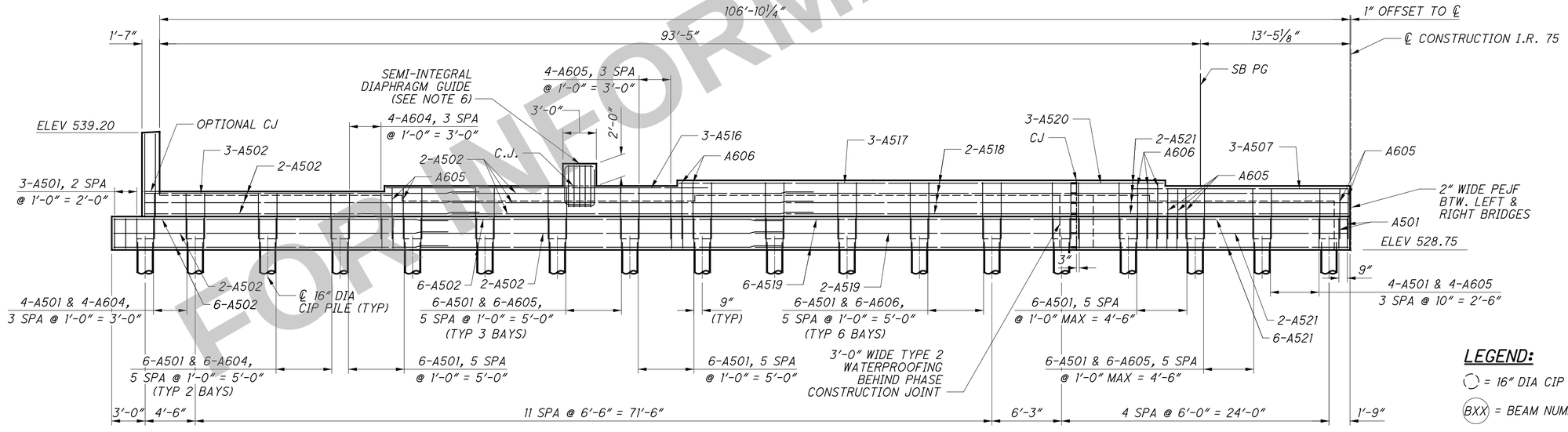
18 / 55

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2017

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ABUTMENT PLAN - LEFT BRIDGE



ABUTMENT ELEVATION - LEFT BRIDGE

(ELEVATIONS SHOWN ALONG ℄ BRG)

FORWARD ABUTMENT LEFT BRIDGE BEAM SEAT ELEVATIONS													
BEAM	1	2	3	4	5	6	7	8	9	10	11	12	13
ELEV	534.00	534.00	534.00	534.50	534.50	534.50	535.00	535.00	535.00	535.00	535.00	534.50	534.50

NOTES:

1. SEE SHEET 22/55 FOR SECTION A-A AND VIEW Z-Z.
2. SEE SHEET 37/55 FOR DIAPHRAGM REINFORCING DETAILS.
3. SEE SHEET 45/55 FOR RAILING DETAILS AND SCD SBR-1-20 AND SBR-2-20 FOR ADDITIONAL DETAILS.
4. SEE SHEET 15/55 FOR PILE LAYOUT.
5. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
6. SEE STANDARD DRAWING SICD-2-14 FOR ADDITIONAL SEMI-INTEGRAL DIAPHRAGM DETAILS NOT SHOWN, INCLUDING REINFORCING AND RUB PLATE DETAILS.

FOR INFORMATION ONLY

DESIGN AGENCY
2600 Corporate Exchange Drive, Suite 300, Columbus, OH 43231

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
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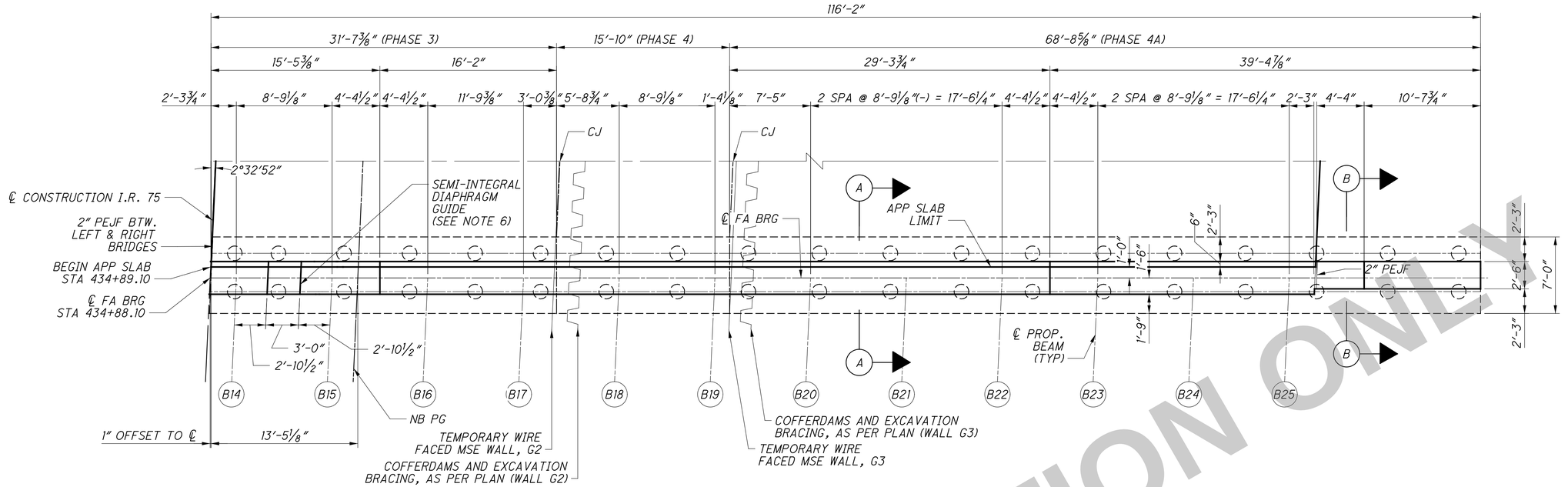
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BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

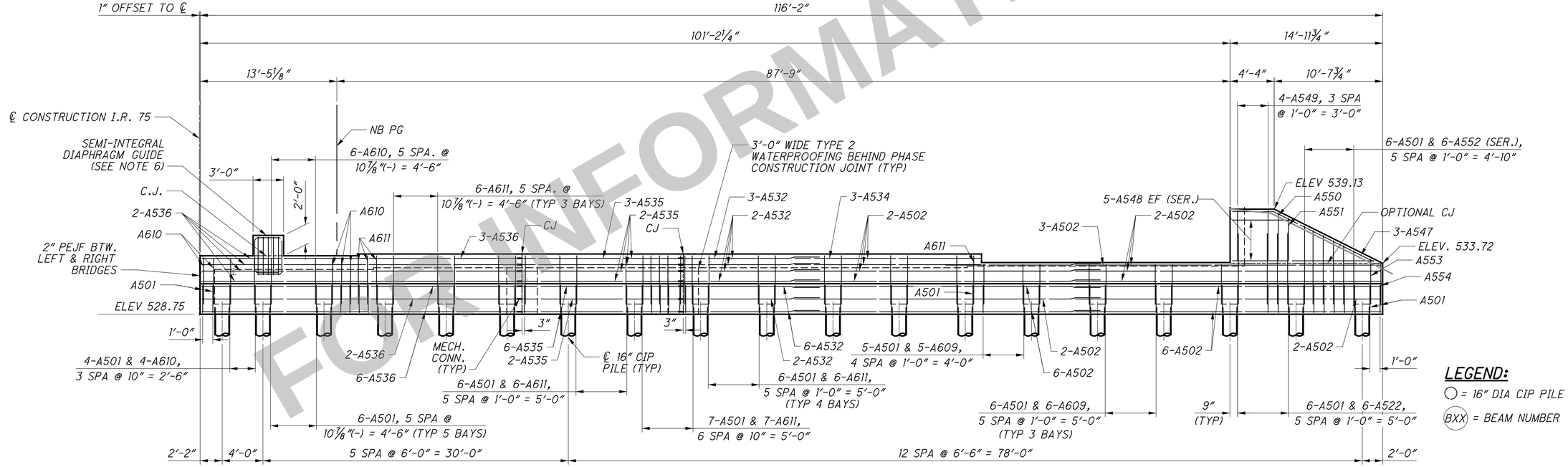
19 / 55

1408
2017

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ABUTMENT PLAN - RIGHT BRIDGE



ABUTMENT ELEVATION - RIGHT BRIDGE

(ELEVATIONS SHOWN ALONG ℄ BRG)

FORWARD ABUTMENT RIGHT BRIDGE BEAM SEAT ELEVATIONS												
BEAM	14	15	16	17	18	19	20	21	22	23	24	25
ELEV	534.50	534.50	534.67	534.67	534.67	534.67	534.67	534.67	534.67	533.83	533.83	533.83

NOTES:

1. SEE SHEET 21/55 FOR SECTIONS A-A AND B-B.
2. SEE SHEET 37/55 FOR DIAPHRAGM REINFORCING DETAILS.
3. SEE SHEET 46/55 FOR RAILING DETAILS AND SCD SBR-1-20 AND SBR-2-20 FOR ADDITIONAL DETAILS.
4. SEE SHEET 16/55 FOR PILE LAYOUT.
5. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
6. SEE STANDARD DRAWING SICD-2-14 FOR ADDITIONAL SEMI-INTEGRAL DIAPHRAGM DETAILS NOT SHOWN, INCLUDING REINFORCING AND RUB PLATE DETAILS.

FOR INFORMATION ONLY

DESIGN AGENCY
2600 Corporate Exchange Drive, Suite 300, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
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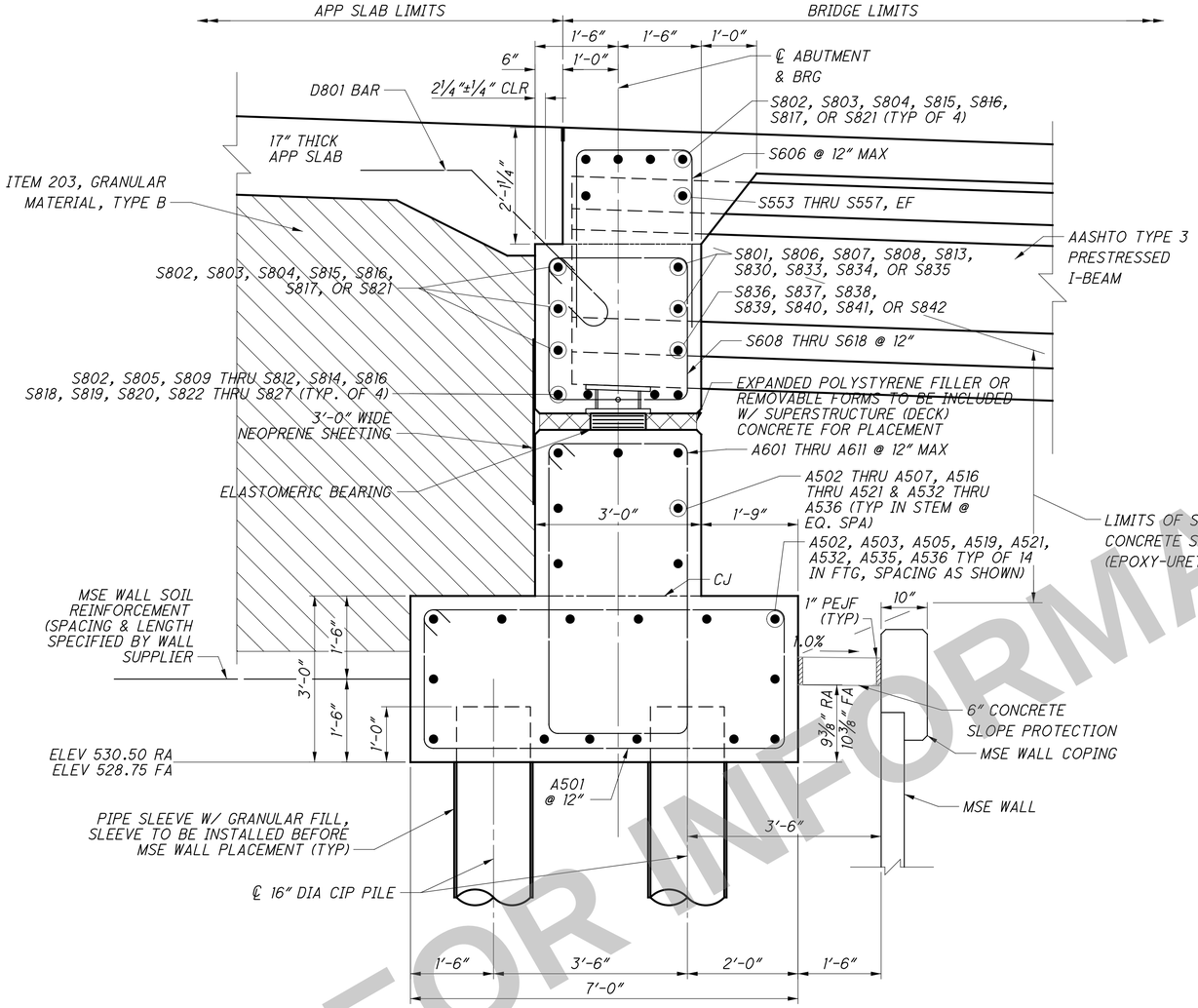
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I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

20/55

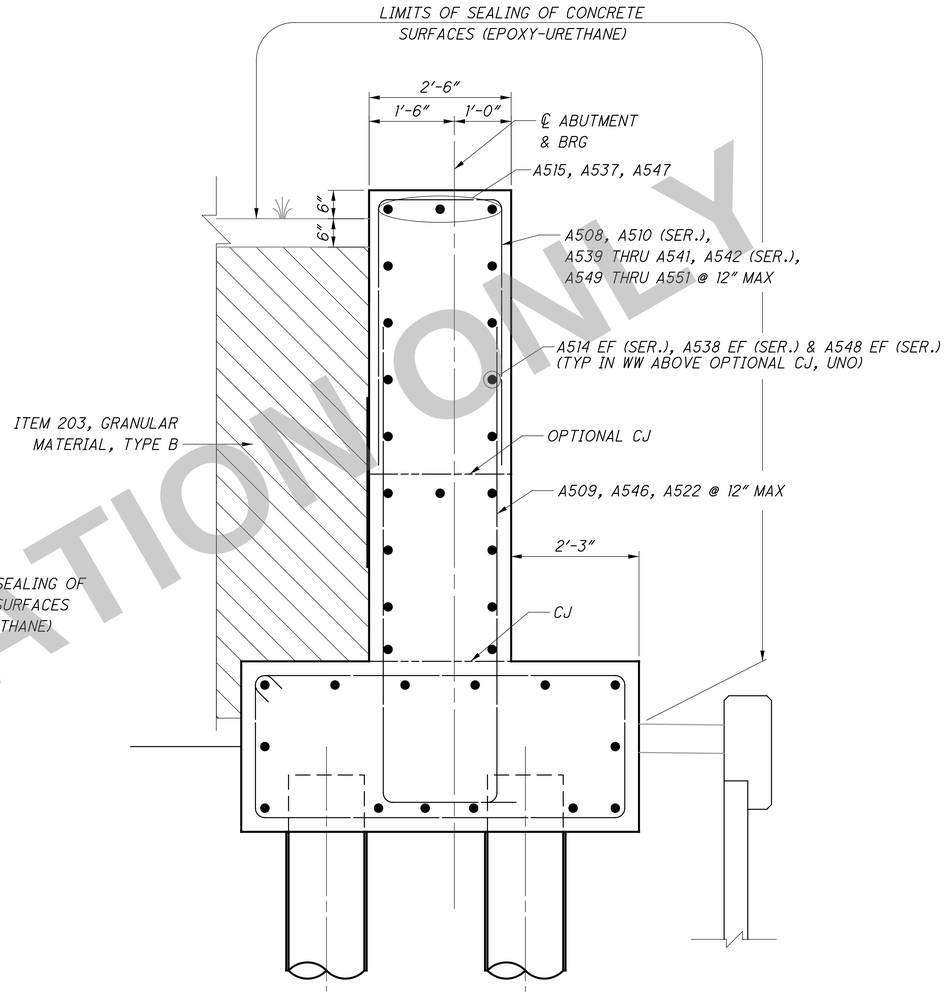
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SECTION A-A

(S602 THRU S605 & S607 NOT SHOWN FOR CLARITY)



SECTION B-B

(DETAILS SIMILAR TO SECTION A, EXCEPT AS NOTED)
(A511 (SER.), A512, A513, A543 (SER.), A544, A545, A552 (SER.), A553 & A554 ARE TYPE-3 BARS EXTENDING FROM BOT. OF FTG TO TOP OF WW AND ARE NOT SHOWN FOR CLARITY)

FOR INFORMATION ONLY

NOTES:

1. SEE SHEET MSE WALL PLANS FOR MSE WALL DETAILS.
2. SEE SHEETS 18/55 AND 17/55 FOR REAR ABUTMENT DETAILS.
3. SEE SHEETS 19/55 AND 20/55 FOR FORWARD ABUTMENT DETAILS.
4. SEE SHEETS 36/55 AND 37/55 FOR DIAPHRAGM DETAILS.
5. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

DESIGN AGENCY
2000 Corporate Exchange Drive, Suite 200, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
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CHECKED	REVISED		STRUCTURE FILE NUMBER
JAD			3110095

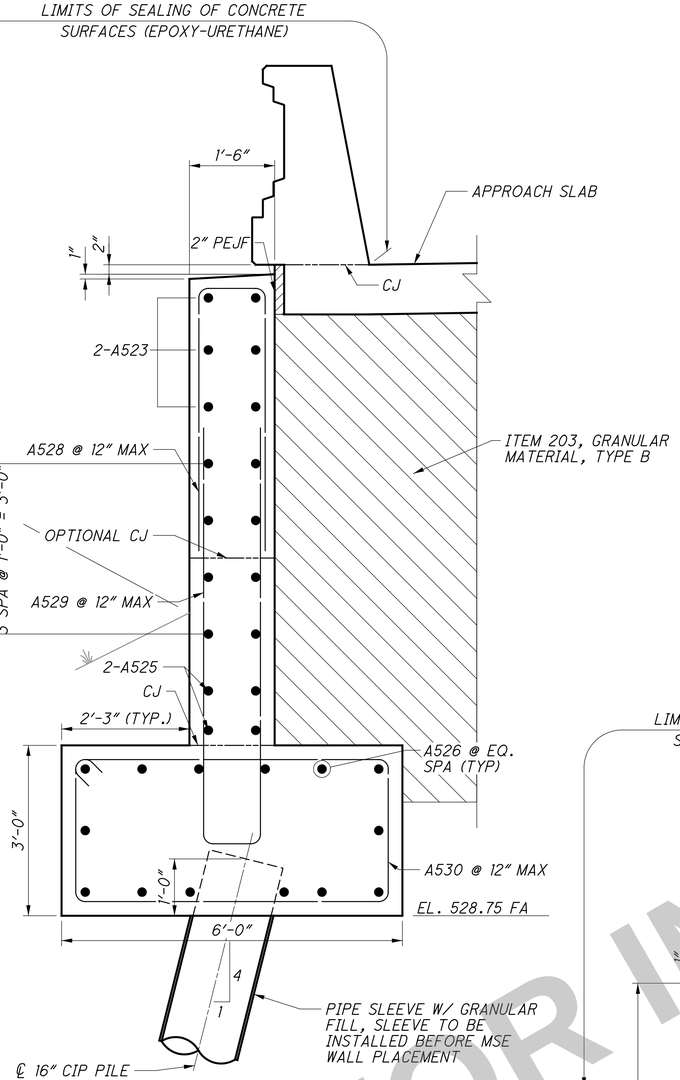
BRIDGE ABUTMENT DETAILS
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

21/55

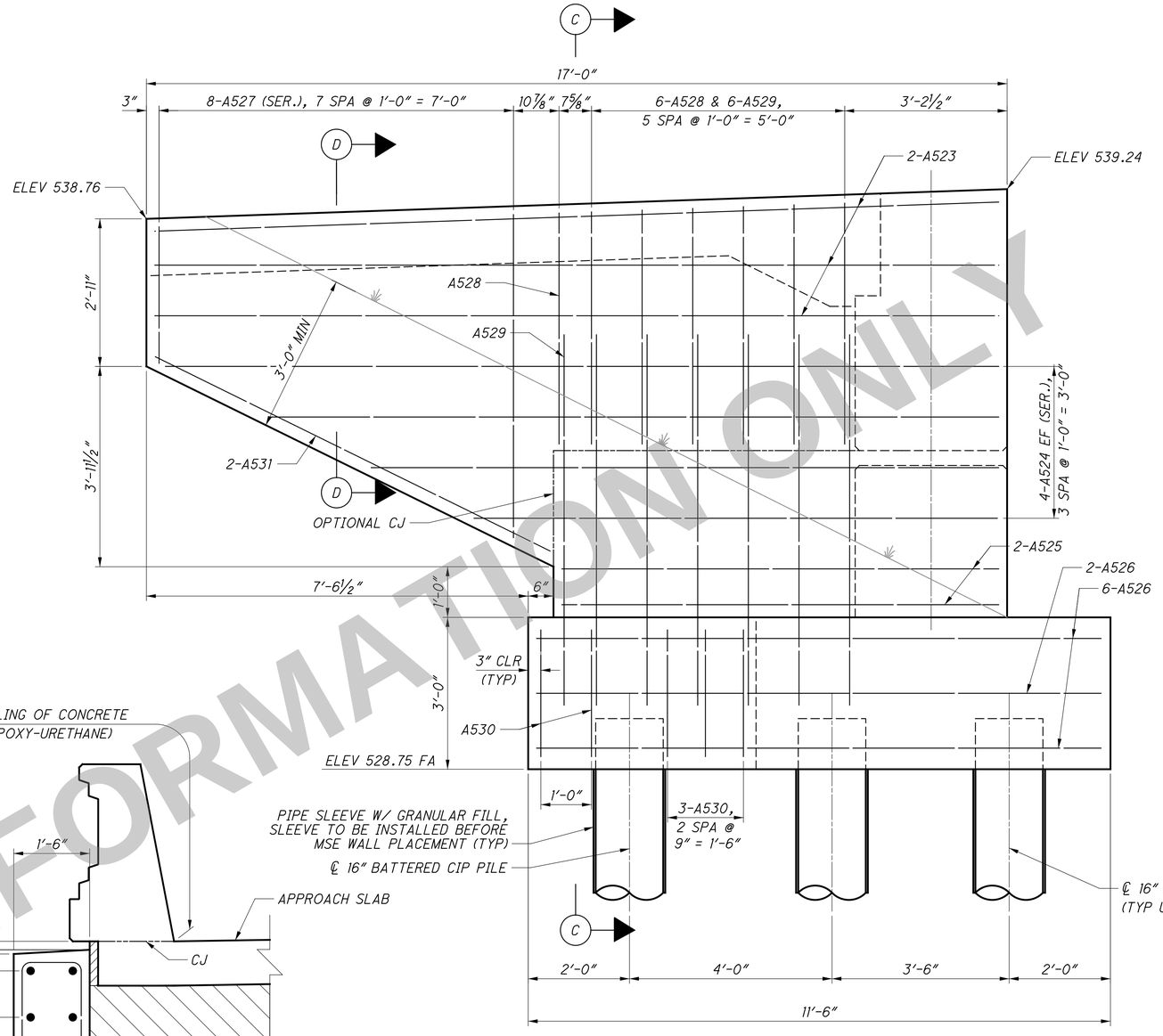
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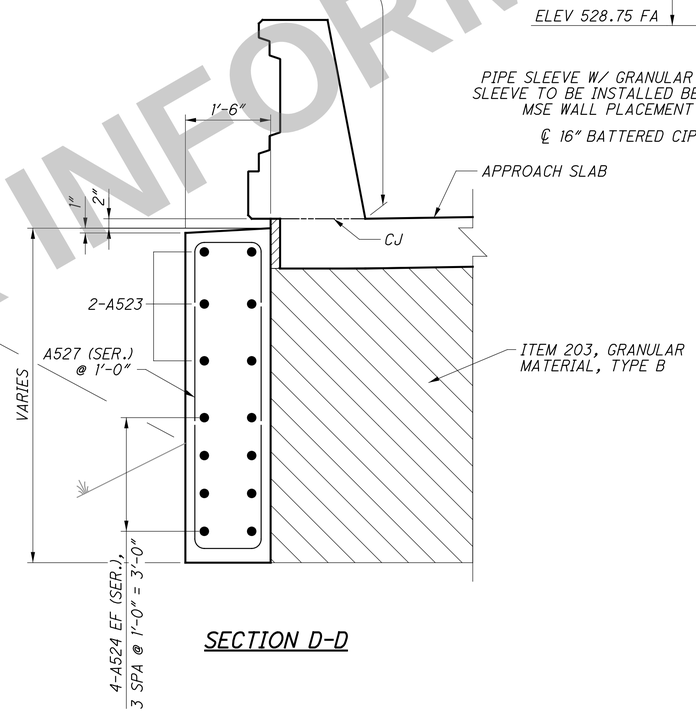


SECTION C-C

(A531 NOT SHOWN FOR CLARITY)



VIEW Z-Z



SECTION D-D

NOTES:

1. SEE SHEET MSE WALL PLANS FOR MSE WALL DETAILS.
2. SEE SHEETS 19/55 AND 20/55 FOR FORWARD ABUTMENT DETAILS.
3. SEE SHEETS 37/55 FOR DIAPHRAGM DETAILS.
4. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

FOR INFORMATION ONLY

DESIGN AGENCY
2000 Corporate Exchange Drive, Suite 200, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
TML	TML	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
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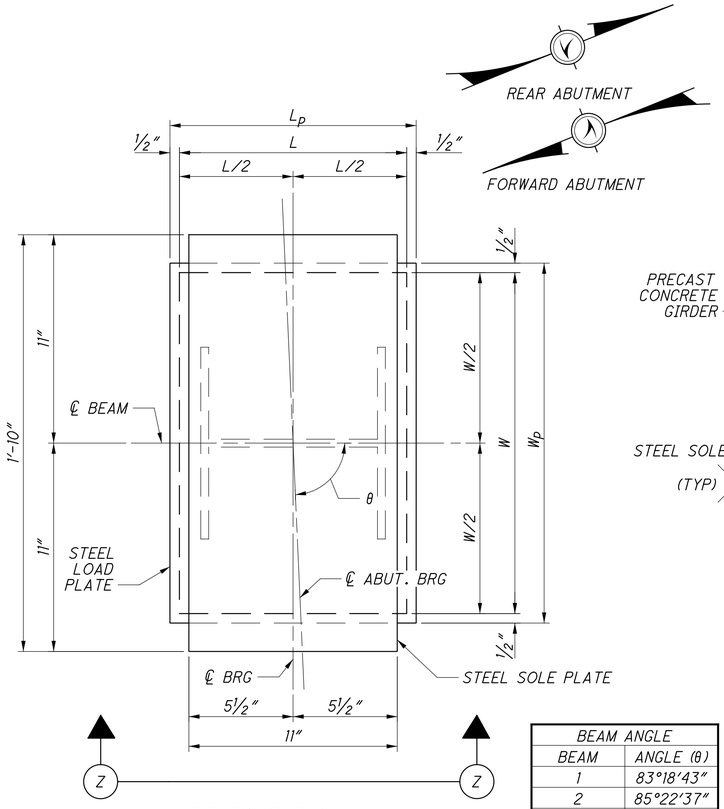
BRIDGE ABUTMENT DETAILS

BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

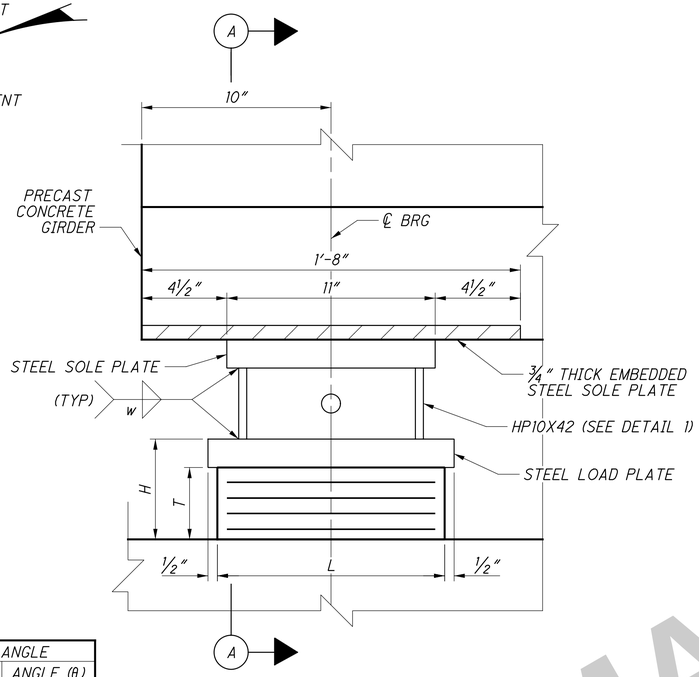
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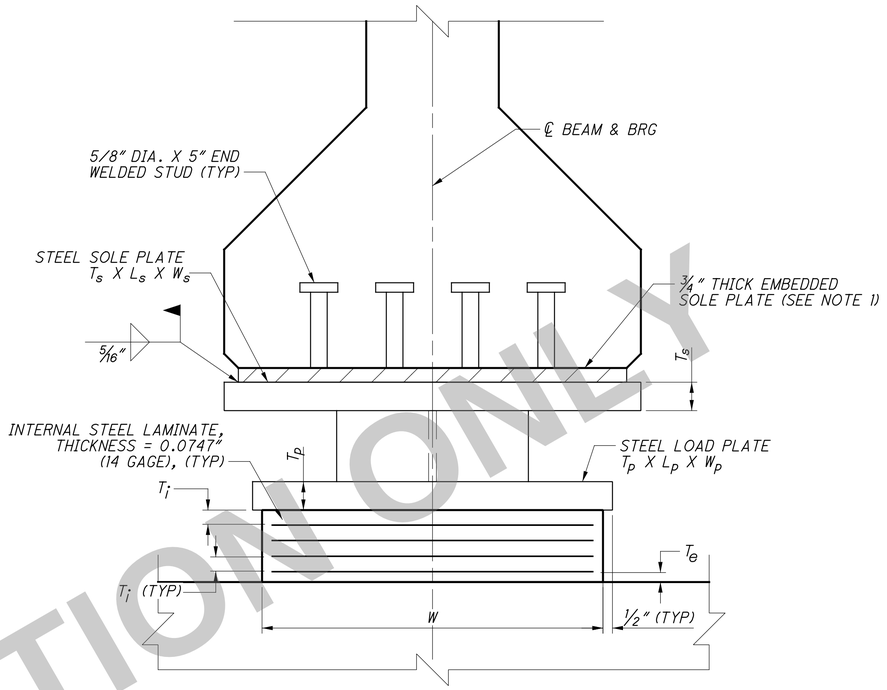


BEARING PAD PLAN

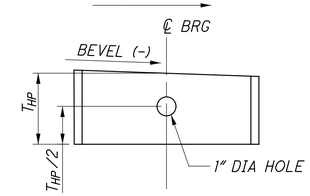
BEAM ANGLE	
BEAM	ANGLE (θ)
1	83°18'43"
2	85°22'37"
3 THRU 18	87°27'8"



VIEW Z-Z BEARING ELEVATION



SECTION A-A



DETAIL 1 - BEVELED HP POST

LAMINATED ELASTOMERIC BEARING DETAILS

SUBSTRUCTURE UNIT	TYPE	BEARING							SOLE PLATE				LOAD PLATE				SERVICE REACTIONS			
		L	W	T_e	T_i	N	T	H	T_s	L_s	W_s	w	T_p	L_p	W_p	w	R_{DL} (KIP)	R_{LL}^{MIN} (KIP)	R_{LL}^{MAX} (KIP)	LIVE LOAD ROTATION (RAD.)
LEFT REAR ABUTMENT	EXP	1'-1"	1'-8"	1/2"	3/4"	3	3 13/16"	5 5/16"	1 1/2"	11"	1'-10"	5/16"	1 1/2"	1'-2"	1'-9"	5/16"	83.00	0.00	46.90	0.001620
RIGHT REAR ABUTMENT	EXP	1'-1"	1'-8"	1/2"	3/4"	3	3 13/16"	5 5/16"	1 1/2"	11"	1'-10"	5/16"	1 1/2"	1'-2"	1'-9"	5/16"	85.80	0.00	55.40	0.001611
LEFT FORWARD ABUTMENT	EXP	1'-1"	1'-8"	1/2"	3/4"	3	3 13/16"	5 5/16"	1 1/2"	11"	1'-10"	5/16"	1 1/2"	1'-2"	1'-9"	5/16"	83.00	0.00	46.90	0.001620
RIGHT FORWARD ABUTMENT	EXP	1'-1"	1'-8"	1/2"	3/4"	3	3 13/16"	5 5/16"	1 1/2"	11"	1'-10"	5/16"	1 1/2"	1'-2"	1'-9"	5/16"	85.80	0.00	55.40	0.001611

HP POST HEIGHTS (T_{HP})

SUBSTRUCTURE UNIT	BEAM NUMBER																									BEVEL
	LEFT BRIDGE													RIGHT BRIDGE												
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
REAR ABUTMENT	1 3/4"	5 11/16"	7 15/16"	3 13/16"	6 3/4"	7 9/16"	3 15/16"	5 1/2"	7 1/8"	5 3/4"	3 15/16"	7 7/8"	3 5/8"	2 7/8"	5 1/16"	7 5/16"	8 15/16"	10 1/2"	8 13/16"	7"	5 1/8"	2 15/16"	9 3/4"	6 1/2"	2 1/8"	-2.00%
FORWARD ABUTMENT	1 5/8"	3 1/16"	6 5/8"	2 7/16"	4 1/4"	6 1/16"	2 3/8"	3 15/16"	5 1/2"	4 1/8"	2 5/16"	6 3/16"	1 15/16"	1 3/16"	5 3/8"	5 5/8"	7 3/16"	8 3/4"	7"	5 3/16"	3 5/16"	1 1/16"	8 15/16"	5 11/16"	1 1/4"	-2.50%

LEGEND:

T_e = THICKNESS OF EXTERNAL ELASTOMER LAYER

T_i = THICKNESS OF INTERNAL ELASTOMER LAYER

N = NUMBER OF INTERNAL ELASTOMER LAYERS BETWEEN STEEL LAMINATES

NOTES:

1. SEE STANDARD DRAWINGS PSID-1-99 AND SICD-1-96 FOR ADDITIONAL DETAILS NOT SHOWN.
2. THE ELASTOMER SHALL HAVE A HARDNESS OF 60 DUROMETER. THE BEARINGS WERE DESIGNED IN ACCORDANCE WITH SECTION 14.7.6 (METHOD A) OF THE 2012 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE LONG TERM COMPRESSION PROOF LOAD TEST (AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6) IS NOT REQUIRED.
3. SHOP FABRICATE THE LOAD PLATES AND HP SHAPES USING ASTM A709 GRADE 50 AND GALVANIZE THE STEEL LOAD PLATES.
4. BOND THE GALVANIZED STEEL LOAD PLATES TO THE ELASTOMERIC BEARING BY VULCANIZING DURING THE MOLDING PROCESS.
5. CONTROL THE WELDING SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300°F AS DETERMINED BY PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.
6. BEARINGS SHALL BE CLEARLY MARKED BY THE FABRICATOR WITH THE FOLLOWING INFORMATION TO FACILITATE PROPER PLACEMENT: SUBSTRUCTURE UNIT, BEAM NUMBER, TOP, AND FORWARD STATION DIRECTION.
7. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

FOR INFORMATION ONLY

DESIGN AGENCY
2000 Corporate Exchange Drive, Suite 200, Columbus, OH 43231

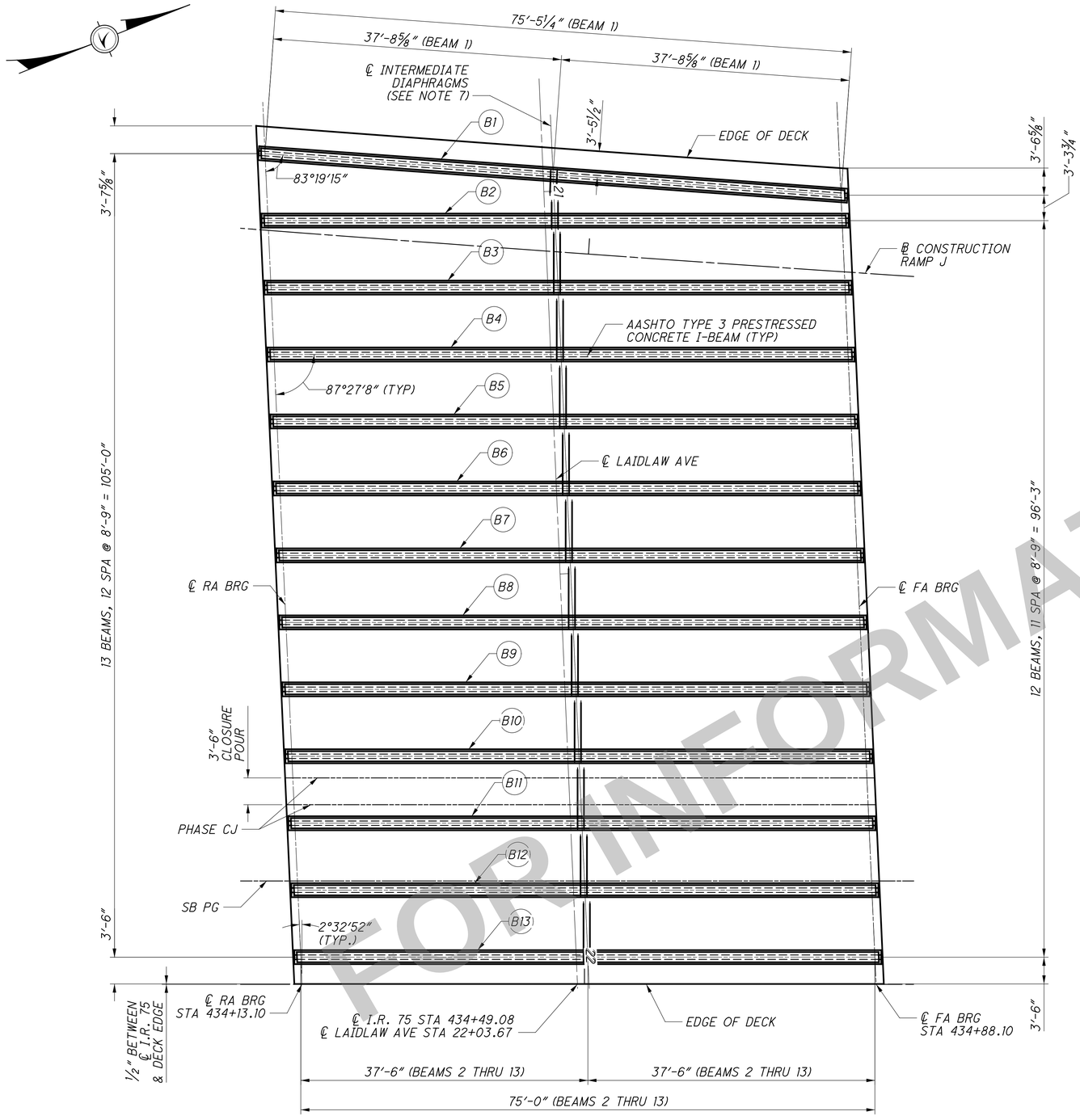
DESIGNED	DRAWN	REVIEWED	DATE
TML	TML	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAD		3110095	

BEARING DETAILS
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

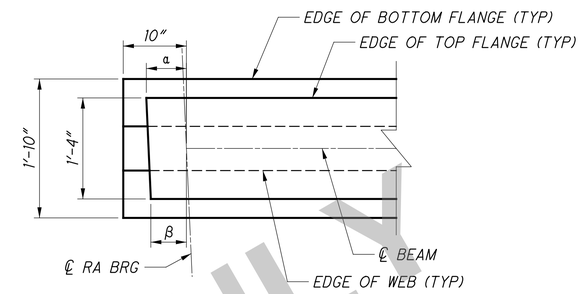
HAM-75-7.85
PID No. 77889

1412
2017

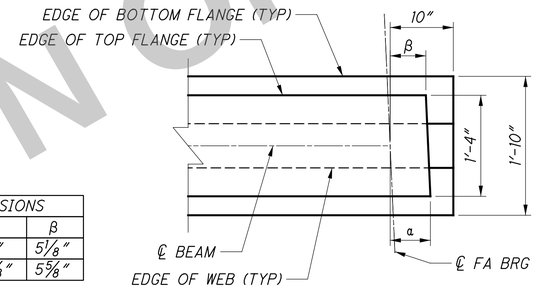
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FRAMING PLAN



BEAM CLIP DETAIL (REAR ABUTMENT)



BEAM CLIP DETAIL (FORWARD ABUTMENT)

CLIP DIMENSIONS		
BEAM	α	β
1	7"	5⅛"
2 THRU 13	6⅜"	5⅝"

LEGEND:

(BXX) = BEAM NUMBER

NOTES:

1. SEE PLAN INSERT SHEETS 27/55 THROUGH 34/55 WHICH CONTAINS ARCHIVED STANDARD DRAWING PSID-1-99 FOR ADDITIONAL DETAILS NOT SHOWN.
2. SEE SHEET 26/55 FOR BEAM DETAILS.
3. SEE SHEET 23/55 FOR BEARING DETAILS.
4. SEE SHEET 43/55 FOR BEAM DEFLECTION AND CAMBER.
5. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
6. DIAPHRAGMS IN CLOSURE POUR TO BE POURED PRIOR TO THE CLOSURE POUR BUT AFTER THE ADJACENT DECK POURS.
7. INTERMEDIATE DIAPHRAGMS SHALL BE CAST-IN-PLACE CONCRETE DIAPHRAGMS ONLY.

FOR INFORMATION ONLY

DESIGN AGENCY
2000 Corporate Exchange Drive, Suite 300, Columbus, OH 43231

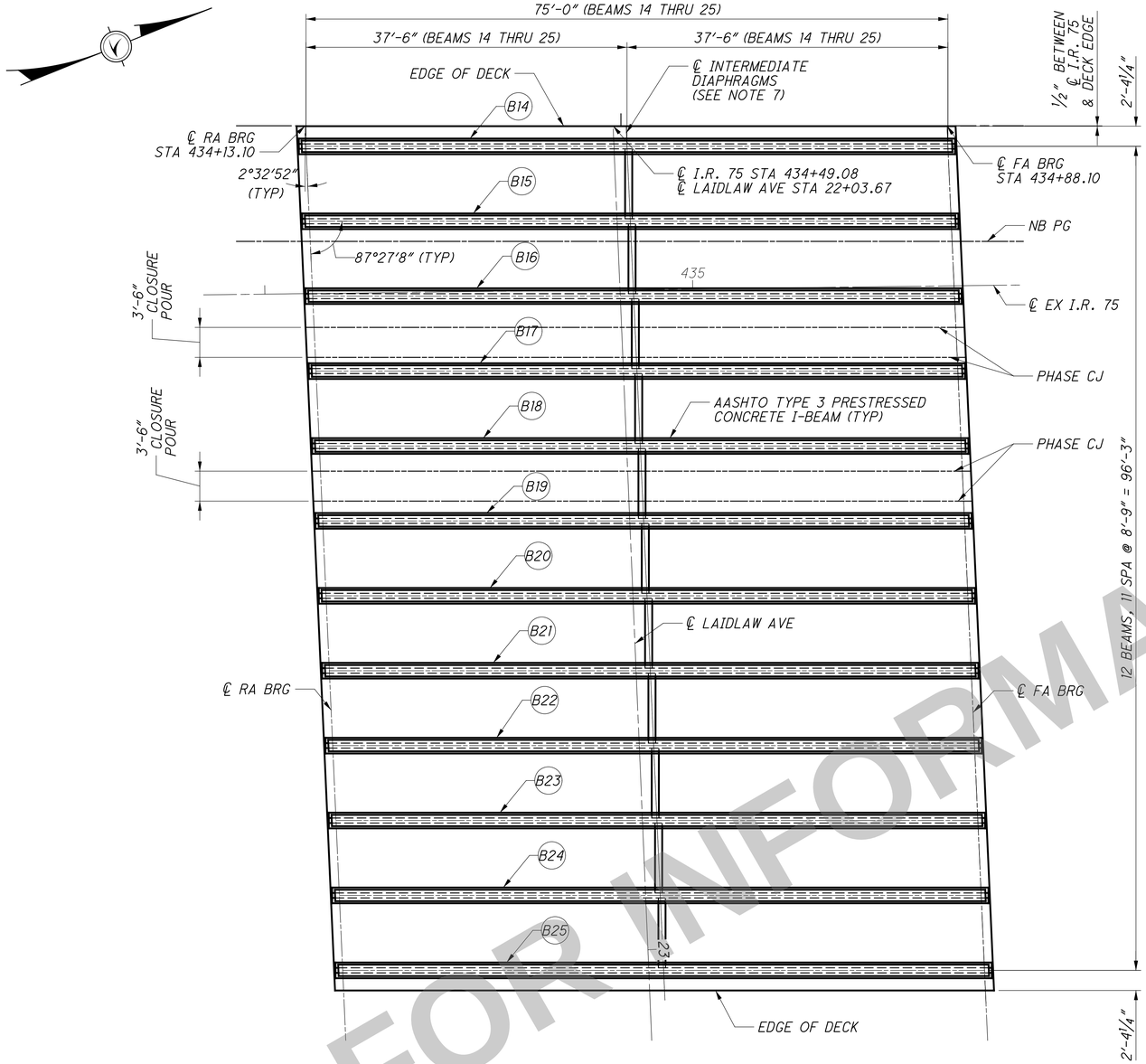
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TML	TML	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PPA		3110095	

LEFT BRIDGE FRAMING PLAN
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

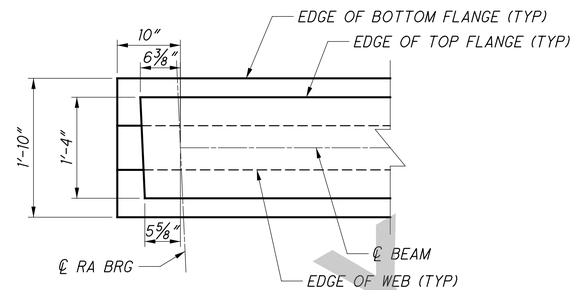
HAM-75-7.85
PID No. 77889

1413
2017

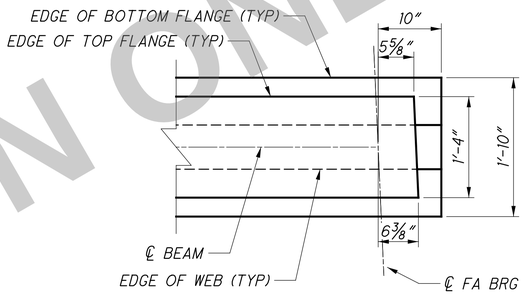
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FRAMING PLAN



BEAM CLIP DETAIL (REAR ABUTMENT)



BEAM CLIP DETAIL (FORWARD ABUTMENT)

LEGEND:

(BXX) = BEAM NUMBER

NOTES:

1. SEE PLAN INSERT SHEETS 27/55 THROUGH 34/55 WHICH CONTAINS ARCHIVED STANDARD DRAWING PSID-1-99 FOR ADDITIONAL DETAILS NOT SHOWN.
2. SEE SHEET 26/55 FOR BEAM DETAILS.
3. SEE SHEET 23/55 FOR BEARING DETAILS.
4. SEE SHEET 44/55 FOR BEAM DEFLECTION AND CAMBER.
5. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
6. DIAPHRAGMS IN CLOSURE POUR TO BE POURED PRIOR TO THE CLOSURE POUR BUT AFTER THE ADJACENT DECK POURS.
7. INTERMEDIATE DIAPHRAGMS SHALL BE CAST-IN-PLACE CONCRETE DIAPHRAGMS ONLY.

FOR INFORMATION ONLY

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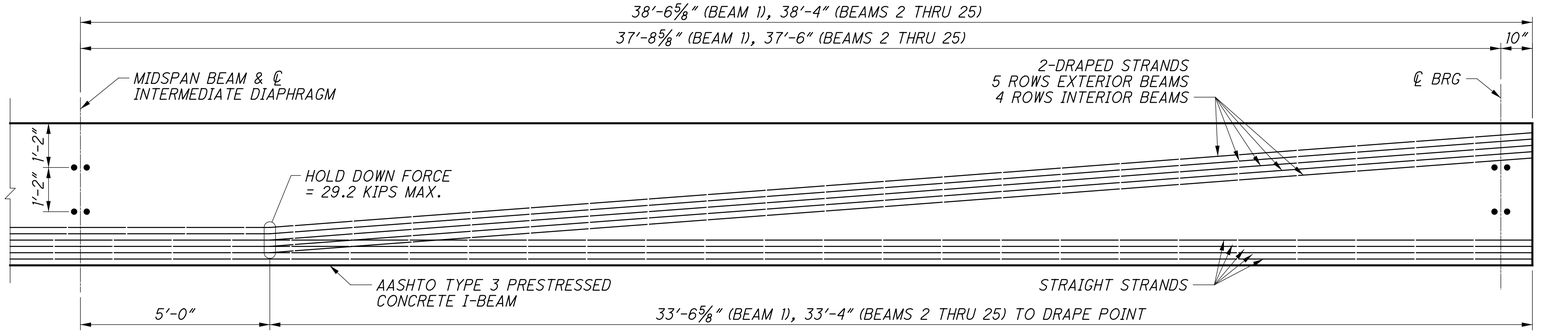
DESIGN AGENCY
2000 Corporate Exchange Drive, Suite 200, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
TML	TML	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PPA		3110095	

RIGHT BRIDGE FRAMING PLAN
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

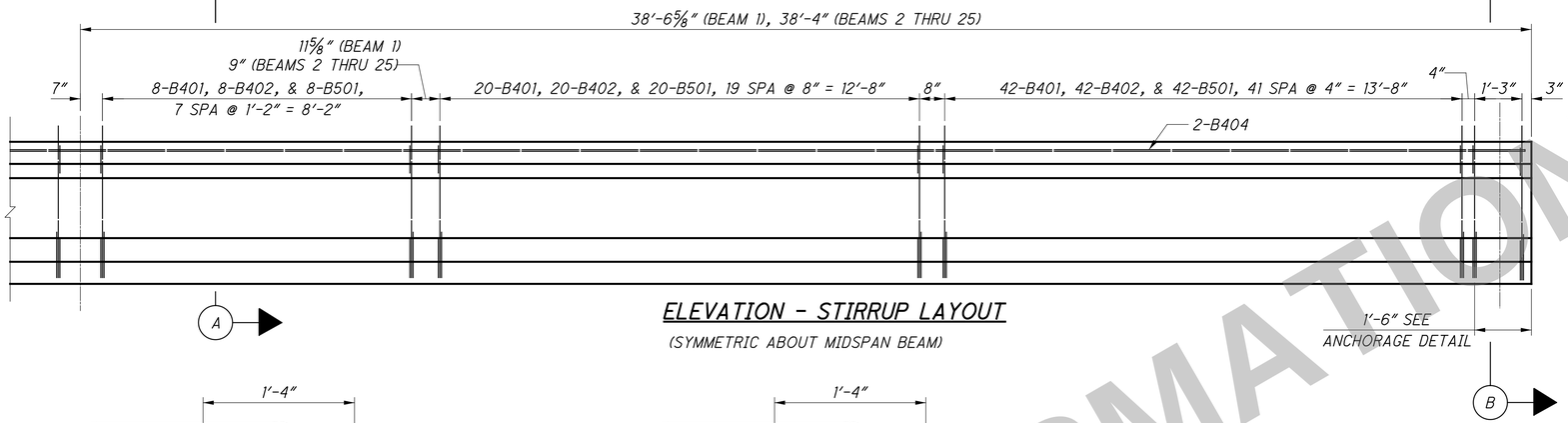
HAM-75-7.85
PID No. 77889

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2017



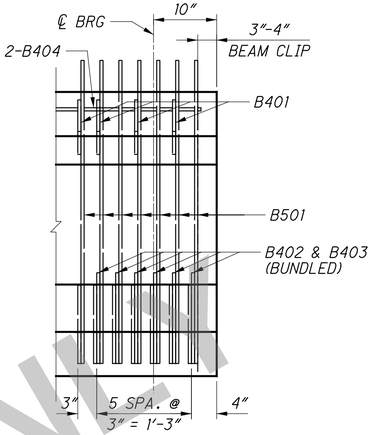
ELEVATION - STRAND DETAILS

(SYMMETRIC ABOUT MIDSPAN BEAM)



ELEVATION - STIRRUP LAYOUT

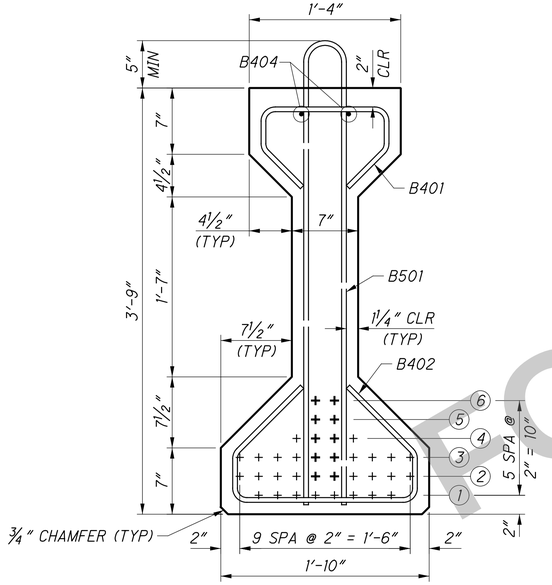
(SYMMETRIC ABOUT MIDSPAN BEAM)



ANCHORAGE DETAIL

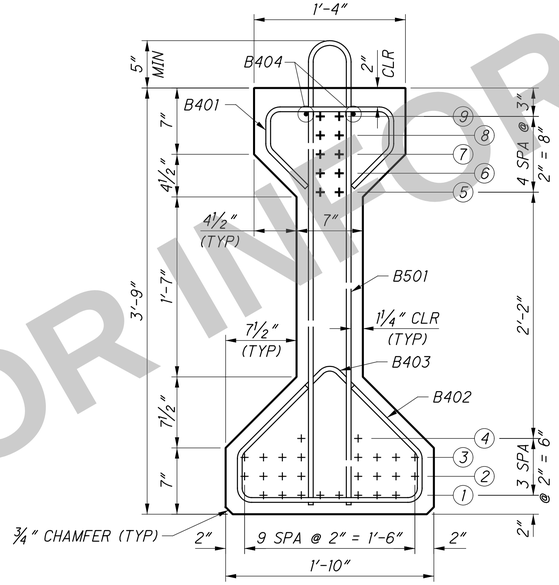
(STRANDS NOT SHOWN FOR CLARITY)

REINFORCING LIST (TOTAL)				
MARK	TYPE	NUMBER	BAR LENGTH	TOTAL WEIGHT (LBS)
B401	4	3650	2'-7"	6315
B402	2	3800	3'-11"	9956
B403	3	300	3'-1"	618
B404	ST.	150	26'-11"	2697
B501	1	3800	8'-6"	33706



SECTION A-A AASHTO TYPE 3

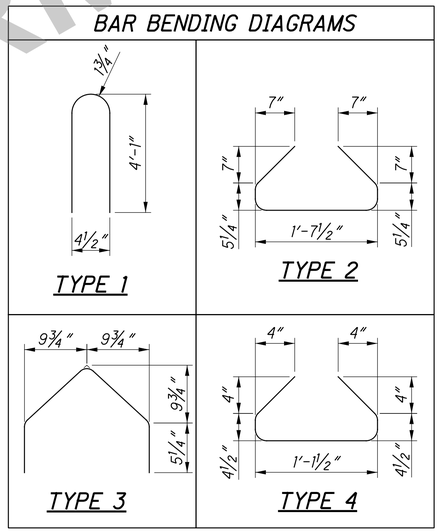
(AT MIDSPAN)



SECTION B-B AASHTO TYPE 3

(AT BEAM ENDS)

BAR BENDING DIAGRAMS



NOTES:

1. SEE PLAN INSERT SHEETS 27/55 THROUGH 34/55 WHICH CONTAINS ARCHIVED STANDARD DRAWING PSID-1-99 FOR ADDITIONAL DETAILS NOT SHOWN.
2. BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT IDENTIFIES THE BAR LOCATION, THE NEXT DIGIT INCH-POUND BAR SIZE, AND THE REMAINING DIGIT ITS SEQUENCE NUMBER. FOR INSTANCE, B401 INDICATES A NO. 4 BAR.
3. BAR DIMENSIONS SHOWN ARE OUT-TO-OUT.
4. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
5. MIN. SPLICE LENGTH FOR #4 BARS SHALL BE 1'-11".
6. IF SHIPPING STRANDS ARE USED THE FABRICATOR SHALL PROVIDE A DE-TENSIONING PROCEDURE FOR THE SHIPPING STRANDS, AND THE CONTRACTOR SHALL HAVE A PROFESSIONAL ENGINEER WHO IS REGISTERED IN OHIO REVIEW AND APPROVE THE PROCEDURE. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO THE BEAMS CAUSED BY THE SHIPPING STRAND DE-TENSIONING. DAMAGED BEAMS SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER OR THE BEAMS SHALL BE REJECTED.
7. SEE SHEETS 24/55 AND 25/55 FOR FRAMING PLAN.
8. SEE SHEETS 43/55 AND 44/55 FOR BEAM CAMBER INFORMATION.
9. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
10. INTERMEDIATE DIAPHRAGMS SHALL BE CAST-IN-PLACE CONCRETE DIAPHRAGMS ONLY.
11. SHIPPING STRANDS: THE FABRICATOR MAY ADD SHIPPING STRANDS AT THE LOCATIONS SHOWN ON THIS STANDARD. THESE SHIPPING STRANDS SHALL BE DEBONDED FOR THE ENTIRE LENGTH OF THE BEAM EXCEPT FOR THE LAST 10'-0" AT EACH END. ADDITIONAL REINFORCING STEEL SHALL BE PLACED IN THE TOP FLANGE AT SHIPPING STRAND LOCATIONS TO MEET AASHTO 5.10.10.1 AT EACH END OF THE 10'-0" OF BONDED STRAND AND 5.10.10.2 ALONG THE ENTIRE BONDED LENGTH OF THE SHIPPING STRAND. THE STRANDS SHALL BE CUT ACCORDING TO CMS 515.16 AFTER ALL HANDLING OPERATIONS ARE COMPLETE.

BEAM STRAND INFORMATION																					
BEAM LOCATION	NUMBER OF STRANDS PER ROW															TOTAL STRANDS	CONCRETE STRENGTHS (KSI)		B401 BARS REQ'D	B402 BARS REQ'D	B403 BARS REQ'D	B404 BARS REQ'D	B501 BARS REQ'D
	ROW NUMBER (MIDSPAN)						ROW NUMBER (BEAM ENDS)										f'ci	f'c					
	1	2	3	4	5	6	1	2	3	4	5	6	7	8	9								
B1, B13, B14, B25	8	10	10	2	2	2	8	8	8	-	2	2	2	2	2	34	5.5	7.0	146	152	12	6	152
B2 THRU B12, B15 THRU B24	8	10	10	4	2	-	8	8	8	2	-	2	2	2	2	34	5.5	7.0	146	152	12	6	152

FOR INFORMATION ONLY

DESIGN AGENCY: 3MEA, 3955 Corporate Exchange Drive, Suite 200, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
TML	TML	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PPA		3110095	

BEAM DETAILS

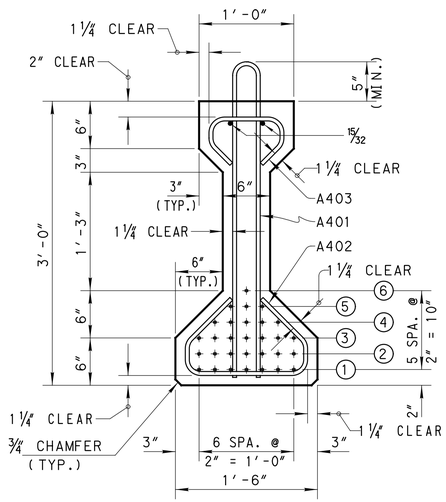
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

26/55

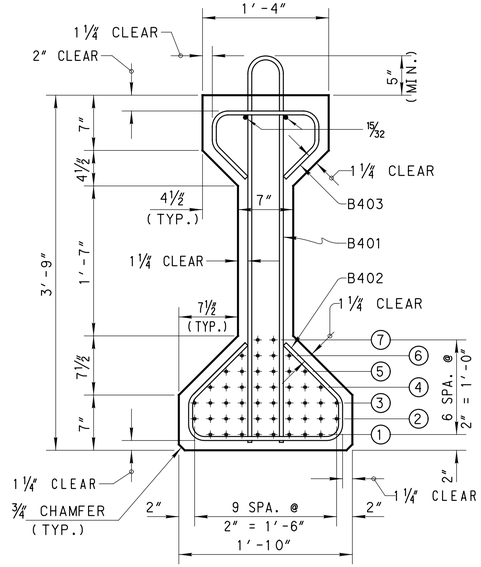
1415
2017

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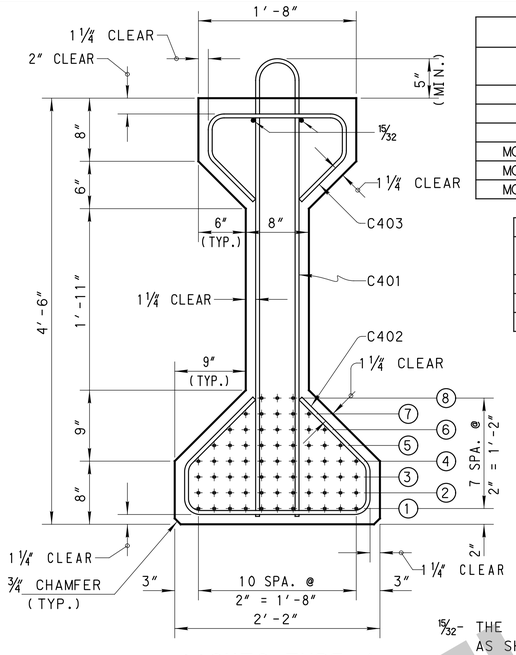
AASHTO TYPE 2

(30 STRANDS MAXIMUM)



AASHTO TYPE 3

(48 STRANDS MAXIMUM)



AASHTO TYPE 4

(68 STRANDS MAXIMUM)

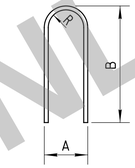
15/32- THE NUMBER OF BARS SHALL BE PROVIDED AS SHOWN. BAR SIZE SHALL BE DETERMINED BY ANALYSIS.

SECTION PROPERTIES

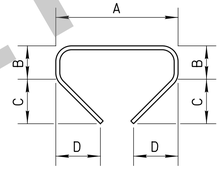
SECTION	AREA (in²)	WEIGHT (lb/ft)	Yb (in)	Y† (in)	I (in⁴)	Sb (in³)	S† (in³)	Vol/Sur (in)
AASHTO TYPE 2	369	384	15.83	20.17	50,979	3,221	2,527	3.371
AASHTO TYPE 3	560	583	20.27	24.73	125,390	6,185	5,071	4.056
AASHTO TYPE 4	789	822	24.73	29.27	260,741	10,542	8,909	4.741
MODIFIED AASHTO TYPE 4 (60")	860	896	28.74	31.26	384,705	13,385	12,307	4.089
MODIFIED AASHTO TYPE 4 (66")	908	946	31.58	34.42	492,212	15,588	14,299	4.085
MODIFIED AASHTO TYPE 4 (72")	1015	1058	36.52	35.48	684,726	18,749	19,299	3.947

BEAM MARK	NUMBER OF STRANDS PER ROW: ROW NUMBER ①	②	③	④	⑤	⑥	⑦	⑧	TOTAL STRANDS	CONCRETE STRENGTHS f'ci	f'c	401 BARS REQ'D	402 BARS REQ'D	403 BARS REQ'D	404 BARS REQ'D

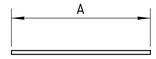
(THIS TABLE SHALL BE REPRODUCED IN THE PROJECT PLANS.)



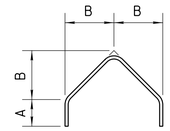
TYPE 1



TYPE 2



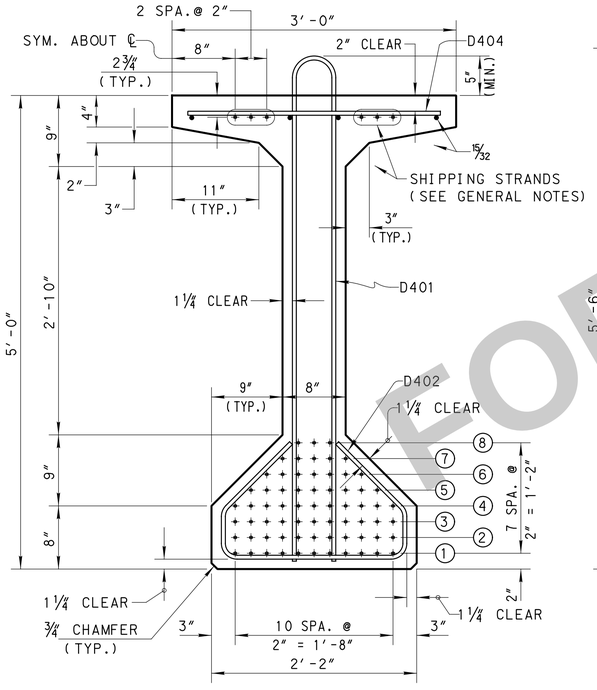
TYPE 3



TYPE 4

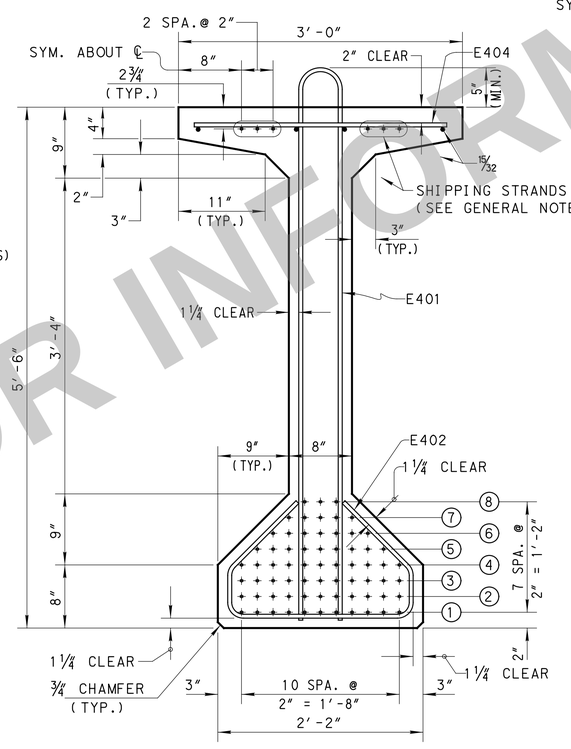
BENDING DIAGRAMS

(ALL DIMENSIONS ARE OUT-TO-OUT)



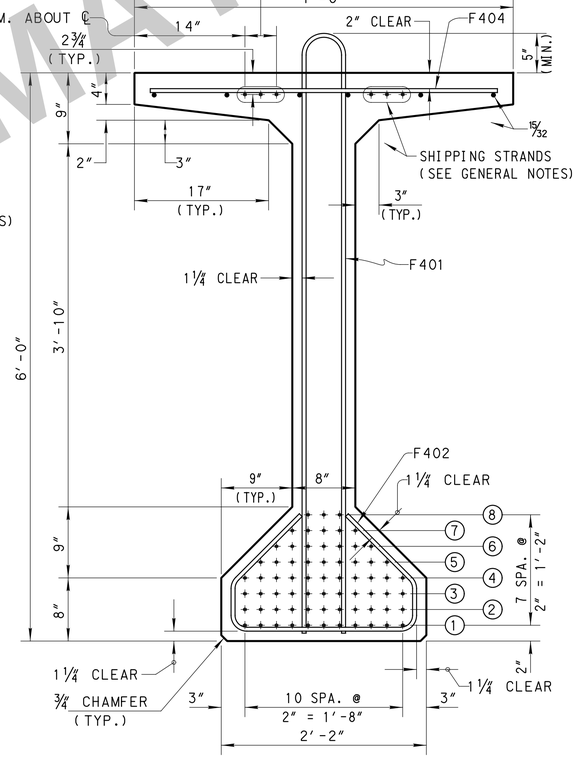
MODIFIED AASHTO TYPE 4 (60")

(68 STRANDS MAXIMUM)



MODIFIED AASHTO TYPE 4 (66")

(68 STRANDS MAXIMUM)



MODIFIED AASHTO TYPE 4 (72")

(68 STRANDS MAXIMUM)

MARK	TYPE	DIMENSIONS A	B	C	D	R
AASHTO TYPE 2						
A401	1	3½	3'-4"			1¼
A402	2	1'-3½	4¼	5½	5½	
A403	2	9½	3½	2½	2½	
A405	4	4¼	7¾			
AASHTO TYPE 3						
B401	1	4½	4'-1"			1¾
B402	2	1'-7½	5¼	7"	7"	
B403	2	1'-1½	4½	4"	4"	
B405	4	5¼	9¾			
AASHTO TYPE 4						
C401	1	5½	4'-10"			2¼
C402	2	1'-11½	6¼	8½	8½	
C403	2	1'-5½	5½	5½	5½	
C405	4	6¼	11¾			
MODIFIED AASHTO TYPE 4 (60")						
D401	1	5½	5'-4"			2¼
D402	2	1'-11½	6¼	8½	8½	
D404	3	2'-8"				
D405	4	6¼	11¾			
MODIFIED AASHTO TYPE 4 (66")						
E401	1	5½	5'-10"			2¼
E402	2	1'-11½	6¼	8½	8½	
E404	3	2'-8"				
E405	4	6¼	11¾			
MODIFIED AASHTO TYPE 4 (72")						
F401	1	5½	6'-4"			2¼
F402	2	1'-11½	6¼	8½	8½	
F404	3	3'-8"				
F405	4	6¼	11¾			

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST LETTER IDENTIFIES THE BAR LOCATION, THE NEXT DIGIT INDICATES THE INCH-POUND BAR SIZE AND THE REMAINING DIGITS ITS SEQUENCE NUMBER. ALL STEEL SHALL BE EPOXY COATED.

FOR INFORMATION ONLY

DESIGN AGENCY
OFFICE OF STRUCTURAL ENGINEERING

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
Brad Fogwell
ADMINISTRATOR
09-07-99
DATE

STANDARD
PRESTRESSED CONCRETE I-BEAM BRIDGE DETAILS

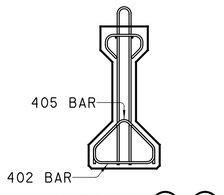
REVISIONS
10-20-00
04-20-07
07-19-02
07-18-08
07-18-03

DESIGNED SAM
DRAWN SAM
CHECKED JS/WTL
REVIEWED LMW

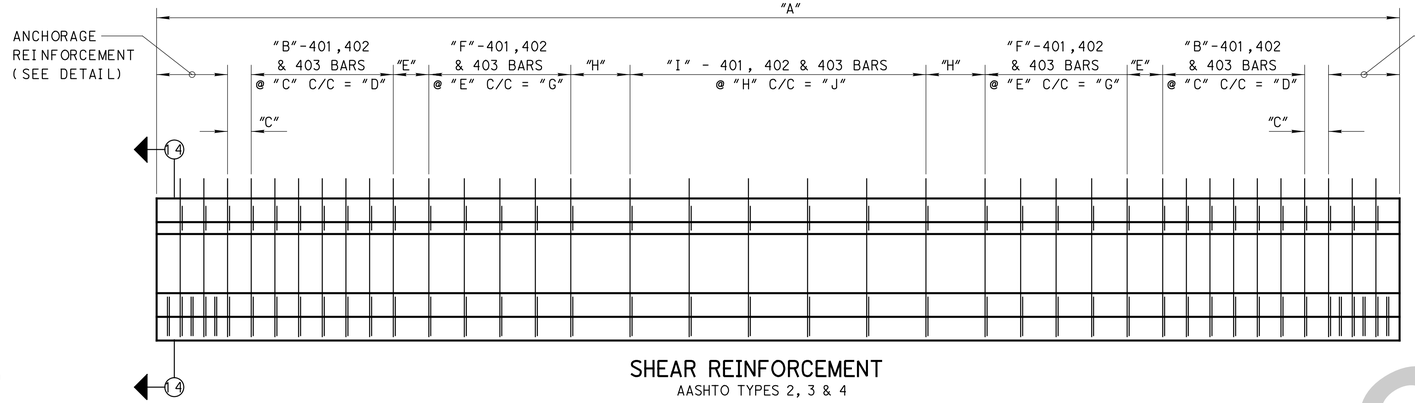
PSID-1-99

1 / 8
27 / 55
1416
2017

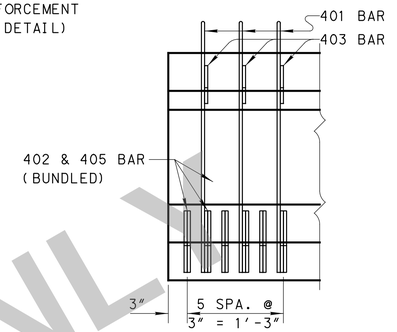
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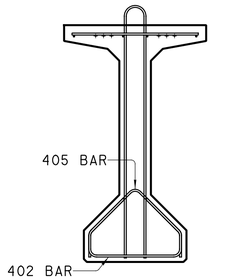
SECTION ⑭-⑭



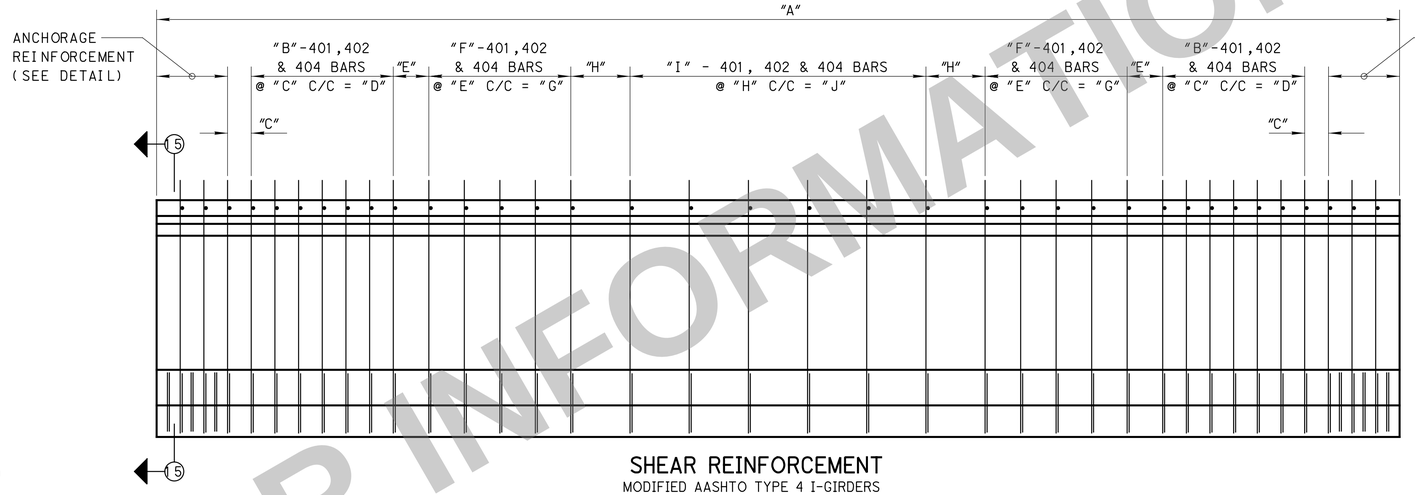
SHEAR REINFORCEMENT
AASHTO TYPES 2, 3 & 4



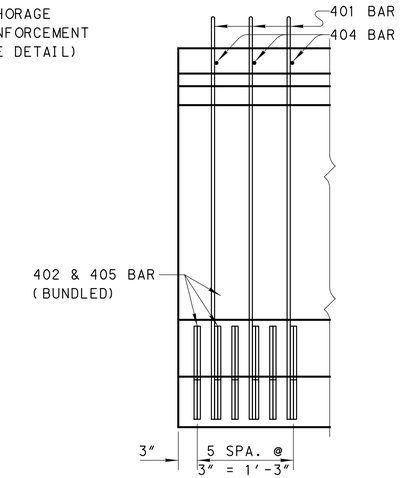
ANCHORAGE REINFORCEMENT
AASHTO TYPES 2, 3 & 4



SECTION ⑮-⑮



SHEAR REINFORCEMENT
MODIFIED AASHTO TYPE 4 I-GIRDERS



ANCHORAGE REINFORCEMENT
MODIFIED AASHTO TYPE 4 I-GIRDERS

STIRRUP SPACING: A SUGGESTED ARRANGEMENT FOR STIRRUP SPACING IS SHOWN. THE DESIGNER HAS THE OPTION OF USING AN ALTERNATE ARRANGEMENT IF IT IS MORE EFFICIENT.

BEAM DIMENSIONS

BEAM MARK	NO. REQ'D	DIMENSIONS										APPROXIMATE WEIGHT (LBS)
		A	B	C	D	E	F	G	H	I	J	

(COMPLETED TABLE SHALL BE REPRODUCED IN THE PROJECT PLANS.)

ANCHORAGE ZONE REINFORCEMENT: THE REINFORCEMENT SHOWN IS DESIGNED TO RESIST 4 PERCENT OF A PRESTRESSING FORCE GENERATED BY THE MAXIMUM NUMBER OF ½" DIA. OVERSIZED STRANDS ALLOWED PER SECTION LOCATED IN THE BOTTOM FLANGE. THE REINFORCEMENT IS ACTING AT A UNIT STRESS EQUAL TO 20 KSI.

FOR INFORMATION ONLY

DESIGN AGENCY
OFFICE OF STRUCTURAL ENGINEERING

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
Brad Fogel
ADMINISTRATOR
09-07-99
DATE

REVISIONS
10-20-00
07-19-02
04-20-07
07-18-08
07-18-03

STANDARD
PRESTRESSED CONCRETE
I-BEAM BRIDGE DETAILS

DESIGNED	DRAWN	CHECKED	REVIEWED
SAM	SAM	JS/WTL	LMW

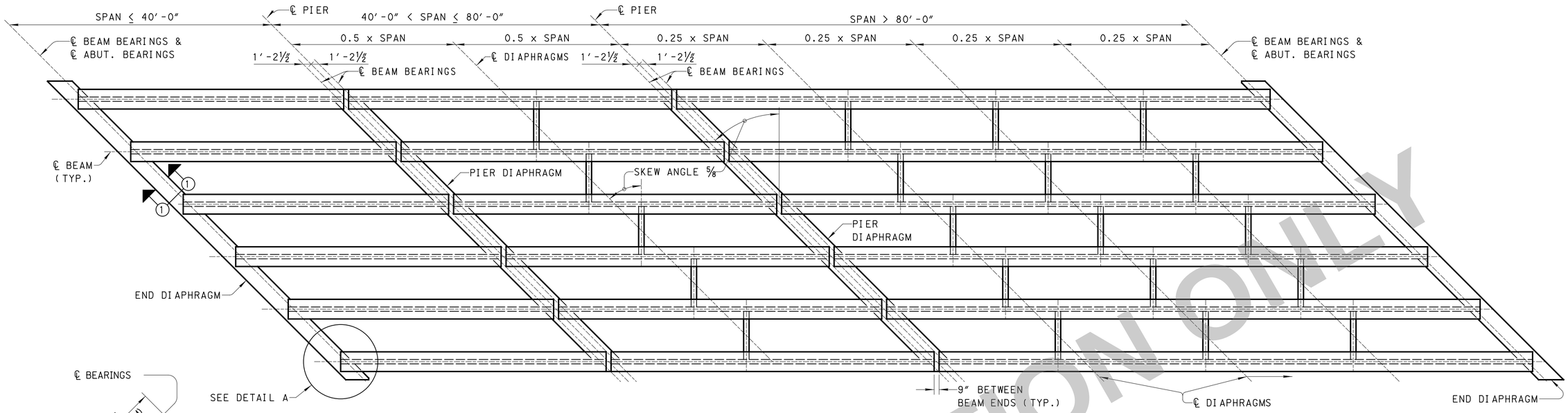
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2 / 8

28 / 55

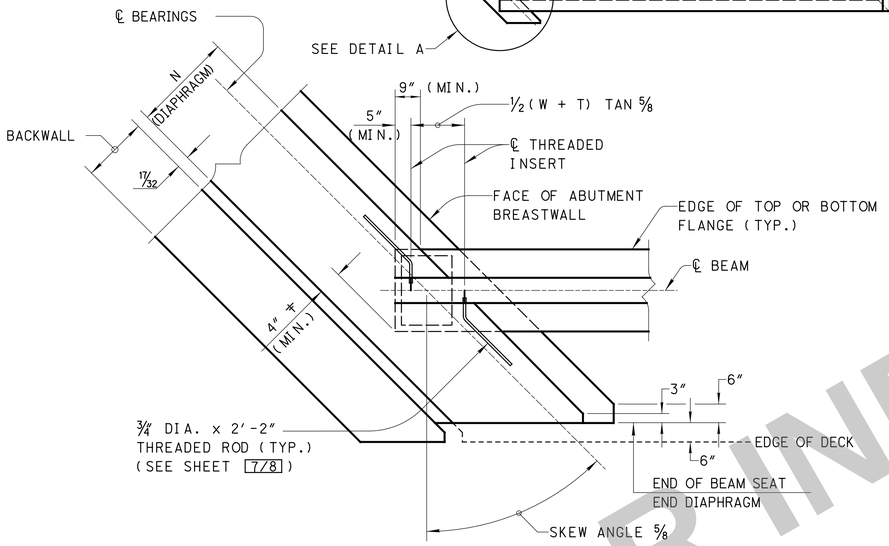
1417
2017

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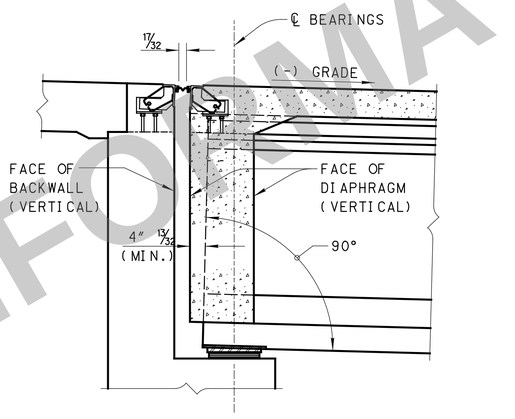


TYPICAL FRAMING PLAN

S = BEAM SPACING

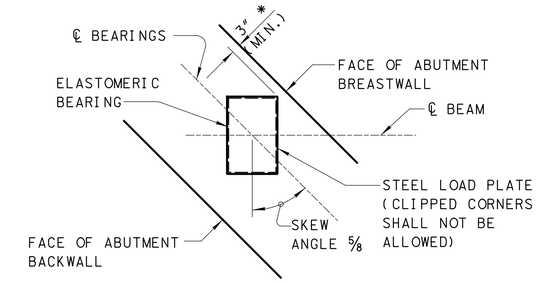


DETAIL A

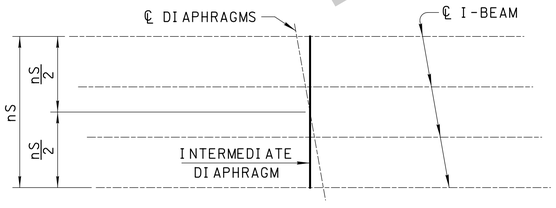


SECTION ①-①

(POSITIVE GRADE IS SIMILAR)

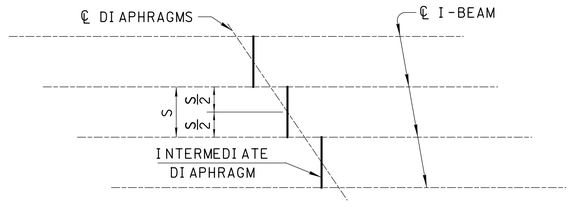


BEARING ORIENTATION AT ABUTMENTS



PLAN FOR SKEW ANGLES ≤ 10°

n= NO. OF BEAM SPACES



PLAN FOR SKEW ANGLES > 10°

LEGEND

∓ - DISTANCE SHALL BE MEASURED FROM THE LARGER OF THE TOP OR BOTTOM FLANGE WIDTH.

17/32- SEE STANDARD DRAWING EXJ-6-06 FOR DIMENSION DEFINITION.

N = LARGER OF { 4″ + W SIN 5/8 + 9″ COS 5/8 ; 18″ }

W = LARGER OF THE TOP OR BOTTOM FLANGE WIDTH

T = THICKNESS OF WEB

13/32- THIS DIMENSION IS MEASURED FROM THE VERTICAL FACE OF THE END DIAPHRAGM TO THE NEAREST POINT ON THE END OF THE BEAM.

∗ - MEASURED TO STEEL LOAD PLATE, IF STEEL LOAD PLATE IS USED, OTHERWISE MEASURED TO ELASTOMERIC BEARING.

SEE SHEET 4/8 FOR BEARING DETAILS.
SEE SHEET 5/8 FOR CAST-IN-PLACE CONCRETE DIAPHRAGMS
SEE SHEET 6/8 FOR STEEL INTERMEDIATE DIAPHRAGMS.

FOR INFORMATION ONLY

DESIGN AGENCY
OFFICE OF STRUCTURAL ENGINEERING

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
Brad Ingwell
ADMINISTRATOR
09-07-99
DATE

REVISIONS
10-20-00 04-20-07
07-19-02 07-18-08
07-18-03

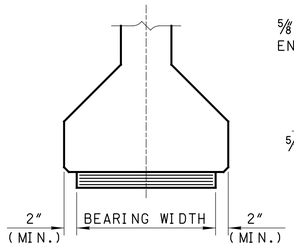
STANDARD
PRESTRESSED CONCRETE I-BEAM BRIDGE DETAILS

REVIEWED LMW
CHECKED JS/WTL
DESIGNED SAM
DRAWN SAM

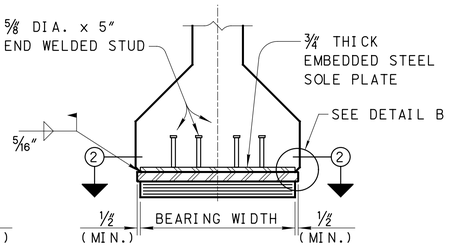
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3/8
29/55
1418
2017

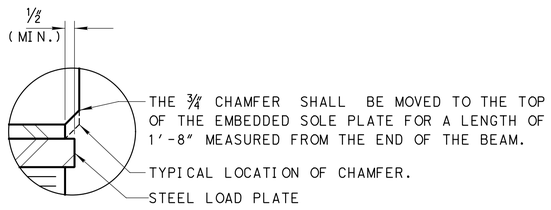
PLOTTED BY efoley 2/18/2022 3:22:44 PM J:\20110903\ODOT\HAM\77889\structures\HAM075_0823C\sheets\075_0823CSM601.dgn



END VIEW
(BEARING WITH NO LOAD PLATE)

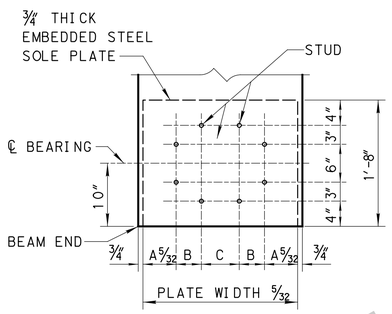


END VIEW
(BEARING WITH LOAD PLATE)



DETAIL B

STEEL LOAD PLATES: A LAMINATED ELASTOMERIC BEARING WITHOUT A LOAD PLATE SHOULD BE THE FIRST OPTION UNLESS ROTATIONAL AND/OR GRADE REQUIREMENTS DICTATE THE USE OF A LOAD PLATE. A VULCANIZED BEVELED LOAD PLATE IS REQUIRED WHEN THE ROTATIONAL CAPACITY OF A BEARING IS EXCEEDED UNDER ANY LOADING CONDITION. WHEN A LOAD PLATE IS REQUIRED, THE FABRICATOR SHALL INSTALL THE EMBEDDED SOLE PLATE TO ALLOW FOR FIELD INSTALLATION OF THE BEARING. DURING FIELD WELDING, CONTROL THE TEMPERATURE AT THE ELASTOMER BONDED SURFACE TO A MAXIMUM OF 300° F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.

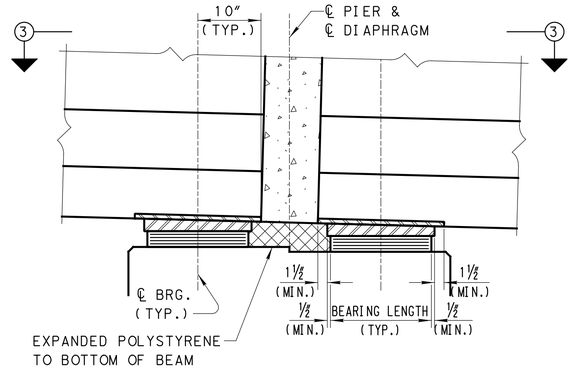


SECTION ②-②
(BEARING AND LOAD PLATE NOT SHOWN)

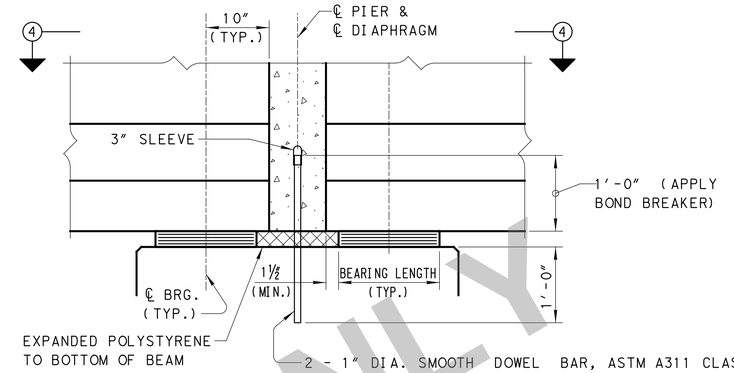
BOTTOM FLANGE WIDTH	PLATE WIDTH	A 5/32	B	C
1′-6″	1′-4½	3¼	2″	6″
1′-10″	1′-8½	4¼	4″	4″
2′-2″	2′-0½	5¼	4″	6″

NOTE - END WELDED STUDS MAY BE MOVED SLIGHTLY IN ORDER TO AVOID REINFORCING STEEL AND PRESTRESSING STRANDS.

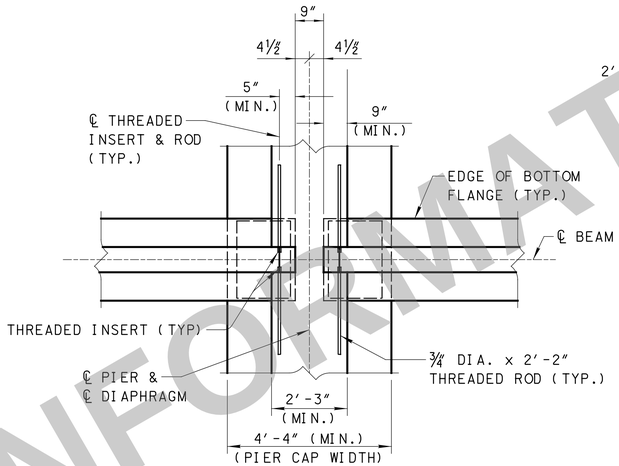
5/32- IN ORDER TO ALLOW FOR FIT-UP, THE PLATE WIDTH MAY BE DECREASED BY ⅜″. DIMENSION "A" SHALL BE CORRECTED ACCORDINGLY.



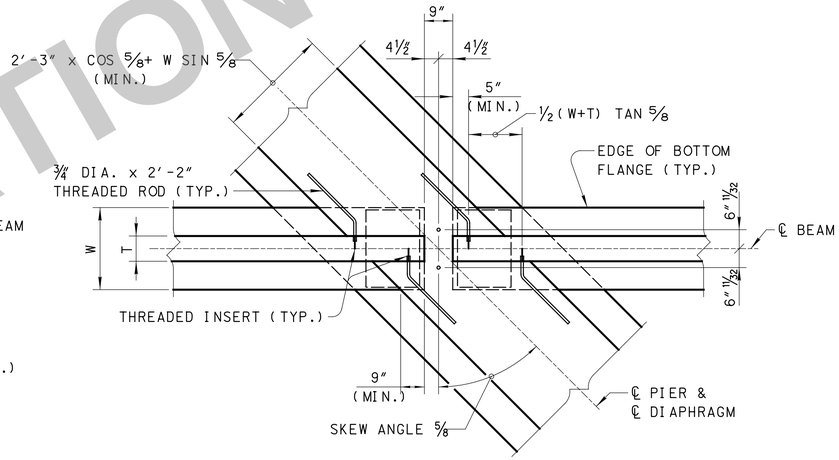
EXPANSION PIER DETAIL
(BEARING WITH LOAD PLATE)



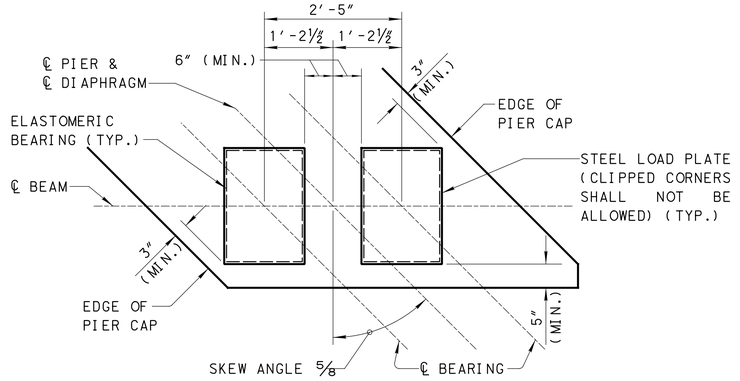
FIXED PIER DETAIL
(BEARING WITH NO LOAD PLATE)



VIEW ③-③
(NO SKEW)



VIEW ④-④
(AT SKEWED PIER)



BEARING ORIENTATION AT PIERS
(BEAM NOT SHOWN)

11/32- MEASURED TO CENTER OF 1″ DIA. SMOOTH DOWEL BARS. DOWEL BARS SHALL BE OMITTED AT EXPANSION PIERS.
W = LARGER OF TOP OR BOTTOM FLANGE WIDTH
T = THICKNESS OF WEB

SEE SHEET 5 / 8 FOR PIER DIAPHRAGM DETAILS.

SEE SHEET 7 / 8 FOR THREADED INSERT AND ROD DETAILS.

FOR INFORMATION ONLY

DESIGN AGENCY
OFFICE OF STRUCTURAL ENGINEERING

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
Brad Fogel
ADMINISTRATOR
09-07-99
DATE

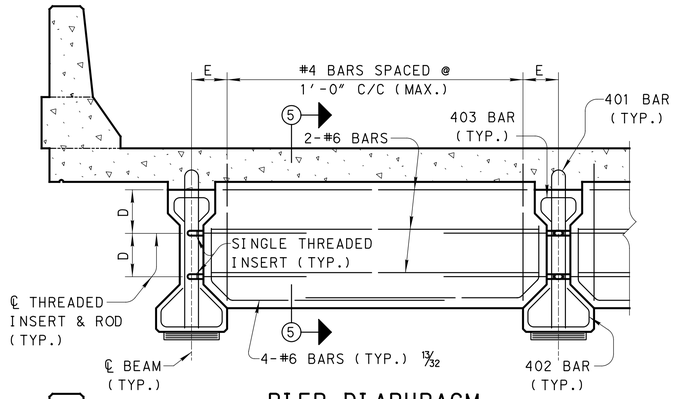
REVISIONS
10-20-00
07-19-02
07-18-03
04-20-07
07-18-08

STANDARD
PRESTRESSED CONCRETE
I-BEAM BRIDGE DETAILS

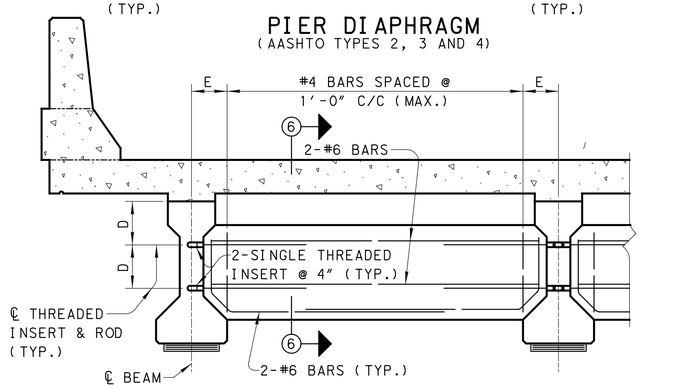
DESIGNED SAM
DRAWN SAM
CHECKED JS/WTL
REVIEWED LMW
PSID-1-99

4 / 8
30 / 55
1419
2017

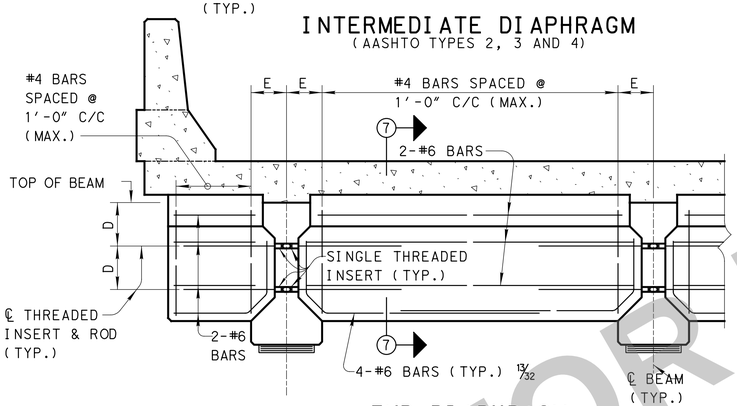
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PIER DIAPHRAGM
(AASHTO TYPES 2, 3 AND 4)



INTERMEDIATE DIAPHRAGM
(AASHTO TYPES 2, 3 AND 4)

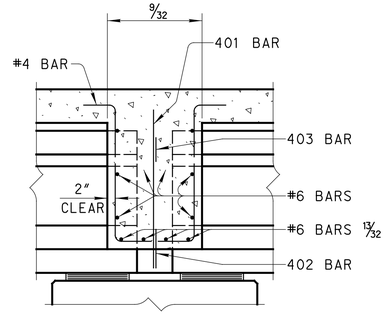


END DIAPHRAGM
(AASHTO TYPES 2, 3 AND 4)

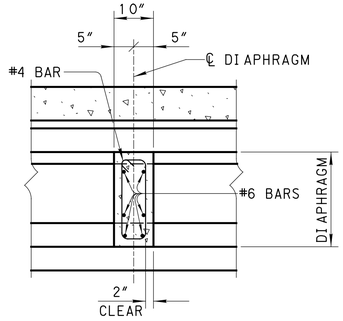
SECTION	DIM. D	DIM. E
AASHTO TYPE 2	11"	9"
AASHTO TYPE 3	1'-2"	11"
AASHTO TYPE 4	1'-5"	1'-1"
MODIFIED AASHTO TYPE 4 (60")	1'-3"	1'-8"
MODIFIED AASHTO TYPE 4 (66")	1'-6"	1'-8"
MODIFIED AASHTO TYPE 4 (72")	1'-9"	2'-2"

ALL VERTICAL BARS SHALL BE PLACED PARALLEL TO BEAMS.

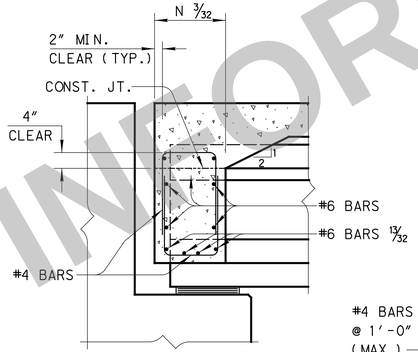
9/32- REFER TO SHEET 4 / 8 FOR DIMENSION DEFINITION.
3/32- REFER TO SHEET 3 / 8 FOR DIMENSION DEFINITION.
13/32- FOR BEAM SPACINGS EXCEEDING 9'-0", USE 4-#8 BARS.
REFER TO SHEET 7 / 8 FOR THREADED INSERT AND STRAND EXTENSION DETAILS.
REFER TO SHEET 1 / 8 FOR 401, 402, 403 & 404 BENDING DIAGRAMS.



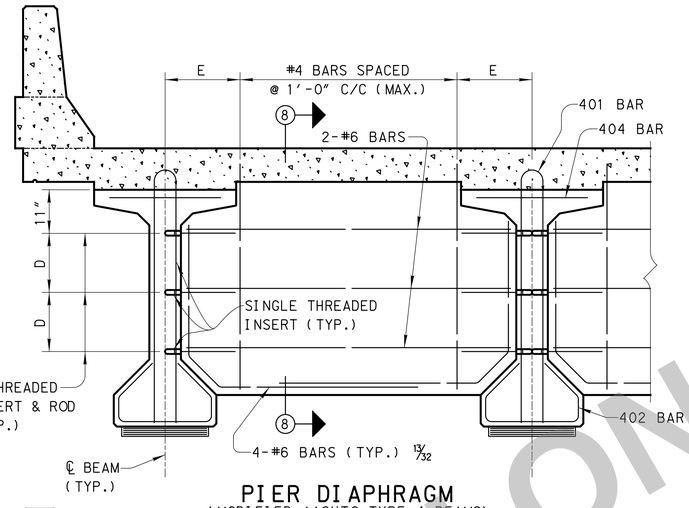
SECTION ⑤-⑤
(PARTIAL PIER SHOWN)



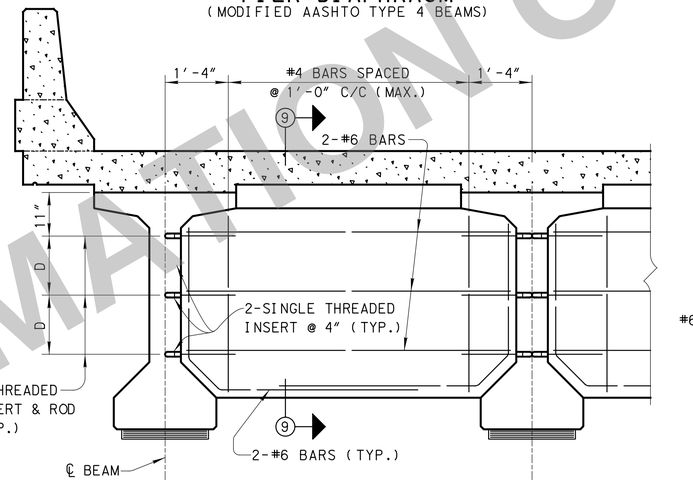
SECTION ⑥-⑥



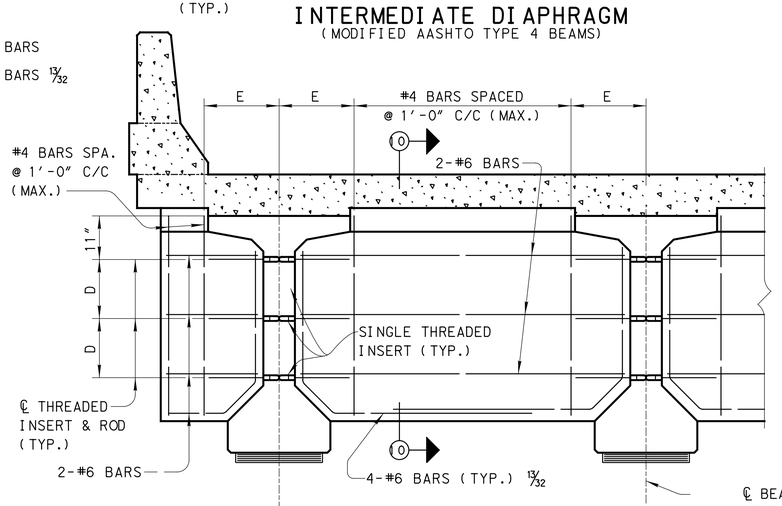
SECTION ⑦-⑦
(PARTIAL ABUTMENT SHOWN)



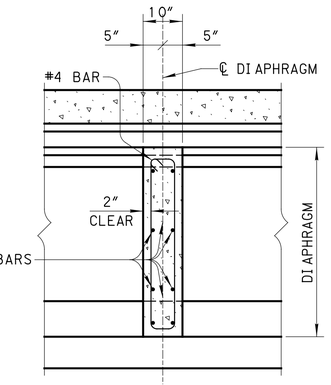
PIER DIAPHRAGM
(MODIFIED AASHTO TYPE 4 BEAMS)



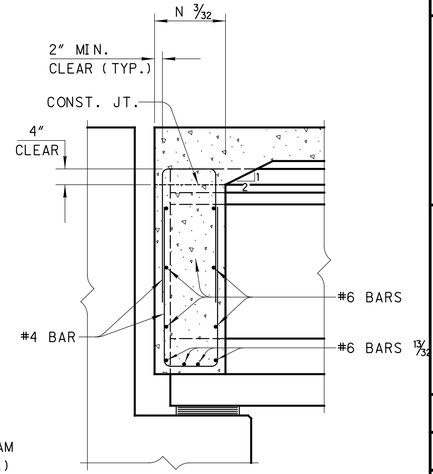
INTERMEDIATE DIAPHRAGM
(MODIFIED AASHTO TYPE 4 BEAMS)



END DIAPHRAGM
(MODIFIED AASHTO TYPE 4 BEAMS)



SECTION ⑨-⑨



SECTION ⑩-⑩
(PARTIAL ABUTMENT SHOWN)

FOR INFORMATION ONLY

DESIGN AGENCY
OFFICE OF STRUCTURAL ENGINEERING

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
Brad Fogel — ADMINISTRATOR
09-07-99 — DATE

DESIGNED	DRAWN	CHECKED	REVIEWED
SAM	SAM	JS/WTL	LMW

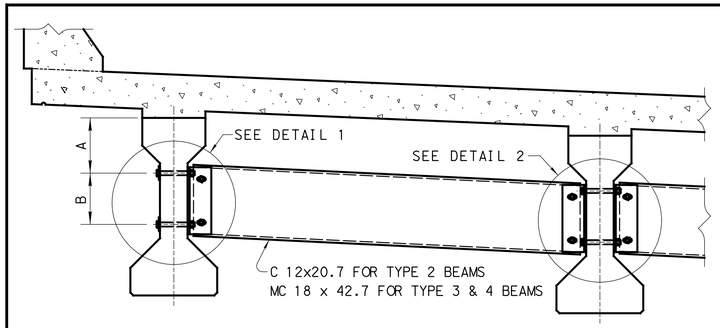
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REVISIONS: 10-20-00, 04-20-07, 07-19-02, 07-18-08, 07-18-03

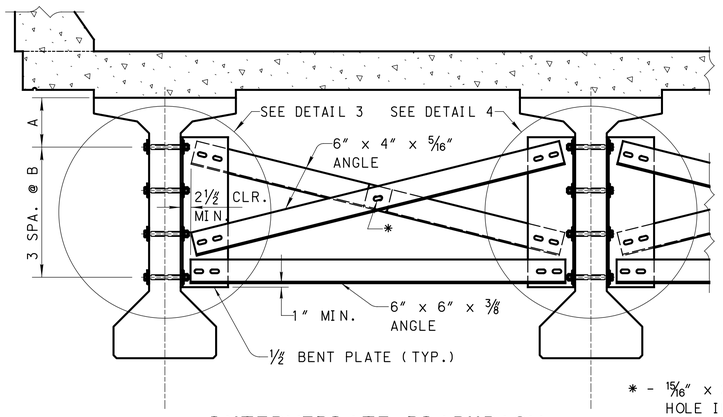
STANDARD
PRESTRESSED CONCRETE
I-BEAM BRIDGE DETAILS

5 / 8
31 / 55
1420
2017

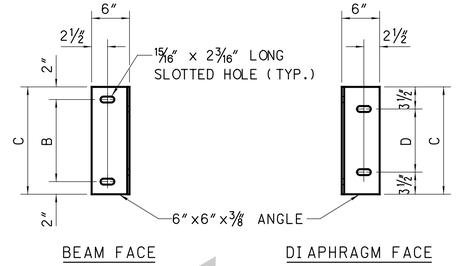
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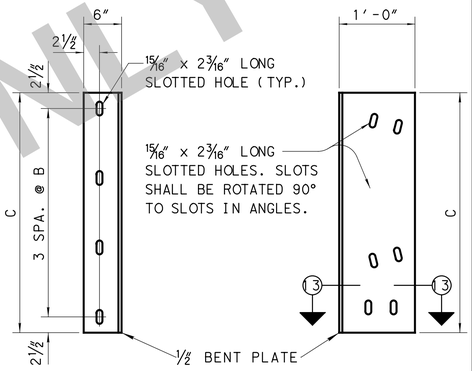
INTERMEDIATE DIAPHRAGM
(AASHTO TYPES 2, 3 AND 4)



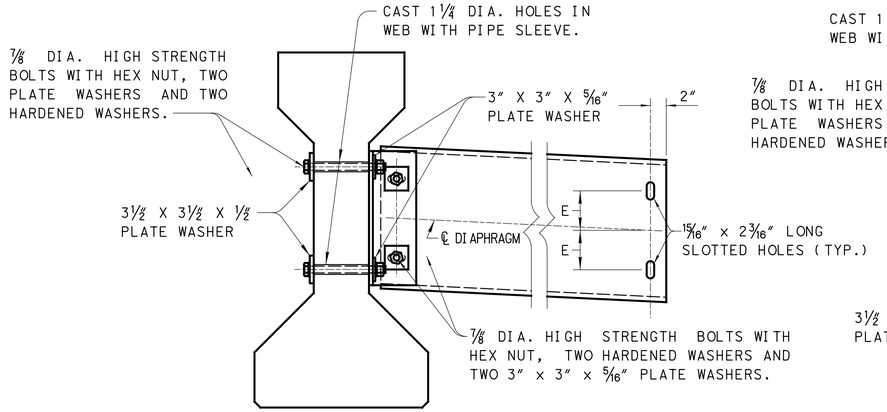
INTERMEDIATE DIAPHRAGM
(MODIFIED AASHTO TYPE 4 BEAMS)



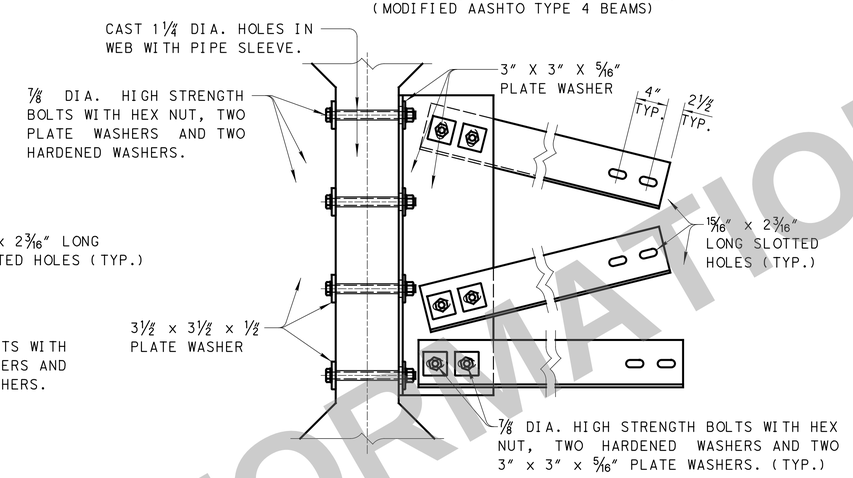
DIAPHRAGM SUPPORT
(FOR 36", 45" & 54" BEAMS)



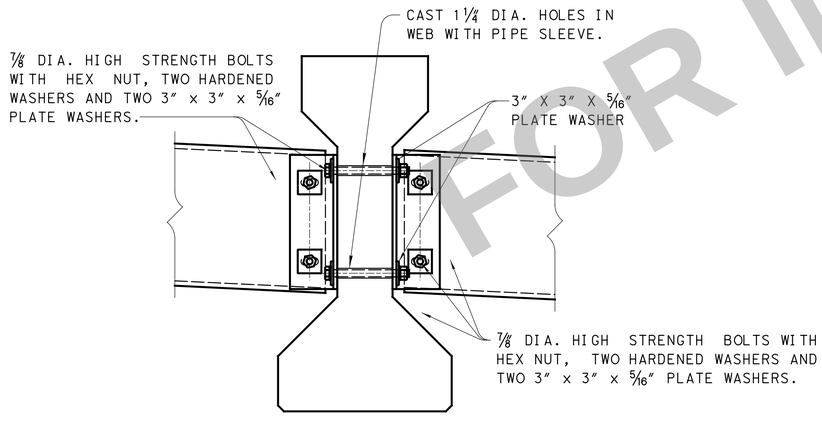
DIAPHRAGM SUPPORT
(FOR 60", 66" & 72" BEAMS)



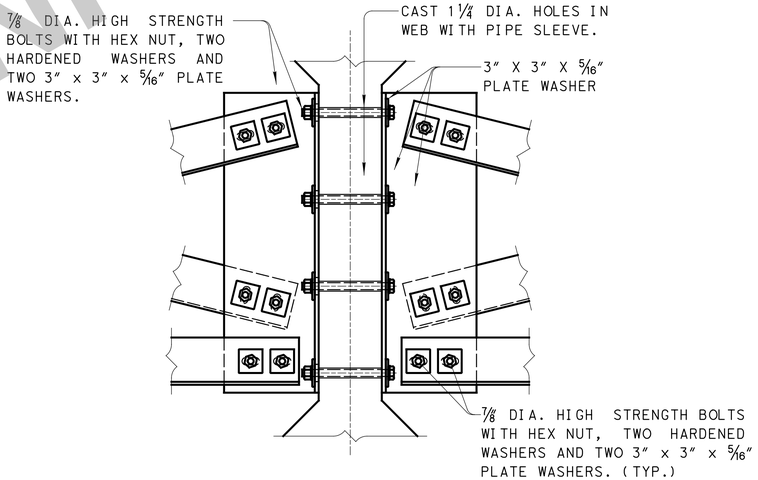
DETAIL 1
DETAIL 1 SHALL BE USED AT THE FASCIA BEAM AND ALL INTERIOR BEAMS WHEN THE SKEW ANGLE EXCEEDS 10°.



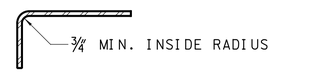
DETAIL 3
DETAIL 3 SHALL BE USED AT THE FASCIA BEAM AND ALL INTERIOR BEAMS WHEN THE SKEW ANGLE EXCEEDS 10°.



DETAIL 2
DETAIL 2 SHALL BE USED AT INTERIOR BEAMS WHEN THE SKEW ANGLE IS 10° OR LESS.



DETAIL 4
DETAIL 4 SHALL BE USED AT INTERIOR BEAMS WHEN THE SKEW ANGLE IS 10° OR LESS.



SECTION (13)-(13)

DIMENSIONS

BEAM HEIGHT	A	B	C	D	E
36"	1'-0½"	8"	1'-0"	5"	2½"
45"	1'-2½"	1'-1"	1'-5"	10"	5"
54"	1'-7"	1'-1"	1'-5"	10"	5"
60"	1'-0½"	9"	2'-8"	-	-
66"	1'-0½"	11"	3'-2"	-	-
72"	1'-0½"	1'-1"	3'-8"	-	-

NOTES

ALL STRUCTURAL STEEL, INCLUDING BOLTS, NUTS AND WASHERS, SHALL MEET THE FABRICATION AND ERECTION REQUIREMENTS SPECIFIED IN 513. THE DEPARTMENT WILL CONSIDER THESE COSTS TO BE INCIDENTAL TO ITEM 515, INTERMEDIATE DIAPHRAGMS.

ALL STRUCTURAL STEEL SHALL BE ASTM A709, GRADE 36 OR 50, GALVANIZED ACCORDING TO 711.02.

ALL BOLTS ARE 7/8" DIA. ASTM A325, TYPE 1. ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED ACCORDING TO 711.02.

LOCATE BOLT HOLES IN THE I-BEAM WEBS TO AVOID PRESTRESS PRESTRESSING STRANDS.

FOR INFORMATION ONLY

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OFFICE OF STRUCTURAL ENGINEERING

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
Brad Fogel — ADMINISTRATOR
09-07-99 — DATE

REVISIONS
10-20-00
07-19-02
07-18-03
04-20-07
07-18-08

STANDARD
PRESTRESSED CONCRETE I-BEAM BRIDGE DETAILS

DESIGNED SAM | DRAWN SAM | CHECKED LMW | REVIEWED WTL

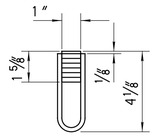
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6 / 8

32 / 55

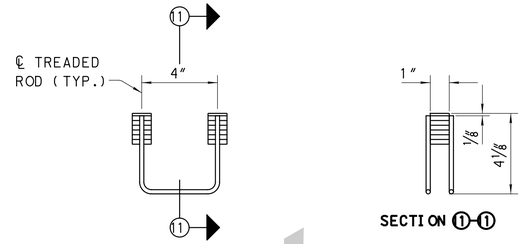
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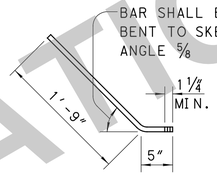


SINGLE THREADED INSERT
(3,000 LB PROOF LOAD)

NOTE - THE GIRDER FABRICATOR MAY USE DOUBLE THREADED INSERTS IN LIEU OF TWO SINGLE INSERTS SPACED AT 4″ ON CENTER AT THE CONCRETE INTERMEDIATE DIAPHRAGM LOCATIONS.

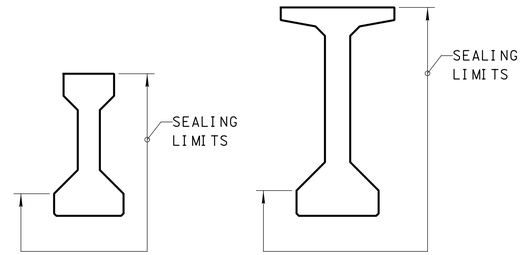


DOUBLE THREADED INSERT
(6,000 LB PROOF LOAD)

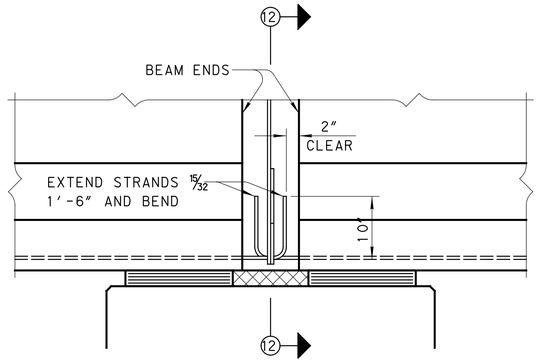


¾″ DIA. x 2′-2″ THREADED ROD

SHALL CONFORM TO 709.01, 709.03 OR 709.05 WITH THREADS FORMED PRIOR TO GALVANIZING.

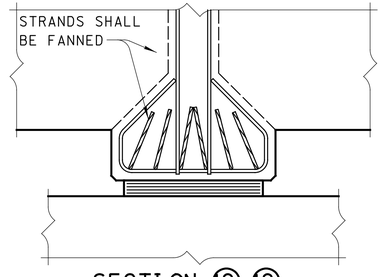


SEALING OF FASCIA BEAMS



EXTENDED STRAND DETAIL

15/32- THE NUMBER OF STRANDS TO BE BENT SHALL BE THE LARGER OF ONE HALF THE NUMBER OF ROW 1 STRANDS OR THE NUMBER OF STRANDS SUFFICIENT TO RESIST THE POSITIVE LIVE LOAD MOMENT AT THE PIER. ALTERNATE STRANDS IN ABUTTING BEAMS TO AVOID INTERFERENCE.



SECTION 2-2
(PARTIAL PIER AND DIAPHRAGM SHOWN)

FOR INFORMATION ONLY

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OFFICE OF STRUCTURAL ENGINEERING

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
Brad Ingwell
ADMINISTRATOR
09-07-99
DATE

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STANDARD
PRESTRESSED CONCRETE
1-BEAM BRIDGE DETAILS

DESIGNED SAM
DRAWN SAM
CHECKED JS/WTL
REVIEWED LMW
PSID-1-99

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2017

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GENERAL: THIS STANDARD DRAWING PROVIDES DESIGN AND GENERAL CONSTRUCTION DETAILS FOR PRESTRESSED CONCRETE I-BEAM BRIDGES. THE DETAILS IN THIS STANDARD ARE APPLICABLE TO STRUCTURES WITH BEAM SPACINGS LESS THAN 14′-0″ AND SKEWS LESS THAN 45°. THE PROJECT PLANS FOR EACH STRUCTURE SHALL INCLUDE THE FOLLOWING DETAILS:

1. THE DESIGNER SHALL CHOOSE A 28-DAY CONCRETE STRENGTH BETWEEN 5500 PSI AND 7000 PSI, A RELEASE STRENGTH BETWEEN 4000 PSI AND 5000 PSI AND A NOMINAL STRAND AREA OF 0.153 IN^2 OR 0.167 IN^2. THE VALUES CHOSEN BY THE DESIGNER SHALL BE LISTED IN THE STRUCTURE GENERAL NOTES.
2. A TRANSVERSE CROSS-SECTION THROUGH THE DECK, DETAILING (AT A MINIMUM) THE I-BEAM SPACING, DECK THICKNESS, HAUNCH DIMENSIONS, DECK REINFORCING AND COVER.
3. FRAMING PLAN SHOWING (AT A MINIMUM) SPAN LENGTHS, BEAM SPACINGS, SKEW ANGLE, DIAPHRAGM LOCATIONS, AND CENTERLINES OF BEARINGS.
4. BEAM ELEVATION AND SECTION VIEWS FOR EACH BEAM DETAILING BEAM LENGTHS, BEAM HEIGHT, STRAND LOCATIONS AND NUMBER, STRAND DEBONDING LENGTHS, CROSS SECTION OF I-BEAM ENDS SHOWING NUMBER AND LOCATION OF BENT UP ANCHOR STRANDS, REINFORCING STEEL, INSERT LOCATIONS AND EMBEDDED STEEL PLATES (IF ANY).
5. VARIABLE HAUNCH THICKNESSES AND SCREED ELEVATIONS.
6. LAMINATED ELASTOMERIC BEARING DETAILS, INCLUDING DIMENSIONS, DUROMETER AND LOAD PLATE (IF ANY).
7. DETAILS OF END AND PIER DIAPHRAGMS, INCLUDING DIMENSIONS, REINFORCING STEEL SIZE AND SPACING.
8. EXPANSION JOINT DETAILS.
9. DETAILS OF ABUTMENTS AND PIERS, INCLUDING DOWEL ROD POSITIONS, CENTERLINE OF BEAM BEARINGS, ORIENTATION OF BEARINGS AND FIXED DOWEL REQUIREMENTS.
10. ALL PLAN QUANTITY ITEMS REQUIRED TO PROPERLY COVER THE COST OF FABRICATION, ERECTION AND CONSTRUCTION OF THE BEAMS.
11. PLAN NOTES, INCLUDING BUT NOT LIMITED TO, CONCRETE PLACEMENT SEQUENCE.
12. ALL OTHER DETAILS AND INFORMATION NECESSARY TO COMPLETE THE PLANS.

IT IS NOT INTENDED THAT DETAILS SHOWN ON THIS STANDARD DRAWING BE REPEATED ON THE PROJECT PLANS EXCEPT AS MAY BE REQUIRED FOR CLARITY.

DESIGN CRITERIA:

DESIGN SPECIFICATIONS: THIS STANDARD DRAWING CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996, INCLUDING THE 1997, 1998, 1999 AND 2000 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING:
DEAD LOAD - 60 LB/FT (FUTURE WEARING SURFACE)
LIVE LOAD - HS-25 AND THE ALTERNATE MILITARY LOADING

DESIGN STRESSES:
PRESTRESSED CONCRETE - F′C = * (28-DAY)
F′CI = ** (RELEASE)

DIAPHRAGM CONCRETE - F′C = 4500 PSI

REINFORCING STEEL - MIN. YIELD STRENGTH = 60 KSI.

PRESTRESSING STRAND - FURNISH MATERIAL CONFORMING TO 711.27 (ASTM A416), GRADE 270, LOW RELAXATION, UNCOATED, SEVEN WIRE STRAND. STRANDS SHALL BE ½ INCH DIAMETER WITH A TOTAL CROSS-SECTIONAL AREA OF EITHER 0.153 IN OR 0.167 IN .*** ½

STRUCTURAL STEEL - ASTM A709, GRADE 36 OR 50

* - THE DESIGNER SHALL SPECIFY A 28-DAY COMPRESSIVE STRENGTH IN THE RANGE OF 5500 PSI MINIMUM TO 7000 PSI MAXIMUM AND LIST THE VALUE IN THE STRUCTURE'S GENERAL NOTES.

** - THE DESIGNER SHALL SPECIFY A RELEASE STRENGTH IN THE RANGE OF 4000 PSI MINIMUM TO 5000 PSI MAXIMUM AND LIST THE VALUE IN THE STRUCTURE'S GENERAL NOTES.

*** - THE DESIGNER SHALL SPECIFY ONLY THE STRAND AREA USED IN THE DESIGN IN THE STRUCTURE'S GENERAL NOTES.

THE DESIGNER SHALL NOT SPECIFY MORE THAN ONE STRAND SIZE, ONE RELEASE STRENGTH AND ONE 28-DAY STRENGTH IN A SINGLE STRUCTURE.

DECK REINFORCING: THE DESIGNER SHALL DESIGN THE DECK REINFORCING OVER THE PIERS TO RESIST THE NEGATIVE MOMENTS INDUCED BY ANY SUPERIMPOSED DEAD LOADS AND LIVE LOADS.

LAP SPLICES FOR REINFORCING STEEL IN I-BEAMS AND DIAPHRAGMS SHALL BE:
2′-0″ IN LENGTH FOR #4 BARS
2′-6″ IN LENGTH FOR #5 BARS
3′-0″ IN LENGTH FOR #6 BARS
5′-0″ IN LENGTH FOR #8 BARS

FABRICATION AND CONSTRUCTION REQUIREMENTS:

ERECTION PROCEDURE:THE CONTRACTOR SHALL SUBMIT PLANS FOR ERECTION AND HANDLING PROCEDURES ACCORDING TO 501.05.

ERECTION AND LIFTING DEVICES: THE GIRDER FABRICATOR IS RESPONSIBLE FOR THE DESIGN OF A LIFTING SYSTEM FOR HANDLING I-BEAMS. AS A MINIMUM, THE FABRICATOR SHALL USE TWO LIFT POINTS; ONE WITHIN 5 FEET OF EACH END. THE FABRICATOR SHALL SHOW THE LIFTING SYSTEM ON THE SHOP DRAWINGS AND USE A FACTOR OF SAFETY OF FOUR IN THE DESIGN. REFER TO PART 5 OF THE PCI HANDBOOK.

TEMPORARY STABILITY FOR DECK PLACEMENT: THE ERECTION PROCEDURE SHALL INCLUDE ANY ADDITIONAL TEMPORARY DIAPHRAGMS OR SUPPORTS NEEDED TO ASSURE THE I-BEAMS WILL REMAIN STABLE BEFORE, DURING AND THROUGH COMPLETION OF THE PLACEMENT OF THE CONCRETE DECK.

THE PLACEMENT OF DECK CONCRETE SHALL NOT PROCEED UNTIL ALL INTERMEDIATE DIAPHRAGMS HAVE BEEN PROPERLY INSTALLED. CONCRETE INTERMEDIATE DIAPHRAGMS SHALL BE COMPLETED AT LEAST 48 HOURS BEFORE DECK PLACEMENT BEGINS.

CAST-IN-PLACE DECK CONCRETE: THOROUGHLY CLEAN THE TOP SURFACE OF THE BEAMS OF ALL DIRT, DUST, LAITANCE OR OTHER FOREIGN MATERIALS WITH WATER, AIR UNDER PRESSURE OR ANY OTHER METHOD THAT PRODUCES SATISFACTORY RESULTS. THOROUGHLY DRENCH THE SURFACE WITH CLEAN WATER. BEFORE PLACING THE CONCRETE, ALLOW THE SURFACE TO DRY TO A DAMP CONDITION.

THE DESIGNER SHALL INCLUDE A DECK POUR SEQUENCE IN THE PLANS FOR MULTI-SPAN, CONTINUOUS BRIDGES. TWO CONSTRUCTION JOINTS SPACED AT 8′-0″, PARALLEL TO AND CENTERED ABOUT THE PIERS ARE REQUIRED. DO NOT PLACE CONCRETE BETWEEN THESE CONSTRUCTION JOINTS PRIOR TO THE PLACEMENT OF CONCRETE IN EACH ADJACENT SPAN. UPON COMPLETION OF THE CONCRETE PLACEMENT IN THE ADJACENT SPANS, PLACE THE DIAPHRAGM AND DECK CONCRETE BETWEEN THE CONSTRUCTION JOINTS. SEAL THE JOINTS WITH A 2′-0″ WIDE STRIP OF HIGH MOLECULAR WEIGHT METHACRYLATE RESIN ACCORDING TO 511.22.

CONTINUOUS DECK POUR PROCEDURES, WHICH PROCEED FROM END TO END OF THE BRIDGE AND PLACE THE PIER DIAPHRAGM CONCRETE CONCURRENTLY WITH THE DECK CONCRETE, MAYBE APPROVED BY THE DIRECTOR IF THE PLACEMENT SUBMITTAL CAN ASSURE THAT THE DECK CONCRETE IN ADJACENT SPANS WILL BE PLACED BEFORE THE PIER DIAPHRAGM CONCRETE HAS REACHED ITS INITIAL SET.

THE FABRICATOR SHALL INTENTIONALLY ROUGHEN THE SURFACE OF THE I-BEAM TOP FLANGES TO BE INCORPORATED INTO THE DECK CONCRETE TO A DEPTH OF APPROXIMATELY ¼″ BEFORE THE CONCRETE HAS REACHED ITS INITIAL SET.

GALVANIZING: GALVANIZE ALL STRUCTURAL STEEL, DOWEL BARS, PIPE SLEEVES, BOLTS, STUDS, INSERTS, THREADED RODS, NUTS AND WASHERS, EMBEDDED SOLE PLATES AND BEARING LOAD PLATES (IF ANY) ACCORDING TO 711.02.

SEALING OF FASCIA BEAMS: SEAL THE FASCIA I-BEAM WITH AN EPOXY-URETHANE SEALER AS SHOWN ON SHEET 7 OF 8. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES SEPARATELY UNDER SEALING OF CONCRETE SURFACES.

DIAPHRAGMS: ALL END AND PIER DIAPHRAGMS SHALL BE CAST-IN-PLACE. THE INTERMEDIATE DIAPHRAGMS MAY BE CAST-IN-PLACE AS SHOWN ON SHEET 5 OF 8 OR GALVANIZED STEEL AS SHOWN ON SHEET 6 OF 8. ONLY ONE TYPE OF INTERMEDIATE DIAPHRAGM MAY BE USED PER STRUCTURE. DIAPHRAGMS ARE NOT REQUIRED IN SPANS UP TO, AND INCLUDING, 40 FEET. DIAPHRAGMS ARE REQUIRED AT MID-SPAN FOR SPANS 40-80 FEET AND AT QUARTER POINTS FOR SPANS GREATER THAN 80 FEET. THE DESIGN PLANS SHALL SHOW THE CENTERLINE LOCATION OF EACH INTERMEDIATE DIAPHRAGM. THE FABRICATOR SHALL SHOW LOCATIONS OF INSERTS OR HOLES IN THE I-BEAMS FOR ALL DIAPHRAGM CONNECTIONS AND DETAILS FOR GALVANIZED STEEL DIAPHRAGMS IN THE SHOP DRAWINGS.

ALL STRUCTURAL STEEL, INCLUDING BOLTS, NUTS, WASHERS AND PLATE WASHERS FOR INTERMEDIATE DIAPHRAGMS SHALL CONFORM TO THE REQUIREMENTS OF 513.

CONCRETE FOR INTERMEDIATE DIAPHRAGMS SHALL CONFORM TO THE REQUIREMENTS OF 511. UNLESS OTHERWISE SPECIFIED, CONCRETE SHALL BE CLASS S.

ALTERNATE DESIGNS: AT NO EXPENSE TO THE PROJECT AND UPON WRITTEN ACCEPTANCE AND APPROVAL OF THE DIRECTOR, THE CONTRACTOR MAY SUBSTITUTE ALTERNATE DESIGNS FOR DETAILS AND I-BEAM SECTIONS TO THOSE SHOWN IN THE PLANS. IF AN ALTERNATE DESIGN IS APPROVED, THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE REVISION OF THE PROJECT PLANS. THE DEPARTMENT WILL NOT PAY FOR DESIGN COSTS OR COSTS ASSOCIATED WITH PLAN MODIFICATIONS. THE CONTRACTOR SHALL SUBMIT THE ALTERNATE DESIGN TO THE DIRECTOR FOR ACCEPTANCE AT LEAST 30 DAYS BEFORE CONSTRUCTION BEGINS.

SHIPPING STRANDS:
THE FABRICATOR MAY ADD SHIPPING STRANDS AT THE LOCATIONS SHOWN ON SHEET 1 OF 8. THESE SHIPPING STRANDS SHALL BE DEBONDED FOR THE ENTIRE LENGTH OF THE BEAM EXCEPT FOR THE LAST 10′-0″ AT EACH END. THE STRANDS SHALL BE CUT AFTER ALL HANDLING OPERATIONS ARE COMPLETE.

BASIS OF PAYMENT: IN ADDITION TO THE ITEMS LISTED IN 515.18, THE DEPARTMENT WILL CONSIDER ALL COSTS ASSOCIATED WITH FOLLOWING ITEMS TO BE INCIDENTAL TO THE COST OF THE I-BEAMS: THREADED RODS; BEARING SOLE PLATES; TEMPORARY BRACING; AND FIXED ANCHOR DOWELS.

THE DEPARTMENT WILL PAY FOR PIER AND ABUTMENT DIAPHRAGMS SEPARATELY UNDER ITEM 511, CONCRETE FOR STRUCTURES.

FOR INFORMATION ONLY

DESIGN AGENCY
OFFICE OF STRUCTURAL ENGINEERING

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
Brad Fogell — ADMINISTRATOR
09-07-99 — DATE

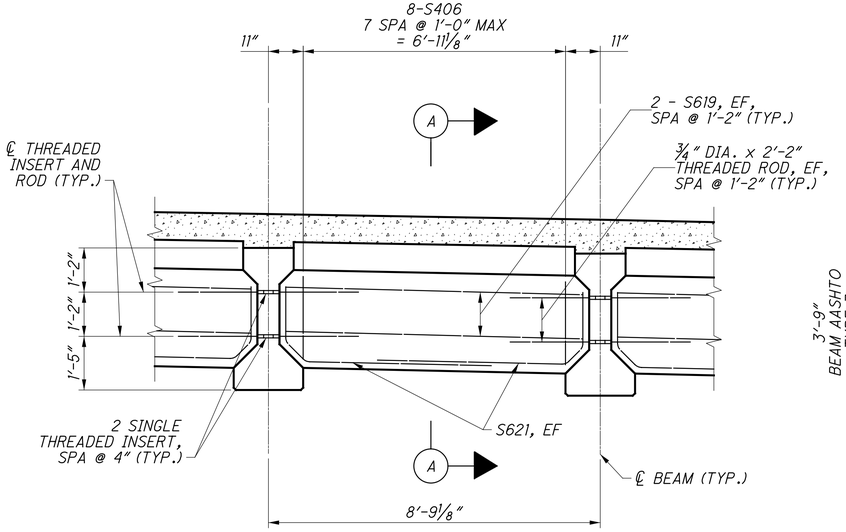
REVISIONS
10-20-00
07-19-02
04-20-07
07-18-03
07-18-08

STANDARD
PRESTRESSED CONCRETE I-BEAM BRIDGE DETAILS

DESIGNED SAM | DRAWN SAM | CHECKED JS/WTL | REVIEWED LMW | PSID-1-99

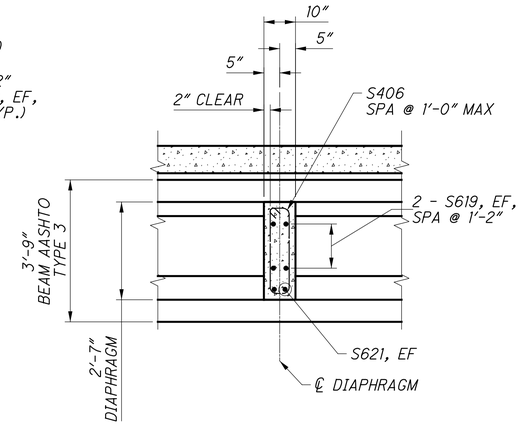
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34 / 55
1423 / 2017

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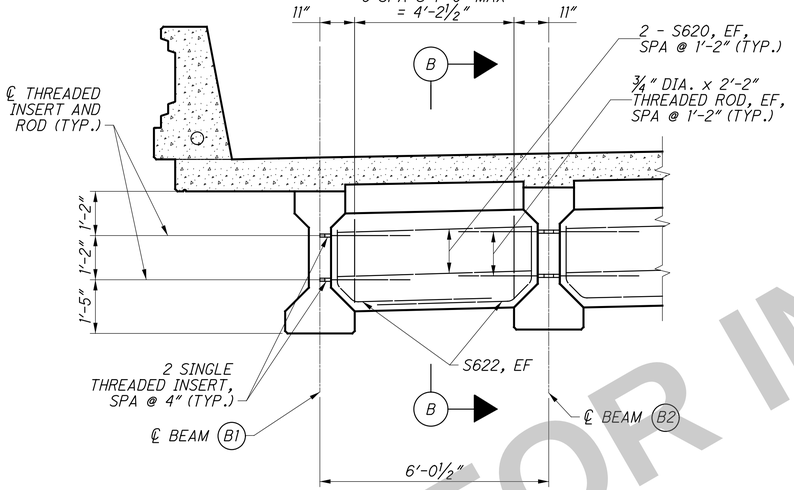


CONCRETE INTERMEDIATE DIAPHRAGM TYPE-1

(TYP OF 22)

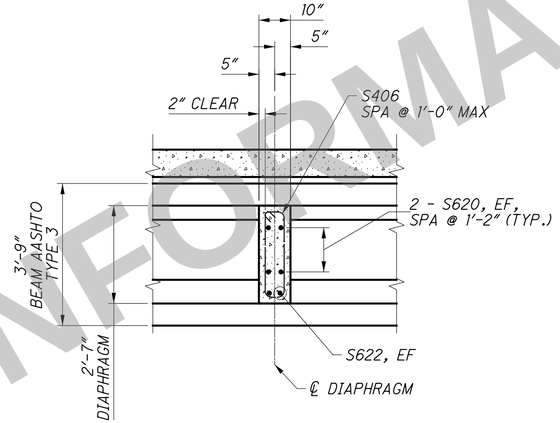


SECTION A-A



CONCRETE INTERMEDIATE DIAPHRAGM TYPE-2

(TYP OF 1)



SECTION B-B

NOTES:

1. SEE PLAN INSERT SHEETS 27/55 THROUGH 34/55 WHICH CONTAIN ARCHIVED STANDARD DRAWING PSID-1-99 FOR ADDITIONAL DETAILS NOT SHOWN.
2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
3. INTERMEDIATE DIAPHRAGMS SHALL BE CAST-IN-PLACE CONCRETE DIAPHRAGMS ONLY.
4. MINIMUM LAP LENGTH FOR #6 BARS - 3'-0".

FOR INFORMATION ONLY

DESIGN AGENCY
2000 Corporate Exchange Drive, Suite 200, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
TML	JBM	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PPA		3110095	

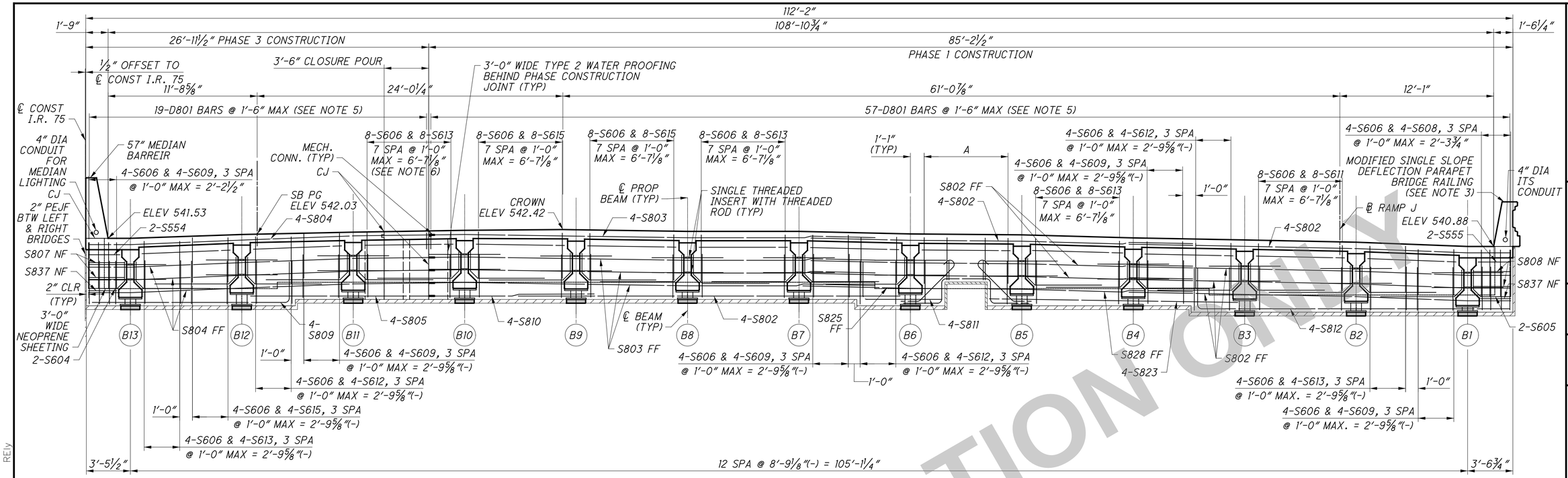
INTERMEDIATE DIAPHRAGM
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

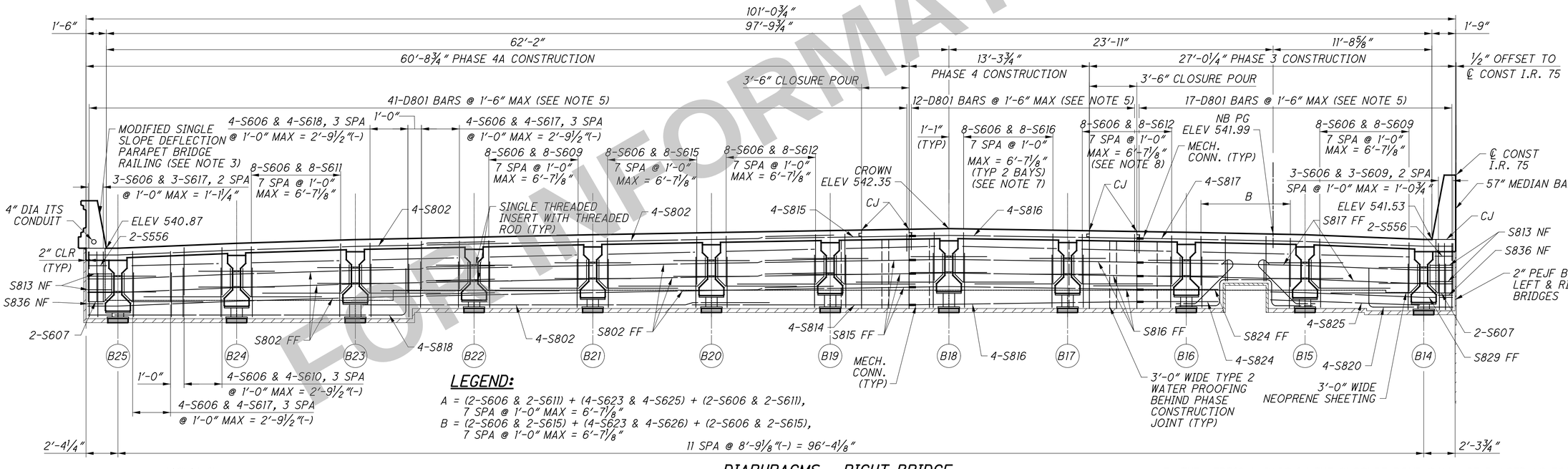
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DIAPHRAGMS - LEFT BRIDGE



LEGEND:

A = (2-S606 & 2-S611) + (4-S623 & 4-S625) + (2-S606 & 2-S611), 7 SPA @ 1'-0" MAX = 6'-7⅛"

B = (2-S606 & 2-S615) + (4-S623 & 4-S626) + (2-S606 & 2-S615), 7 SPA @ 1'-0" MAX = 6'-7⅛"

MINIMUM LAP	
#8	5'-0"

LEGEND:

(BXX) = BEAM NUMBER

NOTES:

1. SEE SHEETS 18/55 AND 17/55 FOR ABUTMENT DETAILS
2. SEE SHEET 21/55 FOR ABUTMENT SECTION.
3. PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE THE HORIZONTAL CONSTRUCTION JOINT BETWEEN THE DIAPHRAGM AND DECK CONCRETE AT THE APPROACH SLAB SEAT. PLACE CLOSURE POUR CONCRETE IN THE DIAPHRAGM AND DECK CONCURRENTLY.

DIAPHRAGMS - RIGHT BRIDGE

4. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
5. SPACE BETWEEN D801 BARS MEASURED PERPENDICULAR TO ℄ CONSTRUCTION I.R. 75.
6. THE VERTICAL BARS IN THE CLOSURE POUR SHALL BE PLACED AS FOLLOWS: 2-S606 & 2-S613 BARS PLACED IN PHASE 1, 4-S606 & 4-S613 BARS PLACED IN THE PHASE 3 CLOSURE POUR AND 2-S606 & 2-S613 BARS PLACED IN THE PHASE 3 DECK POUR.
7. THE VERTICAL BARS IN THE CLOSURE POUR SHALL BE PLACED AS FOLLOWS: 2-S606 & 2-S616 BARS PLACED IN PHASE 4, 4-S606 & 4-S616 BARS PLACED IN THE PHASE 4A CLOSURE POUR AND 2-S606 & 2-S616 BARS PLACED IN THE PHASE 4A DECK POUR.
8. THE VERTICAL BARS IN THE CLOSURE POUR SHALL BE PLACED AS FOLLOWS: 3-S606 & 3-S612 BARS PLACED IN PHASE 3, 4-S606 & 4-S612 BARS PLACED IN THE PHASE 4 CLOSURE POUR AND 1-S606 & 1-S612 BARS PLACED IN THE PHASE 4 DECK POUR.
9. SEE PLAN SHEET 38/55 FOR ADDITIONAL DIAPHRAGM DETAILS NOT SHOWN.

FOR INFORMATION ONLY

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DESIGN AGENCY
2000 Corporate Exchange Drive, Suite 200, Columbus, OH 43231

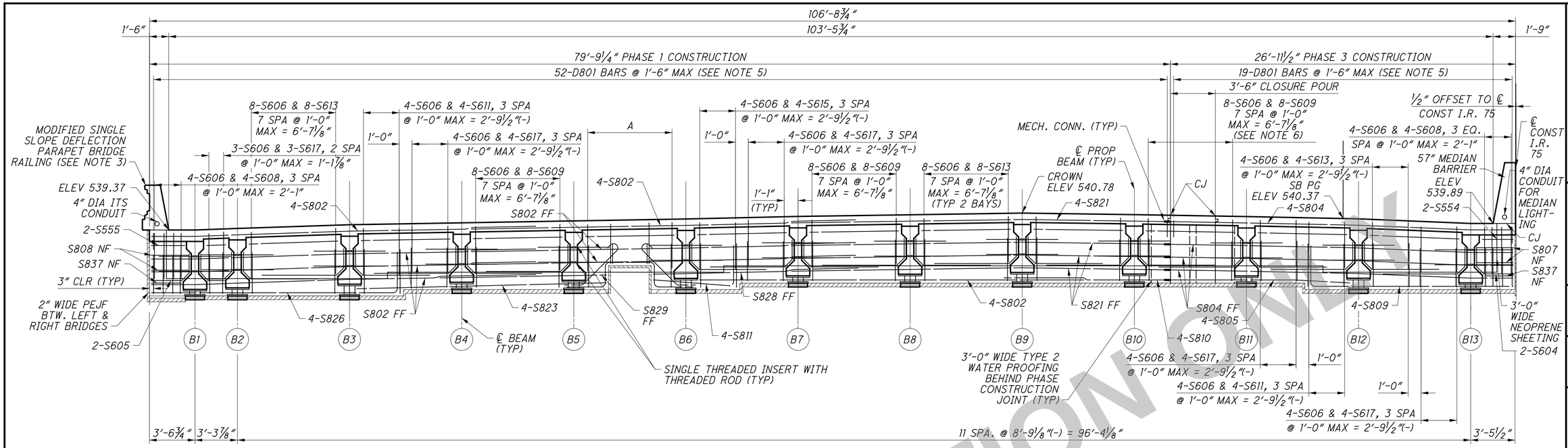
DESIGNED TML | CHECKED PPA
DRAWN JBM | REVISED
REVIEWED NCM | DATE 12-15-21
STRUCTURE FILE NUMBER 3110095

REAR ABUTMENT DIAPHRAGMS
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

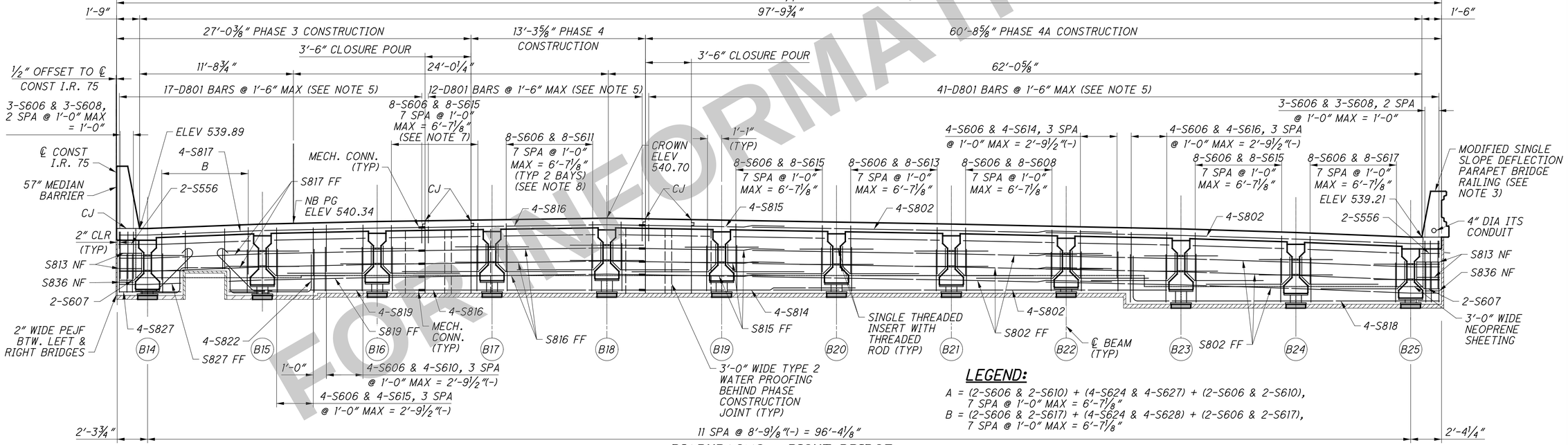
HAM-75-7.85
PID No. 77889

36 / 55

1425 / 2017



DIAPHRAGMS - LEFT BRIDGE



DIAPHRAGMS - RIGHT BRIDGE

MINIMUM LAP	
#8	5'-0"

LEGEND:

(BXX) = BEAM NUMBER

LEGEND:

A = (2-S606 & 2-S610) + (4-S624 & 4-S627) + (2-S606 & 2-S610), 7 SPA @ 1'-0" MAX = 6'-7⅛"

B = (2-S606 & 2-S617) + (4-S624 & 4-S628) + (2-S606 & 2-S617), 7 SPA @ 1'-0" MAX = 6'-7⅛"

NOTES:

1. SEE SHEETS 19/55 AND 20/55 FOR ABUTMENT DETAILS.
2. SEE SHEET 21/55 FOR ABUTMENT SECTION.
3. PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE THE HORIZONTAL CONSTRUCTION JOINT BETWEEN THE DIAPHRAGM AND DECK CONCRETE AT THE APPROACH SLAB SEAT. PLACE CLOSURE POUR CONCRETE IN THE DIAPHRAGM AND DECK CONCURRENTLY.
4. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
5. SPACE BETWEEN D801 BARS MEASURED PERPENDICULAR TO ℄ CONSTRUCTION I.R. 75.
6. THE VERTICAL BARS IN THE CLOSURE POUR SHALL BE PLACED AS FOLLOWS: 2-S606 & 2-S609 BARS PLACED IN PHASE 1, 4-S606 & 4-S609 BARS PLACED IN THE PHASE 3 CLOSURE POUR AND 2-S606 & 2-S609 BARS PLACED IN THE PHASE 3 DECK POUR.
7. THE VERTICAL BARS IN THE CLOSURE POUR SHALL BE PLACED AS FOLLOWS: 3-S606 & 3-S615 BARS PLACED IN PHASE 3, 4-S606 & 4-S615 BARS PLACED IN THE PHASE 4 CLOSURE POUR AND 1-S606 & 1-S615 BARS PLACED IN THE PHASE 4 DECK POUR.
8. THE VERTICAL BARS IN THE CLOSURE POUR SHALL BE PLACED AS FOLLOWS: 2-S606 & 2-S611 BARS PLACED IN PHASE 4, 4-S606 & 4-S611 BARS PLACED IN THE PHASE 4A CLOSURE POUR AND 2-S606 & 2-S611 BARS PLACED IN THE PHASE 4A DECK POUR.
9. SEE PLAN SHEET 39/55 FOR ADDITIONAL DIAPHRAGM DETAILS NOT SHOWN.

FOR INFORMATION ONLY

DESIGN AGENCY
2200 Corporate Exchange Drive, Suite 310, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
TML	JBM	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PPA		3110095	

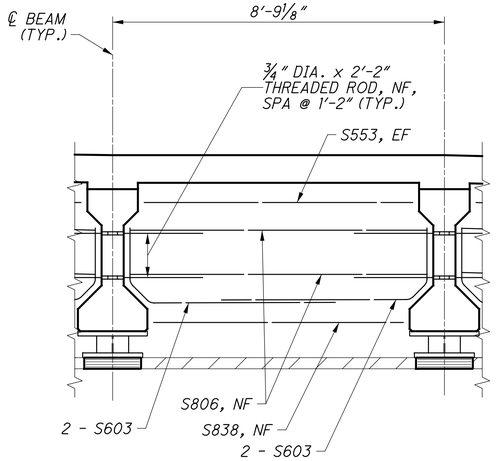
FORWARD ABUTMENT DIAPHRAGMS
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

37/55

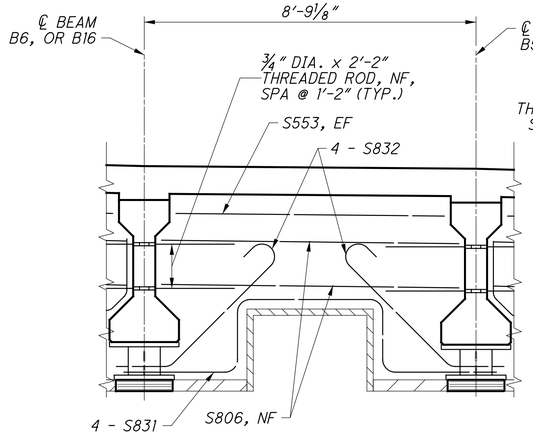
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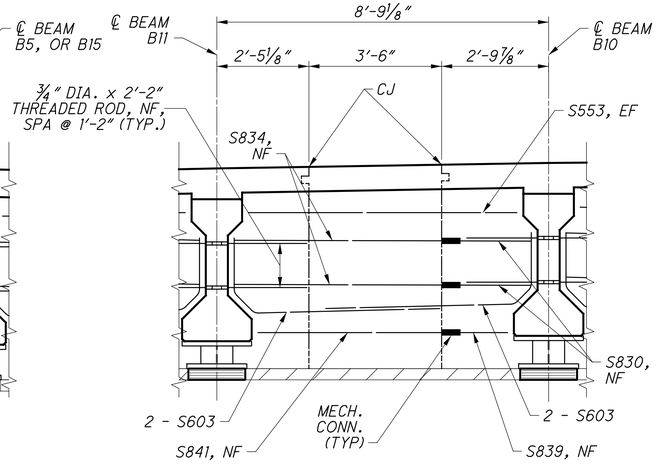


DIAPHRAGM TYPICAL

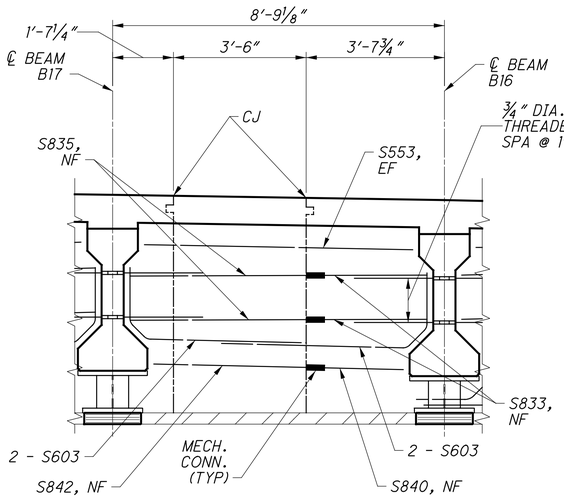
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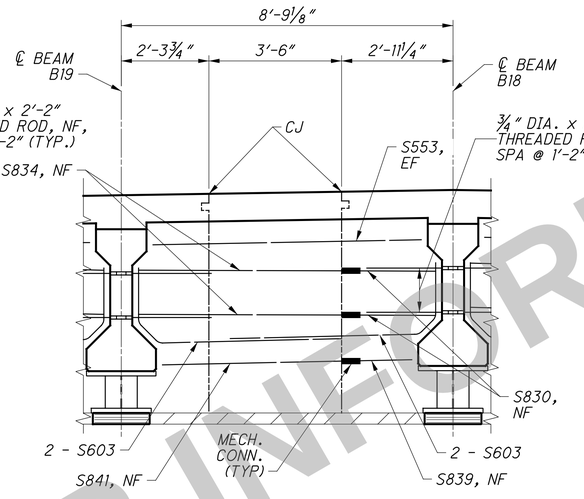
DIAPHRAGM BETWEEN BEAM B6 AND B5, B16 AND B15



DIAPHRAGM BETWEEN BEAM B11 AND B10



DIAPHRAGM BETWEEN BEAM B17 AND B16



DIAPHRAGM BETWEEN BEAM B19 AND B18

FOR INFORMATION ONLY

NOTES:

1. SEE PLAN INSERT SHEETS 27/55 THROUGH 34/55 WHICH CONTAIN ARCHIVED STANDARD DRAWING PSID-1-99 FOR ADDITIONAL DETAILS NOT SHOWN.
2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

DESIGN AGENCY
2000 Corporate Exchange Drive, Suite 200, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
TML	JBM	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PPA		3110095	

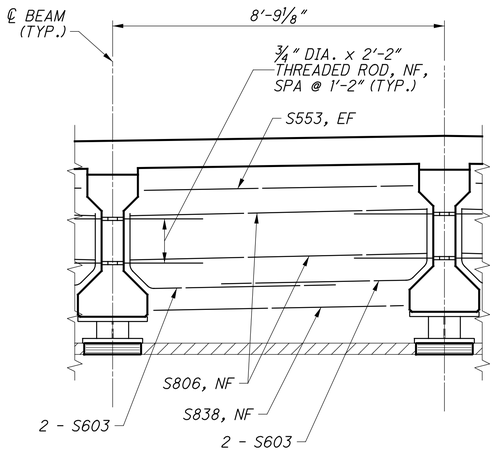
REAR ABUTMENT DIAPHRAGM DETAILS
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

38/55

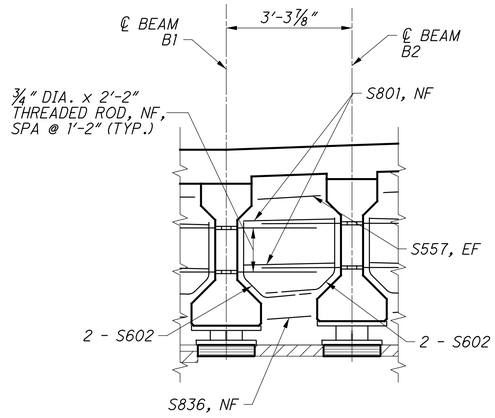
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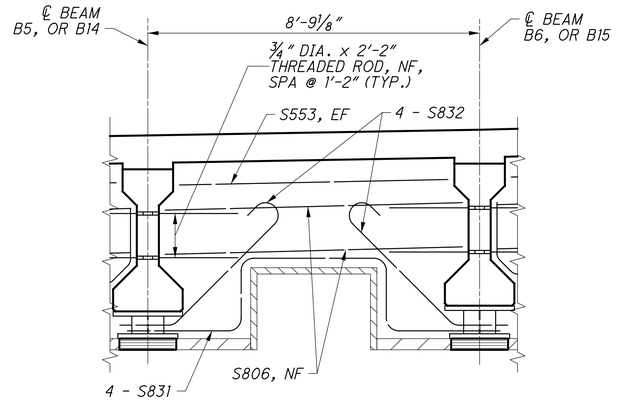


DIAPHRAGM TYPICAL

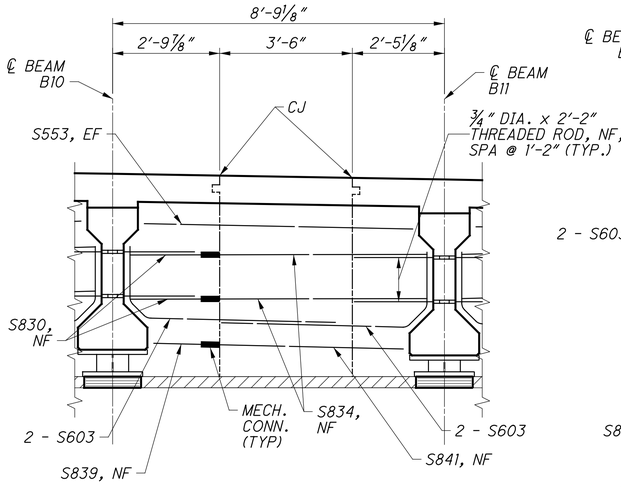
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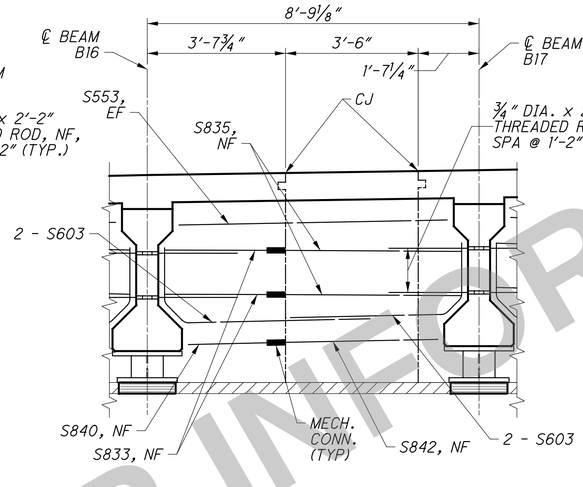
DIAPHRAGM BETWEEN BEAM B1 AND B2



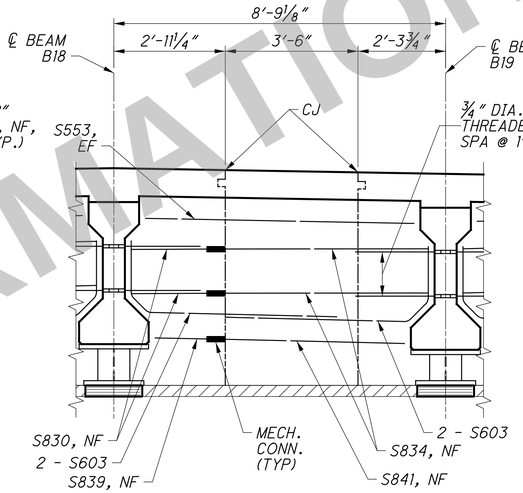
DIAPHRAGM BETWEEN BEAM B5 AND B6, B14 AND B15



DIAPHRAGM BETWEEN BEAM B10 AND B11



DIAPHRAGM BETWEEN BEAM B16 AND B17



DIAPHRAGM BETWEEN BEAM B18 AND B19

FOR INFORMATION ONLY

NOTES:

1. SEE PLAN INSERT SHEETS 27/55 THROUGH 34/55 WHICH CONTAIN ARCHIVED STANDARD DRAWING PSID-1-99 FOR ADDITIONAL DETAILS NOT SHOWN.
2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

DESIGN AGENCY
2001 Crown Centre Drive, Suite 201, Columbus, OH 43201

DESIGNED	DRAWN	REVIEWED	DATE
TML	JBM	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PPA		3110095	

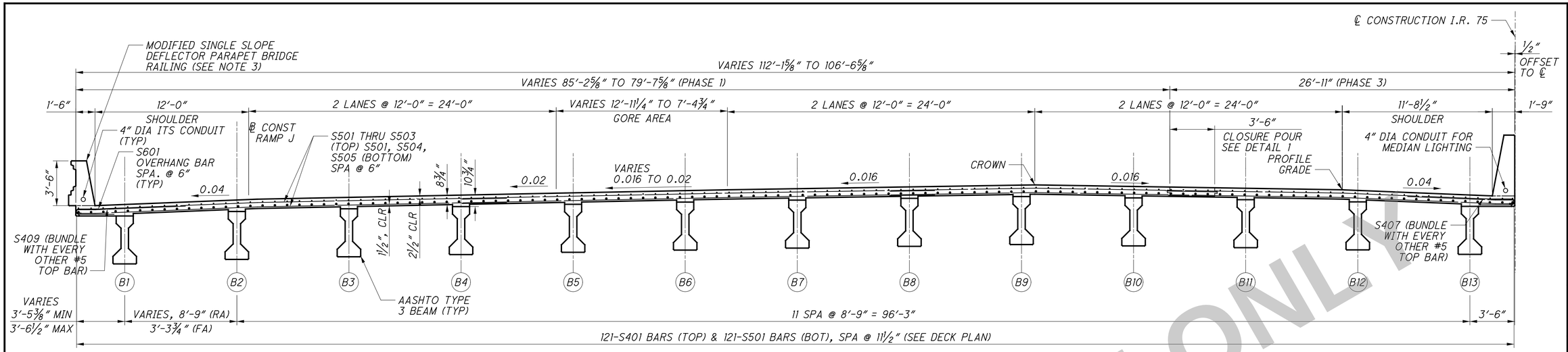
FORWARD ABUTMENT DIAPHRAGM DETAILS

BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

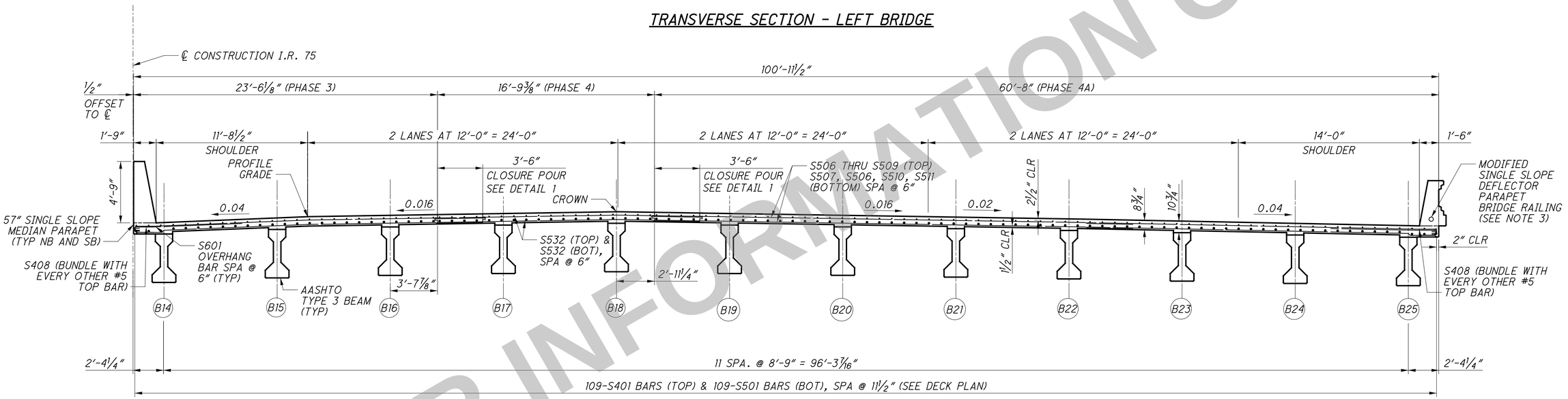
HAM-75-7.85
PID No. 77889

1428
2017

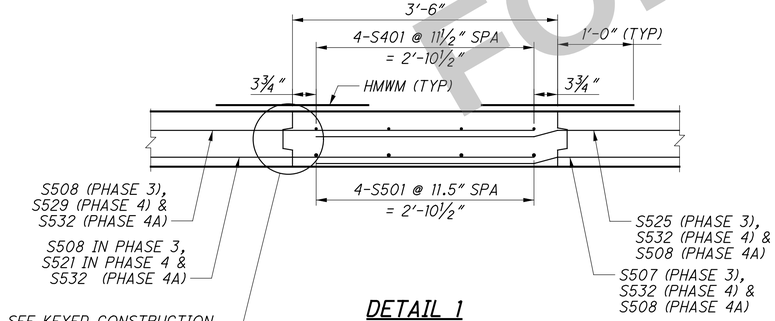
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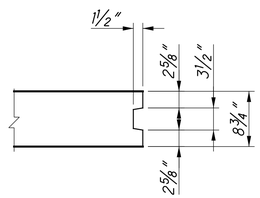
TRANSVERSE SECTION - LEFT BRIDGE



TRANSVERSE SECTION - RIGHT BRIDGE



DETAIL 1
CLOSURE POUR



KEYED CONSTRUCTION JOINT DETAIL

LEGEND:

(BXX) = BEAM NUMBER

NOTES:

1. LAP #4 BAR = 1'-11"
   LAP #5 BAR = 3'-2"
2. FOR DECK PLANS SEE SHEETS 41/55 AND 42/55
3. SEE STD. DWG SBR-1-20 AND SBR-2-20 FOR ADDITIONAL DETAILS.
4. FOR RAILING DETAILS AND SEALING LIMITS SEE SHEET 45/55 THROUGH 47/55
5. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

FOR INFORMATION ONLY

DESIGN AGENCY
2000 Corporate Exchange Drive, Suite 200, Columbus, OH 43231

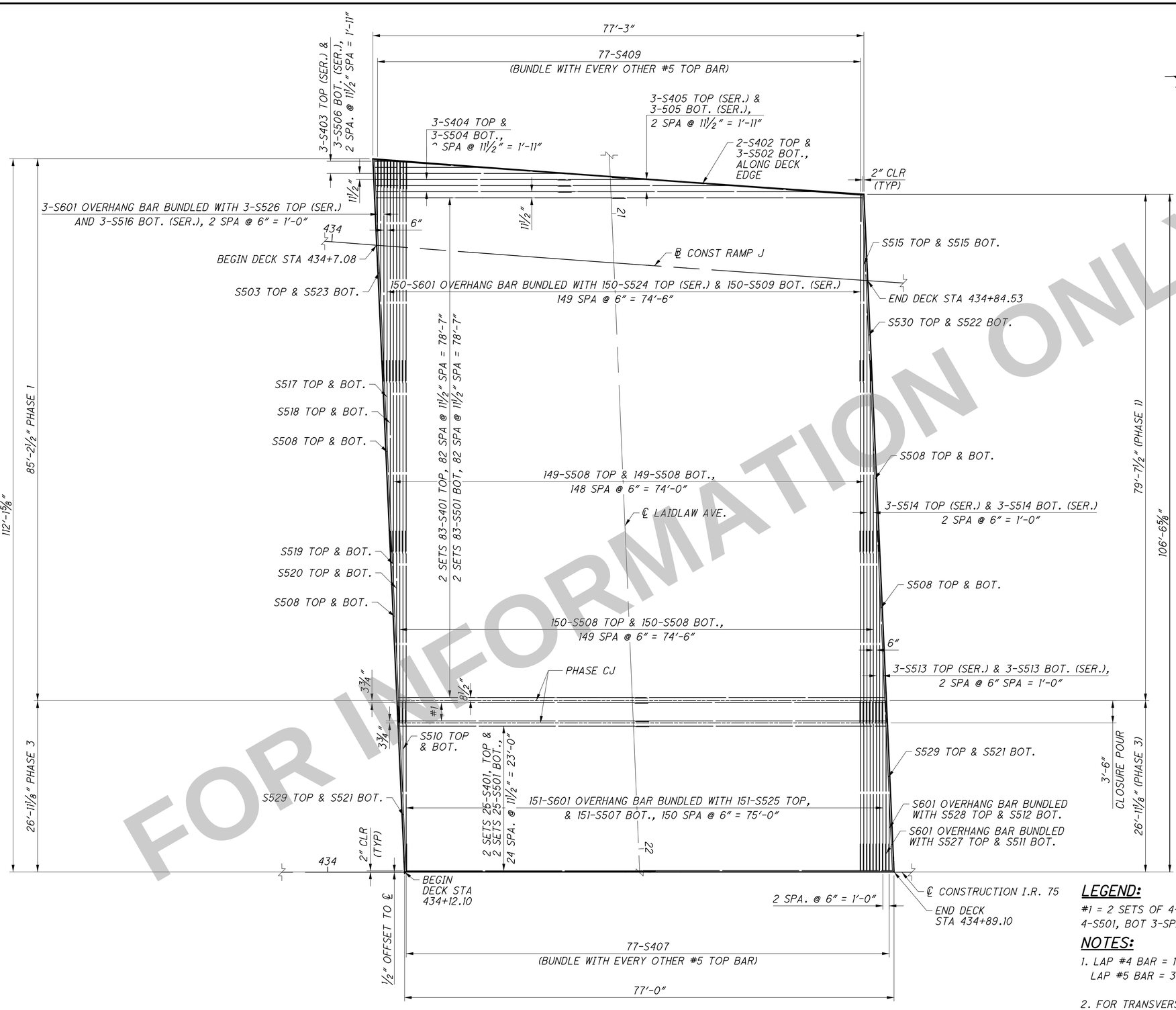
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JAD	SBH	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JWE		3110095	

TRANSVERSE SECTION
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

1429
2017

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DECK PLAN - LEFT BRIDGE

LEGEND:

#1 = 2 SETS OF 4-S401, TOP & 4-S501, BOT 3-SPA @ 11½" = 2'-10½"

NOTES:

1. LAP #4 BAR = 1'-11"
   LAP #5 BAR = 3'-2"
2. FOR TRANSVERSE SECTION SEE SHEET 40/55
3. FOR FRAMING PLAN SEE SHEET 24/55
4. SEE GENERAL NOTES FOR ABBREVIATION LEGENDS.

FOR INFORMATION ONLY

DESIGN AGENCY
2000 Corporate Exchange Drive, Suite 300, Columbus, OH 43231

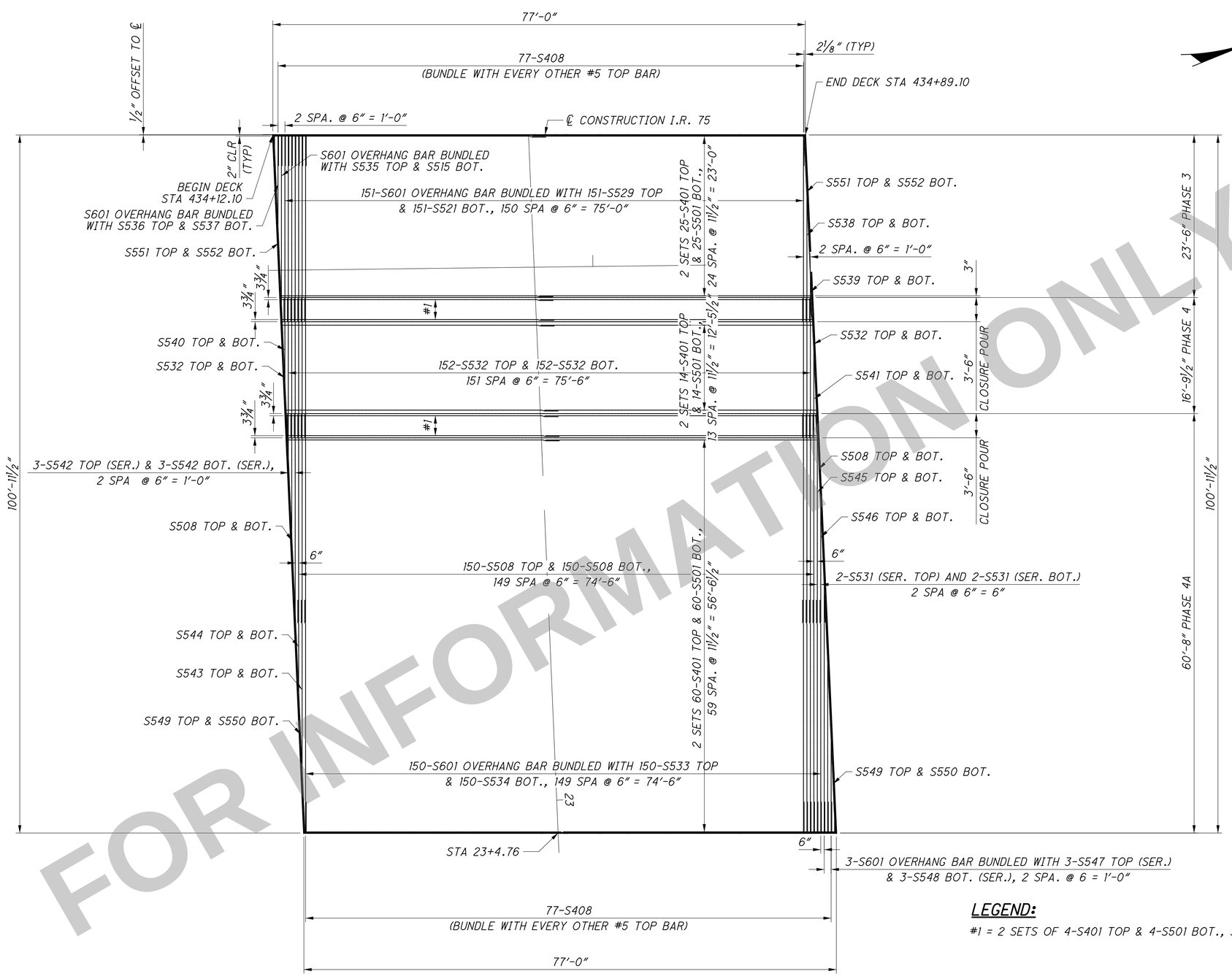
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JAD	RT	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
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BRIDGE DECK PLAN
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

1430
2017

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DECK PLAN - RIGHT BRIDGE

LEGEND:

#1 = 2 SETS OF 4-S401 TOP & 4-S501 BOT., 3 SPA. @ 11½″ = 2′-10½″

NOTES:

1. LAP #4 BAR = 1′-11″
   LAP #5 BAR = 3′-2″
2. FOR TRANSVERSE SECTION SEE SHEET 40/55
3. FOR FRAMING PLAN SEE SHEET 25/55
4. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

FOR INFORMATION ONLY

DESIGN AGENCY
JMT
2000 Corporate Exchange Drive, Suite 300, Columbus, OH 43231

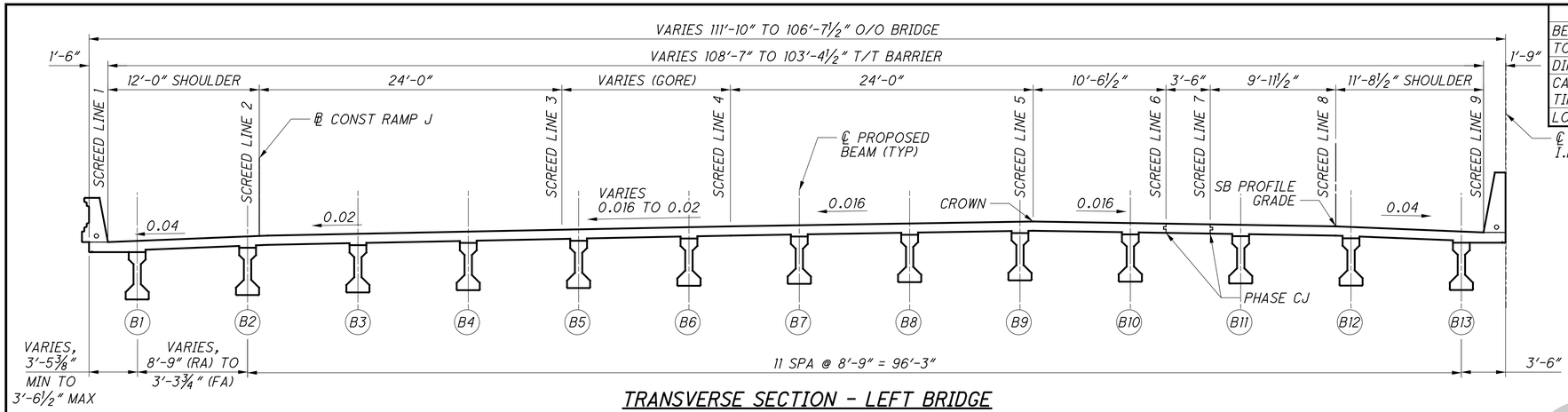
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JAD	RT	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JWE		3110095	

BRIDGE DECK PLAN
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

1431
2017

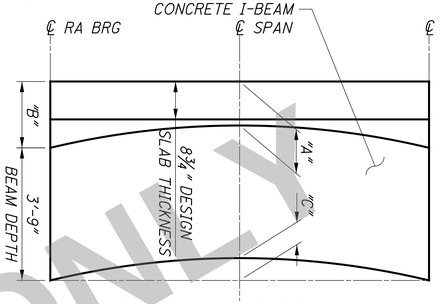
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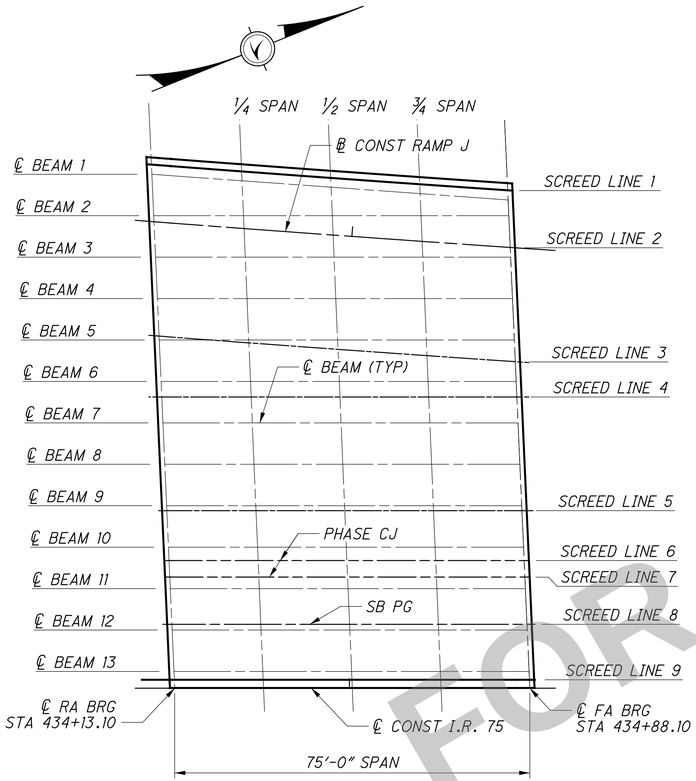
TRANSVERSE SECTION - LEFT BRIDGE

(SOUTH BOUND)

LEFT BRIDGE BEAM CAMBER				
BEAM NUMBER	1	2	3 THRU 12	13
TOPPING THICKNESS, "A"	10 3/4"	10 3/4"	10 3/4"	10 3/4"
DIMENSION "B"	11 15/16"	1'-0"	11 7/8"	11 13/16"
CALCULATED CAMBER AT TIME OF RELEASE, "C"	1 1/2"	1 5/8"	1 5/8"	1 1/2"
LONG TERM CAMBER, "C"	3 3/4"	4"	4"	3 3/4"



BEAM CAMBER DIAGRAM



PLAN SCHEMATIC - LEFT BRIDGE

(SOUTH BOUND)

TOP OF HAUNCH AND FINAL DECK ELEVATION TABLE - LEFT BRIDGE						
LOCATION		℄ BRG RA	¼ SPAN	½ SPAN	¾ SPAN	℄ BRG FA
BEAM 1	STATION	434+08.27	434+27.08	434+45.90	434+64.71	434+83.52
	TOP/HAUNCH ELEV	540.23	539.94	539.59	539.18	538.72
	FINAL DECK ELEV	540.96	540.62	540.25	539.86	539.45
BEAM 2	STATION	434+08.66	434+27.41	434+46.16	434+64.91	434+83.66
	TOP/HAUNCH ELEV	540.56	540.23	539.83	539.37	538.84
	FINAL DECK ELEV	541.29	540.90	540.48	540.04	539.57
BEAM 3	STATION	434+09.05	434+27.80	434+46.55	434+65.30	434+84.05
	TOP/HAUNCH ELEV	540.74	540.45	540.08	539.64	539.13
	FINAL DECK ELEV	541.47	541.11	540.71	540.30	539.86
BEAM 4	STATION	434+09.44	434+28.19	434+46.94	434+65.69	434+84.44
	TOP/HAUNCH ELEV	540.90	540.60	540.24	539.79	539.28
	FINAL DECK ELEV	541.63	541.26	540.87	540.45	540.01
BEAM 5	STATION	434+09.93	434+28.58	434+47.33	434+66.08	434+84.83
	TOP/HAUNCH ELEV	541.14	540.76	540.39	539.94	539.43
	FINAL DECK ELEV	541.87	541.42	541.02	540.60	540.16
BEAM 6	STATION	434+10.22	434+28.97	434+47.72	434+66.47	434+85.22
	TOP/HAUNCH ELEV	541.21	540.91	540.55	540.10	539.58
	FINAL DECK ELEV	541.94	541.57	541.18	540.76	540.31
BEAM 7	STATION	434+10.61	434+29.36	434+48.11	434+66.86	434+85.61
	TOP/HAUNCH ELEV	541.41	541.10	540.74	540.29	539.78
	FINAL DECK ELEV	542.14	541.76	541.37	540.95	540.51
BEAM 8	STATION	434+11.00	434+29.75	434+48.50	434+67.25	434+86.00
	TOP/HAUNCH ELEV	541.54	541.23	540.87	540.42	539.91
	FINAL DECK ELEV	542.27	541.89	541.50	541.08	540.64
BEAM 9	STATION	434+11.39	434+30.14	434+48.89	434+67.64	434+86.39
	TOP/HAUNCH ELEV	541.67	541.37	541.00	540.55	540.04
	FINAL DECK ELEV	542.40	542.03	541.63	541.21	540.77
BEAM 10	STATION	434+11.78	434+30.53	434+49.28	434+68.03	434+86.78
	TOP/HAUNCH ELEV	541.56	541.25	540.88	540.43	539.92
	FINAL DECK ELEV	542.29	541.91	541.51	541.09	540.65
BEAM 11	STATION	434+12.17	434+30.92	434+49.67	434+68.42	434+87.17
	TOP/HAUNCH ELEV	541.41	541.10	540.74	540.29	539.77
	FINAL DECK ELEV	542.14	541.76	541.37	540.95	540.50
BEAM 12	STATION	434+12.56	434+31.31	434+50.06	434+68.81	434+87.56
	TOP/HAUNCH ELEV	541.23	540.93	540.56	540.11	539.59
	FINAL DECK ELEV	541.96	541.59	541.19	540.77	540.32
BEAM 13	STATION	434+12.95	434+31.70	434+50.45	434+69.20	434+87.95
	TOP/HAUNCH ELEV	540.87	540.56	540.19	539.74	539.23
	FINAL DECK ELEV	541.60	541.23	540.83	540.41	539.96

SCREED AND FINAL DECK ELEVATION TABLE - LEFT BRIDGE						
LOCATION		℄ BRG RA	¼ SPAN	½ SPAN	¾ SPAN	℄ BRG FA
LEFT TOE OF PARAPET SCREED LINE 1	STATION	434+08.18	434+27.00	434+45.81	434+64.62	434+83.43
	SCREED ELEV	540.88	540.60	540.25	539.84	539.37
	DL DEFLECTION	0.00	0.05	0.07	0.05	0.00
	FINAL DECK ELEV	540.88	540.55	540.18	539.79	539.37
℄ CONST RAMP J SCREED LINE 2	STATION	434+08.72	434+27.53	434+46.35	434+65.15	434+83.96
	SCREED ELEV	541.34	541.07	540.73	540.31	539.82
	DL DEFLECTION	0.00	0.07	0.10	0.07	0.00
	FINAL DECK ELEV	541.34	541.00	540.63	540.24	539.82
LEFT GORE EDGE SCREED LINE 3	STATION	434+09.72	434+28.25	434+47.06	434+65.87	434+85.03
	SCREED ELEV	541.62	541.36	541.02	540.59	540.10
	DL DEFLECTION	0.00	0.07	0.10	0.07	0.00
	FINAL DECK ELEV	541.62	541.29	540.92	540.52	540.10
RIGHT GORE EDGE SCREED LINE 4	STATION	434+10.37	434+29.12	434+47.87	434+66.62	434+85.37
	SCREED ELEV	542.00	541.70	541.34	540.88	540.37
	DL DEFLECTION	0.00	0.07	0.10	0.07	0.00
	FINAL DECK ELEV	542.00	541.63	541.24	540.81	540.37
CROWN SCREED LINE 5	STATION	434+11.43	434+30.18	434+48.94	434+67.69	434+86.44
	SCREED ELEV	542.42	542.11	541.75	541.30	540.78
	DL DEFLECTION	0.00	0.07	0.10	0.07	0.00
	FINAL DECK ELEV	542.42	542.04	541.65	541.23	540.78
LEFT PHASE CJ SCREED LINE 6	STATION	434+11.90	434+30.65	434+49.40	434+68.16	434+86.91
	SCREED ELEV	542.24	541.93	541.57	541.12	540.60
	DL DEFLECTION	0.00	0.07	0.10	0.07	0.00
	FINAL DECK ELEV	542.24	541.86	541.47	541.05	540.60
RIGHT PHASE CJ SCREED LINE 7	STATION	434+12.06	434+30.81	434+49.56	434+68.31	434+87.06
	SCREED ELEV	542.20	541.87	541.51	541.06	540.54
	DL DEFLECTION	0.00	0.07	0.10	0.07	0.00
	FINAL DECK ELEV	542.20	541.80	541.41	540.99	540.54
PG I.R. 75 SB SCREED LINE 8	STATION	434+12.50	434+31.25	434+50.00	434+68.75	434+87.50
	SCREED ELEV	542.03	541.71	541.34	540.89	540.37
	DL DEFLECTION	0.00	0.07	0.10	0.07	0.00
	FINAL DECK ELEV	542.03	541.64	541.24	540.82	540.37
RIGHT TOE OF PARAPET SCREED LINE 9	STATION	434+13.02	434+31.77	434+50.52	434+69.27	434+88.02
	SCREED ELEV	541.53	541.22	540.85	540.40	539.89
	DL DEFLECTION	0.00	0.06	0.09	0.06	0.00
	FINAL DECK ELEV	541.53	541.16	540.76	540.34	539.89

LEGEND:

(BXX) = BEAM NUMBER

NOTES:

1. THE TOPPING THICKNESSES SHOWN FROM THE TOP OF THE DECK SLAB TO THE TOP OF THE TOP FLANGE ALONG THE CENTERLINE OF THE I-BEAM ARE THEORETICAL DIMENSIONS. THE HAUNCH DEPTH IS THE TOPPING THICKNESS MINUS THE DESIGN SLAB THICKNESS. THE DEPARTMENT WILL PAY FOR SUPERSTRUCTURE CONCRETE BASED ON THE DESIGN SLAB THICKNESS AND THE AVERAGE OF THE THEORETICAL HAUNCH DEPTHS AT MID-SPAN AND AT EACH BEAM BEARING EVEN THOUGH DEVIATION FROM THE DIMENSIONS SHOWN MAY BE NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. ONCE ALL BEAMS ARE SET IN THEIR FINAL POSITION, THE ACTUAL CAMBER FOR EACH MEMBER WILL BE THE TOP OF BEAM ELEVATION AT MID-SPAN MINUS THE AVERAGE TOP OF BEAM ELEVATION AT EACH BEARING. THE ACTUAL TOPPING THICKNESS AT MID-SPAN WILL BE THE THEORETICAL DIMENSION PLUS OR MINUS THE DIFFERENCE BETWEEN THE ACTUAL AND ANTICIPATED CAMBER.
2. SCREED LINES SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
3. TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM/GIRDER HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
4. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.
5. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

FOR INFORMATION ONLY

DESIGN AGENCY
2001 Crocker Road, Suite 200, Westlake, OH 44145

DESIGNED TML | DRAWN TML | CHECKED PPA | REVIEWED NCM | DATE 12-15-21
STRUCTURE FILE NUMBER 3110095
REVISED

SCREED, TOP OF HAUNCH & FINAL DECK ELEVATIONS
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

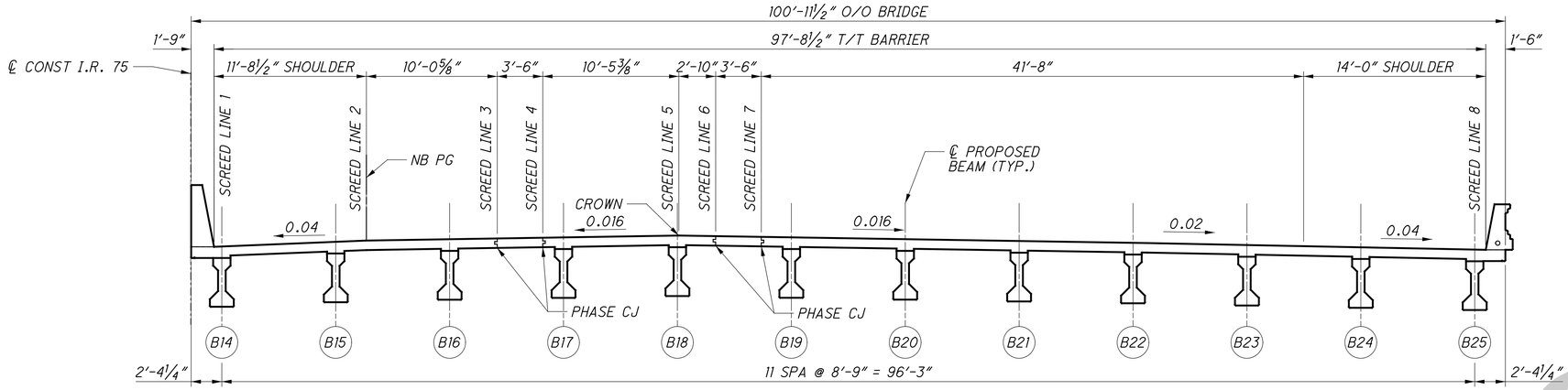
HAM-75-7.85
PID No. 77889

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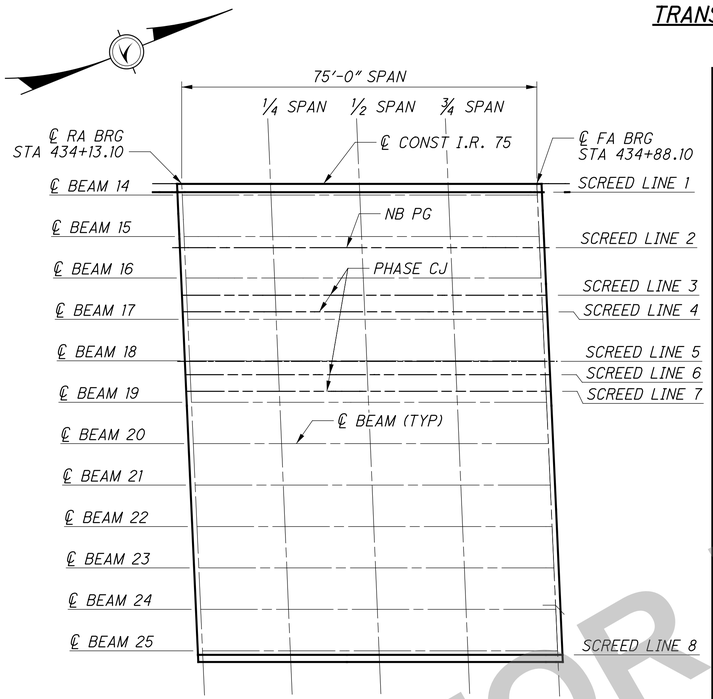
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RIGHT BRIDGE BEAM CAMBER			
BEAM NUMBER	14	15 THRU 24	25
TOPPING THICKNESS, "A"	10 3/4"	10 3/4"	10 3/4"
DIMENSION "B"	11 15/16"	11 13/16"	11 15/16"
CALCULATED CAMBER AT TIME OF RELEASE, "C"	1 1/2"	1 5/8"	1 1/2"
LONG TERM CAMBER, "C"	3 3/4"	4"	3 3/4"



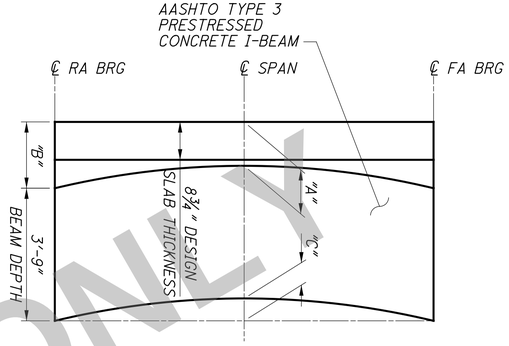
TRANSVERSE SECTION - RIGHT BRIDGE

(NORTH BOUND)



PLAN SCHEMATIC - RIGHT BRIDGE

(NORTH BOUND)



BEAM CAMBER DIAGRAM

TOP OF HAUNCH AND FINAL DECK ELEVATION TABLE - RIGHT BRIDGE						
LOCATION		℄ BRG RA	1/4 SPAN	1/2 SPAN	3/4 SPAN	℄ BRG FA
BEAM 14	STATION	434+13.21	434+31.96	434+50.71	434+69.46	434+88.21
	TOP/HAUNCH ELEV	540.82	540.50	540.13	539.68	539.18
	FINAL DECK ELEV	541.55	541.18	540.78	540.36	539.91
BEAM 15	STATION	434+13.60	434+32.35	434+51.10	434+69.85	434+88.60
	TOP/HAUNCH ELEV	541.17	540.86	540.49	540.04	539.52
	FINAL DECK ELEV	541.90	541.52	541.12	540.70	540.25
BEAM 16	STATION	434+13.99	434+32.74	434+51.49	434+70.24	434+88.99
	TOP/HAUNCH ELEV	541.35	541.05	540.68	540.23	539.71
	FINAL DECK ELEV	542.08	541.71	541.31	540.89	540.44
BEAM 17	STATION	434+14.38	434+33.13	434+51.88	434+70.63	464+89.38
	TOP/HAUNCH ELEV	541.49	541.18	540.81	540.36	539.84
	FINAL DECK ELEV	542.22	541.84	541.44	541.02	540.57
BEAM 18	STATION	434+14.77	434+33.52	434+52.27	434+71.02	434+89.77
	TOP/HAUNCH ELEV	541.62	541.31	540.94	540.49	539.97
	FINAL DECK ELEV	542.35	541.97	541.57	541.15	540.70
BEAM 19	STATION	434+15.16	434+33.91	434+52.66	434+71.41	434+90.16
	TOP/HAUNCH ELEV	541.48	541.17	540.80	540.34	539.82
	FINAL DECK ELEV	542.21	541.83	541.43	541.00	540.55
BEAM 20	STATION	434+15.55	434+34.30	434+53.05	434+71.80	434+90.55
	TOP/HAUNCH ELEV	541.33	541.02	540.65	540.19	539.67
	FINAL DECK ELEV	542.06	541.68	541.28	540.85	540.40
BEAM 21	STATION	434+15.94	434+34.69	434+53.44	434+72.19	434+90.94
	TOP/HAUNCH ELEV	541.17	540.86	540.49	540.03	539.52
	FINAL DECK ELEV	541.90	541.52	541.12	540.69	540.25
BEAM 22	STATION	434+16.32	434+35.07	434+53.83	434+72.58	434+91.32
	TOP/HAUNCH ELEV	540.99	540.68	540.31	539.85	539.33
	FINAL DECK ELEV	541.72	541.34	540.94	540.51	540.06
BEAM 23	STATION	434+16.71	434+35.46	434+54.21	434+72.97	434+91.71
	TOP/HAUNCH ELEV	540.81	540.50	540.12	539.67	539.15
	FINAL DECK ELEV	541.54	541.16	540.75	540.33	539.88
BEAM 24	STATION	434+17.11	434+35.85	434+54.60	434+73.35	434+92.11
	TOP/HAUNCH ELEV	540.54	540.23	539.85	539.39	538.87
	FINAL DECK ELEV	541.27	540.89	540.48	540.05	539.60
BEAM 25	STATION	434+17.49	434+36.24	434+54.99	434+73.74	434+92.49
	TOP/HAUNCH ELEV	540.18	539.85	539.47	539.02	538.52
	FINAL DECK ELEV	540.91	540.53	540.12	539.70	539.25

SCREED AND FINAL DECK ELEVATION TABLE - RIGHT BRIDGE						
LOCATION		℄ BRG RA	1/4 SPAN	1/2 SPAN	3/4 SPAN	℄ BRG FA
LEFT TOE OF PARAPET SCREED LINE 1	STATION	434+13.17	434+31.92	434+50.67	434+69.42	434+88.17
	SCREED ELEV	541.53	541.20	540.83	540.38	539.89
	DL DEFLECTION	0.00	0.05	0.08	0.05	0.00
	FINAL DECK ELEV	541.53	541.15	540.75	540.33	539.89
PG I.R. 75 NB SCREED LINE 2	STATION	434+13.70	434+32.45	434+51.20	434+69.96	434+88.71
	SCREED ELEV	541.99	541.68	541.31	540.86	540.34
	DL DEFLECTION	0.00	0.07	0.10	0.07	0.00
	FINAL DECK ELEV	541.99	541.61	541.21	540.79	540.34
PHASE CJ 1 SCREED LINE 3	STATION	434+14.15	434+32.90	434+51.65	434+70.40	434+89.15
	SCREED ELEV	542.14	541.83	541.46	541.01	540.49
	DL DEFLECTION	0.00	0.07	0.10	0.07	0.00
	FINAL DECK ELEV	542.14	541.76	541.36	540.94	540.49
PHASE CJ 2 SCREED LINE 4	STATION	434+14.31	434+33.06	434+51.81	434+70.56	434+89.31
	SCREED ELEV	542.19	541.89	541.52	541.06	540.55
	DL DEFLECTION	0.00	0.07	0.10	0.07	0.00
	FINAL DECK ELEV	542.19	541.82	541.42	540.99	540.55
CROWN SCREED LINE 5	STATION	434+14.77	434+22.52	434+52.27	434+71.02	434+89.77
	SCREED ELEV	542.35	542.04	541.67	541.22	540.70
	DL DEFLECTION	0.00	0.07	0.10	0.07	0.00
	FINAL DECK ELEV	542.35	541.97	541.57	541.15	540.70
PHASE CJ 3 SCREED LINE 6	STATION	434+14.90	434+33.65	434+52.40	434+71.15	434+89.90
	SCREED ELEV	542.30	542.00	541.62	541.17	540.65
	DL DEFLECTION	0.00	0.07	0.10	0.07	0.00
	FINAL DECK ELEV	542.30	541.93	541.52	541.10	540.65
PHASE CJ 4 SCREED LINE 7	STATION	434+15.05	434+33.80	434+52.55	434+71.31	434+90.05
	SCREED ELEV	542.24	541.94	541.57	541.11	540.59
	DL DEFLECTION	0.00	0.07	0.10	0.07	0.00
	FINAL DECK ELEV	542.24	541.87	541.47	541.04	540.59
RIGHT TOE OF PARAPET SCREED LINE 8	STATION	434+17.53	434+36.28	434+55.03	434+73.78	434+92.53
	SCREED ELEV	540.87	540.54	540.17	539.71	539.21
	DL DEFLECTION	0.00	0.05	0.08	0.05	0.00
	FINAL DECK ELEV	540.87	540.49	540.09	539.66	539.21

LEGEND:

(BXX) = BEAM NUMBER

NOTES:

1. THE TOPPING THICKNESSES SHOWN FROM THE TOP OF THE DECK SLAB TO THE TOP OF THE TOP FLANGE ALONG THE CENTERLINE OF THE I-BEAM ARE THEORETICAL DIMENSIONS. THE HAUNCH DEPTH IS THE TOPPING THICKNESS MINUS THE DESIGN SLAB THICKNESS. THE DEPARTMENT WILL PAY FOR SUPERSTRUCTURE CONCRETE BASED ON THE DESIGN SLAB THICKNESS AND THE AVERAGE OF THE THEORETICAL HAUNCH DEPTHS AT MID-SPAN AND AT EACH BEAM BEARING EVEN THOUGH DEVIATION FROM THE DIMENSIONS SHOWN MAY BE NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. ONCE ALL BEAMS ARE SET IN THEIR FINAL POSITION, THE ACTUAL CAMBER FOR EACH MEMBER WILL BE THE TOP OF BEAM ELEVATION AT MID-SPAN MINUS THE AVERAGE TOP OF BEAM ELEVATION AT EACH BEARING. THE ACTUAL TOPPING THICKNESS AT MID-SPAN WILL BE THE THEORETICAL DIMENSION PLUS OR MINUS THE DIFFERENCE BETWEEN THE ACTUAL AND ANTICIPATED CAMBER.
2. SCREED LINES SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
3. TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM/GIRDER HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
4. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.
5. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

FOR INFORMATION ONLY

DESIGN AGENCY
2000 Crown Colony Drive, Suite 201, Quincy, OH 43201

DESIGNED TML | DRAWN TML | CHECKED PPA | REVIEWED NCM | DATE 12-15-21 | STRUCTURE FILE NUMBER 3110095 | REVISED

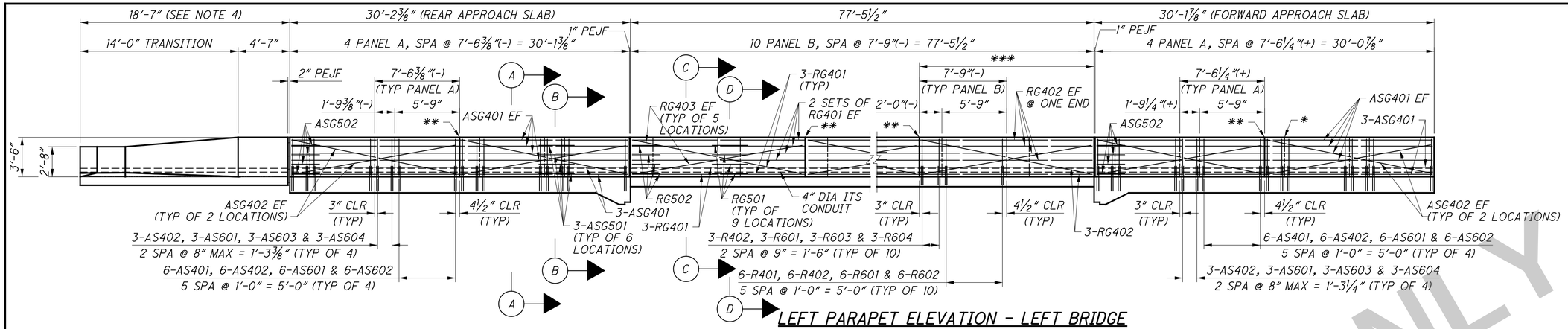
SCREED, TOP OF HAUNCH & FINAL DECK ELEVATIONS
BRIDGE NO. HAM-75-0823
I-R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

44 / 55

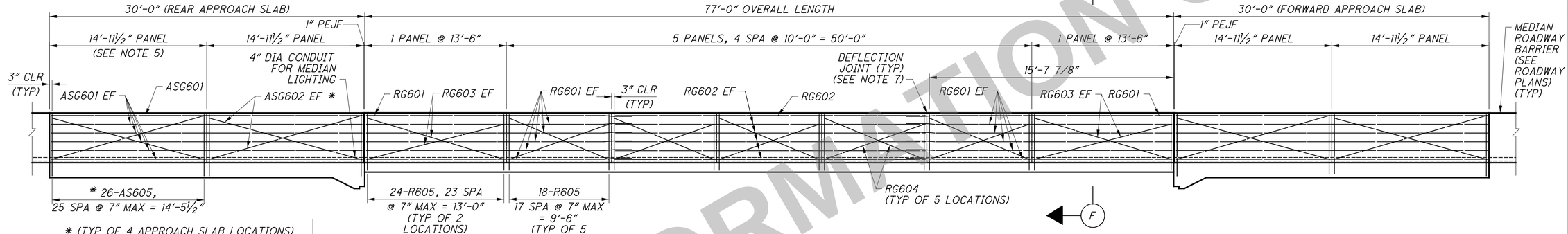
1433
2017

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LEFT PARAPET ELEVATION - LEFT BRIDGE

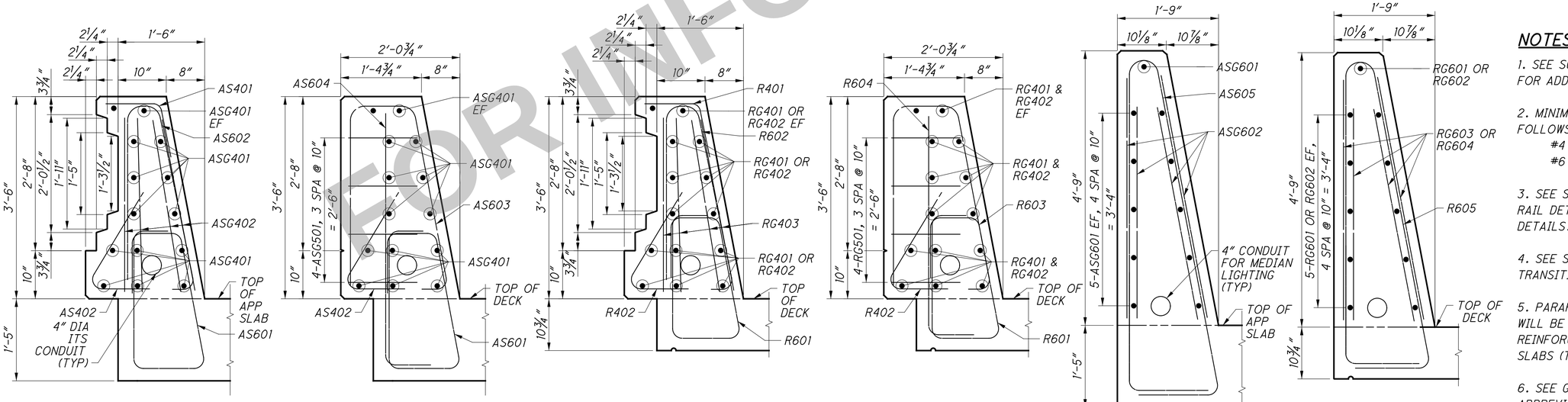
(MEASURED ALONG THE LEFT EDGE TOE OF PARAPET)
(* - CONTRACTION JOINT, ADJACENT TO ALL PILASTERS UNLESS NOTED AS A DEFLECTION JOINT)
(** - DEFLECTION JOINT)
(*** - TYPICAL DELFECTION JOINT SPACING - 15'-6)



* (TYP OF 4 APPROACH SLAB LOCATIONS)

RIGHT PARAPET ELEVATION - LEFT BRIDGE

(MEASURED ALONG THE RIGHT EDGE TOE OF PARAPET)



SECTION A-A
(AESTHETIC RAILING)

SECTION B-B
(AESTHETIC RAILING)

SECTION C-C
(AESTHETIC RAILING)

SECTION D-D
(AESTHETIC RAILING)

SECTION E-E
(MEDIAN RAILING)

SECTION F-F
(MEDIAN RAILING)

NOTES:

1. SEE SCD SBR-1-20 AND SBR-2-20 FOR ADDITIONAL PARAPET DETAILS.
2. MINIMUM LAP LENGTHS SHALL BE AS FOLLOWS:
   #4 = 1'-1"
   #6 = 1'-8"
3. SEE SHEET 47/55 FOR AESTHETIC RAIL DETAILS AND CONTROL JOINT DETAILS.
4. SEE SHEET 48/55 FOR PARAPET TRANSITION DETAILS.
5. PARAPET ON THE APPROACH SLAB WILL BE PAID WITH ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN.
6. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
7. SEE STD DWG SBR-2-20 FOR DEFLECTION JOINT DETAILS.

FOR INFORMATION ONLY

DESIGN AGENCY
JMT
2000 Corporate Exchange Drive, Suite 200, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
TML	TML	NCM	12-15-21
CHECKED	REVISED		STRUCTURE FILE NUMBER
JWE			3110095

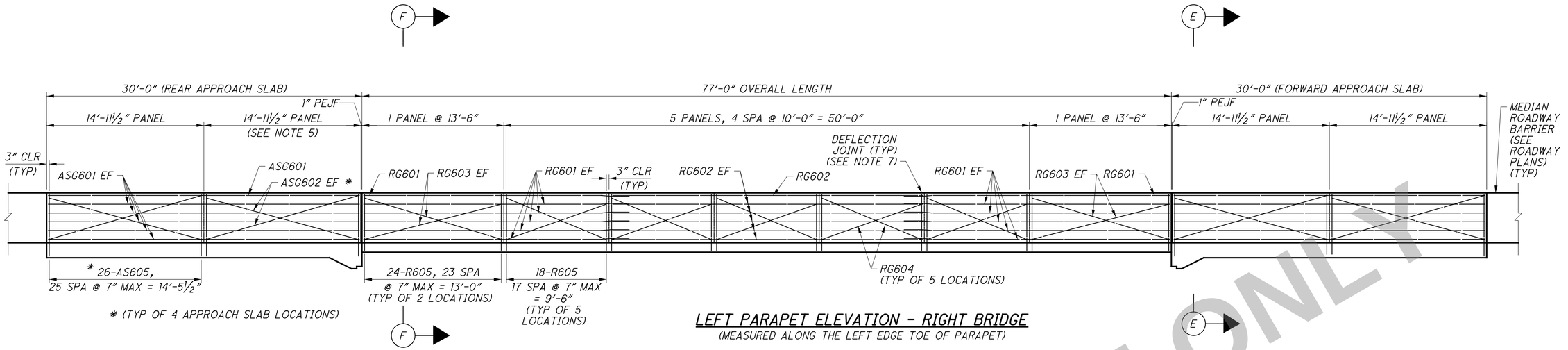
PARAPET DETAILS
BRIDGE NO. HAM-75-0823
I-R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

45/55

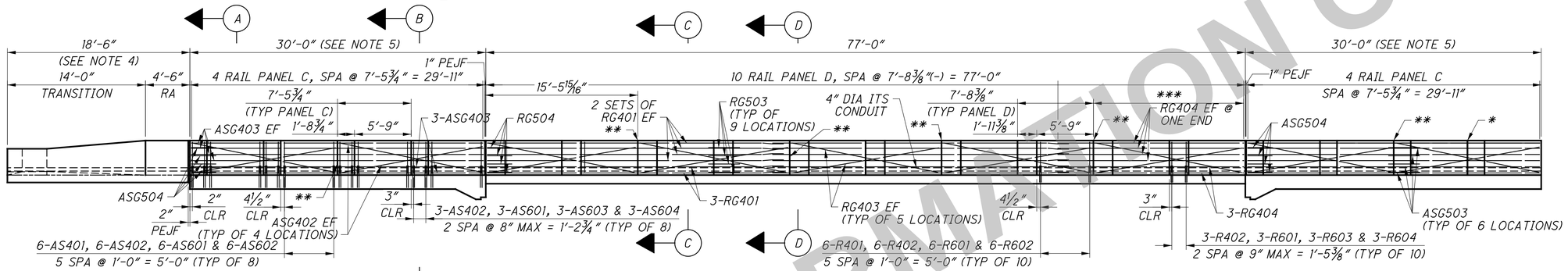
1434
2017

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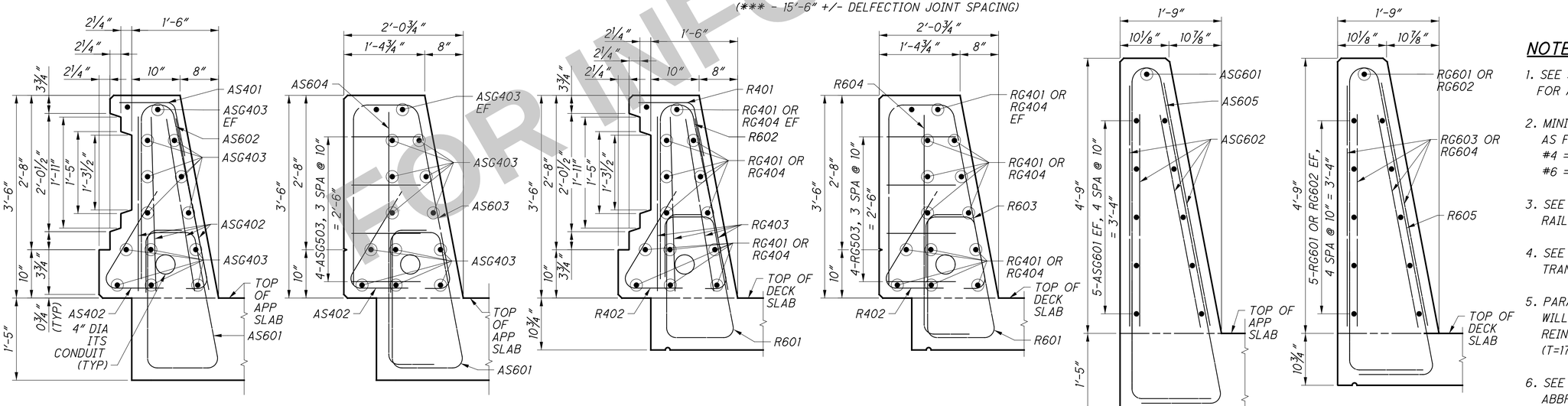
LEFT PARAPET ELEVATION - RIGHT BRIDGE

(MEASURED ALONG THE LEFT EDGE TOE OF PARAPET)



RIGHT PARAPET ELEVATION - RIGHT BRIDGE

(MEASURED ALONG THE LEFT EDGE TOE OF PARAPET)
(* - CONTRACTION JOINT, ADJACENT TO ALL PILASTERS UNLESS NOTED AS A DEFLECTION JOINT)
(** - DEFLECTION JOINT)
(*** - 15'-6" +/- DELFECTION JOINT SPACING)



SECTION A-A
(AESTHETIC RAILING)

SECTION B-B
(AESTHETIC RAILING)

SECTION C-C
(AESTHETIC RAILING)

SECTION D-D
(AESTHETIC RAILING)

SECTION E-E
(MEDIAN RAILING)

SECTION F-F
(MEDIAN RAILING)

NOTES:

1. SEE SCD SBR-1-20 AND SBR-2-20 FOR ADDITIONAL PARAPET DETAILS.
2. MINIMUM LAP LENGTHS SHALL BE AS FOLLOWS:
   #4 = 1'-1"
   #6 = 1'-8"
3. SEE SHEET 47/55 FOR AESTHETIC RAIL DETAILS.
4. SEE SHEET 48/55 FOR PARAPET TRANSITION DETAILS.
5. PARAPET OF THE APPROACH SLAB WILL BE PAID WITH ITEM 526 - REINFORCED APPROACH SLABS (T=17"), AS PER PLAN.
6. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
7. SEE STD DWG SBR-2-20 FOR ADDITIONAL DETAILS.

FOR INFORMATION ONLY

DESIGN AGENCY
2001 Crocker Exchange Drive, Suite 200, Columbus, OH 43221

DESIGNED	DRAWN	REVIEWED	DATE
TML	TML	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JWE		3110095	

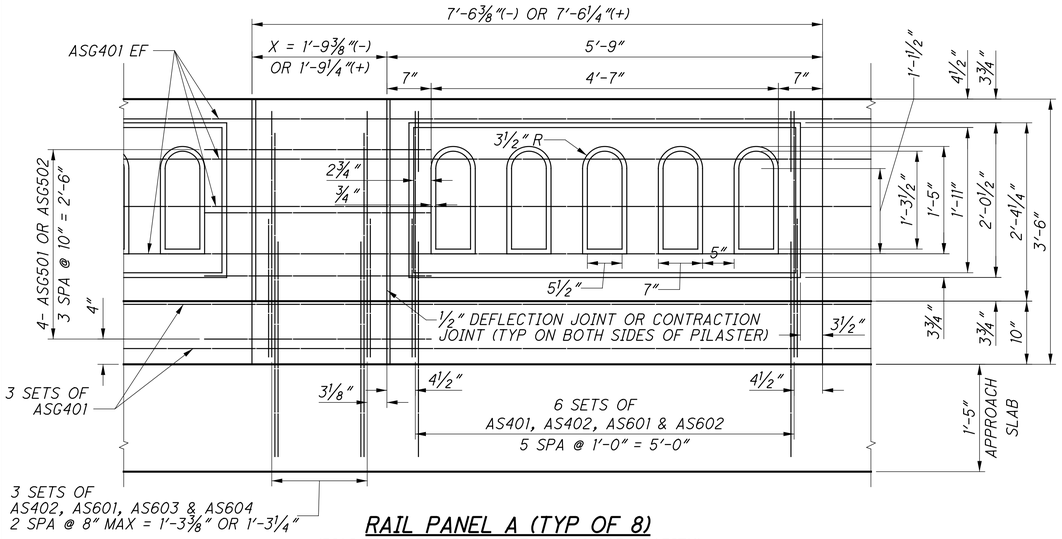
PARAPET DETAILS
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

46/55

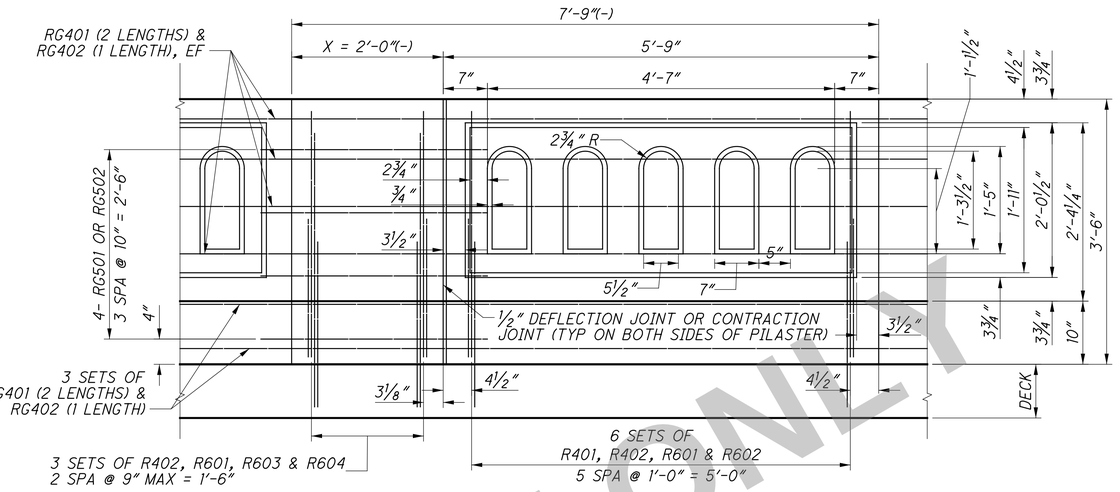
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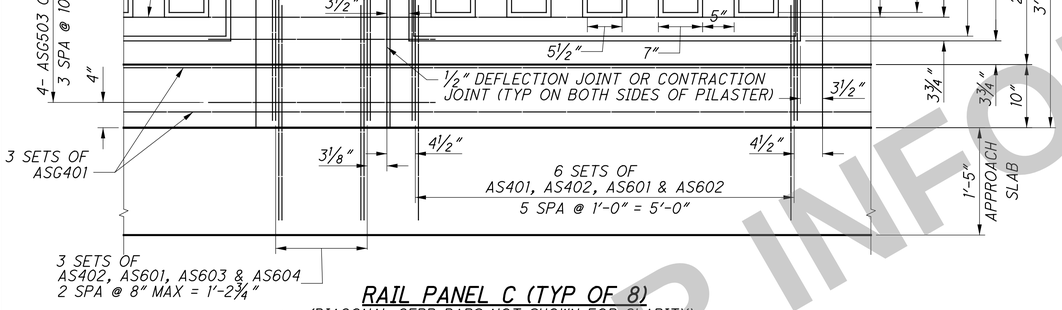
RAIL PANEL A (TYP OF 8)

(DIAGONAL GFRP BARS NOT SHOWN FOR CLARITY)



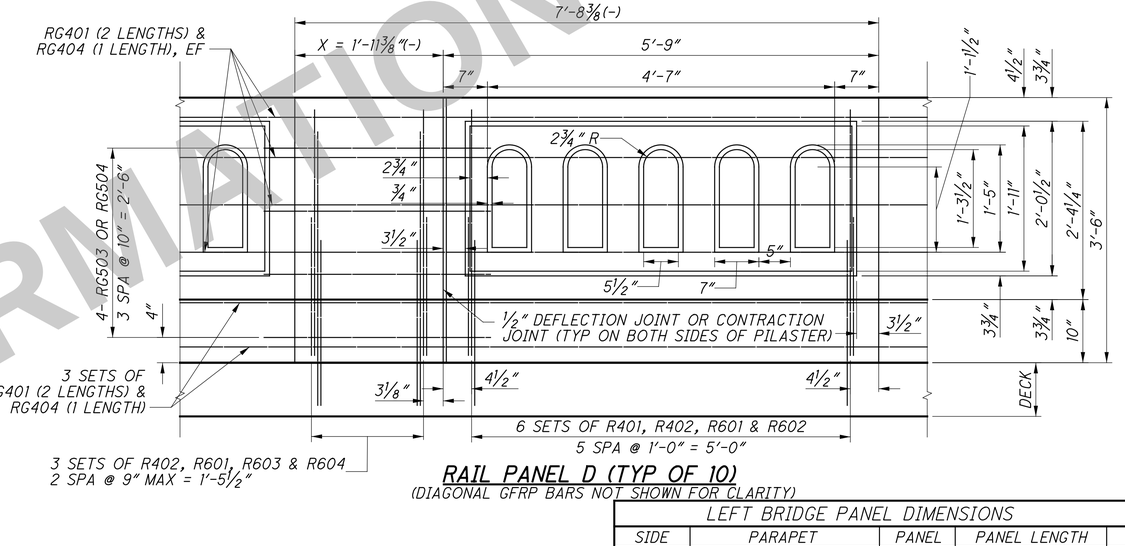
RAIL PANEL B (TYP OF 10)

(DIAGONAL GFRP BARS NOT SHOWN FOR CLARITY)



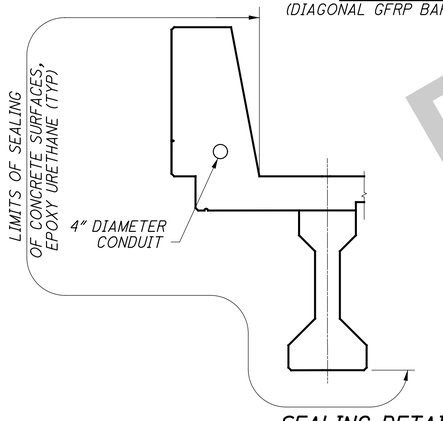
RAIL PANEL C (TYP OF 8)

(DIAGONAL GFRP BARS NOT SHOWN FOR CLARITY)



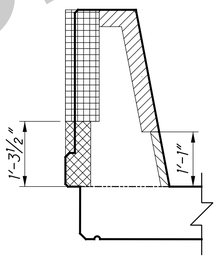
RAIL PANEL D (TYP OF 10)

(DIAGONAL GFRP BARS NOT SHOWN FOR CLARITY)



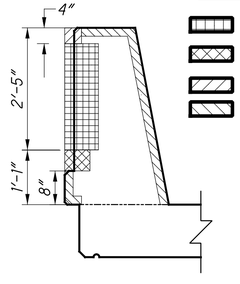
SEALING DETAIL

(EXTERIOR PARAPET, SEE NOTE 3)



DEFLECTION JOINT

(SEE NOTE 4)



CONTRACTION JOINT

(OPPOSITE SIDE OF PILASTER FROM DEFLECTION JOINT WHERE THE BARS ARE CONTINIOUS)

DEFLECTION AND CONTRACTION JOINT LEGEND:

- 8" WIDE PREFORMED JOINT MATERIAL
- 6" WIDE PREFORMED JOINT MATERIAL
- 4" WIDE PREFORMED JOINT MATERIAL
- 2" WIDE PREFORMED JOINT MATERIAL

LEFT BRIDGE PANEL DIMENSIONS				
SIDE	PARAPET	PANEL	PANEL LENGTH	"X"
LEFT	REAR APP SLAB	A	7'-6 3/8"	1'-9 3/8"
	BRIDGE	B	7'-9"	2'-0"
	FORWARD APP SLAB	A	7'-6 1/4"	1'-9 1/4"
RIGHT BRIDGE PANEL DIMENSIONS				
SIDE	PARAPET	PANEL	PANEL LENGTH	"X"
RIGHT	REAR APP SLAB	C	7'-5 3/4"	1'-8 3/4"
	BRIDGE	D	7'-8 1/2"	1'-11 1/2"
	FORWARD APP SLAB	C	7'-5 3/4"	1'-8 3/4"

NOTES:

1. SEE SHEETS 45/55 AND 46/55 FOR RAILING PANEL LAYOUT.
2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
3. FOR PARAPET ON APPROACH SLAB, SEAL TO GROUND ELEVATION.
4. DEFLECTION JOINTS AND CONTRACTION JOINTS ARE TO BE CAST INTO THE PARAPETS AND HELD IN WITH CHAMFER STRIPS. THE EXCESS MATERIAL WILL BE TRIMMED TO THE BASE OF THE CHAMFER. THE MATERIAL THAT WILL BE USED NEEDS TO NOT ABSORB WATER AND AS SUFFICIENT RIGIDITY TO NOT SIGNIFICANTLY MOVE DURING THE CASTING OF THE PARAPET. THE JOINT MATERIAL IS TO BE 0.5" IN THICKNESS AND WILL BE NOMAFLEX BY NOMACO OR FIBER LITE BY W.R. MEADOWS OR SIMILAR PRODUCT APPROVED BY THE ENGINEER. THE GFRP FIBER SPLICE BARS THAT WERE SHOWN IN THE AS BID PLANS AND ARE INTENDED TO HOLD THE LONGITUIDINAL BARS TOGETHER DURNG SLIP FORMING ARE TO BE NON-PERFORMED.

FOR INFORMATION ONLY

DESIGN AGENCY
2000 Corporate Exchange Drive, Suite 200, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
TML	TML	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JWE		3110095	

PARAPET AESTHETIC DETAILS

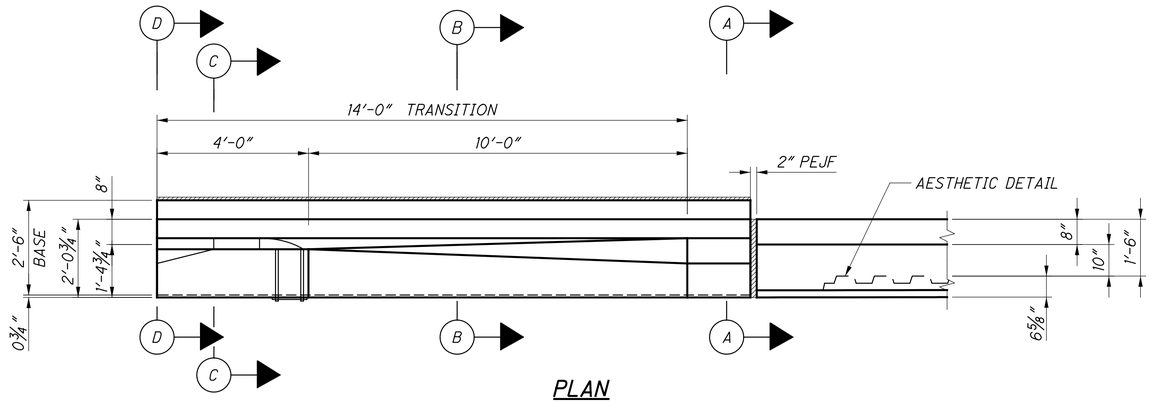
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

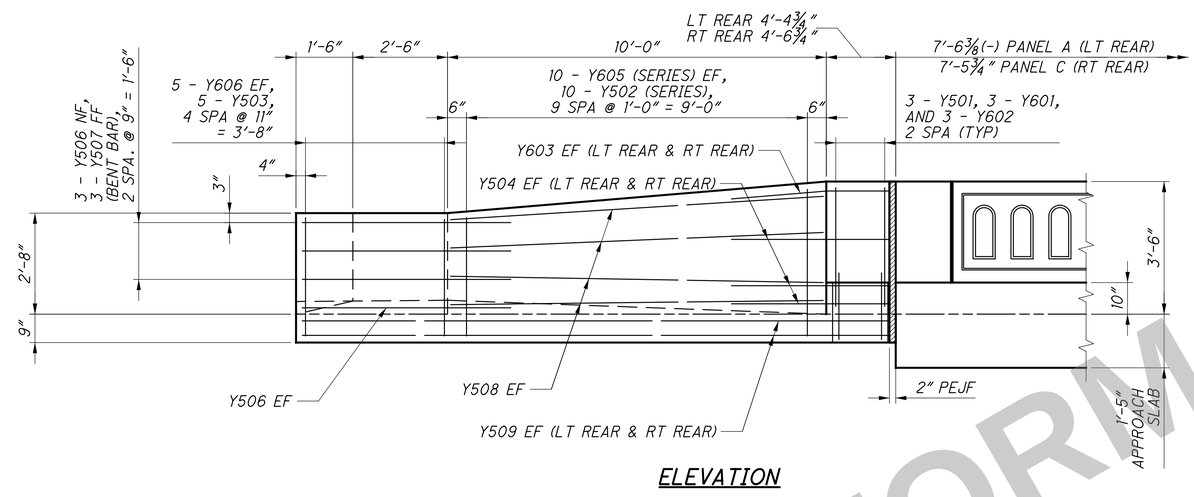
47 / 55

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2017

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PLAN

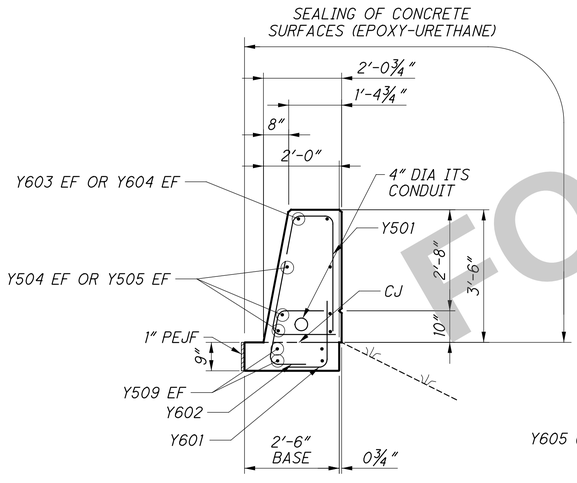


ELEVATION

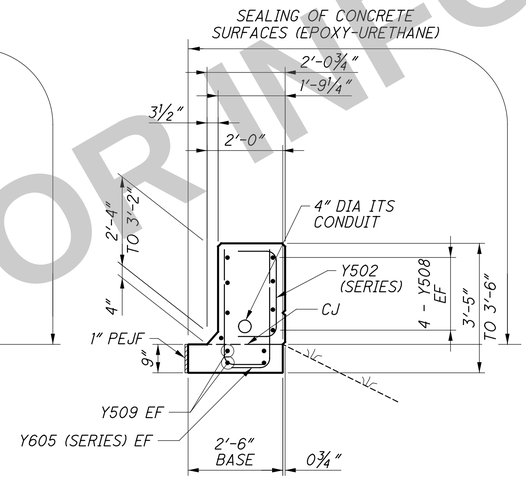
MARK	TOTAL	LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS A	B	C	D	E	INC.
TRANSITIONS (FOR INFORMATION ONLY)										
Y501	6	8'-6"	54	37	1'-0"	1'-8"	3'-2"	3'-0"		
	2	4'-1"				2'-4"				
Y502	SER. OF	TO	94	2	1'-0"	TO	1'-0"			1"
	10	4'-10"				3'-1"				
Y503	10	4'-1"	43	2	1'-0"	2'-4"	1'-0"			
Y504	12	6'-10"	86	ST.						
Y505	NOT USED									
Y506	10	5'-6"	58	ST.						
Y507	6	5'-6"	35	25	1'-8"	2'-5"	1'-4"	0'-1 1/2"	0'-5"	
Y508	16	10'-0"	167	ST.						
Y509	8	18'-2"	152	ST.						
Y601	6	3'-2"	29	1	1'-7"	1'-9"				
Y602	6	3'-7"	33	28	1'-9"	1'-1"				
Y603	4	6'-10"	42	19	4'-4"	2'-6"	0'-2 1/2"			
Y604	NOT USED									
	4	4'-0"				3'-1"				
Y605	SER. OF	TO	263	1	1'-1"	TO				1"
	10	4'-9"				3'-10"				
Y606	20	4'-0"	121	1	1'-1"	3'-1"				
		TOTAL =	1177							

NOTES:

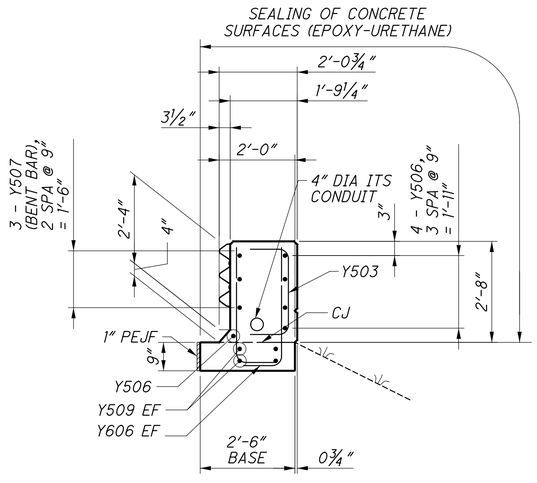
1. ALL LABOR, MATERIALS AND REINFORCING STEEL TO CONSTRUCT THE TRANSITIONS INCLUDING THE 9" CONCRETE BASE WILL BE PAID FOR UNDER ITEM 622 - CONCRETE BARRIER END SECTION, TYPE D, AS PER PLAN.
2. DIMENSION GIVEN ARE ALONG ARC OUTSIDE FACE OF BARRIER.
3. ELEVATION VIEW LOOKING AT EXTERIOR FACE OF PARAPET.
4. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.



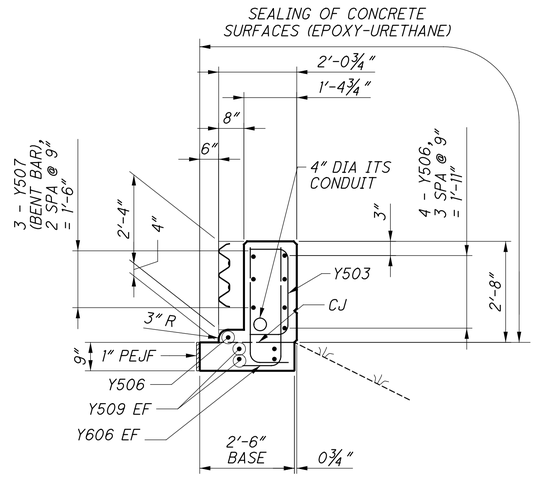
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

FOR INFORMATION ONLY

DESIGN AGENCY: 2000 Corporate Exchange Drive, Suite 200, Columbus, OH 43231

DESIGNED: TML | DRAWN: TML | CHECKED: JAD | REVIEWED: NCM | DATE: 12-15-21 | REVISED | STRUCTURE FILE NUMBER: 3110095

PARAPET TRANSITION DETAILS

BRIDGE NO. HAM-75-0823

I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

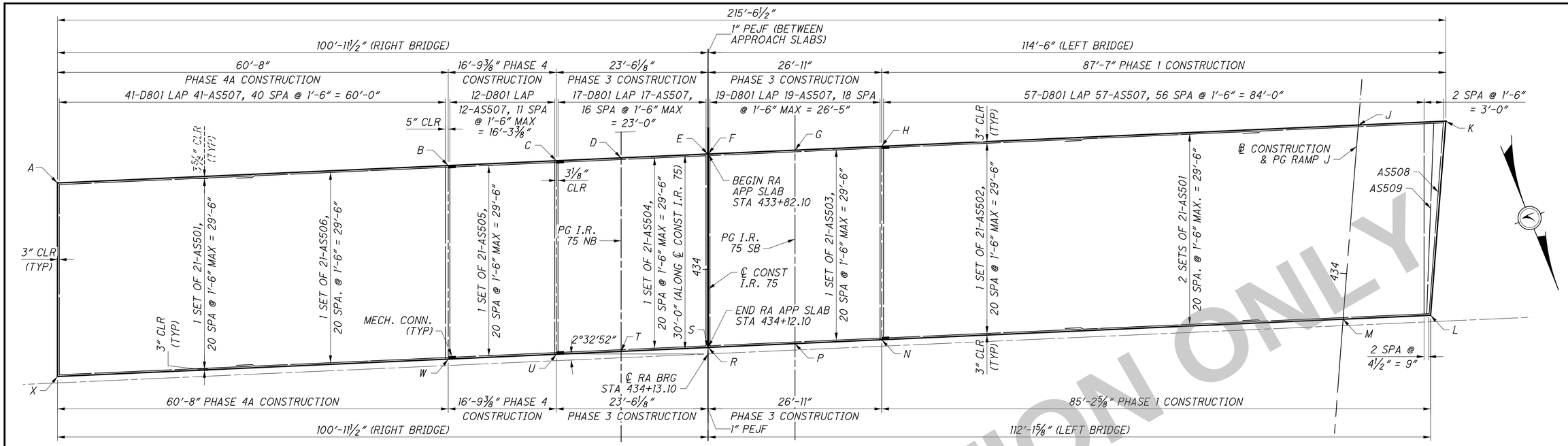
HAM-75-7.85

PID No. 77889

48 / 55

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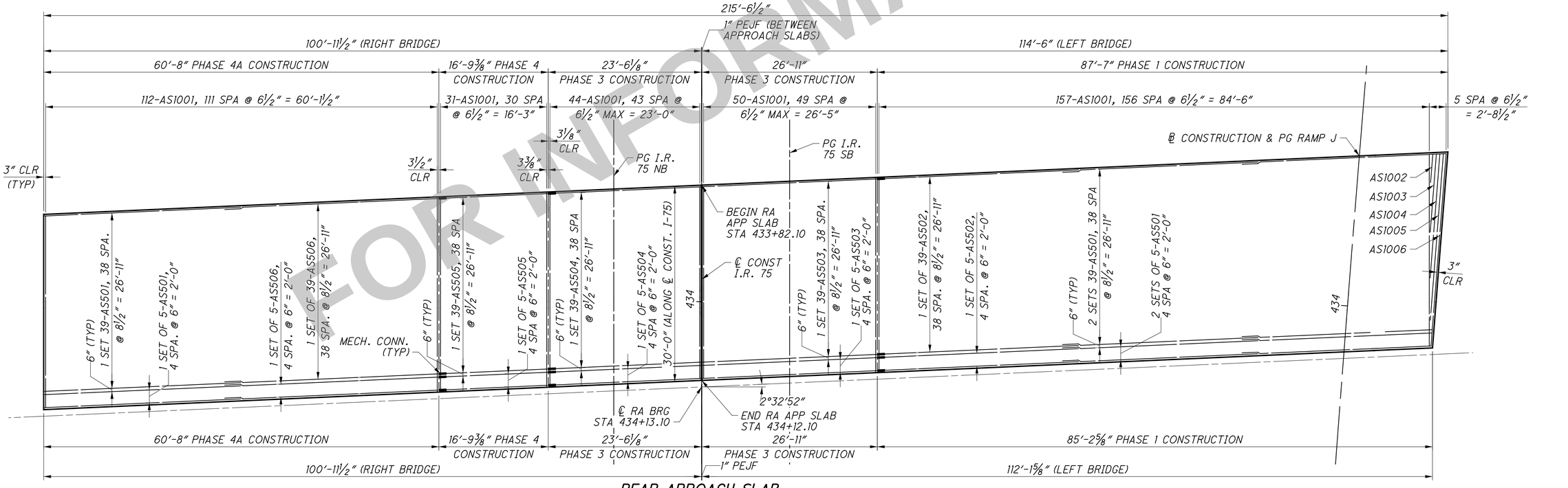


REAR APROACH SLAB
(TOP REINFORCING LAYOUT)

APPROACH SLAB ELEVATIONS										
POINT	A	B	C	D	E	F	G	H	J	K
ELEVATION	541.45	542.88	542.71	542.56	542.10	542.10	542.58	542.81	541.86	541.41
POINT	L	M	N	P	R	S	T	U	W	X
ELEVATION	540.90	541.36	542.26	542.03	541.55	541.55	542.01	542.16	542.32	540.89

NOTES:

1. SEE ODOT SCD AS-1-15 FOR ADDITIONAL DETAILS NOT SHOWN.
2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
3. MINIMUM LAP LENGTHS: #5 BARS = 2'-5"
4. SEE SHEET 51/55 FOR REAR SLEEPER SLAB DETAILS.



REAR APROACH SLAB
(BOTTOM REINFORCING LAYOUT)

FOR INFORMATION ONLY

DESIGN AGENCY
2000 Corporate Exchange Drive, Suite 200, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
TML	TML/SBH	NCM	12-15-21
CHECKED	REVISED		STRUCTURE FILE NUMBER
JWE			3110095

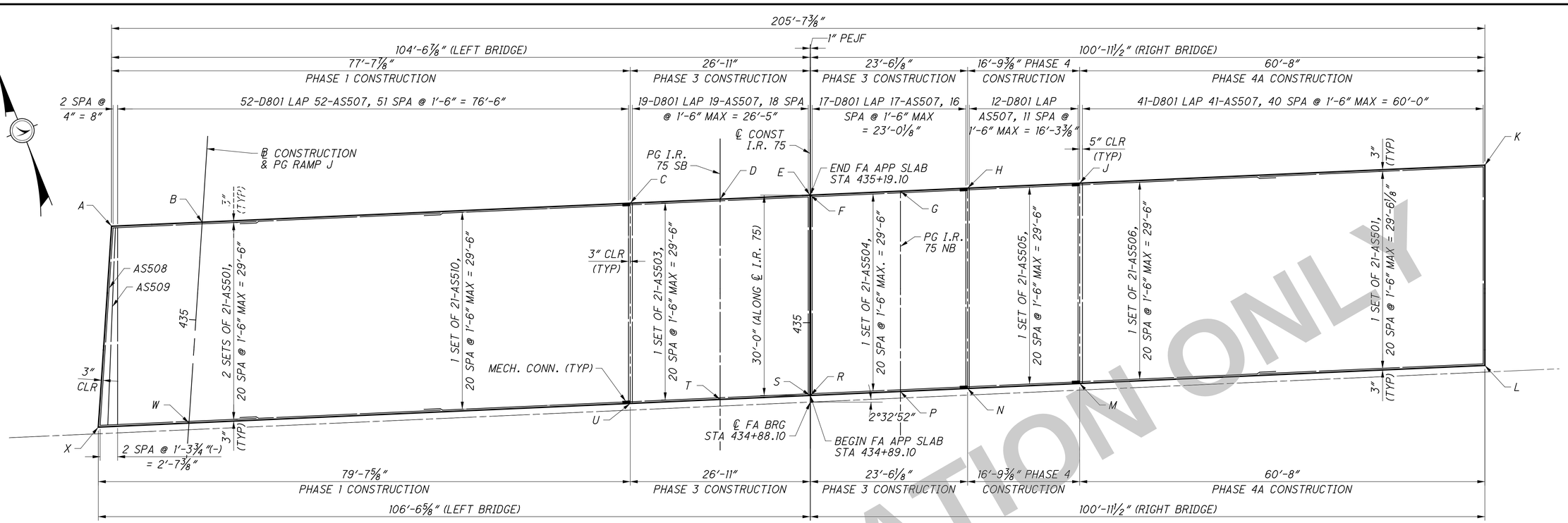
REAR APPROACH SLAB
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

49 / 55

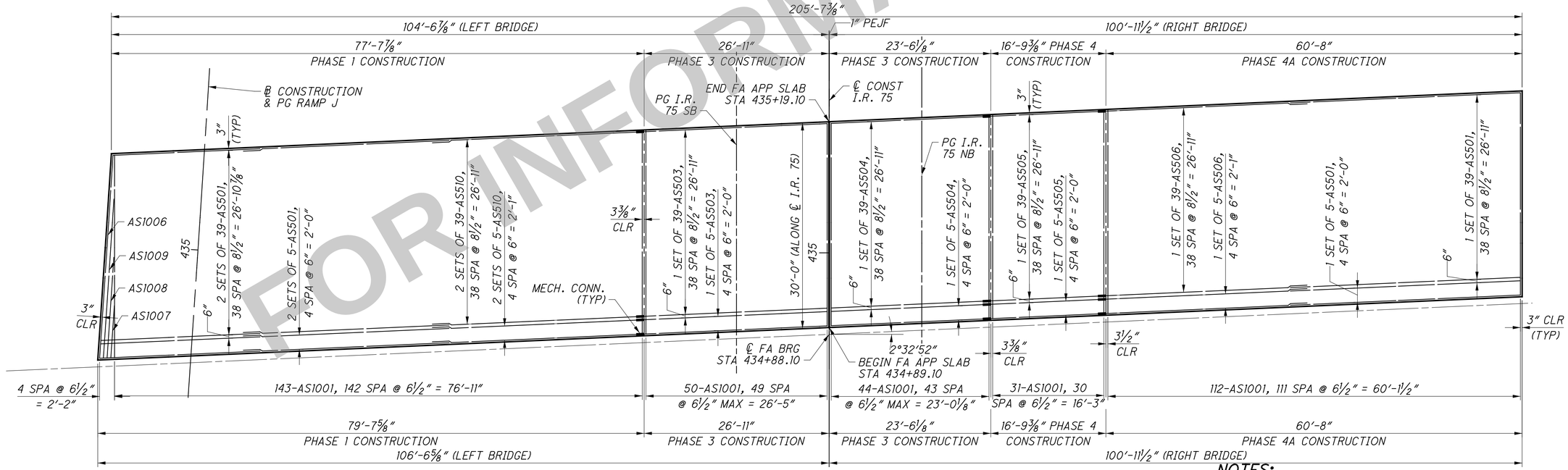
1438
2017

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FORWARD APPROACH SLAB

(TOP REINFORCING LAYOUT)



FORWARD APPROACH SLAB

(BOTTOM REINFORCING LAYOUT)

APPROACH SLAB ELEVATIONS											
POINT	A	B	C	D	E	F	G	H	J	K
ELEVATION	538.64	539.08	539.82	539.59	539.10	539.10	539.56	539.71	539.86	538.41
POINT	L	M	N	P	R	S	T	U	W	X
ELEVATION	539.18	540.63	540.47	540.32	539.86	539.86	540.35	540.58	539.80	539.35

NOTES:

1. SEE ODOT SCD AS-1-15 FOR ADDITIONAL DETAILS NOT SHOWN.
2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
3. MINIMUM LAP LENGTHS: #5 BARS = 2'-5"
4. SEE SHEET 52/55 FOR FORWARD SLEEPER SLAB DETAILS.

FOR INFORMATION ONLY

DESIGN AGENCY
2001 Crocker Exchange Drive, Suite 200, Columbus, OH 43221

DESIGNED	DRAWN	REVIEWED	DATE
TML	TML/SBH	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JWE		3110095	

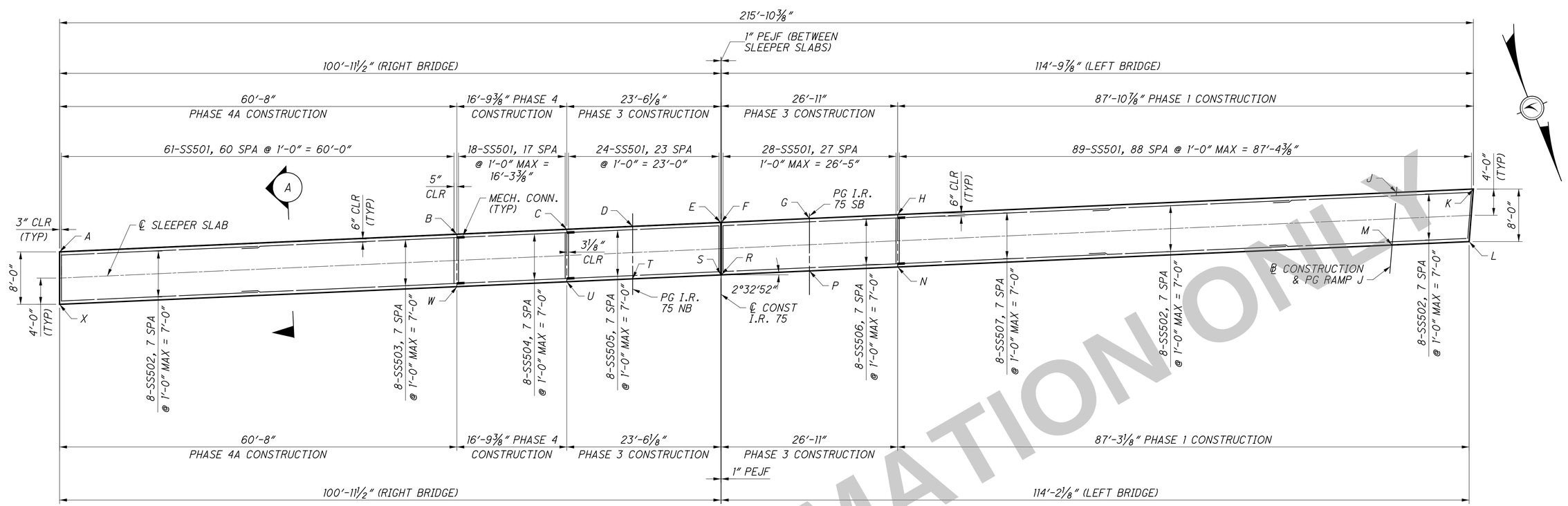
FORWARD APPROACH SLAB
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

50 / 55

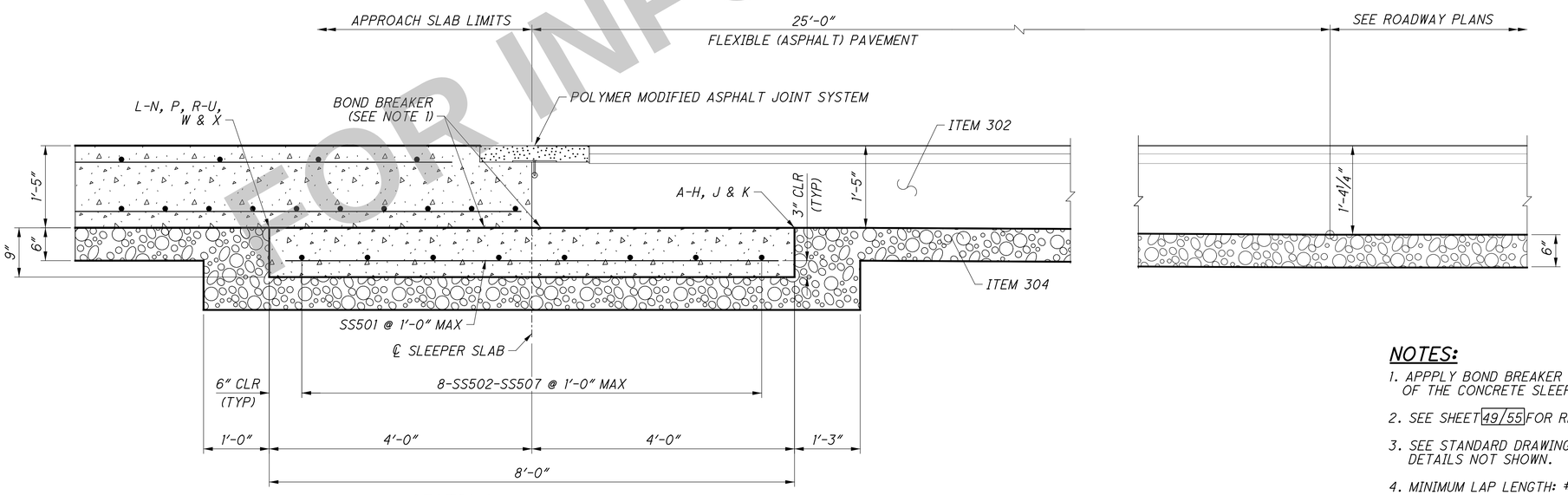
1439
2017

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PLAN OF REAR SLEEPER SLAB

REAR SLEEPER SLAB LOCATION		
POINT	STATION	ELEVATION
A	433+82.59	540.10
B	433+79.89	541.53
C	433+79.15	541.37
D	433+78.70	541.21
E	433+78.10	540.75
F	433+78.10	540.75
G	433+77.50	541.23
H	433+76.90	541.46
J	433+73.59	540.50
K	433+72.99	540.03
L	433+81.02	539.91
M	433+81.63	540.38
N	433+84.90	541.32
P	433+85.50	541.09
R	433+86.10	540.62
S	433+86.10	540.62
T	433+86.70	541.07
U	433+87.15	541.23
W	433+87.89	541.39
X	433+90.59	539.96



SECTION A

NOTES:

1. APPPLY BOND BREAKER TO THE ENTIRE TOP SURFACE OF THE CONCRETE SLEEPER SLAB.
2. SEE SHEET 49/55 FOR REAR APPROACH SLAB DETAILS.
3. SEE STANDARD DRAWING AS-2-15 FOR ADDITIONAL DETAILS NOT SHOWN.
4. MINIMUM LAP LENGTH: #5 BARS = 2′-5″

FOR INFORMATION ONLY

DESIGN AGENCY
JMT
2000 Corporate Exchange Drive, Suite 300, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
CBY	CBY	RPM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PPA		3110095	

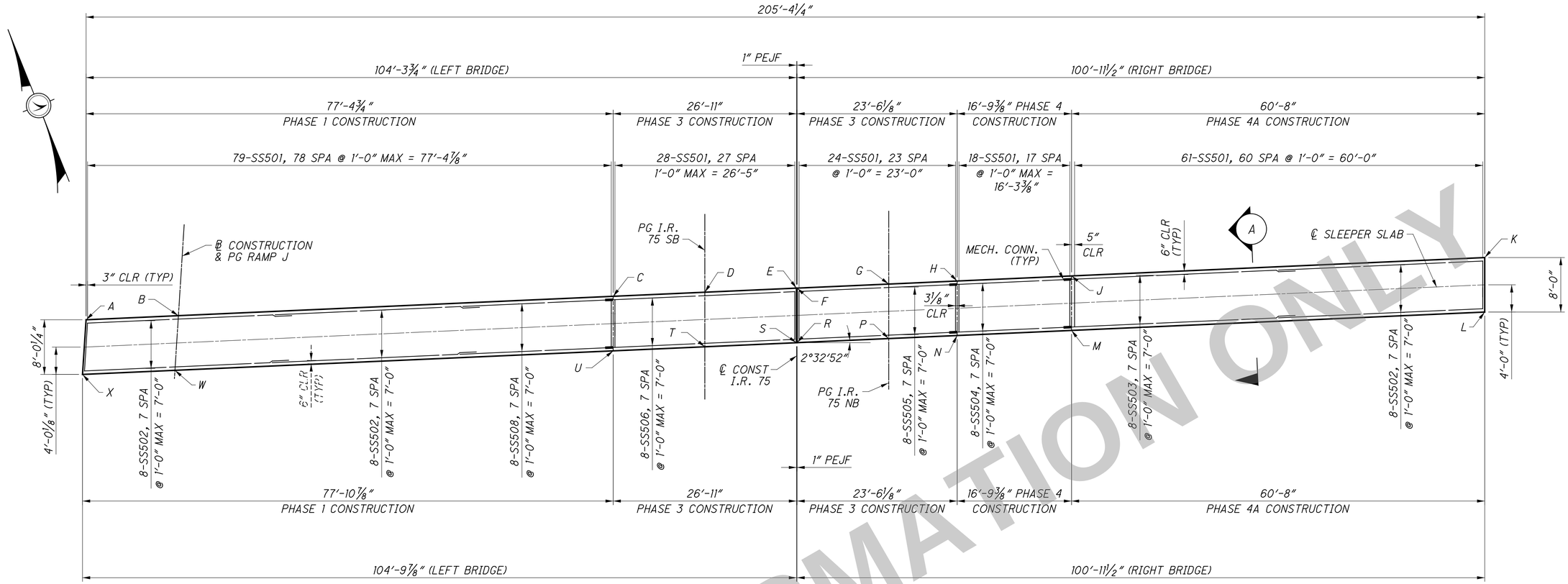
REAR SLEEPER SLAB
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

51/55

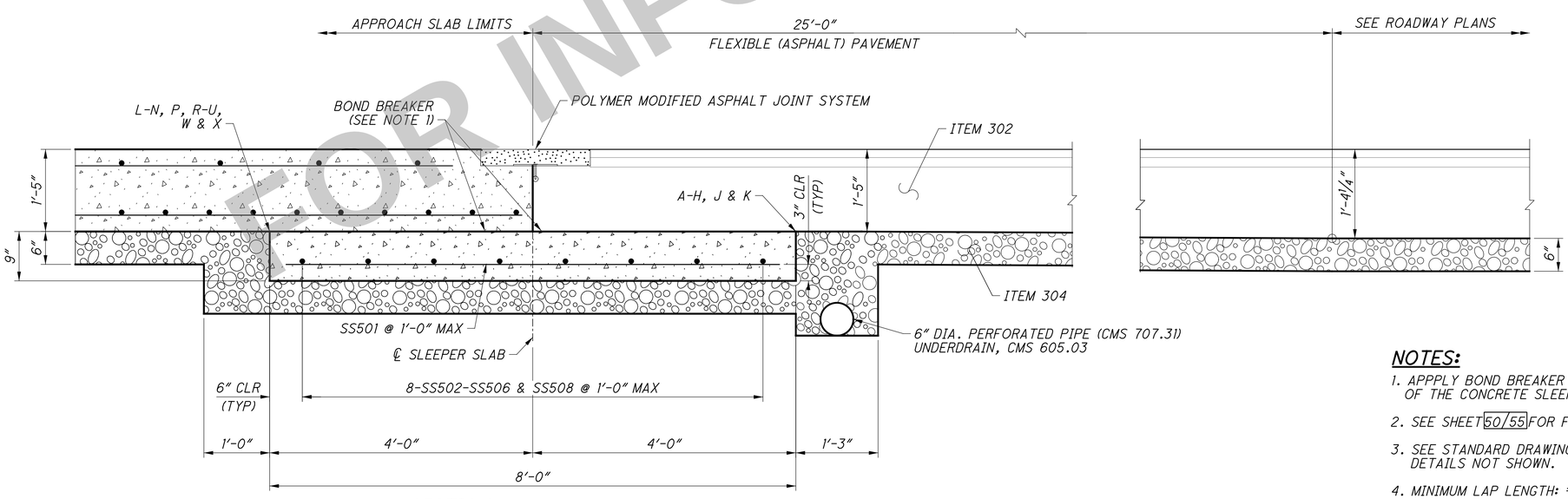
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2017

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PLAN OF FORWARD SLEEPER SLAB

FORWARD SLEEPER SLAB LOCATION		
POINT	STATION	ELEVATION
A	435+18.47	537.10
B	435+19.07	537.57
C	435+21.90	538.30
D	435+22.50	538.07
E	435+23.10	537.58
F	435+23.10	537.58
G	435+23.70	538.03
H	435+24.15	538.18
J	435+24.89	538.34
K	435+27.59	536.89
L	435+19.59	537.10
M	435+16.89	538.55
N	435+16.15	538.39
P	435+15.70	538.24
R	435+15.10	537.79
S	435+15.10	537.79
T	435+14.50	538.28
U	435+13.90	538.51
W	435+11.04	537.77
X	435+10.43	537.30



SECTION A

NOTES:

1. APPPLY BOND BREAKER TO THE ENTIRE TOP SURFACE OF THE CONCRETE SLEEPER SLAB.
2. SEE SHEET 50/55 FOR FORWARD APPROACH SLAB DETAILS.
3. SEE STANDARD DRAWING AS-2-15 FOR ADDITIONAL DETAILS NOT SHOWN.
4. MINIMUM LAP LENGTH: #5 BARS = 2′-5″

FOR INFORMATION ONLY

DESIGN AGENCY
JMT
2000 Corporate Exchange Drive, Suite 200, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
CBY	CBY	RPM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PPA		3110095	

FORWARD SLEEPER SLAB
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

1441
2017

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	MARK	NUMBER REAR	NUMBER FORWARD	NUMBER TOTAL	LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS A	B	C	D	INC.
	ABUTMENTS											
	A501	229	214	443	19′-2″	8856	3	6′-8″	2′-7″			
	A502	104	90	194	30′-0″	6071	ST.					
*	A503	20		20	21′-8″	452	ST.					
*	A504	3		3	34′-7″	109	ST.					
**	A505	20		20	25′-4″	529	ST.					
**	A506	3		3	8′-9″	28	ST.					
	A507	3	3	6	17′-9″	112	ST.					
	A508	3		3	11′-11″	38	2	5′-0″	2′-2″	5′-0″		
	A509	9		9	16′-7″	156	2	7′-4″	2′-2″	7′-4″		
		1		1	7′-5″			2′-9″		2′-9″		
	A510	SER. OF		SER. OF	TO	61	2	TO	2′-2″	TO		5 1/2″
		6		6	11′-11″			5′-0″		5′-0″		
		1		1	13′-10″				4′-5″			
	A511	SER. OF		SER. OF	TO	102	3	2′-2″	TO			5 3/4″
		6		6	18′-8″				6′-10″			
	A512	1		1	12′-2″	13	3	2′-2″	3′-7″			
	A513	1		1	11′-0″	12	3	2′-2″	3′-0″			
		2		2	5′-2″							
	A514	SER. OF		SER. OF	TO	96	ST.					2′-0″
		5		5	13′-2″							
	A515	3		3	18′-9″	59	19	3′-10″	13′-4″	6′-8″		
	A516		3	3	27′-5″	86	ST.					
*	A517		3	3	35′-8″	112	ST.					
*	A518		8	8	28′-5″	238	ST.					
*	A519		14	14	30′-11″	452	ST.					
**	A520		3	3	7′-9″	25	ST.					
**	A521		22	22	24′-4″	559	ST.					
	A522		6	6	16′-9″	105	2	7′-5″	2′-2″	7′-5″		
	A523		6	6	16′-8″	105	ST.					
			2	2	10′-4″							
	A524		SER. OF	SER. OF	TO	112	ST.					2′-0″
			4	4	16′-4″							
	A525		4	4	8′-7″	36	ST.					
	A526		14	14	11′-2″	164	ST.					
			1	1	8′-6″				2′-8″			
	A527		SER. OF	SER. OF	TO	102	3	1′-2″	TO			6 1/4″
			8	8	15′-10″				6′-4″			
	A528		7	7	9′-11″	72	2	4′-6″	1′-2″	4′-6″		
	A529		7	7	14′-11″	109	2	7′-0″	1′-2″	7′-0″		
	A530		5	5	17′-2″	90	3	5′-8″	2′-7″			
	A531		2	2	8′-7″	18	ST.					
**	A532	21	25	46	13′-5″	644	ST.					
	A533	3		3	12′-10″	41	ST.					
	A534	3	3	6	18′-2″	114	ST.					
***	A535	21	25	46	15′-10″	760	ST.					
*	A536	21	25	46	31′-5″	1508	ST.					
	A537	3		3	15′-6″	49	19	3′-10″	10′-5″	5′-4″		
		2		2	5′-0″							
	A538	SER. OF		SER. OF	TO	94	ST.					2′-0″
		5		5	13′-0″							
	A539	4		4	12′-1″	51	2	5′-1″	2′-2″	5′-1″		
	A540	1		1	11′-5″	12	2	4′-9″	2′-2″	4′-9″		
	A541	1		1	10′-5″	11	2	4′-3″	2′-2″	4′-3″		
		1		1	6′-11″			2′-6″		2′-6″		
	A542	SER. OF		SER. OF	TO	25	2	TO	2′-2″	TO		6″
		3		3	8′-11″			3′-6″		3′-6″		
		1		1	16′-10″				5′-11″			
	A543	SER. OF		SER. OF	TO	56	3	2′-2″	TO			6″
		3		3	18′-10″				6′-11″			
	A544	1		1	15′-0″	16	3	2′-2″	5′-0″			
	A545	1		1	14′-0″	15	3	2′-2″	4′-6″			
	A546	9		9	16′-5″	155	2	7′-3″	2′-2″	7′-3″		
	A547		3	3	15′-7″	49	19	4′-0″	10′-4″	5′-3″		
			2	2	5′-2″							
	A548		SER. OF	SER. OF	TO	96	ST.					2′-0″
			5	5	13′-2″							
	A549		4	4	11′-11″	50	2	5′-0″	2′-2″	5′-0″		
	A550		1	1	11′-7″	13	2	4′-10″	2′-2″	4′-10″		
	A551		1	1	10′-5″	11	2	4′-3″	2′-2″	4′-3″		
			1	1	17′-0″				6′-0″			
	A552		SER. OF	SER. OF	TO	122	3	2′-2″	TO			5 3/4″
			6	6	21′-10″				8′-5″			
	A553		1	1	15′-4″	16	3	2′-2″	5′-2″			
	A554		1	1	14′-2″	15	3	2′-2″	4′-7″			
					SUBTOTAL =	23004						

	MARK	NUMBER REAR	NUMBER FORWARD	NUMBER TOTAL	LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS A	B	C	D	INC.
	ABUTMENTS (CONTINUED)											
	A601	48		48	16′-4″	1178	3	2′-8″	5′-1″			
	A602	40		40	17′-4″	1042	3	2′-8″	5′-7″			
	A603	23		23	15′-4″	530	3	2′-8″	4′-7″			
	A604		20	20	15′-10″	476	3	2′-8″	4′-10″			
	A605		39	39	16′-10″	987	3	2′-8″	5′-4″			
	A606		41	41	17′-10″	1099	3	2′-8″	5′-10″			
	A607	23		23	15′-2″	524	3	2′-8″	4′-6″			
	A608	64		64	16′-8″	1603	3	2′-8″	5′-3″			
	A609		23	23	15′-6″	536	3	2′-8″	4′-8″			
	A610		15	15	16′-10″	380	3	2′-8″	5′-4″			
	A611		59	59	17′-2″	1522	3	2′-8″	5′-6″			
					SUBTOTAL =	9877						
					TOTAL =	32881						

	MARK	NUMBER REAR	NUMBER FORWARD	NUMBER TOTAL	LENGTH	WEIGHT (LBS)	TYPE
	SLEEPER SLAB (FOR INFORMATION ONLY)						
	SS501	220	210	430	7′-6″	3364	ST.
	SS502	24	24	48	30′-0″	1502	ST.
**	SS503	8	8	16	32′-11″	550	ST.
***	SS504	8	8	16	16′-10″	281	ST.
*	SS505	8	8	16	23′-3″	388	ST.
**	SS506	8	8	16	26′-8″	446	ST.
*	SS507	8		8	32′-3″	270	ST.
*	SS508		8	8	22′-6″	188	ST.
					TOTAL =	6989	

NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, P601 IS A NO. 6 BAR.

2. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED.

3. "ST." INDICATES A STRAIGHT BAR.

4. ALL REINFORCING TO BE EPOXY COATED.

5. UNLESS NOTED OTHERWISE, THE FOLLOWING LAPS SHALL APPLY:
   #4 BARS: 1′-11″
   #5 BARS: 2′-5″
   #6 BARS: 2′-11″

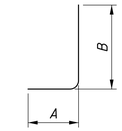
LEGEND:

* - BAR WITH MECHANICAL CONNECTOR

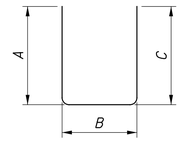
** - BAR WITH THREADED END

*** - BAR WITH MECHANICAL CONNECTOR AND THREADED END

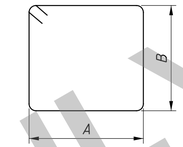
BAR BENDING DIAGRAMS



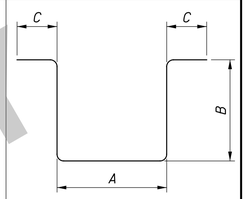
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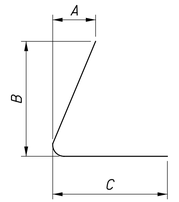
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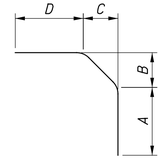
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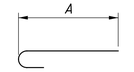
TYPE-6



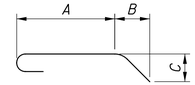
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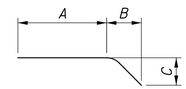
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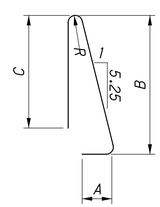
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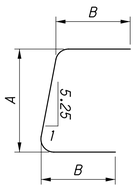
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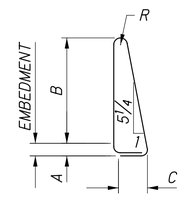
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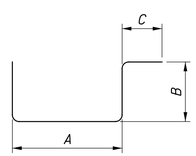
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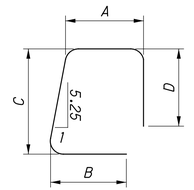
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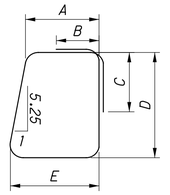
TYPE-35



TYPE-36



TYPE-37



TYPE-41

FOR INFORMATION ONLY

DESIGN AGENCY
2001 Crocker Road, Suite 600, Westlake, OH 44145

DATE 12-15-21
REVIEWED NCM
STRUCTURE FILE NUMBER 3110095
DRAWN JBM
REVISED
DESIGNED KK
CHECKED PPA

REINFORCING LIST
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

53 / 55

1442
2017

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MARK	NUMBER REAR	NUMBER FORWARD	NUMBER TOTAL	LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS A	B	C	D	R	INC.
SUPERSTRUCTURE												
S401			438	39'-4"	11509	ST.						
S402			2	39'-6"	53	ST.						
			1	2'-7"								
S403			SER. OF	TO	32	ST.						13'-3 1/2"
			3	29'-2"								
S404			3	32'-9"	66	ST.						
			1	13'-6"								
S405			SER. OF	TO	54	ST.						13'-3"
			3	40'-0"								
S407			77	5'-5"	279	2	2'-6"	0'-7"	2'-6"			
S408			154	3'-1"	318	2	1'-4"	0'-7"	1'-4"			
S409			77	5'-3"	271	2	2'-5"	0'-7"	2'-5"			
S501			438	39'-11"	18236	ST.						
S502			3	27'-9"	87	ST.						
S503			1	35'-5"	37	16	34'-10"					
S504			3	33'-11"	107	ST.						
			1	13'-6"								
S505			SER. OF	TO	84	ST.						13'-3"
			3	40'-0"								
			1	2'-7"								
S506			SER. OF	TO	50	ST.						13'-3 1/2"
			3	29'-2"								
S507			151	26'-7"	4187	ST.						
S508			910	30'-0"	28474	ST.						
			1	29'-2"								
S509			SER. OF	TO	5000	ST.						1/2"
			150	34'-9"								
S510			2	15'-6"	33	ST.						
S511			1	22'-4"	24	ST.						
S512			1	11'-2"	12	ST.						
			2	10'-3"								
S513			SER. OF	TO	135	ST.						11'-2 1/2"
			3	32'-8"								
			2	17'-1"								
S514			SER. OF	TO	178	ST.						11'-3"
			3	39'-7"								
S515			3	24'-0"	76	ST.						
			1	10'-9"								
S516			SER. OF	TO	69	ST.						11'-2 1/2"
			3	33'-2"								
S517			2	13'-0"	28	ST.						
S518			2	24'-3"	51	ST.						
S519			2	8'-8"	19	ST.						
S520			2	19'-10"	42	ST.						
S521			153	26'-8"	4256	ST.						
S522			1	29'-3"	31	ST.						
S523			1	34'-10"	37	ST.						
			1	29'-9"			29'-2"					
S524			SER. OF	TO	5092	16						1/2"
			150	35'-4"			34'-9"					
S525			151	27'-2"	4279	16	26'-7"					
			1	11'-4"			10'-9"					
S526			SER. OF	TO	71	16						11'-2 1/2"
			3	33'-9"			33'-2"					
S527			1	22'-11"	24	16	22'-4"					
S528			1	11'-9"	13	16	11'-2"					
S529			153	27'-3"	4349	16	26'-8"					
S530			1	29'-10"	32	16	29'-3"					
			2	16'-5"								
S531			SER. OF	TO	91	ST.						10'-6"
			2	26'-11"								
S532			308	20'-0"	6425	ST.						
S533			150	34'-1"	5333	16	33'-6"					
S534			150	33'-6"	5242	ST.						
S535			1	24'-7"	26	16	24'-0"					
S536			1	13'-4"	14	16	12'-9"					
S537			1	12'-9"	14	ST.						
S538			2	17'-9"	38	ST.						
S539			2	6'-6"	14	ST.						
S540			2	11'-9"	25	ST.						
S541			2	12'-1"	26	ST.						
			2	6'-2"								
S542			SER. OF	TO	109	ST.						11'-3"
			3	28'-8"								
S543			2	24'-4"	51	ST.						
S544			2	13'-1"	28	ST.						
S545			2	26'-11"	57	ST.						
S546			2	16'-5"	35	ST.						
			1	13'-7"			13'-0"					
S547			SER. OF	TO	80	16						11'-9"
			3	37'-1"			36'-6"					
			1	13'-0"								
S548			SER. OF	TO	78	ST.						11'-9"
			3	36'-6"								
S549			2	34'-2"	72	16	33'-7"					
S550			2	33'-7"	71	ST.						
S551			2	27'-7"	58	16	27'-0"					
S552			2	27'-0"	57	ST.						
S601			612	10'-1"	9269	16	9'-5"					
				TOTAL =	114908							

MARK	NUMBER REAR	NUMBER FORWARD	NUMBER TOTAL	LENGTH	LENGTH (FT)	TYPE	DIMENSIONS A	B	C	D	E	R	INC.
GLASS FIBER REINFORCED POLYMER (GFRP) REINFORCING STEEL													
RG401			56	30'-0"	1680	ST.							
RG402			14	19'-4"	271	ST.							
RG403			40	15'-4"	614	ST.							
RG404			14	18'-10"	264	ST.							
				SUB-TOTAL RAILING =	2829								
RG501			36	5'-2"	186	6	1'-8"	1'-2"	0'-10"				
RG502			4	4'-6"	18	36	1'-8"	1'-2"	0'-10"				
RG503			36	5'-2"	186	6	1'-7 1/2"	1'-2"	0'-10"				
RG504			4	4'-5"	18	36	1'-7 1/2"	1'-2"	0'-10"				
				SUB-TOTAL RAILING =	408								
RG601			44	25'-3"	1111	ST							
RG602			22	29'-6"	649	ST							
RG603			16	13'-7"	218	ST							
RG604			40	10'-3"	410	ST							
				SUB-TOTAL RAILING =	2388								
ASG401	14	14	28	29'-9"	833	ST.							
ASG402	16	16	32	15'-0"	480	ST.							
ASG403	14	14	28	29'-7"	829	ST.							
				SUB-TOTAL APPROACH SLAB =	2142								
ASG501	12	12	24	4'-11"	118	6	1'-5"	1'-2"	0'-10"				
ASG502	4	4	8	4'-3"	34	36	1'-5"	1'-2"	0'-10"				
ASG503	12	12	24	4'-11"	118	6	1'-4 1/2"	1'-2"	0'-10"				
ASG504	4	4	8	4'-2"	34	36	1'-4 1/2"	1'-2"	0'-10"				
				SUB-TOTAL APPROACH SLAB =	304								
ASG601	22	22	44	29'-7"	1302	ST							
ASG602	16	16	32	14'-11"	478	ST							
				SUB-TOTAL APPROACH SLAB =	1780								

MARK	NUMBER REAR	NUMBER FORWARD	NUMBER TOTAL	LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS A	B	C	D	E	R	INC.
RAILING													
R401			120	1'-9"	141	19	0'-11"	0'-2"	0'-11"				
R402			180	2'-8"	321	11	0'-9"	1'-8"	1'-1"				
R601			180	6'-11"	1870	41	0'-9 1/2"	0'-7"	1'-0"	2'-1"	1'-1 3/4"		
R602			120	7'-0"	1262	23	0'-6"	3'-3"	3'-3"			2"	
R603			60	7'-8"	691	37	1'-1 1/2"	0'-6"	3'-3"	3'-3"			
R604			60	4'-8"	421	1	1'-0"	3'-10"					
R605			276	12'-9"	5286	35	0'-9"	4'-7"	0'-10"			2 3/4"	
				TOTAL =	9992								

MARK	NUMBER REAR	NUMBER FORWARD	NUMBER TOTAL	LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS A	B	C	D	E	R	INC.
APPROACH SLABS (FOR INFORMATION ONLY)													
AS401	48	48	96	1'-9"	113	19	0'-11"	0'-2"	0'-11"				
AS402	72	72	144	2'-8"	257	11	0'-9"	1'-8"	1'-1"				
AS501	195	195	390	30'-0"	12204	ST							
AS502	65		65	32'-3"	2187	ST							
AS503	65	65	130	26'-8"	3616	ST							
AS504	65	65	130	23'-3"	3153	ST							
AS505	65	65	130	16'-10"	2283	ST							
AS506	65	65	130	32'-11"	4464	ST							
AS507	146	141	287	29'-6"	8831	ST							
AS508	1	1	2	29'-7"	62	ST							
AS509	1	1	2	29'-8"	62	ST							
AS510		65	65	24'-3"	1645	ST							
AS601	72	72	144	7'-5"	1605	41	0'-9 1/2"	0'-7"	1'-0"	2'-4"	1'-2 1/2"		
AS602	48	48	96	7'-0"	1010	23	0'-6"	3'-3"	3'-3"			2"	
AS603	24	24	48	7'-8"	553	37	1'-1 1/2"	0'-6"	3'-3"	3'-3"			
AS604	24	24	48	5'-3"	379	1	1'-0"	4'-5"					
AS605	104	104	208	14'-1"	4400	35	1'-4"	4'-7"	0'-11"			2 3/4"	
AS1001	394	380	774	30'-11"	102969	16	29'-6"						
AS1002	1		1	4'-4"	19	ST							
AS1003	1		1	12'-3"	53	ST							
AS1004	1		1	19'-1"	83	ST							
AS1005	1		1	25'-8"	111	ST							
AS1006	1	1	2	31'-0"	267	16	29'-7"						
AS1007		1	1	9'-0"	39	16	7'-7"						
AS1008		1	1	16'-1"	70	16	14'-8"						
AS1009		1	1	24'-8"	107	16	23'-3"						
				TOTAL =	150542								

FOR INFORMATION ONLY

NOTES:

1. REFER TO SHEET 53/55 FOR LEGEND, NOTES AND ADDITIONAL DETAILS.

DESIGN AGENCY
2000 Corporate Exchange Drive, Suite 300, Columbus, OH 43231

DESIGNED JBM | DRAWN JBM | CHECKED PPA | REVIEWED NCM | DATE 12-15-21

STRUCTURE FILE NUMBER 3110095

REVISED

REINFORCING LIST

BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

HAM-75-7.85
PID No. 77889

54/55

1443
2017

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MARK	NUMBER REAR	NUMBER FORWARD	NUMBER TOTAL	LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS A	B	C	D	INC.
DIAPHRAGMS											
S406			182	5′-11″	719	3	0′-6″	2′-3″			
S553	46	44	90	7′-1″	665	ST.					
S554	2	2	4	2′-5″	10	ST.					
S555	2	2	4	2′-7″	11	ST.					
S556	4	4	8	1′-4″	11	ST.					
S557		2	2	1′-9″	4	ST.					
S602		4	4	3′-7″	22	13	1′-3″	0′-7″	0′-7″	1′-7″	
S603	84	88	164	7′-2″	1765	13	4′-10″	0′-7″	0′-7″	1′-7″	
S604	2	2	4	4′-7″	28	13	2′-3″	0′-7″	0′-7″	1′-7″	
S605	2	2	4	4′-8″	28	13	2′-4″	0′-7″	0′-7″	1′-7″	
S606	190	185	375	11′-6″	6477	2	4′-10″	2′-2″	4′-10″		
S607	4	4	8	3′-5″	41	13	1′-1″	0′-7″	0′-7″	1′-7″	
S608	4	22	26	11′-4″	443	3	2′-8″	2′-7″			
S609	39	24	63	11′-8″	1104	3	2′-8″	2′-9″			
S610	4	8	12	12′-0″	216	3	2′-8″	2′-11″			
S611	20	24	44	12′-4″	815	3	2′-8″	3′-1″			
S612	28		28	12′-6″	526	3	2′-8″	3′-2″			
S613	32	36	68	11′-10″	1209	3	2′-8″	2′-10″			
S614		4	4	11′-2″	67	3	2′-8″	2′-6″			
S615	32	32	64	12′-2″	1170	3	2′-8″	3′-0″			
S616	16	4	20	12′-8″	381	3	2′-8″	3′-3″			
S617	11	31	42	11′-6″	725	3	2′-8″	2′-8″			
S618	4		4	12′-10″	77	3	2′-8″	3′-4″			
S619			88	7′-10″	1035	ST.					
S620			4	5′-2″	31	ST.					
S621			88	7′-2″	947	13	5′-0″	0′-7″	0′-7″	1′-5″	
S622			4	5′-11″	36	13	3′-9″	0′-7″	0′-7″	1′-5″	
S623	8		8	11′-4″	136	3	2′-2″	3′-1″			
S624		8	8	10′-10″	130	3	2′-2″	2′-10″			
S625	4		4	8′-8″	52	3	2′-8″	1′-3″			
S626	4		4	8′-6″	51	3	2′-8″	1′-2″			
S627		4	4	8′-4″	50	3	2′-8″	1′-1″			
S628		4	4	7′-10″	47	3	2′-8″	0′-10″			
D801	146	141	287	6′-1″	4662	18	3′-11″	1′-0″	1′-0″		
				TOTAL =	23,691						

	MARK	NUMBER REAR	NUMBER FORWARD	NUMBER TOTAL	LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS A	B	C	D	INC.
	DIAPHRAGMS											
	S801		2	2	2′-5″	13	ST.					
	S802	35	35	70	30′-0″	5607	ST.					
*	S803	7		7	35′-1″	656	ST.					
**	S804	7	7	14	26′-9″	1000	ST.					
**	S805	4	4	8	14′-0″	299	ST.					
	S806	40	38	78	7′-10″	1631	ST.					
	S807	2	2	4	2′-10″	30	ST.					
	S808	2	2	4	2′-11″	31	ST.					
	S809	4	4	8	19′-2″	409	1	16′-2″	3′-2″			
*	S810	4	4	8	13′-0″	278	ST.					
	S811	4	4	8	9′-6″	203	1	6′-6″	3′-2″			
	S812	4		4	28′-2″	301	1	25′-2″	3′-2″			
	S813	4	4	8	1′-8″	36	ST.					
**	S814	4	4	8	16′-0″	342	ST.					
**	S815	7	7	14	10′-7″	396	ST.					
***	S816	11	11	22	16′-10″	989	ST.					
*	S817	6	6	12	23′-4″	748	ST.					
	S818	4	4	8	27′-1″	579	1	23′-10″	3′-5″			
*	S819		5	5	15′-0″	200	ST.					
	S820	4		4	8′-10″	94	1	6′-3″	2′-10″			
*	S821		7	7	29′-7″	553	ST.					
	S822		4	4	9′-2″	98	1	6′-7″	2′-10″			
	S823	4	4	8	19′-6″	417	ST.					
*	S824	5		5	6′-2″	82	ST.					
	S825	5		5	11′-0″	147	ST.					
	S826		4	4	22′-6″	240	1	19′-6″	3′-2″			
	S827		5	5	4′-8″	62	ST.					
	S828	1	1	2	16′-0″	85	ST.					
	S829	1	1	2	13′-5″	72	ST.					
*	S830	4	4	8	2′-5″	52	ST.					
	S831	8	8	16	12′-10″	548	6	3′-10″	1′-11″	3′-0″		
	S832	16	16	32	6′-3″	534	18	4′-1″	1′-0″	1′-0″		
*	S833	2	2	4	3′-2″	34	ST.					
**	S834	4	4	8	5′-5″	116	ST.					
**	S835	2	2	4	4′-8″	50	ST.					
	S836	2	3	5	1′-1″	14	ST.					
	S837	2	2	4	2′-3″	24	ST.					
	S838	18	17	35	6′-7″	615	ST.					
*	S839	2	2	4	1′-9″	19	ST.					
*	S840	1	1	2	2′-7″	14	ST.					
**	S841	2	2	4	4′-10″	52	ST.					
**	S842	1	1	2	4′-1″	22	ST.					
					TOTAL =	17,692						

FOR INFORMATION ONLY

LEGEND:

* - BAR WITH MECHANICAL CONNECTOR

** - BAR WITH THREADED END

*** - BAR WITH MECHANICAL CONNECTOR AND THREADED END

NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, P601 IS A NO. 6 BAR.

DESIGN AGENCY
2001 Crocker Road, Suite 200, Columbus, OH 43221

DESIGNED KK | DRAWN JBM | CHECKED PPA | REVIEWED NCM | DATE 12-15-21

STRUCTURE FILE NUMBER 3110095

REVISED

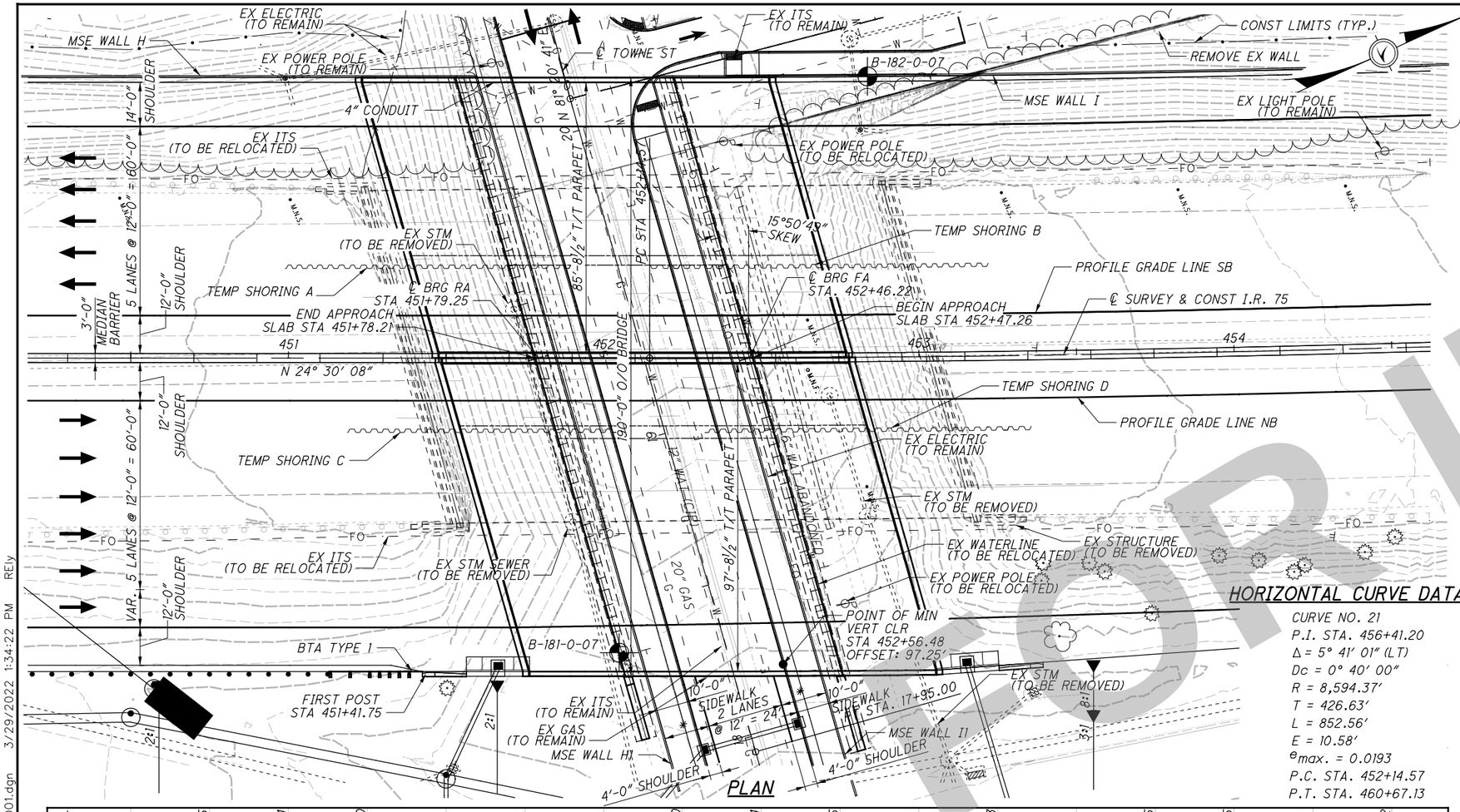
REINFORCING LIST
BRIDGE NO. HAM-75-0823
I.R. 75 OVER LAIDLAW AVENUE (C.R. 690)

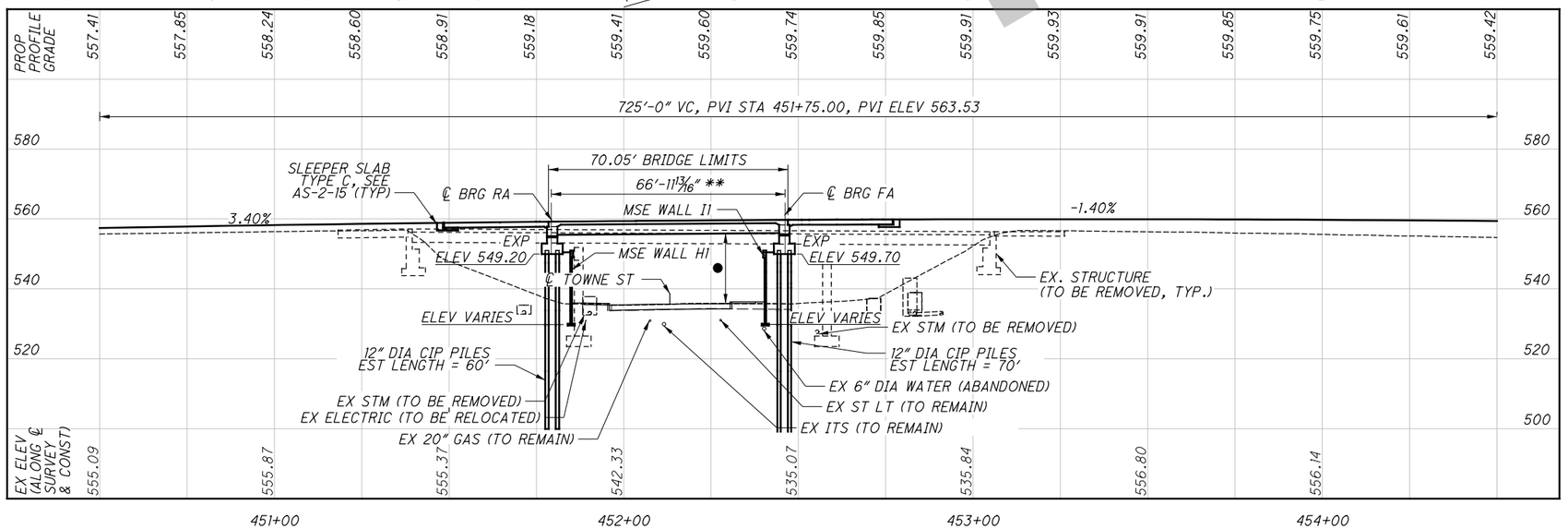
HAM-75-7.85
PID No. 77889

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2017

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PROFILE ALONG RIGHT BRIDGE PROFILE GRADE LINE I.R. 75

BENCHMARK DATA

BM #409 STA. 453+17.42, EL. 564.07, OFFSET 509.11' RT.
BM #410 STA. 456+03.19, EL. 541.01 , OFFSET 1838.09' RT.

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET (13/2017)

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. SEE GENERAL PLAN SHEET 2/40 FOR PHASE CONSTRUCTION DIMENSIONS.

DESIGN TRAFFIC:
2010 ADT =173,800 2010 ADTT =24,332
2030 ADT =203,000 2030 ADTT =28,420
DIRECTIONAL DISTRIBUTION = 0.53

LEGEND

- ⌖ BORING LOCATION
- ⊕ SURVEY BENCHMARK
- ● 15'-6" REQUIRED MINIMUM VERTICAL CLEARANCE
  16'-8" PROVIDED MINIMUM VERTICAL CLEARANCE
- * 14'-6" PROVIDED, 14'-6" REQUIRED
- ** MEASURED ALONG REFERENCE TANGENT

HORIZONTAL CURVE DATA

CURVE NO. 21
P.I. STA. 456+41.20
Δ = 5° 41' 01" (LT)
Dc = 0° 40' 00"
R = 8,594.37'
T = 426.63'
L = 852.56'
E = 10.58'
$e_{max.}$ = 0.0193
P.C. STA. 452+14.57
P.T. STA. 460+67.13

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAMS, WITH CONCRETE DECK AND CONCRETE SUBSTRUCTURE

SPANS: 46'-0", 71'-0", 46'-0" C/C BRGS.
ROADWAY: 2 @ 51'-6" TOE/TOE PARAPET
LOADING: CF 2000-51
SKEW: 14°45'00" RF.
APPROACH SLABS: AS-1-81 (20'-0" LONG)
WEARING SURFACE: 1¼" MICROSILICA MODIFIED CONCRETE OVERLAY
ALIGNMENT: TANGENT
CROWN: 0.016 FT/FT
STRUCTURAL FILE NUMBER: 3110176
DATE BUILT: 1958
DISPOSITION: TO BE REMOVED

PROPOSED STRUCTURE

TYPE: SINGLE SPAN, STEEL BEAM BRIDGE WITH COMPOSITE REINFORCED DECK SUPPORTED BY SEMI-INTEGRAL ABUTMENTS FOUNDED ON PILES AND MSE WALL EMBANKMENTS
SPANS: 66'-11 13/16" C/C BEARINGS (MEASURED ALONG REFERENCE TANGENT)
ROADWAY: 85'-8½" (SB), 97'-8½" (NB) TOE/TOE PARAPET
LOADING: HL-93
FWS = 0.060 KSF
SKEW: 15°50'49" RF.
WEARING SURFACE: 1" MONOLITHIC CONCRETE
APPROACH SLABS: 30'-0" LONG (AS-1-81)
ALIGNMENT: TANGENT AND 0°40' CURVE TO THE LEFT
CROWN: VARIES
COORDINATES: LATITUDE 39°11'01" N
LONGITUDE 84°29'02" W

FOR REVIEW

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED JGM | DRAWN JGM | REVIEWED SSK | DATE 12-15-21
CHECKED NCK | REVISED | STRUCTURE FILE NUMBER 3110184

HAMILTON COUNTY
STA. 451+77.21
STA. 452+47.26

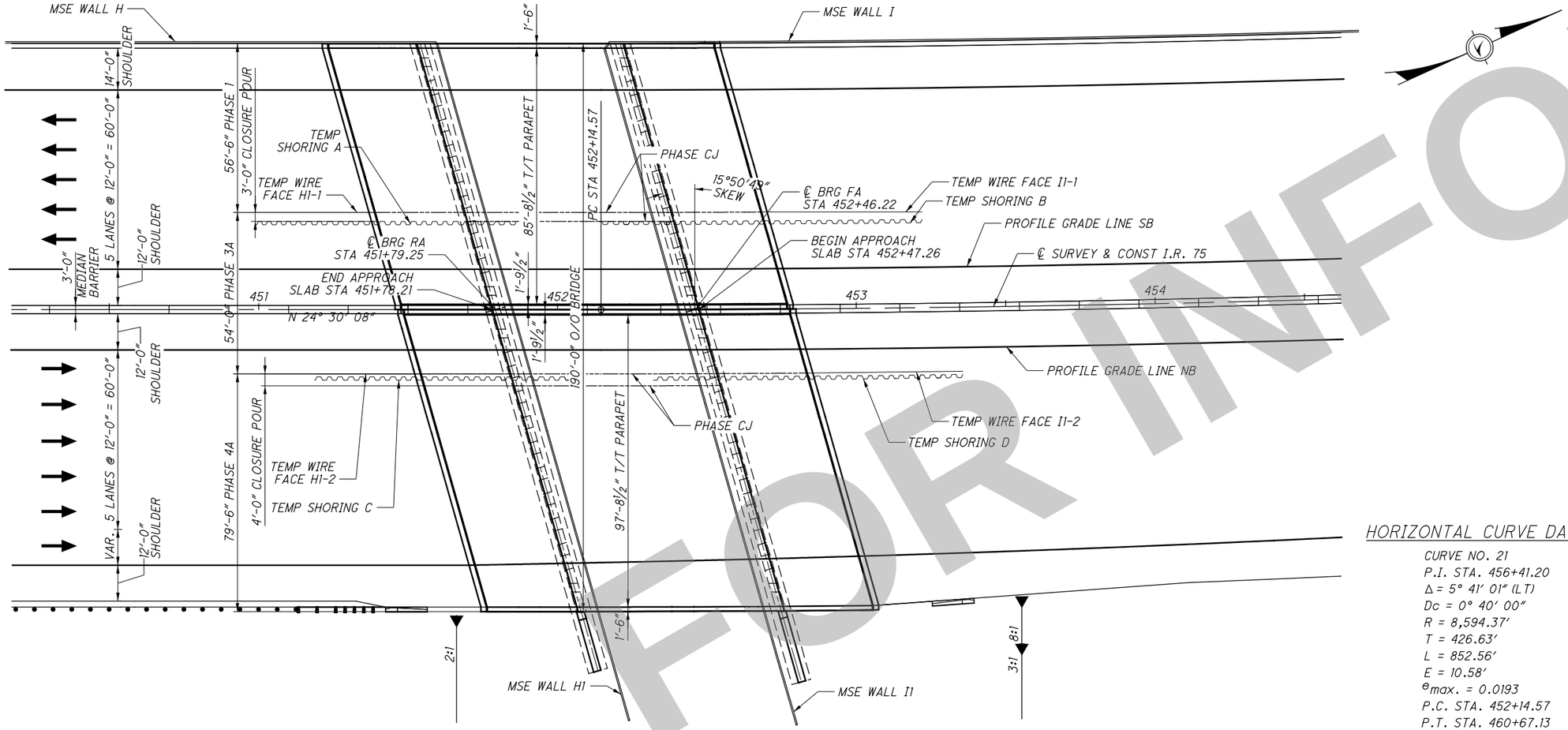
SITE PLAN
BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

1/40

1445/2017

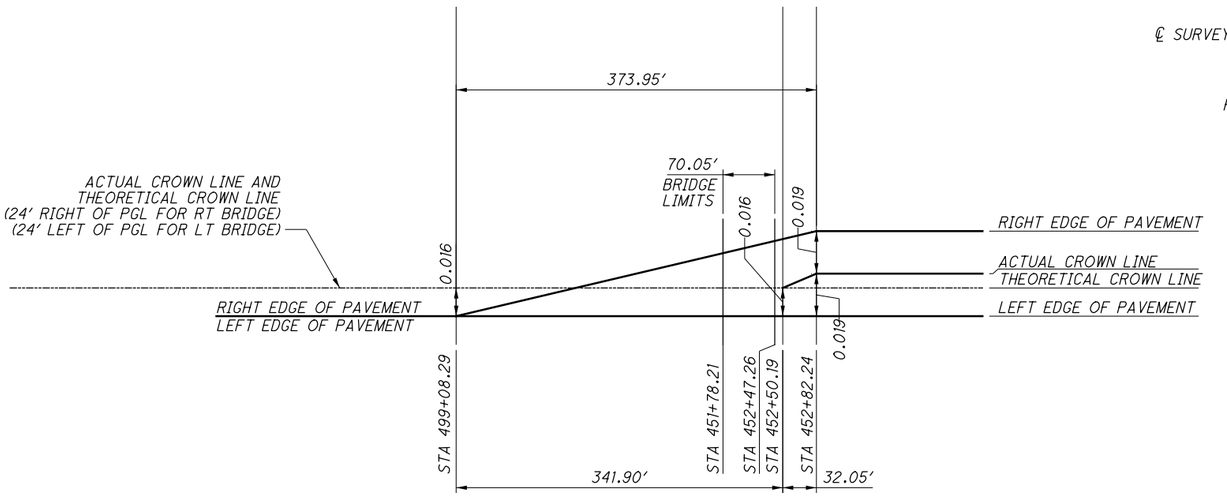
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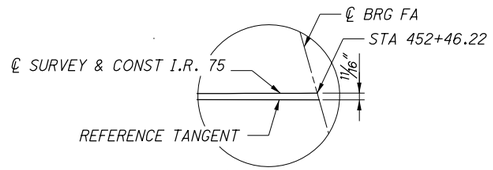
GENERAL PLAN

HORIZONTAL CURVE DATA

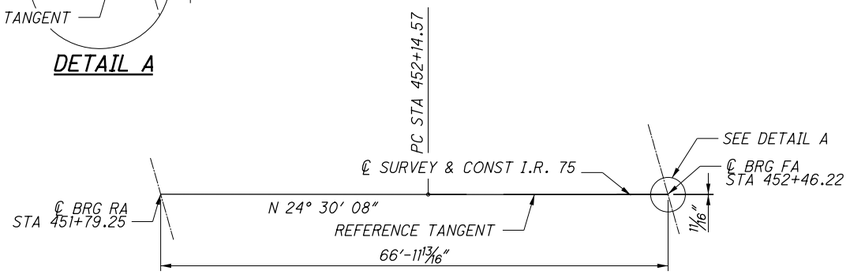
CURVE NO. 21
P.I. STA. 456+41.20
Δ = 5° 41' 01" (LT)
Dc = 0° 40' 00"
R = 8,594.37'
T = 426.63'
L = 852.56'
E = 10.58'
e max. = 0.0193
P.C. STA. 452+14.57
P.T. STA. 460+67.13



SUPERELEVATION DIAGRAM



DETAIL A



REFERENCE TANGENT DIAGRAM

FOR INFO

RESOURCE INTERNATIONAL, INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED	DRAWN	REVIEWED	DATE
JGM	JGM	NCK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JLM		3110184	

GENERAL PLAN
BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

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REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-1-15	REVISED	07-17-15
AS-2-15	REVISED	01-18-19
GSD-1-19	REVISED	01-15-21
NBS-1-09	REVISED	01-15-21
PCB-91	REVISED	07-17-20
SBR-1-20	REVISED	07-17-20
SBR-2-20	REVISED	01-15-21
SICD-1-96	REVISED	07-18-14
SICD-2-14	DATED	01-15-21

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFATIONS:

840 DATED 04-16-21

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

OPERATIONAL IMPORTANCE:

A LOAD MODIFIER OF 1.05 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DESIGN LOADING:

HL-93 AND FUTURE WEARING SURFACE (FWS) 0.060 KSF

DESIGN DATA:

CONCRETE CLASS QC3 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

CONCRETE CLASS QC1/QC3 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

STRUCTURAL STEEL - ASTM A709 GRADE 50W -
YIELD STRENGTH 50 KSI

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL

2½" CONCRETE COVER

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

EXISTING STRUCTURE PLANS:

CONSTRUCTION PLANS FOR THE EXISTING BRIDGE ARE ON FILE AT THE DEPARTMENT OF TRANSPORTATION, DISTRICT 8 OFFICE, 505 SOUTH STATE ROUTE 741, LEBANON, OHIO AND ARE AVAILABLE FOR REFERENCE.

EXISTING STRUCTURE VERIFICATION:

EXISTING STRUCTURE VERIFICATION: DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATINVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTION 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

PILE DRIVING CONSTRAINTS:

PILE DRIVING MAY NOT BEGIN UNTIL SUFFICIENT EMBANKMENT AND MSE WALL SETTLEMENT HAS OCCURRED AS DOCUMENTED BY THE SETTLEMENT PLATFORMS. THE ANTICIPATED WAITING PERIOD TO PERMIT SUFFICIENT EMBANKMENT SETTLEMENT IS 30 DAYS. THE DISTRICT GEOTECHNICAL ENGINEER MAY REDUCE OR EXTEND THE WAITING PERIOD BASED ON THE MAGNITUDE AND RATE OF THE EMBANKMENT SETTLEMENT AS DETERMINED BY THE SETTLEMENT PLATFORMS. THE SETTLEMENT WAITING PERIOD BEGINS ONCE THE APPROACH EMBANKMENT REACHES THE DESIGN SUBGRADE LEVEL FOR A MINIMUM DISTANCE OF 100 FT. BEHIND EACH ABUTMENT. THE PLANS HAVE PROVISIONS FOR A TEMPORARY WALL AT THE ABUTMENT LOCATION TO PERMIT PLACEMENT OF EMBANKMENT TO THE DESIGN SUBGRADE LEVEL. BEGIN PILE DRIVING ONLY FOLLOWING TERMINATION OF THE SETTLEMENT MONITORING WAITING PERIOD BY THE DISTRICT GEOTECHNICAL ENGINEER.

PILES DRIVEN TO TIP ELEVATION FOR PILE/SOIL SETUP:

THE ULTIMATE BEARING VALUE IS 215 KIPS PER PILE FOR THE ABUTMENT PILES. PART OF THE ULTIMATE BEARING VALUE WILL BE ACHIEVED THROUGH PILE/SOIL SETUP, WHICH IS A TIME-DEPENDENT INCREASE IN RESISTANCE THAT OCCURS IN SOME SOILS.

NOTIFY THE ENGINEER AT LEAST 5 DAYS BEFORE DRIVING PILES SO THAT THE ENGINEER CAN NOTIFY THE DISTRICT GEOTECHNICAL ENGINEER, THE OFFICER OF CONSTRUCTION ADMINISTRATION, AND THE OFFICE OF STRUCTURAL ENGINEERING.

DRIVE THE FIRST TWO PILES IN EACH SUBSTRUCTURE TO THE TIP ELEVATION GIVEN BELOW FOR THE SUBSTRUCTURE. DRIVE THE THIRD AND FOURTH PILES TO 75% AND 85% OF THE LENGTH OF THE FIRST TWO PILES. PERFORM DYNAMIC LOAD TESTING ON ALL FOUR PILES WHILE DRIVING. AFTER DRIVING THE FOUR PILES, CEASE ALL DRIVING OPERATIONS AT THE SUBSTRUCTURE FOR A MINIMUM OF 7 DAYS. INCLUDE THE WAITING PERIOD AS A SEPARATE ACTIVITY IN THE PROGRESS SCHEDULE. AFTER THE WAITING PERIOD, PERFORM PILE RESTRIKES ON THE FOUR PILES (TWO RESTRIKE ITEMS). SUBMIT ALL TEST RESULTS TO THE ENGINEER. THE ENGINEER WILL REVIEW THE TEST RESULTS AND ESTABLISH DRIVING CRITERIA FOR THE PILING IN THE SUBSTRUCTURE WITH THE ASSISTANCE OF THE DISTRICT GEOTECHNICAL ENGINEER, THE OFFICE OF CONSTRUCTION ADMINISTRATION, AND THE OFFICE OF STRUCTURAL ENGINEERING. THE DRIVING CRITERIA WITH PILE SETUP SHALL BE PEFORMED FOR THE FIRST STAGE OF BRIDGE CONSTRUCTION. THE CONTRACTOR SHALL NOT ORDER PILES FOR SUBSEQUENT PHASES UNTIL AFTER THE DRIVING CRITERIA HAS BEEN ESTABLISHED WITH SETUP. THE DEPARTMENT WILL ADJUST THE FURNISHED PILE QUANTITES BASED ON THE RESTRIKE TEST RESULTS.

IF THE DYNAMIC LOAD TESTING INDICATES A PILE HAS ACHIEVED THE ULTIMATE BEARING VALUE ABOVE THE TIP ELEVATION DURING THE INITIAL DRIVING (BEFORE THE WAITING PERIOD), STOP DRIVING AND NOTIFY THE ENGINEER. IF THE RESTRIKE TEST RESULTS ON THE FOUR PILES INDICATE THAT A PILE DID NOT ACHIEVE THE REQUIRED ULTIMATE BEARING VALUE, DRIVE THE PILE TO THE ESTABLISHED DRIVING CRITERIA. SPLICING OF THE PILES BEYOND THE ESTIMATED LENGTH PROVIDED IN THE PLANS WILL BE PAID BY THE DEPARTMENT UNDER CMS 109.05 WITH A NEGIOTATED PRICE PER SPLICE.

REAR ABUTMENT
60 PILES 65 FEET LONG, ORDER LENGTH
TIP ELEVATION, 493.00 FEET
2 DYNAMIC LOAD TESTING ITEM
2 RESTRIKE

FORWARD ABUTMENT
62 PILES 75 FEET LONG, ORDER LENGTH
TIP ELEVATION, 484.60 FEET
2 DYNAMIC LOAD TESTING ITEM
2 RESTRIKE

DECK PLACEMENT DESIGN ASSUMPTIONS:

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM LOAD OF 1.75 KIPS FOR A TOTAL MACHINE LOAD OF 14 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

ITEM 202 - STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN:

THE CONTRACTOR MUST REVIEW THE STRUCTURE WHEN PREPARING HIS BID. THE CONTRACTOR WILL REVIEW THE CONDITION OF THE STRUCTURE TO DETERMINE WHAT DEBRIS WILL FALL FROM THE STRUCTURE DURING REMOVAL. THE CONTRACTOR WILL DETERMINE THE CORRESPONDING COST TO CLEAN-UP ANY AND ALL DEBRIS WHICH FALLS FROM THE STRUCTURE DURING ANY REMOVAL OPERATION. THE COST TO CLEAR AND CLEAN-UP ALL DEBRIS DURING REMOVAL SHALL BE INCLUDED WITH THE BID FOR THIS ITEM OF WORK. NO ADDITIONAL COST WILL BE RECOGNIZED TO CLEAN DEBRIS RESULTING FROM THE STRUCTURE REMOVAL OPERATION.

ITEM 511 - CLASS QC3 CONCRETE MISC.: CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN:
ITEM 511 - CLASS QC3 CONCRETE MISC.: CONCRETE WITH QC/QA, BRIDGE DECK (MEDIAN PARAPET), AS PER PLAN:

THIS ITEM APPLIED TO THE CONCRETE IN THE BRIDGE DECK AND MEDIAN PARPAET. THIS ITEM MODIFIES THE STANDARD 511 CONCRETE FOR STRUCTURES SPECIFICATION TO INCLUDE MACRO-SYNTHETIC, AND CORROSION INHIBITORS INTO THE SUPERSTRUCTURE CONCRETE. THIS ITEM SHALL CONFORM TO CMS 511 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

PROVIDE MATERIALS CONFORMING TO 511.02 EXCEPT AS MODIFIED BELOW:

PORTLAND CEMENT CONCRETE
499.03, CLASS QC 3 MEETING A DESIGN STRENGTH OF 4,500 PSI, WITH MACRO-SYNTHETIC FIBERS WITH MODIFICATION PER 511.02

FIBERS FOR CONCRETE	ASTM C 1116, TYPE III
CORROSION INHIBITOR	515.15

THE CLASS QC3 CONCRETE FOR THE SUPERSTRUCTURE SHALL MEET THE FOLLOWING CRITERIA: WATER/CEMENT RATIO = 0.40 MAXIMUM; MINIMUM 4 LBS/CY MACRO-SYNTHETIC FIBERS (1.5 IN. MIN. TO 2.5 IN. MAX.) MEETING ASTM C1116 TYPE III SHALL BE ADDED TO THE MIX.

MIX SHALL INCLUDE A MIGRATING CORROSION INHIBITOR AS MANUFACTURED BY AN APPROVED SUPPLIER LISTED ON ODOT'S QUALIFIED APPROVED SUPPLIERS, ITEM 515.15. THE DOSAGE RATE LISTED ON THE ODOT QUALIFIED APPROVED SUPPLIERS LIST WILL APPLY.

THE MACRO-SYNTHETIC FIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO 'BALLING' OCCURS. UPON INSPECTION OF THE MIX AT THE TIME OF PLACEMENT, IF ANY 'BALLING' OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR. IT IS IMPORTANT TO FOLLOW INDUSTRY STANDARDS AND ASTM SPECIFICATIONS ON THE PREMIXING OF THE CEMENT, AGGREGATE, AND MACRO-SYNTHETIC FIBERS PRIOR TO THE ADDITION OF WATER AND ADMIXTURES. PROVIDE MACRO-SYNTHETIC - FIBERS THAT ARE MONOFILAMENT FIBERS MADE FROM VIRGIN POLYPROPYLENE, POLYETHYLENE, OR CO-POLYMERS THAT ARE INERT TO ALKALI ATTACK. ENSURE THE MACRO-SYNTHETIC FIBERS HAVE A MINIMUM TENSILE STRENGTH OF 70 KSI, A MINIMUM MODULUS OF ELASTICITY OF 800 KSI, A MINIMUM FILAMENT DIAMETER OF 0.012 INCHES, AND ASPECT RATIO BETWEEN 60 AND 100, AND ARE BETWEEN 1.0 AND 2.5 INCHES IN LENGTH. STORE THE MACRO-SYNTHETIC FIBERS ACCORDING TO THE MANUFACTUR'S RECOMMENDATION AND KEEP THE MATERIAL FREE FROM DUST, DIRT AND MOISTURE.

USE A MINIMUM DOSAGE RATE OF MACRO-SYNTHETIC FIBERS OF 4.0 LBS/CY OF CONCRETE. DETERMINE THE FINAL PROPOSED DOSAGE RATE THROUGH MIX TESTING. ENSURE THE FIBER REINFORCED CONCRETE MEETS OR EXCEEDS A MINIMUM EQUIVALENT FLEXURAL STRENGTH RATIO OF 25% ACCORDING TO ASTM C 1609. ENSURE THE FINAL PROPOSED MIX IS WORKABLE AND ABLE TO BE PRODUCED SUCH THAT BALLING OR CLUMPING OF THE FIBERS IS NOT A PROBLEM AS DETERMINED BY THE ENGINEER. UTILIZE A LABORATORY REGULARLY INSPECTED BY THE CEMENT AND CONCRETE REFERENCE LABORATORY (CCRL) OF THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, OR OTHER APPROVED REFERENCE LABORATORY, TO PERFORM THE TESTING. BEFORE USE, SUBMIT DOCUMENTATION TO THE PROJECT ENGINEER CERTIFYING BOTH THE MACRO-SYNTHETIC FIBERS AND THE MIX MEET OR EXCEED THE REQUIRED PROPERTIES. SAMPLING WILL BE ALLOWED FOR TESTING PURPOSES. A DEMONSTRATION OF THE MIX PRODUCTION OR TRIAL MIX, MAY BE REQUIRED BY THE ENGINEER PRIOR TO PLACING ANY OF THE MIX ON THE PROJECT.

THE BATCH WEIGHTS SHALL BE CORRECTED TO COMPENSATE FOR THE MOISTURE CONTAINED IN THE AGGREGATE AT THE TIME OF USE. A CHEMICAL ADMIXTURE (705.12, TYPE A OR D) SHALL BE USED.

ITEM 511 - CLASS QC3 CONCRETE MISC.: CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN:
ITEM 511 - CLASS QC3 CONCRETE MISC.: CONCRETE WITH QC/QA, BRIDGE DECK (MEDIAN PARAPET), AS PER PLAN:

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT THE CORROSION INHIBITOR AND ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CORROSION INHIBITOR IS SUGGESTED TO BE A MCI PRODUCT BY CORTEC OR AN APPROVED EQUAL FROM THE QUALIFIED PRODUCTS LIST. THE CONCRETE SUPPLIER'S CHOICE OF ONE OF THESE CORROSION INHIBITORS DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS. PLEASE BE ADVISED THAT SOME PRODUCTS ON THE LIST EFFECT THE DELIVERED MIX PROPERTIES GREATLY WHILE OTHER PRODUCTS DO NOT.

APPROACH SLABS, DIAPHRAGMS, AND MEDIAN PARAPET CONCRETE (WHEN APPLICABLE) ARE TO USE THE SAME MIX DESIGN AS THE BRIDGE DECK. THE CONTRACTOR SHOULD BE ADVISED THAT CONCRETE RETARDING AGENTS MAY NEED TO BE ADDED TO OFFSET THE EFFECTS OF THE MIGRATING CORROSION INHIBITOR SELECTED.

THE CONTRACTOR SHALL PROVIDE TRADITIONAL BRIDGE DECK FORMS CONFORMING TO CMS 508. PERMANENT STAY-IN-PLACE (SIP) FORMS ARE NOT ALLOWED. THE PLACING OF THE DECK AND THE APPROACH SLABS IN THE SAME CONCRETE POUR IS NOT PERMITTED.

ITEM 503, COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN:

THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF THE EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN.

ABBREVIATIONS:

ABUT - ABUTMENT
AS - APPROACH SLAB
BRG - BEARING
C/C - CENTER TO CENTER
CJ - CONSTRUCTION JOINT
CIP - CAST-IN-PLACE
CONC - CONCRETE
CONST - CONSTRUCTION
DG - DIAPHRAGM GUIDE
DIA - DIAMETER
ELEV - ELEVATION
EX - EXISTING
EXP - EXPANSION
FA - FORWARD ABUTMENT
F/F - FACE TO FACE
FWD - FORWARD
LF - LEFT FORWARD
LT - LEFT
MIN - MINIMUM
NB - NORTHBOUND
NO - NUMBER
NPCPP - NON-PERFORATED CORRUGATED PLASTIC PIPE
PCB - PORTABLE CONCRETE BARRIER
PCPP - PERFORATED CORRUGATED PLASTIC PIPE
PEJF - PREFORMED EXPANSION JOINT FILLER
PG - PROFILE GRADE
PROP - PROPOSED
RA - REAR ABUTMENT
REQ'D - REQUIRED
RT - RIGHT
SB - SOUTHBOUND
SPA - SPACES
STA - STATION
ST - STRAIGHT
SUPER - SUPERSTRUCTURE
T/T - TOE TO TOE
TYP - TYPICAL
VERT - VERTICAL
W/ - WITH
CLR - CLEAR
RD - ROAD

FOR REFERENCE ONLY

RESOURCE INTERNATIONAL INC.
8350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED	DRAWN	REVIEWED	DATE
JGM	JGM	NCK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JLM		3110184	

GENERAL NOTES
BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

1447
2017

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ITEM 511 - CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK (EXTERIOR PARAPET), AS PER PLAN

THIS WORK SHALL INCLUDE THE CONSTRUCTION OF THE EXTERIOR BRIDGE PARAPETS WITH A FORM LINER PATTERN APPLIED TO THE EXTERIOR FACE THAT MATCHES THE ARCHITECTURAL "TEXAS RAIL" DETAILS SHOWN IN THE PLANS. THIS ITEM SHALL INCLUDE ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO CONSTRUCT THE "TEXAS" TYPE BRIDGE RAILING. QUANTITY SHALL INCLUDE SAW CUTTING, JOINT SEALER, FORM LINERS AND ANY OTHER MISCELLANEOUS ITEMS REQUIRED TO FULLY CONSTRUCT THE RAILING. THIS ITEM SHALL ONLY INCLUDE THE EXTERIOR PARAPET ON THE BRIDGE. EXTERIOR PARAPET ON APPROACH SLABS SHALL BE PAID FOR UNDER ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN.

IN ADDITION TO THE WORK ITEMS REQUIRED IN ITEM 511, THIS ITEM WILL INCLUDE THE DEVELOPMENT, DELIVERY AND PLACMENT OF A SPECIAL CONCRETE MIX AS DESCRIBED IN THE FOLLOWING NOTE:

PROVIDE A CONCRETE WITH THE FOLLOWING PROPERTIES:

MINIMUM PORTLAND CEMENT CONTENT	800 LB/CU. YD.
NO MICRO SILICA AND NO FLY ASH	
MAXIMUM COARSE AGGREGATE SIZE	#8
MAXIMUM WATER/CEMENT RATIO	0.38
COARSE TO FINE AGGREGATE RATIO	
TO PRODUCE SELF CONSOLIDATING CONCRETE	
MINIMUM 3 DAY STRENGTH	4000 PSI
MINIMUM 28 DAY STRENGTH	5500 PSI
AIR CONTENT	8% ±2%
MINIMUM SPREAD	24"

PROVIDE A CONCRETE MIX AT A SLUMP THAT ALLOWS THE CONCRETE MIX TO BE PUMPED THROUGH A 3 1/2" DIAMETER ACCESS HOLE THROUGH THE FORM AND SELF CONSOLIDATE THE PARAPET CONCRETE. THE FINAL CONCRETE MIX WILL BE A SELF CONSOLIDATING CONCRETE USING AN APPROVED SELF CONSOLIDATING ADMIXTURE.

SUBMIT THE MIX DESIGN AND TEST RESULTS TO THE ENGINEER FOR REVIEW AND ACCEPTANCE.

DURING THE CONCRETE OPERATIONS, ASSURE THE REPRESENTATIVES OF THE READY MIX PRODUCER AND THE CHEMICAL ADMIXTURE MANUFACTURER ARE ON SITE TO DETERMINE ANY ADJUSTMENTS REQUIRED TO COMPLETE THE CONCRETE PLACEMENT.

PAYMENT FOR THIS WORK SHALL INCLUDE ALL NECESSARY MATERIAL, LABOR, AND EQUIPMENT TO COMPLETE THIS TASK. PAYMENT SHALL BE MADE UNDER ITEM 511 - CLASS QC3 CONCRETE WITH QC/QA, BRIDGE DECK (EXTERIOR PARAPET), AS PER PLAN.

ITEM 514 - FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT, AS PER PLAN
ITEM 514 - FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN:

THE FASCIA GIRDER OUTSIDE SURFACES AND LOWER FLANGE SHALL HAVE A THREE COAT IZEU PAINT SYSTEM APPLIED. THE PRIME COAT SHALL BE SHOP APPLIED. THE APPLICATION OF THE PRIME COAT SHALL BE PAID FOR UNDER ITEM 513, STRUCTURAL STEEL MEMBERS, LEVEL 5. THE INTERMEDIATE AND FINISH COATS SHALL BE FIELD APPLIED PER ITEM 514. SEE TRANSVERSE DECK SECTION ON SHEET 25/40 FOR EXACT LIMITS OF PAINTING OF THE FACIA GIRDERS. THE COLOR OF THE FINISH COAT SHALL BE FEDERAL COLOR NUMBER 14277 (GREEN).

ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN:

THIS ITEM SHALL INCLUDE ALL THE COST OF ALL CONCRETE AND REINFORCING STEEL FOR THE APPROACH SLABS AND PARAPETS ON APPROACH SLABS. SEALING OF THE PARAPETS SHALL BE PAID FOR UNDER ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).

ITEM 511 - CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, ABUTMENT, AS PER PLAN & SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN:

THIS ITEM MODIFIES THE STANDARD 511 CONCRETE FOR STRUCTURES SPECIFICATION TO INCLUDE MACRO-SYNTHETIC, AND CORROSION INHIBITORS INTO THE SUBSTRUCTURE CONCRETE. THIS ITEM SHALL CONFORM TO CMS 511 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

PROVIDE MATERIALS CONFORMING TO 511.02 EXCEPT AS MODIFIED BELOW:

PORTLAND CEMENT CONCRETE
499.03, CLASS QC 3 MEETING A DESIGN STRENGTH OF 4,000 PSI, WITH MACRO-SYNTHETIC FIBERS WITH MODIFICATION PER 511.02

FIBERS FOR CONCRETE	ASTM C 1116, TYPE III
CORROSION INHIBITOR	515.15

THE CLASS QC3 CONCRETE FOR THE SUBSTRUCTURE SHALL MEET THE FOLLOWING CRITERIA: WATER/CEMENT RATIO = 0.40 MAXIMUM; MINIMUM 4 LBS/CY MACRO-SYNTHETIC FIBERS (1.0 IN. MIN. TO 2.5 IN. MAX.) MEETING ASTM C1116 TYPE III SHALL BE ADDED TO THE MIX.

MIX SHALL INCLUDE A MIGRATING CORROSION INHIBITOR AS MANUFACTURED BY AN APPROVED SUPPLIER LISTED ON ODOT'S QUALIFIED APPROVED SUPPLIERS, ITEM 515.15. THE DOSAGE RATE LISTED ON THE ODOT QUALIFIED APPROVED SUPPLIERS LIST WILL APPLY.

THE MACRO-SYNTHETIC FIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO 'BALLING' OCCURS. UPON INSPECTION OF THE MIX AT THE TIME OF PLACEMENT, IF ANY 'BALLING' OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR. IT IS IMPORTANT TO FOLLOW INDUSTRY STANDARDS AND ASTM SPECIFICATIONS ON THE PREMIXING OF THE CEMENT, AGGREGATE, AND MACRO-SYNTHETIC FIBERS PRIOR TO THE ADDITION OF WATER AND ADMIXTURES. PROVIDE MACRO-SYNTHETIC - FIBERS THAT ARE MONOFILAMENT FIBERS MADE FROM VIRGIN POLYPROPYLENE, POLYETHYLENE, OR CO-POLYMERS THAT ARE INERT TO ALKALI ATTACK. ENSURE THE MACRO-SYNTHETIC FIBERS HAVE A MINIMUM TENSILE STRENGTH OF 70 KSI, A MINIMUM MODULUS OF ELASTICITY OF 800 KSI, A MINIMUM FILAMENT DIAMETER OF 0.012 INCHES, AND ASPECT RATIO BETWEEN 60 AND 100, AND ARE BETWEEN 1.0 AND 2.5 INCHES IN LENGTH. STORE THE MACRO-SYNTHETIC FIBERS ACCORDING TO THE MANUFACTURE$^{5}/_{32}$S RECOMMENDATION AND KEEP THE MATERIAL FREE FROM DUST, DIRT AND MOISTURE.

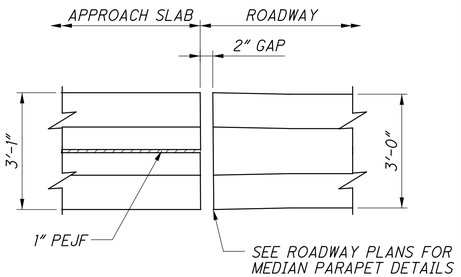
USE A MINIMUM DOSAGE RATE OF MACRO-SYNTHETIC FIBERS OF 4.0 LBS/CY OF CONCRETE. DETERMINE THE FINAL PROPOSED DOSAGE RATE THROUGH MIX TESTING. ENSURE THE FIBER REINFORCED CONCRETE MEETS OR EXCEEDS A MINIMUM EQUIVALENT FLEXURAL STRENGTH RATIO OF 25% ACCORDING TO ASTM C 1609. ENSURE THE FINAL PROPOSED MIX IS WORKABLE AND ABLE TO BE PRODUCED SUCH THAT BALLING OR CLUMPING OF THE FIBERS IS NOT A PROBLEM AS DETERMINED BY THE ENGINEER. UTILIZE A LABORATORY REGULARLY INSPECTED BY THE CEMENT AND CONCRETE REFERENCE LABORATORY (CCRL) OF THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, OR OTHER APPROVED REFERENCE LABORATORY, TO PERFORM THE TESTING. BEFORE USE, SUBMIT DOCUMENTATION TO THE PROJECT ENGINEER CERTIFYING BOTH THE MACRO-SYNTHETIC FIBERS AND THE MIX MEET OR EXCEED THE REQUIRED PROPERTIES. SAMPLING WILL BE ALLOWED FOR TESTING PURPOSES. A DEMONSTRATION OF THE MIX PRODUCTION OR TRIAL MIX, MAY BE REQUIRED BY THE ENGINEER PRIOR TO PLACING ANY OF THE MIX ON THE PROJECT.

THE BATCH WEIGHTS SHALL BE CORRECTED TO COMPENSATE FOR THE MOISTURE CONTAINED IN THE AGGREGATE AT THE TIME OF USE. A CHEMICAL ADMIXTURE (705.12, TYPE A OR D) SHALL BE USED.

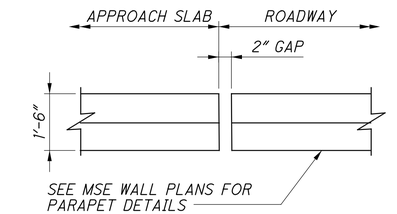
ITEM 511 - CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, ABUTMENT, AS PER PLAN & SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN: (CONTINUED)

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT THE CORROSION INHIBITOR AND ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CORROSION INHIBITOR IS SUGGESTED TO BE A MCI PRODUCT BY CORTEC OR AN APPROVED EQUAL FROM THE QUALIFIED PRODUCTS LIST. THE CONCRETE SUPPLIERS CHOICE OF ONE OF THESE CORROSION INHIBITORS DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS. PLEASE BE ADVISED THAT SOME PRODUCTS ON THE LIST EFFECT THE DELIVERED MIX PROPERTIES GREATLY WHILE OTHER PRODUCTS DO NOT.

THE CONTRACTOR SHOULD BE ADVISED THAT CONCRETE RETARDING AGENTS MAY NEED TO BE ADDED TO OFFSET THE EFFECTS OF THE MIGRATING CORROSION INHIBITOR SELECTED.



MEDIAN PARAPET PLAN
TYPICAL BOTH ENDS



EXTERIOR PARAPET PLAN
FORWARD APPROACH SLAB
LEFT BRIDGE ONLY

FOR INFORMATION ONLY

PLOTTED BY jenniferm 4/21/2022 12:35:45 PM \\son1resourceinternational.com\two\projects\2010\B-10-020 HAM-75-7.85\77889\structures\HAM075_0857C\sheets\075_0857CGN002.dgn

RESOURCE INTERNATIONAL INC.
8350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED	DRAWN	REVIEWED	DATE
JGM	JGM	NCK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JLM		3110184	

GENERAL NOTES
BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

1448
2017

ESTIMATED QUANTITIES

ITEM	EXTENSION	PARTICIPATION		TOTAL	UNIT	DESCRIPTION	ABUT.	SUPER.	GEN.	SHEET #
		57%-03/IMS/BR	43%-04/IMS/BR							
202	11003	LUMP		LUMP		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN			LUMP	3/40
202	22900	270	203	473	SQ YD	APPROACH SLAB REMOVED			473	
503	11101	LUMP		LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL A)			LUMP	3/40, 12/40, 13/40
503	11101	LUMP		LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL B)			LUMP	3/40, 12/40, 13/40
503	11101	LUMP		LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL C)			LUMP	3/40, 12/40, 13/40
503	11101	LUMP		LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (WALL D)			LUMP	3/40, 12/40, 13/40
503	21300	LUMP		LUMP		UNCLASSIFIED EXCAVATION			LUMP	
505	11100	LUMP		LUMP		PILE DRIVING EQUIPMENT MOBILIZATION			LUMP	
507	500	4526	3414	7940	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	7940			
507	550	4874	3676	8550	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	8550			
509	10000	77,983	58,830	136,813	POUND	EPOXY COATED REINFORCING STEEL	45,517	91,296		
509	30020	1479	1115	2594	FT	NO. 4 GFRP DEFORMED BARS		2594		
509	30030	778	587	1365	FT	NO. 5 GFRP DEFORMED BARS		1365		
509	30040	1237	933	2170	FT	NO. 6 GFRP DEFORMED BARS		2170		
511	33501	5	3	8	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN	8			4/40
511	46513	180	136	316	CU YD	CLASS QC1 CONCRETE WITH QC/QA, FOOTING, AS PER PLAN	316			4/40
511	53014	308	232	540	CU YD	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN		540		3/40
511	53014	18	14	32	CU YD	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK (MEDIAN PARAPET), AS PER PLAN		32		3/40
511	53014	15	11	26	CU YD	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK (EXTERIOR PARAPET), AS PER PLAN		26		3/40
511	53014	87	65	152	CU YD	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, ABUTMENT, AS PER PLAN	152			4/40
512	10100	576	434	1010	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	275	735		
512	33000	7	6	13	SQ YD	TYPE 2 WATERPROOFING	13			
513	10260	187,406	141,376	328,782	POUND	STRUCTURAL STEEL MEMBERS, LEVEL 3		328,782		
513	20000	4208	3175	7383	EACH	WELDED STUD SHEAR CONNECTORS		7383		
514	61	8404	6340	14,744	SQ FT	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT, AS PER PLAN		14,744		3/40
514	67	8404	6340	14,744	SQ FT	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN		14,744		3/40
514	10000	6	4	10	EACH	FINAL INSPECTION REPAIR		10		
516	10010	226	170	396	FT	ARMORLESS PREFORMED JOINT SEAL	396			
516	13600	201	152	353	SQ FT	1" PREFORMED EXPANSION JOINT FILLER	54	299		
516	13900	25	19	44	SQ FT	2" PREFORMED EXPANSION JOINT FILLER	44			
516	14020	236	178	414	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	414			
516	44101	26	20	46	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN 12"X12"X3.12" WITH 13"X13"X1 1/2" LOAD PLATE			46	
516	47001	LUMP		LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LUMP	6/40
523	20000	1	1	2	EACH	DYNAMIC LOAD TESTING			2	
523	20500	1	1	2	EACH	RESTRIKE			2	
526	30001	722	545	1267	SQ YD	REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN		1267		3/40
526	90030	226	170	396	FT	TYPE C INSTALLATION		396		

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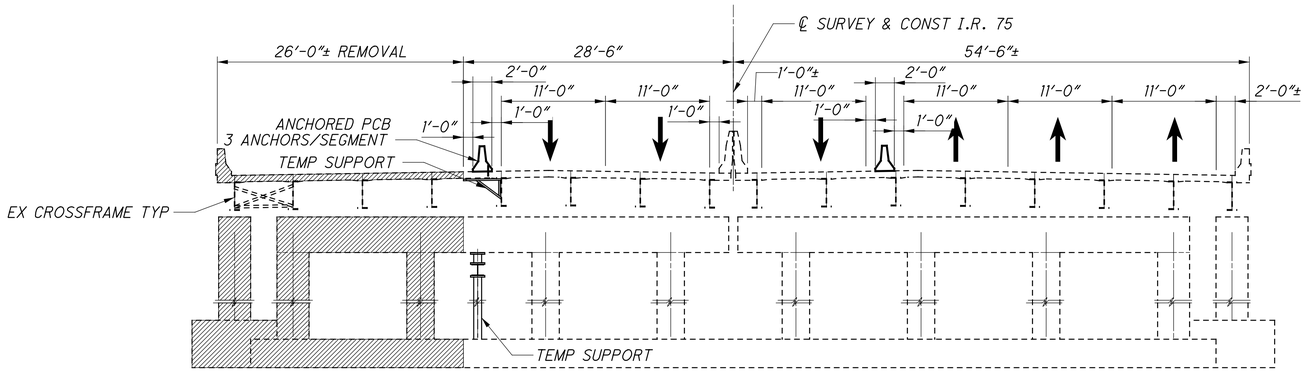
RESOURCE INTERNATIONAL INC.
8350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED JGM | DRAWN JGM | REVIEWED NCK | DATE 12-15-21
CHECKED JLM | REVISED --- | STRUCTURE FILE NUMBER 3110184

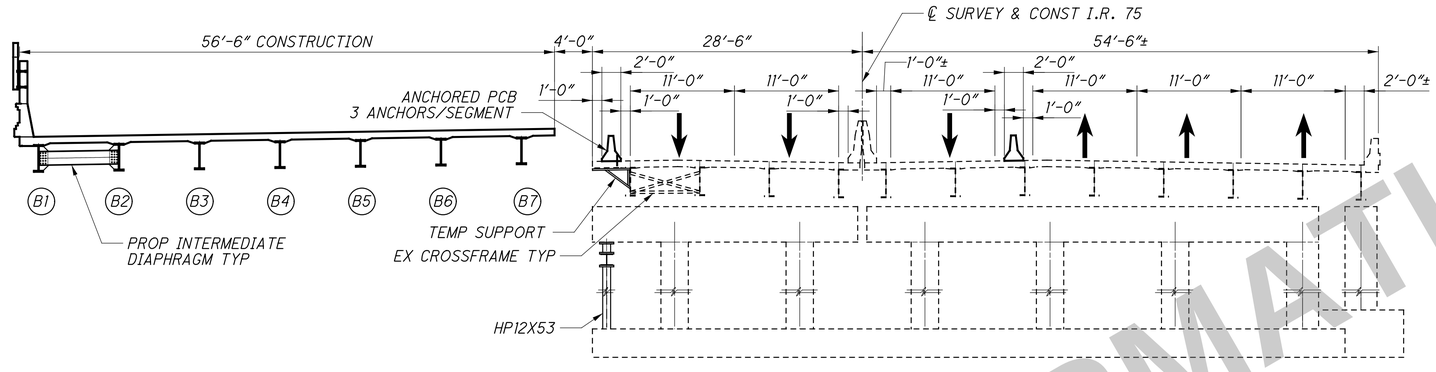
ESTIMATED QUANTITIES
BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

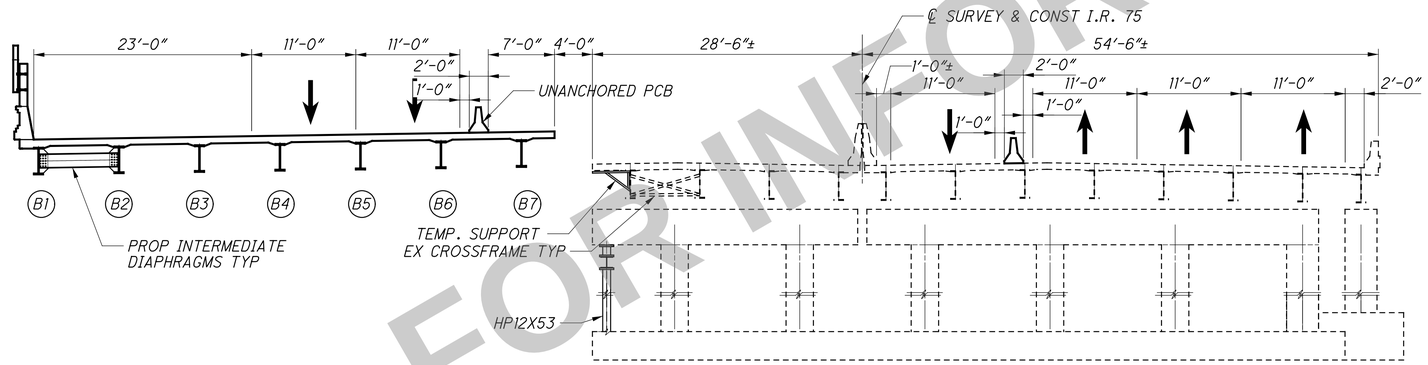
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2017



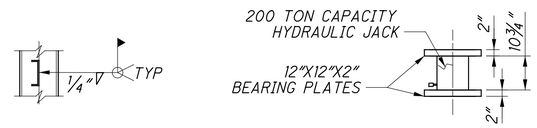
PHASE 1 - REMOVAL



PHASE 1 - CONSTRUCTION

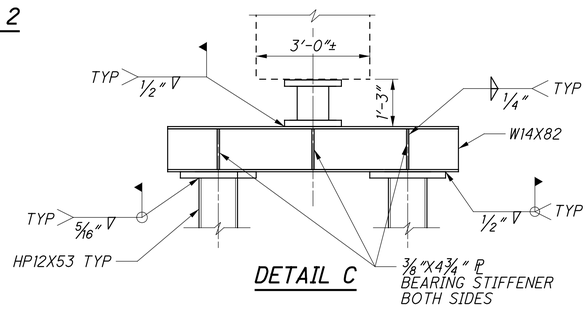


PHASE 2



DETAIL A

DETAIL B



DETAIL C

NOTES:

1. JACKING DETAILS SHOWN ON THIS SHEET IS ONE CONCEPTUAL WAY TO SUPPORT THE PIER CAP DURING PHASE 1 CONSTRUCTION. THE DESIGN LOAD ON THE PIER CAP AT THE POINT OF SUPPORT IS 200 KIPS (100 TON). USE JACKS WITH MECHANICAL LOCKS TO CARRY THE LOAD ONCE SET. DO NOT RELY ON THE JACKS' LIFTING SYSTEM, (E.G. HYDRAULIC SYSTEM), ALONE TO SUPPORT THE STRUCTURE EXCEPT DURING THE ACTUAL JACKING OPERATION. AT THE CONTRACTOR'S OPTION, A DIFFERENT JACKING AND TEMPORARY SUPPORT SYSTEM CAN BE CONSTRUCTED, PROVIDED IT IS DESIGNED AND SEALED BY AN PROFESSIONAL ENGINEER.

2. STRUCTURAL STEEL - ASTM A709 GRADE 50 - YIELD STRENGTH 50 KSI.

SUGGESTED SEQUENCE OF CONSTRUCTION:

PHASE 1 - SHORING AND REMOVAL:

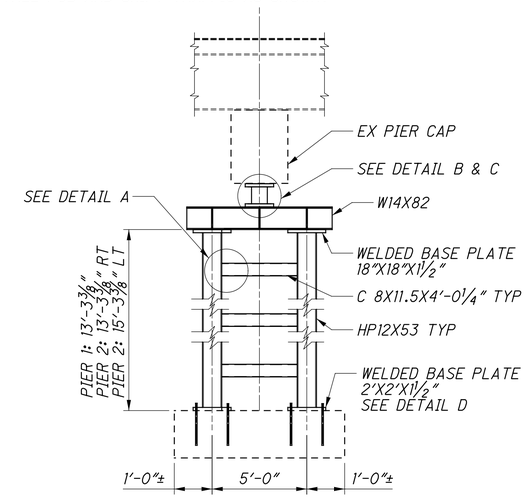
1. INSTALL PCB AND SHIFT TRAFFIC AS SHOWN.
2. EXCAVATE DOWN TO EXPOSE THE EXISTING PIER FOOTING IN-BETWEEN THE SECOND AND THIRD COLUMNS.
3. INSTALL HP12X53 & 2'X2'X1½" WELDED BASE PLATE.
4. DOWEL INTO EXISTING FOUNDATION AND INSTALL C8X11.5X4'-0¼" BRACING.
5. INSTALL 18"X18"X1½" BASE PLATES AND W14X82 BEAM, WELD.
6. INSTALL ⅜"X4¾" BEARING STIFFENERS, BOTH SIDES OF W14X82.
7. INSTALL 12"X12"X2" BEARING PLATES AND 200 TON CAPACITY HYDRAULIC JACK TO SUPPORT PIER CAP.
8. REMOVE 25'-0"± OF EXISTING DECK, PIER, 3 COLUMNS AND FOUNDATION.
9. INSTALL SHEET PILING.

PHASE 1 - CONSTRUCTION:

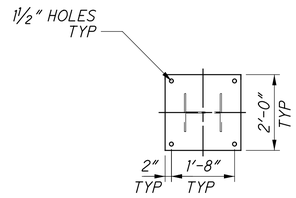
1. CONSTRUCT MSE WALL AND ABUTMENT AS SHOWN ON WALL H1 & I1 PLANS & SHEETS 16/40 17/40 18/40 19/40 20/40
2. INSTALL BEAMS B1 - B7, INTERMEDIATE DIAPHRAGMS & SHEAR CONNECTORS.
3. INSTALL 56'-6" OF DECK, APPROACH SLABS & PARAPET.

PHASE 1A:

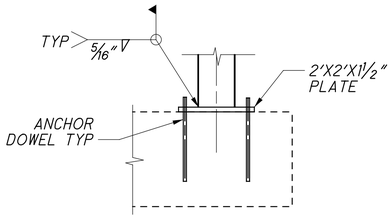
1. INSTALL PCB AND SHIFT TRAFFIC AS SHOWN.



PIER SUPPORT DETAIL



BASE PLATE DETAIL



DETAIL D

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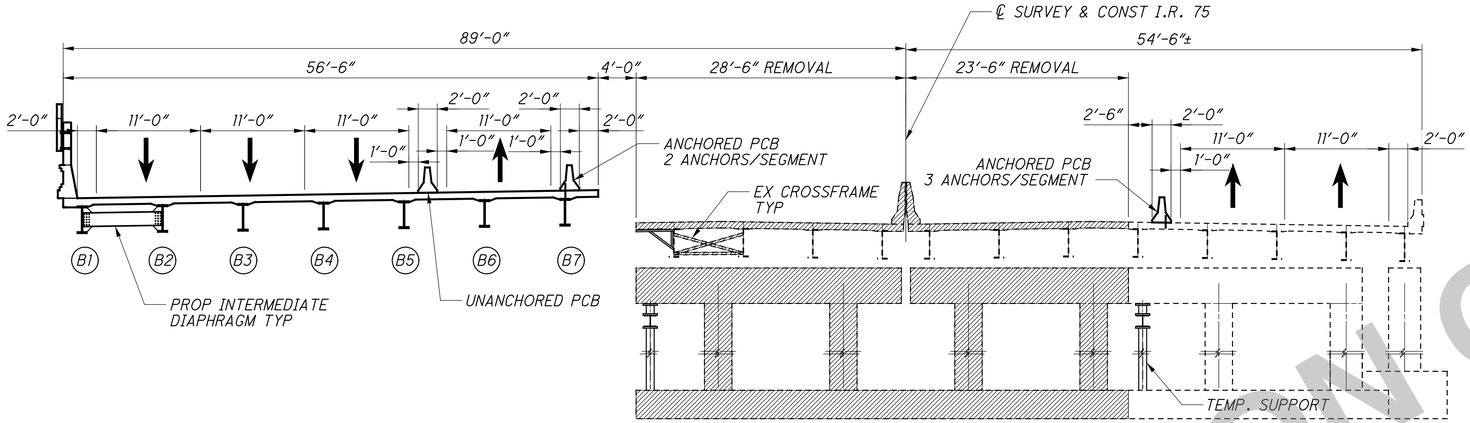
DESIGNED	DRAWN	REVIEWED	DATE
NCK	JGM	SSK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JGM		3110184	

PHASE CONSTRUCTION DETAILS
BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

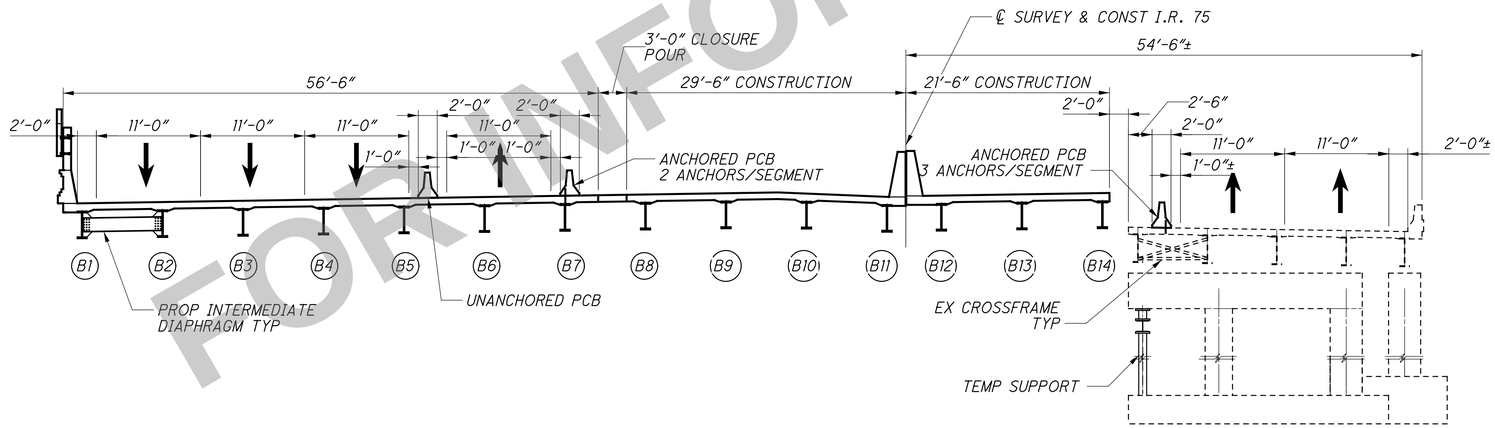
HAM-75-7.85
PID No. 77889

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PHASE 3A - REMOVAL



PHASE 3A - CONSTRUCTION

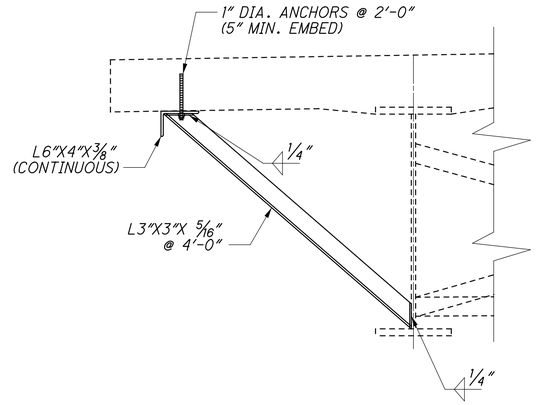
SUGGESTED SEQUENCE OF CONSTRUCTION:

PHASE 3A - REMOVAL:

1. INSTALL PCB AND SHIFT TRAFFIC AS SHOWN.
2. EXCAVATE DOWN TO EXPOSE THE EXISTING PIER FOOTING IN-BETWEEN THE SEVENTH AND EIGHTH COLUMNS.
3. INSTALL TEMPORARY PIER SUPPORT. SEE SHEET 6/40 FOR DETAILS.
4. REMOVE 52'-0"± OF EXISTING DECK, PIER, 4 COLUMNS AND FOUNDATION.

PHASE 3A - CONSTRUCTION:

1. CONSTRUCT MSE WALL AND ABUTMENT AS SHOWN ON MSE WALL H1 & I1 PLANS AND SHEETS 16/40 17/40 18/40 19/40 20/40
2. INSTALL BEAMS B8 - B14, INTERMEDIATE DIAPHRAGMS & SHEAR CONNECTORS.
3. INSTALL 52'-0" OF DECK, APPROACH SLABS & PARAPET.
4. INSTALL INTERMEDIATE DIAPHRAGM BETWEEN BEAM 7 AND BEAM 8. CONSTRUCT 3'-0" CLOSURE POUR.



TEMPORARY SUPPORT DETAIL

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DESIGNED	DRAWN	REVIEWED	DATE
NCK	JGM	SSK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JGM		3110184	

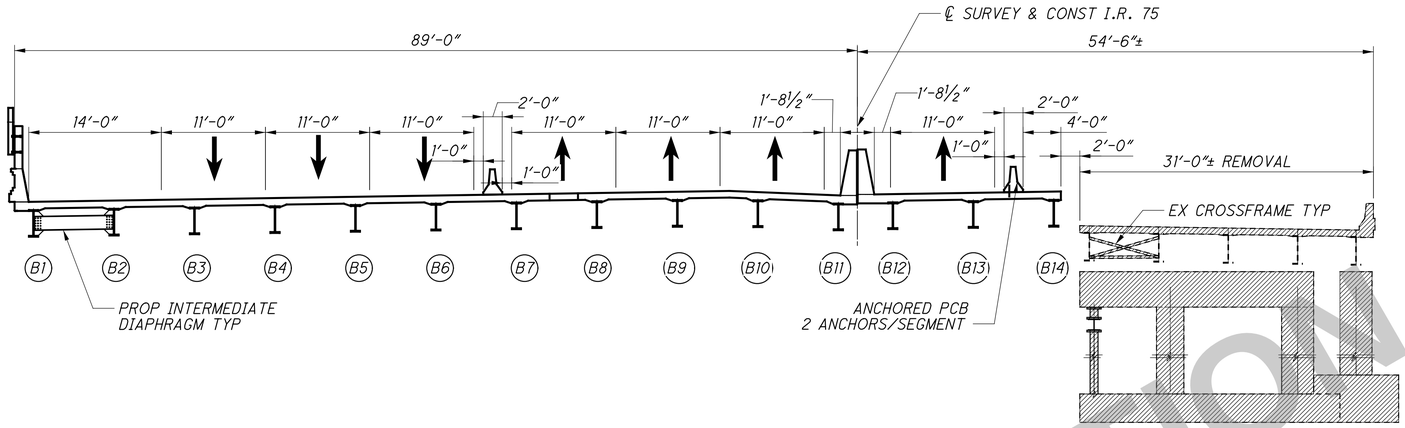
PHASE CONSTRUCTION DETAILS
BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

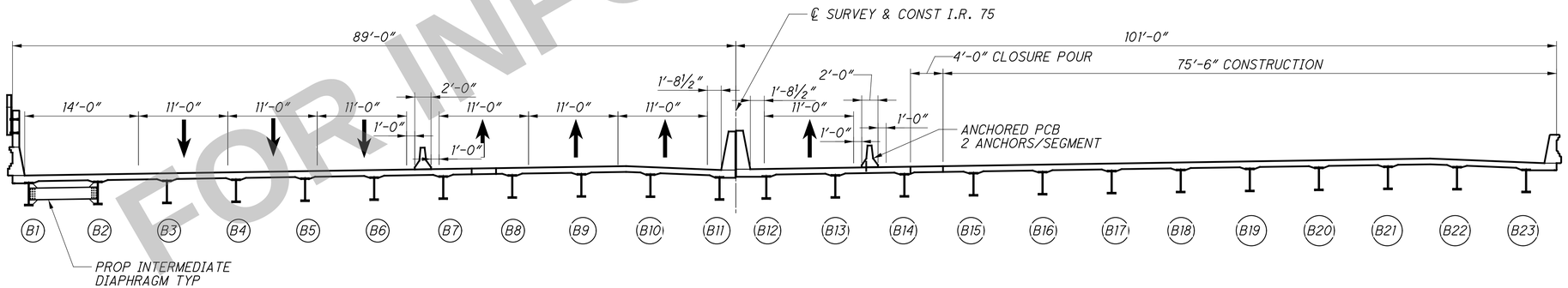
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PHASE 4A - REMOVAL



PHASE 4A - CONSTRUCTION

SUGGESTED SEQUENCE OF CONSTRUCTION:

PHASE 4A - REMOVAL:

1. INSTALL PCB AND SHIFT TRAFFIC AS SHOWN.
2. REMOVE 31'-0"± OF EXISTING DECK, PIER, 3 COLUMNS AND FOUNDATION.

PHASE 4A - CONSTRUCTION:

1. CONSTRUCT MSE WALL AND ABUTMENT AS SHOWN ON WALL H1 & I1 PLANS AND SHEETS 16/40 17/40 18/40 19/40 20/40
2. INSTALL BEAMS B15 - B23, INTERMEDIATE DIAPHRAGMS & SHEAR CONNECTORS.
3. INSTALL 75'-6" OF DECK, APPROACH SLABS & PARAPET.
4. INSTALL INTERMEDIATE DIAPHRAGM BETWEEN BEAM 14 & BEAM 15. CONSTRUCT 4'-0" CLOSURE POUR.

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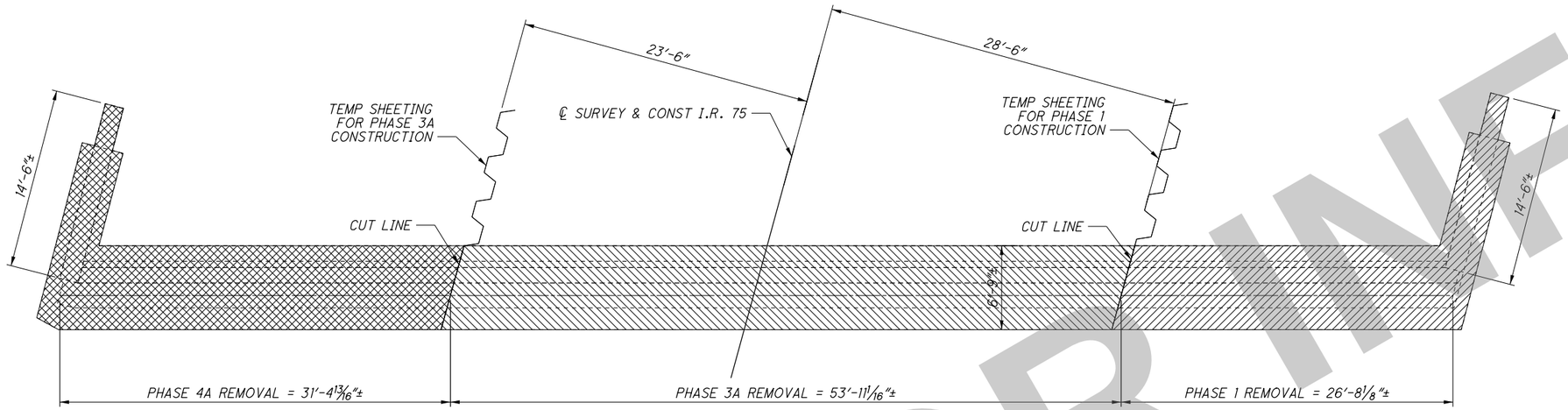
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NCK	JGM	SSK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JGM		3110184	

PHASE CONSTRUCTION DETAILS

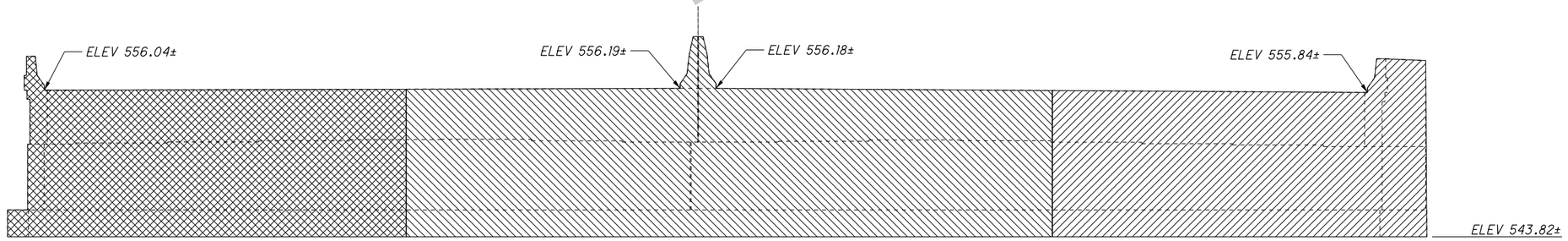
BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

1452
2017



PLAN



ELEVATION

LEGEND:

- PHASE 1 REMOVAL
- PHASE 3A REMOVAL
- PHASE 4A REMOVAL

FOR INFO

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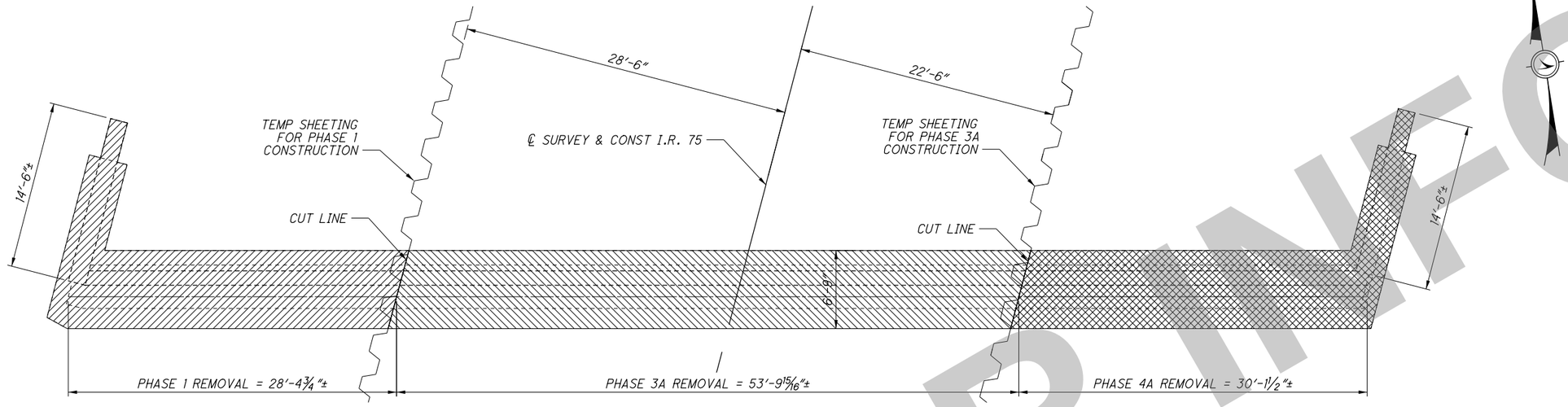
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JGM	JGM	NCK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JLM		3110184	

REAR ABUTMENT REMOVAL DETAILS

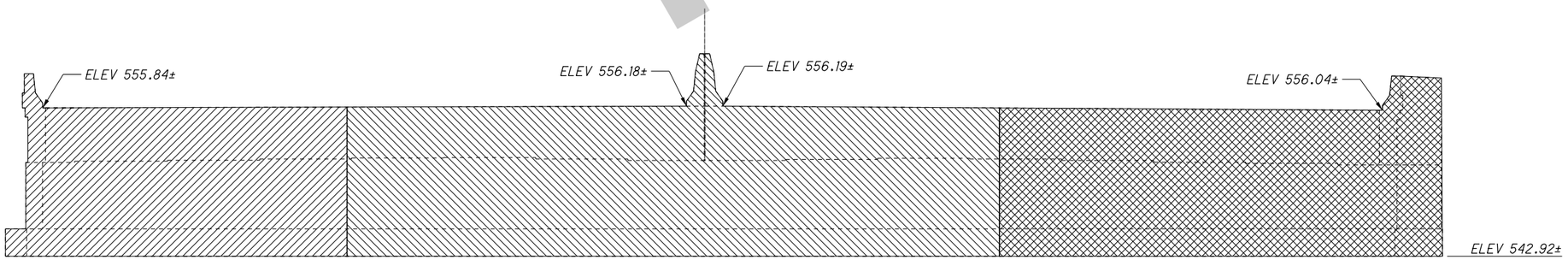
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I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

1453
2017



PLAN



ELEVATION

LEGEND:

- PHASE 1 REMOVAL
- PHASE 3A REMOVAL
- PHASE 4A REMOVAL

FOR INFO

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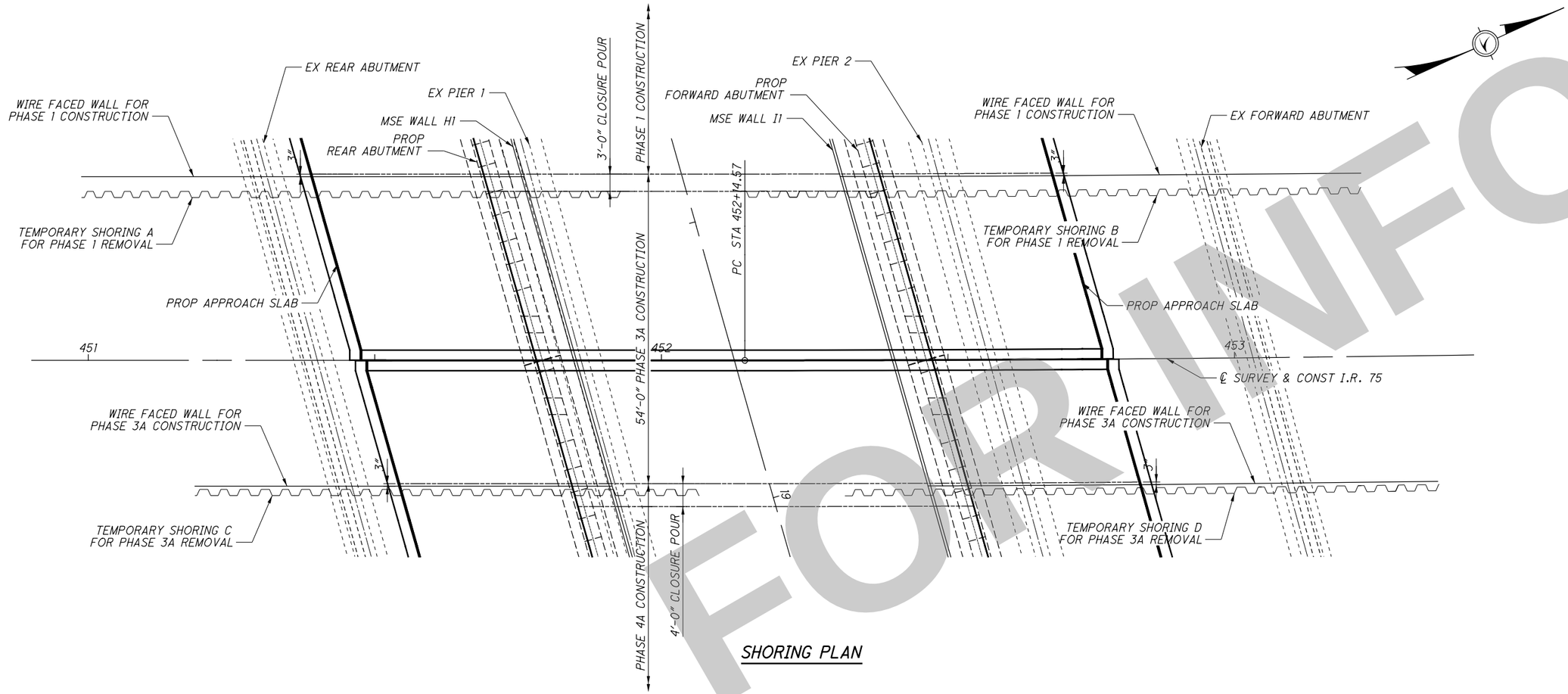
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JGM	JGM	NCK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JLM		3110184	

FORWARD ABUTMENT REMOVAL DETAILS

BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

1454
2017



SHORING PLAN

NOTES:

1. SHEET PILING SHALL BE ASTM A328 MATERIAL AND MEET THE REQUIREMENTS OF CMS 711.03.
2. THE MAXIMUM SPACING OF THE SOIL ANCHORS IS 7'-0" AND A MINIMUM OF 3 ANCHORS PER WALER IS REQUIRED.
3. ADJUST THE VERTICAL AND HORIZONTAL ANGLES OF THE SOIL ANCHORS TO ACCOMMODATE THE PROPOSED METHOD OF THE INSTALLATION AND TO AVOID ANY OBSTRUCTION. HOWEVER, AS THE VERTICAL AND HORIZONTAL ANGLES OF THE SOIL ANCHORS INCREASE, THE COMPONENT OF THE SOIL ANCHOR DESIGN LOAD PERPENDICULAR TO THE WALL WILL DECREASE. THE COMPONENT OF THE DESIGN LOAD PERPENDICULAR TO THE WALL MUST BE EQUAL TO OR GREATER THAN THE HORIZONTAL DESIGN LOAD FOR EACH WALER MULTIPLIED BY THE SOIL ANCHOR SPACING ALONG THE WALER.
4. TEMPORARY SOIL ANCHORS DO NOT REQUIRE CORROSION PROTECTION.
5. FILL THE VOID BETWEEN THE DRILL HOLE AND THE SHEATHING OF THE UNBONDED LENGTH WITH GROUT.
6. BACKFILL THE AREA WITH LOW STRENGTH MORTAR BACKFILL IMMEDIATELY FOLLOWING ANCHOR DE-TENSIONING AND TO DE-TENSION THE ANCHORS ONLY AS THE LOW STRENGTH MORTAR BACKFILL IS PLACED VERTICALLY.
7. PAYMENT FOR SHEET PILING, SOIL ANCHORS, WALERS, EXPANSION ANCHORS, LOW STRENGTH MORTAR BACKFILL, REMOVAL OF ALL COMPONENTS AFTER NO LONGER NECESARY FOR SPECIFIC CONSTRUCTION PHASE, AND ALL OTHER ITEMS ASSOCIATED WITH TEMPORARY SHORING WILL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN".
8. SEE SHEET 12/40 FOR ELEVATION VIEWS.

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COLUMBUS, OHIO 43231
(614) 823-4949

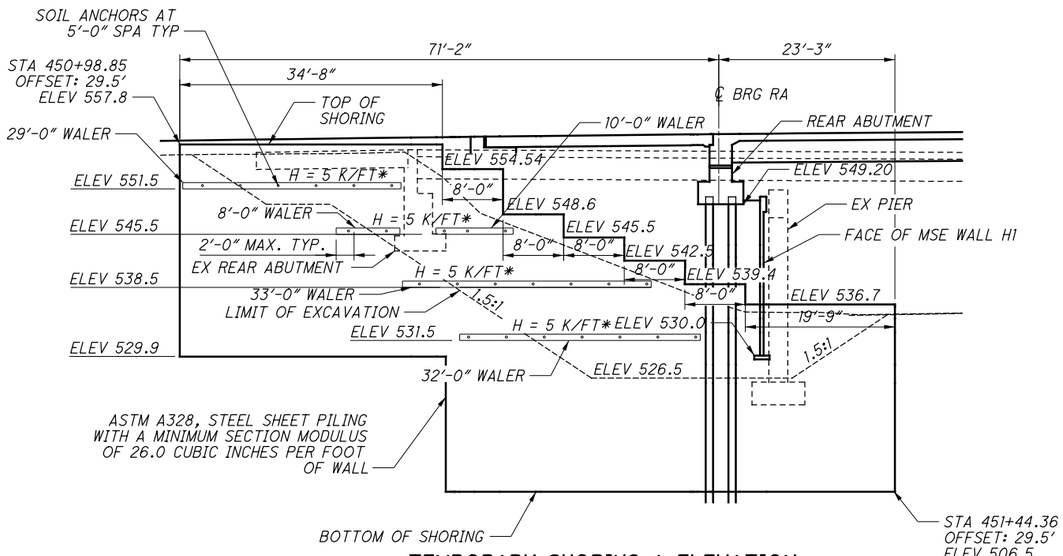
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JGM	JGM	NCK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JLM		3110184	

TEMPORARY SHORING DETAILS
BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

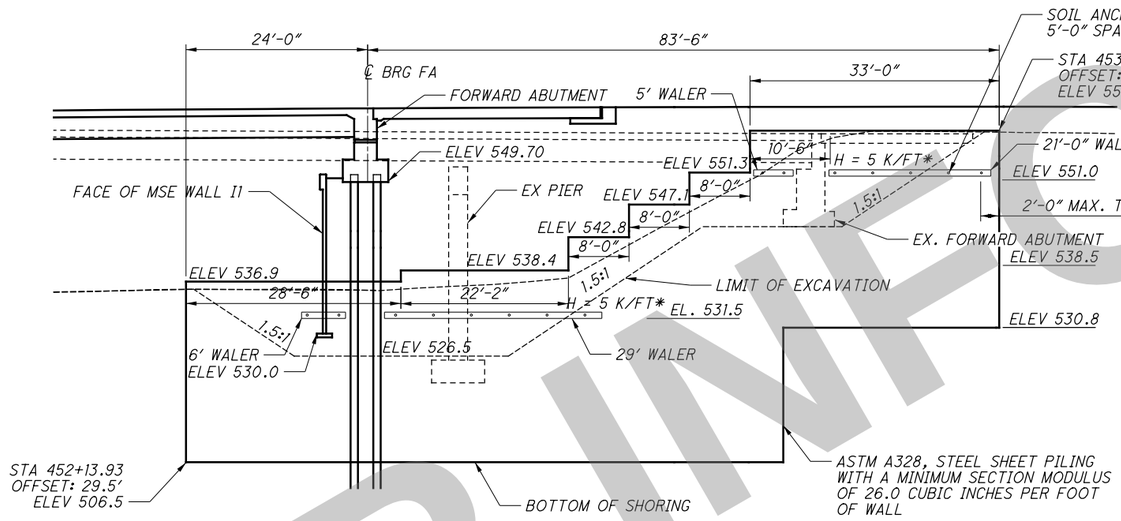
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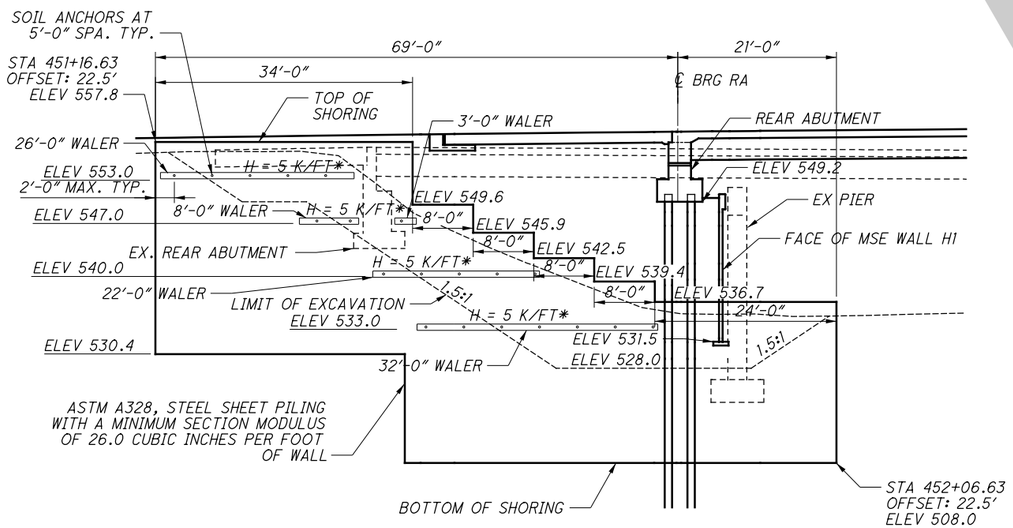
TEMPORARY SHORING A ELEVATION

REAR ABUTMENT PHASE 1



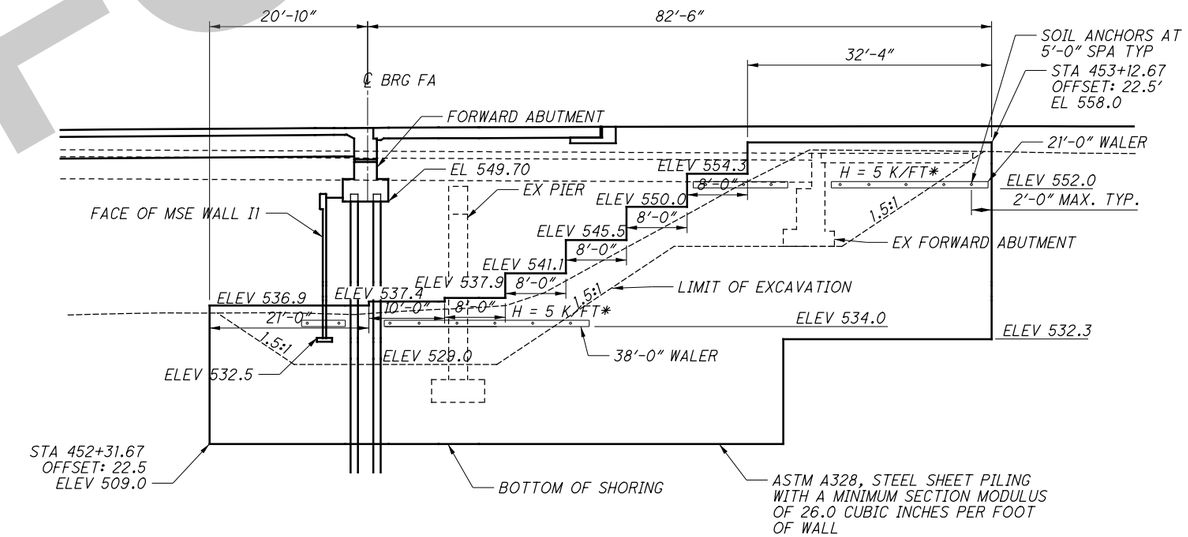
TEMPORARY SHORING B ELEVATION

FORWARD ABUTMENT PHASE 1



TEMPORARY SHORING C ELEVATION

REAR ABUTMENT PHASE 3A



TEMPORARY SHORING D ELEVATION

FORWARD ABUTMENT PHASE 3A

NOTES:

1. SEE SHEET 11/40 FOR PLAN VIEW.
2. INSTALL ALL ANCHORS PER SUPPLEMENTAL SPECIFICATION 866.

LEGEND:

* - BOND LENGTH OF SOIL ANCHORS TO BE DETERMINED BY CONTRACTOR.

H - HORIZONTAL COMPONENT OF REQUIRED SOIL ANCHOR FORCE PER FOOT OF WALER.

FOR INFO

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

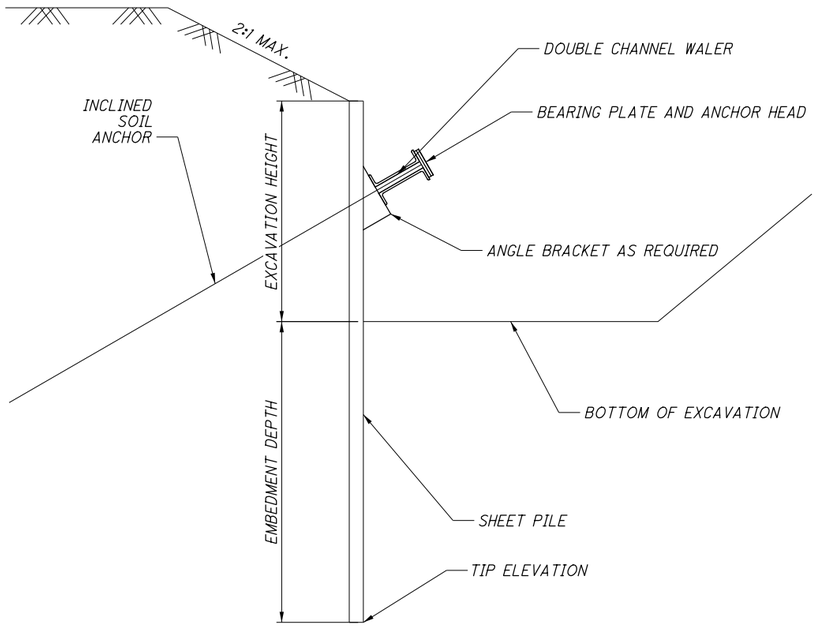
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TEMPORARY SHORING DETAILS
BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

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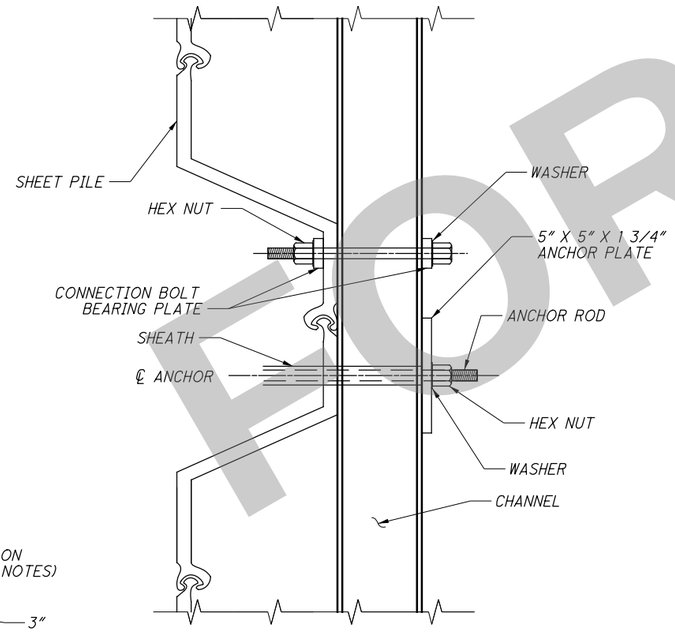


TYPICAL SINGLE TIE SECTION WITH EXTERNAL WALER

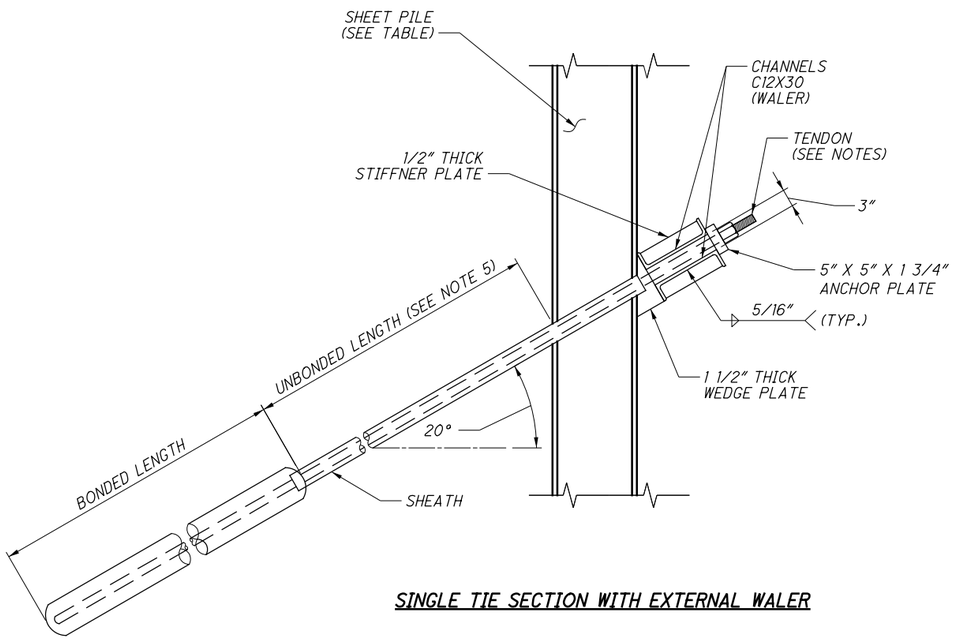
EXCAVATION HEIGHT	SECTION MODULUS IN^3/FT	EMBEDMENT DEPTH (FT)	HORIZONTAL WALER FORCE (K/FT)	LOCATION FROM TOP	UNBONDED LENGTH *
10' OR LESS	30.2	20	-	-	-
10' TO 15'	30.2	10	5.0	6	15 FT.

* UNBONDED LENGTH IS CALCULATED BASED ON:

- MIN. 15 FEET OVER BURDEN AT END OF UNBONDED LENGTH
- MIN 5 FEET BEYOND ACTIVE WEDGE
- MIN. 15 FEET LONG



TYPICAL WALER PLAN



SINGLE TIE SECTION WITH EXTERNAL WALER

NOTES:

1. ALL GROUND ANCHOR SHOULD BE PER SS 866 04-21-17.

2. TENDON SHALL BE EITHER A 1 ⅜" DIAMETER THREADED BAR (ASTM A722 GRADE 150) OR A LOW RELAXATION FOUR-STRAND (ASTM A416 GRADE 270) SEVEN-WIRE UNCOATED STRAND.

3. THE CEMENT FOR THE GROUT SHALL BE TYPE I, TYPE II, OR TYPE III CONFORMING TO ASTM C150. THE GROUT SHALL CONFORM TO ALL APPLICABLE REQUIREMENTS OF ITEM 499. GROUT ADDITIVES SHOULD BE AVOIDED. CHEMICAL ADDITIVES WHICH CAN CONTROL BLEED AND/OR RETARD SET MAY BE USED IN THE ANCHOR GROUT AS DIRECTED BY THE ENGINEER.

4. THE SHEATH (BOND BREAKER) SHALL BE EITHER A POLYVINYL CHLORIDE (PVC), POLYETHYLENE, OR PROPYLENE PIPE OR TUBE. THE MATERIAL SHALL BE CAPABLE OF WITHSTANDING DAMAGE DURING SHIPPING, HANDLING, AND INSTALLATION. THE SHEATH SHALL HAVE A MINIMUM WALL THICKNESS OF 0.04 INCH. THE MATERIAL IS SUBJECT TO THE APPROVAL OF THE ENGINEER.

THE MATERIALS SHALL CONFORM TO THE FOLLOWING:

PVC	ASTM D1785
POLYETHYLENE	ASTM D1248
PROPYLENE	ASTM D4101

THE INSTALLED SHEATHING SHALL PERMIT AT LEAST 95 PERCENT OF THE TENDON FORCE TO BE TRANSMITTED TO THE ANCHOR LENGTH. THE SHEATHING SHALL HAVE A TENSILE STRENGTH EXCEEDING 3,000 POUNDS PER SQUARE INCH (PSI) AS DETERMINED BY ASTM D638 AND AN IZOD IMPACT STRENGTH EXCEEDING 4 FOOT-POUNDS PER INCH AS DETERMINED BY ASTM D256A.

5. SHEETING SHALL BE LEFT IN-PLACE FOLLOWING CONSTRUCTION OF MSE WALL. DISCONNECT THE ANCHOR HEADS AND REMOVE THE WALERS WHEN THE SGB ELEVATION IS FILLED TO WITHIN 1 FT. OF THE BOTTOM OF THE WALER.

6. ALL STEEL SHALL BE GRADE 50. ALL BOLTS SHALL BE 5/8" DIA. HIGH STRENGTH BOLTS ASTM A325.

FOR INFO

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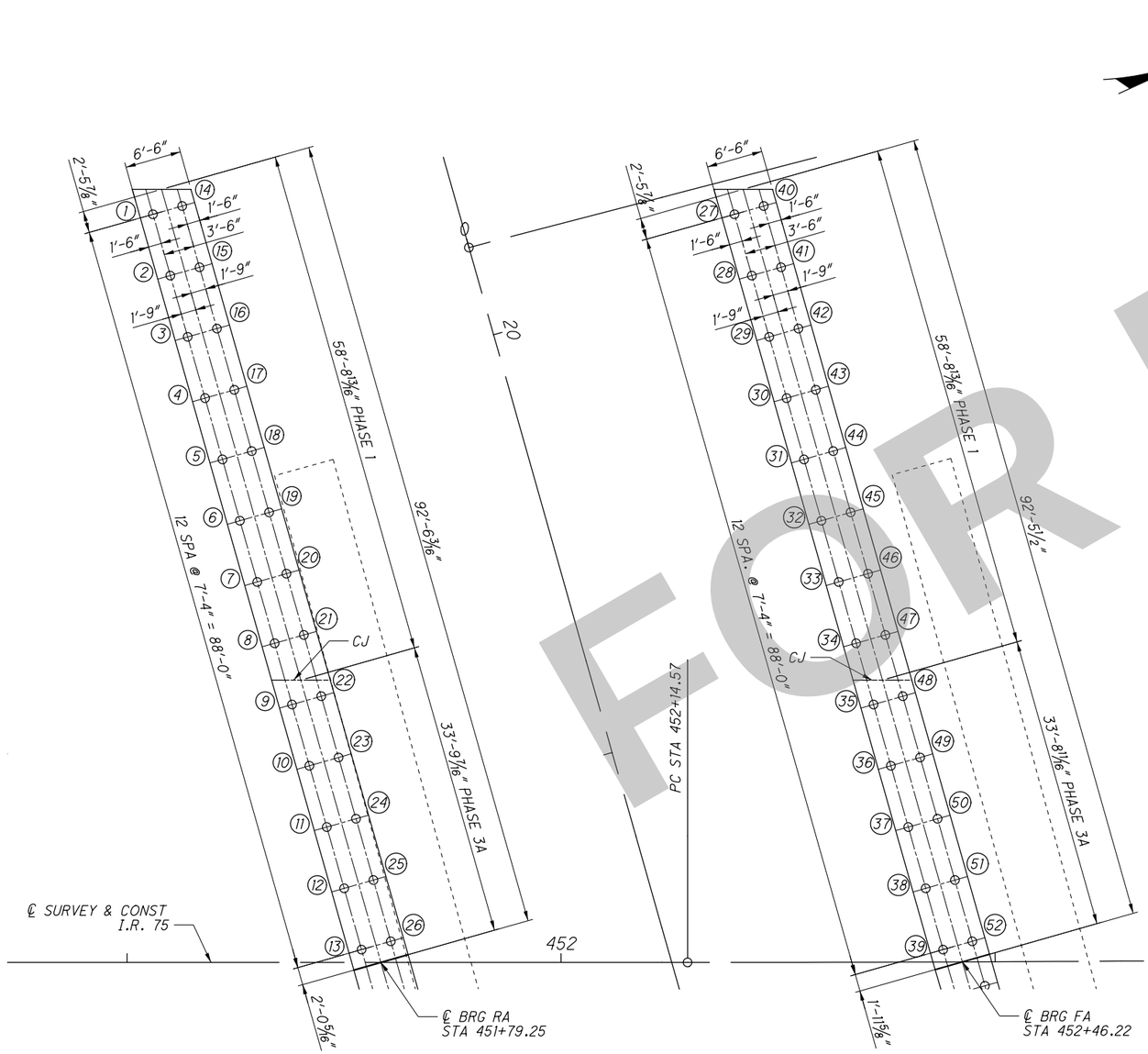
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MMS	MMS	NCK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JGM		3110184	

TEMPORARY SHORING DETAILS
BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

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REAR ABUTMENT

FORWARD ABUTMENT

FOUNDATION PLAN

FOR INFO

RESOURCE INTERNATIONAL, INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED	DRAWN	REVIEWED	DATE
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FOUNDATION PLAN
BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

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2017

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REAR ABUTMENT

FORWARD ABUTMENT

FOUNDATION PLAN

FOR INFO

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COLUMBUS, OHIO 43231
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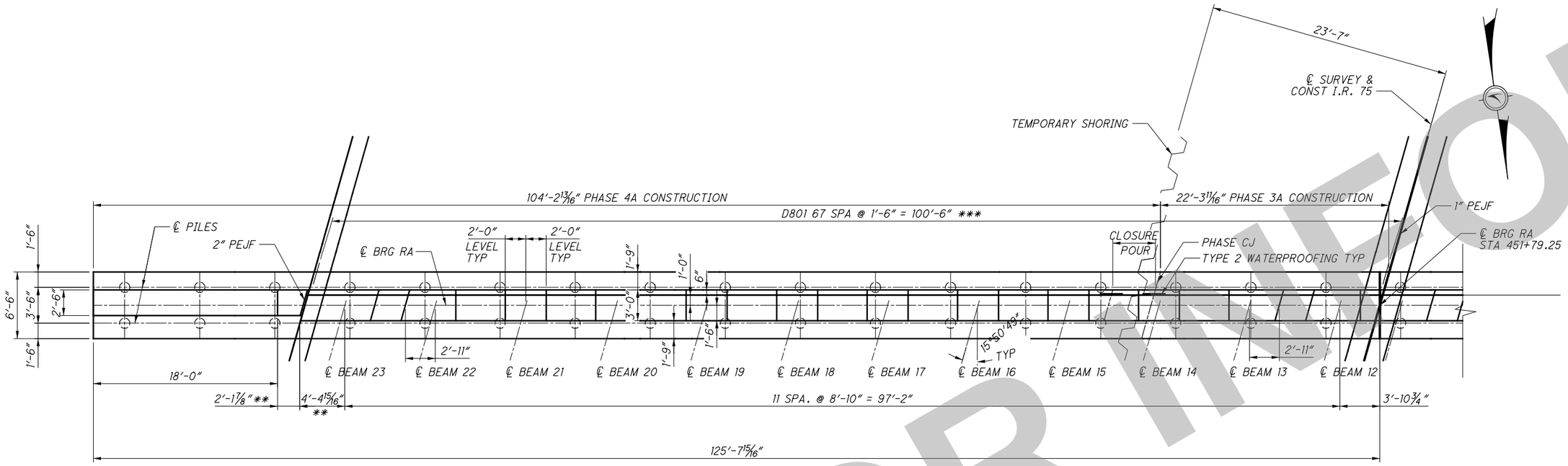
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FOUNDATION PLAN
BRIDGE NO. HAM-75-0857
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HAM-75-7.85
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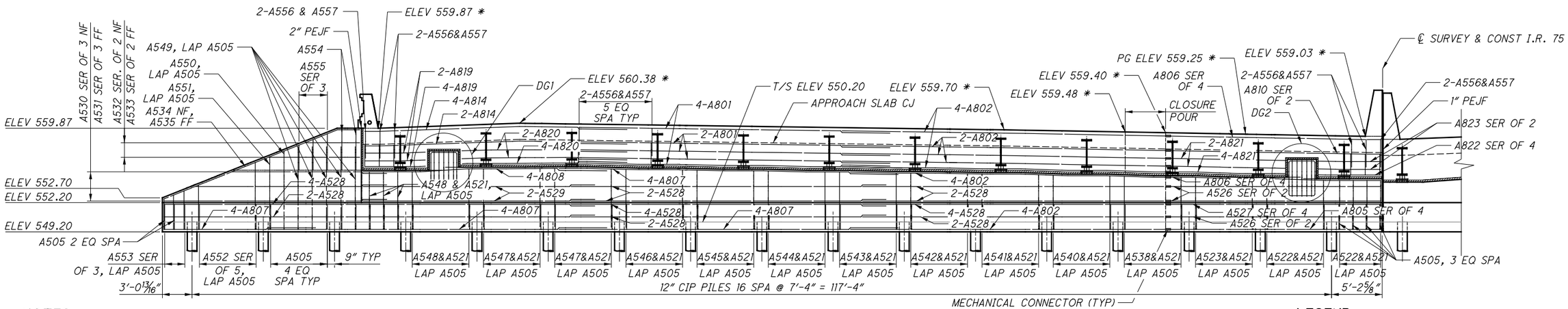
REAR ABUTMENT PLAN

(MSE WALL NOT SHOWN FOR CLARITY, SEE MSE WALL PLANS FOR ADDITIONAL INFORMATION)

BEAM SEAT ELEVATIONS (REAR ABUTMENT)											
BEAM 12	BEAM 13	BEAM 14	BEAM 15	BEAM 16	BEAM 17	BEAM 18	BEAM 19	BEAM 20	BEAM 21	BEAM 22	BEAM 23
554.62	554.78	554.94	555.10	555.25	555.36	555.48	555.60	555.72	555.84	555.81	555.50

NOTE:

ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE THE HORIZONTAL CONSTRUCTION JOINT BETWEEN THE DIAPHRAGM AND DECK CONCRETE AT THE APPROACH SLAB SEAT. PLACE CLOSURE POUR CONCRETE IN THE DIAPHRAGM AND DECK CONCURRENTLY.



REAR ABUTMENT ELEVATION

(MSE WALL NOT SHOWN FOR CLARITY, SEE MSE WALL PLANS FOR ADDITIONAL INFORMATION)

NOTES:

1. LAP #5 BAR: 2'-5"
   LAP #8 BAR: 4'-11"
2. APPLY ITEM 512, TYPE 2 WATERPROOFING, 2'-0" WIDE CENTERED ON THE JOINT.
3. SEE SHEET 20/40 FOR DIAPHRAGM GUIDE DETAIL.

LEGEND:

* - ELEVATIONS GIVEN AT CENTERLINE OF BEARING

** - MEASURED TO CENTERLINE OF JOINT

*** - MEASURED PERPENDICULAR TO CENTERLINE

FOR INFO

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED NCK | DRAWN JGM | REVIEWED SSK | DATE 12-15-21
CHECKED JGM | REVISED | STRUCTURE FILE NUMBER 3110184

REAR ABUTMENT PLAN AND ELEVATION 1 OF 2

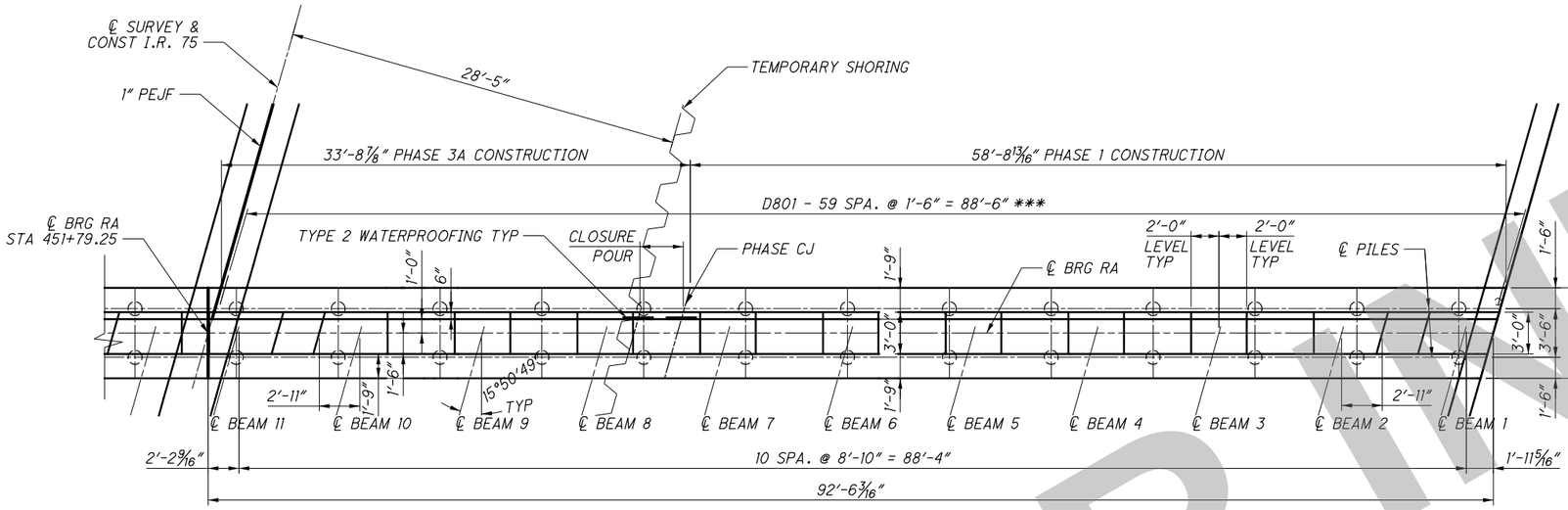
BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

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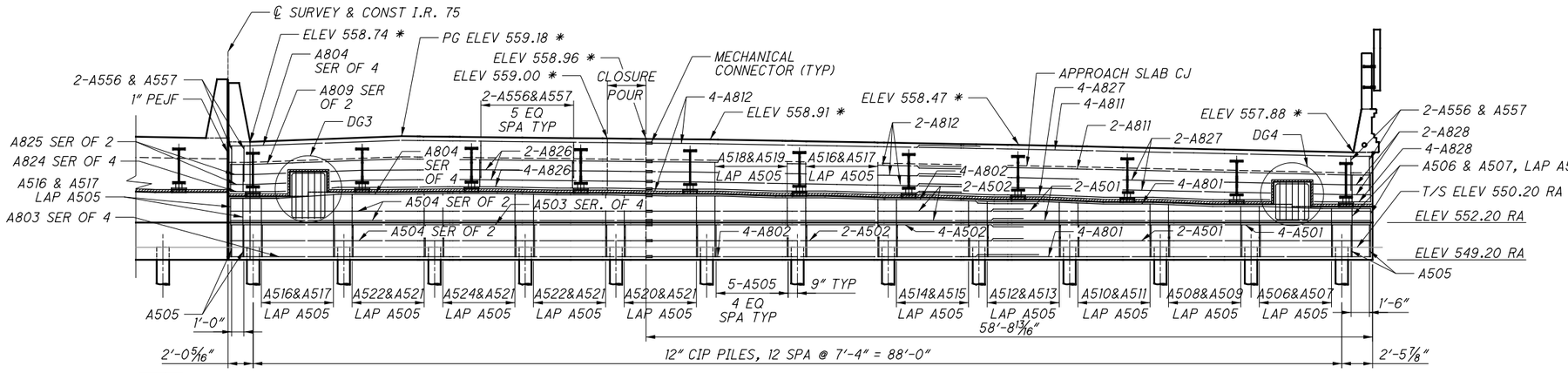
REAR ABUTMENT PLAN

(MSE WALL NOT SHOWN FOR CLARITY, SEE MSE WALL PLANS FOR ADDITIONAL INFORMATION)

BEAM SEAT ELEVATIONS (REAR ABUTMENT)										
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553.44	553.63	553.83	554.02	554.17	554.33	554.47	554.57	554.66	554.62	554.30

NOTE:

ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION:
PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE THE HORIZONTAL CONSTRUCTION JOINT BETWEEN THE DIAPHRAGM AND DECK CONCRETE AT THE APPROACH SLAB SEAT. PLACE CLOSURE POUR CONCRETE IN THE DIAPHRAGM AND DECK CONCURRENTLY.



NOTES:

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2. APPLY ITEM 512, TYPE 2 WATERPROOFING, 2'-0" WIDE CENTERED ON THE JOINT.
3. SEE SHEET 20/40 FOR DIAPHRAGM GUIDE DETAIL.

REAR ABUTMENT ELEVATION

(MSE WALL NOT SHOWN FOR CLARITY, SEE MSE WALL PLANS FOR ADDITIONAL INFORMATION)

LEGEND:

* - ELEVATIONS GIVEN AT CENTERLINE OF BEARING

*** - MEASURED PERPENDICULAR TO CENTERLINE

FOR INFO

RESOURCE INTERNATIONAL, INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

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JGM	JGM	NCK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JLM		3110184	

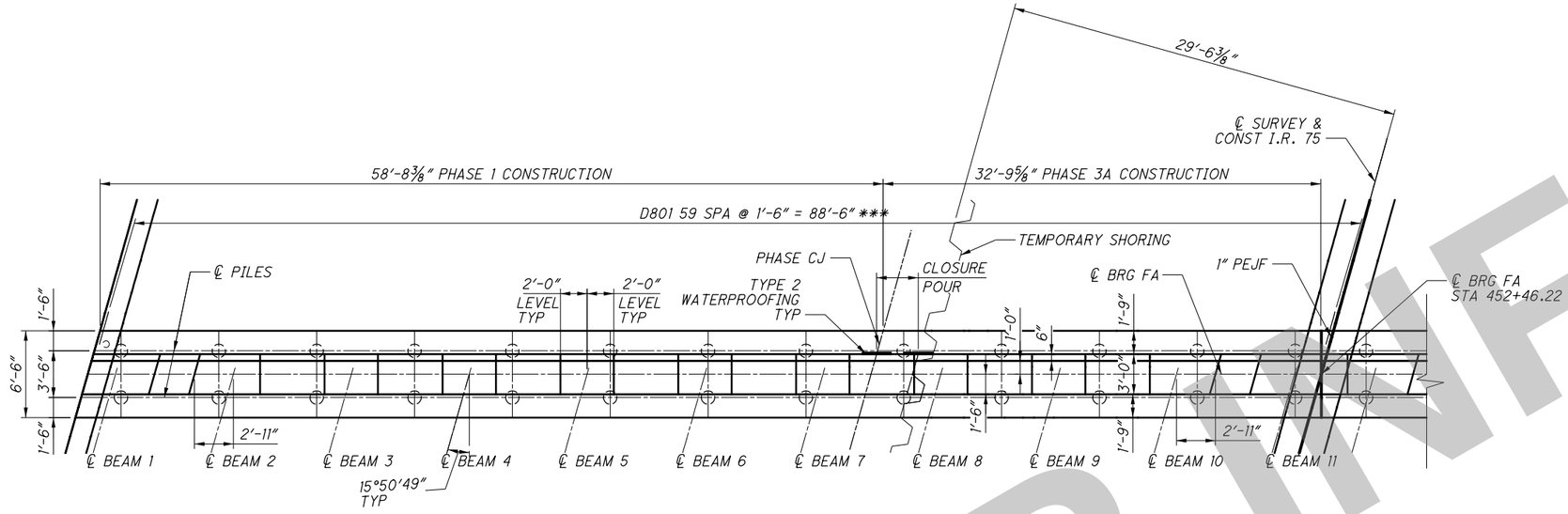
REAR ABUTMENT PLAN AND ELEVATION 2 OF 2

BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

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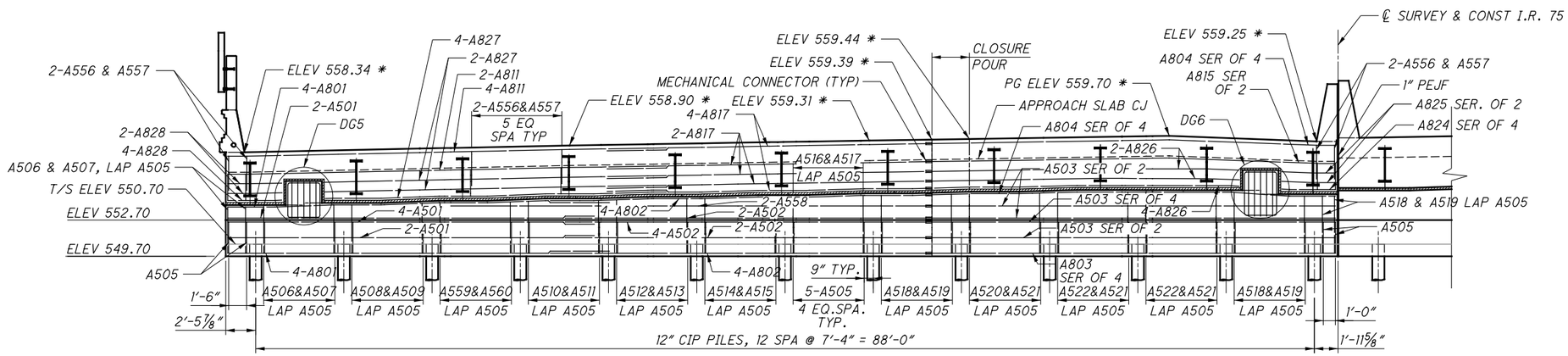
FORWARD ABUTMENT PLAN

(MSE WALL NOT SHOWN FOR CLARITY, SEE MSE WALL PLANS FOR ADDITIONAL INFORMATION)

BEAM SEAT ELEVATIONS (FORWARD ABUTMENT)										
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553.90	554.08	554.27	554.45	554.59	554.74	554.88	555.02	555.16	555.13	554.80

NOTE:

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FORWARD ABUTMENT ELEVATION

(MSE WALL NOT SHOWN FOR CLARITY, SEE MSE WALL PLANS FOR ADDITIONAL INFORMATION)

NOTES:

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   LAP #8 BAR: 4'-11"
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3. SEE SHEET 20/40 FOR DIAPHRAGM GUIDE DETAIL.

LEGEND:

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** - MEASURED TO CENTERLINE OF JOINT

*** - MEASURED PERPENDICULAR TO CENTERLINE

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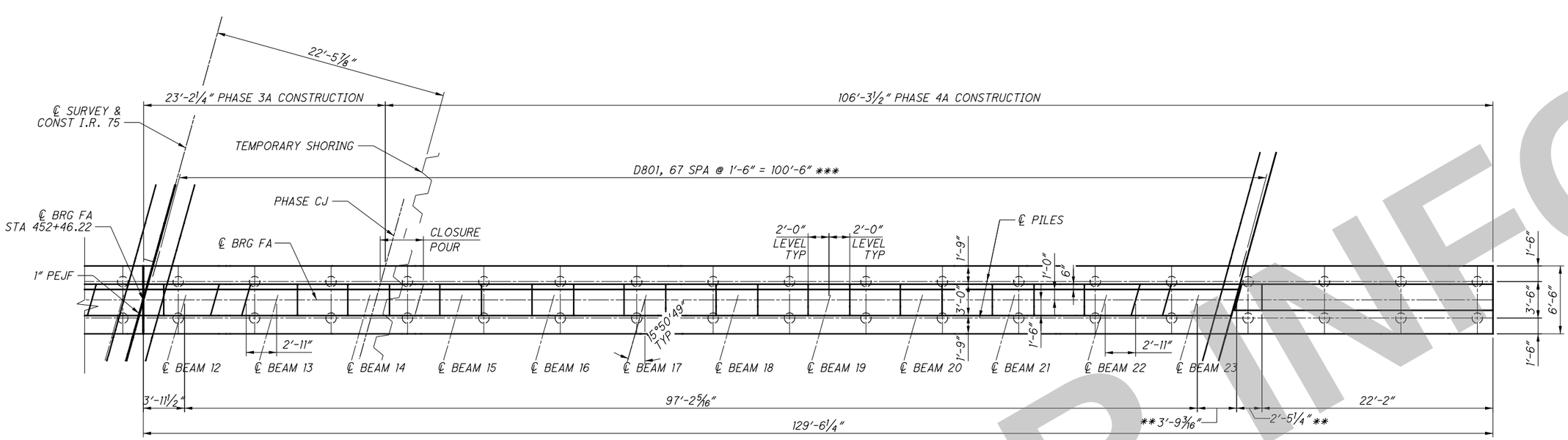
FORWARD ABUTMENT PLAN AND ELEVATION 1 OF 2

BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

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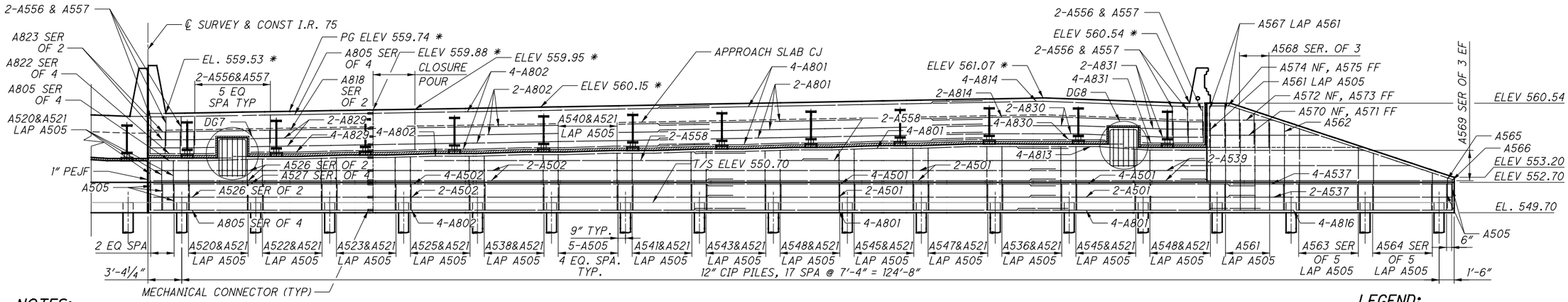
FORWARD ABUTMENT PLAN

(MSE WALL NOT SHOWN FOR CLARITY, SEE MSE WALL PLANS FOR ADDITIONAL INFORMATION)

BEAM SEAT ELEVATIONS (FORWARD ABUTMENT)											
BEAM 12	BEAM 13	BEAM 14	BEAM 15	BEAM 16	BEAM 17	BEAM 18	BEAM 19	BEAM 20	BEAM 21	BEAM 22	BEAM 23
555.12	555.27	555.41	555.56	555.71	555.86	556.02	556.18	556.34	556.51	556.49	556.17

NOTE:

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NOTES:

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3. SEE SHEET 20/40 FOR DIAPHRAGM GUIDE DETAIL.

FORWARD ABUTMENT ELEVATION

(MSE WALL NOT SHOWN FOR CLARITY, SEE MSE WALL PLANS FOR ADDITIONAL INFORMATION)

LEGEND:

* - ELEVATIONS GIVEN AT CENTERLINE OF BEARING

** - MEASURED TO CENTERLINE OF JOINT

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FOR INFO

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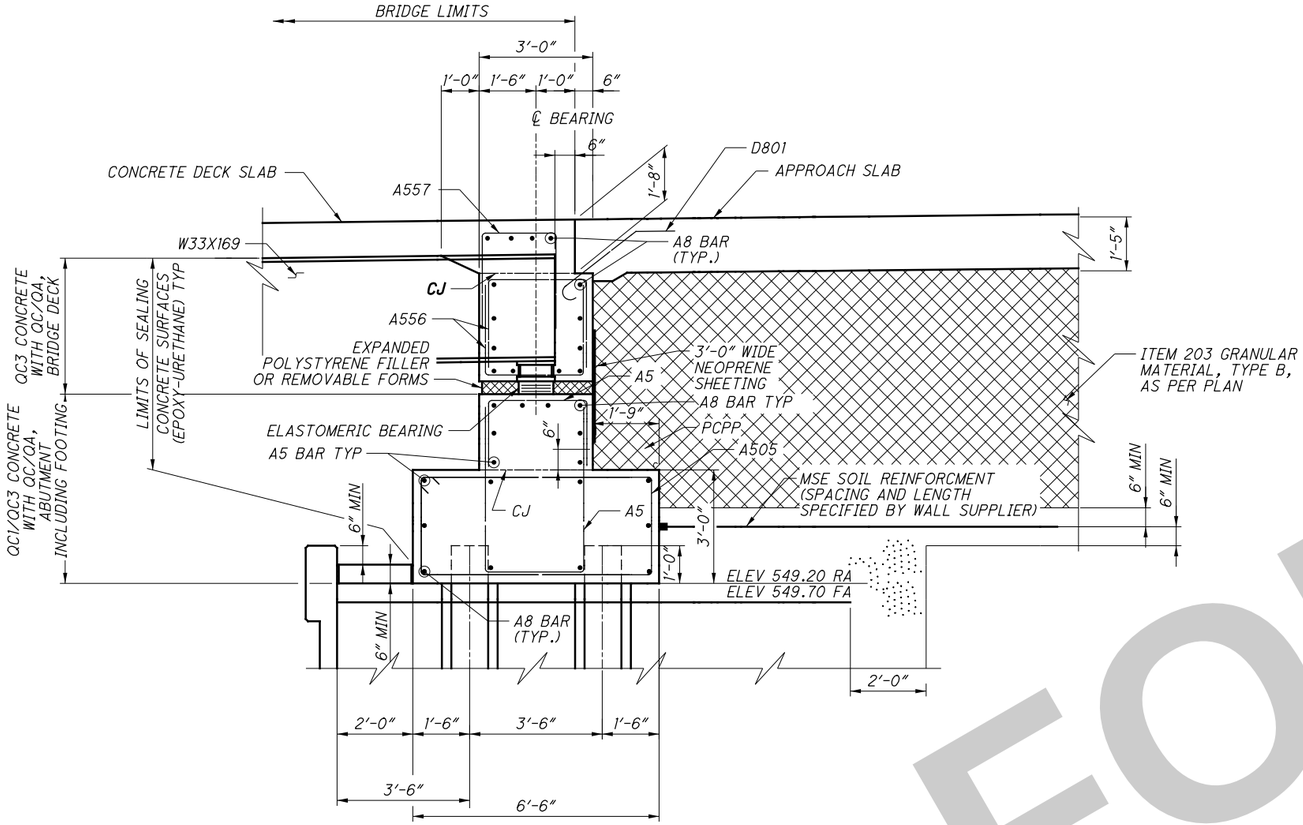
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FORWARD ABUTMENT PLAN AND ELEVATION 2 OF 2
BRIDGE NO. HAM-75-0857
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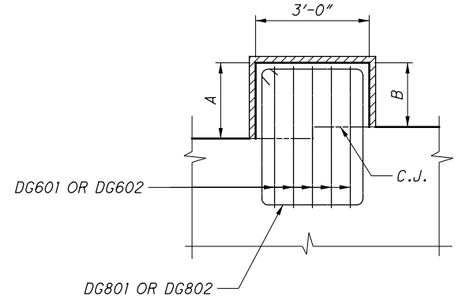
HAM-75-7.85
PID No. 77889

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2017

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TYPICAL ABUTMENT SECTION

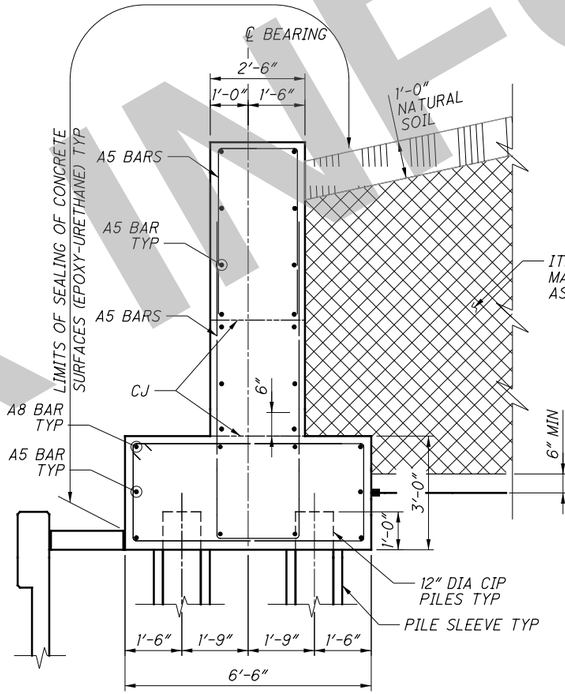


DIAPHRAGM GUIDE

LOCATION		DIMENSIONS A	DIMENSIONS B	BARS	
DG1	RA	2'-0"	1'-8 1/4"	DG601	DG801
DG2	RA	1'-10"	2'-0"	DG601	DG801
DG3	RA	2'-0"	1'-8"	DG601	DG801
DG4	RA	1'-9 3/4"	2'-0"	DG602	DG802
DG5	FA	2'-0"	1'-9 7/8"	DG602	DG802
DG6	FA	1'-8"	2'-0"	DG601	DG801
DG7	FA	2'-0"	1'-10 3/16"	DG601	DG801
DG8	FA	1'-8"	2'-0"	DG601	DG801

DIAPHRAGM GUIDE - FOR INFO ONLY

MARK	TOTAL	LENGTH	WEIGHT (LB)	TYPE	DIMENSIONS A	DIMENSIONS B	DIMENSIONS C
DG601	35	13'-10"	728	3	2'-9 5/16"	3'-8 1/2"	
DG602	5	12'-3"	92	3	2'-9 5/16"	2'-11"	
DG801	49	13'-8"	1789	5	2'-8"	3'-7"	2'-4"
DG802	7	12'-1"	226	5	2'-8"	2'-9 1/2"	2'-4"



WINGWALL SECTION

NOTES:

1. SEE WALL H1 & I1 PLANS FOR LEVELING PAD ELEVATIONS.
2. REFER TO ODOT SCD SICD-2-14 FOR ADDITIONAL DIAPHRAGM GUIDE DETAILS.

FOR INFO

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
JLM		3110184	

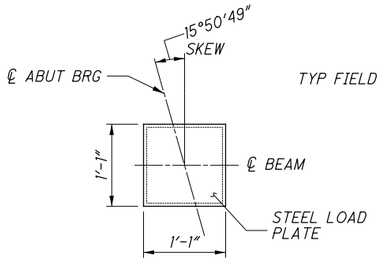
ABUTMENT DETAILS
BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

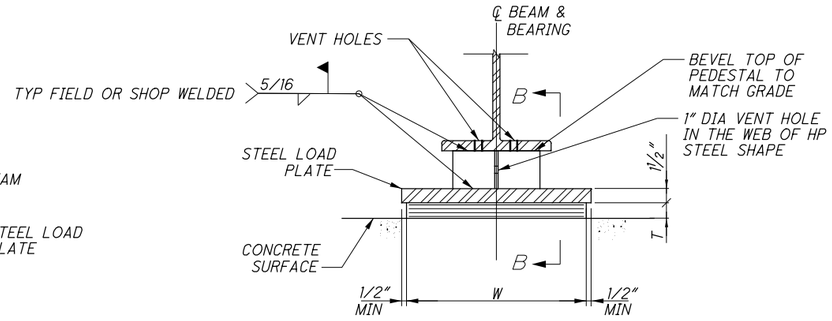
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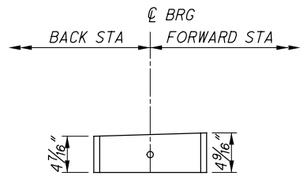
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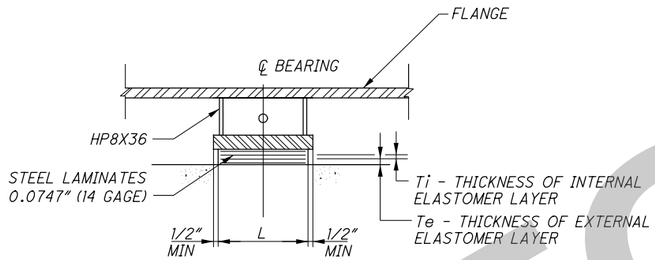
BEARING ORIENTATION PLAN



LAMINATED ELASTOMERIC BEARING EXPANSION AT PIERS



BEVELED HP8X36



SECTION B-B

TABLE OF ELASTOMERIC BEARING DATA

LOCATION	BEARING TYPE	NO. REQ'D.	L (INCHES)	W (INCHES)	T (INCHES)	Te (INCHES)	Ti (INCHES)	NUMBER OF INTERNAL ELASTOMER LAYERS	LOAD PLATE SIZE
REAR ABUTMENT	EXPANSION	23	12"	12"	3.12"	0.25"	0.35"	6	13" x 13" x 1½"
FORWARD ABUTMENT	EXPANSION	23	12"	12"	3.12"	0.25"	0.35"	6	13" X 13" X 1½"

* - SEE BEVELED LOAD PLATE DETAIL

ELASTOMERIC BEARING NOTES:

1. CONTROL WELDING SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300° F AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.

2. FOLLOWING ARE THE BEARING DESIGN LOADS:

	ABUTMENTS
MAX DEAD LOAD	70 KIPS
MAX LIVE LOAD	75 KIPS
TOTAL DESIGN LOAD	145 KIPS

3. STEEL LOAD PLATE AND PEDESTAL SHALL MEET THE REQUIREMENTS OF ASTM-A709, GRADE 50 STEEL.

4. THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED IN ACCORDANCE WITH SECTION 14.7.6 (METHOD A) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE LONG TERM COMPRESSION PROOF LOAD TEST (AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6) IS NOT REQUIRED.

5. BEARING STEEL LOAD PLATES SHALL BE VULCANIZED BONDED UNDER HEAT AND PRESSURE TO THE ELASTOMER DURING THE MOLDING PROCESS.

6. IF THE STEEL IS ERECTED AT AN AMBIENT TEMPERATURE HIGHER THAN 80° F OR LOWER THAN 40° F AND THE BEARING SHEAR DEFLECTION EXCEEDS 1/6 OF THE BEARING HEIGHT AT 60° F (+/-) 10° F, RAISE THE BEAMS OR GIRDERS TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60° F (+/-) 10° F.

FOR INFO

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
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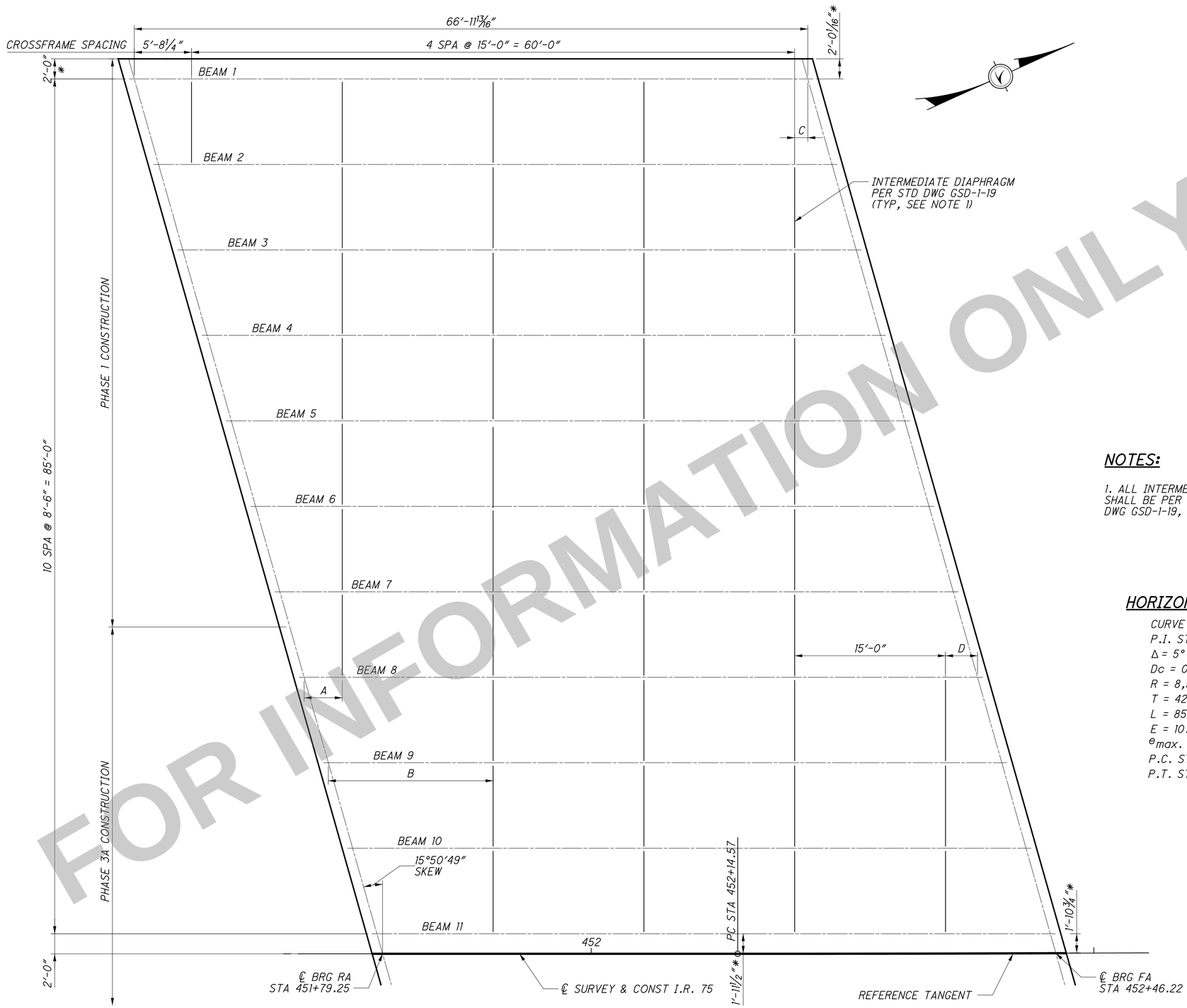
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
JLM		3110184	

SUPERSTRUCTURE DETAILS
BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

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FRAMING PLAN

	BEAM 1	BEAM 2	BEAM 3	BEAM 4	BEAM 5	BEAM 6	BEAM 7	BEAM 8	BEAM 9	BEAM 10	BEAM 11
A	-	18'-3 5/16"	15'-10 3/8"	13'-5 3/8"	11'-0 7/16"	8'-7 1/2"	6'-2 9/16"	3'-9 9/16"	-	-	-
B	-	-	-	-	-	-	-	-	16'-4 5/8"	13'-11 11/16"	11'-6 3/4"
C	-	3'-8 1/2"	6'-1 1/2"	8'-6 7/16"	10'-11 3/8"	13'-4 5/16"	15'-9 5/16"	-	-	-	-
D	-	-	-	-	-	-	-	3'-2 1/4"	5'-7 3/16"	8'-0 1/8"	10'-5 1/8"

NOTES:

1. ALL INTERMEDIATE DIAPHRAGMS SHALL BE PER THE DETAILS IN STD DWG GSD-1-19, SHEET 2 OF 4.

HORIZONTAL CURVE DATA

CURVE NO. 21
P.I. STA. 456+41.20
Δ = 5° 41' 01" (LT)
Dc = 0° 40' 00"
R = 8,594.37'
T = 426.63'
L = 852.56'
E = 10.58'
$e_{max.}$ = 0.0193
P.C. STA. 452+14.57
P.T. STA. 460+67.13

LEGEND:

* - MEASURED TO EDGE OF DECK

FOR INFORMATION ONLY

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8350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

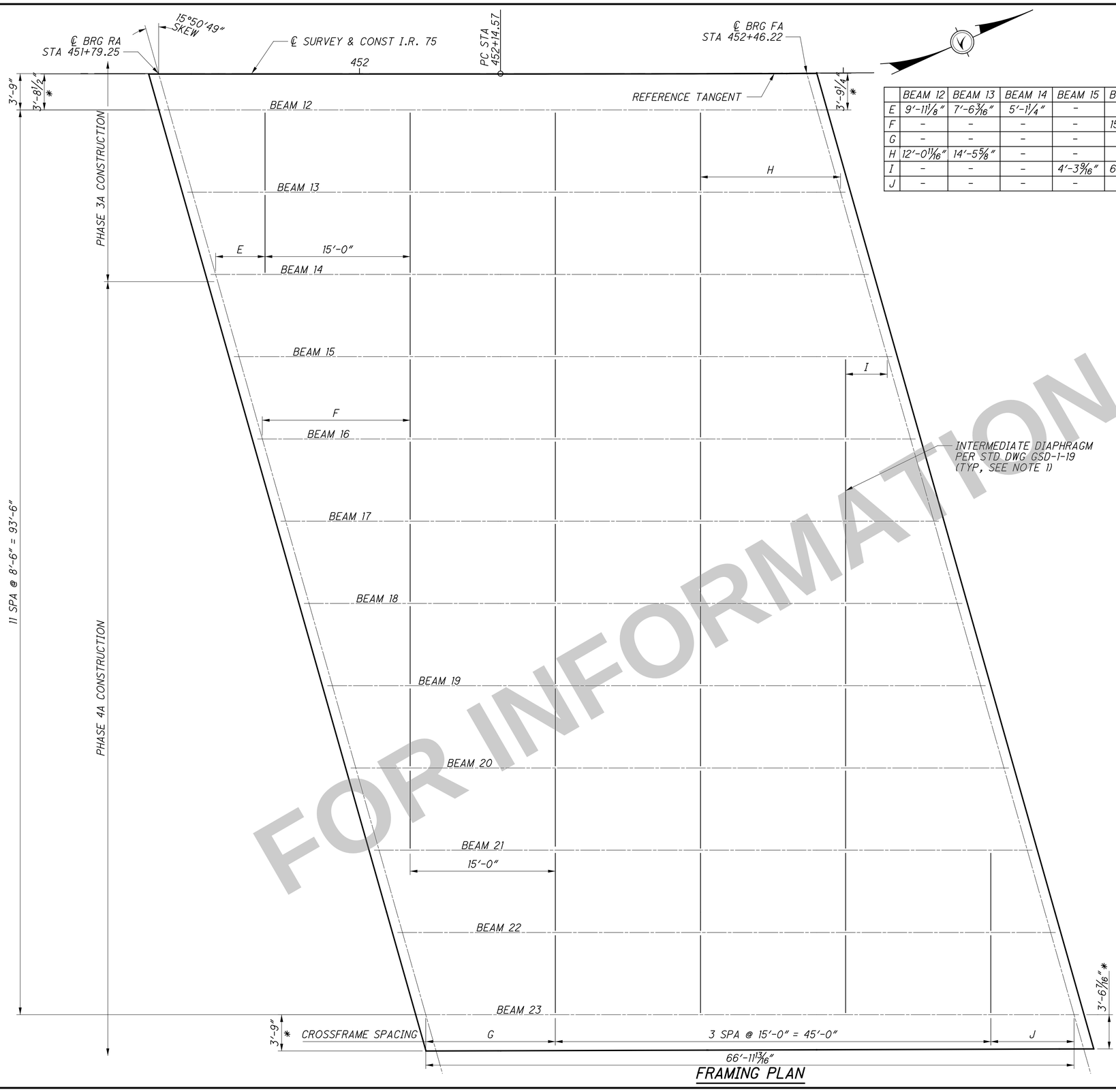
DESIGNED	DRAWN	REVIEWED	DATE
JGM	JGM	NCK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JLM		3110184	

FRAMING PLAN
BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

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2017

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FRAMING PLAN

	BEAM 12	BEAM 13	BEAM 14	BEAM 15	BEAM 16	BEAM 17	BEAM 18	BEAM 19	BEAM 20	BEAM 21	BEAM 22	BEAM 23
E	9'-11⅛"	7'-6³⁄₁₆"	5'-1¼"	–	–	–	–	–	–	–	–	–
F	–	–	–	–	15'-3⁵⁄₁₆"	12'-10⅜"	10'-5⁷⁄₁₆"	8'-0⅞"	5'-7½"	3'-2⅜"	–	–
G	–	–	–	–	–	–	–	–	–	–	15'-9⅝"	13'-4⅝"
H	12'-0¹¹⁄₁₆"	14'-5⅝"	–	–	–	–	–	–	–	–	–	–
I	–	–	–	4'-3⁹⁄₁₆"	6'-8½"	9'-1⁷⁄₁₆"	11'-6⁷⁄₁₆"	13'-11³⁄₈"	16'-4⁵⁄₁₆"	–	–	–
J	–	–	–	–	–	–	–	–	–	3'-9¼"	6'-2¼"	8'-7³⁄₁₆"

NOTES:

1. ALL INTERMEDIATE DIAPHRAGMS SHALL BE PER THE DETAILS IN STD DWG GSD-1-19, SHEET 2 OF 4.

HORIZONTAL CURVE DATA

CURVE NO. 21
P.I. STA. 456+41.20
Δ = 5° 41' 01" (LT)
Dc = 0° 40' 00"
R = 8,594.37'
T = 426.63'
L = 852.56'
E = 10.58'
$e_{max.}$ = 0.0193
P.C. STA. 452+14.57
P.T. STA. 460+67.13

LEGEND:

* - MEASURED TO EDGE OF DECK

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8350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

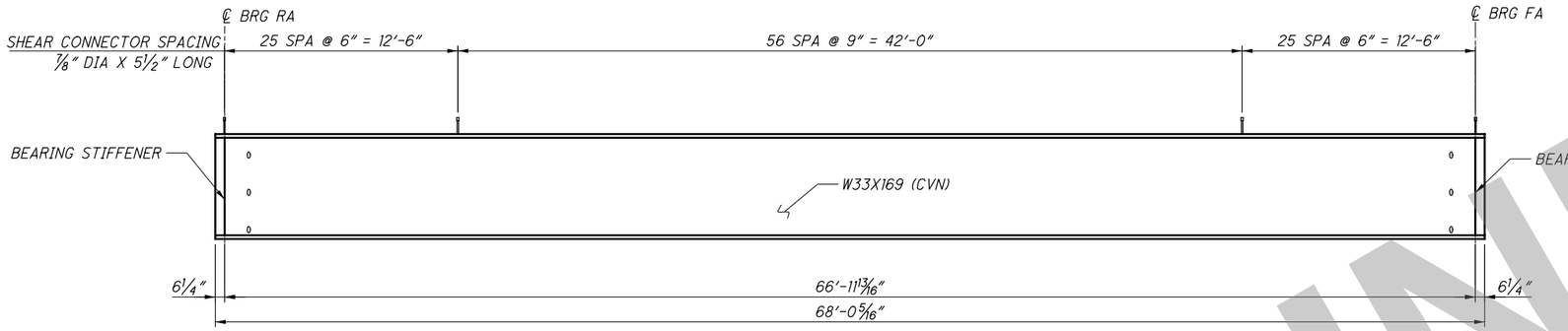
DESIGNED	DRAWN	REVIEWED	DATE
JGM	JGM	NCK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JLM		3110184	

FRAMING PLAN
BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

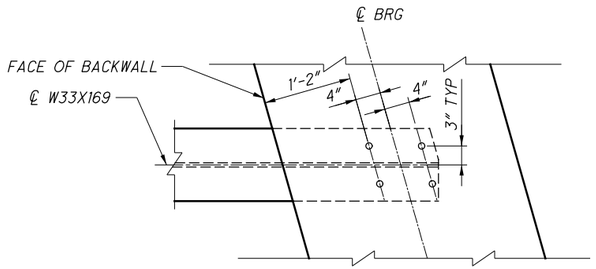
HAM-75-7.85
PID No. 77889

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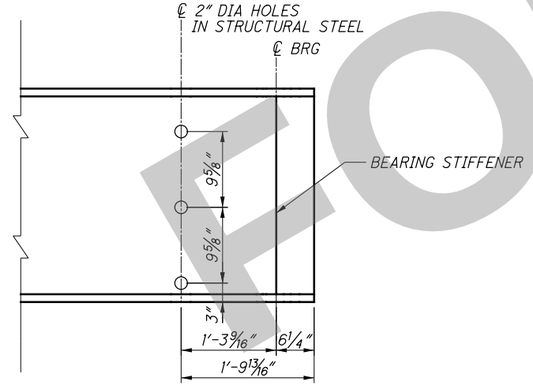
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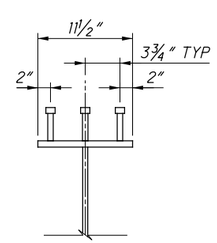
BEAM ELEVATION



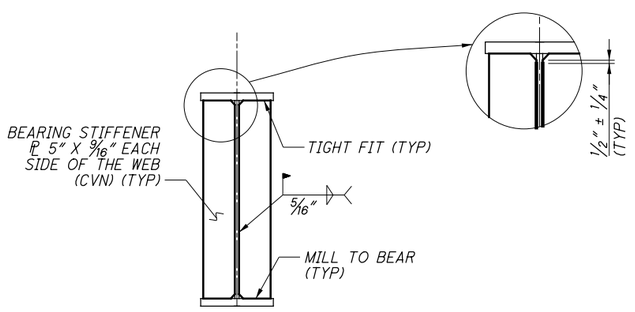
BEAM END DETAIL- PLAN



BEAM END DETAIL - ELEVATION



SHEAR CONNECTOR DETAIL



BEARING STIFFENER DETAIL

NOTE:

CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.

FOR INFO

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6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
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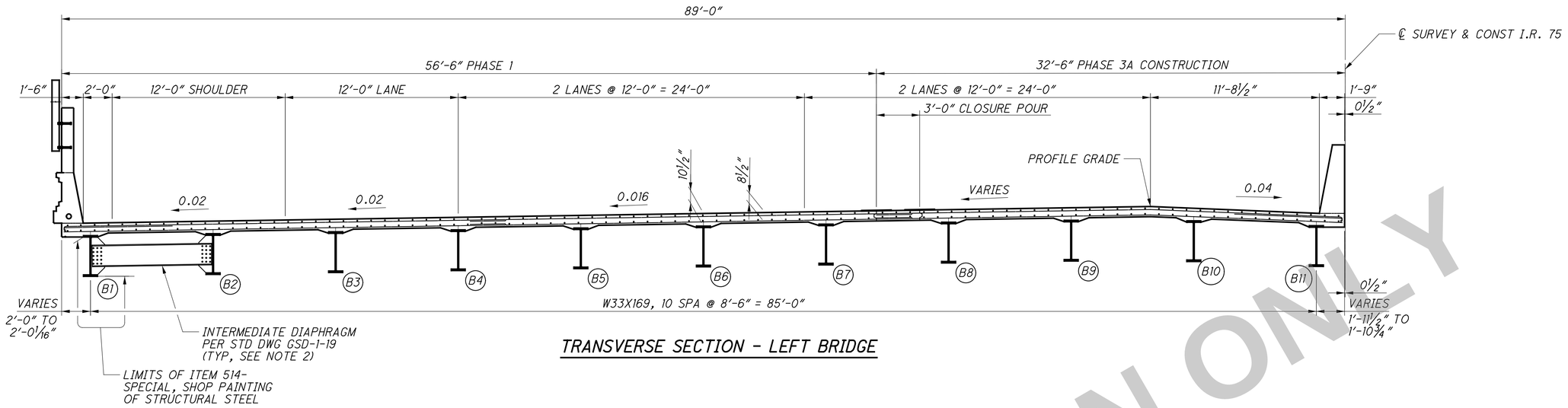
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JGM	JGM	NCK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JLM		3110184	

BEAM ELEVATION
BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

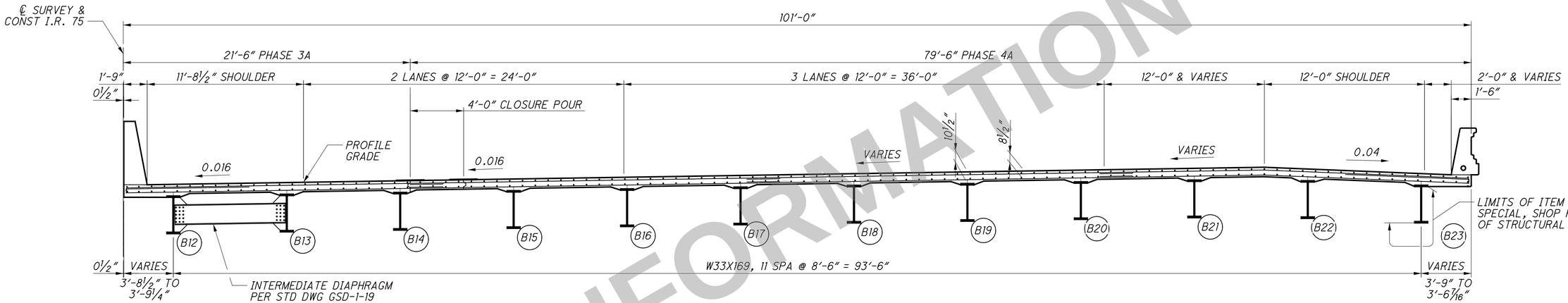
HAM-75-7.85
PID No. 77889

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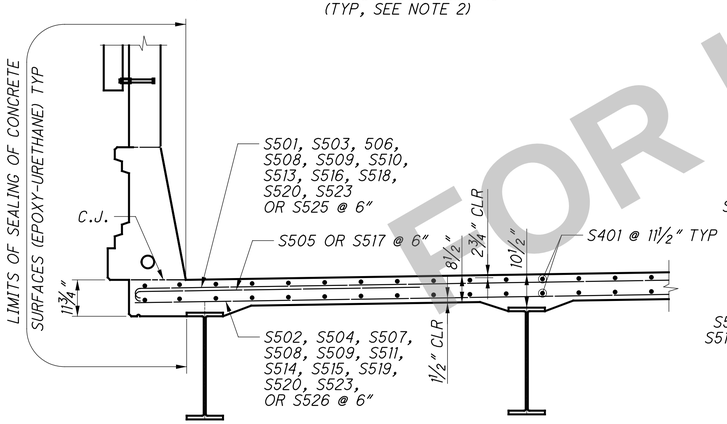
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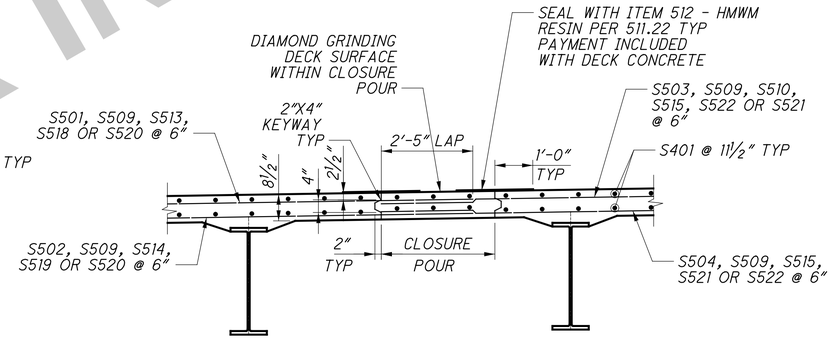
TRANSVERSE SECTION - LEFT BRIDGE



TRANSVERSE SECTION - RIGHT BRIDGE



TYPICAL DECK REINFORCEMENT



CLOSURE POUR DETAILS

NOTES:

1. DECK SLAB CONCRETE QUANTITY:
THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH BEAM/GIRDER HAUNCH. THE ESTIMATE ASSUMES A CONSTANT HAUNCH THICKNESS OF 8½ INCHES AND A CONSTANT HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM/GIRDER FLANGE OF 11¾ INCHES. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. THE ALLOWABLE TOLERANCE FOR THE HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM/GIRDER FLANGE IS ± 3 INCHES.

2. ALL INTERMEDIATE DIAPHRAGMS SHALL BE PER THE DETAILS IN GSD-1-19, SHEET 2 OF 4.

FOR INFORMATION ONLY

RESOURCE INTERNATIONAL INC.
8350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED JGM | DRAWN JGM | REVIEWED NCK | DATE 12-15-21
CHECKED JLM | REVISED | STRUCTURE FILE NUMBER 3110184

TRANSVERSE SECTION
BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

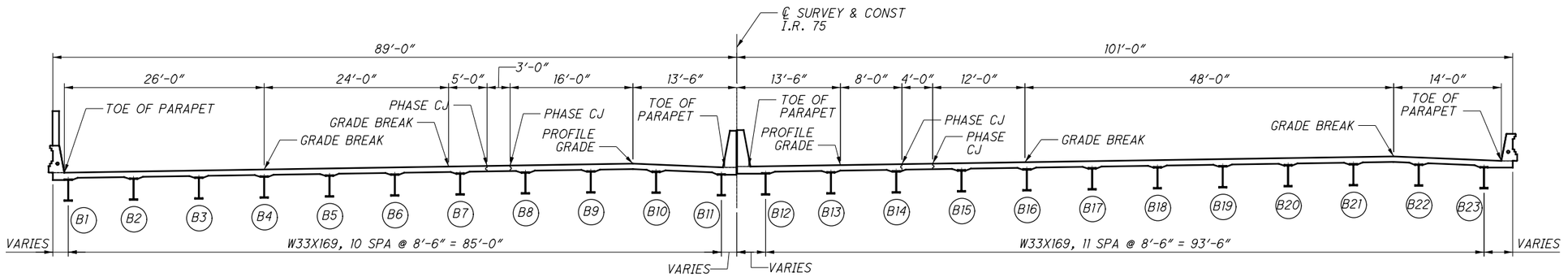
HAM-75-7.85
PID No. 77889

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LOCATION	SCREED ELEVATIONS									
	BRG RA		1/4 SPAN		1/2 SPAN		3/4 SPAN		BRG FA	
	STATION	ELEV	STATION	ELEV	STATION	ELEV	STATION	ELEV	STATION	ELEV
TOE OF PARAPET	451+54.41	557.88	451+71.16	558.13	451+87.91	558.30	452+04.66	558.36	452+21.47	558.34
GRADE BREAK	451+61.79	558.47	451+78.54	558.71	451+95.29	558.87	452+12.04	558.93	452+28.88	558.90
GRADE BREAK	451+68.61	558.91	451+85.35	559.14	452+02.10	559.30	452+35.68	559.34	452+35.68	559.31
PHASE CJ	451+70.02	558.96	451+86.77	559.20	452+03.52	559.36	452+20.29	559.42	452+37.09	559.39
PHASE CJ	451+70.88	559.00	451+87.62	559.24	452+04.37	559.40	452+21.14	559.46	452+37.93	559.44
PROFILE GRADE	451+75.42	559.18	451+92.17	559.44	452+08.91	559.63	452+25.68	559.70	452+42.44	559.70
TOE OF PARAPET	451+78.74	558.74	451+95.49	559.01	452+12.23	559.18	452+29.98	559.26	452+45.72	559.25
TOE OF PARAPET	451+79.76	559.03	451+96.50	559.30	452+13.24	559.47	452+29.98	559.55	452+46.72	559.53
PROFILE GRADE	451+83.08	559.25	451+99.83	559.51	452+16.57	559.68	452+33.29	559.75	452+49.99	559.74
PHASE CJ	451+85.35	559.40	452+02.10	559.66	452+18.84	559.83	452+35.53	559.89	452+52.22	559.88
PHASE CJ	451+86.49	559.48	452+03.24	559.73	452+19.97	559.90	452+36.66	559.97	452+53.33	559.95
GRADE BREAK	451+89.89	559.70	452+06.64	559.95	452+23.35	560.12	452+40.02	560.18	452+56.67	560.15
GRADE BREAK	452+03.52	560.38	452+20.21	560.68	452+36.97	560.91	452+53.35	561.03	452+69.90	561.07
TOE OF PARAPET	452+07.49	559.87	452+24.13	560.17	452+40.68	560.39	452+57.21	560.50	452+73.74	560.54

LOCATION	TOP OF HAUNCH ELEVATIONS									
	BRG RA		1/4 SPAN		1/2 SPAN		3/4 SPAN		BRG FA	
	STATION	ELEV	STATION	ELEV	STATION	ELEV	STATION	ELEV	STATION	ELEV
BEAM 1	451+54.55	557.19	451+71.30	557.33	451+88.05	557.45	452+04.80	557.56	452+21.61	557.65
BEAM 2	451+56.97	557.38	451+73.71	557.52	451+90.46	557.64	452+07.21	557.74	452+24.04	557.83
BEAM 3	451+59.38	557.57	451+76.13	557.71	451+92.88	557.83	452+09.62	557.93	452+26.46	558.01
BEAM 4	451+61.79	557.76	451+78.54	557.89	451+95.29	558.01	452+12.04	558.11	452+28.88	558.19
BEAM 5	451+64.21	557.92	451+80.95	558.05	451+97.70	558.16	452+14.45	558.26	452+31.29	558.34
BEAM 6	451+66.62	558.07	451+83.37	558.20	452+00.11	558.31	452+16.87	558.41	452+33.70	558.48
BEAM 7	451+69.03	558.22	451+85.78	558.35	452+02.53	558.46	452+19.29	558.55	452+36.11	558.62
BEAM 8	451+71.44	558.31	451+88.19	558.45	452+04.94	558.57	452+21.71	558.67	452+38.51	558.76
BEAM 9	451+73.86	558.41	451+90.60	558.56	452+07.35	558.69	452+24.12	558.80	452+40.90	558.90
BEAM 10	451+76.27	558.36	451+93.02	558.52	452+09.76	558.65	452+26.53	558.77	452+43.29	558.88
BEAM 11	451+78.68	558.04	451+95.43	558.20	452+12.18	558.33	452+28.93	558.45	452+45.68	558.55
BEAM 12	451+80.31	558.36	451+97.06	558.52	452+13.81	558.65	452+30.55	558.76	452+47.29	558.86
BEAM 13	451+82.73	558.52	451+99.47	558.67	452+16.22	558.80	452+32.94	558.92	452+49.66	559.01
BEAM 14	451+85.14	558.68	452+01.89	558.83	452+18.63	558.96	452+35.33	559.07	452+52.04	559.16
BEAM 15	451+87.55	558.84	452+04.30	558.98	452+21.03	559.11	452+37.72	559.22	452+54.40	559.30
BEAM 16	451+89.97	559.00	452+06.71	559.14	452+23.42	559.26	452+40.10	559.37	452+56.77	559.45
BEAM 17	451+92.38	559.11	452+09.13	559.26	452+25.81	559.39	452+42.47	559.51	452+59.12	559.60
BEAM 18	451+94.79	559.22	452+11.54	559.39	452+28.20	559.53	452+44.84	559.66	452+61.48	559.76
BEAM 19	451+97.20	559.34	452+13.95	559.51	452+30.58	559.67	452+47.21	559.81	452+63.83	559.92
BEAM 20	451+99.62	559.46	452+16.35	559.65	452+32.96	559.81	452+49.57	559.96	452+66.17	560.09
BEAM 21	452+02.03	559.59	452+18.74	559.78	452+35.33	559.96	452+51.92	560.12	452+68.51	560.25
BEAM 22	452+04.44	559.55	452+21.12	559.75	452+37.70	559.93	452+54.27	560.09	452+70.85	560.24
BEAM 23	452+06.86	559.24	452+23.50	559.44	452+40.06	559.61	452+56.62	559.77	452+73.18	559.91



DECK SECTION

SCREED ELEVATIONS:

SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFELCTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.

TOP OF HAUNCH ELEVATIONS:

TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF DECK ABOVE THE BEAM/GIRDER HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.

FOR INFO

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6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
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DESIGNED	DRAWN	REVIEWED	DATE
JGM	JGM	NCK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JLM	---	3110184	

DECK SCREED & TOP OF HAUNCH ELEVATIONS

BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

1470
2017

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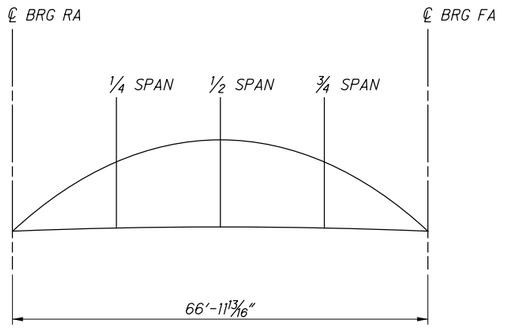
LOCATION	FINAL DECK ELEVATIONS									
	BRG RA		1/4 SPAN		1/2 SPAN		3/4 SPAN		BRG FA	
	STATION	ELEV	STATION	ELEV	STATION	ELEV	STATION	ELEV	STATION	ELEV
TOE OF PARAPET	451+54.41	557.88	451+71.16	558.03	451+87.91	558.15	452+04.66	558.26	452+21.47	558.34
BEAM 1	451+54.55	557.89	451+71.30	558.04	451+88.05	558.16	452+04.80	558.27	452+21.61	558.36
BEAM 2	451+56.97	558.09	451+73.71	558.23	451+90.46	558.35	452+07.21	558.45	452+24.04	558.54
BEAM 3	451+59.38	558.28	451+76.13	558.41	451+92.88	558.53	452+09.62	558.63	452+26.46	558.72
GRADE BREAK	451+61.79	558.47	451+78.54	558.60	451+95.29	558.72	452+12.04	558.82	452+28.88	558.90
BEAM 4	451+61.79	558.47	451+78.54	558.60	451+95.29	558.72	452+12.04	558.82	452+28.88	558.90
BEAM 5	451+64.21	558.62	451+80.95	558.76	451+97.70	558.87	452+14.45	558.97	452+31.29	559.04
BEAM 6	451+66.62	558.78	451+83.37	558.91	452+00.11	559.02	452+16.87	559.11	452+33.70	559.19
GRADE BREAK	451+68.61	558.91	451+85.35	559.04	452+02.10	559.15	452+18.87	559.24	452+35.68	559.31
BEAM 7	451+69.03	558.93	451+85.78	559.05	452+02.53	559.17	452+19.29	559.26	452+36.11	559.33
PHASE CJ	451+70.02	558.96	451+86.77	559.10	452+03.52	559.21	452+20.29	559.31	452+37.09	559.39
PHASE CJ	451+70.88	559.00	451+87.62	559.13	452+04.37	559.25	452+21.14	559.35	452+37.93	559.44
BEAM 8	451+71.44	559.02	451+88.19	559.16	452+04.94	559.28	452+21.71	559.38	452+38.51	559.47
BEAM 9	451+73.86	559.11	451+90.60	559.27	452+07.35	559.40	452+24.12	559.51	452+40.90	559.61
PROFILE GRADE	451+75.42	559.18	451+92.17	559.34	452+08.91	559.48	452+25.68	559.60	452+42.44	559.70
BEAM 10	451+76.27	559.07	451+93.02	559.22	452+09.76	559.36	452+26.53	559.48	452+43.29	559.58
BEAM 11	451+78.68	558.75	451+95.43	558.91	452+12.18	559.04	452+28.93	559.16	452+45.68	559.26
TOE OF PARAPET	451+78.74	558.74	451+95.49	558.90	452+12.23	559.03	452+28.98	559.15	452+45.72	559.25
TOE OF PARAPET	451+79.76	559.03	451+96.50	559.19	452+13.24	559.32	452+29.98	559.44	452+46.72	559.53
BEAM 12	451+80.31	559.07	451+97.06	559.22	452+13.81	559.36	452+30.55	559.47	452+47.29	559.57
BEAM 13	451+82.73	559.23	451+99.47	559.38	452+16.22	559.51	452+32.94	559.62	452+49.66	559.72
PROFILE GRADE	451+83.08	559.25	451+99.83	559.40	452+16.57	559.53	452+33.29	559.65	452+49.99	559.74
BEAM 14	451+85.14	559.39	452+01.89	559.54	452+18.63	559.66	452+35.33	559.77	452+52.04	559.86
PHASE CJ	451+85.35	559.40	452+02.10	559.55	452+18.84	559.68	452+35.53	559.79	452+52.22	559.88
PHASE CJ	451+86.49	559.48	452+03.24	559.62	452+19.97	559.75	452+36.66	559.86	452+53.33	559.95
BEAM 15	451+87.55	559.55	452+04.30	559.69	452+21.03	559.82	452+37.72	559.92	452+54.40	560.01
GRADE BREAK	451+89.89	559.70	452+06.64	559.84	452+23.35	559.97	452+40.02	560.07	452+56.67	560.15
BEAM 16	451+89.97	559.70	452+06.71	559.85	452+23.42	559.97	452+40.10	560.07	452+56.77	560.16
BEAM 17	451+92.38	559.82	452+09.13	559.97	452+25.81	560.10	452+42.47	560.22	452+59.12	560.31
BEAM 18	451+94.79	559.93	452+11.54	560.09	452+28.20	560.24	452+44.84	560.36	452+61.48	560.47
BEAM 19	451+97.20	560.05	452+13.95	560.22	452+30.58	560.38	452+47.21	560.51	452+63.83	560.63
BEAM 20	451+99.62	560.17	452+16.35	560.36	452+32.96	560.52	452+49.57	560.67	452+66.17	560.79
BEAM 21	452+02.03	560.30	452+18.74	560.49	452+35.33	560.67	452+51.92	560.82	452+68.51	560.96
GRADE BREAK	452+03.52	560.38	452+20.21	560.58	452+36.97	560.76	452+53.35	560.92	452+69.90	561.07
BEAM 22	452+04.44	560.26	452+21.12	560.46	452+37.70	560.64	452+54.27	560.80	452+70.85	560.94
BEAM 23	452+06.86	559.95	452+23.50	560.14	452+40.06	560.32	452+56.62	560.48	452+73.18	560.62
TOE OF PARAPET	452+07.49	559.87	452+24.13	560.06	452+40.68	560.24	452+57.21	560.40	452+73.74	560.54

FINAL DECK SURFACE ELEVATIONS:

FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.

BEAM 6	CAMBER (ALL DIMENSIONS IN INCHES)				
	BRG R.A.	1/4 SPAN	1/2 SPAN	3/4 SPAN	BRG F.A.
DEFLECTION DUE TO WEIGHT OF STEEL	0	1/4	5/16	1/4	0
DEFLECTION DUE TO REMAINING DEAD LOAD	0	1 5/16	1 13/16	1 5/16	0
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0	0	1/16	0	0
REQUIRED SHOP CAMBER (IN)=	0	1 9/16	2 3/16	1 9/16	0

BEAM 17	CAMBER (ALL DIMENSIONS IN INCHES)				
	BRG R.A.	1/4 SPAN	1/2 SPAN	3/4 SPAN	BRG F.A.
DEFLECTION DUE TO WEIGHT OF STEEL	0	1/4	5/16	1/4	0
DEFLECTION DUE TO REMAINING DEAD LOAD	0	1 5/16	1 13/16	1 5/16	0
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0	0	1/16	0	0
REQUIRED SHOP CAMBER (IN)=	0	1 9/16	2 3/16	1 9/16	0



FOR INFO

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED	DRAWN	REVIEWED	DATE
JGM	JGM	NCK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JLM	---	3110184	

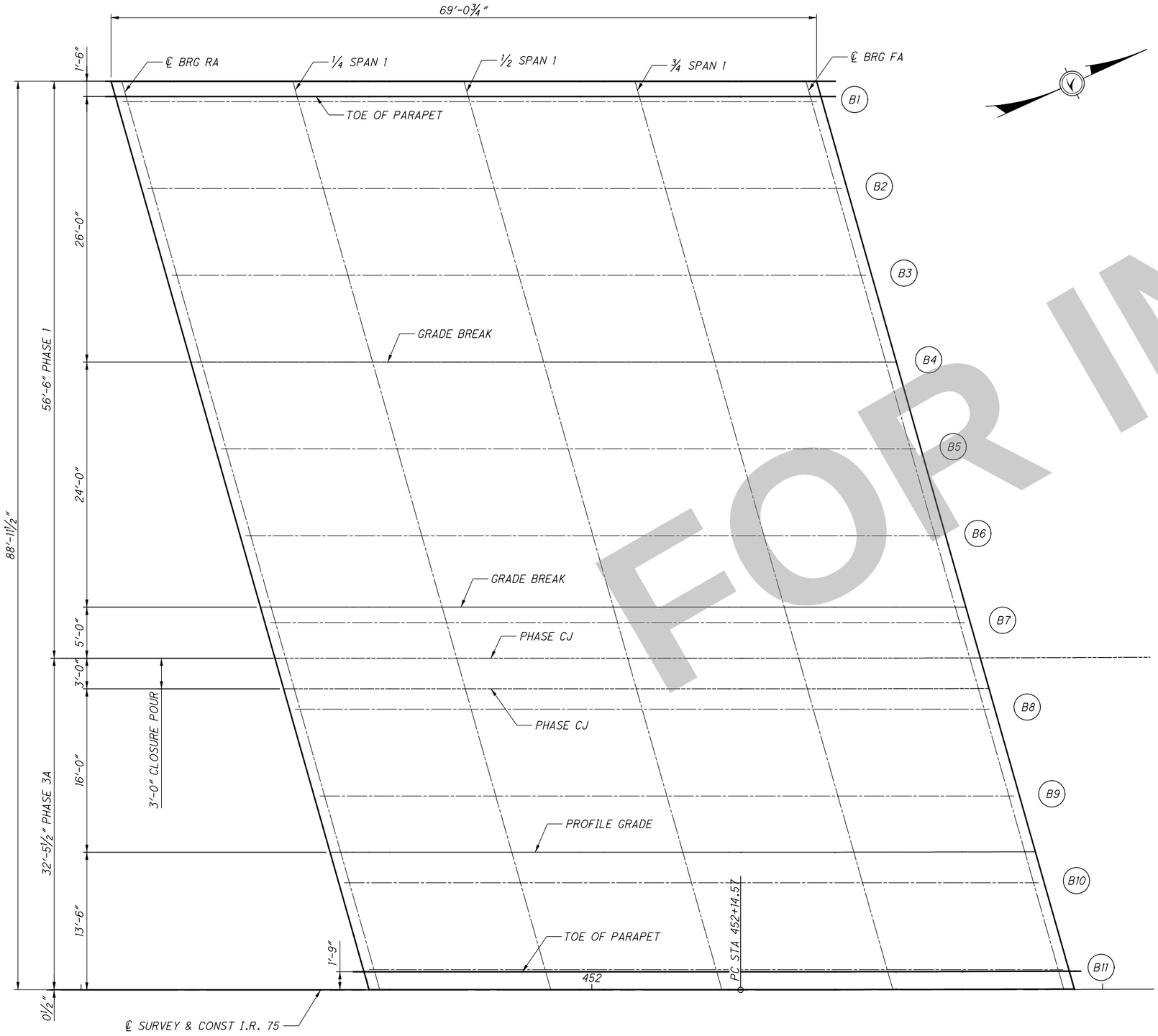
FINAL DECK ELEVATIONS & CAMBER

BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

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DECK PLAN - LEFT BRIDGE

FOR INFO

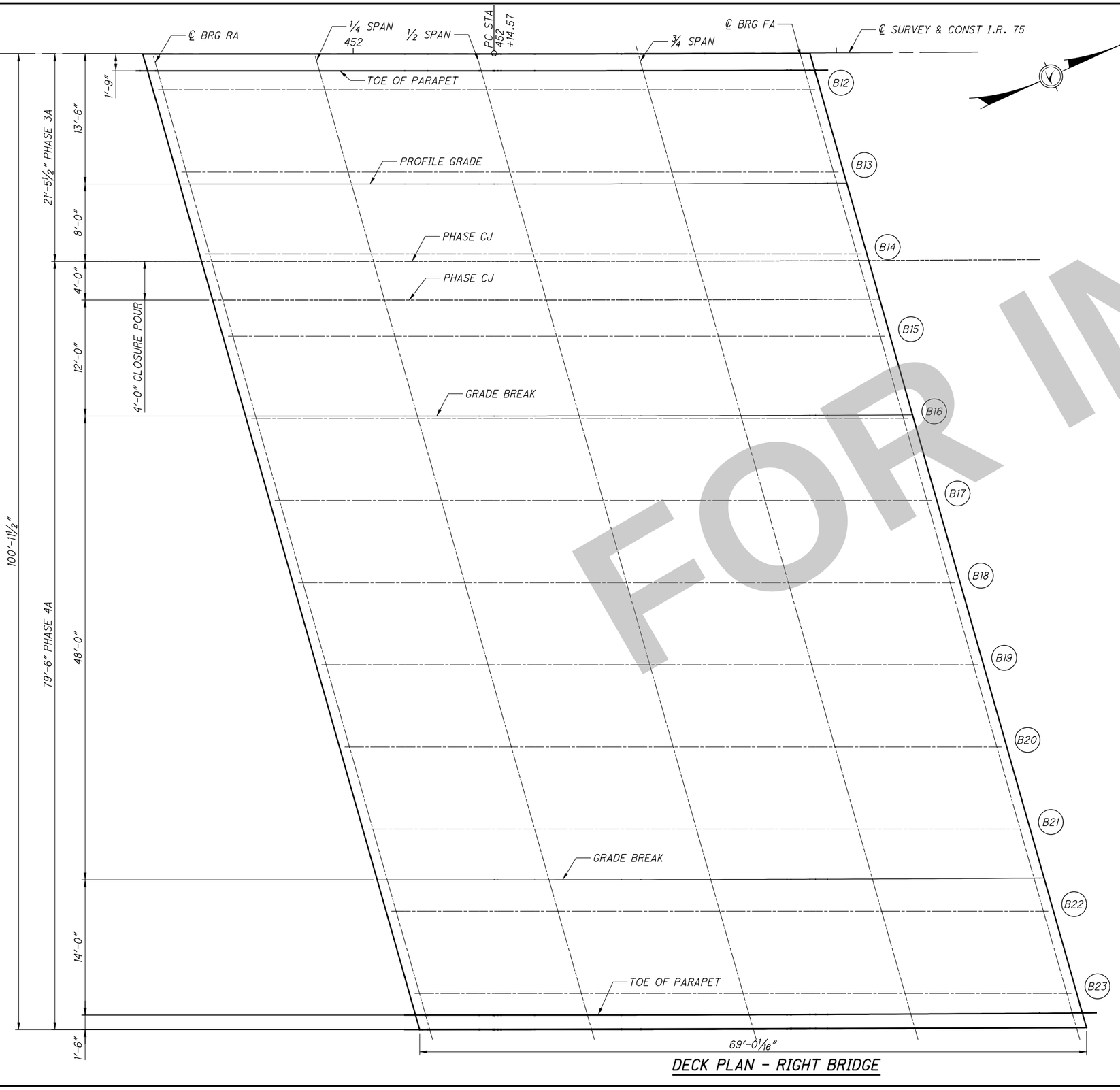
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COLUMBUS, OHIO 43231
(614) 823-4949

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JLM		3110184	

DECK ELEVATION LOCATION PLAN
BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889



DECK PLAN - RIGHT BRIDGE

FOR INFO

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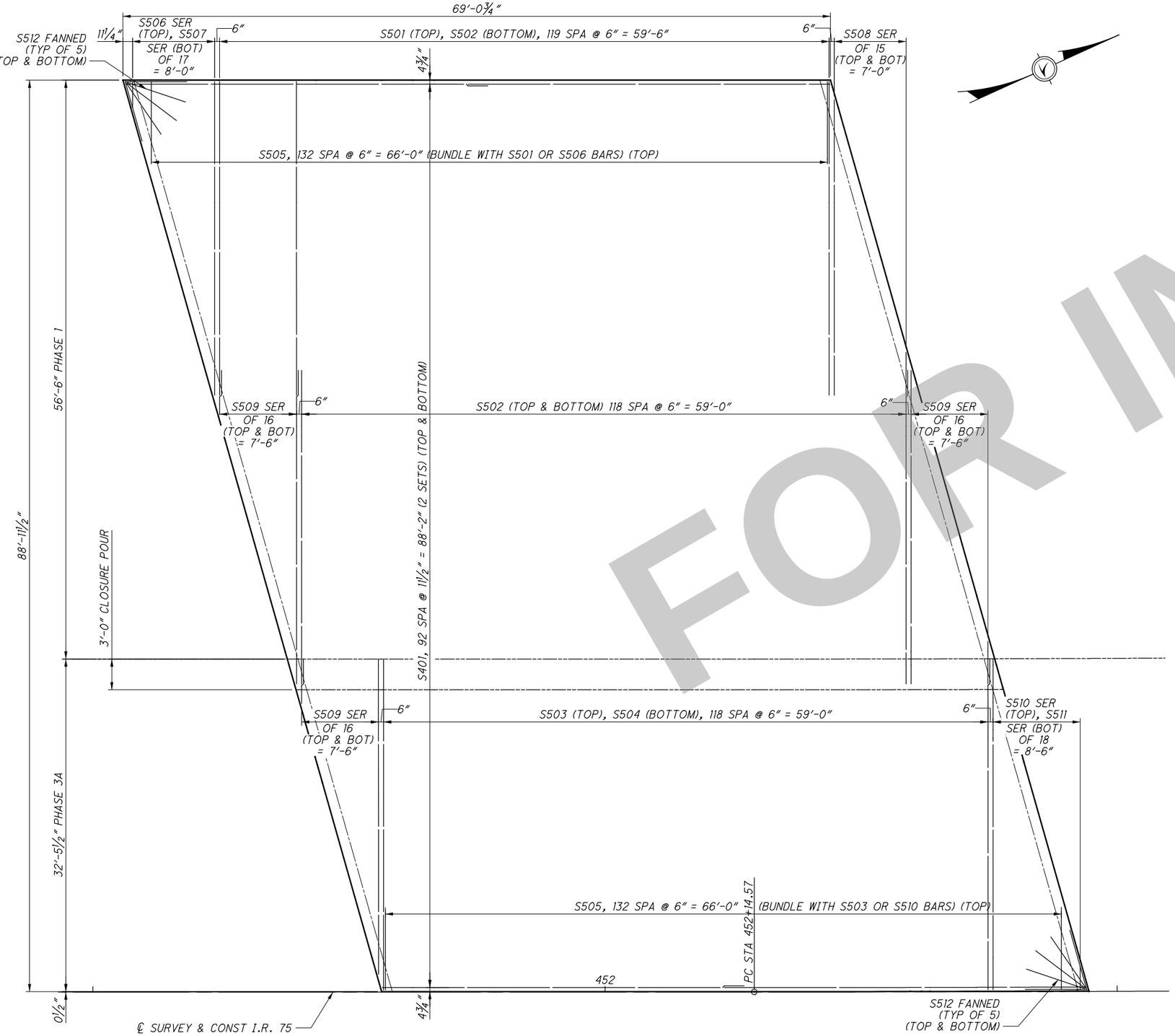
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
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DECK ELEVATION LOCATION PLAN

BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

1473
2017



DECK PLAN - LEFT BRIDGE

NOTES:

1. MINIMUM LAP LENGTHS:
   LAP NO. 4 BAR: 1'-11"
   LAP NO. 5 BAR: 2'-5"

2. DO NOT PLACE CONCRETE FOR DECK CLOSURE POUR UNTIL DECK POUR HAS CURED 48 HOURS. SEAL ALL DECK JOINTS WITH 2'-0" WIDE STRIP OF ITEM 512 - HMWM RESIN.

FOR INFO

RESOURCE INTERNATIONAL, INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
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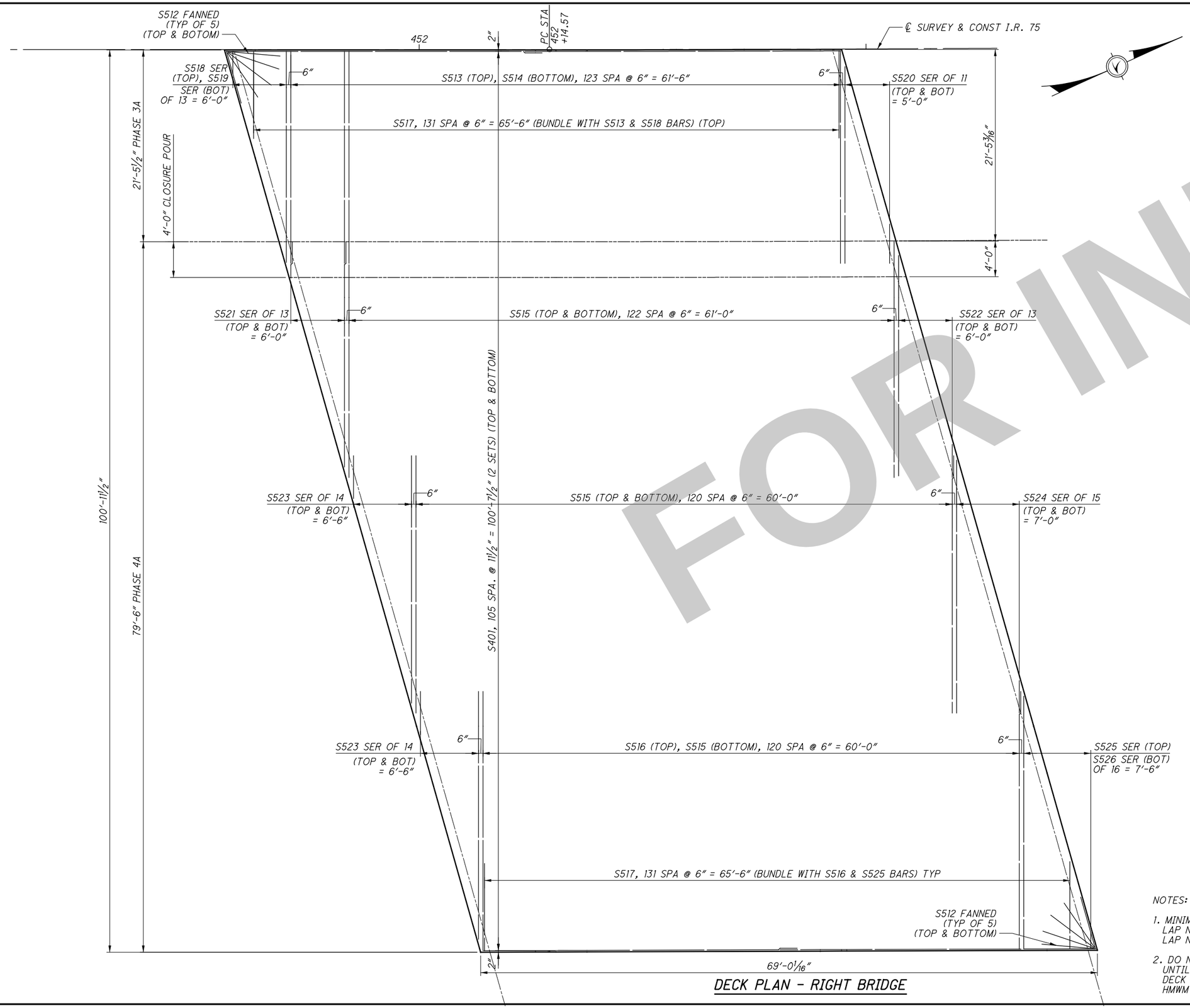
DECK PLAN

BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

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DECK PLAN - RIGHT BRIDGE

NOTES:

1. MINIMUM LAP LENGTHS:
   LAP NO. 4 BAR: 1'-11"
   LAP NO. 5 BAR: 2'-5"
2. DO NOT PLACE CONCRETE FOR DECK CLOSURE POUR UNTIL DECK POUR HAS CURED 48 HOURS. SEAL ALL DECK JOINTS WITH 2'-0" WIDE STRIP OF ITEM 512 - HMWM RESIN.

FOR INFO

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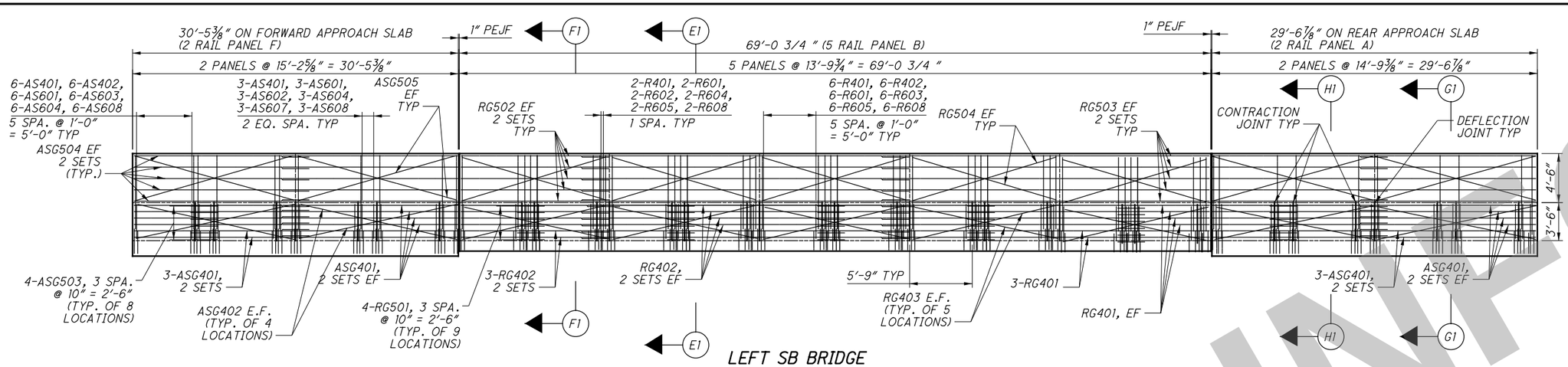
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JGM	JGM	NCK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JLM		3110184	

DECK PLAN
BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

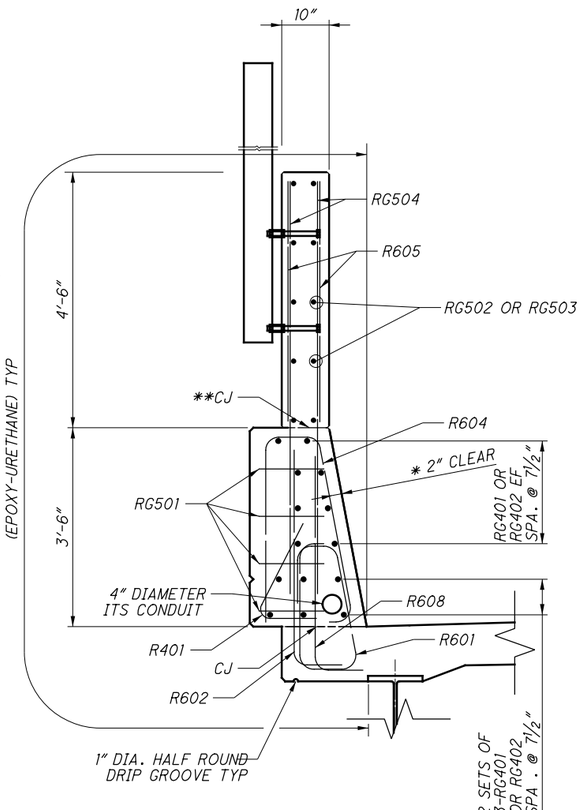
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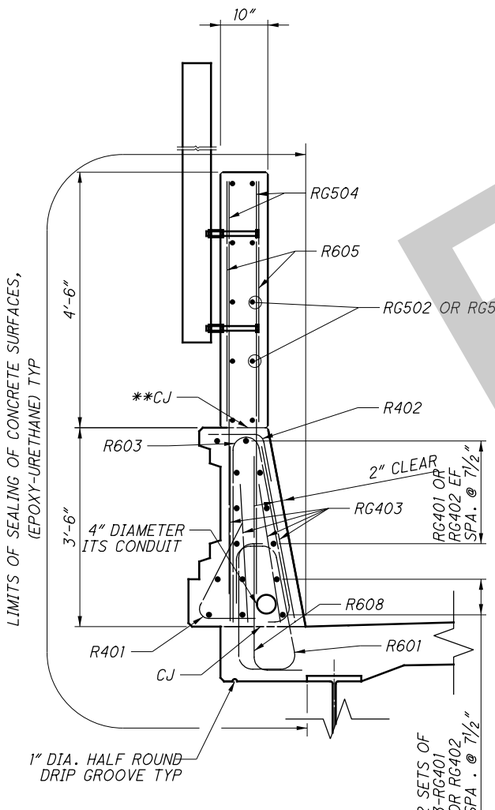


LEFT SB BRIDGE

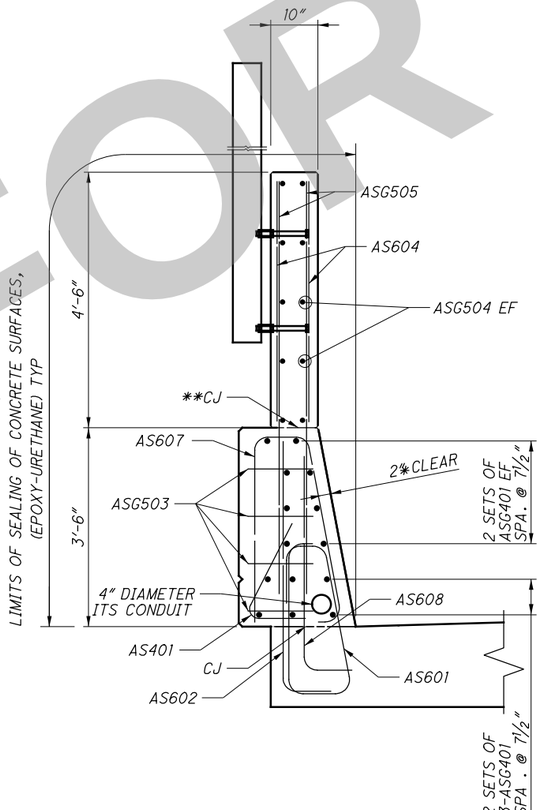
EXTERIOR PARAPET DETAIL



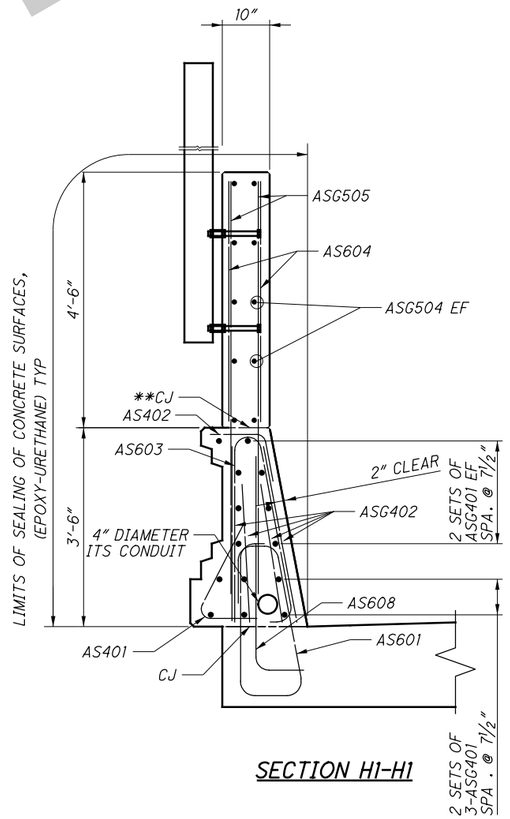
SECTION E1-E1



SECTION F1-F1



SECTION G1-G1



SECTION H1-H1

LEGEND:

* TYPICAL DIMENSION

** CONCRETE ABOVE CJ IS INCLUDED WITH ITEM 511 CLASS QC3 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN. CONCRETE BELOW CJ IS INCLUDED WITH ITEM 511 CLASS QC3 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN.

MINIMUM LAP LENGTH
#5 BAR = 2'-5"
#6 BAR = 2'-11"

NOTES:

1. DIMENSION GIVEN ARE ALONG ARC OUTSIDE FACE OF BARRIER.
2. ELEVATION VIEW LOOKING AT EXTERIOR FACE OF PARAPET.
3. FOR ADDITIONAL APPROACH SLAB DETAILS SEE SHEET 36/40 & 37/40
4. PAYMENT FOR APPROACH SLAB PARAPETS SHALL BE INLCUDED WITH ITEM 526 REINFORCED CONCRETE APPROACH SLABS.

FOR INFO

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COLUMBUS, OHIO 43231
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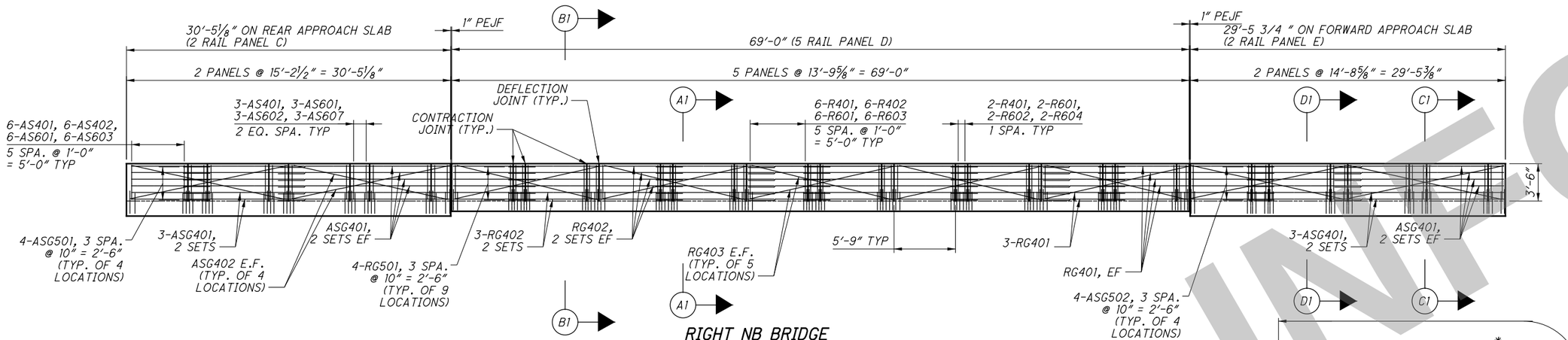
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JLM	JLM	NCK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JGM		3110184	

PARAPET DETAILS
BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

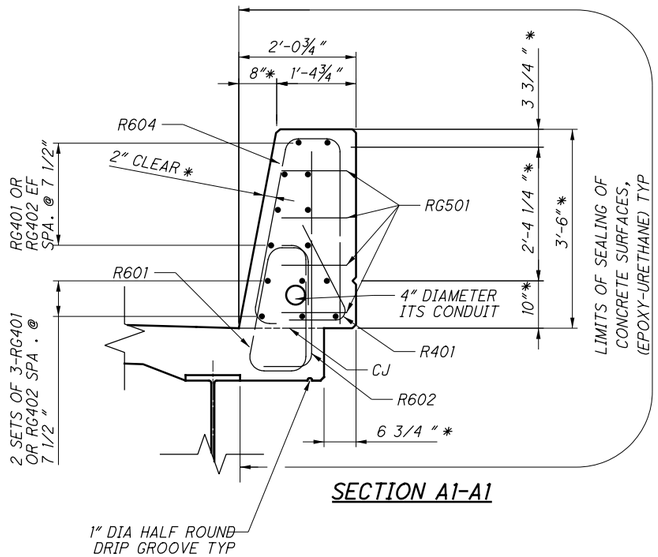
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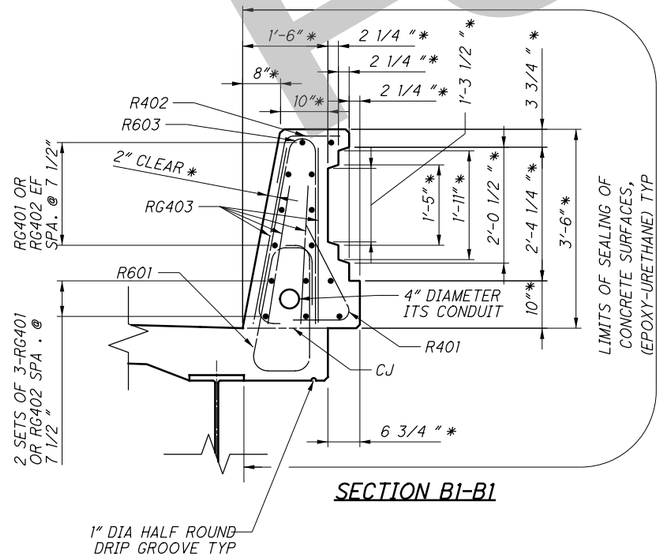


RIGHT NB BRIDGE

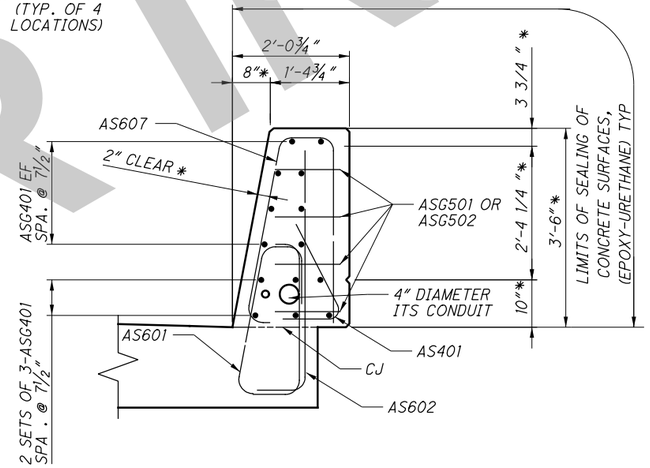
EXTERIOR PARAPET DETAIL



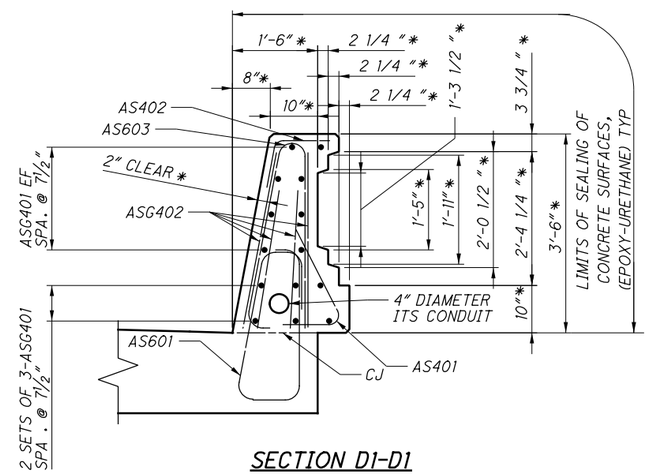
SECTION A1-A1



SECTION B1-B1



SECTION C1-C1



SECTION D1-D1

LEGEND:

* TYPICAL DIMENSION

** CONCRETE ABOVE CJ IS INCLUDED WITH ITEM 511 CLASS QC3 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN. CONCRETE BELOW CJ IS INCLUDED WITH ITEM 511 CLASS QC3 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN.

NOTES:

1. DIMENSION GIVEN ARE ALONG ARC OUTSIDE FACE OF BARRIER.
2. ELEVATION VIEW LOOKING AT EXTERIOR FACE OF PARAPET.
3. FOR ADDITIONAL APPROACH SLAB DETAILS SEE SHEET 36/40 & 37/40
4. PAYMENT FOR APPROACH SLAB PARAPETS SHALL BE INLCUDED WITH ITEM 526 REINFORCED CONCRETE APPROACH SLABS.

MINIMUM LAP LENGTH
#4 BAR = 1'-11"
#5 BAR = 2'-5"
#6 BAR = 2'-11"

FOR INFO

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(614) 823-4949

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JGM		3110184	

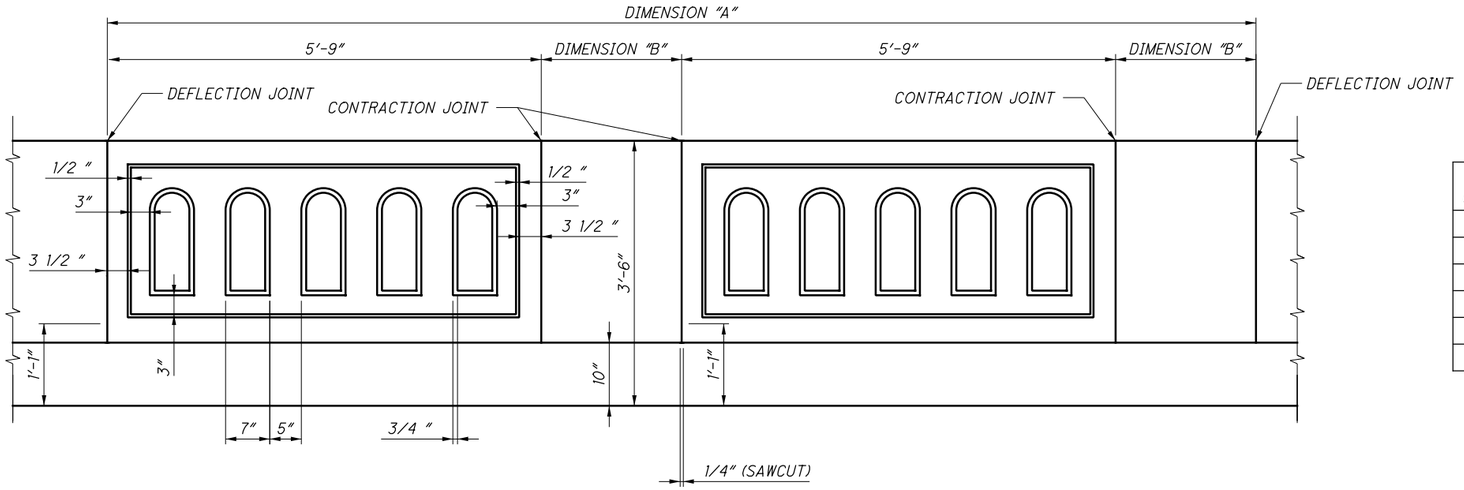
PARAPET DETAILS
BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

33/40

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2017

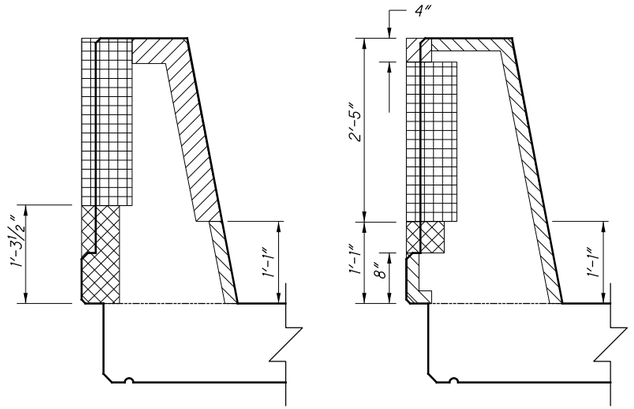
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TYPICAL RAIL PANEL

(APPROACH SLAB NOT SHOWN)

PANEL	NO. OF PANELS	DIMENSION "A"	DIMENSION "B"
A	2	14'-9 3/8"	1'-7 5/8"
B	5	13'-9 3/4"	1'-1 3/4"
C	2	15'-2 1/2"	1'-10 1/4"
D	5	13'-9 5/8"	1'-1 3/4"
E	2	14'-8 5/8"	1'-7 3/8"
F	2	15'-2 5/8"	1'-10 3/8"



DEFLECTION JOINT

(SEE NOTE 3)

CONTRACTION JOINT

(OPPOSITE SIDE OF PILASTER FROM DEFLECTION JOINT WHERE THE BARS ARE CONTINIOUS)

8" WIDE PREFORMED JOINT MATERIAL

6" WIDE PREFORMED JOINT MATERIAL

4" WIDE PREFORMED JOINT MATERIAL

2" WIDE PREFORMED JOINT MATERIAL

NOTES:

1. DIMENSIONS GIVEN ARE ALONG ARC OUTSIDE FACE OF BARRIER.
2. ELEVATION VIEW LOOKING AT EXTERIOR FACE OF PARAPET.
3. DEFLECTION JOINTS AND CONTRACTION JOINTS ARE TO BE CAST INTO THE PARAPETS AND HELD IN WITH CHAMFER STRIPS. THE EXCESS MATERIAL WILL BE TRIMMED TO THE BASE OF THE CHAMFER. THE MATERIAL THAT WILL BE USED NEEDS TO NOT ABSORB WATER AND AS SUFFICIENT RIGIDITY TO NOT SIGNIFICANTLY MOVE DURING THE CASTING OF THE PARAPET. THE JOINT MATERIAL IS TO BE 0.5" IN THICKNESS AND WILL BE NOMAFLEX BY NOMACO OR FIBER LITE BY W.R. MEADOWS OR SIMILAR PRODUCT APPROVED BY THE ENGINEER. THE GFRP FIBER SPLICE BARS THAT WERE SHOWN IN THE AS BID PLANS AND ARE INTENDED TO HOLD THE LONGITUDINAL BARS TOGETHER DURING SLIP FORMING ARE TO BE NON-PERFORMED.

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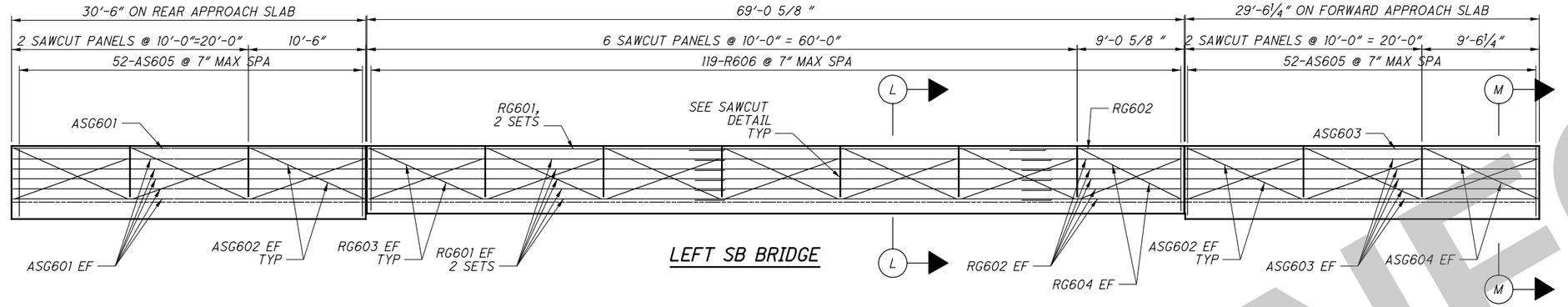
PARAPET DETAILS

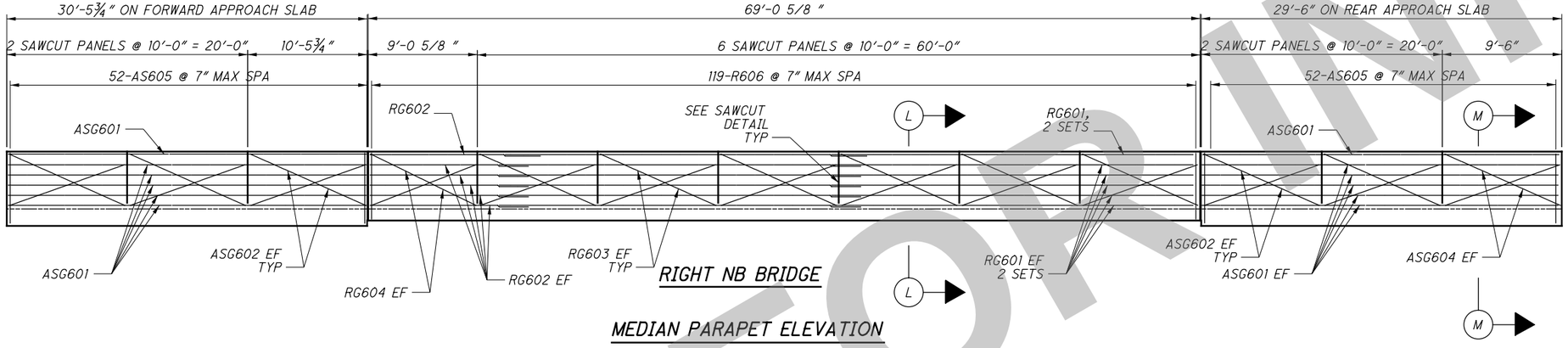
BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

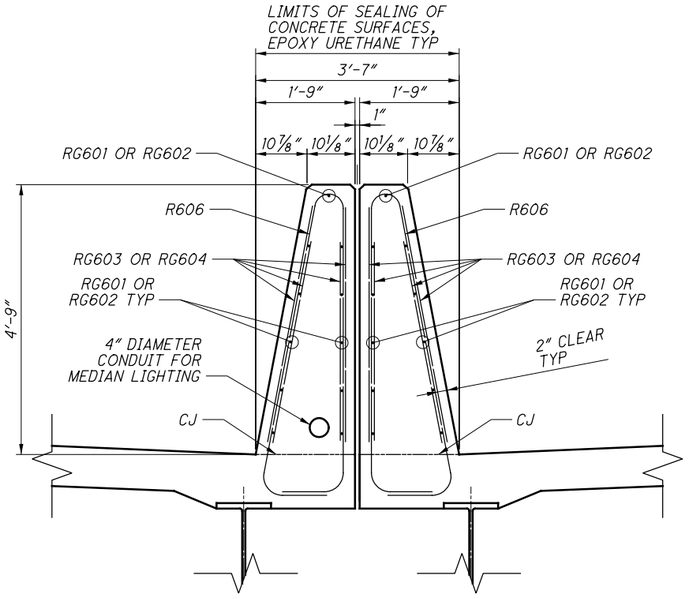
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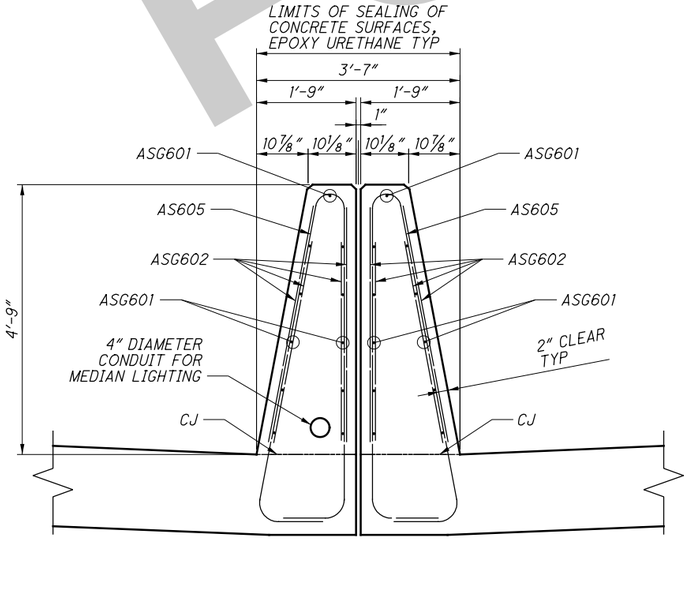




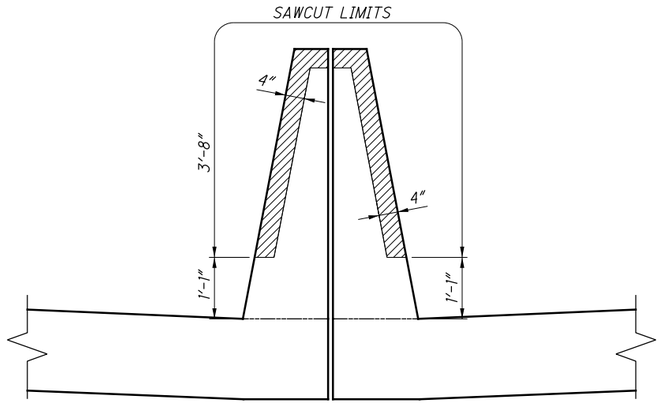
MEDIAN PARAPET ELEVATION



SECTION L-L



SECTION M-M



SAWCUT DETAILS

NOTES:

1. DIMENSION GIVEN ARE ALONG ARC OUTSIDE FACE OF BARRIER.
2. ELEVATION VIEW LOOKING AT EXTERIOR FACE OF PARAPET.
3. SEE SHEET 36/40 & 37/40 FOR ADDITIONAL APPROACH SLAB DETAILS.
4. PAYMENT FOR APPROACH SLAB PARAPETS SHALL BE INCLUDED WITH ITEM 526 REINFORCED CONCRETE APPROACH SLABS.

MINIMUM LAP LENGTHS

#6 BAR = 2'-11"

FOR INFO

RESOURCE INTERNATIONAL, INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

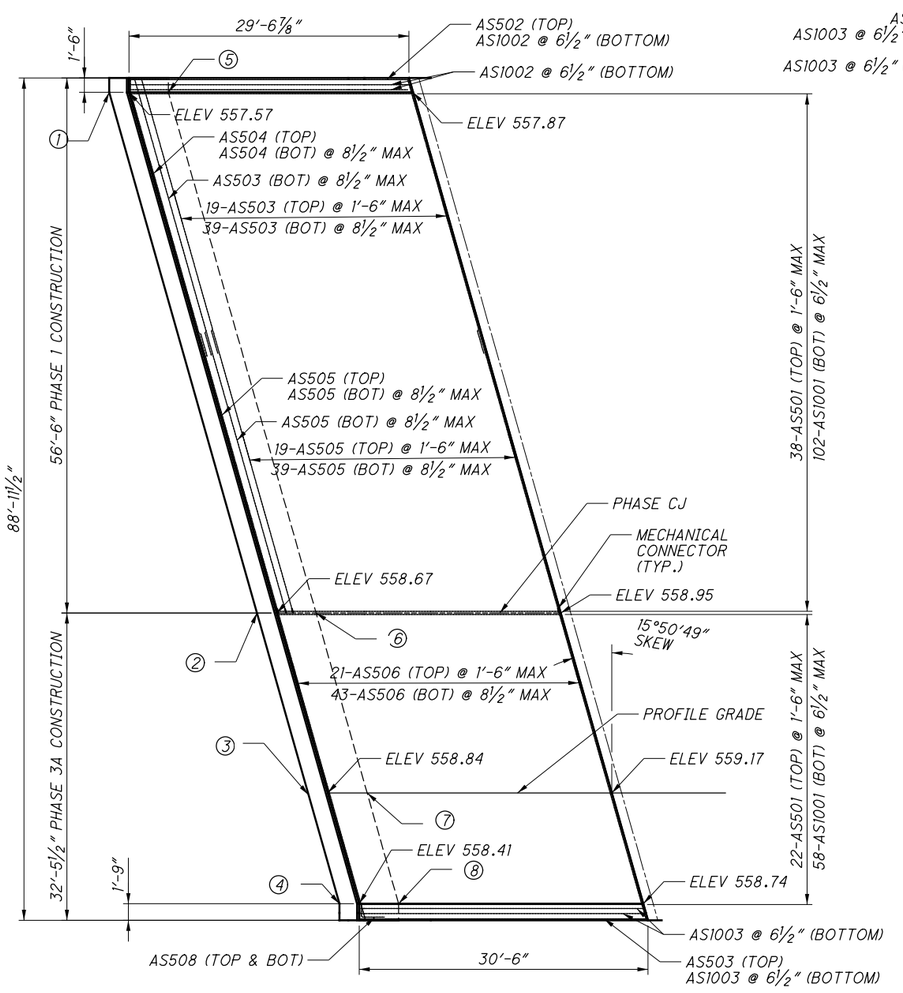
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JLM	JLM	NCK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JGM		3110184	

PARAPET DETAILS
BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

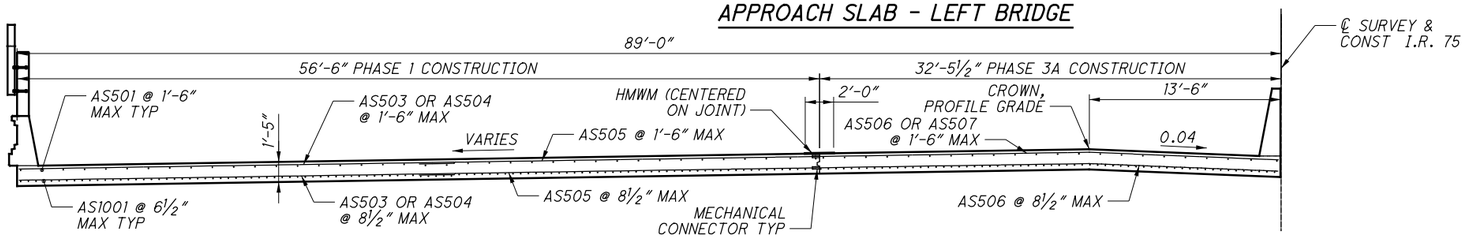
HAM-75-7.85
PID No. 77889

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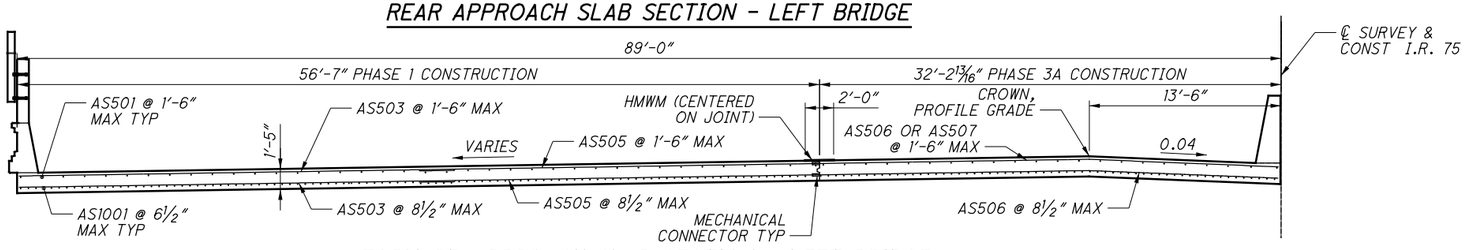
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APPROACH SLAB - LEFT BRIDGE



REAR APPROACH SLAB SECTION - LEFT BRIDGE



FORWARD APPROACH SLAB SECTION - LEFT BRIDGE

	STATION	OFFSET	ELEVATION
1	451+21.29	87.50	557.55
2	451+36.91	32.50	558.65
3	451+42.30	13.50	558.82
4	451+45.62	1.79	558.39
5	451+27.53	87.50	557.62
6	451+43.14	32.50	558.72
7	451+48.54	13.50	558.89
8	451+51.86	1.79	558.46
9	452+48.66	87.50	558.44
10	452+64.09	32.50	558.47
11	452+69.37	13.50	559.83
12	452+72.61	1.79	559.37
13	452+54.95	87.50	558.47
14	452+70.34	32.50	559.49
15	452+75.60	13.50	559.85
16	452+78.83	1.79	559.39

NOTE:

1. SEE STANDARD DRAWING AS-1-15 FOR ADDITIONAL NOTES AND DETAILS.
2. SEE STANDARD DRAWING AS-2-15 FOR ADDITIONAL SLEEPER SLAB DETAILS.

FOR INFO

RESOURCE INTERNATIONAL, INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED	DRAWN	REVIEWED	DATE
JGM	JGM	NCK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JLM		3110184	

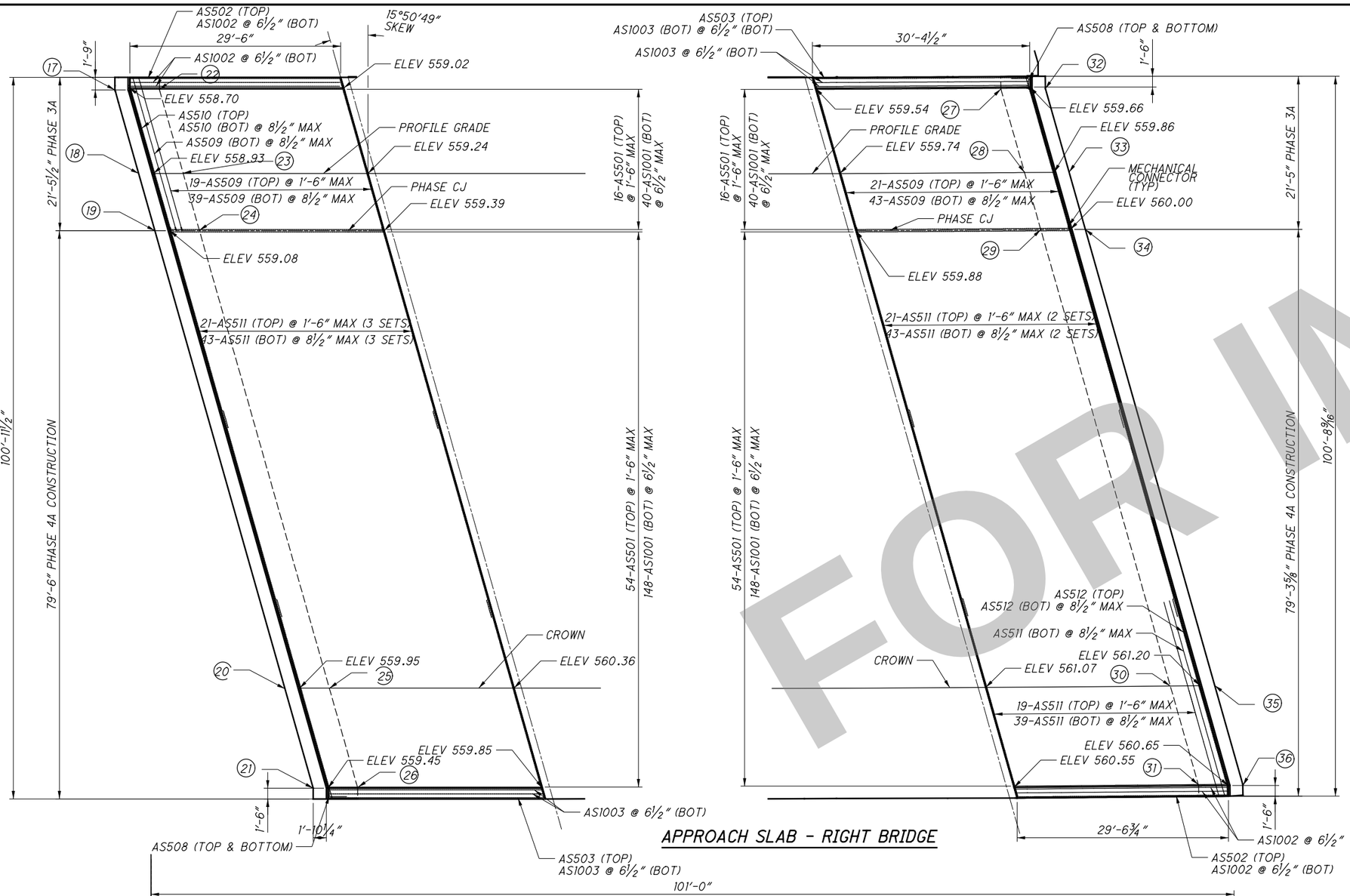
APPROACH SLAB DETAILS

BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

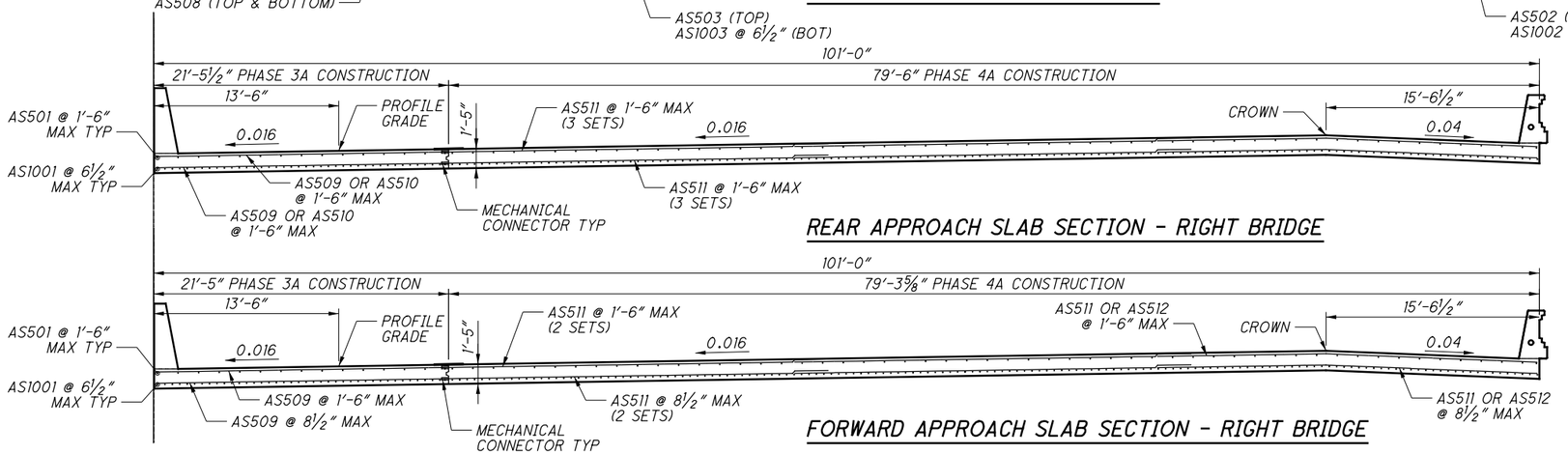
HAM-75-7.85
PID No. 77889

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APPROACH SLAB - RIGHT BRIDGE



REAR APPROACH SLAB SECTION - RIGHT BRIDGE

FORWARD APPROACH SLAB SECTION - RIGHT BRIDGE

	STATION	OFFSET	ELEVATION
17	451+46.64	1.79	558.68
18	451+49.96	13.50	558.91
19	451+52.23	21.50	559.06
20	451+70.39	85.46	559.92
21	451+74.38	99.50	559.42
22	451+52.88	1.79	558.76
23	451+56.20	13.50	558.98
24	451+58.47	21.50	559.13
25	451+76.63	85.46	560.02
26	451+80.61	99.50	559.52
27	452+73.60	1.79	559.66
28	452+76.84	13.50	559.86
29	452+79.04	21.50	559.99
30	452+96.50	85.46	561.18
31	453+00.29	99.50	560.63
32	452+79.83	1.79	559.68
33	452+83.05	13.50	559.87
34	452+85.25	21.50	560.01
35	453+02.66	85.46	561.21
36	453+06.41	99.37	560.66

NOTES:

1. SEE STANDARD DRAWING AS-1-15 FOR ADDITIONAL NOTES AND DETAILS.
2. SEE STANDARD DRAWING AS-2-15 FOR ADDITIONAL NOTES AND DETAILS.

FOR INFO

RESOURCE INTERNATIONAL, INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED	DRAWN	REVIEWED	DATE
JGM	JGM	NCK	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JLM		3110184	

APPROACH SLAB DETAILS
BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

37 / 40

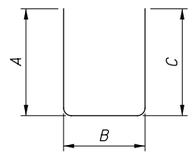
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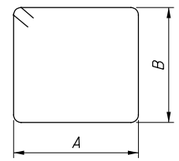
MARK	NUMBER R.A	NUMBER F.A	NUMBER TOTAL	LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS A	B	C	D	E	R	INC
ABUTMENTS													
A501	10	24	34	30'-6"	1082	ST							
A502*	10	18	28	30'-6"	891	ST							
A503*	1 SER OF 4	1 SER OF 4	2 SER OF 4	32'-7" TO 34'-4"	279	ST							7"
A504*	3 SER OF 2	3 SER OF 2	6 SER OF 2	33'-1" TO 33'-10"	419	ST							9"
A505	151	154	305	18'-2"	5777	3	6'-2"	2'-7"					
A506	7	7	14	10'-1"	147	2	3'-10"	2'-8"	3'-10"				
A507	7	7	14	4'-3"	62	2	11"	2'-8"	11"				
A508	5	5	10	10'-5"	109	2	4'-0"	2'-8"	4'-0"				
A509	5	5	10	4'-9"	50	2	1'-2"	2'-8"	1'-2"				
A510	5	5	10	10'-11"	114	2	4'-3"	2'-8"	4'-3"				
A511	5	5	10	5'-1"	53	2	1'-4"	2'-8"	1'-4"				
A512	5	5	10	11'-1"	116	2	4'-4"	2'-8"	4'-4"				
A513	5	5	10	5'-5"	57	2	1'-6"	2'-8"	1'-6"				
A514	5	5	10	11'-5"	119	2	4'-6"	2'-8"	4'-6"				
A515	5	5	10	5'-7"	58	2	1'-7"	2'-8"	1'-7"				
A516	12	5	17	11'-7"	205	2	4'-7"	2'-8"	4'-7"				
A517	12	5	17	5'-9"	102	2	1'-8"	2'-8"	1'-8"				
A518	5	12	17	11'-11"	211	2	4'-9"	2'-8"	4'-9"				
A519	5	12	17	6'-1"	108	2	1'-10"	2'-8"	1'-10"				
A520	5	13	18	12'-1"	227	2	4'-10"	2'-8"	4'-10"				
A521	92	87	179	6'-5"	1199	2	2'-0"	2'-8"	2'-0"				
A522	19	10	29	12'-5"	376	2	5'-0"	2'-8"	5'-0"				
A523	5	5	10	12'-9"	133	2	5'-2"	2'-8"	5'-2"				
A524	5		5	12'-7"	66	2	5'-1"	2'-8"	5'-1"				
A525		5	5	12'-11"	67	2	5'-3"	2'-8"	5'-3"				
A526*	2 SER OF 2	3 SER OF 2	5 SER OF 2	21'-9" TO 22'-6"	231	ST							9"
A527*	1 SER OF 4	1 SER OF 4	2 SER OF 4	21'-2" TO 22'-11"	184	ST							7"
A528	22			36'-10"	845	ST							
A529	4		4	14'-10"	62	ST							
A530	1 SER OF 3		1 SER OF 3	15'-9" TO 22'-9"	60	ST							3'-6"
A531	1 SER OF 3		1 SER OF 3	16'-5" TO 23'-5"	62	ST							3'-6"
A532	1 SER. OF 2		1 SER. OF 2	5'-4" TO 9'-2"	15	ST							1'-11"
A533	1 SER. OF 2		1 SER. OF 2	6'-0" TO 9'-9"	16	ST							1'-10 1/2"
A534	1		1	21'-3"	22	19	19'-3"	1'-11"	9"				
A535	1		1	21'-11"	23	19	19'-3"	2'-6"	1'-0"				
A536		5	5	14'-11"	78	2	6'-3"	2'-8"	6'-3"				
A537		6	6	28'-6"	178	ST							
A538	5	5	10	13'-1"	136	2	5'-4"	2'-8"	5'-4"				
A539		4	4	28'-9"	120	ST							
A540	5	5	10	13'-5"	140	2	5'-6"	2'-8"	5'-6"				
A541	5	5	10	13'-7"	142	2	5'-7"	2'-8"	5'-7"				
A542	5		5	13'-9"	72	2	5'-8"	2'-8"	5'-8"				
A543	5	5	10	13'-11"	145	2	5'-9"	2'-8"	5'-9"				
A544	5		5	14'-1"	73	2	5'-10"	2'-8"	5'-10"				
A545	5	10	15	14'-5"	226	2	6'-0"	2'-8"	6'-0"				
A546	5		5	14'-7"	76	2	6'-1"	2'-8"	6'-1"				
A547	10	5	15	14'-9"	231	2	6'-2"	2'-8"	6'-2"				
A548	8	10	18	14'-3"	268	2	5'-11"	2'-8"	5'-11"				
A549	5		5	18'-11"	99	2	8'-6"	2'-2"	8'-6"				

MARK	NUMBER R.A	NUMBER F.A	NUMBER TOTAL	LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS A	B	C	D	E	R	INC
ABUTMENTS													
A550	1		1	21'-0"	22	3	2'-2"	8'-0"					
A551	1		1	19'-10"	21	3	2'-2"	7'-5"					
A552	1 SER. OF 5		1 SER. OF 5	14'-0" TO 18'-8"	85	3	2'-2"	4'-6" TO 6'-10"					7"
A553	1 SER. OF 3		1 SER. OF 3	11'-0" TO 12'-8"	37	3	2'-2"	3'-0" TO 3'-10"					5"
A554	2		2	10'-3"	21	2	4'-2"	2'-2"	4'-2"				
A555	1 SER. OF 3		1 SER. OF 3	7'-1" TO 9'-5"	26	2	2'-7" TO 3'-9"	2'-2" TO 0	2'-7" TO 3'-9"				7"
A556	62		62	6'-5"	415	2	2'-0"	2'-8"	2'-0"				
A557	31		31	7'-3"	234	2	2'-10"	1'-10"	2'-10"				
A558		6	6	40'-0"	250	ST							
A559		5	5	10'-9"	56	2	4'-2"	2'-8"	4'-2"				
A560		5	5	4'-11"	26	2	1'-3"	2'-8"	1'-3"				
A561		5	5	19'-3"	100	2	8'-8"	2'-2"	8'-8"				
A562		1	1	22'-0"	23	3	2'-2"	8'-6"					
A563		1 SER. OF 5	1 SER. OF 5	17'-2" TO 20'-11"	99	3	2'-2"	6'-1" TO 7'-11 1/2"					5 5/8"
A564		1 SER. OF 5	1 SER. OF 5	12'-4" TO 18'-2"	74	3	2'-2"	3'-8" TO 5'-7"					5 3/4"
A565		1	1	11'-4"	12	3	2'-2"	3'-2"					
A566		1	1	11'-0"	11	3	2'-2"	3'-0"					
A567		2	2	10'-1"	21	2	4'-1"	2'-2"	4'-1"				
A568		1 SER. OF 3	1 SER. OF 3	7'-7" TO 9'-6"	27	2	2'-10" TO 3'-9 1/2"	2'-2"	2'-10" TO 3'-9 1/2"				5 3/4"
A569		2 SER. OF 3	2 SER. OF 3	18'-6" TO 27'-2"	143	ST							4'-4"
A570		1	1	11'-2"	12	ST							
A571		1	1	10'-6"	11	ST							
A572		1	1	6'-7"	7	ST							
A573		1	1	6'-0"	6	ST							
A574		1	1	25'-5"	27	19	23'-2"	2'-1 1/2"	8 1/2"				
A575		1	1	24'-9"	26	19	23'-2"	1'-6"	6"				

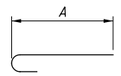
BENDING DIAGRAMS



TYPE-2



TYPE-3



TYPE-19

LEGEND:

* - REINFORCING BAR UTILIZES A MECHANICAL CONNECTOR. BAR LENGTH IS MEASURED TO THE CENTER OF THE MECHANICAL CONNECTOR. EXTRA BAR LENGTH AND/OR BAR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF MECHANICAL CONNECTOR FURNISHED.

NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE 3 DIGITS ARE USED, AND THE FIRST 2 DIGITS WHERE FOUR DIGITS ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, P601 IS A NO. 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. "R" INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD." WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

2. ALL REINFORCING STEEL TO BE EPOXY COATED.

FOR INFO

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED JGM | DRAWN JGM | REVIEWED NCK | DATE 12-15-21
CHECKED JLM | REVISED --- | STRUCTURE FILE NUMBER 3110184

REINFORCING STEEL LIST
BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

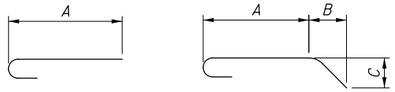
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MARK	NUMBER R.A	NUMBER F.A	NUMBER TOTAL	LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS A	B	C	D	E	R	INC
ABUTMENTS													
A801	22	34	56	31'-9"	4747	ST							
A802*	30	30	60	31'-9"	5086	ST							
A803*	1 SER. OF 4	1 SER. OF 4	2 SER. OF 4	32'-7" TO 34'-4"	715	ST							7"
A804*	2 SER. OF 4	2 SER. OF 4	4 SER. OF 4	33'-1" TO 33'-10"	1429	ST							3"
A805*	1 SER. OF 4	1 SER. OF 4	2 SER. OF 4	21'-2 3/4" TO 22'-11"	472	ST							6 3/4"
A806*	2 SER. OF 4		2 SER. OF 4	21'-9" TO 22'-6"	473	ST							3"
A807	12		12	39'-10"	1276	ST							
A808	4		4	16'-1"	172	ST							
A809*	1 SER. OF 2		1 SER. OF 2	33'-1" TO 33'-10"	179	ST							9"
A810*	1 SER. OF 2		1 SER. OF 2	21'-9" TO 22'-6"	118	ST							9"
A811	6	6	12	34'-6"	1105	ST							
A812*	14		14	29'-0"	1084	ST							
A813		4	4	33'-9"	360	ST							
A814	6	6	12	29'-0"	929	ST							
A815*		1 SER OF 2	1 SER OF 2	33'-1" TO 33'-10"	179	ST							9"
A816		4	4	37'-6"	401	ST							
A817*		14	14	29'-3"	1093	ST							
A818*		1 SER OF 2	1 SER OF 2	21'-2" TO 22'-11"	118	ST							9"
A819	8		8	6'-6"	139	ST							
A820	8		8	19'-0"	406	ST							
A821*	8		8	12'-4"	263	ST							
A822	1 SER. OF 4	1 SER. OF 4	2 SER. OF 4	6'-0" TO 6'-9"	136	ST							3"
A823	2 SER. OF 2	2 SER. OF 2	4 SER. OF 2	6'-0" TO 6'-9"	136	ST							9"
A824	1 SER. OF 4	1 SER. OF 4	2 SER. OF 4	4'-2" TO 4'-11"	97	ST							3"
A825	2 SER. OF 2	2 SER. OF 2	4 SER. OF 2	4'-2" TO 4'-11"	97	ST							9"
A826	8	8	16	25'-7"	1093	ST							
A827	8	8	16	26'-6"	1132	ST							
A828	8	8	16	4'-7"	196	ST							
A829*		8	8	12'-3"	262	ST							
A830		8	8	19'-3"	411	ST							
A831		8	8	6'-3"	134	ST							
D801	128	128	256	5'-6"	3759	18	3'-4"	1'-0"	1'-0"				
SUB-TOTAL			**45517**										

MARK	TOTAL	LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS A	B	C	D	E	R	INC
SUPERSTRUCTURE											
S401	796	35'-4"	18786	ST.							
S501	239	31'-1"	7748	16	30'-7"						
S502	358	30'-7"	11420	ST.							
S503	119	32'-9"	4065	16	32'-3"						
S504	119	32'-3"	4003	ST.							
S505	266	8'-0"	2220	16	7'-6"						
S506	1 SER. OF 17	3'-0" TO 31'-0"	301	16	2'-6" TO 30'-7"						1'-9"
S507	1 SER. OF 17	2'-6" TO 30'-7"	293	ST.							1'-9"
S508	2 SER. OF 15	4'-2" TO 28'-8"	514	ST.							1'-9"
S509	6 SER. OF 16	4'-4" TO 30'-7"	1748	ST.							1'-9"
S510	1 SER. OF 18	2'-9" TO 32'-6"	331	16	2'-3" TO 32'-0"						1'-9"
S511	1 SER. OF 18	2'-3" TO 32'-0"	322	ST.							1'-9"
S512	40	6'-0"	250	ST.							
S513	124	24'-2"	3126	16	23'-8"						
S514	124	23'-8"	3061	ST.							
S515	609	26'-5"	16782	ST.							
S516	121	26'-11"	3397	16	26'-5"						
S517	264	9'-9"	2685	16	9'-3"						
S518	1 SER. OF 13	2'-11" TO 23'-11"	182	16	2'-5" TO 23'-5"						1'-9"
S519	1 SER. OF 13	2'-5" TO 23'-5"	175	ST.							1'-9"
S520	2 SER. OF 11	4'-4" TO 21'-10"	300	ST.							1'-9"
S521	2 SER. OF 13	4'-1" TO 25'-1"	395	ST.							1'-9"
S522	2 SER. OF 13	3'-8" TO 24'-8"	384	ST.							1'-9"
S523	4 SER. OF 14	4'-10" TO 27'-7"	942	ST.							1'-9"
S524	2 SER. OF 15	3'-7" TO 28'-1"	495	ST.							1'-9"
S525	1 SER. OF 16	2'-4" TO 28'-7"	258	16	1'-10" TO 28'-1"						1'-9"
S526	1 SER. OF 16	1'-10" TO 28'-1"	250	ST.							1'-9"
SUB-TOTAL	**84433**										

BENDING DIAGRAMS



TYPE-16 TYPE-18

NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE 3 DIGITS ARE USED, AND THE FIRST 2 DIGITS WHERE FOUR DIGITS ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, P601 IS A NO. 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. "R" INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD." WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

2. ALL REINFORCING STEEL TO BE EPOXY COATED.

LEGEND:

* - REINFORCING BAR UTILIZES A MECHANICAL CONNECTOR. BAR LENGTH IS MEASURED TO THE CENTER OF THE MECHANICAL CONNECTOR. EXTRA BAR LENGTH AND/OR BAR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF MECHANICAL CONNECTOR FURNISHED.

FOR INFO

RESOURCE INTERNATIONAL, INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED JGM | DRAWN JGM | REVIEWED NCK | DATE 12-15-21
CHECKED JLM | REVISED --- | STRUCTURE FILE NUMBER 3110184

REINFORCING STEEL LIST

BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

1483
2017

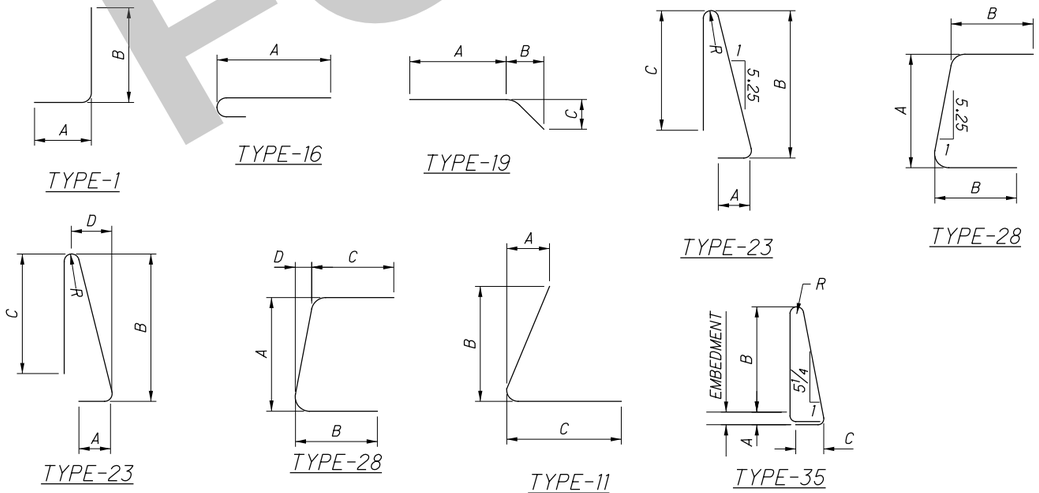
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MARK	TOTAL	LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
PARAPET											
R401	160	2'-8"	284	11	9"	1'-8"	1'-1"				
R402	120	1'-9"	140	19	11"	2"	11"				
R601	160	7'-5"	1783	41	9 1/2"	7"	1'-0"	2'-4"	1'-2 1/2"		
R602	40	4'-8"	281	1	1'-0"	3'-10"					
R603	120	7'-0"	1262	39	6"	3'-3"	3'-3"	1'-0 1/2"		2"	
R604	40	7'-6"	451	40	6"	3'-3"	3'-3"	1'-6 1/2"			
R605	160	7'-3"	1742	ST.							
R606	NOT	USED									
R607	NOT	USED									
R608	160	3'-10"	920	1	1'-0"	3'-0"					
SUB-TOTAL			6863								
TOTAL			136813								

MARK	TOTAL	LENGTH	TYPE	DIMENSIONS						
				A	B	C	D	E	R	INC
GLASS FIBER REINFORCED POLYMER (GFRP) REINFORCING STEEL										
RG401	28	13'-0"	ST							
RG402	56	30'-0"	ST							
RG403	40	13'-9"	ST							
	TOTAL	2594	FT							
RG501	72	5'-0"	6	1'-7"	1'-2"	10"				
RG502	20	30'-0"	ST							
RG503	10	13'-0"	ST							
RG504	20	13'-9"	ST							
	TOTAL	1365	FT							
RG601	44	30'-0"	ST							
RG602	22	13'-6"	ST							
RG603	48	10'-0"	ST							
RG604	8	9'-2"	ST							
	TOTAL	2170	FT							
APPROACH SLAB (FOR INFO ONLY)										
ASG401	96	16'-0"	ST							
ASG402	32	15'-0"	ST							
	TOTAL	2016	FT							
ASG501	16	4'-11"	6	1'-6"	1'-2"	10"				
ASG502	16	4'-6"	6	1'-1"	1'-2"	10"				
ASG503	32	5'-0"	6	1'-7"	1'-2"	10"				
ASG504	40	16'-0"	ST							
ASG505	16	16'-0"	ST							
	TOTAL	1207	FT							
ASG601	11	30'-0"	ST							
ASG602	40	10'-0"	ST							
ASG603	11	29'-0"	ST							
ASG604	8	9'-6"	ST							
	TOTAL	1125	FT							

MARK	TOTAL	LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
APPROACH SLABS - INFO ONLY											
AS401	144	2'-8"	256	11	9"	1'-8"	1'-1"				
AS402	96	1'-9"	112	19	11"	2"	11"				
AS501	260	29'-6"	8000	ST							
AS502	4	29'-3"	122	ST							
AS503	127	30'-0"	3974	ST							
AS504	2	30'-3"	63	19	29'-0"	1'-3"	4"				
AS505*	125	31'-0"	4042	ST							
AS506	123	33'-6"	4298	ST							
AS507	2	33'-4"	70	19	32'-1"	1'-3"	4"				
AS508	8	3'-10"	32	1	2'-5"	1'-6"					
AS509*	123	22'-1"	2833	ST							
AS510*	2	22'-0"	46	19	20'-9"	1'-3"	4"				
AS511	379	28'-8"	11333	ST							
AS512	2	28'-4"	59	19	27'-1"	1'-3"	4"				
AS513	NOT	USED									
AS514	NOT	USED									
AS515	120	9'-9"	1220	34	1'-1"	4'-5"	4'-3"	10"		2"	
AS601	144	7'-9"	1676	41	9 1/2"	7"	1'-0"	2'-6 1/2"	1'-4"		
AS602	48	4'-5"	318	1	1'-0"	3'-7"					
AS603	96	7'-0"	1009	39	6"	3'-3"	3'-3"	1'-0 1/2"		2"	
AS604	288	7'-3"	3136	ST							
AS605	208	14'-0"	4374	35	1'-3"	4'-7"	1'-6"			2 3/4"	
AS606	120	2'-9"	496	1	1'-3"	1'-8"					
AS607	48	7'-6"	541	40	6"	3'-3"	3'-3"	1'-6 1/2"			
AS608	162	3'-10"	932	1	1'-0"	3'-0"					
AS1001	696	31'-0"	92842	16	29'-7"						
AS1002	12	30'-8"	1579	16	29'-3"						
AS1003	12	31'-2"	1609	16	29'-9"						
SUB-TOTAL			144972								

BENDING DIAGRAMS



NOTES:

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2. ALL REINFORCING STEEL TO BE EPOXY COATED.

LEGEND:

* - REINFORCING BAR UTILIZES A MECHANICAL CONNECTOR. BAR LENGTH IS MEASURED TO THE CONSTRUCTION JOINT. EXTRA BAR LENGTH AND/OR BAR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF MECHANICAL CONNECTOR FURNISHED.

** - INCLUDED FOR PAYMENT WITH ITEM 511 - CLASS QC3 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN. SEE "GFRP REINFORCING" SPECIAL PROVISION FOR SPECIFICATIONS PERTAINING TO GFRP REINFORCING STEEL.

FOR INFO

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNED JGM | DRAWN JGM | REVIEWED NCK | DATE 12-15-21
CHECKED JLM | REVISED --- | STRUCTURE FILE NUMBER 3110184

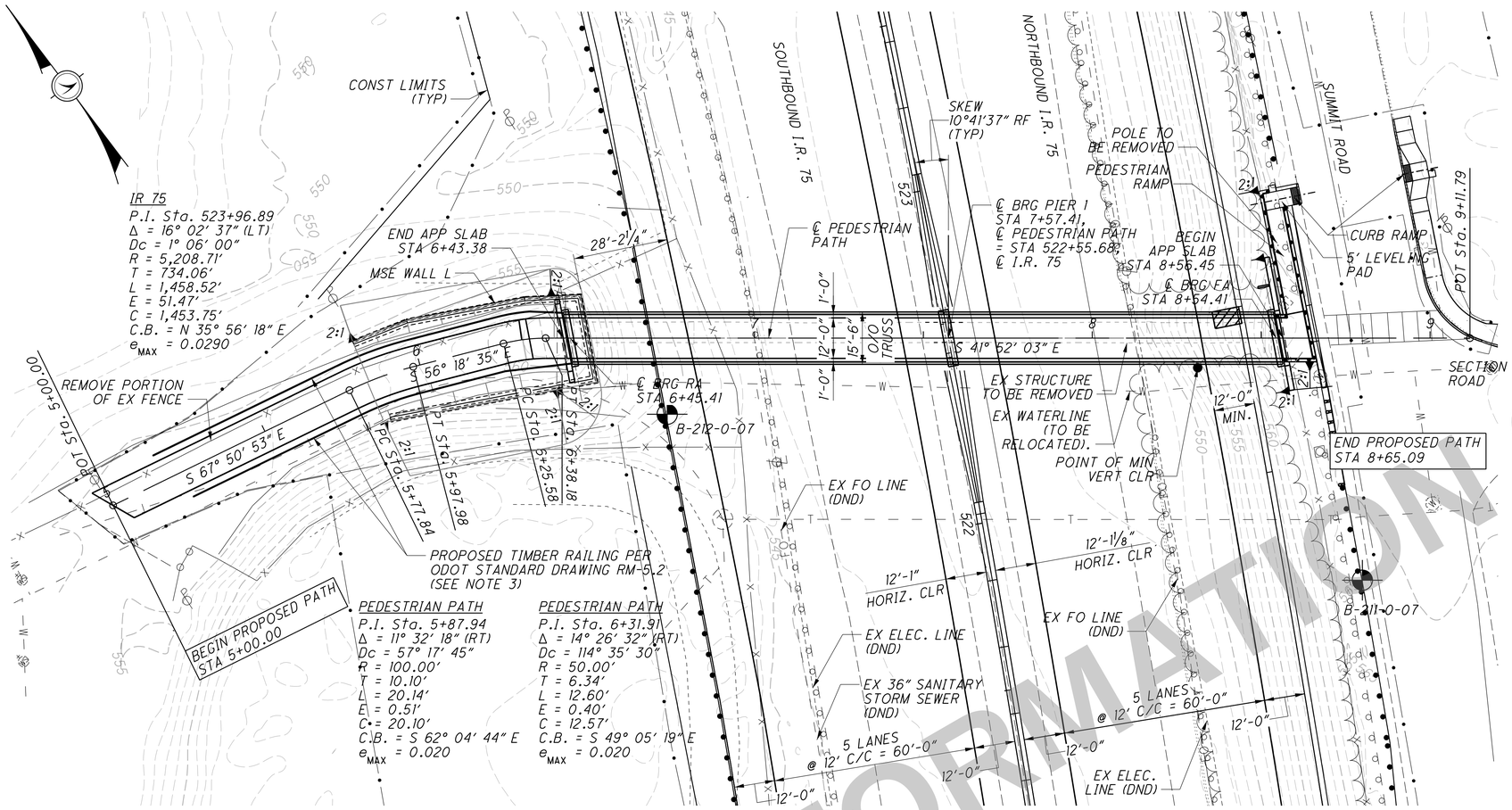
REINFORCING STEEL LIST
BRIDGE NO. HAM-75-0857
I.R. 75 OVER TOWNE STREET (CR603)

HAM-75-7.85
PID No. 77889

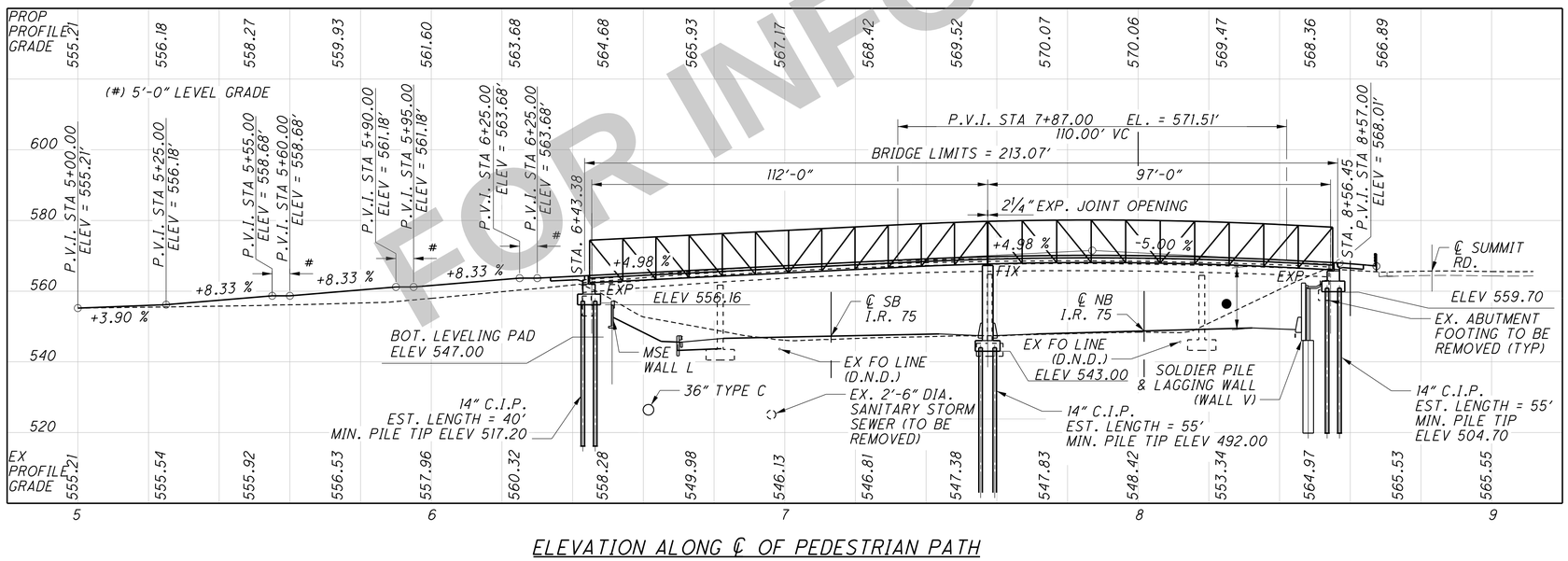
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PLAN



ELEVATION ALONG ℄ OF PEDESTRIAN PATH

BENCHMARK DATA

BM #421 STA 521+89.81, ELEV 565.44 , OFFSET 157.55 RT,
BM #422 STA 522+60.99, ELEV 554.98 , OFFSET 251.34 LT,

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET 13 / 2017

NOTES:

1. EARTHWORK LIMITS ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. SEE WALL "V" PLANS FOR DETAILS ON SOLDIER PILE WALL.
3. SEE WALL "L" PLANS FOR DETAILS ON MSE WALL.
4. SEE ROADWAY SHEET 388 / 2017 FOR ADDITIONAL RAILING DETAILS.

LEGEND

- BORING LOCATION
- 17'-6" REQUIRED MINIMUM VERTICAL CLEARANCE
  17'-10 5/8" ACTUAL MINIMUM VERTICAL CLEARANCE (NORTHBOUND)
  17'-11 3/8" ACTUAL MINIMUM VERTICAL CLEARANCE (SOUTHBOUND)
  16'-6" EXISTING MINIMUM VERTICAL CLEARANCE (NORTHBOUND)

EXISTING STRUCTURE

TYPE: FOUR SPAN CONTINUOUS COMPOSITE ROLLED STEEL (ASTM A572, PAINTED) BEAM SUPERSTRUCTURE WITH REINFORCED CONCRETE DECK SUPPORTED BY WALL TYPE PIERS AND INTEGRAL ABUTMENTS.
SPANS: 38'-0", 76'-3", 60'-0", 35'-0" C/C BEARINGS
WALKWAY: 8'-0" F/F SAFETY CURB
LOADING: 85 PSF
SKEW: NONE
DECK: REINFORCED CONCRETE
APPROACH SLABS: NONE
ALIGNMENT: TANGENT
CROWN: 1.56%
WEARING SURFACE: MONOLITHIC CONCRETE
STRUCTURE FILE NUMBER: 3110133
DATE BUILT: 1993
DISPOSITION: TO BE REMOVED

PROPOSED STRUCTURE

TYPE: TWO SPAN, PREFABRICATED STEEL PONY TRUSS WITH CONCRETE DECK SUPPORTED ON CONCRETE ABUTMENTS BEHIND MSE WALL (RA) & A SOLDIER PILE & LAGGING WALL (FA) & CONCRETE T-TYPE PIER ON CIP CONCRETE PILES.
SPANS: 112'-0", 97'-0" C/C BEARINGS
PATH: 12'-0" F/F RAILS
LOADING: 0.090 KSF PEDESTRIAN OR H15-44 (TRUCK ONLY)
SKEW: 10° 41' 37" R.F.
WEARING SURFACE: MONOLITHIC CONCRETE (MACRO-FIBERS)
APPROACH SLABS: 10'-0" LONG (AS-1-15) MODIFIED
TYPE C INSTALLATION (AS-2-15)
ALIGNMENT: TANGENT
SUPERELEVATION: 0.020 FT/FT
COORDINATES: LATITUDE N 39° 11' 58"
LONGITUDE W 84° 28' 12"

FOR INFORMATION ONLY

DESIGN AGENCY
JMT
2000 Corporate Exchange Drive, Suite 300, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
JWE	RDW	NCM	12-15-21
CHECKED	REVISED		STRUCTURE FILE NUMBER
JAD			3110125

HAMILTON COUNTY
STA. 6+43.38
STA. 8+56.45

SITE PLAN
BRIDGE NO. HAM-75-0992
PEDESTRIAN PATH BRIDGE OVER I.R. 75

HAM-75-7.85
PID No. 77889

1 / 17

1485 / 2017

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REFER TO THE FOLLOWING STANDARD DRAWINGS:

AS-1-15	DATED (REVISED)	07-17-15
AS-2-15	DATED (REVISED)	01-18-19
EXJ-2-81	DATED (REVISED)	07-19-02
VFP-1-90	DATED (REVISED)	07-20-18
RM-4.5	DATED (REVISED)	07-21-17
RM-4.6	DATED (REVISED)	07-19-13
RM-5.2	DATED (REVISED)	01-18-19

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

840	DATED	04-16-21

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2012 (4" EDITION), INCLUDING THE INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL, 2007. THIS STRUCUTRE SHALL ALSO CONFORM TO THE AASHTO LRFD GUIDE SPECIFICATIONS FOR THE DESIGN OF PEDESTRIAN BRIDGES* AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

* MODIFICATIONS FOR AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS TO INCORPORATE OR UPDATE THE GUIDE SPECIFICATIONS FOR DESIGN OF PEDESTRIAN BRIDGES, FINAL DRAFT VERSION DATED JANUARY 2009 OR THE LATEST UPDATE AVAILABLE FROM AASHTO AT TIME OF BIDDING.

OPERATIONAL IMPORTANCE

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN LOADING:

0.090 KIPS/SQ FT. UNIFORM PEDESTRIAN LOADING. CONSIDERATION OF DYNAMIC LOADING IS NOT REQUIRED.

OR

H15-44 (TRUCK ONLY)

DESIGN STRESSES

CONCRETE CLASS QC3	COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE DECK SLAB)
CONCRETE CLASS QC1/QC3	COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
REINFORCING STEEL	ASTM 615 OR A996 GRADE 60, MINIMUM YIELD STRENGTH 60 KSI
STRUCTURAL STEEL SHAPES, TUBES & PLATES	ASTM A847 GRADE 50 YIELD STRENGTH 50 KSI ASTM A242, GRADE 50 YEILD STRENGTH 50 KSI

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL AND 2½" CONCRETE COVER.

MONOLITHIC WEARING SURFACE

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1" THICK.

ITEM 202, STRUCTURE REMOVED, AS PER PLAN

THE CONTRACTOR MUST REVIEW THE STRUCTURE WHEN PREPARING HIS BID. THE CONTRACTOR WILL REVIEW THE CONDITION OF THE STRUCUTURE TO DETERMINE WHAT DEBRIS WILL FALL FROM THE STRUCTURE DURING REMOVAL. THE CONTRACTOR WILL DETERMINE THE CORRESPONDING COST TO CLEAN UP ANY AND ALL DEBRIS WHICH FALLS FROM THE STRUCTURE DURING ANY REMOVAL OPERATION. THE COST TO CLEAR AND CLEAN UP ALL DEBRIS DURING REMOVAL SHALL BE INCLUDED WITH THE BID FOR THIS ITEM OF WORK. NO ADDITIONAL COST WILL BE RECOGNIZED TO CLEAN DEBRIS RESULTING FROM THE STRUCTURE REMOVAL OPERATION.

PILES DRIVEN TO TIP ELEVATION FOR PILE/SOIL SETUP:

THE ULTIMATE BEARING VALUE IS 179 KIPS PER PILE FOR THE REAR ABUTMENT PILES. THE ULTIMATE BEARING VALUE IS 116 KIPS PER PILE FOR THE FORWARD ABUTMENT PILES. THE ULTIMATE BEARING VALUE IS 234 KIPS PER PILE FOR THE PIER PILES. PART OF THE ULTIMATE BEARING VALUE WILL BE ACHIEVED THROUGH PILE/SOIL SETUP, WHICH IS A TIME-DEPENDENT INCREASE IN RESISTANCE THAT OCCURS IN SOME SOILS.

NOTIFY THE ENGINEER AT LEAST 5 DAYS BEFORE DRIVING PILES SO THAT THE ENGINEER CAN NOTIFY THE DISTRICT GEOTECHNICAL ENGINEER, THE OFFICER OF CONSTRUCTION ADMINISTRATION, AND THE OFFICE OF STRUCTURAL ENGINEERING.

DRIVE THE FIRST TWO PILES IN EACH SUBSTRUCTURE TO THE TIP ELEVATION GIVEN BELOW FOR THE SUBSTRUCTURE. DRIVE THE THIRD AND FOURTH PILES TO 75% AND 85% OF THE LENGTH OF THE FIRST TWO PILES. PERFORM DYNAMIC LOAD TESTING ON ALL FOUR PILES WHILE DRIVING. AFTER DRIVING THE FOUR PILES, CEASE ALL DRIVING OPERATIONS AT THE SUBSTRUCTURE FOR A MINIMUM OF 7 DAYS. INCLUDE THE WAITING PERIOD AS A SEPARATE ACTIVITY IN THE PROGRESS SCHEDULE. AFTER THE WAITING PERIOD, PERFORM PILE RESTRIKES ON THE FOUR PILES (TWO RESTRIKE ITEMS). SUBMIT ALL TEST RESULTS TO THE ENGINEER. THE ENGINEER WILL REVIEW THE TEST RESULTS AND ESTABLISH DRIVING CRITERIA FOR THE PILING IN THE SUBSTRUCTURE WITH THE ASSISTANCE OF THE DISTRICT GEOTECHNICAL ENGINEER, THE OFFICE OF CONSTRUCTION ADMINISTRATION, AND THE OFFICE OF STRUCTURAL ENGINEERING. THE DRIVING CRITERIA WITH PILE SETUP SHALL BE PEFORMED FOR THE FIRST STAGE OF BRIDGE CONSTRUCTION. THE CONTRACTOR SHALL NOT ORDER PILES FOR SUBSEQUENT PHASES UNTIL AFTER THE DRIVING CRITERIA HAS BEEN ESTABLISHED WITH SETUP. THE DEPARTMENT WILL ADJUST THE FURNISHED PILE QUANTITES BASED ON THE RESTRIKE TEST RESULTS.

IF THE DYNAMIC LOAD TESTING INDICATES A PILE HAS ACHIEVED THE ULTIMATE BEARING VALUE ABOVE THE TIP ELEVATION DURING THE INITIAL DRIVING (BEFORE THE WAITING PERIOD), STOP DRIVING AND NOTIFY THE ENGINEER. IF THE RESTRIKE TEST RESULTS ON THE FOUR PILES INDICATE THAT A PILE DID NOT ACHIEVE THE REQUIRED ULTIMATE BEARING VALUE, DRIVE THE PILE TO THE ESTABLISHED DRIVING CRITERIA.

PILES DRIVEN TO TIP ELEVATION FOR PILE/SOIL SETUP (CONT.):

SPLICING OF THE PILES BEYOND THE ESTIMATED LENGTH PROVIDED IN THE PLANS WILL BE PAID BY THE DEPARTMENT UNDER CMS 109.05 WITH A NEGOTIATED PRICE PER SPLICE.

REAR ABUTMENT
6 PILES 60 FEET LONG, ORDER LENGTH
TIP ELEVATION, 503.50 FEET
2 DYNAMIC LOAD TESTING ITEMS
2 RESTRIKE

PIER 1
6 PILES 70 FEET LONG, ORDER LENGTH
TIP ELEVATION, 479.00 FEET
2 DYNAMIC LOAD TESTING ITEMS
2 RESTRIKE

FORWARD ABUTMENT
10 PILES 60 FEET LONG, ORDER LENGTH
TIP ELEVATION, 506.80 FEET
2 DYNAMIC LOAD TESTING ITEMS
2 RESTRIKE

ITEM 511 - CLASS QC3 CONCRETE, MISC: CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN:

THIS ITEM INCLUDES ALL LABOR AND MATERIAL TO FORM AND PLACE THE BRIDGE DECK AND CURBS ALONG THE BRIDGE DECK. PAYMENT INCLUDES REINFORCING STEEL PAID FOR AS ITEM 511 CLASS QC3 CONCRETE, MISC: CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN.

THIS ITEM MODIFIES THE STANDARD 511 CONCRETE FOR STRUCTURES SPECIFICATION TO INCLUDE MACRO-SYNTHETIC, AND CORROSION INHIBITORS INTO THE SUPERSTRUCTURE CONCRETE. THIS ITEM SHALL CONFORM TO CMS 511 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

PROVIDE MATERIALS CONFORMING TO 511.02 EXCEPT AS MODIFIED BELOW:

PORTLAND CEMENT CONCRETE	499.03, CLASS QC3 MEETING A DESIGN STRENGTH OF 4,500 PSI, WITH MACRO-SYNTHETIC FIBERS WITH MODIFICATION PER 511.02
FIBERS FOR CONCRETE	ASTM C 1116, TYPE III
CORROSION INHIBITOR	515.15

THE CLASS QC3 CONCRETE FOR THE SUPERSTRUCTURE SHALL MEET THE FOLLOWING CRITERIA:
WATER/CEMENT RATIO = 0.40 MAXIMUM; MINIMUM 4 LBS/CY MACRO-SYNTHETIC FIBERS (1.5 IN. MIN. TO 2.5 IN. MAX.) MEETING ASTM C1116 TYPE III SHALL BE ADDED TO THE MIX.

MIX SHALL INCLUDE A MIGRATING CORROSION INHIBITOR AS MANUFACTURED BY AN APPROVED SUPPLIER LISTED ON ODOT'S QUALIFIED APPROVED SUPPLIERS, ITEM 515.15. THE DOSAGE RATE LISTED ON THE ODOT QUALIFIED APPROVED SUPPLIERS LIST WILL APPLY.

ITEM 511 - CLASS QC3 CONCRETE, MISC: CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN (CONT):

THE MACRO-SYNTHETIC FIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO "BALLING" OCCURS. UPON INSPECTION OF THE MIX AT THE TIME OF PLACEMENT, IF ANY "BALLING" OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR. IT IS IMPORTANT TO FOLLOW INDUSTRY STANDARDS AND ASTM SPECIFICATIONS ON THE PREMIXING OF THE CEMENT, AGGREGATE, AND MACRO-SYNTHETIC FIBERS PRIOR TO THE ADDITION OF WATER AND ADMIXTURES. PROVIDE MACRO-SYNTHETIC FIBERS THAT ARE MONOFILAMENT FIBERS MADE FROM VIRGIN POLYPROPYLENE, POLYETHYLENE, OR CO-POLYMERS THAT ARE INERT TO ALKALI ATTACK. ENSURE THE MACRO-SYNTHETIC FIBERS HAVE A MINIMUM TENSILE STRENGTH OF 70 KSI, A MINIMUM MODULUS OF ELASTICITY OF 800 KSI, A MINIMUM FILAMENT DIAMETER OF 0.012 INCHES, AND ASPECT RATIO BETWEEN 60 AND 100, AND ARE BETWEEN 1.0 AND 2.5 INCHES IN LENGTH. STORE THE MACRO-SYNTHETIC FIBERS ACCORDING TO THE MANUFACTURE'S RECOMMENDATION AND KEEP THE MATERIAL FREE FROM DUST, DIRT AND MOISTURE.

USE A MINIMUM DOSAGE RATE OF MACRO-SYNTHETIC FIBERS OF 4.0 LBS/CY OF CONCRETE. DETERMINE THE FINAL PROPOSED DOSAGE RATE THROUGH THE MIX TESTING. ENSURE THE FIBER REINFORCED CONCRETE MEETS OR EXCEEDS A MINIMUM EQUIVALENT FLEXURAL STRENGTH RATIO OF 25% ACCORDING TO ASTM C 1609. ENSURE THE FINAL PROPOSED MIX IS WORKABLE AND ABLE TO BE PRODUCED SUCH THAT BALLING OR CLUMPING OF THE FIBERS IS NOT A PROBLEM AS DETERMINED BY THE ENGINEER. UTILIZE A LABORATORY REGULARLY INSPECTED BY THE CEMENT AND CONCRETE REFERENCE LABORATORY (CCRL) OF THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, OR OTHER APPROVED REFERENCE LABORATORY, TO PERFORM THE TESTING. BEFORE USE, SUBMIT DOCUMENTATION TO THE PROJECT ENGINEER CERTIFYING BOTH THE MACRO-SYNTHETIC FIBERS AND THE MIX MEET OR EXCEED THE REQUIRED PROPERTIES. SAMPLING WILL BE ALLOWED FOR TESTING PURPOSES. A DEMONSTRATION OF THE MIX PRODUCTION OR TRIAL MIX, MAY BE REQUIRED BY THE ENGINEER PRIOR TO PLACING ANY OF THE MIX ON THE PROJECT.

THE BATCH WEIGHTS SHALL BE CORRECTED TO COMPENSATE FOR THE MOISTURE CONTAINED IN THE AGGREGATE AT THE TIME OF USE. A CHEMICAL ADMIXTURE (705.12, TYPE A OR D) SHALL BE USED.

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT THE CORROSION INHIBITOR AND ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CORROSION INHIBITOR IS SUGGESTED TO BE A MCI PRODUCT BY CORTEC OR AN APPROVED EQUAL FROM THE QUALIFIED PRODUCTS LIST. THE CONCRETE SUPPLIERS CHOICE OF ONE OF THESE CORROSION INHIBITORS DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS. PLEASE BE ADVISED THAT SOME PRODUCTS ON THE LIST EFFECT THE DELIVERED MIX PROPERTIES GREATLY WHILE OTHER PRODUCTS DO NOT.

APPROACH SLABS, DIAPHRAGMS, AND BRIDGE RAILING CONCRETE (WHEN APPLICABLE) ARE TO USE THE SAME MIX DESIGN AS THE BRIDGE DECK. THE CONTRACTOR SHOULD BE ADVISED THAT CONCRETE RETARDING AGENTS MAY NEED TO BE ADDED TO OFFSET THE EFFECTS OF THE MIGRATING CORROSION INHIBITOR SELECTED. USE SELF-COMPACTING CONCRETE ON DECORATIVE RAILING SIMILAR TO TEXAS RAILING AND MACRO-SYNTHETIC CONCRETE PER THIS SPECIFICATION ON TRADITIONAL CONCRETE RAILING WHEN APPLICABLE.

THE PLACING OF THE DECK AND THE APPROACH SLABS IN THE SAME CONCRETE POUR IS NOT PERMITTED.

FOR INFORMATION ONLY

DESIGN AGENCY
JMT
2000 Corporate Exchange Drive, Suite 200, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
JWE	RT	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAD		3110125	

GENERAL NOTES
BRIDGE NO. HAM-75-0992
PEDESTRIAN PATH BRIDGE OVER I.R. 75

HAM-75-7.85
PID No. 77889

1486
2017

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ITEM 511 - CLASS QC3 CONCRETE, MISC: CONCRETE WITH QC/QA, SUBSTRUCTURE, AS PER PLAN:

THIS ITEM MODIFIES THE STANDARD 511 CONCRETE FOR STRUCTURES SPECIFICATION TO INCLUDE MACRO-SYNTHETIC, AND CORROSION INHIBITORS INTO THE SUBSTRUCTURE CONCRETE. THIS ITEM SHALL CONFORM TO CMS 511 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

PROVIDE MATERIALS CONFORMING TO 511.02 EXCEPT AS MODIFIED BELOW:

PORTLAND CEMENT CONCRETE	499.03, CLASS QC3 MEETING A DESIGN STRENGTH OF 4,000 PSI, WITH MACRO-SYNTHETIC FIBERS WITH MODIFICATION PER 511.02
FIBERS FOR CONCRETE	ASTM C 1116, TYPE III
CORROSION INHIBITOR	515.15

THE CLASS QC3 CONCRETE FOR THE SUBSTRUCTURE SHALL MEET THE FOLLOWING CRITERIA:
WATER/CEMENT RATIO = 0.40 MAXIMUM; MINIMUM 4 LBS/CY MACRO-SYNTHETIC FIBERS (1.0 IN. MIN. TO 2.5 IN. MAX.) MEETING ASTM C1116 TYPE III SHALL BE ADDED TO THE MIX.

MIX SHALL INCLUDE A MIGRATING CORROSION INHIBITOR AS MANUFACTURED BY AN APPROVED SUPPLIER LISTED ON ODOT'S QUALIFIED APPROVED SUPPLIERS, ITEM 515.15. THE DOSAGE RATE LISTED ON THE ODOT QUALIFIED APPROVED SUPPLIERS LIST WILL APPLY.

THE MACRO-SYNTHETIC FIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO "BALLING" OCCURS. UPON INSPECTION OF THE MIX AT THE TIME OF PLACEMENT, IF ANY "BALLING" OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR. IT IS IMPORTANT TO FOLLOW INDUSTRY STANDARDS AND ASTM SPECIFICATIONS ON THE PREMIXING OF THE CEMENT, AGGREGATE, AND MACRO-SYNTHETIC FIBERS PRIOR TO THE ADDITION OF WATER AND ADMIXTURES. PROVIDE MACRO-SYNTHETIC FIBERS THAT ARE MONOFILAMENT FIBERS MADE FROM VIRGIN POLYPROPYLENE, POLYETHYLENE, OR CO-POLYMERS THAT ARE INERT TO ALKALI ATTACK. ENSURE THE MACRO-SYNTHETIC FIBERS HAVE A MINIMUM TENSILE STRENGTH OF 70 KSI, A MINIMUM MODULUS OF ELASTICITY OF 800 KSI, A MINIMUM FILAMENT DIAMETER OF 0.012 INCHES, AND ASPECT RATIO BETWEEN 60 AND 100, AND ARE BETWEEN 1.0 AND 2.5 INCHES IN LENGTH. STORE THE MACRO-SYNTHETIC FIBERS ACCORDING TO THE MANUFACTURE'S RECOMMENDATION AND KEEP THE MATERIAL FREE FROM DUST, DIRT AND MOISTURE.

USE A MINIMUM DOSAGE RATE OF MACRO-SYNTHETIC FIBERS OF 4.0 LBS/CY OF CONCRETE. DETERMINE THE FINAL PROPOSED DOSAGE RATE THROUGH THE MIX TESTING. ENSURE THE FIBER REINFORCED CONCRETE MEETS OR EXCEEDS A MINIMUM EQUIVALENT FLEXURAL STRENGTH RATIO OF 25% ACCORDING TO ASTM C 1609. ENSURE THE FINAL PROPOSED MIX IS WORKABLE AND ABLE TO BE PRODUCED SUCH THAT BALLING OR CLUMPING OF THE FIBERS IS NOT A PROBLEM AS DETERMINED BY THE ENGINEER. UTILIZE A LABORATORY REGULARLY INSPECTED BY THE CEMENT AND CONCRETE REFERENCE LABORATORY (CCRL) OF THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, OR OTHER APPROVED REFERENCE LABORATORY, TO PERFORM THE TESTING. BEFORE USE, SUBMIT DOCUMENTATION TO THE PROJECT ENGINEER CERTIFYING BOTH THE MACRO-SYNTHETIC FIBERS AND THE MIX MEET OR EXCEED THE REQUIRED PROPERTIES. SAMPLING WILL BE ALLOWED FOR TESTING PURPOSES. A DEMONSTRATION OF THE MIX PRODUCTION OR TRIAL MIX, MAY BE REQUIRED BY THE ENGINEER PRIOR TO PLACING ANY OF THE MIX ON THE PROJECT.

THE BATCH WEIGHTS SHALL BE CORRECTED TO COMPENSATE FOR THE MOISTURE CONTAINED IN THE AGGREGATE AT THE TIME OF USE. A CHEMICAL ADMIXTURE (705.12, TYPE A OR D) SHALL BE USED. THE ENGINEER CAN REDUCE THE BATCH LOAD SIZE AT ANY TIME AS NEEDED TO CORRECT/IMPROVE CONCRETE QUALITY.

ITEM 511 - CLASS QC3 CONCRETE, MISC: CONCRETE WITH QC/QA, SUBSTRUCTURE, AS PER PLAN (CONT):

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT THE CORROSION INHIBITOR AND ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CORROSION INHIBITOR IS SUGGESTED TO BE A MCI PRODUCT BY CORTEC OR AN APPROVED EQUAL FROM THE QUALIFIED PRODUCTS LIST. THE CONCRETE SUPPLIER'S CHOICE OF ONE OF THESE CORROSION INHIBITORS DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS. PLEASE BE ADVISED THAT SOME PRODUCTS ON THE LIST EFFECT THE DELIVERED MIX PROPERTIES GREATLY WHILE OTHER PRODUCTS DO NOT.

THE CONTRACTOR SHOULD BE ADVISED THAT CONCRETE RETARDING AGENTS MAY NEED TO BE ADDED TO OFFSET THE EFFECTS OF THE MIGRATING CORROSION INHIBITOR SELECTED.

ITEM 511, CLASS QC3 CONCRETE, MISC: SIDEWALK, AS PER PLAN:

THE PAYMENT LIMITS FOR THE SIDEWALK ARE SHOWN ON THE PLANS. THIS ITEM SHALL CONFORM TO CMS 511 WITH THE SAME CONDITIONS AND REVISIONS TO THE CONCRETE MIX AS DESCRIBED IN ITEM 511, CLASS QC3 CONCRETE, BRIDGE DECK, AS PER PLAN. PAYMENT INCLUDES CONCRETE, REINFORCING STEEL AND AGGREGATE BASE ALL PAID FOR AS ITEM 511 CLASS QC3 CONCRETE, SIDEWALK, AS PER PLAN.

ITEM 513-STRUCTURAL STEEL, MISC.: PREFABRICATED BRIDGE

1.0 GENERAL

1.1 DESCRIPTION: THIS ITEM SHALL CONSIST OF FURNISHING, TRANSPORTING, ERECTING AND INSTALLING IN PLACE THE COMPLETE PEDESTRIAN BRIDGE SUPERSTRUCTURE, INCLUDING ALL FRAMING, RAILING, PAINTING, FLOOR SYSTEM, BEARINGS, ANCHOR DOWELS, AND ALL INCIDENTALS, IN ACCORDANCE WITH THE DETAILS SHOWN IN THE PLANS AND THESE SPECIFICATIONS.

1.2 THESE SPECIFICATIONS ARE FOR A FULLY ENGINEERED CLEAR SPAN BRIDGE SPAN BRIDGE OF WELDED STEEL CONSTRUCTION AND SHALL BE REGARDED AS MINIMUM STANDARDS FOR DESIGN AND CONSTRUCTION. ALL STEEL WORK SHALL BE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF ODOT CMS SECTION 513.

1.3 THE DISTANCE FROM THE TOP OF THE FINISHED DECK TO THE BOTTOM OF THE BOTTOM CHORD OF THE TRUSS SHALL PROVIDE A MINIMUM VERTICAL CLEARANCE OF 17'-6" OVER I.R. 75.

2.0 DIMENSIONS

2.1 WIDTH: INSIDE CURB TO CURB OF THE RAILING SHALL BE 12 FEET, 0 INCHES. THE INSIDE TO INSIDE OF THE TRUSS SHALL BE 14 FEET, 2 INCHES.

2.2 LENGTH: BRIDGE CENTER TO CENTER BEARING LENGTH IS TO BE 112 FEET, 0 INCHES AND 97 FEET, 0 INCHES. THE OUT TO OUT OF THE TRUSS WIDTH SHALL BE 15 FEET 6 INCHES TO ACCOMMODATE THE PROPOSED ABUTMENTS AND PIER.

3.0 DESIGN

3.1 DEFLECTION: THE VERTICAL DEFLECTION OF THE PEDESTRIAN BRIDGE DUE TO PEDESTRIAN LIVE LOAD SHALL NOT EXCEED 1/500 OF THE SPAN LENGTH.
3.2 A 1 KIP POINT LOAD SHOULD BE POSITIONED SO AS TO PRODUCE THE MAXIMUM STRESS IN THE STAY IN PLACE DECK.
3.3 A DESIGN WIND PRESSURE OF 31 POUNDS/SF SHALL BE USED IN THE DESIGN OF PREFABRICATED BRIDGE TO ACCOMMODATE VANDAL PROTECTION FENCE TO BE INSTALLED BY THE CONTRACTOR.

4.0 MATERIALS

4.1 THE PEDESTRIAN BRIDGE SHALL BE FABRICATED USING PAINTED STEEL CONSISTING OF DOMESTIC ASTM A-709 GRADE 50 FOR PLATES AND STRUCTURAL SHAPES AND ASTM A606 OR ASTM A847 FOR TUBULAR SECTIONS. MINIMUM YIELD STRENGTH SHALL BE 50,000 PSI.
4.2 ALL BOLTS IN THE PAINTED SECTIONS SHALL BE ASTM A325 TYPE 1, GALVANIZED.

5.0 FABRICATION

5.1 THE BRIDGE ENGINEER SHALL SUBMIT TO THE ENGINEER, SHOP DRAWINGS AND STRUCTURAL CALCULATIONS PREPARED ACCORDING TO ODOT CMS SECTION 513.
5.2 THE BRIDGE FABRICATOR SHALL BE LEVEL 6 CERTIFIED.
5.3 PROVIDE WEEP HOLES AT LOW POINTS WHERE WATER COLLECTION INSIDE OF STRUCTURAL TUBING IS POSSIBLE DURING CONSTRUCTION AND/OR SERVICE.

6.0 FINISHES

6.1 THE PAINT SYSTEM SHALL CONSIST OF A 3-COAT GREEN, ODOT APPROVED PAINT SYSTEM. ALL EXPOSED STEEL SURFACES SHALL RECIEVE SHOP APPLIED PRIMER, INTERMEDIATE, AND FINISH COATS. THE FINISH COAT SHALL MEET FEDERAL STANDARD 595C COLOR #14277.
6.2 ALL BLAST CLEANING SHALL BE DONE IN A DEDICATED OSHA APPROVED INDOOR FACILITY OWNED AND OPERATED BY THE BRIDGE FABRICATOR. BLAST OPERATIONS AHALL USE BEST MANAGEMENT PRACTICES AND EXERCISE ENVIRONMENTALLY FRIENDLY BLAST MEDIA RECOVERY SYSTEMS.
ALL EXPOSED SURFACES OF STEEL TO BE PAINTED SHALL BE BLAST CLEANED IN ACCORDANCE WITH THE APPROPRIATE SECTION OF THE STEEL STRUCTURES PAINTING COUNCIL SURFACE PREPARATION SPECIFICATIONS AS RECOMMENDED BY THE PAINT MANUFACTURER.
THE FABRICATOR MUST HOLD A "SOPHISTICATED PAINT ENDORSEMENT" AS SET FORTH BY AISC. BRIDGE FABRICATOR MUST EMPLOY A SSPC BCI LEVEL 1 OR HIGH.
6.3 TO PREVENT RUST RUNS ON PAINTED STRUCTURES, OPEN ENDS OF ALL TUBES SHALL BE CAPPED AND SEAL WELDED. WHEREVER PRACTICAL , MEMBER END CONNECTIONS AND STEEL ON STEEL CONTACT SURFACES, SUCH AS STRINGER TO FLOOR BEAM CONNECTIONS, SHALL BE WELDED ALL AROUND. LONG SEAMS BETWEEN MEMBERS OR ANY SEAM WHICH CANNOT BE PRACTICALLY WELDED SHALL BE CAULKED.
6.4 ALL PAINTERS SHALL BE CERTIFIED BY THE APPROPRIATE PAINT MANUFACTURER FOR PROPER HANDLING, MIXING, THINNING (IF REQUIRED) AND APPLICATION OF THE PAINT SYSTEM IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. THE PAINTERS SHALL BE CERTIFIED BY THE DOT IN THE STATE IN WHICH BRIDGE IS MANUFACTURED.
6.5 THE CONTACTOR SHALL CLEAN AND PAINT THE AREAS OF THE BRIDGE DAMAGED DURING THE INSTALLATION, PER CMS 514. ALL COSTS ASSOCIATED WITH THIS REQUIREMENT SHALL BE CONSIDERED INCIDENTAL TO ITEM 513, STRUCTURAL STEEL, MISC,: PREFABRICATED BRIDGE.

7.0 SHIPPING STORAGE AND ERECTION

7.1 SHALL BE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF ODOT CMS SECTION 513.

7.2 THE CONTRACTOR SHALL SUBMIT ACCESS PLAN(S) AND ERECTION PLANS TO THE OWNER IN WRITING AT LEAST 30 DAYS PRIOR TO DELIVERY OF THE BRIDGE.

7.3 THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING ACCESS TO ALL WORK AREAS WITHIN THE LIMIT OF WORK. PROVISION OF ACCESS SHALL INCLUDE, BUT NOT LIMITED TO, CLEARING, GRUBBING, EARTHWORK, TEMPORARY ROADWAYS, SEDIMENT AND EROSION CONTROL, RESTORATIONOF DISTURBED AREAS, SEEDING AND LANDSCAPING. SUBMIT ANY RESTORATION PLANS TO THE ENGINEER FOR APPROVAL PRIOR TO THE BEGINNING OF ANY WORK.

7.4 THE CONTRACTOR SHALL COORDINATE WITH THE BRIDGE FABRICATOR WRITTEN INSTRUCTION AND PROCEDURES TO OBTAIN ADEQUATE EQUIPMENT TO ERECT, LIFT AND INSTALL THE BRIDGE. THIS INCLUDES SPREADER BEAMS ETC. AS REQUIRED TO ENSURE THAT NO PORTION OF THE BRIDGE IS OVERSTRESSED DURING INSTALLATION.

7.5 THE CONTRACTOR SHALL COORDINATE THE ANCHOR BOLT SIZE, TYPE, AND LOCATION WITH THE BRIDGE MANUFACTURER BEFORE CONSTRUCTING THE ABUTMENTS OR PIERS. ADDITIONALLY, THE CONTRACTOR SHALL COORDINATE THE STRUCTURE DEPTH AT THE CENTERLINE OF THE BEARINGS WITH THE ABUTMENT AND PIER DRAWINGS. ANY CHANGES NECESSITATED BY DEVIATIONS IN STRUCTURE DEPTH SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AS NOTED ON THE CONTRACT PLANS.

8.0 BASIS OF PAYMENT

8.1 THIS WORK SHALL BE PAID FOR AT THE LUMP SUM PRICE BID FOR ITEM 513-STRUCTURAL STEEL, MISC.: PREFABRICATED BRIDGE AS SET FORTH IN THESE NOTES AND IN THE PLANS, PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITHTHE CONTRACT DOCUMENTS AND TO THE SATISFACTION OF THE ENGINEER.

8.2 THE OWNER SHALL NOT BE RESPONSIBLE FOR ADDED EXPENSE DUE TO UNAVOIDABLE DELAYS SUCH AS INCLEMENT WEATHER, DELAYS IN PERMITS, RE-ROUTING BY PUBLIC AGENCIES, ETC.

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DESIGN AGENCY
2000 Corporate Exchange Drive, Suite 200, Columbus, OH 43231
DESIGNED JWE | DRAWN RT | CHECKED JAD | REVIEWED NCM | DATE 12-15-21
REVISED | STRUCTURE FILE NUMBER 3110125

GENERAL NOTES
BRIDGE NO. HAM-75-0992
PEDESTRIAN PATH BRIDGE OVER I.R. 75

HAM-75-7.85
PID No. 77889

1487
2017

ABBREVIATIONS

APPROACH = APP
BEARING = BRG
BENCHMARK = BM
BOTTOM = BOT
CAST IN PLACE = CIP
CENTER TO CENTER = C/C
CLEAR = CLR
CONSTRUCTION = CONST
CONSTRUCTION JOINT = CJ
DIAMETER = DIA
DO NOT DISTURB = DND
EACH FACE = EF
ELECTRIC = ELEC.
ELEVATION = ELEV
EQ = EQUAL
EXISTING = EX
EXPANSION = EXP
FACE TO FACE = F/F
FIBER OPTIC = FO
FOOTING = FTG
FORWARD ABUTMENT = FA
INTERSTATE ROUTE 75 = I.R. 75
LEFT = LT
MAXIMUM = MAX
MECHANICALLY STABILIZED EARTH = MSE
MINIMUM = MIN
MISCELLANEOUS = MISC
NEAR FACE = NF
NON-PERFORATED CORRUGATED PLASTIC PIPE = NPCPP
NUMBER = NO
OUT TO OUT = O/O
OUTSIDE DIAMETER = OD
PAVEMENT = PVMT
PERFORATED CORRUGATED PLASTIC PIPE = PCPP
PORTABLE CONCRETE BARRIER = PCB
PREFORMED EXPANSION JOINT FILLER = PEJF
PROFILE GRADE = PG
PROPOSED = PROP
REAR ABUTMENT = RA
REINFORCED CONCRETE PIPE = RCP
REQUIRED = REQ'D
RIGHT = RT
ROAD = RD
SPACES = SPA
STANDARD = STD
STATION = STA
TEMPORARY = TEMP
TYPICAL = TYP
VERTICAL = VERT

ITEM 516, STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC COMPRESSION SEAL, AS PER PLAN:

THE COMPRESSION SEAL EXPANSION JOINT SHALL INCLUDED THE ELASTOMERIC COMPRESSION SEAL AND THE RETAINERS AND 1/2" PLATE AT EACH ABUTMENT. ELASTOMERIC COMPRESSION SEAL SHALL CONFORM TO STANDARD DRAWING EXP-2-81. PAYMENT FOR ELASTOMERIC SCOMPRESSION SEAL, PLATES IN ABUTMENTS AND RETAINERS SHALL BE MADE AT THE UNIT PRICE PER LINEAR FOOT FOR ITEM 516, STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC COMPRESSION SEAL, AS PER PLAN.

ITEM 517, RAILING, MISC.: STEEL ORNAMENTAL RAILINGS:

STEEL RAILING SHALL BE FABRICATED USING TUBULAR STEEL SECTIONS MEETING THE REQUIREMENTS OF ASTM A500, GRADE B, STEEL BASE PLATES AND END CAPS SHALL MEET THE REQUIREMENTS OF ASTM A709 GRADE 36 AS DETAILED IN THE PLANS. FABRICATION AND SHOP DRAWING SUBMITTALS SHALL CONFORM TO THE REQUIREMENTS OF CMS 501. THE RAILINGS SHALL BE GALVANIZED AS PER CMS 517.05. PAYMENT FOR ALL LABOR, MATERIALS, AND EQUIPMENT NEEDED TO FABRICATE, COAT, AND INSTALL THE STEEL RAILINGS AS DETAILED IN THE PLANS SHALL BE MADE AT THE UNIT PRICE PER LINEAR FOOT FOR ITEM 517, RAILING, MISC.: STEEL ORNAMENTAL RAILING.

ITEM 523, DYNAMIC LOAD TESTS

PERFORM DYNAMIC LOAD TESTS PER ITEM 523 AT LOCATIONS AND FREQUENCY OUTLINED IN THE PLANS. EACH UNIT OF PAYMENT FOR THE DYNAMIC LOAD TEST INCLUDES TESTING OF TWO PILES WITH SIGNAL MATCHING ON ONE OF THE TWO PILES TESTED.

ITEM 607, VANDAL PROTECTION FENCE, 10' CURVED, COATED FABRIC, AS PER PLAN

THE VANDAL FENCE SHALL CONFORM TO VPF-1-90 WITH POST PS-2 AND BASE PLATE BP-1. FABRICATION AND SHOP DRAWINGS SHALL CONFROM TO THE REQUIREMENTS OF CMS 501. THE FENCING SHALL ALSO INCLUDE THE 1" DIAMETER PIPE HANDRAIL. PAYMENT FOR ALL LABOR, MATERIALS AND EQUIPMENT NEEDED TO FABRICATED, COAT AND INSTALL THE FENCE DETAILED IN THE PLANS SHALL BE MADE AT THE UNIT PRICE PER LINEAR FOOT FOR ITEM 607, VANDAL PROTECTION FENCE, 10' CURVED, COATED FABRIC, AS PER PLAN.

ITEM 622, CONCRETE BARRIER, SINGLE SLOPED, TYPE D, AS PER PLAN

PAYMENT INCLUDES THE TWO TRANSITIONS, THE LENGTH OF THE TYPE D BARRIER AND THE FOOTING FOR THE BARRIER AS SHOWN IN THE PLANS, SHALL BE PAID WITH ITEM 622, CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN.

SEQUENCE OF CONSTRUCTION:

1. REMOVE THE EXISITNG PEDESTRIAN BRIDGE IN ACCORDANCE WITH CMS 501.05
2. INSTALL CAST-IN-PLACE PILING AT BOTH THE ABUTMENTS AND PIER.
3. CONSTRUCT OF PIER FOUNDATION. INSTALL MSE WALL AT REAR ABUTMENT AND SOLDIER PILE WALL AT THE FORWARD ABUTMENT. THE SOLDIER PILE WALL WILL BE TOP DOWN CONSTRUCTION.
4. CONSTRUCT OF BOTH THE REAR AND FORWARD ABUTMENTS. CONSTRUCT PIER STEM AND HAMMERHEAD SECTIONS.
5. INSTALL THE PREFABRICATED STEEL BRIDGE.
6. CONSTRUCT THE FORWARD ABUTMENT RAMP.
7. INSTALL FENCING AND RAILING ALONG THE BRIDGE DECK AND APPROACHES.

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DESIGN AGENCY
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DESIGNED	DRAWN	REVIEWED	DATE
JWE	RT	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAD		3110125	

GENERAL NOTES
BRIDGE NO. HAM-75-0992
PEDESTRIAN PATH BRIDGE OVER I.R. 75

HAM-75-7.85
PID No. 77889

1488
2017

ESTIMATED QUANTITIES

CALC BY: JAD/CBY DATE: 12/5/2014_6/11/2021
CHECKED BY: PPA DATE: 12/5/2014_6/23/2021

ITEM	EXT.	PARTICIPATION 04/IMS/BR	QUANTITY	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET NO.
					PEDESTIAN BRIDGE					
202	11002	LS	LS		STRUCTURE REMOVED, OVER 20 FOOT SPAN					
203	35110	65	65	CY	GRANULAR MATERIAL, TYPE B	65				
503	11100	LS	LS		COFFERDAMS AND EXCAVATION BRACING					
503	21100	103	103	CY	UNCLASSIFIED EXCAVATION	93	10			
505	11100	LS	LS		PILE DRIVING EQUIPMENT MOBILIZATION					
507	00600	1,270	1,270	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	880	390			
507	00650	1,380	1,380	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	960	420			2 / 17
509	10000	9,717	9,717	LB	EPOXY COATED REINFORCING STEEL	3,729	5,988			
511	46510	45	45	CY	CLASS QC1 CONCRETE, FOOTING	36	9			
511	53014	72	72	CY	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN			72		2 / 17
511	53014	52	52	CY	CLASS QC3 CONCRETE, MISC.: CONCRETE WITH QC/QA, SUBSTRUCTURE, AS PER PLAN	27	25			3 / 17
511	53014	10	10	CY	CLASS QC3 CONCRETE, MISC.: CONCRETE, SIDEWALK, AS PER PLAN				10	3 / 17
512	10100	131	131	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)			131		
513	95020	LS	LS		STRUCTURAL STEEL, MISC.: PREFABRICATED BRIDGE					3 / 17
516	10010	12	12	FT	ARMORLESS PREFORMED JOINT SEAL				12	
516	10501	42	42	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC COMPRESSION SEAL, AS PER PLAN	42				4 / 17
516	13600	68	68	SF	1" PREFORMED EXPANSION JOINT FILLER	68				
517	76300	96	96	FT	RAILING, MISC.: STEEL ORNAMENTAL RAILING				96	4 / 17
523	20000	6	6	EACH	DYNAMIC LOAD TESTING	4	2			4 / 17
523	20500	6	6	EACH	RESTRIKE	4	2			
526	10000	28	28	SY	REINFORCED CONCRETE APPROACH SLABS (T=12")				28	
526	90030	12	12	FT	TYPE C INSTALLATION				12	
607	39921	421	421	FT	VANDAL PROTECTION FENCE, 10' CURVED, COATED FABRIC, AS PER PLAN				421	4 / 17
622	10161	55	55	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN				55	4 / 17

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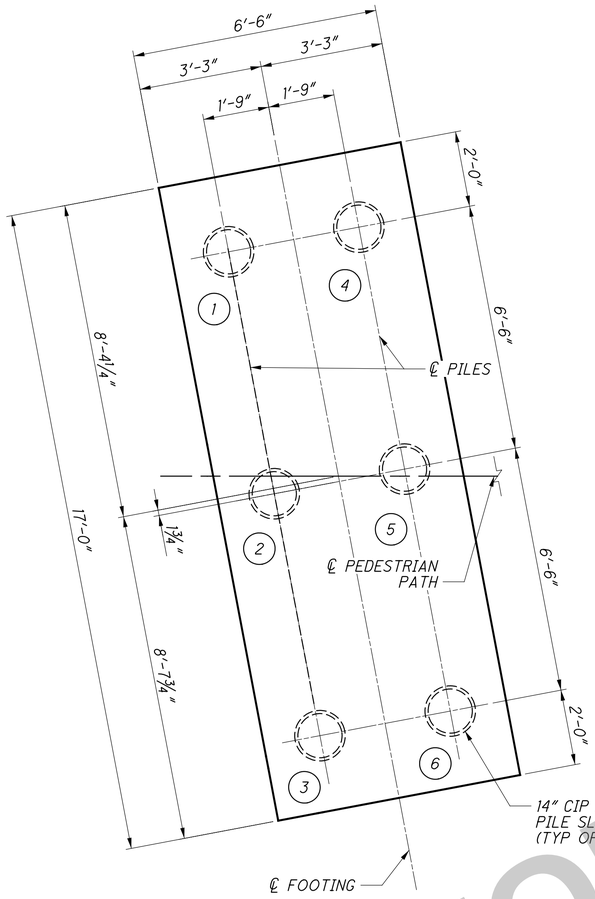
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PPA			3110125

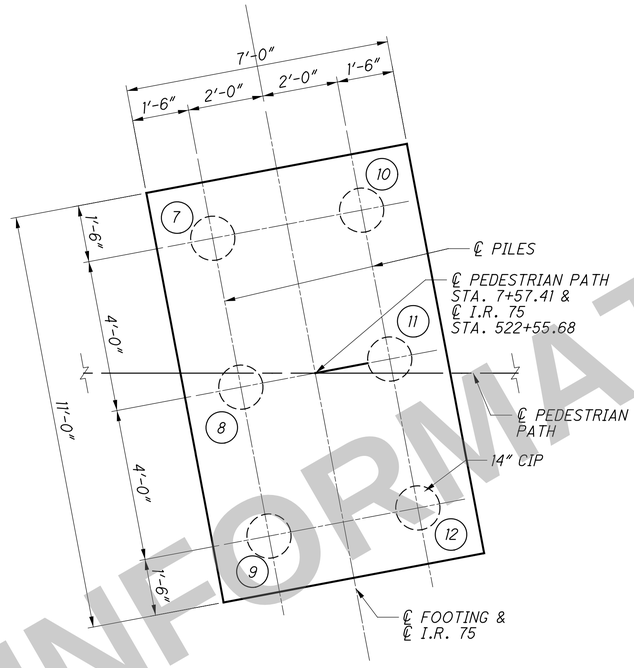
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HAM-75-7.85
PID No. 77889

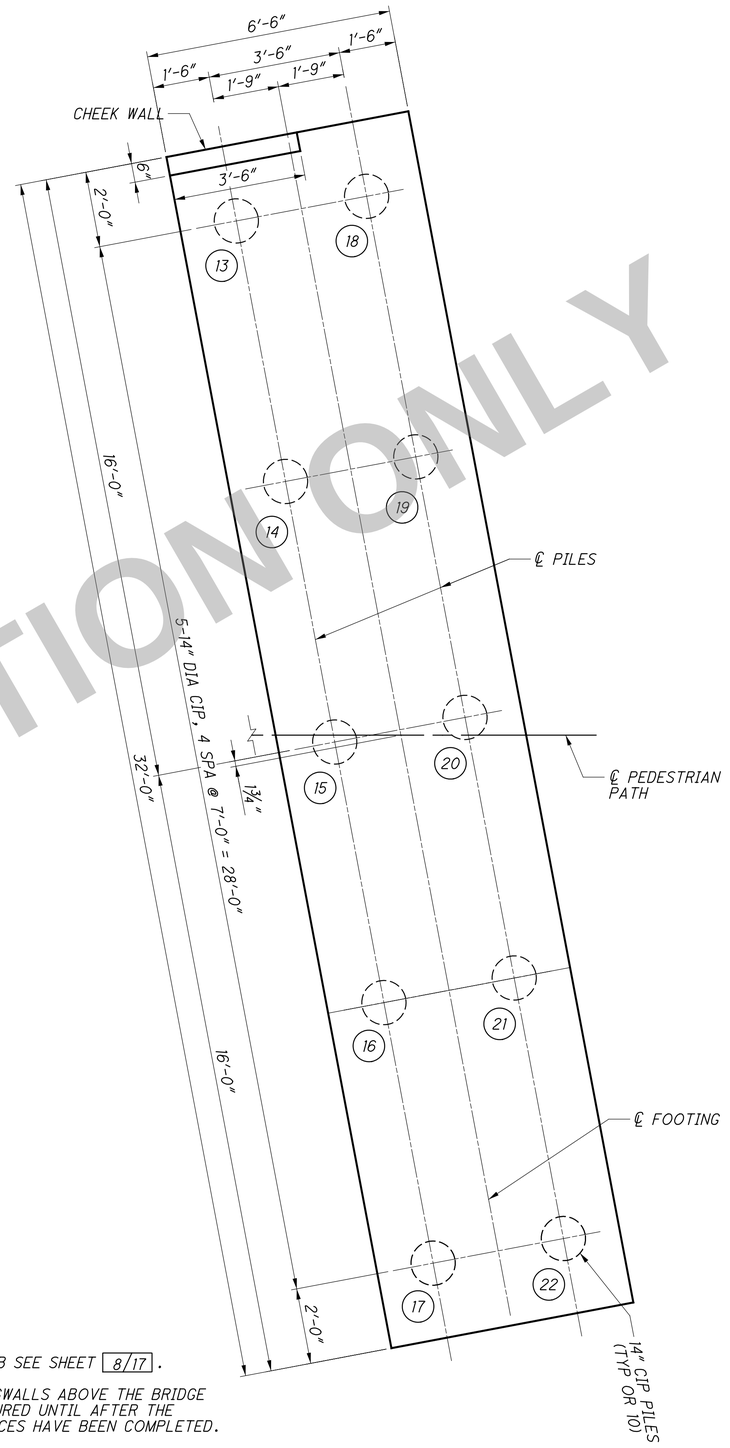
1489
2017



REAR ABUTMENT



PIER



FORWARD ABUTMENT

LEGEND:

= 14" CIP PILE W/ PILE SLEEVES

= 14" CIP PILE

NOTES:

1. FOR SECTIONS A-A & B-B SEE SHEET 8/17 .
2. THE BACKWALL AND WINGWALLS ABOVE THE BRIDGE SEAT SHALL NOT BE POURED UNTIL AFTER THE BRIDGE AND DECK SURFACES HAVE BEEN COMPLETED.
3. PLACE D801 ANCHOR BARS PARALLEL TO THE CENTERLINE OF TRAIL.
4. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

FOR INFORMATION ONLY

DESIGN AGENCY
JMT
2000 Corporate Exchange Drive, Suite 300, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
JWE	SBH	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAD		3110125	

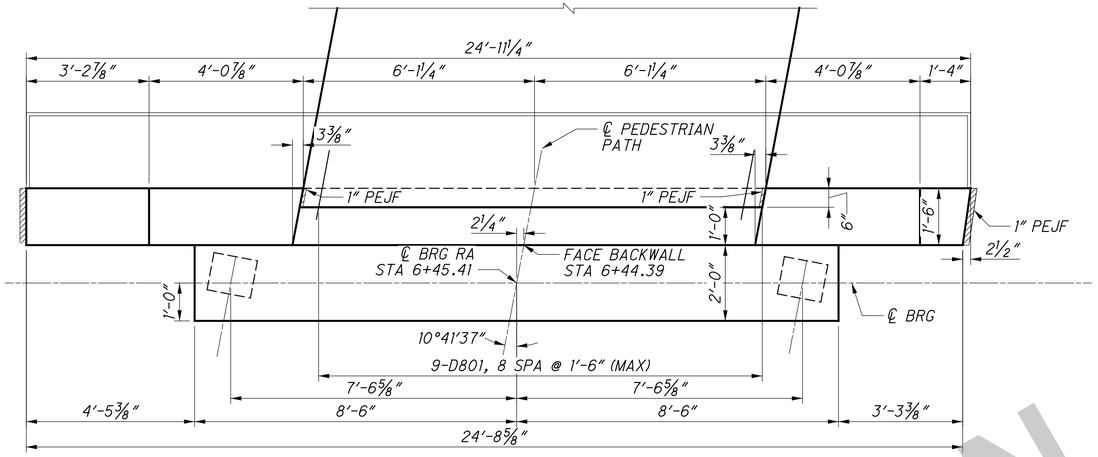
FOUNDATION PLAN
BRIDGE NO. HAM-75-0992
PEDESTRIAN PATH BRIDGE OVER I.R. 75

HAM-75-7.85
PID No. 77889

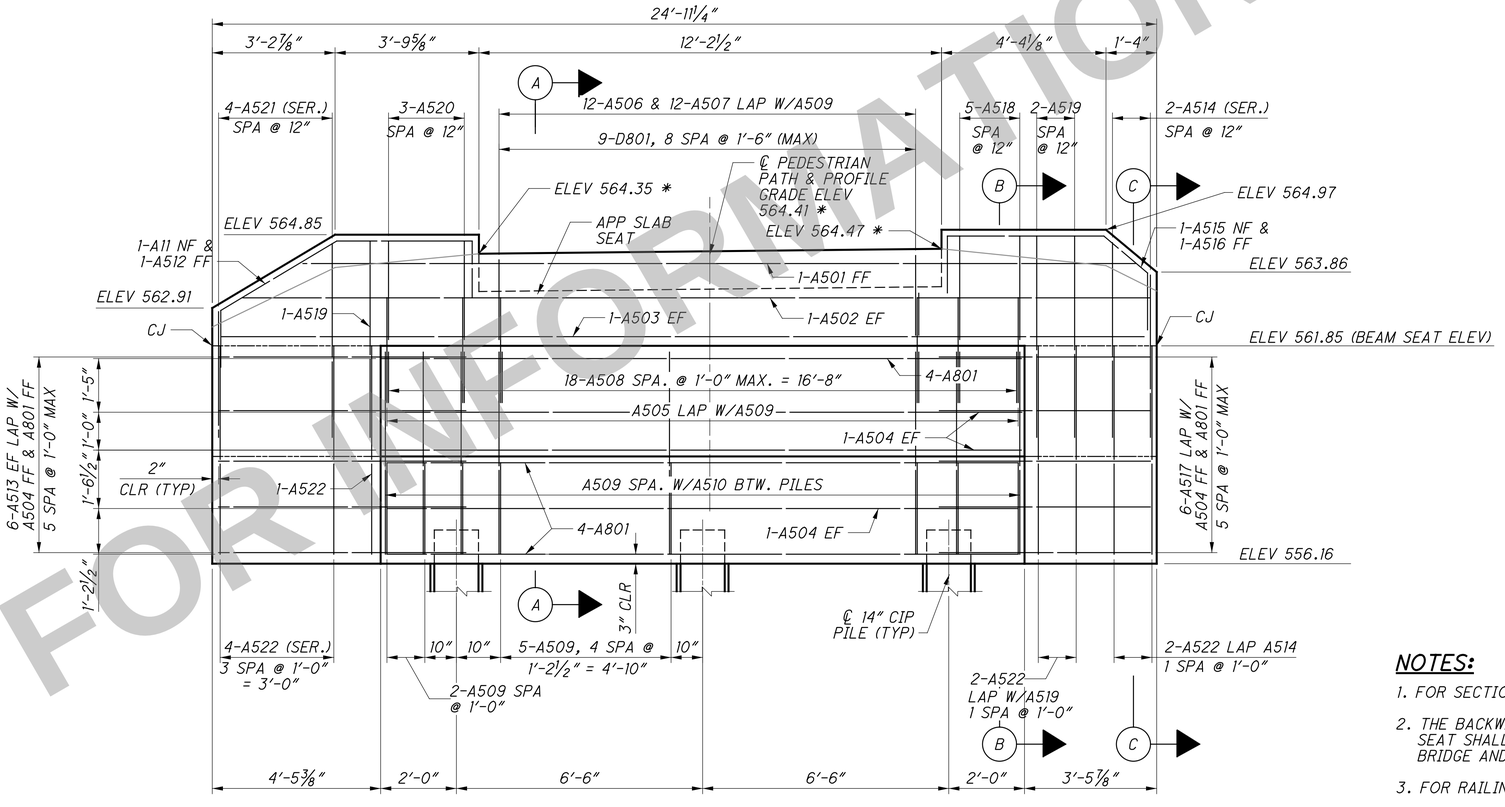
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1490
2017

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PLAN



ELEVATION

*ELEVATIONS GIVEN AT FRONT FACE OF BACKWALL

NOTES:

1. FOR SECTIONS A-A, B-B, & C-C SEE SHEET 8/17 .
2. THE BACKWALL AND WINGWALLS ABOVE THE BRIDGE SEAT SHALL NOT BE POURED UNTIL AFTER THE BRIDGE AND DECK SURFACES HAVE BEEN COMPLETED.
3. FOR RAILING DETAILS SEE SHEET 12/17 .
4. PLACE D801 ANCHOR BARS PARALLEL TO THE CENTERLINE OF TRAIL.
5. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
6. MIN. LAP LENGTHS: #5 = 2'-5"

FOR INFORMATION ONLY

DESIGN AGENCY
JMT
2000 Corporate Exchange Drive, Suite 300, Columbus, OH 43231

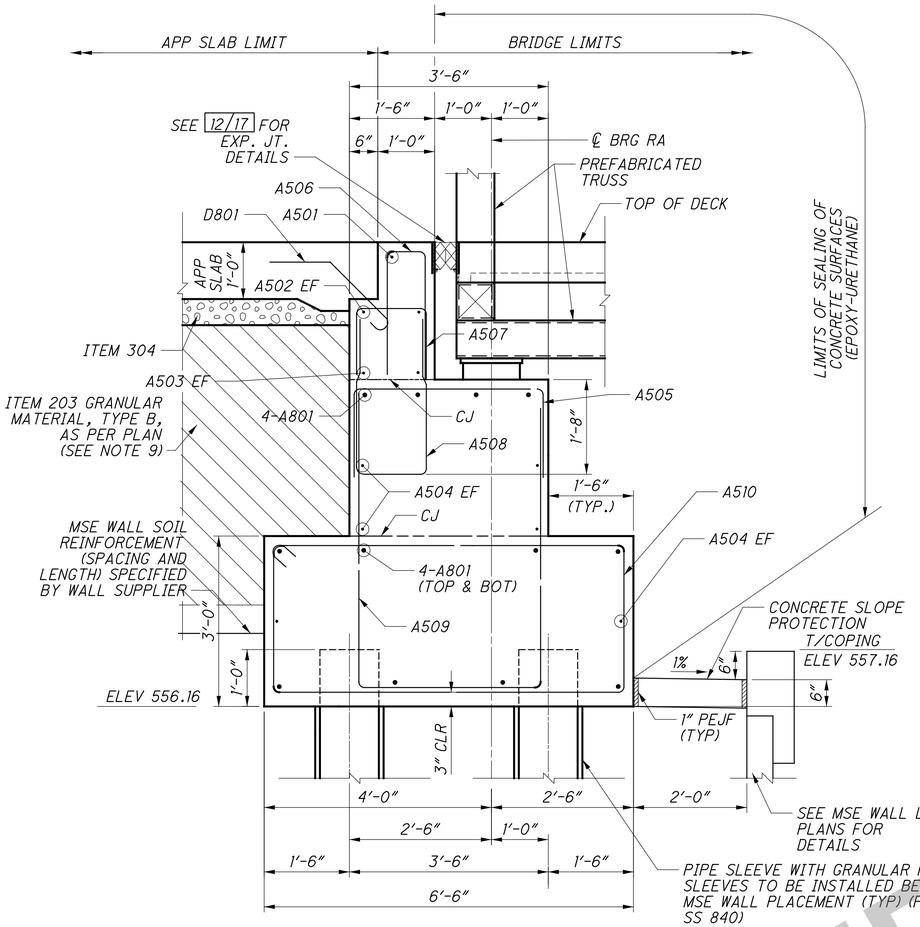
DESIGNED	DRAWN	REVIEWED	DATE
RT	RT	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JWE		3110125	

REAR ABUTMENT
BRIDGE NO. HAM-75-0992
PEDESTRIAN PATH BRIDGE OVER I.R. 75

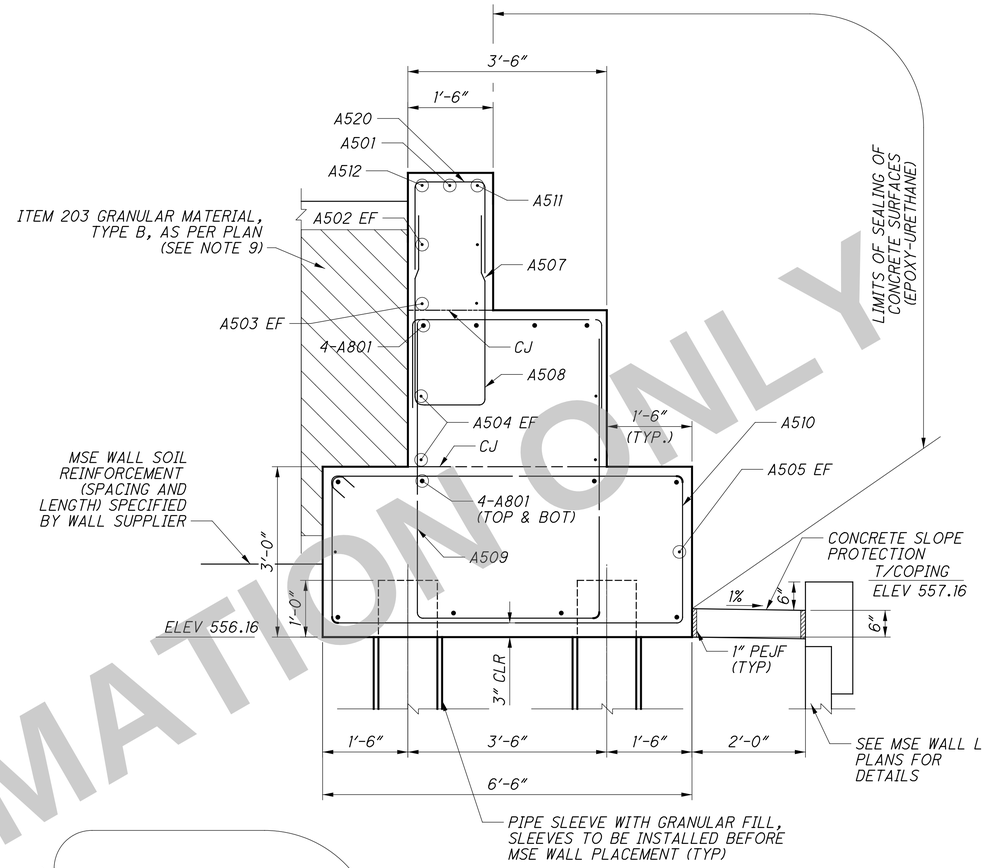
HAM-75-7.85
PID No. 77889

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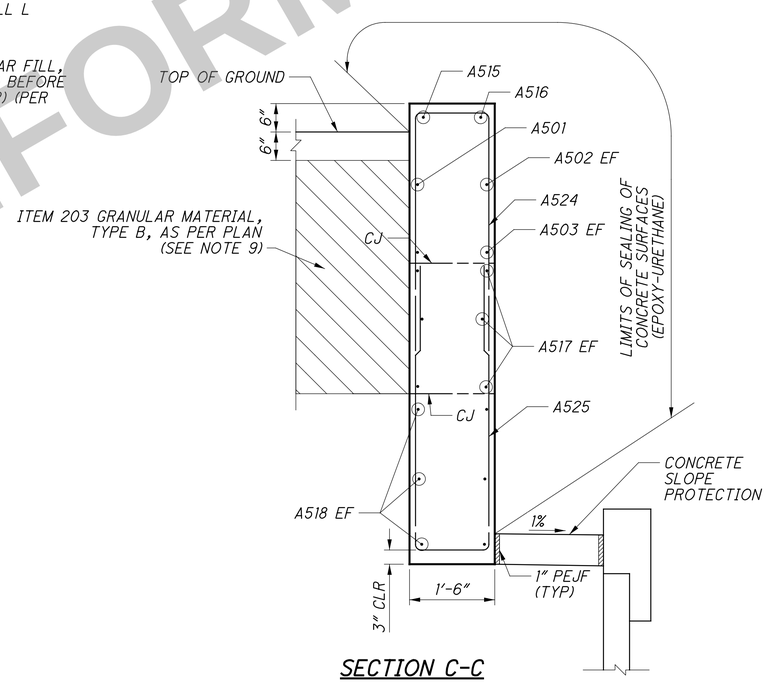
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SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

1. THE BACKWALL AND WINGWALLS ABOVE THE BEAM SEAT SHALL NOT BE POURED UNTIL AFTER THE BRIDGE AND DECK SURFACES HAVE BEEN COMPLETED.
2. FOR RAILING DETAILS SEE SHEET 14/17.
3. PLACE D801 ANCHOR BARS PARALLEL TO THE CENTERLINE OF PEDESTRIAN PATH.
4. FOR LOCATIONS OF A-A, B-B, & C-C SEE SHEET 7/17 .
5. FOR MSE WALL DETAILS PLANS FOR MSE WALL.
6. BEARING ANCHORS BOLTS LOCATIONS FOR TRUSSES SHALL CONFORM TO THE PREFABRICATED BRIDGE DETAILS. ACCURATELY PLACE REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT TO AVOID INTERFERENCE WITH THE DRILLING OF ANCHOR BOLT HOLES.
7. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
8. MIN LAP LENGTHS:
   #5 = 2'-5"
9. ITEM 203 GRANULAR MATERIAL, TYPE B, AS PER PLAN IS QUANTIFIED WITH MSE WALL L.

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JWE		3110125	

REAR ABUTMENT SECTIONS

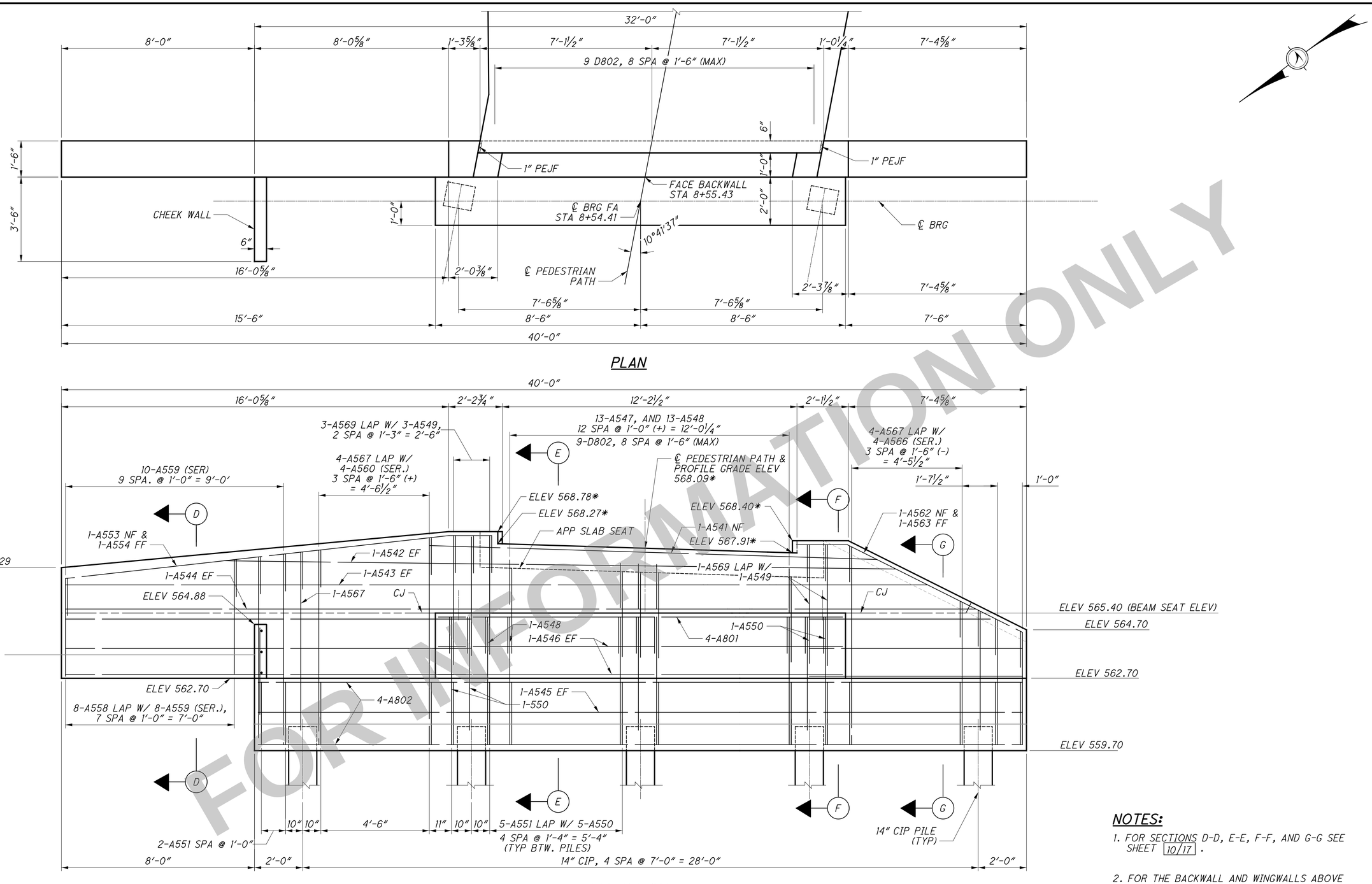
BRIDGE NO. HAM-75-0992
PEDESTRIAN PATH BRIDGE OVER I.R. 75

HAM-75-7.85
PID No. 77889

8 / 17

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2017

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PLAN

ELEVATION

* ELEVATIONS GIVEN AT FRONT FACE OF BACKWALL

NOTES:

1. FOR SECTIONS D-D, E-E, F-F, AND G-G SEE SHEET 10/17 .
2. FOR THE BACKWALL AND WINGWALLS ABOVE THE BRIDGE SEAT ELEVATIONS SHALL NOT BE POURED UNTIL AFTER THE BRIDGE AND DECK SURFACES HAVE BEEN COMPLETED.
3. FOR RAILING DETAILS SEE SHEET 14/17.
4. PLACE D801 ANCHOR BARS PARALLEL TO THE CENTERLINE OF TRAIL.
5. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

FOR INFORMATION ONLY

DESIGN AGENCY
JMT
2200 Corporate Exchange Drive, Suite 300, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
JWE	JWE	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAD		3110125	

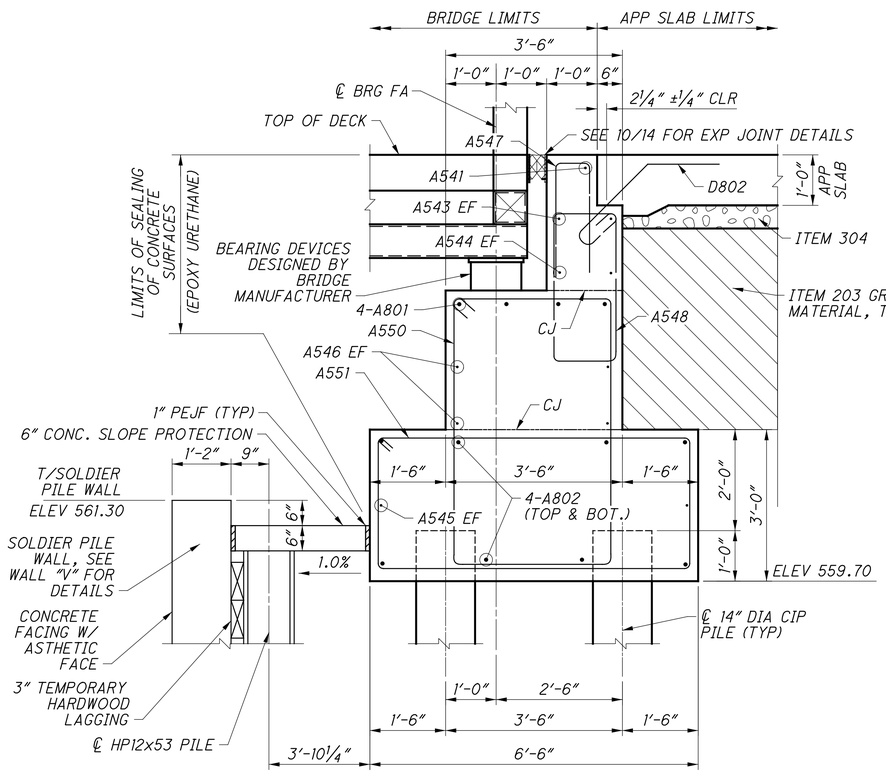
FORWARD ABUTMENT
BRIDGE NO. HAM-75-0992
PEDESTRIAN PATH BRIDGE OVER I.R. 75

HAM-75-7.85
PID No. 77889

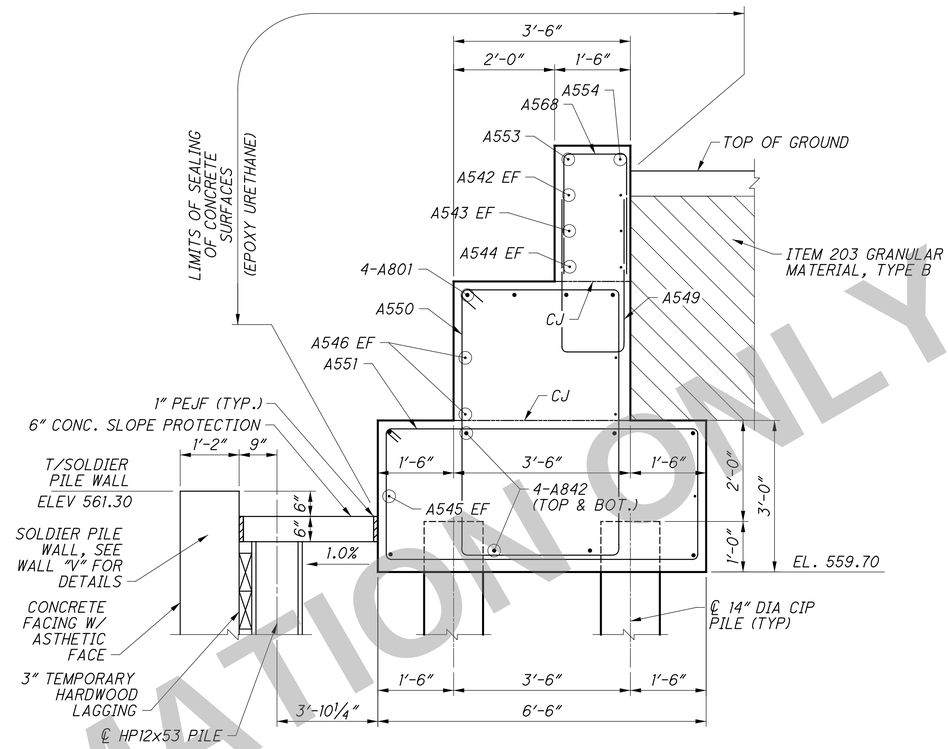
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1493
2017

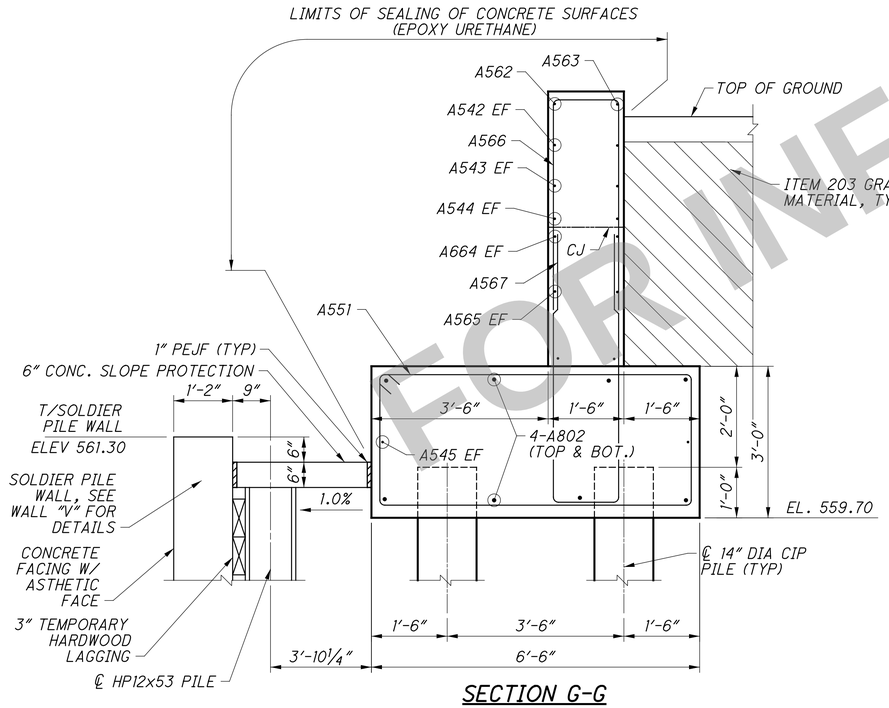
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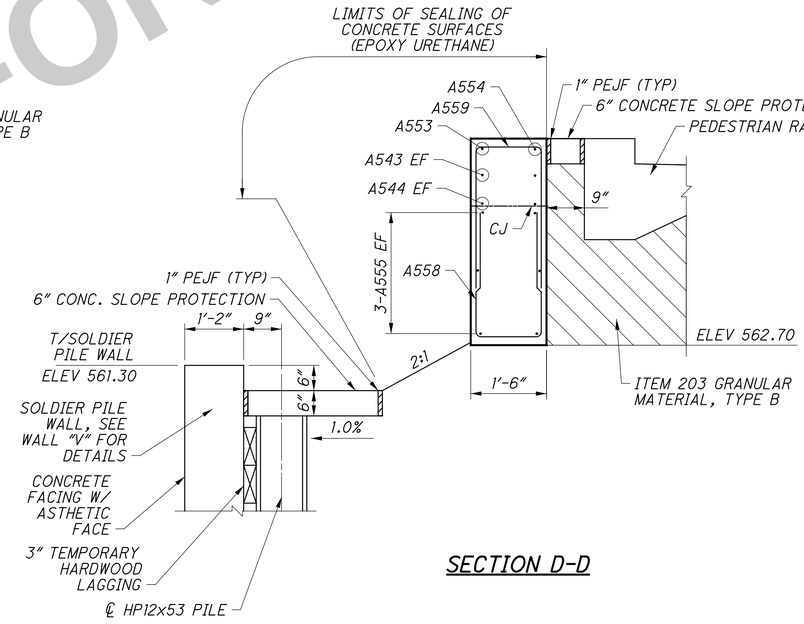
SECTION E-E



SECTION F-F



SECTION G-G



SECTION D-D

NOTES:

1. THE BACKWALL AND WINGWALLS ABOVE THE BRIDGE SEAT SHALL NOT BE POURED UNTIL AFTER THE BRIDGE AND DECK SURFACES HAVE BEEN COMPLETED.
2. FOR RAILING DETAILS SEE SHEET 14/17.
3. PLACE D801 ANCHOR BARS PARALLEL TO THE CENTERLINE OF PEDESTRIAN PATH.
4. BEARING ANCHOR BOLT LOCATIONS FOR BRIDGE TRUSSES SHALL CONFORM TO THE PREFABRICATED BRIDGE DETAILS. REINFORCING STEEL IN VICINITY OF THE BRIDGE SEAT SHALL BE PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF THE ANCHOR BOLT HOLES.
5. FOR LOCATION OF SECTIONS D-D, E-E, F-F, AND G-G SEE SHEET 9/17.
6. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

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DESIGN AGENCY
2000 Corporate Exchange Drive, Suite 200, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
JWE	RT	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAD		3110125	

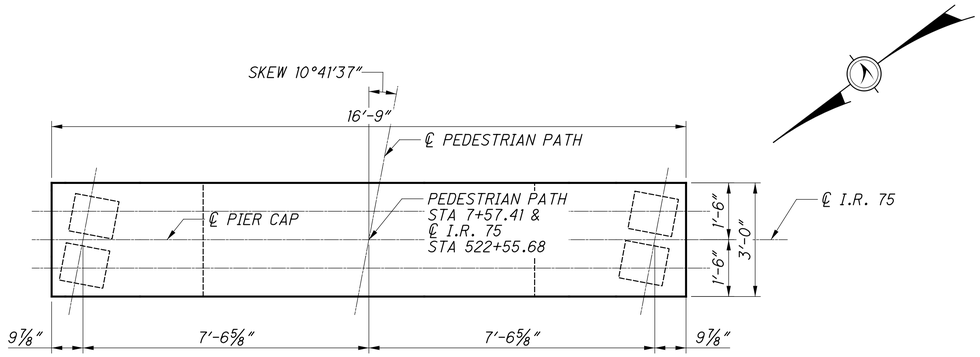
FORWARD ABUTMENT SECTIONS
BRIDGE NO. HAM-75-0992
PEDESTRIAN PATH BRIDGE OVER I.R. 75

HAM-75-7.85
PID No. 77889

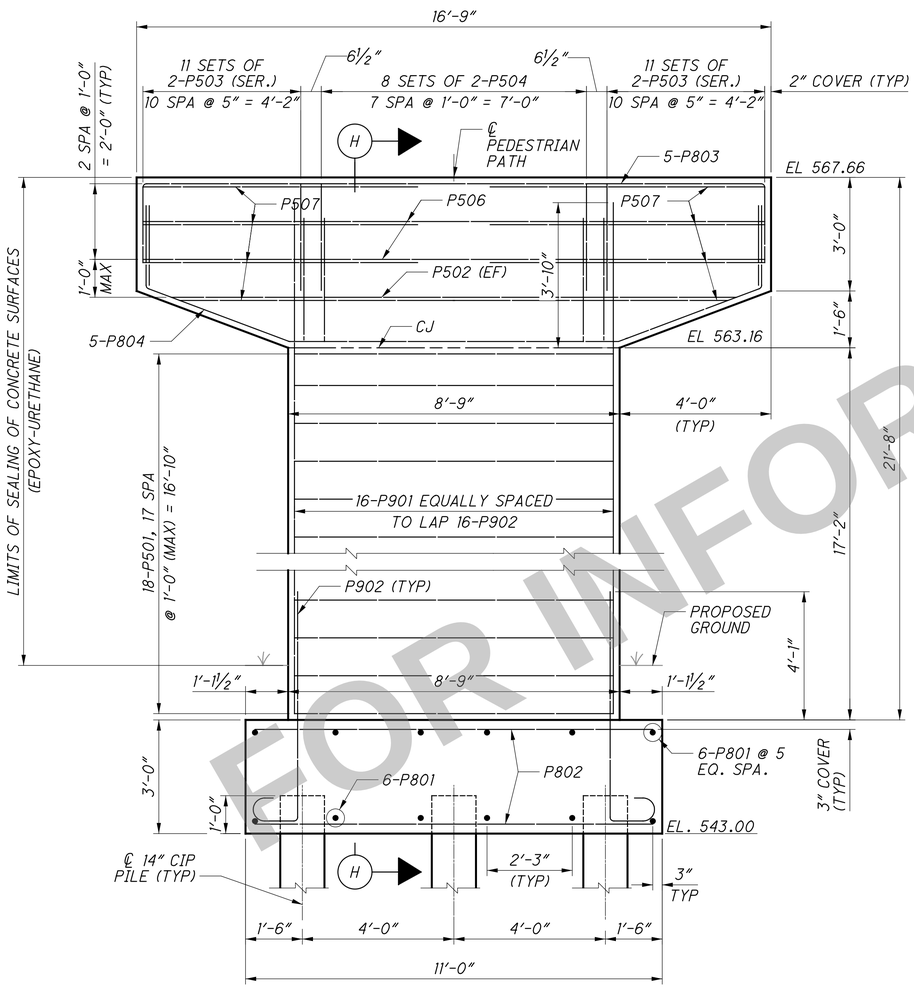
10 / 17

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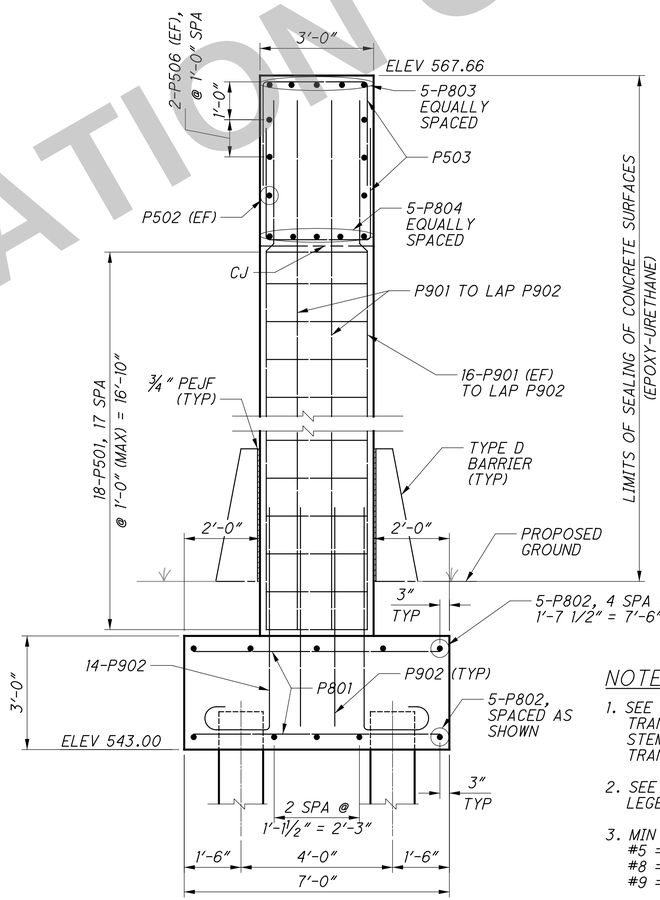
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PLAN VIEW



PIER ELEVATION



SECTION H-H

NOTES:

1. SEE STANDARD DRAWING RM-4.4 FOR TRANSITION OF TYPE D BARRIER AT PIER STEM. SEE ROADWAY PLANS FOR LIMITS OF TRANSITION AND QUANTITY.
2. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
3. MIN LAP LENGTHS:
   #5 = 2'-5"
   #8 = 2'-8" (CAP)
   #9 = 3'-10"
4. BEARINGS BY BRIDGE MANUFACTURER. BEARING ANCHOR BOLT LOCATIONS FOR BRIDGE TRUSSES SHALL CONFORM TO THE PREFABRICATED BRIDGE DETAILS. REINFORCING STEEL IN VICINITY OF THE BRIDGE SEAT SHALL BE PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF THE ANCHOR BOLT HOLES.

FOR INFORMATION ONLY

DESIGN AGENCY
2000 Corporate Exchange Drive, Suite 200, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
RT	JWE	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JWE		3110125	

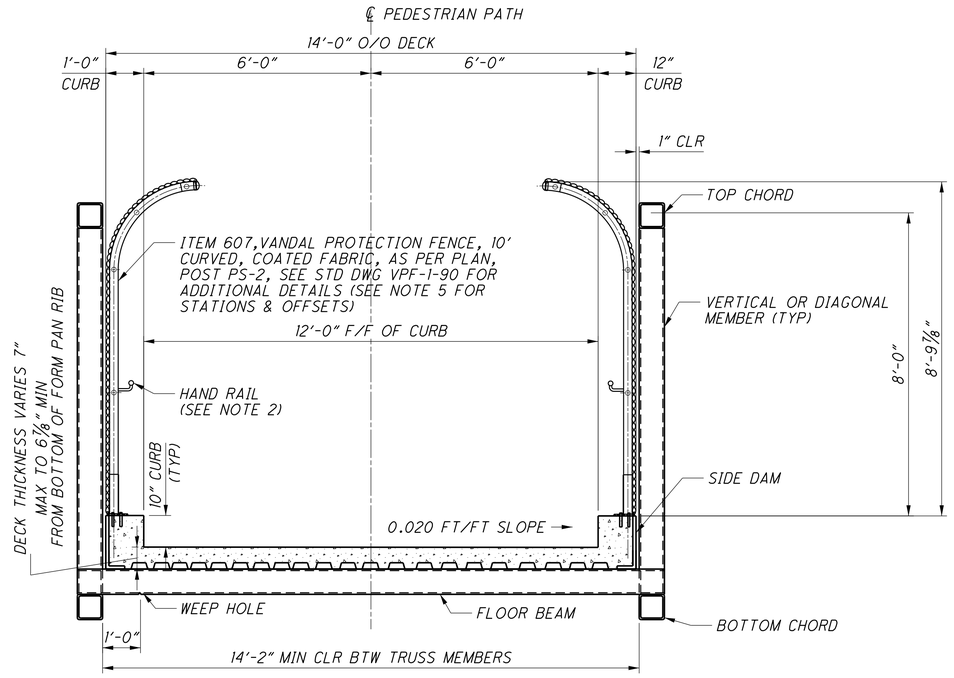
PIER DETAILS
BRIDGE NO. HAM-75-0992
PEDESTRIAN PATH BRIDGE OVER I.R. 75

HAM-75-7.85
PID No. 77889

11 / 17

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2017

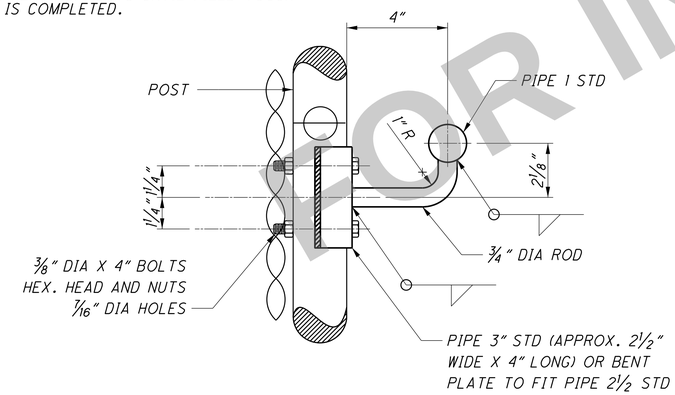
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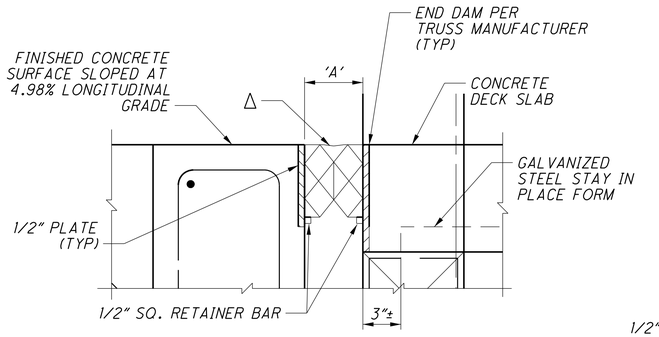
TRANSVERSE SECTION

TRANSVERSE SECTION NOTES:

1. DECK AND CURB REINFORCING TO BE DESIGNED BY BRIDGE MANUFACTURER, NOT SHOWN. PAYMENT OF REINFORCING STEEL TO BE INCLUDED WITH ITEM 511 CLASS QC3 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN.
2. FOAM, OR OTHER, FILLER MATERIAL IS NOT PERMITTED IN FORM PAN TROUGHS.
3. SPLICES WITHIN FLOORBEAMS ARE PROHIBITED UNLESS DOCUMENTED SHIPPING RESTRICTIONS DO NOT ALLOW FULL-WIDTH PREASSEMBLY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR SPLICES REQUIRED BY SHIPPING RESTRICTIONS.
4. DO NOT INSTALL FENCING/POSTS UNTIL FIELD TOUCH UP OF PAINTING IS COMPLETED.

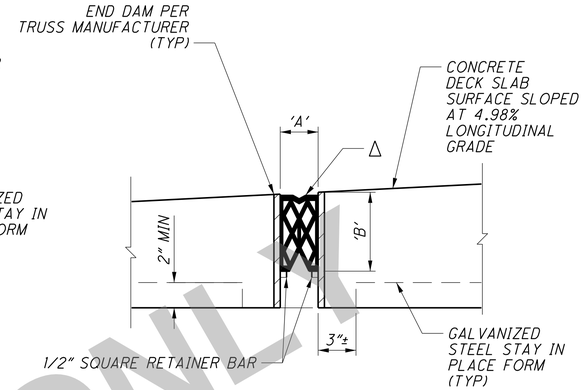


RAILING ATTACHMENT TO VPF POST



EXPANSION JOINT DETAILS

(AT ABUTMENTS, SEE NOTE 3)



EXPANSION JOINT DETAILS

(AT PIER, SEE NOTE 3)

AMBIENT TEMP.	RA DIM. 'A'	FA DIM. 'A'
30° F	2 1/2"	2 3/8"
40° F	2 7/16"	2 3/8"
50° F	2 3/8"	2 5/16"
60° F	2 1/4"	2 1/4"
70° F	2 1/8"	2 3/16"
80° F	2 1/16"	2 1/8"
90° F	2"	2 1/8"

EXPANSION JOINT NOTES:

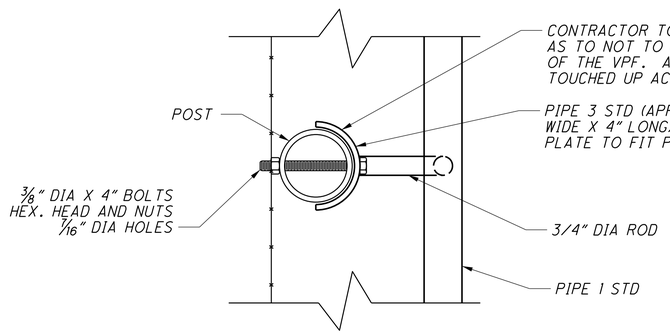
1. REAR ABUTMENT LOCATION SHOWN, PIER AND FORWARD ABUTMENT SIMILAR.
2. STRUCTURAL STEEL AND REINFORCING STEEL NOT SHOWN.
3. ¼" FORMED LEDGE NOT REQUIRED ALONG THE VERTICAL SIDE AT COMPRESSION SEAL UPTURNS LOCATED AT THE PIER AND FORWARD ABUTMENT LOW SIDE GUTTERS.

EXPANSION JOINT LEGEND:

Δ 4" NOMINAL COMPRESSION SEAL SET AT 4.98% LONGITUDINAL GRADE TO MATCH THE DECK SURFACE.

DIM. 'A' = 2 1/4" (MEASURED PERPENDICULAR TO JOINT) SEE TABLE FOR VARIABLE WIDTH AT ABUTMENTS.
2 1/4" AT THE PIER.

DIM. 'B' = GROOVE DEPTH PER SEAL MANUFACTURER, NOT TO EXCEED 6".



RAILING ATTACHMENT TO VPF POST

NOTES:

1. FOR SUPERSTRUCTURE DESIGN INFORMATION SEE STRUCTURAL GENERAL NOTES, SHEET 2/17.
2. HANDRAIL TO BE PAID FOR WITH ITEM 607 VANDAL PROTECTION FENCE, 10' CURVED, COATED FABRIC, AS PER PLAN.
3. EXPANSION JOINT TO BE PAID FOR WITH ITEM 516-STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC COMPRESSION SEAL, AS PER PLAN.
4. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
5. THE NORTH FENCE EXTENDS FROM STA. 6+44.07, 6.72' LT, TO STA. 8+53.07, 6.72' LT. THE SOUTH FENCE EXTENDS FROM STA. 6+46.73, 6.72' RT, TO STA. 8+55.73, 6.72' RT.

FOR INFORMATION ONLY

DESIGN AGENCY: JMT, 2000 Corporate Exchange Drive, Suite 200, Columbus, OH 43231
DESIGNED: RT | DRAWN: RT | CHECKED: JWE | REVIEWED: NCM | DATE: 12-15-21 | REVISED: | STRUCTURE FILE NUMBER: 3110125

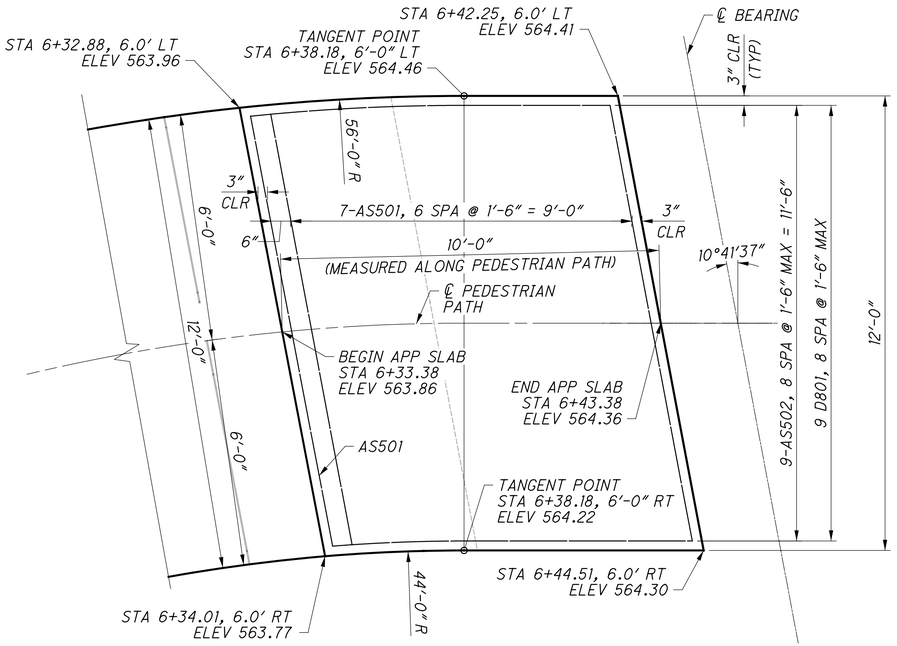
TRANSVERSE SECTION
BRIDGE NO. HAM-75-0992
PEDESTRIAN PATH BRIDGE OVER I.R. 75

HAM-75-7.85
PID No. 77889

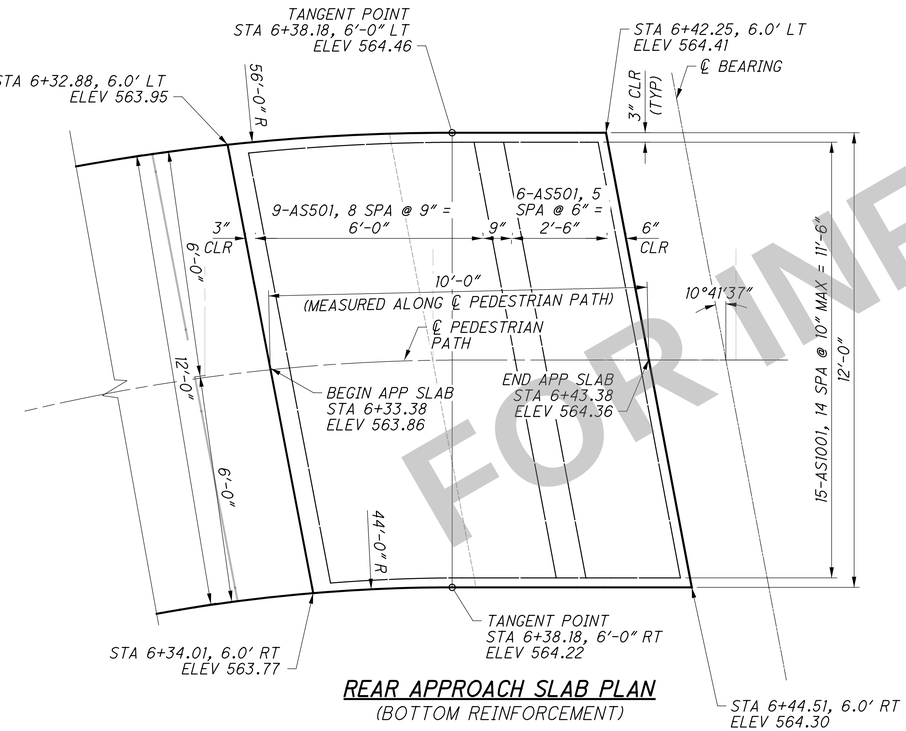
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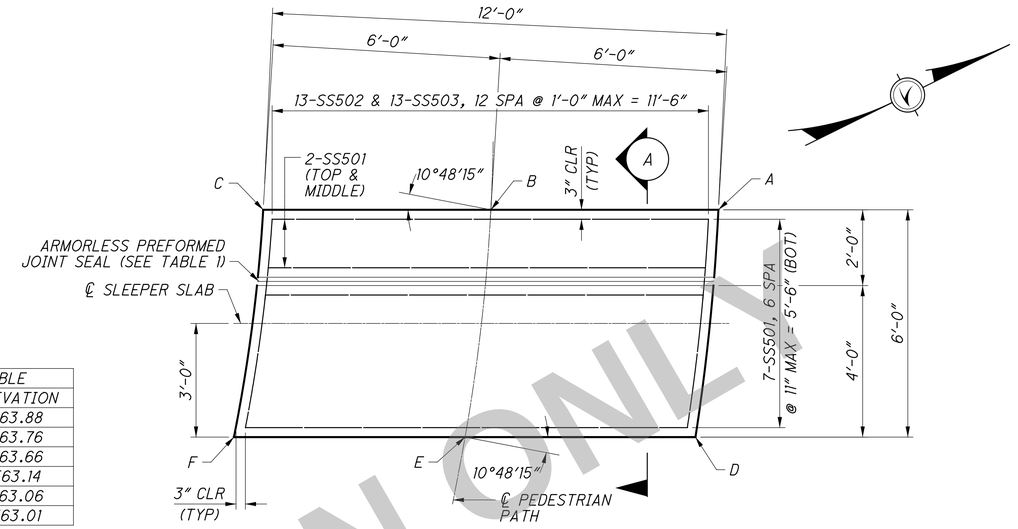


REAR APPROACH SLAB PLAN
(TOP REINFORCEMENT)

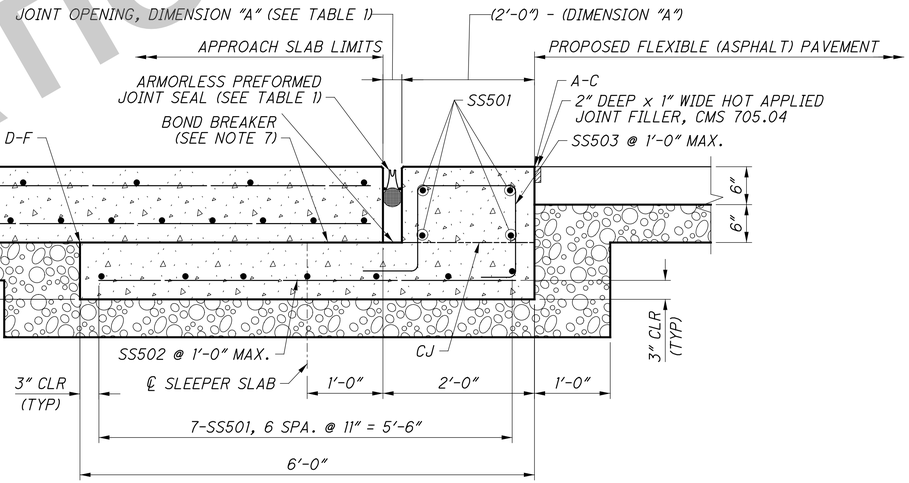


REAR APPROACH SLAB PLAN
(BOTTOM REINFORCEMENT)

REAR SLEEPER SLAB TABLE		
POINT	STATION	ELEVATION
A	06+31.09	563.88
B	06+31.38	563.76
C	06+31.73	563.66
D	06+36.48	563.14
E	06+37.38	563.06
F	06+38.61	563.01



PLAN OF REAR SLEEPER SLAB



SECTION A

TABLE 1 - EXPANSION JOINT OPENING	
TEMPERATURE (*F)	DIMENSION "A"
30	2 1/4"
40	2 1/8"
50	1 15/16"
60	1 13/16"
70	1 11/16"
80	1 9/16"
90	1 7/16"

NOTES:

1. SEE STANDARD DRAWING AS-1-15 ADDITIONAL DETAILS.
2. SEE SHEETS 16/17 AND 17/17 FOR REINFORCEMENT SHEET NOTES, BAR LISTS AND BEND DIAGRAMS.
3. FOR RAILING DETAILS SEE SHEET 14/17 .
4. PLACE D801 ANCHOR BARS PARALLEL TO THE CENTERLINE OF TRAIL.
5. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
6. FIELD BEND BARS IF NEEDED.
7. APPLY BOND BREAKER TO THE ENTIRE TOP SURFACE OF THE CONCRETE SLEEPER SLAB.

FOR INFORMATION ONLY

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2000 Corporate Exchange Drive, Suite 300, Columbus, OH 43231

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JWE	RT	NCM	12-15-21
CHECKED	REVISED		STRUCTURE FILE NUMBER
JAD			3110125

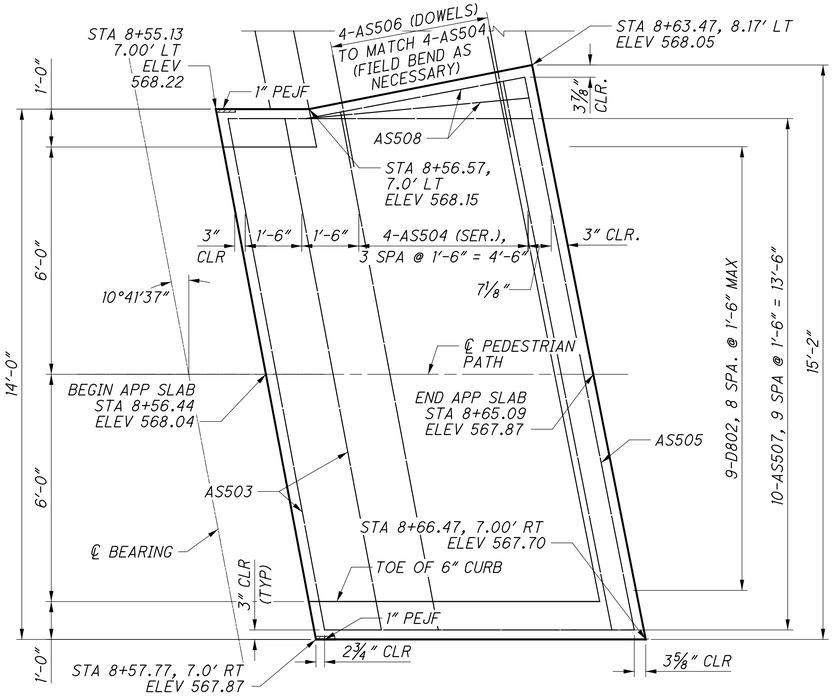
REAR APPROACH SLAB DETAILS
BRIDGE NO. HAM-75-0992
PEDESTRIAN PATH BRIDGE OVER I.R. 75

HAM-75-7.85
PID No. 77889

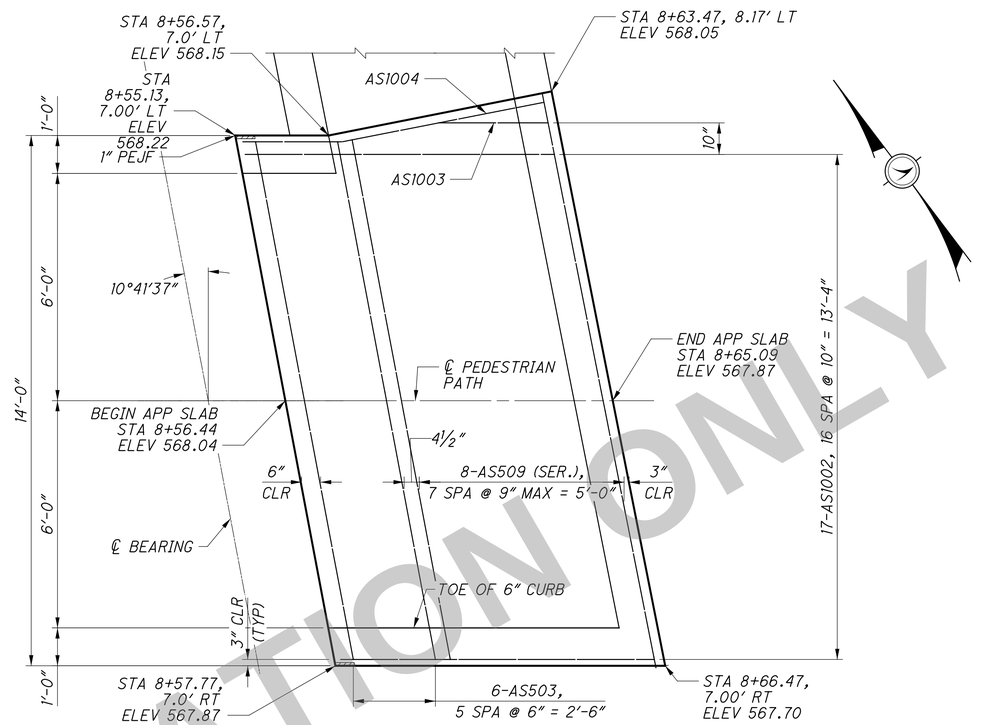
13 / 17

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2017

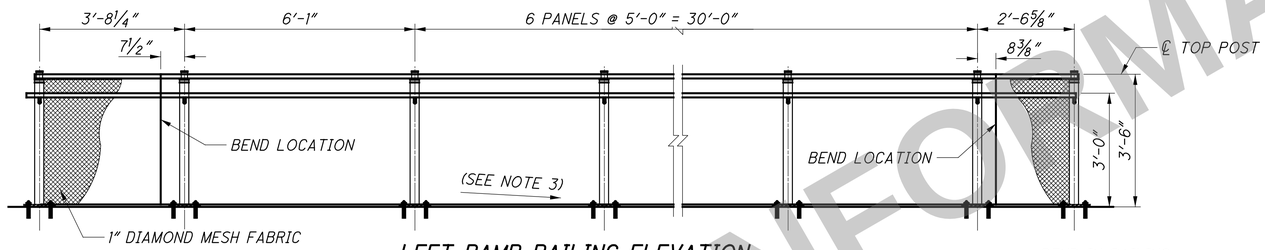
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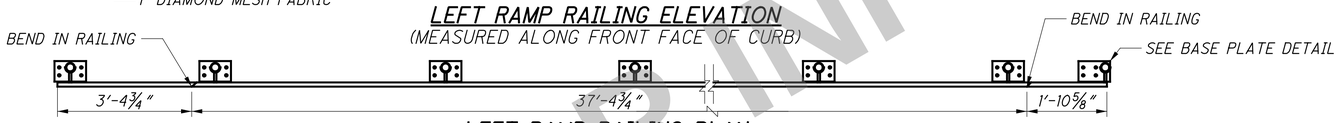
FORWARD APPROACH SLAB PLAN
(TOP REINFORCEMENT)



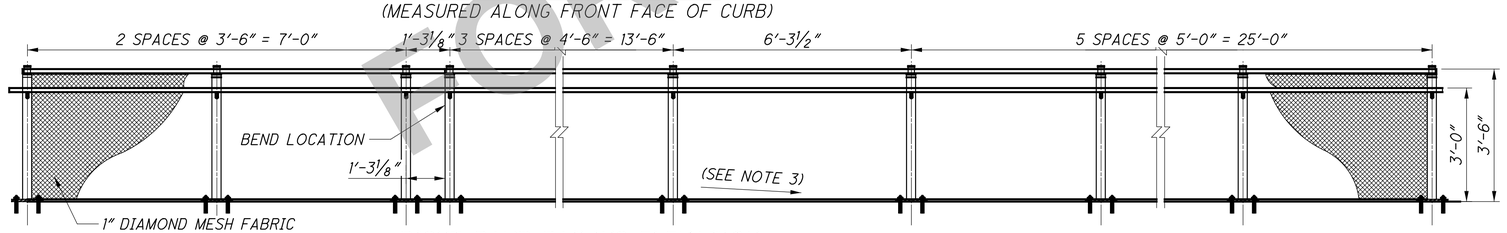
FORWARD APPROACH SLAB PLAN
(BOTTOM REINFORCEMENT)



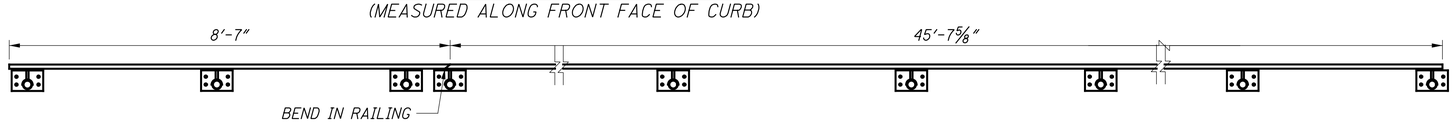
LEFT RAMP RAILING ELEVATION
(MEASURED ALONG FRONT FACE OF CURB)



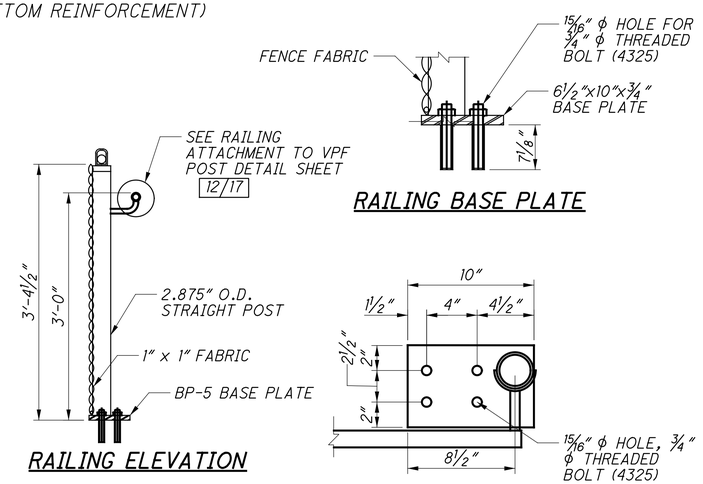
LEFT RAMP RAILING PLAN
(MEASURED ALONG FRONT FACE OF CURB)



RIGHT RAMP RAILING ELEVATION
(MEASURED ALONG FRONT FACE OF CURB)



RIGHT RAMP RAILING PLAN
(MEASURED ALONG FRONT FACE OF CURB)



RAILING BASE PLATE

RAILING ELEVATION

RAILING BASE PLATE

NOTES:

1. SEE STANDARD DRAWINGS AS-1-15 FOR ADDITIONAL DETAILS.
2. SEE SHEETS 16/17 AND 17/17 FOR REINFORCEMENT SHEET NOTES, BAR LISTS AND BEND DIAGRAMS.
3. SEE SHEET 15/17 FOR PEDESTRIAN RAMP DETAILS, INCLUDING LONGITUDINAL SLOPES.
4. SEE SHEET 12/17 FOR HANDRAIL DETAILS.
5. RAMP RAILING IS PAID PER ITEM 517, RAILING, MISC.: STEEL ORNAMENTAL RAILING.
6. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.

FOR INFORMATION ONLY

DESIGN AGENCY
JMT
2200 Corporate Exchange Drive, Suite 300, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
JWE	RT	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAD		3110125	

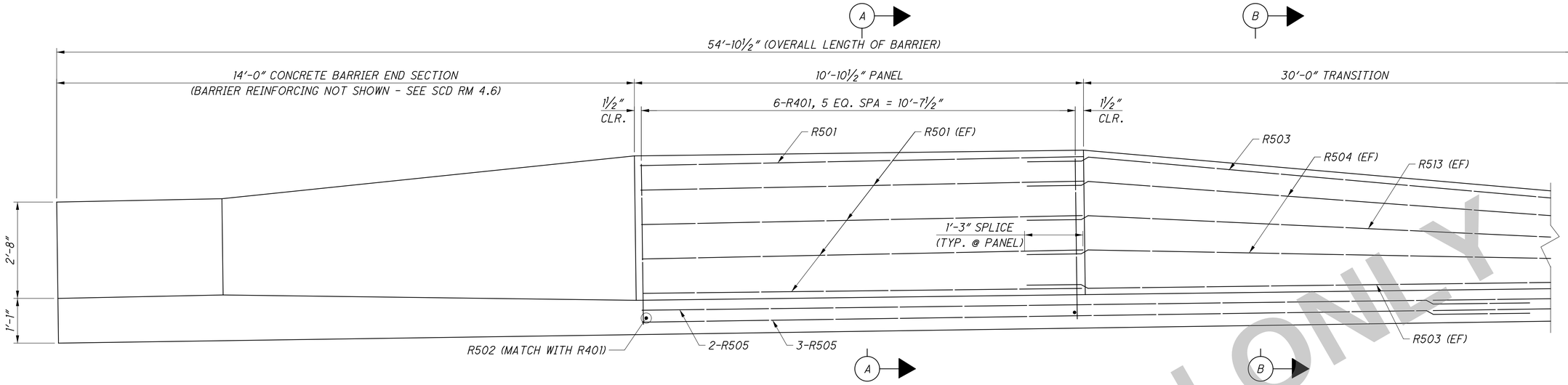
FORWARD APPROAH SLAB DETAILS
BRIDGE NO. HAM-75-0992
PEDESTRIAN PATH BRIDGE OVER I.R. 75

HAM-75-7.85
PID No. 77889

14 / 17

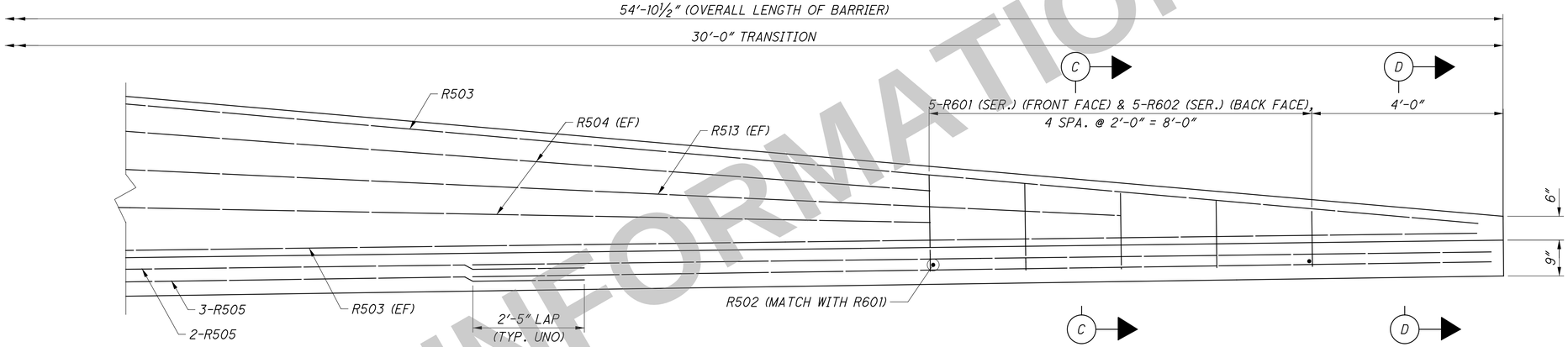
1498
2017

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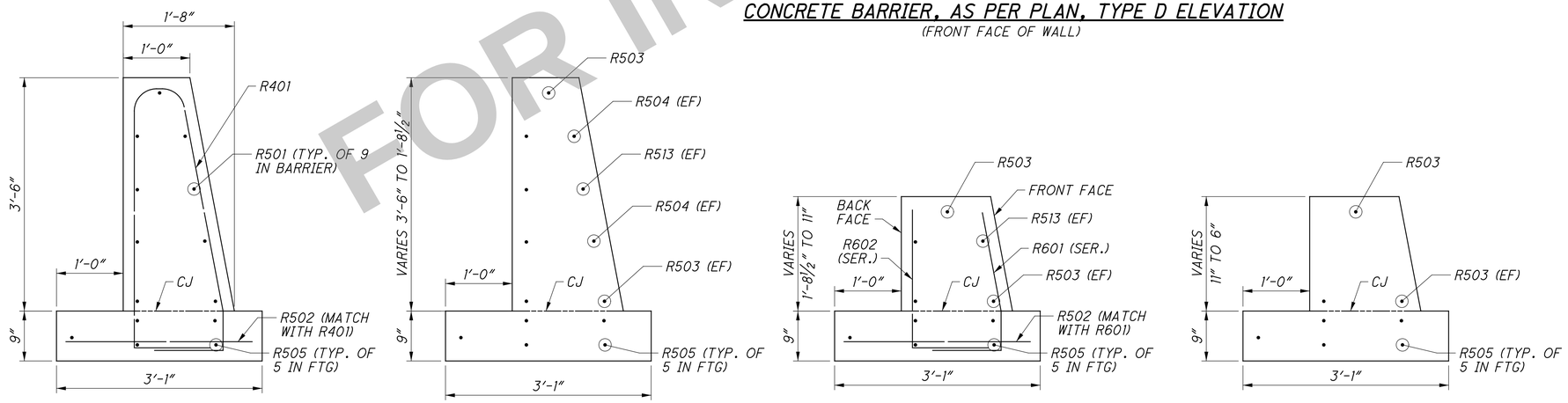
CONCRETE BARRIER, AS PER PLAN, TYPE D ELEVATION

(FRONT FACE OF WALL)



CONCRETE BARRIER, AS PER PLAN, TYPE D ELEVATION

(FRONT FACE OF WALL)



FOR INFORMATION ONLY

NOTES:

1. SEE SHEETS 16/17 AND 17/17 FOR REINFORCEMENT SHEET NOTES, BAR LISTS AND BEND DIAGRAMS.
2. SEE STANDARD DRAWINGS RM-4.5 RM-4.6 FOR ADDITIONAL DETAILS.
3. SEE SHEET 15/17 FOR FORWARD APPROACH SLAB DETAILS.

DESIGN AGENCY
2000 Corporate Exchange Drive, Suite 300, Columbus, OH 43231

DESIGNED	DRAWN	REVIEWED	DATE
PPA	PPA	NCM	12-15-21
CHECKED	REVISED	STRUCTURE FILE NUMBER	
CBY		3110125	

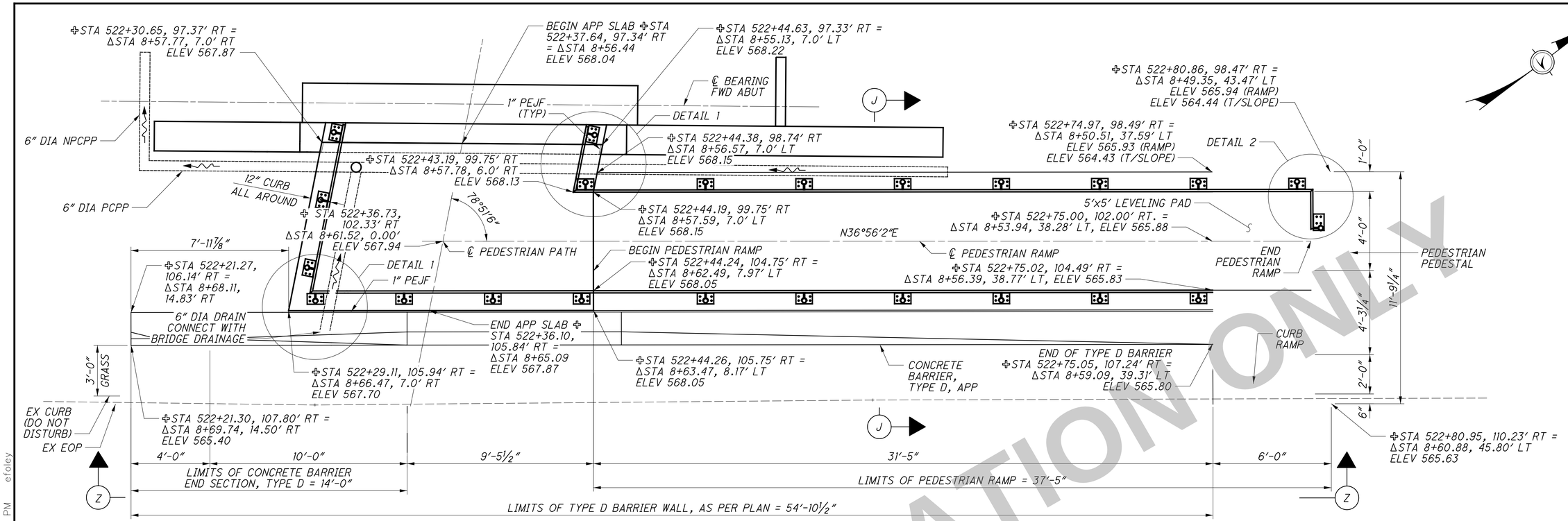
CONCRETE BARRIER, AS PER PLAN, TYPE D
BRIDGE NO. HAM-75-0992
PEDESTRIAN PATH BRIDGE OVER I.R. 75

HAM-75-7.85
PID No. 77889

14A 17

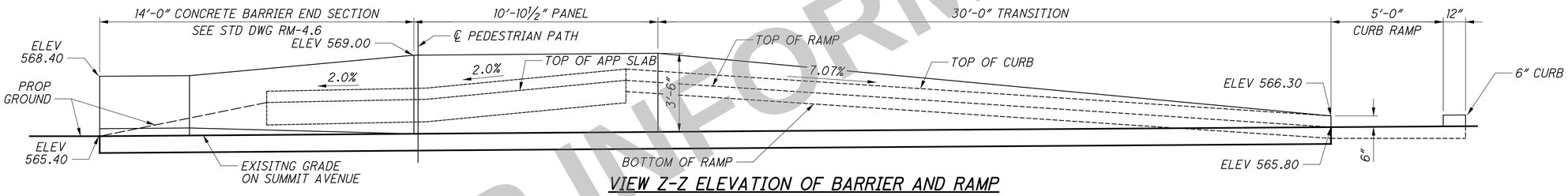
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2017

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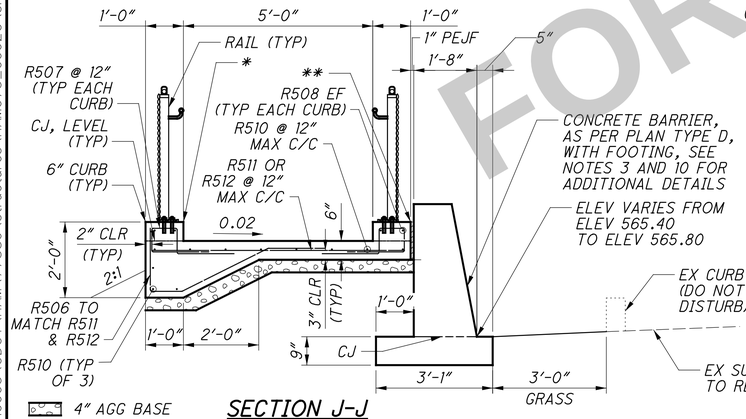


FORWARD APPROACH SLAB AND RAMP (PLAN)

ALL ELEVATIONS ARE AT THE TOP OF THE RAMP (6" CURB HEIGHT NOT INCLUDED), UNLESS NOTED

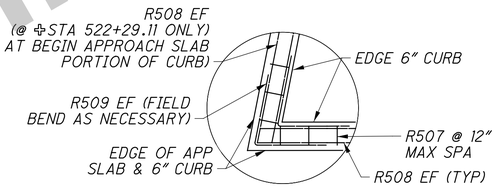


VIEW Z-Z ELEVATION OF BARRIER AND RAMP

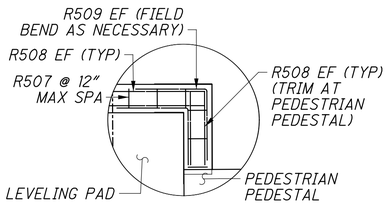


SECTION J-J

* - ELEV VARIES FROM 566.43 TO 568.65
** - ELEV VARIES FROM 566.33 TO 568.55



DETAIL 1 - 6" CURB



DETAIL 2 - 6" CURB

LEGEND:

℄ I.R. 75 STATION/OFFSET.

Δ ℄ PEDESTRIAN PATH STATION/OFFSET.

NOTES:

1. SEE STANDARD DRAWINGS AS-1-15 FOR ADDITIONAL DETAILS.
2. SEE SHEETS 16/17 AND 17/17 FOR REINFORCEMENT SHEET NOTES, BAR LISTS AND BEND DIAGRAMS.
3. SEE STANDARD DRAWINGS RM-4.5 RM-4.6 FOR ADDITIONAL DETAILS.
4. SEE SHEET 14/17 FOR APPROACH SLAB DETAILS.
5. SEE ROADWAY PLANS FOR GUARDRAIL AND PAVEMENT LIMITS AND QUANTITIES.

NOTES (CONT'D):

6. 6" CURB, PEDESTRIAN RAMP & CURB RAMP SHALL BE PAID BY ITEM 511, CLASS QC3 CONCRETE, SIDEWALK, AS PER PLAN.
7. SEE GENERAL NOTES FOR ABBREVIATION LEGEND.
8. MIN LAP LENGTH: #5 BAR = 2'-5".
9. R507, R508 AND R509 "CURB BARS" INCLUDED WITH PEDESTRIAN RAMP REINFORCING TABLE.
10. SEE SHEET 14A/17 FOR CONCRETE BARRIER, AS PER PLAN, TYPE D DETAILS AND REINFORCING LAYOUT.

FOR INFORMATION ONLY

DESIGN AGENCY
2000 Corporate Exchange Drive, Suite 200, Columbus, OH 43231

DESIGNED	CHECKED
DRAWN JWE	REVIEWED NCM
REVISED	DATE 12-15-21
	STRUCTURE FILE NUMBER 3110125

FORWARD APPROAH SLAB DETAILS
BRIDGE NO. HAM-75-0992
PEDESTRIAN PATH BRIDGE OVER I.R. 75

HAM-75-7.85
PID No. 77889

15 / 17

1499
2017

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MARK	NUMBER REAR	NUMBER FORWARD	NUMBER TOTAL	LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS A	B	C	D	E	R	INC.
ABUTMENTS													
A501	1		1	21'-10"	23	ST.							
A502	2		2	23'-11"	50	ST.							
A503	2		2	24'-7"	52	ST.							
A504	6		6	16'-8"	105	ST.							
A505	14		14	7'-9"	114	2	2'-5"	3'-2"	2'-5"				
A506	12		12	6'-9"	85	2	3'-2"	0'-8"	3'-2"				
A507	12		12	2'-11"	37	2	1'-0"	1'-2"	1'-0"				
A508	18		18	6'-3"	118	2	2'-8"	1'-2"	2'-8"				
A509	14		14	13'-7"	199	2	5'-4"	3'-2"	5'-4"				
A510	14		14	18'-10"	276	3	6'-2"	2'-7"					
A511	1		1	10'-2"	11	14	1'-6"	3'-10"	3'-0"	1'-9"	1'-6"		
A512	1		1	9'-10"	11	14	1'-6"	3'-7"	3'-0"	1'-9"	1'-6"		
A513	12		12	6'-11"	87	ST.							
	1		1	10'-7"			4'-10"	1'-2"	4'-10"				
A514	SER. OF		SER. OF	TO	22	2							6"
	2		2	9'-7"			4'-4"	1'-2"	4'-4"				
A515	1		1	8'-2"	9	14	1'-6"	3'-10"	1'-2"	10 1/2"	1'-6"		
A516	1		1	8'-5"	9	14	1'-6"	4'-1 1/2"	1'-2"	10 1/2"	6"		
A517	12		12	5'-11"	75	ST.							
A518	3		3	6'-5"	21	2							
A519	3		3	11'-11"	38	2	5'-6"	1'-2"	5'-6"				
A520	3		3	6'-3"	20	2	2'-8"	1'-2"	2'-8"				
	1		1	11'-3"			5'-2"	1'-2"	5'-2"				
A521	SER. OF		SER. OF	TO	40	2							7"
	4		4	7'-9"			3'-5"	1'-2"	3'-5"				
A522	9		9	11'-7"	109	2	5'-4"	1'-2"	5'-4"				
A541		1	1	20'-9"	22	ST.							
A542		2	2	31'-6"	66	ST.							
A543		2	2	36'-9"	77	ST.							
A544		2	2	37'-9"	79	ST.							
A545		2	2	31'-6"	66	ST.							
A546		4	4	39'-8"	166	ST.							
A547		13	13	6'-9"	92	2	3'-2"	0'-8"	3'-2"				
A548		16	16	9'-8"	162	3	3'-4 1/2"	1'-2"					
A549		5	5	8'-0"	42	2	3'-6 1/2"	1'-2"	3'-6 1/2"				
A550		14	14	17'-5"	255	3	5'-3 1/4"	3'-2"					
A551		26	26	18'-6"	502	3	6'-0"	2'-6"					
A552		4	4	8'-7"	36	2	3'-10"	1'-2"	3'-10"				
A553		1	1	19'-11"	21	14	1'-6"	1'-1 1/2"	15'-10 3/4"	1'-5 3/4"	1'-6"		
A554		1	1	20'-8"	22	14	1'-6"	1'-10 1/4"	15'-10 3/4"	1'-5 3/4"	1'-6"		
A555		6	6	17'-11"	113	ST.							
A556		4	4	3'-6"	15	ST.							
A557		3	3	4'-9"	15	16	4'-2"						
A558		8	8	5'-7"	47	2	2'-4"	1'-2"	2'-4"				
		1	1	11'-1"			5'-1 1/4"	1'-2"	5'-1 1/4"				
A559		SER. OF	SER. OF	TO	107	2							1 1/8"
		10	10	9'-5"			4'-3"	1'-2"	4'-3"				
		1	1	12'-3"			5'-8"	1'-2"	5'-8"				
A560		SER. OF	SER. OF	TO	50	2							1 3/4"
		4	4	11'-5"			5'-3"	1'-2"	5'-3"				
A561		4	4	6'-7"	28	2	2'-10"	1'-2"	2'-10"				
A562		1	1	13'-0"	14	14	1'-6"	2'-1 3/8"	7'-3 1/8"	3'-7 1/2"	1'-6"		
A563		1	1	11'-9"	13	14	1'-6"	9 3/4"	7'-3 1/8"	3'-7 1/2"	1'-6"		
A564		2	2	8'-8"	19	ST.							
A565		4	4	9'-11"	42	ST.							
		1	1	11'-6"			5'-3 1/2"	1'-2"	5'-3 1/2"				
A566		SER. OF	SER. OF	TO	39	2							9"
		4	4	7'-0"			3'- 1/2"	1'-2"	3'- 1/2"				
A567		6	6	11'-5"	72	2	5'-3"	1'-2"	5'-3"				
A568		2	2	6'-3"	14	2	2'-8"	1'-2"	2'-8"				
A569		3	3	7'-0"	22	2	3'- 1/2"	1'-2"	3'- 1/2"				
				TOTAL =	3729								

MARK	NUMBER REAR	NUMBER FORWARD	NUMBER TOTAL	LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS A	B	C	D	E	R	INC.
ABUTMENTS (CONT.)													
A801	12	4	16	16'-8"	712	ST.							
A802		8	8	31'-6"	673	ST.							
D801	9		9	4'-7"	111	18	2'-3"	1'-0"	1'-0"				
D802		9	9	4'-7"	111	18	2'-3"	1'-0"	1'-0"				
				TOTAL =	5336								

MARK	NUMBER REAR	NUMBER FORWARD	NUMBER TOTAL	LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS A	B	C	D	E	R	INC.
PIER													
P501			18	22'-9"	428	3	2'-8"	8'-5"					
P502			2	14'-11"	32	ST.							
			4	9'-1"			3'-4"	2'-8"	3'-4"				
P503			SER. OF	TO	383	2							
			11	7'-7"			2'-7"	2'-8"	2'-7"				
P504			16	9'-1"	152	2	3'-4"	2'-8"	3'-4"				
P506			4	16'-5"	69	ST.							
P507			8	7'-3"	61	2	2'-5"	2'-8"	2'-5"				
P801			12	6'-6"	209	ST.							
P802			10	10'-6"	281	ST.							
P803			5	21'-4"	285	2	2'-8"	16'-5"	2'-8"				
P804			5	21'-11"	293	34	2'-8"	1'-6"	4'-0"	8'-5"			
P901			36	20'-9"	2540	ST.							
P902			36	10'-3"	1255	37	1'-6"	6'-10"					
				TOTAL =	5988								

MARK	NUMBER REAR	NUMBER FORWARD	NUMBER TOTAL	LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS A	B	C	D	E	R	INC.
CONCRETE BARRIER, TYPE D, AS PER PLAN (FOR INFORMATION ONLY)													
R401			6	10'-1"	41	36	0'-4"	3'-1"	0'-7"	1'-2"	3'-11"		
R501			9	10'-7"	100	ST.							
R502			11	2'-7"	30	ST.							
R503			3	30'-0"	94	ST.							
R504			4	19'-3"	81	ST.							
R505			10	21'-5"	224	ST.							
R513			2	23'-1"	49	ST.							
			1	2'-7"					0'-9"				
R601			SER. OF	TO	23	38	1'-3"	0'-7"	TO				2 1/2"
			5	3'-5"					1'-7"				
			1	2'-7"				1'-4"					
R602			SER. OF	TO	23	1	1'-3"	TO					2 1/2"
			5	3'-5"				2'-2"					
				TOTAL =	665								
PEDESTRIAN RAMP (FOR INFORMATION ONLY)													
R506			38	7'-0"	278	35	1'-7"	0'-9"	2'-2"	2'-5"	1'-1"		
R507			109	6'-4"	721	30	2'-5"	0'-8"	0'-8 1/4"	0'-7 3/4"			
R508			22	11'-5"	262	ST.							
R509			6	4'-9"	30	1	2'-5"	2'-5"					
R510			11	37'-1"	426	ST.							
R511			32	6'-8"	223	ST.							
R512			6	8'-11"	56	ST.							
				TOTAL =	1996								

NOTES:

1. SEE SHEET 17/17 FOR BENDING DIAGRAMS AND NOTES.

FOR INFORMATION ONLY

DESIGN AGENCY
JMT
2200 Corporate Exchange Drive, Suite 300, Columbus, OH 43231

DATE 12-15-21
REVIEWED NCM
STRUCTURE FILE NUMBER 3110125
DRAWN SBH
REVISED
DESIGNED KK
CHECKED JAD

REINFORCING STEEL LIST

BRIDGE NO. HAM-75-0992
PEDESTRIAN PATH BRIDGE OVER I.R. 75

HAM-75-7.85
PID No. 77889

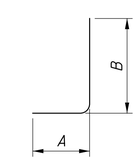
1500
2017

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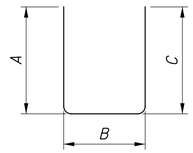
MARK	NUMBER REAR	NUMBER FORWARD	NUMBER TOTAL	LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS A	B	C	D	E	R	INC.
APPROACH SLABS (FOR INFORMATION ONLY)													
AS501	23		23	13'-11"	334	ST.							
AS502	9		9	9'-6"	90	ST.							
AS503		8	8	13'-9"	115	ST.							
		1	1	13'-11"									
AS504		SER. OF	SER. OF	TO	60	ST.							3 3/8"
		4	4	14'-9"									
AS505		1	1	14'-11"	16	ST.							
AS506		4	4	3'-0"	13	ST.							
AS507		10	10	8'-2"	86	ST.							
AS508		2	2	5'-11"	13	ST.							
		1	1	14'-0"									
AS509		SER. OF	SER. OF	TO	124	ST.							2 1/2"
		8	8	15'-6"									
AS1001	15		15	10'-11"	705	16	9'-6"						
AS1002		17	17	9'-8"	708	16	8'-3"						
AS1003		1	1	4'-3"	19	16	2'-10"						
AS1004		1	1	7'-10"	34	19	2'-7"	5'-3"	1'-0"				
				TOTAL =	2317								

MARK	NUMBER REAR	NUMBER FORWARD	NUMBER TOTAL	LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS A	B	C	D	E	R	INC.
SLEEPER SLABS (FOR INFORMATION ONLY)													
SS501	11		11	11'-8"	134	ST.							
SS502	13		13	5'-6"	75	ST.							
SS503	13		13	5'-2"	71	30	0'-10"	1'-3 1/2"	1'-4"	1'-4"			
				TOTAL =	280								

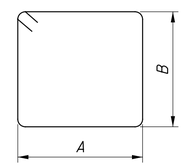
BAR BENDING DIAGRAMS



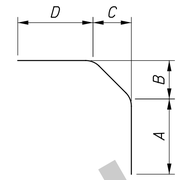
TYPE-1



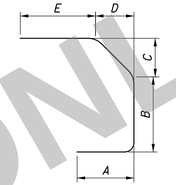
TYPE-2



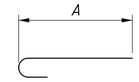
TYPE-3



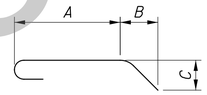
TYPE-13



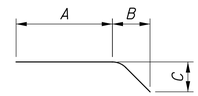
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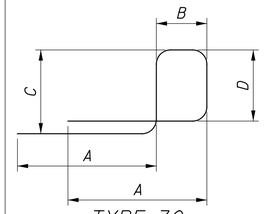
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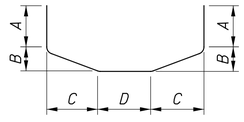
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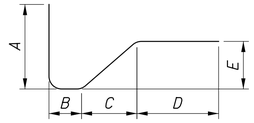
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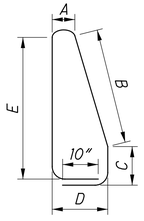
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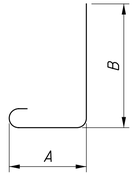
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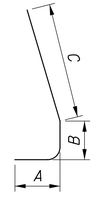
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TYPE-38

NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, P601 IS A NO. 6 BAR.

2. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED.

3. "ST." INDICATES A STRAIGHT BAR.

4. ALL REINFORCING TO BE EPOXY COATED.

5. "*" INDICATES A BAR WITH A MECHANICAL CONNECTOR AND "**" INDICATES A BAR WITH THREADED END. LENGTHS PROVIDED ARE MEASURED FLUSH WITH PHASE CONSTRUCTION JOINT. THE CONTRACTOR SHALL COORDINATE REINFORCING STEEL LENGTH WITH THE CONNECTOR MANUFACTURER OF THE THREADED CONNECTOR.

FOR INFORMATION ONLY

DESIGN AGENCY
2200 Corporate Exchange Drive, Suite 310, Columbus, OH 43231

DATE 12-15-21
REVIEWED NCM
STRUCTURE FILE NUMBER 3110125
DRAWN JBM
REVISED
DESIGNED JBM
CHECKED PPA

REINFORCING STEEL LIST
BRIDGE NO. HAM-75-0992
PEDESTRIAN PATH BRIDGE OVER I.R. 75

HAM-75-7.85
PID No. 77889

17 / 17

1501
2017

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pw:\\gfnet-pw.bentley.com:gfnet-pw-01\Documents\Projects\54682\77889\structures\HAM_RR_TYP\sheets\02 4/21/2022 8:34:33 AM cmarburger

PROJECT NORFOLK SOUTHERN BRIDGE PLANS

THE GENERAL NORFOLK SOUTHERN RAILROAD (NSRR) BRIDGE NOTES & DETAILS ARE APPLICABLE TO THE NSRR BRIDGES CONSTRUCTED WITH ODOT PROJECT IDENTIFICATION 77889.

BRIDGE SPECIFIC DETAIL AND NOTES ARE INCLUDED WITH THE PLANS FOR EACH STRUCTURE. THE STRUCTURES INCLUDED WITH THIS PROJECT ARE AS FOLLOWS:

NORFOLK SOUTHERN RAILROAD OVER STATE ROUTE 562
OHIO, HAMILTON COUNTY, CINCINNATI (BERRY YARD)
ODOT DATA: HAM-562-0026 (ODOT SFN: 3113818)
NSRR DATA: BRIDGE CT-1.41 (NSRR BRIDGE No.: BR0018448)

PAGE 1515 2017 THROUGH 1571 2017

NORFOLK SOUTHERN RAILROAD OVER INTERSTATE 75
OHIO, HAMILTON COUNTY, CINCINNATI (BERRY YARD)
ODOT DATA: HAM-75-0834 (ODOT SFN: 3110142)
NSRR DATA: BRIDGE CT-0.95 (NSRR BRIDGE No.: BR0018445)

PAGE 1572 2017 THROUGH 1612 2017

NORFOLK SOUTHERN RAILROAD OVER PROSSER AVE
OHIO, HAMILTON COUNTY, CINCINNATI (BERRY YARD)
ODOT DATA: HAM-75-PROSSER (ODOT SFN: TBD)
NSRR DATA: BRIDGE CT-0.89 (NSRR BRIDGE No.: BR0018444)

PAGE 1613 2017 THROUGH 1647 2017

CONSTRUCTION SPECIFICATIONS

PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH THE FOLLOWING; WHERE DISCREPANCIES EXIST BETWEEN THESE REQUIREMENTS, THE MORE STRINGENT SHALL GOVERN:
- NSRR-PPM: NORFOLK SOUTHERN RAILWAY PUBLIC PROJECTS MANUAL, CURRENT EDITION, INCLUDING APPENDICES
- AREMA: AMERICAN RAILWAY ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION, CURRENT EDITION
- ODOT CMS: STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION & MATERIAL SPECIFICATIONS, JANUARY 1, 2019
- THE SUPPLEMENTAL SPECIFICATIONS, AND SPECIAL PROVISIONS FOR THIS PROJECT.

REFER TO THE FOLLOWING ODOT STANDARD BRIDGE DRAWING(S):
-N/A-

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S) (ODOT SSP):
ODOT SSP 1083 - CERTIFICATION OF GRAFFITI PROTECTION COATINGS FOR CONCRETE
ODOT SSP 832 - TEMPORARY SEDIMENT AND EROSION CONTROL

NORFOLK SOUTHERN RAILROAD COORDINATION AND MAINTENANCE-OF-WAY

THE CONSTRUCTION PROGRAM WILL REQUIRE CLOSE COORDINATION AND COOPERATION WITH NORFOLK SOUTHERN PERSONNEL FOR ALL OPERATIONS THAT INVOLVE TRACK WORK AND RAIL SERVICE. THE TIME OF SPECIFIC TRACK CLOSINGS, OPENINGS, SWITCHING AND OTHER REQUIRED RAIL, TIE AND BALLAST WORK IN ALL CASES SHALL BE ALSO SUBJECT TO NORFOLK SOUTHERN APPROVAL.

ALL WORK ON, OVER, UNDER, OR ADJACENT TO NORFOLK SOUTHERN RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH THE NSRR-PPM APPENDIX E, "NORFOLK SOUTHERN - SPECIAL PROVISIONS FOR THE PROTECTION OF RAILWAY INTERESTS".

ALL PROPOSED SUBMITTALS REQUIRED EITHER BY THE ODOT CMS OR THE NSRR-PPM SHALL BE SUBMITTED TO NSRR FOR REVIEW AND APPROVAL

ALL BALLAST, RAILS, TIES AND INCIDENTAL TRACK METAL WORK FOR THE TRACKS WILL BE FURNISHED AND PLACED BY NORFOLK SOUTHERN.

RAILROAD TRACK HORIZONTAL ALIGNMENTS

RAILROAD TRACK CURVES ARE CHORD DEFINED.

NORFOLK SOUTHERN RAILROAD COORDINATION AND MAINTENANCE-OF-WAY (CONTINUED)

THE CONTRACTOR SHALL MAINTAIN A CONSTRUCTION CLEARANCE OF 10 FEET HORIZONTALLY (FOR ELEMENTS BELOW THE TOP OF RAIL) FROM THE CENTERLINE OF TRACKS AND 22 FEET VERTICALLY FROM A POINT LEVEL WITH THE TOP OF THE HIGHER RAIL, AT ALL TIMES. CLEARANCE OF 14 FEET HORIZONTALLY SHALL BE PROVIDED TO ANY TEMPORARY WORKS INSTALLED ABOVE THE TOP OF RAIL, EXCEPT AS INDICATED BY THESE PLANS OR APPROVED BY NSRR.

DESIGN SPECIFICATIONS

THE DESIGN WAS COMPLETED IN ACCORDANCE WITH THE FOLLOWING DESIGN STANDARDS:

* AREMA, CHAPTERS 8, 9 & 15
* NSRR-PPM APPENDIX H.2 "UNDERPASS GRADE SEPARATION DESIGN CRITERIA"
* REINFORCED CONCRETE PIER & DECK SLAB DESIGN AS PER AREMA, CHAPTER 8, TABLE 8-2-5, LOAD FACTOR DESIGN.
* ALL OTHER REINFORCED CONCRETE DESIGN AS PER AREMA, CHAPTER 8, TABLE 8-2-4, SERVICE LOAD DESIGN.
* STRUCTURAL STEEL DESIGN AS PER AREMA CHAPTER 15, ALLOWABLE STRESS DESIGN.
* DESIGN LIVE LOAD:
  COOPER E-80 INCLUDING ALTERNATE LIVE LOAD ON 4 AXLES. DESIGN SPEED OF 15 MPH.
* LIVE LOAD DISTRIBUTION:
  TO STEEL SUPERSTRUCTURE MEMBERS PER AREMA 15-1.3.4
  TO CONCRETE DECK PER AREMA 8-2.2.3(c).
* IMPACT LOAD: ROLLING EQUIPMENT WITHOUT HAMMER BLOW STEEL SUPERSTRUCTURE PER AREMA CHAPTER 15-1.3.5 CONCRETE DECK PER AREMA 8-2.2.3(d).
* DEAD LOAD:
  INCLUDES 6" ADDITIONAL BALLAST FOR FUTURE TRACK SURFACING. REMOVABLE DECK FORMS SHALL BE USED.
* FATIGUE ANALYSIS IS BASED ON AREMA 15-1.3.13.
* THE SUPERSTRUCTURE IS ANALYZED AS NON-COMPOSITE FOR STRENGTH REQUIREMENTS AND COMPOSITE FOR LIVE LOAD DEFLECTION REQUIREMENTS.

DESIGN DATA

* CONCRETE
  SUPERSTRUCTURE CONCRETE SHALL OBTAIN A 28 DAY COMPRESSIVE STRENGTH OF 4,500 PSI (MINIMUM) (DECK AND PARAPETS)
  SUBSTRUCTURE CONCRETE SHALL OBTAIN A 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI (MINIMUM) (ABUTMENTS, PIERS, FOOTINGS AND FOUNDATIONS)
* REINFORCING STEEL
  ASTM A615, GRADE 60
  (60,000 PSI MINIMUM YIELD STRENGTH)
  ALL REINFORCING SHALL BE EPOXY COATED PER ASTM A775
  WELDING GRADE 60 REINFORCING BARS IS PROHIBITED
  PROVIDE 2" CLEAR CONCRETE COVER ON REINFORCEMENT BARS EXCEPT AS NOTED.
* STRUCTURAL STEEL
  SUPERSTRUCTURE STEEL SHALL BE ASTM A709, GRADE 50 (50,000 PSI MINIMUM YIELD STRENGTH)
  STEEL BEARING COMPONENTS SHALL BE ASTM A36 (36,000 PSI MINIMUM YIELD STRENGTH)
  STEEL SHEAR CONNECTORS SHALL BE ASTM A108, GRADE 1010 THROUGH 1020 (EITHER SEMI- OR FULLY KILLED)
* STRUCTURAL BOLTS
  UNLESS OTHERWISE NOTED, ALL STRUCTURAL BOLTS SHALL BE ASTM F3125, GRADE A325. ALL BOLTS, NUTS AND WASHERS SHALL BE PAINTED AFTER INSTALLATION. GALVANIZED BOLTS SHALL NOT BE USED.
* BRONZE BEARING COMPONENTS SHALL BE ASTM B22 (ALLOY C91100)
  (CYLINDRICAL EXPANSION BEARINGS)
* FORGED BEARING COMPONENTS SHALL BE ASTM A668, CLASS D (37,500 PSI MINIMUM YIELD STRENGTH)
  (FIXED BEARING PINTLES)
* ANCHOR RODS SHALL BE ASTM F1554 GRADE 105 (105,000 PSI MINIMUM YIELD STRENGTH)
* STEEL PIPES FOR CAST-IN-PLACE CONCRETE PILES ASTM A252, GRADE 2 (35,000 PSI MINIMUM YIELD STRENGTH)

DIMENSIONS AND BOUNDARIES

ALL DIMENSIONS SHOWN ARE HORIZONTAL UNLESS NOTED OTHERWISE. SUPERSTRUCTURE DIMENSIONS SHOWN ARE GIVEN AT A TEMPERATURE OF 65°F.

PROTECTION OF UTILITIES

THE CONTRACTOR IS REMINDED THAT ALL EXISTING COMPONENTS AND SYSTEMS TO REMAIN IN USE DURING AND/OR AFTER THIS PROJECT REQUIRE PROTECTION. THESE ITEMS INCLUDE, BUT ARE NOT LIMITED TO:

WATER MAINS
GAS MAINS
ELECTRICAL/TELEPHONE CONDUITS AND OVERHEAD LINES
SIGNALS
SEWER
FIBER OPTIC LINES
RAILROAD AERIAL LINES
ON-TRACK UTILITIES (UNDERGROUND ON RAILROAD PROPERTY)
ADVERTISING BOARDS ON RAILROAD PROPERTY

IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT EXISTING SYSTEMS AND COMPONENTS FOR THE DURATION OF THE CONTRACT AND/OR COORDINATE ON-TRACK UTILITY PROTECTION AND RELOCATION WITH THE RAILROADS. THE OHIO "ONE CALL" SERVICE DOES NOT LOCATED BURIED RAILROAD UTILITIES.

* OVERHEAD POWER LINES:
  THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AND COORDINATION WITH OWNERS AS TO THE LOCATION OF THESE UTILITIES WHEN MOVED MAY BE NECESSARY TO AVOID DAMAGE THERETO DURING CONSTRUCTION AND ERECTION OF STRUCTURES.
* UTILITY LINES:
  THE CONTRACTOR AND UTILITY COMPANIES ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM. THE COST OF THE RELOCATION OF ON-TRACK UTILITIES WILL BE INCLUDED IN THE RAILROAD FORCE ACCOUNT WORK.
* RAILROAD AERIAL LINES:
  RAILROAD AERIAL LINES WILL BE RELOCATED BY THE OWNING RAILROAD (TEMPORARILY OR PERMANENTLY AT THE DISCRETION OF THE RAILROAD). USE ALL PRECAUTIONS NECESSARY TO SEE THAT THE LINES ARE NOT DISTURBED DURING CONSTRUCTION AND COOPERATE WITH THE RAILROAD IN RELOCATION OF THESE LINES. THE COST OF THE RELOCATION WILL BE INCLUDED IN THE RAILROAD FORCE ACCOUNT WORK.
* ON-TRACK UTILITIES (UNDERGROUND ON RAILROAD PROPERTY):
  THE CONTRACTOR SHALL CONTACT THE RAILROAD'S REPRESENTATIVE TWO (2) DAYS IN ADVANCE OF THOSE PLACES WHERE EXCAVATION, PILE DRIVING, OR HEAVY LOADS MAY DAMAGE RAILROAD UNDERGROUND LINES ON RAILROAD PROPERTY. UPON REQUEST FROM THE CONTRACTOR OR AGENCY, RAILROAD SIGNAL FORCES WILL LOCATE AND PAINT MARK OR FLAG RAILROAD UNDERGROUND SIGNAL, COMMUNICATION, AND POWER LINES IN THE AREA TO BE DISTURBED FOR THE CONTRACTOR. THE CONTRACTOR SHALL AVOID EXCAVATION OR OTHER DISTURBANCE OF THESE LINES WHICH ARE CRITICAL TO THE SAFETY OF THE RAILROAD AND THE PUBLIC. IF DISTURBANCE OR EXCAVATION IS REQUIRED NEAR A BURIED RAILROAD SIGNAL, COMMUNICATION, OR POWER LINE, THE LINE SHALL BE POTHOLED MANUALLY WITH CAREFUL HAND EXCAVATION BY THE CONTRACTOR AND PROTECTED OR RELOCATED BY THE CONTRACTOR DURING THE COURSE OF THE DISTURBANCE UNDER THE SUPERVISION AND DIRECTION OF A RAILROAD SIGNAL REPRESENTATIVE.
* ADVERTISING BOARDS ON RAILROAD PROPERTY:
  ADVERTISING BOARDS ON RAILROAD PROPERTY THAT ARE TO BE REMOVED SHALL BE COORDINATED WITH THE NSRR REAL ESTATE DEPARTMENT.
* RAILROAD UTILITY RELOCATION:
  ALL UTILITY INSTALLATIONS OR RELOCATIONS THAT ARE REQUIRED IN CONJUNCTION WITH THIS PROJECT CAN BE INSTALLED OR RELOCATED AS PART OF THE PROJECT PROVIDED THE CONSTRUCTION IS PERFORMED BY THE PROJECT CONTRACTOR OR PROJECT CONTRACTOR'S SUBCONTRACTOR. HOWEVER, THE UTILITY MUST SUBMIT AN APPLICATION FOR THE INSTALLATION OR RELOCATION TO THE RAILROADS REPRESENTATIVE FOR APPROPRIATE HANDLING FOR LICENSE AGREEMENT AND APPLICABLE FEES. A LICENSE AGREEMENT MUST BE EXECUTED PRIOR TO UTILITY BEING INSTALLED OR RELOCATED.

FOR NSRR UTILITY APPLICATIONS GO TO:
WWW.NSCORP.COM -> CUSTOMERS -> REAL ESTATE
-> WIRELINE/PIPELINE AND FIBER OPTICS -> AECOM

EXCAVATION

THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF ALL EXCAVATED SLOPES. DIRECT SURFACE RUNOFF AWAY FROM THE EXCAVATION. GROUNDWATER LEVELS MAY FLUCTUATE SEASONALLY AS A FUNCTION OF PRECIPITATION AND OTHER HYDROLOGICAL FACTORS. THEREFORE, THERE MAY BE CONSIDERABLE CHANGE IN THE WATER TABLE OR THE PRESENCE OF WATER WHERE NOT PREVIOUSLY ENCOUNTERED. PERFORM ALL EXCAVATIONS IN ACCORDANCE WITH OSHA REQUIREMENTS AND NORFOLK SOUTHERN SPECIFICATIONS FOR SHORING. EXCAVATION AND SHORING SHOWN IN THESE PLANS ASSUME AN OSHA TYPE B SOIL (TO BE CONFIRMED BY THE CONTRACTOR)

EXCAVATE ACCORDING TO CONSTRUCTION SEQUENCES DRAWINGS AND NOTES. DO NOT OVEREXCAVATE.

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN

UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH CMS ITEM 503 EXCEPT THAT THE BACKFILL MATERIAL SHALL BE MATERIAL CONFORMING TO CMS 703.17 (CMS 304 MATERIAL) AND MEET THE COMPACTION REQUIREMENTS OF CMS 304.05. IN ADDITION, THE BACKFILL SHALL BE PLACED AND COMPACTED IN 6" LIFTS. THE USE OF SLAG IS PROHIBITED.

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING AS PER PLAN

PLANS AND SHOP DRAWINGS FOR TEMPORARY SHORING THAT SUPPORT RAILROAD EMBANKMENT OR LIVE LOAD SHALL BE APPROVED BY NORFOLK SOUTHERN. THE SHORING DESIGN SHOWN IN THE PLANS MEETS NORFOLK SOUTHERN AND AREMA SPECIFICATIONS FOR SHORED CONSTRUCTION AND HAS BEEN APPROVED BY NORFOLK SOUTHERN. ANY CHANGES TO THIS DESIGN REQUIRES NORFOLK SOUTHERN APPROVAL.

THE CONTRACTOR SHOULD VERIFY THE ADEQUACY OF THE ASSUMED EXCAVATION SLOPES IN THESE PLANS PRIOR TO SHORING INSTALLATION OR EXCAVATION. THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK, REVIEW TIME, SCHEDULE DELAYS, BUDGET IMPACTS AND DAMAGES RESULTING FROM RAILROAD APPROVAL OF CONTRACTOR MODIFICATIONS OF THESE PLANS.

THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, DUE TO EITHER CONTRACTOR PREFERENCE OR FINDING SOILS NOT CAPABLE OF SUPPORTING THE EXCAVATION SLOPES SHOWN IN THESE PLANS, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH CMS 501.05 AND THE NSRR-PPM. THE SECTION PROPERTIES LISTED IN THESE PLANS ARE REQUIRED TO MEET SHORING RESISTANCE AND/OR DEFLECTION REQUIREMENTS OF THE RAILROAD.
THE DESIGN INCLUDES TOTAL UNFACTORED LOADS AND INCLUDES ALL APPLICABLE LIVE LOAD SURCHARGES. A SOIL DENSITY OF 125 PCF WITH AN INTERNAL ANGLE OF FRICTION OF 31 DEGREES WAS USED IN THE SHORING DESIGN DETAILED IN THESE PLANS. PER THE NSRR-PPM, NO SHORING SHALL BE CLOSER THAN 10'-0" THE THE CENTERLINE OF TRACK. SHORING LOCATED BETWEEN 10'-0" AND 18'-0" FROM THE CENTERLINE OF TRACK SHALL BE LIMITED TO A MAXIMUM CALCULATED DEFLECTION OF 3/8". SHORING LOCATED GREATER THAN 18'-0" FROM THE CENTERLINE OF TRACK SHALL BE LIMITED TO A MAXIMUM CALCULATED DEFLECTION OF 1/2".

THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EACH EXCAVATION AT THE INDIVIDUAL CONTRACT LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (LOCATION DESCRIPTION). NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN. RAILROAD APPROVAL IS REQUIRED FOR ANY EXCAVATION SUPPORT ALTERNATE DESIGNS THAT ARE IN THE RAILROAD RIGHT-OF-WAY, SUPPORTING TRACK, OR WITHIN THE RAILROAD TRACK ZONE OF INFLUENCE (DEFINED BY THE NSRR-PPM AS A 2:1 GRADE DOWN FROM THE EDGE OF THE SUBBALLAST). ANY DELAYS RELATED TO THE ALTERNATE SHORING DESIGN, APPROVAL, AND ACCEPTANCE BY THE RAILROAD IS NON-EXCUSABLE AND THE DEPARTMENT WILL NOT CONSIDER ADDITIONAL COMPENSATION OR CONTRACT EXTENSION.

FOR REVIEW ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
EFD	JEA	CTV	12-15-21
CHECKED	REVISED	ODOT SFN	3113818, 3110142, PROSSER
CTM			

STANDARD RAILROAD BRIDGE NOTES 1/6
GENERAL NORFOLK SOUTHERN RAILROAD (NSRR) BRIDGE STANDARD NOTES & DETAILS
NSRR BRIDGES CT-1.41 (NORWOOD LATERAL), CT-0.95 (I-75), CT-0.89 (PROSSER AVE)

HAM-75-7.85
PID No. 77889

1502 2017

ITEM 507 - CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED, AS PER PLAN

FURNISH ASTM A252, GRADE 2 STEEL PIPES FOR PILES AS FOLLOWS:

12" DIAMETER = 0.50" (½") MINIMUM WALL THICKNESS
14" DIAMETER = 0.50" (½") MINIMUM WALL THICKNESS
16" DIAMETER = 0.50" (½") MINIMUM WALL THICKNESS

SPLICING OF STEEL PIPES SHALL BE PER ODOT CMS 507.09 (FULL PENETRATION BUTT WELDS).

ITEM 507 - CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN, AS PER PLAN

PILE DRIVING CRITERIA SHALL BE PER CMS 507.05

PILES DRIVEN TO TIP ELEVATION FOR PILE/SOIL SETUP

PART OF THE ULTIMATE BEARING VALUE WILL BE ACHIEVED THROUGH PILE/SOIL SETUP, WHICH IS A TIME-DEPENDENT INCREASE IN RESISTANCE THAT OCCURS IN SOME SOILS.

NOTIFY THE ENGINEER AT LEAST 5 DAYS BEFORE DRIVING PILES SO THAT THE ENGINEER CAN NOTIFY THE DISTRICT GEOTECHNICAL ENGINEER, THE OFFICER OF CONSTRUCTION ADMINISTRATION, AND THE OFFICE OF STRUCTURAL ENGINEERING.

DRIVE THE FIRST TWO PILES IN EACH SUBSTRUCTURE TO THE TIP ELEVATION GIVEN IN THE PLANS FOR THE SUBSTRUCTURE. DRIVE THE THIRD AND FOURTH PILES TO 75% AND 85% OF THE LENGTH OF THE FIRST TWO PILES. PERFORM DYNAMIC LOAD TESTING ON ALL FOUR PILES WHILE DRIVING.

AFTER DRIVING THE FOUR PILES, CEASE ALL DRIVING OPERATIONS AT THE SUBSTRUCTURE FOR A MINIMUM OF 7 DAYS. INCLUDE THE WAITING PERIOD AS A SEPARATE ACTIVITY IN THE PROGRESS SCHEDULE.

AFTER THE WAITING PERIOD, PERFORM PILE RESTRIKES ON THE FOUR PILES (TWO RESTRIKE ITEMS). SUBMIT ALL TEST RESULTS AND ESTABLISH DRIVING CRITERIA FOR THE PILING IN THE SUBSTRUCTURE WITH THE ASSISTANCE OF THE DISTRICT GEOTECHNICAL ENGINEER, THE OFFICE OF CONSTRUCTION ADMINISTRATION, THE OFFICE OF STRUCTURAL ENGINEERING, AND NORFOLK SOUTHERN RAILROAD.

IF THE DYNAMIC LOAD TESTING INDICATES A PILE HAS ACHIEVED THE ULTIMATE BEARING VALUE ABOVE THE TIP ELEVATION DURING THE INITIAL DRIVING (BEFORE THE WAITING PERIOD), STOP DRIVING AND NOTIFY THE ENGINEER. IF THE RESTRIKE TEST RESULTS ON THE FOUR PILES INDICATE THAT A PILE DID NOT ACHIEVE THE REQUIRED ULTIMATE BEARING VALUE, DRIVE THE PILE TO THE ESTABLISHED DRIVING CRITERIA. SPLICING OF PILES BEYOND THE ESTIMATED LENGTH PROVIDED IN THESE PLANS WILL BE PAID FOR BY THE DEPARTMENT PER ODOT CMS 109.05 WITH A NEGOTIATED PRICE PER SPLICE.

BRIDGE SPECIFIC MAXIMUM SERVICE REACTION VALUES, ORDER LENGTHS, PILE CUTOFF ELEVATIONS PILE TIP ELEVATIONS, ARE WITH BRIDGE SPECIFIC NOTES AND PLANS.

FOR HAM-562-0026 (NSRR BRIDGE CT-1.41) OVER S.R. 562,

SEE SHEETS 1517 (2017) , 1530 (2017) , 1531 (2017) AND 1532 (2017) .

FOR HAM-75-0834 (NSRR BRIDGE CT-0.95) OVER I.R. 75,

SEE SHEETS 1575 (2017) , 1580 (2017) , 1581 (2017) AND 1582 (2017) .

FOR HAM-75-PROSSER (NSRR BRIDGE CT-0.89) OVER

PROSSER AVE, SEE SHEETS 1614 (2017) , 1619 (2017) AND 1620 (2017) .

PILE DRIVING CONSTRAINTS

PRIOR TO DRIVING PILES AT THE ABUTMENTS, CONSTRUCT THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP AT A 1:1 SLOPE FROM THE TOP OF THE HEEL OF THE FOOTING TO THE SUBGRADE ELEVATION AND FOR A MINIMUM DISTANCE OF 250 FEET BEHIND THE ABUTMENTS. DO NOT BEGIN THE INSTALLATION OF THE ABUTMENT PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED. AFTER THE FOOTING AND THE BREASTWALL HAVE BEEN CONSTRUCTED, CONSTRUCT THE EMBANKMENT IMMEDIATELY BEHIND THE ABUTMENTS UP TO THE TOP OF BEARING SEAT ELEVATION AND ON A 1:1 SLOPE UP TO THE SUBGRADE ELEVATION PRIOR TO SETTING THE GIRDERS ON THE ABUTMENTS.

BRIDGE SEAT REINFORCING, SETTING ANCHORS

ACCURATELY PLACE REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT TO AVOID INTERFERENCE WITH THE THE PRE-SETTING OF BEARING ANCHORS.

ITEM 511 - CONCRETE FOR RAILROAD BRIDGES

ALL CONCRETE PAID FOR UNDER ITEM 511 SHALL MEET THE REQUIREMENTS OF ODOT CMS 511, MODIFIED AS NECESSARY TO MEET THE REQUIREMENTS OF NSRR-PPM, APPENDIX H.4.2 - "SPECIFICATIONS FOR CAST-IN-PLACE CONCRETE", AND AREMA CHAPTER 8. IN THE CASE OF A DISCREPANCY, THE MOST STRINGENT SHALL GOVERN.

ALL CONCRETE SHALL HAVE A MINIMUM REQUIRED CEMENT RATIO OF 610 LBS/CY. SLAG AND FLY ASH SHALL NOT BE USED IN CONCRETE FOR RAILROAD BRIDGES.

ALL MIX DESIGNS, AND ANY ADMIXTURES USED, SHALL BE SUBMITTED TO NSRR FOR REVIEW AND APPROVAL. ANY ADMIXTURES USED SHALL BE IN ADDITION TO, NOT IN LIEU OF, THE MINIMUM REQUIRED CEMENT RATIO.

ALL WATERSTOPS REQUIRED BY THESE PLANS SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE CONCRETE.

ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN

IMMEDIATELY AFTER REMOVING FORMS, CLEAN, DAMPEN AND FILL WITH MORTAR ALL CAVITIES PRODUCED BY FORM TIES, HONEYCOMB SPOTS, BROKEN CORNERS OR EDGES, AIR ENTRAINMENT OR BUG HOLES, AND OTHER DEFECTS.

AS SOON AS A CONCRETE SAW CAN BE OPERATED WITHOUT DAMAGING THE FRESHLY PLACED CONCRETE, SAWCUT 1¼" DEEP CONTROL JOINTS INTO THE PERIMETER OF THE CONCRETE PARAPET STARTING AND ENDING AT THE ELEVATION OF THE CONCRETE DECK. PLACE THE SAWCUTS AT LOCATIONS SHOWN ON THE DECK PLAN SHEET. USE AN EDGE GUIDE, FENCE, OR JIG TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE (A NOMINAL WIDTH OF ¼"). SEAL THE PERIMETER OF THE DEFLECTION CONTROL JOINT TO A MINIMUM DEPTH OF 1 INCH WITH A POLYURETHANE OR POLYMERIC MATERIAL CONFORMING TO ASTM C920, TYPE S. LEAVE THE BOTTOM ½" OF THE INSIDE AND OUTSIDE FACE UNSEALED TO ALLOW WATER TO ESCAPE.

ITEM 511 - CONCRETE, MISC.: FACING OF CANTILEVER WALLS

THE WORK SHALL INCLUDE ALL MATERIALS AND LABOR REQUIRED TO INSTALL A PERMANENT CAST-IN-PLACE CONCRETE FACE ON PILE AND LAGGING, AND CAISSON WALLS.

THE UNIT BID PRICE SHALL INCLUDE ANY SUBSURFACE PREPARATION REQUIRED, DRILLING OF DOWEL HOLES INTO CAISSONS (WHERE REQUIRED), FURNISHING AND INSTALLING REQUIRED REINFORCING PER BRIDGE SPECIFIC DETAILS AND NOTES, THE INSTALLATION AND SUBSEQUENT REMOVAL OF ALL REQUIRED FORMWORK, 1" PEJF MATERIAL REQUIRED FOR CONTRACTION JOINTS, AND CONCRETE FURNISHED AND INSTALLED PER THIS NOTE.

CANTILEVER WALL SUBSURFACES SHOULD BE CLEANED OF ALL FOREIGN AND LOOSE MATERIAL AND/OR UNSOUND CONCRETE.

DOWEL HOLES SHALL BE CONSTRUCTED PER CMS 510. DOWELS SHALL BE MADE OF DEFORMED BARS, ASTM A615, GRADE 60, AND SHALL BE SPACED AS SHOWN ON THE PLANS. DOWELS SHALL BE GROUTED IN PLACE WITH AN EPOXY GROUT INTENDED FOR DOWEL BARS, AND SHALL BE APPLIED IN ACCORDANCE WITH ASTM C881 AND THE MANUFACTURERS RECOMMENDATIONS. DOWEL HOLES SHALL BE DRILLED DOWNWARD. ALL FREE WATER SHALL BE REMOVED BY AN AIR JET OR VACUUM PRIOR TO PLACEMENT OF GROUT.

1" PREFORMED EXPANSION JOINT FILLER SHALL BE FURNISHED AND INSTALLED PER CMS 516.

CONCRETE SHALL BE INSTALLED PER CMS 511. THE MAXIMUM NOMINAL SIZE OF COURSE AGGREGATE SHALL BE LIMITED TO ¾" ACCORDING TO ACI 301, SECTION 4. THE MIX DESIGN SHALL ADHERE TO CMS 499 (TYPE QC 2, TABLE 499.03-1).

THE FORMLINER SHALL BE ARCHITECTURAL POLYMERS #9050 SMALL AGED ASHLAR STONE. THE ARCHITECTURAL POLYMERS PATTERN SHALL MEET THE CUT SHEET ILLUSTRATED ON SHEET1079B.

THE COST OF FORM LINER SHALL BE BID SEPARATELY WITH ITEM 530 - SPECIAL - FORM LINER.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES (SQ FT) AT THE CONTRACT BID PRICE FOR EACH STRUCTURE USING NOMINAL DIMENSIONS SHOWN AS SHOWN IN THE PLANS.

ITEM 512 - SPECIAL - WATERPROOFING. MISC.: DAMPPROOFING OF RAILROAD STRUCTURES

A. DAMPPROOFING OF CONCRETE SURFACES BELOW GRADE SHALL BE AS SHOWN ON THE PLANS. UNLESS NOTED OTHERWISE, DAMPPROOFING LIMITS ARE VERTICAL SURFACES OF THE FILL FACE AND EXTEND FROM THE FINISHED GRADE LINE TO THE TOP OF FOOTING ELEVATION.

B. SURFACES TO BE TREATED SHALL BE CLEAN AND DRY.

C. CONCRETE SURFACES SHALL HAVE BEEN CURED A MINIMUM OF 7 DAYS FOR STANDARD CONCRETE AND 3 DAYS FOR HIGH-EARLY STRENGTH CONCRETE, RESPECTIVELY, BEFORE BEING DAMPPROOFED.

D. DAMPPROOFING SHALL CONFORM TO THE FOLLOWING.

1. SURFACES TO BE DAMPPROOFED SHALL BE COVERED WITH A UNIFORM COAT OF HOT PRIMER AT A RATE OF 1 GALLON PER 100 SQUARE FEET.

2. AFTER THE PRIMER HAS BEEN ALLOWED TO CURE, TWO SUCCESSIVE UNIFORM MOP COATS OF HOT ASPHALT OR TAR SHALL BE APPLIED AT A RATE OF 4½ GALLONS PER 100 SQUARE FEET PER EACH COAT. THE FIRST COAT SHALL BE ALLOWED TO CURE BEFORE THE SECOND COAT IS APPLIED.

E. NO DAMPPROOFING OR WATERPROOFING SHALL BE ALLOWED WHEN THE TEMPERATURE IS BELOW 35° F.

F. ASPHALT SHALL BE APPLIED AT A TEMPERATURE BETWEEN 300° F AND 350° F.

G. TAR SHALL BE APPLIED AT A TEMPERATURE BETWEEN 200° F AND 250° F.

H. ALL BITUMEN SHALL BE MOPPED OR BRUSHED ON THE SURFACE EXCEPT THAT SPRAYING SHALL BE PERMITTED FOR PRIME COATS.

I. THE FINAL COAT SHALL BE ALLOWED TO DRY AT LEAST 2 DAYS BEFORE ANY EARTH IS ALLOWED TO CONTACT THE SURFACE.

DAMPPROOFING SHALL BE IN ACCORDANCE WITH AREMA CHAPTER 8, PART 29

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES (SQ FT) AT THE CONTRACT BID PRICE FOR EACH STRUCTURE, WHICH SHALL INCLUDE ALL MATERIALS, LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE ITEM.

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DESIGNED	DRAWN	REVIEWED	DATE
EFD	JEA	CTV	12-15-21
CHECKED	REVISED	ODOT SFN	3113818, 3110142, PROSSER
CTM			

STANDARD RAILROAD BRIDGE NOTES 2/6
GENERAL NORFOLK SOUTHERN RAILROAD (NSRR) BRIDGE STANDARD NOTES & DETAILS
NSRR BRIDGES CT-1.41 (NORWOOD LATERAL), CT-0.95 (I-75), CT-0.89 (PROSSER AVE)

HAM-75-7.85
PID No. 77889

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1503 (2017)

ITEM 512 - TYPE E WATERPROOFING, AS PER PLAN

SPRAY-APPLIED WATERPROOFING SHALL BE IN ACCORDANCE WITH NSRR-PPM, APPENDIX H.4.3 - "SPECIFICATIONS FOR MEMBRANE WATERPROOFING", AREMA CHAPTER 8, PART 29, AND THE DETAILS HEREIN.

USE THE SPRAY-APPLIED WATERPROOFING ON THE ENTIRE DECK AND APPLICABLE CURB SURFACES.

AN INTIAL LIFT OF BALLAST SHALL BE PLACED ATOP THE COMPELETED WATERPOOFING. PAYMENT FOR THE INITIAL LIFT OF BALAST IS INCLUDED WITH THE TRACK PLANS.

NO DEDUCTIONS IN QUANTITIES ARE MADE FOR HOLES AT DECK DRAINS.

THE BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE ITEM.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES (SQ YD) AT THE CONTRACT BID PRICE FOR EACH STRUCTURE, WHICH SHALL INCLUDE ALL MATERIALS, LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE ITEM.

ITEM 512 - SPECIAL - ASPHALTIC PANEL

TWO LAYERS OF ½" THICK ASPHALTIC PANELS SHALL BE PLACED AS PROTECTIVE COVER PER NSRR-PPM, APPENDIX H.4.3 - "SPECIFICATIONS FOR MEMBRANE WATERPROOFING" AND AREMA CHAPTER 8, SECTIONS 29.14.4.1 AND 29.14.4.4. CUT HOLES IN ASPHALT PANELS AT DECK DRAIN LOCATIONS.

NO DEDUCTIONS IN QUANTITIES ARE MADE FOR HOLES AT DECK DRAINS.

THE COST TO FURNISH AND INSTALL CURB FLASHING AND ARMOR PLATES AT ABUTMENTS, INCLUDING ANCHORAGES, SHALL BE INCLUDED FOR PAYMENT WITH THIS ITEM.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES (SQ YD) AT THE CONTRACT BID PRICE FOR EACH STRUCTURE, WHICH SHALL INCLUDE ALL MATERIALS, LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE ITEM.

ITEM 512 - SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)

APPLY A PERMANENT GRAFFITI COATING QUALIFIED ACCORDING TO ODOT SSP - 1083 THAT IS COMPATIBLE WITH THE CONCRETE STAIN OR EPOXY-URETHANE OVER WHICH IT IS APPLIED. APPLY THE GRAFFITI COATING IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS.

ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN

SECONDARY STRUCTURAL STEEL SHALL BE CONSIDERED LEVEL 1 AND SHALL CONFORM TO ODOT CMS 513 EXCEPT AS MODIFIED HEREIN AND BY NSRR-PPM APPENDIX H.4.1 - "SPECIFICATIONS FOR STRUCTURAL STEEL". ALL BOLTS SHALL BE INSTALLED USING THE TURN-OF-THE-NUT METHOD AND PER AREMA 15.3.2.3.

SECONDARY STRUCTURAL STEEL IS DEFINED AS INTERMEDIATE AND END DIAPHRAGMS, STIFFENER BOTTOM FLANGE CONNECTION PLATES, LOWER LATERAL BRACING ELEMENTS, AND LOWER LATERAL BRACING CONNECTION PLATES.

SECONDARY STRUCTURAL STEEL SHALL BE PROVIDED AS PER ASTM SPECIFICATIONS A709, GRADE 50, AND SHALL ALSO COMPLY WITH THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:
A. S5-T2 (NON-FRACTURE CRITICAL - CHARPY TEST ZONE 2)
B. S29 (FINE AUSTENITIC GRAIN SIZE)

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES (POUND) AT THE CONTRACT BID PRICE FOR EACH STRUCTURE.

ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN

PRIMARY STRUCTURAL STEEL SHALL BE CONSIDERED LEVEL 6 AND SHALL CONFORM TO ODOT CMS 513 EXCEPT AS MODIFIED HEREIN AND BY NSRR-PPM APPENDIX H.4.1 - "SPECIFICATIONS FOR STRUCTURAL STEEL". ALL BOLTS SHALL BE INSTALLED USING THE TURN-OF-THE-NUT METHOD AND PER AREMA 15.3.2.3.

PRIMARY STRUCTURAL STEEL IS DEFINED AS WELDED PLATE GIRDER FLANGES, WEBS AND STIFFENERS. IT SHALL ALSO INCLUDE ANY ITEMS WELDED TO GIRDER FLANGES OR WEBS, AND ANY OTHER STEEL NOT SPECIFICALLY IDENTIFIED AS SECONDARY (LEVEL 1).

PRIMARY STRUCTURAL STEEL SHALL BE PROVIDED AS PER ASTM SPECIFICATIONS A709, GRADE 50, AND SHALL ALSO COMPLY WITH THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:
A. S5-F2 (FRACTURE CRITICAL - CHARPY TEST ZONE 2)
B. S29 (FINE AUSTENITIC GRAIN SIZE)
C. S93 (LIMITATION ON WELD REPAIRS)

DECK SLAB OVERHANG FORMS SHALL BE SUPPORTED FROM THE BOTTOM FLANGE OF THE FASCIA GIRDERS UNLESS THE GIRDER WEB IS ADEQUATELY SUPPORTED TO PREVENT BUCKLING DUE TO LOADS FROM WEB-BEARING FORM SUPPORTS. THE DETAILS OF ALL OVERHANG FORMWORK SUPPORTS AND OPTIONAL USE OF WEB CONNECTIONS SHALL BE APPROVED BY NSRR PRIOR TO USE.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES (POUND) AT THE CONTRACT BID PRICE FOR EACH STRUCTURE.

ITEM 514 - SHOP PAINTING AND FIELD TOUCH-UP OF STRUCTURAL STEEL

INTERMEDIATE AND FINISH COATS SHALL BE SHOP APPLIED. SHOP APPLIED PAINTING AND SUBSEQUENT TOUCH-UP SHALL COMPLY WITH THE NSRR-PPM APPENDIX H.4.4 "SPECIFICATIONS FOR PAINTING SHOP FABRICATED BRIDGE STEEL".

FIELD TOUCH-UP SHALL BE APPLIED IN THE APPROPRIATE ROADWAY MAINTENANCE OF TRAFFIC PHASING.

THE TOTAL SURFACE AREA OF GIRDERS, STIFFENERS, DIAPHRAGMS, AND LOWER LATERAL BRACE MEMBERS (WHERE APPLICABLE) IS CALCULATED IN THE PAINTING SURFACE AREA. THE SIDES AND TOPS OF GIRDER TOP FLANGES ARE EXCLUDED FROM THE TOTAL PAINTING AREA.

THE TOTAL SURFACE AREA INCLUDES A 5% ALLOWANCE FOR INCIDENTALS (SUCH AS BOLT HEADS AND GUSSET PLATES).

FINISH COAT SHALL BE FEDERAL COLOR NUMBER 14277 (GREEN).

ITEM 516 - STRUCTURAL STEEL EXPANSION JOINT, AS PER PLAN

CONSTRUCT EXPANSION JOINTS IN ACCORDANCE TO ODOT CMS ITEM 516 AND THE DETAILS HEREIN.

THE EXPANSION JOINT SYSTEM SHALL BE WATER TESTED AFTER INSTALLATION. LEAKS SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.

TEAR-WEB WATERSTOP:
FURNISH MATERIAL CONFORMING TO ODOT CMS 705.11. THE SEAL CONFIGURATION SHOULD BE SIMILAR TO THE DETAILS SHOWN HEREIN. INSTALL THE SEAL ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS AND UNDER THE SUPERVISION OF THE MANUFACTURER'S DESIGNATED REPRESENTATIVE.

FURNISH WATERSTOPS IN ONE CONTINUOUS PIECE UNLESS OTHERWISE APPROVED BY THE ENGINEER.

STEEL PLATES:
FURNISH AND INSTALL GALVANIZED SLIDING PLATES (15" WIDE BY ½" THICK) COMPLYING TO ASTM A-36.

FURNISH AND INSTALL GALVANIZED SHEET METAL COVERS (28" WIDE BY 16 GA.) AS SHOWN IN THE PLANS.

GALVANIZE ALL JOINT STEEL PER ODOT CMS 711.02. REPAIR DAMAGED OR FIELD WELDED PLATES PER CMS 711.02.

THE BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE ITEM; INCLUDING CUTTING AND GRINDING BOLTS SMOOTH WITH THE METAL PLATE; SUPPLYING, SUPPLYING AND INSTALLING THE SILICONE TREATED PAPER; INSTALLING AND ADHERING THE ⅛" ELASTOMERIC FLASHING; AND SUPPLYING, PREPARING, AND INSTALLING THE RUBBER JOINT COMPOUND.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES (FT) AT THE CONTRACT BID PRICE FOR EACH STRUCTURE.

ITEM 518 - STRUCTURE DRAINAGE, MISC.: SUPERSTRUCTURE DRAINAGE SYSTEM

ALL ITEMS REQUIRED TO COMPLETE THE DECK DRAINAGE SYSTEM AND CONVEY THE WATER TO ITS OUTLET SHALL BE INCLUDED FOR PAYMENT WITH THIS ITEM. ALL PIPE SHALL BE DUCTILE IRON. INCLUDE ALL 6" INNER DIAMETER DUCTILE IRON PIPE, DOWNSPOUTS, HORIZONTAL CONDUCTOR PIPES, BRACKETS, PIPE HANGER ASSEMBLIES, TEES, SCUPPERS, WYES, ELBOWS, AND U-BOLTS FOR PAYMENT WITH THIS ITEM (INCLUDING SPECIALS).

DUCTILE IRON PIPES LARGER THAN 6" INNER DIAMETER THAT ARE USED TO OUTLET DRAINAGE INTO ROADWAY DRAINAGE SHALL BE PAID FOR SEPARATELY.

ALL DUCTILE IRON SHALL BE CLASS 54.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED DRAINAGE SYSTEM (LUMP) AT THE CONTRACT BID PRICE FOR EACH STRUCTURE.

ITEM 518 - 8" PERFORATED CORRUGATED STEEL PIPE, 707.01, AS PER PLAN
ITEM 518 - 8" NON-PERFORATED CORRUGATED STEEL PIPE, INCLUDING SPECIALS, 707.01, AS PER PLAN

UNLESS SUPERCEDED BY NSRR-PPM APPENDIX H.4.9 - "SPECIFICATION FOR CORRUGATED STEEL PIPE (BITUMINOUS COATED GALVANIZED STEEL)", UNDERDRAIN PIPES SHALL BE PROVIDED AS FOLLOWS:

MATERIALS SHALL BE AS PER ODOT CMS 707.01, AND GALVANIZED AS PER ODOT CMS 711.02, AND BITUMINOUS COATED AS PER ODOT CMS 707.05

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES (FT) AT THE CONTRACT BID PRICE WHICH SHALL INCLUDE ALL MATERIALS, LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE ITEM.

ITEM 530 - SPECIAL - FORM LINER

FORM LINERS IN ACCORDANCE WITH CMS 508.03 SHALL BE USED FOR THE ARCHITECTURALLY TREATED ABUTMENT AND WINGWALLS. FORM LINERS SHALL BE USED TO PRODUCE THE TEXTURED SURFACES ON THE LIMITS INDICATED IN THE PLANS. THE FORM LINERS USED TO PRODUCE THE ARCHITECTURAL SURFACE TEXTURES SHALL BE APPROVED BY THE DEPARTMENT.

AN ASHLAR STONE PATTERN SHALL BE USED TO MATCH OTHER SURFACES AS PART OF THIS PROJECT. THE MINIMUM FORM LINER RELIEF DEPTH SHALL BE 1". THE MAXIMUM FORM LINER RELIEF DEPTH SHALL BE 2".

ARCHITECTURALLY TREATED ABUTMENT AND WINGWALL FACES SHALL MAINTAIN A MINIMUM 2" OF CLEAR COVER TO THE REINFORCING UNDER THE RELIEF. VERTICAL FRONT FACE REINFORCING MAY BE ADJUSTED TO A MAXIMUM OF 4" CLEAR TO THE FRONT FACE OF THE PLAN DIMENSIONS TO ENSURE MINIMAL COVER.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES (SF) AT THE CONTRACT BID PRICE FOR EACH STRUCTURE USING NOMINAL DIMENSIONS SHOWN AS SHOWN IN THE PLANS.

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EFD	JEA	CTV	12-15-21
CHECKED	REVISED	ODOT SFN	3113818, 3110142, PROSSER
CTM			

STANDARD RAILROAD BRIDGE NOTES 3/6
GENERAL NORFOLK SOUTHERN RAILROAD (NSRR) BRIDGE STANDARD NOTES & DETAILS
NSRR BRIDGES CT-1.41 (NORWOOD LATERAL), CT-0.95 (I-75), CT-0.89 (PROSSER AVE)

HAM-75-7.85
PID No. 77889

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ITEM 524 - DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK, AS PER PLAN

DRILLED SHAFTS FOR CAISSON WALLS SHALL BE PAID FOR PER ODOT CMS 524 AND CONSTRUCTED PER ODOT CMS 524 AND AREMA 8-24.5. SEE INDIVIDUAL BRIDGE PLAN NOTES FOR FURTHER DETAIL.

SHAFT SPIRAL REINFORCING SHALL EXTEND FROM 3" ABOVE THE SHAFT TIP TO THE LOWEST LEVEL OF HORIZONTAL REINFORCING IN THE SUPPORTED MEMBER ABOVE. VERTICAL REINFORCING BARS SHALL EXTEND A MINIMUM OF 18" ABOVE THE SHAFT TOP AND A MAXIMUM OF 24" INTO THE SHAFT CAP.

CYLINDRICAL CONSTRUCTION FROM SHAFT TIP TO SHAFT TOP IS ASSUMED FOR PAYMENT. THE CONTRACTOR MAY ELECT TO PLACE A CONSTRUCTION JOINT AT THE EXISTING GROUND LINe OF EACH SHAFT. THE CONTRACTOR MAY ELECT TO CONSTRUCT A RECTANGULAR WALL ABOVE THE OPTIONAL SHAFT CONSTRUCTION JOINT TO THE TOP OF SHAFT ELEVATION. ANY ADDITIONAL TIME OR MATERIALS DUE TO RECTANGULAR CONSTRUCTION ABOVE THE OPTIONAL CONSTRUCTION JOINT ARE AT THE EXPENSE OF THE CONTRACTOR. THE CIRCULAR REINFORCING PATTERN SHALL BE PROVIDED AS SHOWN IN THESE PLANS. IF RECTANGULAR CONSTRUCTION IS USED ABOVE THE OPTIONAL CONSTRUCTION JOINT, REVISED FORMING AND SHORING DETAILS SHALL BE SUBMITTED TO NSRR FOR REVIEW AND APPROVAL.

DRILLED SHAFT HOLES CONSTRUCTED AS CAISSON WALL TEMPORARY SHORING SHALL BE CASED TEMPORARILY PER NSRR REQUIREMENTS. TEMPORARY CASING SHALL BE SIZED TO RESIST THE FULL RAILROAD SURCHARGE USING THE BOUSSINESQ EQUATION FOR STRIP LOADS AS DETAILED IN AREMA 8-20.3.2.2. CONCRETE SHALL BE PLACED IN THE SHAFTS IN ACCORDANCE WITH AREMA CHAPTER 8 (SECTIONS 1 AND 24) IN ADDITION TO THE ODOT SPECIFICATIONS.

PAYMENT IS FULL COMPENSATION FOR DRILLING THE HOLES, PROVIDING AND PLACING REINFORCING, AND CONSTRUCTING THE DRILLED SHAFTS TO THE TOP ELEVATION. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES (FT) AT THE CONTRACT BID PRICE.

ITEM 524 - DRILLED SHAFTS, MISC.: CSL TESTING

PART 1: DESCRIPTION

THIS WORK CONSISTS OF EVALUATING THE STRUCTURAL INTEGRITY OF DRILLED SHAFTS USING THE CROSSHOLE SONIC LOGGING (CSL) TEST METHOD. THE WORK ALSO CONSISTS OF FURNISHING AND INSTALLING ACCESS TUBES REQUIRED TO CONDUCT THE TESTING, CORE DRILLING OF CONCRETE TO CONFIRM POSSIBLE DEFECTS, AND REPORTING OF RESULTS TO THE APPLICABLE PARTIES.

CSL TESTING MEASURES THE TIME IT TAKES FOR AN ULTRASONIC PULSE TO TRAVEL FROM A SIGNAL SOURCE IN ONE ACCESS TUBE TO A RECEIVER IN ANOTHER ACCESS TUBE. IN UNIFORM, GOOD QUALITY CONCRETE, THE TRAVEL TIME BETWEEN PARALLEL TUBES WILL BE RELATIVELY CONSTANT AND CORRESPOND TO A REASONABLE SIGNAL VELOCITY FROM THE BOTTOM TO THE TOP OF THE DRILLED SHAFT. IN UNIFORM, GOOD QUALITY CONCRETE, CSL TESTING WILL ALSO MEASURE STRONG SIGNAL AMPLITUDE AND ENERGY READINGS. LONG TRAVEL TIMES, LOW SIGNAL AMPLITUDE, OR LOW ENERGY READINGS INDICATE THE PRESENCE OF ANOMALIES THAT MAY CONSIST OF POOR QUALITY CONCRETE, VOIDS, HONEYCOMBS OR SOIL INTRUSIONS. THE SIGNAL MAY BE COMPLETELY LOST BY THE RECEIVER AND CSL RECORDING SYSTEM FOR SEVERE DEFECTS SUCH AS VOIDS AND SOIL INTRUSIONS.

THROUGHOUT THIS NOTE, THE TERM "AUTHORITIES" IS DEFINED AS THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION (THE DEPARTMENT) AND THE CORRESPONDING NSRR REPRESENTATIVE/ENGINEER.

CSL TESTING (CONTINUED)

PART 2: MATERIALS

FURNISH MATERIALS CONFORMING TO:
PORTLAND CEMENT:.....ODOT CMS 701.02
CHEMICAL ADMIXTURE:.....ODOT CMS 705.12

CEMENT GROUT CONSISTS OF A MIXTURE OF CEMENT AND WATER THAT PROVIDES A MINIMUM 28-DAY COMPRESSIVE STRENGTH EQUAL TO, OR GREATER THAN, THE DRILLED SHAFT CONCRETE. DETERMINE THE COMPRESSIVE STRENGTH OF THE CEMENT GROUT ACCORDING TO ASTM C-39 OR ASTM C-942. ADMIXTURES WHICH CONTROL BLEED, IMPROVE FLOWABILITY, REDUCE WATER CONTENT, AND RETARD SET MAY BE USED IN THE GROUT IF ACCEPTED BY THE AUTHORITIES. FOR GROUT, USE WATER FREE FROM SEWAGE, OIL, ACID, STRONG ALKALIS, VEGETABLE MATTER, CLAY, AND LOAM.
POTABLE WATER IS SATISFACTORY FOR USE IN GROUT.

FURNISH ACCESS TUBES CONSISTING OF SCHEDULE 40 STEEL PIPE WITH AN INSIDE DIAMETER BETWEEN 1.5 AND 2.0 INCHES. ACCESS TUBES SHALL HAVE ROUND, REGULAR INSIDE SURFACES FREE FROM DEFECTS AND OBSTRUCTIONS, INCLUDING ALL PIPE JOINTS, IN ORDER TO PERMIT THE FREE, UNOBSTRUCTED PASSAGE OF THE PROBES. ACCESS TUBES SHALL BE FREE FROM CONTAMINANTS TO ENSURE A GOOD BOND TO THE CONCRETE.

SUBMIT THE GROUT MIX AND THE SELECTED PIPE FOR THE ACCESS TUBES WITH THE DRILLED SHAFT INSTALLATION PLAN FOR THE AUTHORITIES ACCEPTANCE. ALSO INCLUDE FOR THE AUTHORITIES ACCEPTANCE THE PROPOSED METHOD FOR JOINING THE PIPE AND FOR ATTACHING THE PIPE TO THE REINFORCING STEEL CAGE.

PART 3: NDT CONSULTANT

RETAIN AN EXPERIENCED NONDESTRUCTIVE TESTING (NDT) CONSULTANT TO PERFORM OR SUPERVISE THE CSL TESTING. THE NDT CONSULTANT SHALL HAVE AT LEAST TWO YEARS EXPERIENCE IN CSL TESTING. SUBMIT TO THE AUTHORITIES FOR APPROVAL A RESUME OF THE CREDENTIALS OF THE PROPOSED NDT CONSULTANT AT LEAST 14 CALENDAR DAYS BEFORE CONSTRUCTING THE DRILLED SHAFTS.

PART 4: INSTALLATION OF ACCESS TUBES

INSTALL ACCESS TUBES IN ALL CONTRACT DRILLED SHAFTS TO PERMIT ACCESS FOR THE CSL TEST EQUIPMENT. USE TABLE 4-1 TO DETERMINE THE NUMBER OF ACCESS TUBES PER SHAFT AND THE TUBE SPACING. IF THE SHAFT DIAMETER VARIES ALONG THE LENGTH OF THE SHAFT, USE THE LARGEST DIAMETER TO DETERMINE THE NUMBER OF ACCESS TUBES.

TABLE 4-1

SHAFT DIAMETER (FEET)	NUMBER OF TUBES	TUBE SPACING (DEGREES)
3.0 TO 5.0	4	90
5.5 TO 7.5	6	60
8.0 TO 9.5	8	45
10.0 TO 12.0	10	36

PROVIDE WATERTIGHT JOINTS, A WATERTIGHT CAP ON THE BOTTOM, AND A REMOVABLE CAP AT THE TOP OF THE ACCESS TUBES. USE THREADED JOINTS OR MECHANICAL COUPLINGS. IF MECHANICAL COUPLINGS ARE USED, RECORD THE LOCATION OF EACH COUPLER. DO NOT WELD JOINTS. DO NOT COVER JOINTS WITH TAPE OR OTHER WRAPPING MATERIAL. ATTACH THE TUBES TO THE INTERIOR OF THE REINFORCING STEEL CAGE SO THAT THE TUBES ARE PARALLEL AND EVENLY SPACED AROUND THE PERIMETER OF THE REINFORCING STEEL CAGE. PROVIDE A MINIMUM CONCRETE COVER OF 3 INCHES. INSTALL THE ACCESS TUBES SO THAT THE BOTTOM OF THE TUBE IS 6 INCHES OR LESS FROM THE BOTTOM OF THE DRILLED SHAFT BUT DOES NOT TOUCH THE BOTTOM OF THE SHAFT. WIRE-TIE OR SECURE THE ACCESS TUBES TO THE REINFORCING STEEL CAGE EVERY 3 FEET. EXTEND THE TOP OF THE ACCESS TUBES AT LEAST 3 FEET ABOVE THE TOP OF THE DRILLED SHAFT. IF THE TOP OF THE DRILLED SHAFT IS BELOW THE SURFACE, EXTEND THE TOP OF THE ACCESS TUBES AT LEAST 2 FEET ABOVE THE GROUND SURFACE. ENSURE THAT THE ACCESS TUBES DO NOT MOVE DURING PLACEMENT OF THE CAGE AND CONCRETE.

CSL TESTING (CONTINUED)

PART 4: (CONTINUED)

WITHIN 4 HOURS OF PLACING THE REINFORCING STEEL CAGE BUT BEFORE PLACING THE CONCRETE, FILL THE ACCESS TUBES WITH CLEAN WATER AND RECAP THE TUBES. AFTER PLACING THE CONCRETE, EXERCISE CARE WHEN REMOVING THE CAPS FROM THE ACCESS TUBES SO AS NOT TO APPLY EXCESS TORQUE, HAMMERING, OR OTHER STRESSES WHICH COULD BREAK THE BOND BETWEEN THE TUBES AND THE CONCRETE. LABEL EACH ACCESS TUBE WITH A UNIQUE IDENTIFIER AT THE TOP OF THE TUBE.

PART 5: TEST PROCEDURE

CSL TESTING SHALL BE PERFORMED ON DRILLED SHAFTS INDICATED ON FOUNDATION PLANS. IF DEFECTS ARE FOUND, THE SHAFTS ON BOTH SIDES OF THE DEFECTED SHAFT SHALL BE TESTED.

BEFORE CSL TESTING, SUPPLY THE AUTHORITIES AND NDT CONSULTANT WITH A RECORD OF THE LENGTH, TOP ELEVATION, BOTTOM ELEVATION, AND DATE OF CONCRETE PLACEMENT FOR ALL DRILLED SHAFTS. PERFORM CSL TESTS IN ACCORDANCE WITH ASTM D-6760 EXCEPT AS MODIFIED BY THESE PLAN SPECIFICATIONS.

PERFORM THE CSL TEST AT LEAST 72 HOURS AFTER CONCRETE PLACEMENT IN A SHAFT, BUT NO MORE THAN 30 CALENDAR DAYS AFTER CONCRETE PLACEMENT. THE AUTHORITIES MAY DIRECT A LONGER MINIMUM TIME IF THE DRILLED SHAFT CONCRETE CONTAINS A RETARDING ADMIXTURE OR USES A MIX DESIGN THAT RESULTS IN A LONGER SETTING TIME FOR THE DRILLED SHAFT CONCRETE.

FOR SHAFTS WITH 4 OR 6 ACCESS TUBES, OBTAIN READINGS BETWEEN ALL PAIRS OF TUBES. FOR SHAFTS WITH 8 OR 10 ACCESS TUBES, OBTAIN READINGS BETWEEN ADJACENT PAIRS OF ACCESS TUBE AROUND THE PERIMETER, BETWEEN PAIRS OF ACCESS TUBES ACROSS THE DIAMETER OF THE SHAFT, AND BETWEEN PAIRS OF ACCESS TUBES THAT ARE SPACED AT TWO TIMES THE SPACING SHOWN IN TABLE 4-1 (SEE FIGURE 5-1 FOR A DIAGRAM). OBTAIN READINGS AT DEPTH INTERVALS OF 0.2 FEET OR LESS. IF POSSIBLE DEFECTS ARE DETECTED, OBTAIN ADDITIONAL READINGS TO CONFIRM THE INITIAL READINGS AT NO ADDITIONAL COST TO THE DEPARTMENT. NOTIFY THE AUTHORITIES OF POSSIBLE DEFECTS WITHIN 24 HOURS OF TESTING.

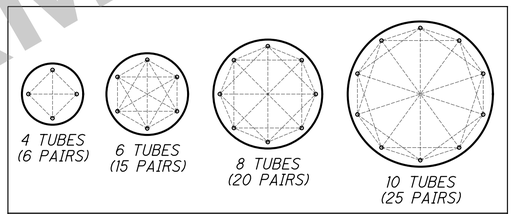


FIGURE 5-1

PART 6: TEST REPORT

PRESENT THE CSL TEST RESULTS IN A WRITTEN REPORT. SUPPLY THE AUTHORITIES WITH TWO COPIES OF THE REPORT (PER AUTHORITY) WITHIN SEVEN CALENDAR DAYS AFTER COMPLETION OF THE CSL TESTING. THE AUTHORITIES MAY REQUIRE SEPARATE REPORTS FOR EACH SUBSTRUCTURE DEPENDING ON THE NUMBER OF DRILLED SHAFTS OR THE LENGTH OF THE DRILLED SHAFT CONSTRUCTION SCHEDULE. IF SEPARATE REPORTS FOR EACH SUBSTRUCTURE ARE REQUIRED BY THE AUTHORITIES, SUPPLY THE REPORT WITHIN SEVEN CALENDAR DAYS AFTER COMPLETION OF TESTING AT THAT GIVEN SUBSTRUCTURE.

IN ADDITION TO THE REPORT REQUIREMENTS IN ASTM D-6760, INDICATE ALL POSSIBLE DEFECTS ON THE CSL LOGS AND INCLUDE A SUMMARY OF ALL POSSIBLE DEFECTS DETECTED DURING THE CSL TESTING. THE SUMMARY SHALL INDICATE FOR EACH POSSIBLE DEFECT:

A. THE DRILLED SHAFT IDENTIFICATION
B. TEST DATE
C. NUMBER OF DAYS BETWEEN CONCRETE PLACEMENT AND CSL TESTING
D. ACCESS TUBE PAIRS TESTED
E. DEPTH BELOW TOP OF SHAFT
F. PERCENT WAVE SPEED REDUCTION
G. AN EVALUATION OF THE DEFECT

CSL TESTING (CONTINUED)

PART 7: EVALUATION OF TEST RESULTS

THE AUTHORITIES WILL EVALUATE THE CSL TEST RESULTS AND DETERMINE IF THE DRILLED SHAFT CONSTRUCTION IS ACCEPTABLE. IF THE CSL TEST RESULTS INDICATE POSSIBLE DEFECTS IN THE DRILLED SHAFT, THE AUTHORITIES MAY REQUIRE CORING OF THE DRILLED SHAFT TO OBTAIN SAMPLES IN THE AREA OF THE POSSIBLE DEFECT, OR EXCAVATION OF THE DRILLED SHAFT TO EXAMINE THE CONDITION OF THE CONCRETE. THE AUTHORITIES MAY REQUIRE TESTING OF THE CORE SAMPLES. THE AUTHORITIES WILL CONSIDER THE CSL TEST RESULTS, THE CONDITION OF THE CONCRETE AS SHOWN BY CORE SAMPLES, RESULTS OF TESTING ON THE CORE SAMPLES, AND OTHER INFORMATION WHEN DETERMINING THE ACCEPTABILITY OF THE DRILLED SHAFT. DO NOT PROCEED WITH CONSTRUCTION OF SUBSTRUCTURES OR STRUCTURES ABOVE A DRILLED SHAFT UNTIL THE AUTHORITIES HAVE ACCEPTED THE DRILLED SHAFT.

IF EXAMINATION OF THE DRILLED SHAFT CONCRETE CONFIRMS THE PRESENCE OF A DEFECT IN THE DRILLED SHAFT, THEN THE DEPARTMENT WILL NOT PAY FOR CORING, TESTING ON THE CORE SAMPLES, OR EXCAVATION COSTS, EVEN IF THE DRILLED SHAFT IS ACCEPTED BY THE AUTHORITIES. IF A DEFECT CANNOT BE CONFIRMED BY CORING, THEN THE DEPARTMENT WILL PAY FOR CORING, TESTING ON THE CORE SAMPLES, AND EXCAVATION COSTS AS EXTRA WORK ACCORDING TO 109.05.

IF THE AUTHORITIES DETERMINE A DRILLED SHAFT IS NOT ACCEPTABLE, THE CONTRACTOR SHALL SUBMIT A PLAN FOR REMEDIAL ACTION TO THE AUTHORITIES FOR ACCEPTANCE. HAVE AN OHIO REGISTERED ENGINEER PREPARE, SIGN, SEAL, AND DATE CALCULATIONS AND WORKING DRAWINGS FOR ALL FOUNDATION ELEMENTS AFFECTED BY THE REMEDIAL ACTION PLAN. HAVE A SECOND OHIO REGISTERED ENGINEER CHECK, SIGN, SEAL AND DATE THE CALCULATIONS AND WORKING DRAWINGS. THE PREPARER AND CHECKER SHALL BE TWO DIFFERENT ENGINEERS.

PART 8: CORING OF DRILLED SHAFT CONCRETE

IF THE CSL TEST RESULTS INDICATE POSSIBLE DEFECTS IN THE DRILLED SHAFT, THE AUTHORITIES MAY REQUIRE CORING OF THE DRILLED SHAFT CONCRETE TO OBTAIN SAMPLES IN THE AREA OF THE POSSIBLE DEFECT. IF DIRECTED BY THE AUTHORITIES, OBTAIN CORE SAMPLES IN ACCORDANCE WITH ASTM D-2113 FOR THE FULL LENGTH OF THE POSSIBLE DEFECT PLUS 3 FEET ABOVE AND BELOW THE POSSIBLE DEFECT, OR AS DIRECTED BY THE AUTHORITIES. OBTAIN CORE SAMPLES WITH A MINIMUM DIAMETER OF 3.0 INCHES.

USE EITHER A CONVENTIONAL DOUBLE-TUBE, SWIVEL-TYPE CORE BARREL WITH SPLIT LINERS OR A WIRELINE CORE BARREL WITH SPLIT INNER LINERS. USE A NEW DIAMOND CORING BIT. REPLACE THE CORING BIT AND CORE BARREL AS NECESSARY TO ACHIEVE A HIGH PERCENTAGE OF CORE RECOVERY.

RECORD AN ACCURATE LOG OF THE CORING. PLACE THE CORE SAMPLES IN A PARTITIONED CORE BOX WITH A COVER AND FASTENERS TO PREVENT ACCIDENTAL OPENING DURING HANDLING. IDENTIFY THE BOXES OF CORES BY PROJECT NAME, SHAFT NUMBER, DEPTHS SAMPLED, BOX NUMBER, AND TOTAL NUMBER OF BOXES PER SHAFT. CLEARLY AND PERMANENTLY MARK THE TOP AND BOTTOM DEPTHS BELOW THE TOP OF THE DRILLED SHAFT OF EACH CORE SAMPLE. SECURELY BLOCK THE SAMPLES IN A PARTIALLY FILLED COMPARTMENT TO PREVENT SHIFTING AND DISLOCATION. PROTECT THE SAMPLES DURING TRANSPORT AND STORAGE UNTIL TESTING CAN BE ACCOMPLISHED. SUBMIT THE CORE SAMPLES AND TWO COPIES OF THE CORING LOGS TO THE AUTHORITIES.

PART 9: GROUTING TUBES AND HOLES

AFTER CSL TESTING AND CORING OF THE DRILLED SHAFT CONCRETE IS COMPLETE, REMOVE ALL WATER FROM THE ACCESS TUBES AND ANY CORED HOLES. IF THE TUBES EXTEND ABOVE THE TOP OF THE DRILLED SHAFT REINFORCING, CUTOFF THE TUBES BELOW THE TOP OF THE DRILLED SHAFT REINFORCING. FILL THE TUBES AND CORE HOLES WITH GROUT.

PART 10: METHOD OF MEASUREMENT

THE DEPARTMENT WILL MEASURE CSL TESTING BY THE NUMBER OF DRILLED SHAFTS ON WHICH CSL TESTING IS PERFORMED PER THESE PLANS.

PART 11: BASIS OF PAYMENT

THE DEPARTMENT WILL PAY FOR CROSSHOLE SONIC LOGGING (CSL) TESTING AT THE CONTRACT BID PRICE (EACH) AFTER BEING PROVIDED THE WRITTEN TEST REPORT.

FOR INFORMATION ONLY

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DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
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COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
EFD	JEA	CTV	12-15-21
CHECKED	REVISED	ODOT SFN	3113818, 3110142, PROSSER
CTM			

STANDARD RAILROAD BRIDGE NOTES 4/6
GENERAL NORFOLK SOUTHERN RAILROAD (NSRR) BRIDGE STANDARD NOTES & DETAILS
NSRR BRIDGES CT-1.41 (NORWOOD LATERAL), CT-0.95 (I-75), CT-0.89 (PROSSER AVE)

HAM-75-7.85
PID No. 77889

1505
2017

ITEM 530 - SPECIAL - STRUCTURES: SURVEY AND MONITORING OF TRACK AND TEMPORARY SHORING

PART 1: QUALIFICATIONS OF PERSONNEL

PROVIDE QUALIFIED PERSONNEL UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL LAND SURVEY OR LICENSED IN THE STATE OF OHIO WITH A MINIMUM OF TWO YEARS EXPERIENCE IN DEFORMATION MONITORING FOR STRUCTURES. PROVIDE THE NECESSARY EQUIPMENT AND MATERIALS TO OBTAIN, RECORD, COMPILE AND ANALYZE THE INSTRUMENTATION DATA AS SPECIFIED AND AS DIRECTED BY THE ENGINEER. SUBMIT THE NAMES, DUTIES, AND QUALIFICATIONS OF THE PERSONNEL AT LEAST FOUR WEEKS PRIOR TO COMMENCEMENT OF MONITORING. INCLUDE THE EQUIPMENT TO BE USED, INCLUDING INSTRUMENT CALIBRATION, AND THE FORM IN WHICH INFORMATION WILL BE PRESENTED TO THE ENGINEER. INCLUDE THE LOCATIONS AND METHODS THAT WILL BE USED TO MAINTAIN PERMANENT REFERENCE POINTS. THE ENGINEER MAY REQUEST A MEETING WITH THE MONITORING PERSONNEL WHEN EVALUATING THEIR QUALIFICATIONS. OBTAIN WRITTEN APPROVAL FROM THE ENGINEER PRIOR TO COMMENCEMENT OF MONITORING.

PART 2: MONITORING MOVEMENT OF TRACK

1) DESCRIPTION
THIS WORK IS THE MONITORING OF VERTICAL AND HORIZONTAL MOVEMENT OF EXISTING, TEMPORARY AND PERMANENT TRACKS DURING THE TIME PERIOD OVER WHICH THE TRACKS ARE SUPPORTED BY TEMPORARY SHORING. COORDINATE INSTRUMENTATION MONITORING WITH THE PROVISIONS FOR MONITORING MOVEMENT OF TEMPORARY SHORING.

2) CONSTRUCTION
A) MONITORING
SURVEY THE TOP OF RAILS OF ANY TRACKS ALONG THE LENGTH OF TRACK THAT WILL BE SUPPORTED BY THE TEMPORARY SHORING PLUS AN ADDITIONAL 100 FEET IN BOTH DIRECTIONS BEYOND THE ENDS OF THE TEMPORARY SHORING. WHERE MORE THAN ONE TRACK MAY BE AFFECTED, ESTABLISH MONITORING POINTS ON EACH TRACK. COMPLETE THIS SURVEY BEFORE ANY WORK FOR THE TEMPORARY SHORING (EXCAVATION OR PLACEMENT OF SHORING) HAS BEGUN. PROVIDE THE SURVEY INFORMATION TO THE DEPARTMENT TO USE AS A REFERENCE FOR FUTURE SURVEYS TO ESTABLISH WHETHER MOVEMENT HAS OCCURRED. SURVEY EACH TOP OF RAIL AT A MAXIMUM SPACING OF TWENTY (20) FEET BETWEEN MONITORING POINTS. PROVIDE A SECOND SET OF BASELINE READINGS TO CONFIRM REPEATABILITY OF THE BASELINE READINGS WITHIN TWENTY FOUR (24) HOURS AFTER THE INITIAL BASELINE SURVEY AT THE SAME MONITORING POINTS. PROVIDE ADDITIONAL MONITORING SURVEY(S) IMMEDIATELY PRIOR TO AND AFTER SHORING INSTALLATION. FIELD-MARK AND LOCATE VERTICAL MONITORING POINTS WITH PAINT OR CRAYON ON THE FIELD SIDE OF THE RAIL AND A POINT ON THE TIE FOR HORIZONTAL MEASUREMENT TO ASSURE THAT SUCCESSIVE READINGS ARE MEASURED AT THE SAME LOCATION(S).

B) MONITORING FREQUENCY
AS SOON AS ANY TRACK IS PARTIALLY SUPPORTED BY TEMPORARY SHORING, BEGIN THE MONITORING SURVEYS.

DURING THE FIRST THREE (3) DAYS THAT THE TRACK IS SUPPORTED BY THE TEMPORARY SHORING, SURVEY THE TOP OF RAIL LOCATIONS A MINIMUM OF THREE (3) TIMES PER DAY WITH EACH SURVEY BEING APPROXIMATELY EIGHT (8) HOURS APART. SURVEY THE TRACKS AT THE SAME LOCATIONS AS THE INITIAL SURVEY.

THE AMOUNT, FREQUENCY, AND DURATION OF MONITORING MAY BE CHANGED AT THE DISCRETION OF NSRR.

PART 2: (CONTINUED)

IF IT IS ESTABLISHED BY THE ENGINEER THAT NO MOVEMENT OF THE TRACKS IS OCCURRING, REDUCE THE FREQUENCY OF THE SURVEYS TO ONCE A DAY FOR THE NEXT FOUR (4) CALENDAR DAYS. IF, AFTER THIS PERIOD OF TIME, NO MOVEMENT OF THE TRACKS HAS OCCURRED, REDUCE THE FREQUENCY OF THE MONITORING SURVEY TO ONCE A WEEK. CONTINUE TO SURVEY THE TRACKS ONCE A WEEK UNTIL THE SHORING IS REMOVED OR AS DIRECTED BY THE ENGINEER.

IF VERTICAL OR HORIZONTAL MOVEMENT OF THE TRACK IS EQUAL TO OR GREATER THAN 0. 25 INCHES, IMMEDIATELY MAKE DIRECT CONTACT AND NOTIFY THE REPRESENTATIVE OF NORFOLK SOUTHERN CORPORATION. IF DEFLECTION CONTINUES TO INCREASE, DO NOT RESUME WORK UNTIL NORFOLK SOUTHERN CORPORATION HAS INSPECTED THE SITE AND APPROVED.

PART 3: MONITORING MOVEMENT OF TEMPORARY SHORING

1) DESCRIPTION
THIS WORK IS THE MONITORING OF BOTH VERTICAL AND HORIZONTAL MOVEMENTS OF TEMPORARY SHORING DURING CONSTRUCTION. COORDINATE INSTRUMENTATION MONITORING WITH THE PROVISIONS FOR MONITORING MOVEMENT OF TRACK AND ITEM 503, COFFERDAMS AND EXCAVATION BRACING.

2) CONSTRUCTION
A) MONITORING
FOR TEMPORARY SHORING SUPPORTING NORFOLK SOUTHERN CORPORATION TRACKS, SURVEY THE TOP OF SHORING AT MONITORING POINTS THAT ARE SPACED AT MAXIMUM INTERVALS OF TEN (10) FEET. ESTABLISH REFERENCE POINTS BY CENTER PUNCHING THE TOP OF SHORING AT A MINIMUM OF THREE (3) LOCATIONS, WHICH INCLUDE BOTH ENDS AND A THIRD POINT NEAR MID-LENGTH, ALONG EACH SHORING LINE. LOCATE THESE REFERENCE POINTS RELATIVE TO THE SUPPORTED TRACK. PROVIDE A DIRECT LINE OF SIGHT ALONG THE TOP OF THE SHORING BETWEEN THESE REFERENCE POINTS AND MEASURE THE PILE DEFLECTION AT EACH MONITORING POINT RELATIVE TO THIS REFERENCE LINE. MEASURE THE PLUMBNESS OF THE WALL AT EACH OF THESE MONITORING LOCATIONS. COMPLETE THIS SURVEY BEFORE ANY EXCAVATION IN FRONT OF THE SHORING HAS BEGUN. PROVIDE THE SURVEY INFORMATION TO THE ENGINEER TO USE AS A REFERENCE FOR FUTURE SURVEYS TO ESTABLISH WHETHER MOVEMENT HAS OCCURRED.

B) MONITORING FREQUENCY
AS SOON ANY TRACKS ARE PARTIALLY SUPPORTED BY THE TEMPORARY SHORING, BEGIN THE MONITORING SURVEYS.

DURING THE FIRST THREE (3) DAYS THAT THE TRACKS ARE SUPPORTED BY THE TEMPORARY SHORING, SURVEY THE TOP OF SHORING LOCATIONS A MINIMUM OF THREE (3) TIMES PER DAY WITH EACH SURVEY BEING APPROXIMATELY EIGHT (8) HOURS APART. SURVEY THE TOP OF SHORING AT THE SAME LOCATIONS AS THE INITIAL SURVEY.

IF IT IS ESTABLISHED THAT NO EXCESSIVE MOVEMENT OF THE SHORING IS OCCURRING, REDUCE THE FREQUENCY OF THE SURVEYS TO ONCE A DAY FOR THE NEXT FOUR (4) CALENDAR DAYS. IF, AFTER THIS PERIOD OF TIME, NO MOVEMENT OF THE SHORING HAS OCCURRED, REDUCE THE FREQUENCY OF THE SURVEYING TO ONCE A WEEK. CONTINUE TO SURVEY THE SHORING ONCE A WEEK UNTIL THE COMPLETION OF THAT PHASE OF CONSTRUCTION.

IF LATERAL MOVEMENT OF THE SHORING SYSTEM IS EQUAL TO OR GREATER THAN 0.375 INCHES, IMMEDIATELY MAKE DIRECT CONTACT AND NOTIFY THE REPRESENTATIVE OF NORFOLK SOUTHERN CORPORATION. IF DEFLECTION CONTINUES TO INCREASE, DO NOT RESUME WORK UNTIL NORFOLK SOUTHERN CORPORATION HAS INSPECTED THE SITE AND APPROVED.

THE AMOUNT, FREQUENCY, AND DURATION OF MONITORING MAY BE CHANGED AT THE DISCRETION OF NSRR.

PART 4: REPORTING AND INTERPRETATION OF RESULTS

1) MONITORING REPORT
RECORD AND STORE RAW INSTRUMENTATION DATA IN STANDARD UNITS OF MEASURE. REDUCE AND PRESENT INSTRUMENTATION DATA IN A CONSISTENT SPREADSHEET FORMAT. FURNISH A SUMMARY REPORT TO THE ENGINEER WITHIN 24 HOURS AFTER COLLECTION, WITH TABULATED RAW DATA, REDUCED RESULTS AND SUMMARY PLOTS. PROVIDE DATA IN A CHRONOLOGICAL FORMAT REPORTING ALL PREVIOUSLY REPORTED VALUES. PROVIDE THE REPORT IN BOTH HARD COPY AND DIGITAL FORMAT. HIGHLIGHT ANY SIGNIFICANT CHANGES IN MEASURED VALUES AND NOTE WHAT CONSTRUCTION OR ENVIRONMENTAL CHANGES OCCURRED THAT COULD HAVE PRODUCED THE CHANGES IN VALUES.

2) INTERPRETATION OF RESULTS
THE ENGINEER WILL INTERPRET THE INSTRUMENTATION RESULTS AND WILL MAKE SUCH INTERPRETATIONS AVAILABLE TO THE CONTRACTOR. DO NOT DISCLOSE MONITORING DATA TO THIRD PARTIES WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER.

PART 5: MEASUREMENT AND PAYMENT

THE COST SHALL INCLUDE BASELINE READINGS AND SPECIFIED INSTRUMENT READING SETS FOR ALL SUPPORTED TRACKS AND ASSOCIATED SHORING. NO SEPARATE MEASUREMENT OR PAYMENT FOR ADDITIONAL READING SETS THAT ARE NOT AUTHORIZED BY THE ENGINEER. ADEQUATE MATERIAL AND EQUIPMENT REQUIRED SHALL BE FURNISHED AND INCLUDED IN THE COST.

FURNISHING AND INSTALLATION OF TEMPORARY EXCAVATION WILL BE MEASURED AND PAID FOR SEPARATELY.

THE DEPARTMENT WILL PAY FOR THE ACCEPTABLE MONITORING (LUMP) AT THE CONTRACT BID PRICE FOR EACH BRIDGE.

ITEM SPECIAL - STRUCTURES: PRECONSTRUCTION CONDITION SURVEY

BEFORE PILE DRIVING BEGINS, CONDUCT A CODITION SURVEY OF ANY EXISTING BUILDINGS, STRUCTURES, OR UTILITIES WITHIN 400 FEET OF THE PILE DRIVING WORK. EXISTING BRIDGE STRUCTURES FOUNDED ON PILES ARE EXCLUDED (HAM-562-0026 AND HAM-075-0834). THE HAM-075-PROSSER BRIDGE SHALL BE INCLUDED IN THE CONDITION SURVEY AND MONITORING UNLESS THE CONTRACTOR CAN VERIFY THAT IT IS FOUNDED ON PILES. THE PURPOSE OF THE SURVEY IS TO DOCUMENT THE CONDITION OF THE BUILDINGS, STRUCTURES, OR UTILITIES PRIOR TO PILE DRIVING, SO THAT ANY CLAIMS OF DAMAGE CAUSED BY THE PILE DRIVING CAN BE VERIFIED.

RETAIN AN EXPERIENCED VIBRATION SPECIALIST TO PERFORM OR SUPERVISE THE CONDITION SURVEY. USE A VIBRATION SPECIALIST THAT MEETS THE QUALIFICATION REQUIREMENTS LISTED BELOW FOR VIBRATION MONITORING.

RECORD THE CONDITION OF EXISTING STRUCTURES AND BUILDING MATERIALS, USING WRITTEN TEXT, PHOTOGRAPHS, AND VIDEO RECORDINGS. INSPECT INTERIOR WALLS, CEILINGS, AND FLOORS THAT ARE ACCESSIBLE. INSPECT THE EXTERIOR OF THE BUILDING THAT IS VISIBLE FROM GROUND LEVEL. ALSO RECORD THE LOCATION, SIZE, AND TYPE OF ALL CRACKS AND OTHER STRUCTURAL DEFICIENCIES.

IF OWNERS OR OCCUPANTS FAIL TO ALLOW ACCESS TO THE PROPERTY FOR THE PRECONDITION SURVEY, SEND A CERTIFIED LETTER TO THE OWNER OR OCCUPANT. DOCUMENT THE NOTIFICATION EFFORT AND THE CERTIFIED LETTER IN THE REPORT.

SUBMIT A REPORT TO ODOT THAT SUMMARIZES THE PRECONSTRUCTION CONDITION OF THE BUILDINGS, STRUCTURES, AND UTILITIES, AND THAT IDENTIFIES AREAS OF CONCERN. SUBMIT THREE COPIES OF THE REPORT.

THE DEPARTMENT WILL PAY FOR THIS ITEM AT THE CONTRACT LUMP SUM PRICE FOR ITEM SPECIAL - STRUCTURES: PRECONSTRUCTION CONDITION SURVEY FOR EACH BRIDGE.

FOR INFORMATION ONLY

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DESIGNED	DRAWN	REVIEWED	DATE
EFD	JEA	CTV	12-15-21
CHECKED	REVISED	ODOT SFN	3113818, 3110142, PROSSER
CTM			

STANDARD RAILROAD BRIDGE NOTES 5/6
GENERAL NORFOLK SOUTHERN RAILROAD (NSRR) BRIDGE STANDARD NOTES & DETAILS
NSRR BRIDGES CT-1.41 (NORWOOD LATERAL), CT-0.95 (I-75), CT-0.89 (PROSSER AVE)

HAM-75-7.85
PID No. 77889

1506
2017

ITEM SPECIAL - STRUCTURAL SURVEY AND MONITORING OF VIBRATION

MONITOR GROUND VIBRATIONS CAUSED BY PILE DRIVING SO THAT THE PILE DRIVING WORK CAN BE CONTROLLED IN ORDER TO MINIMIZE THE POTENTIAL DAMAGE TO EXISTING STRUCTURES, SPECIFICALLY THE STRUCTURES COVERED BY A PRECONSTRUCTION CONDITION SURVEY.

RETAIN AN EXPERIENCED VIBRATION SPECIALIST TO ESTABLISH THE ACCEPTABLE VIBRATION LIMITS AND TO PERFORM THE VIBRATION MONITORING. USE A VIBRATION SPECIALIST THAT IS AN EXPERT IN THE INTERPRETATION OF VIBRATION DATA AND WHO MEETS ONE OF THE FOLLOWING CRITERIA: 1) IS A REGISTERED ENGINEER WITH AT LEAST TWO YEARS OF PROVEN EXPERIENCE IN MONITORING VIBRATIONS ON SIMILAR CONSTRUCTION PROJECTS, OR 2) HAS AT LEAST FIVE YEARS OF PROVEN EXPERIENCE IN MONITORING VIBRATIONS ON SIMILAR CONSTRUCTION PROJECTS. DO NOT USE A VIBRATION SPECIALIST THAT IS AN EMPLOYEE OF THE CONTRACTOR.

SUBMIT A RESUME OF THE CREDENTIALS OF THE PROPOSED VIBRATION SPECIALIST AT OR BEFORE THE PRECONSTRUCTION CONFERENCE. INCLUDE IN THE RESUME A LIST OF CONSTRUCTION PROJECTS ON WHICH THE VIBRATION SPECIALIST WAS RESPONSIBLY IN CHARGE OF MONITORING THE VIBRATIONS. LIST A DESCRIPTION OF THE PROJECTS, WITH DETAILS OF THE VIBRATION INTERPRETATIONS MADE ON THE PROJECT. LIST THE NAMES AND TELEPHONE NUMBERS OF PROJECT OWNERS WITH SUFFICIENT KNOWLEDGE OF THE PROJECTS TO VERIFY THE SUBMITTED INFORMATION. OBTAIN APPROVAL OF THE VIBRATION SPECIALIST BEFORE BEGINNING ANY PILE DRIVING WORK. ALLOW 30 DAYS FOR THE REVIEW OF THIS DOCUMENTATION.

USE SEISMOGRAPHS CAPABLE OF CONTINUOUSLY RECORDING THE PEAK PARTICLE VELOCITY FOR THREE MUTUALLY PERPENDICULAR COMPONENTS OF VIBRATION, AND PROVIDING A PERMANENT RECORD OF THE ENTIRE VIBRATION EVENT. USE A SUFFICIENT NUMBER OF SEISMOGRAPHS TO PROVIDE REDUNDANCY IN CASE ONE DEVICE SHOULD FAIL. SUBMIT A PLAN OF THE PROPOSED SEISMOGRAPH LOCATIONS TO THE ENGINEER FOR REVIEW.

THE VIBRATION SPECIALIST SHALL PERFORM THE FOLLOWING:

1. MEASURE THE AMBIENT GROUND VIBRATIONS NEAR EXISTING STRUCTURES BEFORE PILE DRIVING BEGINS.
2. ESTABLISH VIBRATION LIMITS TO MINIMIZE POTENTIAL DAMAGE TO EXISTING STRUCTURES AND EXPLAIN WHY THEY ARE BEING USED TO THE ENGINEER BEFORE DRIVING PILES NEAR EXISTING STRUCTURES.
3. MONITOR GROUND VIBRATIONS DURING PILE DRIVING.
4. IMMEDIATELY INFORM THE CONTRACTOR AND ENGINEER IF THE VIBRATION LIMITS ARE REACHED OR EXCEEDED.
5. FURNISH THE DATA RECORDED AND INCLUDE THE FOLLOWING:
   A. IDENTIFICATION OF SEISMOGRAPH
   B. DISTANCE AND DIRECTION OF SEISMOGRAPH FROM PILE DRIVING.
   C. START TIME AND DURATION OF PILE DRIVING.
   D. LIST OF PILES DRIVEN DURING EACH MONITORING INTERVAL.

THE CONTRACTOR SHALL IMMEDIATELY SUSPEND ALL PILE DRIVING IF THE VIBRATION LIMITS ARE REACHED OR EXCEEDED. EVALUATE ALTERNATIVE CONSTRUCTION PROCEDURES, SUCH AS PREBORED HOLES, TO REDUCE VIBRATIONS.

SUBMIT A FINAL REPORT WHICH CONTAINS ALL MEASUREMENTS, INTERPRETATIONS, AND RECOMMENDATIONS TO THE ENGINEER. SUBMIT THREE COPIES OF THE REPORT.

THE DEPARTMENT WILL PAY FOR THIS ITEM AT THE CONTRACT LUMP SUM PRICE FOR ITEM SPECIAL - STRUCTURAL SURVEY AND MONITORING OF VIBRATION FOR EACH BRIDGE. THE DEPARTMENT WILL PAY THE FINAL TWENTY PERCENT AFTER THE ENGINEER RECIEVES THE FINAL REPORT.

THE PRECONSTRUCTION CONDITION SURVEY IS PAID FOR AS A SEPARATE PAY ITEM.

THE DEPARTMENT WILL PAY ACCORDING TO CMS 109.05 FOR ALTERNATIVE CONSTRUCTION PROCEDURES THAT THE ENGINEER DETERMINES ARE NECESSARY TO REDUCE VIBRATIONS.

STANDARD PLAN ABBREVIATIONS AND SYMBOLS

AVE = AVENUE
BM = BENCHMARK
BOT = BOTTOM
BRG = BEARING
BTWN = BETWEEN
C.B. = CHORD BEARING
C/C = CENTER TO CENTER
CB = CATCH BASIN
CCTV = CLOSED CIRCUIT TELEVISION
CIP = CAST IN PLACE
CJ = CONSTRUCTION JOINT
CLR = CLEAR
CMS = CONSTRUCTION MATERIAL SPECIFICATIONS
CONST = CONSTRUCTION
CSP/N = CORRUGATED STEEL PIPE (NON-PERFORATED)
CSP/P = PERFORATED CORRUGATED STEEL PIPE
DIA = DIAMETER
DND = DO NOT DISTURB
DPRM = DIAPHRAGM
E/P = EDGE OF PAVEMENT
E/S = EDGE OF SHOULDER
EB = EASTBOUND
EF = EACH FACE
ELEC = ELECTRIC
ELEV = ELEVATION
EX = EXISTING
EXP = EXPANSION
F/F = FACE TO FACE
FA = FORWARD ABUTMENT
FF = FAR FACE/FILL FACE
FO = FIBER OPTIC
FTG = FOOTING
⟨G#⟩ = GIRDER NUMBER
GR = GUARDRAIL
I/I = INSIDE TO INSIDE
I.R. 75 = INTERSTATE ROUTE 75
LLB = LOWER LATERAL BRACING
LT = LEFT
MAX = MAXIMUM
MH = MANHOLE
MHC = MINIMUM HORIZONTAL CLEARANCE
MIN = MINIMUM
MISC = MISCELLANEOUS
ML = MAIN LINE
MSE = MECHANICALLY STABILIZED EARTH
MVC = MINIMUM VERTICAL CLEARANCE
NB = NORTHBOUND
NE = NORTHEAST
NF = NEAR FACE
NO = NUMBER
NSRR = NORFOLK SOUTHERN RAILROAD
NW = NORTHWEST
O/O = OUT TO OUT
OD = OUTSIDE DIAMETER
OVHD = OVERHEAD
ODOT = OHIO DEPARTMENT OF TRANSPORTATION
P.V.I. = POINT OF VERTICAL INTERSECTION
PC = POINT OF CURVE
PEJF = PREFORMED EXPANSION JOINT FILLER
PG = PROFILE GRADE
PI = POINT OF INTERSECTION
PMVC = POINT OF MINIMUM VERTICAL CLEARANCE
POT = POINT ON TANGENT
PROP = PROPOSED
PT = POINT OF TANGENT
PVMT = PAVEMENT
RA = REAR ABUTMENT
RCP = REINFORCED CONCRETE PIPE
RD = ROAD
REQ'D = REQUIRED
RR = RAILROAD
RT = RIGHT
S/O = SERIES OF
S.R. = STATE ROUTE
SB = SOUTHBOUND
SCD = STANDARD CONSTRUCTION DRAWING
SE = SOUTHEAST
SER = SERIES
SHLD = SHOULDER
SPA = SPACES
ST = STREET
STA = STATION
STD = STANDARD
STM = STORM
STT = SPIRAL TO TANGENT
SW = SOUTHWEST
T/B = TOP AND BOTTOM
T/T = TOE TO TOE
TBR = TO BE REMOVED
TEMP = TEMPORARY
TYP = TYPICAL
U.N.O. = UNLESS NOTED OTHERWISE
VC = VERTICAL CURVE
VERT = VERTICAL

FOR INFORMATION ONLY

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DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
EFD	JEA	CTV	12-15-21
CHECKED	REVISED	ODOT SFN	3113818, 3110142, PROSSER
CTM			

STANDARD RAILROAD BRIDGE NOTES 6/6

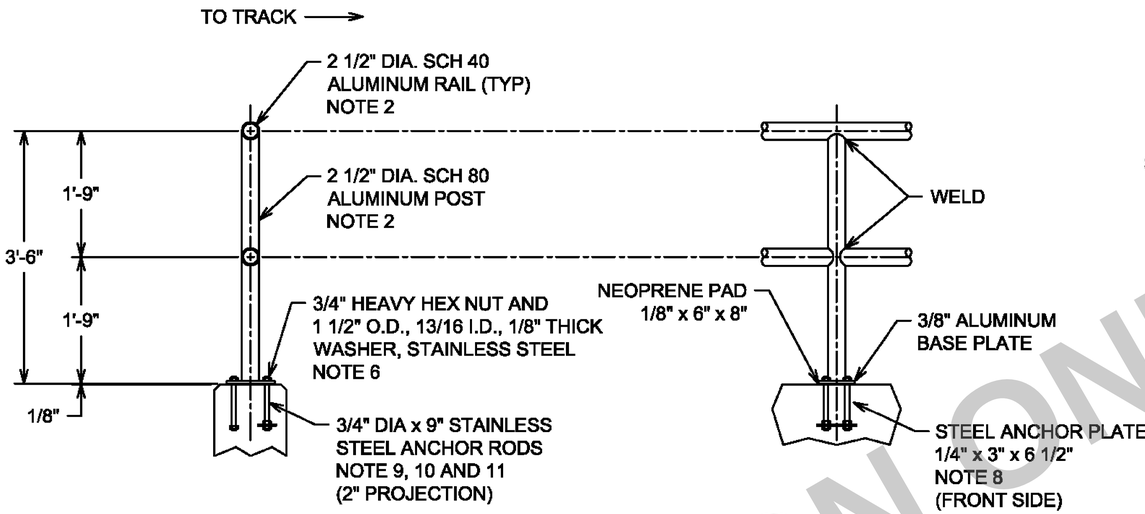
GENERAL NORFOLK SOUTHERN RAILROAD (NSRR) BRIDGE STANDARD NOTES & DETAILS
NSRR BRIDGES CT-1.41 (NORWOOD LATERAL), CT-0.95 (I-75), CT-0.89 (PROSSER AVE)

HAM-75-7.85
PID No. 77889

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NOTES:

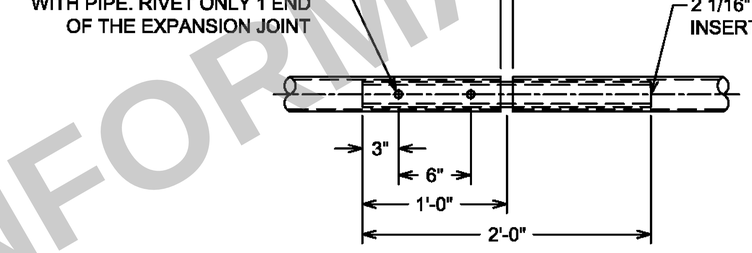
1. JOINTS IN RAILING (SPLICE GAP) SHALL BE LOCATED IN POST SPACING PLAN.
2. ALUMINUM PIPE TO BE ASTM B429, ALLOY 6061-T6 AND BASE PLATE TO BE ASTM B209, ALLOY 6061-T6.
3. STAINLESS STEEL BOLTS, CAP SCREWS AND NUTS TO BE ASTM A276, TYPE 304, STAINLESS STEEL WASHERS TO BE ASTM A276, TYPE 302.
4. POST TO BE SET PERPENDICULAR TO TOP OF CURB AND RAILS SHALL BE PLACED PARALLEL TO THE GRADE OF THE BRIDGE.
5. CERTIFIED MILL REPORTS ARE REQUIRED FOR RAIL AND POST. SHOP INSPECTIONS ARE NOT REQUIRED.
6. AFTER ANCHOR BOLT NUTS HAVE BEEN TIGHTENED, THREAD SHALL BE NICKED TO LOCK NUTS.
7. CURVED RAIL USAGE: WHERE RAILS ARE TO BE USED ON BRIDGES ON HORIZONTAL AND/OR VERTICAL CURVATURE, THE CONTRACTOR MAY AT HIS OPTION HAVE THE REQUIRED CURVATURE IN THE RAIL FORMED IN THE SHOP OR IN THE FIELD. IN EITHER EVENT, THE RAIL SHALL CONFORM WITHOUT BUCKLING OR KINKING TO THE REQUIRED CURVATURE IN A UNIFORM MANNER ACCEPTABLE TO THE ENGINEER.
8. ANCHOR PLATES SHALL BE STEEL CONFORMING TO ASTM A36.
9. ANCHOR RODS SHALL CONFORM TO ASTM A276, TYPE 302 OR 304 STAINLESS STEEL AND THREADS SHALL BE ROLLED, NOT CUT.
10. UPPER ANCHOR ROD NUTS SHALL BE HEAVY HEX NUTS, PER ASTM A276 TYPE 302 OR 304 STAINLESS STEEL.
11. LOWER ANCHOR ROD NUTS SHALL BE HEAVY STEEL HEX NUTS, PER ASTM A563.
12. THE CENTERLINE OF ANY SPLICE AND/OR EXPANSION JOINT IS TO BE LOCATED AT LEAST 2'-0" AWAY FROM CENTERLINE OF POST. EXPANSION AND/OR SPLICE JOINTS FOR EACH RAIL OF TWO RAILINGS ARE TO BE PLACED IN THE SAME LOCATION AND IN THE SAME PANEL.
13. WELDING SHALL BE IN ACCORDANCE WITH THE CURRENT AWS STRUCTURAL WELDING CODE FOR ALUMINUM.



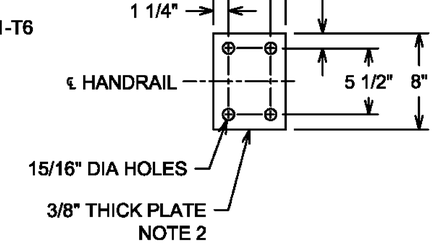
SECTION
NTS

FRONT VIEW
NTS

END POST DETAIL
NTS



EXPANSION JOINT DETAIL
NTS



BASE PLATE DETAIL
NTS

REVISIONS		
DATE	LTR.	DESCRIPTION
9/23/2013	1	REVISED NOTE 3 PUNCTUATION

NORFOLK SOUTHERN

PUBLIC PROJECTS MANUAL
TYPICAL DRAWINGS

UNDERPASS BRIDGE DETAILS
HANDRAIL

REF. NO.: SEC 2 - UP - 4 - SHT 7
DATE: JULY 1, 2013 | DRAWING NO.: 13

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
NSRR	JEA	CTV	12-15-21
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CTM			

NSRR HANDRAIL DETAILS
GENERAL NORFOLK SOUTHERN RAILROAD (NSRR) BRIDGE DETAILS
NSRR BRIDGES CT-1.41 (NORWOOD LATERAL), CT-0.95 (I-75), CT-0.89 (PROSSER AVE)

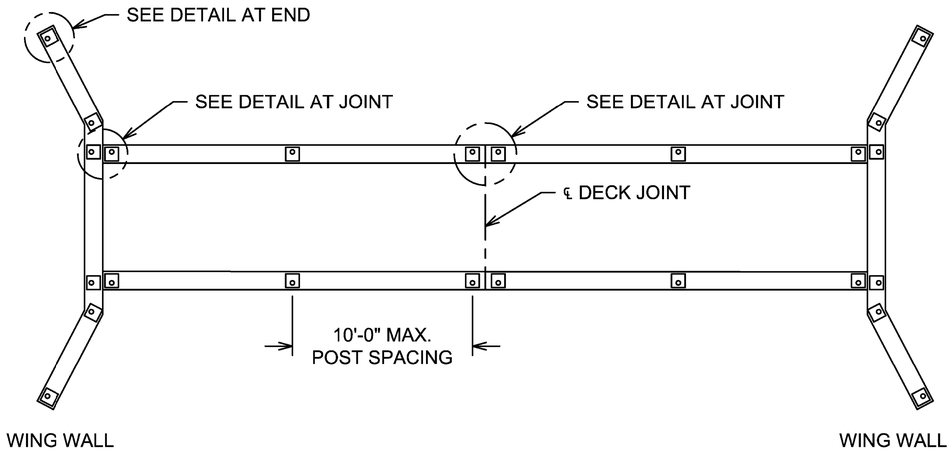
HAM-75-7.85
PID No. 77889

7 / 13

1508
2017

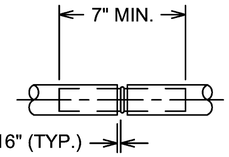
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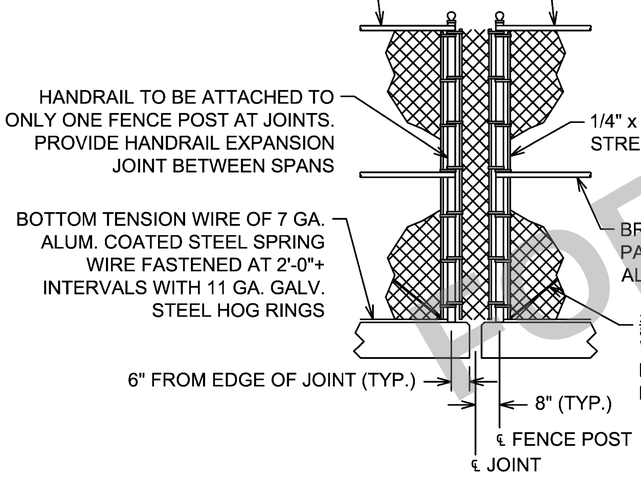


FENCE AND HANDRAIL POST SPACING

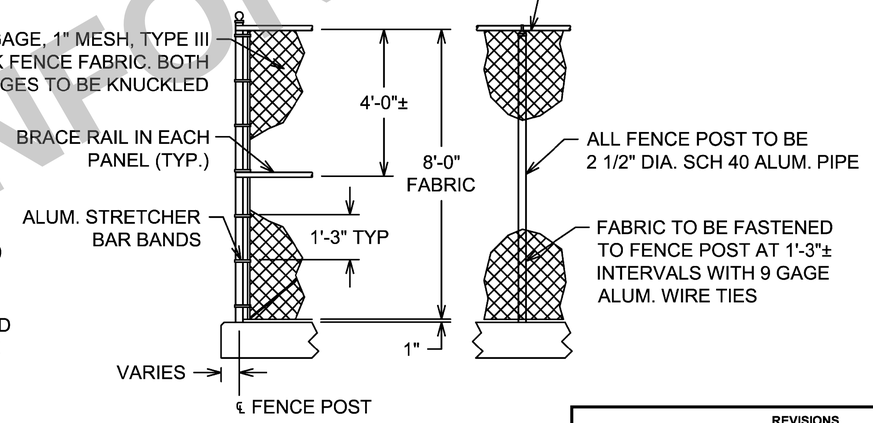
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TOP RAIL SLEEVE DETAIL



DETAIL AT JOINT



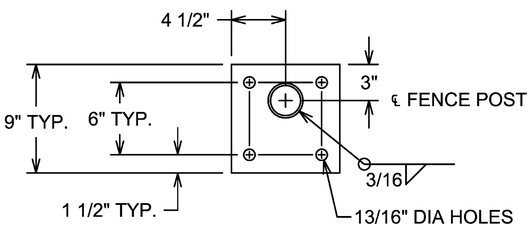
DETAIL AT END

DETAILS FOR CHAIN LINK FENCE

NTS

NOTES:

1. ALUMINUM PIPE TO BE ASTM B24I, ALLOY 6061-T6, ALUMINUM BASE PLATE TO BE ASTM B-209, ALLOY 6061-T6.
2. FENCE FABRIC TO BE TYPE III ALUMINUM ALLOY WIRE ASTM B-211, ALLOY 6061-T89 OR T94.
3. BRACE RAIL AND BRACE ENDS, POST TOPS, TURNBUCKLES, TRUSS RODS, STRETCHER BARS, AND BAR BANDS TO BE IN ACCORDANCE WITH AASHTO M181.
4. STAINLESS STEEL BOLTS, NUTS AND ANCHOR RODS TO BE ASTM A-276, TYPE 304. STAINLESS STEEL WASHERS TO BE ASTM A-276, TYPE 302.
5. POST TO BE SET PERPENDICULAR TO TOP OF CURB AND RAILS SHALL BE PLACED PARALLEL TO THE GRADE OF THE BRIDGE.
6. BOTTOM OF BASE PLATE SHALL BE THOROUGHLY COATED WITH ALUMINUM IMPREGNATED CAULKING COMPOUND OR APPROVED QUALITY.
7. CERTIFIED MILL REPORTS ARE REQUIRED FOR POST, RAIL, AND FENCE FABRIC. SHOP INSPECTION IS NOT REQUIRED.
8. WELDING SHALL BE IN ACCORDANCE WITH THE CURRENT AWS STRUCTURAL WELDING CODE - ALUMINUM.
9. SEE NS TYPICAL DRAWING NO. 15 FOR ADDITIONAL HANDRAIL DETAILS.



BASE PLATE DETAIL

NTS

REVISIONS		
DATE	LTR.	DESCRIPTION

NORFOLK SOUTHERN

PUBLIC PROJECTS MANUAL
TYPICAL DRAWINGS

UNDERPASS BRIDGE DETAILS
VANDAL FENCING WITH HANDRAIL I

REF. NO.: N/A

DATE: JULY 1, 2013 | DRAWING NO.: 14

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
NSRR	JEA	CTV	12-15-21
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CTM			

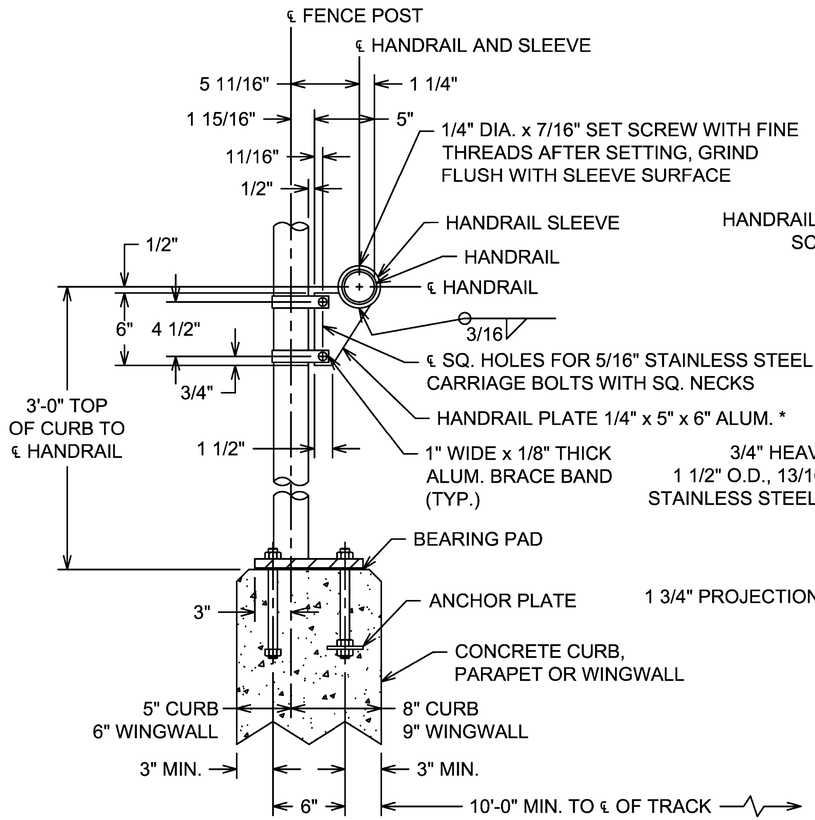
NSRR VANDAL PROTECTION FENCE DETAILS
GENERAL NORFOLK SOUTHERN RAILROAD (NSRR) BRIDGE STANDARD NOTES & DETAILS
NSRR BRIDGES CT-1.41 (NORWOOD LATERAL), CT-0.95 (I-75), CT-0.89 (PROSSER AVE)

HAM-75-7.85
PID No. 77889

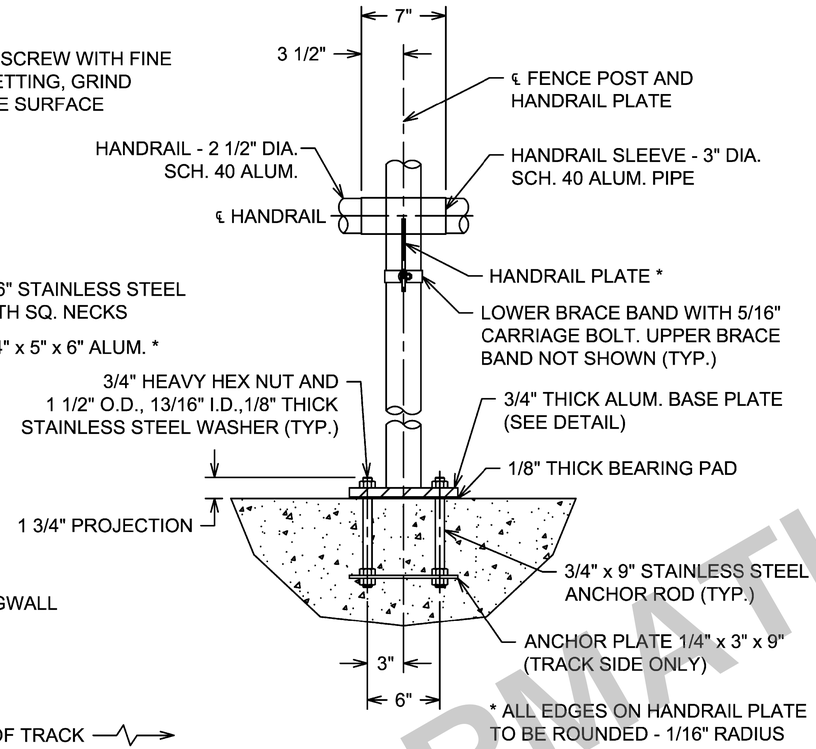
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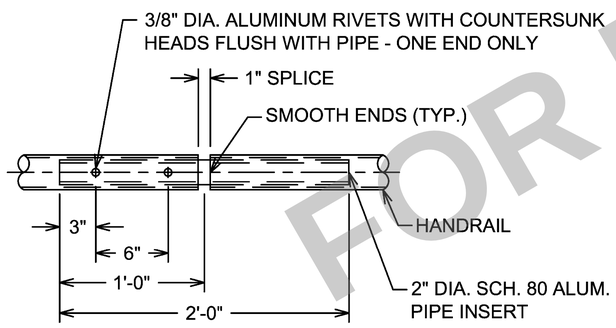
SECTION



FRONT VIEW

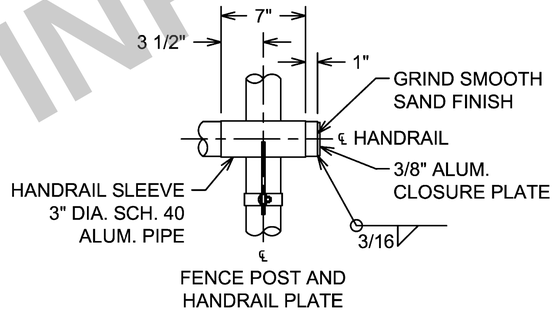
DETAILS FOR PIPE RAILING

NTS



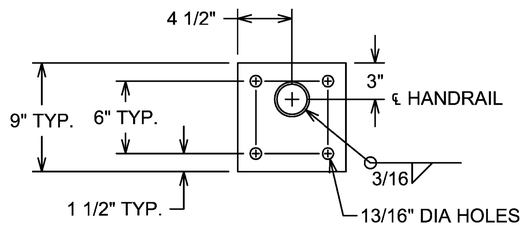
HANDRAIL JOINT DETAIL

NTS



END CLOSURE DETAIL

NTS



BASE PLATE DETAIL

NTS

NOTES:

1. JOINT IN HANDRAILING SHALL BE LOCATED IN POST SPACING PLAN.
2. ALL HANDRAIL PIPE, SLEEVES AND EXPANSION JOINTS TO BE SMOOTH AND FREE OF ALL SHARP EDGES.
3. ALUMINUM PIPE TO BE ASTM B241, ALLOY 6061-T6, ALUMINUM CLOSURE PLATE, AND HANDRAIL PLATE TO BE ASTM B-209, ALLOY 6061-T6.
4. STAINLESS STEEL BOLTS, NUTS AND ANCHOR RODS TO BE ASTM A-276, TYPE 304. STAINLESS STEEL WASHERS TO BE ASTM A-276, TYPE 302. ANCHOR ROD THREADS SHALL BE ROLLED, NOT CUT.
5. POST TO BE SET PERPENDICULAR TO TOP OF CURB AND RAILS SHALL BE PLACED PARALLEL TO THE GRADE OF THE BRIDGE.
6. BOTTOM OF BASEPLATE SHALL BE THOROUGHLY COATED WITH ALUMINUM IMPREGNATED CAULKING COMPOUND OR APPROVED QUALITY.
7. CERTIFIED MILL REPORTS ARE REQUIRED FOR POST AND RAIL. SHOP INSPECTION IS NOT REQUIRED.
8. AFTER ANCHOR BOLT AND OTHER BOLT NUTS HAVE BEEN TIGHTENED, THREADS SHALL BE NICKED TO LOCK NUTS.
9. THE ALUMINUM BRACE BANDS USED TO SECURE HANDRAIL SLEEVE SHALL BE OF SUCH SIZE NECESSARY TO CLAMP TIGHTLY TO FENCE POST.
10. WELDING SHALL BE IN ACCORDANCE WITH THE CURRENT AWS STRUCTURAL WELDING CODE - ALUMINUM.
11. ANCHOR PLATE SHALL BE STEEL CONFORMING TO ASTM SPECIFICATION A36.
12. UPPER ANCHOR ROD NUTS SHALL BE HEAVY HEX NUTS, PER ASTM A276 TYPE 302 OR 304 STAINLESS STEEL.
13. LOWER ANCHOR ROD NUTS SHALL BE HEAVY HEX NUTS, PER ASTM A307.

FOR INFORMATION ONLY

REVISIONS		
DATE	LTR.	DESCRIPTION

NORFOLK SOUTHERN

PUBLIC PROJECTS MANUAL
TYPICAL DRAWINGS

UNDERPASS BRIDGE DETAILS
VANDAL FENCING WITH HANDRAIL II

REF. NO.: N/A

DATE: JULY 1, 2013 | DRAWING NO.: 15

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
NSRR	JEA	CTV	12-15-21
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CTM			

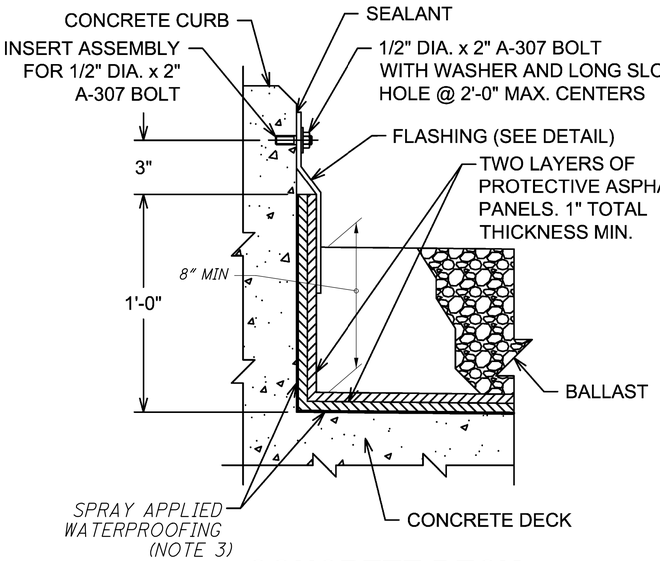
NSRR HANDRAIL WITH VANDAL PROTECTION FENCE DETAILS
GENERAL NORFOLK SOUTHERN RAILROAD (NSRR) BRIDGE STANDARD NOTES & DETAILS
NSRR BRIDGES CT-1.41 (NORWOOD LATERAL), CT-0.95 (I-75), CT-0.89 (PROSSER AVE)

HAM-75-7.85
PID No. 77889

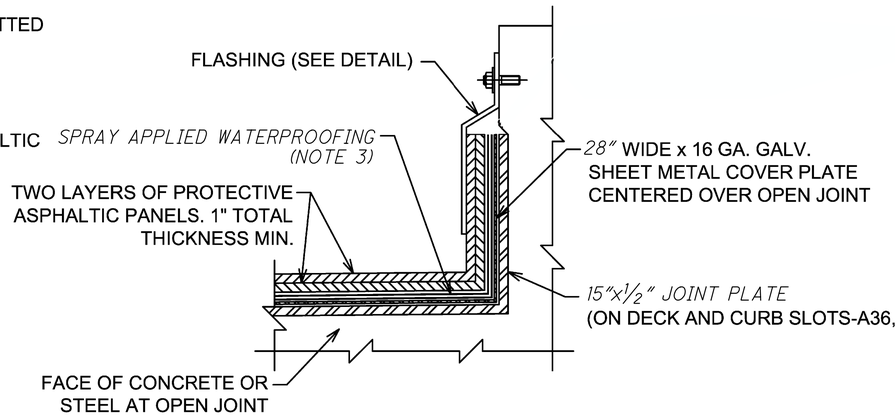
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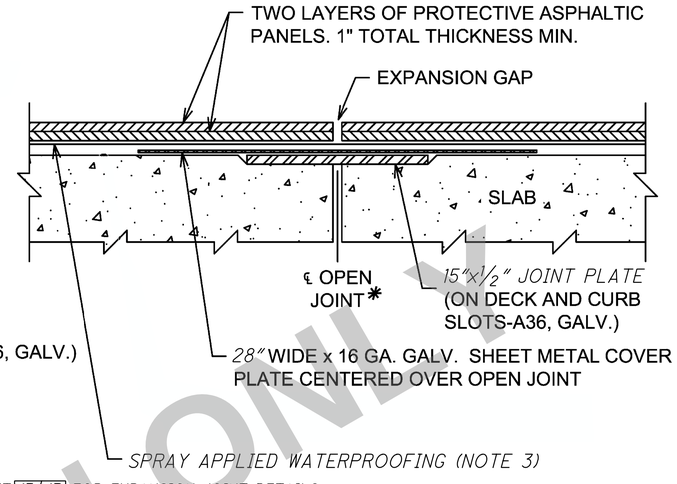
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CONCRETE DECK

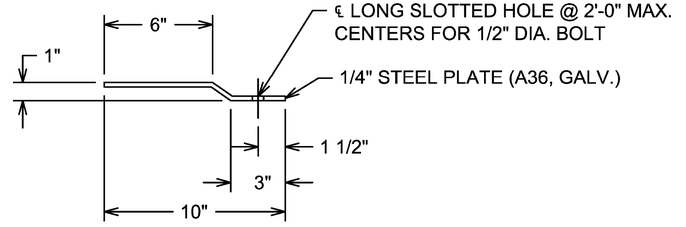


TYPICAL TRANSVERSE SECTION AT OPEN JOINT*



* SEE SHEET 13 / 13 FOR EXPANSION JOINT DETAILS

TYPICAL LONGITUDINAL SECTION AT BENTS AND BACKWALL*



CURB FLASHING DETAIL

TYPICAL LONGITUDINAL SECTION AT END OF BACKWALL / APPROACH SLABS

TYPICAL LONGITUDINAL SECTION AT CONTROLLED JOINTS

NOTES:

1. ALL STRUCTURAL STEEL PLATES, BOLTS AND WASHERS SHALL BE GALVANIZED.
2. DISCONTINUE FLASHING OVER PIERS AND ABUTMENTS.
3. *SEE APPENDIX H.4.3 SECTION 6 OF THE NSRR PUBLIC PROJECTS MANUAL FOR WATERPROOFING SPECIFICATIONS.*
4. ALL DETAILS ARE DRAWN NOT TO SCALE.

FOR INFORMATION ONLY

REVISIONS		
DATE	LTR.	DESCRIPTION

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PUBLIC PROJECTS MANUAL
TYPICAL DRAWINGS

UNDERPASS BRIDGE DETAILS
WATERPROOFING

REF. NO.: N/A

DATE: JULY 1, 2013 | DRAWING NO.: 18

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
NSRR	JEA	CTV	12-15-21
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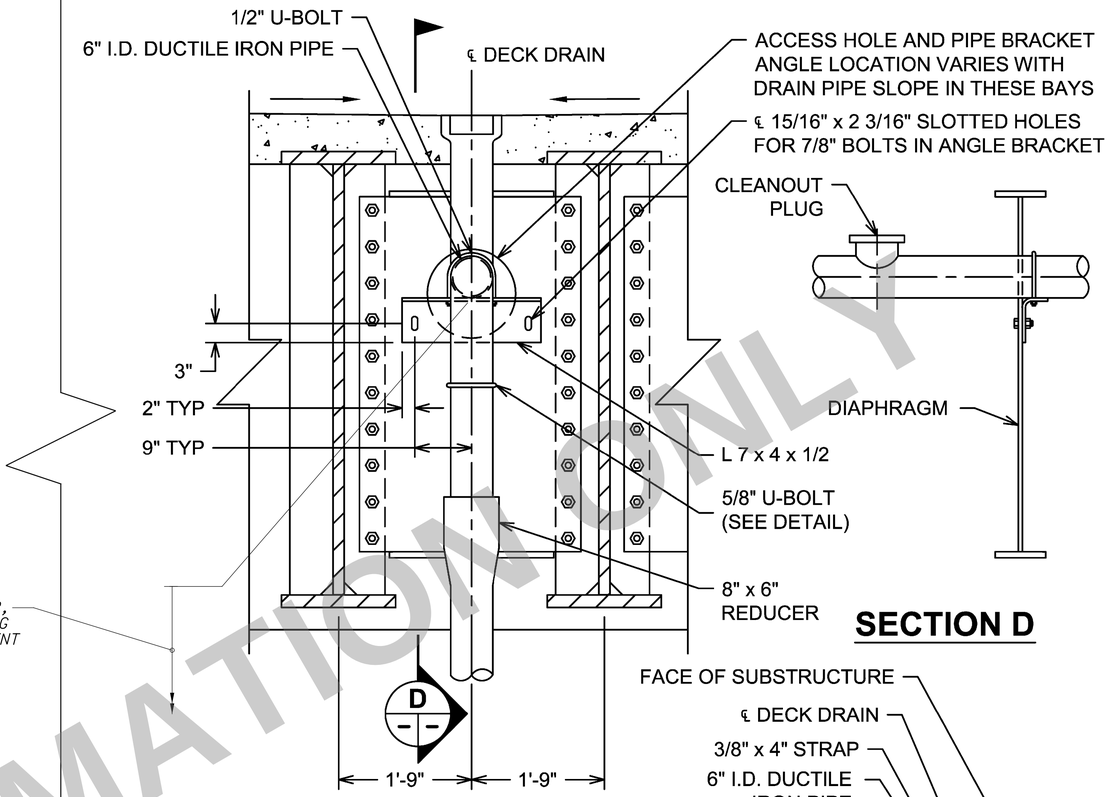
NSRR WATERPROOFING DETAILS
GENERAL NORFOLK SOUTHERN RAILROAD (NSRR) BRIDGE STANDARD NOTES & DETAILS
NSRR BRIDGES CT-1.41 (NORWOOD LATERAL), CT-0.95 (I-75), CT-0.89 (PROSSER AVE)

HAM-75-7.85
PID No. 77889

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2017

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FOR INFORMATION ONLY

NOTES:

1. ALL PIPES, TEES, BELLS AND BENDS SHALL BE CLASS 54 DUCTILE IRON.
2. USE MINIMUM 1% FALL ON DRAIN PIPES.

BRIDGE SPECIFIC REFERENCES

CT-1.41 (OVER S.R. 562) 1567/2017 AND 1568/2017

CT-0.95 (OVER I.R. 75) 1608/2017 AND 1609/2017

CT-0.89 (OVER PROSSER AVE) 1644/2017

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DATE	LTR.	DESCRIPTION

NORFOLK SOUTHERN

PUBLIC PROJECTS MANUAL
TYPICAL DRAWINGS

UNDERPASS BRIDGE DETAILS
DECK DRAIN II

REF. NO.: N/A

DATE: JULY 1, 2013 | DRAWING NO.: 17

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

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NSRR	JEA	CTV	12-15-21
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CTM			

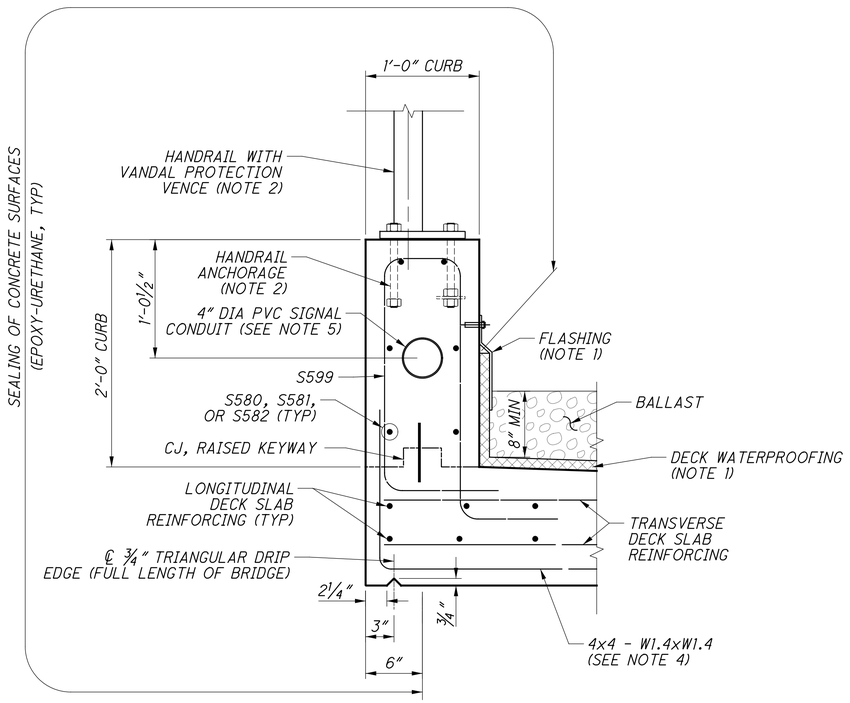
NSRR MISCELLANEOUS DRAINAGE DETAILS
GENERAL NORFOLK SOUTHERN RAILROAD (NSRR) BRIDGE STANDARD NOTES & DETAILS
NSRR BRIDGES CT-1.41 (NORWOOD LATERAL), CT-0.95 (I-75), CT-0.89 (PROSSER AVE)

HAM-75-7.85
PID No. 77889

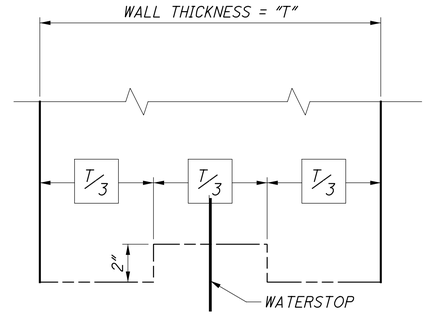
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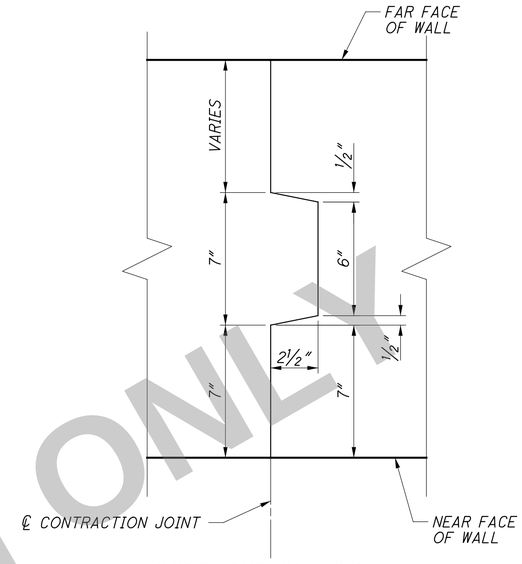
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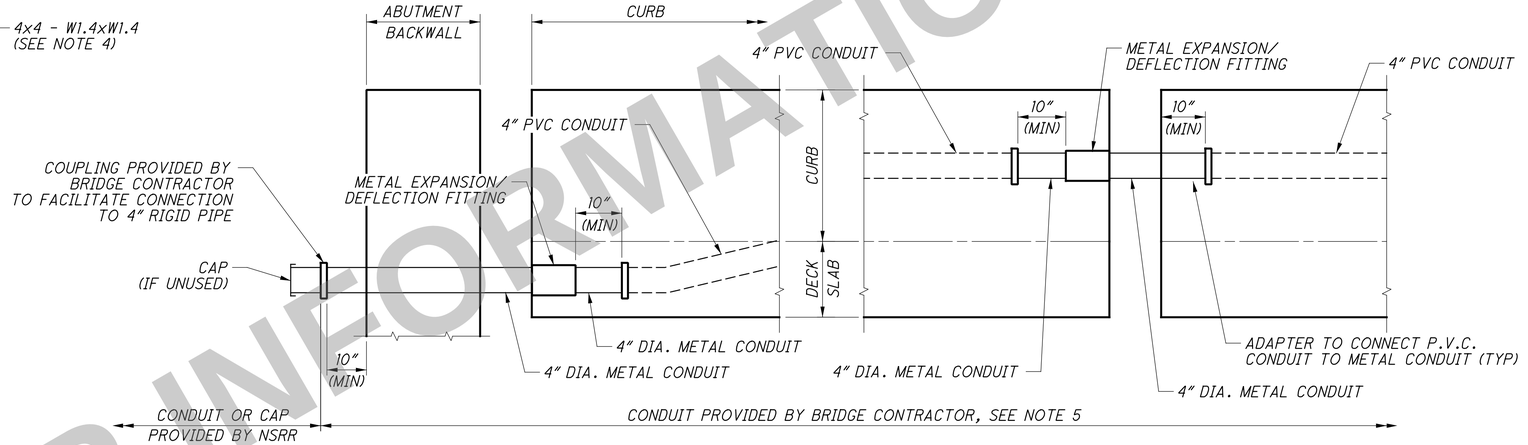
9 CURB DETAIL



RAISED KEYWAY
CONSTRUCTION JOINT

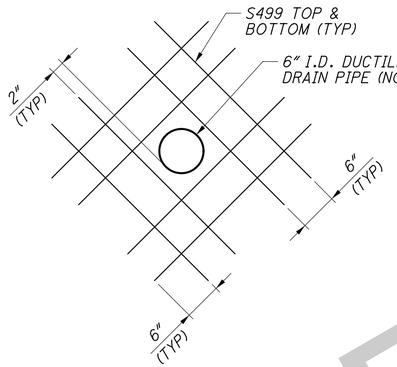


CONTRACTION JOINT
VERTICAL KEYWAY

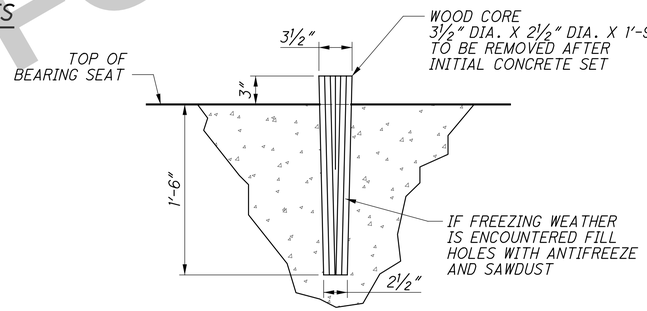


CONDUIT ELEVATION AT ABUTMENT
TRANSITION THE CONDUIT FROM THE PARAPET DOWN TO THE DECK SLAB WITHIN A HORIZONTAL DISTANCE OF 10'-0" (SEE NOTE 5)

CONDUIT ELEVATION AT PIER
(SEE NOTE 5)



REINFORCING AT DECK DRAIN PIPES



ANCHOR BLOCK OUT DETAIL

NOTES:

1. FOR WATERPROOFING DETAILS, SEE SHEET 10 | 13.
2. FOR HANDRAIL WITH VANDAL PROTECTION FENCE, SEE SHEETS 8 | 13 THROUGH 9 | 13.
3. FOR DECK DRAIN DETAILS, INCLUDING GRATE, SEE SHEET 11 | 13.
4. 4x4 - W1.4xW1.4 GALVANIZED WELDED WIRE FABRIC PER ODOT CMS 709.08 PROVIDED ACROSS OVERHANGS. MESH SHALL EXTEND FROM 1" CLEAR OF EXTERIOR GIRDER TOP FLANGE, 1" ABOVE THE TOP OF THE DRIP EDGE, AND 6" ABOVE THE TOP OF THE CURB CONSTRUCTION JOINT. WWF TO BE TURNED UP INTO THE CAGE AT THE FLANGE LOCATION. FURNISHING AND INSTALLING THE WWF SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE DECK REINFORCING STEEL.
5. CONDUIT SHALL BE PAID FOR WITH ITEM 625, CONDUIT, 4", 725.051, AS PER PLAN AND SHALL INCLUDE ALL REQUIRED FITINGS, ADAPTERS, METAL CONDUIT, AND OTHER SPECIAL ITEMS REQUIRED TO CONSTRUCT THE JOINTS SHOWN.

FOR INFORMATION ONLY

DESIGN AGENCY
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DESIGNED	DRAWN	REVIEWED	DATE
EFD	EFD	CTV	12-15-21
CHECKED	REVISED	ODOT SFN	3113818, 3110142, PROSSER
CTM			

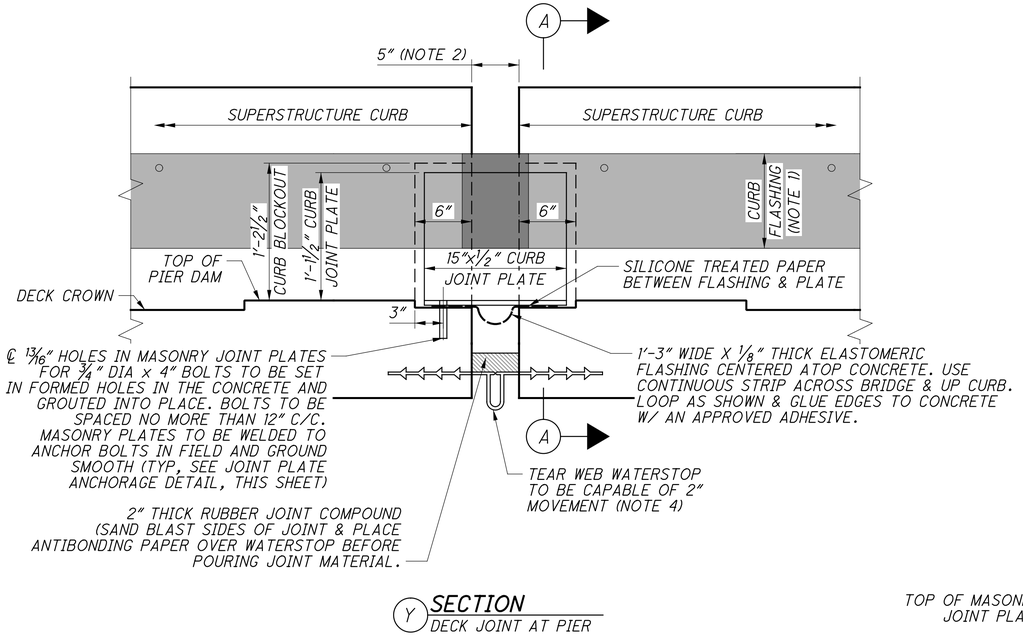
TYPICAL STRUCTURAL DETAILS
GENERAL NORFOLK SOUTHERN RAILROAD (NSRR) BRIDGE STANDARD NOTES & DETAILS
NSRR BRIDGES CT-1.41 (NORWOOD LATERAL), CT-0.95 (I-75), CT-0.89 (PROSSER AVE)

HAM-75-7.85
PID No. 77889

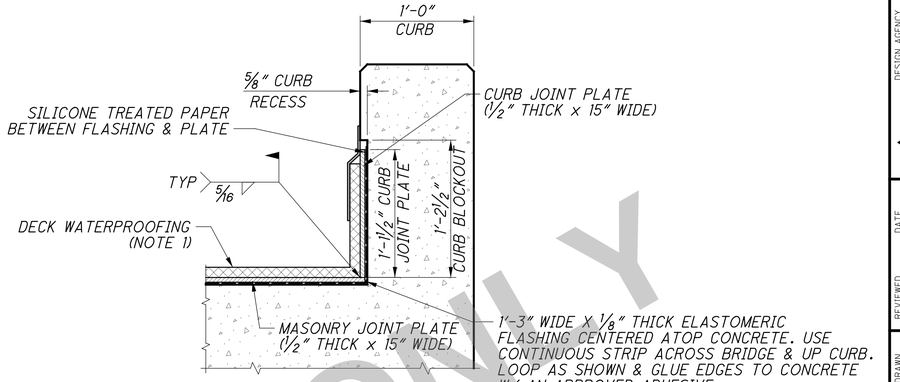
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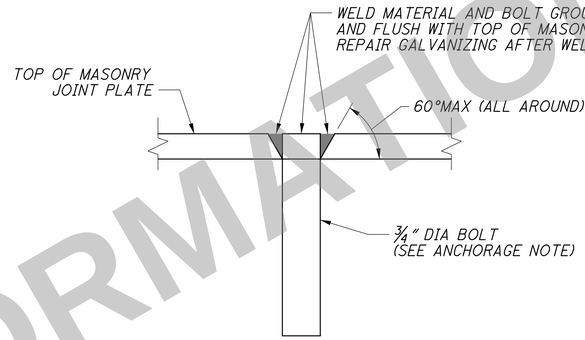
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Y **SECTION**
DECK JOINT AT PIER

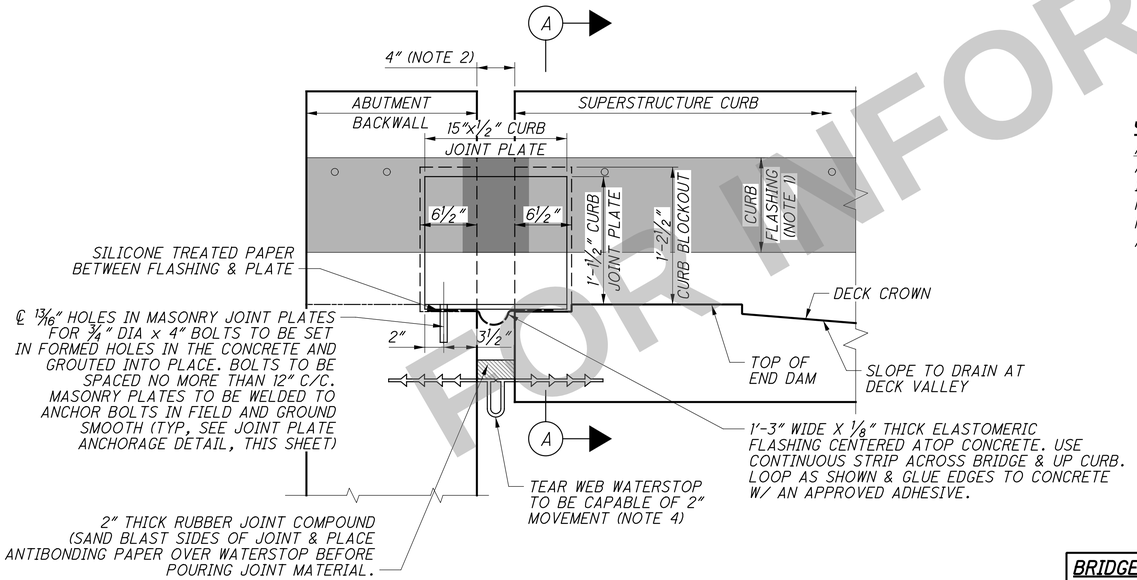


A **SECTION**
DECK CURB SHOWN
ABUTMENT BACKWALL SIMILAR



JOINT PLATE ANCHORAGE DETAIL

ANCHORAGE NOTE:
AT THE CONTRACTORS OPTION, THREADED INSERTS IN THE CONCRETE WITH COUNTERSUNK ¾" SCREWS MAY BE USED. IF USED, THE METHODS AND MATERIALS SHALL BE SUBMITTED TO NSRR AND APPROVED BY NSRR.



Z **SECTION**
DECK JOINT AT ABUTMENT

BRIDGE SPECIFIC REFERENCES

CT-1.41 (OVER S.R. 562)	1563 / 2017
CT-0.95 (OVER I.R. 75)	1606 / 2017
CT-0.89 (OVER PROSSER AVE)	1642 / 2017

NOTES:

1. FOR WATERPROOFING DETAILS, INCLUDING CURB FLASHING, SEE SHEET 10 | 13.
2. BASIC JOINT OPENINGS GIVEN ARE AT THERMAL NEUTRAL TEMPERATURES. FOR OPENING WIDTHS AT VARIABLE TEMPERATURES, SEE BRIDGE SPECIFIC REFERENCES.
3. JOINT PLATES SHALL BE GALVANIZED. FOR LENGTH OF SKEWED DECK JOINT PLATE, SEE BRIDGE SPECIFIC REFERENCES.
4. CAST THE TEAR-WEB WATERSTOPS 2" MIN. FROM THE BOTTOM OF THE DECK. EXTEND THE WATERSTOPS UP THE CURB. A BULB-TYPE WATERSTOP WITH A 2" DIAMETER BULB MAY BE SUBSTITUTED AT THE CONTRACTORS OPTION AND WITH THE APPROVAL OF NSRR.
5. PRIOR TO INSTALLING THE FLASHING AND EXPANSION JOINT PLATE COVER THE CONTRACTOR SHALL TEST THE JOINT FOR LEAKS AND MADE WATERTIGHT TO THE SATISFACTION OF NSRR.

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CTM			

DECK EXPANSION JOINT DETAILS

GENERAL NORFOLK SOUTHERN RAILROAD (NSRR) BRIDGE STANDARD NOTES & DETAILS
NSRR BRIDGES CT-1.41 (NORWOOD LATERAL), CT-0.95 (I-75), CT-0.89 (PROSSER AVE)

HAM-75-7.85
PID No. 77889

13 / 13

1514 / 2017

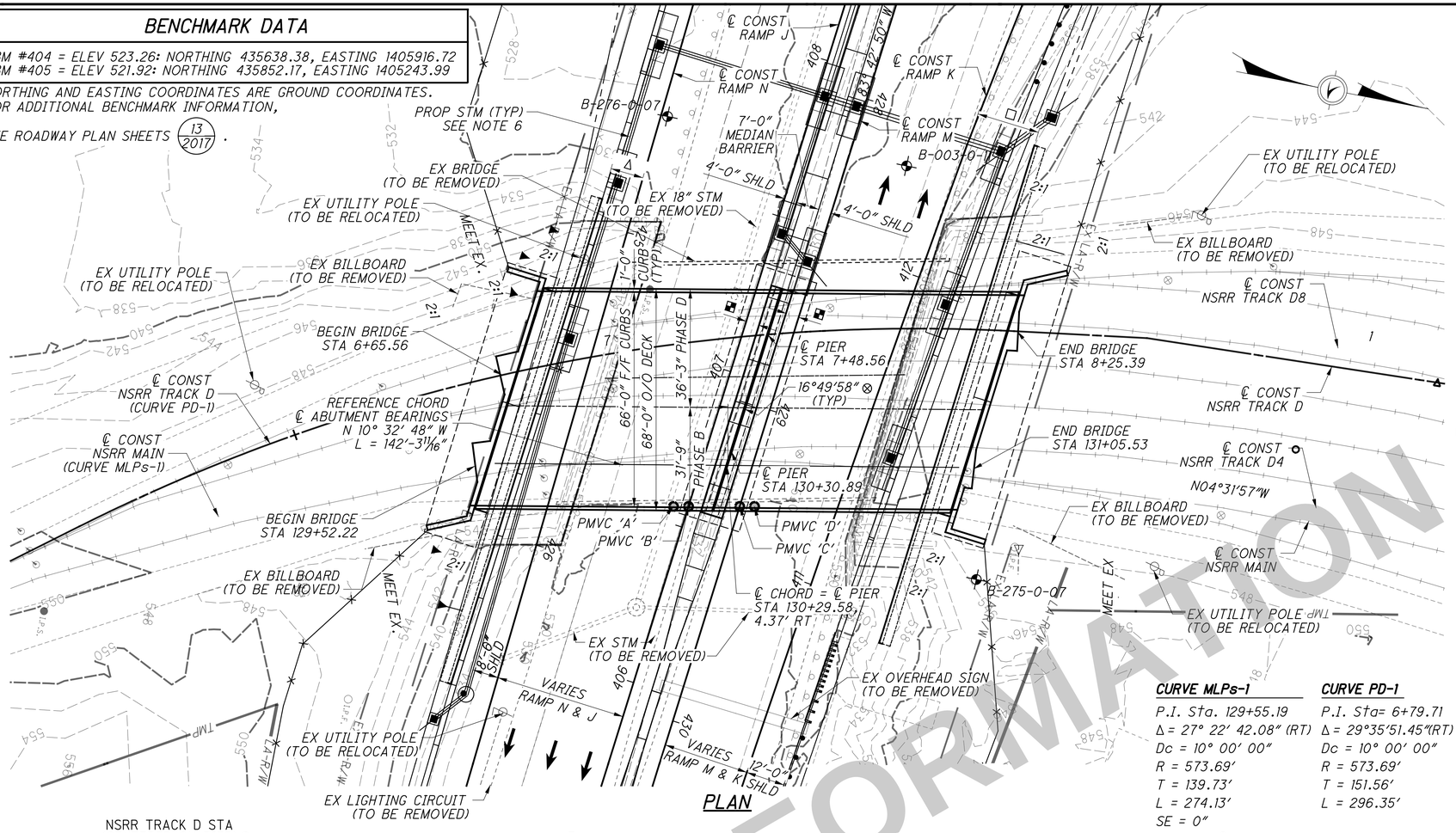
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BENCHMARK DATA

BM #404 = ELEV 523.26: NORTHING 435638.38, EASTING 1405916.72
BM #405 = ELEV 521.92: NORTHING 435852.17, EASTING 1405243.99

NORTHING AND EASTING COORDINATES ARE GROUND COORDINATES.
FOR ADDITIONAL BENCHMARK INFORMATION,

SEE ROADWAY PLAN SHEETS (13/2017) .



PLAN

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. FOR SHORING & STAGING INFORMATION, SEE SHEETS [5/57] - [15/57].
3. FOR ADDITIONAL ROADWAY INFORMATION, SEE ROADWAY PLAN SHEETS (363/2017) , (366/2017) , (359/2017) & (362/2017) FOR RAMPS J, K, M & N.
4. FOR ADDITIONAL RAIL DETAILS, SEE TRACK PLANS, SHEET (1712/2017) .
5. FOR ADDITIONAL LAYOUT DETAILS, SEE GENERAL PLAN, SHEET [2/57].
6. FOR ADDITIONAL DRAINAGE INFORMATION, SEE SHEET (819/2017) .

MILEPOST NOTE:

1. THE CENTER OF BRIDGE ALONG ℄ SURVEY AND CONSTRUCTION OF NS RAILROAD IS STA 130+30.89 (℄ PIER). THE DISTANCE TO NS RAILROAD MILEPOST CT-1.0 IS 2,165 FT. (0.41 MILES) WEST.

S.R. 562 TRAFFIC DATA

2010 ADT = 173,800 2010 ADTT = 24,332
2030 ADT = 203,000 2030 ADTT = 28,520
DIRECTIONAL DISTRIBUTION = 53%

NORFOLK SOUTHERN RAIL TRAFFIC DATA

5 FREIGHT TRAINS PER DAY
0 PASSENGER TRAINS PER DAY
10 MPH OPERATING SPEED
SOURCE: NORFOLK SOUTHERN RAILROAD

LEGEND

SEE SHEET (1506/2017) FOR PROJECT ABBREVIATIONS

- ⌖ - SOIL BORING LOCATION
- ◉ - POINT OF MINIMUM VERTICAL CLEARANCE
  - A = 14'-11½" (SPAN 1 OVER PROPOSED MOT), 14'-6" REQUIRED
  - B = 16'-10¾" (SPAN 1 OVER PROPOSED ROADWAY), 15'-6" REQUIRED
  - C = 16'-10¾" (SPAN 2 OVER PROPOSED ROADWAY), 15'-6" REQUIRED
  - D = 15'-0" (SPAN 2 OVER PROPOSED MOT), 14'-6" REQUIRED
- ⊗ = MEASURED TO REFERENCE CHORD
- ▪ = 4'-0" (MINIMUM HORIZONTAL CLEARANCE)
- △ = 10'-2" (MINIMUM HORIZONTAL CLEARANCE)
- □ = 19'-3⅝" (MINIMUM HORIZONTAL CLEARANCE)

CURVE MLPs-1

P.I. Sta. 129+55.19
Δ = 27° 22' 42.08" (RT)
Dc = 10° 00' 00"
R = 573.69'
T = 139.73'
L = 274.13'
SE = 0"

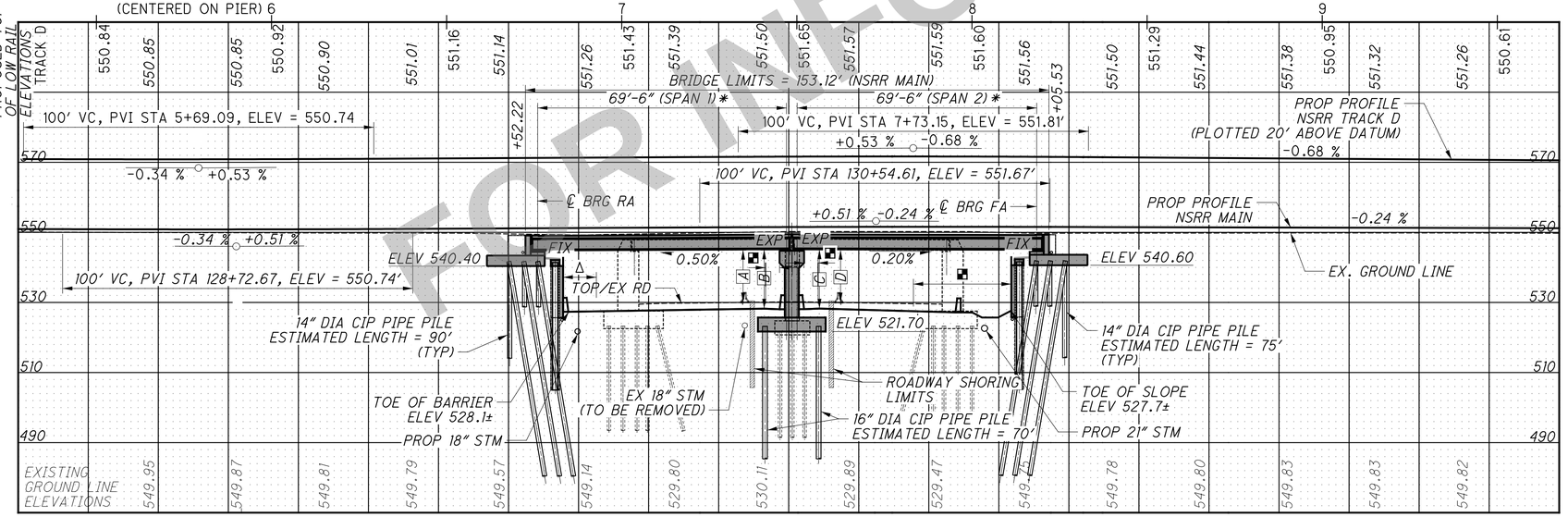
CURVE PD-1

P.I. Sta= 6+79.71
Δ = 29°35'51.45"(RT)
Dc = 10° 00' 00"
R = 573.69'
T = 151.56'
L = 296.35'

SOIL BORING DATA

BORING	STATION	OFFSET
B-275-0-07	406+61.52	91.0' RT
B-276-0-07	407+69.02	41.8' LT
B-003-0-11	407+76.37	32.8' RT

BORING DATA REFERENCED FROM ℄ RAMP J



PROFILE ALONG ℄ CONST PROPOSED NS RAILROAD MAIN

* MEASURED ALONG REFERENCE CHORD

EXISTING STRUCTURE

TYPE: TWO SIMPLE-SPAN STEEL DECK GIRDERS (33 KSI) WITH STEEL DECK ON CONCRETE ABUTMENTS AND PIER
SPANS: 44'-6"±, 44'-6"± C/C BEARINGS
WIDTH: 74'-0"± O/O DECK
ORIGINAL DESIGN LOADING: COOPER E-72
ALIGNMENT: TANGENT
SKEW: 18°± LF
YEAR BUILT: 1960
STRUCTURE FILE NUMBER: 3113817
DISPOSITION: TO BE REPLACED

PROPOSED STRUCTURE

TYPE: TWO SIMPLE-SPAN STEEL DECK GIRDERS (ASTM A709, GR. 50) WITH BALLASTED, COMPOSITE REINFORCED DECK ON CONCRETE STUB ABUTMENTS & WALL-TYPE PIER
SPAN: 69'-6", 69'-6" C/C BRGS (MEASURED ALONG REFERENCE CHORD)
WIDTH: 66'-0" F/F CURBS (68'-0" O/O DECK)
LOADING: COOPER E-80 WITH DIESEL IMPACT & ALTERNATE LOAD
ALIGNMENT: 10°00'00" RIGHT CURVE (CHORD DEFINITION)
SKEW: 16° 49' 58" LF (MEASURED TO REFERENCE CHORD)
COORDINATES: LATITUDE N 39° 10' 27"
LONGITUDE W 84° 29' 08"
STRUCTURE FILE NUMBER: 3113818

FOR INFORMATION ONLY

DESIGN AGENCY
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DESIGNED EFD | DRAWN SNH | REVIEWED CTV | DATE 12-15-21
CHECKED CTM | REVISED | ODOT SFN: 3113818 | NSRR BR#: BR0018448

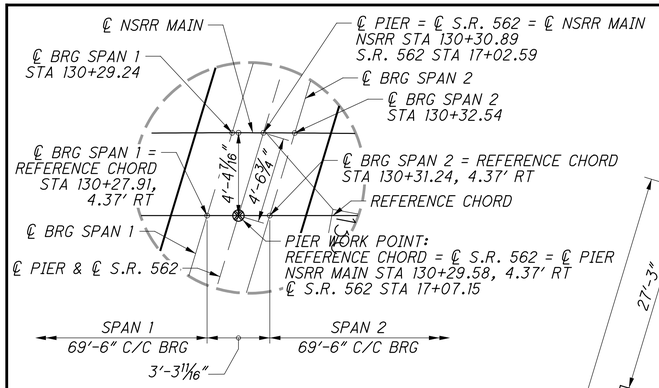
HAMILTON COUNTY
STA 129+52.22
TO STA 131+05.34

SITE PLAN
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

(1515/2017)

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1 **DETAIL**
PIER LAYOUT

DETAIL 1

GENERAL PLAN VIEW

NOTES:

1. FOR GENERAL STAGING OF CONSTRUCTION PLANS, INCLUDING TEMPORARY CLEARANCES AND SEQUENCING, SEE SHEETS 8 | 57 THROUGH 11 | 57.
2. MINIMUM AND MAXIMUM DISTANCES BETWEEN TRACK CENTERLINES AND CURBS ARE MEASURED NORMAL TO THE ℄ TO AN OBSTRUCTION FROM THE STRUCTURE. DISTANCES BETWEEN ALIGNMENTS ARE MEASURED AT THE LAST POINT AT WHICH BOTH ALIGNMENTS ARE ON THE SUPERSTRUCTURE.
3. FOR ADDITIONAL RAIL DETAILS, SEE TRACK PLANS, SHEET 1712/2017 .

FOR INFORMATION ONLY

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DESIGNED	DRAWN	REVIEWED	DATE
EFD	SNH	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

GENERAL PLAN
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

2 / 57

1516/2017

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HAM-562-0026 SPECIFIC NOTES

STANDARD RAILROAD BRIDGE NOTES AND DETAILS

THE NOTES ON THIS SHEET ARE SPECIFIC TO THE SUBJECT BRIDGE STRUCTURE. FOR STANDARD NOTES AND DETAILS APPLICABLE TO ALL RAILROAD BRIDGE STRUCTURES ON THIS PROJECT, INCLUDING THIS STRUCTURE, SEE THE FOLLOWING SHEETS: (1502 2017) THROUGH (1514 2017)

ITEM 202 - STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

THIS ITEM SHALL INCLUDE THE PHASED REMOVAL OF THE EXISTING IN-SERVICE BRIDGE CARRYING NSRR OVER S.R. 562.

THE REMOVAL OF THE EXISTING IN-SERVICE BRIDGE INCLUDES THE REMOVAL OF ALL SUPERSTRUCTURE ELEMENTS AND ALL SUBSTRUCTURE ELEMENTS TO A DISTANCE OF 3'-6" BELOW PROPOSED FINAL GRADE.

THE CONTRACTOR MUST REVIEW THE EXISTING STRUCTURE WHEN PREPARING THEIR BID. EXISTING PLANS ARE AVAILABLE FOR THE SUBJECT BRIDGE.

PHASE A SUBSTRUCTURE CONCRETE REMOVAL

SAW-CUT BOUNDARIES OF PROPOSED PHASE A CONCRETE REMOVALS, THEN REMOVE THE CONCRETE TO THE SAW-CUT LINE. CUTOFF THE EXISTING REINFORCING STEEL FLUSH WITH THE SAW-CUT LINE. CLEAN THE CONCRETE SURFACE AND EXPOSED REINFORCEMENT.

PHASE A CONCRETE SHALL BE REMOVED BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. FOR REMOVAL WITHIN 18 INCHES OF PORTIONS OF CONCRETE TO REMAIN, THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS. OUTSIDE THE 18-INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL IN THE PIER CAP.

ITEM 507 - CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN, AS PER PLAN

FOR STANDARD NOTES FOR THIS ITEM, SEE SHEET: (1503 2017)

FOR FURNISHED PILE NOTES, SEE SHEET: (1503 2017)

THE SERVICE REACTIONS LISTED BELOW ARE THE MAXIMUM SERVICE REACTION OF ALL LOAD GROUPS, AFTER THE REDUCTION OF ANY ALLOWABLE OVERSTRESS. LOAD GROUPS AND ALLOWABLE OVERSTRESS ARE PER AREMA TABLE 8-2-4.

PRIOR TO DRIVING, THE CONTRACTOR SHALL VERIFY THAT THE LAYOUT OF BATTERED PILES WILL NOT INTERFERE WITH THE LAYOUT OF SOLDIER PILE SHAFTS.

REAR AND FORWARD ABUTMENTS: 164 KIPS

PIER: 163 KIPS

SEE FOUNDATION PLAN SHEETS 16/57 THROUGH 18/57 FOR ORDER LENGTHS, TIP ELEVATION, AND CUTOFF ELEVATION DETAILS FOR SPECIFIC PILES.

PILE DESIGN LOADS (ULTIMATE BEARING VALUE):
THE ULTIMATE BEARING VALUE IS 164 TONS PER PILE FOR THE REAR AND FORWARD ABUTMENT PILES. THE ULTIMATE BEARING VALUE IS 163 TONS FOR THE PIER PILES.

ABUTMENT PILES:
65 PILES 95 FEET LONG, ORDER LENGTH (REAR)
68 PILES 80 FEET LONG, ORDER LENGTH (FORWARD)
4 DYNAMIC LOAD TESTING ITEMS (2 PER ABUTMENT)

PIER PILES:
40 PILES 75 FEET LONG, ORDER LENGTH
2 DYNAMIC LOAD TESTING ITEMS

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES (FT) AT THE CONTRACT BID PRICE.

ITEM 507 - STEEL PILES, MISC.: SOLDIER PILES

THE WORK SHALL CONSISTS OF FURNISHING AND PLACING STEEL SOLDIER PILES INTO DRILLED HOLES AS WELL AS MONITORING PLUMBNESS. FURNISH SOLDIER PILES CONSISTING OF STRUCTURAL STEEL MEMBERS THAT MEET THE PLAN REQUIREMENTS AND CONFORM TO ASTM A709, GRADE 50. DO NOT FIELD WELD OR SPLICE STEEL SOLDIER PILES.

ALIGN THE SOLDIER PILE VERTICALLY WITHIN THE HOLE. PLACE THE SOLIDER PILE SO THAT THE FLANGES ARE PARALLEL TO THE CENTERLINE OF PREBORED HOLES AND THE TOP IS AT THE PLAN ELEVATION. SUPPORT THE SOLDIER PILE SO THAT IT DOES NOT MOVE DURING CONCRETE PLACEMENT. DO NOT ALLOW THE VERTICAL ALIGNMENT OF THE SOLDIER PILE TO VARY BY MORE THAN 1/4" PER FOOT OF DEPTH. DO NOT ALLOW THE ORIENTATION OF THE FLANGES TO VARY BY MORE THAN 10 DEGREES.

CHECK THE POSITION, THE VERTICAL ALIGNMENT, AND ORIENTATION OF THE SOLDIER PILE IMMEDIATELY AFTER CONCRETE PLACEMENT. MAKE CORRECTIONS AS NECESSARY TO MEET THE ABOVE TOLERANCES.

MEASUREMENT FOR PAYMENT WILL BE THE DISTANCE BETWEEN THE TOP AND BOTTOM OF THE SOLDIER PILE. PAYMENT IS FULL COMPENSATION FOR FURNISHING AND PLACING THE SOLDIER PILES AND MONITORING THEIR PLUMBNESS UNTIL THE PLACEMENT OF THE CONCRETE FACING HAS BEGUN. THE DEPARTMENT WILL PAY FOR SOLDIER PILES AT THE CONTRACT UNIT BID PRICE OF ITEM 507 - STEEL PILES, MISC.: SOLDIER PILES (FT).

ITEM 512 - SPECIAL - BUTYL RUBBER MEMBRANE WATERPROOFING

BUTYL RUBBER MEMBRANE WATERPROOFING SHALL BE IN ACCORDANCE WITH NSRR-PPM, APPENDIX H.4.3 - "SPECIFICATIONS FOR MEMBRANE WATERPROOFING", AREMA CHAPTER 8, PART 29, AND THE DETAILS HEREIN.

USE 3/32" THICK BUTYL RUBBER MEMBRANE WATERPROOFING ACROSS THE LONGITUDINAL DECK PHASE CJ FOR THE FULL LENGTH OF THE BRIDGE DECK.

THE BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE ITEM.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES (SQ YD) AT THE CONTRACT BID PRICE FOR THIS STRUCTURE, WHICH SHALL INCLUDE ALL MATERIALS, LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE ITEM.

ITEM 524 - DRILLED SHAFTS, 30" DIAMETER, ABOVE BEDROCK, AS PER PLAN

THIS WORK CONSISTS OF FURNISHING AND INSTALLING DRILLED SHAFTS FOR SOLIDER PILE AND LAGGING WALLS. THE DRILLED SHAFTS ARE REINFORCED WITH SOLDIER PILES IN LIEU OF REINFORCING STEEL CAGES. THE SOLDIER PILES EXTEND ABOVE THE TOP OF THE DRILLED SHAFT. FURNISH AND INSTALL THE DRILLED SHAFTS IN ACCORDANCE WITH CMS 524 EXCEPT AS MODIFIED AND SUPPLEMENTED BELOW.

EACH PHASE OF PREBORED HOLES SHALL BE 30 INCHES DIAMETER AND INSTALLED ONLY AFTER THE ABUTMENT PILES ARE INSTALLED FOR THAT PHASE (INCLUDING AFTER ALL PLANNED RESTRIKES). PRIOR TO DRILLING THE CONTRACTOR SHALL VERIFY THAT THE LAYOUT OF SOLDIER PILE SHAFTS WILL NOT INTERFERE WITH THE BATTERED PILES.

PREBORED HOLES DO NOT REQUIRE CASING FOR RAILROAD SURCHARGE IF SHORING IS INSTALLED PER THESE PLANS.

FILL THE HOLE BELOW THE BOTTOM OF LAGGING ELEVATION WITH CONCRETE. USE CLASS QCI CONCRETE ACCORDING TO CMS 511. THE CONTRACTOR MAY PLACE CONCRETE USING THE FREE FALL METHOD PROVIDED THE DEPTH OF WATER IS LESS THAN 6 INCHES AND THE CONCRETE FALLS WITHOUT STRIKING THE SIDES OF THE HOLE. POURING CONCRETE ON THE WEB OF THE SOLDIER PILE IS ACCEPTABLE. THE MAXIMUM FREE FALL OF CONCRETE SHALL NOT EXCEED 4 FEET.

FILL THE HOLE ABOVE THE BOTTOM OF LAGGING ELEVATION WITH LOW STRENGTH MORTAR BACKFILL (LSM) PER ITEM 613. REMOVE CONCRETE AND LSM EVEN WITH THE FRONT FACE OF THE SOLDIER PILE IN ORDER TO PLACE THE LAGGING.

ITEM 524 - DRILLED SHAFTS, 30" DIAMETER, ABOVE BEDROCK, AS PER PLAN (CONTINUED)

MEASUREMENT FOR PAYMENT FOR DRILLED SHAFTS ABOVE BEDROCK, AS PER PLAN WILL BE LIMITED TO THE ACTUAL DRILLED DISTANCE BETWEEN THE GROUND SURFACE AND THE MINIMUM TIP ELEVATION, AS DETERMINED BY THE ENGINEER. PAYMENT IS FULL COMPENSATION FOR DRILLING THE HOLES, CONSTRUCTING THE DRILLED SHAFTS, SUPPORTING THE SOLDIER PILES, FURNISHING AND PLACING CONCRETE AND LSM, AND REMOVAL OF CONCRETE OR LSM AROUND THE SOLDIER PILE AS NECESSARY TO PLACE LAGGING. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT UNIT BID PRICE PER FOOT FOR ITEM 524 - DRILLED SHAFTS, 30" DIAMETER, ABOVE BEDROCK, AS PER PLAN.

ITEM 530 - SPECIAL - RETAINING WALL, TIMBER LAGGING

THIS ITEM CONSISTS OF FURNISHING AND INSTALLING UNTREATED HARDWOOD LAGGING TO SERVE AS TEMPORARY LAGGING FOR THE SOLIDER PILE WALL. THE LAGGING SHALL CONSIST OF HARDWOOD TIMBER WITH NOMINAL 4"x8" DIMENSIONS. THE CONTRACTOR SHALL SUBMIT THE PROPOSED LAGGING TYPE TO NSRR FOR REVIEW AND APPROVAL. LAGGING SHOULD BE PLACED IN A TOP DOWN MANNER AS EXCAVATION PROCEEDS DOWNWARD. AT NO TIME SHOULD MORE THAN 24 INCHES OF UNSUPPORTED EXCAVATION BE PERMITTED. REDUCE THE UNSUPPORTED HEIGHT AS NECESSARY TO PREVENT CAVING AND SLOUGHING OF THE SOILS BETWEEN THE SOLDIER PILES. PROVIDE 1/4" TO 1/8" HORIZONTAL JOINT SPACING BETWEEN THE LAGGING BOARDS TO PERMIT DRAINAGE. THE TIMBER EXTREME FIBER ALLOWABLE STRESS IN BENDING SHALL BE GREATER THAN OR EQUAL TO 1050 PSI AND GREATER THAN OR EQUAL TO 150 PSI IN SHEAR.

CONNECT LAGGING TO SOLDIER PILES USING THREADED STUD SHEAR CONNECTORS, LAGGING WASHERS, AND NUTS PROVIDED AND INSTALLED PER CMS 513. LAGGING PLATES AND NUTS SHALL BE ASTM A709 GRADE 36, YIELD STRENGTH 36,000 PSI OR GREATER.

THE DEPARTMENT WILL MEASURE THE TEMPORARY TIMBER LAGGING BY THE NUMBER OF SQUARE FEET AND WILL DETERMINE THE AREA FROM PLAN DIMENSIONS USING A LENGTH MEASURED ALONG A HORIZONTAL LINE ALONG THE CENTERLINE OF THE SOLDIER PILES AND A HEIGHT FROM THE BOTTOM OF THE LAGGING TO THE TOP. PAYMENT IS FULL COMPENSATION FOR FURNISHING AND PLACING ALL MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK, INCLUDING WELDED THREADED STUDS. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT UNIT PRICE BID PER SQUARE FOOT FOR ITEM SPECIAL - RETAINING WALL, TIMBER LAGGING.

ITEM 530 - SPECIAL - RETAINING WALL: PREFABRICATED GEOCOMPOSITE DRAIN

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING PREFABRICATED GEOCOMPOSITE DRAIN (PGD) VERTICALLY IN EACH SOLDIER PILE BAY. THE PGD SHALL BE A MINIMUM OF 4 FEET WIDE IN EACH SOLDIER PILE BAY. PLACE THE GEOTEXTILE SIDE OF THE PGD AGAINST THE RETAINED SLOPE FACE. EXTEND THE PGD TO THE FULL HEIGHT OF THE WALL AS SHOWN IN THE PLANS. PAYMENT INCLUDES MATERIAL SUPPLY AND INSTALLATION.

A. PREPARATION: PREPARE THE SURFACE OF THE WALL OR ABUTMENT, ON WHICH THE PGD IS TO BE PLACED, TO BE FREE OF SOIL, DEBRIS, AND EXCESSIVE IRREGULARITIES THAT PREVENT CONTINUOUS CONTACT BETWEEN THE WALL SURFACE AND THE PGD.

B. PLACEMENT. PLACE PGD STRIPS TO PROVIDE CONTINUOUS COVERAGE OVER THE FACE OF THE WALL. UNROLL PGD DIRECTLY ONTO THE PREPARED SURFACE. DO NOT DRAG THE PGD ACROSS THE GROUND. TENSION THE PGD TO REMOVE ANY CREASES OR WRINKLES. DO NOT EXPOSE PGD TO WEATHER OR DIRECT SUNLIGHT FOR LONGER THAN 5 DAYS. PLACE THE GEOTEXTILE FABRIC SIDE TO FACE TOWARD THE BACKFILL OR RETAINED SOIL. CONSTRUCT THE PGD IN HORIZONTAL OR VERTICAL COURSES. PLACE THE PGD IN DIRECT CONTACT WITH THE WALL AND SECURE TO THE SURFACE USING EITHER ADHESIVES PER MANUFACTURES RECOMMENDATION OR NAILS AS FOLLOWS. SECURE WITH 2 INCH (51 MM) OR LONGER CONCRETE NAILS ALONG WITH WASHERS OR WOOD BATTENS OF NOT LESS THAN 9 SQUARE INCHES (5887 SQUARE MM). SPACE THE CONCRETE NAILS NO MORE THAN 3 FEET (0.9 M) APART, BOTH HORIZONTALLY AND VERTICALLY. USE AT LEAST ONE HORIZONTAL ROW OF NAILS IN EACH HORIZONTAL COURSE OF PGD, OR USE AT LEAST ONE VERTICAL COLUMN OF NAILS IN EACH VERTICAL COURSE OF PGD. DO NOT AFFECT THE DRAINAGE AREA AND THE DOWNWARD FLOW IN THE DRAIN BY THE ADHESIVE OR FASTENERS.

ITEM 530 - SPECIAL - RETAINING WALL: PREFABRICATED GEOCOMPOSITE DRAIN (CONTINUED)

C. SPLICING AND COVERING. FORM HORIZONTAL OR VERTICAL SEAMS BETWEEN COURSES BY UTILIZING THE FLAP OF GEOTEXTILE EXTENDING FROM ONE COURSE AND LAPPING OVER THE FLAP ON THAT OF THE NEXT COURSE. SECURELY FASTEN THE OVERLAPPED FLAPS WITH A CONTINUOUS STRIP OF 3 INCH (76 MM) WIDE, WATERPROOF, PLASTIC TAPE. WHERE SPLICES ARE NECESSARY WITHOUT A GEOTEXTILE FLAP, PLACE AND CENTER A 12 INCH (0.3 M) WIDE CONTINUOUS STRIP OF GEOTEXTILE OVER THE SEAM AND FASTEN WITH CONTINUOUS STRIPS OF 3 INCH (76 MM) WIDE, WATERPROOF, PLASTIC TAPE. AS AN ALTERNATIVE METHOD OF SPLICING, EITHER HORIZONTALLY OR VERTICALLY, ROLLS OF PGD MAY BE JOINED TOGETHER BY TURNING BACK THE GEOTEXTILE FLAP AT THE ROLL EDGES AND INTERLOCKING THE DRAINAGE CORE APPROXIMATELY TWO PAGE 41 OF 107 INCHES. FOLD THE FLAP UNDER AND TAPE IT BEYOND THE SEAM WITH 3 INCH (76 MM) WIDE, WATERPROOF, PLASTIC TAPE. SHINGLE LAP THE CORE AND FABRIC IN THE DIRECTION OF WATER FLOW. TO PREVENT SOIL INTRUSION, COVER ALL EXPOSED EDGES OF THE PGD CORE BY TUCKING THE GEOTEXTILE FLAP OVER AND BEHIND THE CORE EDGE. ALTERNATIVELY, A 12 INCH (0.3 M) WIDE STRIP OF GEOTEXTILE MAY BE USED TO WRAP THE EDGE, TAPING IT TO THE GEOTEXTILE SIDE 8 INCHES (203 MM) IN FROM THE EDGE WITH A CONTINUOUS STRIP OF 3 INCH (76 MM) WIDE, WATERPROOF, PLASTIC TAPE AND FOLDING THE REMAINING 4 INCHES (102 MM) OVER AND BEHIND THE CORE EDGE. CAPS (BOTTOM, TOP, OR END) PROVIDED BY THE MANUFACTURES CAN ALSO BE USED ACCORDING TO MANUFACTURER'S INSTRUCTIONS. CONSTRUCT ALL SEAMS, SPLICES, AND CAPS TO PREVENT THE BACKFILL MATERIAL FROM ENTERING THE PGD.

D. CONNECTING TO WEEP HOLES AND DRAINAGE SYSTEM. CONNECT THE PGD TO THE DRAINAGE SYSTEM AS SHOWN ON THE PLANS OR PER MANUFACTURER'S RECOMMENDATIONS IF NOT SHOWN IN THE PLANS. MAINTAIN A POSITIVE OUTLET FOR THE WATER IN THE PGD AT ALL LOCATIONS. DO NOT SEAL, BLOCK OR RESTRICT WEEP HOLES WITH THE PGD. IF AVAILABLE, USE WEEP HOLE FITTINGS PROVIDED BY THE MANUFACTURER AND INSTALLED TO THE MANUFACTURER'S INSTRUCTIONS. IF THE PGD CORE IS NOT PERFORATED AT THE WEEP HOLE LOCATION, MAKE A HOLE IN THE PGD CORE MATCHING THE DIAMETER OF THE WEEP HOLE OR LARGER TO ACCOMMODATE THE PIPE OR FITTING. WHEN MAKING HOLES IN THE CORE, DO NOT DAMAGE THE GEOTEXTILE FABRIC. USE MANUFACTURER PROVIDED OUTLET FITTINGS THAT TRANSITION BETWEEN THE PGD AND THE OUTLET PIPE, AND PREVENT MATERIAL FROM ENTERING THE OUTLET PIPE. IF MANUFACTURER FITTINGS ARE NOT AVAILABLE, PROVIDE SMOOTH-LINED OR CORRUGATED OUTLET FITTINGS ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. FASTEN AND SEAL OUTLET FITTINGS TO THE WALL DRAINS ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

E. REPAIR. PATCH OR REPLACE DAMAGED PGD. REMOVE THE DAMAGED AREA AND PLACE A PGD PATCH AND SPLICE THE EDGES ACCORDING TO 518.06.C. IF THE DAMAGED PORTION IS LARGER THAN 50 PERCENT OF THE PGD ROLL WIDTH, CUT ACROSS ENTIRE WIDTH OF THE ROLL TO REMOVE THE DAMAGED PORTION AND SPLICE ACCORDING TO 5183.06.C. IF DAMAGE IS LIMITED TO TEARS IN THE GEOTEXTILE FABRIC, PLACE A GEOTEXTILE PATCH EXTENDING 6 IN (152 MM) BEYOND THE DAMAGED AREA IN ALL DIRECTIONS OR TO THE EDGE OF THE ROLL, AND SEAL THE ENTIRE PERIMETER WITH 3 INCH (76 MM) WIDE, WATERPROOF, PLASTIC TAPE. REPAIR AND REPLACE DAMAGED PGD AT NO ADDITIONAL EXPENSE TO THE DEPARTMENT.

F. BACKFILLING. REPLACE OR REPAIR ANY PGD COMPONENT THAT IS DAMAGED DURING THE BACKFILLING OPERATION. USE HAND OPERATED COMPACTION EQUIPMENT TO COMPACT THE BACKFILL WITHIN 1 FOOT (0.3 M) OF THE PGD.

THE DEPARTMENT WILL MEASURE THE PGD BY THE NUMBER OF SQUARE FEET OF MATERIAL INSTALLED. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITY AT THE CONTRACT UNIT BID PRICE PER SQUARE FOOT FOR ITEM SPECIAL - RETAINING WALL: PREFABRICATED GEOCOMPOSITE DRAIN.

THE CONTRACTOR SHALL USE ONE OF THE FOLLOWING OR AN EQUAL APPROVED BY THE ENGINEER. INSTALL THE PDG PER THE MANUFACTURER'S RECOMMENDATIONS.

1. AMERIDRAIN 200
   AMERICAN WICK DRAIN CORPORATION, INC.
   1209 AIRPORT ROAD
   MONROE, NC 28110-7389
   PH 800-242-9425 OR 704-238-9200
2. TENCATE G100N
   TENCATE GEOSYNTHETICS NORTH AMERICA
   365 SOUTH HOLLAND DRIVE
   PENDERGRASS, GA 30567
   PH 800-685-9900 OR 706-693-2226
3. J-DRAIN 200
   JDR ENTERPRISES, INC.
   292 SOUTH MAIN STREET, SUITE #200
   ALPHARETTA, GA 30009
   PH 800-843-7569 OR 770-442-1461

FOR FORM

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DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2600 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
EFD	EFD	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

BRIDGE SPECIFIC NOTES
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

1517 2017

ESTIMATED BRIDGE QUANTITIES

CALCULATED: VDT DATE: 6/11/15
CHECKED: SNH DATE: 6/12/15

ITEM	ITEM EXT.	TOTAL QUANTITY (05/NHS/BR)	UNIT	DESCRIPTION	PHASE A & B				PHASE C & D				GENERAL	APP SHEET NO.
					REAR	PIER	FWD	SUPER	REAR	PIER	FWD	SUPER		
202	11003	LUMP	LS	STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN									LUMP	3/57
503	11101	LUMP	LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (PHASE A, REAR ABUTMENT)									LUMP	1502/2017
503	11101	LUMP	LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (PHASE A, PIER)									LUMP	1502/2017
503	11101	LUMP	LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (PHASE A, FORWARD ABUTMENT)									LUMP	1502/2017
503	11101	LUMP	LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (PHASE C, REAR ABUTMENT)									LUMP	1502/2017
503	11101	LUMP	LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (PHASE C, PIER)									LUMP	1502/2017
503	11101	LUMP	LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (PHASE C, FORWARD ABUTMENT)									LUMP	1502/2017
503	21101	2,105	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN	331	304	381		410	297	374			1502/2017
505	11100	LUMP	LS	PILE DRIVING EQUIPMENT MOBILIZATION									LUMP	
507	00400	1,500	FT	STEEL PILES, MISC.: SOLDIER PILES	450		376		297		377			3/57
507	00601	10,950	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN, AS PER PLAN	2,880		2,550		2,970		2,550			1503/2017
507	00651	11,615	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED, AS PER PLAN	3,040		2,720		3,135		2,720			1503/2017
507	00701	2,800	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN, AS PER PLAN		1,400				1,400				1503/2017
507	00751	3,000	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED, AS PER PLAN		1,500				1,500				1503/2017
509	10000	158,802	LB	EPOXY COATED REINFORCING STEEL	11,105	19,716	11,351	36,706	10,827	19,107	10,863	39,127		
511	34447	345	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN				161				184		1503/2017
511	34451	22	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN				11				11		1503/2017
511	40513	233	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS, AS PER PLAN		115				118				1503/2017
511	44113	94	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT, NOT INCLUDING FOOTING, AS PER PLAN	24		23		26		21			1503/2017
511	46013	21	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN	6		4		7		4			1503/2017
511	46511	643	CY	CLASS QC1 CONCRETE, FOOTING, AS PER PLAN	95	115	104		107	115	107			1503/2017
511	71200	4,144	SF	CONCRETE, MISC.: FACING OF CANTILEVER WALLS	1,192		1,023		839		1090			1503/2017
512	10001	1,237	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN	245	169	226		194	173	230			1504/2017
512	10100	1,411	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	245	169	226	87	194	173	230	87		
512	44451	1,086	SY	TYPE E WATERPROOFING, AS PER PLAN				500				586		1504/2017
SPECIAL	51256100	97	SY	SPECIAL - BUTYL RUBBER MEMBRANE WATERPROOFING				97						3/57
SPECIAL	51256202	1,086	SY	SPECIAL - ASPHALTIC PANEL				500				586		1504/2017
SPECIAL	51267400	1,241	SF	SPECIAL - WATERPROOFING, MISC.: DAMPPROOFING OF RAILROAD STRUCTURES	312		321		312		296			1503/2017
513	10221	59,300	LB	STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN				27,420				31,880		1504/2017
513	10321	1,441,405	LB	STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN				682,735				758,670		1504/2017
513	20000	11,248	EACH	WELDED STUD SHEAR CONNECTORS				5,328				5,920		
514	80020	39,225	SF	SHOP PAINTING AND FIELD TOUCH-UP OF STRUCTURAL STEEL				18,395				20,830		1504/2017
516	12201	208	FT	STRUCTURAL STEEL EXPANSION JOINT, AS PER PLAN				96				112		1504/2017
516	13600	48	SF	1" PREFORMED EXPANSION JOINT FILLER			12		18		18			
516	43201	38	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (14"x20"x2.948" BEARING WITH LOAD PLATE), AS PER PLAN				18				20		47/57
516	43301	38	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (16"x18"x3.772" BEARING WITH LOAD PLATE), AS PER PLAN				18				20		47/57
517	73101	356	FT	TEMPORARY BRIDGE RAILING, AS PER PLAN				356						5/57
517	75001	70	FT	RAILING, ALUMINUM, AS PER PLAN	18		19		15		18			1508/2017
517	76300	292	FT	RAILING, MISC.: NSRR ALUMINUM HANDRAIL WITH VANDAL PROTECTION FENCE				146				146		1509/2017
518	21200	93	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	23		24		24		22			
518	40012	340	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE	96		84		72		88			
518	42201	211	FT	8" PERFORATED CORRUGATED STEEL PIPE, 707.01, AS PER PLAN	45		55		60		51			1504/2017
518	42301	710	FT	8" NON-PERFORATED CORRUGATED STEEL PIPE, INCLUDING SPECIALS, 707.01, AS PER PLAN	185		180		165		180			1504/2017
518	63300	LUMP	LS	STRUCTURE DRAINAGE, MISC.: SUPERSTRUCTURE DRAINAGE SYSTEM				LUMP				LUMP		1504/2017
523	20000	12	EACH	DYNAMIC LOAD TESTING	2	2	2		2	2	2			
523	20500	12	EACH	RESTRIKE	2	2	2		2	2	2			
524	94603	1,460	FT	DRILLED SHAFTS, 30" DIAMETER, ABOVE BEDROCK, AS PER PLAN	438		366		289		367			3/57
SPECIAL	53000200	LUMP	LS	SPECIAL - STRUCTURES: SURVEY AND MONITORING OF TRACK AND TEMPORARY SHORING									LUMP	1506/2017
SPECIAL	53000200	LUMP	LS	SPECIAL - STRUCTURES: PRECONSTRUCTION CONDITION SURVEY									LUMP	1506/2017
SPECIAL	53013000	4,144	SF	SPECIAL - FORM LINER	1,192		1,023		839		1,090			1504/2017
SPECIAL	53014000	LUMP	LS	SPECIAL - STRUCTURAL SURVEY AND MONITORING OF VIBRATION									LUMP	1507/2017
SPECIAL	53050010	4,144	SF	SPECIAL - RETAINING WALL: PREFABRICATED GEOCOMPOSITE DRAIN	1,192		1,023		839		1,090			3/57
SPECIAL	53051020	4,144	SF	SPECIAL - RETAINING WALL, TIMBER LAGGING	1,192		1,023		839		1,090			3/57
625	25605	308	FT	CONDUIT, 4", 725.051, AS PER PLAN				154				154		1513/2017

FOR INFORMATION ONLY

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COLUMBUS, OHIO 43231

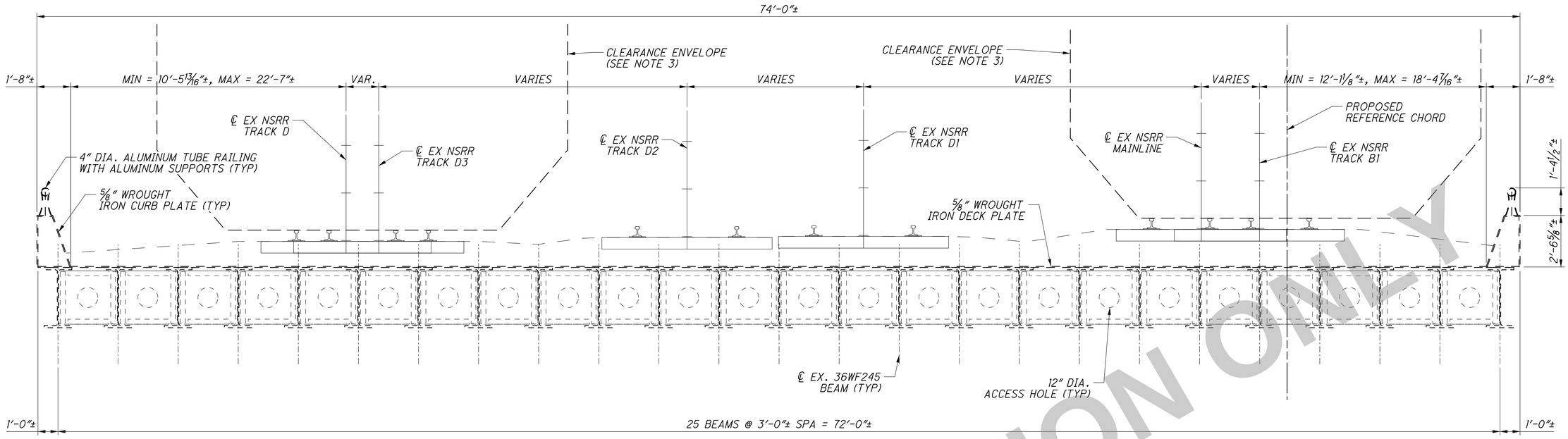
DESIGNED VDT | DRAWN VDT | REVIEWED CTV | DATE 12-15-21
CHECKED SNH | REVISED | ODOT SFN: 3113818 | NSRR BR#: BR0018448

ESTIMATED BRIDGE QUANTITIES
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

1518
2017

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TRANSVERSE SECTION - EXISTING BRIDGE

LOOKING UPSTATION, SEE NOTE 1

SUGGESTED CONSTRUCTION SEQUENCE

PHASE A - EAST REMOVAL & SHORING

(ROADWAY MOT PHASE 1 SHALL BE INSTALLED PRIOR TO BEGINNING THIS WORK)

1. FORCE ACCOUNT: REMOVE TRACKS D2, D1, MAIN LINE, B, AND B1 FROM SERVICE.
2. INSTALL TEMPORARY SHORING AT ABUTMENTS, INCLUDING PILES R33 & R34.
3. INSTALL TEMPORARY HANDRAIL ATOP PROPOSED SHORING AND EXISTING SUPERSTRUCTURE.
4. PARTIALLY REMOVE EXISTING SUPERSTRUCTURE.
5. INSTALL TEMPORARY PIER SHORING.
6. EXCAVATE AREAS FOR PROPOSED ABUTMENTS, INSTALLING WHALERS AND RAKERS AT REQUIRED LOCATIONS.
7. EXCAVATE AND PARTIALLY REMOVE EXISTING PIER ELEMENTS.
8. REMOVE EXISTING ABUTMENT BACKWALL AND WINGWALL ELEMENTS AS INDICATED.

PHASE B - EAST CONSTRUCTION

1. DRIVE ABUTMENT AND PIER PILES.
2. CONSTRUCT RETAINING WALL SHAFTS, SETTING STEEL POSTS IN CONCRETE AND LOW-STRENGTH MORTAR AS INDICATED.
3. CONSTRUCT ABUTMENT ELEMENTS.
4. CONSTRUCT PIER ELEMENTS.
5. INSTALL CLOSURE SHEETING, BACKFILL BEHIND PROPOSED ABUTMENTS, AND REMOVE UNNECCESARY SHEETING TO BE ABLE TO ERECT GIRDERS.
6. ERECT GIRDERS
7. POUR THE DECK, INSTALL JOINTS AND WATERPROOFING, INSTALL TEMPORARY HANDRAIL.
8. INSTALL REQUIRED CLOSURE SHORING AND TEMPORARY HANDRAIL BEHIND PROPOSED ABUTMENTS.
9. FORCE ACCOUNT: INSTALL BALLAST AND TEMPORARY MAINLINE TRACK.

PHASE C - WEST REMOVAL & SHORING

1. FORCE ACCOUNT: MAKE PROPOSED TEMPORARY MAINLINE ACTIVE, PROVIDING ACCESS TO TRACKS D4, D3, D2, D1, MAINLINE, B, B1, AND BRICK YARD.
2. FORCE ACCOUNT: REMOVE TRACKS D, D3 AND D4 FROM SERVICE.
3. INSTALL REMAINING TEMPORARY SHORING AND HANDRAIL AT ABUTMENTS.
4. REMOVE REMAINING EXISTING SUPERSTRUCTURE.
5. INSTALL REMAINING TEMPORARY PIER SHORING, MODIFYING CLOSURE SHORING AS REQUIRED.
6. EXCAVATE AREAS FOR PROPOSED ABUTMENTS.
7. EXCAVATE AND REMOVE REMAINING EXISTING PIER ELEMENTS.
8. REMOVE EXISTING WINGWALL ELEMENTS AS INDICATED.

PHASE D - WEST CONSTRUCTION

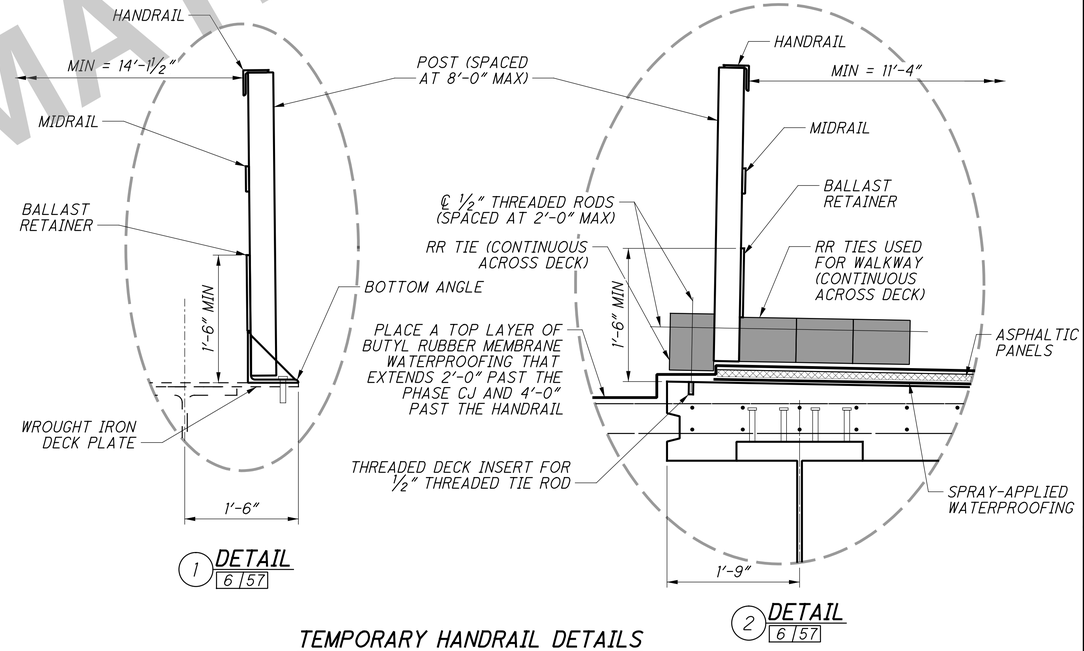
1. DRIVE ABUTMENT AND PIER PILES.
2. CONSTRUCT RETAINING WALL SHAFTS, SETTING STEEL POSTS IN CONCRETE AND LOW-STRENGTH MORTAR AS INDICATED.
3. PERFORM TOP-DOWN EXCAVATION IN FRONT OF RETAINING WALL.
4. REMOVE ABUTMENT STEMS AND FOOTINGS AS INDICATED.

(ROADWAY MOT PHASE 3 MAY BE INSTALLED AFTER THIS POINT) (REMOVE REMAINING FOOTING DURING ROADWAY MOT PHASE 3)

5. CONSTRUCT REMAINING ABUTMENT ELEMENTS.
6. CONSTRUCT REMAINING PIER ELEMENTS.
7. ERECT REMAINING GIRDERS
8. POUR THE DECK, REMOVE TEMPORARY HANDRAIL, INSTALL JOINTS AND WATERPROOFING.
9. FORCE ACCOUNT: INSTALL BALLAST AND PROPOSED TRACK D.

PHASE E - FINALIZATION

1. REMOVE TIMBER-TIE WALKWAY.
2. FORCE ACCOUNT: REGRADE AND REALIGN TEMPORARY MAINLINE INTO FINAL MAINLINE GEOMETRY.
3. CAST RETAINING WALL FACING.



TEMPORARY HANDRAIL DETAILS

NOTES:

1. FOR PHASED CONSTRUCTION SECTIONS, SEE SHEETS 6 | 57 AND 7 | 57.
2. FOR PHASED CONSTRUCTION PLANS, SEE SHEETS 8 | 57 THROUGH 11 | 57.
3. FOR PROPOSED TRANSVERSE SECTION DETAILS AND DESCRIPTION OF THE CLEARANCE ENVELOPE, SEE SHEET 42 | 57.
4. SUBMIT DETAILS OF TEMPORARY HAND RAILING SIGNED AND SEALED BY A PROFESSIONAL ENGINEER IN THE STATE OF OHIO TO THE ENGINEER AND NSRR FOR APPROVAL. HAND RAILING SHALL BE IN ACCORDANCE WITH AREMA 15-8.5, NSRR & OSHA. THE MOST STRINGENT OF THE REQUIREMENTS SHALL GOVERN.

FOR INFORMATION ONLY

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Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

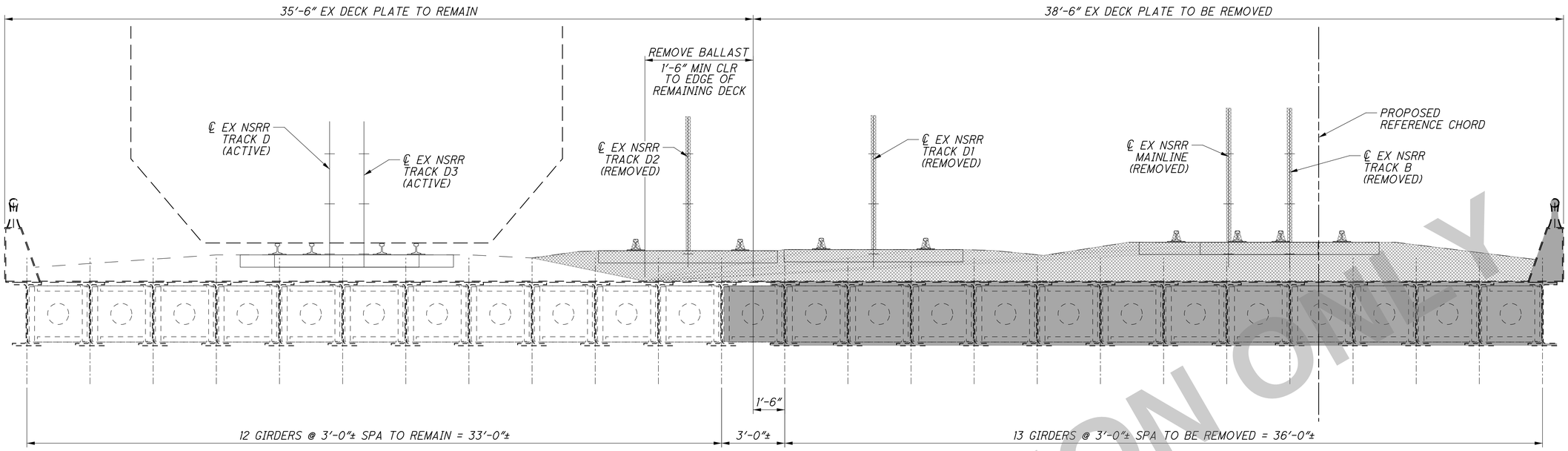
DESIGNED	DRAWN	REVIEWED	DATE
EFD	SNH	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

PHASED CONSTRUCTION SECTIONS: EXISTING SECTION & NOTES
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

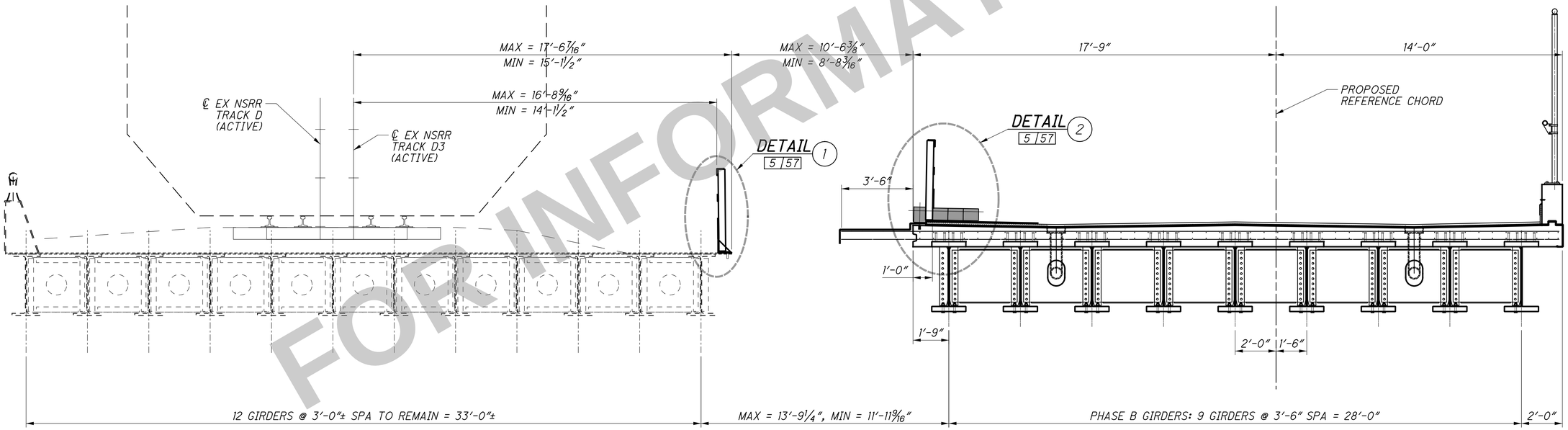
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PHASE A (EAST REMOVAL)

NOTE 1 AND 3



PHASE B (EAST CONSTRUCTION)

NOTE 2 AND 3

NOTES:

1. FOR PHASE A REMOVAL PLAN, SEE SHEET 8 57.
2. FOR PHASE B CONSTRUCTION PLAN, SEE SHEET 9 57.
3. FOR SUGGESTED PHASING NOTES, SEE SHEET 5 57.
4. FOR FINAL SECTION DETAILS SEE SHEET 42 57.

FOR INFORMATION ONLY

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2600 CORPORATE EXCHANGE DRIVE SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
EFD	SNH	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
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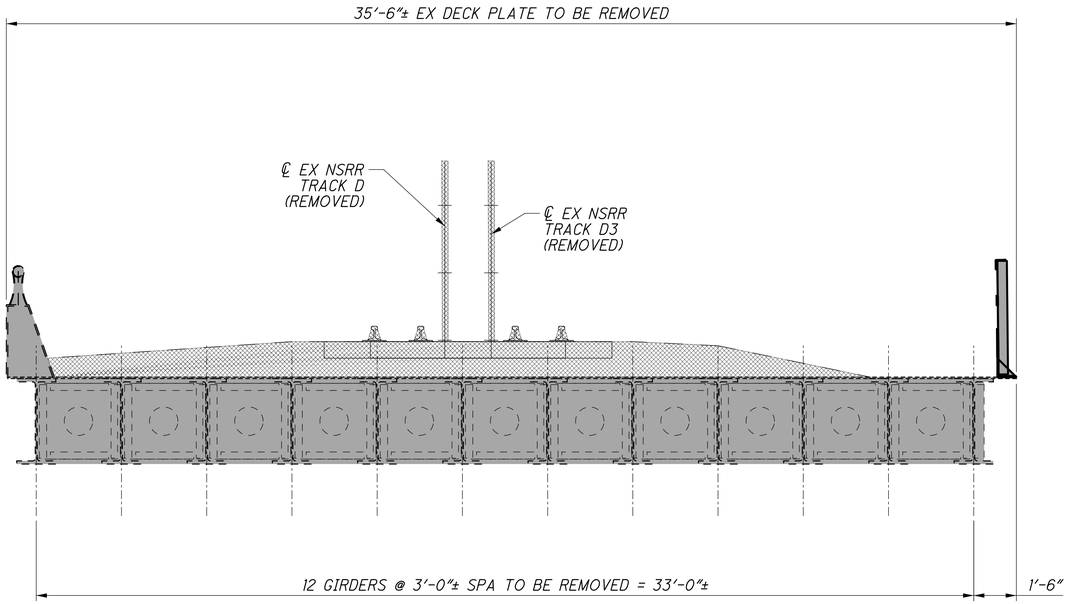
PHASED CONSTRUCTION SECTIONS: PHASES A & B

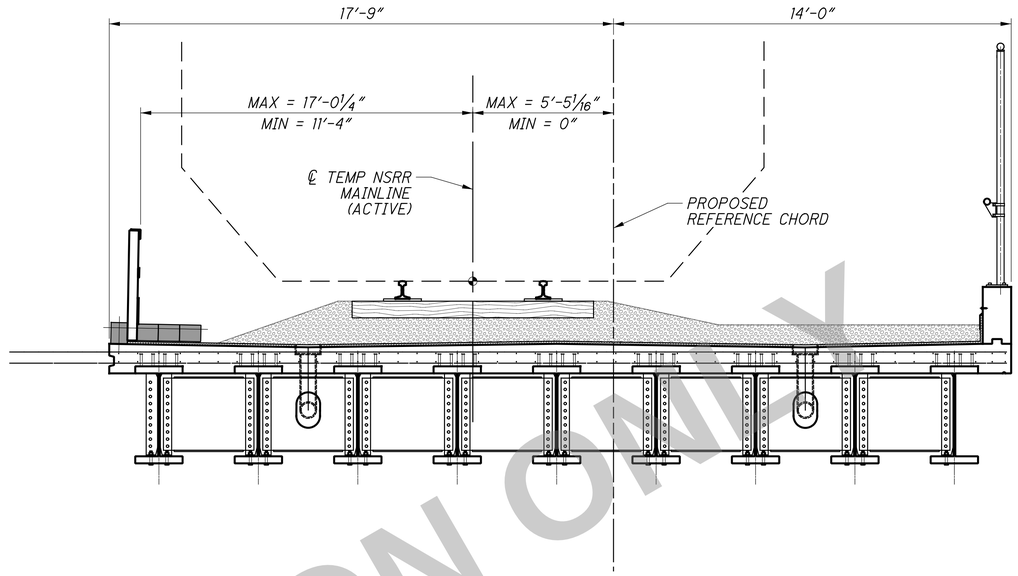
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2017

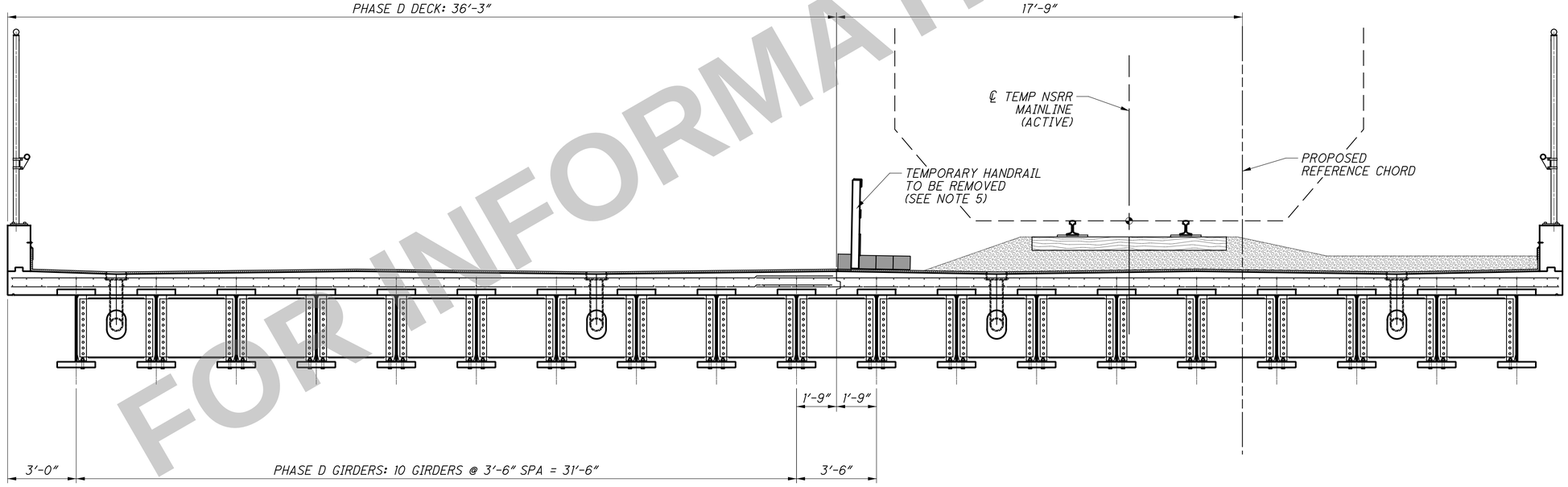
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PHASE C (WEST REMOVAL)

NOTE 1 AND 3



PHASE D (WEST CONSTRUCTION)

NOTE 2 AND 3

NOTES:

1. FOR PHASE C REMOVAL PLAN, SEE SHEET 10/57.
2. FOR PHASE D CONSTRUCTION PLAN, SEE SHEET 11/57.
3. FOR SUGGESTED PHASING NOTES, SEE SHEET 5/57.
4. FOR FINAL TRANSVERSE SECTION DETAILS, INCLUDING DIAPHRAGM ASSEMBLY UNITS, SEE SHEET 42/57.
5. TEMPORARY RAIL AND WALKWAY MAY BE REMOVED AFTER PHASE D DECK IS PLACED. TEMPORARY TIMBER BALLAST RETAINER SHALL REMAIN IN PLACE UNTIL DECK WATERPROOFING AT CONSTRUCTION JOINT IS COMPLETED.

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE SUITE 230
COLUMBUS, OHIO 43231

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EFD	SNH	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

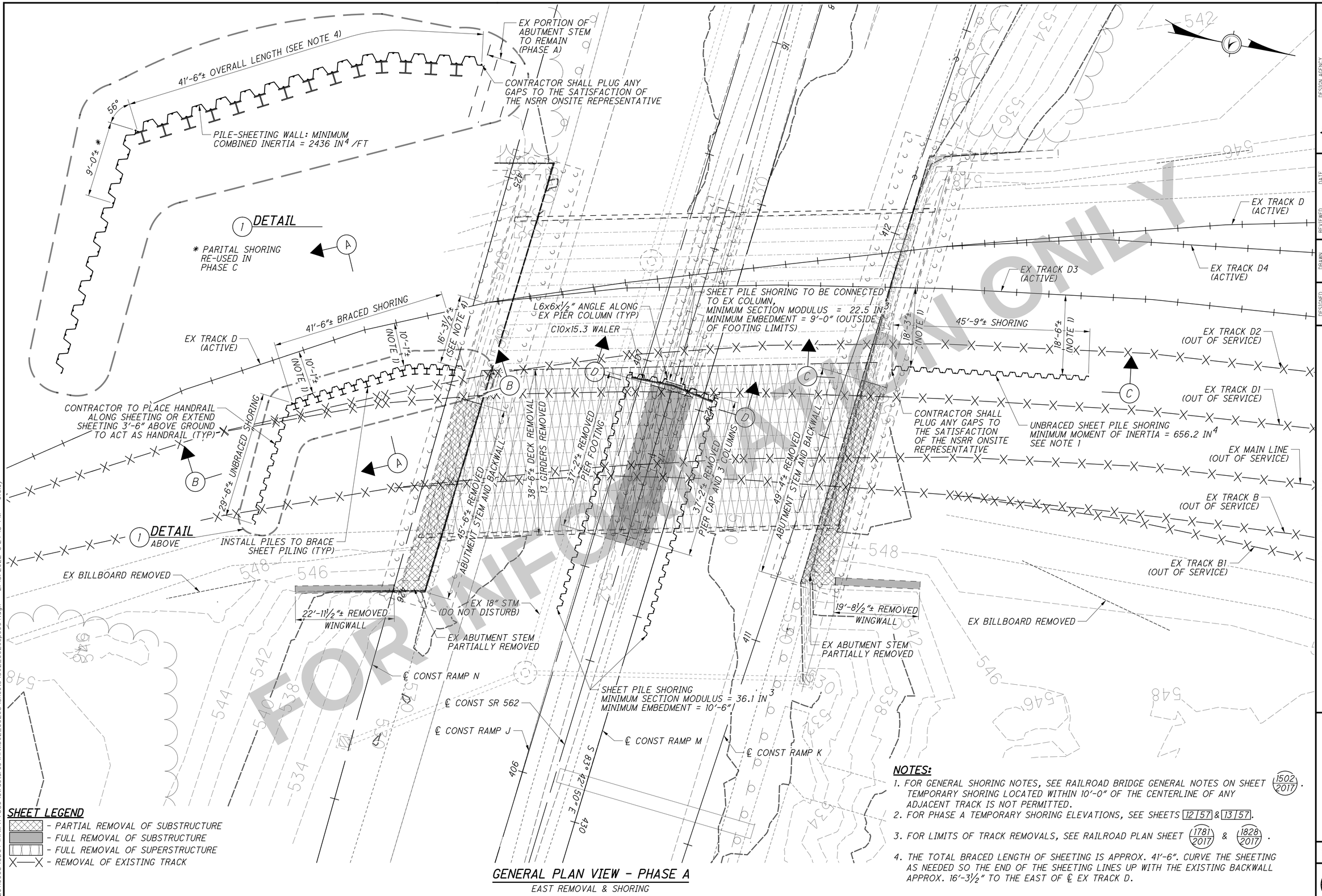
PHASED CONSTRUCTION SECTIONS: PHASES C & D
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41; CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

7 / 57

1521
2017

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SHEET LEGEND

- PARTIAL REMOVAL OF SUBSTRUCTURE
- FULL REMOVAL OF SUBSTRUCTURE
- FULL REMOVAL OF SUPERSTRUCTURE
- REMOVAL OF EXISTING TRACK

GENERAL PLAN VIEW - PHASE A

EAST REMOVAL & SHORING

NOTES:

1. FOR GENERAL SHORING NOTES, SEE RAILROAD BRIDGE GENERAL NOTES ON SHEET (1502/2017). TEMPORARY SHORING LOCATED WITHIN 10'-0" OF THE CENTERLINE OF ANY ADJACENT TRACK IS NOT PERMITTED.
2. FOR PHASE A TEMPORARY SHORING ELEVATIONS, SEE SHEETS 12/57 & 13/57.
3. FOR LIMITS OF TRACK REMOVALS, SEE RAILROAD PLAN SHEET (1781/2017) & (1828/2017).
4. THE TOTAL BRACED LENGTH OF SHEETING IS APPROX. 41'-6". CURVE THE SHEETING AS NEEDED SO THE END OF THE SHEETING LINES UP WITH THE EXISTING BACKWALL APPROX. 16'-3 1/2" TO THE EAST OF ℄ EX TRACK D.

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PHASE A PLAN VIEW

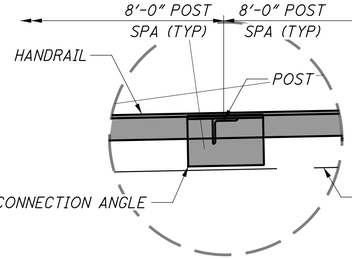
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

8 / 57

1522/2017

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1 **DETAILED PLAN**
TEMPORARY HANDRAIL ATOP EXISTING DECK

1 **DETAIL**
ABOVE

2 **DETAIL**
RIGHT

EX TRACK D (ACTIVE)

EX TRACK D3 (ACTIVE)

EX TRACK D4 (ACTIVE)

10'-4" OF SHORING TO BE RE-USED NEXT PHASE (TYP EACH SIDE)

EX CLOSURE SHEETING TO REMAIN UNTIL PHASE C NEW CLOSURE SHEETING IS INSTALLED AND PHASE B PIER FOOTING IS BACKFILLED

CONTRACTOR TO PLACE HANDRAIL ALONG SHEETING OR EXTEND SHEETING 3'-6" ABOVE GROUND TO ACT AS HANDRAIL (TYP)

℄ TEMP NSRR MAIN

℄ TEMP BRICK YARD LADDER

45'-9" REAR ABUTMENT CONST

38'-0"

14'-4 3/4" (MIN)

3'-9" O/O DECK PHASE B

130

28'-0" ± 9 GIRDERS SPACED AT 3'-6"

11'-4" (MIN)

35'-7" PIER CAP CONST

40'-0" PIER FOOTING CONST

59'-0" ROADWAY SHORING

17'-9"

14'-0"

(13'-1 1/8")

78'-0" FWD RETAINING WALL SHAFTS AND CAP CONST

45'-3" FWD ABUTMENT CONST

91'-6" REAR RETAINING WALL SHAFTS AND CAP CONST

PROPOSED REFERENCE CHORD

EX 18" STM (DO NOT DISTURB)

℄ CONST RAMP N

SHORING NOT TO BE RE-USED NEXT PHASE TO BE REMOVED PRIOR TO SETTING THE GIRDERS

℄ CONST SR 562

℄ CONST RAMP J

℄ CONST RAMP M

℄ CONST RAMP K

S 83° 42' 50" E

8'-0" POST SPA (TYP)
8'-0" POST SPA (TYP)
RR TIE
POST
EDGE OF PHASE B CONCRETE DECK
HANDRAIL
2'-3" WALKWAY (3 RR TIES)

2 **DETAILED PLAN**
TEMPORARY HANDRAIL ATOP PROPOSED DECK

SHEET LEGEND
- LIMITS OF BRIDGE MOUNTED TEMPORARY HANDRAIL & BALLAST RETAINER

NOTES:
1. FOR GENERAL SHORING NOTES, SEE RAILROAD BRIDGE GENERAL NOTES ON SHEET 1502/2017. TEMPORARY SHORING LOCATED WITHIN 10'-0" OF THE CENTERLINE OF ANY ADJACENT TRACK IS NOT PERMITTED.
2. FOR TEMPORARY RAIL ALIGNMENTS, SEE RAILROAD SHEET 1739/2017.

GENERAL PLAN VIEW - PHASE B
EAST CONSTRUCTION

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2600 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
EFD	SNH	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

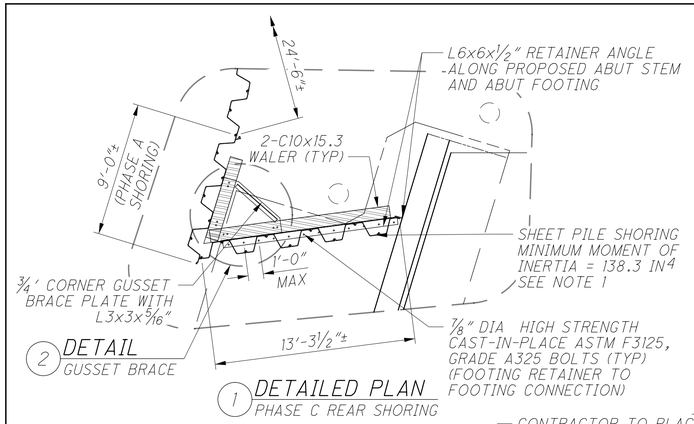
PHASE B PLAN VIEW
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

9 / 57

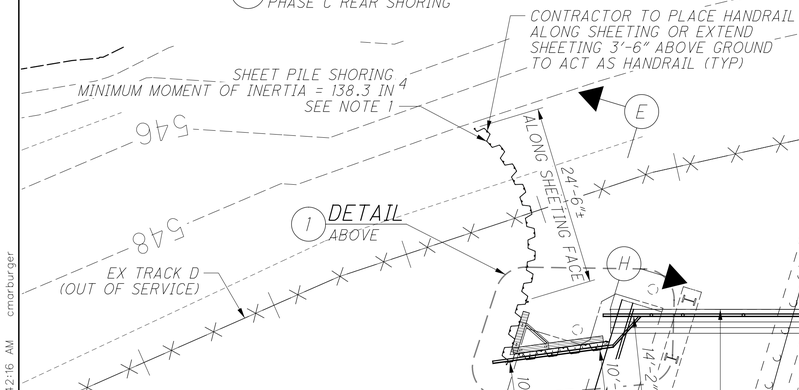
1523/2017

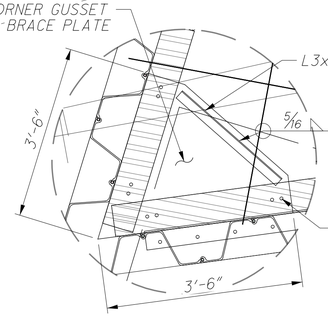
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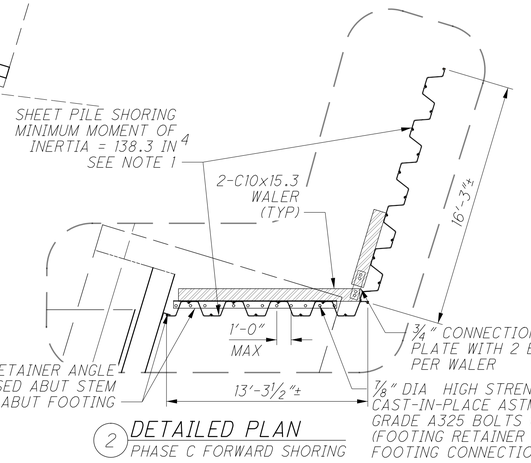
2 DETAIL
GUSSET BRACE

1 DETAILED PLAN
PHASE C REAR SHORING





2 DETAIL
GUSSET BRACE
(NOTE 4)



2 DETAILED PLAN
PHASE C FORWARD SHORING

SHEET LEGEND
- FULL REMOVAL OF SUPERSTRUCTURE
- FULL REMOVAL OF SUBSTRUCTURE
- REMOVAL OF EXISTING TRACK

GENERAL PLAN VIEW - PHASE C
WEST REMOVAL & SHORING

NOTES:
1. FOR GENERAL SHORING NOTES, SEE RAILROAD BRIDGE GENERAL NOTES ON SHEET 1502 / 2017. TEMPORARY SHORING LOCATED WITHIN 10'-0" OF THE CENTERLINE OF ANY ADJACENT TRACK IS NOT PERMITTED.
2. FOR PHASE C TEMPORARY SHORING ELEVATIONS, SEE SHEET 14 / 57.
3. FOR LIMITS OF TRACK REMOVALS, SEE RAILROAD PLAN SHEET 1781 / 2017 & 1828 / 2017.
4. FIELD WELD WALERS TO SHEET PILE WITH 5/16" WELD, TOP AND BOTTOM, SHIM AS NEEDED.

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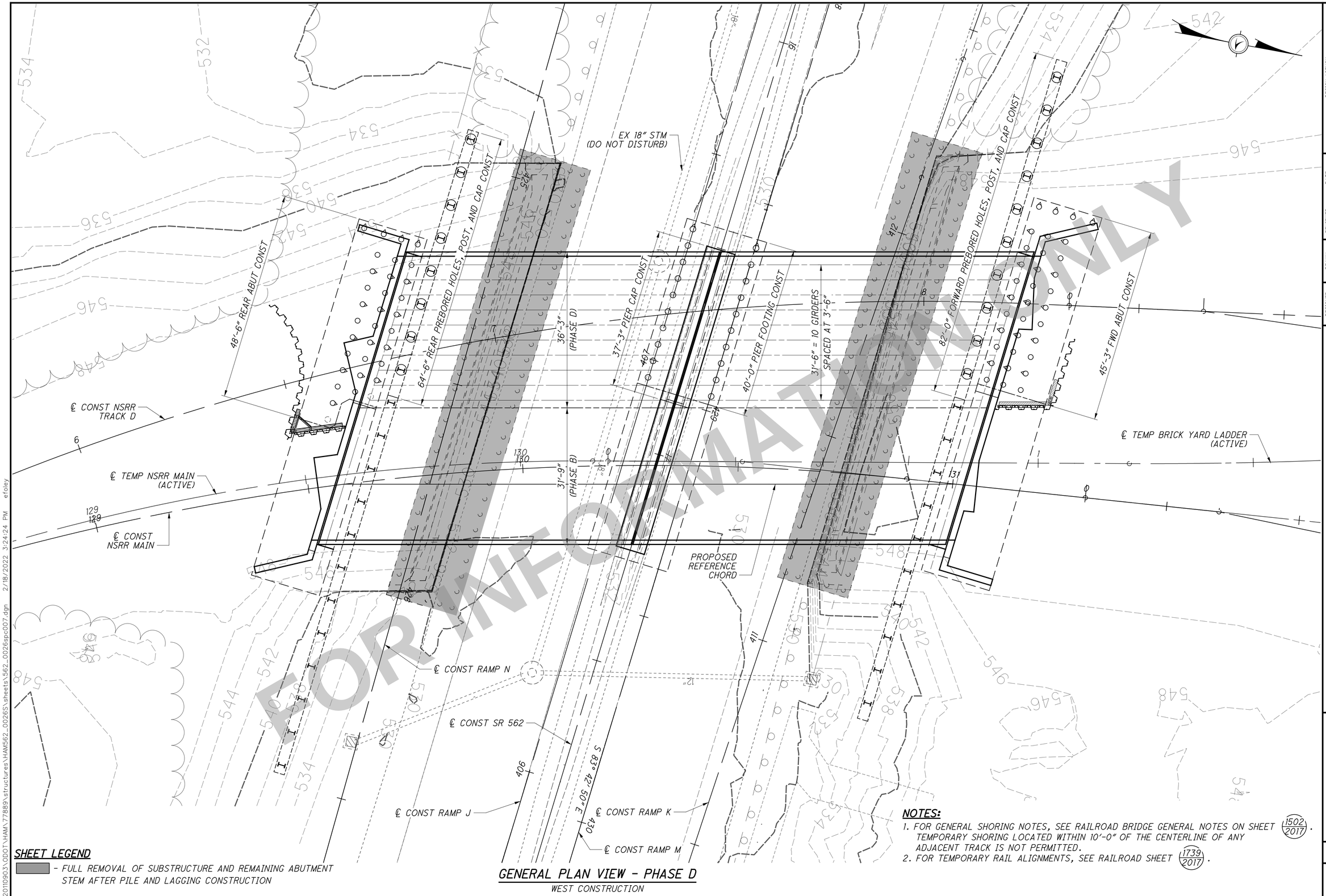
DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
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CTM		NSRR BR#: BR0018448	

PHASE C PLAN VIEW
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

1524 / 2017



FOR INFORMATION ONLY

SHEET LEGEND

▭ – FULL REMOVAL OF SUBSTRUCTURE AND REMAINING ABUTMENT STEM AFTER PILE AND LAGGING CONSTRUCTION

NOTES:

1. FOR GENERAL SHORING NOTES, SEE RAILROAD BRIDGE GENERAL NOTES ON SHEET (1502/2017). TEMPORARY SHORING LOCATED WITHIN 10'-0" OF THE CENTERLINE OF ANY ADJACENT TRACK IS NOT PERMITTED.
2. FOR TEMPORARY RAIL ALIGNMENTS, SEE RAILROAD SHEET (1739/2017).

GENERAL PLAN VIEW – PHASE D

WEST CONSTRUCTION

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COLUMBUS, OHIO 43231

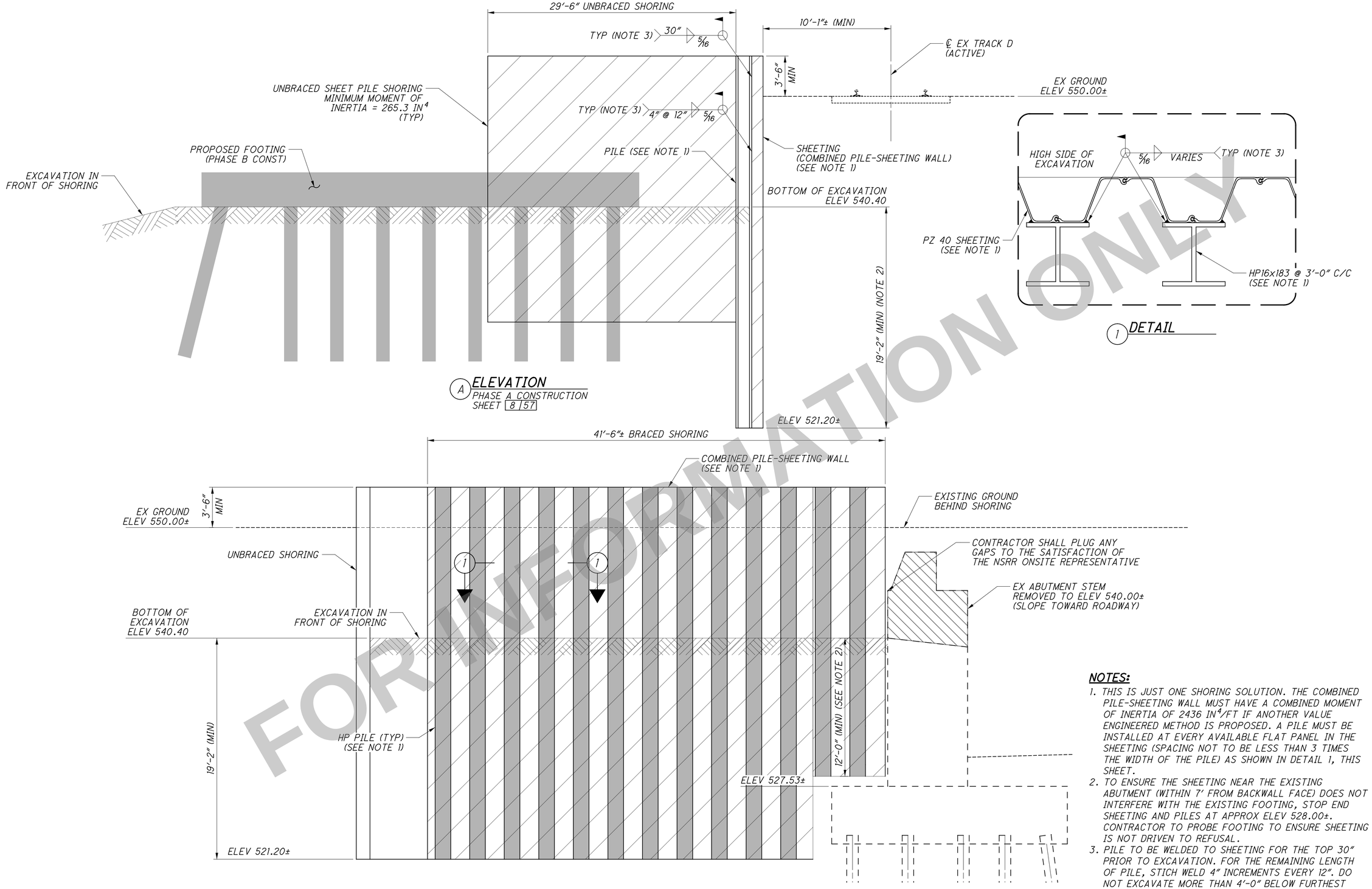
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PHASE D PLAN VIEW

BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

1525/2017



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NOTES:

1. THIS IS JUST ONE SHORING SOLUTION. THE COMBINED PILE-SHEETING WALL MUST HAVE A COMBINED MOMENT OF INERTIA OF 2436 IN^4/FT IF ANOTHER VALUE ENGINEERED METHOD IS PROPOSED. A PILE MUST BE INSTALLED AT EVERY AVAILABLE FLAT PANEL IN THE SHEETING (SPACING NOT TO BE LESS THAN 3 TIMES THE WIDTH OF THE PILE) AS SHOWN IN DETAIL 1, THIS SHEET.
2. TO ENSURE THE SHEETING NEAR THE EXISTING ABUTMENT (WITHIN 7' FROM BACKWALL FACE) DOES NOT INTERFERE WITH THE EXISTING FOOTING, STOP END SHEETING AND PILES AT APPROX ELEV 528.00±. CONTRACTOR TO PROBE FOOTING TO ENSURE SHEETING IS NOT DRIVEN TO REFUSAL.
3. PILE TO BE WELDED TO SHEETING FOR THE TOP 30" PRIOR TO EXCAVATION. FOR THE REMAINING LENGTH OF PILE, STICH WELD 4" INCREMENTS EVERY 12". DO NOT EXCAVATE MORE THAN 4'-0" BELOW FURTHEST WELD EDGE. USE SHIM PLATES AS NEEDED BETWEEN THE HP PILES AND THE SHEETING.
4. THE TEMPORARY SHORING SHALL BE LEFT IN PLACE AND CUT OFF 3'-0" BELOW FINAL GRADE.

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
CTM	CTM	CTV	12-15-21
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VDT		NSRR BR#: BR0018448	

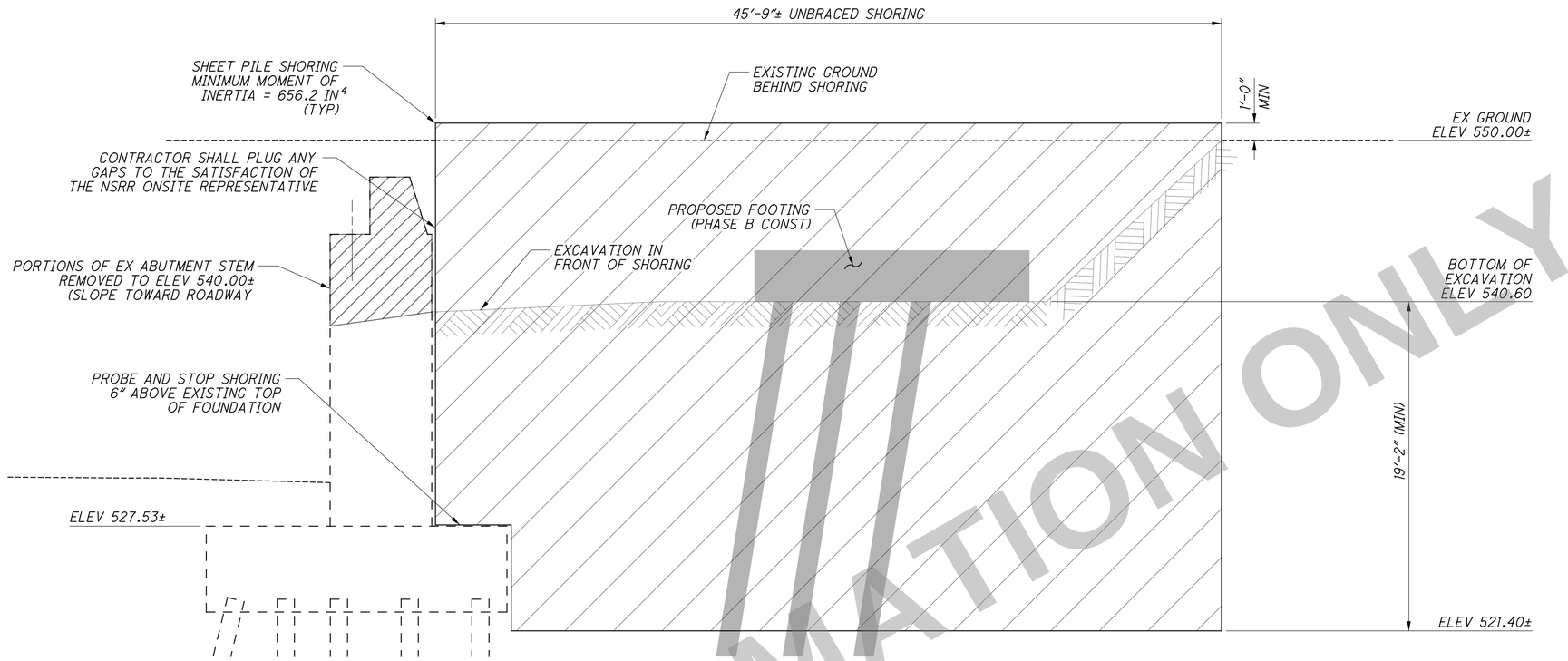
TEMPORARY SHORING - PHASE A REAR ABUTMENT
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

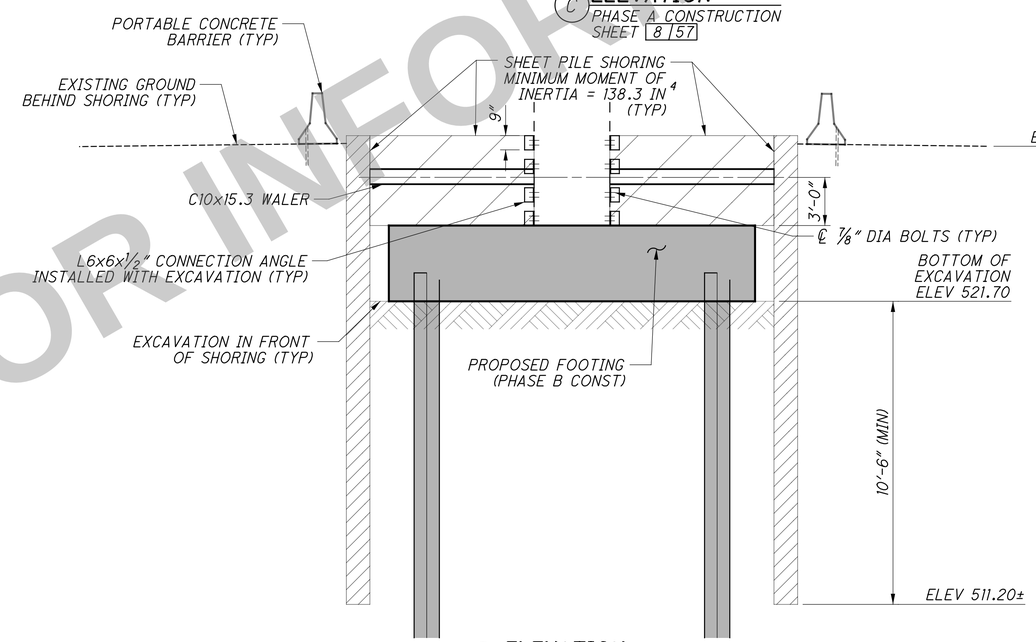
12 / 57

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C ELEVATION
PHASE A CONSTRUCTION SHEET 8 57



D ELEVATION
PHASE A CONSTRUCTION SHEET 8 57

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TEMPORARY SHORING - PHASE A FORWARD ABUTMENT

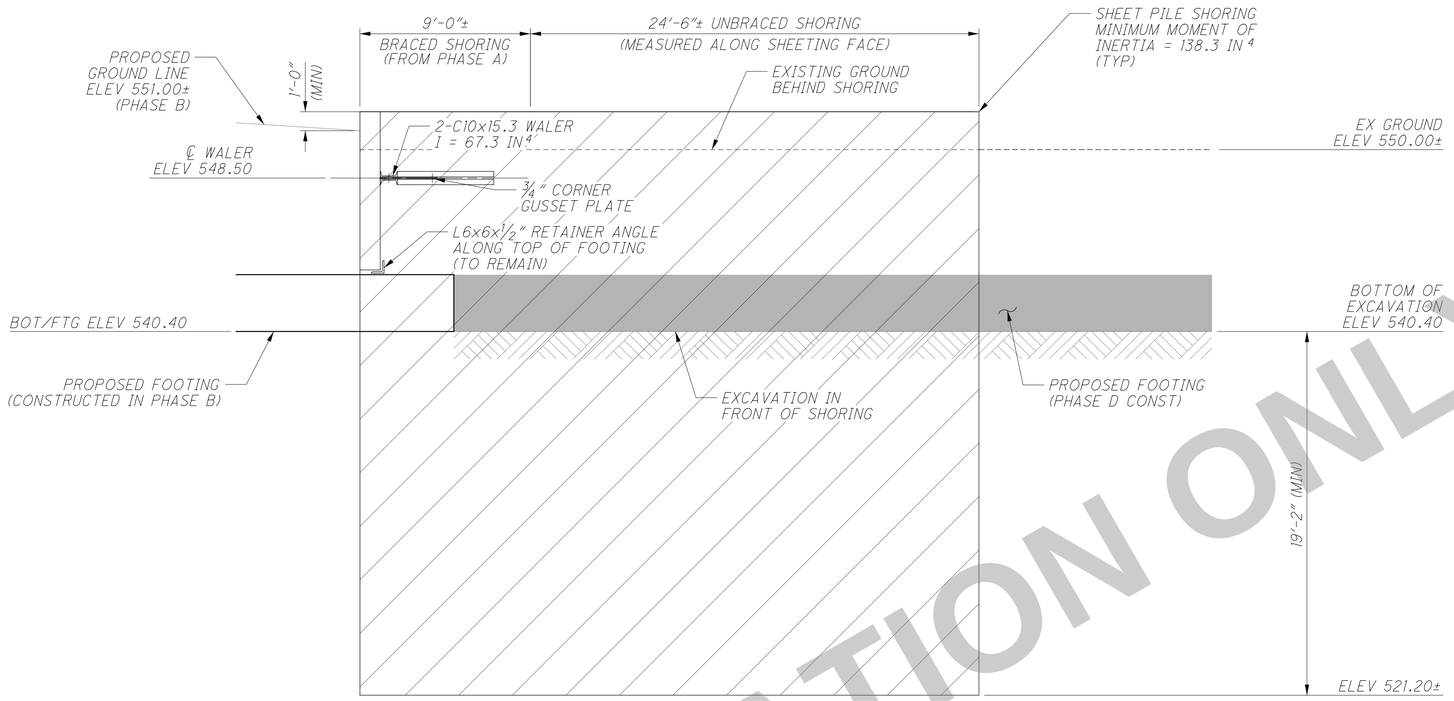
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
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HAM-75-7.85
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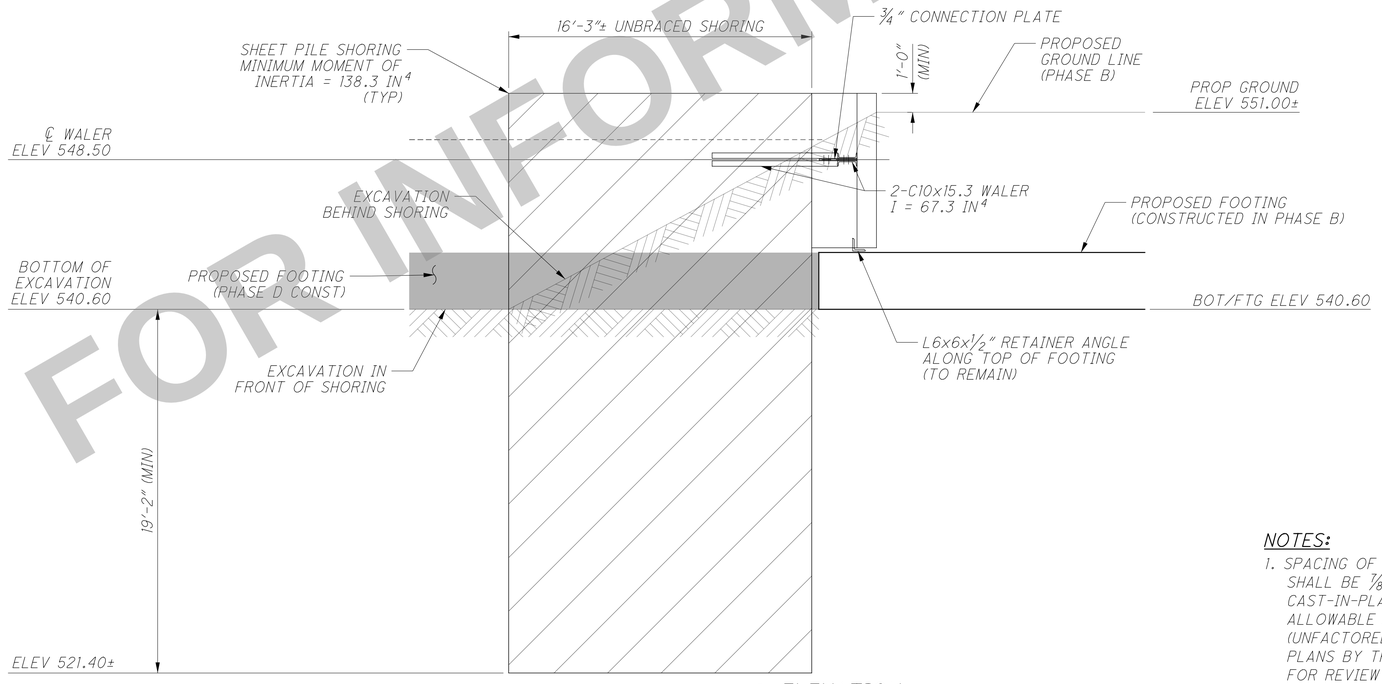
13 / 57

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E ELEVATION
PHASE C CONSTRUCTION
SHEET 10 57



F ELEVATION
PHASE C CONSTRUCTION
SHEET 10 57

NOTES:

1. SPACING OF ANCHORAGE TO CONCRETE SHALL NOT EXCEED 12". BOLTS SHALL BE ⅞" DIA HIGH STRENGTH ASTM F3125, GRADE A325 BOLTS, CAST-IN-PLACE. ANCHORAGE INSTALLATION SHALL HAVE A PUBLISHED ALLOWABLE SHEAR RESISTANCE GREATER THAN OR EQUAL TO 7 KIPS (UNFACTORED LOADS) IN 4 KSI UNCRACKED CONCRETE. CONNECTION PLANS BY THE CONTRACTOR SHALL BE SUBMITTED TO NSRR AND ODOT FOR REVIEW AND APPROVAL.

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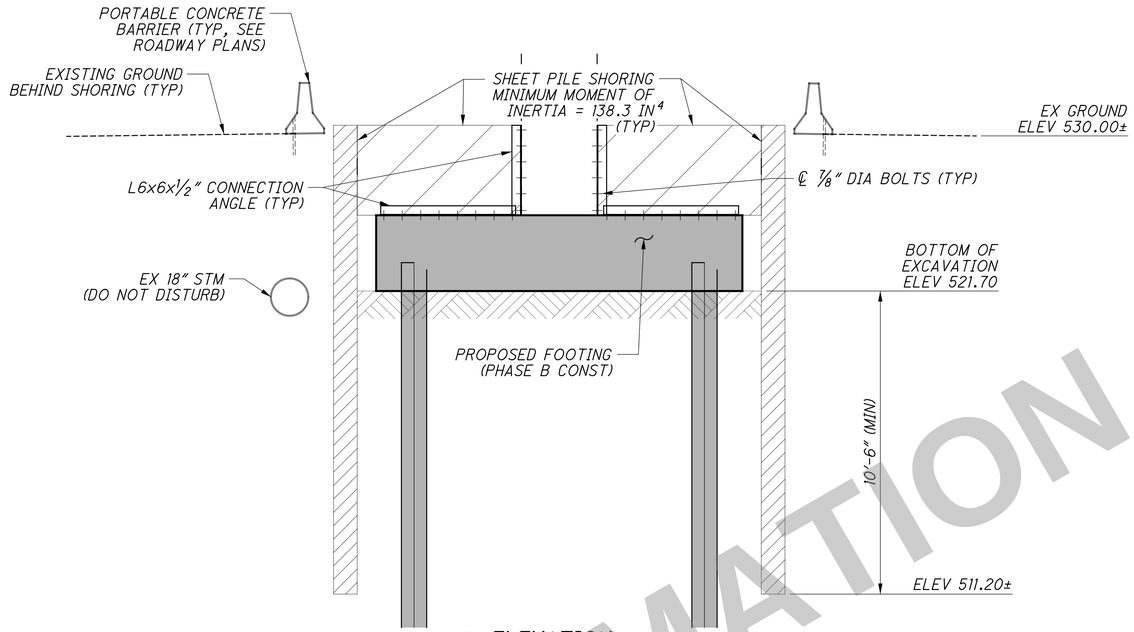
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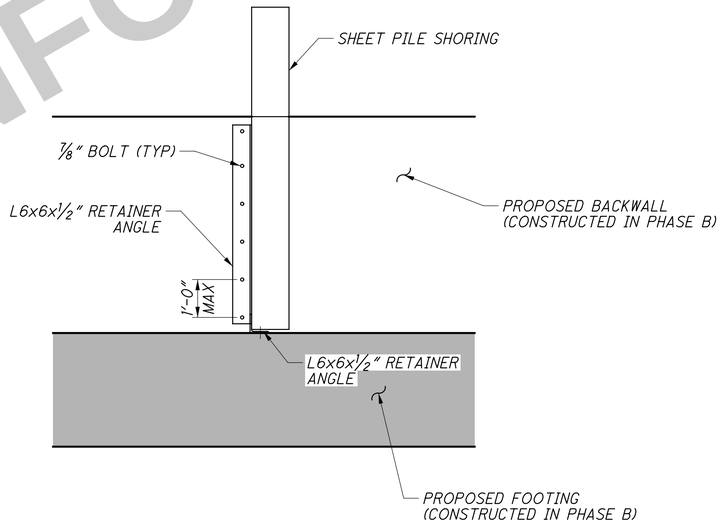
TEMPORARY SHORING - PHASE C
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

1528
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G ELEVATION
PHASE C CONSTRUCTION
SHEET 10|57



H ELEVATION
PHASE C CONSTRUCTION
SHEET 10|57

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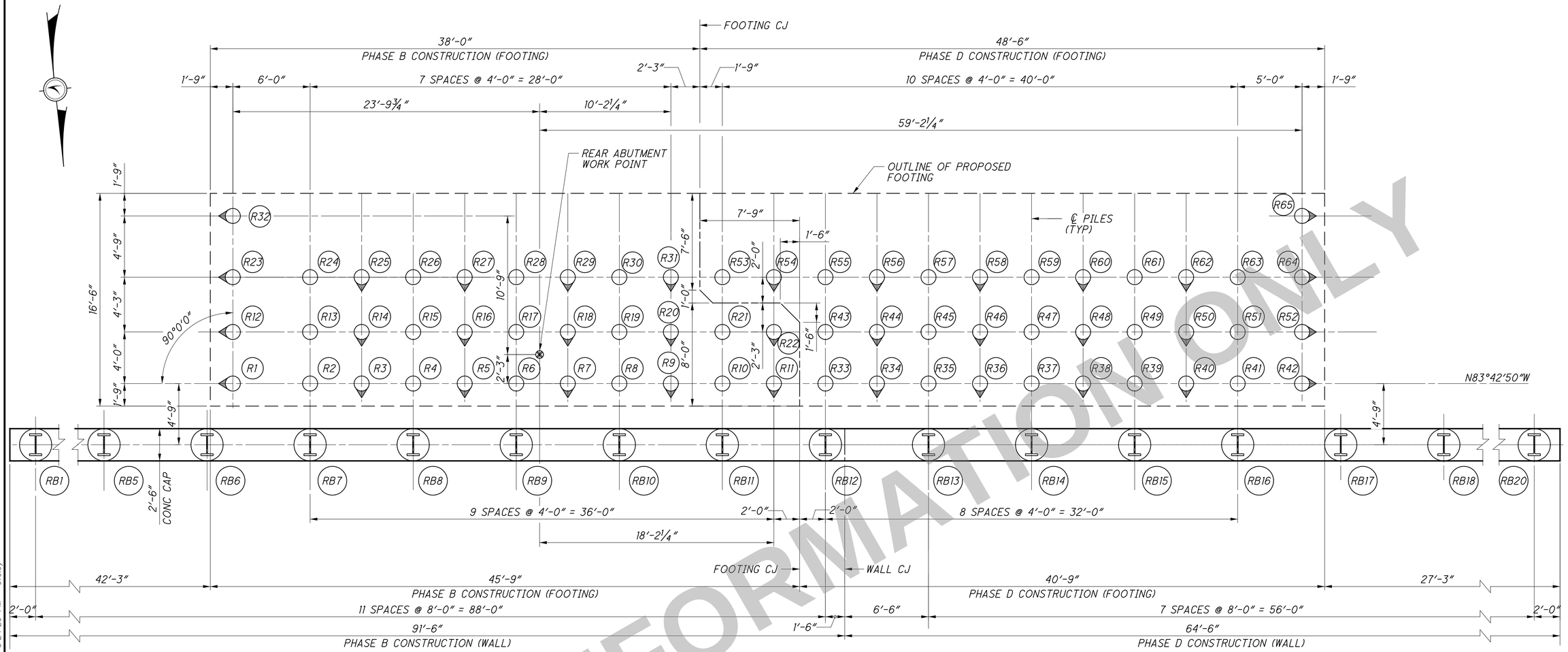
TEMPORARY SHORING - PHASE C PIER
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
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15 / 57

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FOUNDATION PLAN - REAR ABUTMENT

DRILLED SHAFT AND SOLDIER PILE DATA					
PILE NUMBER	SOLDIER PILE CUTOFF ELEVATION	MINIMUM TIP ELEVATION	ORDER PILE LENGTH (EACH)	TOP DRILLED SHAFT ELEVATION	DRILLED SHAFT LENGTH (EACH)
RB1	531.10	502.00	30'	530.10	29'
RB2	533.20	502.00	32'	532.20	31'
RB3	535.40	502.00	34'	534.40	33'
RB4	537.60	502.00	36'	536.60	35'
RB5	539.80	502.00	38'	538.80	37'
RB6-RB17	541.40	502.00	40'	540.40	39'
RB18	538.20	502.00	37'	537.20	36'
RB19	533.90	502.00	32'	532.90	31'
RB20	529.60	502.00	28'	528.60	27'

PILE DATA				
PHASE	PILE NUMBER	PILE CUTOFF ELEVATION	MINIMUM TIP ELEVATION	ORDER PILE LENGTH (EACH)
B	R1 - R32	541.65	454.40	95'
D	R33 - R65	541.65	454.40	95'

LEGEND:

- (R#) INDICATES PILE NUMBER AT REAR ABUTMENT
- INDICATES 14" DIA CIP CONCRETE PILE BATTERED 1:6 IN THE DIRECTION SHOWN (NOTE 1)
- INDICATES 14" DIA CIP CONCRETE PILE
- (RB#) INDICATES LAGGING WALL DRILLED SHAFT NUMBER AT REAR ABUTMENT
- INDICATES LAGGING WALL DRILLED SHAFT WITH W18x143

NOTES:

1. PILE SPACING IS MEASURED ALONG THE BOTTOM OF FOOTING.
2. FOR PIER PILE LAYOUT PLAN, SEE SHEET 17/57 .
3. FOR FORWARD ABUTMENT PILE LAYOUT PLAN, SEE SHEET 18/57 .
4. FOR REFERENCE CHORD AND OVERALL BRIDGE GEOMETRY, SEE SHEET 2/57 .
5. FOR WORK POINT DEFINITION, SEE SHEET 21/57 .

DESIGN AGENCY
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EFD	CAN	CTV	12-15-21
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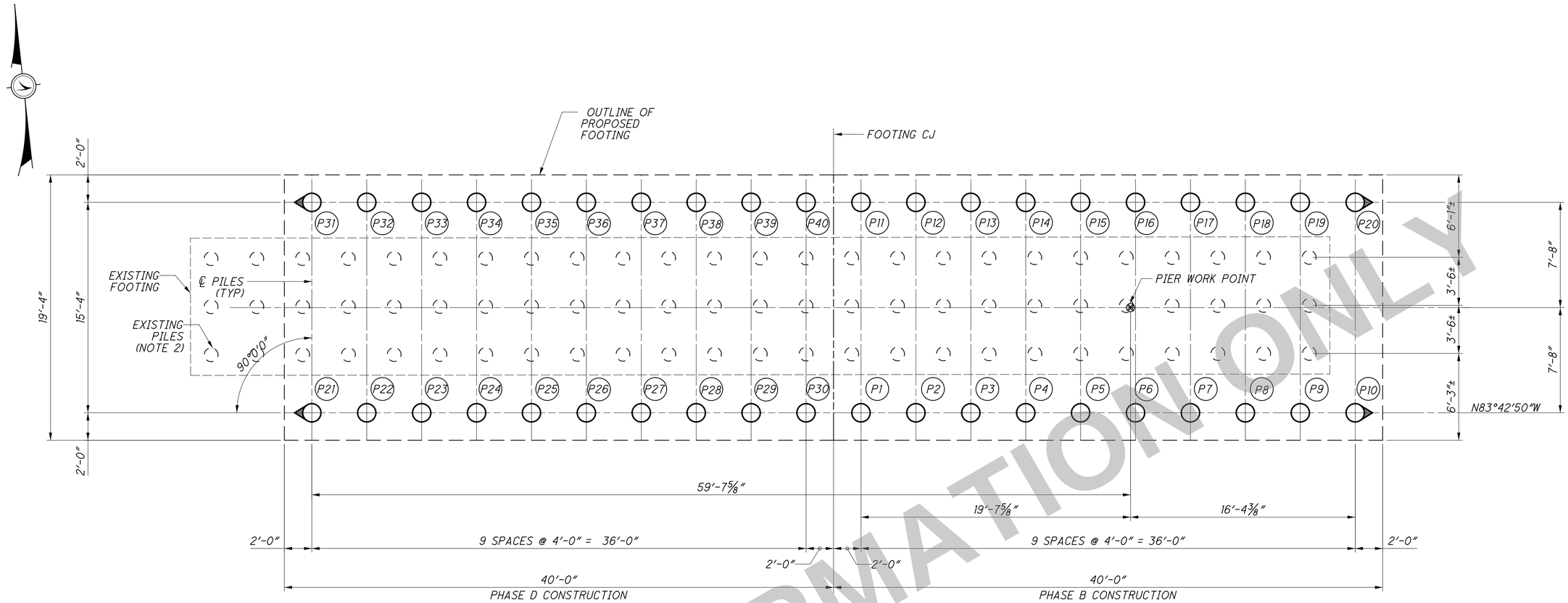
REAR ABUTMENT PILE LAYOUT
BRIDGE NO. HAM-562-0026 (INSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

16 / 57

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2017

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FOUNDATION PLAN - PIER

LEGEND:

- (P#) INDICATES PIER PILE NUMBER
- INDICATES 16" DIA CIP CONCRETE PILE BATTERED 1:4 IN THE DIRECTION SHOWN (NOTE 1)
- INDICATES 16" DIA CIP CONCRETE PILE
- INDICATES EXISTING 12" DIA CONCRETE PILES TO BE CUTOFF AT PROPOSED BOTTOM OF FOOTING (NOTE 2)

NOTES:

1. PILE SPACING IS MEASURED ALONG THE BOTTOM OF FOOTING.
2. EXISTING PILES ARE TO REMAIN BELOW ELEVATION 521.80 (MIN 1.5" BELOW PROPOSED FOOTING REINFORCING). PROPOSED FOUNDATION AND FOOTING HAS BEEN DESIGNED TO SUPPORT THE FULL PIER REACTION WITHOUT CONSIDERATION OF THE EXISTING PILES.
3. FOR REAR ABUTMENT PILE LAYOUT PLAN, SEE SHEET 16/57.
4. FOR FORWARD ABUTMENT PILE LAYOUT PLAN, SEE SHEET 18/57.
5. FOR REFERENCE CHORD AND OVERALL BRIDGE GEOMETRY, SEE SHEET 2/57.
6. FOR WORK POINT DEFINITION, SEE SHEET 37/57.

PILE DATA

PHASE	PILE NUMBER	PILE CUTOFF ELEVATION	MINIMUM TIP ELEVATION	ORDER PILE LENGTH (EACH)
B	P1 - P20	523.20	455.70	75'
D	P21 - P40	523.20	455.70	75'

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2600 CORPORATE EXCHANGE DRIVE SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
EFD	CAN	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

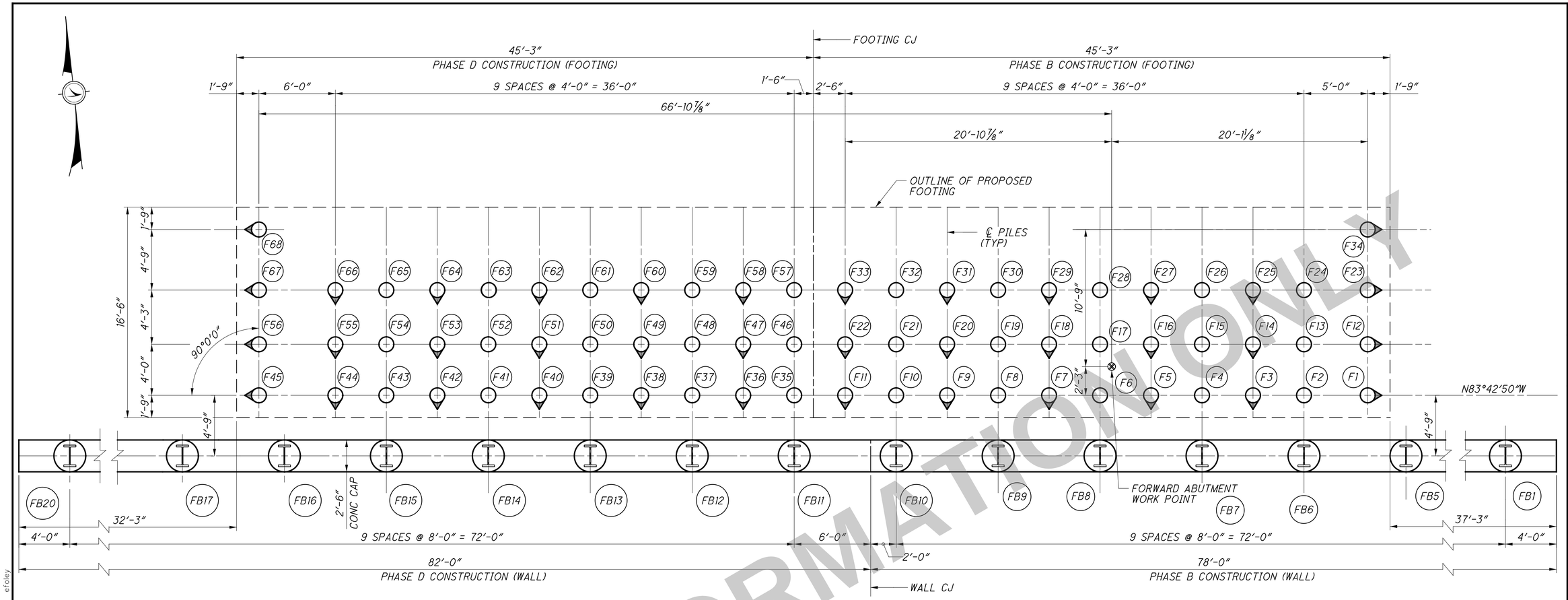
PIER PILE LAYOUT
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

17 / 57

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FOUNDATION PLAN - FORWARD ABUTMENT

FOR INFORMATION ONLY

DRILLED SHAFT AND SOLDIER PILE DATA					
PILE NUMBER	SOLDIER PILE CUTOFF ELEVATION	MINIMUM TIP ELEVATION	ORDER PILE LENGTH (EACH)	TOP DRILLED SHAFT ELEVATION	DRILLED SHAFT LENGTH (EACH)
FB1	531.80	502.00	30'	530.80	29'
FB2	534.30	502.00	33'	533.30	32'
FB3	536.90	502.00	35'	535.90	34'
FB4	539.40	502.00	38'	538.40	37'
FB5-FB16	541.60	502.00	40'	540.60	39'
FB17	540.80	502.00	39'	539.80	38'
FB18	537.40	502.00	36'	536.40	35'
FB19	534.10	502.00	33'	533.10	32'
FB20	530.70	502.00	29'	529.70	28'

PILE DATA				
PHASE	PILE NUMBER	PILE CUTOFF ELEVATION	MINIMUM TIP ELEVATION	ORDER PILE LENGTH (EACH)
B	F1 - F34	541.85	467.60	80'
D	F35 - F68	541.85	467.60	80'

LEGEND:

- (F#) INDICATES PILE NUMBER AT FORWARD ABUTMENT
- INDICATES 14" DIA CIP CONCRETE PILE BATTERED 1:6 IN THE DIRECTION SHOWN (NOTE 1)
- INDICATES 14" DIA CIP CONCRETE PILE
- (FB#) INDICATES LAGGING WALL DRILLED SHAFT NUMBER AT FORWARD ABUTMENT
- INDICATES LAGGING WALL DRILLED SHAFT WITH W18x143

NOTES:

1. PILE SPACING IS MEASURED ALONG THE BOTTOM OF FOOTING.
2. FOR REAR ABUTMENT PILE LAYOUT PLAN, SEE SHEET 16/57.
3. FOR PIER PILE LAYOUT PLAN, SEE SHEET 17/57.
4. FOR REFERENCE CHORD AND OVERALL BRIDGE GEOMETRY, SEE SHEET 2/57.
5. FOR WORK POINT DEFINITION, SEE SHEET 28/57.

DESIGN AGENCY
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COLUMBUS, OHIO 43231

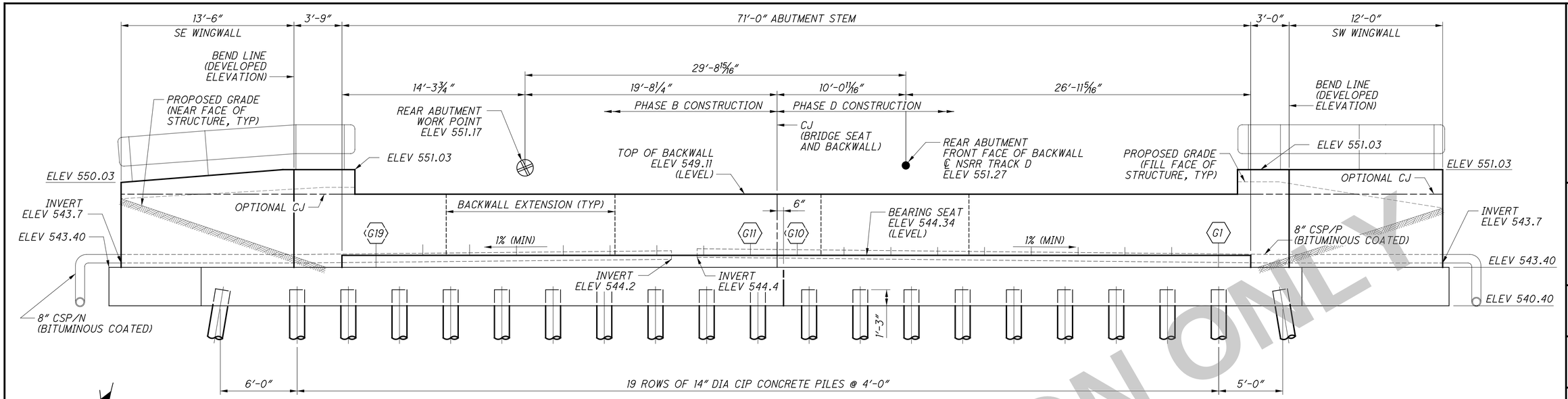
DESIGNED	DRAWN	REVIEWED	DATE
EFD	CAN	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

FORWARD ABUTMENT PILE LAYOUT
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

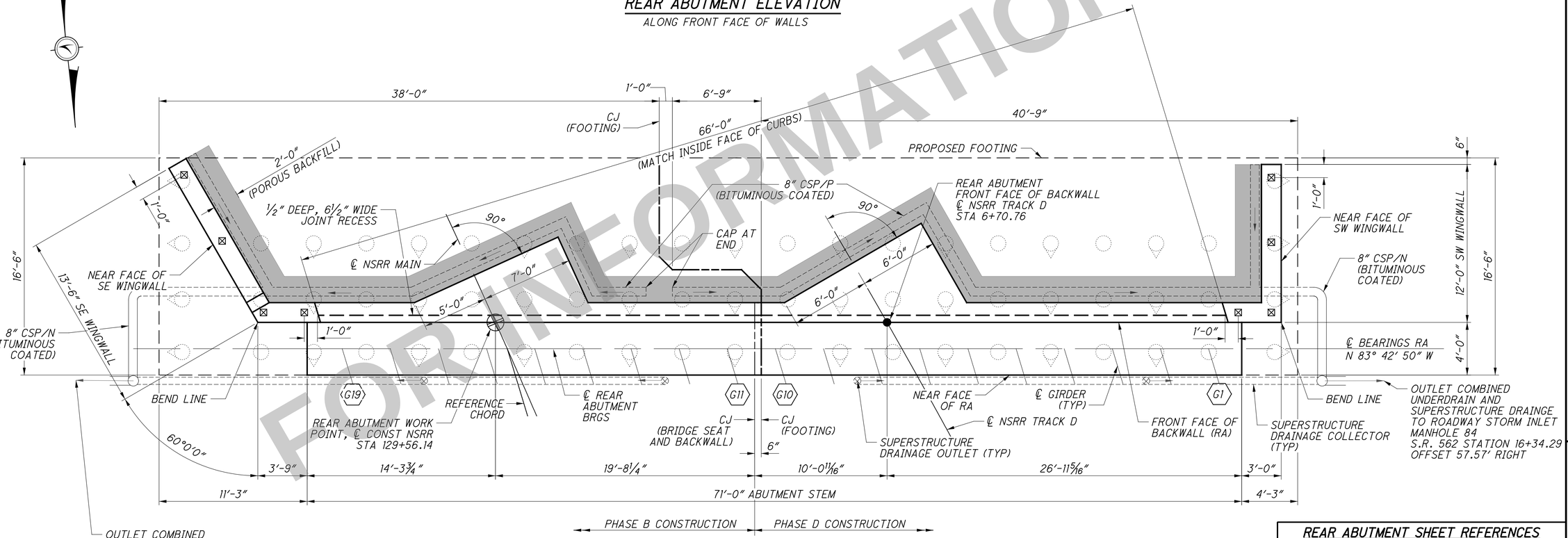
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REAR ABUTMENT ELEVATION

ALONG FRONT FACE OF WALLS



REAR ABUTMENT PLAN

NOTES:

1. FOR HANDRAIL DETAILS, SEE SHEET (1508 / 2017) . POST LOCATIONS SHOWN ARE SCHEMATIC, FINAL LAYOUT OF POSTS AND HANDRAIL JOINTS SHALL BE SUBMITTED BY THE CONRTACTOR FOR NSRR REVIEW AND APPROVAL.

REAR ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	16 / 57	
GENERAL PLAN & ELEV:	19 / 57	
EXISTING ABUTMENT REMOVAL:	20 / 57	
ABUTMENT PLANS (PHASE B):	21 / 57	
ABUTMENT ELEVATION (PHASE B):	22 / 57	
ABUTMENT PLANS (PHASE D):	23 / 57	
ABUTMENT ELEVATION (PHASE D):	24 / 57	
WINGWALL ELEVATIONS:	25 / 57	
TYPICAL DETAILS:	33 / 57	- 34 / 57
FIXED BEARING:	47 / 57	- 48 / 57
REINFORCING LIST:	55 / 57	- 56 / 57

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Gannett Fleming
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COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
EFD	CAN	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

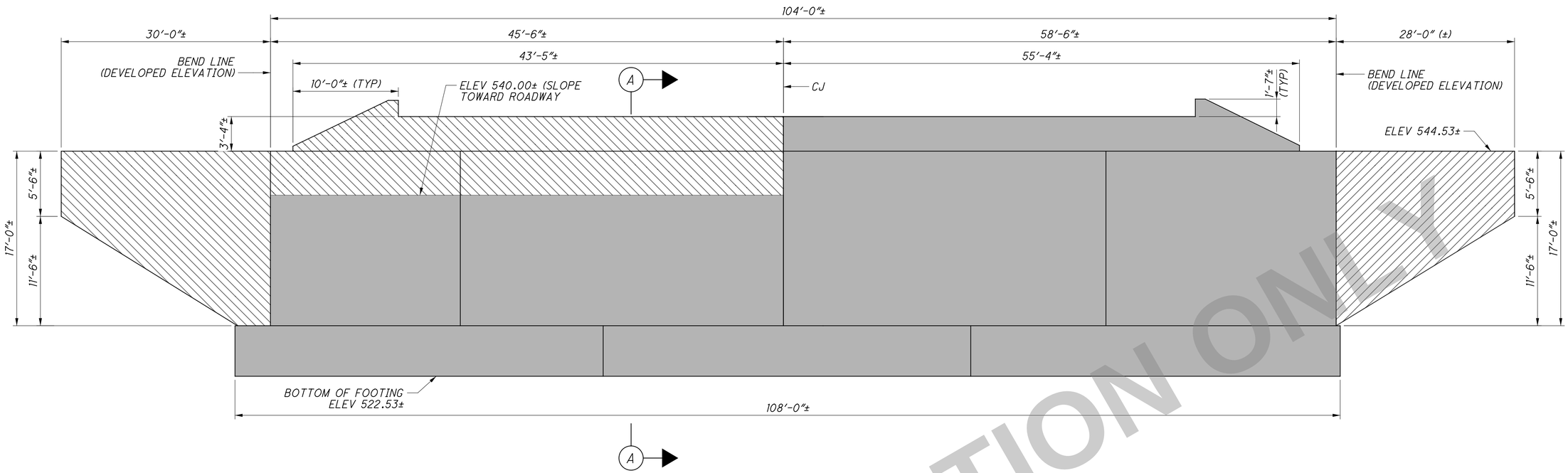
REAR ABUTMENT: PLAN AND ELEVATION

BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

1533 / 2017

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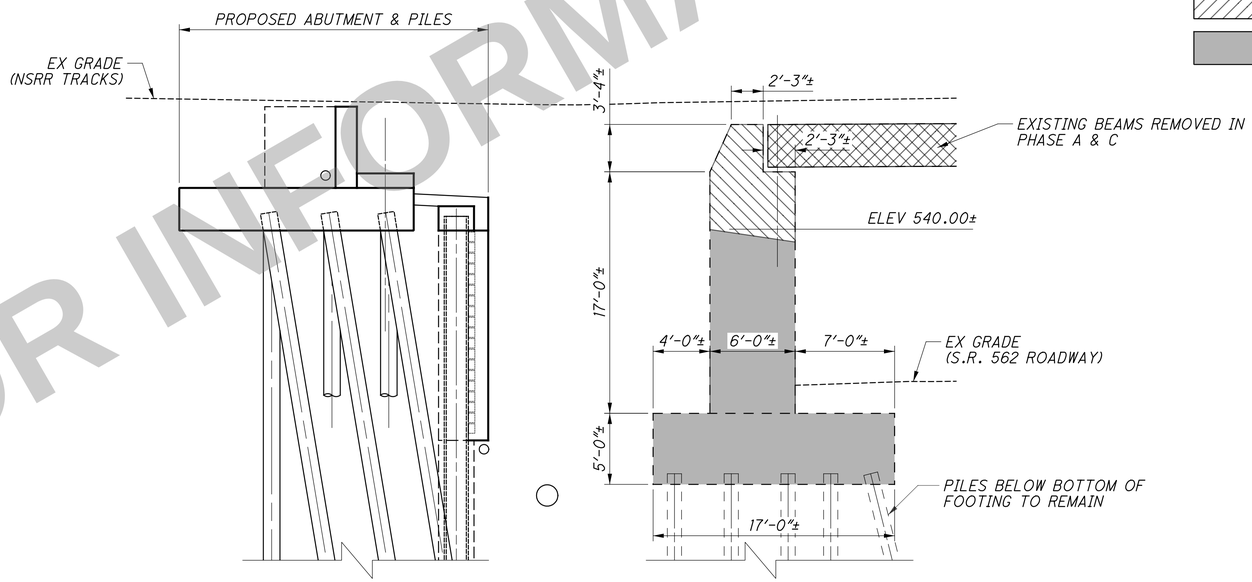


ELEVATION - REAR ABUTMENT PHASE REMOVAL

NOT TO SCALE

LEGEND:

- PHASE A REMOVAL
- PHASE C REMOVAL
- PHASE D REMOVAL



A SECTION

NOTES:

1. FOR COMPLETE PHASED CONSTRUCTION DETAILS, SEE SHEETS 5|57 THROUGH 11|57.

REAR ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	16|57	
GENERAL PLAN & ELEV:	19|57	
EXISTING ABUTMENT REMOVAL:	20|57	
ABUTMENT PLANS (PHASE B):	21|57	
ABUTMENT ELEVATION (PHASE B):	22|57	
ABUTMENT PLANS (PHASE D):	23|57	
ABUTMENT ELEVATION (PHASE D):	24|57	
WINGWALL ELEVATIONS:	25|57	
TYPICAL DETAILS:	33|57	- 34|57
FIXED BEARING:	47|57	- 48|57
REINFORCING LIST:	55|57	- 56|57

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DESIGN AGENCY
Gannett Fleming
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EFD	DKU	CTV	12-15-21
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CTM		NSRR BR#: BR0018448	

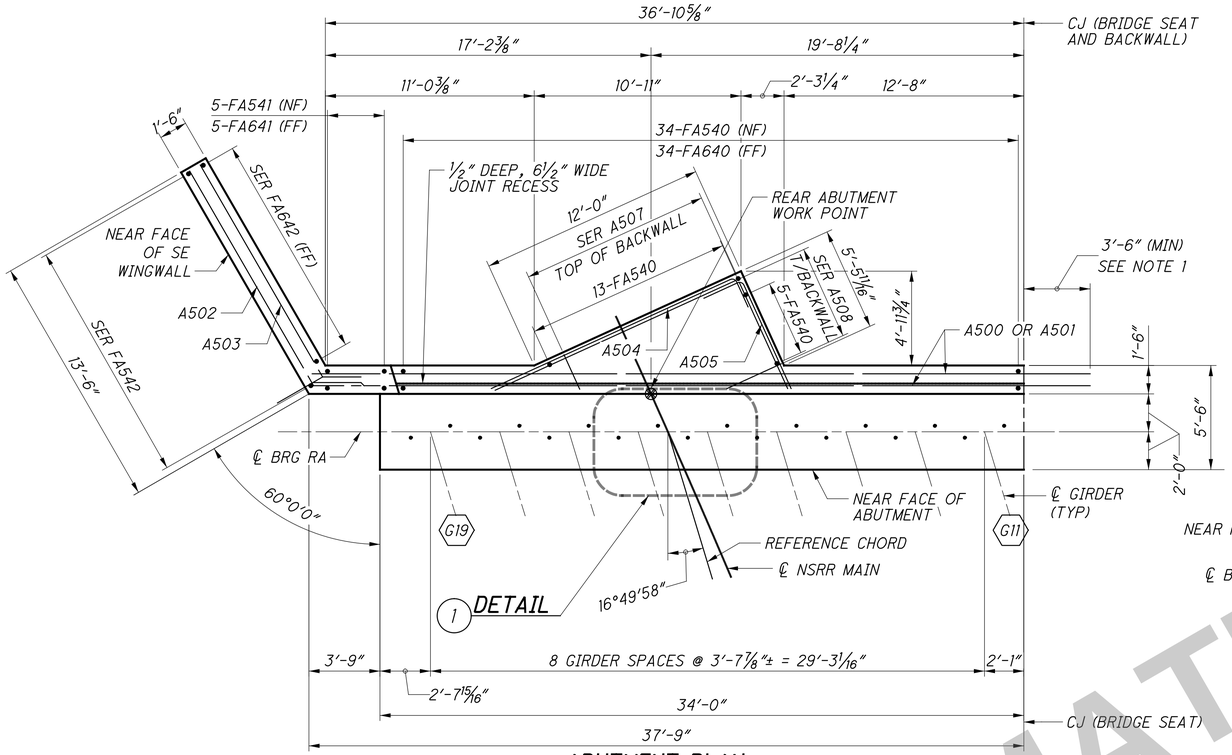
REAR ABUTMENT: REMOVAL STAGES AND DETAILS
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

20 / 57

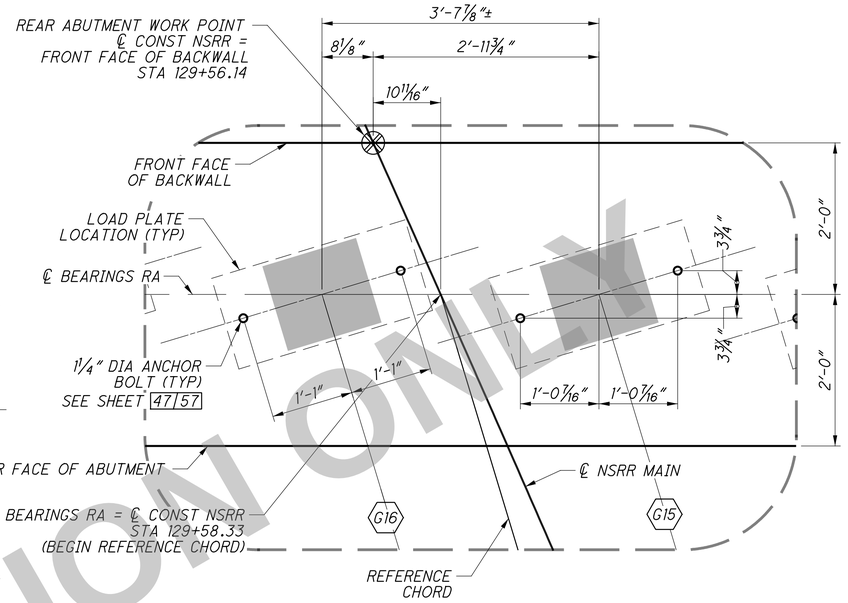
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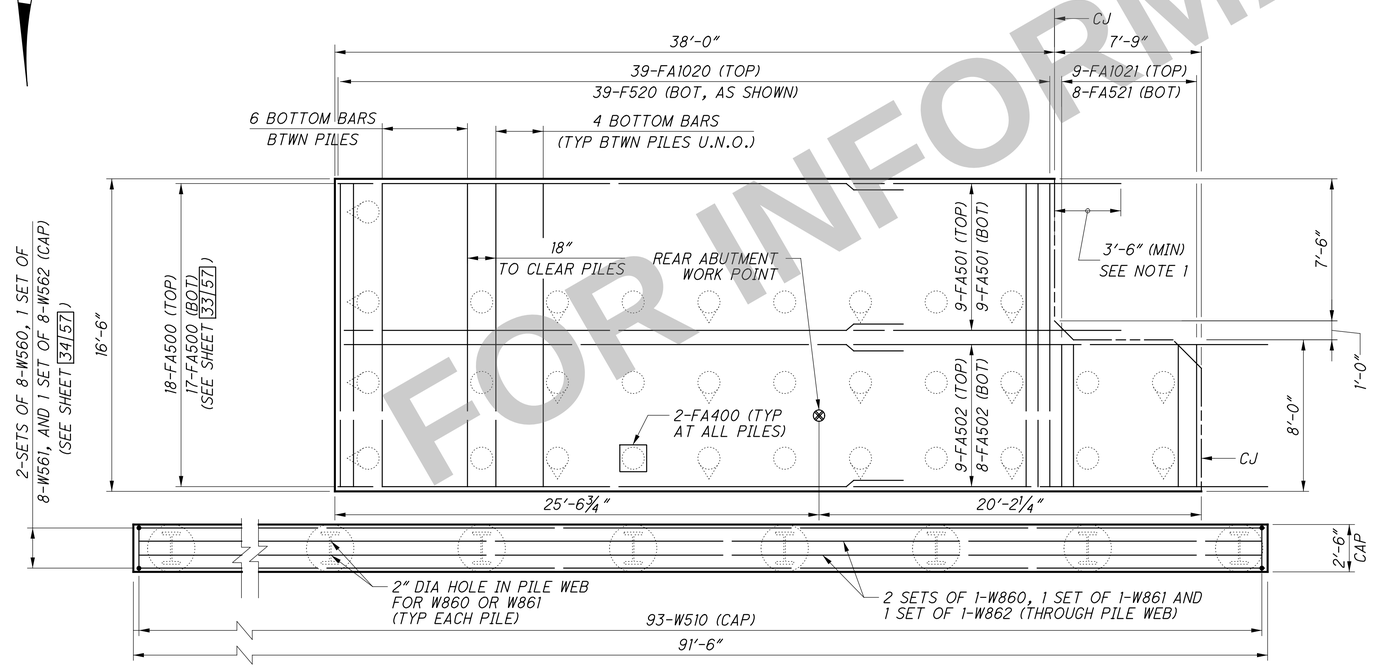


1 DETAIL

ABUTMENT PLAN
PHASE B CONSTRUCTION



1 WORK POINT DEFINITION
INCLUDING ANCHOR BOLT LAYOUT



FOOTING PLAN
PHASE B CONSTRUCTION

NOTES:

1. MECHANICALLY SPLICE REINFORCEMENT THAT CAN NOT ACHEIVE ADEQUATE SPLICE LENGTH DUE TO INTERFERENCE WITH SHORING. COST OF MECHANICAL SPLICING SHALL BE INCIDENTAL TO THE COST OF THE REINFORCING. MECHANICAL SPLICES SHALL BE SUBMITTED TO NSRR FOR REVIEW AND APPROVAL. 10 MECHANICAL SPLICES SHALL BE ASSUMED IN THE CONSTRUCTION COST AT THIS LOCATION (FOR BIDDING PURPOSES ONLY).
2. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 55|57 .

REAR ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	16|57
GENERAL PLAN & ELEV:	19|57
EXISTING ABUTMENT REMOVAL:	20|57
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ABUTMENT ELEVATION (PHASE B):	22|57
ABUTMENT PLANS (PHASE D):	23|57
ABUTMENT ELEVATION (PHASE D):	24|57
WINGWALL ELEVATIONS:	25|57
TYPICAL DETAILS:	33|57 - 34|57
FIXED BEARING:	47|57 - 48|57
REINFORCING LIST:	55|57 - 56|57

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2600 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
EFD	CAN	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

REAR ABUTMENT PLAN AND FOOTING PLAN – PHASE B

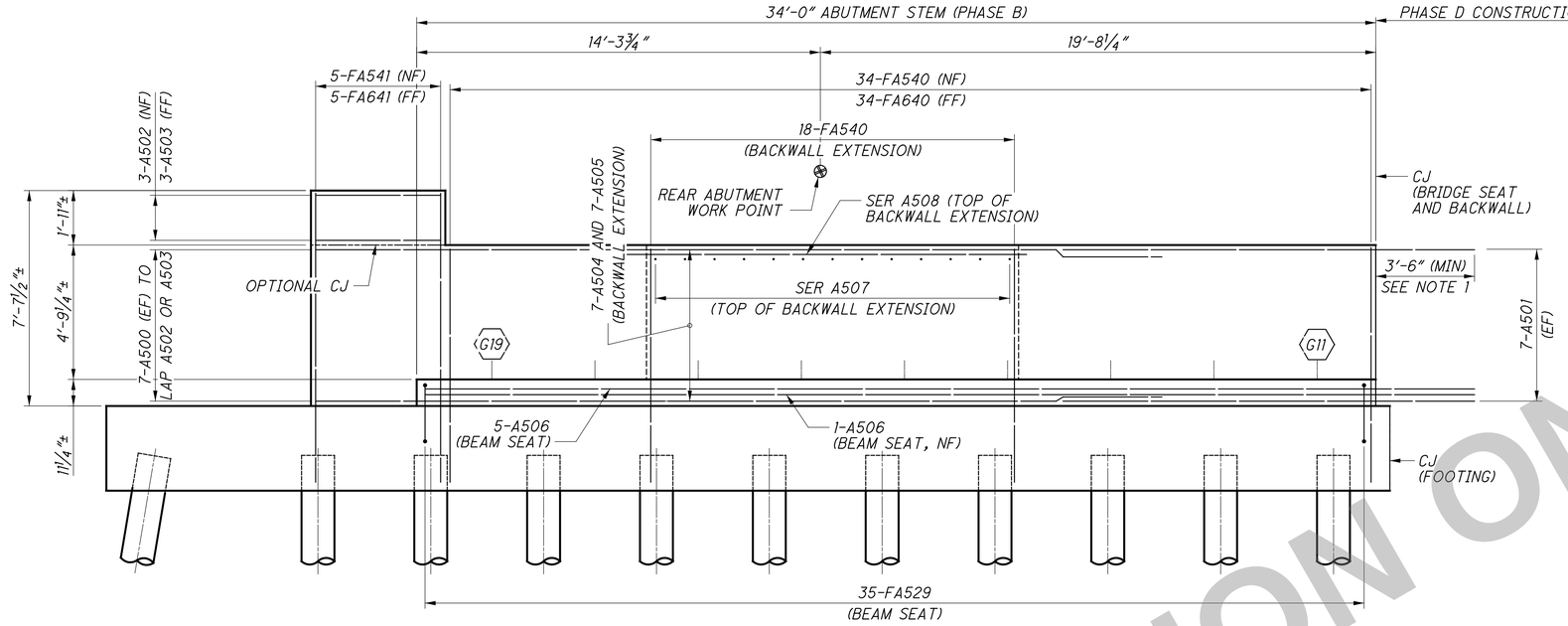
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

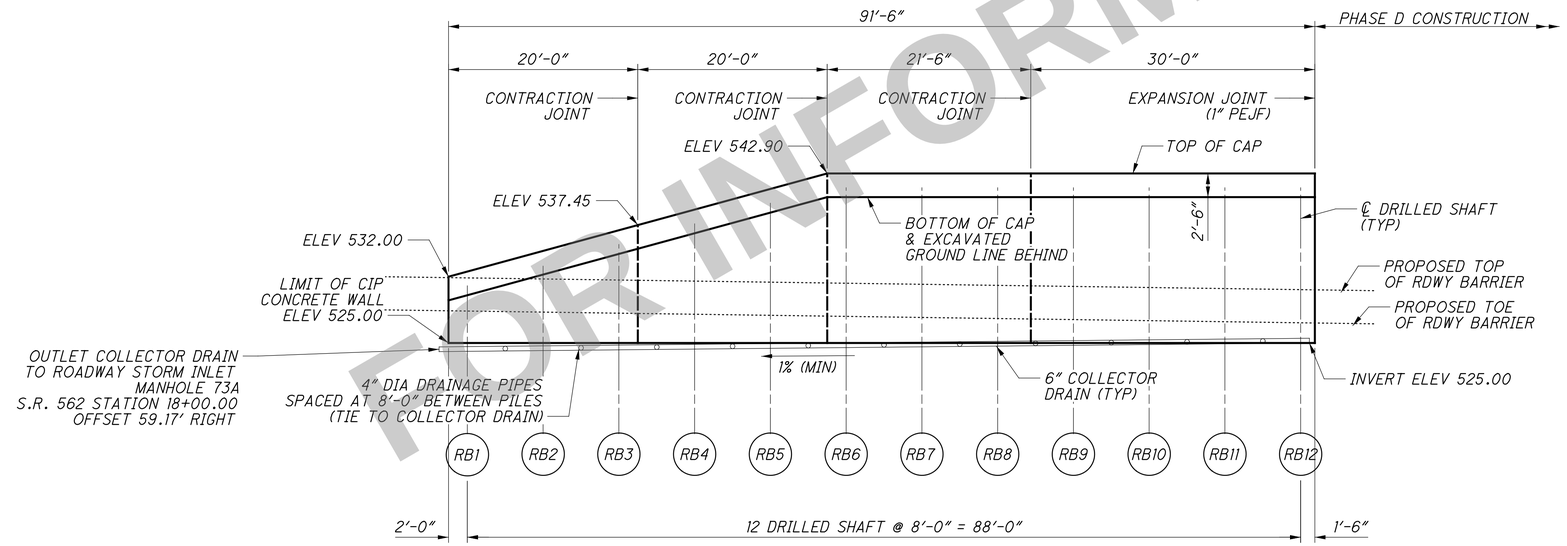
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REAR ABUTMENT ELEVATION
PHASE B CONSTRUCTION



REAR ABUTMENT
SOLDIER PILE AND LAGGING WALL
PHASE B CONSTRUCTION

LEGEND:

(RB#) INDICATES LAGGING WALL PREBORED WI8 PILE NUMBER

NOTES:

1. MECHANICALLY SPLICE REINFORCING THAT CAN NOT ACHIEVE ADEQUATE SPLICE LENGTH DUE TO INTERFERENCE WITH SHORING. COST OF MECHANICAL SPLICING SHALL BE INCIDENTAL TO THE COST OF THE REINFORCING. MECHANICAL SPLICES SHALL BE SUBMITTED TO NSRR FOR REVIEW AND APPROVAL. 10 MECHANICAL SPLICES SHALL BE ASSUMED IN THE CONSTRUCTION COST (FOR BIDDING PURPOSES ONLY).
2. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 55/57 .

REAR ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	16/57
GENERAL PLAN & ELEV:	19/57
EXISTING ABUTMENT REMOVAL:	20/57
ABUTMENT PLANS (PHASE B):	21/57
ABUTMENT ELEVATION (PHASE B):	22/57
ABUTMENT PLANS (PHASE D):	23/57
ABUTMENT ELEVATION (PHASE D):	24/57
WINGWALL ELEVATIONS:	25/57
TYPICAL DETAILS:	33/57 - 34/57
FIXED BEARING:	47/57 - 48/57
REINFORCING LIST:	55/57 - 56/57

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2600 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

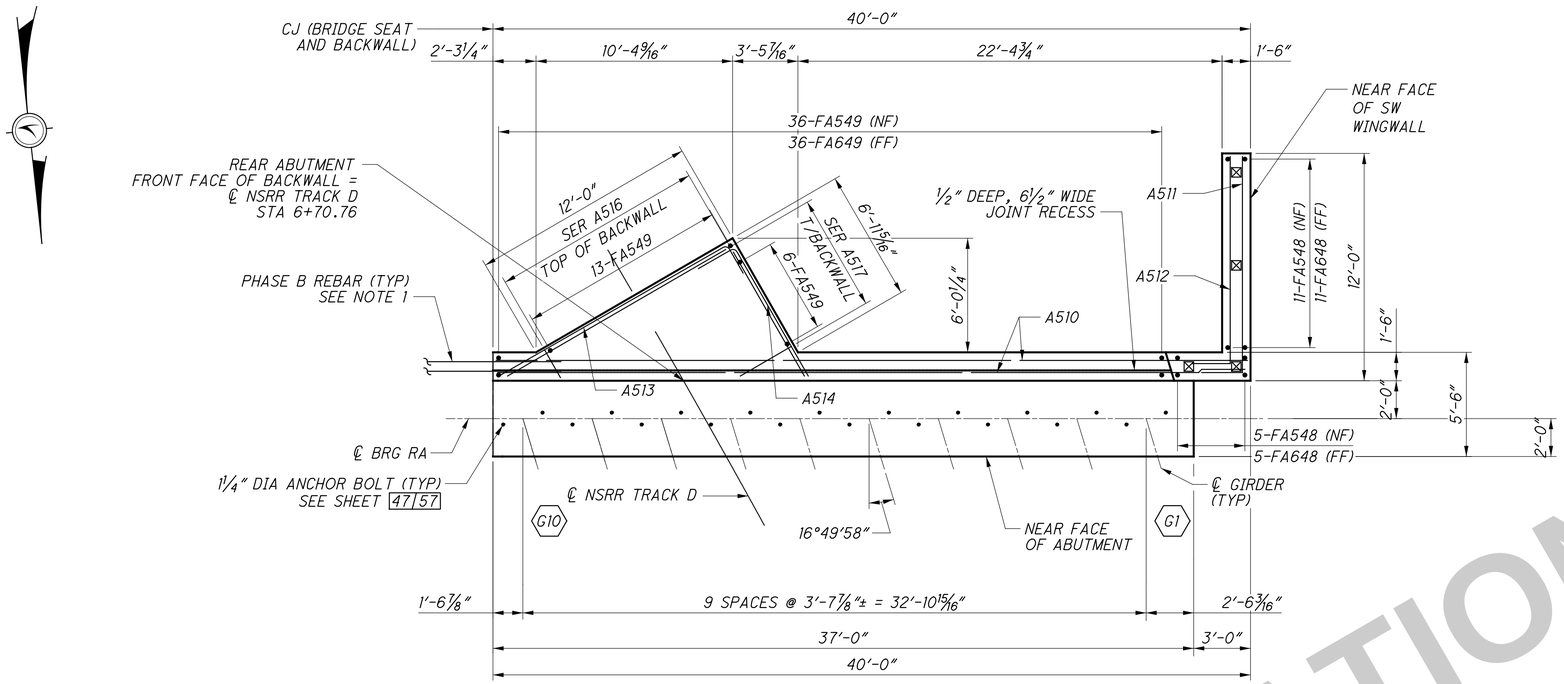
DESIGNED	DRAWN	REVIEWED	DATE
EFD	CAN	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

REAR ABUTMENT ELEVATION - PHASE B
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

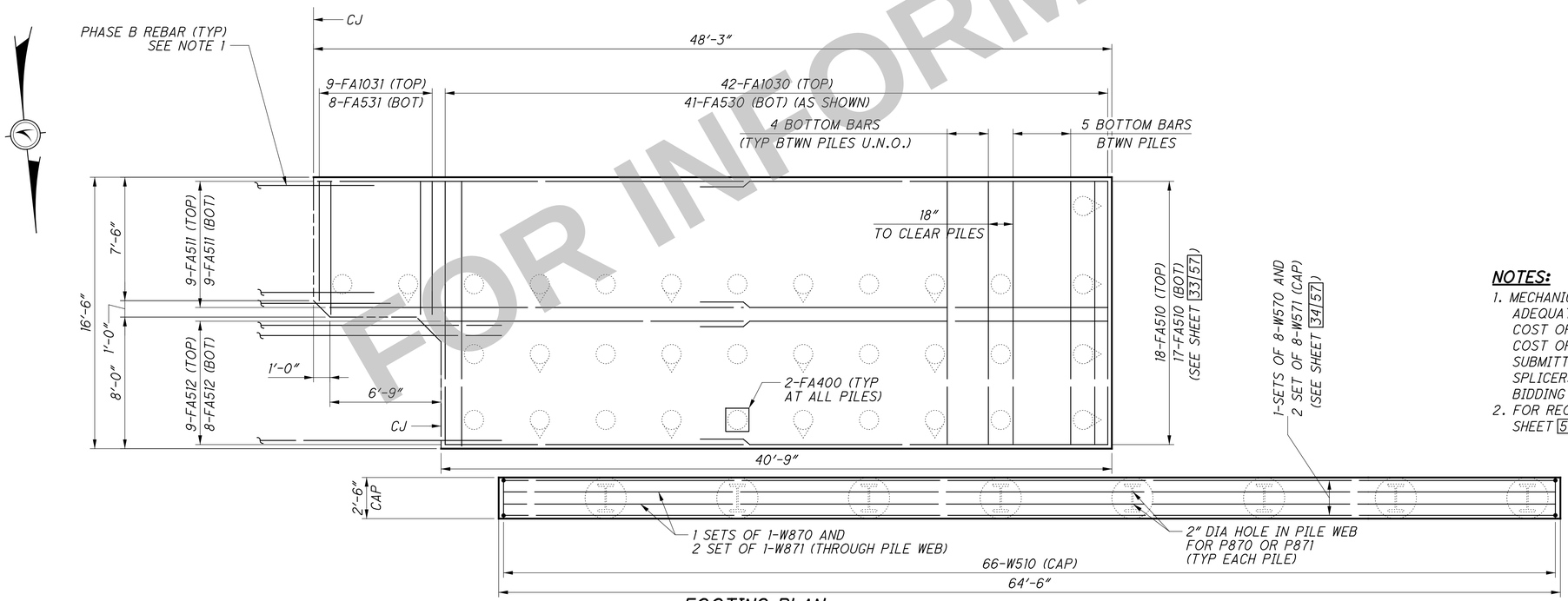
HAM-75-7.85
PID No. 77889

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2017

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ABUTMENT PLAN
PHASE D CONSTRUCTION



FOOTING PLAN
PHASE D CONSTRUCTION

NOTES:

1. MECHANICALLY SPLICE REINFORCEMENT THAT CAN NOT ACHEIVE ADEQUATE SPLICE LENGTH DUE TO INTERFERENCE WITH SHORING. COST OF MECHANICAL SPLICING SHALL BE INCIDENTAL TO THE COST OF THE REINFORCING. MECHANICAL SPLICERS SHALL BE SUBMITTED TO NSRR FOR REVEIW AND APPROVAL. 10 MECHANICAL SPLICERS SHALL BE ASSUMED IN THE CONSTRUCTION COST (FOR BIDDING PURPOSES ONLY).
2. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 55 57 .

REAR ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	16 57
GENERAL PLAN & ELEV:	19 57
EXISTING ABUTMENT REMOVAL:	20 57
ABUTMENT PLANS (PHASE B):	21 57
ABUTMENT ELEVATION (PHASE B):	22 57
ABUTMENT PLANS (PHASE D):	23 57
ABUTMENT ELEVATION (PHASE D):	24 57
WINGWALL ELEVATIONS:	25 57
TYPICAL DETAILS:	33 57 - 34 57
FIXED BEARING:	47 57 - 48 57
REINFORCING LIST:	55 57 - 56 57

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2600 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
EFD	CAN	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

REAR ABUTMENT PLAN AND FOOTING PLAN – PHASE D

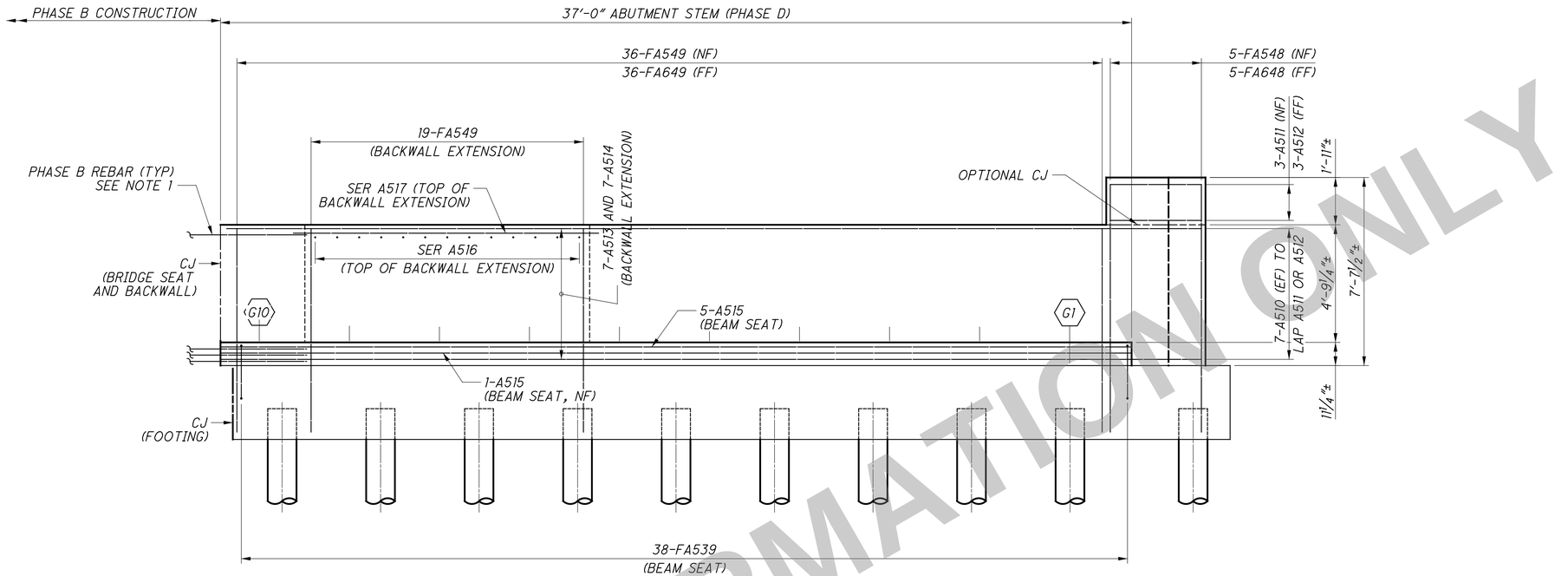
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

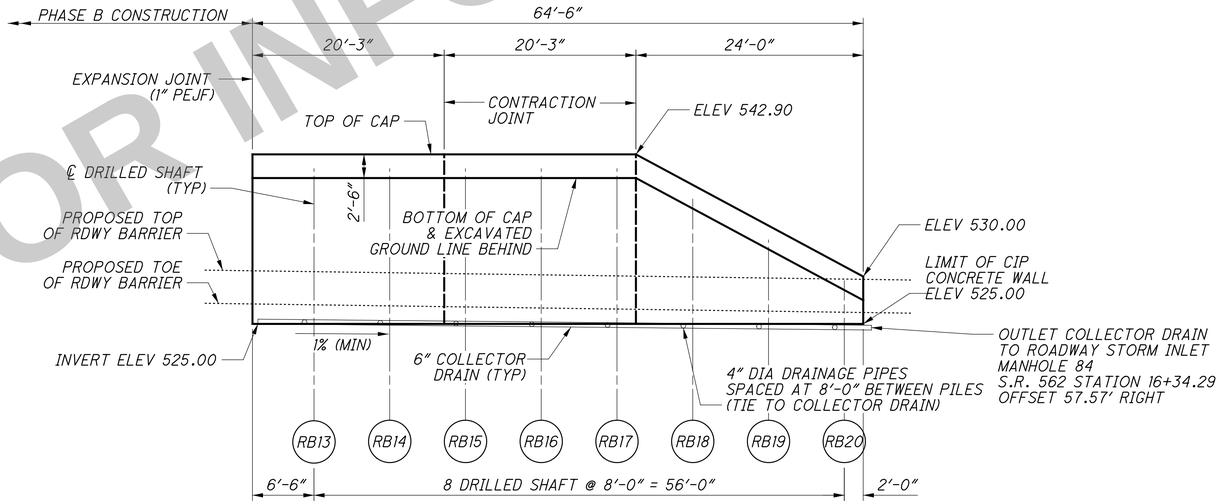
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REAR ABUTMENT ELEVATION
PHASE D CONSTRUCTION



REAR ABUTMENT
SOLDIER PILE AND LAGGING WALL
PHASE D CONSTRUCTION

LEGEND:

(RB#) INDICATES LAGGING WALL PREBORED W18 PILE NUMBER

NOTES:

1. MECHANICALLY SPLICE REINFORCEMENT THAT CAN NOT ACHEIVE ADEQUATE SPLICE LENGTH DUE TO INTERFERENCE WITH SHORING. COST OF MECHANICAL SPLICING SHALL BE INCIDENTAL TO THE COST OF THE REINFORCING. MECHANICAL SPLICES SHALL BE SUBMITTED TO NSRR FOR REVIEW AND APPROVAL. 10 MECHANICAL SPLICES SHALL BE ASSUMED IN THE CONSTRUCTION COST AT THIS LOCATION (FOR BIDDING PURPOSES ONLY).
2. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 55/57 .

REAR ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	16/57	
GENERAL PLAN & ELEV:	19/57	
EXISTING ABUTMENT REMOVAL:	20/57	
ABUTMENT PLANS (PHASE B):	21/57	
ABUTMENT ELEVATION (PHASE B):	22/57	
ABUTMENT PLANS (PHASE D):	23/57	
ABUTMENT ELEVATION (PHASE D):	24/57	
WINGWALL ELEVATIONS:	25/57	
TYPICAL DETAILS:	33/57	- 34/57
FIXED BEARING:	47/57	- 48/57
REINFORCING LIST:	55/57	- 56/57

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DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE SUITE 230
COLUMBUS, OHIO 43231

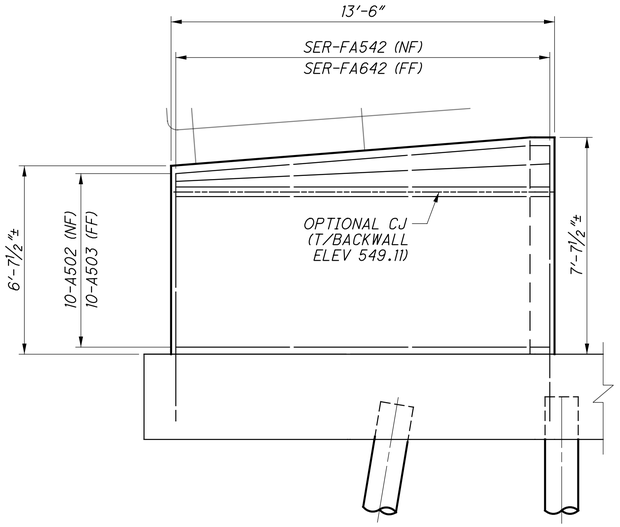
DESIGNED	DRAWN	REVIEWED	DATE
EFD	CAN	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

REAR ABUTMENT ELEVATION - PHASE D
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

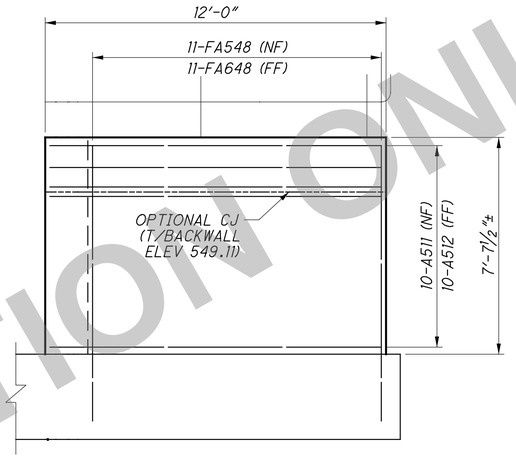
HAM-75-7.85
PID No. 77889

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2017

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SOUTHEAST WINGWALL ELEVATION
PHASE B



SOUTHWEST WINGWALL ELEVATION
PHASE D

FOR INFORMATION ONLY

NOTES:

1. VERTICALLY/HORIZONTALLY ADJUST THE BARS AS REQUIRED TO CLEAR THE PILES.
2. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 55|57.

REAR ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	16|57	
GENERAL PLAN & ELEV:	19|57	
EXISTING ABUTMENT REMOVAL:	20|57	
ABUTMENT PLANS (PHASE B):	21|57	
ABUTMENT ELEVATION (PHASE B):	22|57	
ABUTMENT PLANS (PHASE D):	23|57	
ABUTMENT ELEVATION (PHASE D):	24|57	
WINGWALL ELEVATIONS:	25|57	
TYPICAL DETAILS:	33|57 -	34|57
FIXED BEARING:	47|57 -	48|57
REINFORCING LIST:	55|57 -	56|57

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COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
EFD	CAN	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

REAR ABUTMENT WINGWALL ELEVATIONS

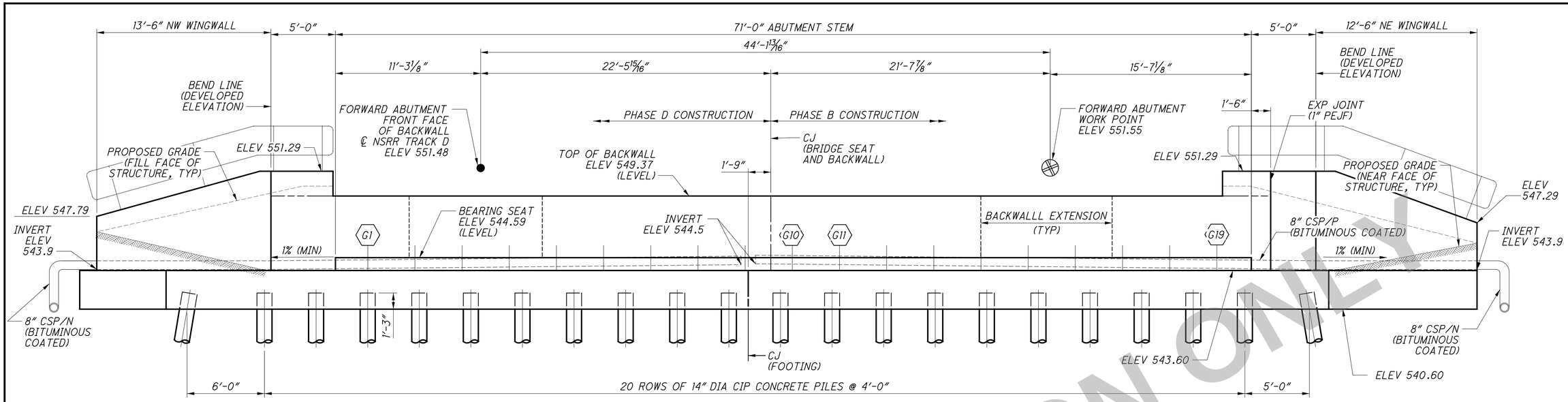
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

25 / 57

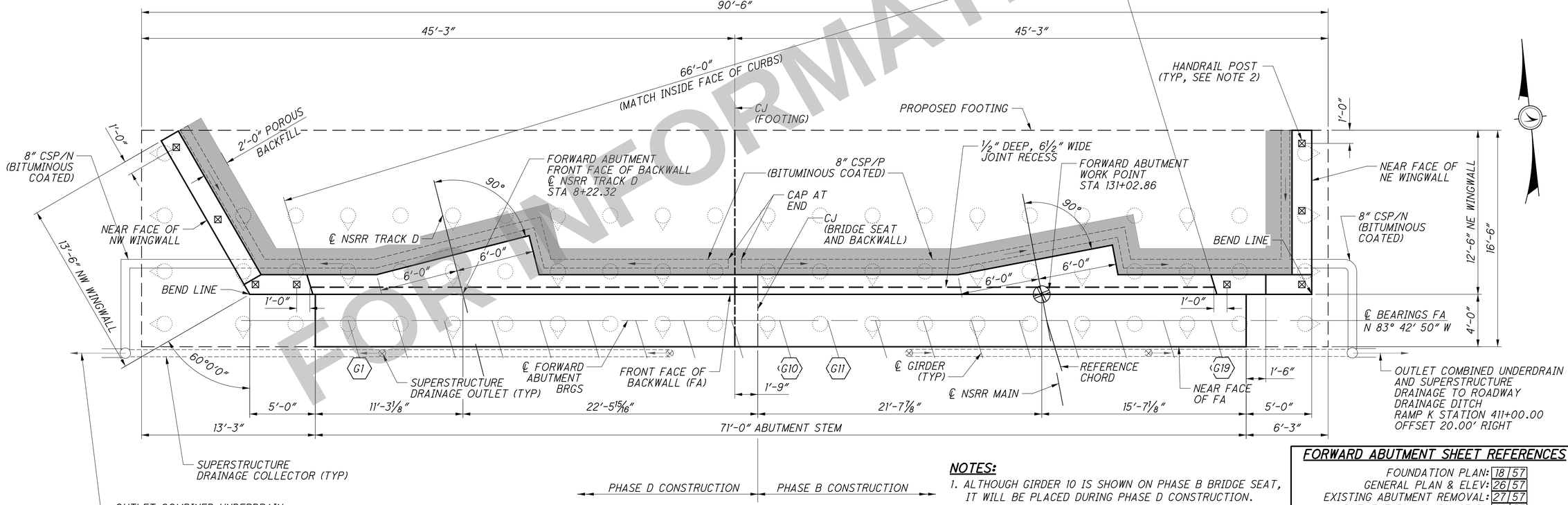
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FORWARD ABUTMENT ELEVATION

ALONG FRONT FACE OF WALLS



FORWARD ABUTMENT PLAN

NOTES:

1. ALTHOUGH GIRDER 10 IS SHOWN ON PHASE B BRIDGE SEAT, IT WILL BE PLACED DURING PHASE D CONSTRUCTION.
2. FOR HANDRAIL DETAILS, SEE SHEET (1508/2017) . POST LOCATIONS SHOWN ARE SCHEMATIC, FINAL LAYOUT OF POSTS AND HANDRAIL JOINTS SHALL BE SUBMITTED BY THE CONTRACTOR FOR NSRR REVIEW AND APPROVAL.

FORWARD ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	18/57
GENERAL PLAN & ELEV:	26/57
EXISTING ABUTMENT REMOVAL:	27/57
ABUTMENT PLANS (PHASE B):	28/57
ABUTMENT ELEVATION (PHASE B):	29/57
ABUTMENT PLANS (PHASE D):	30/57
ABUTMENT ELEVATION (PHASE D):	31/57
WINGWALL ELEVATIONS:	32/57
TYPICAL DETAILS:	33/57 - 34/57
FIXED BEARING:	47/57 - 48/57
REINFORCING LIST:	55/57 - 56/57

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
EFD	CAN	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

FORWARD ABUTMENT: PLAN AND ELEVATION

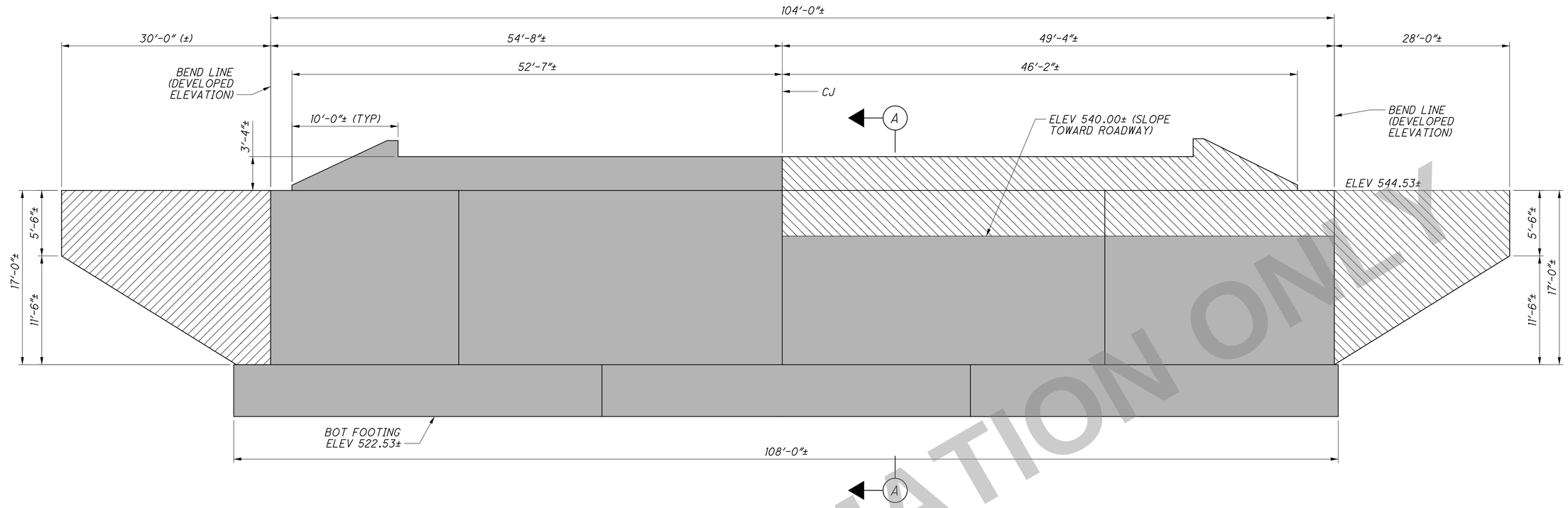
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

26 / 57

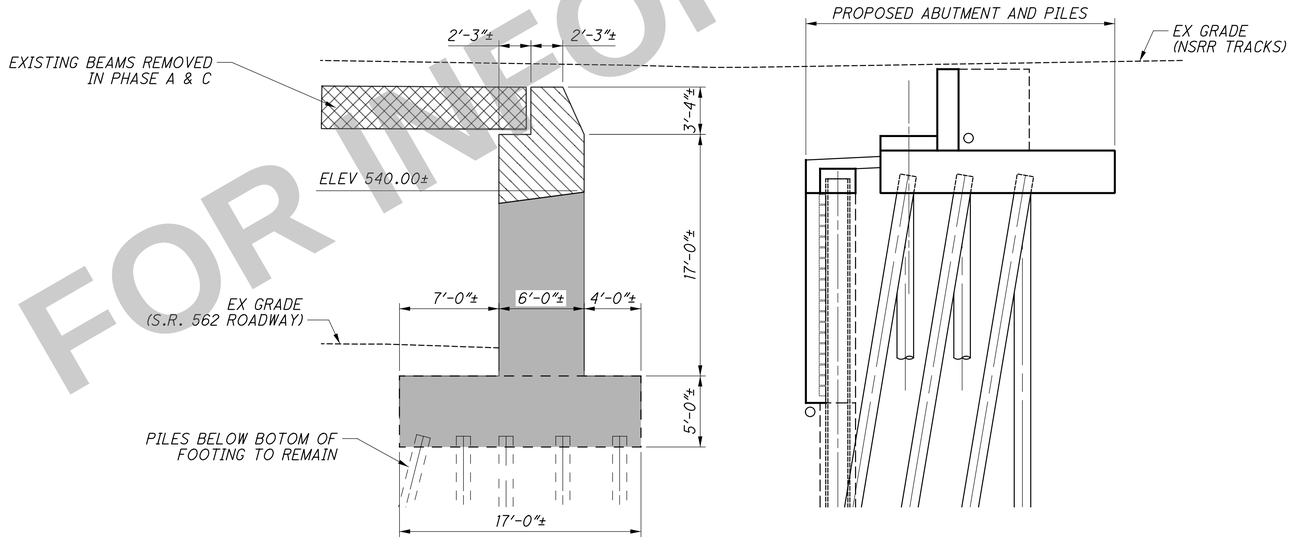
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ELEVATION - FORWARD ABUTMENT PHASE REMOVAL

NOT TO SCALE



(A) SECTION

LEGEND:

- PHASE A REMOVAL
- PHASE C REMOVAL
- PHASE D REMOVAL

NOTES:

1. FOR COMPLETE PHASED CONSTRUCTION DETAILS, SEE SHEETS 5 | 57 THROUGH 11 | 57.

FORWARD ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	18 | 57	
GENERAL PLAN & ELEV:	26 | 57	
EXISTING ABUTMENT REMOVAL:	27 | 57	
ABUTMENT PLANS (PHASE B):	28 | 57	
ABUTMENT ELEVATION (PHASE B):	29 | 57	
ABUTMENT PLANS (PHASE D):	30 | 57	
ABUTMENT ELEVATION (PHASE D):	31 | 57	
WINGWALL ELEVATIONS:	32 | 57	
TYPICAL DETAILS:	33 | 57	- 34 | 57
FIXED BEARING:	47 | 57	- 48 | 57
REINFORCING LIST:	55 | 57	- 56 | 57

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
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DESIGNED	DRAWN	REVIEWED	DATE
EFD	DKU	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

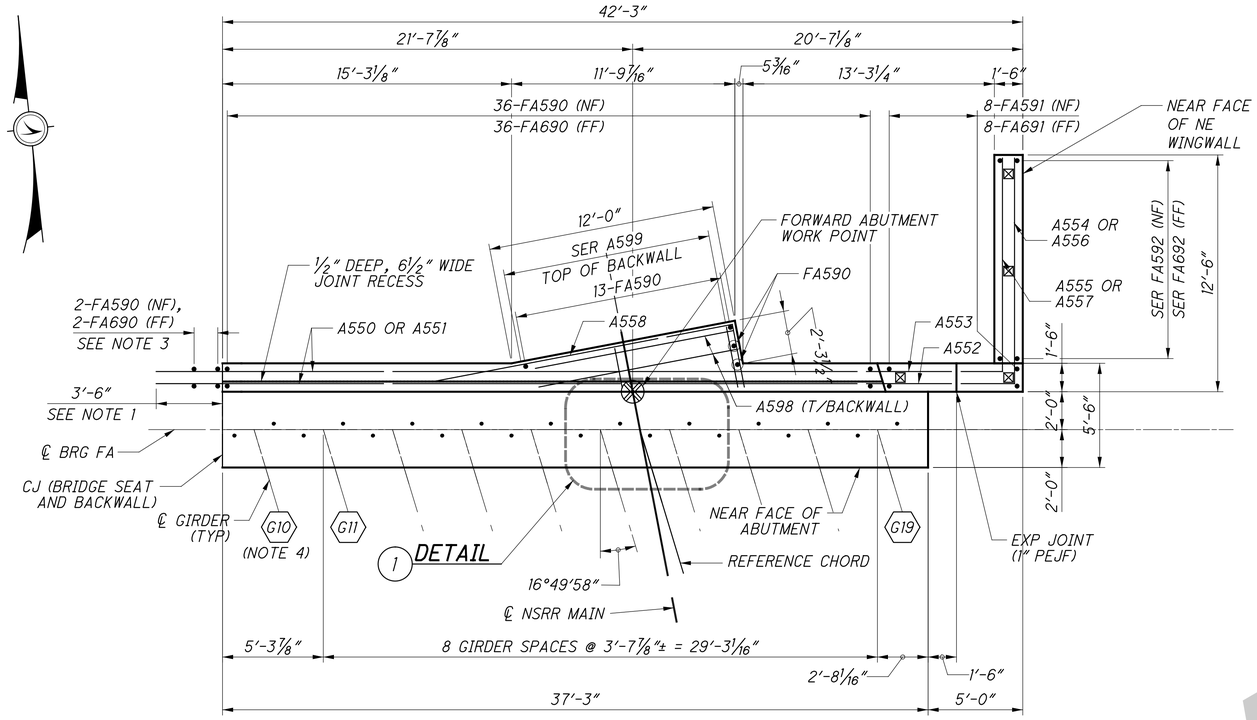
FORWARD ABUTMENT: REMOVAL STAGES AND DETAILS

BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

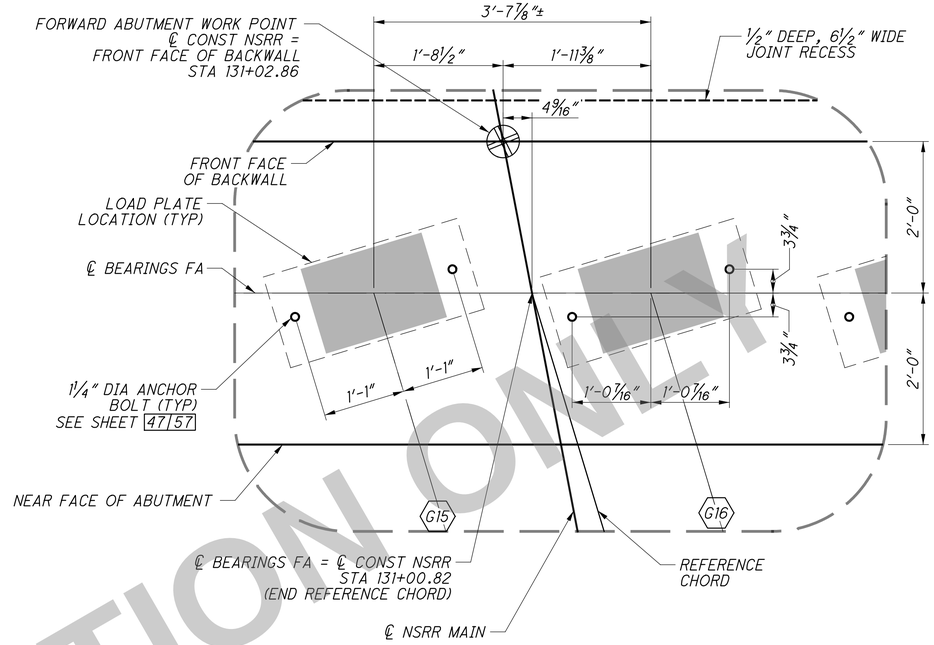
HAM-75-7.85
PID No. 77889

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2017

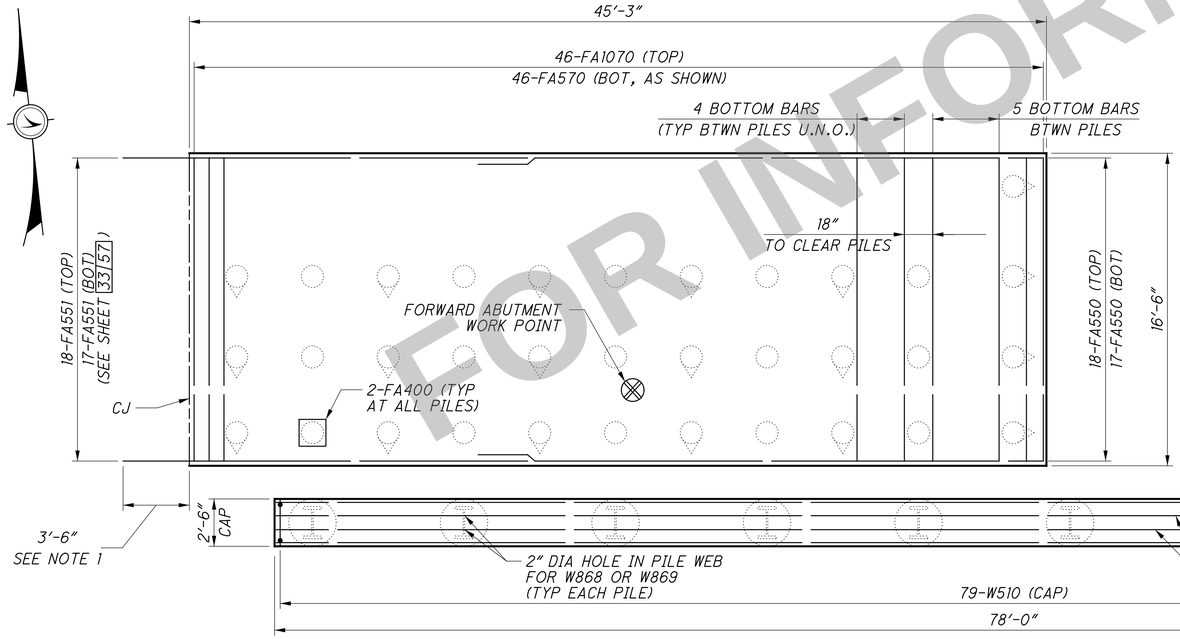
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ABUTMENT PLAN
PHASE B CONSTRUCTION



1 WORK POINT DEFINITION
INCLUDING ANCHOR BOLT LAYOUT



FOOTING PLAN
PHASE B CONSTRUCTION

NOTES:

1. MECHANICALLY SPLICE REINFORCEMENT THAT CAN NOT ACHEIVE ADEQUATE SPLICE LENGTH DUE TO INTERFERENCE WITH SHORING. COST OF MECHANICAL SPLICING SHALL BE INCIDENTAL TO THE COST OF THE REINFORCING. MECHANICAL SPLICERS SHALL BE SUBMITTED TO NSRR FOR REVIEW AND APPROVAL. 10 MECHANICAL SPLICES SHALL BE ASSUMED IN THE CONSTRUCTION COST AT THIS LOCATION (FOR BIDDING PURPOSES ONLY).
2. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 55/57.
3. PLACE ALL BACKWALL REINFORCEMENT WITH PHASE B ABUTMENT POUR.
4. ALTHOUGH GIRDER 10 IS INSTALLED IN PHASE D, THE ANCHOR BOLTS MUST BE INSTALLED IN PHASE B WHEN BRIDGE SEAT WILL BE POURED.

FORWARD ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	18/57
GENERAL PLAN & ELEV:	26/57
EXISTING ABUTMENT REMOVAL:	27/57
ABUTMENT PLANS (PHASE B):	28/57
ABUTMENT ELEVATION (PHASE B):	29/57
ABUTMENT PLANS (PHASE D):	30/57
ABUTMENT ELEVATION (PHASE D):	31/57
WINGWALL ELEVATIONS:	32/57
TYPICAL DETAILS:	33/57 - 34/57
FIXED BEARING:	47/57 - 48/57
REINFORCING LIST:	55/57 - 56/57

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
EFD	CAN	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

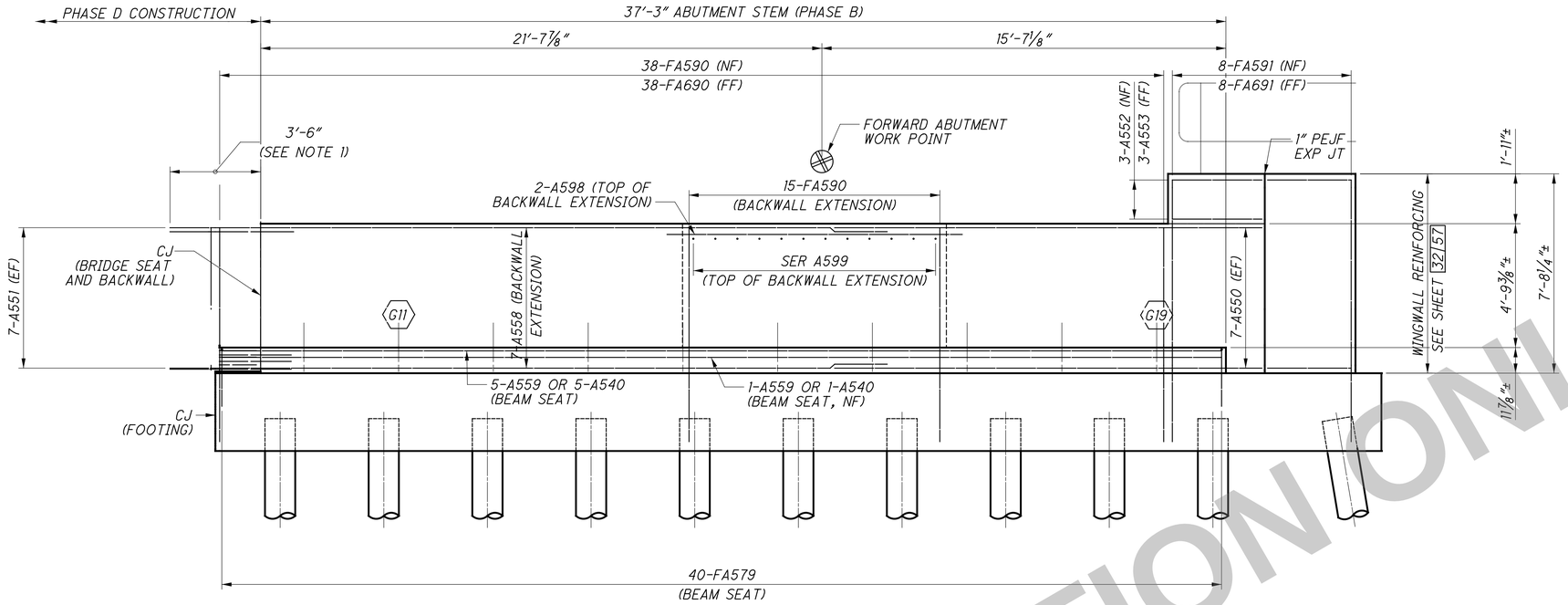
FORWARD ABUTMENT PLAN AND FOOTING PLAN - PHASE B
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

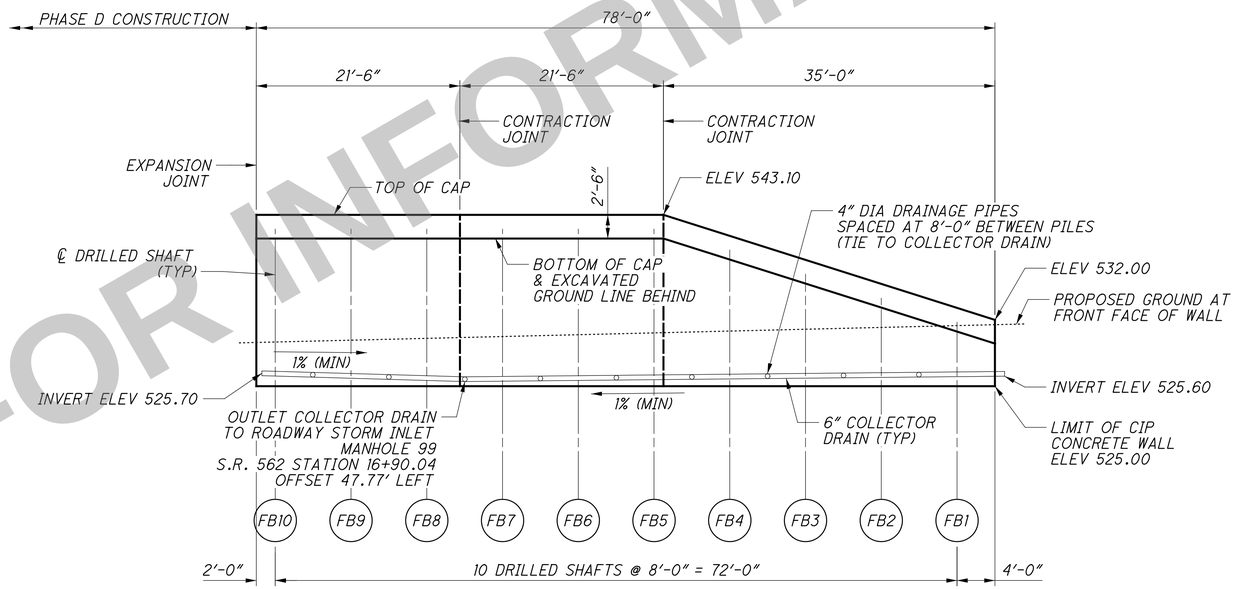
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2017

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FORWARD ABUTMENT ELEVATION
PHASE B CONSTRUCTION



FORWARD ABUTMENT
SOLDIER PILE AND LAGGING WALL
PHASE B CONSTRUCTION

LEGEND:

(FB#) INDICATES LAGGING WALL PREBORED W18 PILE NUMBER

NOTES:

1. MECHANICALLY SPLICE REINFORCEMENT THAT CAN NOT ACHEIVE ADEQUATE SPLICE LENGTH DUE TO INTERFERENCE WITH SHORING. COST OF MECHANICAL SPLICING SHALL BE INCIDENTAL TO THE COST OF THE REINFORCING. MECHANICAL SPLICERS SHALL BE SUBMITTED TO NSRR FOR REVIEW AND APPROVAL. 10 MECHANICAL SPLICES SHALL BE ASSUMED IN THE CONSTRUCTION COST AT THIS LOCATION (FOR BIDDING PURPOSES ONLY).
2. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 55/57.

FORWARD ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	18/57
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ABUTMENT ELEVATION (PHASE B):	29/57
ABUTMENT PLANS (PHASE D):	30/57
ABUTMENT ELEVATION (PHASE D):	31/57
WINGWALL ELEVATIONS:	32/57
TYPICAL DETAILS:	33/57 - 34/57
FIXED BEARING:	47/57 - 48/57
REINFORCING LIST:	55/57 - 56/57

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2600 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
EFD	CAN	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

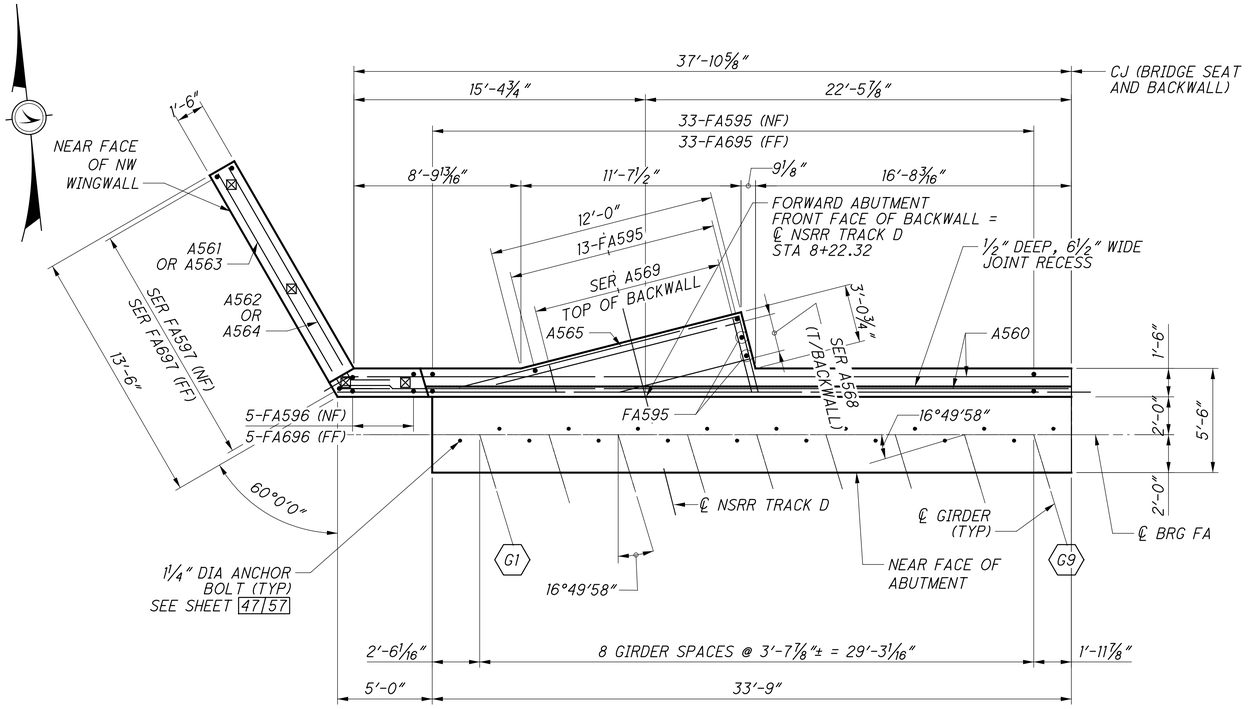
FORWARD ABUTMENT ELEVATION - PHASE B
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

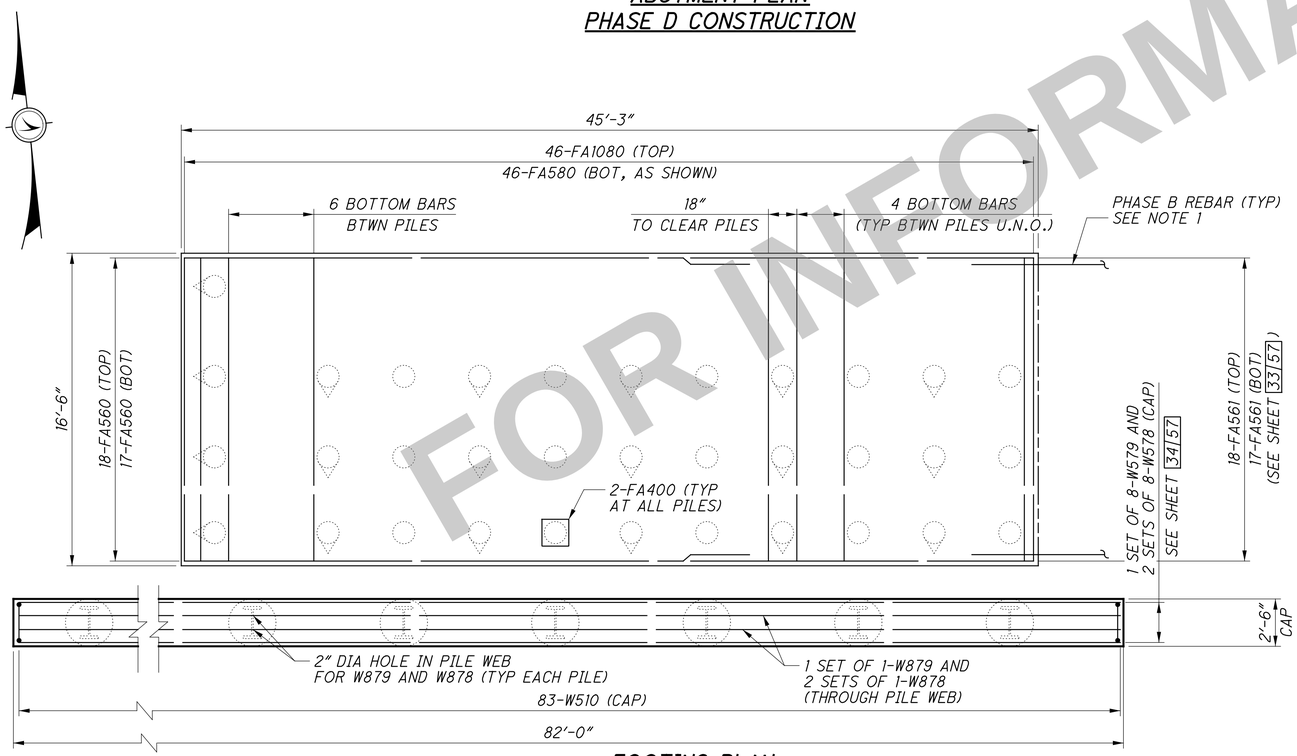
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2017

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ABUTMENT PLAN
PHASE D CONSTRUCTION



FOOTING PLAN
PHASE D CONSTRUCTION

NOTES:

1. MECHANICALLY SPLICE REINFORCEMENT THAT CAN NOT ACHEIVE ADEQUATE SPLICE LENGTH DUE TO INTERFERENCE WITH SHORING. COST OF MECHANICAL SPLICING SHALL BE INCIDENTAL TO THE COST OF THE REINFORCING. MECHANICAL SPLICERS SHALL BE SUBMITTED TO NSRR FOR REVIEW AND APPROVAL. 10 MECHANICAL SPLICES SHALL BE ASSUMED IN THE CONSTRUCTION COST AT THIS LOCATION (FOR BIDDING PURPOSES ONLY).
2. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 55|57 .

FORWARD ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	18|57
GENERAL PLAN & ELEV:	26|57
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ABUTMENT ELEVATION (PHASE B):	29|57
ABUTMENT PLANS (PHASE D):	30|57
ABUTMENT ELEVATION (PHASE D):	31|57
WINGWALL ELEVATIONS:	32|57
TYPICAL DETAILS:	33|57 - 34|57
FIXED BEARING:	47|57 - 48|57
REINFORCING LIST:	55|57 - 56|57

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

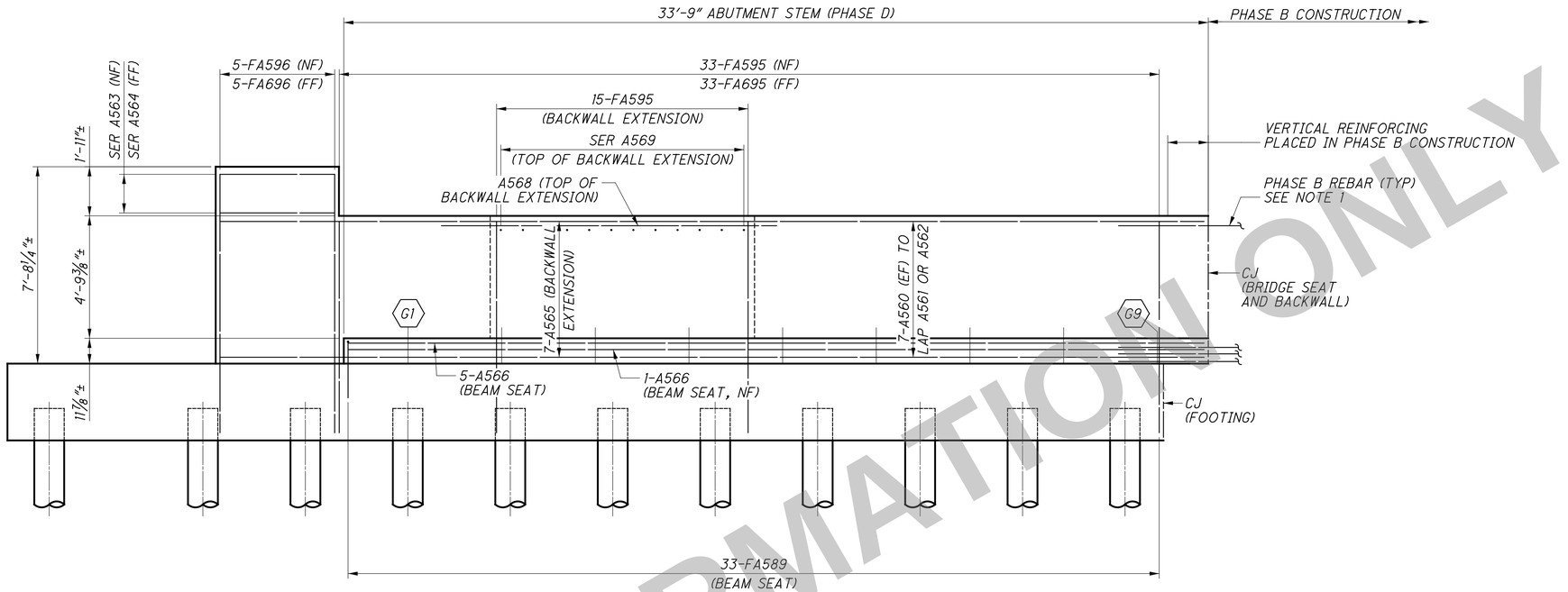
DESIGNED	DRAWN	REVIEWED	DATE
EFD	CAN	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

FORWARD ABUTMENT PLAN AND FOOTING PLAN - PHASE D
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

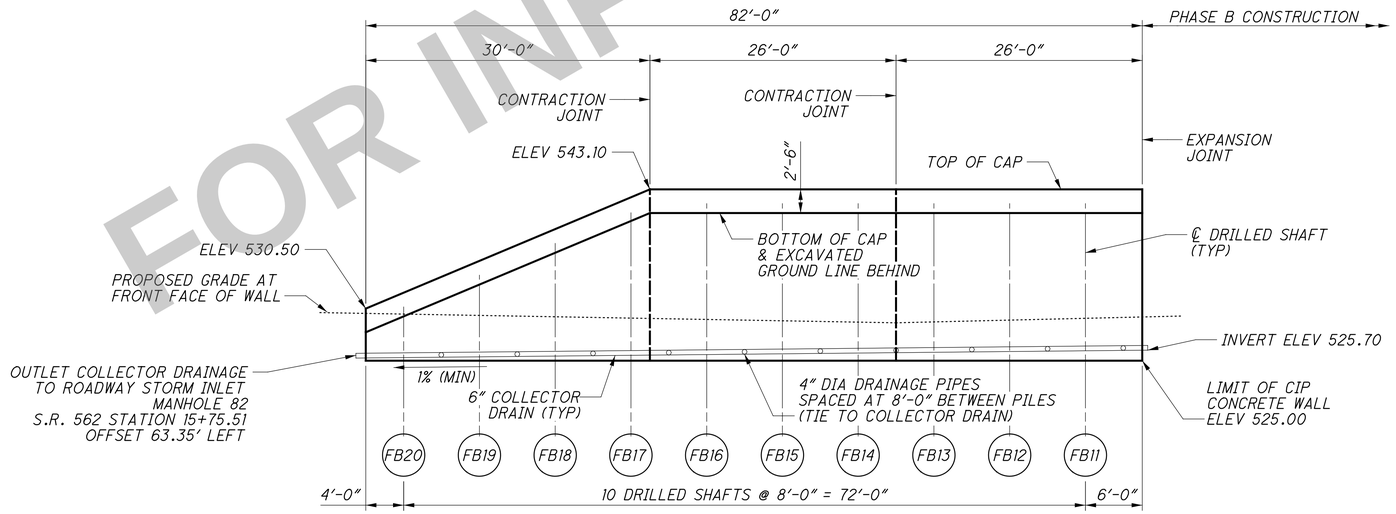
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PID No. 77889

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FORWARD ABUTMENT ELEVATION
PHASE D CONSTRUCTION



FORWARD ABUTMENT
SOLDIER PILE AND LAGGING WALL
PHASE D CONSTRUCTION

LEGEND:

(FB#) INDICATES LAGGING WALL PREBORED W18 PILE NUMBER

NOTES:

1. MECHANICALLY SPLICE REINFORCEMENT THAT CAN NOT ACHEIVE ADEQUATE SPLICE LENGTH DUE TO INTERFERENCE WITH SHORING. COST OF MECHANICAL SPLICING SHALL BE INCIDENTAL TO THE COST OF THE REINFORCING. MECHANICAL SPLICERS SHALL BE SUBMITTED TO NSRR FOR REVIEW AND APPROVAL. 10 MECHANICAL SPLICES SHALL BE ASSUMED IN THE CONSTRUCTION COST AT THIS LOCATION (FOR BIDDING PURPOSES ONLY).
2. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 55/57.

FORWARD ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	18/57	
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ABUTMENT ELEVATION (PHASE B):	29/57	
ABUTMENT PLANS (PHASE D):	30/57	
ABUTMENT ELEVATION (PHASE D):	31/57	
WINGWALL ELEVATIONS:	32/57	
TYPICAL DETAILS:	33/57	- 34/57
FIXED BEARING:	47/57	- 48/57
REINFORCING LIST:	55/57	- 56/57

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE SUITE 230
COLUMBUS, OHIO 43231

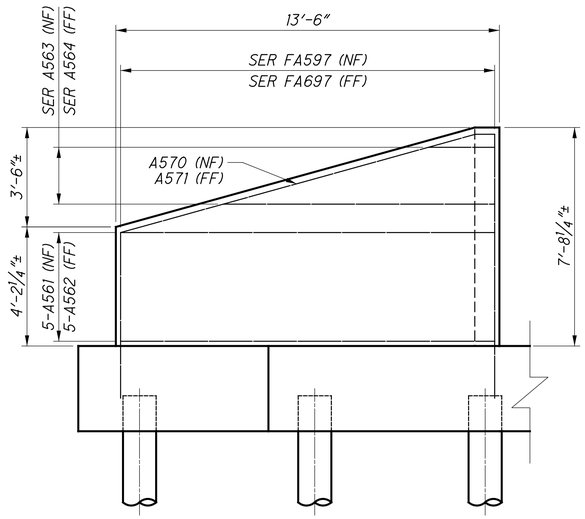
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EFD	CAN	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

FORWARD ABUTMENT ELEVATION – PHASE D
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

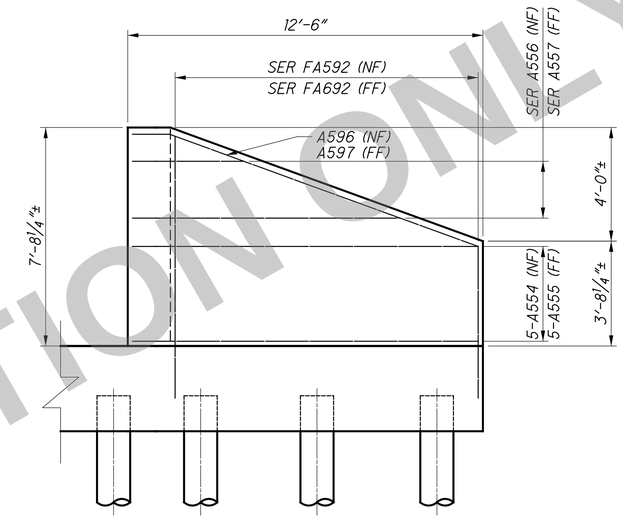
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2017

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NORTHWEST WINGWALL ELEVATION

PHASE D



NORTHEAST WINGWALL ELEVATION

PHASE B

FOR INFORMATION ONLY

NOTES:

1. VERTICALLY/HORIZONTALLY ADJUST THE BARS AS REQUIRED TO CLEAR THE PILES.
2. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 55/57 .
3. WINGWALL PILES SHOWN ARE APPROXIMATE LOCATIONS DUE TO THE SKEW ANGLE.

FORWARD ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	18/57	
GENERAL PLAN & ELEV:	26/57	
EXISTING ABUTMENT REMOVAL:	27/57	
ABUTMENT PLANS (PHASE B):	28/57	
ABUTMENT ELEVATION (PHASE B):	29/57	
ABUTMENT PLANS (PHASE D):	30/57	
ABUTMENT ELEVATION (PHASE D):	31/57	
WINGWALL ELEVATIONS:	32/57	
TYPICAL DETAILS:	33/57	- 34/57
FIXED BEARING:	47/57	- 48/57
REINFORCING LIST:	55/57	- 56/57

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COLUMBUS, OHIO 43231

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CTM		NSRR BR#: BR0018448	

FORWARD ABUTMENT WINGWALL ELEVATIONS

BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)

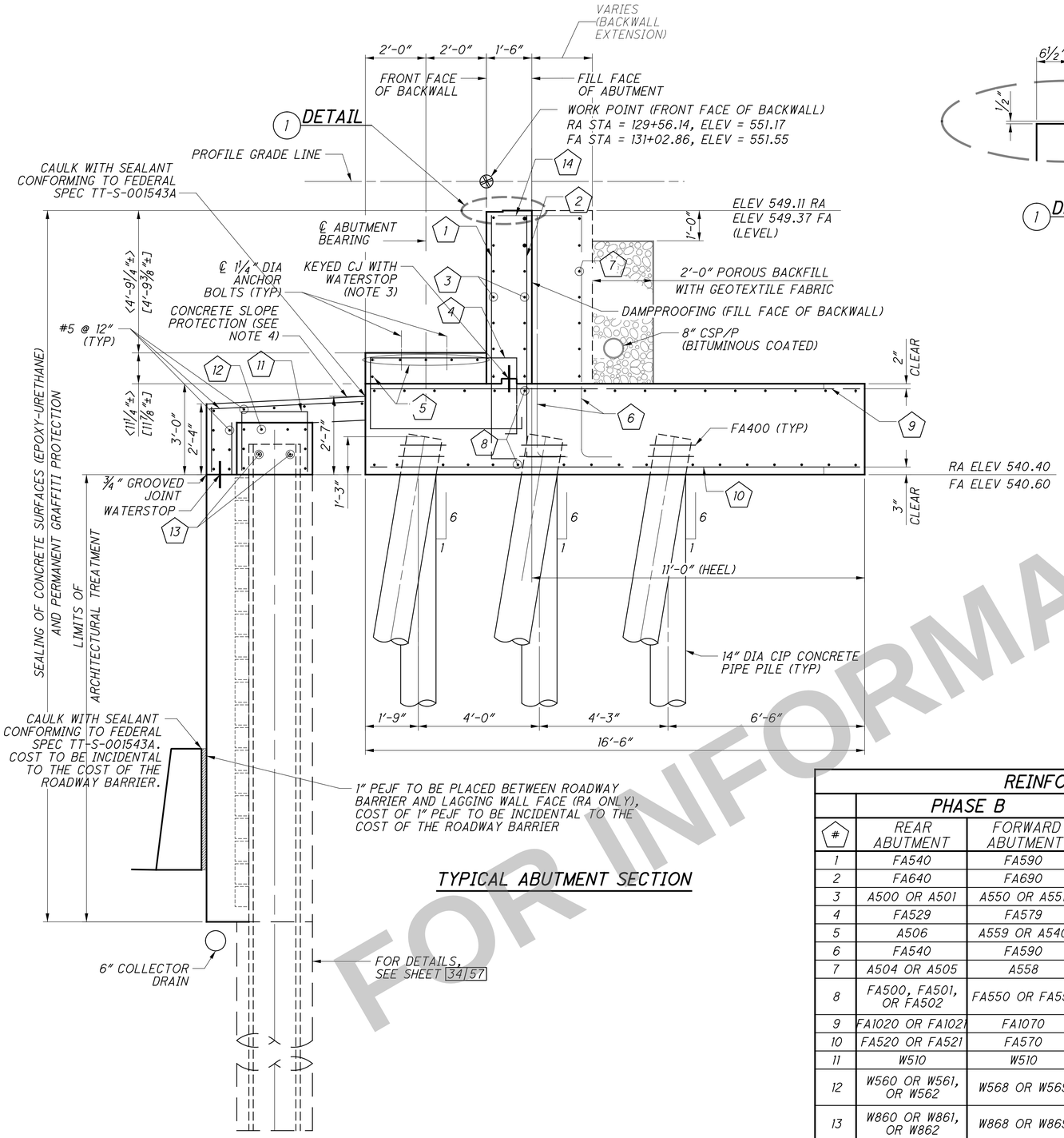
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85

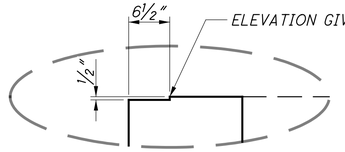
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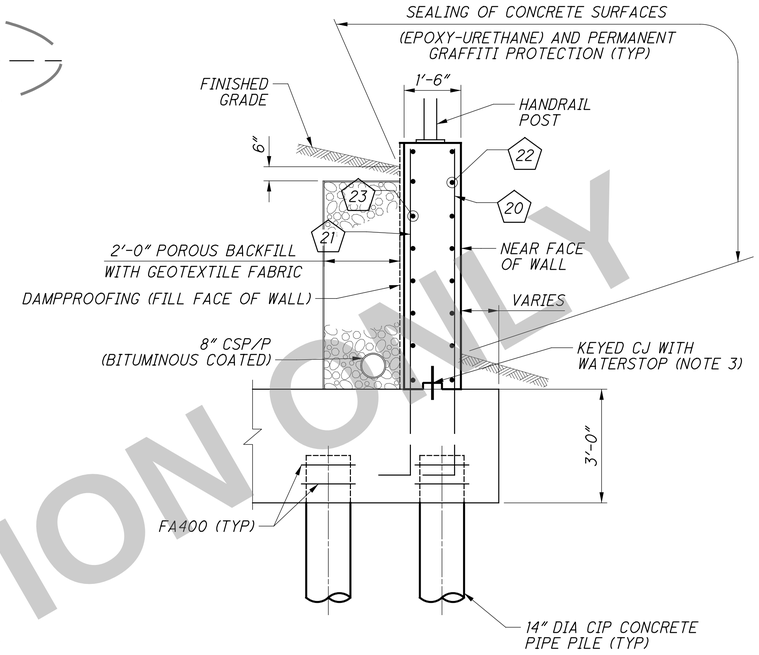
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TYPICAL ABUTMENT SECTION





TYPICAL WINGWALL SECTION

FOR FOOTING REINFORCEMENT,
SEE ABUTMENT SHEETS 21/57, 23/57, 28/57 & 30/57.

SOLDIER PILE WALL

REINFORCING				
	PHASE B		PHASE D	
⬠ #	REAR ABUTMENT	FORWARD ABUTMENT	REAR ABUTMENT	FORWARD ABUTMENT
1	FA540	FA590	FA549	FA595
2	FA640	FA690	FA649	FA695
3	A500 OR A501	A550 OR A551	A510	A560
4	FA529	FA579	FA539	FA589
5	A506	A559 OR A540	A515	A566
6	FA540	FA590	FA549	FA595
7	A504 OR A505	A558	A513 OR A514	A565
8	FA500, FA501, OR FA502	FA550 OR FA551	FA510, FA511, OR FA512	FA560 OR FA561
9	FA1020 OR FA1021	FA1070	FA1030 OR FA1031	FA1080
10	FA520 OR FA521	FA570	FA530 OR FA531	FA580
11	W510	W510	W510	W510
12	W560 OR W561, OR W562	W568 OR W569	W570 OR W571	W579
13	W860 OR W861, OR W862	W868 OR W869	W870 OR W871	W879
14	A507 OR A508	A598 OR A599	A516 OR A517	A568 OR A569
20	FA542	FA592	FA548	FA597
21	FA642	FA692	FA648	FA697
22	A502	A554, A556, OR A596	A511	A561, A563, OR A570
23	A503	A555, A557, OR A597	A512	A562, A564, OR A571

NOTES:

1. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 55/57.
2. DIMENSIONS IN <DIM> REFER TO THE REAR ABUTMENT. DIMENSIONS IN [DIM] REFER TO THE FORWARD ABUTMENT.
3. WATERSTOPS SHALL BE 6"x⅜" PVC AND SHALL BE CONTINUOUS ACROSS JOINT. FOR RAISED KEYWAY DETAIL, SEE TYPICAL STRUCTURAL DETAILS SHEET 1513/2017.
4. THE SLOPE PROTECTION CONCRETE HAS BEEN QUANTIFIED AND INCLUDED IN THE QUANTITY OF THE CONCRETE CAP, PAID FOR WITH CLASS QC1 CONCRETE, FOOTING, AS PER PLAN. REINFORCING SHOWN IS THE MINIMUM REQUIRED AND TO BE INCLUDED WITH THE PAYMENT FOR CONCRETE. SLOPE PROTECTION SHALL BE PLACED ATOP THE HORIZONTAL AREAS OF THE CONCRETE CAP AND END WHEN THE WALL BEGINS TO DECREASE IN HEIGHT, SPECIFICALLY: REAR ABUTMENT FROM SR 562 STA. 16+66 TO 17+56, FORWARD ABUTMENT FROM SR 562 STA. 16+15 TO 17+11.

ABUTMENT SHEET REFERENCES

FOUNDATION PLANS: 16/57 & 18/57
REAR ABUTMENT PLANS: 19/57 - 25/57
FORWARD ABUTMENT PLANS: 26/57 - 32/57
REINFORCING LIST: 55/57 - 56/57

FOR INFORMATION ONLY

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ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

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CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

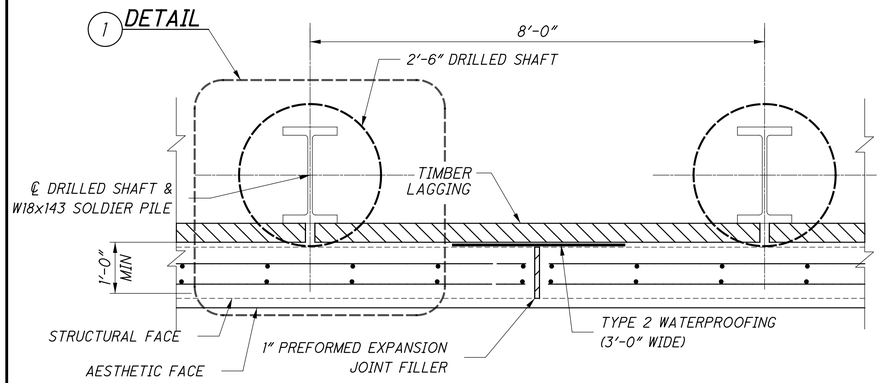
TYPICAL ABUTMENT SECTIONS
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

33 / 57

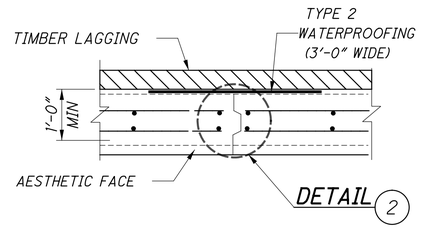
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2017

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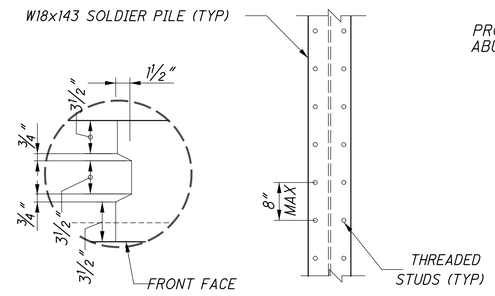


EXPANSION JOINT DETAIL

LOCATED BETWEEN CONSTRUCTION PHASES

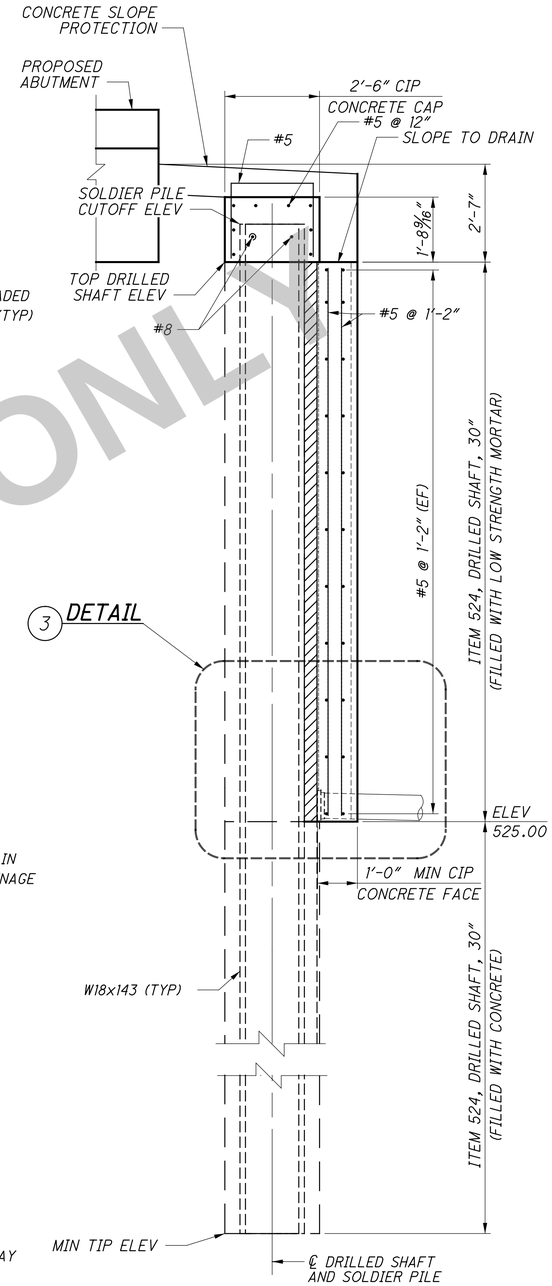


CONTRACTION JOINT DETAIL

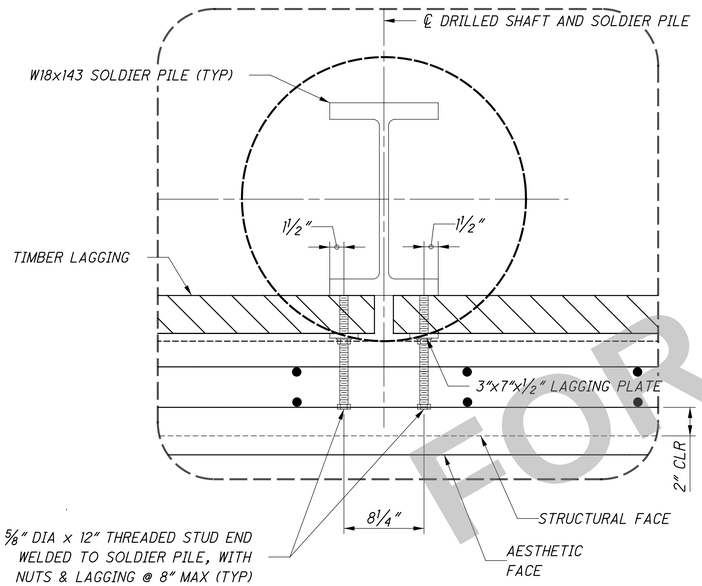


2 DETAIL

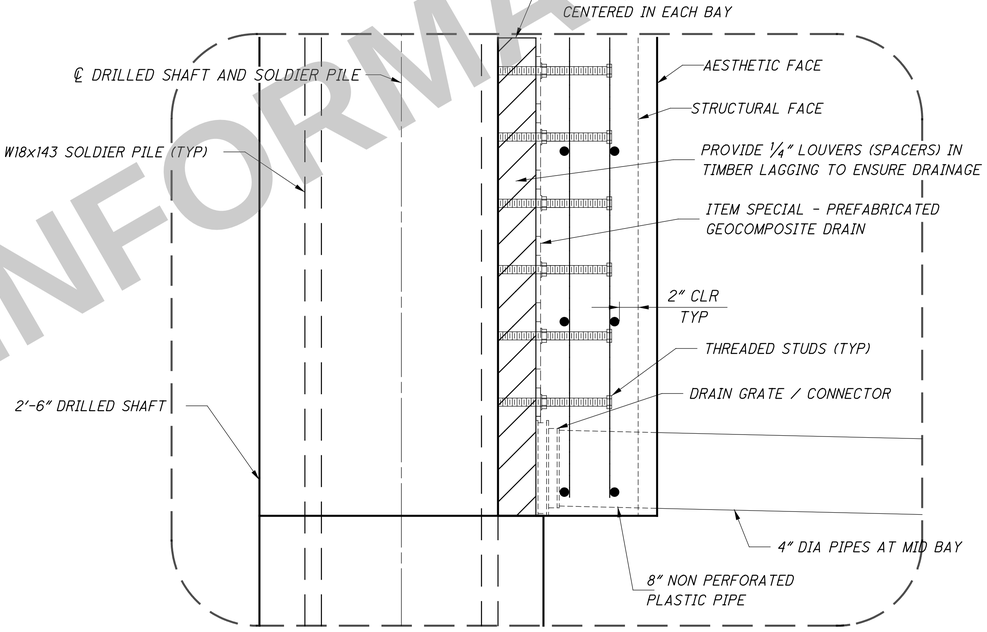
SOLDIER PILE ELEVATION



TYPICAL RETAINING WALL



1 DETAIL



3 DETAIL

NOTES:

1. THE HORIZONTAL AND VERTICAL REINFORCING STEEL SHALL NOT EXCEED 14" AND SHALL CONTAIN 0.25 SQUARE INCHES OF STEEL PER FOOT IN EACH DIRECTION (AREMA CHAPTER 8-2.12). REINFORCING STEEL MAY CONSIST OF REINFORCING BARS OR WELDED WIRE FABRIC. PERIMETER BARS SHALL BE #5. FOR MORE NOTES, INCLUDING BASIS OF PAYMENT, SEE SHEET 1503/2017 .

FOR INFORMATION ONLY

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DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE SUITE 230
COLUMBUS, OHIO 43231

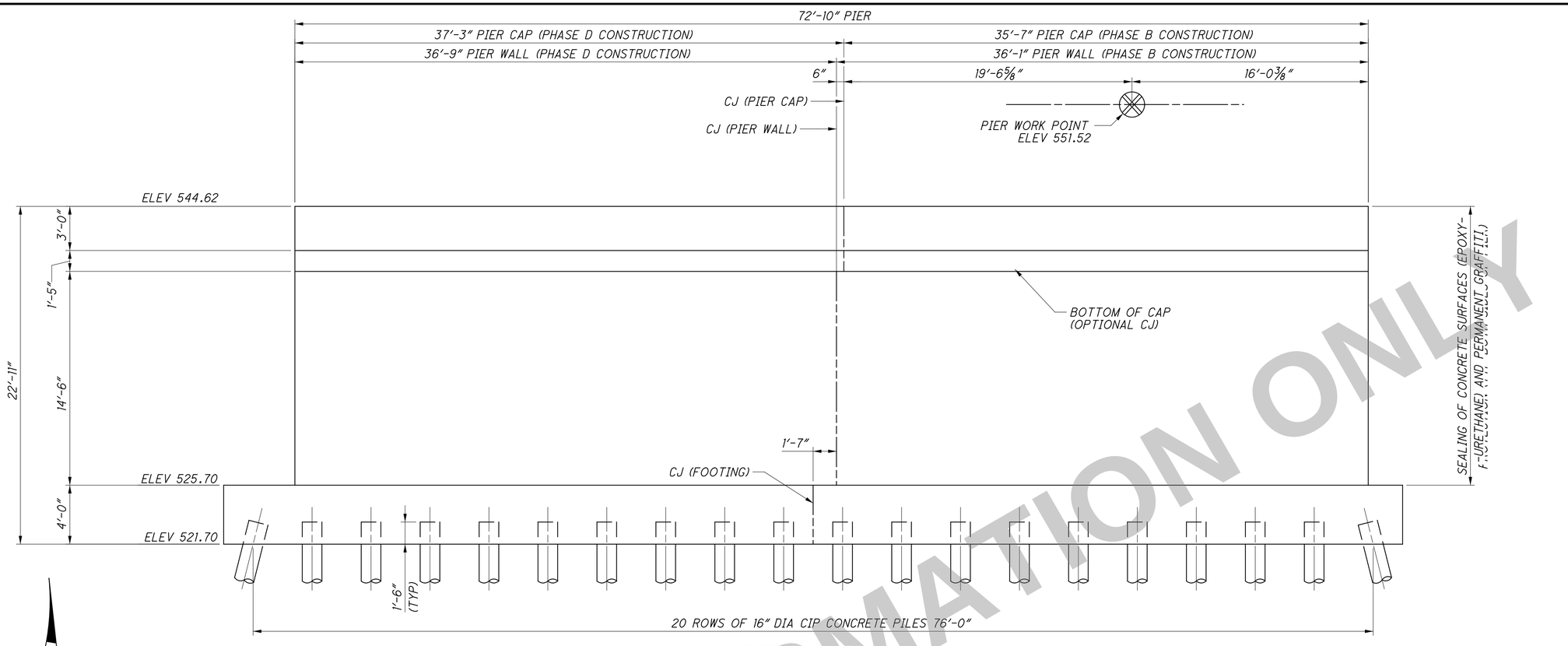
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EFD	CAN	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

PILE AND LAGGING WALL DETAILS

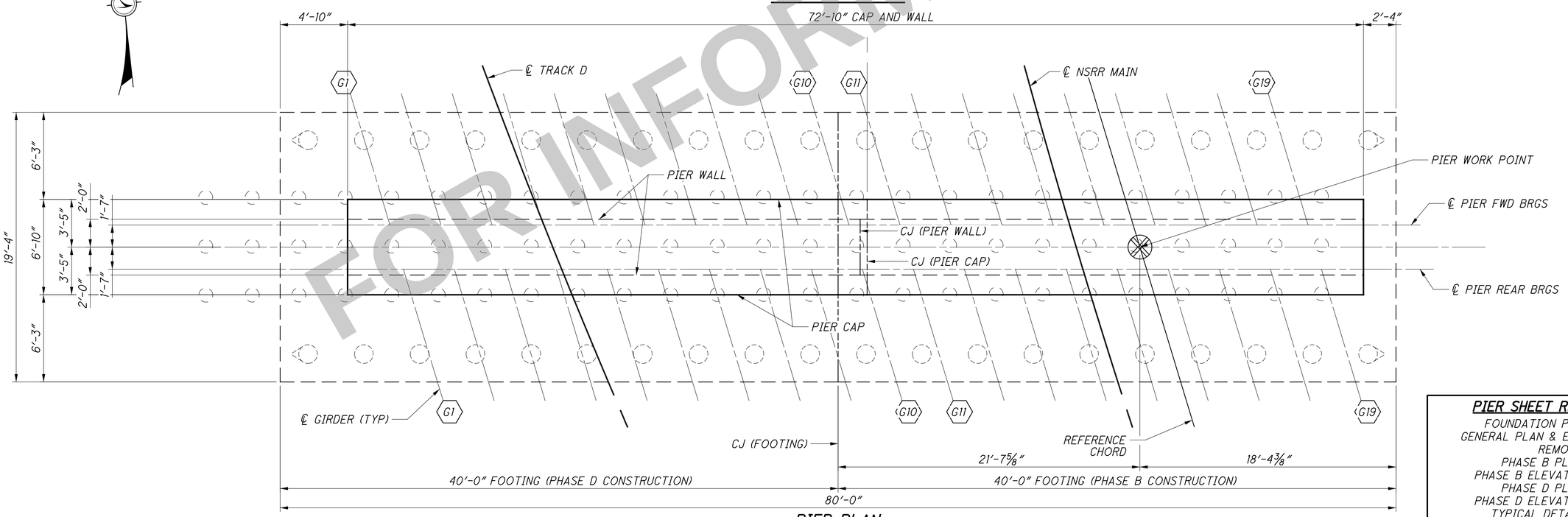
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

1548
2017



PIER ELEVATION



PIER PLAN

FOR INFORMATION ONLY

PIER SHEET REFERENCES

FOUNDATION PLAN:	17 | 57
GENERAL PLAN & ELEV:	35 | 57
REMOVAL:	36 | 57
PHASE B PLANS:	37 | 57
PHASE B ELEVATION:	38 | 57
PHASE D PLANS:	39 | 57
PHASE D ELEVATION:	40 | 57
TYPICAL DETAILS:	41 | 57
EXPANSION BEARING:	47 | 57 - 48 | 57
REINFORCING LIST:	55 | 57 - 56 | 57

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
EFD	CJG	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

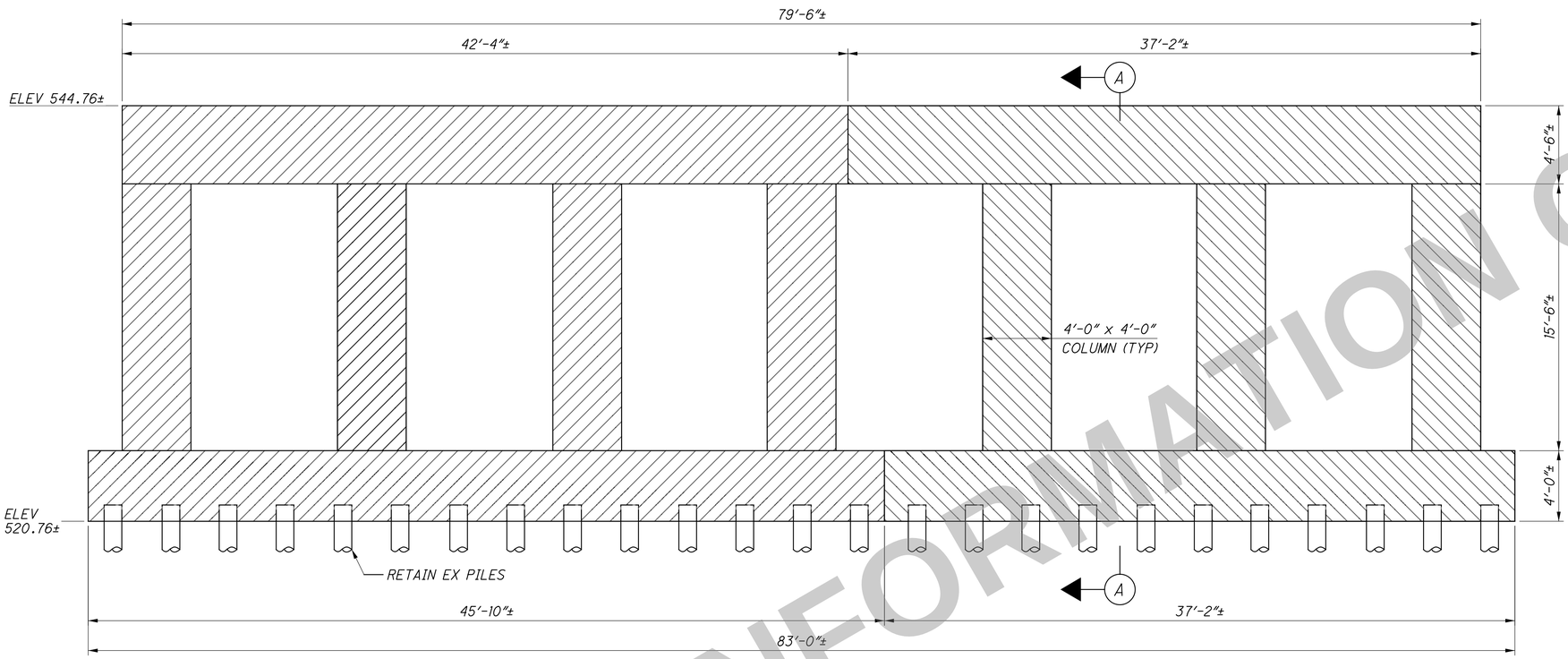
PIER - PLAN & ELEVATION

BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

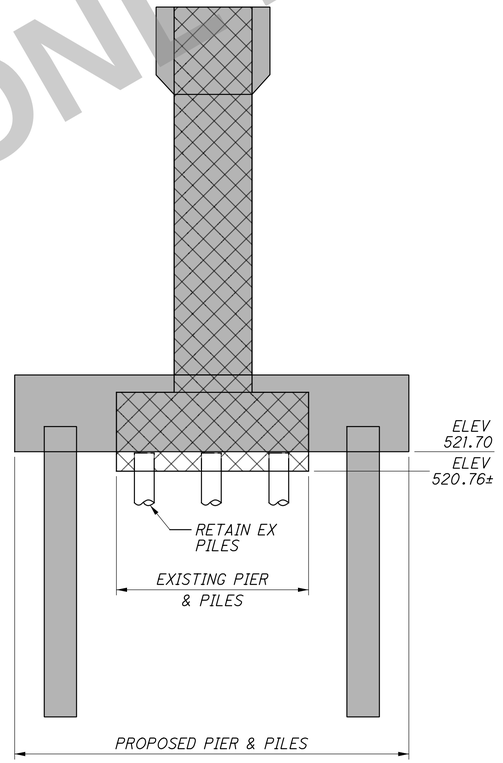
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ELEVATION - EXISTING PIER PHASE REMOVAL

LOOKING UPSTATION



A SECTION

FOR INFORMATION ONLY

LEGEND:

- PHASE A REMOVAL
- PHASE C REMOVAL
- PHASE A OR PHASE C REMOVAL
- PHASE B OR PHASE D CONSTRUCTION

NOTES:

1. EXISTING PILE TOPS THAT EXTEND ABOVE ELEVATION 521.70 SHALL BE CUTOFF TO ELEVATION 521.70. EXISTING PILES MAY ENGAGE PROPOSED PIER FOOTING CONCRETE (BELOW THE PROPOSED REINFORCING) BUT ARE NOT INCLUDED IN THE DESIGN STRENGTH OF THE PROPOSED PIER FOOTING. ANY FOOTING CONCRETE PLACED BELOW ELEVATION 521.70 DUE TO CONTRACTOR ADHERANCE TO THIS SHALL BE CONSIDERED INCIDENTAL TO THE PROPOSED FOOTING CONCRETE.

PIER SHEET REFERENCES

FOUNDATION PLAN:	17 / 57
GENERAL PLAN & ELEV:	35 / 57
REMOVAL:	36 / 57
PHASE B PLANS:	37 / 57
PHASE B ELEVATION:	38 / 57
PHASE D PLANS:	39 / 57
PHASE D ELEVATION:	40 / 57
TYPICAL DETAILS:	41 / 57
EXPANSION BEARING:	47 / 57 - 48 / 57
REINFORCING LIST:	55 / 57 - 56 / 57

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
EFD	DKU	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

PIER: REMOVAL STAGES AND DETAILS

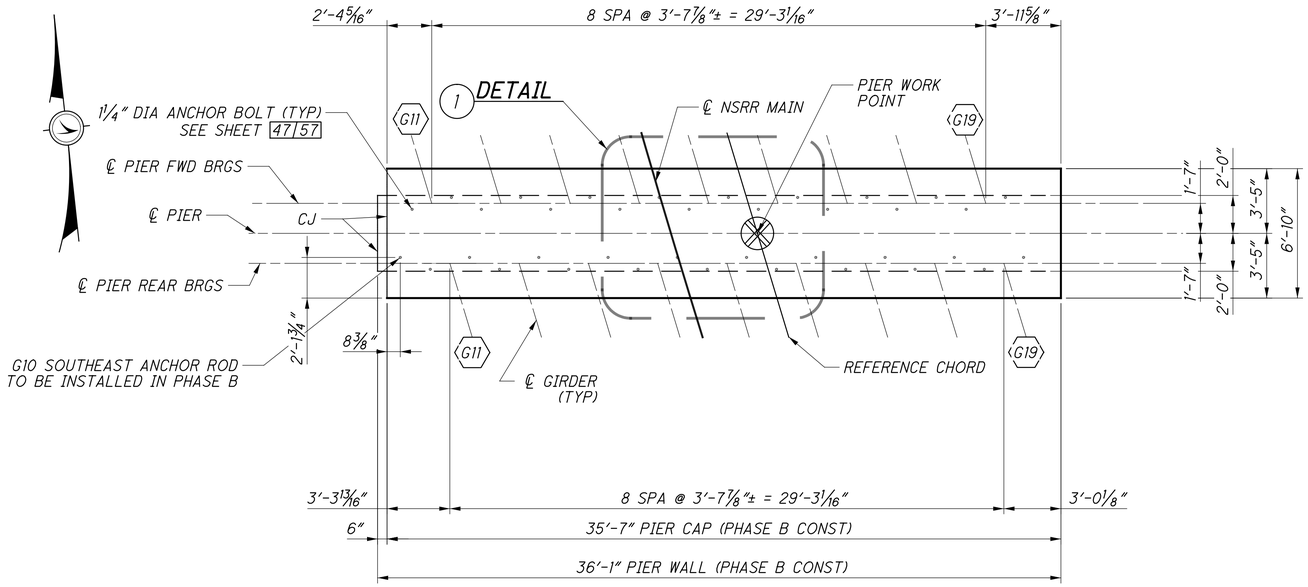
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

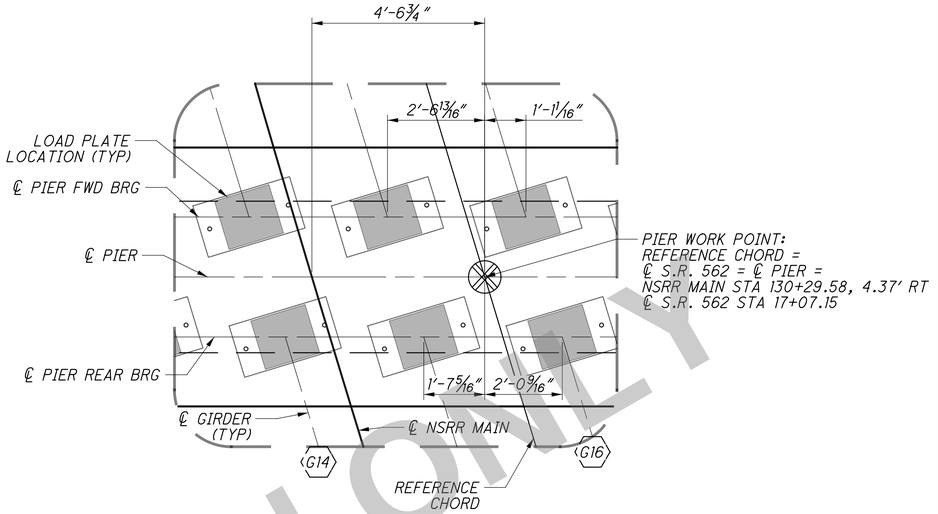
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2017

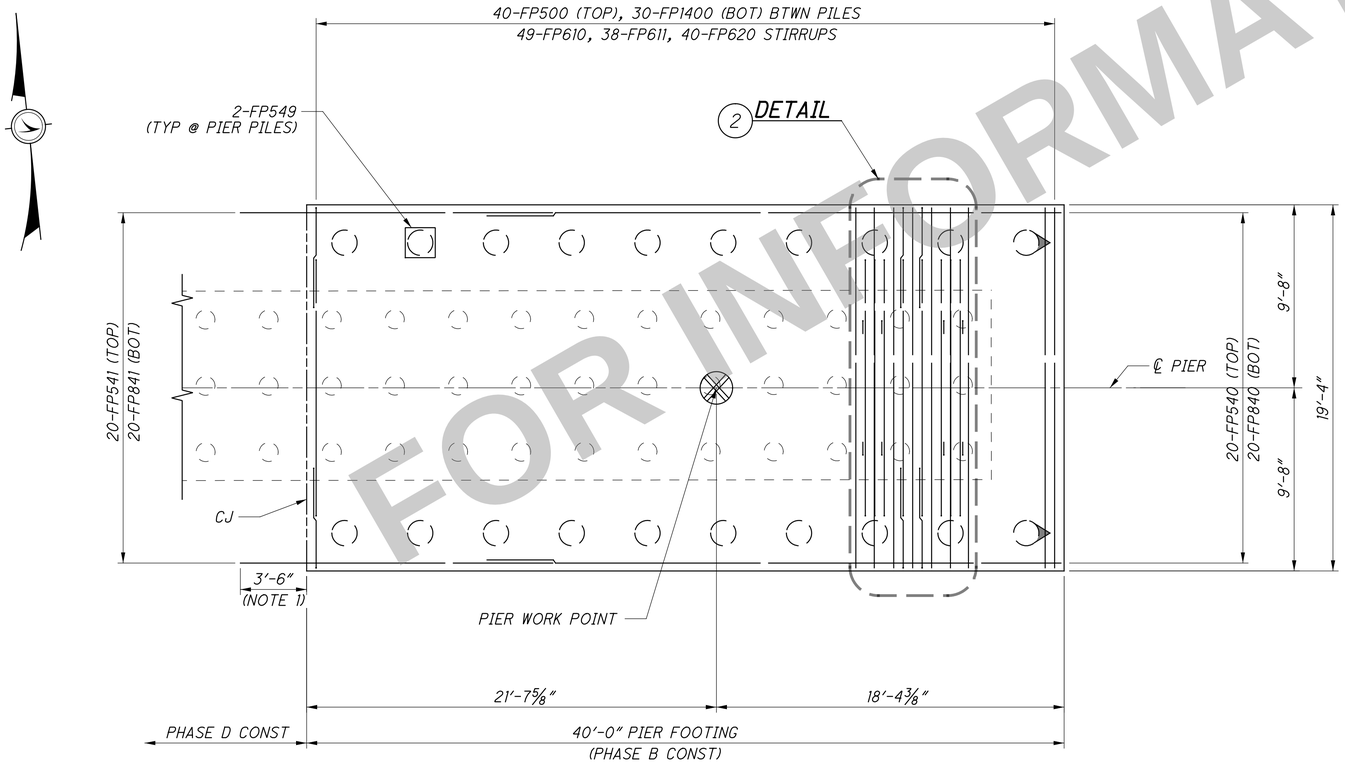
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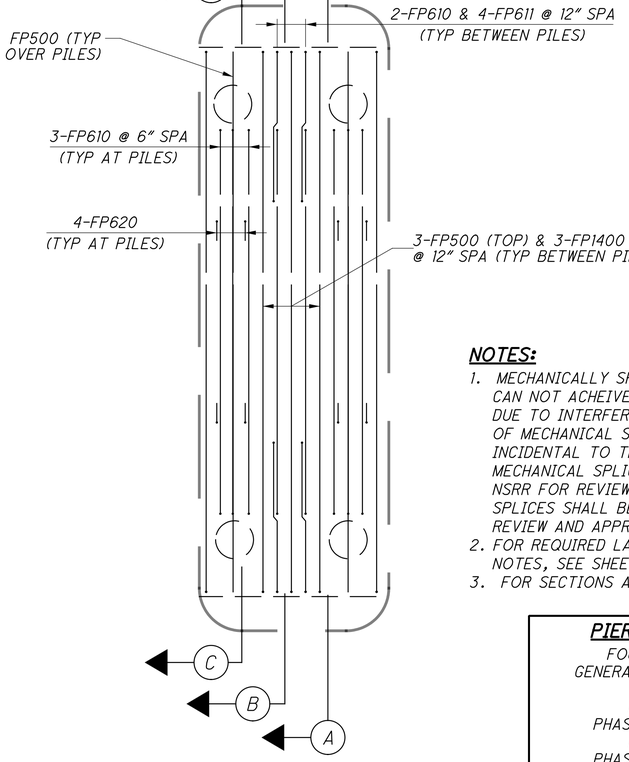
PIER PLAN
PHASE B CONSTRUCTION



1 WORK POINT DEFINITION
INCLUDING BEARING LAYOUT



PIER FOOTING PLAN
PHASE B CONSTRUCTION



2 TYPICAL FOOTING STIRRUP DETAIL
TRANSVERSE REINFORCEMENT

NOTES:

1. MECHANICALLY SPLICE REINFORCEMENT THAT CAN NOT ACHEIVE ADEQUATE SPLICE LENGTH DUE TO INTERFERENCE WITH SHORING. COST OF MECHANICAL SPLICING SHALL BE INCIDENTAL TO THE COST OF THE REINFORCING. MECHANICAL SPLICERS SHALL BE SUBMITTED TO NSRR FOR REVIEW AND APPROVAL. 10 MECHANICAL SPLICES SHALL BE SUBMITTED TO NSRR FOR REVIEW AND APPROVAL.
2. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 55|57 .
3. FOR SECTIONS A, B & C, SEE SHEET 41|57 .

PIER SHEET REFERENCES

FOUNDATION PLAN:	17|57
GENERAL PLAN & ELEV:	35|57
REMOVAL:	36|57
PHASE B PLANS:	37|57
PHASE B ELEVATION:	38|57
PHASE D PLANS:	39|57
PHASE D ELEVATION:	40|57
TYPICAL DETAILS:	41|57
EXPANSION BEARING:	47|57 - 48|57
REINFORCING LIST:	55|57 - 56|57

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
EFD	CJG	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

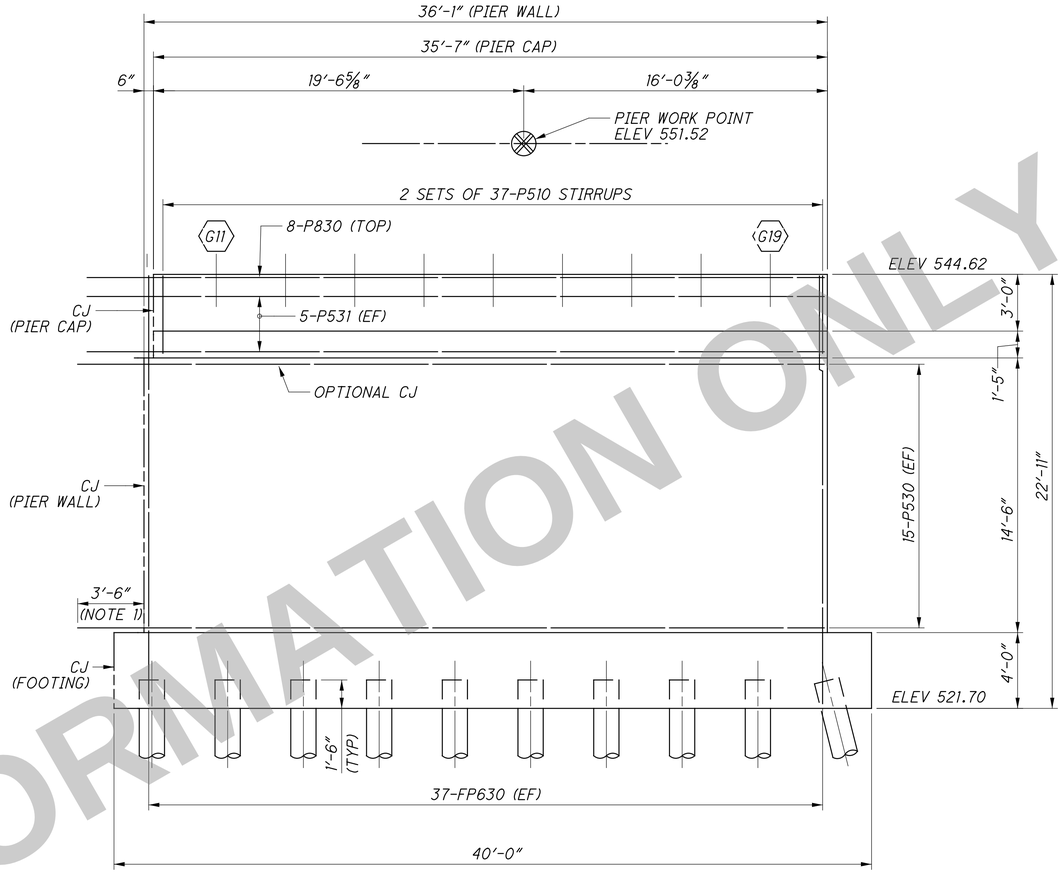
PIER PLAN AND FOOTING PLAN – PHASE B
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

37 / 57

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PIER ELEVATION

PHASE B

NOTES:

1. MECHANICALLY SPLICE REINFORCEMENT THAT CAN NOT ACHEIVE ADEQUATE SPLICE LENGTH DUE TO INTERFERENCE WITH SHORING. COST OF MECHANICAL SPLICING SHALL BE INCIDENTAL TO THE COST OF THE REINFORCING. MECHANICAL SPLICERS SHALL BE SUBMITTED TO NSRR FOR REVIEW AND APPROVAL. 10 MECHANICAL SPLICES SHALL BE ASSUMED IN THE CONSTRUCTION COST AT THIS LOCATION (FOR BIDDING PURPOSES ONLY).
2. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 55/57 .
3. VERTICALLY/HORIZONTALLY ADJUST AND FIELD CUT VERTICAL REINFORCEMENT AS REQUIRED TO CLEAR PILES.

PIER SHEET REFERENCES

FOUNDATION PLAN: 17/57
GENERAL PLAN & ELEV: 35/57
REMOVAL: 36/57
PHASE B PLANS: 37/57
PHASE B ELEVATION: 38/57
PHASE D PLANS: 39/57
PHASE D ELEVATION: 40/57
TYPICAL DETAILS: 41/57
EXPANSION BEARING: 47/57 - 48/57
REINFORCING LIST: 55/57 - 56/57

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DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE SUITE 230
COLUMBUS, OHIO 43231

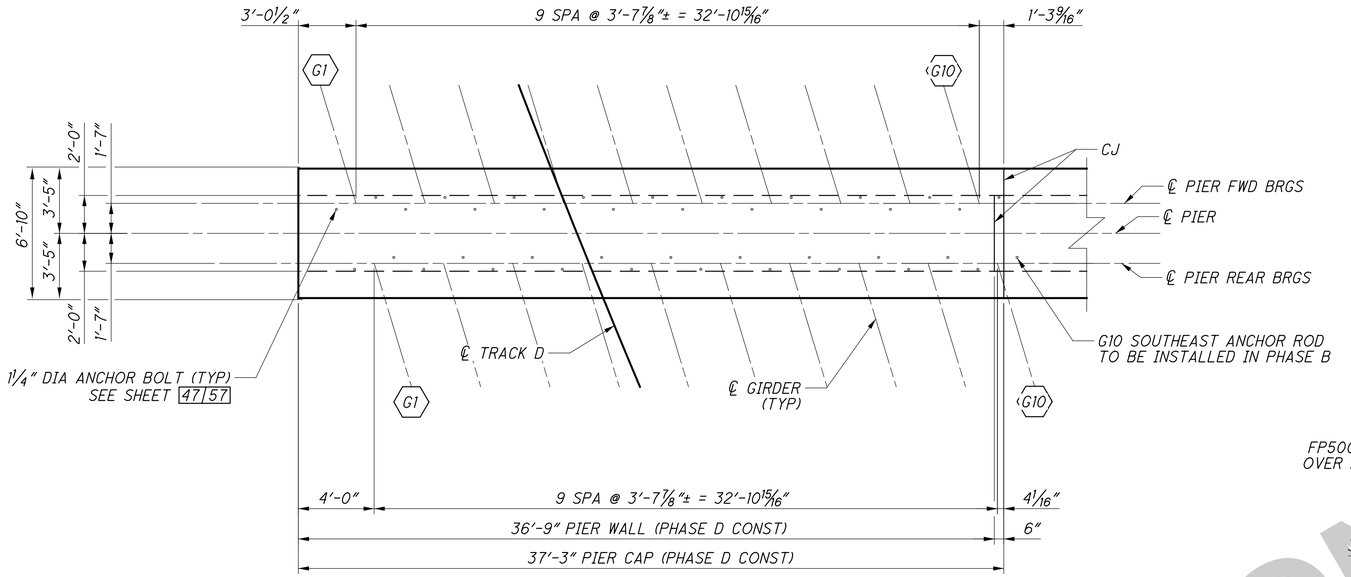
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EFD	CJG	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

PIER ELEVATION - PHASE B
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

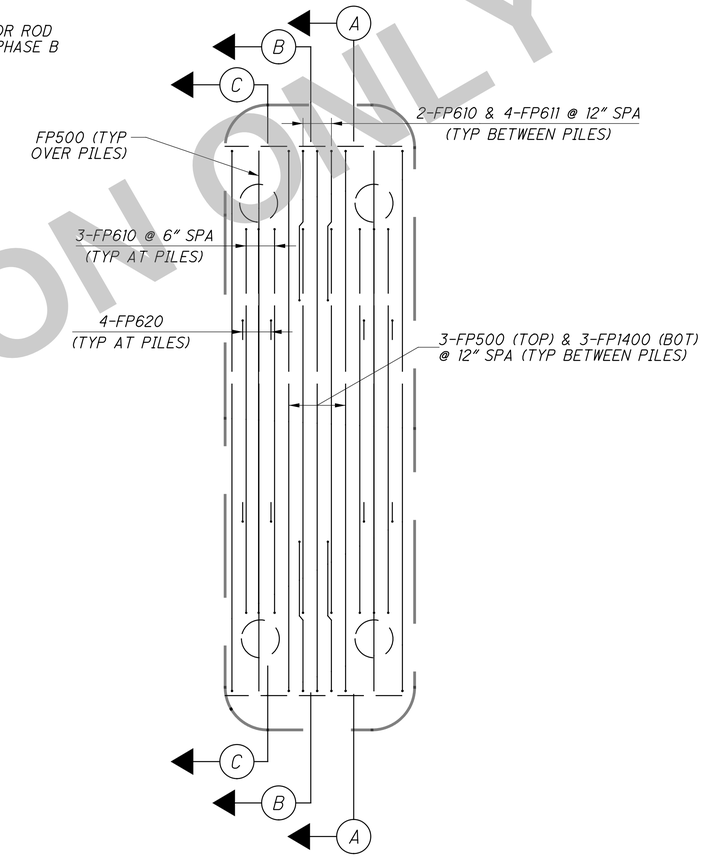
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PID No. 77889

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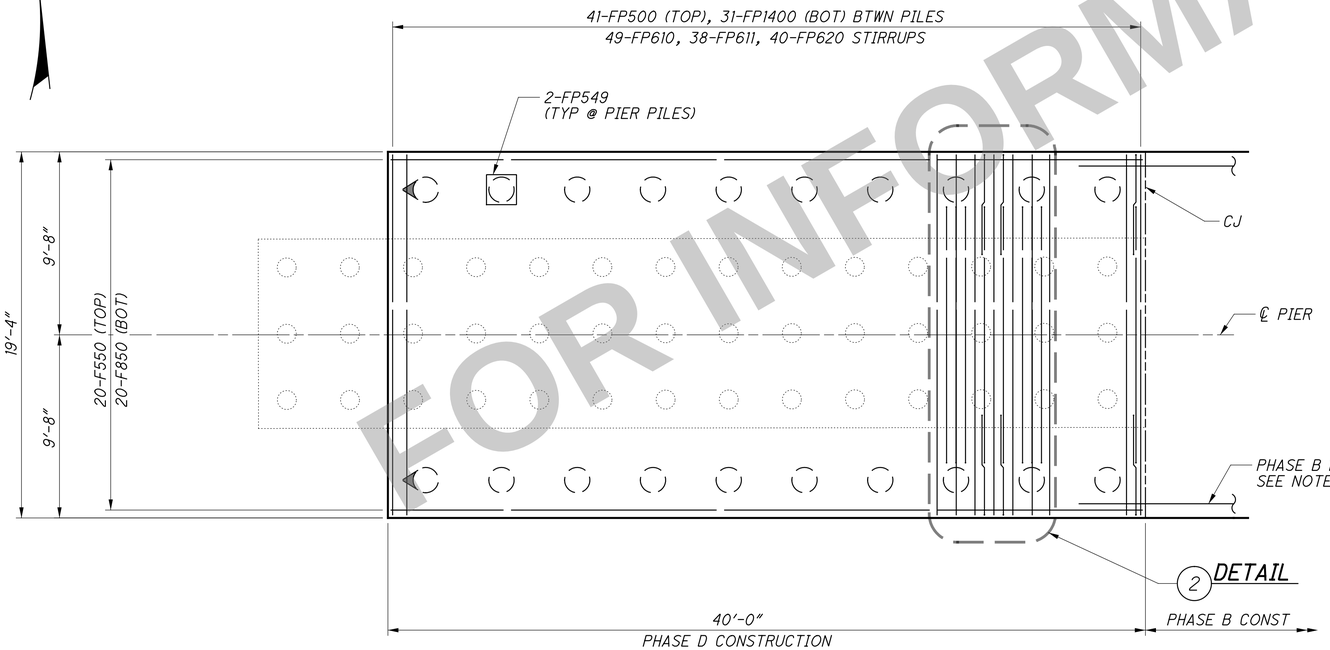
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PIER PLAN
PHASE D CONSTRUCTION



② TYPICAL FOOTING STIRRUP DETAIL
TRANSVERSE REINFORCEMENT



PIER FOOTING PLAN
PHASE D CONSTRUCTION

NOTES:

1. MECHANICALLY SPLICE REINFORCEMENT THAT CAN NOT ACHEIVE ADEQUATE SPLICE LENGTH DUE TO INTERFERENCE WITH SHORING. COST OF MECHANICAL SPLICING SHALL BE INCIDENTAL TO THE COST OF THE REINFORCING. MECHANICAL SPLICERS SHALL BE SUBMITTED TO NSRR FOR REVIEW AND APPROVAL. 10 MECHANICAL SPLICES SHALL BE ASSUMED IN THE CONSTRUCTION COST AT THIS LOCATION (FOR BIDDING PURPOSES ONLY).
2. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 55 57 .

PIER SHEET REFERENCES

FOUNDATION PLAN:	17 57
GENERAL PLAN & ELEV:	35 57
REMOVAL:	36 57
PHASE B PLANS:	37 57
PHASE B ELEVATION:	38 57
PHASE D PLANS:	39 57
PHASE D ELEVATION:	40 57
TYPICAL DETAILS:	41 57
EXPANSION BEARING:	47 57 - 48 57
REINFORCING LIST:	55 57 - 56 57

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2600 CORPORATE EXCHANGE DRIVE SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
EFD	CJG	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

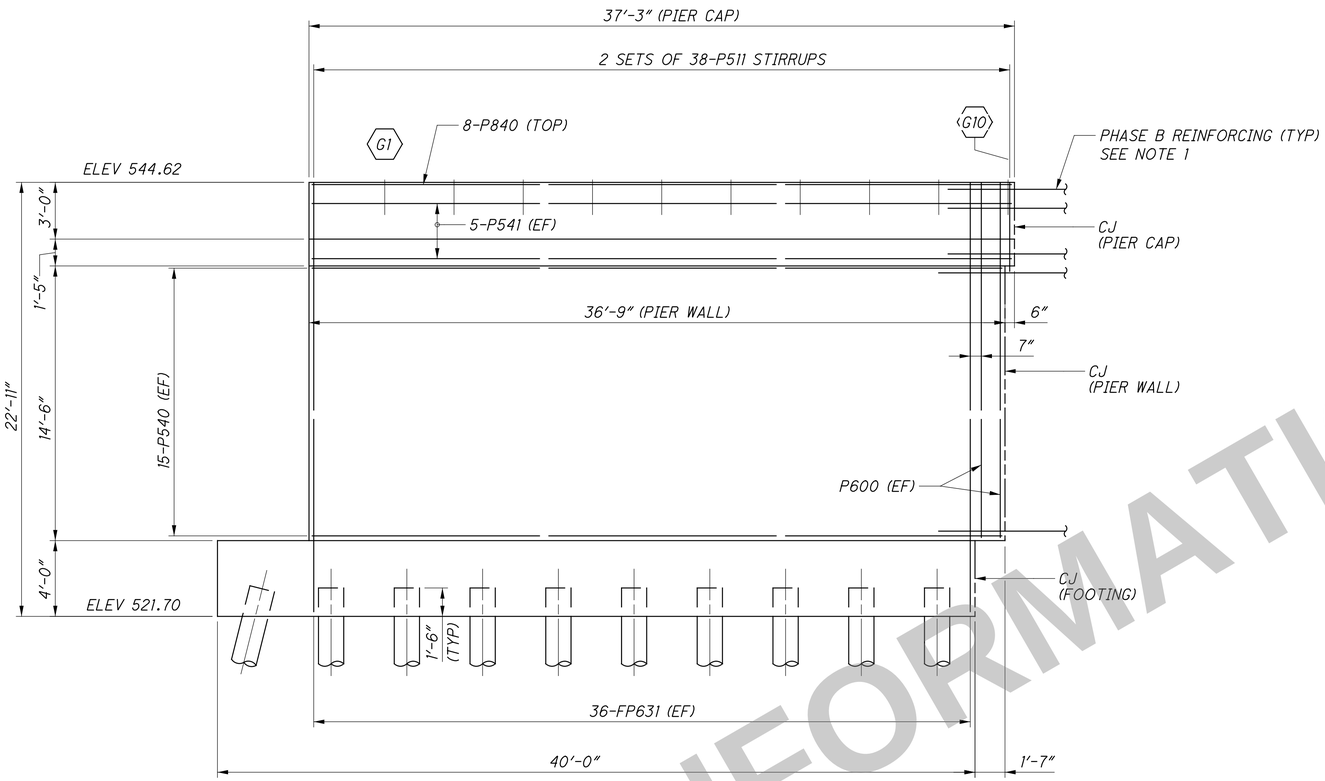
PIER PLAN AND FOOTING PLAN – PHASE D
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

39 / 57

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2017

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PIER ELEVATION
PHASE D

FOR INFORMATION ONLY

NOTES:

1. MECHANICALLY SPLICE REINFORCEMENT THAT CAN NOT ACHEIVE ADEQUATE SPLICE LENGTH DUE TO INTERFERENCE WITH SHORING. COST OF MECHANICAL SPLICING SHALL BE INCIDENTAL TO THE COST OF THE REINFORCING. MECHANICAL SPLICERS SHALL BE SUBMITTED TO NSRR FOR REVIEW AND APPROVAL. 10 MECHANICAL SPLICES SHALL BE ASSUMED IN THE CONSTRUCTION COST AT THIS LOCATION (FOR BIDDING PURPOSES ONLY).
2. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 55/57.
3. VERTICALLY/HORIZONTALLY ADJUST AND FIELD CUT VERTICAL REINFORCEMENT AS REQUIRED TO CLEAR PILES.

PIER SHEET REFERENCES

FOUNDATION PLAN:	17/57
GENERAL PLAN & ELEV:	35/57
REMOVAL:	36/57
PHASE B PLANS:	37/57
PHASE B ELEVATION:	38/57
PHASE D PLANS:	39/57
PHASE D ELEVATION:	40/57
TYPICAL DETAILS:	41/57
EXPANSION BEARING:	47/57 - 48/57
REINFORCING LIST:	55/57 - 56/57

DESIGN AGENCY
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ENGINEERS & ARCHITECTS, P.C.
2600 CORPORATE EXCHANGE DRIVE SUITE 230
COLUMBUS, OHIO 43231

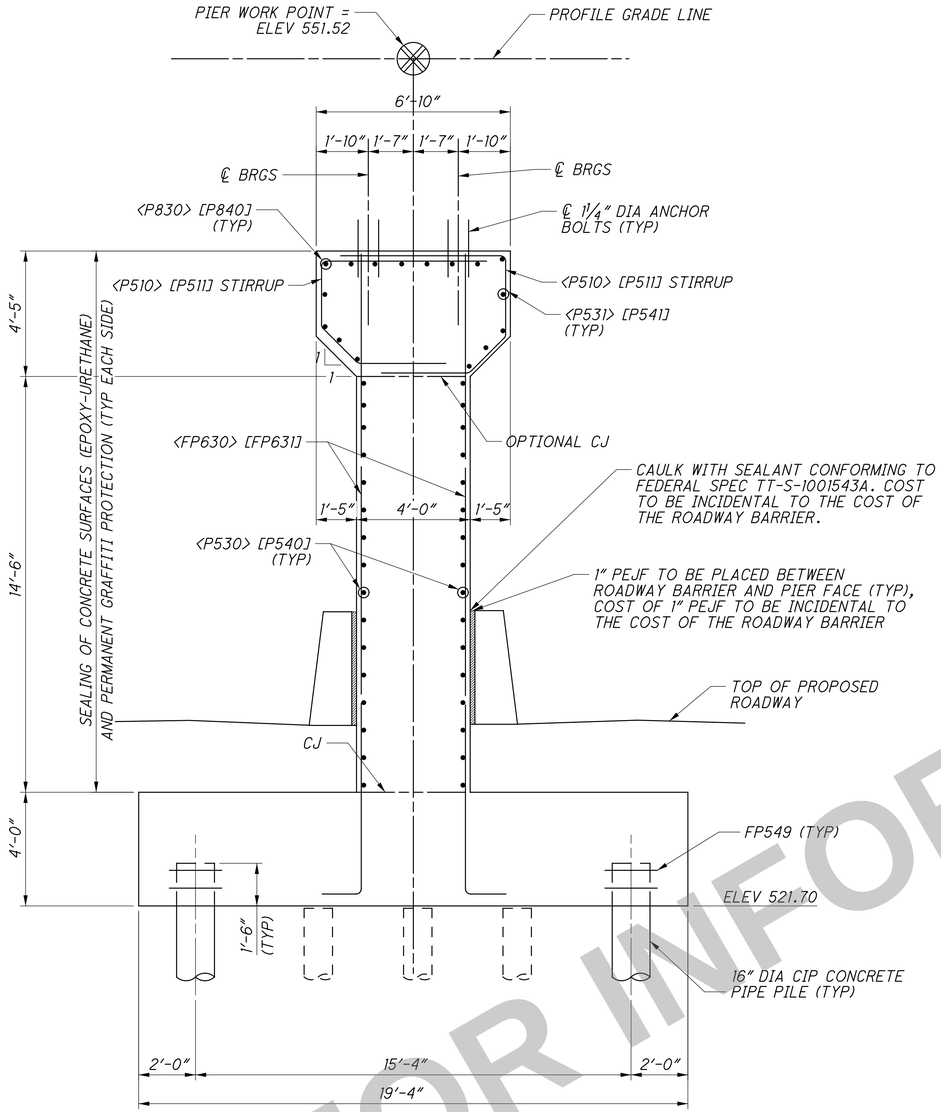
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EFD	CJG	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

PIER ELEVATION - PHASE D
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

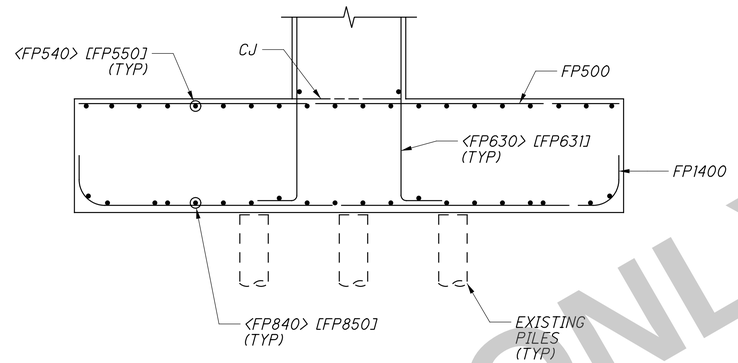
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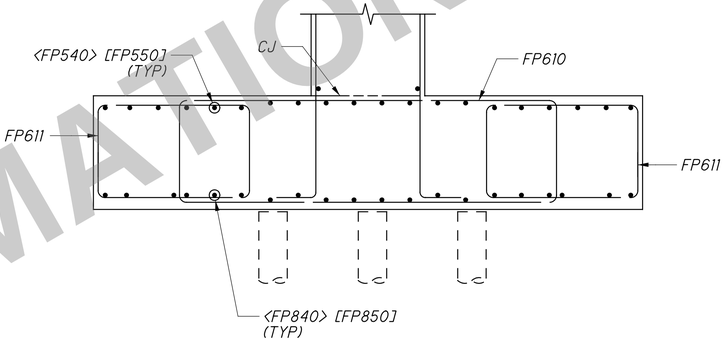


TYPICAL PIER SECTION

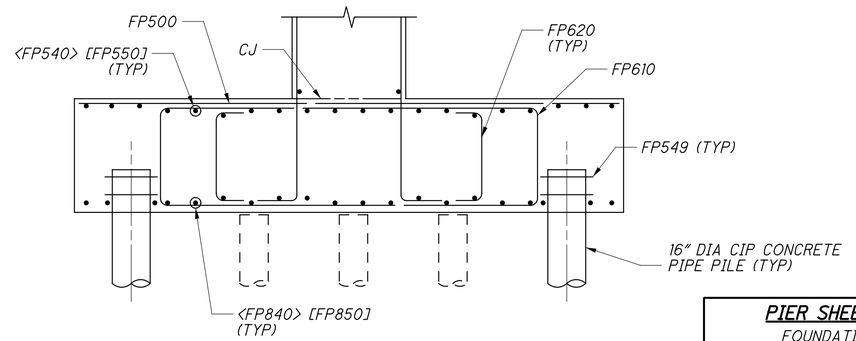
FOOTING REINFORCEMENT SHOWN IN SECTIONS A, B & C



A SECTION
37/57



B SECTION
37/57



C SECTION
37/57

NOTES:

1. DIMENSIONS AND CALLOUTS IN <DIM> REFERENCE PHASE B CONSTRUCTION.
   DIMENSIONS AND CALLOUTS IN [DIM] REFERENCE PHASE D CONSTRUCTION.
   DIMENSIONS AND CALLOUTS NOT IN BRACKETS ARE APPLICABLE TO BOTH ABUTMENTS.
2. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 55/57 .

PIER SHEET REFERENCES

FOUNDATION PLAN:	17/57
GENERAL PLAN & ELEV:	35/57
REMOVAL:	36/57
PHASE B PLANS:	37/57
PHASE B ELEVATION:	38/57
PHASE D PLANS:	39/57
PHASE D ELEVATION:	40/57
TYPICAL DETAILS:	41/57
EXPANSION BEARING:	47/57 - 48/57
REINFORCING LIST:	55/57 - 56/57

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2600 CORPORATE EXCHANGE DRIVE SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
EFD	CJG	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

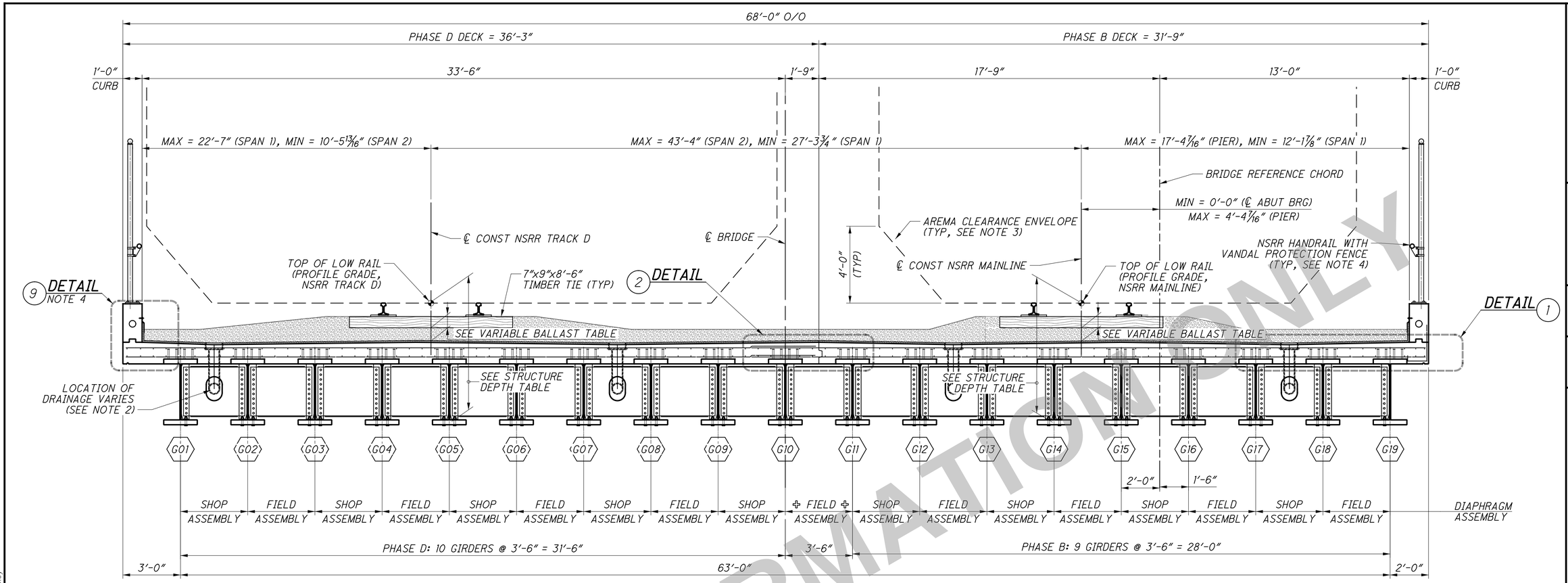
TYPICAL PIER SECTIONS

BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

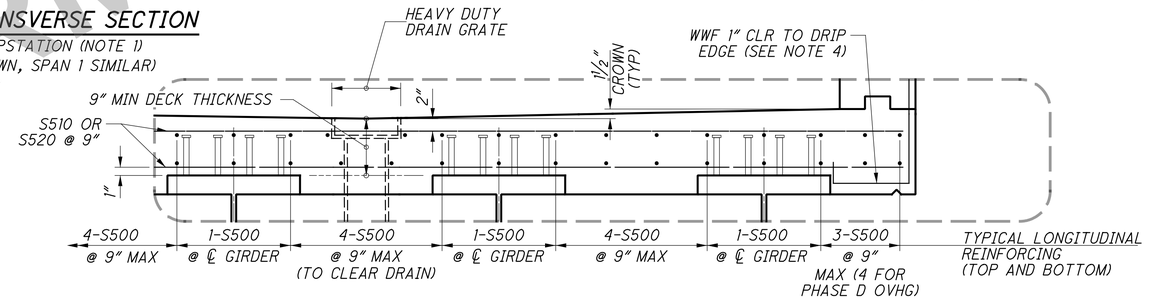
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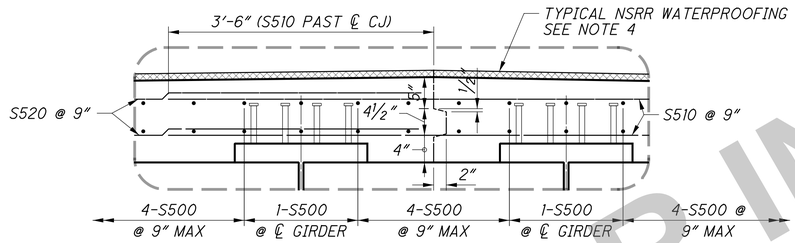
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TYPICAL TRANSVERSE SECTION

LOOKING UPSTATION (NOTE 1)
(SPAN 2 SHOWN, SPAN 1 SIMILAR)





2 DETAIL
CONSTRUCTION JOINT

1 TYPICAL SLAB REINFORCING DETAIL
MISC. DETAILS NOT SHOWN FOR CLARITY

STRUCTURE DEPTH TABLE

ELEMENT	DEPTH
141 RE RAIL	7 7/16"
TIE PLATE	1"
TIE	7"
WATERPROOFING	1/8"
CROWN HEIGHT	1/2"
MIN CONCRETE DECK	9"
GIRDER	41"
BOLT HEAD THICKNESS	5/8"
ELEMENT DEPTH FROM PGL (EXCLUDING BALLAST)	68 11/16"

VARIABLE BALLAST THICKNESS

LOCATION	NSRR MAIN		NSRR TRACK D	
	Δ VAR BALLAST	*TOTAL DEPTH	Δ VAR BALLAST	*TOTAL DEPTH
SPAN 1: ℄ REAR BRG	9.11"	77.80"	10.39"	79.08"
SPAN 1: MIDSPAN	9.19"	77.88"	10.66"	79.35"
SPAN 1: ℄ REAR PIER BRG	9.00"	77.69"	10.46"	79.15"
SPAN 2: ℄ FWD PIER BRG	9.00"	77.69"	10.42"	79.11"
SPAN 2: MIDSPAN	10.33"	79.01"	10.99"	79.68"
SPAN 2: ℄ BEARING FA	10.60"	79.29"	9.80"	78.49"

Δ VARIABLE BALLAST IS CALCULATED TO CONSIDER BOTH THE EFFECTS OF DECK CROWN AND HORIZONTAL CURVATURE, COMBINED WITH THE VARIATIONS DUE TO VERTICAL PROFILE.

* TOTAL DEPTH INDICATES THE TOTAL DEPTH FROM PGL TO BOTTOM OF STEEL (INCLUDING BOLT HEAD THICKNESS). IT IS THE SUMMATION OF THE ELEMENT DEPTH AND VARIABLE BALLAST THICKNESS AT EACH LOCATION.

✣ BAY 10 DIAPHRAGMS SHALL BE FULLY FASTENED AFTER COMPLETION OF THE DECK POUR AND PRIOR TO PLACEMENT OF PHASE D BALLAST

NOTES:

1. THE TYPICAL TRANSVERSE SECTION IS DRAWN AND DIMENSIONED NORMAL TO THE CHORD UNLESS NOTED OTHERWISE. THE TYPICAL SECTION SHOWN IS SCHEMATIC, BOTTOM OF BEAM ELEVATIONS AND DECK LOW POINT ELEVATIONS ARE EQUAL ALONG THE SKEW. SCREED, FINAL TOP OF DECK, AND MISCELLANEOUS STEEL DETAILS ACCOUNT FOR VARIATIONS IN BOTTOM OF BEAM ELEVATIONS NORMAL TO THE REFERENCE CHORD. EACH BOTTOM OF BEAM ELEVATION WILL INCREASE BY APPROXIMATELY 1/16" IN SPAN 1 AND DECREASE BY 1/32" IN SPAN 2 (MOVING LEFT TO RIGHT ACROSS THE SECTION).
   SEE SHEETS 5 57 THROUGH 11 57 FOR STAGED SECTIONS.
2. FOR DECK DRAINAGE LOCATIONS, SEE SHEET 53 57.
3. THE AREMA CLEARANCE ENVELOPE SHOWN IS THE STANDARD CLEARANCE ENVELOPE WIDENED BY 15" IN EACH DIRECTION TO ACCOUNT FOR A MAXIMUM 10 DEGREE HORIZONTAL CURVATURE. THE OUTER LIMITS OF EACH CLEARANCE DIAGRAM ARE EXTENDED TO THEIR EXTREME LOCATIONS TO DISPLAY THE TOTAL ENVELOPE OF THE ALIGNMENT ACROSS THE STRUCTURE.
4. FOR TYPICAL CURB, OVERHANG, KEYWAY, DRIP EDGE, WATERPROOFING, HANDRAIL AND VANDAL PROTECTION FENCE DETAILS, SEE RAILROAD TYPICAL DETAILS ON SHEETS 1509 2017 THROUGH 1513 2017.

FOR INFORMATION ONLY

DESIGN AGENCY
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DESIGNED	DRAWN	REVIEWED	DATE
EFD	VDT	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

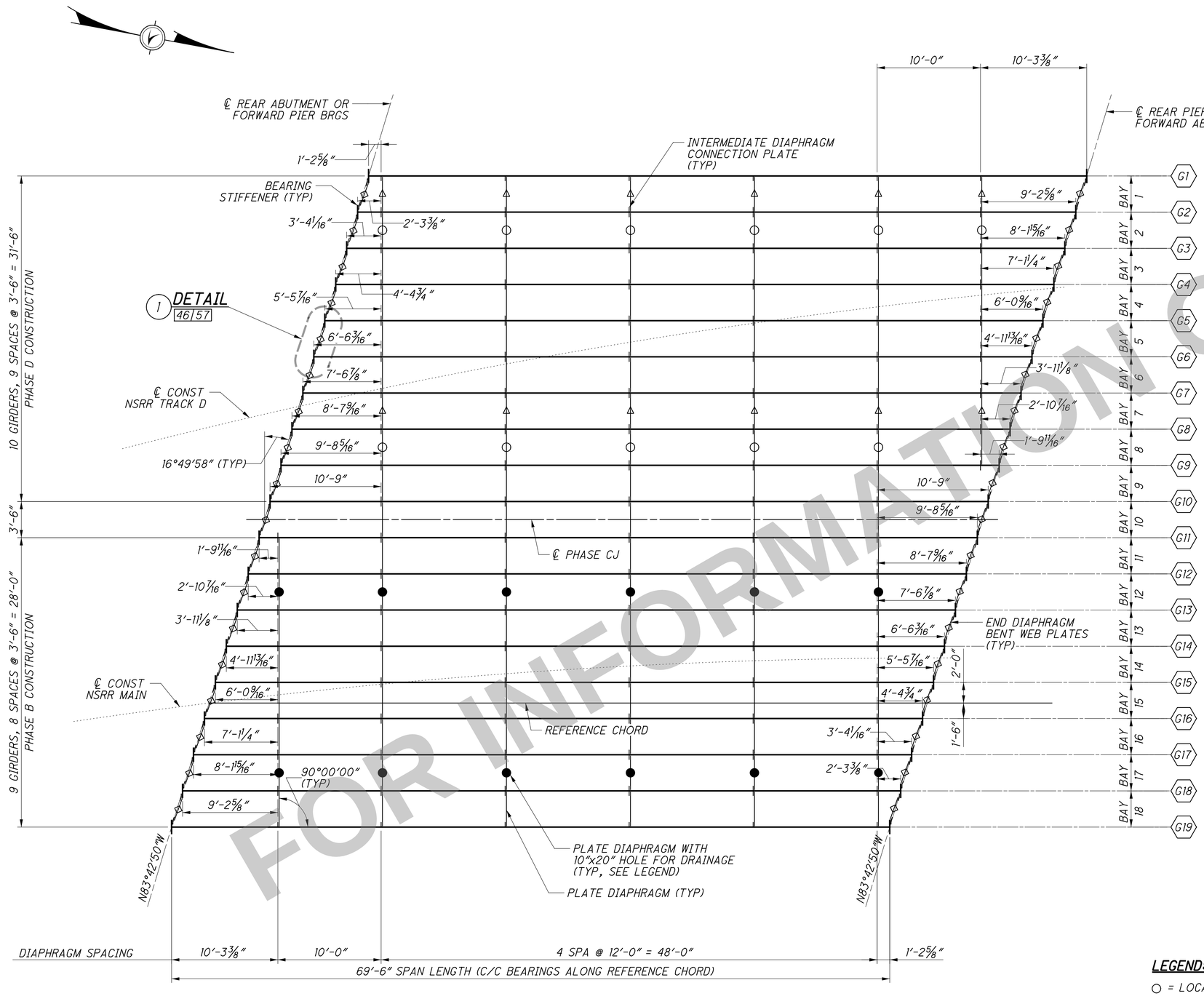
TRANSVERSE SECTION
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

42 / 57

1556 2017

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FRAMING PLAN

(SPAN 1 SHOWN, SPAN 2 SIMILAR)

UPSTATION ►

LEGEND:

○ = LOCATION OF DIAPHRAGM HOLE FOR DRAINAGE IN SPAN 1

△ = LOCATION OF DIAPHRAGM HOLE FOR DRAINAGE IN SPAN 2

● = LOCATION OF DIAPHRAGM HOLE FOR DRAINAGE IN BOTH SPANS

◇ = LOCATION OF END DIAPHRAGMS WITH BENT WEB PLATES

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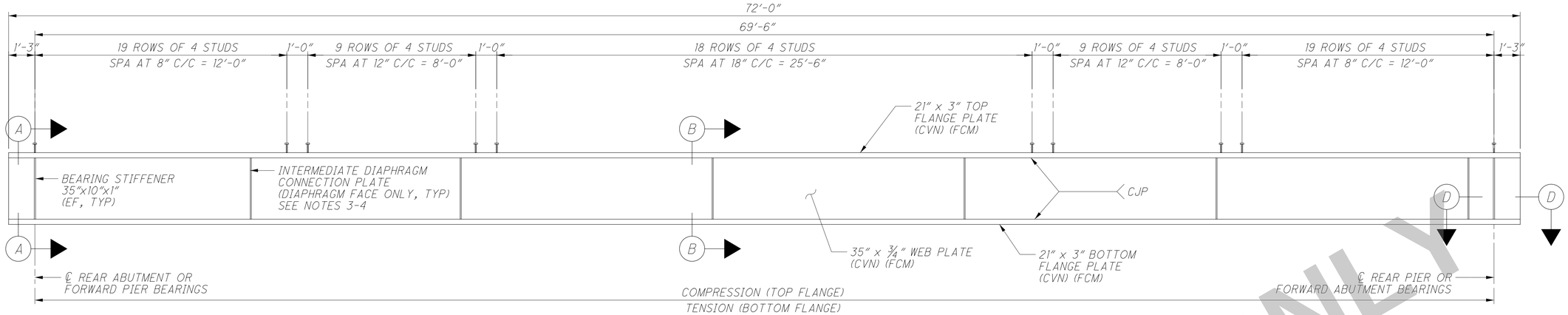
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EFD	CJG	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

FRAMING PLAN

BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

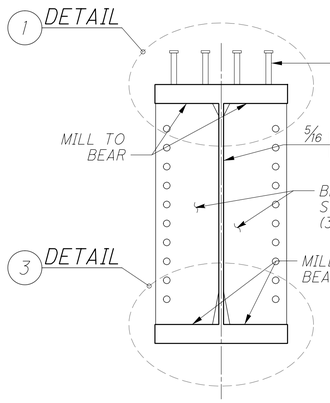
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PID No. 77889

1557
2017

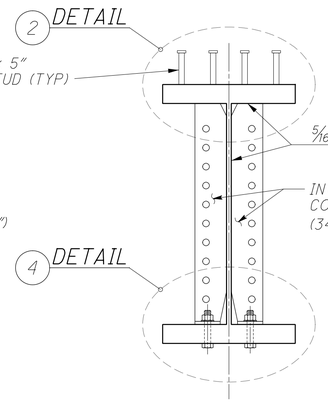


GIRDER ELEVATION

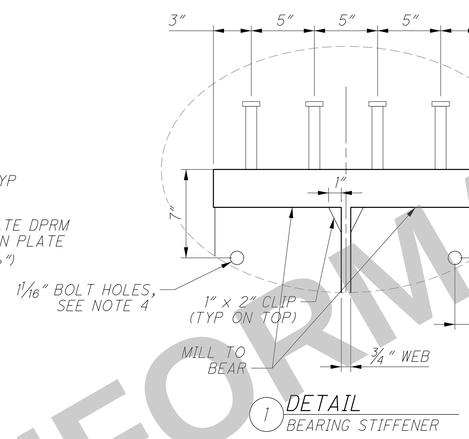
SPAN 1 SHOWN, SPAN 2 SIMILAR
UPSTATION ►



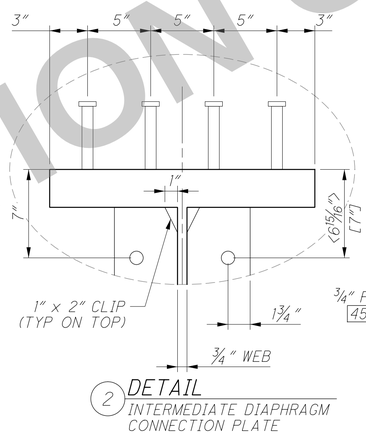
A SECTION
BEARING STIFFENER



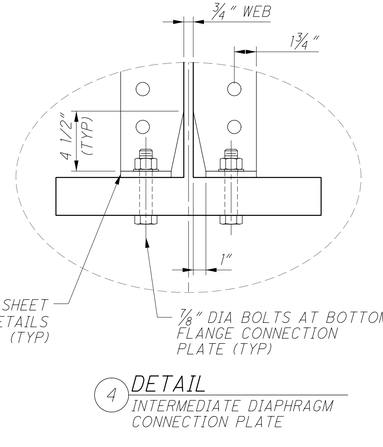
B SECTION
INTERMEDIATE DIAPHRAGM CONNECTION PLATE



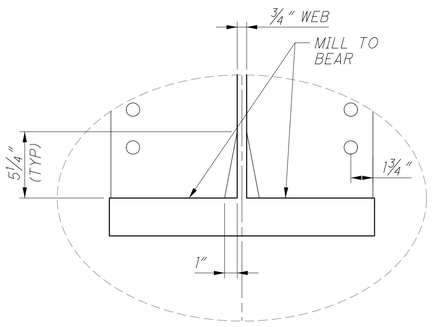
1 DETAIL
BEARING STIFFENER



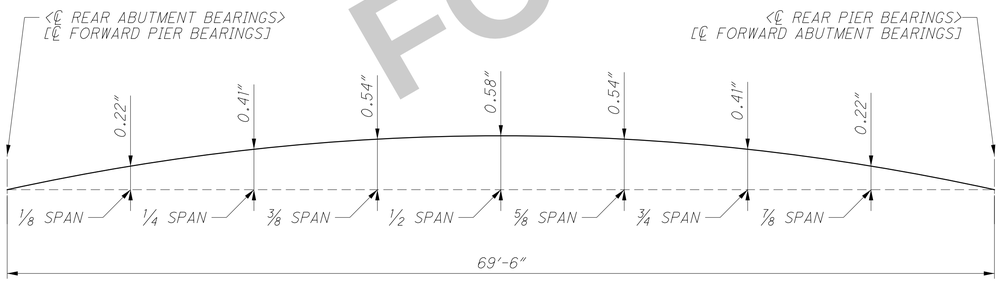
2 DETAIL
INTERMEDIATE DIAPHRAGM CONNECTION PLATE



4 DETAIL
INTERMEDIATE DIAPHRAGM CONNECTION PLATE



3 DETAIL
BEARING STIFFENER



GIRDER CAMBER DETAILS

SPANS 1 AND 2 (SEE NOTE 5)

NOTES:

1. HIGH STRENGTH BOLTS SHALL BE 1" DIAMETER ASTM F3125, GRADE A325, UNLESS OTHERWISE NOTED.
2. (CVN) DENOTES A CHARPY V-NOTCH TEST IS REQUIRED. WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.

   (FCM) DENOTES FRACTURE CRITICAL MEMBER. ALL FCM STEEL SHALL BE PROVIDED PER NORFOLK SOUTHERN SPECIFICATIONS FOR STRUCTURAL STEEL AND THE GENERAL NOTES ON SHEET: 1504/2017.
3. FOR DIAPHRAGM SPACING, SEE FRAMING PLAN SHEET 43/57.
4. FOR DIAPHRAGM CONNECTION DETAILS, SEE SHEET 45/57 AND 46/57.
5. CALLOUTS INSIDE OF <BRACKET> REFER TO SPAN 1 & INSIDE OF [BRACKET] REFER TO SPAN 2. CALLOUTS WITHOUT BRACKETS REFER TO BOTH SPANS. CAMBER CALCULATIONS INCLUDE NON-COMPOSITE DEFLECTIONS DUE TO THE GIRDER SELF-WEIGHT AND CONCRETE DECK PLACEMENT. ALL OTHER DEAD LOAD DEFLECTIONS, INCLUDING SECONDARY CONCRETE POURS AND BALLAST, ARE CALCULATED ASSUMING COMPOSITE SECTION PROPERTIES.
6. FOR SECTION D, SEE SHEET 46/57.

FOR INFORMATION ONLY

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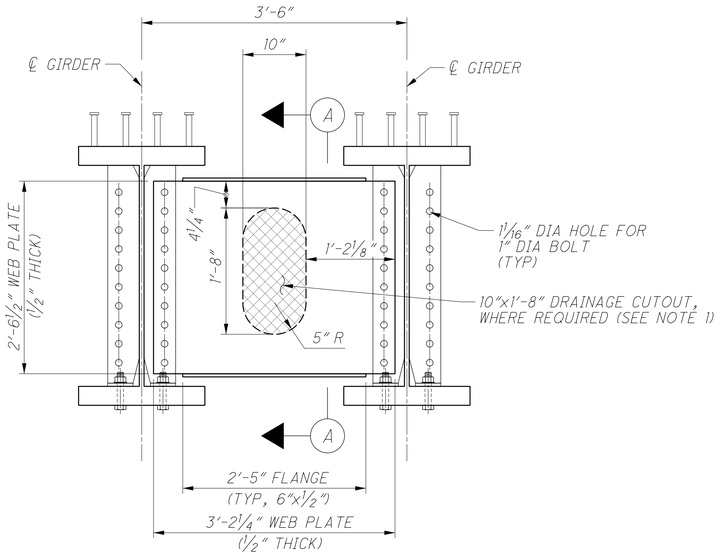
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EFD	CJG	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

GIRDER ELEVATION, GIRDER SECTIONS AND CAMBER TABLE
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

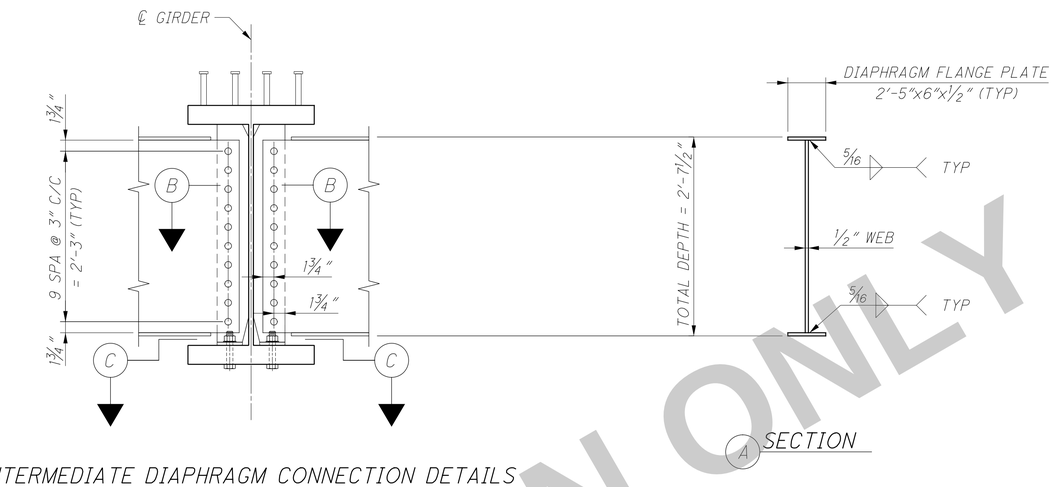
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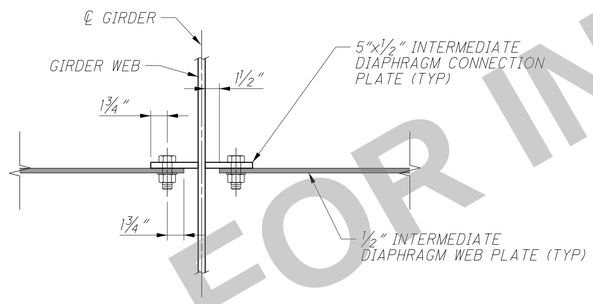


INTERMEDIATE DIAPHRAGM DETAILS

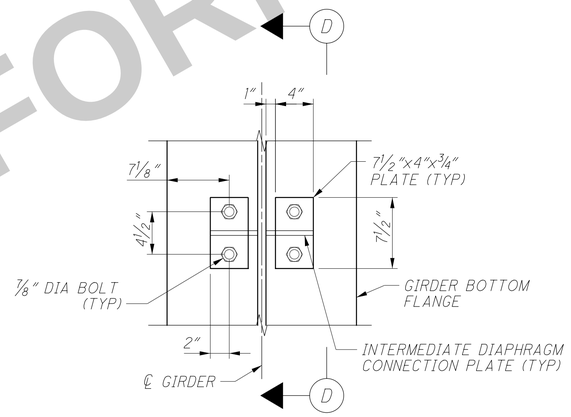
(NORMAL TO REFERENCE CHORD)



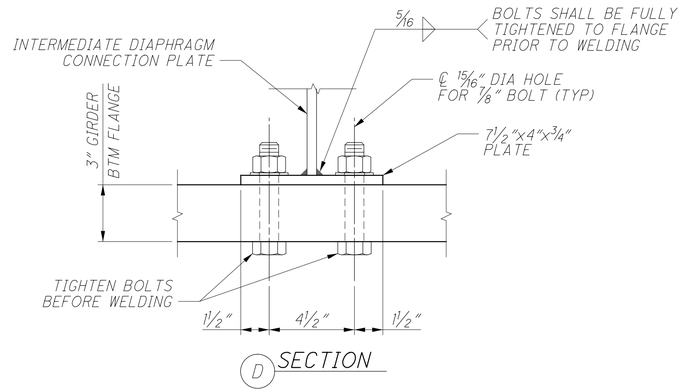
INTERMEDIATE DIAPHRAGM CONNECTION DETAILS



B SECTION



C SECTION



D SECTION

NOTES:

1. FOR LOCATIONS OF PLATE DIAPHRAGM DRAINAGE HOLES, SEE FRAMING PLAN SHEET 43/57.

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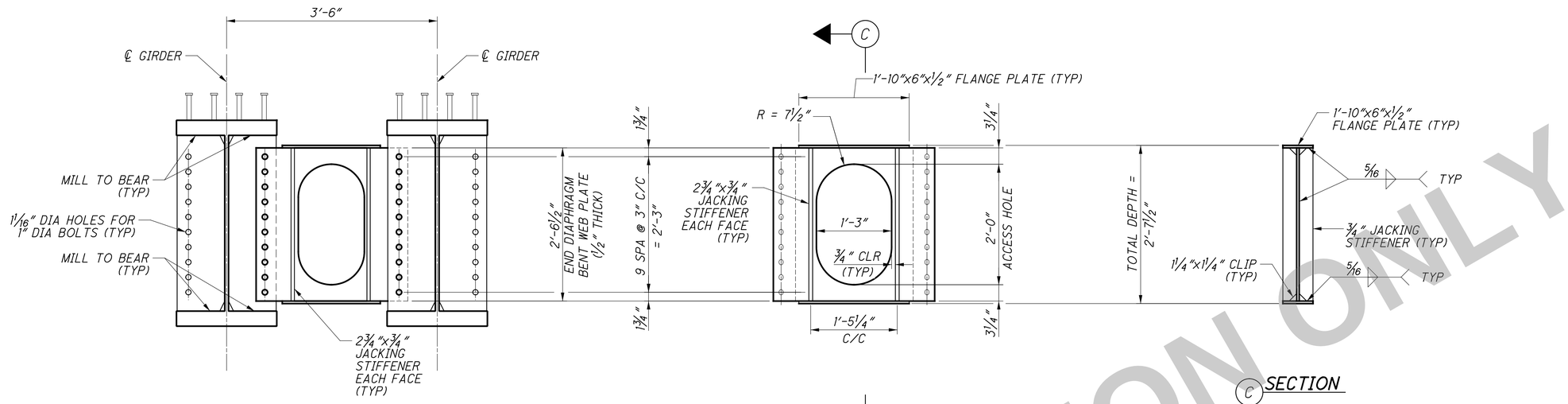
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CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

GIRDER-DIAPHRAGM CONNECTION DETAILS
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

1559
2017

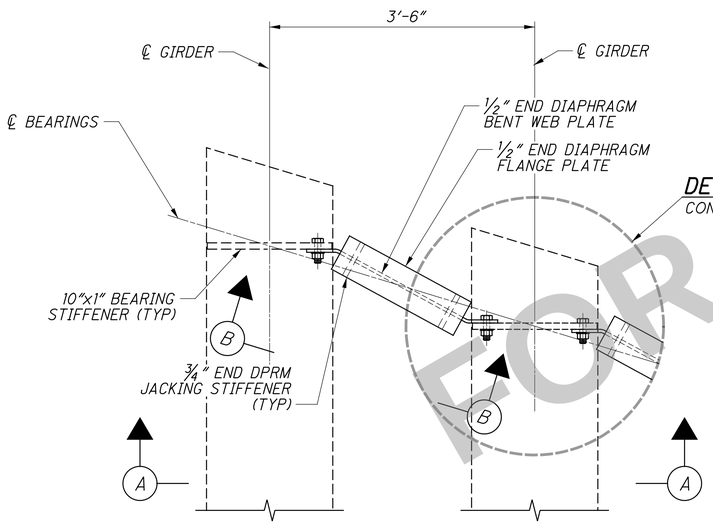
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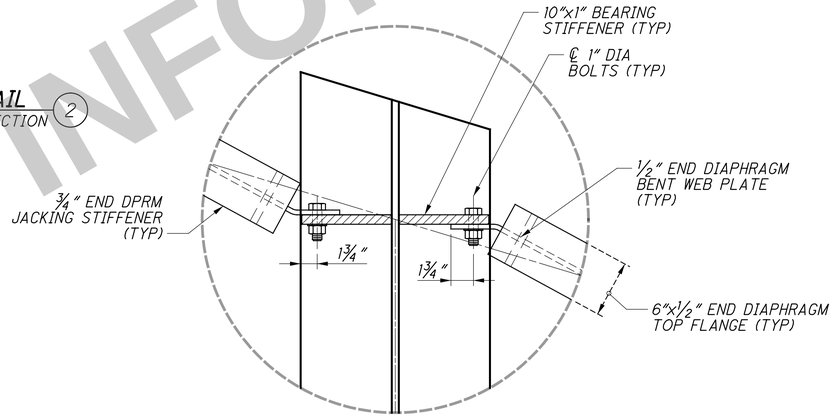
A GIRDER FRAMING SECTION
NORMAL TO GIRDER

B END DIAPHRAGM ELEVATION
PARALLEL TO DIAPHRAGM

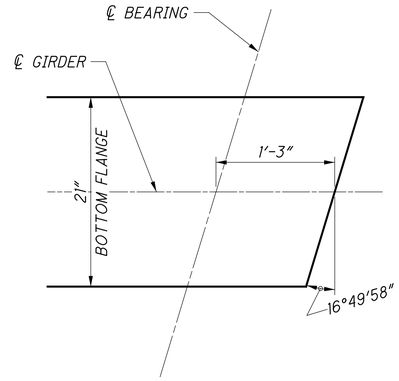
C SECTION



1 TYPICAL END DIAPHRAGM DETAIL
SEE SHEET 43/57



2 CONNECTION DETAIL
BEARING STIFFENER AND END DIAPHRAGM BENT WEB PLATE



D END BEVEL
SEE SHEET 44/57

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DESIGN AGENCY
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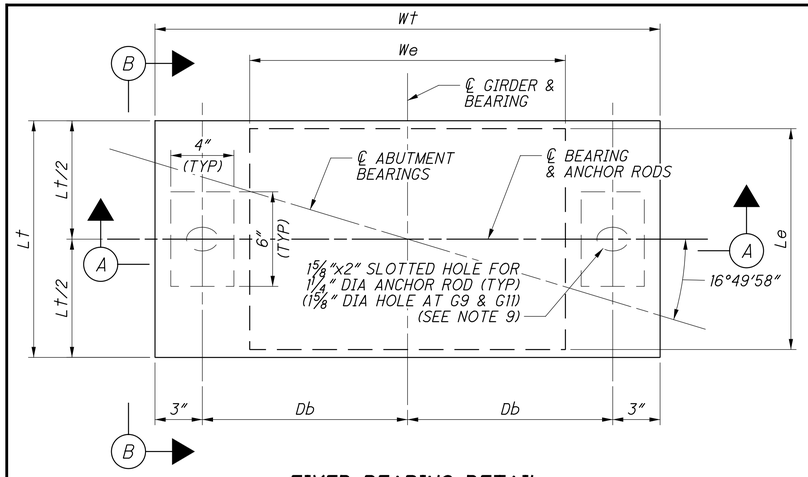
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EFD	CJG	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

END DIAPHRAGM DETAILS
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

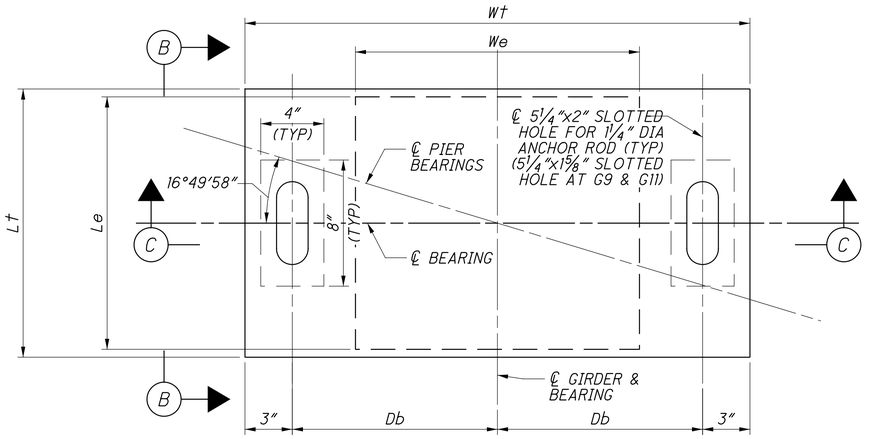
46 / 57

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2017



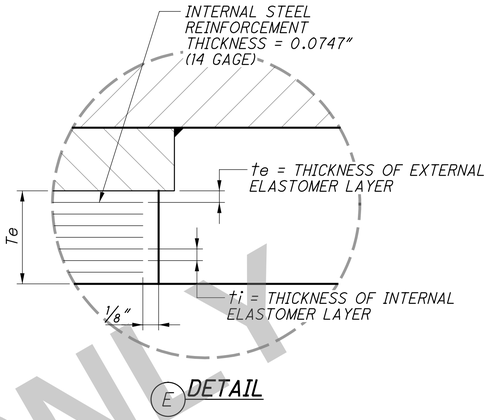
FIXED BEARING DETAIL

TYPICAL ABUTMENT BEARING

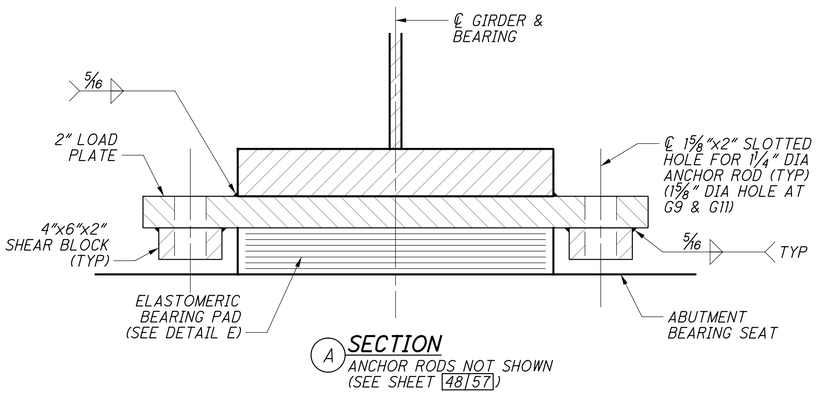


EXPANSION BEARING DETAIL

TYPICAL PIER BEARING

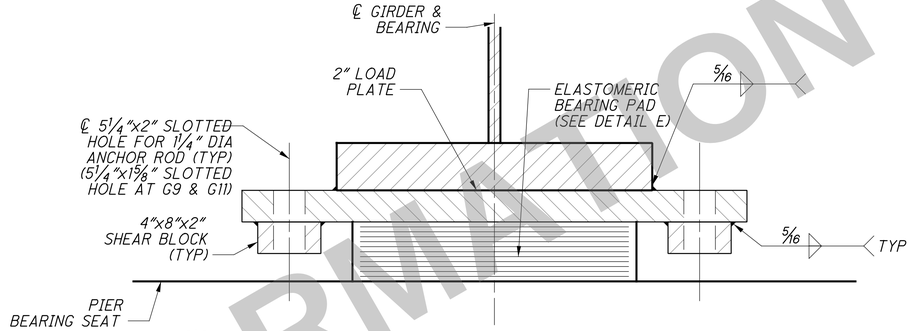


DETAIL



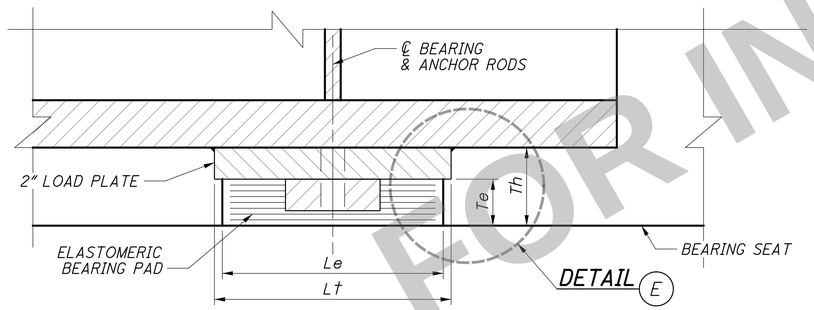
SECTION

ANCHOR RODS NOT SHOWN (SEE SHEET 48|57)



SECTION

ANCHOR RODS NOT SHOWN (SEE SHEET 48|57)



ELEVATION

ANCHOR RODS NOT SHOWN (SEE SHEET 48|57)

LOCATION	TYPE	NO. REQ'D.	DL (KIP)	LL (KIP)	IMPACT (KIP)	TOTAL LOAD (DL+LL+I)	Le (IN.)	We (IN.)	ti (IN.)	te (IN.)	NO. OF ti'S	NO. OF te'S	NO. INTERNAL LAMINATES	Te (IN.)	Wt (IN.)	Lt (IN.)	Th (IN.)	Db (IN.)
ABUTMENT	FIX	38	67.7	131.8	53.4	252.9	14.0	20.0	0.39	0.25	5	2	6	2.898	32	15.0	4.898	13.0
PIER (GIRDERS 9 & 12)	EXP	4	67.7	131.8	53.4	252.9	16.0	18.0	0.34	0.15	8	2	9	3.692	32	17.0	5.692	13.0
PIER (GIRDERS 2 & 18)	EXP	4	67.7	131.8	53.4	252.9	16.0	18.0	0.34	0.15	8	2	9	3.692	32	17.0	5.692	13.0
PIER (GIRDERS 1, 3 THRU 8, 10, 11, 13 THRU 17, 19)	EXP	30	67.7	131.8	53.4	252.9	16.0	18.0	0.34	0.15	8	2	9	3.692	32	17.0	5.692	13.0

NOTES:

1. THE ANCHOR RODS AND NUTS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153. HEAVY HEX NUTS SHALL BE ASTM F563. ANCHOR RODS SHALL BE ASTM F1554, GRADE 105. ANCHOR RODS SHALL BE INSTALLED IN PREFORMED HOLES. DRILLED HOLES SHALL NOT BE USED.

   FOR TYPICAL ANCHOR BLOCK OUT DETAIL, SEE SHEET 1513/2017.

   PREFORMED HOLES SHALL BE FILLED WITH NON-SHRINK, NON-METALLIC GROUT AND IS INCIDENTAL TO THE COST OF THE BEARINGS.
2. DO NOT PAINT STEEL SURFACES IN CONTACT WITH ELASTOMERIC PAD.
3. ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE, AND A DIRECTION ARROW THAT POINTS UPSTATION. ALL MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER THE BEARING IS INSTALLED. STEEL LOAD PLATES SHALLBE ASTM A36 AND SHALL BE SHOP PAINTED WITH INORGANIC ZINC PRIMER AS SPECIFIED IN CMS 513.27. APPLY SHOP PAINT TO EXPOSED SURFACES AFTER WELDING TO THE STRUCTURAL STEEL, COLOR SHALL MATCH STRUCTURAL STEEL.
4. THE STEEL REINFORCEMENT FOR REINFORCED ELASTOMERIC BEARINGS SHALL BE ASTM A1011 GRADE 36, OR ASTM A1008 GRADE D, UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
5. ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER CHAPTER 15 OF AREMA.
6. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. CONTROL WELDING OF LOAD PLATE TO THE SUPERSTRUCTURE SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300°F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.
7. BEARING REPOSITONING: IF THE STEEL IS ERECTED AT AN AMBIENT TEMPERATURE HIGHER THAN 80°F OR LOWER THAN 40°F AND THE BEARING SHEAR DEFLECTION EXCEEDS ⅛ OF THE BEARING HEIGHT AT 60°F±10°F, RAISE THE GIRDERS TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60°F±10°F.
8. BASIS OF PAYMENT - THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS LABOR, TESTING, PAINTING AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS, LOAD PLATES, ANCHOR RODS, AND BEARING BRACKETS. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN.
9. THE SLOTTED DIRECTION OF HOLES AT FIXED BEARINGS ARE NORMAL TO THE CENTERLINE OF GIRDER TO ALLOW LATERAL THERMAL EXPANSION OF THE STRUCTURE. NOTE THAT THE FIXED BEARINGS OF GIRDERS 9 & 11 DO NOT HAVE SLOTTED HOLES.

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
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DESIGNED	DRAWN	REVIEWED	DATE
EFD	DKU	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
CTM		NSRR BR#: BR0018448	

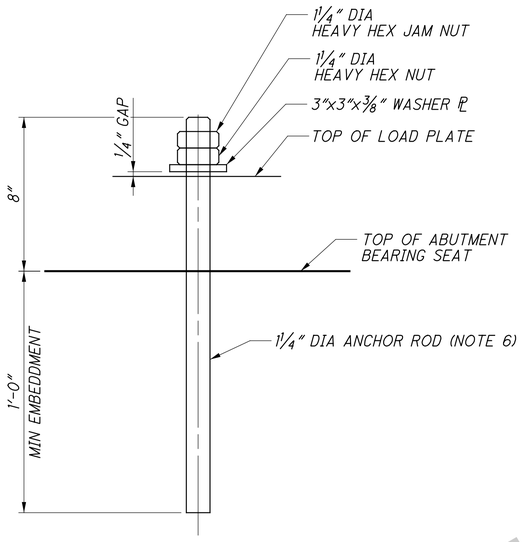
ELASTOMERIC BEARING DETAILS

BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

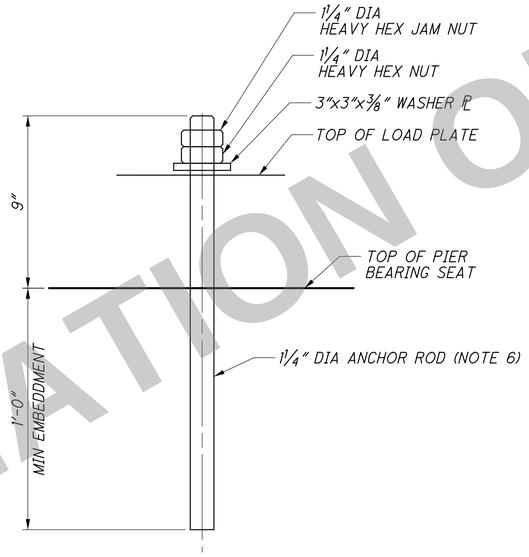
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PID No. 77889

1561/2017

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FIXED BEARING ANCHOR ROD DETAIL



EXPANSION BEARING ANCHOR ROD DETAIL

FOR INFORMATION ONLY

NOTES:

1. FOR REAR ABUTMENT BEARING LAYOUT, SEE SHEETS 21/57 AND 23/57.
2. FOR FORWARD ABUTMENT BEARING LAYOUT, SEE SHEETS 28/57 AND 30/57.
3. FOR PIER BEARING LAYOUT, SEE SHEETS 37/57 AND 39/57.
4. FOR ADDITIONAL BEARING NOTES AND DETAILS, SEE SHEET 47/57.
5. ANCHOR RODS SHALL BE IN COMPLIANCE WITH AREMA 15-5.3.7.d AND INSTALLED IN PREFORMED HOLES. DRILLED HOLES SHALL NOT BE USED.
   FOR TYPICAL ANCHOR BLOCK OUT DETAIL, SEE SHEET (1513/2017).
   PREFORMED HOLES SHALL BE FILLED WITH NON-SHRINK, NON-METALLIC GROUT AND IS INCIDENTAL TO THE COST OF THE BEARINGS. ANCHOR BOLTS ARE TO BE SET IN THE PREFORMED HOLES PRIOR TO PLACING BEARINGS AND GIRDERS.
6. AT A MINIMUM, THE ANCHOR RODS SHALL BE SWEDGED OR THREADED, THE ENTIRE LENGTH OF EMBEDMENT.

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BEARING DETAILS

BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

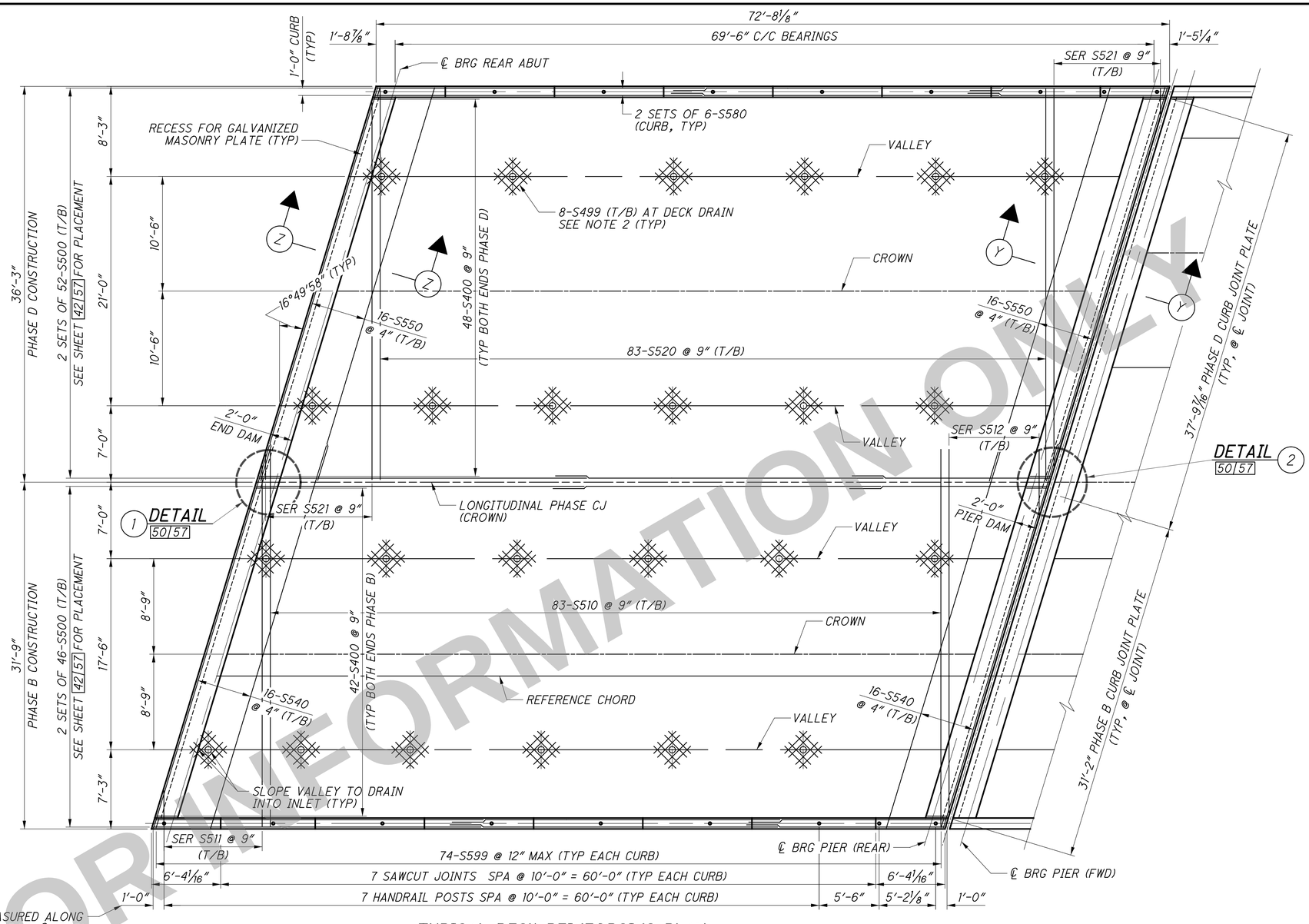
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PID No. 77889

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NOTES:

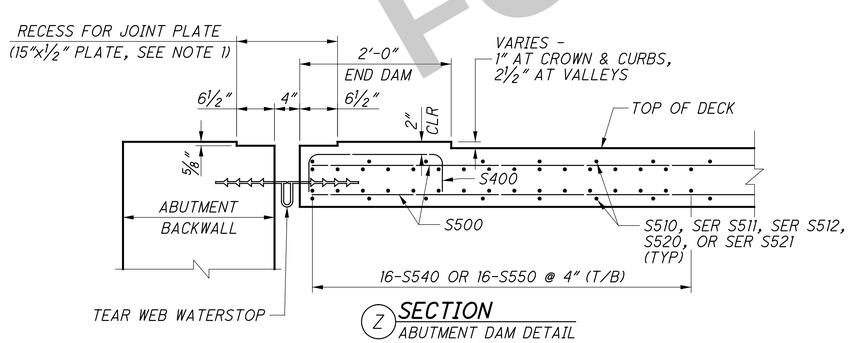
1. FOR DECK JOINT DETAILS, SEE GENERAL RAILROAD DETAILS, SHEET (1514/2017).
2. FOR CURB REINFORCING DETAILS AND REINFORCING AT DECK DRAINS, SEE GENERAL RAILROAD DETAILS, SHEET (1513/2017).
   FOR DRAIN LOCATION AND DETAILS, SEE SHEET 53/57.
3. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 55/57.



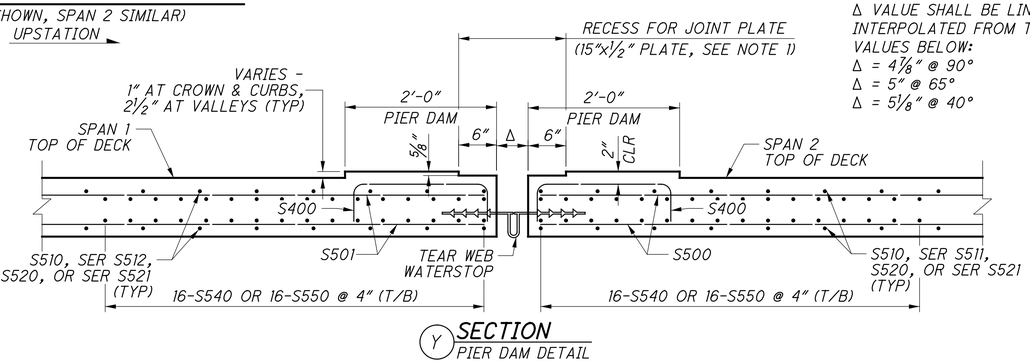
TYPICAL DECK REINFORCING PLAN

(SPAN 1 SHOWN, SPAN 2 SIMILAR)

UPSTATION →



Z SECTION
ABUTMENT DAM DETAIL



Y SECTION
PIER DAM DETAIL

Δ VALUE SHALL BE LINEARLY INTERPOLATED FROM THE VALUES BELOW:
Δ = 4⅛" @ 90°
Δ = 5" @ 65°
Δ = 5⅛" @ 40°

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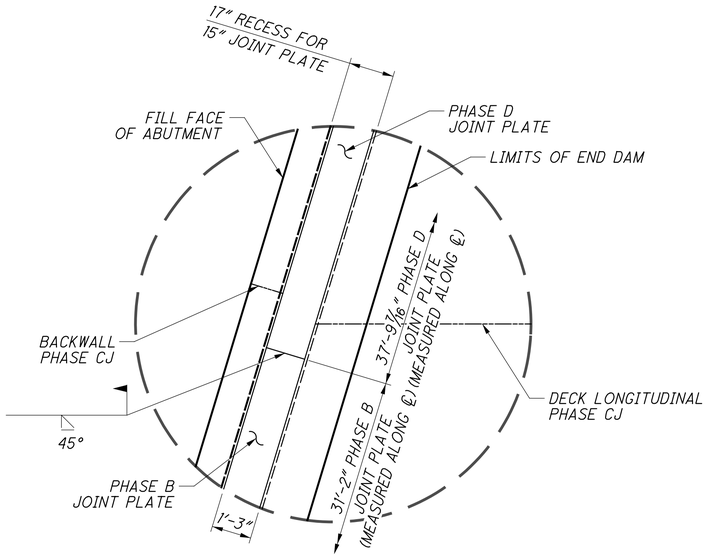
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DECK PLAN - TYPICAL

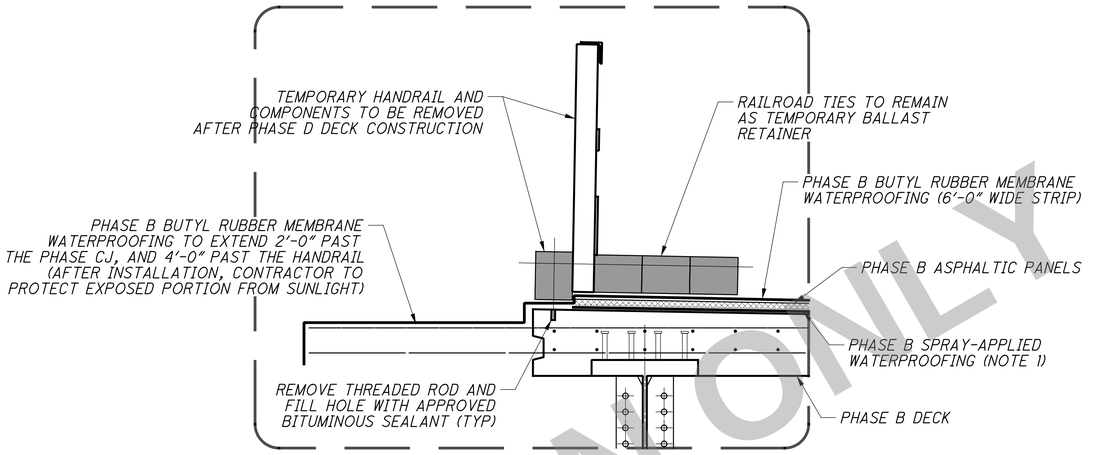
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

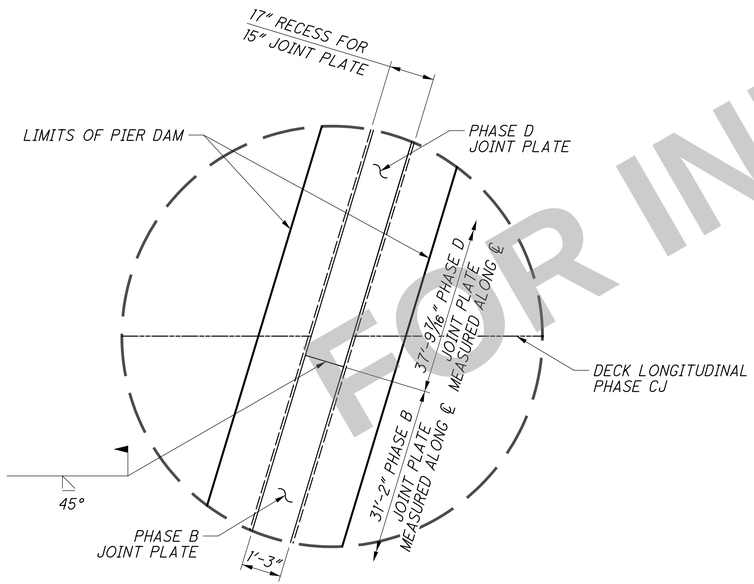
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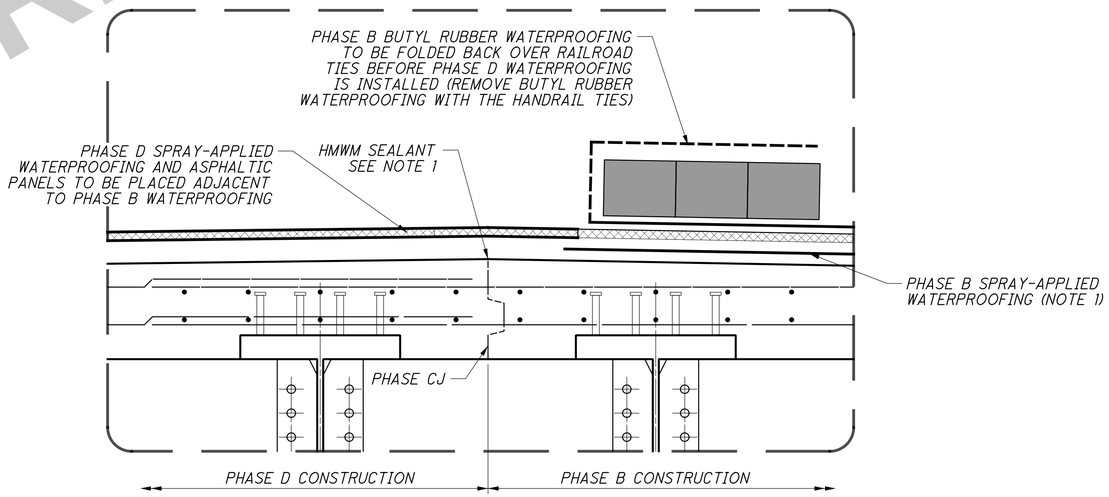
1 **DETAIL**
END DAM JOINT PLATE
49|57



PHASE CJ WATERPROOFING DETAIL
STEP 1 (LOOKING UPSTATION)



2 **DETAIL**
PIER EXPANSION JOINT PLATE
49|57



PHASE CJ WATERPROOFING DETAIL
STEP 2 (NOT TO SCALE)
(LOOKING UPSTATION)

NOTES:

1. STOP PHASE B SPRAY-APPLIED WATERPROOFING 9" BEFORE THE PHASE CJ. SEAL LONGITUDINAL PHASE CJ FOR THE LENGTH OF THE JOINT A MINIMUM OF 9" ON EITHER SIDE OF THE JOINT. SEALANT SHALL BE HIGH MOLECULAR WEIGHT METHACRYLATE (HMWM), 705.15. OVERLAP BOTH WITH PHASE D SPRAY-APPLIED WATERPROOFING.

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VDT	VDT	CTV	12-15-21
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CTM		NSRR BR#: BR0018448	

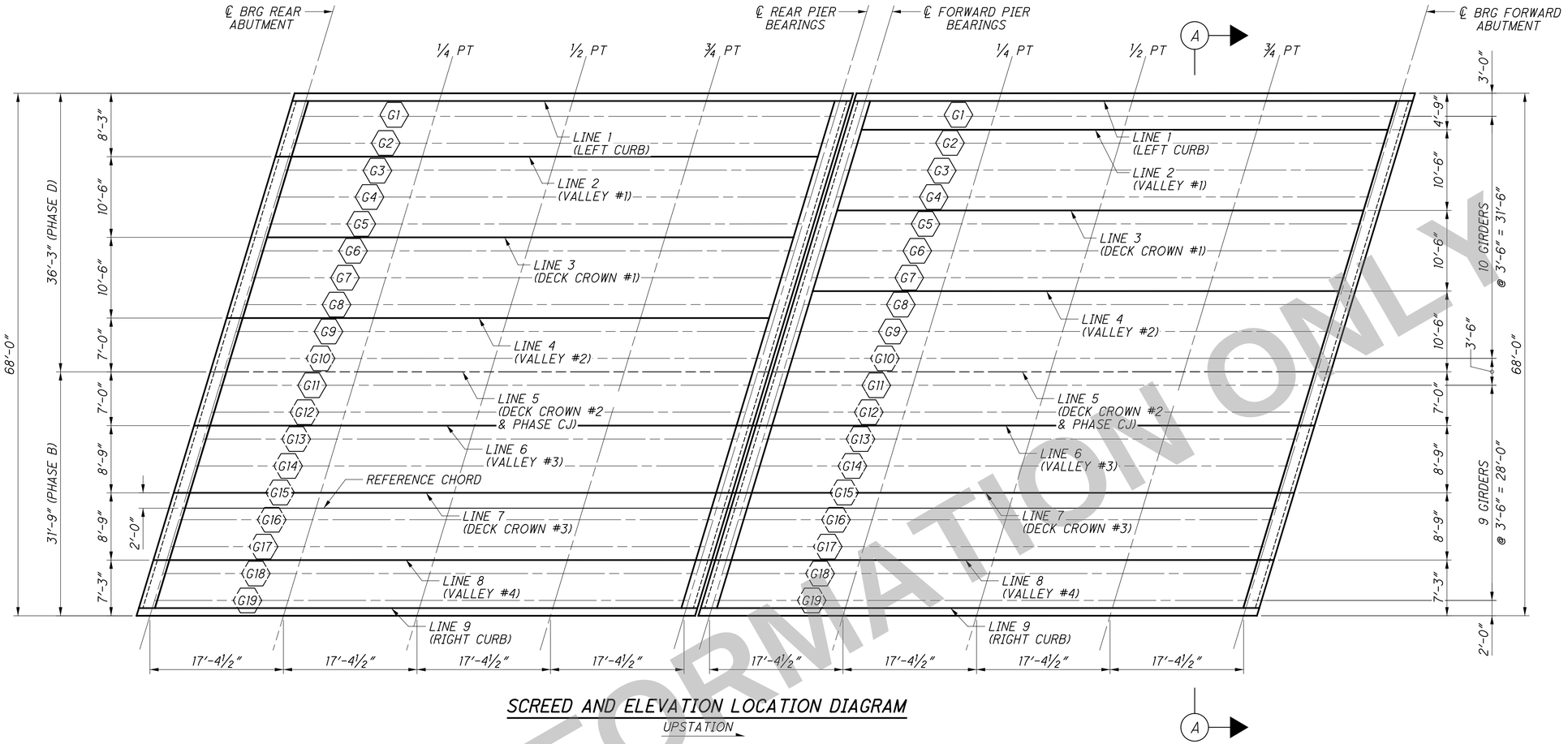
DECK DETAILS
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

50 / 57

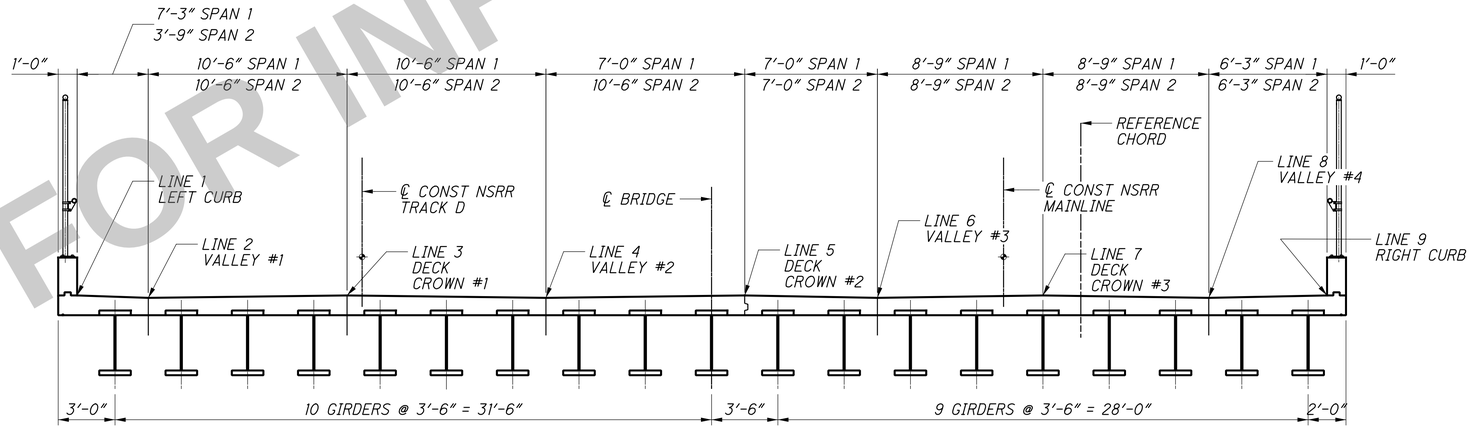
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SCREED AND ELEVATION LOCATION DIAGRAM

UPSTATION



A TRANSVERSE SECTION

SCREED AND FINAL DECK ELEVATION LINES
(SPAN 2 SHOWN, SPAN 1 SIMILAR)

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FINAL DECK/SCREED LOCATIONS

BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

51 / 57

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2017

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FINAL DECK ELEVATION TABLE - SPAN 1

LINE NO.	LOCATION	℄ BRG REAR ABUT	1/4 PT	1/2 PT	3/4 PT	℄ BRG PIER
LINE 1	LEFT CURB LINE	549.04	549.13	549.21	549.30	549.39
LINE 2	VALLEY #1	548.91	549.00	549.09	549.18	549.26
LINE 3	DECK CROWN #1	549.04	549.13	549.21	549.30	549.39
LINE 4	VALLEY #2	548.91	549.00	549.09	549.18	549.26
LINE 5	DECK CROWN #2	549.04	549.13	549.21	549.30	549.39
LINE 6	VALLEY #3	548.91	549.00	549.09	549.18	549.26
LINE 7	DECK CROWN #3	549.04	549.13	549.21	549.30	549.39
LINE 8	VALLEY #4	548.91	549.00	549.09	549.18	549.26
LINE 9	RIGHT CURB LINE	549.04	549.13	549.21	549.30	549.39

FINAL DECK ELEVATION TABLE - SPAN 2

LINE NO.	LOCATION	℄ BRG PIER	1/4 PT	1/2 PT	3/4 PT	℄ BRG FORWARD ABUT
LINE 1	LEFT CURB LINE	549.40	549.37	549.35	549.32	549.29
LINE 2	VALLEY #1	549.27	549.25	549.22	549.19	549.17
LINE 3	DECK CROWN #1	549.40	549.37	549.35	549.32	549.29
LINE 4	VALLEY #2	549.27	549.25	549.22	549.19	549.17
LINE 5	DECK CROWN #2	549.40	549.37	549.35	549.32	549.29
LINE 6	VALLEY #3	549.27	549.25	549.22	549.19	549.17
LINE 7	DECK CROWN #3	549.40	549.37	549.35	549.32	549.29
LINE 8	VALLEY #4	549.27	549.25	549.22	549.19	549.17
LINE 9	RIGHT CURB LINE	549.40	549.37	549.35	549.32	549.29

SCREED ELEVATION TABLE - SPAN 1

LINE NO.	LOCATION	℄ BRG REAR ABUT	1/4 PT	1/2 PT	3/4 PT	℄ BRG PIER
LINE 1	LEFT CURB LINE	549.04	549.15	549.24	549.32	549.39
LINE 2	VALLEY #1	548.91	549.02	549.12	549.20	549.26
LINE 3	DECK CROWN #1	549.04	549.15	549.24	549.32	549.39
LINE 4	VALLEY #2	548.91	549.02	549.12	549.20	549.26
LINE 5	DECK CROWN #2	549.04	549.15	549.24	549.32	549.39
LINE 6	VALLEY #3	548.91	549.02	549.12	549.20	549.26
LINE 7	DECK CROWN #3	549.04	549.15	549.24	549.32	549.39
LINE 8	VALLEY #4	548.91	549.02	549.12	549.20	549.26
LINE 9	RIGHT CURB LINE	549.04	549.15	549.24	549.32	549.39

SCREED ELEVATION TABLE - SPAN 2

LINE NO.	LOCATION	℄ BRG PIER	1/4 PT	1/2 PT	3/4 PT	℄ BRG FORWARD ABUT
LINE 1	LEFT CURB LINE	549.40	549.39	549.38	549.34	549.29
LINE 2	VALLEY #1	549.27	549.27	549.25	549.22	549.17
LINE 3	DECK CROWN #1	549.40	549.39	549.38	549.34	549.29
LINE 4	VALLEY #2	549.27	549.27	549.25	549.22	549.17
LINE 5	DECK CROWN #2	549.40	549.39	549.38	549.34	549.29
LINE 6	VALLEY #3	549.27	549.27	549.25	549.22	549.17
LINE 7	DECK CROWN #3	549.40	549.39	549.38	549.34	549.29
LINE 8	VALLEY #4	549.27	549.27	549.25	549.22	549.17
LINE 9	RIGHT CURB LINE	549.40	549.39	549.38	549.34	549.29

FOR INFORMATION ONLY

NOTES:

1. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS. OTHER ANTICIPATED DEAD LOADS INCLUDE CURB CONCRETE, BALLAST, AND TRACKWORK BUT DOES NOT INCLUDE THE EFFECTS OF A FUTURE BALLAST.

2. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURED (DOES NOT INCLUDE FUTURE BALLAST).

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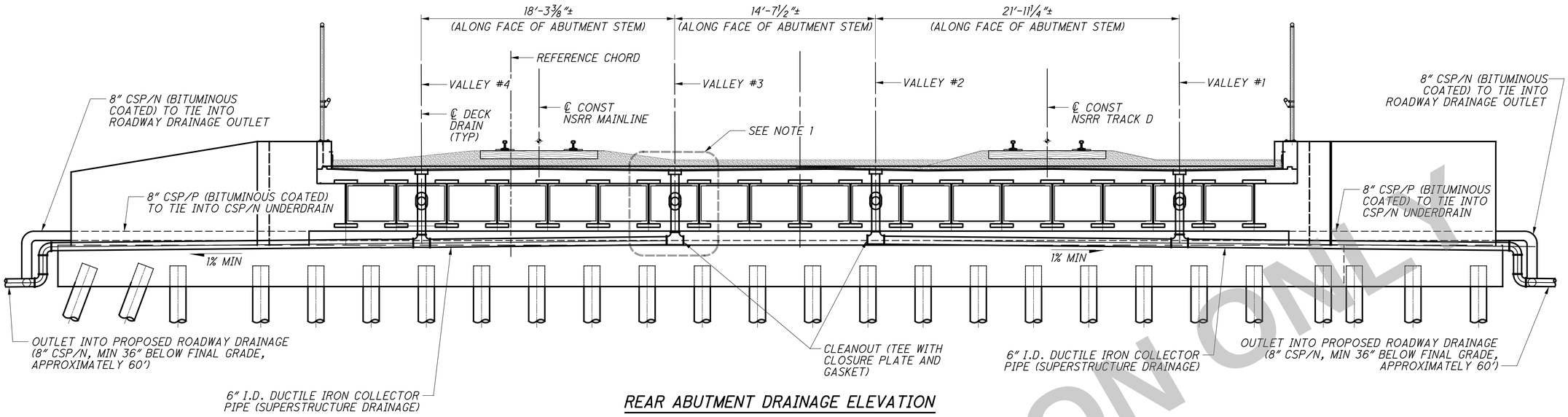
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CHECKED CTM | REVISED | ODOT SFN: 3113818 | NSRR BR#: BR0018448

FINAL DECK/SCREED ELEVATIONS
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

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2017

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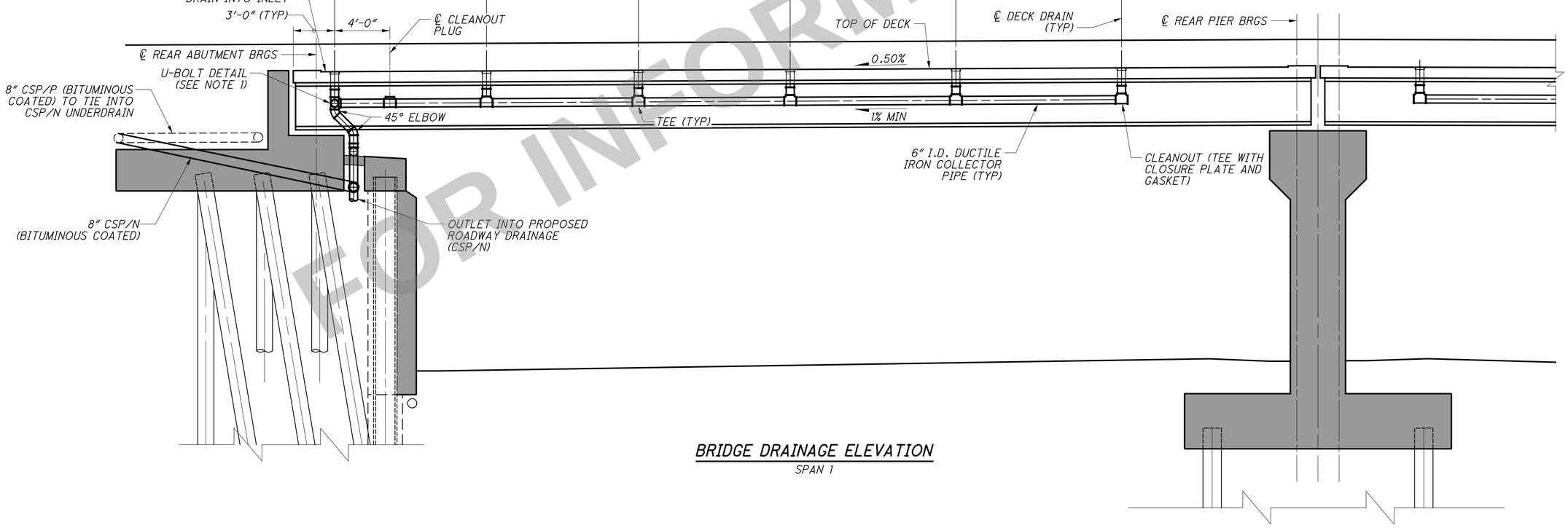


REAR ABUTMENT DRAINAGE ELEVATION

VALLEY #1	12′-0″	14′-9″	12′-0″	12′-0″	10′-0″
VALLEY #2	11′-0″	11′-0″	11′-0″	12′-0″	12′-0″
VALLEY #3	11′-0″	12′-0″	12′-0″	12′-0″	14′-3″
VALLEY #4	8′-6″	10′-0″	12′-0″	12′-0″	12′-0″

NOTES:

1. FOR TYPICAL NORFOLK SOUTHERN AND PROJECT DRAINAGE DETAILS, SEE SHEET (1512/2017) .



BRIDGE DRAINAGE ELEVATION

SPAN 1

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CTM		NSRR BR#: BR0018448	

BRIDGE DRAINAGE – SPAN 1

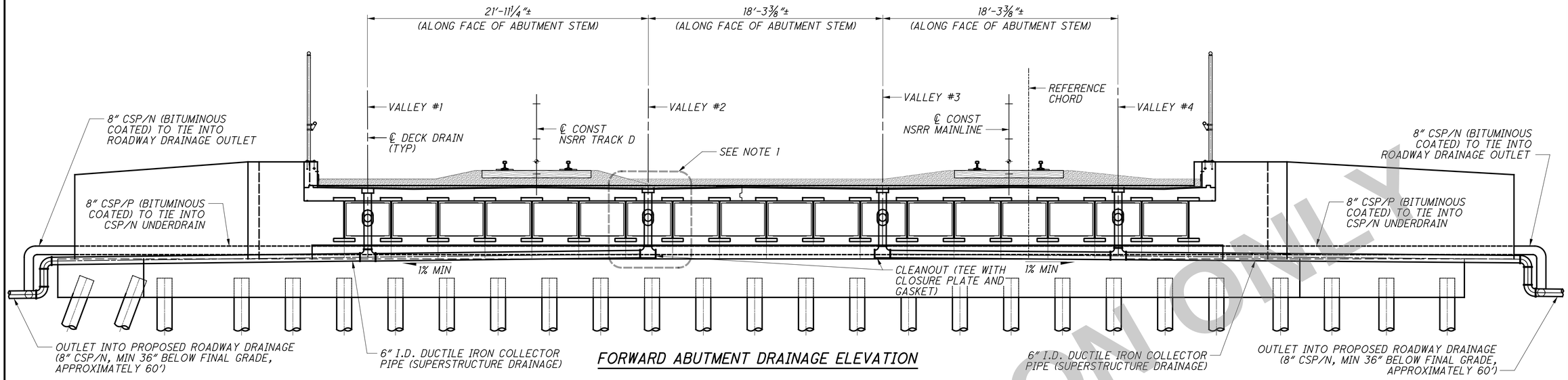
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NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

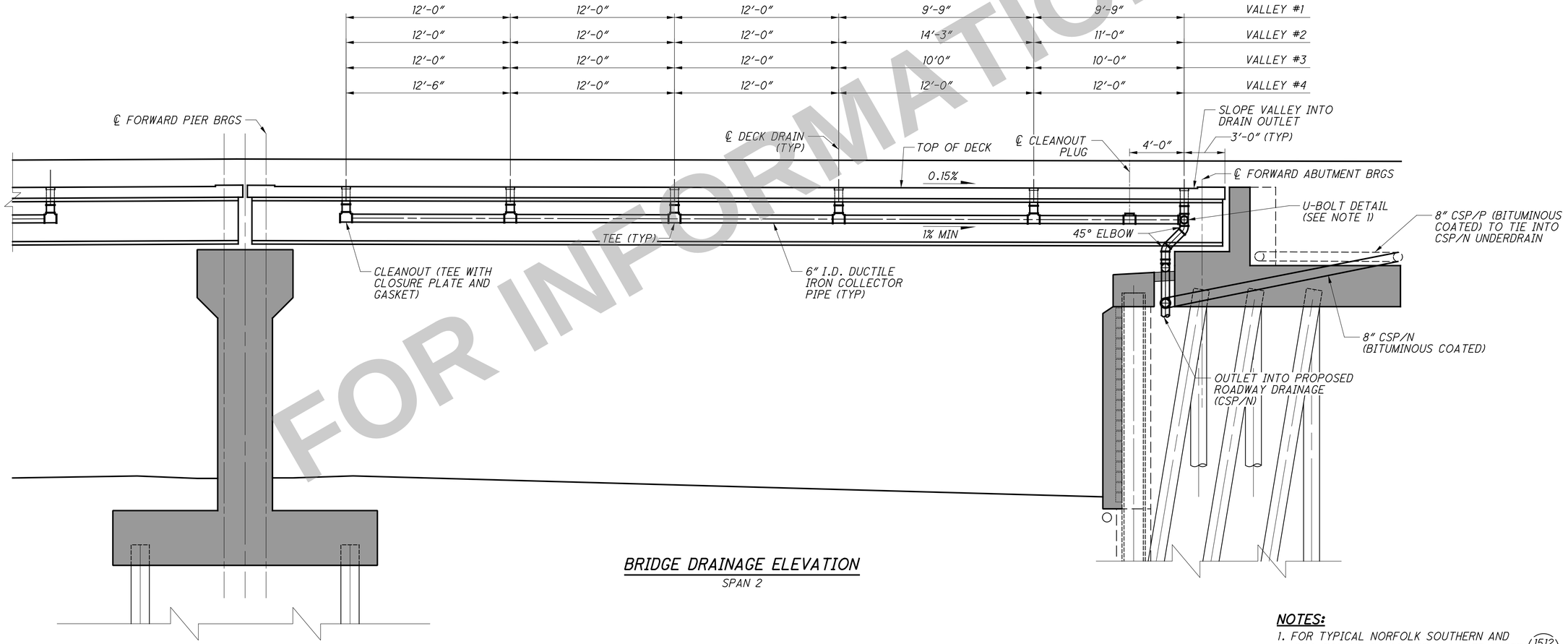
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FORWARD ABUTMENT DRAINAGE ELEVATION



BRIDGE DRAINAGE ELEVATION

SPAN 2

NOTES:

1. FOR TYPICAL NORFOLK SOUTHERN AND PROJECT DRAINAGE DETAILS, SEE SHEET (1512/2017) .

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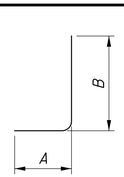
BRIDGE DRAINAGE - SPAN 2

BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

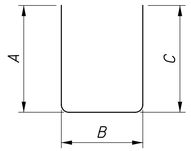
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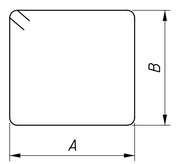
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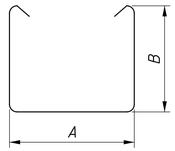
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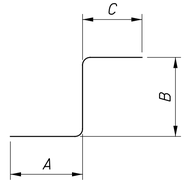
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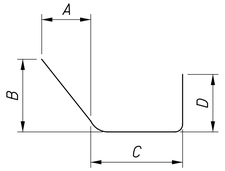
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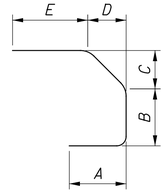
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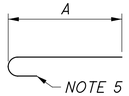
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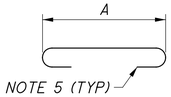
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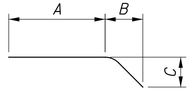
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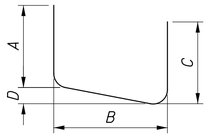
TYPE-16



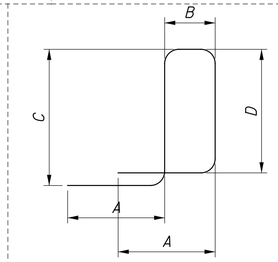
TYPE-17



TYPE-19



TYPE-29



TYPE-34

AREMA CLASS C LAP SPLICE LENGTHS (NOTE 6):

#4 BAR (Ld=1'-6"): ALL = 2'-7"
#5 BAR (Ld=1'-11"): DECK = 3'-3", OTHERS = 3'-8"
#6 BAR (Ld=2'-3"): DECK = 3'-10", OTHERS = 4'-5"
#7 BAR (Ld=2'-11"): ALL = 5'-6"
#8 BAR (Ld=3'-9"): TOP/ FOOTING = 7'-3", OTHERS = 6'-6"
#9 BAR (Ld=4'-9"): TOP/ FOOTING = 9'-2", OTHERS = 8'-1"
#10 BAR (Ld=6'-1"): TOP/ FOOTING = 11'-8", OTHERS = 10'-3"
#11 BAR (Ld=7'-5"): TOP/ FOOTING = 14'-4", OTHERS = 12'-7"
#14 BAR: MECHANICALLY SPLICE

REINFORCING BEND DIAGRAMS AND LAP SPLICE LENGTHS

REINFORCING NOTES

1. ALL REINFORCING BARS SHALL BE EPOXY COATED. PAYMENT FOR REINFORCING, INCLUDING MECHANICAL CONNECTORS, SHALL BE MADE WITH ITEM 509 - EPOXY COATED REINFORCING STEEL
2. MAX REINFORCING SPACING IS 12" UNLESS NOTED OTHERWISE. REINFORCING SPACINGS GIVEN ARE CONSIDERED "MAX" UNLESS NOTED OTHERWISE.
3. "STR." IN THE TYPE COLUMN INDICATES STRAIGHT BARS.
4. "SER OF" DENOTES SERIES OF BARS, E.G "X" SER OF "Y" = "X" SERIES OF "Y" BARS PER SERIES.
5. REFER TO C.M.S SECTION 509.05 FOR STANDARD BEND DIMENSIONS.
6. TWO BARS OF EQUAL SIZE SHALL BE LAPPED THE DISTANCE OF THE APPLICABLE AREMA CLASS C LAP SPLICE LENGTH. WHEN BARS OF UNEQUAL SIZE ARE LAPPED, THE PROVIDED LAP SHALL BE THE MAXIMUM OF EITHER THE "Ld" VALUE OF THE LARGER BAR OR THE APPLICABLE AREMA CLASS C LAP SPLICE LENGTH OF THE SMALLER BAR.
7. MECHANICAL CONNECTORS: AN APPROVED TYPE OF MECHANICAL CONNECTOR FOR REINFORCING BARS SHALL BE PROVIDED IN ACCORDANCE WITH C.M.S. SECTION 509.07. INSTALLATION OF CONNECTORS SHALL CONFORM WITH MANUFACTURER RECOMMENDED PROCEDURES.

   MECHANICAL CONNECTORS AND DOWEL BARS USED WITH EPOXY COATED BARS SHALL BE EPOXY COATED. COATING FOR BOTH CONNECTORS AND BARS SHALL CONFORM TO THE SAME SPECIFICATIONS. COATINGS THAT HAVE BEEN DAMAGED OR THAT OTHERWISE DO NOT MEET SPECIFICATIONS WITH RESPECT TO COLOR, CONTINUITY AND UNIFORMITY, MAY BE REPAIRED AS DIRECTED BY THE ENGINEER, OR THEY SHALL BE REPLACED WITH MATERIAL THAT MEETS THE SPECIFICATIONS. FOR BARS UTILIZING A PLANNED MECHANICAL CONNECTOR, THE BAR LENGTH FOR PAYMENT IS MEASURED TO THE CENTER OF THE PLANNED MECHANICAL CONNECTION. EXTRA BAR LENGTH AND/OR BAR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF MECHANICAL CONNECTOR FURNISHED AND THOSE COSTS SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 509. CONNECTORS AND DOWEL BAR EXTENSIONS SHALL CONFORM TO AND BE INCLUDED IN THE BID PRICE FOR ITEM 509.

MARK	NUMBER PHASE B REAR	NUMBER PHASE B FWD	NUMBER PHASE D REAR	NUMBER PHASE D FWD	TOTAL	LENGTH	WEIGHT PH. B	WEIGHT PH. D	WEIGHT TOTAL	TYPE	DIMENSIONS A	B	C	INC
ABUTMENT & WINGWALLS														
A500	14				14	30'-0"	438		438	STR.				
A501	14				14	14'-3"	208		208	STR.				
A502	10				10	17'-4"	181		181	19	13'-2"	2'-0"	3'-8"	
A503	10				10	16'-0"	167		167	19	12'-8"	1'-8"	2'-11"	
A504	7				7	15'-3"	111		111	1	1'-0"	14'-3"		
A505	7				7	7'-5"	54		54	1	1'-0"	6'-6"		
A506	6				6	37'-8"	236		236	STR.				
	1				1	2'-0"								
A507	SER OF				SER OF	to	49		49	STR.				5 1/2"
	11				11	6'-7"								
	1				1	3'-1"								
A508	SER OF				SER OF	to	55		55	STR.				2'-3 1/4"
	6				6	14'-6"								
A510			14		14	39'-8"		579	579	STR.				
A511			10		10	15'-4"		160	160	1	3'-9"	11'-8"		
A512			10		10	13'-4"		139	139	1	2'-11"	10'-6"		
A513			7		7	15'-1"		110	110	1	1'-0"	14'-2"		
A514			7		7	9'-0"		66	66	1	1'-0"	8'-0"		
A515			6		6	36'-8"		229	229	STR.				
			1		1	1'-8"								
A516			SER OF		SER OF	to		61	61	STR.				7"
			12		12	8'-2"								
			1		1	3'-3"								
A517			SER OF		SER OF	to		64	64	STR.				1'-10"
			7		7	14'-3"								
A540		6			6	14'-5"	90		90	STR.				
A550		14			14	30'-0"	438		438	STR.				
A551		14			14	16'-1"	235		235	STR.				
A552		3			3	3'-4"	10		10	STR.				
A553		3			3	3'-9"	12		12	STR.				
A554		5			5	14'-11"	78		78	1	3'-0"	12'-0"		
A555		5			5	13'-1"	68		68	1	2'-0"	11'-2"		
		1			1	7'-0"						3'-11"		
A556		SER OF			SER OF	to	31		31	1	3'-2"	to		2'-9"
		3			3	12'-6"						9'-5"		
		1			1	4'-8"						2'-9"		
A557		SER OF			SER OF	to	23		23	1	2'-0"	to		2'-8 3/4"
		3			3	10'-2"						8'-3"		
A558		7			7	18'-11"	138		138	1	3'-3"	15'-8"		
A559		6			6	30'-0"	188		188	STR.				
A560				14	14	38'-0"		555	555	STR.				
A561				5	5	17'-7"		92	92	19	13'-2"	2'-3"	3'-9"	
A562				5	5	16'-0"		83	83	19	12'-6"	1'-9"	3'-0"	
				1	1	6'-8"					2'-3"			
A563				SER OF	SER OF	to		32	32	19	to	2'-3"	3'-9"	3'-7"
				3	3	13'-10"					9'-5"			
				1	1	5'-4"					1'-9"			
A564				SER OF	SER OF	to		28	28	19	to	1'-9"	3'-0"	3'-7 1/4"
				3	3	12'-7"					9'-0"			
A565				7	7	18'-9"		137	137	1	3'-5"	15'-5"		
A566				6	6	33'-5"		209	209	STR.				
				1	1	7'-1"								
A568				SER OF	SER OF	to		35	35	STR.				4'-2 1/4"
				3	3	15'-6"								
				1	1	2'-0"								
A569				SER OF	SER OF	to		35	35	STR.				2 1/2"
				11	11	4'-1"								
A570				1	1	18'-1"		19	19	19	13'-8"	2'-3"	3'-9"	
A571				1	1	16'-6"		17	17	19	13'-0"	1'-9"	3'-0"	
A596		1			1	15'-11"	17		17	1	12'-9"	3'-2"		
A597		1			1	13'-6"	14		14	1	11'-6"	2'-0"		
A598		2			2	10'-8"	22		22	STR.				
		1			1	2'-0"								
A599		SER OF			SER OF	to	19		19	STR.				2 1/2"
		7			7	3'-3"								
ABUTMENT & WINGWALL SUB-TOTAL							2,882	2,650	5,532					

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED VDT | DRAWN EFD | CHECKED SNH | REVISED | REVIEWED CTV | DATE 12-15-21

ODOT SFN: 3113818
NSRR BR#: BR0018448

REINFORCING STEEL LIST 1 OF 3
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

1569
2017

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MARK	NUMBER				WEIGHT			TYPE	DIMENSIONS					
	PHASE B	PHASE D	TOTAL	LENGTH	PH. B	PH. D	TOTAL		A	B	C	D	E	INC
PIER														
P510	74		74	13′-2″	1,017		1,017	14	5′-0″	2′-9″	1′-3″	1′-3″	3′-9″	
P511		76	76	13′-2″		1,044	1,044	14	5′-0″	2′-9″	1′-3″	1′-3″	3′-9″	
P530	30		30	39′-4″	1,231		1,231	STR.						
P531	10		10	38′-10″	405		405	STR.						
P540		30	30	36′-5″		1,139	1,139	STR.						
P541		10	10	36′-11″		385	385	STR.						
P600		4	4	18′-8″		112	112	STR.						
P830	8		8	38′-10″	829		829	STR.						
P840		8	8	36′-11″		789	789	STR.						
PIER SUB-TOTAL					3,482	3,469	6,951							
SUPERSTRUCTURE														
S400	168	192	360	2′-5″	271	310	581	2	5″	1′-8″	5″			
S499	384	384	768	3′-0″	770	770	1,540	STR.						
S500	368	416	784	38′-0″	14,585	16,488	31,073	STR.						
S510	332		332	35′-3″	12,206		12,206	STR.						
	4		4	3′-5″										
S511	SER OF		SER OF	To	1,006		1,006	STR.						2′-6¼″
	13		13	33′-9″										
	4		4	6′-7″										
S512	SER OF		SER OF	To	1,018		1,018	STR.						2′-6″
	12		12	34′-1″										
S520		332	332	35′-11″		12,437	12,437	STR.						
		8	8	2′-3″										
S521		SER OF	SER OF	To		2,161	2,161	STR.						2′-6″
		14	14	34′-9″										
S540	128		128	36′-8″	4,895		4,895	STR.						
S550		128	128	37′-6″		5,006	5,006	STR.						
S580	24	24	48	38′-0″	951	951	1,902	STR.						
S599	148	148	296	6′-6″	1,004	1,004	2,008	34	1′-0″	2′-0″	8″	2′-3″	1′-0″	
SUPERSTRUCTURE SUB-TOTAL					36,706	39,127	75,833							

MARK	NUMBER					LENGTH	WEIGHT			TYPE	DIMENSIONS				
	PHASE B		PHASE D		TOTAL		PH. B	PH. D	TOTAL		A	B	C	D	INC
	REAR	FWD	REAR	FWD											
PILE AND LAGGING WALL															
W510	93	79	66	83	321	6′-2″	1,106	959	2,065	29	2′-0″	2′-2″	2′-2″	2″	
W560	16				16	20′-4″	339		339	STR.					
W561	8				8	21′-2″	177		177	STR.					
W562	8				8	29′-8″	248		248	STR.					
W568		16			16	21′-2″	353		353	STR.					
W569		8			8	36′-4″	303		303	STR.					
W570			8		8	26′-11″		225	225	STR.					
W571			16		16	19′-11″		332	332	STR.					
W578				16	16	25′-8″		428	428	STR.					
W579				8	8	32′-2″		268	268	STR.					
W860	4				4	20′-4″	217		217	STR.					
W861	2				2	21′-2″	113		113	STR.					
W862	2				2	29′-8″	158		158	STR.					
W868		4			4	21′-2″	226		226	STR.					
W869		2			2	36′-4″	194		194	STR.					
W870			2		2	26′-11″		144	144	STR.					
W871			4		4	19′-11″		213	213	STR.					
W878				4	4	25′-8″		274	274	STR.					
W879				2	2	32′-2″		172	172	STR.					
PILE AND LAGGING WALL SUB-TOTAL							3,434	3,015	6,449						

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DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2600 CORPORATE EXCHANGE DRIVE SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
VDT	EFD	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3113818	
SNH		NSRR BR#: BR0018448	

SHEET 2 OF 3

REINFORCING STEEL LIST 2 OF 3

BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

56 / 57

1570
2017

MARK	NUMBER					LENGTH	WEIGHT			TYPE	DIMENSIONS			
	PHASE B		PHASE D		TOTAL		PH. B	PH. D	TOTAL		A	B	C	INC
	REAR	FWD	REAR	FWD										
ABUTMENT FOOTING														
FA400	64	68	66	68	266	6'-6"	573	582	1,155	3	1'-6"	1'-6"		
FA500	35				35	30'-0"	1,095		1,095	STR.				
FA501	18				18	15'-2"	285		285	STR.				
FA502	17				17	22'-11"	406		406	STR.				
FA510			35		35	30'-0"		1,095	1,095	STR.				
FA511			18		18	21'-10"		410	410	STR.				
FA512			17		17	14'-1"		250	250	STR.				
FA520	39				39	16'-2"	658		658	STR.				
FA521	8				8	7'-8"	64		64	STR.				
FA529	35				35	14'-7"	532		532	3	4'-9"	2'-3"		
FA530			41		41	16'-2"		691	691	STR.				
FA531			8		8	8'-2"		68	68	STR.				
FA539			38		38	14'-7"		578	578	3	4'-9"	2'-3"		
FA540	52				52	9'-1"	493		493	1	1'-0"	8'-2"		
FA541	5				5	11'-1"	58		58	1	1'-0"	10'-2"		
	1				1	10'-1"						9'-2"		
FA542	SER OF				SER OF	to	167		167	1	1'-0"	to		1"
	15				15	11'-3"						10'-2"		
FA548			16		16	11'-1"		185	185	1	1'-0"	10'-2"		
FA549			55		55	9'-1"		521	521	1	1'-0"	8'-2"		
FA550		35			35	30'-0"	1,095		1,095	STR.				
FA551		35			35	22'-5"	818		818	STR.				
FA560				35	35	30'-0"		1,095	1,095	STR.				
FA561				35	35	18'-9"		684	684	STR.				
FA570		46			46	16'-2"	776		776	STR.				
FA579		40			40	14'-7"	608		608	3	4'-9"	2'-3"		
FA580				46	46	16'-2"		776	776	STR.				
FA589				33	33	14'-7"		502	502	3	4'-9"	2'-3"		
FA590		53			53	9'-2"	507		507	1	1'-0"	8'-3"		
FA591		8			8	11'-2"	93		93	1	1'-0"	10'-3"		
		1			1	7'-2"						6'-3"		
FA592		SER OF			SER OF	to	116		116	1	1'-0"	to		4 1/2"
		12			12	11'-4"						10'-3"		
FA595				48	48	9'-2"		459	459	1	1'-0"	8'-3"		
FA596				5	5	11'-2"		58	58	1	1'-0"	10'-3"		
				1	1	7'-8"						6'-9"		
FA597				SER OF	SER OF	to		147	147	1	1'-0"	to		3"
				15	15	11'-2"						10'-3"		
FA640	34				34	9'-1"	464		464	1	1'-0"	8'-2"		
FA641	5				5	11'-1"	83		83	1	1'-0"	10'-2"		
	1				1	10'-1"						9'-2"		
FA642	SER OF				SER OF	to	223		223	1	1'-0"	to		1"
	14				14	11'-2"						10'-2"		
FA648			16		16	11'-1"		266	266	1	1'-0"	10'-2"		
FA649			36		36	9'-1"		491	491	1	1'-0"	8'-2"		
FA690		38			38	9'-1"	518		518	1	1'-0"	8'-3"		
FA691		8			8	11'-1"	133		133	1	1'-0"	10'-3"		
		1			1	7'-1"						6'-3"		
FA692		SER OF			SER OF	to	165		165	1	1'-0"	to		4 1/2"
		12			12	11'-3"						10'-3"		
FA695				33	33	9'-1"		450	450	1	1'-0"	8'-3"		
FA696				5	5	11'-1"		83	83	1	1'-0"	10'-3"		
				1	1	7'-7"						6'-9"		
FA697				SER OF	SER OF	to		196	196	1	1'-0"	to		3 1/4"
				14	14	11'-2"						10'-3"		
FA1020	39				39	16'-2"	2,713		2,713	STR.				
FA1021	9				9	7'-8"	297		297	STR.				
FA1030			42		42	16'-2"		2,922	2,922	STR.				
FA1031			9		9	8'-2"		316	316	STR.				
FA1070		46			46	16'-2"	3,200		3,200	STR.				
FA1080				46	46	16'-2"		3,200	3,200	STR.				
ABUTMENT FOOTING SUB-TOTAL							16,140	16,025	32,165					

MARK	NUMBER					LENGTH	WEIGHT			TYPE	DIMENSIONS			
	PHASE B		PHASE D		TOTAL		PH. B	PH. D	TOTAL		A	B	C	INC
	REAR	FWD	REAR	FWD										
PIER FOOTING														
FP500		40		41	81	19'-0"	793	812	1,605	STR.				
FP540		20			20	30'-0"	626		626	STR.				
FP541		20			20	17'-2"	358		358	STR.				
FP549		40		40	80	7'-3"	302	302	604	3	1'-8"	1'-8"		
FP550				20	20	39'-8"		827	827	STR.				
FP610		49		49	98	35'-0"	2,576	2,576	5,152	3	13'-8"	3'-6"		
FP611		38		38	76	18'-6"	1,056	1,056	2,112	3	5'-5"	3'-6"		
FP620		40		40	80	5'-3"	316	316	632	2	1'-0"	3'-6"	1'-0"	
FP630		74			74	23'-5"	2,603		2,603	1	1'-0"	22'-6"		
FP631				72	72	23'-5"		2,532	2,532	1	1'-0"	22'-6"		
FP840		20			20	30'-0"	1,602		1,602	STR.				
FP841		20			20	20'-0"	1,068		1,068	STR.				
FP850				20	20	39'-8"		2,118	2,118	STR.				
FP1400		30		31	61	21'-6"	4,934	5,099	10,033	2	1'-9"	19'-0"	1'-9"	
PIER FOOTING SUB-TOTAL							16,234	15,638	31,872					
TOTAL ALL REINFORCING							78,878	79,924	158,802					

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DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED VDT | DRAWN EFD | CHECKED SNH | REVIEWED CTV | DATE 12-15-21

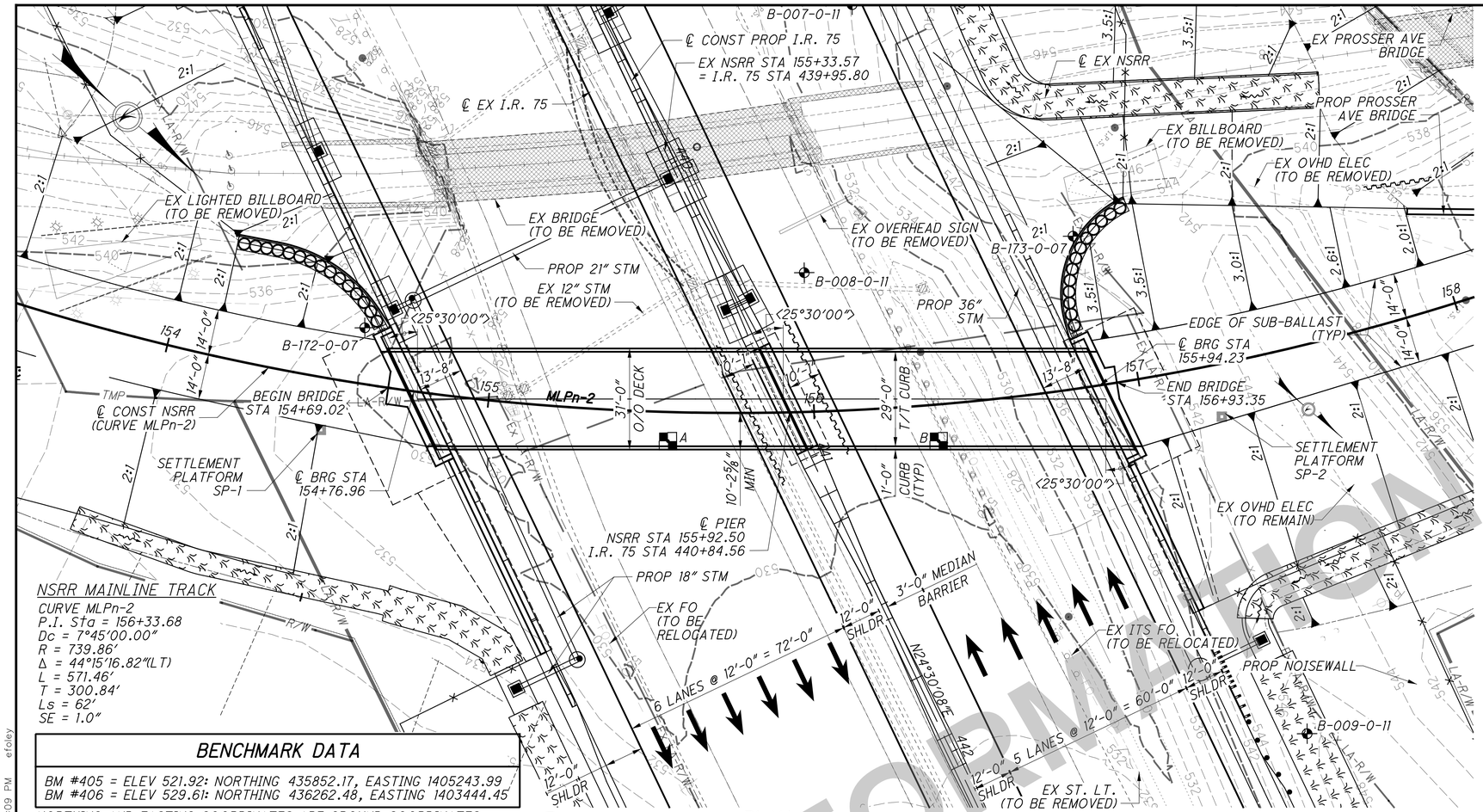
ODOT SFN: 3113818
NSRR BR#: BR0018448

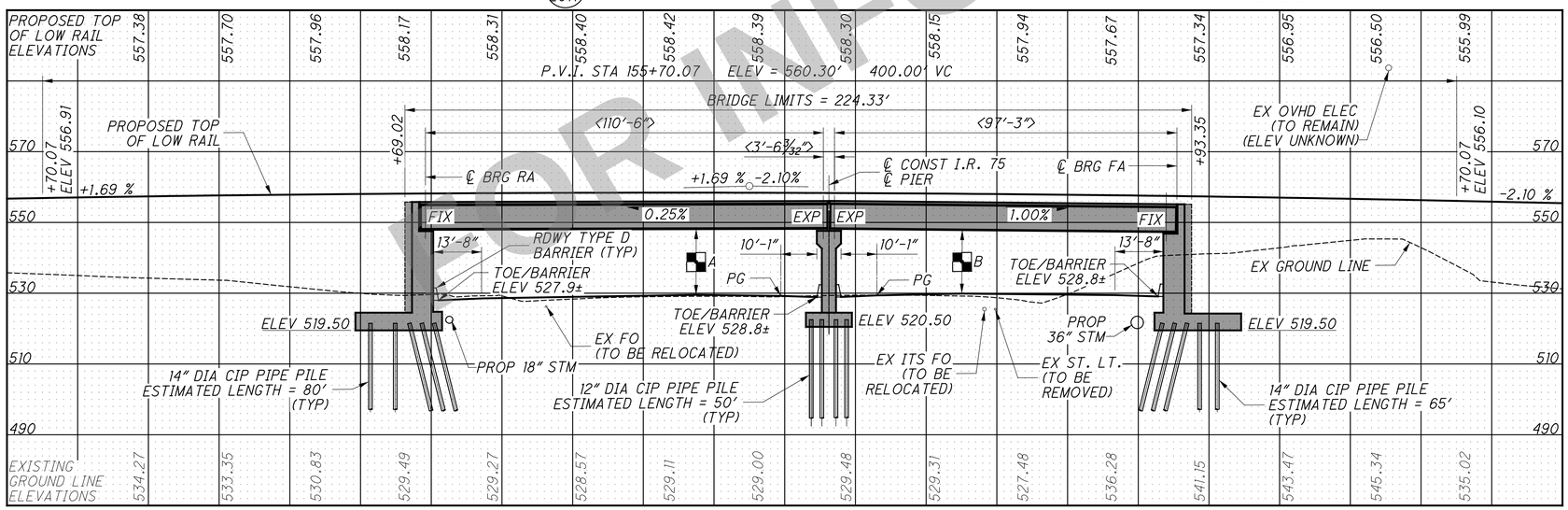
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REINFORCING STEEL LIST 3 OF 3
BRIDGE NO. HAM-562-0026 (NSRR BRIDGE CT-1.41: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER S.R. 562

HAM-75-7.85
PID No. 77889

1571
2017





PROFILE ALONG ℄ CONST PROPOSED NS RAILROAD MAIN

NOTES

1. FOR ADDITIONAL LAYOUT DETAILS, SEE GENERAL PLANS, SHEETS [2|41] AND [3|41].
2. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
3. FOR ADDITIONAL ROADWAY INFORMATION, SEE ROADWAY SHEET (349/2017).
4. FOR ADDITIONAL RAIL INFORMATION, SEE TRACK PLANS, SHEET (1712/2017).

MILEPOST NOTE:

1. THE CENTER OF BRIDGE ALONG ℄ SURVEY AND CONSTRUCTION OF NS RAILROAD IS STA 155+92.50. THE DISTANCE TO NS RAILROAD MILEPOST CT-1.0 IS 264 FT. (0.05 MILES) EAST.

I.R. 75 TRAFFIC DATA

2010 ADT = 173,800 2010 ADTT = 24,332
2035 ADT = 203,000 2030 ADTT = 28,520
DIRECTIONAL DISTRIBUTION = 53%

NORFOLK SOUTHERN RAIL TRAFFIC DATA

5 FREIGHT TRAINS PER DAY
0 PASSENGER TRAINS PER DAY
10 MPH OPERATING SPEED
SOURCE: NORFOLK SOUTHERN RAILROAD

LEGEND

- SOIL BORING LOCATION
- POINT OF MINIMUM VERTICAL CLEARANCE - 16'-6" REQUIRED
  A = 18'-6¼" (SPAN 1 OVER NB I.R. 75)
  B = 17'-10⅜" (SPAN 2 OVER SB I.R. 75)
- APPROX. LIMITS OF TEMPORARY SHORING AT PROPOSED PIER. MINIMUM SECTION MODULUS = 36.1 IN³
- EXISTING BRIDGE REMOVAL

SEE SHEET (1506/2017) FOR PROJECT ABBREVIATIONS

SOIL BORING DATA

BORING	STATION	OFFSET
B-172-0-07	440+05.00	106.5' RT
B-173-0-07	440+73.20	101.8' LT
B-008-0-11	440+47.80	22.51' LT
B-009-0-11	442+41.96	100.90' LT

BORING DATA REFERENCED FROM ℄ CONST PROP I.R. 75

EXISTING STRUCTURE

TYPE: TWO SIMPLE-SPAN STEEL THRU-GIRDERS (33 KSI) WITH CONCRETE DECK ON CONCRETE ABUTMENTS AND PIER

SPANS: 59'-3"±, 58'-0"± C/C BRGS (MEASURED ALONG REF CHORDS)

WIDTH: 12'-2"± (SPAN 1) & 12'-6"± (SPAN 2) C/C GIRDERS WITH 3'-9"± WALKWAY OVERHANGS (EACH SIDE)

ORIGINAL DESIGN LOADING: COOPER E-72

ALIGNMENT: 7°00' LEFT CURVE (CHORD DEFINITION)

SKEW: 21°55'± RF (SPAN 1) & 17°58'± RF (SPAN 2) (MEASURED TO SPAN REFERENCE CHORDS)

YEAR BUILT: 1958

STRUCTURE FILE NUMBER: 3110141

DISPOSITION: TO BE REPLACED

PROPOSED STRUCTURE

TYPE: TWO SIMPLE-SPAN STEEL DECK GIRDERS (ASTM A709, GR. 50) WITH A BALLASTED, COMPOSITE REINFORCED CONCRETE DECK ON FULL-HEIGHT, CONCRETE WALL ABUTMENTS & WALL-TYPE PIER

SPAN: 110'-6", 97'-3" C/C BRGS (MEASURED ALONG REF CHORD)

WIDTH: 29'-0" F/F CURBS (31'-0" O/O CURBS)

LOADING: COOPER E-80 WITH DIESEL IMPACT & ALTERNATE LOAD

ALIGNMENT: 7°45'00" LEFT CURVE (CHORD DEFINITION)

SKEW: 25°30'00" RF (MEASURED TO SPAN REFERENCE CHORDS)

COORDINATES: LATITUDE N 39° 10' 51"
LONGITUDE W 84° 29' 07"

STRUCTURE FILE NUMBER: 3110142

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2600 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED EFD | DRAWN SNH | REVIEWED CTV | DATE 12-15-21
CHECKED CTM | REVISED | ODOT SFN: 3110142 | NSRR BR#: BR0018445

HAMILTON COUNTY
STA. 154+69.02
TO STA. 156+93.35

SITE PLAN
BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

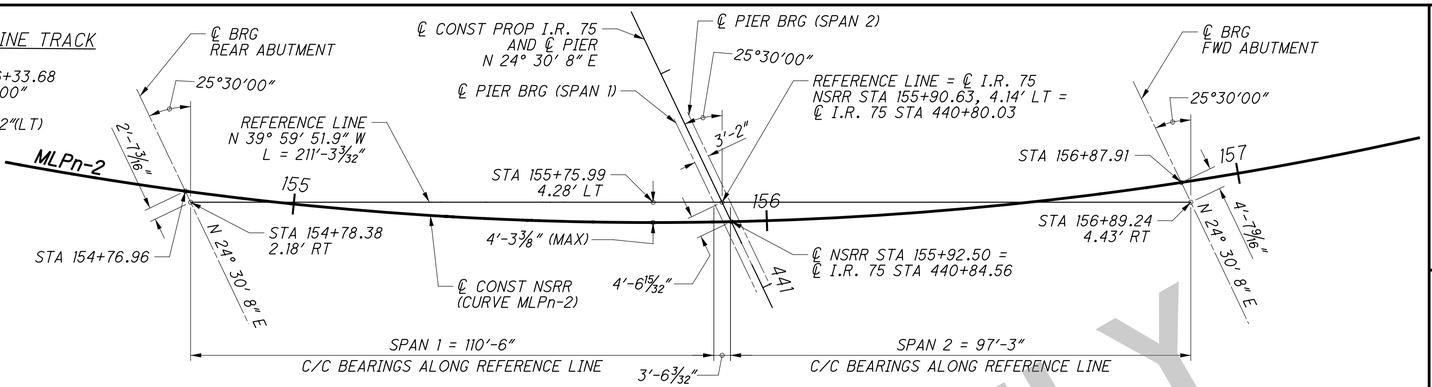
HAM-75-7.85
PID No. 77889

(1572/2017)

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FOR INFORMATION ONLY

NSRR MAINLINE TRACK
CURVE MLPn-2
P.I. Sta = 156+33.68
Dc = 7°45'00.00"
R = 739.86'
Δ = 44°15'16.82"(LT)
L = 571.46'
T = 300.84'
Ls = 62'
SE = 1.0"



BRIDGE LAYOUT LINE DIAGRAM

STATIONS REFER TO NSRR (U.N.O.)

1 REAR ABUTMENT DETAIL
STATIONS REFER TO NSRR

GENERAL PLAN: SPAN 1
STATIONS REFER TO NSRR (U.N.O.)

2 PIER DETAIL
STATIONS REFER TO NSRR (U.N.O.)

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2600 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
EFD	SNH	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3110142	
CTM		NSRR BR#: BR0018445	

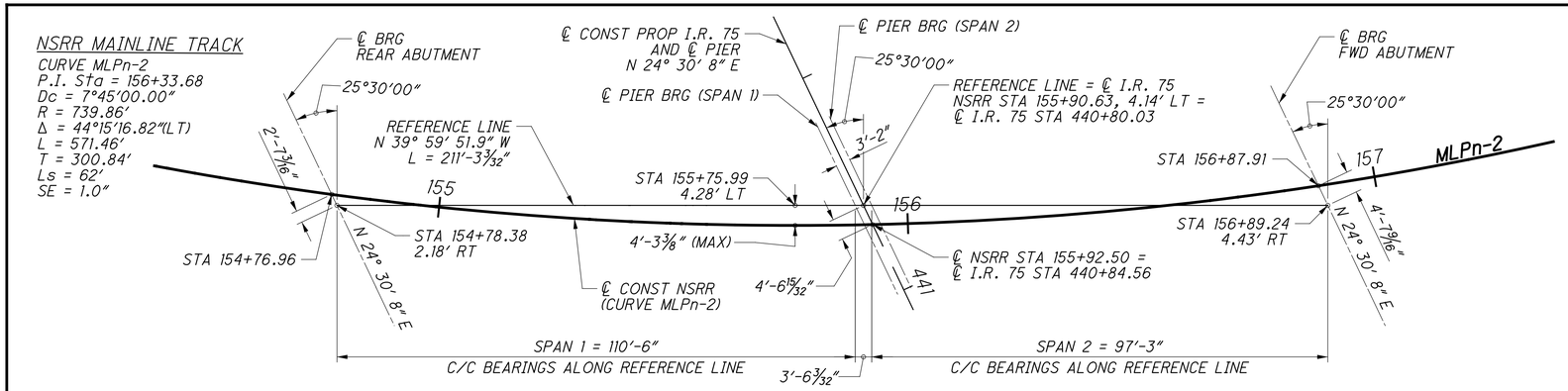
GENERAL PLAN VIEW: SPAN 1
BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

HAM-75-7.85
PID No. 77889

2 / 41

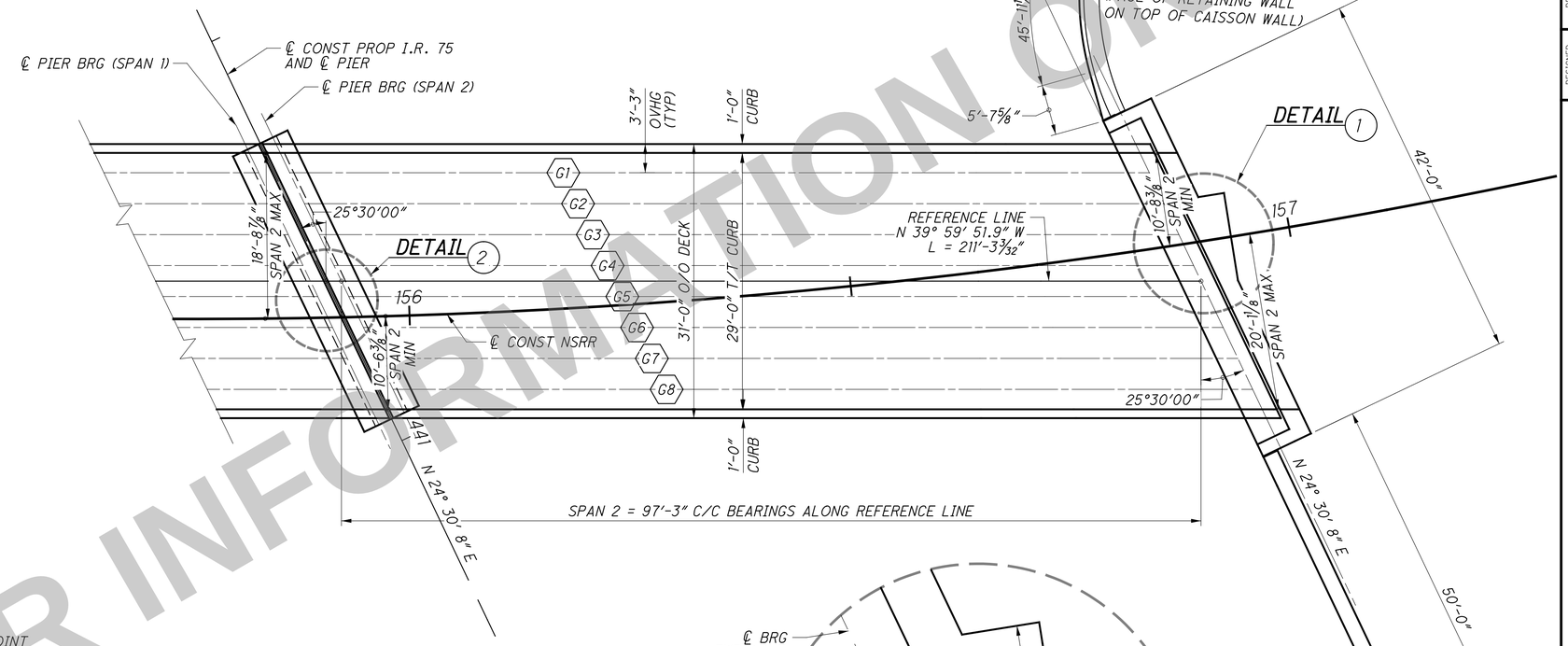
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2017

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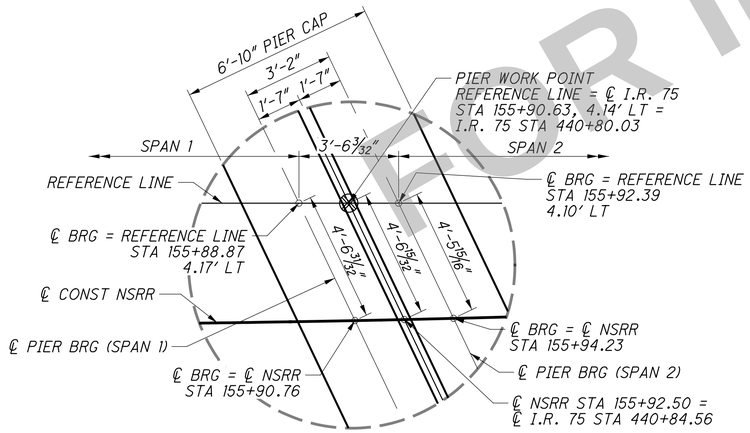
BRIDGE LAYOUT LINE DIAGRAM

STATIONS REFER TO NSRR (U.N.O.)



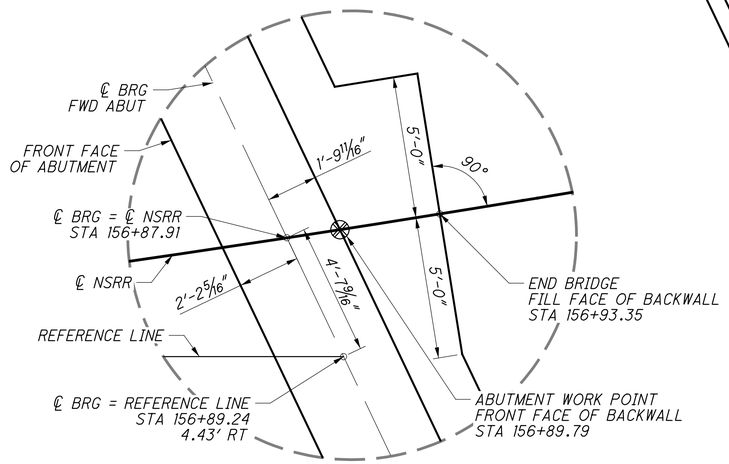
GENERAL PLAN: SPAN 2

STATIONS REFER TO NSRR (U.N.O.)



2 PIER DETAIL

STATIONS REFER TO NSRR (U.N.O.)



1 FORWARD ABUTMENT DETAIL

STATIONS REFER TO NSRR

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
EFD	SNH	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3110142	
CTM		NSRR BR#: BR0018445	

GENERAL PLAN VIEW: SPAN 2

BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

HAM-75-7.85
PID No. 77889

1574
2017

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HAM-075-0834 SPECIFIC NOTES

STANDARD RAILROAD BRIDGE NOTES AND DETAILS

THE NOTES ON THIS SHEET ARE SPECIFIC TO THE SUBJECT BRIDGE STRUCTURE. FOR STANDARD NOTES AND DETAILS APPLICABLE TO ALL RAILROAD BRIDGE STRUCTURES ON THIS PROJECT, INCLUDING THIS STRUCTURE, SEE THE FOLLOWING SHEETS: (1502/2017) THROUGH (1514/2017)

ITEM 202 - STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

THIS ITEM SHALL INCLUDE THE REMOVAL OF THE EXISTING IN-SERVICE BRIDGE CARRYING NSRR OVER I.R. 75.

THE REMOVAL OF THE EXISTING IN-SERVICE BRIDGE INCLUDES THE REMOVAL OF ALL SUPERSTRUCTURE ELEMENTS AND ALL SUBSTRUCTURE ELEMENTS TO A DISTANCE OF 3'-6" BELOW PROPOSED FINAL GRADE.

THE CONTRACTOR MUST REVIEW THE EXISTING STRUCTURE WHEN PREPARING THEIR BID. EXISTING PLANS ARE AVAILABLE FOR THE SUBJECT BRIDGE.

SEE SHEET 5 | 41 FOR PLAN LIMITS OF ITEM 202.

PROPOSED SEQUENCE OF CONSTRUCTION

FOR ROADWAY MAINTENANCE OF TRAFFIC DETAILS, SEE SHEETS (59/2017) THROUGH (262/2017) .

PROPOSED SEQUENCE OF CONSTRUCTION:

THE FOLLOWING MAY BE COMPLETED PRIOR TO ROADWAY MAINTENANCE TRAFFIC PHASE 1
1) INSTALL PRELOAD EMBANKMENT
2) INSTALL SOUTHEAST & SOUTHWEST CAISSON WALLS

THE FOLLOWING SHOULD BE COMPLETED DURING ROADWAY MAINTENANCE TRAFFIC PHASES 1 AND 2
3) INSTALL TEMPORARY ROADWAY SHORING AS REQUIRED TO EXCAVATE ABUTMENT AND PIER FOUNDATIONS
4) INSTALL ABUTMENT AND PIER PILES
5) CONSTRUCT PROPOSED SUBSTRUCTURES
6) REMOVE TEMPORARY SHEET PILE SHORING
7) ERECT AND CONSTRUCT SUPERSTRUCTURE
8) SHIFT NSRR ONTO PROPOSED ALIGNMENT
9) REMOVE EXISTING SUPERSTRUCTURE
10) REMOVE EXISTING FORWARD (WEST) ABUTMENT AND WINGWALLS
11) CONSTRUCT FACING OF SOUTHWEST CAISSON WALL
12) GRADE WEST EMBANKMENT TO PROPOSED ELEVATIONS

THE FOLLOWING SHOULD BE COMPLETED DURING ROADWAY MAINTENANCE TRAFFIC PHASE 3
13) REMOVE EXISTING PIER

THE FOLLOWING SHOULD BE COMPLETED DURING ROADWAY MAINTENANCE TRAFFIC PHASE 4A (OR THEREAFTER)
13) REMOVE EXISTING REAR (EAST) ABUTMENT AND WINGWALLS
14) CONSTRUCT FACING OF SOUTHEAST CAISSON WALL
15) GRADE EAST EMBANKMENT TO PROPOSED ELEVATIONS

ITEM 203 - EMBANKMENT, AS PER PLAN

PLACE AND COMPACT EMBANKMENT MATERIAL IN 6 INCH LIFTS FOR THE CONSTRUCTION OF THE APPROACH EMBANKMENT FROM STATION 154+00 TO STATION 157+50. THE APPROACH EMBANKMENT SHALL BE FURNISHED AND PAID FOR AS PART OF THIS ITEM.

THE EMBANKMENT SHALL BE PLACED FOR THE PURPOSES OF PRE-LOADING THE BRIDGE SITE PRIOR TO SHORING, FOUNDATION AND SUBSTRUCTURE CONSTRUCTION. THE EMBANKMENT SHALL BE PLACED IN COORDINATION WITH THE SETTLEMENT PLATFORMS AND PROJECT PILE DRIVING CONSTRAINTS.

THE EMBANKMENT SHALL BE PLACED TO ITS REQUIRED FINAL ELEVATION AND SLOPED DOWN (1:1 MAX SLOPE) TO THE EXISTING IR-75 EDGE OF PAVEMENT. FILL SHOULD HAVE A MAXIMUM DRY DENSITY OF AT LEAST 110 PCF.

AFTER CONSTRUCTION OF THE APPROACH EMBANKMENT, A MINIMUM WAITING TIME OF 30 DAYS IS REQUIRED PRIOR TO BEGINNING DRILLED SHAFT OR FOUNDATION EXCAVATION AND CONSTRUCTION. THE WAIT TIME SHALL EXTEND UNTIL THE REQUIREMENTS OF THE SETTLEMENT PLATFORMS HAVE BEEN MEET.

SEE SHEET 5 | 41 FOR SCHEMATIC LIMITS OF EMBANKMENT AND EXCAVATION QUANTITIES.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES (CY) AT THE CONTRACT BID PRICE.

ITEM 507 - CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN, AS PER PLAN

FOR STANDARD NOTES FOR THIS ITEM, SEE SHEET: (1503/2017)

FOR FURNISHED PILE NOTES, SEE SHEET: (1503/2017)

PILE DESIGN LOADS (ULTIMATE BEARING VALUE): THE ULTIMATE BEARING VALUE IS 203 TONS PER PILE FOR THE REAR ABUTMENT PILES AND 180 TONS PER PILE FOR THE FORWARD ABUTMENT PILES. THE ULTIMATE BEARING VALUE IS 144 TONS PER PILE FOR THE REAR WINGWALL PILES AND 137 TONS PER PILE FOR THE FORWARD WINGWALL PILES. THE ULTIMATE BEARING VALUE IS 110 TONS PER PILE FOR THE PIER PILES.

ABUTMENT PILES:
14" CIP REAR ABUTMENT PILES 85 FEET LONG, ORDER LENGTH
14" CIP FORWARD ABUTMENT PILES 70 FEET LONG, ORDER LENGTH
4 DYNAMIC LOAD TESTING ITEMS (2 PER ABUTMENT)

WINGWALL PILES:
12" CIP REAR ABUTMENT WINGWALL PILES 85 FEET LONG, ORDER LENGTH
12" CIP FORWARD ABUTMENT WINGWALL PILES 70 FEET LONG, ORDER LENGTH
4 DYNAMIC LOAD TESTING ITEMS (2 PER WALL)

PIER PILES:
12" CIP PILES 55 FEET LONG, ORDER LENGTH
2 DYNAMIC LOAD TESTING ITEMS

SEE FOUNDATION PLAN SHEETS 9 | 35 THROUGH 11 | 35 FOR ORDER LENGTHS, TIP ELEVATION, AND CUTOFF ELEVATION DETAILS FOR SPECIFIC PILES.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES (FT) AT THE CONTRACT BID PRICE.

ITEM 524 - DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK, AS PER PLAN

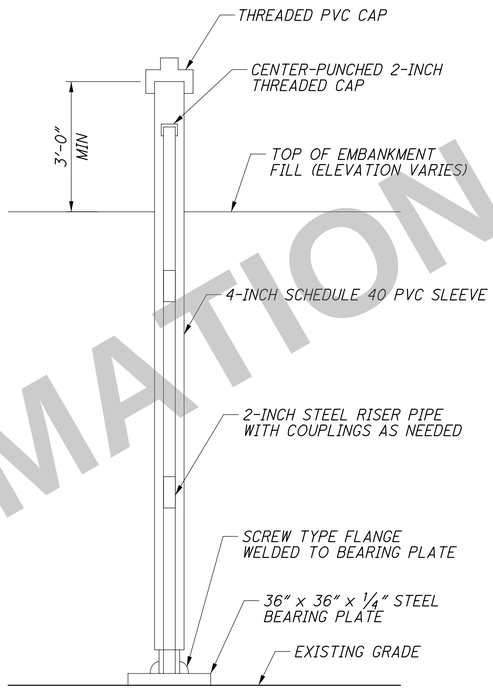
FOR STANDARD NOTES FOR THIS ITEM, SEE SHEET: (1505/2017)

ALTERNATING SHAFT CONSTRUCTION SHALL BE USED PER ODOT GEOTECHNICAL BULLETIN GB-7. THE IN-BETWEEN SHAFTS MAY BE SHIFTED UP TO 3" FROM THEIR PLAN LOCATION TO ALLOW FOR PROPER FITUP. IF SHAFT FITUP REQUIRES AN IN-BETWEEN SHAFT TO BE SHIFTED GREATER THAN 3" THE CAP SHALL BE WIDENED TO ACCOMODATE. ANY RESULTING EXTRA CONCRETE FOR THE CAP SHALL NOT BE REIMBURSED BY THE DEPARTMENT. IF, AFTER EXCAVATION, IT IS DEEMEED BY ODOT OR NSRR THAT THE GAP BETWEEN SHAFTS ALLOWS EXCESSIVE SOIL LOSS, THE GAP BETWEEN SHAFTS SHALL BE GROUTED TO ELIMINATE THE SOIL LOSS. THE GROUTING SHALL BE TO THE SATISFACTION OF NSRR AND SHALL BE AT NO ADDITIONAL COST THE DEPARTMENT.

ITEM SPECIAL - SETTLEMENT PLATFORMS

DESCRIPTION: THIS WORK SHALL CONSIST OF THE FABRICATION, INSTALLATION, PROTECTION, AND MAINTENANCE OF SETTLEMENT PLATFORMS AND OBTAINING SETTLEMENT READINGS IN ACCORDANCE WITH THESE PLANS AND AS DIRECTED BY THE ENGINEER. AT THE OPTION AND EXPENSE OF THE CONTRACTOR, ADDITIONAL SETTLEMENT PLATFORMS MAY BE INSTALLED AT LOCATIONS APPROVED BY THE ENGINEER. THE SETTLEMENT PLATFORM SHALL BE INSTALLED PRIOR TO BACKFILLING BEHIND THE PROPOSED ABUTMENTS.

MATERIALS: THE SETTLEMENT PLATFORM SHALL BE CONSTRUCTED OF A STEEL BEARING PLATE, STEEL RISER PIPE, PVC SLEEVE, FITTINGS AND ANY INCIDENTALS MEETING THE APPROVAL OF THE ENGINEER, AND SHALL BE SECURELY FASTENED TOGETHER AS DETAILED IN THE PLANS. ALL STEEL PIPE AND FITTINGS SHALL BE GALVANIZED AND FABRICATED FROM STANDARD WEIGHT STOCK OF THE SIZE SHOWN IN THE PLANS. MATERIALS WILL BE ACCEPTED ON THE BASIS OF CERTIFICATION AND A VISUAL INSPECTION.



SETTLEMENT PLATFORM (TYPICAL)

NOT TO SCALE

INSTALLATION: THE SETTLEMENT PLATFORMS SHALL BE INSTALLED BEFORE ANY FILL MATERIAL IS PLACED AT THE LOCATIONS SPECIFIED IN THE PLANS. THE BEARING PLATE SHALL BE PLACED ON COMPACTED EXISTING GROUND AND THE PLATE SHALL BE PLACED LEVEL. THE BEARING PLATE WITH ATTACHED RISER PIPE SHALL BE PLACED ON THE PREPARED SUBGRADE AND THE FIRST SECTION OF THE SLEEVE SHALL BE SLIPPED OVER THE RISER PIPE AND CENTERED ABOUT IT.

BEFORE CONSTRUCTION OF THE EMBANKMENT, THE INITIAL ELEVATION OF THE TOP OF THE BEARING PLATE SHALL BE DETERMINED AND RECORDED BY THE CONTRACTOR. WITH THE RISER PIPE CENTERED IN THE PVC SLEEVE AND MAINTAINED IN A VERTICAL POSITION, THE EMBANKMENT MATERIAL SHALL BE PLACED IN LAYERS AND THOROUGHLY COMPACTED.

COMPACTION OF EMBANKMENT MATERIAL AROUND THE SETTLEMENT PLATES SHALL CONFORM TO OTHER EARTHWORK SPECIFICATIONS; HOWEVER, THE EMBANKMENT MATERIAL SHALL BE PLACED BY HAND USING LIGHT-WEIGHT WALK BEHIND COMPACTION EQUIPMENT IN ORDER NOT TO DISTURB SETTLEMENT PLATES AND SLEEVES. WHEN THE INSTALLATION DESCRIBED ABOVE IS COMPLETE. THE CONTRACTOR SHALL DETERMINE THE ELEVATION OF THE TOP OF THE RISER PIPE AT THIS TIME. NO ADDITIONAL EMBANKMENT SHALL BE PLACED UNTIL THIS ELEVATION HAS BEEN DETERMINED.

WHEN THE ELEVATION OF THE TOP SURFACE OF THE EMBANKMENT FILL REACHES A LEVEL APPROXIMATELY 3 FEET BELOW THE TOP OF THE SLEEVE, THE CONTRACTOR SHALL INSTALL THE NEXT SECTION OF THE SLEEVE AND RISER PIPE. ADDED SECTIONS SHOULD NOT BE GREATER THAN 5 FEET IN LENGTH. AS EACH ADDITIONAL LENGTH OF PIPE IS ADDED, THE PIPE CAP ON THE SLEEVE SHALL BE IMMEDIATELY TRANSFERRED TO THE NEW SECTION, AND THE NEW SECTION WRENCH TIGHTENED SO AS TO PREVENT FILL MATERIAL FROM ENTERING THE SLEEVE. AT OTHER TIMES, THE CAP SHALL ONLY BE REMOVED TO CHECK SETTLEMENT. AS THE HEIGHT OF THE EMBANKMENT FILL INCREASES, THE PROCEDURE SHALL BE REPEATED UNTIL THE EMBANKMENT FILL IS COMPLETED.

THE CONTRACTOR SHALL TAKE ALL SETTLEMENT PLATE READINGS. ALL SETTLEMENT PLATE READINGS SHALL BE OBTAINED TO AN ACCURACY OF 0.01 FEET AND BE PART OF A CLOSED CIRCUIT LEVEL RUN. THE CONTRACTOR SHALL TAKE ELEVATION READINGS OF THE BEARING PLATES AND EXTENSIONS AS FOLLOWS:

- UPON INSTALLATION OF THE SETTLEMENT PLATE, THE TOP OF THE BASE PLATE AND THE TOP OF THE FIRST PIPE EXTENSION.
- AS EACH EXTENSION IS ADDED. THE TOP OF THE PREVIOUS EXTENSION AND THE TOP OF THE NEW EXTENSION.
- DAILY READINGS DURING THE PLACEMENT OF THE FILL, INCLUDING THE HEIGHT OF THE FILL.
- DURING THE ENTIRE TIME OF CONSTRUCTION UP TO THE END OF THE WAITING PERIOD, AT INTERVALS NOT TO EXCEED 7 DAYS.

WAITING PERIOD: THE WAITING PERIOD SHALL BE NO LESS THAN 30 DAYS, WITH THE TOTAL DURATION ANTICIPATED TO BE BETWEEN 30 AND 60 DAYS. THE WAITING PERIOD SHALL BE CONSIDERED COMPLETE WHEN THE SETTLEMENT IS MEASURED AT LESS THAN 0.12" EVERY 7 DAYS FOR TWO CONSECTUTIVE READINGS.

REPORTING: THE READINGS SHALL BE PLOTTED ON GRAPH PAPER PRESENTING DEFORMATION (ON THE NEGATIVE Y-AXIS) AND FILL HEIGHT (ON THE POSITIVE Y-AXIS) VERSUS TIME (ON THE X-AXIS). IN ORDER TO CREATE THE GRAPH, USE THE SETTLEMENT PLATFORM SPREADSHEET LOCATED AT http://www.dot.state.oh.us/Divisions/Engineering/Geotechnical/Geotechnical_Documents/Blank_Settlement_Reading_Plots-English.xls
A COPY OF EACH CUMULATIVE PLOT SHALL BE SENT TO THE OFFICE OF GEOTECHNICAL ENGINEERING (ATTENTION: GEOTECHNICAL DESIGN COORDINATOR) AND NSRR, AFTER EACH SETTLEMENT READING IS RECORDED.

BASED UPON INTERPRETATION OF SETTLEMENT MONITORING DATA, THE ENGINEER AND NSRR WILL PROVIDE APPROVAL FOR THE ACTUAL DURATION OF THE WAITING PERIOD. UPON COMPLETION OF THE WAITING PERIOD, THE CONTRACTOR SHALL REMOVE OR CUT OFF THE PIPE EXTENSIONS TO A DEPTH TWO FEET BELOW THE FINISHED SUBGRADE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE SETTLEMENT OF PLATFORMS IN WORKING ORDER DURING THE PERIOD OF HIS CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL OPERATE HIS EQUIPMENT IN A MANNER TO ENSURE THAT THE SETTLEMENT PLATFORMS ARE NOT DAMAGED OR DISPLACED LATERALLY. EACH ASSEMBLY SHALL BE CLEARLY MARKED AND FLAGGED WITH GUARD STAKES AND PROTECTIVE BARRICADES. ALL SETTLEMENT PLATFORMS DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR WITHIN SEVEN 171 DAYS AFTER BEING DAMAGED. NO ADDITIONAL FILL SHALL BE PLACED IN THE AREA UNTIL THE PLATFORMS ARE REPAIRED.

MEASUREMENT AND PAYMENT: EACH SETTLEMENT PLATFORM ASSEMBLY ACCEPTABLY INSTALLED AND MAINTAINED IN A SATISFACTORY OPERATING CONDITION UNTIL THE AREA IS RELEASED FOR FURTHER CONSTRUCTION, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR "ITEM SPECIAL - SETTLEMENT PLATFORM." PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIAL, LABOR AND EQUIPMENT FOR PROPER INSTALLATION OF THE SETTLEMENT PLATFORM, FOR PROTECTING SETTLEMENT PLATFORMS, FOR REPAIR AND REPLACING DAMAGED SETTLEMENT PLATFORMS, FOR MONITORING SETTLEMENT PLATFORMS, AND FOR ALL OTHER WORK AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SPECIFIED HEREIN, SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER.

FOR INFORMATION ONLY

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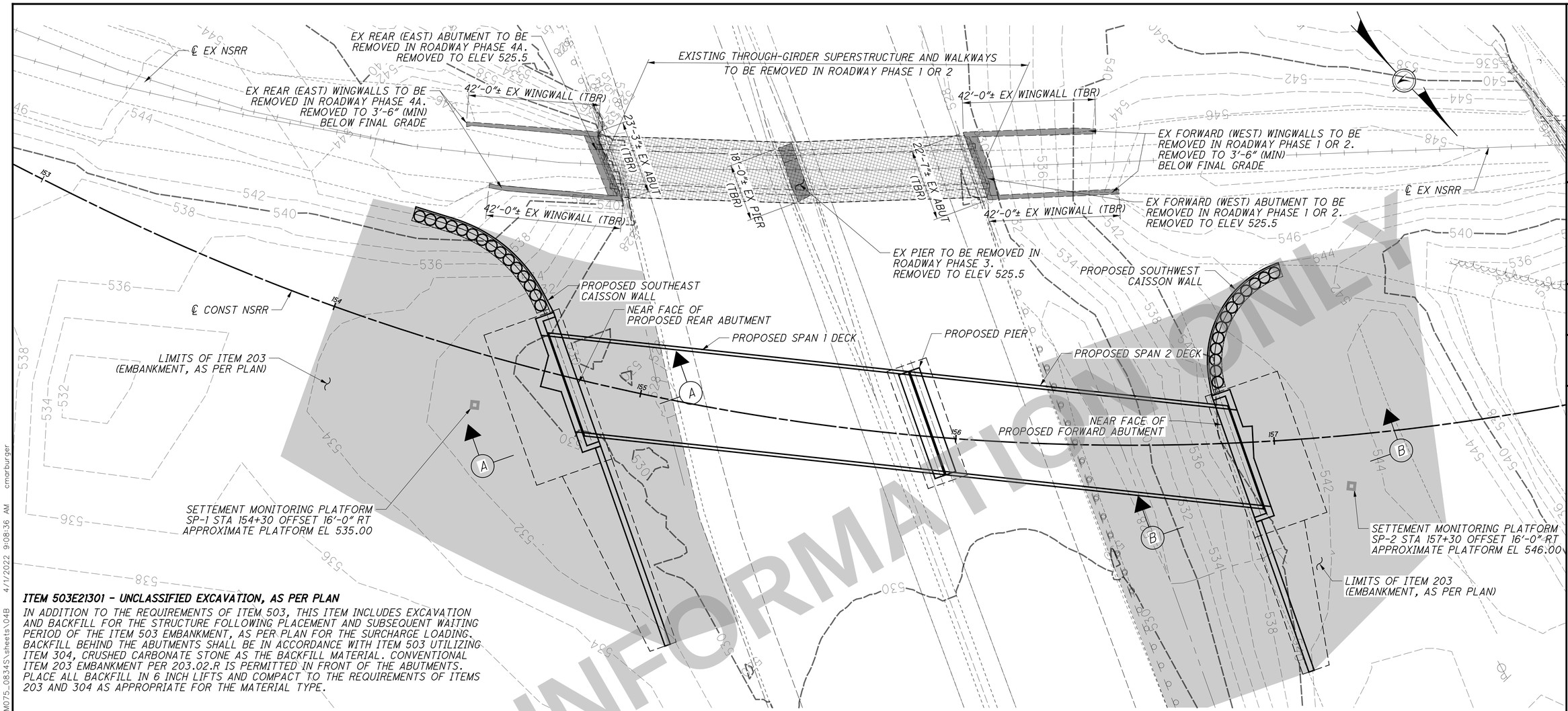
DESIGNED EFD | DRAWN EFD/SNH | REVIEWED CTV | DATE 12-15-21
CHECKED CTM | REVISED | ODOT SFN: 3110142 | NSRR BR#: BRO018445

BRIDGE SPECIFIC NOTES
BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

HAM-75-7.85
PID No. 77889

4 / 41

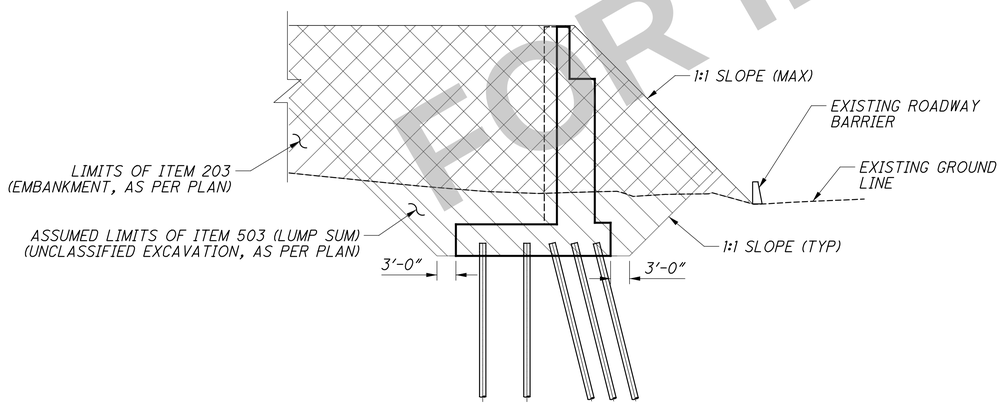
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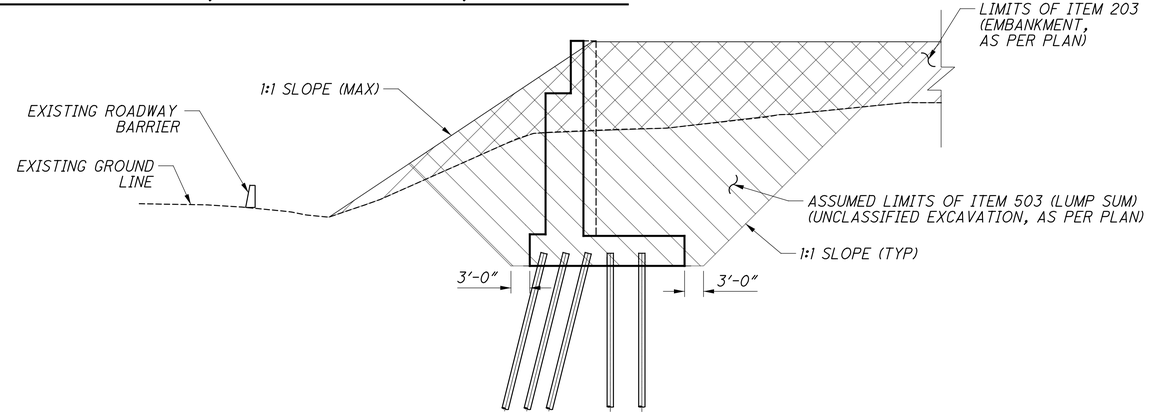
ITEM 503E21301 - UNCLASSIFIED EXCAVATION, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ITEM 503, THIS ITEM INCLUDES EXCAVATION AND BACKFILL FOR THE STRUCTURE FOLLOWING PLACEMENT AND SUBSEQUENT WAITING PERIOD OF THE ITEM 503 EMBANKMENT, AS PER PLAN FOR THE SURCHARGE LOADING. BACKFILL BEHIND THE ABUTMENTS SHALL BE IN ACCORDANCE WITH ITEM 503 UTILIZING ITEM 304, CRUSHED CARBONATE STONE AS THE BACKFILL MATERIAL. CONVENTIONAL ITEM 203 EMBANKMENT PER 203.02.R IS PERMITTED IN FRONT OF THE ABUTMENTS. PLACE ALL BACKFILL IN 6 INCH LIFTS AND COMPACT TO THE REQUIREMENTS OF ITEMS 203 AND 304 AS APPROPRIATE FOR THE MATERIAL TYPE.

PLAN LIMITS OF ITEM 202 - STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN



A SECTION
REAR ABUTMENT EMBANKMENT DETAILS



B SECTION
FORWARD ABUTMENT EMBANKMENT DETAILS

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED EFD | DRAWN EFD | REVIEWED CTV | DATE 12-15-21
CHECKED CTM | REVISED | ODOT SFN: 3110142 | NSRR BR#: BR0018445

BRIDGE SPECIFIC NOTES

BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

HAM-75-7.85
PID No. 77889

1576
2017

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ESTIMATED BRIDGE QUANTITIES

CALCULATED: VDT DATE: 6/11/15
CHECKED: SNH DATE: 6/12/15

ITEM	ITEM EXT.	TOTAL QUANTITY (04/IMS/BR)	UNIT	DESCRIPTION	REAR	PIER	FWD	SUPER	GENERAL	APP SHEET NO.
202	11003	LUMP	LS	STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					LUMP	4/41
SPECIAL	20365000	2	EACH	SPECIAL - SETTLEMENT PLATFORM					2	4/41
203	20001	6,074	CY	EMBANKMENT, AS PER PLAN	4,010		2,064			1767/2017
503	11101	LUMP	LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (PIER)					LUMP	1502/2017
503	21100	216	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN		216				1502/2017
503	21301	LUMP	LS	UNCLASSIFIED EXCAVATION, AS PER PLAN	LUMP		LUMP			5/41
505	11100	LUMP	LS	PILE DRIVING EQUIPMENT MOBILIZATION					LUMP	
507	00501	7,975	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN, AS PER PLAN	3,360	2,600	2,015			4/41
507	00551	8,600	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED, AS PER PLAN	3,570	2,860	2,170			1503/2017
507	00601	8,085	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN, AS PER PLAN	4,640		3,445			4/41
507	00651	8,640	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED, AS PER PLAN	4,930		3,710			1503/2017
509	10000	204,278	LB	EPOXY COATED REINFORCING STEEL	72,086	6,891	59,649	65,652		
511	34447	264	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN				264		1503/2017
511	34451	32	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN				32		1503/2017
511	40513	132	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS, AS PER PLAN		132				1503/2017
511	44113	85	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT, NOT INCLUDING FOOTING, AS PER PLAN	47		38			1503/2017
511	45603	480	CY	CLASS QC4 MASS CONCRETE, SUBSTRUCTURE WITH QC/QA, AS PER PLAN	257		223			1503/2017
511	46013	224	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN	123		101			1503/2017
511	46513	312	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING, AS PER PLAN	137	75	100			1503/2017
511	53016	433	CY	CLASS QC4 CONCRETE, MISC.: FOOTING MASS CONCRETE WITH QC/QA	233		200			1503/2017
511	71200	822	SF	CONCRETE, MISC.: FACING OF CANTILEVER WALLS	437		385			1503/2017
512	10001	821	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN	371	138	312			1504/2017
512	10100	1,089	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	371	138	312	268		
512	44451	738	SY	TYPE E WATERPROOFING, AS PER PLAN				738		1504/2017
SPECIAL	51256202	738	SY	SPECIAL - ASPHALTIC PANEL				738		1504/2017
SPECIAL	51267400	5,373	SF	SPECIAL - WATERPROOFING, MISC.: DAMPPROOFING OF RAILROAD STRUCTURES	2,925		2,448			1503/2017
513	10221	94,050	LB	STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN				94,050		1504/2017
513	10321	1,001,135	LB	STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN				1,001,135		1504/2017
513	20000	4,824	EACH	WELDED STUD SHEAR CONNECTORS				4,824		
514	80020	40,550	SF	SPECIAL - SHOP PAINTING AND FIELD TOUCH-UP OF STRUCTURAL STEEL				40,550		1504/2017
516	12201	99	FT	STRUCTURAL STEEL EXPANSION JOINT, AS PER PLAN				99		1504/2017
516	13600	294	SF	1" PREFORMED EXPANSION JOINT FILLER	148		146			
516	46201	16	EACH	BEARING DEVICE, ROCKER, AS PER PLAN				16		34/41
516	46900	16	EACH	BEARING DEVICE, MISC.: SELF-LUBRICATING CYLINDRICAL BEARING (EXP)				16		33/41
517	75001	260	FT	RAILING, ALUMINUM, AS PER PLAN	143		117			1508/2017
517	76300	429	FT	RAILING, MISC.: NSRR ALUMINUM HANDRAIL WITH VANDAL PROTECTION FENCE				429		1509/2017
518	21200	549	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	296		253			
518	42201	266	FT	8" PERFORATED CORRUGATED STEEL PIPE, 707.01, AS PER PLAN	143		123			1504/2017
518	42301	60	FT	8" NON-PERFORATED CORRUGATED STEEL PIPE, INCLUDING SPECIALS, 707.01, AS PER PLAN	30		30			1504/2017
518	63300	LUMP	LS	STRUCTURE DRAINAGE, MISC.: SUPERSTRUCTURE DRAINAGE SYSTEM					LUMP	1504/2017
523	20000	6	EACH	DYNAMIC LOAD TESTING	2	2	2			
523	20500	6	EACH	RESTRIKE	2	2	2			
524	94803	1,092	FT	DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK, AS PER PLAN	585		507			1505/2017
524	95100	15	EACH	DRILLED SHAFTS, MISC.: CSL TESTING	8		7			1505/2017
SPECIAL	53000200	LUMP	LS	SPECIAL - STRUCTURES: SURVEY AND MONITORING OF TRACK AND TEMPORARY SHORING					LUMP	1506/2017
SPECIAL	53000200	LUMP	LS	SPECIAL - STRUCTURES: PRECONSTRUCTION CONDITION SURVEY					LUMP	1506/2017
SPECIAL	53013000	6,169	SF	SPECIAL - FORM LINER	3,355		2,814			1504/2017
SPECIAL	53014000	LUMP	LS	SPECIAL - STRUCTURAL SURVEY AND MONITORING OF VIBRATION					LUMP	1507/2017
611	01801	90	FT	8" CONDUIT, TYPE B, AS PER PLAN (DUCTILE IRON PIPE ANSI CLASS 52, MECHANICAL JOINTS AND FITTINGS)	10		80			12 &17/41
625	25604	443	FT	CONDUIT, 4", 725.051				443		

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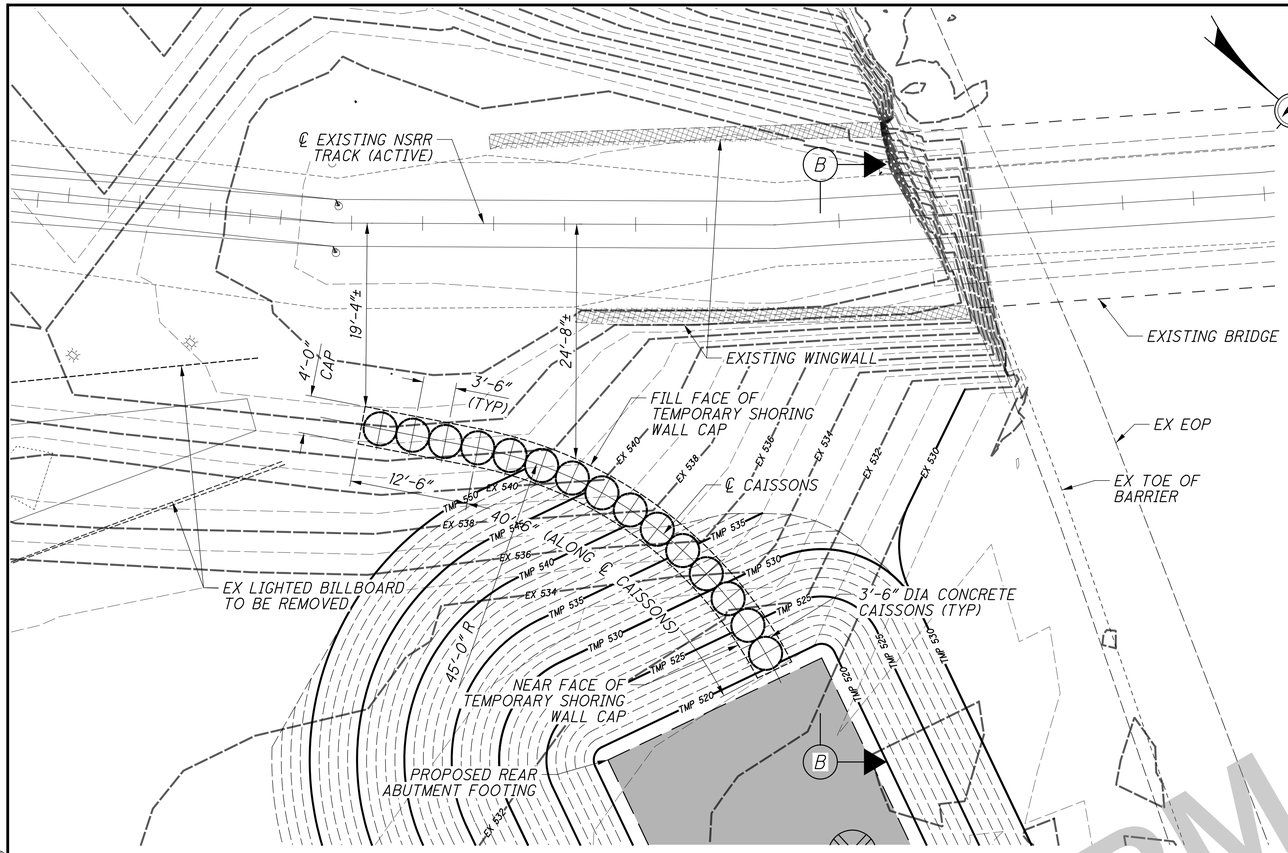
DESIGNED VDT | DRAWN VDT | CHECKED SNH | REVIEWED CTV | DATE 12-15-21 | REVISED

ODOT SFN: 3110142
NSRR BR#: BR0018445

BRIDGE ESTIMATED QUANTITIES
BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

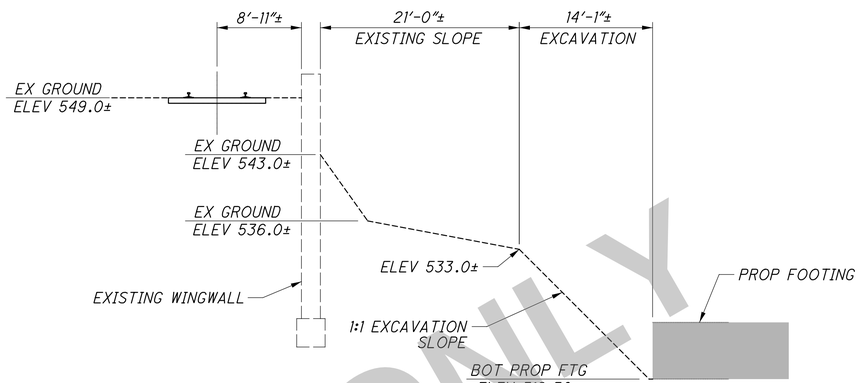
HAM-75-7.85
PID No. 77889

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2017

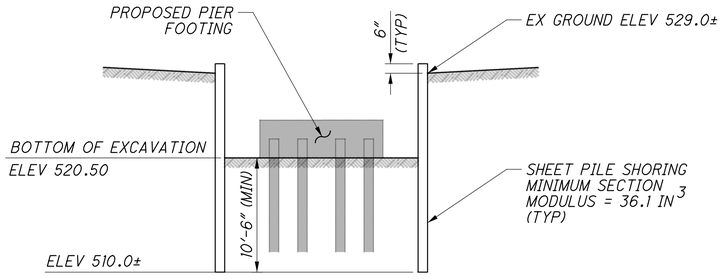


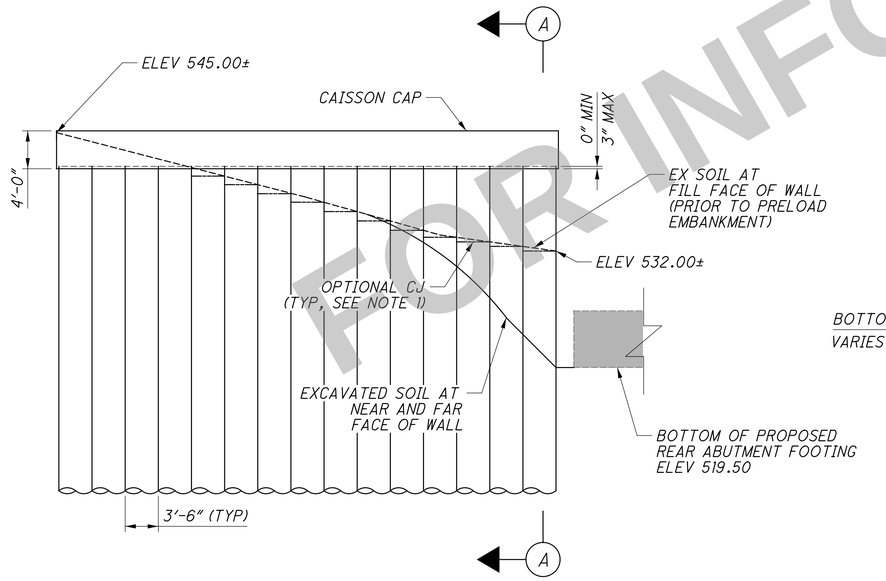
CAISSON WALL PLAN (TEMPORARY CONDITION)

SOUTHEAST WALL (NOTE 2)



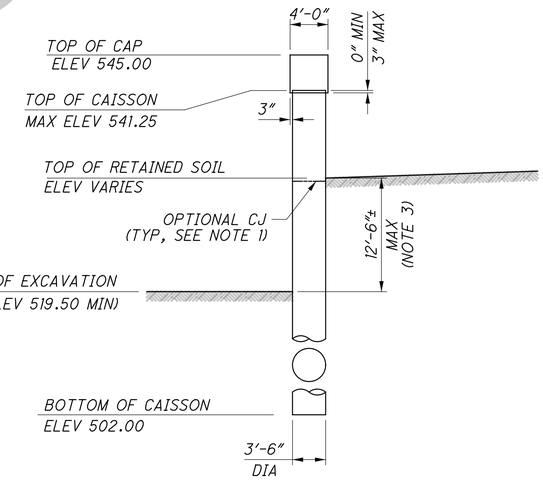
B SECTION
EXISTING WINGWALL





CAISSON WALL ELEVATION (TEMPORARY CONDITION)

SOUTHEAST WALL



A SECTION
DESIGN CASE

TEMPORARY SHEET PILE SECTION

AT PIER FOOTING EXCAVATION

NOTES:

1. OPTIONAL CONSTRUCTION JOINT AT EXISTING GROUNDLINE OF EACH CAISSON. AREA ABOVE CONSTRUCTION JOINT MAY BE OPTIONALLY CONSTRUCTED OF A RECTANGULAR (WALL-TYPE) POUR AT NO ADDITIONAL COST TO THE STATE. THE CAISSON REINFORCING CAGE SHALL BE CONTINUOUS INTO THE CAP. FOR FURTHER DETAILS, INCLUDING REINFORCING, SEE SHEET 23 41 .
2. AFTER INSTALLATION OF CAISSON WALL (AND ASSOCIATED EXCAVATION), THESE PLANS ASSUME A 1:1 EXCAVATION TO THE BOTTOM OF FOOTING. CONTRACTOR SHALL VERIFY THE ADEQUACY OF 1:1 SLOPE AND, IF WARRANTED, SUBMIT REVISIONS TO NSRR AND ODOT. ANTICIPATED TEMPORARY EXCAVATION GRADING IS SHOWN IN THE CAISSON WALL PLAN ON THIS SHEET. THE EXISTING WINGWALL IS ASSUMED TO SHEILD THE EXCAVATION FROM RAILROAD LOADING. SEE SECTION B FOR DETAILS.
3. MAX HEIGHT OF RETAINED SOIL NORMAL TO THE WALL IS DUE TO A MAXIMUM ½" ALLOWABLE DEFLECTION LIMIT.
4. CAISSON WALL TEMPORARY SHORING SHALL BE CASED TEMPORARILY. SEE STANDARD RAILROAD BRIDGE PLAN NOTES FOR MORE INFORMATION.

FOR INFORMATION ONLY

DESIGN AGENCY
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CHECKED	REVISED	ODOT SFN: 3110142	
CTM		NSRR BR#: BR0018445	

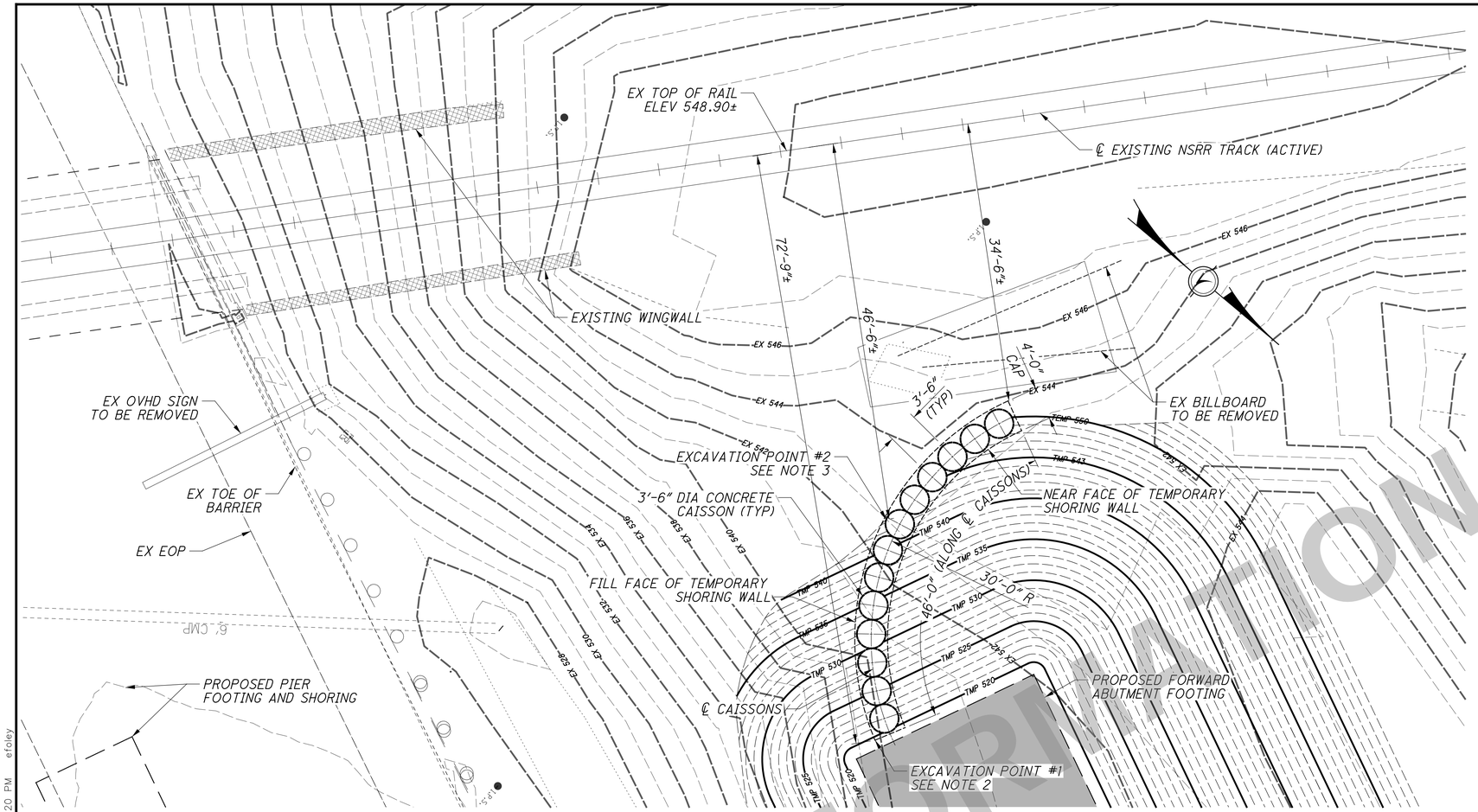
SOUTHEAST TEMPORARY SHORING PLAN AND ELEVATION

BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

HAM-75-7.85
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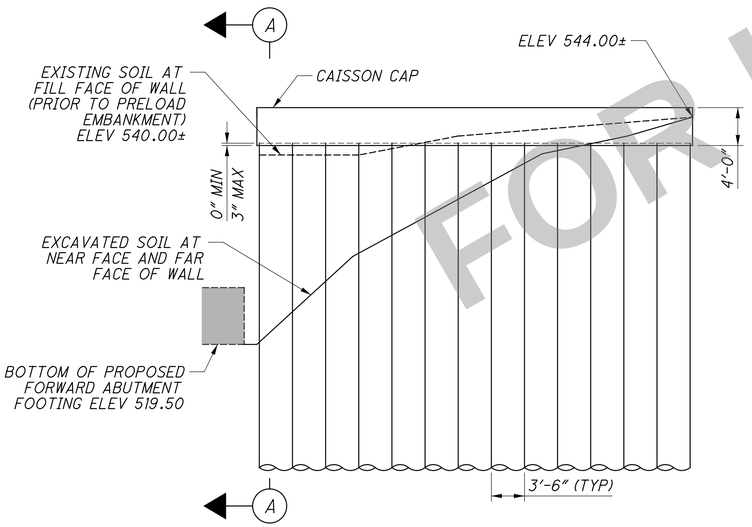
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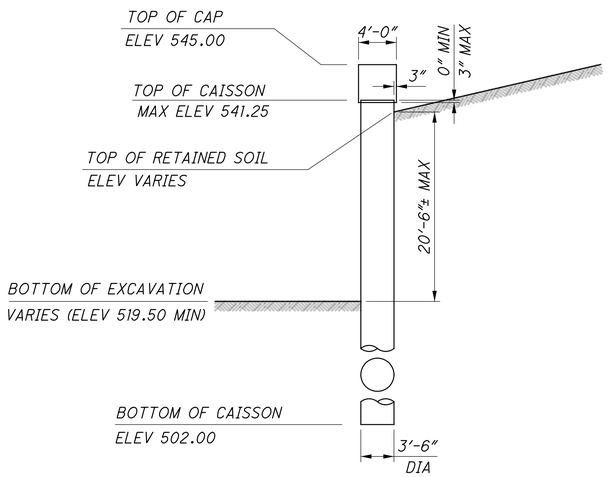
CAISSON WALL (TEMPORARY CONDITION)

SOUTHWEST WALL (NOTE 1)



CAISSON WALL ELEVATION (TEMPORARY CONDITION)

SOUTHWEST WALL



A SECTION
DESIGN CASE

NOTES:

1. AFTER INSTALLATION OF CAISSON WALL (AND ASSOCIATED EXCAVATION), THESE PLANS ASSUME A 1:1 EXCAVATION TO THE BOTTOM OF FOOTING. ANTICIPATED TEMPORARY EXCAVATION GRADING IS SHOWN IN THE CAISSON WALL PLAN ON THIS SHEET. CONTRACTOR SHALL VERIFY THE ADEQUACY OF 1:1 SLOPE AND, IF WARRANTED, SUBMIT REVISIONS TO NSRR AND ODOT. NUMERICAL VERIFICATION BELOW CORRESPONDS TO NOMENCLATURE ON NSRR-PPM DRAWING 4, "SHORING DESIGN GUIDE"
2. EXCAVATION POINT #1 IS THE BOTTOM OF FOOTING EXCAVATION LINE.
   IT IS OUTSIDE OF NORFOLK SOUTHERN EXCAVATION ZONE 1
   EXCAVATION ELEVATION = 519.50
   TOP OF RAIL NORMAL TO ELEVATION = 548.90 (ASSUME 549.0)
   ELEVATION ABOVE WHICH IS CONSIDERED OUTSIDE OF EXCAVATION ZONE 1
   (I.E. NO SHORING REQUIRED OR SURCHARGE CONSIDERED)
   [549.0] - [3.6' TO SHOULDER] - [(72.75 - 14)/2] = 516.0 < 519.50 = OK
3. EXCAVATION POINT #2 IS THE TOP OF 1:1 FOOTING EXCAVATION.
   IT IS OUTSIDE OF NORFOLK SOUTHERN EXCAVATION ZONE 1
   EXCAVATION ELEVATION = 543.00
   TOP OF RAIL NORMAL TO ELEVATION = 548.90 (ASSUME 549.0)
   ELEVATION ABOVE WHICH IS CONSIDERED OUTSIDE OF EXCAVATION ZONE 1
   (I.E. NO SHORING REQUIRED OR SURCHARGE CONSIDERED)
   [549.0] - [3.6' TO SHOULDER] - [(46.5 - 14)/2] = 529.2 < 543.0 = OK
4. CAISSON WALL TEMPORARY SHORING SHALL BE CASED TEMPORARILY. SEE STANDARD RAILROAD BRIDGE PLAN NOTES FOR MORE INFORMATION.

FOR INFORMATION ONLY

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2600 CORPORATE EXCHANGE DRIVE SUITE 230
COLUMBUS, OHIO 43231

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CHECKED	REVISED	ODOT SFN: 3110142	
CTM		NSRR BR#: BR0018445	

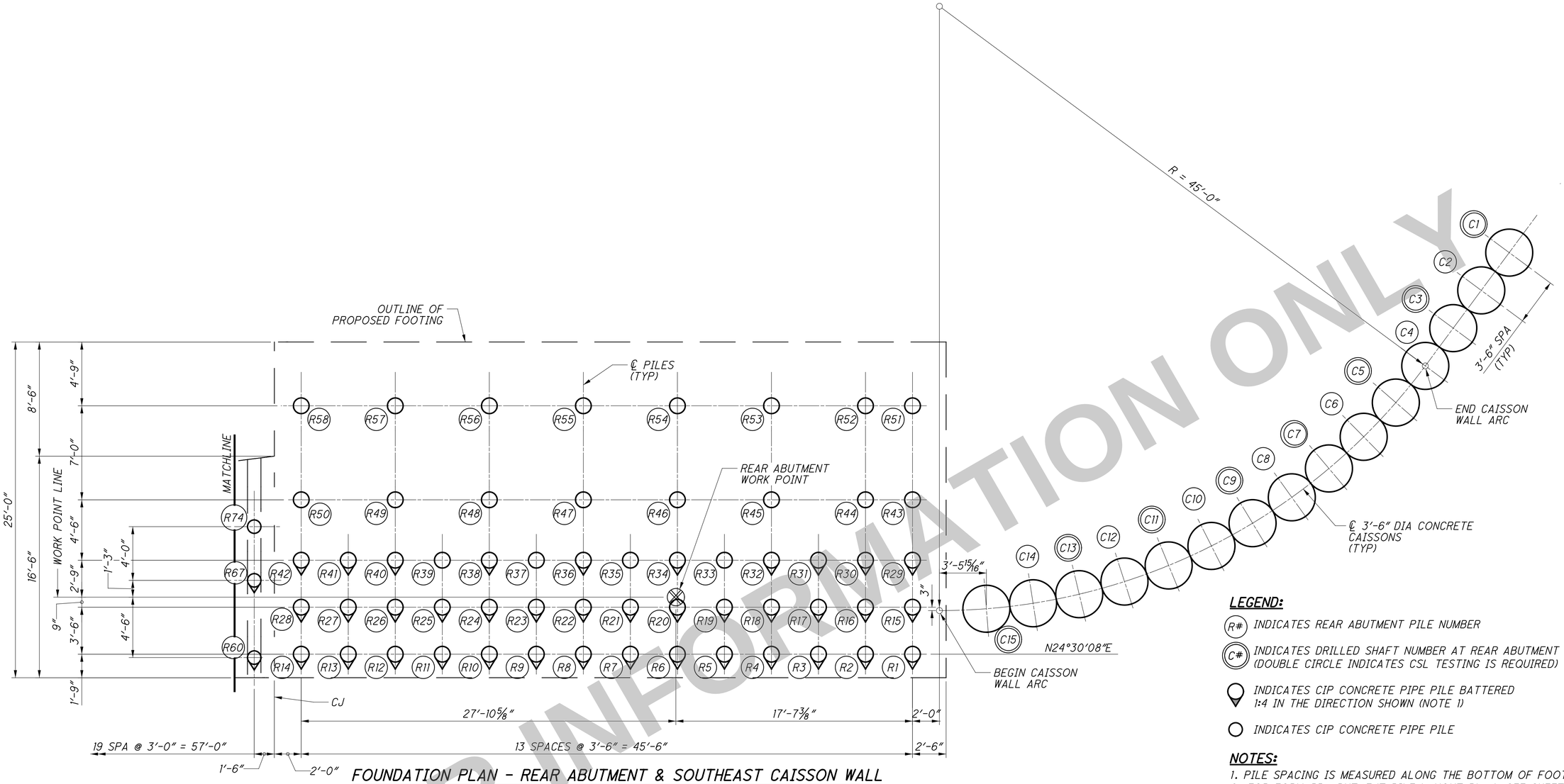
SOUTHWEST TEMPORARY SHORING PLAN AND ELEVATION

BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

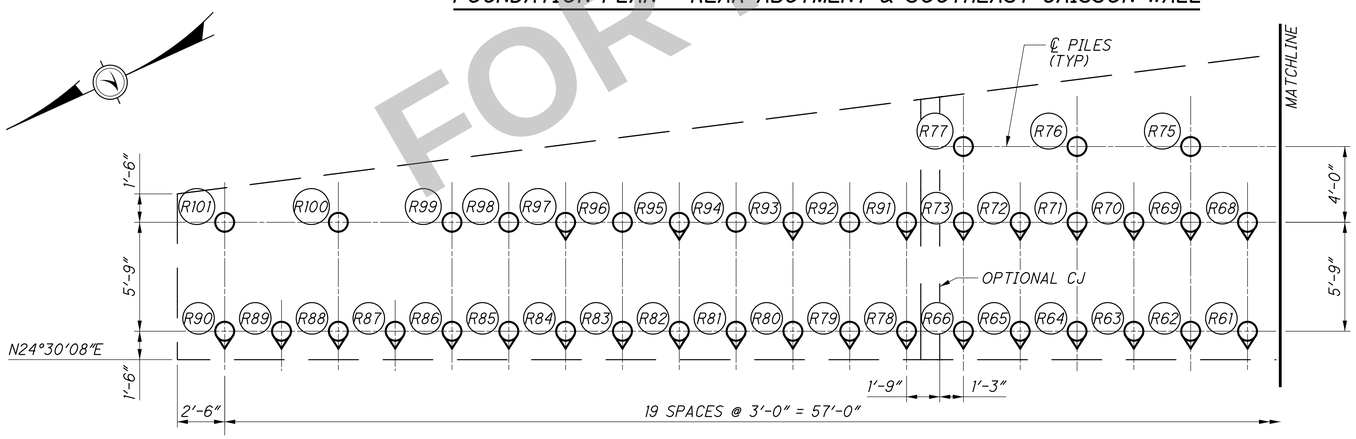
HAM-75-7.85
PID No. 77889

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FOUNDATION PLAN - REAR ABUTMENT & SOUTHEAST CAISSON WALL



FOUNDATION PLAN - NORTHEAST WINGWALL

LEGEND:

- (R#) INDICATES REAR ABUTMENT PILE NUMBER
- (C#) INDICATES DRILLED SHAFT NUMBER AT REAR ABUTMENT (DOUBLE CIRCLE INDICATES CSL TESTING IS REQUIRED)
- INDICATES CIP CONCRETE PIPE PILE BATTERED 1:4 IN THE DIRECTION SHOWN (NOTE 1)
- INDICATES CIP CONCRETE PIPE PILE

NOTES:

1. PILE SPACING IS MEASURED ALONG THE BOTTOM OF FOOTING.
2. FOR FORWARD ABUTMENT PILE LAYOUT PLAN, SEE SHEET 11 | 41.
3. FOR PIER PILE LAYOUT PLAN, SEE SHEET 10 | 41.

PILE DATA				
PILE NUMBER	PIPE PILE DIAMETER	PILE CUTOFF ELEVATION	MINIMUM TIP ELEVATION	ORDER PILE LENGTH (EACH)
R1 - R58	14"	521.50	446.5	85'
R60 - R77	12"	521.75	446.5	85'
R78 - R101	12"	522.75	446.5	85'

* PILE NUMBER R59 IS NOT USED.

CAISSON DATA						
CAISSON NUMBER	TOP OF CAISSON ELEV	TOP OF VERTICAL REINF. ELEV	TIP ELEV	SPIRAL LENGTH	SHAFT PAY LENGTH (EA)	VERTICAL REINF. LENGTH
C1 - C15	541.00**	543.00	502.00	38'-6"	39'-0"	41'-0"

** PAY ELEVATION. CONTRACTOR HAS OPTION TO CONSTRUCT TOP OF CAISSON TO ELEV 541.25 AT NO ADDITIONAL COST TO THE STATE.

FOR INFORMATION ONLY

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COLUMBUS, OHIO 43231

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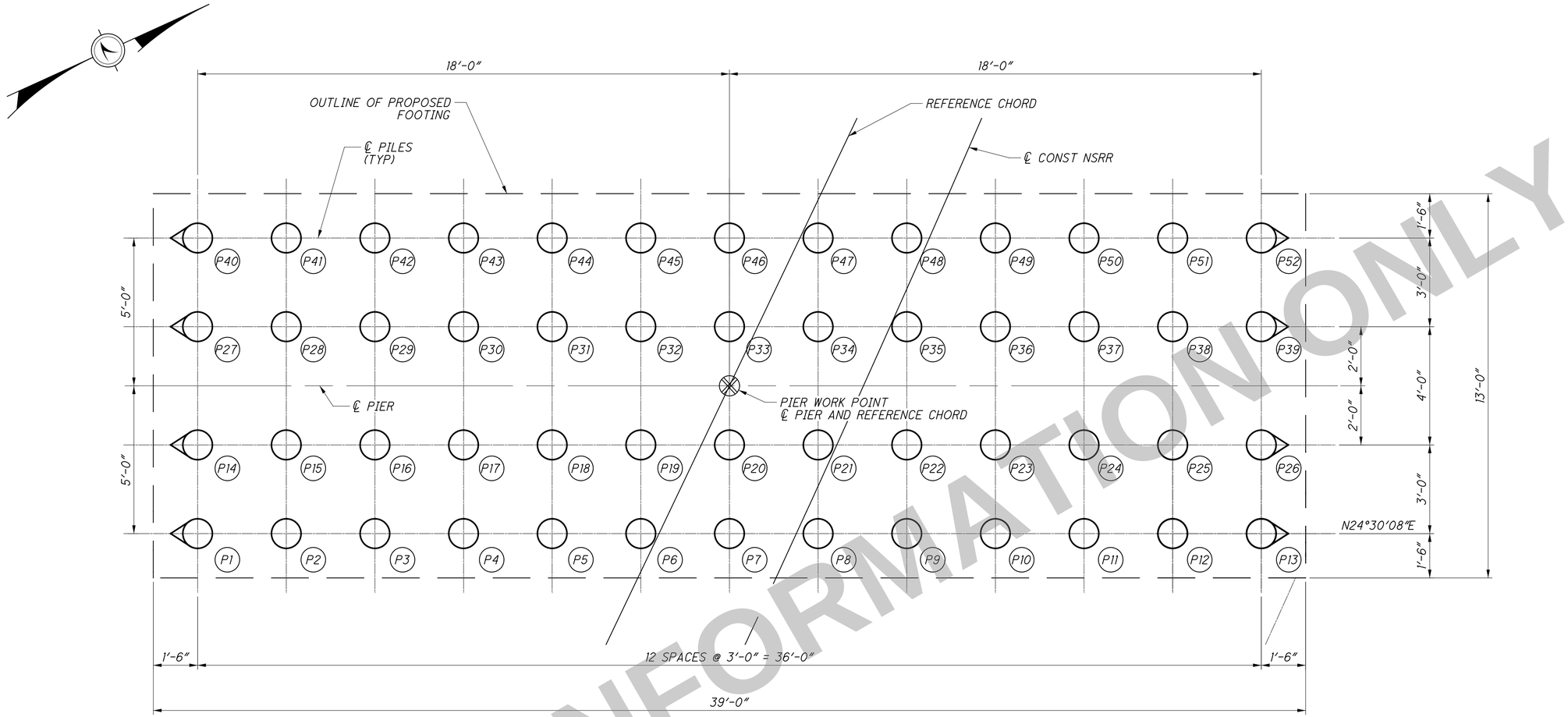
REAR ABUTMENT PILE LAYOUT
BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

HAM-75-7.85
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FOUNDATION PLAN - PIER

LEGEND:

- (P#) INDICATES PIER PILE NUMBER
- INDICATES 12" DIA CIP CONCRETE PIPE PILE BATTERED 1:4 IN THE DIRECTION SHOWN (NOTE 1)
- INDICATES 12" DIA CIP CONCRETE PIPE PILE

NOTES:

1. PILE SPACING IS MEASURED ALONG THE BOTTOM OF FOOTING.
2. FOR REAR ABUTMENT PILE LAYOUT PLAN, SEE SHEET 9 | 41.
3. FOR FORWARD ABUTMENT PILE LAYOUT PLAN, SEE SHEET 11 | 41.

PILE DATA			
PILE NUMBER	PILE CUTOFF ELEVATION	MINIMUM TIP ELEVATION	ORDER PILE LENGTH (EACH)
P1 - P52	522.50	472.50	55'

FOR INFORMATION ONLY

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COLUMBUS, OHIO 43231

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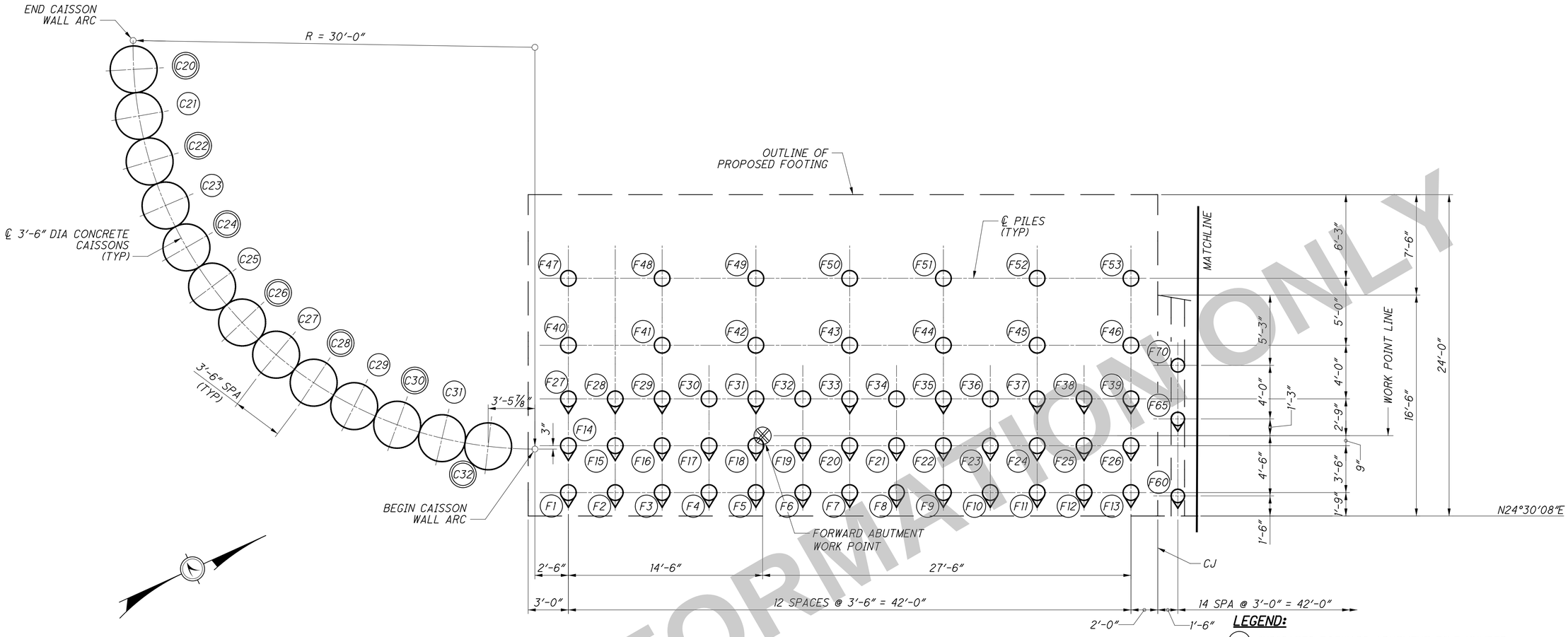
PIER PILE LAYOUT
BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
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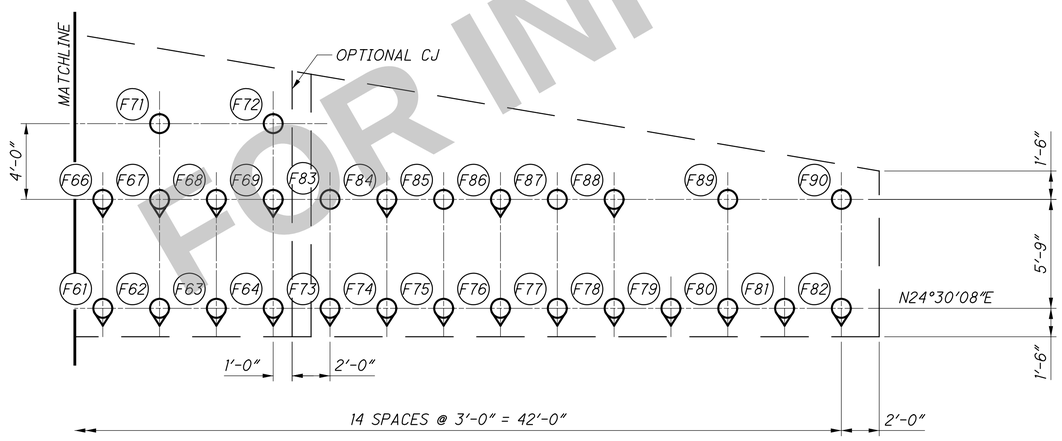
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FOUNDATION PLAN - FORWARD ABUTMENT & SOUTHWEST WINGWALL



FOUNDATION PLAN - NORTHWEST WINGWALL

LEGEND:

- (F#) INDICATES FORWARD ABUTMENT PILE NUMBER
- (C#) INDICATES DRILLED SHAFT NUMBER AT FORWARD ABUTMENT (DOUBLE CIRCLE INDICATES CSL TESTING IS REQUIRED)
- INDICATES CIP CONCRETE PIPE PILE BATTERED 1:4 IN THE DIRECTION SHOWN (NOTE 1)
- INDICATES CIP CONCRETE PIPE PILE

NOTES:

1. PILE SPACING IS MEASURED ALONG THE BOTTOM OF FOOTING.
2. FOR REAR ABUTMENT PILE LAYOUT PLAN, SEE SHEET 9 | 41.
3. FOR PIER PILE LAYOUT PLAN, SEE SHEET 10 | 41.

PILE DATA

PILE NUMBER	PIPE PILE DIAMETER	PILE CUTOFF ELEVATION	MINIMUM TIP ELEVATION	ORDER PILE LENGTH (EACH)
F1 - F53	14"	521.50	459.50	70'
F60 - F72	12"	521.75	459.50	70'
F73 - F90	12"	522.75	459.50	70'

* PILE NUMBERS F54-F59 AND CAISSON NUMBERS C16-C19 ARE NOT USED

CAISSON DATA

CAISSON NUMBER	TOP OF CAISSON ELEV	TOP OF VERTICAL REINF. ELEV	TIP ELEV	SPIRAL LENGTH	SHAFT PAY LENGTH (EA)	VERTICAL REINF. LENGTH
C20 - C32	541.00**	543.00	502.00	38'-6"	39'-0"	41'-0"

** PAY ELEVATION. CONTRACTOR HAS OPTION TO CONSTRUCT TOP OF CAISSON TO ELEV 541.25 AT NO ADDITIONAL COST TO THE STATE.

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2600 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
VDT	VDK	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3110142	
CTM		NSRR BR#: BR0018445	

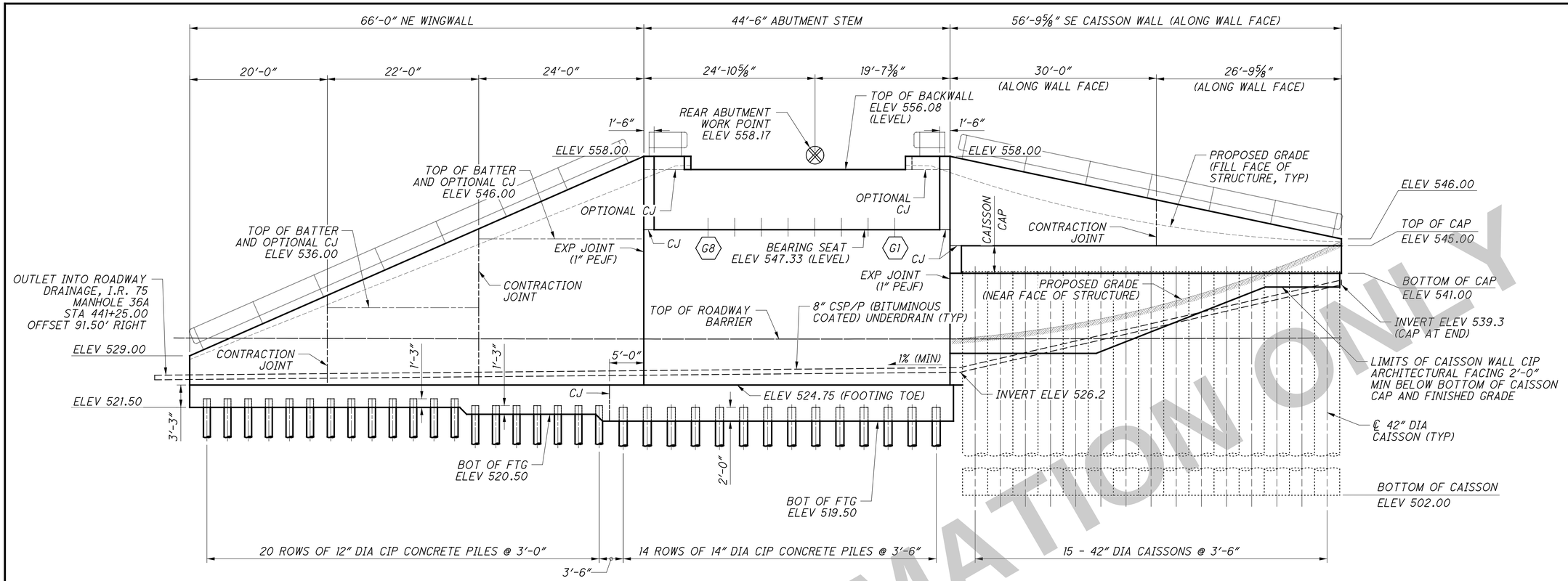
FORWARD ABUTMENT PILE LAYOUT
BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

HAM-75-7.85
PID No. 77889

11 / 41

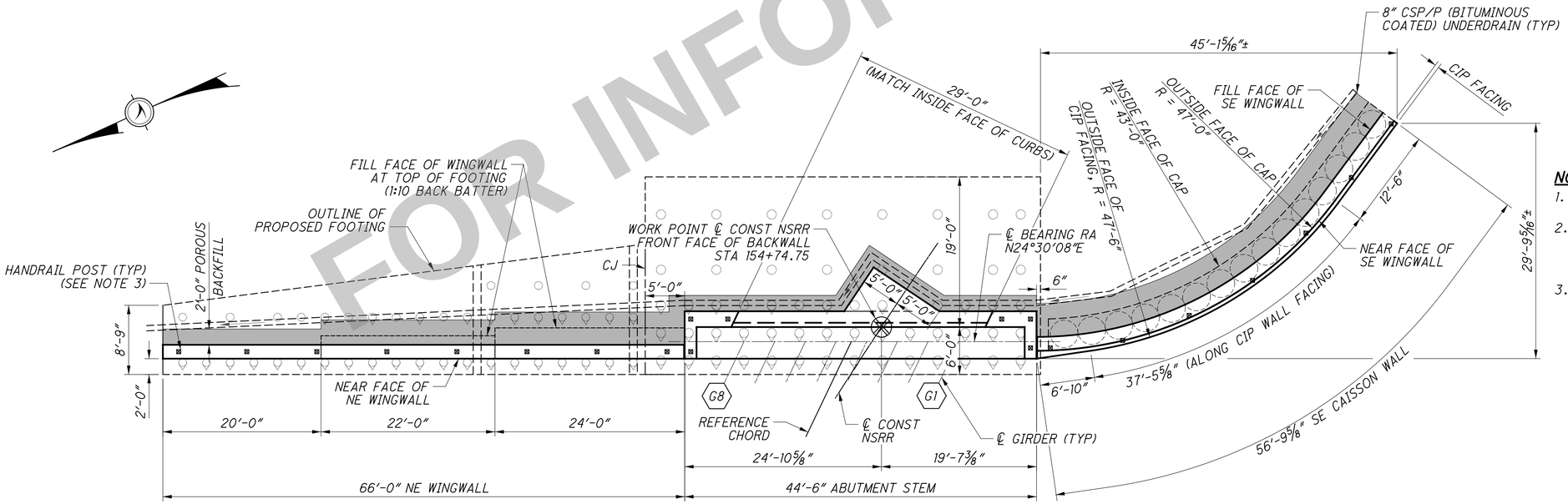
1582
2017

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REAR ABUTMENT ELEVATION

ALONG FRONT FACE OF WALLS



REAR ABUTMENT PLAN

NOTES:

1. THE EXPANSION JOINT IS A FULL-DEPTH JOINT WITH 1" PEJF PLACED BETWEEN POURS.
2. FOR CONTRACTION JOINT DETAILS, SEE SHEET (1513/2017).
3. FOR HANDRAIL DETAILS, SEE SHEET (1508/2017) POST LOCATIONS SHOWN ARE SCHEMATIC. FINAL LAYOUT OF POSTS AND HANDRAIL JOINTS SHALL BE SUBMITTED BY THE CONTRACTOR FOR NSRR REVIEW AND APPROVAL.

REAR ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	9 | 41
GENERAL PLAN & ELEV:	12 | 41
ABUTMENT PLANS:	13 | 41
ABUTMENT ELEVATION:	14 | 41
WINGWALL PLANS:	15 | 41
WINGWALL ELEVATIONS:	16 | 41
TYPICAL DETAILS:	22 | 41 – 23 | 41
FIXED BEARING:	34 | 41
REINFORCING LIST:	39 | 41 – 40 | 41

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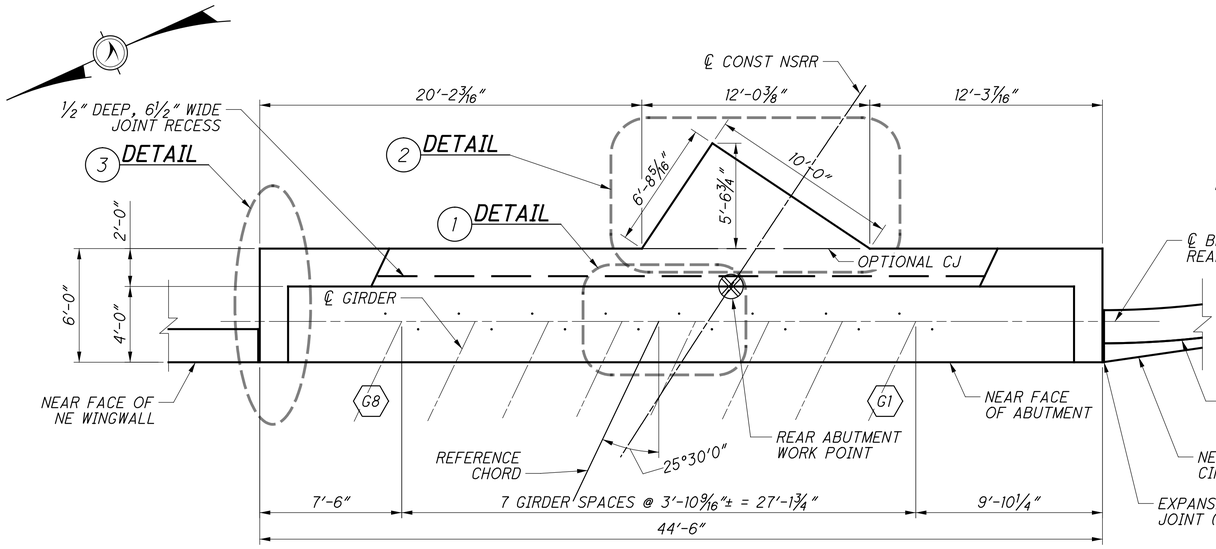
REAR ABUTMENT: PLAN AND ELEVATION

BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

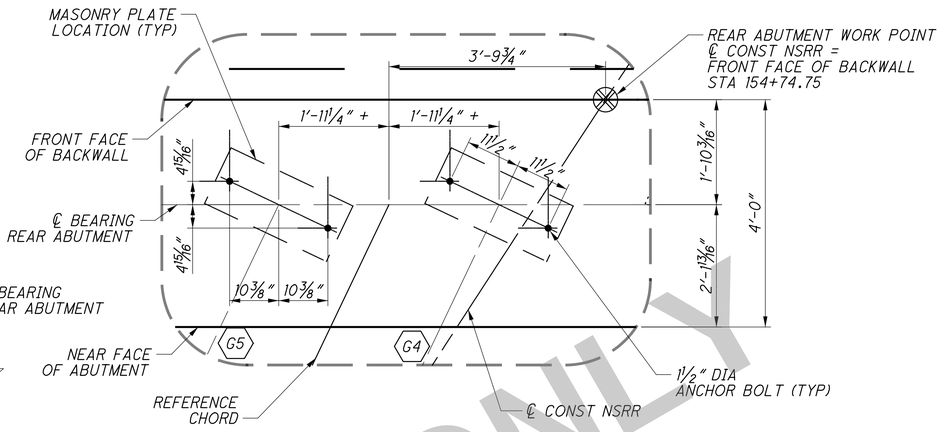
HAM-75-7.85
PID No. 77889

1583 / 2017

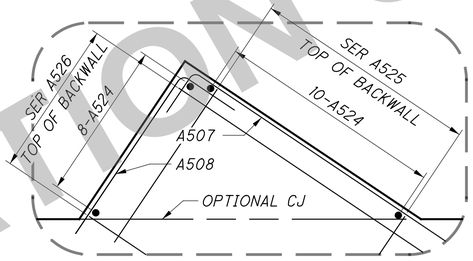
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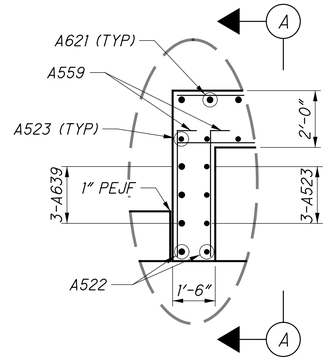
ABUTMENT PLAN



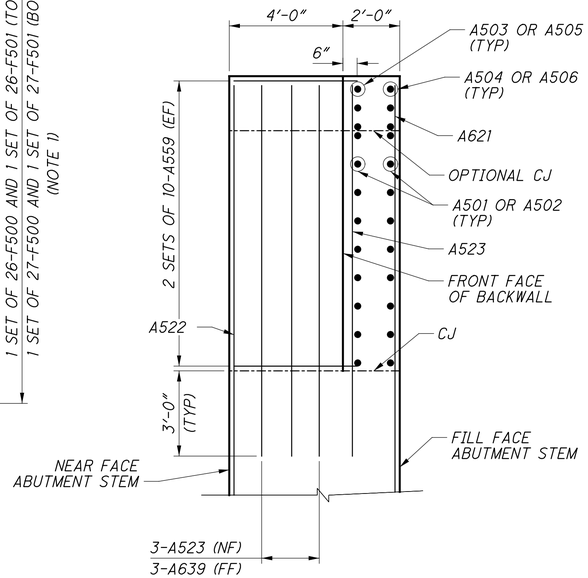
1 WORK POINT DEFINITION
INCLUDING ANCHOR BOLT LAYOUT



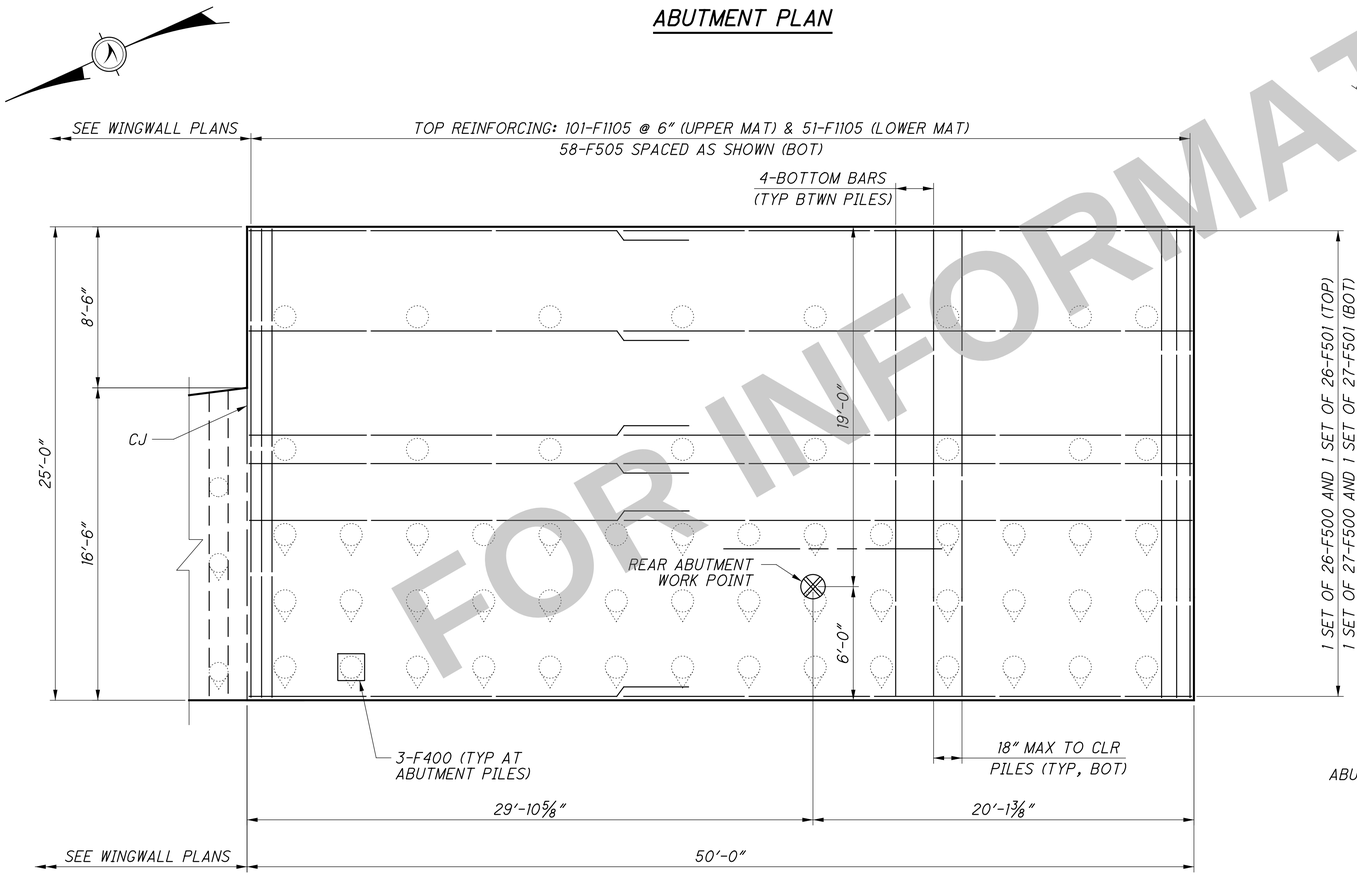
2 ABUTMENT DETAIL
BACKWALL EXTENSION REINFORCEMENT



3 CHEEKWALL DETAIL
PLAN VIEW OF CHEEKWALL REINFORCEMENT



A ELEVATION



FOOTING PLAN

NOTES:

1. FOR SPACING OF LONGITUDINAL BARS AROUND PILES SEE ABUTMENT TYPICAL SECTION, SHEET 14 | 41 .
2. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 39 | 41 .

REAR ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	9 | 41
GENERAL PLAN & ELEV:	12 | 41
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FOR INFORMATION ONLY

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ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
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CHECKED	REVISED	ODOT SFN: 3110142	
CTM		NSRR BR#: BR0018445	

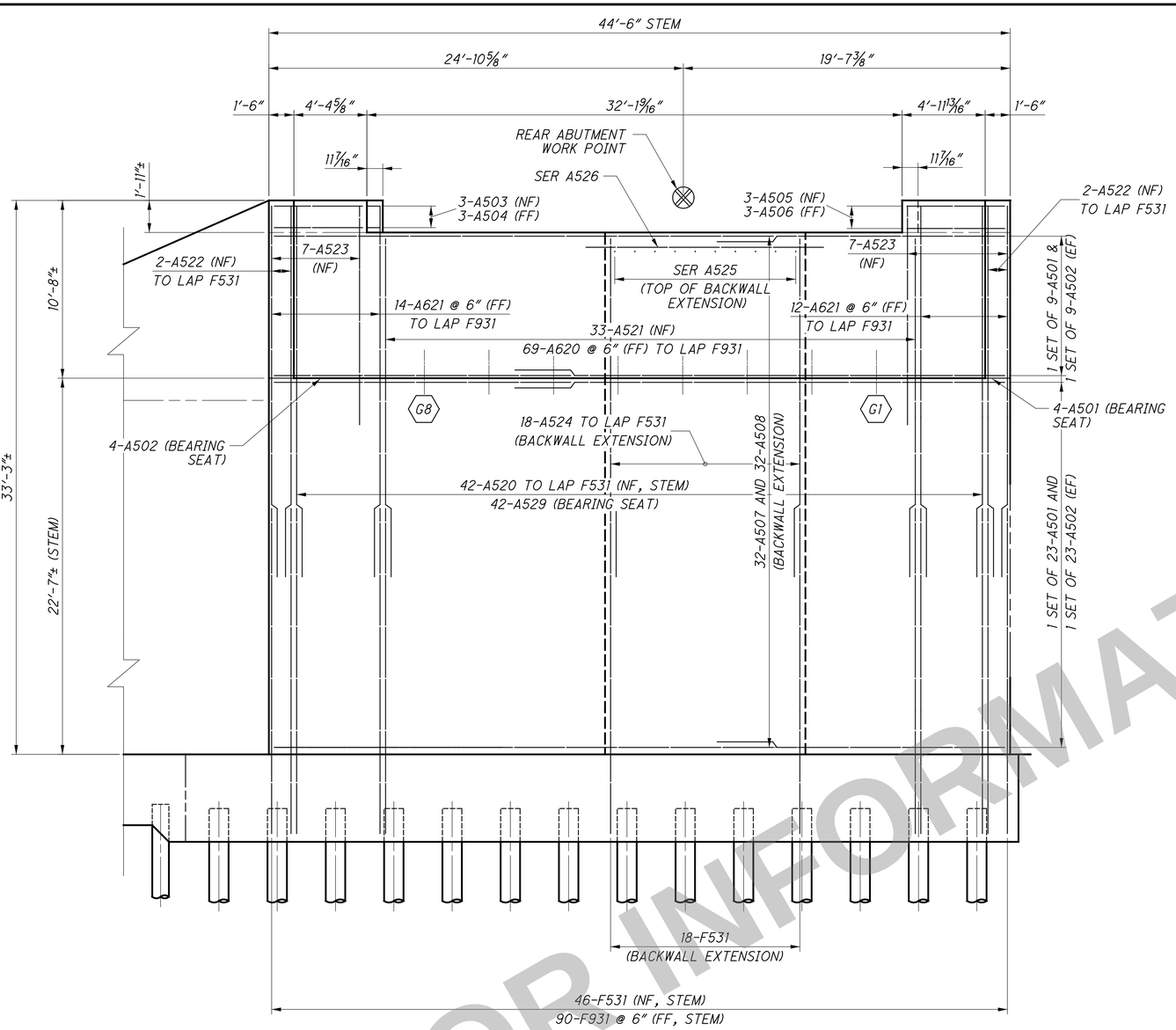
REAR ABUTMENT PLAN AND FOOTING PLAN
BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

HAM-75-7.85
PID No. 77889

13 / 41

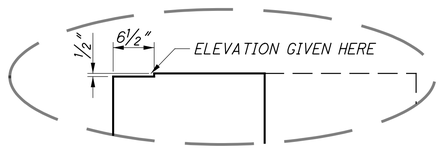
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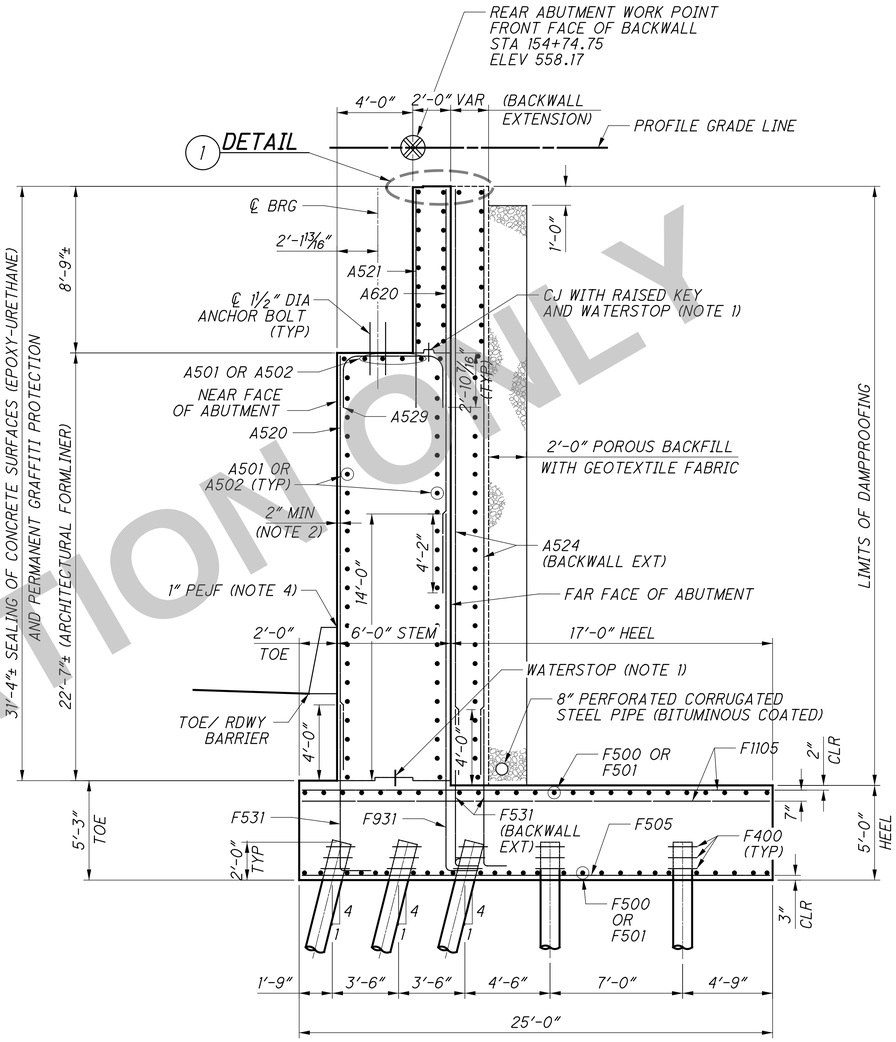


REAR ABUTMENT ELEVATION

SEE NOTE 3



1 DETAIL



REAR ABUTMENT TYPICAL SECTION

NOTES:

1. WATERSTOPS SHALL BE 6"x⅜" PVC AND SHALL BE CONTINUOUS ACROSS JOINT. FOR RAISED KEYWAY DETAIL, SEE TYPICAL STRUCTURAL DETAILS SHEET (1513 2017).
2. ADJUST CLEAR DISTANCE TO PLAN DIMENSION TO ACCOUNT FOR FORMLINER RELIEF AS PER FORMLINER GENERAL NOTE.
3. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 39 | 41.
4. 1" PEJF TO BE PLACED BETWEEN ROADWAY BARRIER AND ABUTMENT FACE (TYP). COST OF 1" PEJF TO BE CONSIDERED INCIDENTAL TO THE COST OF THE ROADWAY BARRIER.

REAR ABUTMENT SHEET REFERENCES

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CHECKED	REVISED	ODOT SFN: 3110142	
CTM		NSRR BR#: BR0018445	

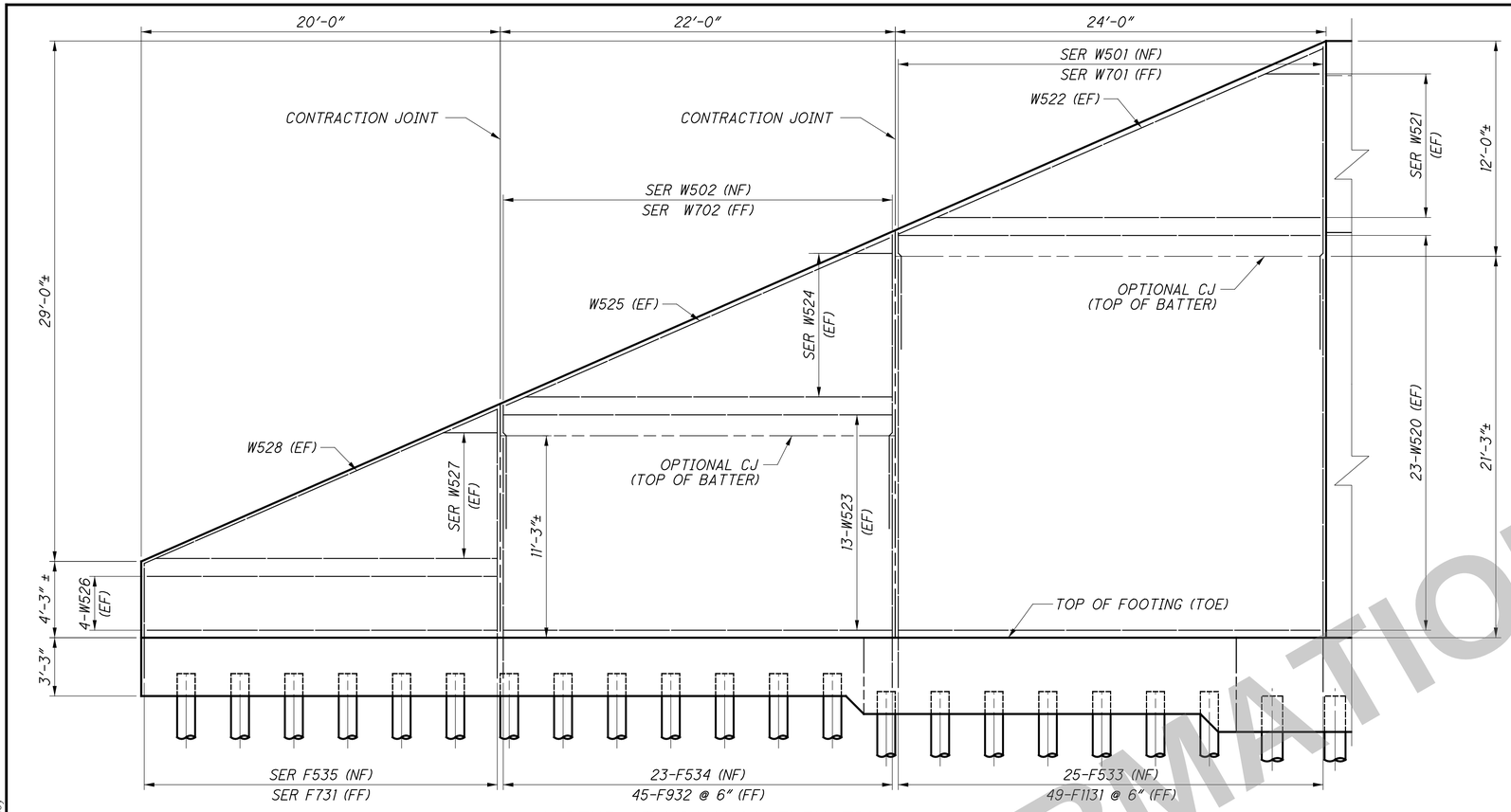
REAR ABUTMENT ELEVATION DETAILS

BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

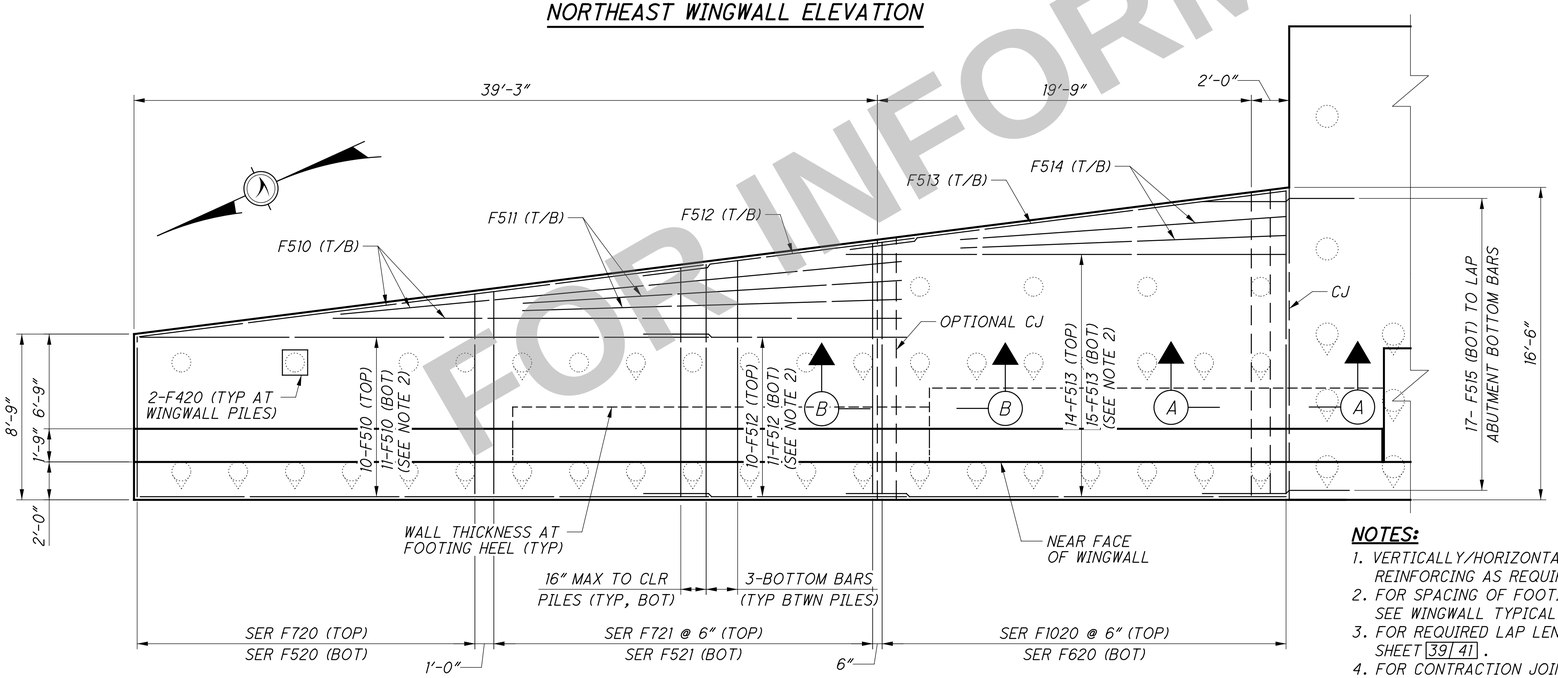
HAM-75-7.85
PID No. 77889

1585 2017

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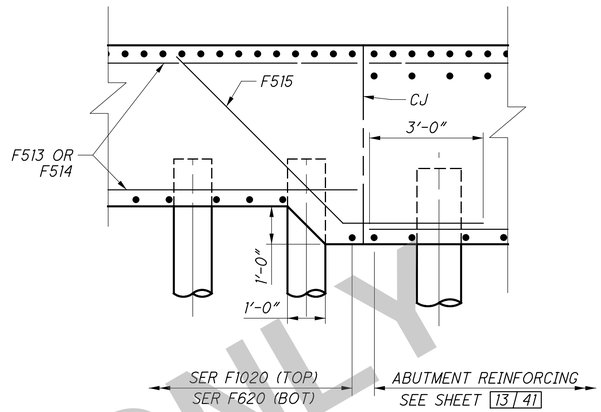


NORTHEAST WINGWALL ELEVATION

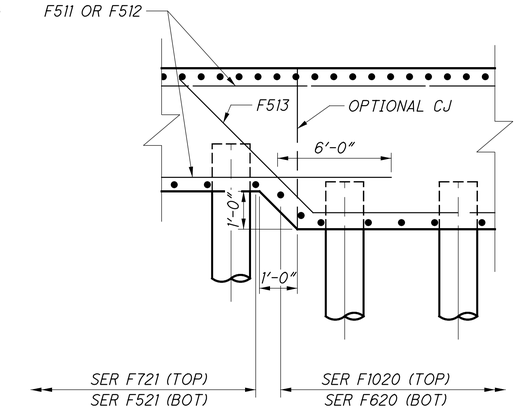


NORTHEAST WINGWALL PLAN

FOOTING REINFORCING SHOWN



A SECTION
STEP DETAILS



B SECTION
STEP DETAILS

NOTES:

1. VERTICALLY/HORIZONTALLY ADJUST AND FIELD CUT VERTICAL REINFORCING AS REQUIRED TO CLEAR PILES.
2. FOR SPACING OF FOOTING BOTTOM LONGITUDINAL BARS AROUND PILES SEE WINGWALL TYPICAL SECTION, SHEET 23 41 .
3. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 39 41 .
4. FOR CONTRACTION JOINT DETAILS, SEE SHEET 1513/2017 .

REAR ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	9 41
GENERAL PLAN & ELEV:	12 41
ABUTMENT PLANS:	13 41
ABUTMENT ELEVATION:	14 41
WINGWALL PLANS:	15 41
WINGWALL ELEVATIONS:	16 41
TYPICAL DETAILS:	22 41 - 23 41
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REINFORCING LIST:	39 41 - 40 41

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2600 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

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CHECKED	REVISED	ODOT SFN: 3110142	
CTM		NSRR BR#: BR0018445	

NORTHEAST WINGWALL PLAN & ELEVATION

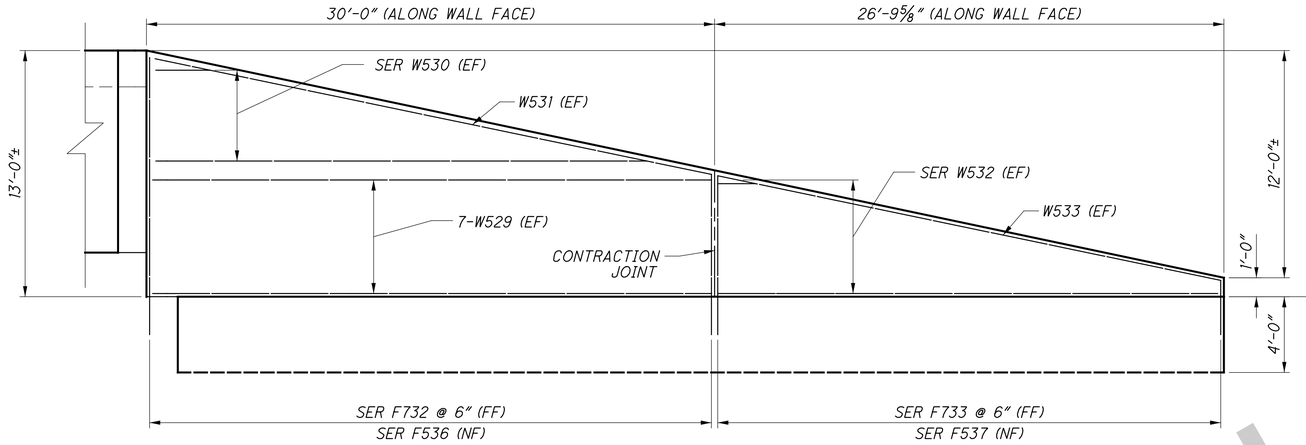
BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

HAM-75-7.85
PID No. 77889

15 / 41

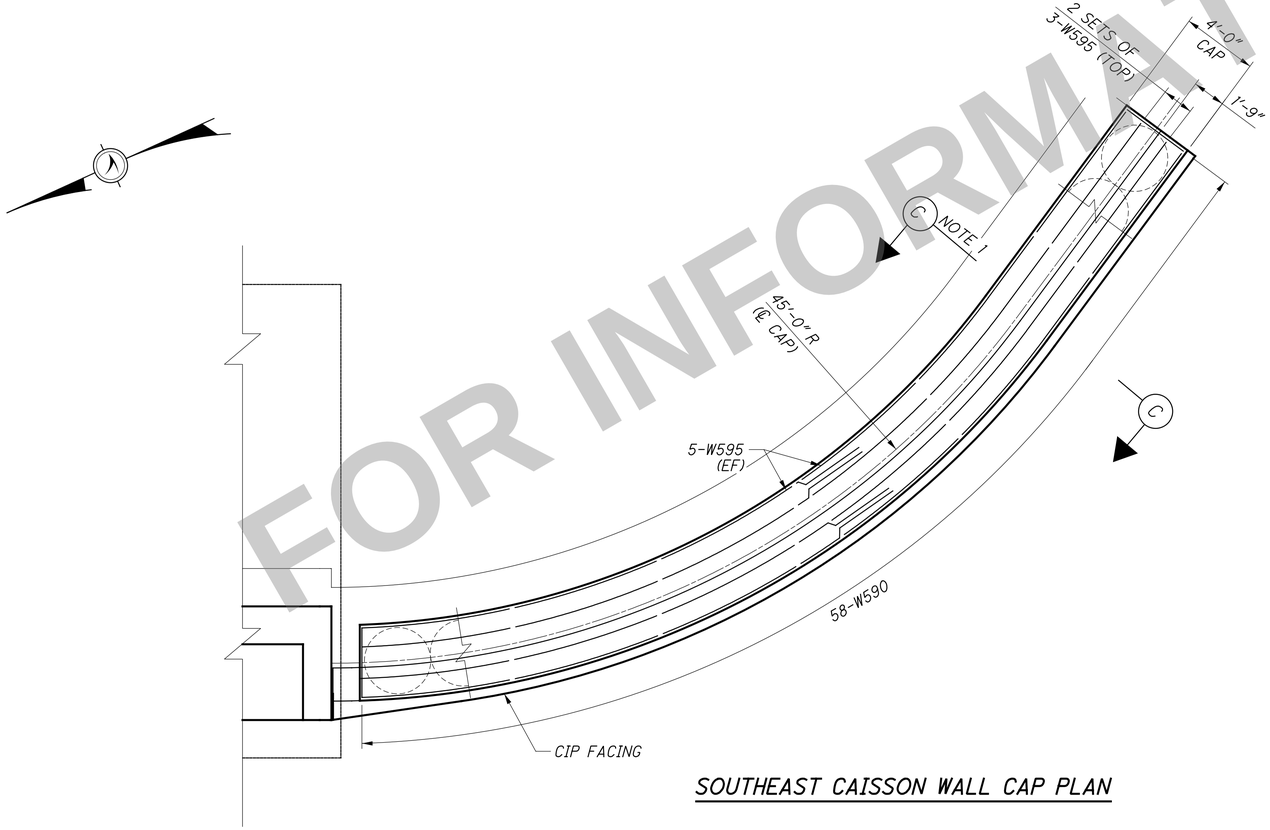
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SOUTHEAST WINGWALL ELEVATION

CAISSONS NOT SHOWN FOR CLARITY



SOUTHEAST CAISSON WALL CAP PLAN

NOTES:

1. FOR SECTION C, SEE SHEET 23 | 41.
2. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 39 | 41.
3. FOR CONTRACTION JOINT DETAILS, SEE SHEET (1513 / 2017).

REAR ABUTMENT SHEET REFERENCES

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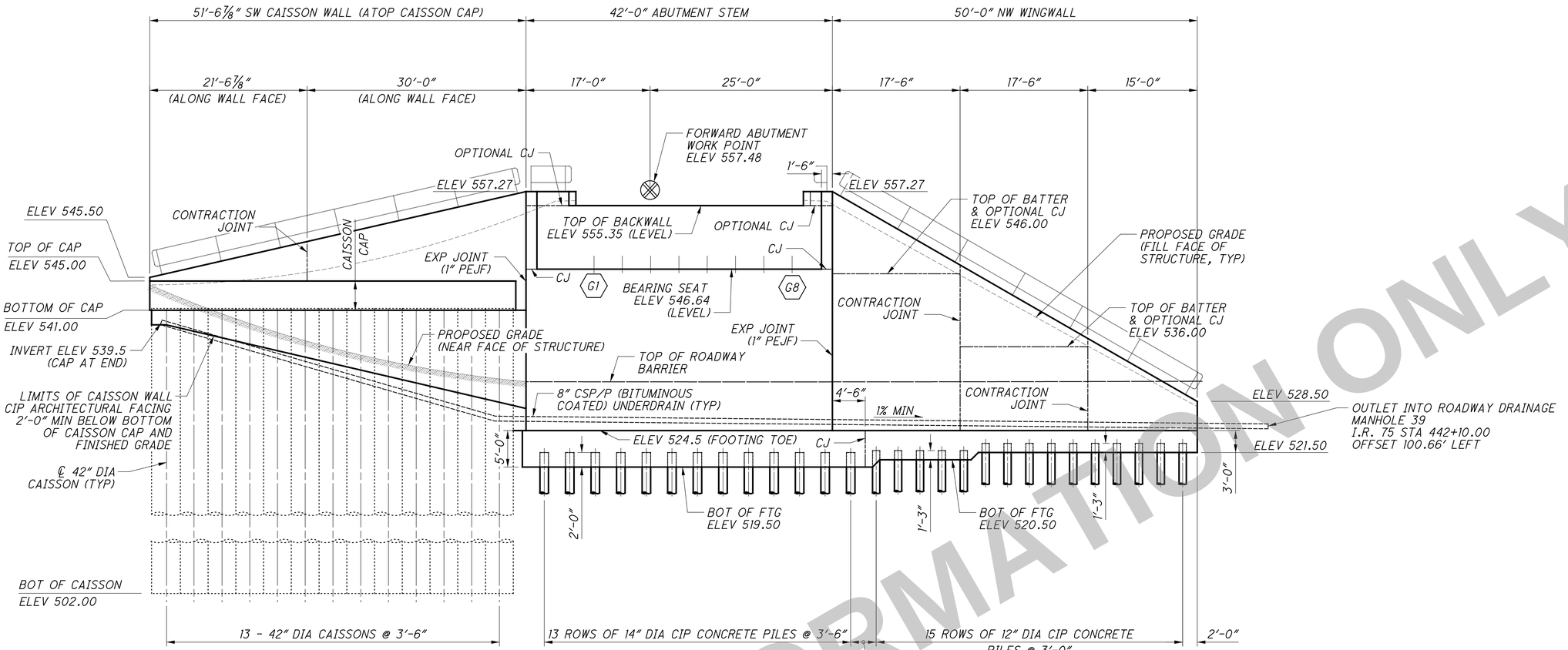
SOUTHEAST WINGWALL PLAN & ELEVATION
BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

HAM-75-7.85
PID No. 77889

16 / 41

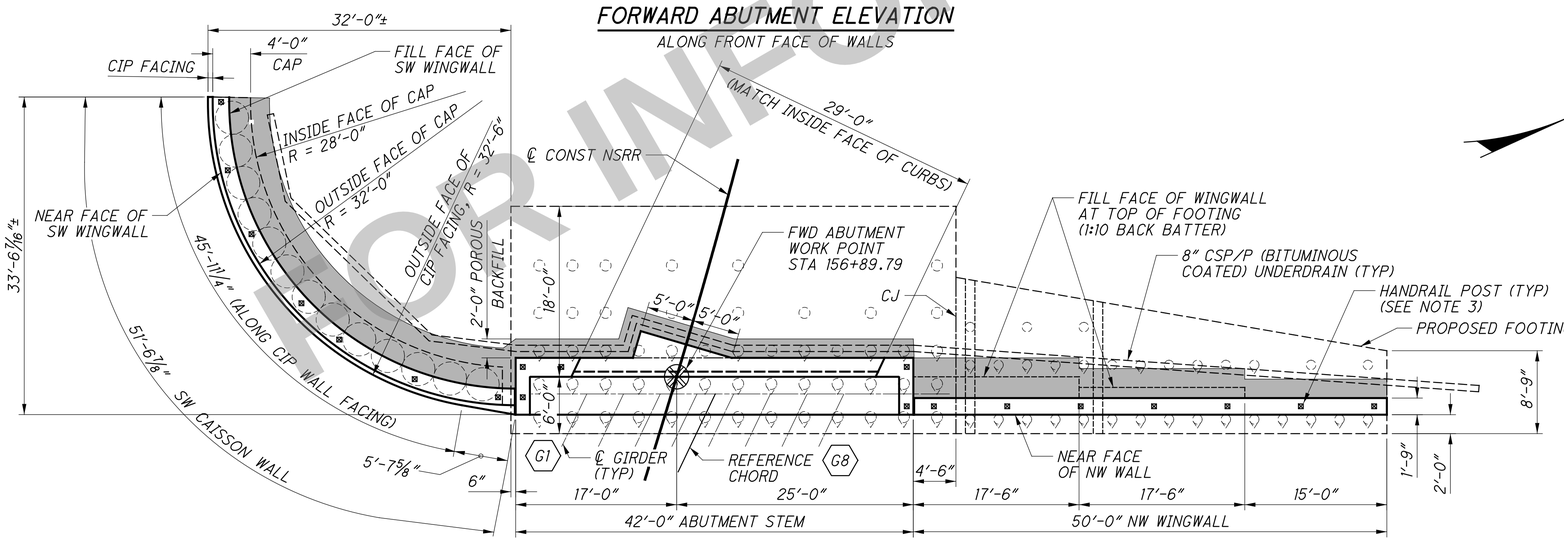
1587 / 2017

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FORWARD ABUTMENT ELEVATION

ALONG FRONT FACE OF WALLS



FORWARD ABUTMENT PLAN

NOTES:

1. THE EXPANSION JOINT IS A FULL-DEPTH JOINT WITH 1" PEJF PLACED BETWEEN POURS.
2. FOR CONTRACTION JOINT DETAILS, SEE SHEET (1513/2017).
3. FOR HANDRAIL DETAILS, SEE SHEET (1508/2017). POST LOCATIONS SHOWN ARE SCHEMATIC. FINAL LAYOUT OF POSTS AND HANDRAIL JOINTS SHALL BE SUBMITTED BY THE CONTRACTOR FOR NSRR REVIEW AND APPROVAL.

FWD ABUTMENT SHEET REFERENCES

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ABUTMENT ELEVATION:	19 | 41	
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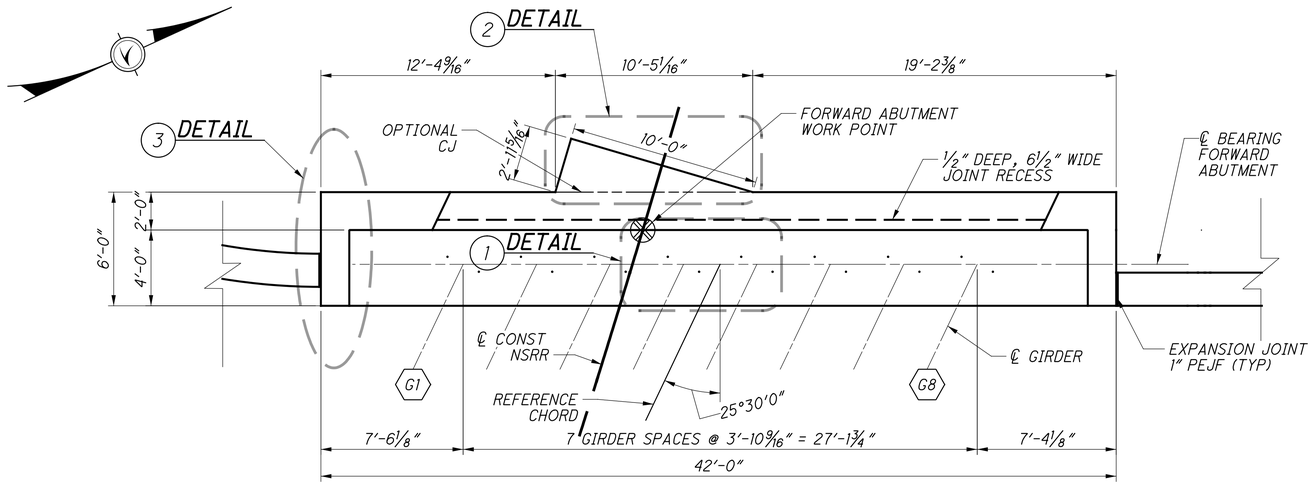
FORWARD ABUTMENT: PLAN AND ELEVATION
BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
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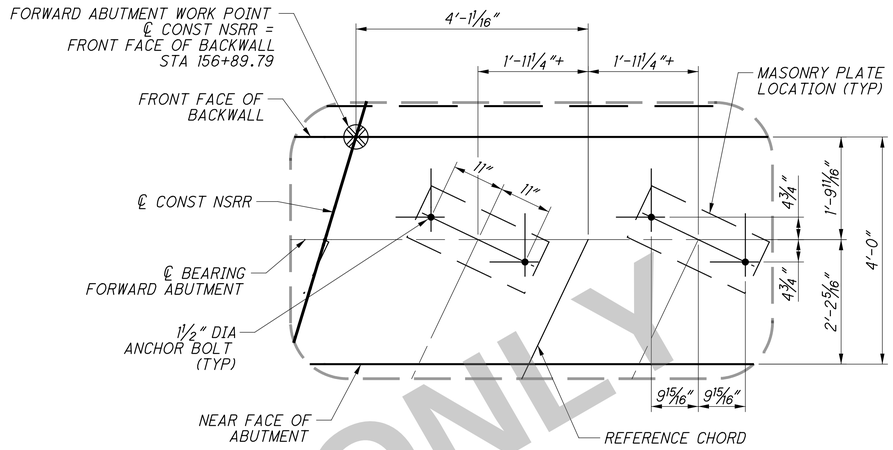
17 / 41

1588 / 2017

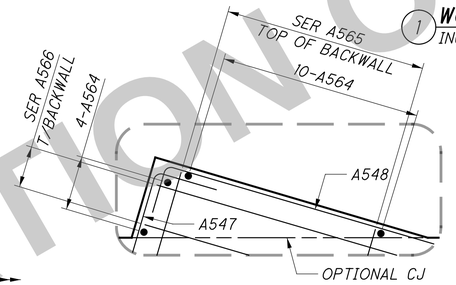
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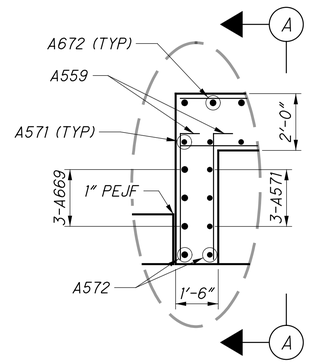
ABUTMENT PLAN



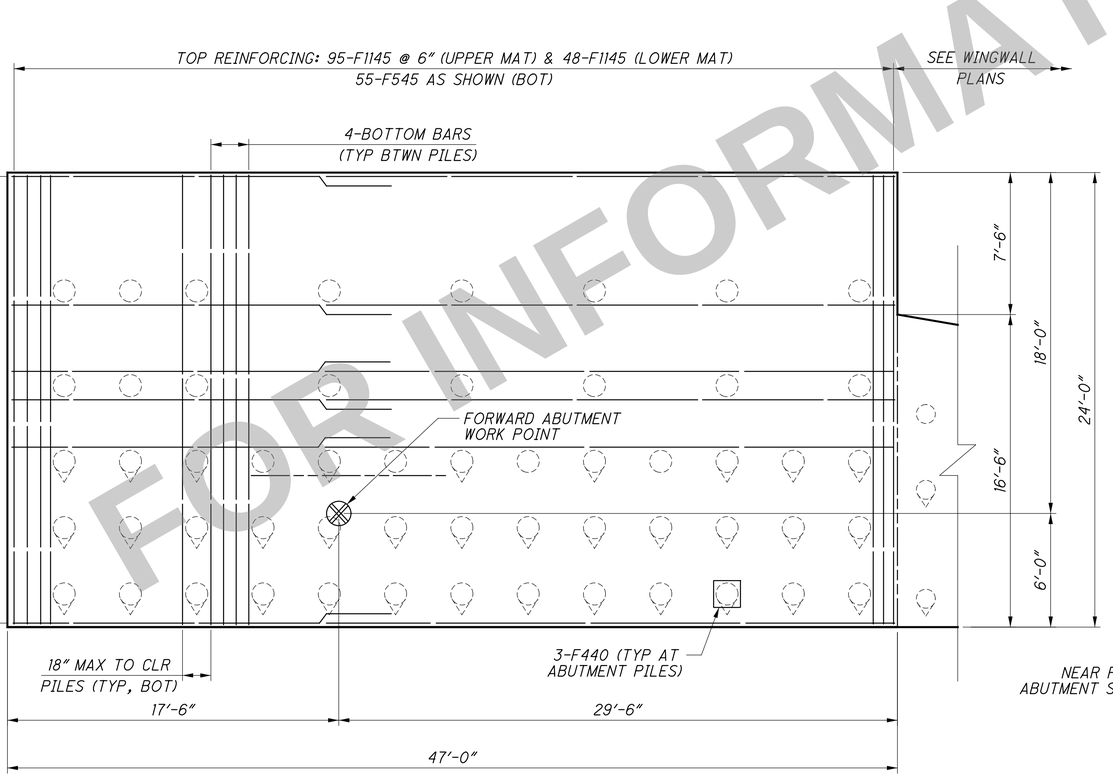
1 WORK POINT DEFINITION
INCLUDING ANCHOR BOLT LAYOUT



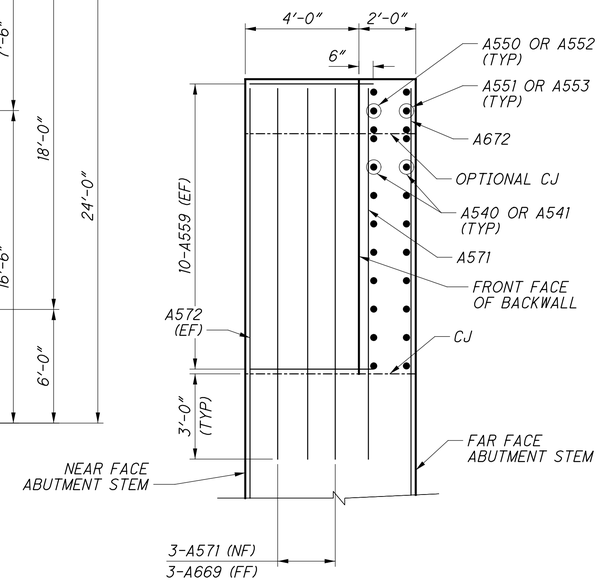
2 ABUTMENT DETAIL
BACKWALL EXTENSION REINFORCEMENT



3 CHEEKWALL DETAIL
PLAN VIEW OF CHEEKWALL REINFORCEMENT



FOOTING PLAN



A ELEVATION

NOTES:

1. FOR SPACING OF BOTTOM LONGITUDINAL BARS AROUND PILES SEE ABUTMENT TYPICAL SECTION, SHEET 19 | 41 .
2. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 39 | 41 .

FWD ABUTMENT SHEET REFERENCES

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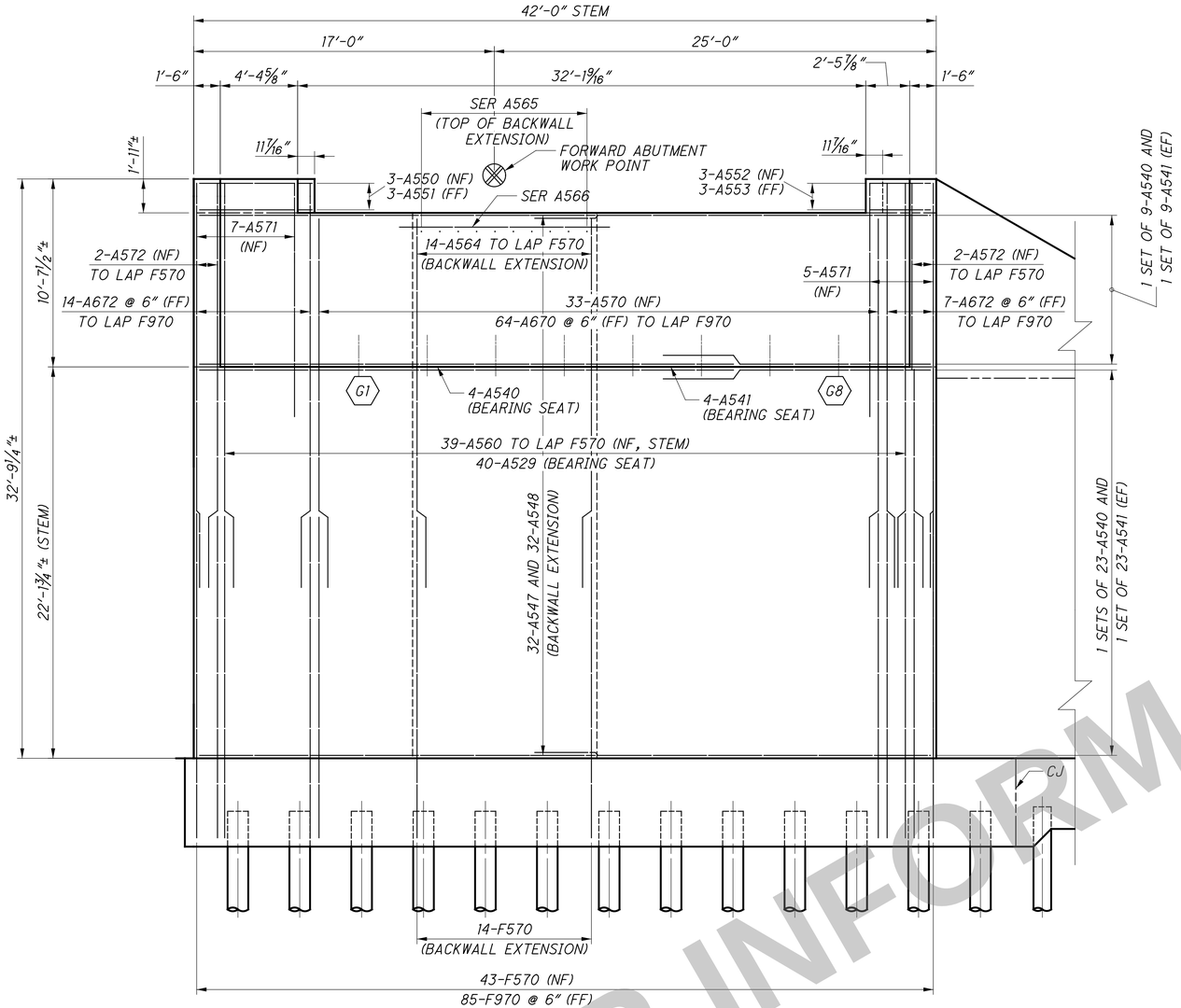
FORWARD ABUTMENT PLAN AND FOOTING PLAN
BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

HAM-75-7.85
PID No. 77889

18 / 41

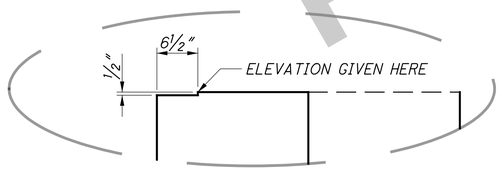
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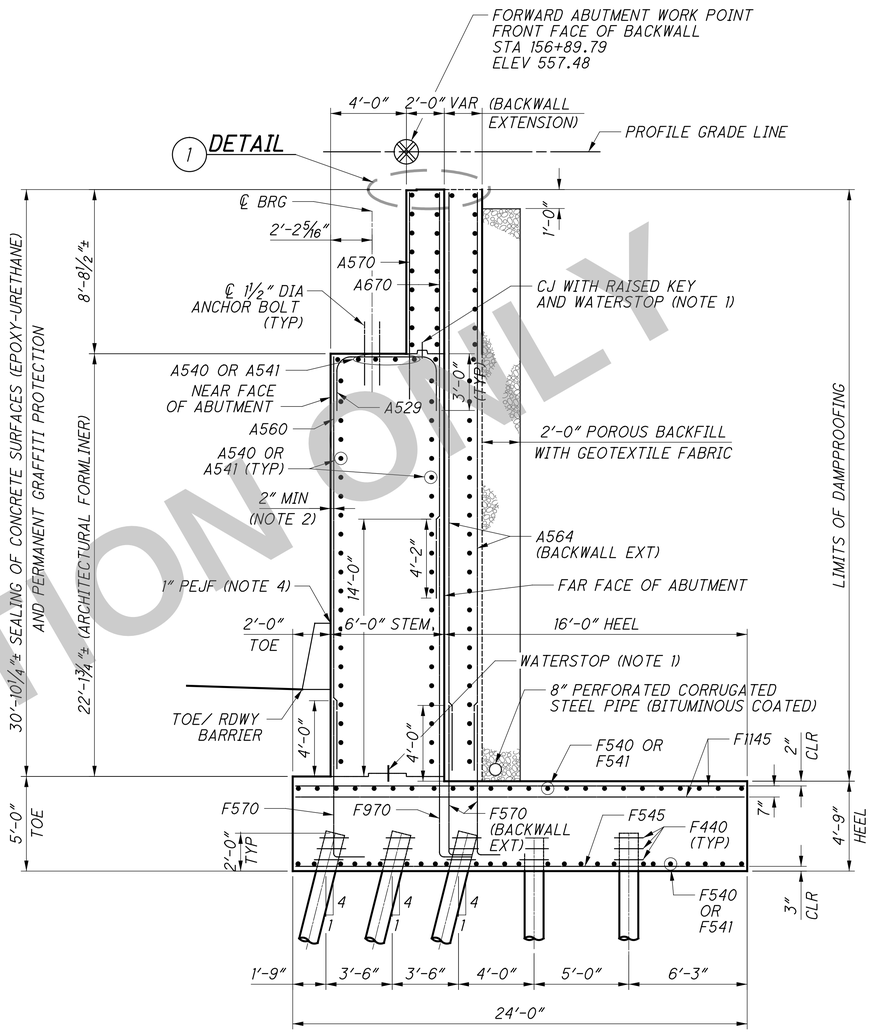


FORWARD ABUTMENT ELEVATION

SEE NOTE 3



1 DETAIL



FORWARD ABUTMENT TYPICAL SECTION

FOR INFORMATION ONLY

NOTES:

1. WATERSTOPS SHALL BE 6"x⅜" PVC AND SHALL BE CONTINUOUS ACROSS JOINT. FOR RAISED KEYWAY DETAIL, SEE TYPICAL STRUCTURAL DETAILS SHEET (1513/2017).
2. ADJUST CLEAR DISTANCE TO PLAN DIMENSION TO ACCOUNT FOR FORMLINER RELIEF AS PER FORMLINER GENERAL NOTE.
3. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 39 | 41 .
4. 1" PEJF TO BE PLACED BETWEEN ROADWAY BARRIER AND ABUTMENT FACE (TYP). COST OF 1" PEJF TO BE CONSIDERED INCIDENTAL TO THE COST OF THE ROADWAY BARRIER.

FWD ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	11 | 41
GENERAL PLAN & ELEV:	17 | 41
ABUTMENT PLANS:	18 | 41
ABUTMENT ELEVATION:	19 | 41
WINGWALL PLANS:	20 | 41
WINGWALL ELEVATIONS:	21 | 41
TYPICAL DETAILS:	22 | 41 - 23 | 41
FIXED BEARING:	34 | 41
REINFORCING LIST:	39 | 41 - 40 | 41

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
VDT	VDK	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3110142	
CTM		NSRR BR#: BR0018445	

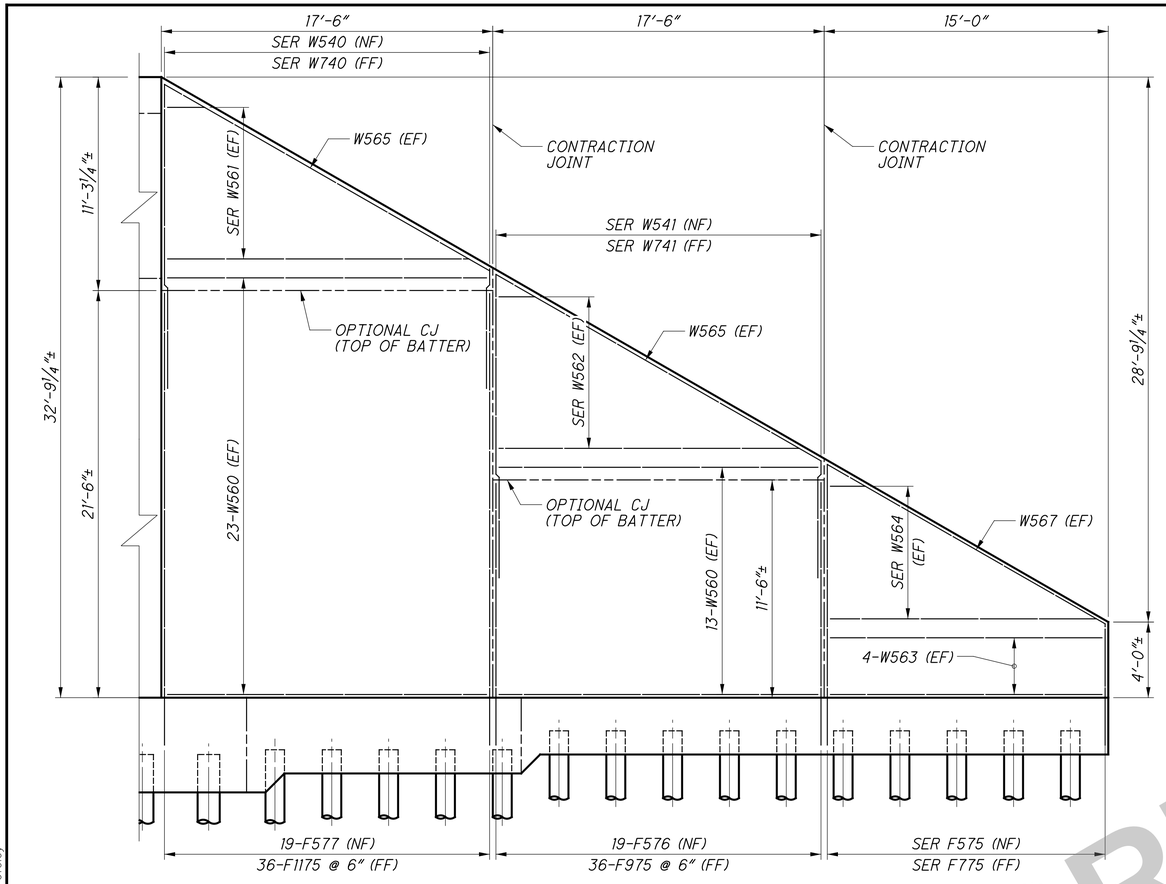
FORWARD ABUTMENT ELEVATION DETAILS

BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

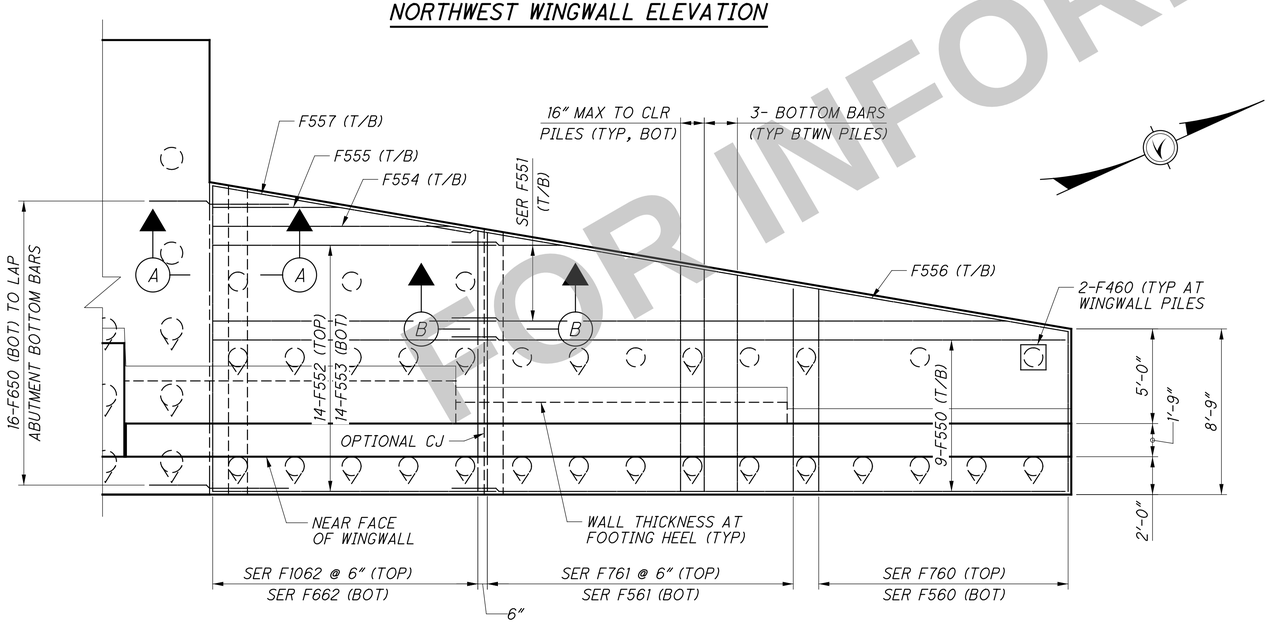
HAM-75-7.85
PID No. 77889

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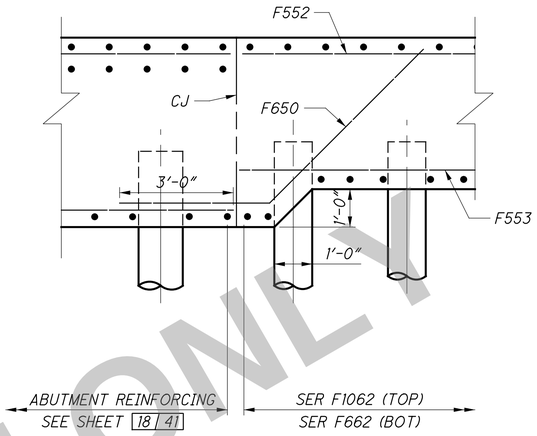
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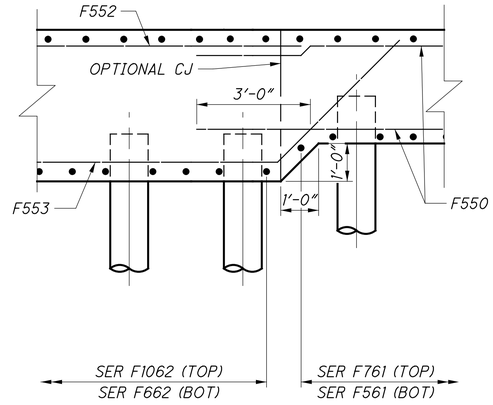
NORTHWEST WINGWALL ELEVATION



NORTHWEST WINGWALL PLAN



A SECTION
STEP DETAILS



B SECTION
STEP DETAILS

NOTES:

1. VERTICALLY/HORIZONTALLY ADJUST AND FIELD CUT VERTICAL REINFORCING AS REQUIRED TO CLEAR PILES.
2. FOR SPACING OF FOOTING BOTTOM LONGITUDINAL BARS AROUND PILES SEE WINGWALL TYPICAL SECTION, SHEET 23 41 .
3. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 39 41 .
4. FOR CONTRACTION JOINT DETAILS, SEE SHEET (1513/2017) .

FWD ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	11 41
GENERAL PLAN & ELEV:	17 41
ABUTMENT PLANS:	18 41
ABUTMENT ELEVATION:	19 41
WINGWALL PLANS:	20 41
WINGWALL ELEVATIONS:	21 41
TYPICAL DETAILS:	22 41 - 23 41
FIXED BEARING:	34 41
REINFORCING LIST:	39 41 - 40 41

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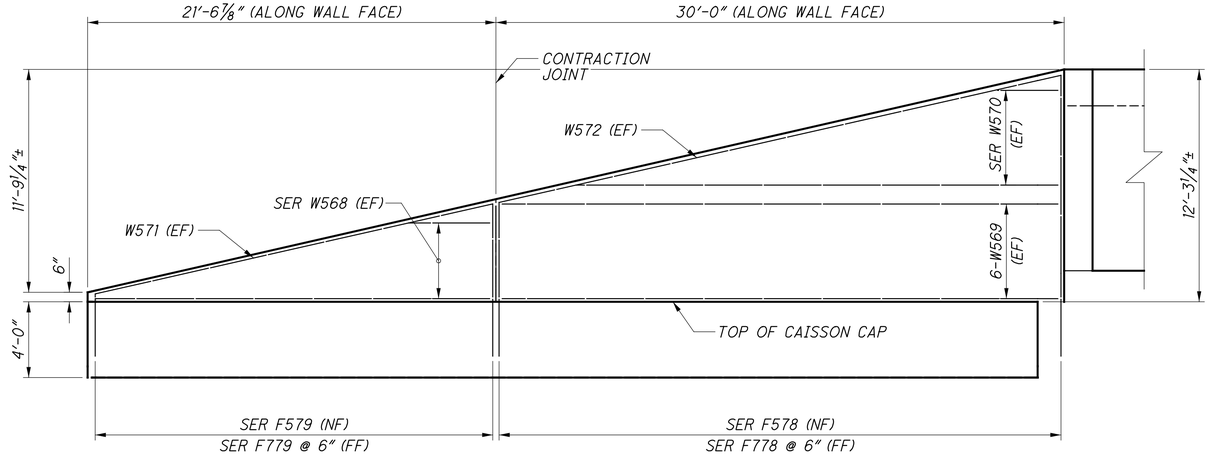
NORTHWEST WINGWALL PLAN & ELEVATION

BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

HAM-75-7.85
PID No. 77889

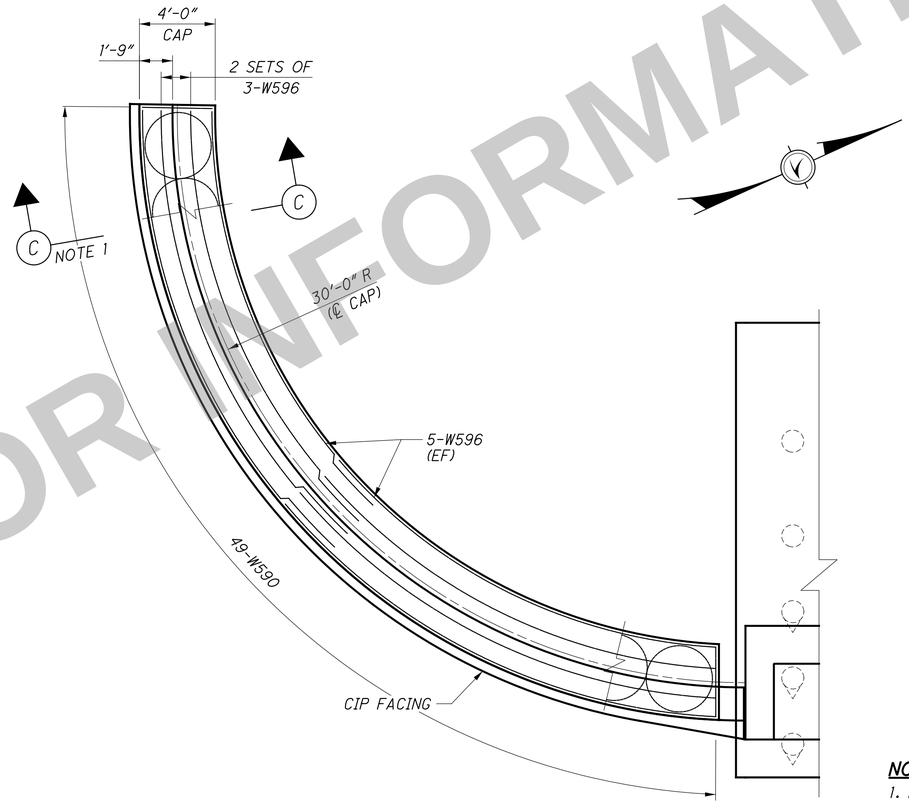
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2017

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SOUTHWEST WINGWALL ELEVATION

CAISSONS NOT SHOWN FOR CLARITY



SOUTHWEST WALL CAISSON CAP PLAN

NOTES:

1. FOR SECTION C, SEE SHEET 23 | 41 .
2. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 39 | 41 .
3. FOR CONTRACTION JOINT DETAILS, SEE SHEET (1513/2017) .

FWD ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	11 | 41	
GENERAL PLAN & ELEV:	17 | 41	
ABUTMENT PLANS:	18 | 41	
ABUTMENT ELEVATION:	19 | 41	
WINGWALL PLANS:	20 | 41	
WINGWALL ELEVATIONS:	21 | 41	
TYPICAL DETAILS:	22 | 41 -	23 | 41
FIXED BEARING:	34 | 41	
REINFORCING LIST:	39 | 41 -	40 | 41

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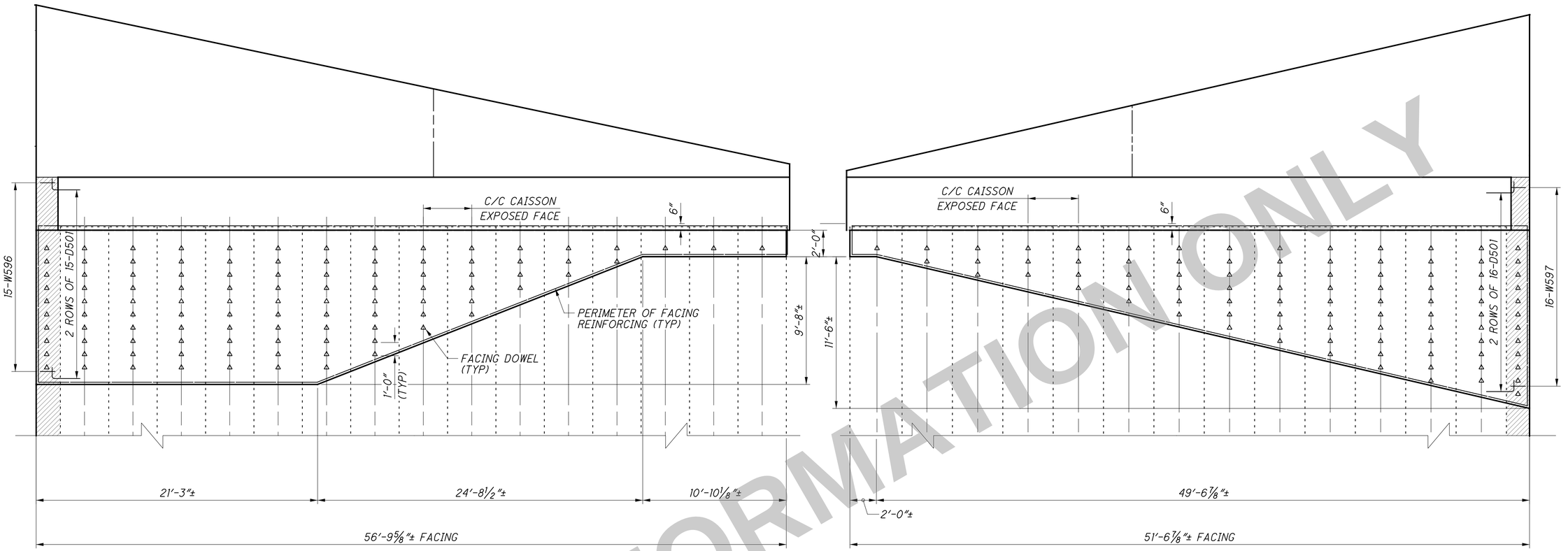
SOUTHWEST WINGWALL PLAN & ELEVATION
BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

HAM-75-7.85
PID No. 77889

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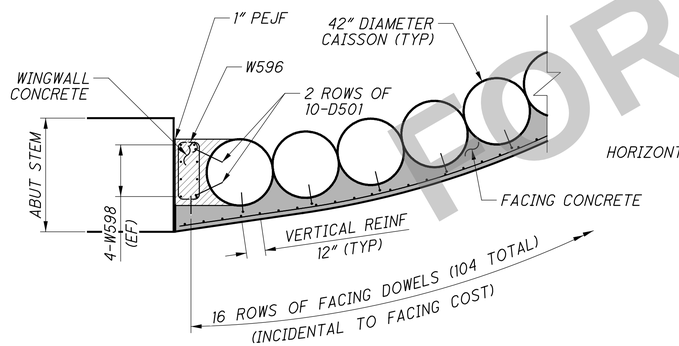


SOUTHEAST CAISSON WALL (REAR)

CIP FACING DETAILS SHOWN

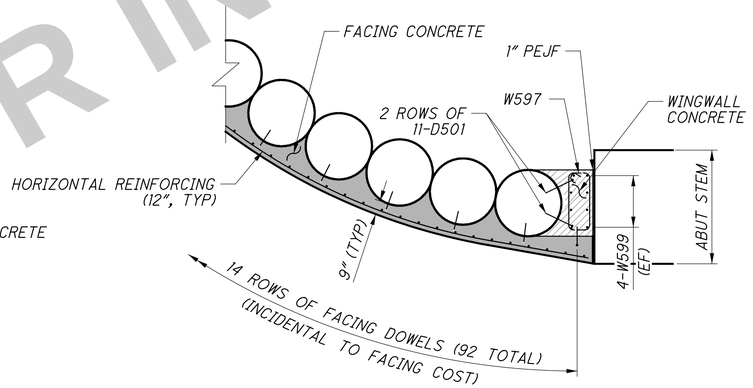
SOUTHWEST CAISSON WALL (FWD)

CIP FACING DETAILS SHOWN



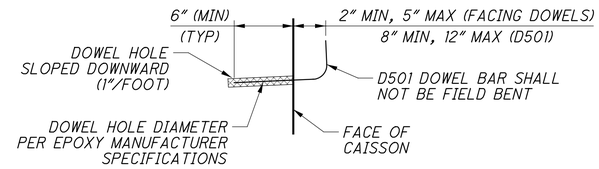
REAR CAISSON PLAN (SE)

CIP FACING DETAILS



FORWARD CAISSON PLAN (SW)

CIP FACING DETAILS



DOWEL DETAIL

ITEM 511 - CONCRETE, MISC.: FACING OF CANTILEVER WALLS

THE APPROXIMATE VOLUME OF CONCRETE TO FACE THE SOUTHEAST CAISSON WALL IS 17.3 CUBIC YARDS. FOR THE SOUTHWEST CAISSON WALL, APPROXIMATE VALUE IS 15.3 CUBIC YARDS. THIS VALUE IS GIVEN ONLY FOR ESTIMATING PURPOSES AND INCLUDES ANNULAR SPACES BETWEEN CAISSONS. THE CONTRACTOR SHALL PROVIDE ACTUAL QUANTITIES REQUIRED TO FACE THE WALL PER THESE PLANS.

THE HORIZONTAL AND VERTICAL REINFORCING STEEL SPACING SHALL NOT EXCEED 12" AND SHALL CONTAIN 0.25 SQUARE INCHES OF STEEL PER FOOT IN EACH DIRECTION (AREMA CHAPTER 8-2.12). REINFORCING STEEL MAY CONSIST OF REINFORCING BARS OR WELDED WIRE FABRIC. PERIMETER BARS SHALL BE #5.

FOR MORE NOTES, INCLUDING BASIS OF PAYMENT, SEE SHEET (1503 2017) .

FOR INFORMATION ONLY

DESIGN AGENCY
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CTM		NSRR BR#: BR0018445	

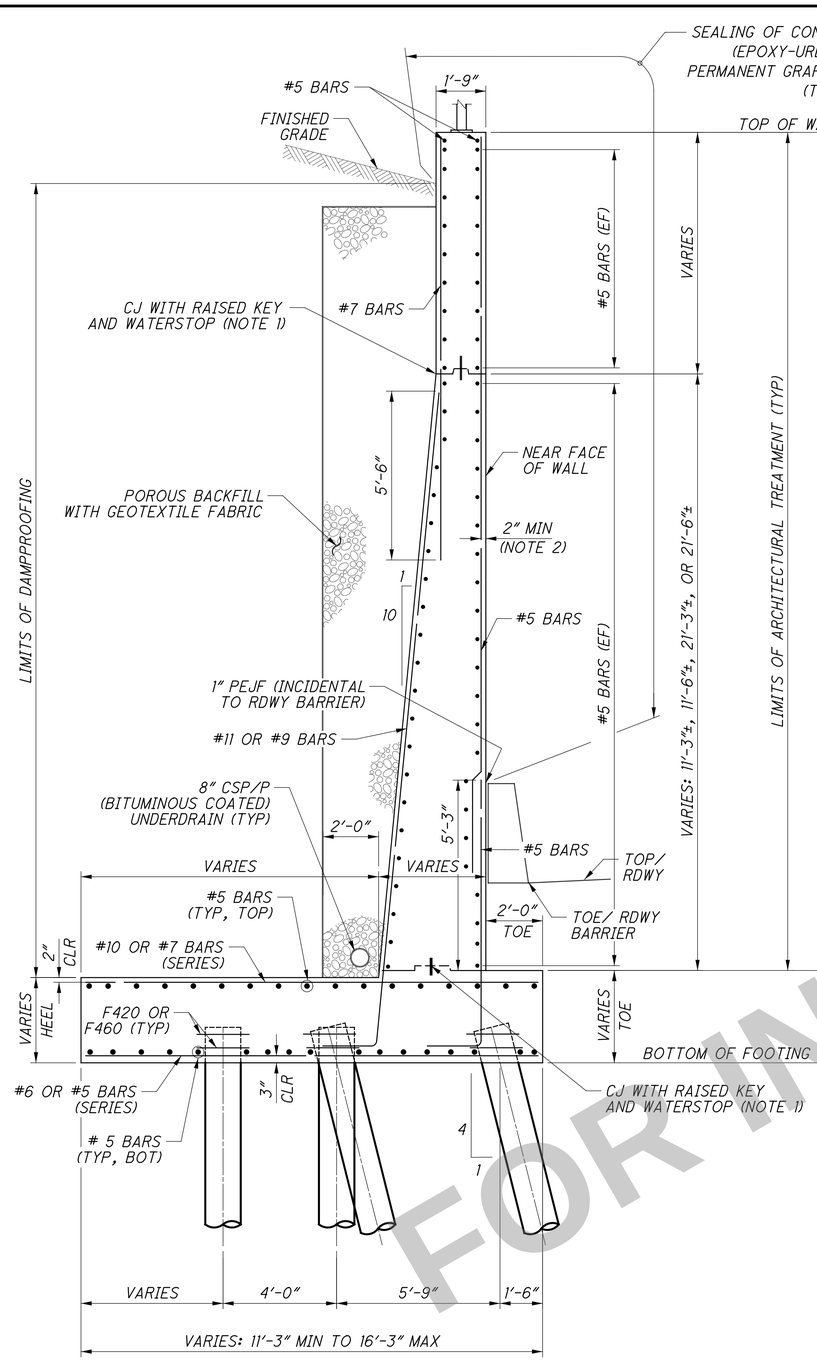
CAISSON CIP FACING DETAILS

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NORFOLK SOUTHERN RAILROAD OVER I.R. 75

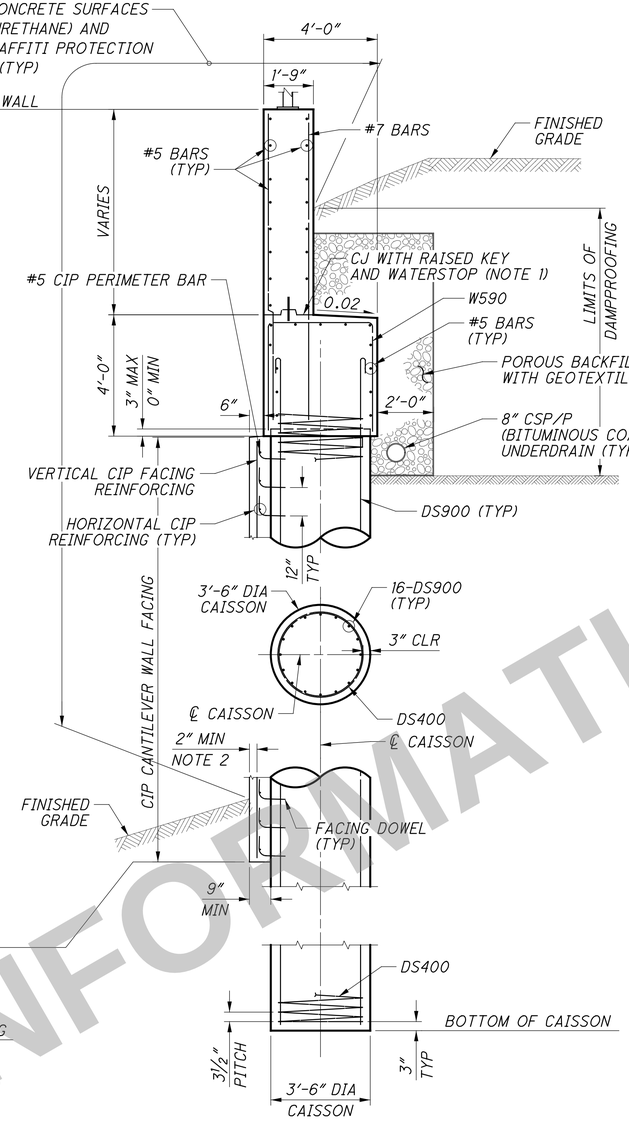
HAM-75-7.85
PID No. 77889

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2017

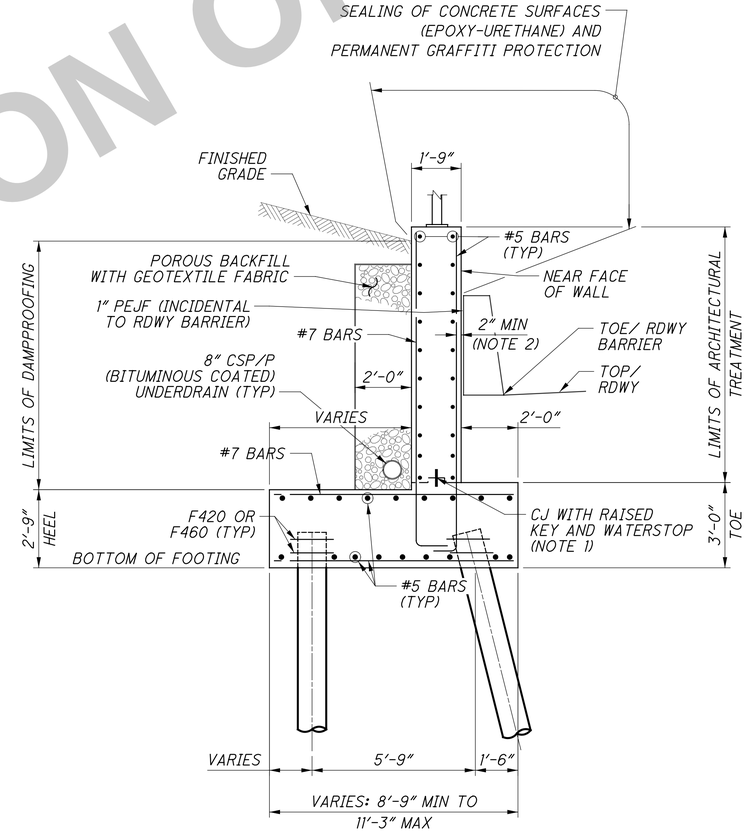
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TYPICAL BATTERED WINGWALL



SECTION C-C
TYPICAL CAISSON WINGWALL



TYPICAL UNBATTERED WINGWALL

NOTES:

1. WATERSTOPS SHALL BE 6"x⅜" PVC AND SHALL BE CONTINUOUS ACROSS JOINT. FOR RAISED KEYWAY DETAIL, SEE TYPICAL STRUCTURAL DETAILS SHEET (1513/2017).
2. ADJUST CLEAR DISTANCE TO PLAN DIMENSION TO ACCOUNT FOR FORMLINER RELIEF AS PER FORMLINER GENERAL NOTE.

FOR INFORMATION ONLY

DESIGN AGENCY
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COLUMBUS, OHIO 43231

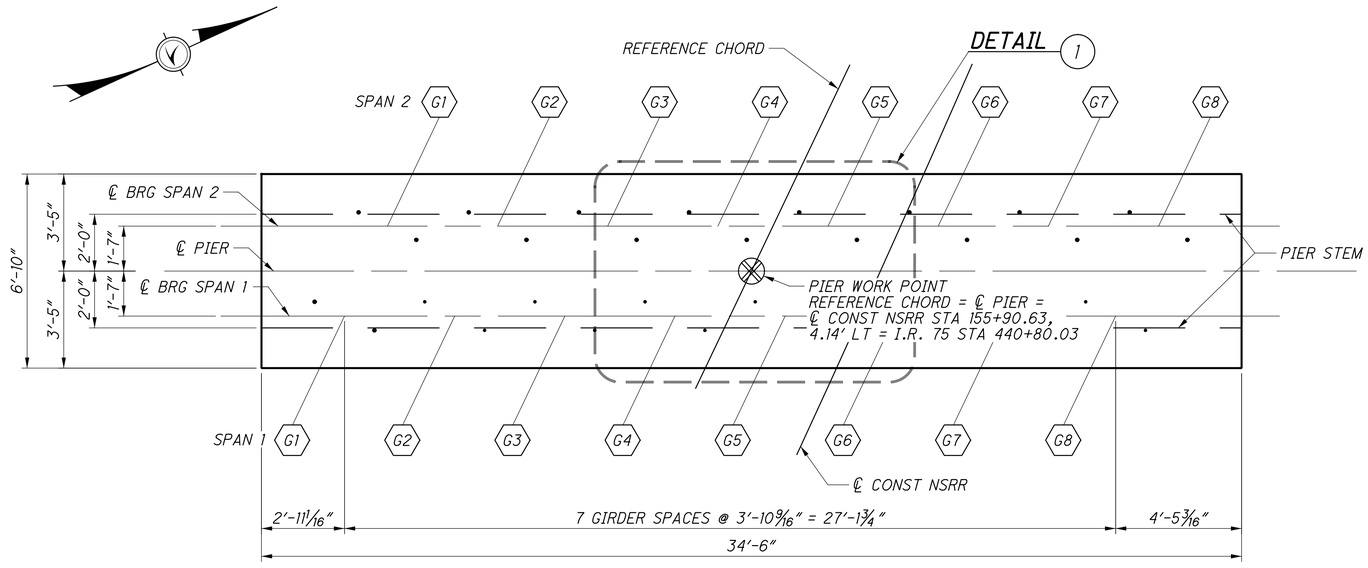
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VDK	VDK	CTV	12-15-21
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CTM		NSRR BR#: BR0018445	

WINGWALL TYPICAL SECTION
BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

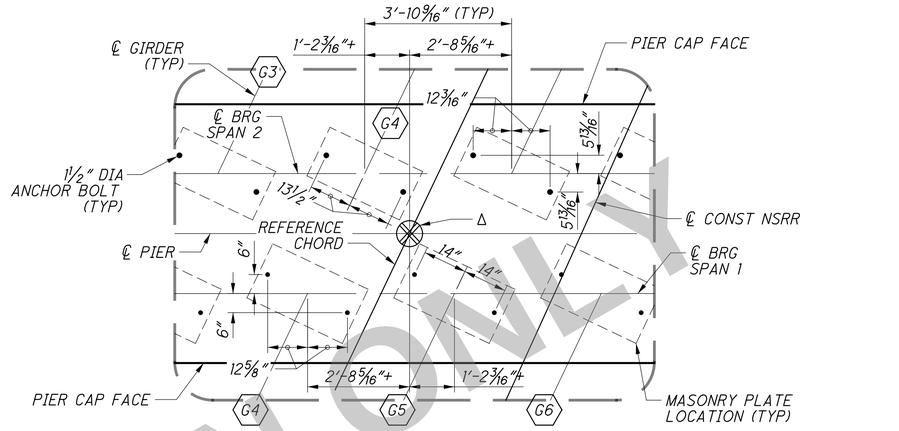
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PID No. 77889

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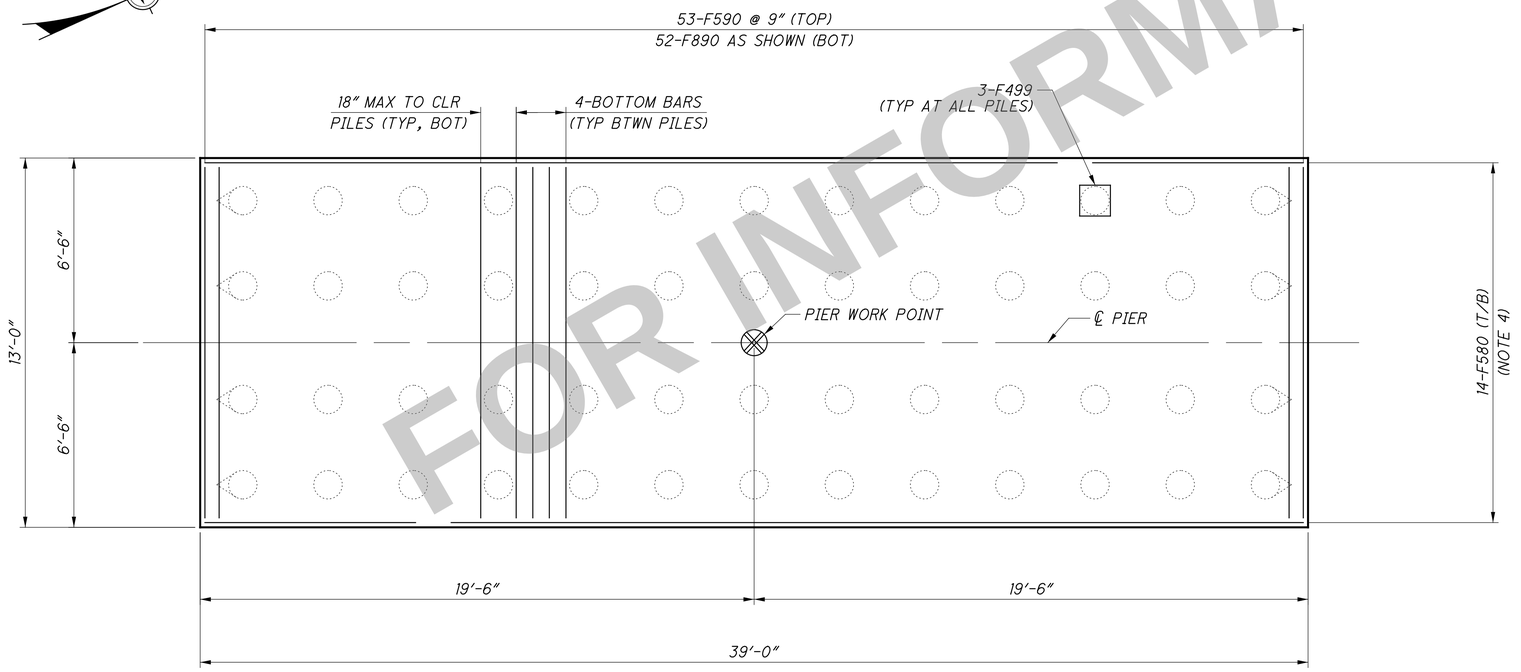


PIER CAP PLAN



Δ = PIER WORK POINT
REFERENCE CHORD = ℄ PIER =
NSRR MAIN STA 155+90.63, 4.14' LT
= I.R. 75 STA 440+80.03

1 WORK POINT DEFINITION
INCLUDING ANCHOR BOLT LAYOUT



PIER FOOTING PLAN

NOTES:

1. FOR PILE LAYOUT PLAN, SEE SHEET 10 41 .
2. FOR PIER ELEVATION, SEE SHEET 25 41 .
3. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 39 41 .
4. FOR SPACING OF BOTTOM LONGITUDINAL BARS AROUND PILES SEE PIER TYPICAL SECTION, SHEET 25 41 .

FOR INFORMATION ONLY

DESIGN AGENCY
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ENGINEERS & ARCHITECTS, P.C.
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COLUMBUS, OHIO 43231

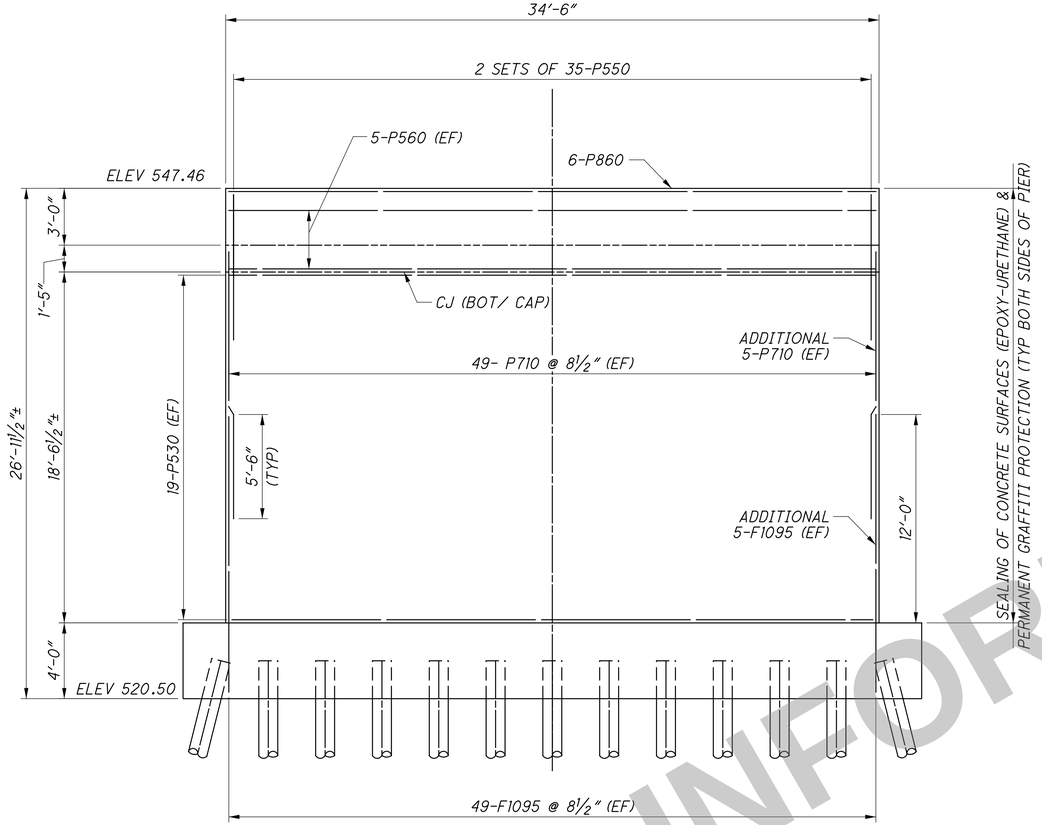
DESIGNED	DRAWN	REVIEWED	DATE
VDT	VDK	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3110142	
CTM		NSRR BR#: BR0018445	

PIER CAP PLAN AND FOOTING PLAN
BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95; CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

HAM-75-7.85
PID No. 77889

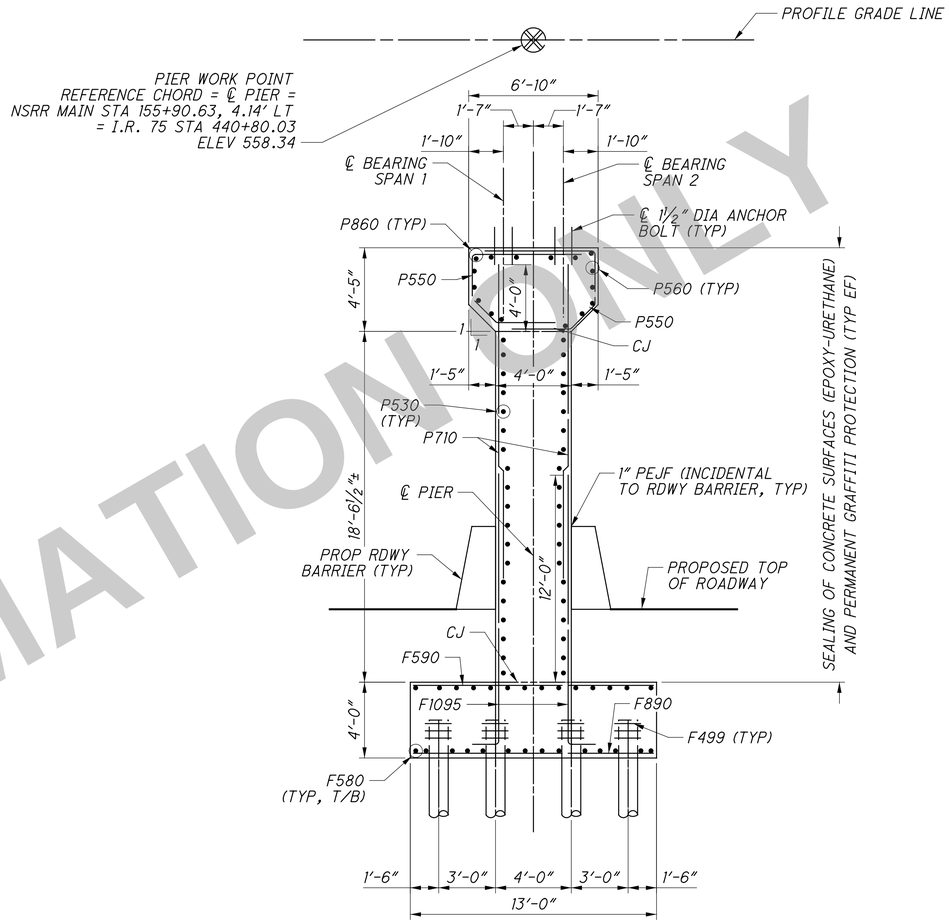
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PIER ELEVATION
LOOKING UPSTATION

SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) & PERMANENT GRAFFITI PROTECTION (TYP BOTH SIDES OF PIER)



PIER TYPICAL SECTION

SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) AND PERMANENT GRAFFITI PROTECTION (TYP EF)

NOTES:

1. FOR PIER PILE LAYOUT, SEE SHEET 10 | 41 .
2. FOR PIER PLAN AND FOOTING PLAN, SEE SHEET 24 | 41 .
3. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 39 | 41 .

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PIER ELEVATION AND SECTION
BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

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PID No. 77889

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2017

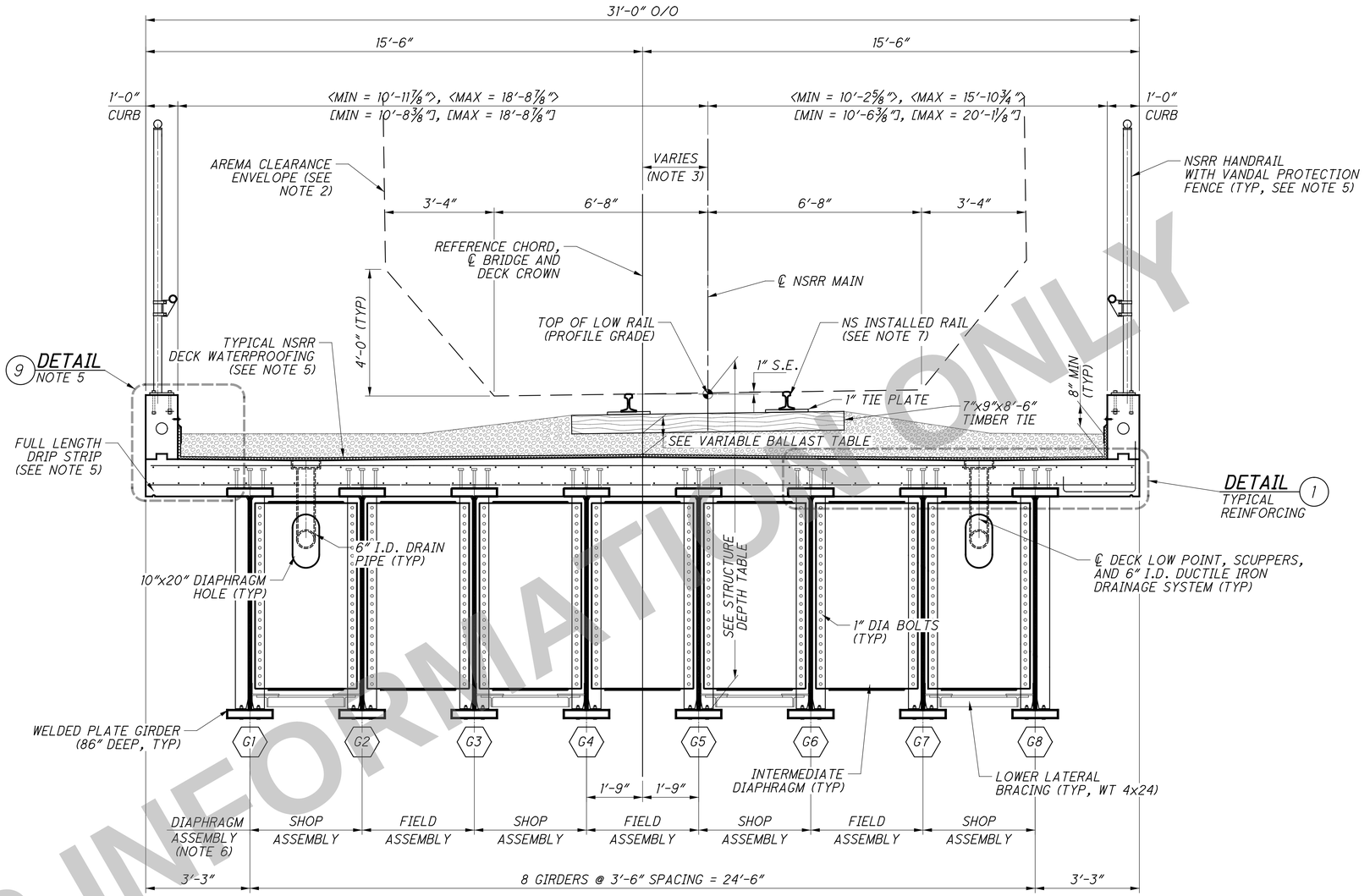
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STRUCTURE DEPTH TABLE	
ELEMENT	DEPTH
141 RE RAIL (NOTE 7)	7 1/16"
TIE PLATE	1"
TIE	7"
WATERPROOFING	1 1/8"
CROWN HEIGHT	1 1/2"
MIN CONCRETE DECK	10 1/2"
GIRDER	86"
BOLT HEAD THICKNESS	5/8"
ELEMENT DEPTH FROM PGL (EXCLUDING BALLAST)	115 3/16"

VARIABLE BALLAST THICKNESS		
LOCATION	Δ VAR. BALLAST	*TOTAL DEPTH
SPAN 1: ℄ RA BRG	9.77"	124.95"
SPAN 1: MIDSPAN	10.77"	125.96"
SPAN 1: ℄ REAR PIER BRG	8.30"	123.49"
SPAN 2: ℄ FWD PIER BRG	8.30"	123.50"
SPAN 2: MIDSPAN	10.39"	125.57"
SPAN 2: ℄ FA BRG	9.80	124.98"

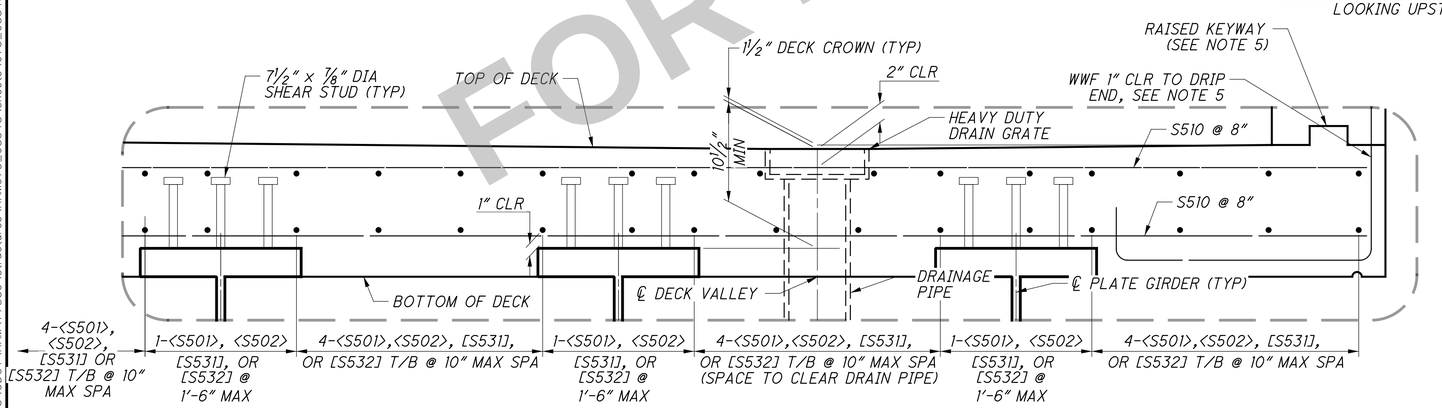
Δ VARIABLE BALLAST IS CALCULATED TO CONSIDER BOTH THE EFFECTS OF SUPERELEVATION, DECK SLOPE, AND HORIZONTAL CURVATURE, COMBINED WITH THE VARIATIONS DUE TO VERTICAL PROFILE.

* TOTAL DEPTH INDICATES THE TOTAL DEPTH FROM PGL TO BOTTOM OF STEEL (INCLUDING BOLT HEAD THICKNESS). IT IS THE SUMMATION OF THE ELEMENT DEPTH AND VARIABLE BALLAST THICKNESS AT EACH LOCATION.



TYPICAL TRANSVERSE SECTION

LOOKING UPSTATION (NOTE 1)



1 TYPICAL SLAB REINFORCING DETAIL

MISC. DETAILS NOT SHOWN FOR CLARITY

NOTES:

1. THE TYPICAL TRANSVERSE SECTION IS DRAWN AND DIMENSIONED NORMAL TO THE CHORD. THE TYPICAL SECTION SHOWN IS SCHEMATIC. BOTTOM OF BEAM ELEVATIONS AND DECK LOW POINT ELEVATIONS ARE EQUAL ALONG THE SKEW. SCREED, FINAL TOP OF DECK, AND MISCELLANEOUS STEEL DETAILS ACCOUNT FOR VARIATIONS IN BOTTOM OF BEAM ELEVATIONS NORMAL TO THE REFERENCE CHORD. MOVING LEFT TO RIGHT ACROSS A TRUE SECTION NORMAL TO THE REFERENCE CHORD, EACH BOTTOM OF BEAM ELEVATION WILL DECREASE BY APPROXIMATELY 1/32" IN SPAN 1 AND INCREASE BY APPROXIMATELY 3/16" IN SPAN 2.
2. THE AREMA CLEARANCE ENVELOPE SHOWN IS THE STANDARD CLEARANCE ENVELOPE WIDENED BY 12" IN EACH DIRECTION TO ACCOUNT FOR A MAXIMUM 8 DEGREE HORIZONTAL CURVATURE.
3. SEE GENERAL PLANS SHEET 2 | 41 AND 3 | 41 FOR CONTROLLING GEOMETRIC DETAILS.
4. DIMENSIONS AND CALLOUTS WITHOUT BRACKETS CORRESPOND TO BOTH SPANS. DIMENSIONS AND CALLOUTS WITH <BRACKET> CORRESPOND TO SPAN 1. DIMENSIONS AND CALLOUTS WITH [BRACKET] CORRESPOND TO SPAN 2.
5. FOR TYPICAL CURB, OVERHANG, KEYWAY, DRIP EDGE, WATERPROOFING,HANDRAIL AND VANDAL PROTECTION FENCE DETAILS, SEE RAILROAD TYPICAL DETAILS ON SHEETS 1509/2017 THROUGH 1513/2017 .
6. THE CONTRACTOR MAY ELECT TO FIELD ASSEMBLE AT NO ADDITIONAL COST TO THE STATE PENDING APPROVAL BY NSRR AND ODOT.
7. RAIL TO BE EITHER 136 OR 141 RE RAIL, PER NS DIRECTION. THE VERTICAL AND BALLAST CLEARANCES ARE CALCULATED USING THE TALLER 141 RE RAIL PER NS DIRECTION.

FOR INFORMATION ONLY

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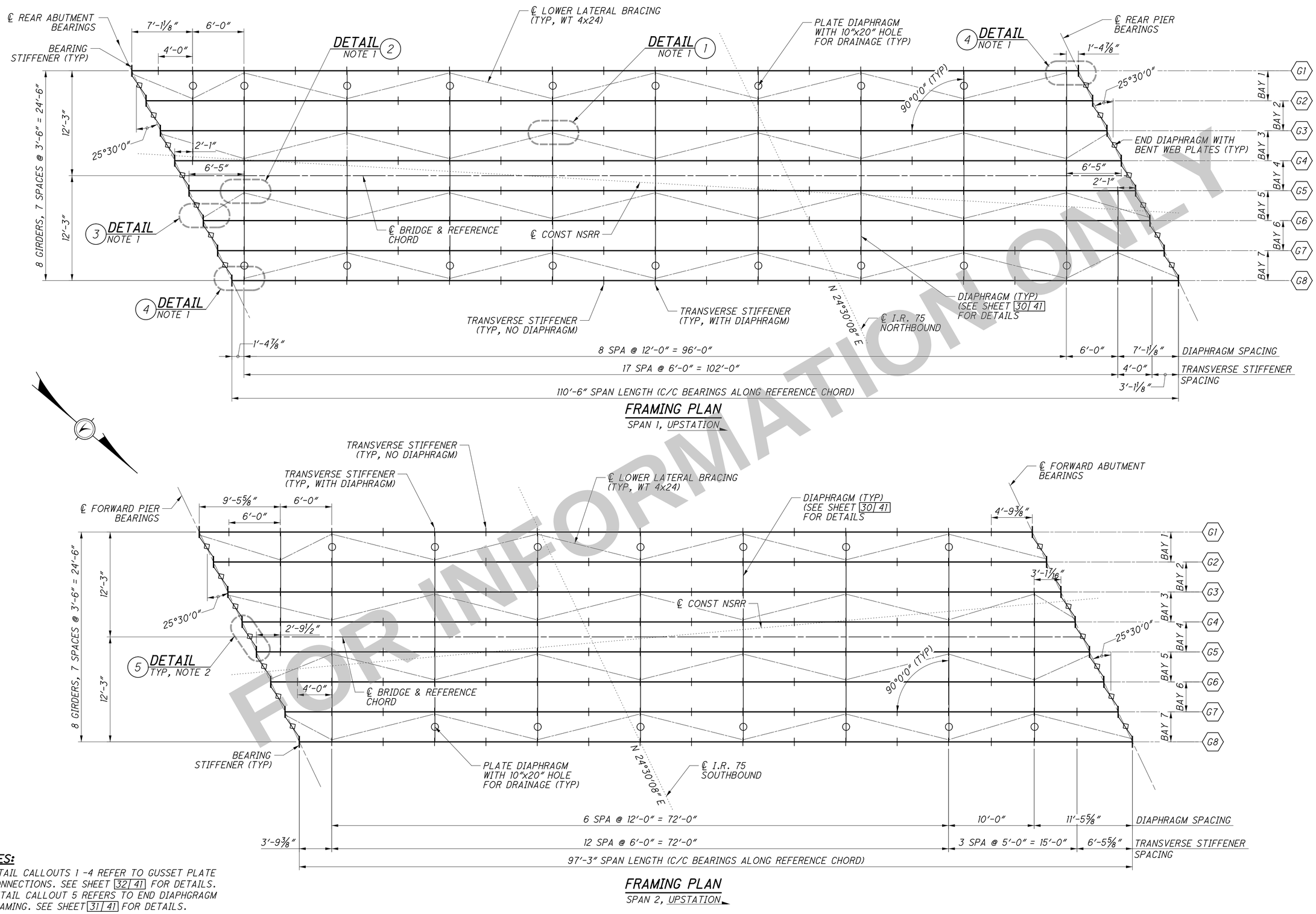
TRANSVERSE SECTION

BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

HAM-75-7.85
PID No. 77889

1597/2017

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FRAMING PLAN
SPAN 1, UPSTATION

FRAMING PLAN
SPAN 2, UPSTATION

NOTES:

1. DETAIL CALLOUTS 1 -4 REFER TO GUSSET PLATE CONNECTIONS. SEE SHEET 32 41 FOR DETAILS.
2. DETAIL CALLOUT 5 REFERS TO END DIAPHGRAGM FRAMING. SEE SHEET 31 41 FOR DETAILS.

FOR INFORMATION ONLY

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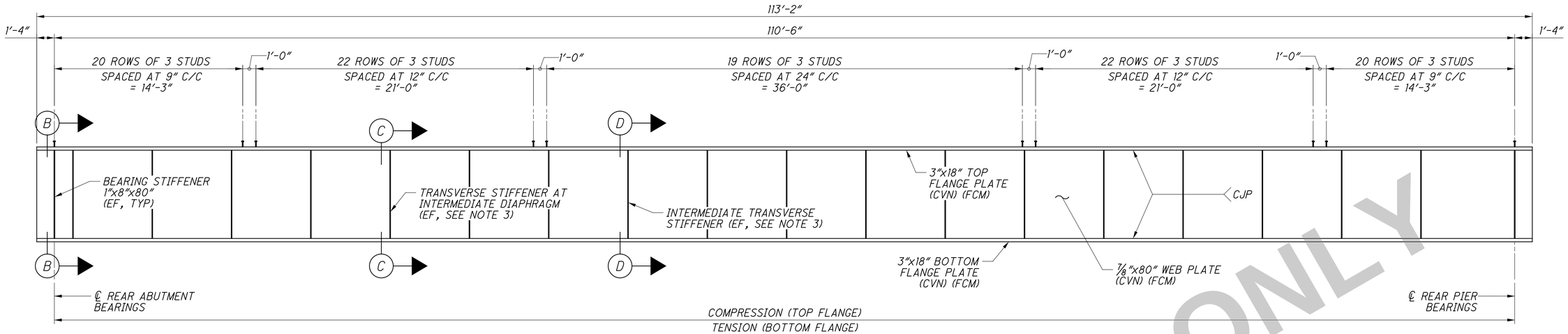
DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2600 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
EFD	VDT	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3110142	
CTM		NSRR BR#: BR0018445	

FRAMING PLAN, SPANS 1 AND 2
BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

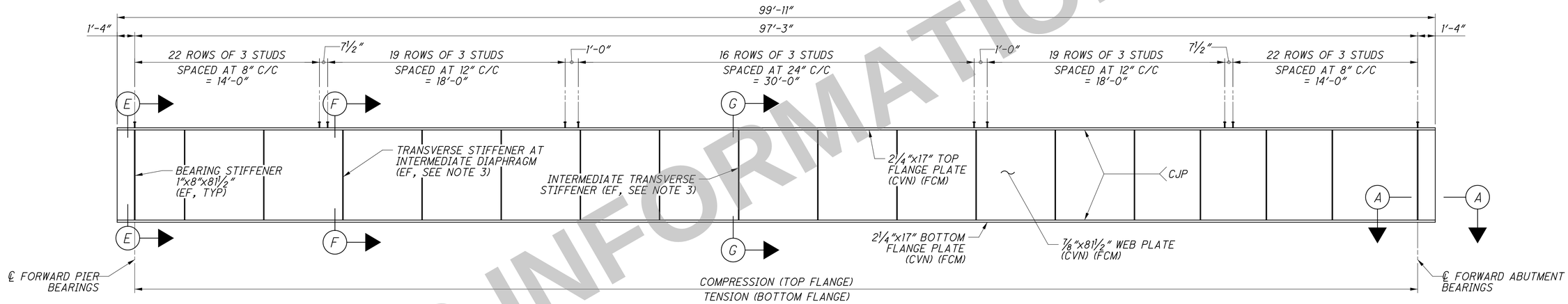
HAM-75-7.85
PID No. 77889

1598
2017



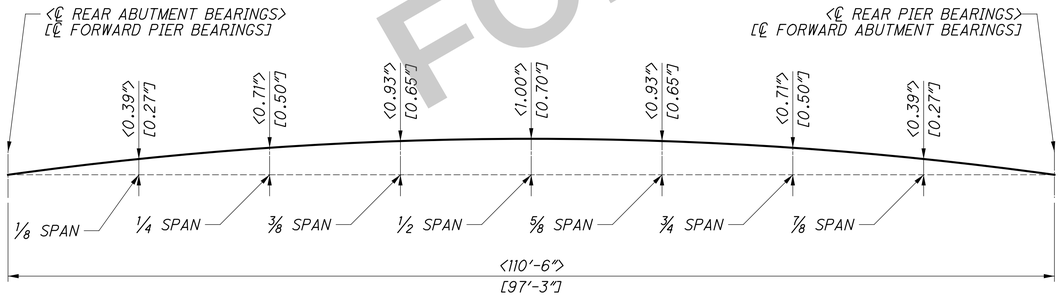
GIRDER ELEVATION

SPAN 1, UPSTATION



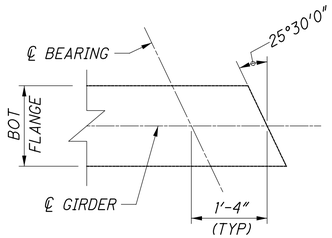
GIRDER ELEVATION

SPAN 2, UPSTATION



GIRDER CAMBER DETAILS

SPANS 1 AND 2 (SEE NOTE 5)



A END BEVEL

NOTES:

1. (CVN) DENOTES CHARPY V-NOTCH TEST IS REQUIRED. WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN ODOT 711.01.
2. (FCM) DENOTES FRACTURE CRITICAL MEMBER. ALL FCM STEEL SHALL BE PROVIDED PER THE NORFOLK SOUTHERN SPECIFICATIONS FOR STRUCTURAL STEEL AND THE GENERAL NOTES ON SHEET: 1502 2017
3. FOR TRANSVERSE STIFFENER AND DIAPHRAGM SPACING, SEE FRAMING PLAN SHEET 27 41 .
4. FOR SECTIONS "B" THROUGH "G", SEE SHEET 29 41 .
5. CALLOUTS INSIDE OF <BRACKET> REFER TO SPAN 1 & INSIDE OF [BRACKET] REFER TO SPAN 2. CAMBER CALCULATIONS INCLUDE NON-COMPOSITE DEFLECTIONS DUE THE GIRDER SELF-WEIGHT AND CONCRETE DECK PLACEMENT. ALL OTHER DEAD LOAD DEFLECTIONS, INCLUDING SECONDARY CONCRETE POURS AND BALLAST, ARE CALCULATED ASSUMING COMPOSITE SECTION PROPERTIES.

FOR INFORMATION ONLY

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Gannett Fleming
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DESIGNED	DRAWN	REVIEWED	DATE
VDT	VDT	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3110142	
CTM		NSRR BR#: BR0018445	

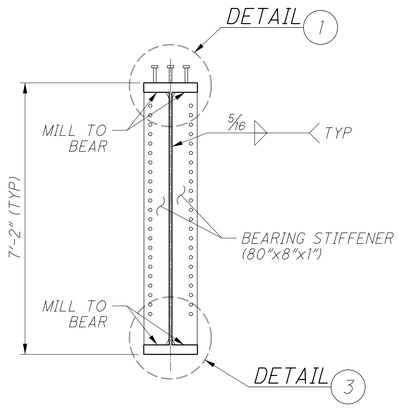
GIRDER ELEVATION AND CAMBER TABLE

BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

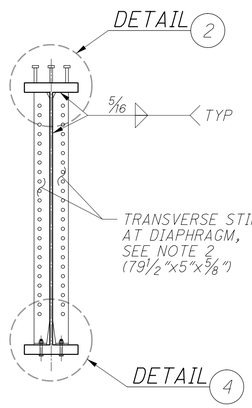
HAM-75-7.85
PID No. 77889

1599 2017

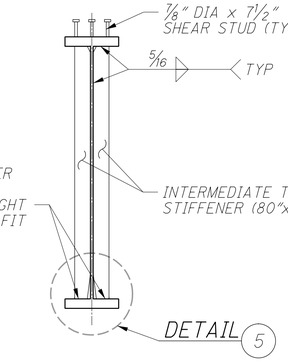
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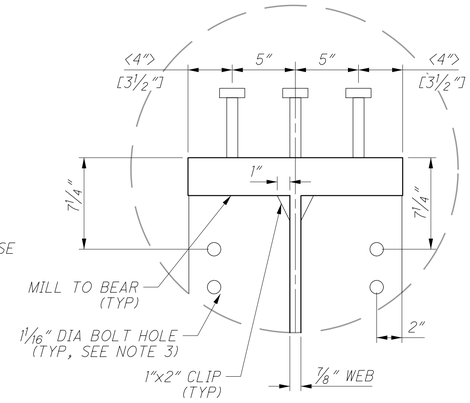
B SECTION
SPAN 1



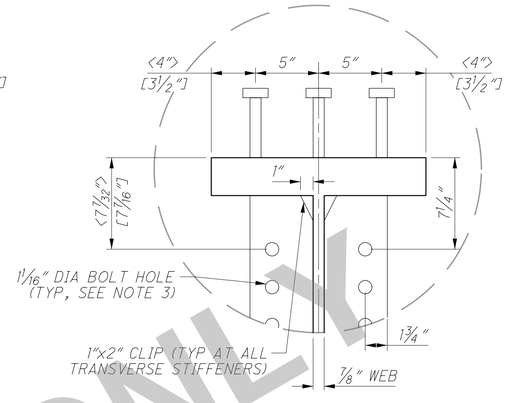
C SECTION
SPAN 1



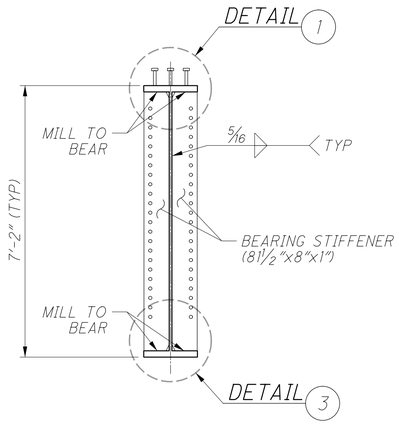
D SECTION
SPAN 1



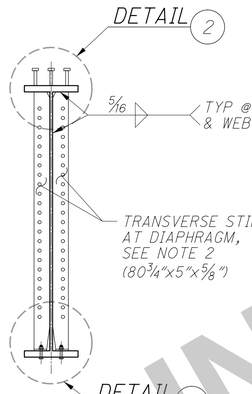
1 DETAIL, BOTH SPANS
BEARING STIFFENER



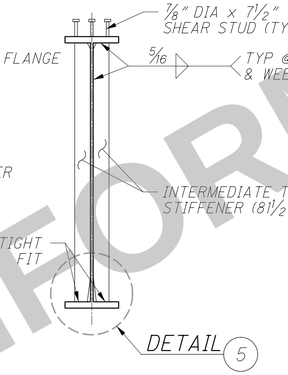
2 DETAIL, BOTH SPANS
TRANSVERSE STIFFENER AT DIAPHRAGM (NOTE 2)



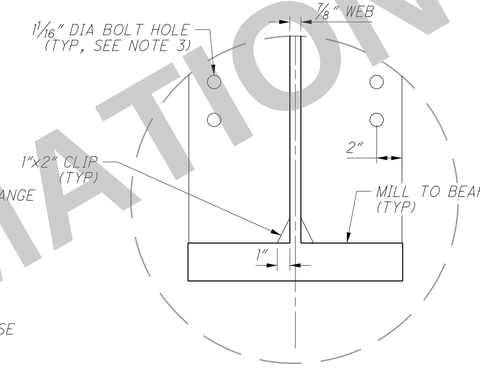
E SECTION
SPAN 2



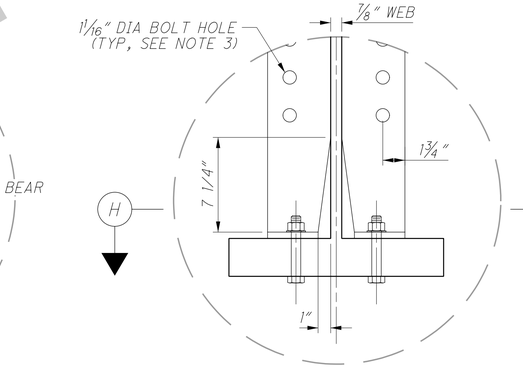
F SECTION
SPAN 2



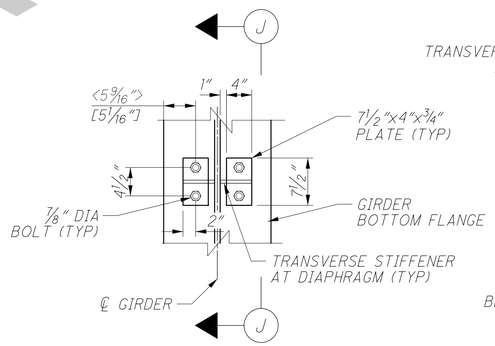
G SECTION
SPAN 2



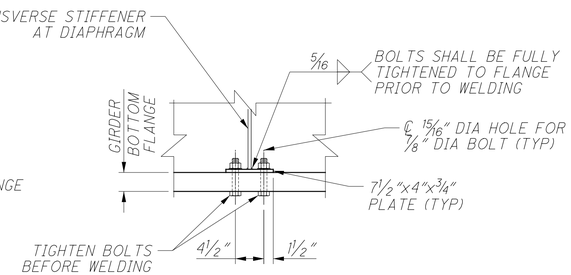
3 DETAIL, BOTH SPANS
BEARING STIFFENER



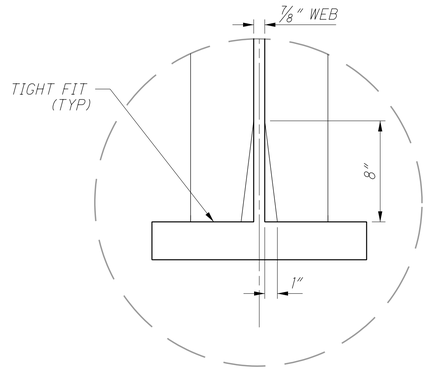
4 DETAIL, BOTH SPANS
TRANSVERSE STIFFENER AT DIAPHRAGM (NOTE 2)



H SECTION
NOTE 2



J SECTION
NOTE 2



5 DETAIL, BOTH SPANS
INTERMEDIATE TRANSVERSE STIFFENER

NOTES:

1. DIMENSIONS WITHOUT BRACKETS APPLY TO BOTH SPANS. DIMENSIONS INSIDE OF A <BRACKET> CORRESPOND TO SPAN 1. DIMENSIONS INSIDE OF A [BRACKET] CORRESPOND TO SPAN 2.
2. TRANSVERSE STIFFENERS AT DIAPHRAGM LOCATIONS SHALL BE FASTENED TO THE BOTTOM FLANGE ON BOTH SIDES OF THE WEB, INCLUDING IN CASES WHEN ONLY ONE STIFFENER CONNECTS TO A DIAPHRAGM. WHEN A STIFFENER IN THE PAIR DOES NOT CONNECT TO A DIAPHRAGM (SUCH AS ON FASCIA GIRDERS), THE BOLT HOLES IN THE STIFFENERS SHALL BE OMITTED.
3. FOR STIFFENER BOLT SPACING AND DIAPHRAGM CONNECTION DETAILS, SEE SHEET 30 | 41 AND 31 | 41 .
4. HIGH STRENGTH BOLTS SHALL BE 1" DIAMETER ASTM F3125, GRADE A325, U.N.O.
5. FOR SECTIONS "B" THROUGH "G" CALLOUTS SEE SHEET 28 | 41 .

FOR INFORMATION ONLY

DESIGN AGENCY
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DESIGNED VDT | DRAWN VDT | REVIEWED CTV | DATE 12-15-21
CHECKED CTM | REVISED
ODOT SFN: 3110142
NSRR BR#: BR0018445

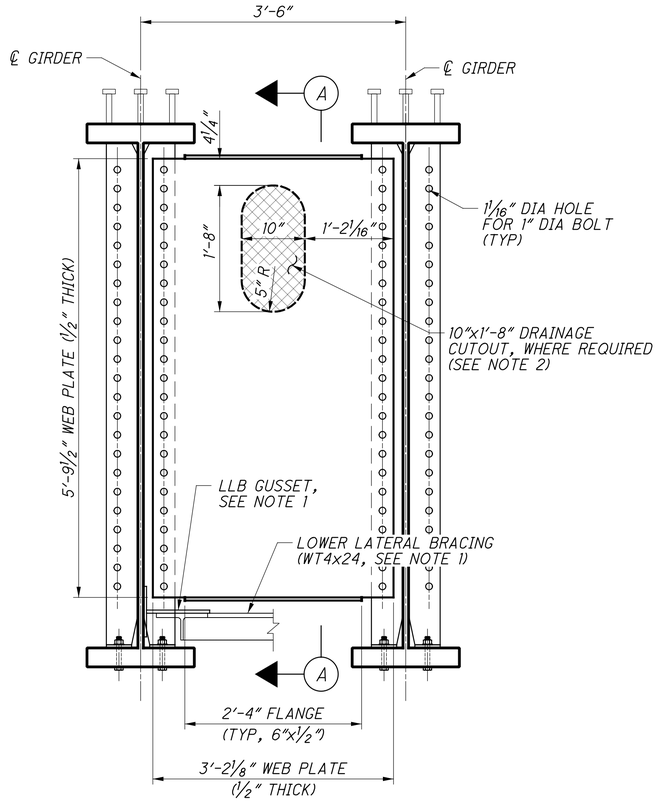
MISCELLANEOUS GIRDER DETAILS/SECTIONS/WELDS
BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

HAM-75-7.85
PID No. 77889

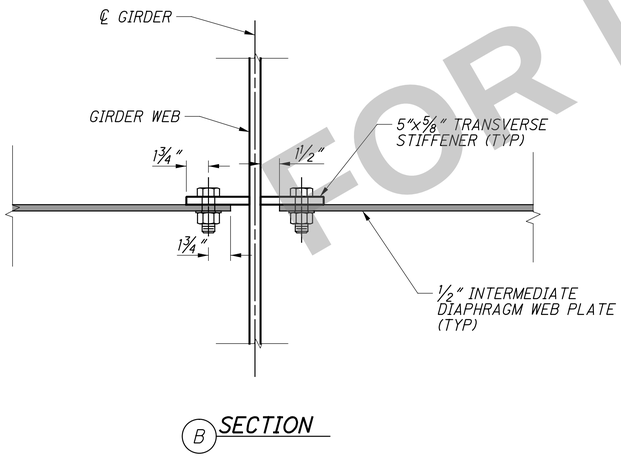
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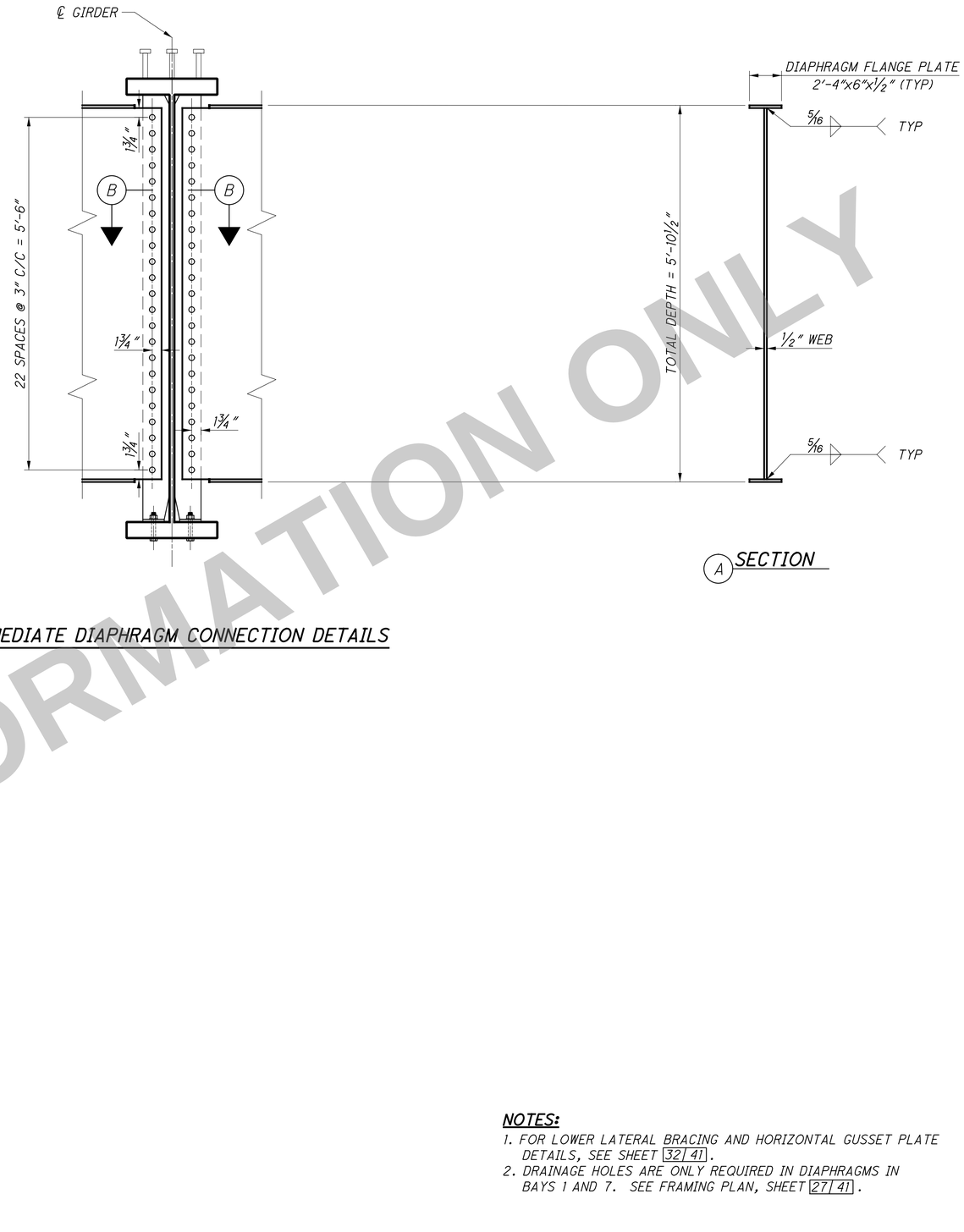
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INTERMEDIATE DIAPHRAGM DETAILS



B SECTION



A SECTION

INTERMEDIATE DIAPHRAGM CONNECTION DETAILS

NOTES:

1. FOR LOWER LATERAL BRACING AND HORIZONTAL GUSSET PLATE DETAILS, SEE SHEET 32 41.
2. DRAINAGE HOLES ARE ONLY REQUIRED IN DIAPHRAGMS IN BAYS 1 AND 7. SEE FRAMING PLAN, SHEET 27 41.

FOR INFORMATION ONLY

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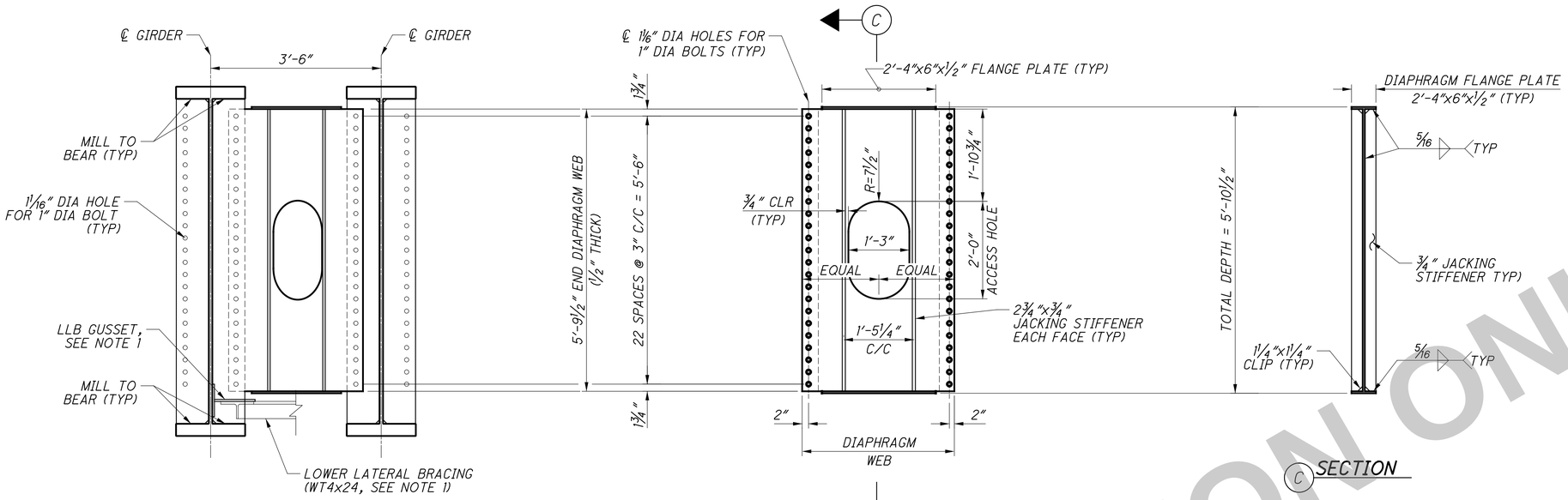
DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2600 CORPORATE EXCHANGE DRIVE SUITE 230
COLUMBUS, OHIO 43231

DESIGNED VDT | DRAWN VDT | CHECKED CTM | REVISED
REVIEWED CTV | DATE 12-15-21
ODOT SFN: 3110142
NSRR BR#: BR0018445

GIRDER DIAPHRAGM DETAILS 1/2
BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

HAM-75-7.85
PID No. 77889

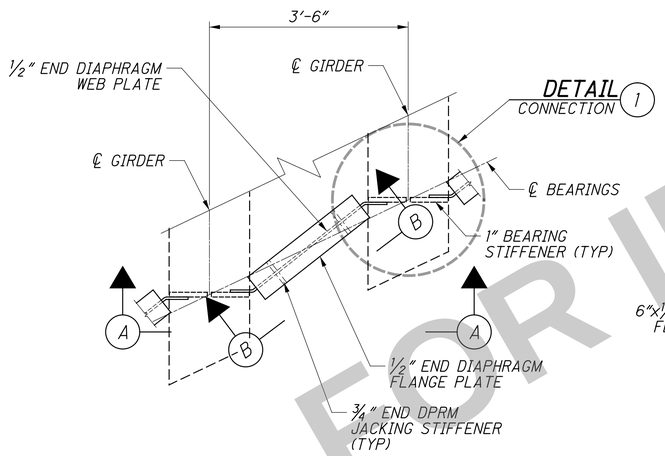
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2017



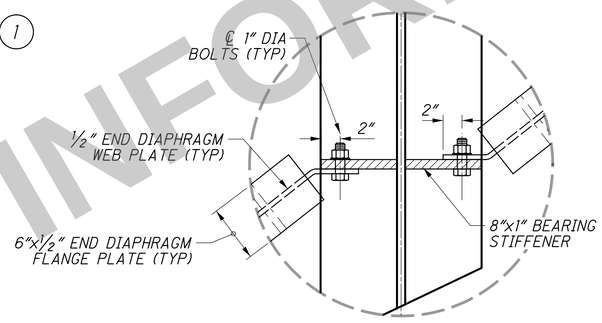
A **GIRDER FRAMING SECTION**
NORMAL TO GIRDER

B **END DIAPHRAGM ELEVATION**
PARALLEL TO DIAPHRAGM

C **SECTION**



5 **TYPICAL END DIAPHRAGM DETAIL**
SEE SHEET 27 41



1 **CONNECTION DETAIL**
BEARING STIFFENER AND END DIAPHRAGM WITH BENT WEB

NOTES:

1. FOR LOWER LATERAL BRACING AND HORIZONTAL GUSSET PLATE DETAILS, SEE SHEET 32 41.

FOR INFORMATION ONLY

DESIGN AGENCY
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COLUMBUS, OHIO 43231

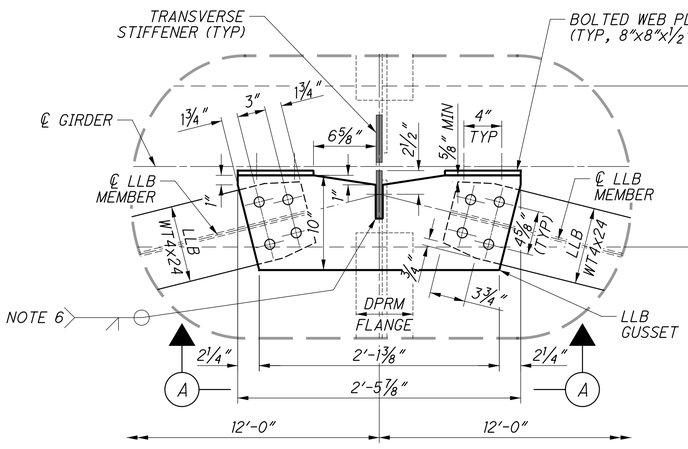
DESIGNED	DRAWN	REVIEWED	DATE
VDT	VDT	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3110142	
CTM		NSRR BR#: BR0018445	

GIRDER DIAPHRAGM DETAILS 2/2
BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

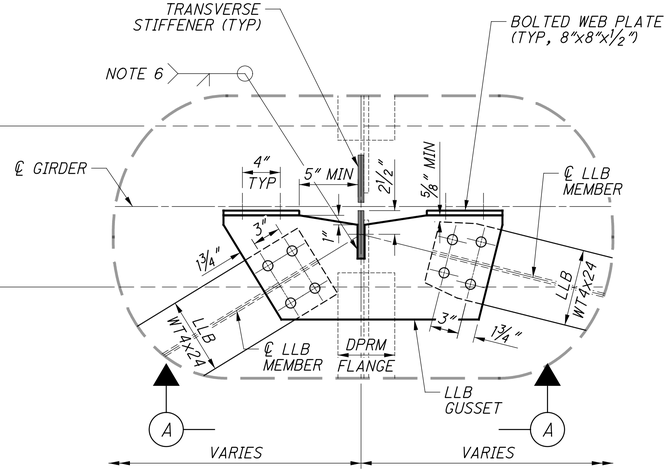
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PID No. 77889

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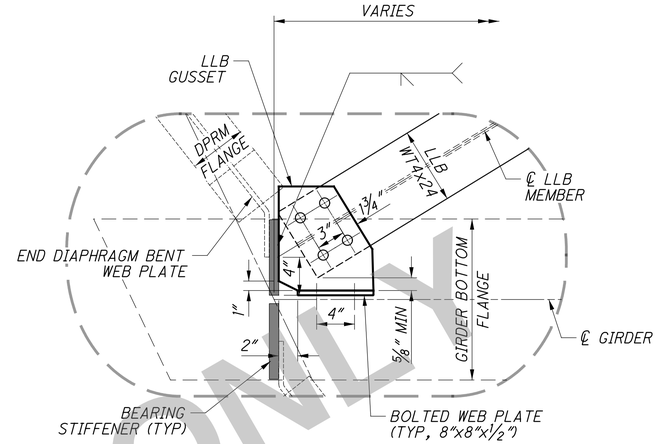
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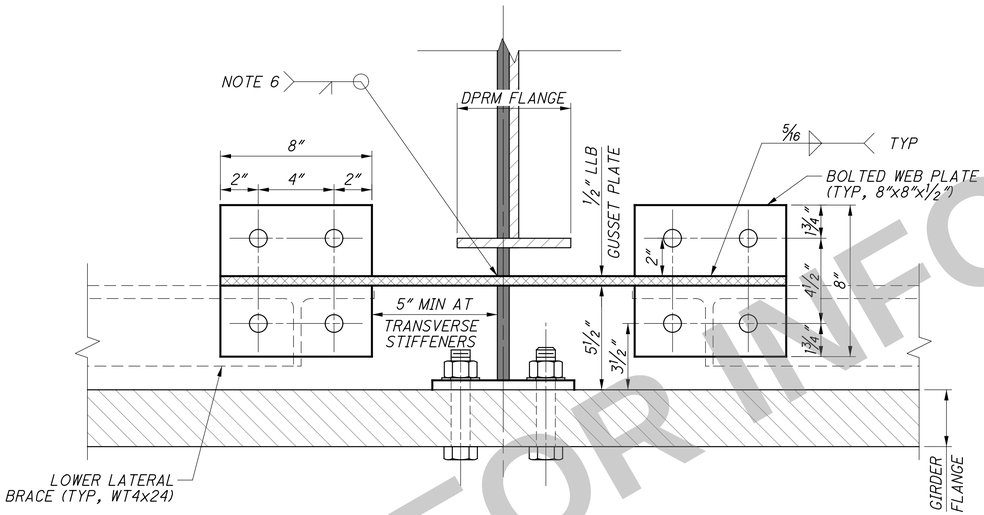
1 **DETAIL**
TYPICAL LLB CONNECTION AT INTERMEDIATE DIAPHRAGMS



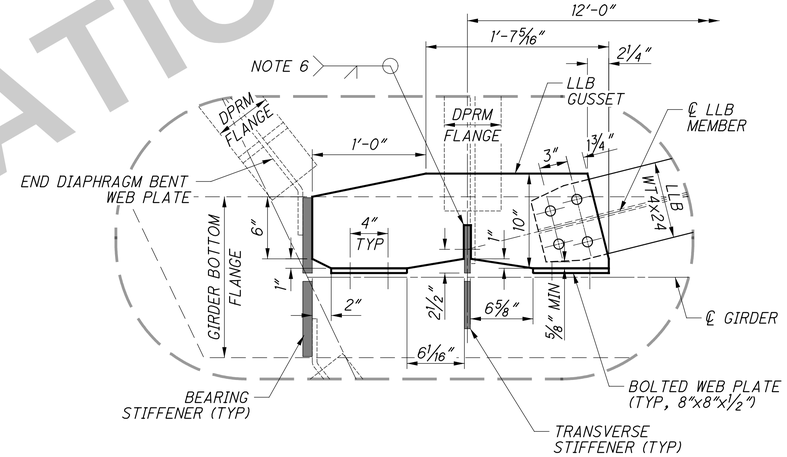
2 **DETAIL**
SEE NOTE 2



3 **DETAIL**
SEE NOTE 3



A **TYPICAL ELEVATION**
SEE NOTE 5



4 **DETAIL**
SEE NOTE 4

NOTES:

1. TYPICAL GUSSET PLATES AND DETAILS SHOWN. FINAL DETAILS TO BE INCLUDED WITH MANUFACTURER SHOP DRAWINGS AND SHALL COMPLY WITH THE REQUIREMENTS OF AREMA CHAPTER 15 AND THESE PLANS. ALL 1" DIAMETER BOLTS SHALL MAINTAIN A MINIMUM DISTANCE OF 1¾" TO ANY FREE EDGE. FOR LOWER LATERAL BRACING LOCATIONS, SEE FRAMING PLAN ON SHEET 27 41.
2. DETAIL 2 IS TYPICAL OF CONNECTIONS THAT CONNECT TWO LOWER LATERAL BRACE MEMBERS OF VARIABLE SPACING AT AN INTERMEDIATE DIAPHRAGM LOCATION.
3. DETAIL 3 IS TYPICAL OF CONNECTIONS THAT CONNECT THE LOWER LATERAL BRACE MEMBERS AT BEARING STIFFENER LOCATIONS (EXCEPT AS NOTED BY NOTE 4).
4. DETAIL 4 IS APPLICABLE ONLY IN SPAN 1, SPECIFICALLY GIRDER 8 AT THE REAR ABUTMENT, AND GIRDER 1 AT THE PIER.
5. ELEVATION IS TYPICAL AT TRANSVERSE STIFFENERS, EXCEPT THOSE SPECIFIED IN NOTE 4.
6. SLOT MADE TO FIT AROUND ⅝" STIFFENER ℄, GAP BETWEEN GUSSET PLATE AND STIFFENER SHALL NOT EXCEED ⅛". GUSSET PLATE TO STIFFENER WELD SHALL BE PERFORMED AFTER STIFFENER IS WELDED TO THE BOTTOM FLANGE CONNECTION PLATE.

FOR INFORMATION ONLY

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DESIGNED	DRAWN	REVIEWED	DATE
EFD	VDT	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3110142	
CTM		NSRR BR#: BR0018445	

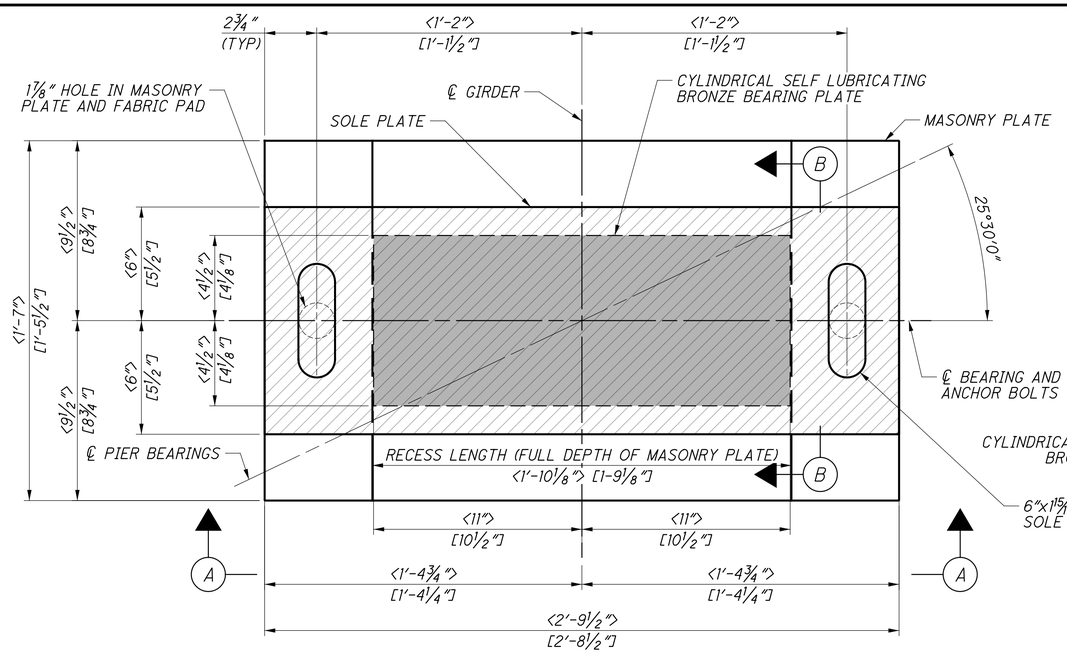
LOWER LATERAL BRACING GUSSET PLATE DETAILS

BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95; CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

HAM-75-7.85
PID No. 77889

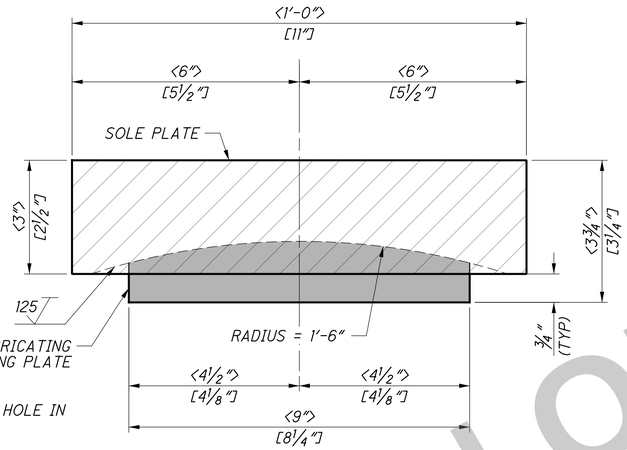
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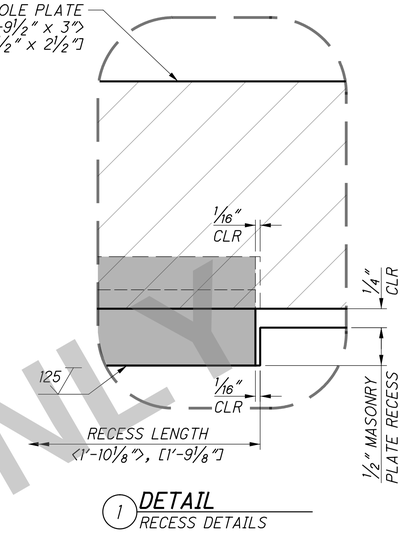


TYPICAL EXPANSION BEARING

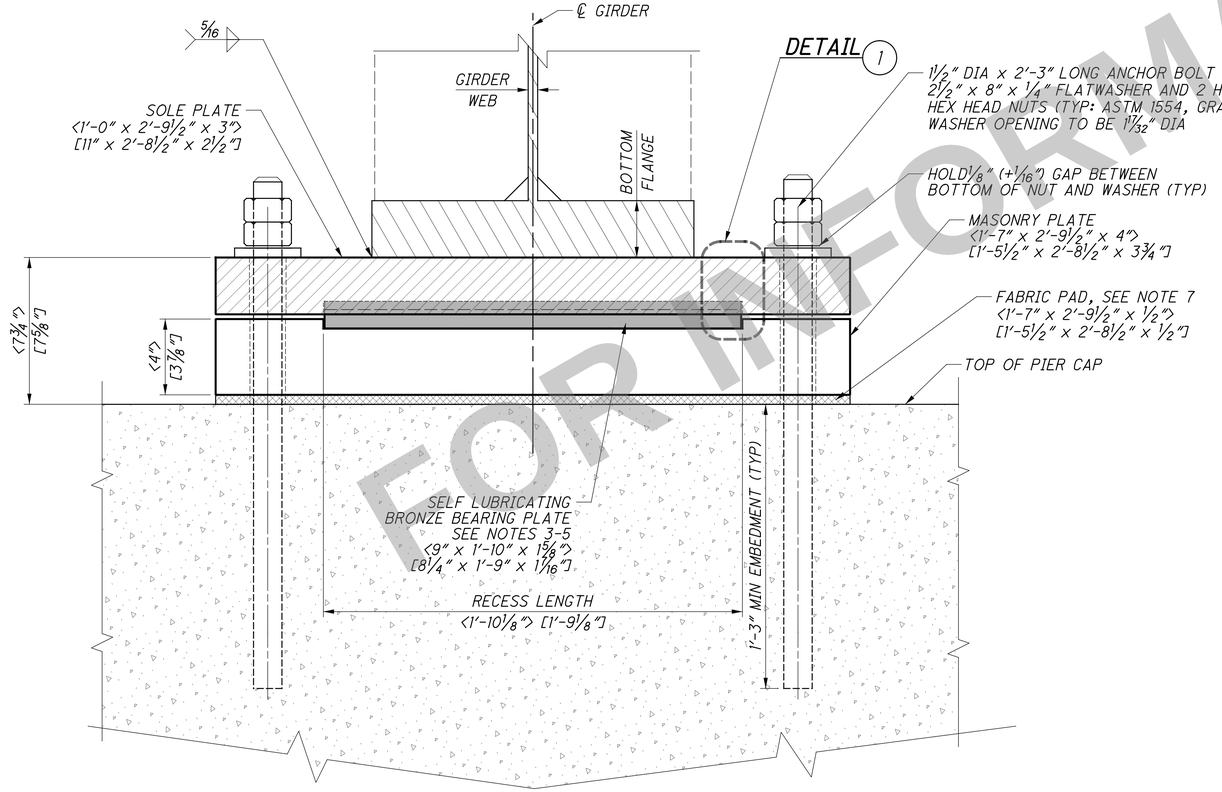
16 REQUIRED (8 SPAN 1, 8 SPAN 2)
(ANCHOR BOLTS NOT SHOWN)



B SECTION
CYLINDRICAL BEARING ASSEMBLY



1 DETAIL
RECESS DETAILS



A ELEVATION

LOAD TABLE		
	SPAN 1	SPAN 2
DEAD LOAD (KIPS)	126.4	104.9
LIVE LOAD + IMPACT (KIPS)	257.6	234.6
SERVICE VERTICAL LOADS (KIPS)	384.0	339.5

NOTES:

1. EXPANSION BEARINGS FOR BOTH SPANS ARE SHOWN ON THIS SHEET. DIMENSIONS NOT IN BRACKETS REFER TO BOTH SPANS DIMENSIONS IN <BRACKET> REFER TO SPAN 1 BEARINGS. DIMENSIONS IN [BRACKET] REFER TO SPAN 2 BEARINGS.
2. BEARINGS SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF AREMA CHAPTER 15 AND THE NORFOLK SOUTHERN PUBLIC PROJECTS MANUAL.
3. BRONZE BEARING PLATES SHALL CONFORM TO THE STANDARD SPECIFICATION FOR BRONZE CASTINGS FOR BRIDGES AND TURNTABLES, ASTM B-22. ALLOY C91100 SHALL BE FURNISHED.
4. SOLID LUBRICANT SHALL CONSIST OF A COMBINATION OF SOLIDS HAVING NON-DETERIORATING CHARACTERISTICS, AS WELL AS LUBRICATING QUALITIES AND SHALL BE CAPABLE OF WITHSTANDING LONG TERM ATMOSPHERIC EXPOSURE, DE-ICING MATERIALS, AND WATER. MOLYBDENUM DISULFIDE AND OTHER INGREDIENTS WHICH MAY PROMOTE ELECTROLYTIC OR CHEMICAL ACTION BETWEEN THE BEARING ELEMENTS SHALL NOT BE USED. SHELLAC, TARS AND ASPHALTS, AND PETROLEUM PRODUCTS SHALL NOT BE USED AS BINDERS.
5. EXPANSION BEARINGS SHALL HAVE MARKINGS MATCHED IN THE ENDS OF THE SOLE PLATES AND BRONZE PLATES TO FACILITATE THEIR POSITIONING FOR THE PROPER TEMPERATURE CORRECTION.
6. EXPOSED SURFACES SHALL BE PAINTED IN ACCORDANCE WITH STRUCTURAL STEEL PAINT SYSTEM, SEE GENERAL NOTES.
7. FABRIC PADS SHALL BE PREFORMED FABRIC BEARING PADS, ½" THICK, AND SHALL BE EITHER:
   - SHOCK PAD STYLE 15175, AS MANUFACTURED BY THE ALERT MANUFACTURING AND SUPPLY COMPANY, CHICAGO, IL; OR
   - FABREEKA PADS, AS MANUFACTURED BY THE FABREEKA PRODUCTS COMPANY, BOSTON, MA; OR
   - SORBTEX PADS AS MANUFACTURED BY VOSS ENGINEERING, INC., CHICAGO, ILLINOIS; OR
   - AN APPROVED EQUAL.
8. ANCHOR RODS SHALL BE IN COMPLIANCE WITH AREMA 15-5.3.7.d AND INSTALLED IN PREFORMED HOLES. AT A MINIMUM, THE ANCHOR RODS SHALL BE SWEDGED OR THREADED THE ENTIRE LENGTH OF EMBEDDMENT. DRILLED HOLES SHALL NOT BE USED. PREFORMED HOLES SHALL BE FILLED WITH NON-SHRINK, NON-METALLIC GROUT AND IS INCIDENTAL TO THE COST OF THE BEARINGS. FOR TYPICAL ANCHOR BLOCK OUT DETAIL, SEE SHEET (1513 2017). ANCHOR BOLTS ARE TO BE SET IN THE PREFORMED HOLES PRIOR TO PLACING BEARINGS AND GIRDERS. CARE SHALL BE TAKEN TO NOT ALLOW GROUT TO ENCROACH INTO THE SLOTTED HOLES OF THE SOLE PLATE.

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
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COLUMBUS, OHIO 43231

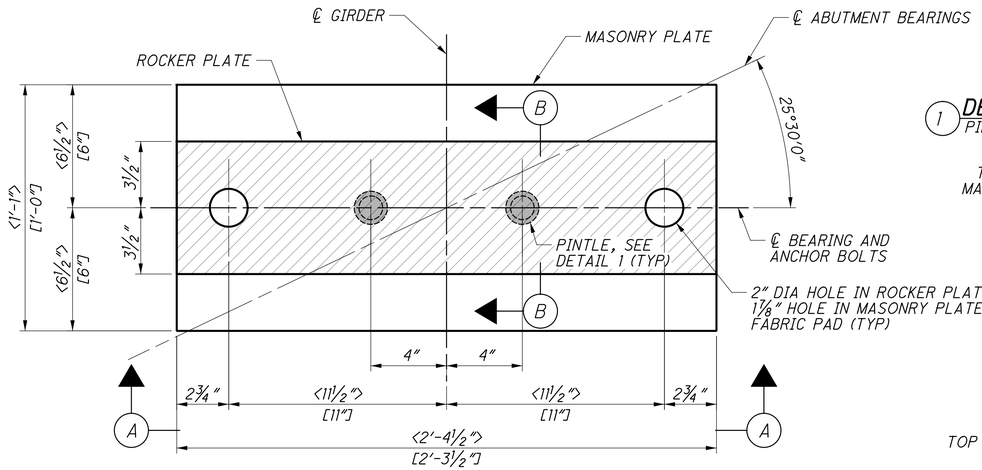
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VDK	VDT	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3110142	
CTM		NSRR BR#: BR0018445	

EXPANSION BEARINGS
BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95; CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

HAM-75-7.85
PID No. 77889

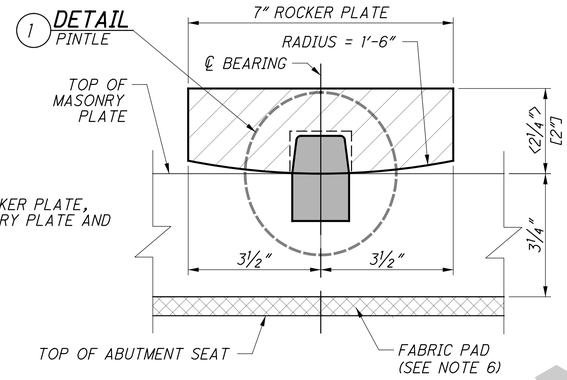
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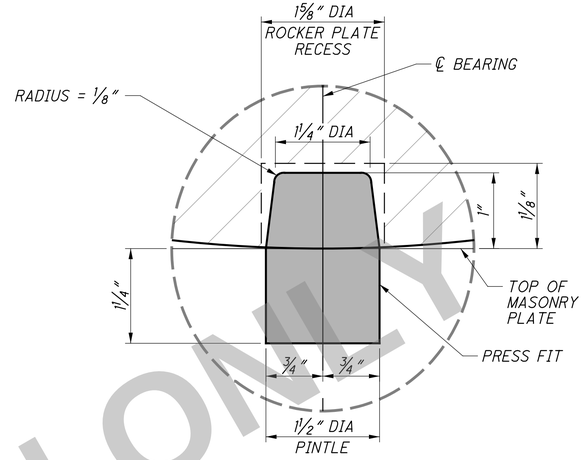


TYPICAL FIXED BEARING

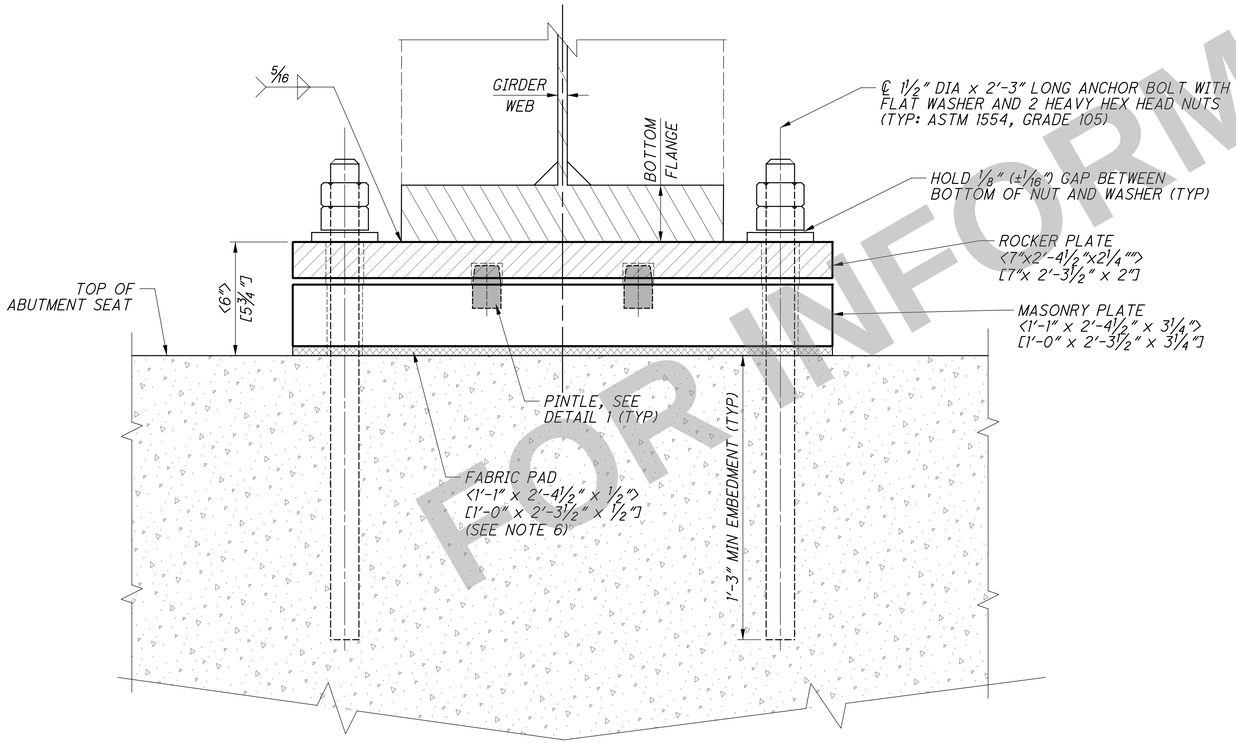
16 REQUIRED (8 SPAN 1, 8 SPAN 2)
(ANCHOR BOLTS NOT SHOWN)



B SECTION
ROCKER PLATE DETAILS



1 PINTLE DETAIL
SEE NOTES 3 AND 4



A ELEVATION

LOAD TABLE		
	SPAN 1	SPAN 2
DEAD LOAD (KIPS)	126.4	104.9
LIVE LOAD + IMPACT (KIPS)	257.6	234.6
SERVICE VERTICAL LOADS (KIPS)	384.0	339.5

NOTES:

1. FIXED BEARINGS FOR BOTH SPANS ARE SHOWN ON THIS SHEET.
   DIMENSIONS NOT IN BRACKETS REFER TO BOTH SPANS
   DIMENSIONS IN <BRACKET> REFER TO SPAN 1 BEARINGS.
   DIMENSIONS IN [BRACKET] REFER TO SPAN 2 BEARINGS.
2. BEARINGS SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF AREMA CHAPTER 15 AND THE NORFOLK SOUTHERN PUBLIC PROJECTS MANUAL.
3. BEARINGS SHALL BE ASSEMBLED COMPLETE IN THE SHOP, CHECKED FOR FIT AND BEARING OF ALL CONTACT SURFACES MARKED FOR ASSEMBLY IN THE FIELD.
4. PROVIDE CARBON STEEL PINTLE STEEL CONFORMING TO THE REQUIREMENTS OF ASTM SPECIFICATION A668, CLASS D.
5. EXPOSED SURFACES SHALL BE PAINTED IN ACCORDANCE WITH STRUCTURAL STEEL PAINT SYSTEM, SEE GENERAL NOTES.
6. FABRIC PADS SHALL BE PROVIDED AS PER NOTE 7 ON SHEET 33/41.
7. ANCHOR RODS SHALL BE IN COMPLIANCE WITH AREMA 15-5.3.7.d AND INSTALLED IN PREFORMED HOLES. AT A MINIMUM, THE ANCHOR RODS SHALL BE SWEDGED OR THREADED THE ENTIRE LENGTH OF EMBEDDMENT. DRILLED HOLES SHALL NOT BE USED.
   FOR TYPICAL ANCHOR BLOCK OUT DETAIL, SEE SHEET 1513/2017.

   PREFORMED HOLES SHALL BE FILLED WITH NON-SHRINK, NON-METALLIC GROUT AND IS INCIDENTAL TO THE COST OF THE BEARINGS. ANCHOR BOLTS ARE TO BE SET IN THE PREFORMED HOLES PRIOR TO PLACING BEARINGS AND GIRDERS.

FOR INFORMATION ONLY

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COLUMBUS, OHIO 43231

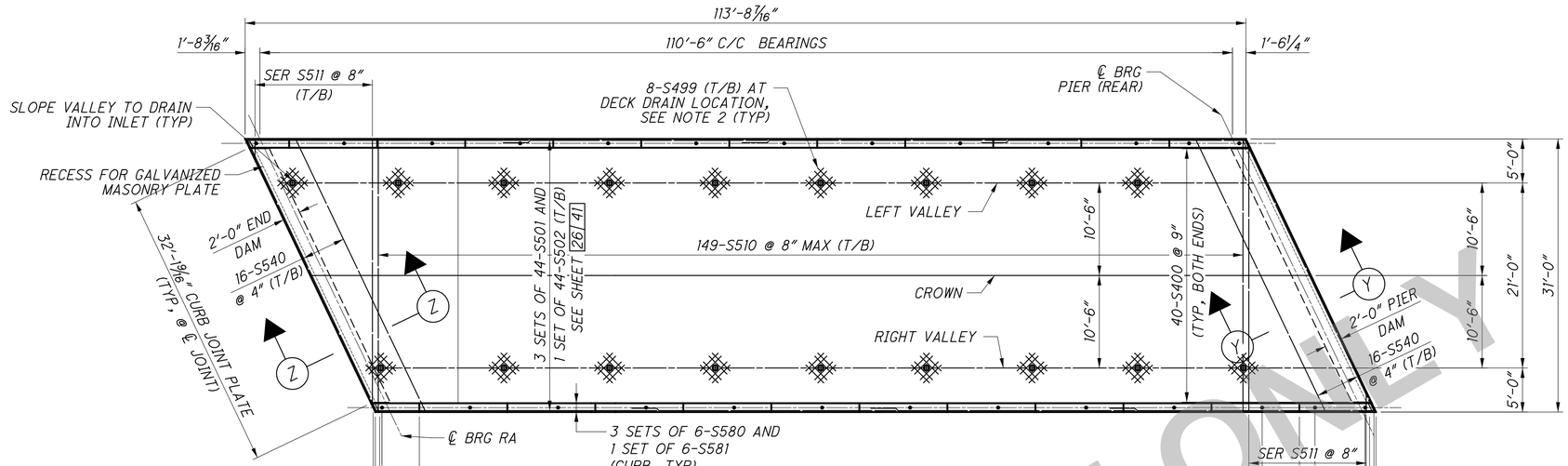
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VDK	VDT	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: 3110142	
CTM		NSRR BR#: BR0018445	

FIXED BEARINGS
BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95; CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

HAM-75-7.85
PID No. 77889

1605/2017

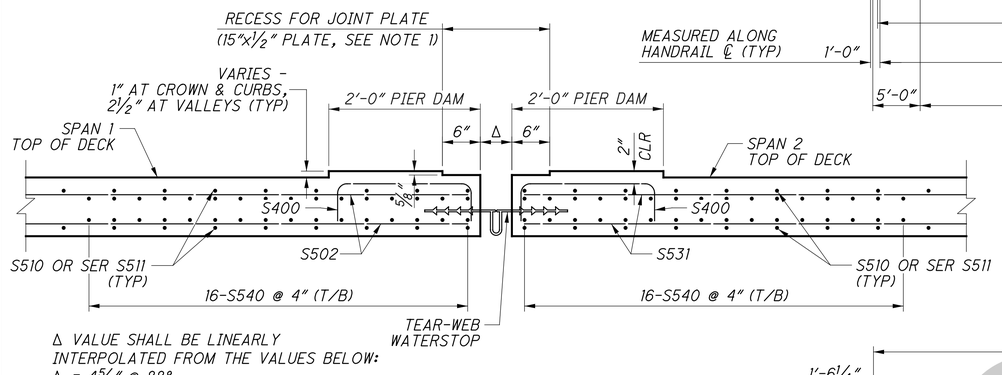
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DECK REINFORCING PLAN
SPAN 1, UPSTATION

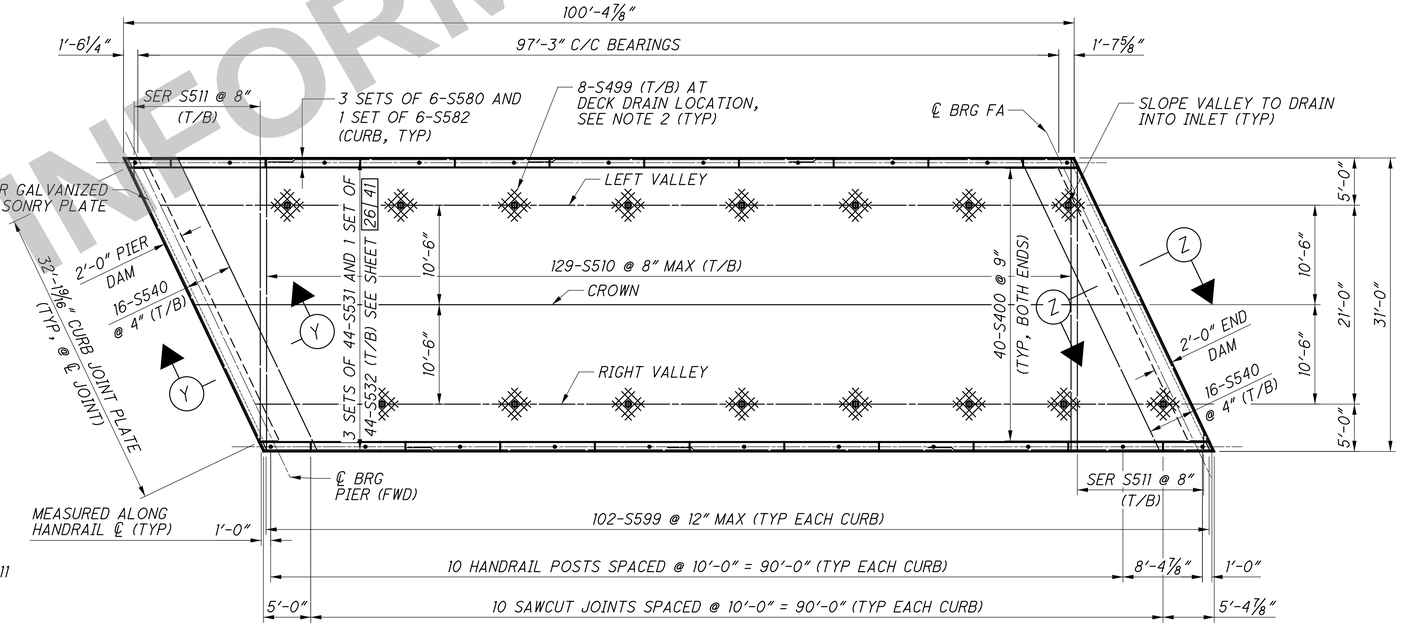
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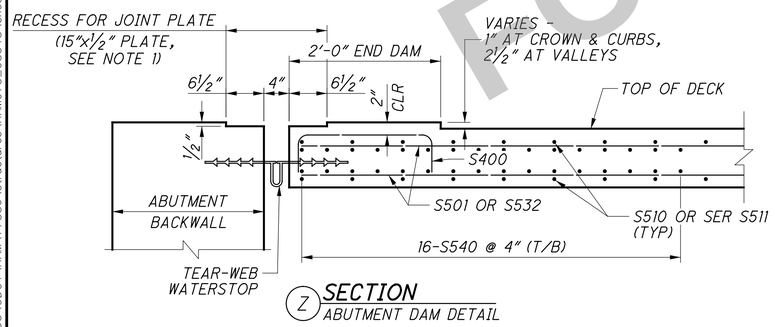
1. FOR DECK JOINT DETAILS, SEE GENERAL RAILROAD DETAILS, SHEET 1514/2017 .
2. FOR CURB REINFORCING DETAILS AND REINFORCING AT DECK DRAINS, SEE GENERAL RAILROAD DETAILS, SHEET 1513/2017 . FOR DRAIN LOCATION AND DETAILS, SEE SHEETS 37 41 AND 38 41 .
3. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 39 41 .



Δ VALUE SHALL BE LINEARLY INTERPOLATED FROM THE VALUES BELOW:
Δ = 4 5/8" @ 88°
Δ = 5" @ 65° (THERMAL NEUTRAL)
Δ = 5 3/8" @ 42°

Y SECTION
PIER DAM DETAIL





Z SECTION
ABUTMENT DAM DETAIL

DECK REINFORCING PLAN
SPAN 2, UPSTATION

FOR INFORMATION ONLY

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CTM		NSRR BR#: BR0018445	

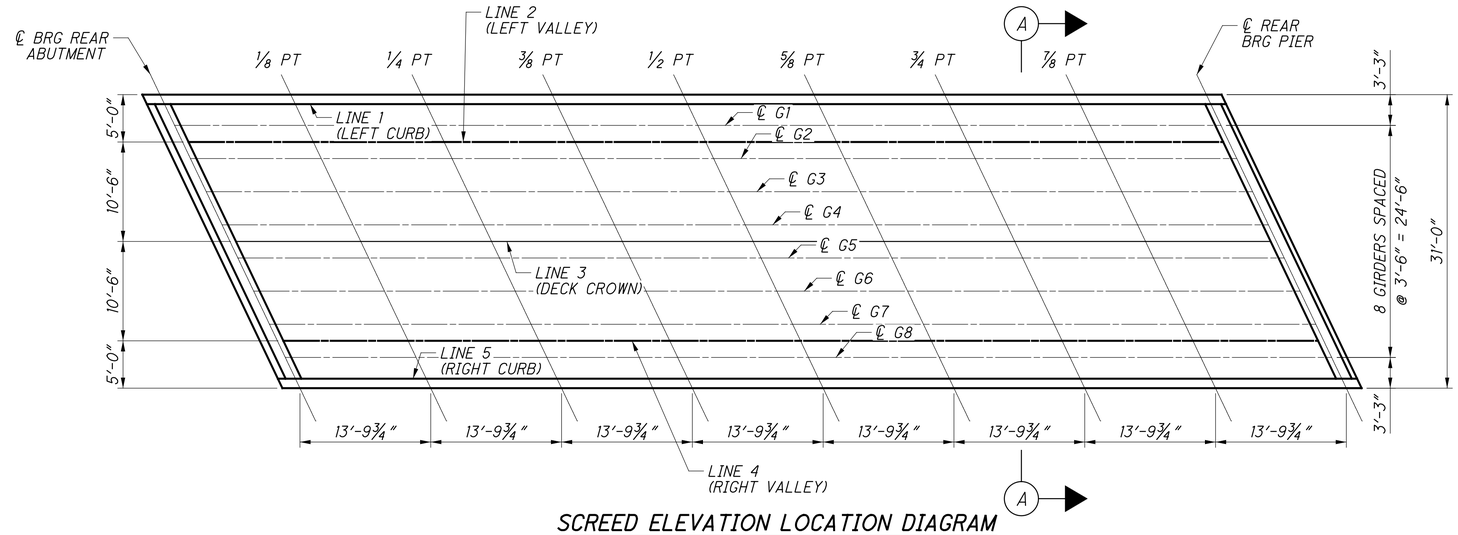
DECK PLAN
BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

HAM-75-7.85
PID No. 77889

35 / 41

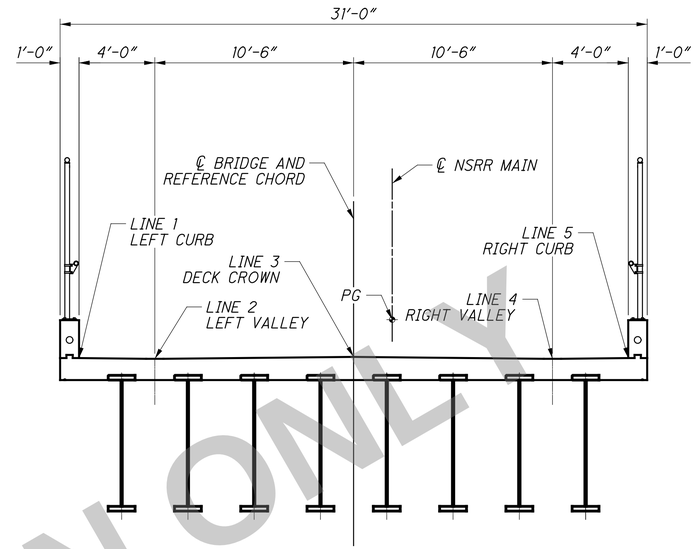
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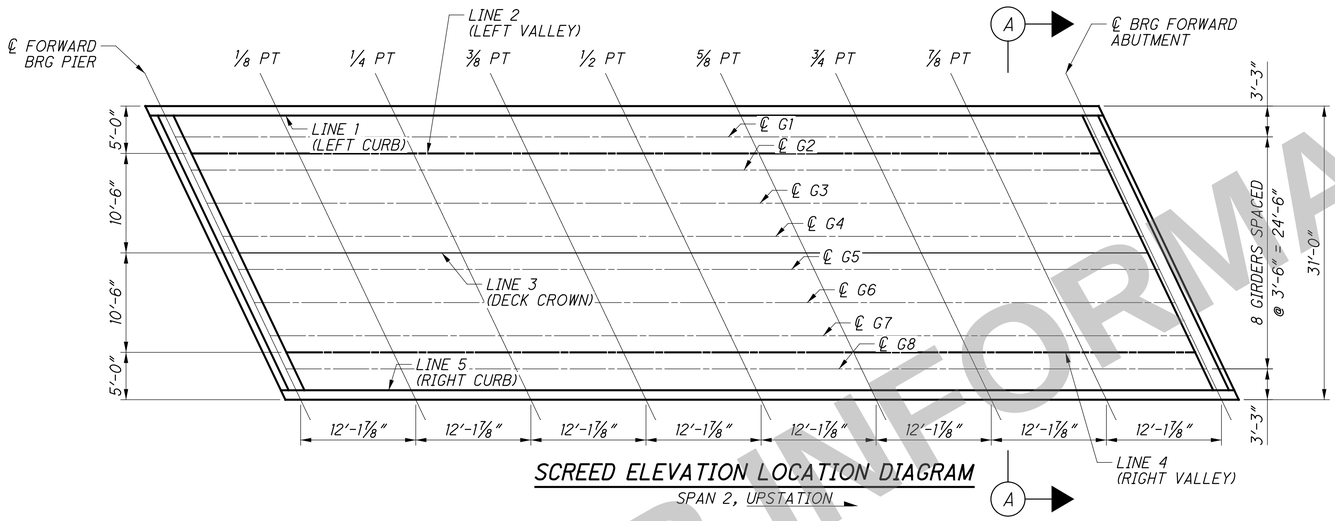
SCREED ELEVATION LOCATION DIAGRAM

SPAN 1, UPSTATION



A TYPICAL TRANSVERSE SECTION

SCREED AND FINAL DECK LINES
(LOOKING UPSTATION)



SCREED ELEVATION LOCATION DIAGRAM

SPAN 2, UPSTATION

NOTES:

1. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS. OTHER ANTICIPATED DEAD LOADS INCLUDE CURB CONCRETE, BALLAST, AND TRACKWORK BUT DOES NOT INCLUDE THE EFFECTS OF A FUTURE BALLAST.
2. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURED. (DOES NOT INCLUDE FUTURE BALLAST)

SCREED ELEVATION TABLE - SPAN 1

LINE NO.	LOCATION	℄ BRG RA	⅛ PT	¼ PT	⅜ PT	½ PT	⅝ PT	¾ PT	⅞ PT	℄ BRG PIER
LINE 1	LEFT CURB LINE	556.00	556.05	556.11	556.15	556.19	556.22	556.24	556.26	556.28
LINE 2	LEFT VALLEY	555.88	555.93	555.98	556.03	556.06	556.09	556.12	556.14	556.15
LINE 3	DECK CROWN	556.00	556.05	556.11	556.15	556.19	556.22	556.24	556.26	556.28
LINE 4	RIGHT VALLEY	555.88	555.93	555.98	556.03	556.06	556.09	556.12	556.14	556.15
LINE 5	RIGHT CURB LINE	556.00	556.05	556.11	556.15	556.19	556.22	556.24	556.26	556.28

SCREED ELEVATION TABLE - SPAN 2

LINE NO.	LOCATION	℄ BRG PIER	⅛ PT	¼ PT	⅜ PT	½ PT	⅝ PT	¾ PT	⅞ PT	℄ BRG FA
LINE 1	LEFT CURB LINE	556.26	556.16	556.05	555.93	555.81	555.69	555.56	555.43	555.29
LINE 2	LEFT VALLEY	556.14	556.03	555.92	555.81	555.69	555.56	555.43	555.30	555.17
LINE 3	DECK CROWN	556.26	556.16	556.05	555.93	555.81	555.69	555.56	555.43	555.29
LINE 4	RIGHT VALLEY	556.14	556.03	555.92	555.81	555.69	555.56	555.43	555.30	555.17
LINE 5	RIGHT CURB LINE	556.26	556.16	556.05	555.93	555.81	555.69	555.56	555.43	555.29

FINAL DECK ELEVATION TABLE - SPAN 1

LINE NO.	LOCATION	℄ BRG RA	⅛ PT	¼ PT	⅜ PT	½ PT	⅝ PT	¾ PT	⅞ PT	℄ BRG PIER
LINE 1	LEFT CURB LINE	556.00	556.04	556.07	556.10	556.14	556.17	556.21	556.24	556.28
LINE 2	LEFT VALLEY	555.88	555.91	555.95	555.98	556.01	556.05	556.08	556.12	556.15
LINE 3	DECK CROWN	556.00	556.04	556.07	556.10	556.14	556.17	556.21	556.24	556.28
LINE 4	RIGHT VALLEY	555.88	555.91	555.95	555.98	556.01	556.05	556.08	556.12	556.15
LINE 5	RIGHT CURB LINE	556.00	556.04	556.07	556.10	556.14	556.17	556.21	556.24	556.28

FINAL DECK ELEVATION TABLE - SPAN 2

LINE NO.	LOCATION	℄ BRG PIER	⅛ PT	¼ PT	⅜ PT	½ PT	⅝ PT	¾ PT	⅞ PT	℄ BRG FA
LINE 1	LEFT CURB LINE	556.26	556.14	556.02	555.90	555.78	555.65	555.53	555.41	555.29
LINE 2	LEFT VALLEY	556.14	556.02	555.89	555.77	555.65	555.53	555.41	555.29	555.17
LINE 3	DECK CROWN	556.26	556.14	556.02	555.90	555.78	555.65	555.53	555.41	555.29
LINE 4	RIGHT VALLEY	556.14	556.02	555.89	555.77	555.65	555.53	555.41	555.29	555.17
LINE 5	RIGHT CURB LINE	556.26	556.14	556.02	555.90	555.78	555.65	555.53	555.41	555.29

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
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COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
VDT	VDT	CTV	12-15-21
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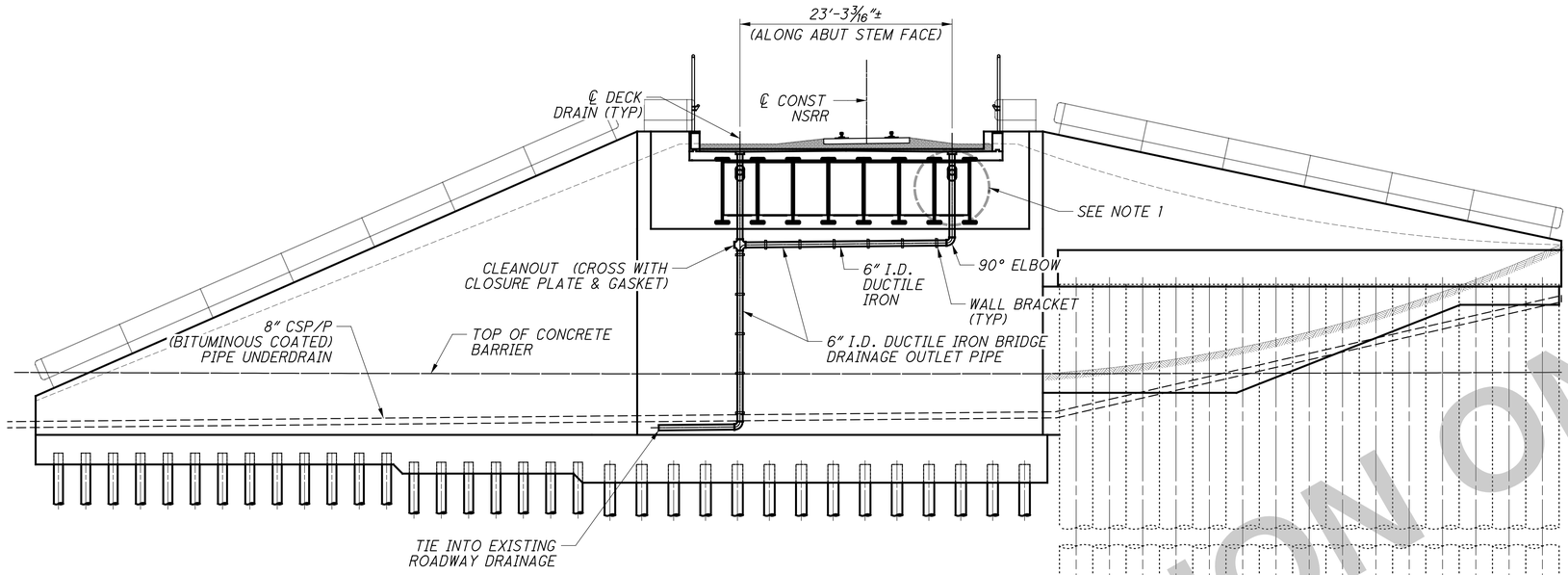
FINAL DECK/SCREED ELEVATIONS

BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95; CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

HAM-75-7.85
PID No. 77889

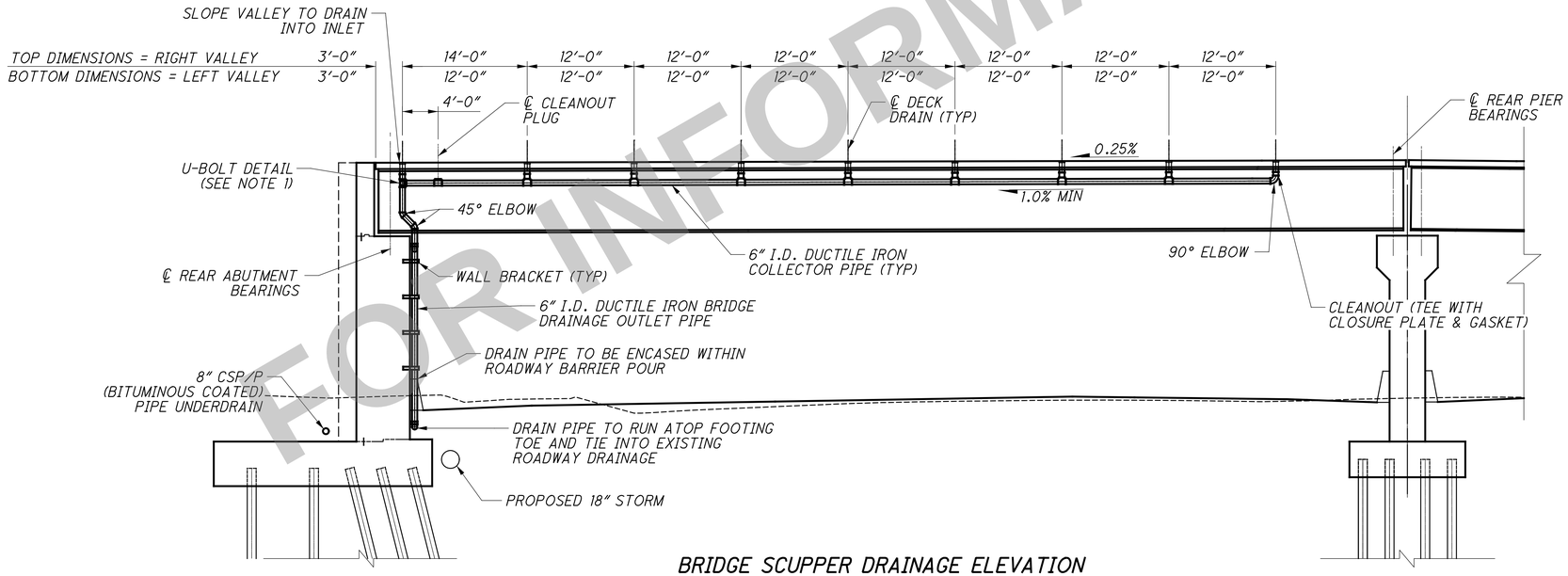
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REAR ABUTMENT SCUPPER DRAINAGE SECTION

SPAN 1



BRIDGE SCUPPER DRAINAGE ELEVATION

SPAN 1

NOTES:

1. FOR TYPICAL NORFOLK SOUTHERN AND PROJECT DRAINAGE DETAILS, SEE SHEET 1512/2017.

FOR INFORMATION ONLY

DESIGN AGENCY
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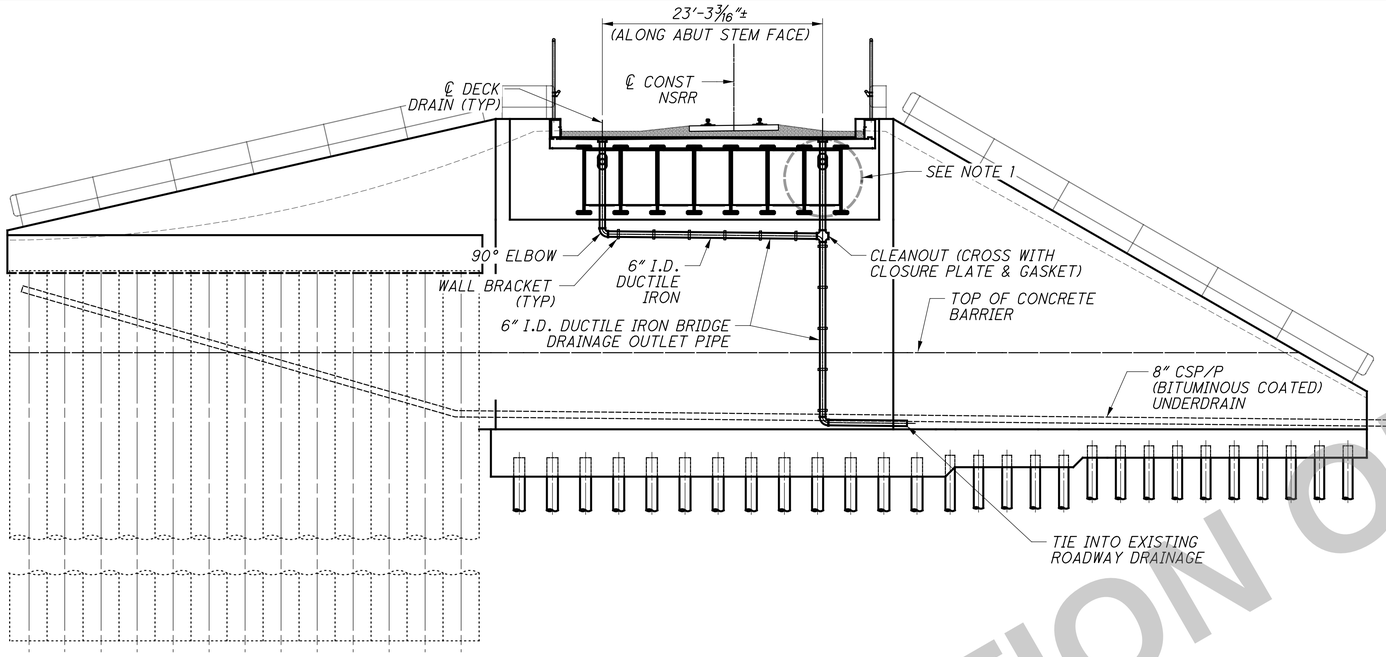
SPAN 1 DRAINAGE DETAILS

BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95; CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

HAM-75-7.85
PID No. 77889

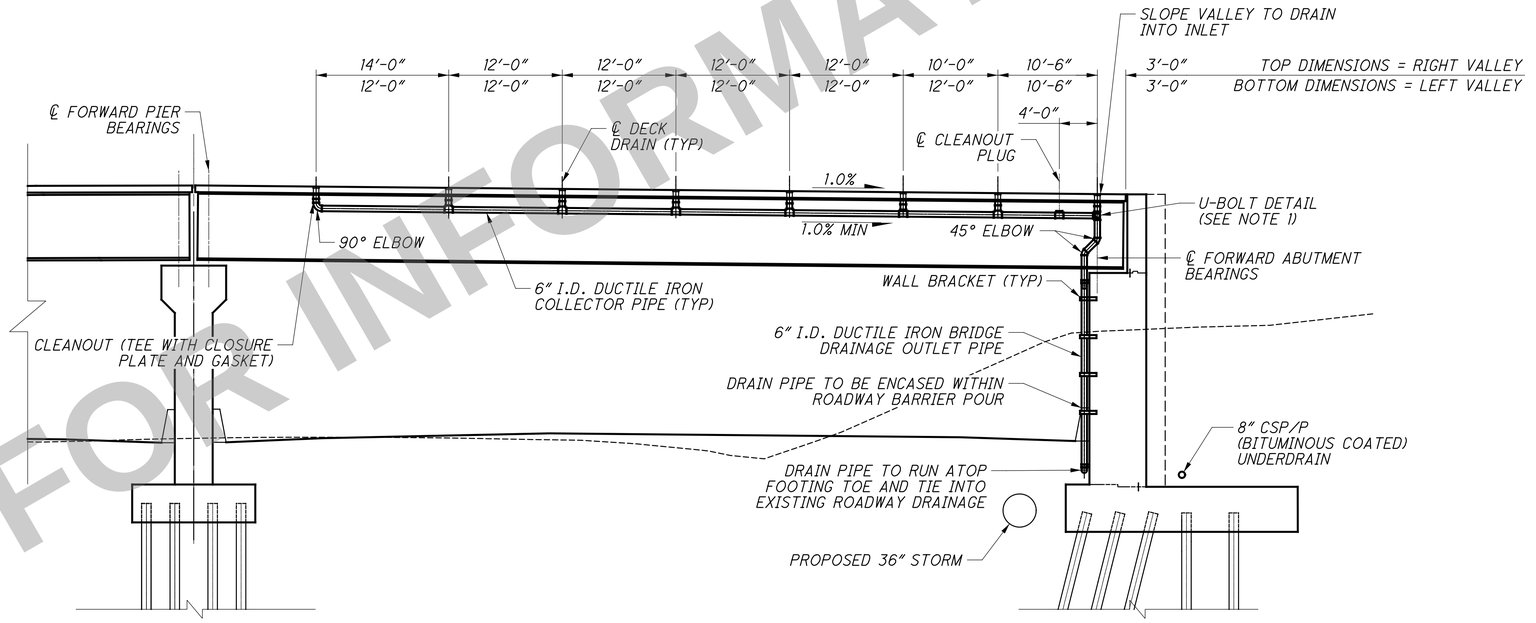
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FORWARD ABUTMENT SCUPPER DRAINAGE SECTION

SPAN 2



BRIDGE SCUPPER DRAINAGE ELEVATION

SPAN 2

NOTES:

1. FOR TYPICAL NORFOLK SOUTHERN AND PROJECT DRAINAGE DETAILS, SEE SHEET (1512/2017).

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ENGINEERS & ARCHITECTS, P.C.
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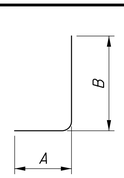
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SPAN 2 DRAINAGE DETAILS
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NORFOLK SOUTHERN RAILROAD OVER I.R. 75

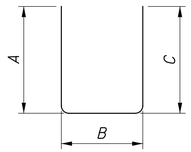
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PID No. 77889

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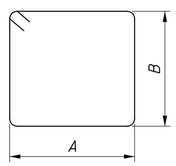
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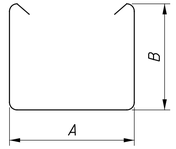
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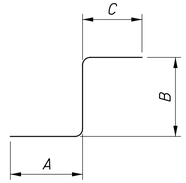
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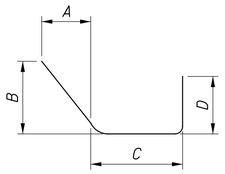
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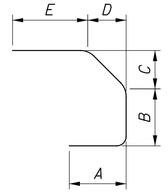
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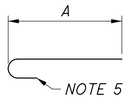
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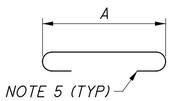
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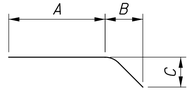
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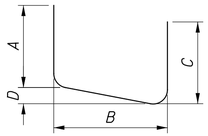
TYPE-16



TYPE-17



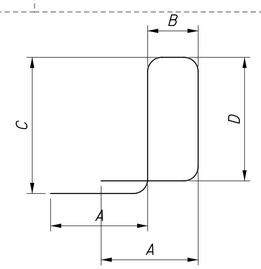
TYPE-19



TYPE-29

AREMA CLASS C LAP SPLICE LENGTHS (NOTE 6):

#4 BAR (Ld=1'-6"): ALL = 2'-7"
#5 BAR (Ld=1'-11"): DECK = 3'-3", OTHERS = 3'-8"
#6 BAR (Ld=2'-3"): DECK = 3'-10", OTHERS = 4'-5"
#7 BAR (Ld=2'-11"): ALL = 5'-6"
#8 BAR (Ld=3'-9"): TOP/ FOOTING = 7'-3", OTHERS = 6'-6"
#9 BAR (Ld=4'-9"): TOP/ FOOTING = 9'-2", OTHERS = 8'-1"
#10 BAR (Ld=6'-1"): TOP/ FOOTING = 11'-8", OTHERS = 10'-3"
#11 BAR (Ld=7'-5"): TOP/ FOOTING = 14'-4", OTHERS = 12'-7"
#14 BAR: MECHANICALLY SPLICE



TYPE-34

REINFORCING BEND DIAGRAMS AND LAP SPLICE LENGTHS

REINFORCING NOTES

1. ALL REINFORCING BARS SHALL BE EPOXY COATED. PAYMENT FOR REINFORCING, INCLUDING MECHANICAL CONNECTORS, SHALL BE MADE WITH ITEM 509 - EPOXY COATED REINFORCING STEEL
2. MAX REINFORCING SPACING IS 12" UNLESS NOTED OTHERWISE. REINFORCING SPACINGS GIVEN ARE CONSIDERED "MAX" UNLESS NOTED OTHERWISE.
3. "STR." IN THE TYPE COLUMN INDICATES STRAIGHT BARS.
4. "SER OF" DENOTES SERIES OF BARS, E.G "X" SER OF "Y" = "X" SERIES OF "Y" BARS PER SERIES.
5. REFER TO C.M.S SECTION 509.05 FOR STANDARD BEND DIMENSIONS.
6. TWO BARS OF EQUAL SIZE SHALL BE LAPPED THE DISTANCE OF THE APPLICABLE AREMA CLASS C LAP SPLICE LENGTH. WHEN BARS OF UNEQUAL SIZE ARE LAPPED, THE PROVIDED LAP SHALL BE THE MAXIMUM OF EITHER THE "Ld" VALUE OF THE LARGER BAR OR THE APPLICABLE AREMA CLASS C LAP SPLICE LENGTH OF THE SMALLER BAR.

MARK	NUMBER REAR ABUT	NUMBER FWD ABUT	NUMBER TOTAL	LENGTH	WEIGHT RA	WEIGHT FA	WEIGHT TOTAL	TYPE	DIMENSIONS A	B	C	INC
ABUTMENT												
A501	68		68	30'-0"	2,128		2,128	STR.				
A502	68		68	17'-10"	1,265		1,265	STR.				
A503	3		3	5'-6"	17		17	STR.				
A504	3		3	6'-6"	20		20	STR.				
A505	3		3	6'-1"	19		19	STR.				
A506	3		3	5'-2"	16		16	STR.				
A507	32		32	12'-8"	423		423	1	1'-0"	11'-9"		
A508	32		32	8'-1"	270		270	1	1'-0"	7'-2"		
A520	42		42	22'-3"	975		975	STR.				
A521	33		33	11'-5"	393		393	STR.				
A522	4		4	32'-11"	137		137	STR.				
A523	20		20	13'-4"	278		278	STR.				
A524	18		18	31'-11"	599		599	1	1'-0"	31'-0"		
	1		1	2'-0"								
A525	SER OF		SER OF	to	52		52	STR.				8"
	10		10	8'-0"								
	1		1	2'-6"								
A526	SER OF		SER OF	to	60		60	STR.				1'-4"
	8		8	11'-9"								
A529	42	40	82	11'-6"	504	480	984	2	3'-0"	5'-8"	3'-0"	
A540		68	68	30'-0"		2,128	2,128	STR.				
A541		68	68	15'-4"		1,087	1,087	STR.				
A547		32	32	4'-9"		159	159	1	1'-0"	3'-10"		
A548		32	32	11'-9"		392	392	1	1'-0"	10'-10"		
A550		3	3	5'-6"		17	17	STR.				
A551		3	3	6'-6"		20	20	STR.				
A552		3	3	3'-8"		11	11	STR.				
A553		3	3	2'-8"		8	8	STR.				
A559	40	40	80	4'-11"	205	205	410	1	1'-0"	4'-0"		
A560		39	39	21'-9"		885	885	STR.				
A564		14	14	30'-6"		445	445	STR.				
		1	1	2'-0"								
A565		SER OF	SER OF	to		27	27	STR.				2 3/4"
		9	9	3'-10"								
		1	1	5'-0"								
A566		SER OF	SER OF	to		33	33	STR.				1'-11 1/2"
		4	4	10'-10"								
A570		33	33	11'-3"		387	387	STR.				
A571		18	18	13'-4"		250	250	STR.				
A572		4	4	32'-4"		135	135	STR.				
A620	69		69	21'-4"	2,211		2,211	STR.				
A621	26		26	23'-3"	908		908	STR.				
A639	6		6	13'-4"	120		120	STR.				
A669		6	6	13'-4"		120	120	STR.				
A670		64	64	20'-10"		2,003	2,003	STR.				
A672		21	21	22'-9"		718	718	STR.				
ABUTMENT SUB-TOTAL					10,600	9,510	20,110					

FOR INFORMATION ONLY

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DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2600 CORPORATE EXCHANGE DRIVE SUITE 230
COLUMBUS, OHIO 43231

DESIGNED SNH | DRAWN EFD | REVIEWED CTV | DATE 12-15-21
CHECKED VDT | REVISED | ODOT SFN: 3110142 | NSRR BR#: BR0018445

REINFORCING STEEL LIST 1 OF 3
BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

HAM-75-7.85
PID No. 77889

39 / 41

1610
2017

MARK	NUMBER REAR ABUT	NUMBER FWD ABUT	NUMBER TOTAL	LENGTH	WEIGHT RA	WEIGHT FA	WEIGHT TOTAL	TYPE	DIMENSIONS A	B	C	INC
WINGWALL												
	1		1	21'-3"								
W501	SER OF		SER OF	to	704		704	STR.				5 3/4"
	25		25	32'-5"								
	1		1	11'-7"								
W502	SER OF		SER OF	to	399		399	STR.				5 1/2"
	23		23	21'-3"								
W520	46		46	23'-8"	1,135		1,135	STR.				
	2		2	3'-7"								
W521	SER OF		SER OF	to	239		239	STR.				2'-3 1/2"
	9		9	21'-9"								
W522	2		2	25'-10"	54		54	STR.				
W523	26		26	21'-8"	588		588	STR.				
	2		2	2'-4"								
W524	SER OF		SER OF	to	216		216	STR.				2'-3 1/2"
	9		9	20'-6"								
W525	2		2	23'-8"	49		49	STR.				
W526	8		8	19'-8"	164		164	STR.				
	2		2	3'-0"								
W527	SER OF		SER OF	to	184		184	STR.				2'-3 1/2"
	8		8	19'-0"								
W528	2		2	21'-6"	45		45	STR.				
W529	14		14	29'-8"	433		433	STR.				
	2		2	3'-0"								
W530	SER OF		SER OF	to	186		186	STR.				4'-9"
	6		6	26'-8"								
W531	2		2	30'-4"	63		63	STR.				
	2		2	2'-0"								
W532	SER OF		SER OF	to	208		208	STR.				4'-1"
	7		7	26'-5"								
W533	2		2	27'-0"	56		56	STR.				
		1	1	21'-3"								
W540		SER OF	SER OF	to		521	521	STR.				6 3/4"
		19	19	31'-3"								
		1	1	11'-2"								
W541		SER OF	SER OF	to		322	322	STR.				6 3/4"
		19	19	21'-3"								
W560		72	72	17'-2"		1,289	1,289	STR.				
		2	2	2'-5"								
W561		SER OF	SER OF	to		177	177	STR.				1'-9"
		9	9	16'-4"								
		2	2	2'-4"								
W562		SER OF	SER OF	to		175	175	STR.				1'-9"
		9	9	16'-2"								
W563		8	8	14'-8"		122	122	STR.				
		2	2	2'-2"								
W564		SER OF	SER OF	to		138	138	STR.				1'-9"
		8	8	14'-4"								
W565		4	4	19'-10"		83	83	STR.				
W567		2	2	16'-11"		35	35	STR.				
		2	2	4'-3"								
W568		SER OF	SER OF	to		133	133	STR.				4'-3"
		5	5	21'-2"								
W569		12	12	29'-8"		371	371	STR.				
TABLE SUB-TOTAL					4,723	3,366	8,089					

MARK	NUMBER REAR ABUT	NUMBER FWD ABUT	NUMBER TOTAL	LENGTH	WEIGHT RA	WEIGHT FA	WEIGHT TOTAL	TYPE	DIMENSIONS A	B	C	INC
WINGWALL (CONTINUED)												
		2	2	3'-11"								
W570		SER OF	SER OF	to		187	187	STR.				4'-4 3/4"
		6	6	25'-10"								
W571		2	2	21'-8"		45	45	STR.				
W572		2	2	30'-5"		63	63	STR.				
W590	58	49	107	10'-9"	650	550	1,200	2	3'-8"	3'-8"	3'-8"	
W595	26		26	30'-1"	816		816	STR.				
W596		26	26	27'-6"		746	746	STR.				
	1		1	6'-10"								
W701	SER OF		SER OF	to	617		617	STR.				5 1/4"
	25		25	17'-4"								
	1		1	7'-2"								
W702	SER OF		SER OF	to	574		574	STR.				5 1/2"
	23		23	16'-10"								
	1		1	6'-7"								
W740	SER OF		SER OF	to	452		452	STR.				6 3/4"
	19		19	16'-8"								
	1		1	6'-6"								
W741	SER OF		SER OF	to	449		449	STR.				6 3/4"
	19		19	16'-7"								
TABLE SUB-TOTAL					3,558	1,591	5,149					
WINGWALL SUB-TOTAL					8,281	4,957	13,238					

MARK	NUMBER GEN/ PIER	LENGTH	GEN		A	B	C	D	E	R	INC
				PIER							
P530	38	34'-2"	1,354	STR.							
P550	70	13'-7"	992	14	5'-3"	2'-8"	1'-5"	1'-5"	3'-10"		
P560	10	34'-2"	356	STR.							
P710	108	16'-6"	3,642	STR.							
P860	6	34'-2"	547	STR.							
PIER SUB-TOTAL			6,891								
SUPERSTRUCTURE											
S400	160	2'-5"	258	2	5"	1'-8"	5"				
S499	544	3'-0"	1,090	STR.							
S501	264	30'-0"	8,261	STR.							
S502	88	33'-6"	3,075	STR.							
S510	556	30'-8"	17,784	STR.							
	8	2'-0"									
S511	SER OF	to	2,833	STR.							1'-5"
	21	29'-11"									
S531	264	30'-0"	8,261	STR.							
S532	88	20'-2"	1,851	STR.							
S540	128	34'-0"	4,539	STR.							
S580	72	30'-0"	2,253	STR.							
S581	12	33'-6"	419	STR.							
S582	12	20'-2"	252	STR.							
S599	434	6'-6"	2,942	34	1'-0"	2'-0"	8"	2'-3"	1'-0"		
SUPERSTR. SUB-TOTAL			53,818								

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DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE SUITE 230
COLUMBUS, OHIO 43231

DESIGNED SNH | DRAWN EFD | CHECKED VDT | REVIEWED CTV | DATE 12-15-21

ODOT SFN: 3110142
NSRR BR#: BR0018445

REVISED

REINFORCING STEEL LIST 2 OF 3
BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95; CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

HAM-75-7.85
PID No. 77889

1611
2017

MARK	NUMBER				LENGTH	WEIGHT				TYPE	DIMENSIONS			
	REAR ABUT	FWD ABUT	GEN/ PIER	TOTAL		RA	FA	GEN	TOTAL		A	B	C	INC
FOOTING														
F400	174			174	6'-6"	756			756	3	1'-6"	1'-6"		
F420	84			84	5'-11"	332			332	3	1'-4"	1'-4"		
F440		165		165	6'-6"		716		716	3	1'-6"	1'-6"		
F460		62		62	5'-11"		245		245	3	1'-4"	1'-4"		
F499			156	156	5'-11"			617	617	3	1'-4"	1'-4"		
F500	53			53	30'-0"	1,658			1,658	STR.				
F501	53			53	23'-4"	1,290			1,290	STR.				
F505	58			58	24'-8"	1,492			1,492	STR.				
F510	27			27	30'-0"	845			845	STR.				
F511	4			4	26'-0"	108			108	STR.				
F512	23			23	19'-9"	474			474	STR.				
F513	31			31	25'-3"	816			816	19	20'-3"	3'-6"	3'-6"	
F514	4			4	17'-3"	72			72	STR.				
F515	17			17	10'-1"	179			179	19	3'-10"	4'-6"	4'-6"	
	1			1	8'-5"									
F520	SER OF			SER OF	to	200			200	STR.				1 1/2"
	20			20	10'-8"									
	1			1	10'-10"									
F521	SER OF			SER OF	to	265			265	STR.				1 1/2"
	21			21	13'-4"									
F531	64			64	9'-11"	662			662	1	1'-0"	9'-0"		
F533	25			25	10'-2"	265			265	1	1'-0"	9'-3"		
F534	23			23	9'-2"	220			220	1	1'-0"	8'-3"		
	1			1	8'-0"							7'-1"		
F535	SER OF			SER OF	to	271			271	1	1'-0"	to		5 1/4"
	21			21	16'-9"							15'-10"		
	1			1	10'-4"									
F536	SER OF			SER OF	to	445			445	STR.				2 3/4"
	31			31	16'-8"									
	1			1	4'-8"									
F537	SER OF			SER OF	to	218			218	STR.				2 1/2"
	28			28	10'-3"									
F540		51		51	30'-0"		1,596		1,596	STR.				
F541		51		51	20'-4"		1,082		1,082	STR.				
F545		55		55	23'-8"		1,358		1,358	STR.				
F550		18		18	33'-0"		620		620	STR.				
		2		2	6'-3"									
F551		SER OF		SER OF	to		188		188	STR.				5'-10 1/2"
		5		5	29'-9"									
F552		14		14	15'-2"		221		221	STR.				
F553		14		14	18'-8"		273		273	19	14'-1"	3'-3"	3'-3"	
F554		2		2	12'-6"		26		26	STR.				
F555		2		2	6'-8"		14		14	STR.				
F556		2		2	33'-0"		69		69	STR.				
F557		2		2	14'-6"		30		30	STR.				
		1		1	8'-5"									
F560		SER OF		SER OF	to		150		150	STR.				2"
		15		15	10'-8"									
		1		1	10'-11"									
F561		SER OF		SER OF	to		232		232	STR.				2"
		18		18	13'-8"									
F570		57		57	9'-8"		575		575	1	1'-0"	8'-9"		
		1		1	7'-6"							6'-7"		
F575		SER OF		SER OF	to		198		198	1	1'-0"	to		7"
		16		16	16'-3"							15'-2"		
F576		19		19	8'-11"		177		177	1	1'-0"	8'-0"		
F577		19		19	9'-11"		197		197	1	1'-0"	9'-0"		
		1		1	9'-0"									
F578		SER OF		SER OF	to		402		402	STR.				2 3/4"
		31		31	15'-10"									
		1		1	4'-1"									
F579		SER OF		SER OF	to		158		158	STR.				2 3/4"
		23		23	8'-11"									
TABLE SUB-TOTAL						10,568	8,527	617	19,712					

MARK	NUMBER				LENGTH	WEIGHT				TYPE	DIMENSIONS			
	REAR ABUT	FWD ABUT	GEN/ PIER	TOTAL		RA	FA	GEN	TOTAL		A	B	C	INC
FOOTING (CONTINUED)														
F580			28	28	38'-8"			1,129	1,129	STR.				
F590			53	53	12'-8"			700	700	STR.				
	1			1	13'-5"									
F620	SER OF			SER OF	to	511			511	STR.				1 1/2"
	23			23	16'-2"									
F650		16		16	10'-0"		240		240	19	4'-0"	4'-3"	4'-3"	
		1		1	13'-9"									
F662		SER OF		SER OF	to		360		360	STR.				2"
		16		16	16'-1"									
	1			1	8'-5"									
F720	SER OF			SER OF	to	393			393	STR.				1 1/2"
	20			20	10'-8"									
	1			1	10'-10"									
F721	SER OF			SER OF	to	1,013			1,013	STR.				3/4"
	41			41	13'-4"									
	1			1	7'-11"							7'-1"		
F731	SER OF			SER OF	to	528			528	1	1'-0"	to		5 1/4"
	21			21	16'-8"							15'-10"		
	1			1	10'-4"									
F732	SER OF			SER OF	to	1,756			1,756	STR.				1 1/2"
	61			61	16'-8"									
	1			1	4'-8"									
F733	SER OF			SER OF	to	841			841	STR.				1 1/4"
	55			55	10'-3"									
		1		1	8'-5"									
F760		SER OF		SER OF	to		294		294	STR.				2"
		15		15	10'-8"									
		1		1	10'-11"									
F761		SER OF		SER OF	to		854		854	STR.				1"
		34		34	13'-8"									
		1		1	7'-5"							6'-7"		
F775		SER OF		SER OF	to		386		386	1	1'-0"	to		7"
		16		16	16'-2"							15'-2"		
		1		1	9'-0"									
F778		SER OF		SER OF	to		1,590		1,590	STR.				1 1/2"
		61		61	15'-10"									
		1		1	4'-1"									
F779		SER OF		SER OF	to		590		590	STR.				1 1/2"
		43		43	8'-11"									
F890			52	52	12'-8"			1,759	1,759	STR.				
F931	90			90	19'-9"	6,044			6,044	1	1'-0"	19'-0"		
F932	45			45	15'-0"	2,295			2,295	1	1'-0"	14'-3"		
F970		85		85	19'-6"		5,636		5,636	1	1'-0"	18'-9"		
F975		36		36	15'-0"		1,836		1,836	1	1'-0"	14'-3"		
	1			1	13'-5"									
F1020	SER OF			SER OF	to	2,589			2,589	STR.				1"
	40			40	16'-2"									
		1		1	13'-9"									
F1062		SER OF		SER OF	to		1,931		1,931	STR.				1"
		30		30	16'-1"									
F1095			108	108	16'-5"			7,629	7,629	1	1'-0"	15'-9"		
F1105	152			152	24'-8"	19,920			19,920	STR.				
F1131	49			49	25'-11"	6,747			6,747	1	1'-0"	25'-3"		
F1145		143		143	23'-8"		17,981		17,981	STR.				
F1175		36		36	25'-11"		4,957		4,957	1	1'-0"	25'-3"		
TABLE SUB-TOTAL						42,637	36,655	11,217	90,509					
FOOTING SUB-TOTAL						53,205	45,182	11,834	110,221					
TOTAL ALL REINFORCING						72,086	59,649	72,543	204,278					

FOR INFORMATION ONLY

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DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED SNH | DRAWN EFD | CHECKED VDT | REVIEWED CTV | DATE 12-15-21

ODOT SFN: 3110142

NSRR BR#: BR0018445

REVISED

REINFORCING STEEL LIST 3 OF 3

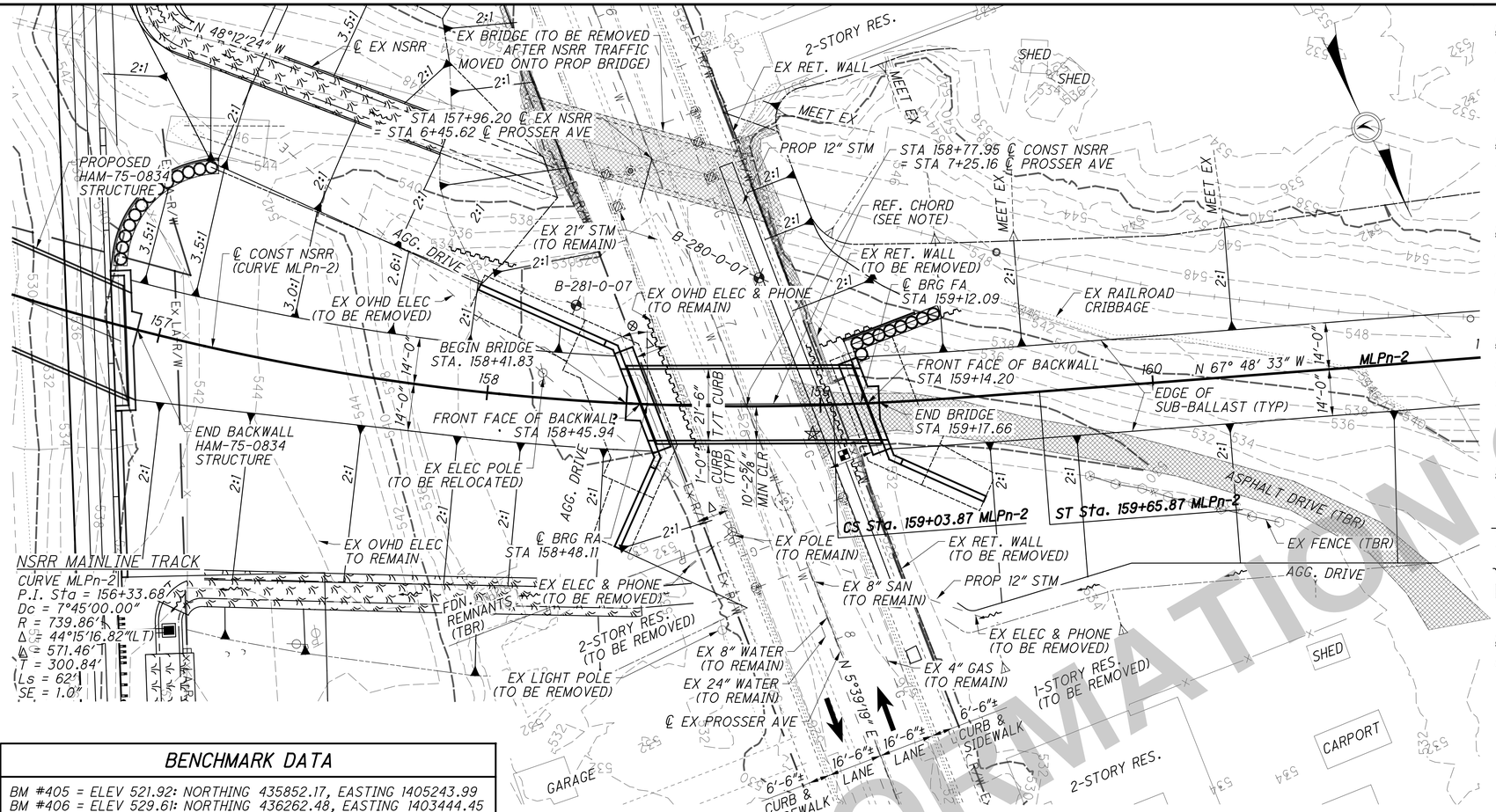
BRIDGE NO. HAM-75-0834 (NSRR BRIDGE CT-0.95: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER I.R. 75

HAM-75-7.85

PID No. 77889

41 / 41

1612
2017



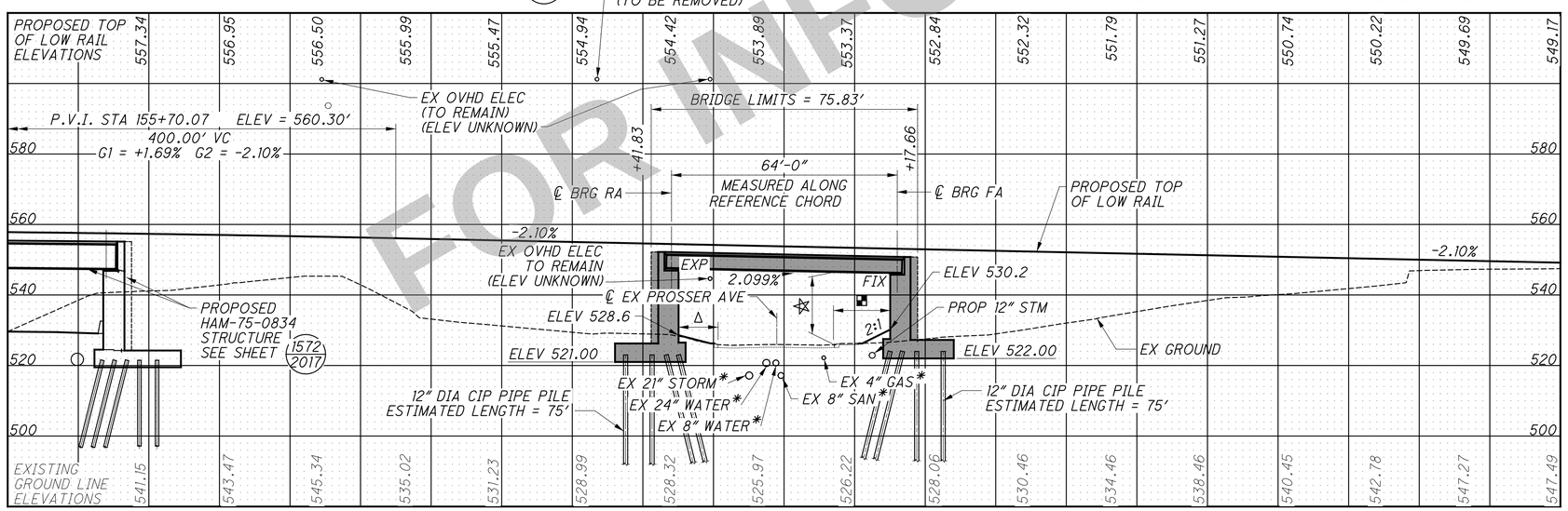
PLAN

BENCHMARK DATA

BM #405 = ELEV 521.92: NORTHING 435852.17, EASTING 1405243.99
BM #406 = ELEV 529.61: NORTHING 436262.48, EASTING 1403444.45

NORTHING AND EASTING COORDINATES ARE GROUND COORDINATES.
FOR ADDITIONAL BENCHMARK INFORMATION, SEE ROADWAY PLAN SHEETS (13/2017).

⊗ = 20° 46' 34" (TYP, MEASURED TO REFERENCE CHORD)
Δ = 10'-0"± (MINIMUM HORIZONTAL CLEARANCE)
▪ = 14'-7"± (MINIMUM HORIZONTAL CLEARANCE)



PROFILE ALONG ℄ CONST PROPOSED NS RAILROAD MAIN

* EXISTING UTILITIES TO REMAIN

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. FOR ADDITIONAL RAIL INFORMATION, SEE TRACK PLANS, SHEET (1712/2017).

MILEPOST NOTE:

1. THE CENTER OF BRIDGE ALONG ℄ SURVEY AND CONSTRUCTION OF NS RAILROAD IS STA 158+77.95. THE DISTANCE TO NS RAILROAD MILEPOST CT-1.0 IS 581 FT. (0.11 MILES) EAST.

PROSSER AVE TRAFFIC DATA

2010 ADT = 2000 2010 ADTT = 2000
2035 ADT = 2000 2030 ADTT = 2000
DIRECTIONAL DISTRIBUTION = N/A

NORFOLK SOUTHERN RAIL TRAFFIC DATA

5 FREIGHT TRAINS PER DAY
0 PASSENGER TRAINS PER DAY
10 MPH OPERATING SPEED
SOURCE: NORFOLK SOUTHERN RAILROAD

LEGEND

SEE SHEET (1506/2017) FOR PROJECT ABBREVIATIONS

- ⌖ - SOIL BORING LOCATION
- ☆ - POINT OF MINIMUM VERTICAL CLEARANCE = 20'-9¾"
- ~~~ - APPROX. LIMITS OF TEMPORARY SHORING
- ▨ - EXISTING BRIDGE REMOVAL

REFERENCE CHORD: ℄ TO ℄ ABUTMENT BEARINGS

REFERENCE CHORD BEARING IS N 63° 34' 07" W, LENGTH = 64'-0"

SOIL BORING DATA

BORING	STATION	OFFSET
B-280-0-07	6+90.45	17.19' LT
B-281-0-07	6+78.52	36.96' RT

BORING DATA REFERENCED FROM ℄ PROSSER AVENUE

EXISTING STRUCTURE

TYPE: SIMPLE-SPAN STEEL THRU GIRDER (UNKNOWN STEEL) WITH OPEN DECK ON CONCRETE AND MASONRY ABUTMENTS
SPAN: 69'-6"± C/C BEARINGS
WIDTH: 16'-6"± C/C GIRDERS
ORIGINAL DESIGN LOADING: COOPER E-65
ALIGNMENT: TANGENT
SKEW: 36° 08'± RF
YEAR BUILT: 1924 ORIGINAL CONST, REHABILITATED 1939 & 1948
STRUCTURE FILE NUMBER: NONE
DISPOSITION: TO BE REPLACED

PROPOSED STRUCTURE

TYPE: SIMPLE-SPAN STEEL DECK GIRDERS (ASTM A709, GR. 50) WITH A BALLASTED, COMPOSITE REINFORCED CONCRETE DECK ON FULL-HEIGHT CONCRETE WALL-TYPE ABUTMENTS
SPAN: 64'-0" C/C BEARINGS (MEASURED ALONG REFERENCE CHORD)
WIDTH: 21'-6" F/F CURBS (23'-6" O/O CUBRS)
LOADING: COOPER E-80 WITH DIESEL IMPACT & ALTERNATE LOAD
ALIGNMENT: 7°45'00" LEFT CURVE (CHORD DEFINITION) WITH 62'-0" LONG SPIRAL
SKEW: 20°46'34" RF (MEASURED TO REFERENCE CHORD)
COORDINATES: LATITUDE N 39° 10' 53" LONGITUDE W 84° 29' 09"
STRUCTURE FILE NUMBER: TO BE ASSIGNED AFTER NSRR & ODOT CONSTRUCTION AGREEMENT

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED EFD | DRAWN SNH | REVIEWED CTV | DATE 12-15-21
CHECKED CTM | REVISED | ODOT SFN: TBD | NSRR BR#: BR0018444

HAMILTON COUNTY
STA. 158+41.83
TO STA. 159+17.66

SITE PLAN
BRIDGE NO. HAM-75-PROSSER (NSRR BRIDGE CT-0.89)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

HAM-75-7.85
PID No. 77889

(1613/2017)

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HAM-075-PROSSER SPECIFIC NOTES

STANDARD RAILROAD BRIDGE NOTES AND DETAILS

THE NOTES ON THIS SHEET ARE SPECIFIC TO THE SUBJECT BRIDGE STRUCTURE. FOR STANDARD NOTES AND DETAILS APPLICABLE TO ALL RAILROAD BRIDGE STRUCTURES ON THIS PROJECT, INCLUDING THIS STRUCTURE, SEE THE FOLLOWING SHEETS: (1502/2017) THROUGH (1514/2017)

PROPOSED SEQUENCE OF CONSTRUCTION

1) INSTALL CAISSON WALL
2) INSTALL TEMPORARY SHEET PILE SHORING
3) EXCAVATE FOUNDATIONS AND INSTALL PILES
4) CONSTRUCT PROPOSED FOOTINGS, ABUTMENTS, AND WINGWALLS
5) REMOVE TEMPORARY SHEET PILE SHORING
6) CONSTRUCT PROPOSED SUPERSTRUCTURE
7) SHIFT NSRR ONTO PROPOSED ALIGNMENT
8) REMOVE EXISTING STRUCTURES AS REQUIRED
9) CONSTRUCT CIP CAISSON WALL FACING
10) GRADE TO FINAL ELEVATIONS

ITEM 202 - STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

THIS ITEM SHALL INCLUDE THE REMOVAL OF THE EXISTING IN-SERVICE BRIDGE CARRYING NSRR OVER PROSSER AVE. THE REMOVAL OF ANCILLARY RETAINING WALLS ALONG PROSSER AVENUE SHALL ALSO BE INCLUDED WITH THIS ITEM.

THE REMOVAL OF THE EXISTING IN-SERVICE BRIDGE INCLUDES THE REMOVAL OF ALL SUPERSTRUCTURE ELEMENTS AND ALL SUBSTRUCTURE ELEMENTS TO A MINIMUM DISTANCE OF 2'-0" BELOW PROPOSED FINAL GRADE.

EXISTING PLANS ARE NOT AVAILABLE FOR THE STRUCTURE OR ANCILLARY RETAINING WALLS.

THE CONTRACTOR MUST REVIEW THE EXISTING STRUCTURE WHEN PREPARING THEIR BID. IT IS ASSUMED THAT THE EXISTING STRUCTURE IS FOUNDED ON PILES.

ITEM 507 - CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN, AS PER PLAN

FOR STANDARD NOTES FOR THIS ITEM, SEE SHEET: (1503/2017)

FOR FURNISHED PILE NOTES, SEE SHEET: (1503/2017)

SEE FOUNDATION PLAN SHEETS 7 | 35 AND 8 | 35 FOR ORDER LENGTHS, TIP ELEVATION, AND CUTOFF ELEVATION DETAILS FOR SPECIFIC PILES.

PILE DESIGN LOADS (ULTIMATE BEARING VALUE):
THE ULTIMATE BEARING VALUE IS 165 TONS PER PILE FOR THE REAR AND FORWARD ABUTMENTS. THE ADDITION OF 16 TONS OF ULTIMATE BEARING VALUE PER REAR ABUTMENT PILE IS DUE TO THE POSSIBILITY OF DOWN DRAG FORCES INDUCED BY EMBANKMENT SETTLEMENT.THE ULTIMATE BEARING VALUE IS 82 TONS PER PILE FOR ALL WINGWALL PILES.

ITEM 507 - CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN, AS PER PLAN (CONTINUED)

ABUTMENT PILES:
60 PILES, 80 FEET LONG, ORDER LENGTH (REAR)
47 PILES, 80 FEET LONG, ORDER LENGTH (FORWARD)
4 DYNAMIC LOAD TESTING ITEMS (2 PER ABUTMENT)

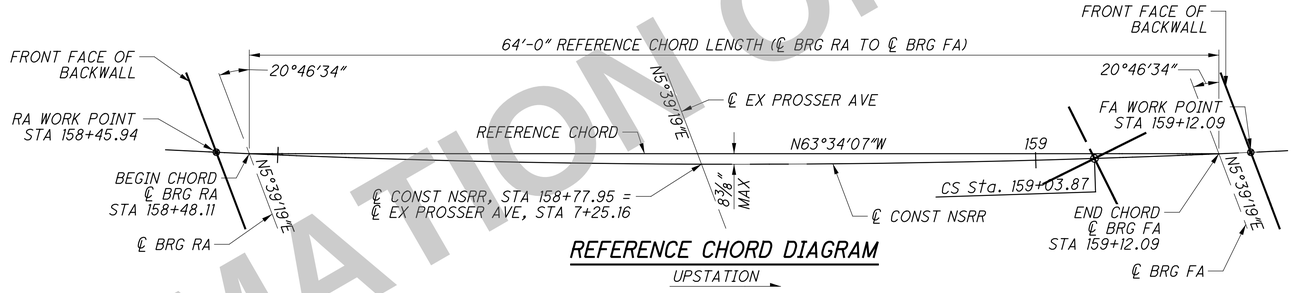
WINGWALL PILES:
44 PILES, 55 FEET, ORDER LENGTH (REAR)
16 PILES, 55 FEET, ORDER LENGTH (FORWARD)
4 DYNAMIC LOAD TEST ITEMS (2 FORWARD, 2 REAR)

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES (FT) AT THE CONTRACT BID PRICE.

ITEM 524 - DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK, AS PER PLAN

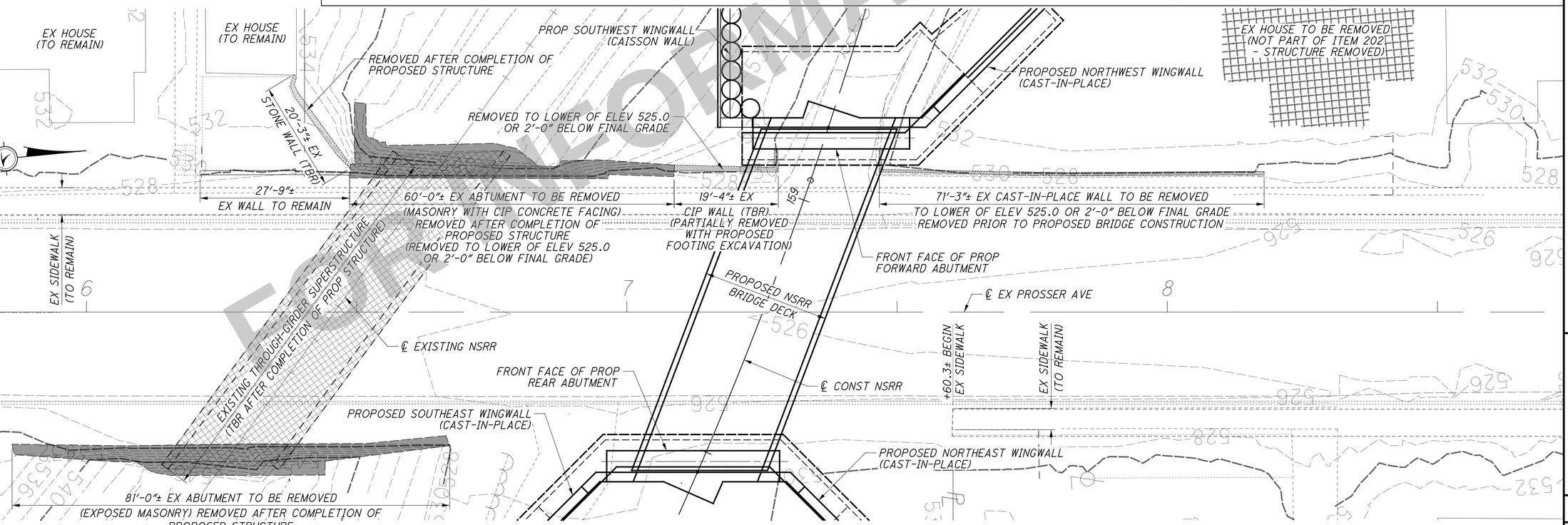
FOR STANDARD NOTES FOR THIS ITEM, SEE SHEET: (1505/2017)

ALTERNATING SHAFT CONSTRUCTION SHALL BE USED PER ODOT GEOTECHNICAL BULLETIN GB-7. THE IN-BETWEEN SHAFTS MAY BE SHIFTED UP TO 3" FROM THEIR PLAN LOCATION TO ALLOW FOR PROPER FITUP. IF SHAFT FITUP REQUIRES AN IN-BETWEEN SHAFT TO BE SHIFTED GREATER THAN 3" THE CAP SHALL BE WIDENED TO ACCOMODATE. ANY RESULTING EXTRA CONCRETE FOR THE CAP SHALL NOT BE REIMBURSED BY THE DEPARTMENT. IF, AFTER EXCAVATION, IT IS DEEMEED BY ODOT OR NSRR THAT THE GAP BETWEEN SHAFTS ALLOWS EXCESSIVE SOIL LOSS, THE GAP BETWEEN SHAFTS SHALL BE GROUTED TO ELIMINATE THE SOIL LOSS. THE GROUTING SHALL BE TO THE SATISFACTION OF NSRR AND SHALL BE AT NO ADDITIONAL COST THE DEPARTMENT.



REFERENCE CHORD DIAGRAM

UPSTATION



PLAN VIEW LIMITS OF ITEM 202 - STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

FOR INFORMATION ONLY

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DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
EFD	EFD	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: TBD	
CTM		NSRR BR#: BR0018444	

BRIDGE SPECIFIC NOTES
BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

HAM-75-7.85
PID No. 77889

1614/2017

ESTIMATED BRIDGE QUANTITIES

CALCULATED: VDT DATE: 6/11/15
CHECKED: SNH DATE: 6/12/15

ITEM	ITEM EXT.	TOTAL QUANTITY (04/IMS/BR)	UNIT	DESCRIPTION	REAR		FWD	SUPER	GENERAL	APP SHEET NO.
202	11003	LUMP	LS	STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					LUMP	2/35
202	23000	250	SY	PAVEMENT REMOVED			250			
202	75000	60	FT	FENCE REMOVED			60			
503	11101	LUMP	LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (REAR ABUTMENT)					LUMP	1502/2017
503	11101	LUMP	LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (SOUTHEAST WINGWALL)					LUMP	1502/2017
503	11101	LUMP	LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (FORWARD ABUTMENT)					LUMP	1502/2017
503	11101	LUMP	LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (SOUTHWEST WINGWALL)					LUMP	1502/2017
503	21101	905	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN	550		355			1502/2017
505	11100	LUMP	LS	PILE DRIVING EQUIPMENT MOBILIZATION					LUMP	
507	00501	11,025	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN, AS PER PLAN	6,700		4,325			2/35
507	00551	11,860	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED, AS PER PLAN	7,220		4,640			1503/2017
509	10000	97,065	LB	EPOXY COATED REINFORCING STEEL	50,644		33,108	13,313		
511	34447	58	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN				58		1503/2017
511	34451	11	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN				11		1503/2017
511	44113	32	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT, NOT INCLUDING FOOTING, AS PER PLAN	18		14			1503/2017
511	45603	285	CY	CLASS QC4 MASS CONCRETE, SUBSTRUCTURE WITH QC/QA, AS PER PLAN	159		126			1503/2017
511	46013	215	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN	153		62			1503/2017
511	46511	165	CY	CLASS QC1 CONCRETE, FOOTING, AS PER PLAN	104		61			1503/2017
511	53016	344	CY	CLASS QC4 CONCRETE, MISC.: FOOTING MASS CONCRETE WITH QC/QA	188		156			1503/2017
511	71200	193	SF	CONCRETE, MISC.: FACING OF CANTILEVER WALLS			193			1503/2017
512	10001	478	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN	262		216			1504/2017
512	10100	562	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	262		216	84		
512	44451	177	SY	TYPE E WATERPROOFING, AS PER PLAN				177		1504/2017
SPECIAL	51256202	177	SY	SPECIAL - ASPHALTIC PANEL				177		1504/2017
SPECIAL	51267400	4,534	SF	SPECIAL - WATERPROOFING, MISC.: DAMPPROOFING OF RAILROAD STRUCTURES	2,500		2,034			1503/2017
513	10221	10,585	LB	STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN				10,585		1504/2017
513	10321	166,810	LB	STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN				166,810		1504/2017
513	20000	1,656	EACH	WELDED STUD SHEAR CONNECTORS				1,656		
514	80020	5,340	SF	SHOP PAINTING AND FIELD TOUCH-UP OF STRUCTURAL STEEL				5,340		1504/2017
516	12201	46	FT	STRUCTURAL STEEL EXPANSION JOINT, AS PER PLAN				46		1504/2017
516	13600	259	SF	1" PREFORMED EXPANSION JOINT FILLER	149		110			
516	46201	6	EACH	BEARING DEVICE, ROCKER, AS PER PLAN				6		29/35
516	46900	6	EACH	BEARING DEVICE, MISC.: SELF-LUBRICATING CYLINDRICAL BEARING (EXP)				6		28/35
517	75001	161	FT	RAILING, ALUMINUM, AS PER PLAN	87		74			1508/2017
517	76300	136	FT	RAILING, MISC.: NSRR ALUMINUM HANDRAIL WITH VANDAL PROTECTION FENCE				136		1509/2017
518	21200	309	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	179		130			
518	42201	212	FT	8" PERFORATED CORRUGATED STEEL PIPE, 707.01, AS PER PLAN	112		110			1504/2017
518	42301	150	FT	8" NON-PERFORATED CORRUGATED STEEL PIPE, INCLUDING SPECIALS, 707.01, AS PER PLAN	70		80			1504/2017
518	63300	LUMP	LS	STRUCTURE DRAINAGE, MISC.: SUPERSTRUCTURE DRAINAGE SYSTEM					LUMP	1504/2017
523	20000	4	EACH	DYNAMIC LOAD TESTING	2		2			
523	20500	4	EACH	RESTRIKE	2		2			
524	94803	410	FT	DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK, AS PER PLAN			410			1505/2017
524	95100	5	EACH	DRILLED SHAFTS, MISC.: CSL TESTING			5			1505/2017
SPECIAL	53000200	LUMP	LS	SPECIAL - STRUCTURES: SURVEY AND MONITORING OF TRACK AND TEMPORARY SHORING					LUMP	1506/2017
SPECIAL	53000200	LUMP	LS	SPECIAL - STRUCTURES: PRECONSTRUCTION CONDITION SURVEY					LUMP	1506/2017
SPECIAL	53013000	4,828	SF	SPECIAL - FORM LINER	2,734		2,094			1504/2017
SPECIAL	53014000	LUMP	LS	SPECIAL - STRUCTURAL SURVEY AND MONITORING OF VIBRATION					LUMP	1507/2017
625	25604	148	FT	CONDUIT, 4", 725.051				148		

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DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
VDT	VDT	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: TBD	
SNH		NSRR BR#: BR0018444	

ESTIMATED BRIDGE QUANTITIES
BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

HAM-75-7.85
PID No. 77889

1615
2017

PROPOSED FOOTING (FORWARD ABUTMENT)

PROPOSED FOOTING (REAR ABUTMENT)

SHEETING TO SUPPORT EX. ROADWAY (CONTRACTOR DESIGNED SHEETING TO BE SUBMITTED AND APPROVED BY NSRR)

℄ PROPOSED NSRR

1 PARTIAL PLAN 5 | 35

EX RETAINING WALL (FOUNDATION UNKNOWN)

SHEETING TO SUPPORT EX. ROADWAY (CONTRACTOR DESIGNED SHEETING TO BE SUBMITTED AND APPROVED BY NSRR)

TEMP 526.5

TEMP 530.0

TEMP 528.0

TEMP 522.0

TEMP 520.0

TEMP 1H

EX. TIMBER CRIBBING TO REMAIN DURING ABUTMENT CONSTRUCTION

19'-6"± NORMAL TO TRACK

23'-9"± NORMAL TO SHORING

PROPOSED CONCRETE SWALE

41'-6"± NORMAL TO SHORING

CONTRACTOR TO DIRECT TEMPORARY DRAINAGE AWAY FROM SHORING AND INTO EX STORM INLET (PLAN TO BE SUBMITTED TO AND APPROVED BY NSRR)

EX STM. INLET

EX MASONRY ABUTMENT (FOUNDATION UNKNOWN)

41'-2"± NORMAL TO SHORING

℄ EX. NSRR

NOTES:

1. FOR SECTION 2, SEE SHEET 6 | 35 .

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DESIGN AGENCY
Gannett Fleming
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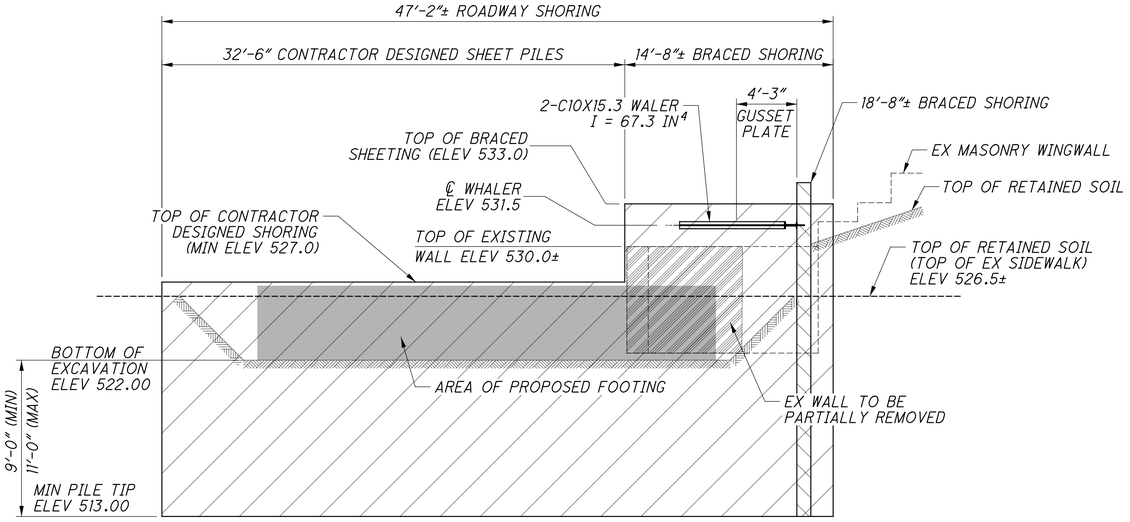
DESIGNED	DRAWN	REVIEWED	DATE
SNH	SNH	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: TBD	
CTM		NSRR BR#: BR0018444	

SHORING AND EXCAVATION SCHEMATIC NEAR RAILROAD
BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

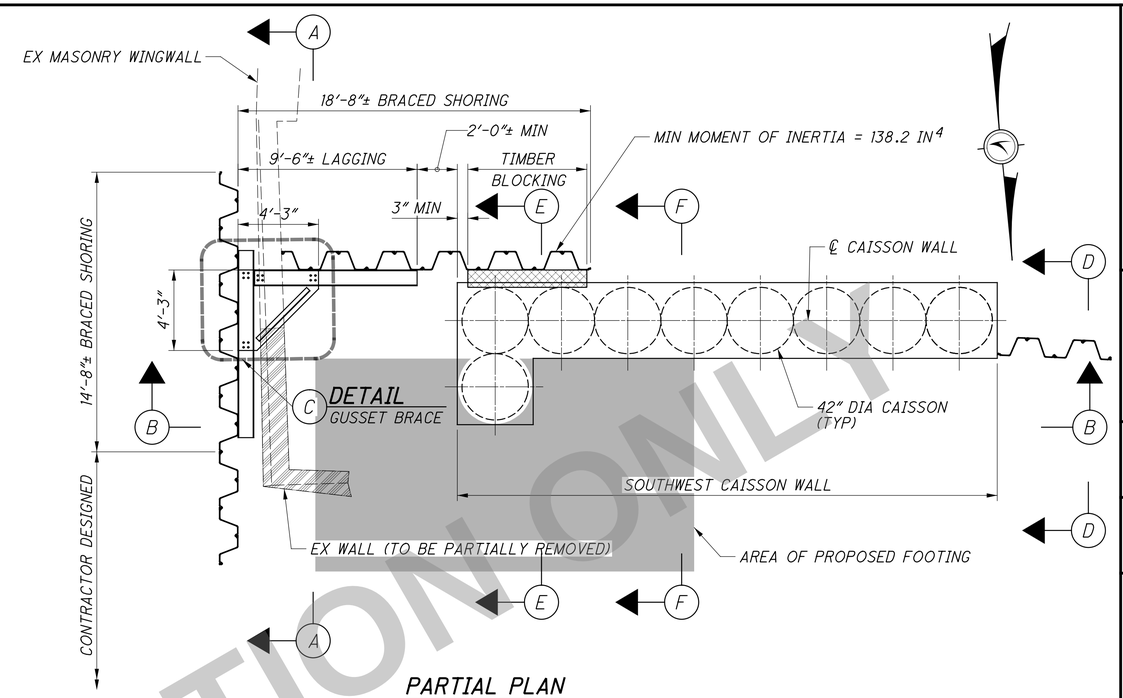
HAM-75-7.85
PID No. 77889

4 | 35

1616
2017

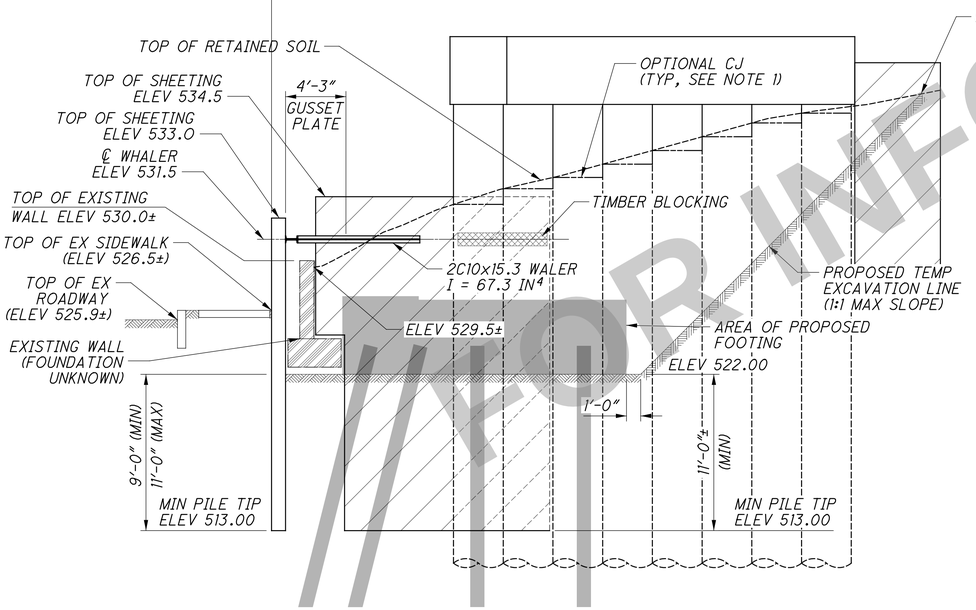


(A) ELEVATION ALONG ROADWAY
FORWARD ABUTMENT, LOOKING DOWNSTATION

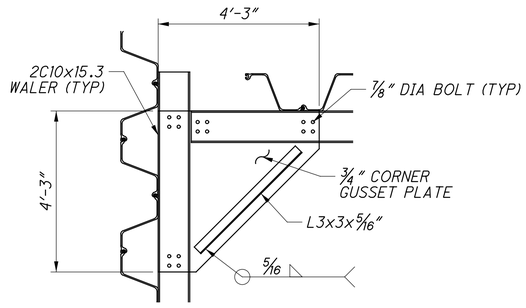


PARTIAL PLAN
(AT SOUTHWEST WINGWALL)
UPSTATION

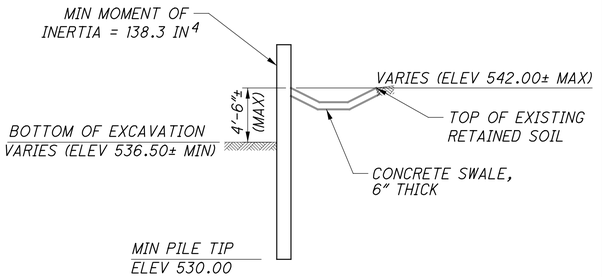
SUGGESTED SHORING SEQUENCE
1) INSTALL CAISSON WALL SHAFTS
2) CONSTRUCT CAISSON WALL CAP
3) INSTALL BRACED SHEETING
4) INSTALL BRACING AND BLOCKING
5) EXCAVATION TO ELEVATION 522.0
6) PARTIALLY REMOVE EX WALL
7) CONSTRUCT PROPOSED FOOTINGS, ABUTMENTS, AND WINGWALLS
8) REMOVE BRACED AND CONTRACTOR DESIGNED SHORING
9) GRADE TO FINAL ELEVATIONS AND CAST CIP FACE ATOP CAISSON WALL



(B) ELEVATION AT CAISSON WALL
FORWARD ABUTMENT, LOOKING SOUTH



(C) DETAIL
GUSSET BRACE PLATE



(D) SECTION OF SHEETING
FORWARD ABUTMENT, TEMPORARY CONDITION

NOTES:
1. OPTIONAL CONSTRUCTION JOINT AT EXISTING GROUNDLINE OF EACH CAISSON. THE CAISSON WALL IS USED FOR TEMPORARY SHORING AND INCORPORATED AS A FINAL WINGWALL. FOR FURTHER CAISSON DETAILS, INCLUDING REINFORCING, SEE SHEET 22 35.
2. CONTRACTOR SHALL PROBE TO ESTABLISH THE LIMITS OF THE EXISTING RETAINING WALL FOOTING. IF SHORING DEVIATES FROM WHAT IS SHOWN ON THESE PLANS, NEW SHORING PLANS SHALL BE SUBMITTED TO ODOT AND NSRR FOR REVIEW AND APPROVAL.
3. ALL WALER TO SHEET PILE CONNECTIONS SHALL BE MADE WITH WELDS, WITH FILL PLATES BEING UTILIZED AS NECESSARY. ALL BOLTED CONNECTIONS ARE TO BE FIELD DRILLED HOLES, WITH CONTRACTOR OPTION TO WELD INSTEAD. CONTRACTOR OPTION MUST BE SUBMITTED TO NSRR FOR REVIEW AND APPROVAL.
4. CAISSON WALL TEMPORARY SHORING SHALL BE CASED TEMPORARILY. SEE STANDARD RAILROAD BRIDGE PLAN NOTES FOR MORE INFORMATION.

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

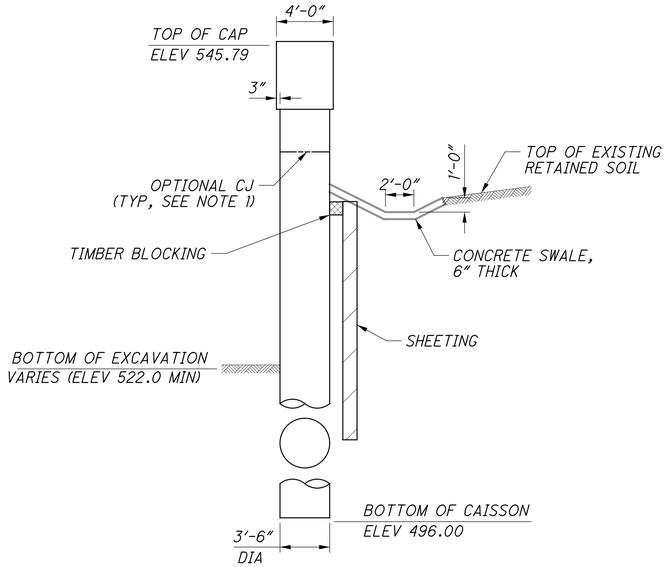
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SNH	CJG/EFD	CTV	12-15-21
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CTM		NSRR BR#: BR0018444	

RAILROAD SHORING PLAN & ELEVATIONS
BRIDGE NO. HAM-75-PROSSER (INSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

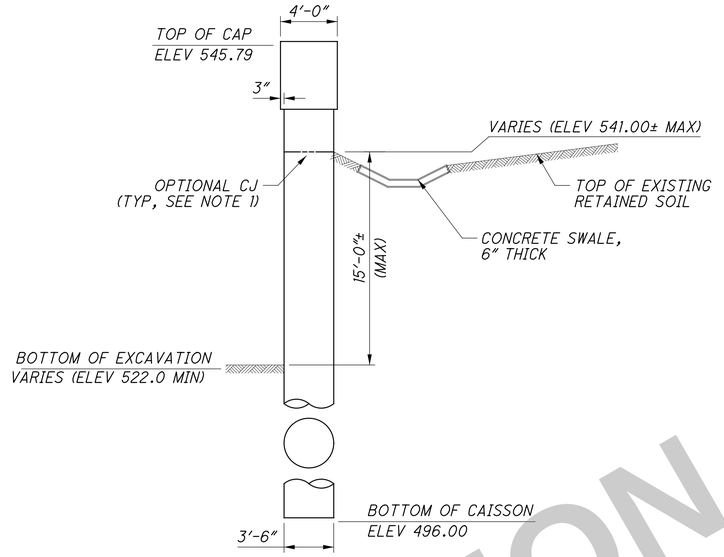
HAM-75-7.85
PID No. 77889

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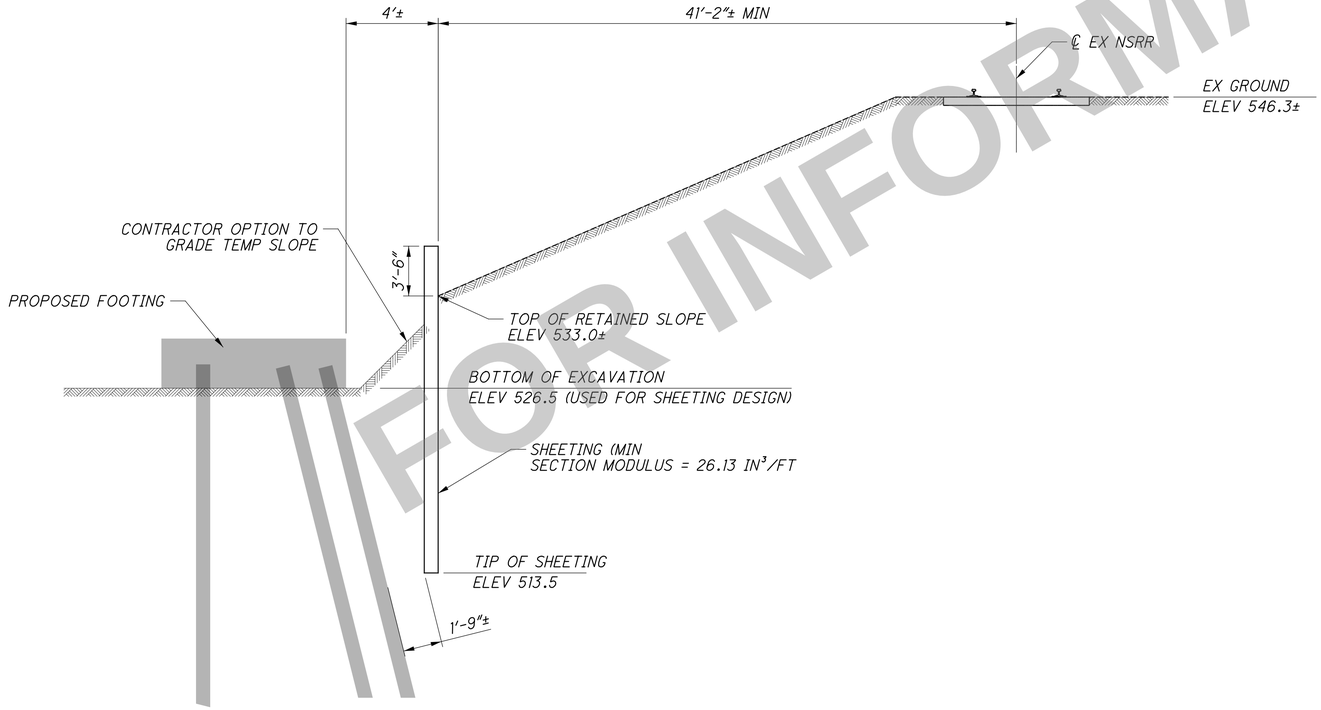
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E SECTION OF CAISSON WALL
FORWARD ABUTMENT, TEMPORARY CONDITION



F SECTION OF CAISSON WALL
FORWARD ABUTMENT, TEMPORARY CONDITION



2 SECTION OF UNBRACED SHORING
REAR ABUTMENT, SOUTHEAST WINGWALL

NOTES:

1. OPTIONAL CONSTRUCTION JOINT AT EXISTING GROUNDLINE OF EACH CAISSON. THE CAISSON WALL IS USED FOR TEMPORARY SHORING AND INCORPORATED AS A FINAL WINGWALL. FOR FURTHER CAISSON DETAILS, INCLUDING REINFORCING, SEE SHEET 22|35.
2. CAISSON WALL TEMPORARY SHORING SHALL BE CASED TEMPORARILY. SEE STANDARD RAILROAD BRIDGE PLAN NOTES FOR MORE INFORMATION.

FOR INFORMATION ONLY

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ENGINEERS & ARCHITECTS, P.C.
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COLUMBUS, OHIO 43231

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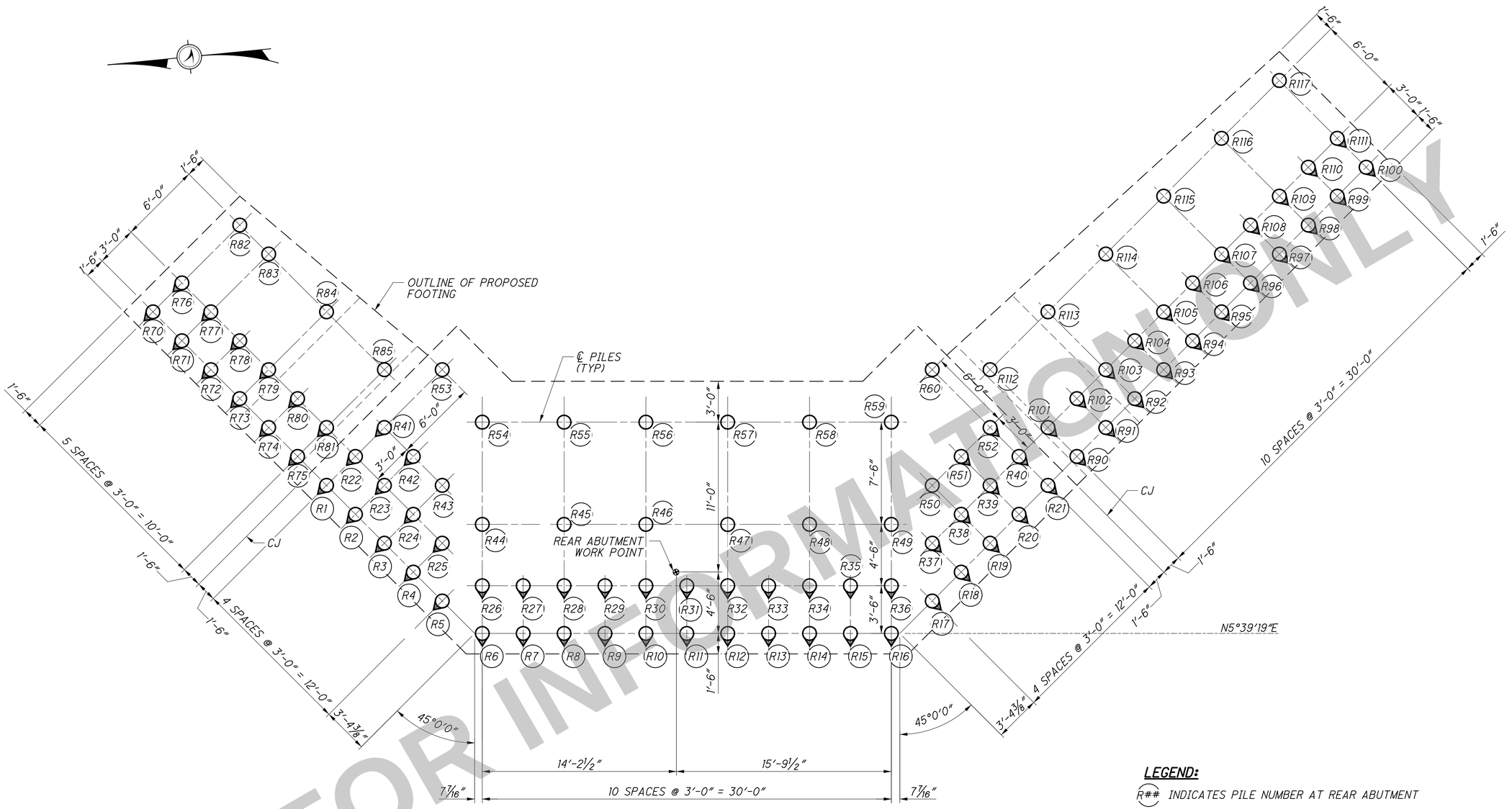
RAILROAD SHORING PLAN & ELEVATIONS
BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

HAM-75-7.85
PID No. 77889

6 / 35

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FOUNDATION PLAN - REAR ABUTMENT

PILE DATA			
PILE NUMBER	PILE CUTOFF ELEVATION	TIP ELEVATION	ORDER PILE LENGTH (EACH) (FEET)
R1 - R60	523.00	450.00	80
R70 - R85	528.00	482.50	55
R90 - R117	528.00	482.50	55

* PILE NUMBERS R61-R69 AND R86-R89 ARE NOT USED

LEGEND:

R## INDICATES PILE NUMBER AT REAR ABUTMENT

INDICATES 12" DIA CIP CONCRETE PILE BATTERED 1:4 IN THE DIRECTION SHOWN (NOTE 1)

INDICATES 12" DIA CIP CONCRETE PILE

NOTES:

1. PILE SPACING IS MEASURED ALONG THE BOTTOM OF FOOTING.
2. FOR FORWARD PILE LAYOUT PLAN, SEE SHEET 8 | 35.
3. FOR WORK POINT DEFINITION, SEE SHEET 10 | 35.

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
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COLUMBUS, OHIO 43231

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CHECKED	REVISED	ODOT SFN: TBD	
EFD		NSRR BR#: BR0018444	

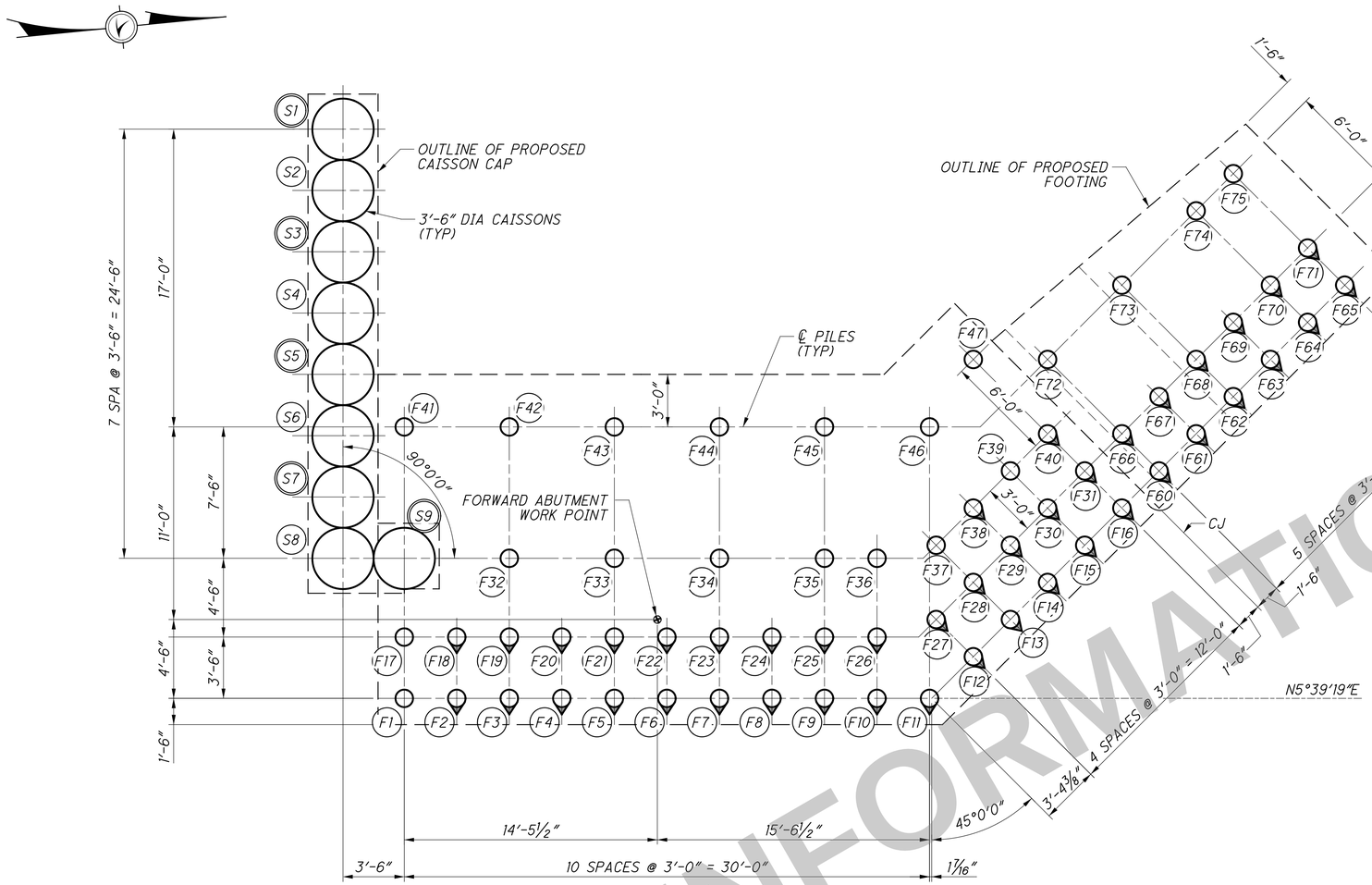
REAR ABUTMENT PILE LAYOUT

BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

HAM-75-7.85
PID No. 77889

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FOUNDATION PLAN - FORWARD ABUTMENT

PILE DATA			
PILE NUMBER	PILE CUTOFF ELEVATION	TIP ELEVATION	ORDER PILE LENGTH (EACH) (FEET)
F1 - F47	524.00	450.00	80
F60 - F75	529.25	483.50	55

* PILE NUMBERS F48-F59 ARE NOT USED

LEGEND:

F## INDICATES PILE NUMBER AT FORWARD ABUTMENT

S# INDICATES DRILLED SHAFT NUMBER AT FORWARD ABUTMENT (DOUBLE CIRCLE INDICATES CSL TESTING REQUIRED)

INDICATES 12" DIA CIP CONCRETE PILE BATTERED 1:4 IN THE DIRECTION SHOWN (NOTE 1)

INDICATES 12" DIA CIP CONCRETE PILE

NOTES:

1. PILE SPACING IS MEASURED ALONG THE BOTTOM OF FOOTING.
2. FOR REAR PILE LAYOUT PLAN, SEE SHEET 7 / 35.
3. FOR WORK POINT DEFINITION, SEE SHEET 16 / 35.

CAISSON DATA						
CAISSON NUMBER	TOP OF CAISSON ELEV	TOP OF VERTICAL REINF. ELEV	TIP ELEV	SPIRAL LENGTH	SHAFT PAY LEN. (EA)	VERTICAL REINF. LENGTH
C1-C9	541.50**	544.25	496.00	44'-9"	45'-6"	48'-0"

** PAY ELEVATION. CONTRACTOR HAS OPTION TO CONSTRUCT TOP OF CAISSON TO ELEV 541.75 AT NO ADDITIONAL COST TO THE STATE.

FOR INFORMATION ONLY

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2600 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

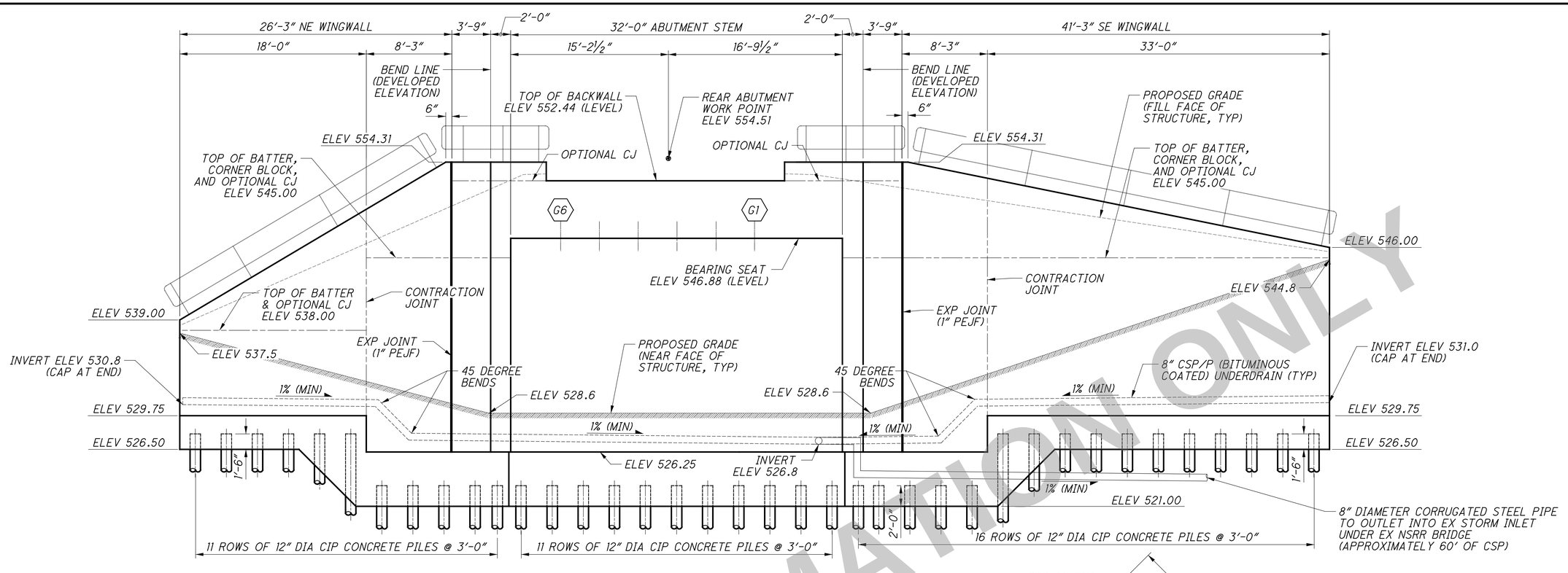
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EFD		NSRR BR#: BR0018444	

FORWARD ABUTMENT PILE LAYOUT
BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

HAM-75-7.85
PID No. 77889

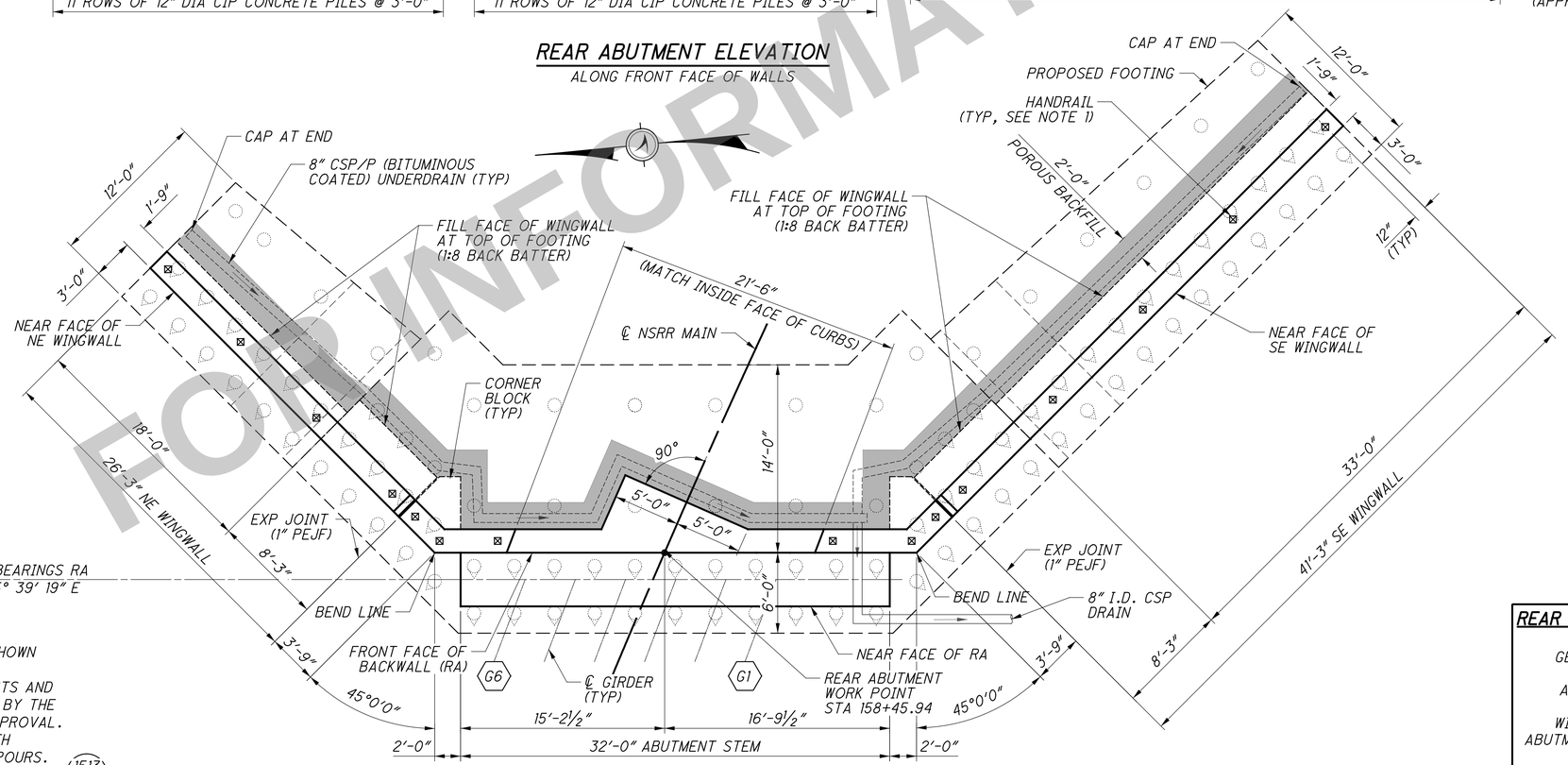
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REAR ABUTMENT ELEVATION

ALONG FRONT FACE OF WALLS



REAR ABUTMENT PLAN

NOTES:

1. FOR HANDRAIL DETAILS, SEE SHEET 1508/2017. POST LOCATIONS SHOWN ARE SCHEMATIC, FINAL LAYOUT OF POSTS AND HANDRAIL JOINTS SHALL BE SUBMITTED BY THE CONTRACTOR FOR NSRR REVIEW AND APPROVAL.
2. THE EXPANSION JOINT IS A FULL-DEPTH JOINT WITH 1" PEJF PLACED BETWEEN POURS.
3. FOR CONTRACTION JOINT DETAILS, SEE SHEET 1513/2017.

REAR ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	7 / 35
GENERAL PLAN & ELEV:	9 / 35
ABUTMENT PLANS:	10 / 35
ABUTMENT ELEVATION:	11 / 35
WINGWALL PLANS:	12 / 35
WINGWALL ELEVATIONS:	13 / 35
ABUTMENT STEM SECTIONS:	14 / 35
TYPICAL SECTIONS:	21 / 35 - 22 / 35
EXPANSION BEARING:	28 / 35
REINFORCING LIST:	33 / 35

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COLUMBUS, OHIO 43231

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EFD		NSRR BR#: BR0018444	

REAR ABUTMENT: PLAN AND ELEVATION

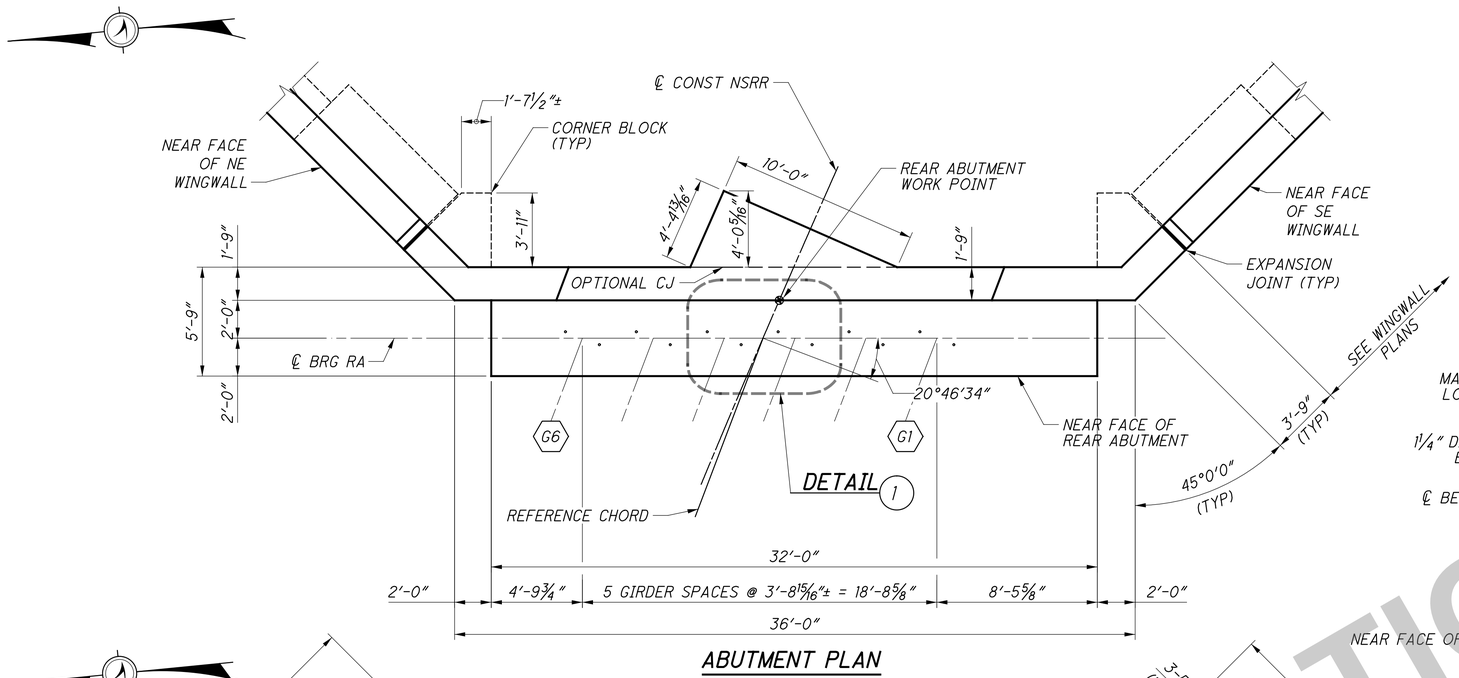
BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

HAM-75-7.85
PID No. 77889

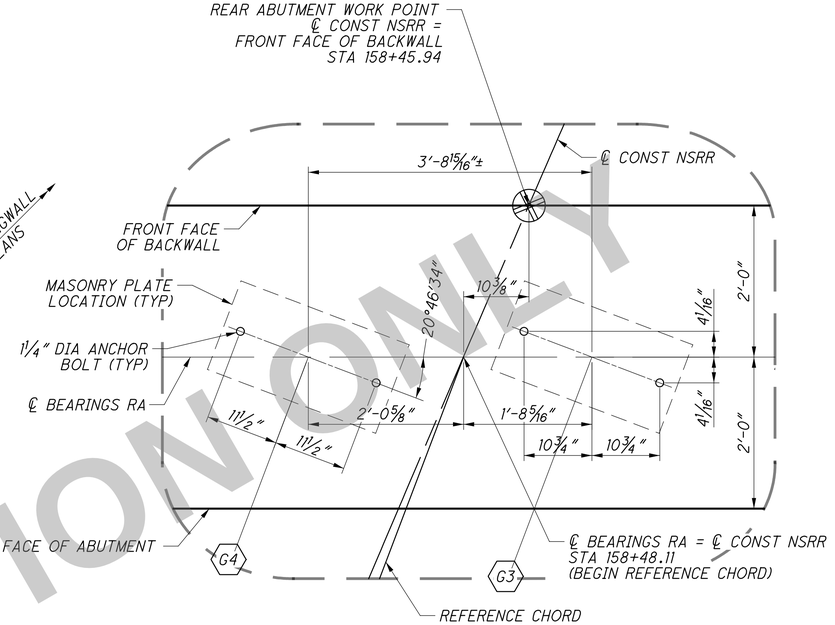
9 / 35

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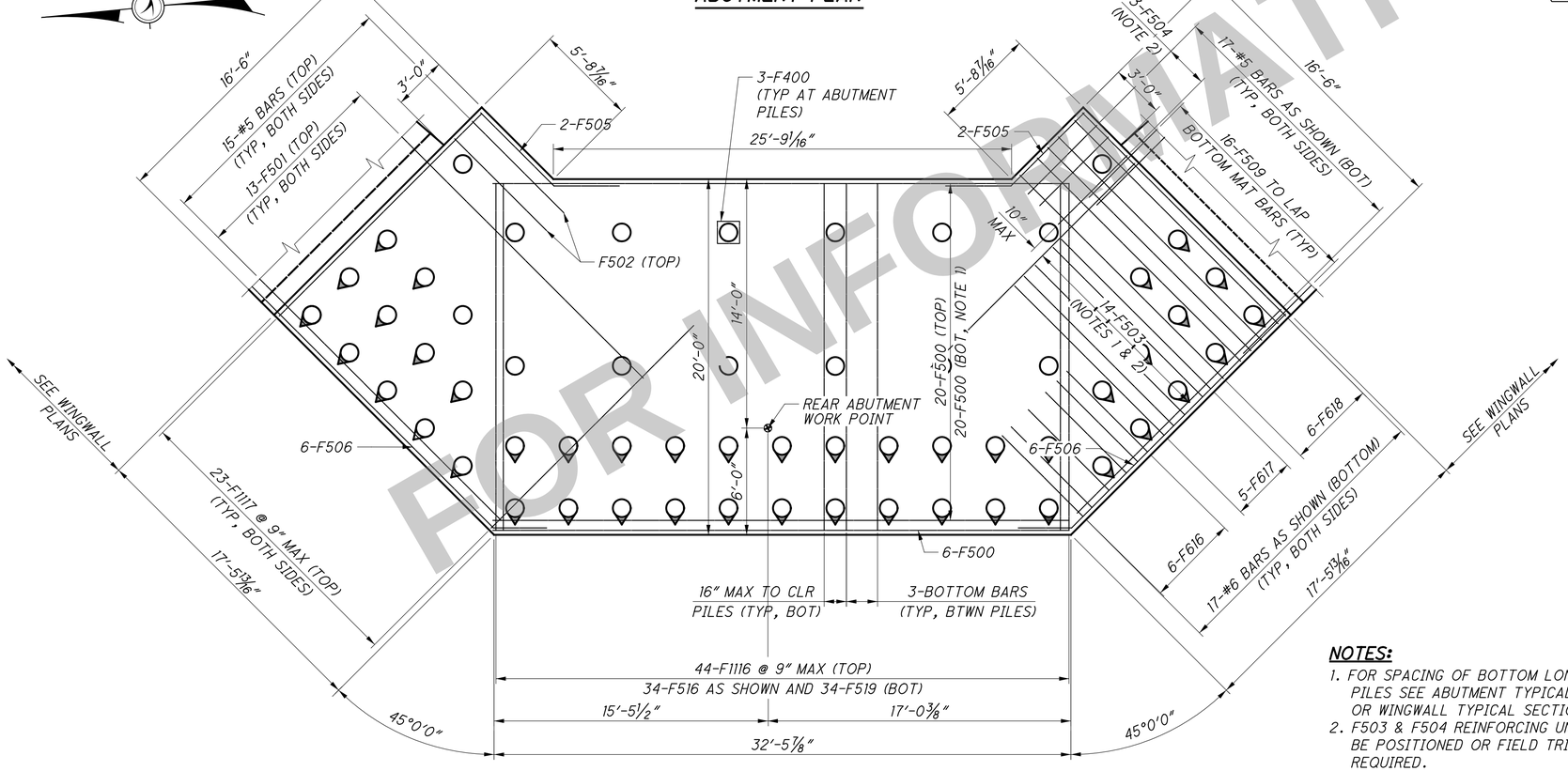
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ABUTMENT PLAN



(1) WORK POINT DEFINITION
INCLUDING ANCHOR BOLT LAYOUT



FOOTING PLAN

NOTES:

1. FOR SPACING OF BOTTOM LONGITUDINAL BARS AROUND PILES SEE ABUTMENT TYPICAL SECTION, SHEET 21 | 35 OR WINGWALL TYPICAL SECTION, SHEET 22 | 35 .
2. F503 & F504 REINFORCING UNDER WINGWALL SECTION MAY BE POSITIONED OR FIELD TRIMMED TO CLEAR PILES AS REQUIRED.
3. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 33 | 35 .

REAR ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	7 | 35
GENERAL PLAN & ELEV:	9 | 35
ABUTMENT PLANS:	10 | 35
ABUTMENT ELEVATION:	11 | 35
WINGWALL PLANS:	12 | 35
WINGWALL ELEVATIONS:	13 | 35
ABUTMENT STEM SECTIONS:	14 | 35
TYPICAL SECTIONS:	21 | 35 - 22 | 35
EXPANSION BEARING:	28 | 35
REINFORCING LIST:	33 | 35

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2600 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

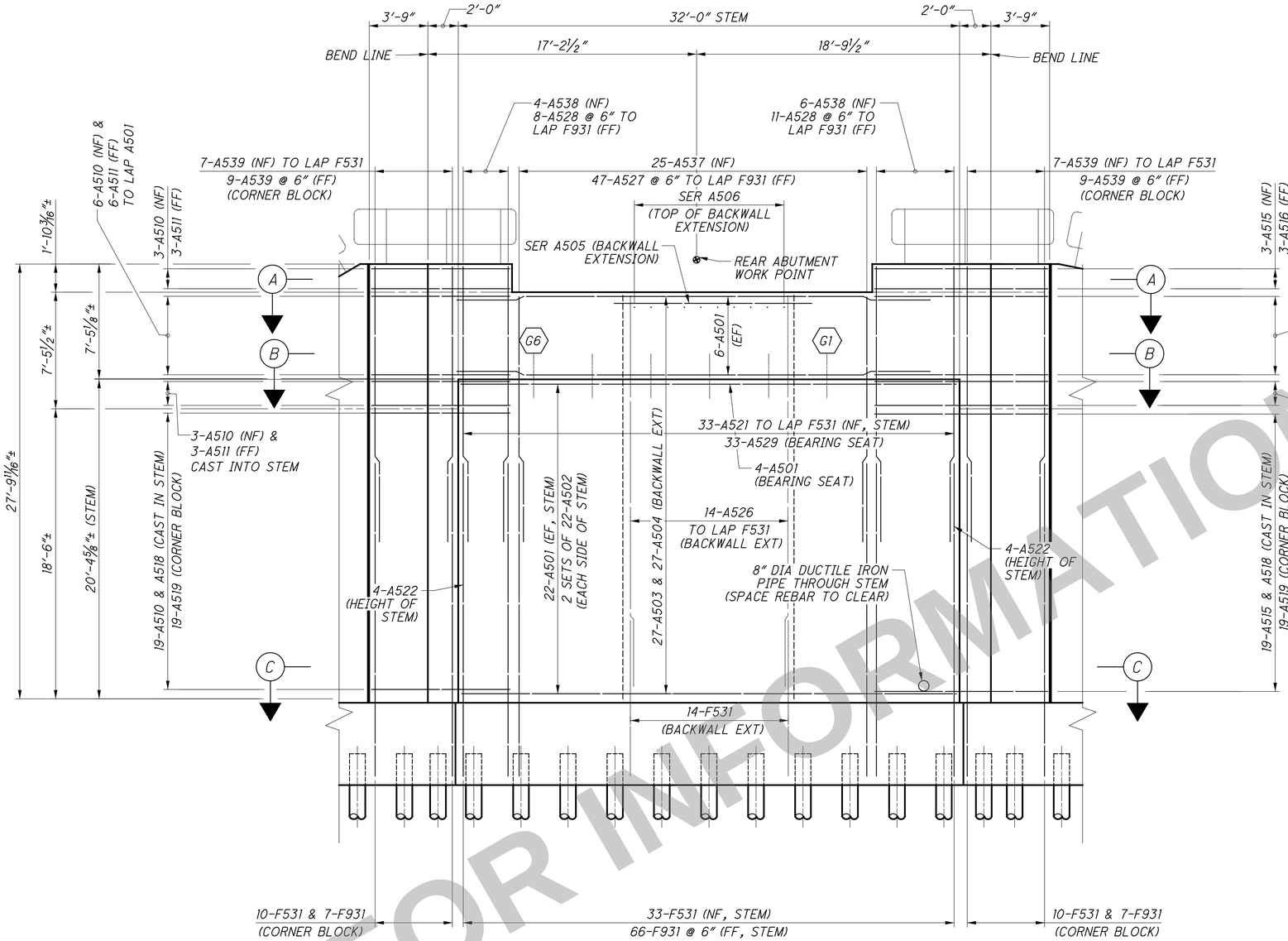
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REAR ABUTMENT PLAN AND FOOTING PLAN
BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

HAM-75-7.85
PID No. 77889

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REAR ABUTMENT ELEVATION

SEE NOTE 1

FOR INFORMATION ONLY

NOTES:

1. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 33|35 .
2. FOR SECTIONS A-A, B-B AND C-C, SEE SHEET 14|35 .

REAR ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	7|35
GENERAL PLAN & ELEV:	9|35
ABUTMENT PLANS:	10|35
ABUTMENT ELEVATION:	11|35
WINGWALL PLANS:	12|35
WINGWALL ELEVATIONS:	13|35
ABUTMENT STEM SECTIONS:	14|35
TYPICAL SECTIONS:	21|35 – 22|35
EXPANSION BEARING:	28|35
REINFORCING LIST:	33|35

DESIGN AGENCY
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ENGINEERS & ARCHITECTS, P.C.
2600 CORPORATE EXCHANGE DRIVE SUITE 230
COLUMBUS, OHIO 43231

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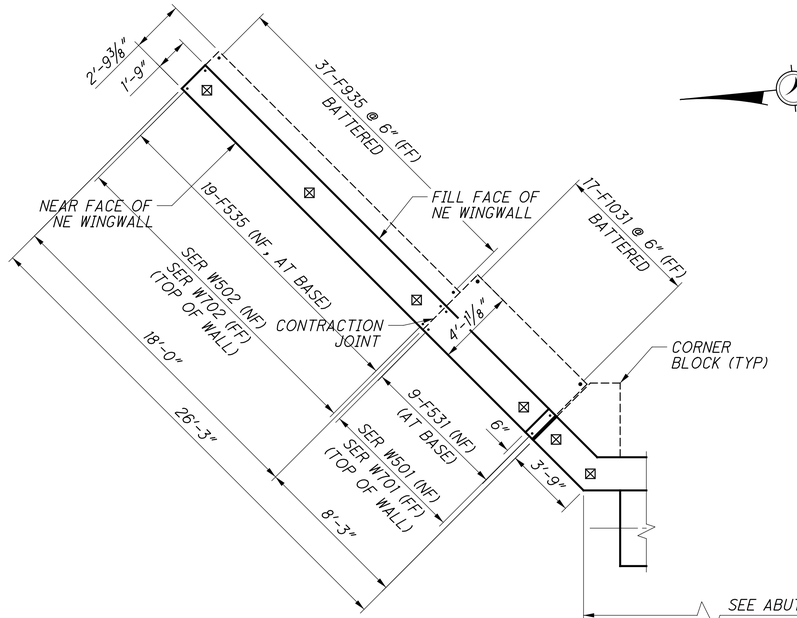
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BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

HAM-75-7.85
PID No. 77889

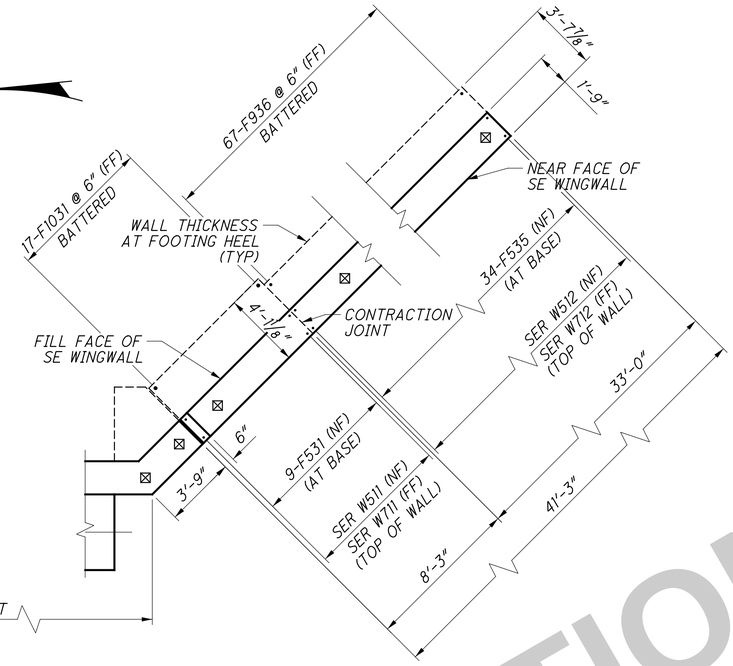
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WINGWALL PLAN - NE WALL

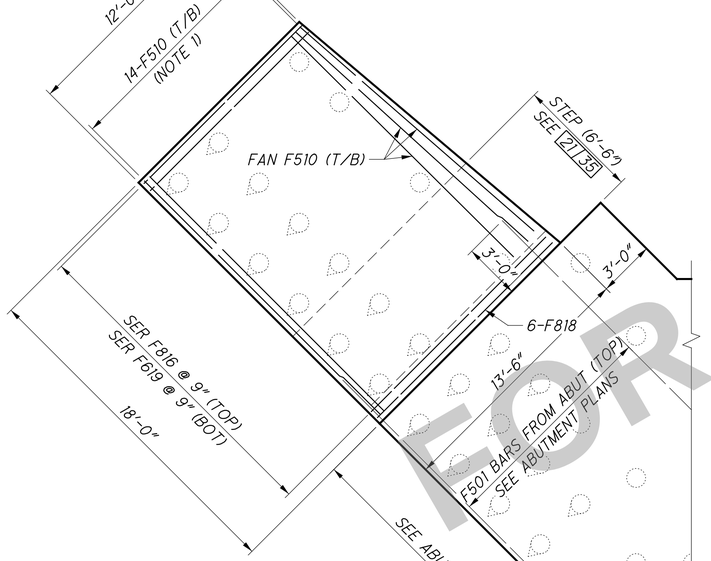


WINGWALL PLAN - SE WALL

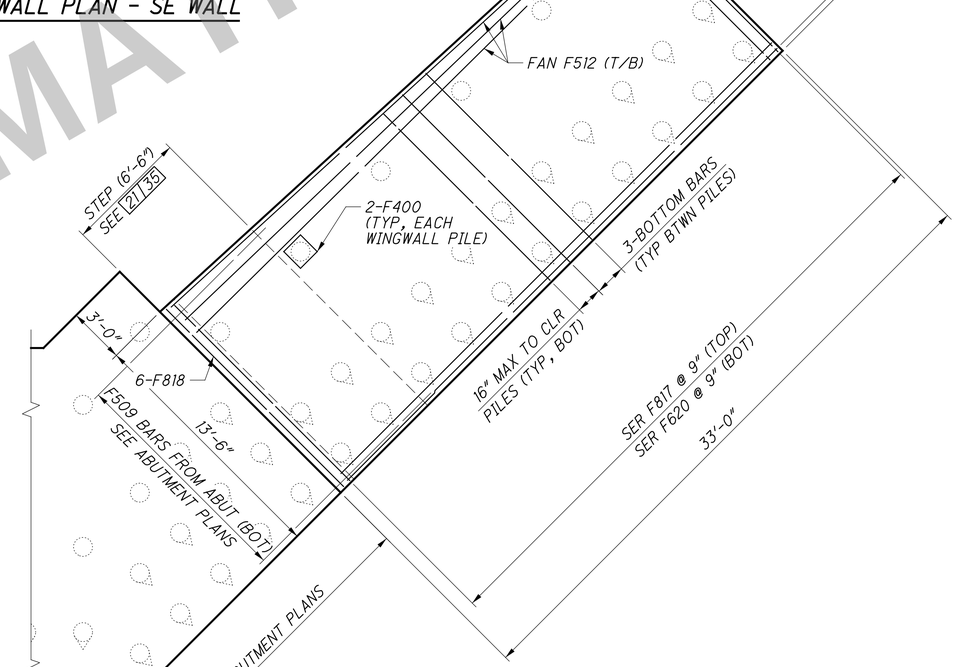
SEE ABUTMENT PLANS

NOTES:

1. FOR SPACING OF FOOTING BOTTOM LONGITUDINAL BARS AROUND PILES SEE ABUTMENT TYPICAL SECTION, SHEET 21|35 OR WINGWALL TYPICAL SECTION, SHEET 22|35 .
2. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 33|35 .



FOOTING PLAN - NE WALL



FOOTING PLAN - SE WALL

SEE ABUTMENT PLANS

REAR ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	7|35
GENERAL PLAN & ELEV:	9|35
ABUTMENT PLANS:	10|35
ABUTMENT ELEVATION:	11|35
WINGWALL PLANS:	12|35
WINGWALL ELEVATIONS:	13|35
ABUTMENT STEM SECTIONS:	14|35
TYPICAL SECTIONS:	21|35 - 22|35
EXPANSION BEARING:	28|35
REINFORCING LIST:	33|35

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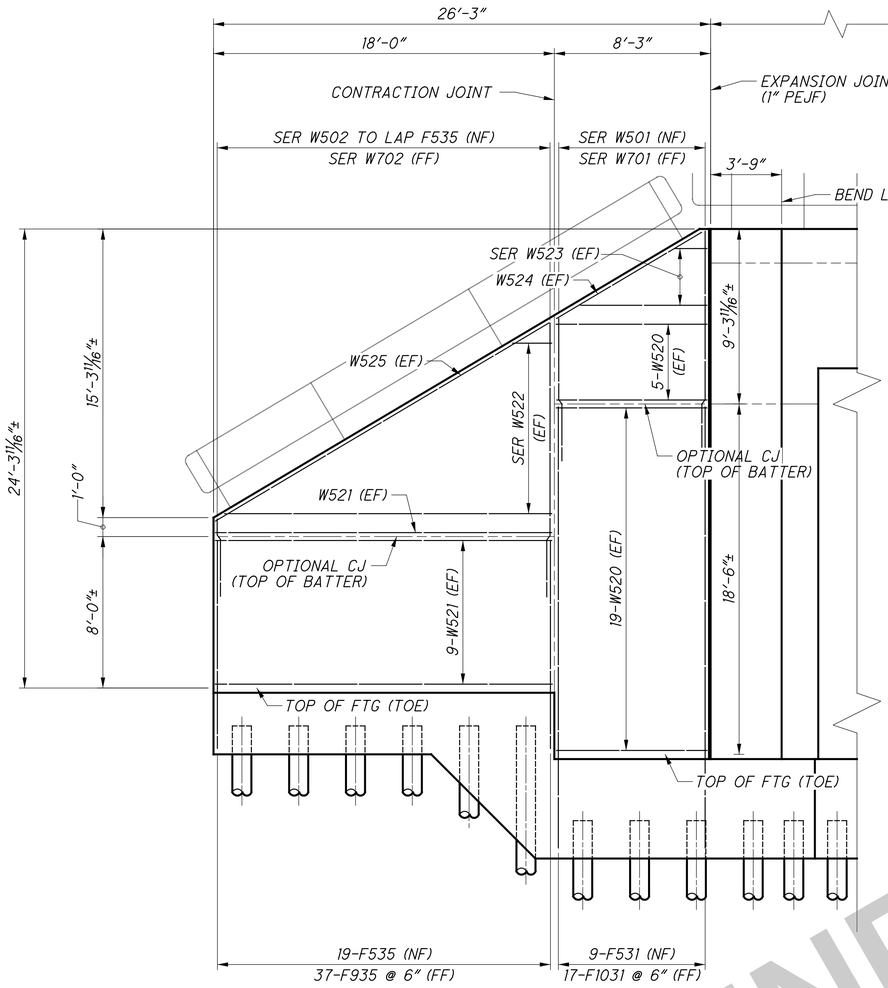
REAR ABUTMENT WINGWALL PLANS
BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

HAM-75-7.85
PID No. 77889

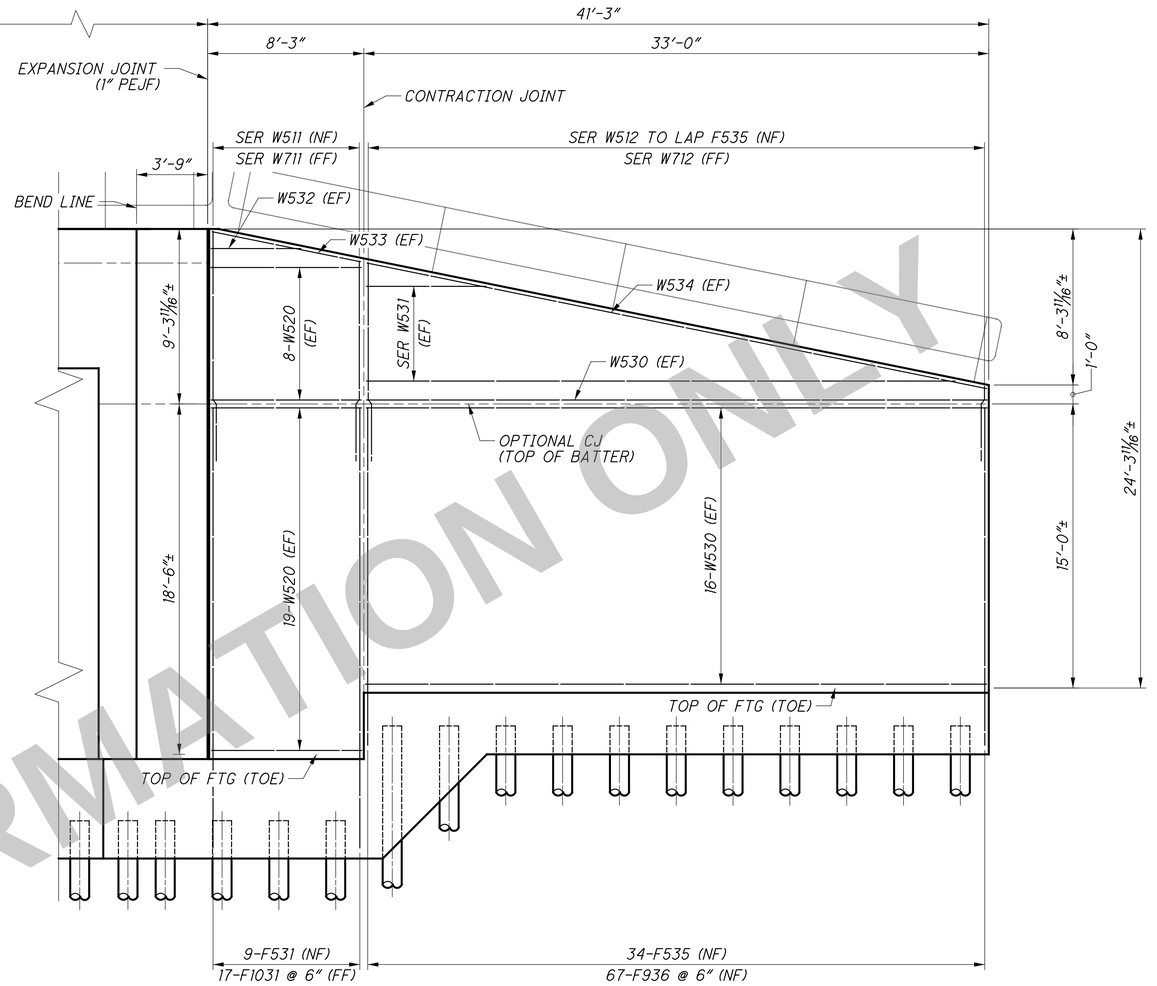
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NORTHEAST WINGWALL ELEVATION



SOUTHEAST WINGWALL ELEVATION

FOR INFORMATION ONLY

NOTES:

1. FOR SPACING OF FOOTING BOTTOM LONGITUDINAL BARS AROUND PILES SEE ABUTMENT TYPICAL SECTION, SHEET 21|35 OR WINGWALL TYPICAL SECTION, SHEET 22|35.
2. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES SEE SHEET 33|35 .
3. VERTICALLY ADJUST AND FIELD CUT VERTICAL REINFORCING AS REQUIRED TO CLEAR PILES.

REAR ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	7|35
GENERAL PLAN & ELEV:	9|35
ABUTMENT PLANS:	10|35
ABUTMENT ELEVATION:	11|35
WINGWALL PLANS:	12|35
WINGWALL ELEVATIONS:	13|35
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TYPICAL SECTIONS:	21|35 - 22|35
EXPANSION BEARING:	28|35
REINFORCING LIST:	33|35

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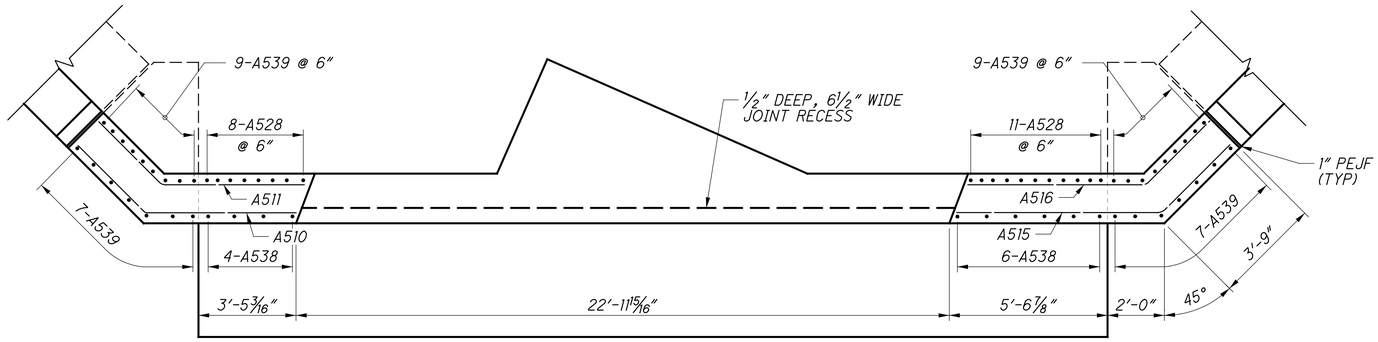
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BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)
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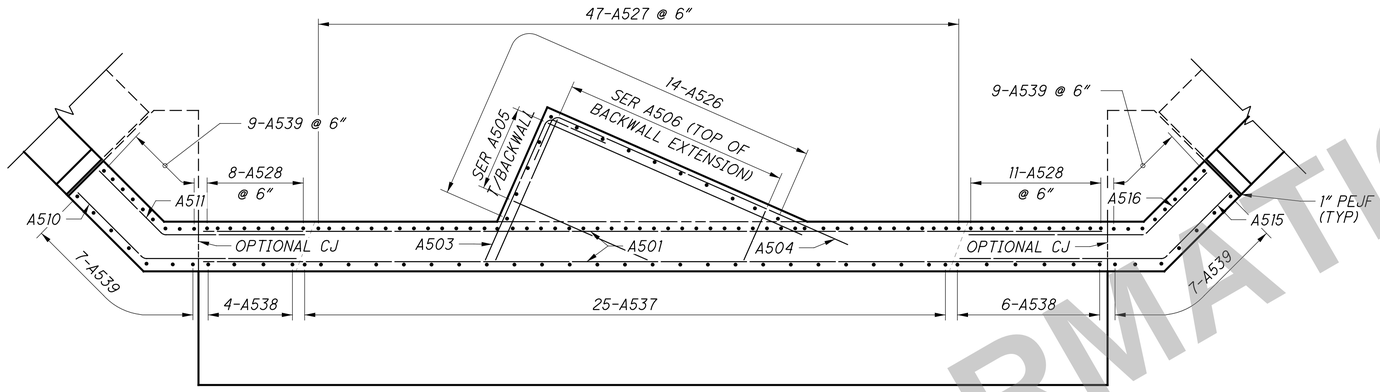
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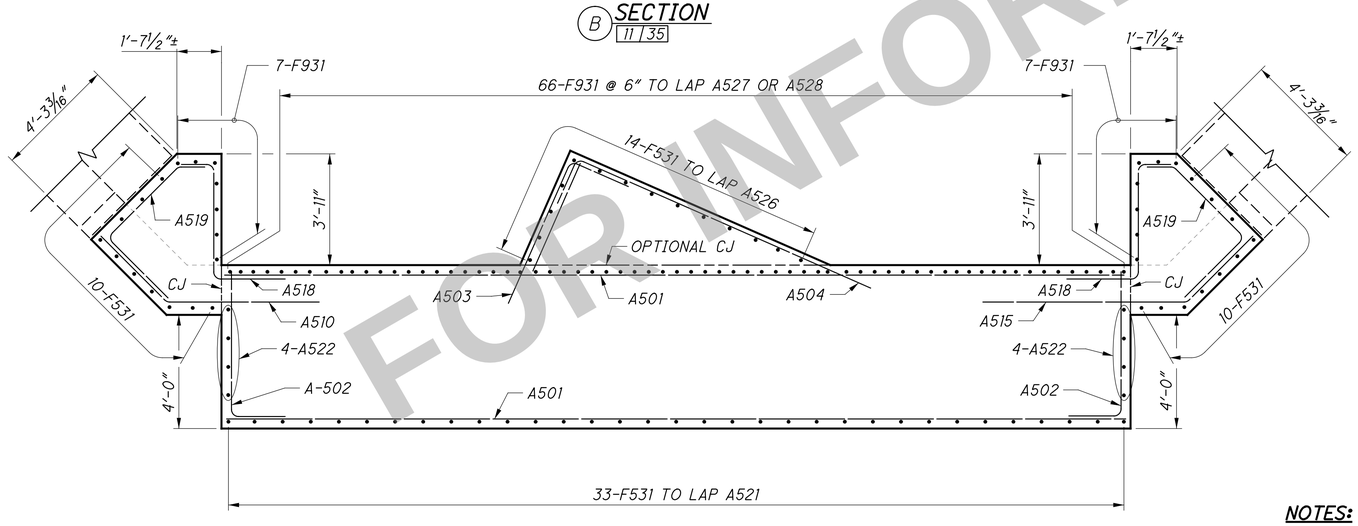
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A SECTION 11 | 35



B SECTION 11 | 35



C SECTION 11 | 35

NOTES:

1. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 33 | 35 .

REAR ABUTMENT SHEET REFERENCES

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ABUTMENT PLANS:	10 | 35
ABUTMENT ELEVATION:	11 | 35
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EXPANSION BEARING:	28 | 35
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CHECKED	REVISED	ODOT SFN: TBD	
EFD		NSRR BR#: BR0018444	

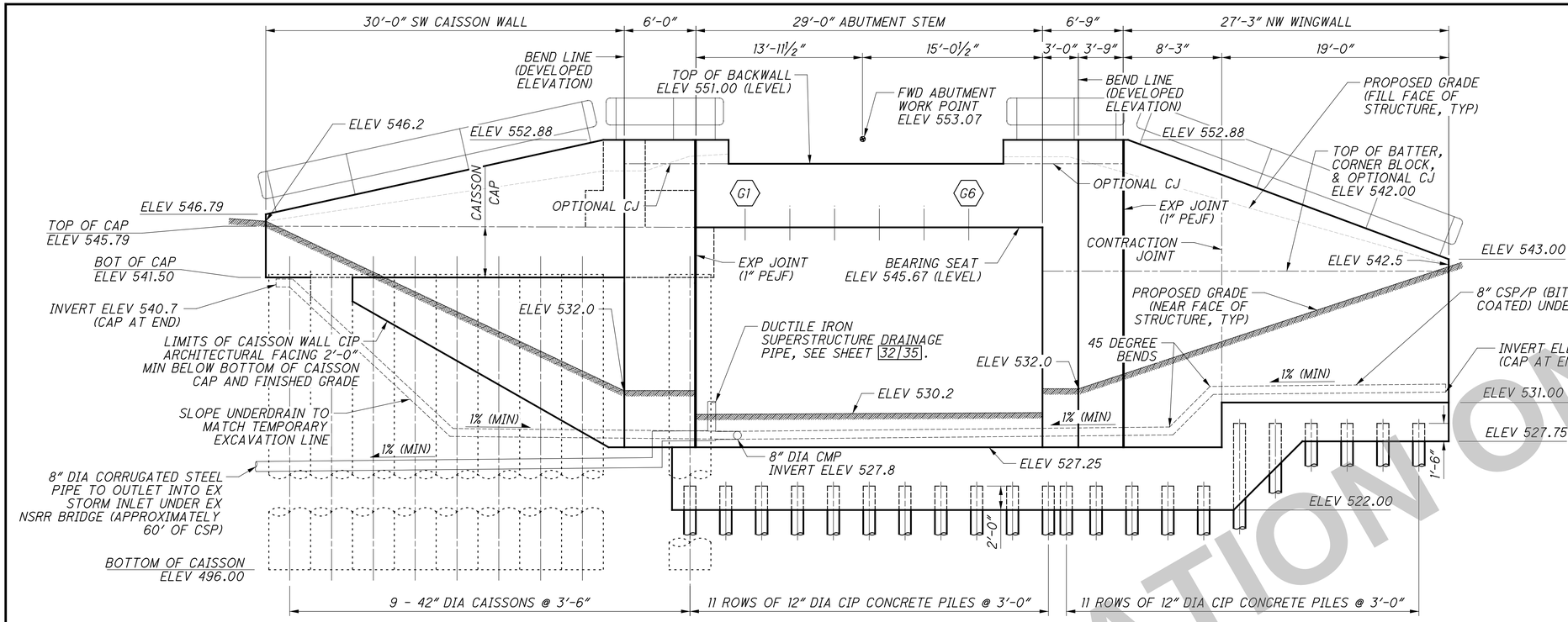
REAR ABUTMENT REINFORCEMENT DETAILS

BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

HAM-75-7.85
PID No. 77889

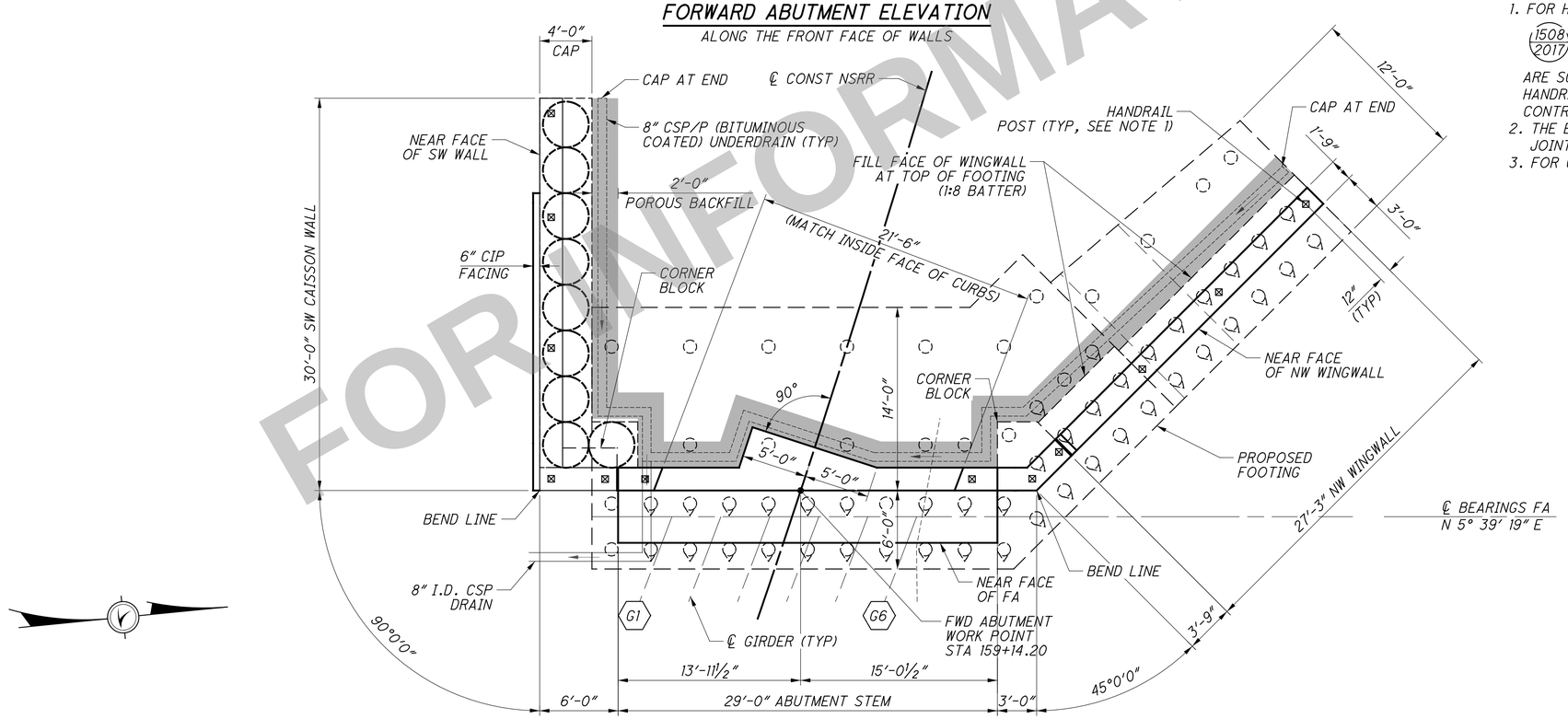
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FORWARD ABUTMENT ELEVATION

ALONG THE FRONT FACE OF WALLS



FORWARD ABUTMENT PLAN

NOTES:

1. FOR HANDRAIL DETAILS, SEE SHEET (1508|2017). POST LOCATIONS SHOWN ARE SCHEMATIC, FINAL LAYOUT OF POSTS AND HANDRAIL JOINTS SHALL BE SUBMITTED BY THE CONTRACTOR FOR NSRR REVIEW AND APPROVAL.
2. THE EXPANSION JOINT IS A FULL-DEPTH JOINT WITH 1" PEJF PLACED BETWEEN POURS.
3. FOR CONTRACTION JOINT DETAILS, SEE SHEET (1513|2017).

FWD ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	8 | 35
GENERAL PLAN & ELEV:	15 | 35
ABUTMENT PLANS:	16 | 35
ABUTMENT ELEVATION:	17 | 35
WINGWALL PLANS:	18 | 35
WINGWALL ELEVATIONS:	19 | 35
ABUTMENT STEM SECTIONS:	20 | 35
TYPICAL DETAILS:	21 | 35 – 22 | 35
FIXED BEARING:	29 | 35
REINFORCING LIST:	33 | 35

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
VDK	CJG	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: TBD	
EFD		NSRR BR#: BR0018444	

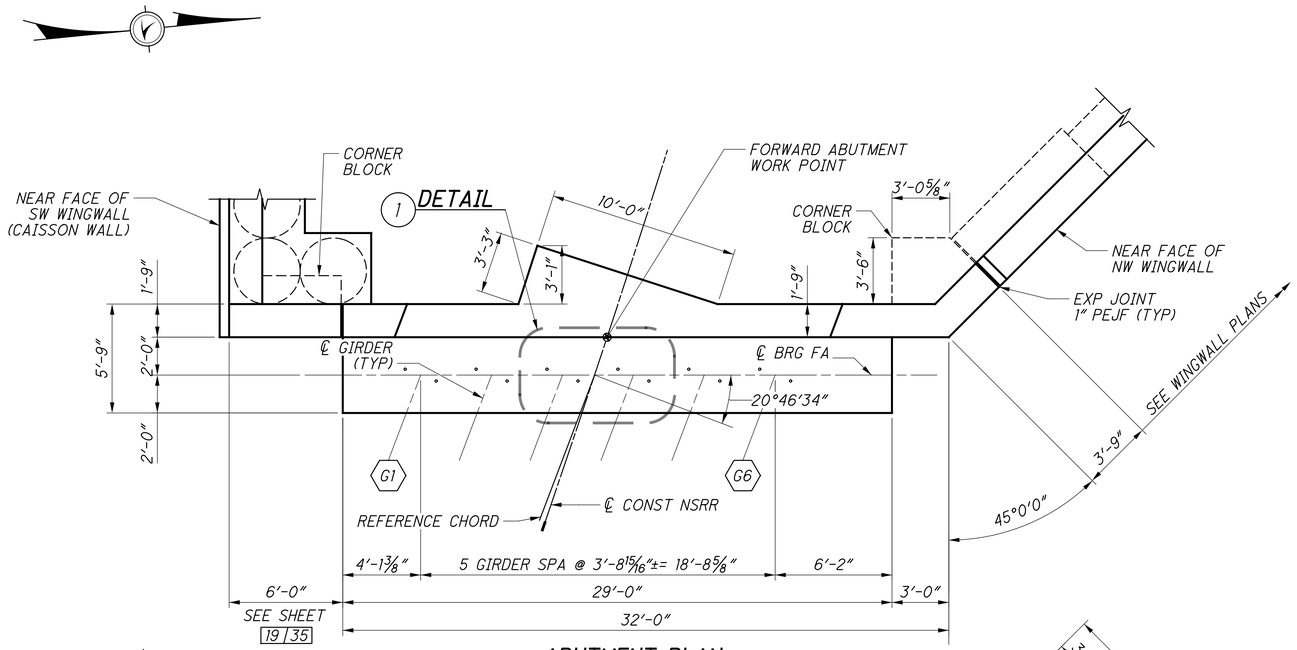
FORWARD ABUTMENT: PLAN AND ELEVATION
BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

HAM-75-7.85
PID No. 77889

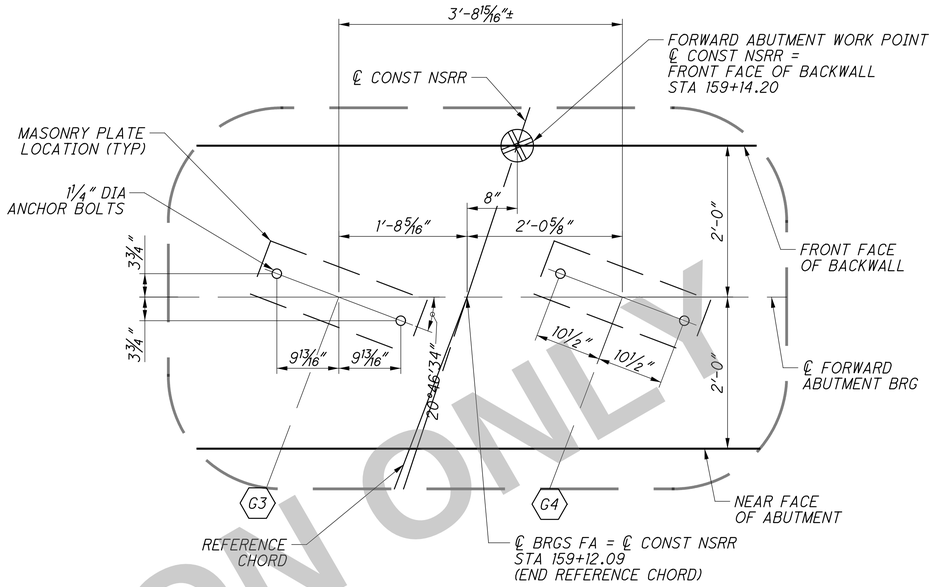
15 / 35

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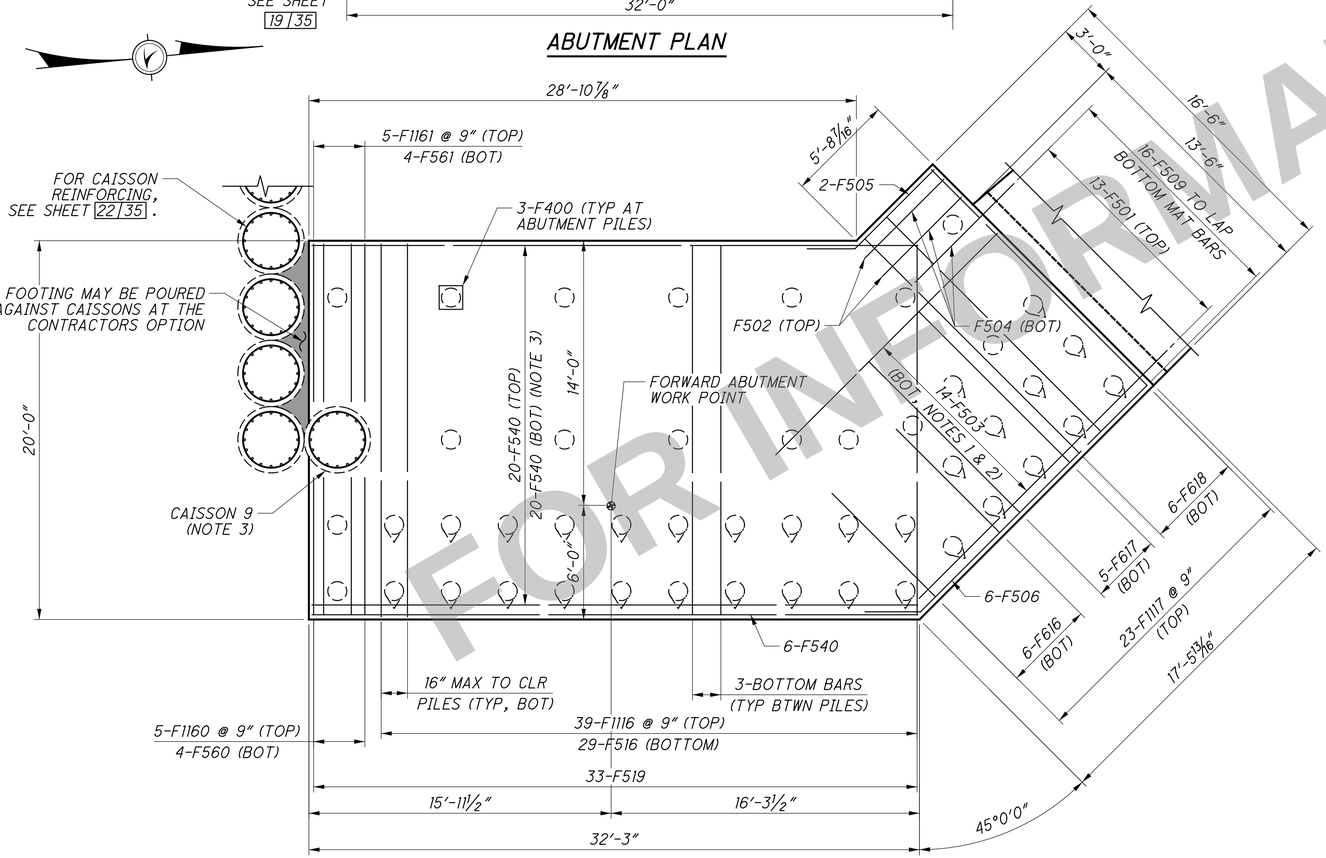
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ABUTMENT PLAN



1 **WORK POINT DEFINITION**
INCLUDING ANCHOR BOLT LAYOUT



FOOTING PLAN

NOTES:

1. FOR SPACING OF BOTTOM LONGITUDINAL BARS AROUND PILES SEE ABUTMENT TYPICAL SECTION, SHEET 21 35 OR WINGWALL TYPICAL SECTION, SHEET 22 35 .
2. F503 & F504 REINFORCING UNDER WINGWALL SECTION MAY BE POSITIONED OR FIELD TRIMMED TO CLEAR PILES AS REQUIRED.
3. FIELD ADJUST F540 REINFORCING TO CLEAR CAISSON C9.
4. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 33 35 .

FWD ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	8 35
GENERAL PLAN & ELEV:	15 35
ABUTMENT PLANS:	16 35
ABUTMENT ELEVATION:	17 35
WINGWALL PLANS:	18 35
WINGWALL ELEVATIONS:	19 35
ABUTMENT STEM SECTIONS:	20 35
TYPICAL DETAILS:	21 35 - 22 35
FIXED BEARING:	29 35
REINFORCING LIST:	33 35

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE SUITE 230
COLUMBUS, OHIO 43231

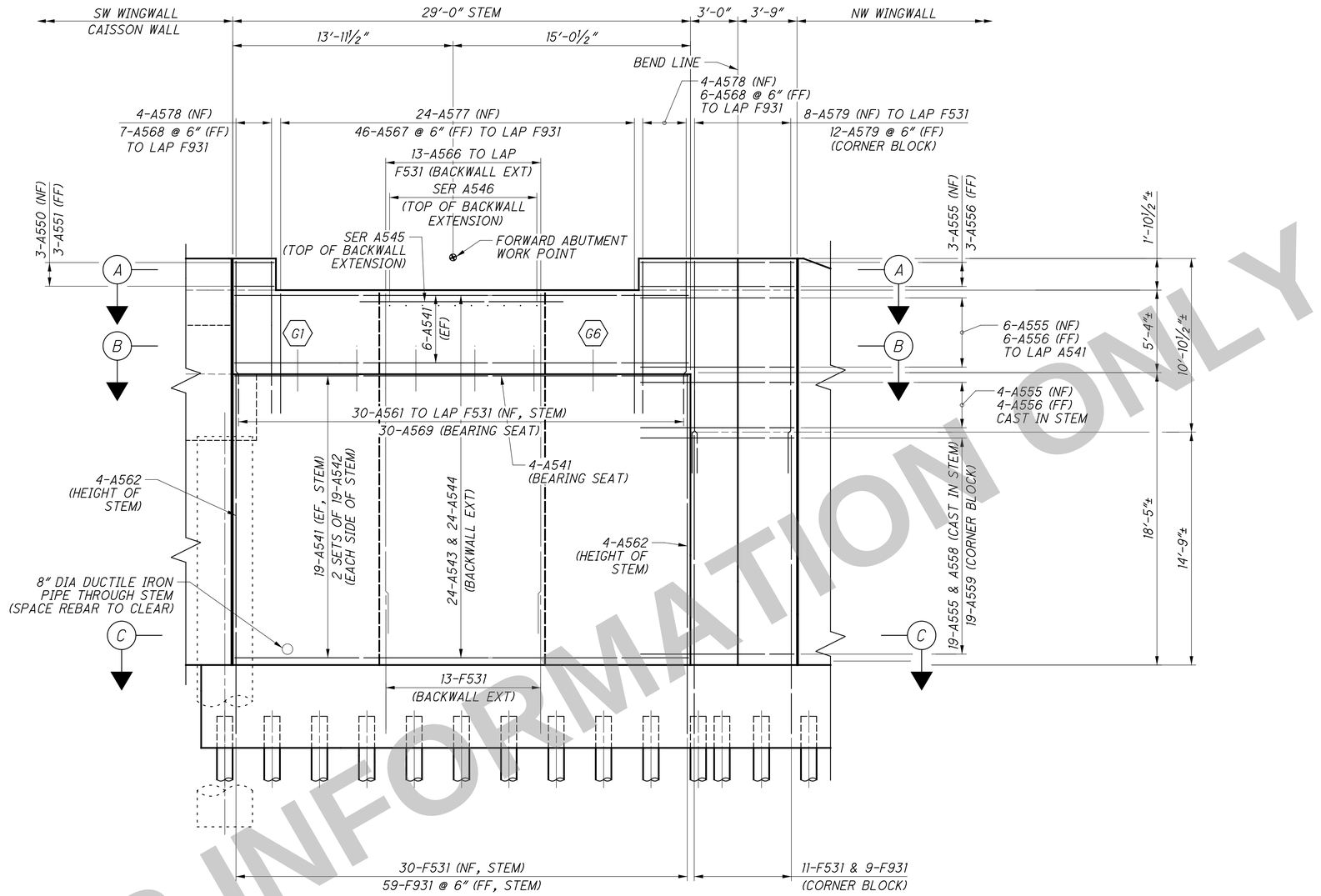
DESIGNED VDK | DRAWN CJG | CHECKED EFD | REVIEWED CTV | DATE 12-15-21 | REVISED | ODOT SFN: TBD | NSRR BR#: BR0018444

FORWARD ABUTMENT PLAN AND FOOTING PLAN
BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

HAM-75-7.85
PID No. 77889

1628 2017

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FORWARD ABUTMENT ELEVATION

SEE NOTE 1

FOR INFORMATION ONLY

NOTES:

1. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 33|35 .
2. FOR SECTIONS A-A, B-B AND C-C, SEE SHEET 20|35 .

FWD ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	8|35
GENERAL PLAN & ELEV:	15|35
ABUTMENT PLANS:	16|35
ABUTMENT ELEVATION:	17|35
WINGWALL PLANS:	18|35
WINGWALL ELEVATIONS:	19|35
ABUTMENT STEM SECTIONS:	20|35
TYPICAL DETAILS:	21|35 - 22|35
FIXED BEARING:	29|35
REINFORCING LIST:	33|35

DESIGN AGENCY
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VDK	CJG	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: TBD	
EFD		NSRR BR#: BR0018444	

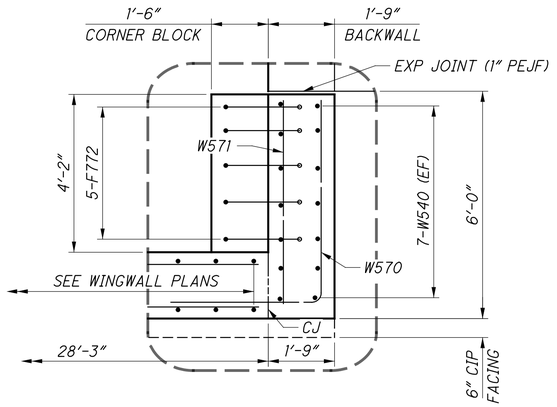
FORWARD ABUTMENT ELEVATION DETAILS
BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

HAM-75-7.85
PID No. 77889

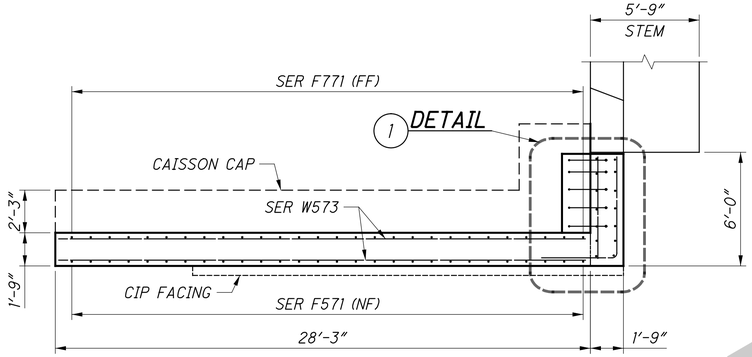
17 / 35

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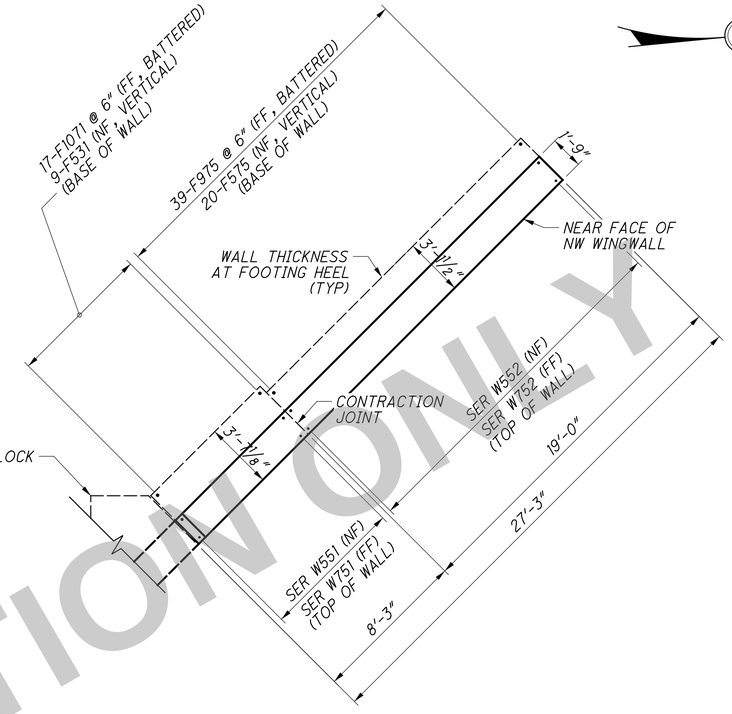
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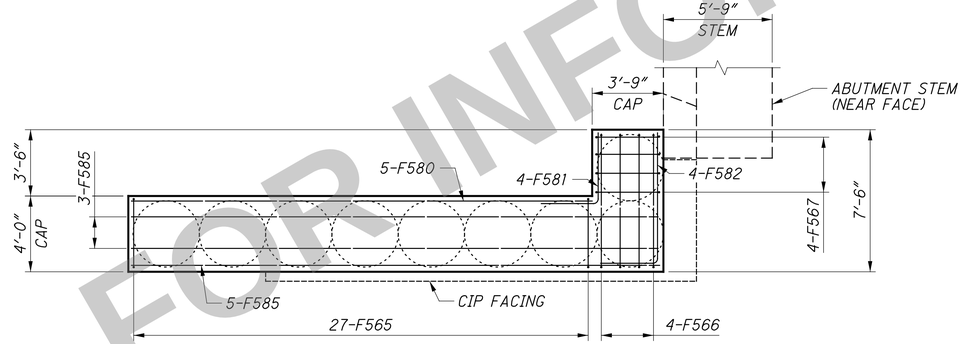
1 **DETAIL**
CORNER BLOCK



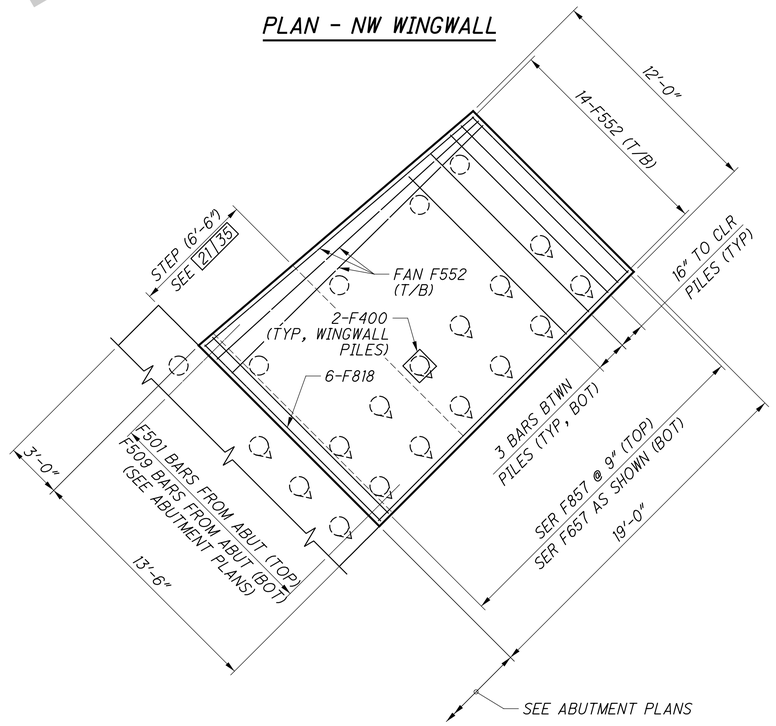
PLAN - SW WINGWALL



PLAN - NW WINGWALL



CAISSON CAP PLAN - SW WINGWALL



FOOTING PLAN - NW WINGWALL

FWD ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	8/35
GENERAL PLAN & ELEV:	15/35
ABUTMENT PLANS:	16/35
ABUTMENT ELEVATION:	17/35
WINGWALL PLANS:	18/35
WINGWALL ELEVATIONS:	19/35
ABUTMENT STEM SECTIONS:	20/35
TYPICAL DETAILS:	21/35 - 22/35
FIXED BEARING:	29/35
REINFORCING LIST:	33/35

NOTES:

1. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 33/35.

FOR INFORMATION ONLY

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EFD		NSRR BR#: BR0018444	

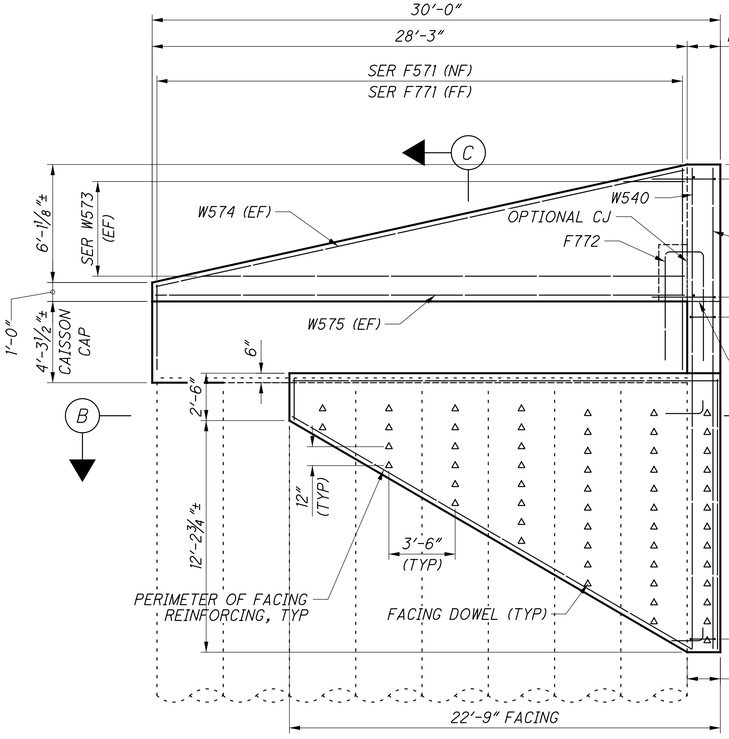
NORTHWEST AND SOUTHWEST WINGWALL PLANS
BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

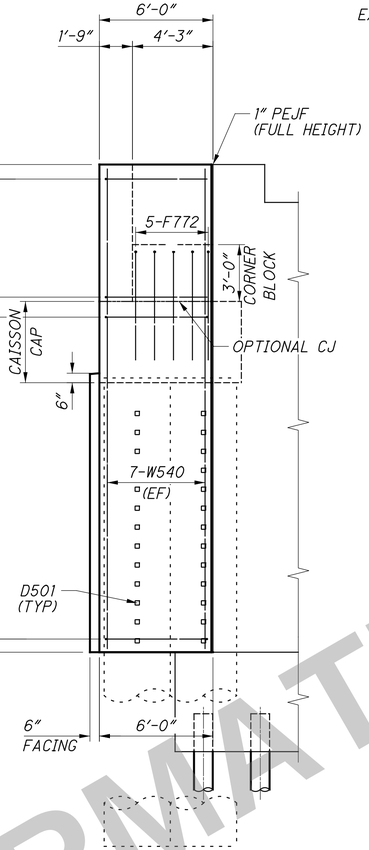
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PID No. 77889

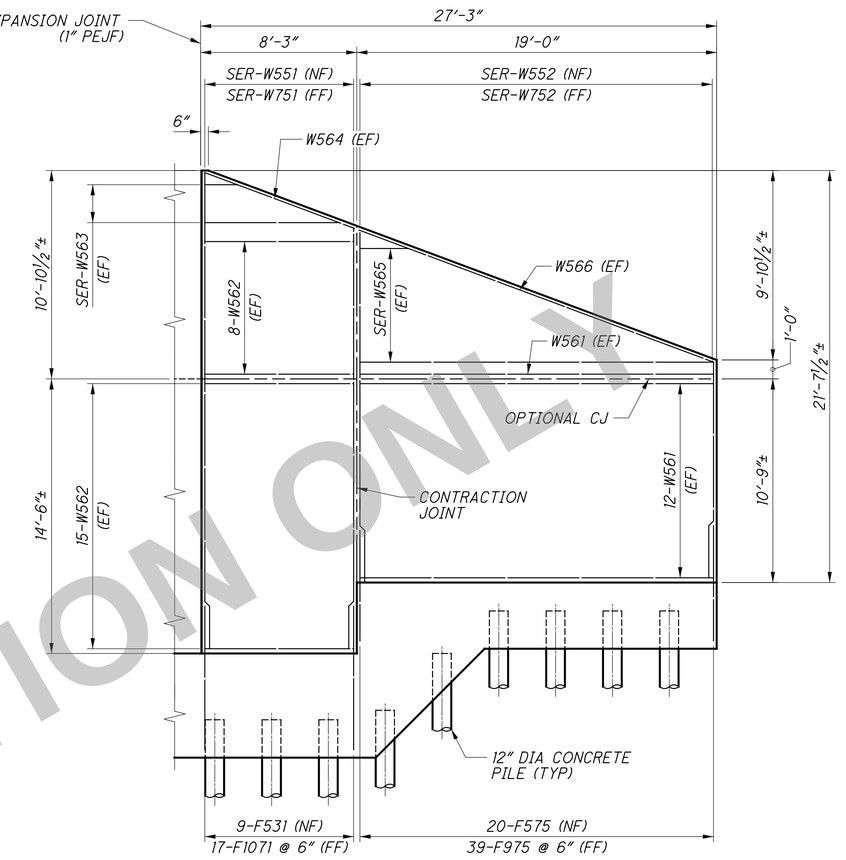
18 / 35

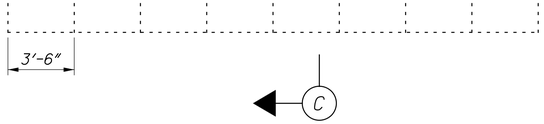
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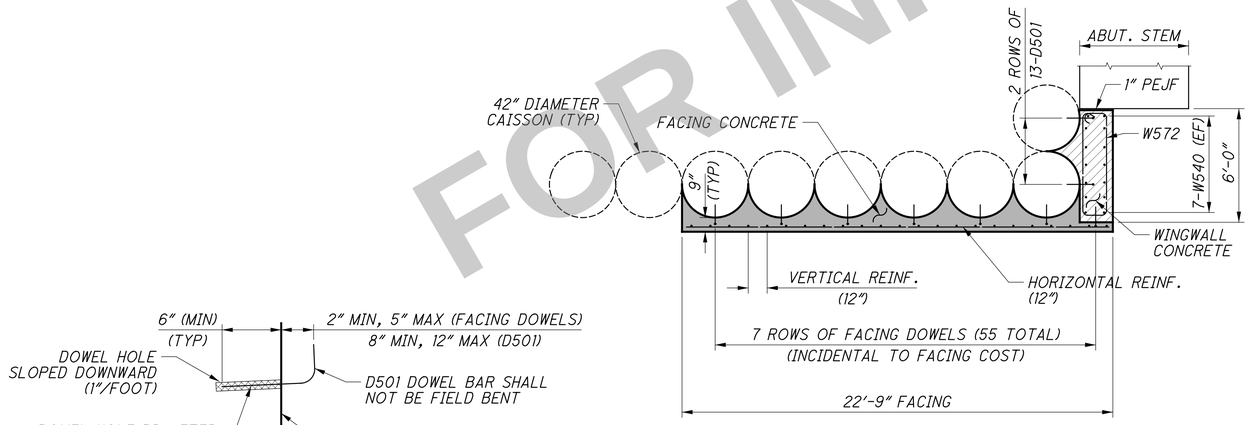




SOUTHWEST WINGWALL ELEVATION

A ELEVATION

NORTHWEST WINGWALL ELEVATION



B SECTION

DOWEL DETAIL

NOTES:

1. FOR SECTION C-C, SEE SHEET 22/35.
2. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 33/35.
3. VERTICALLY ADJUST AND FIELD CUT VERTICAL REINFORCING AS REQUIRED TO CLEAR PILES.

ITEM 511 - CONCRETE, MISC.: FACING OF CANTILEVER WALLS

THE APPROXIMATE VOLUME OF CONCRETE TO FACE THE SOUTHWEST CAISSON WALL IS 8.4 CUBIC YARDS. THIS VALUE IS GIVEN ONLY FOR ESTIMATING PURPOSES AND INCLUDES ANNULAR SPACES BETWEEN CAISSONS. THE CONTRACTOR SHALL PROVIDE ACTUAL QUANTITIES REQUIRED TO FACE THE WALL PER THESE PLANS.

THE HORIZONTAL AND VERTICAL REINFORCING STEEL SPACING SHALL NOT EXCEED 12" AND SHALL CONTAIN 0.25 SQUARE INCHES OF STEEL PER FOOT IN EACH DIRECTION (AREMA CHAPTER 8-2.12). REINFORCING STEEL MAY CONSIST OF REINFORCING BARS OR WELDED WIRE FABRIC. PERIMETER BARS SHALL BE #5.

FOR MORE NOTES, INCLUDING BASIS OF PAYMENT, SEE SHEET 1503/2017.

FWD ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	8/35
GENERAL PLAN & ELEV:	15/35
ABUTMENT PLANS:	16/35
ABUTMENT ELEVATION:	17/35
WINGWALL PLANS:	18/35
WINGWALL ELEVATIONS:	19/35
ABUTMENT STEM SECTIONS:	20/35
TYPICAL DETAILS:	21/35 – 22/35
FIXED BEARING:	29/35
REINFORCING LIST:	33/35

FOR INFORMATION ONLY

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ENGINEERS & ARCHITECTS, P.C.
2600 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
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EFD		NSRR BR#: BR0018444	

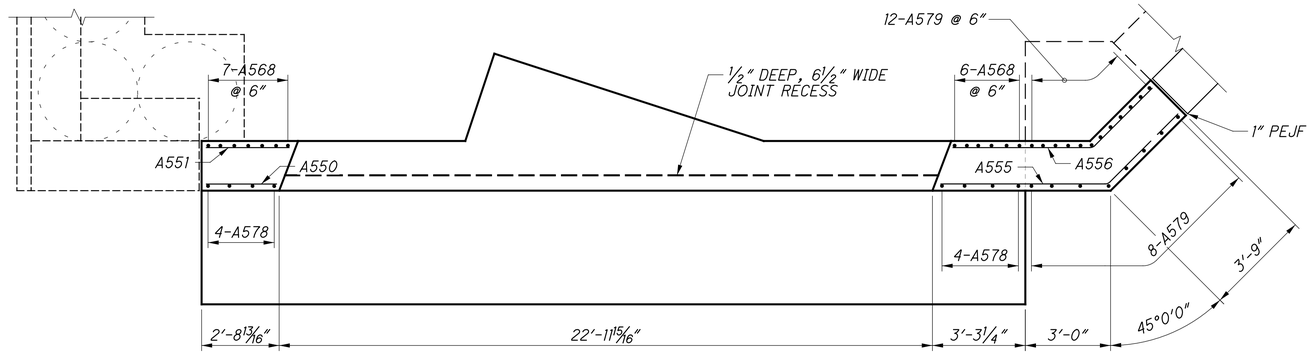
FORWARD WINGWALL ELEVATION DETAILS
BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

HAM-75-7.85
PID No. 77889

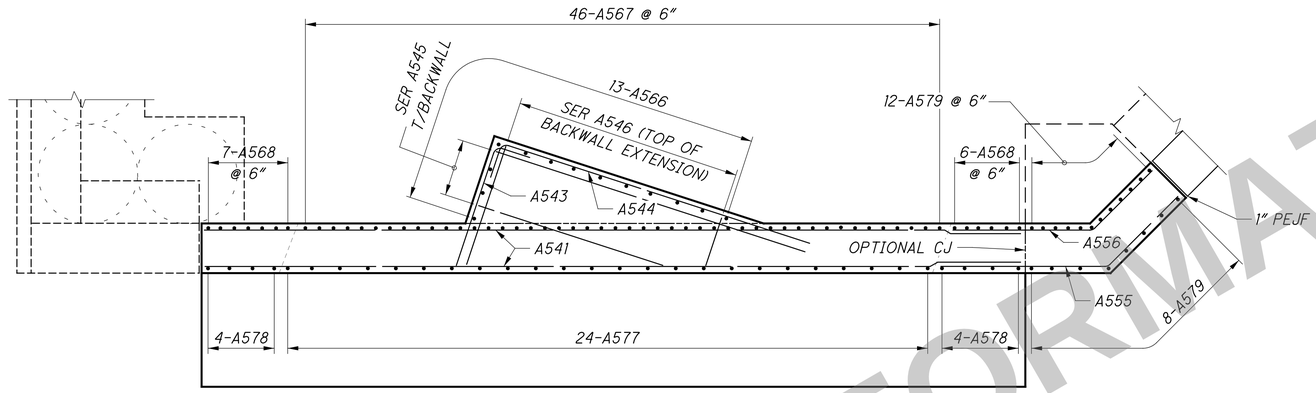
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1631 2017

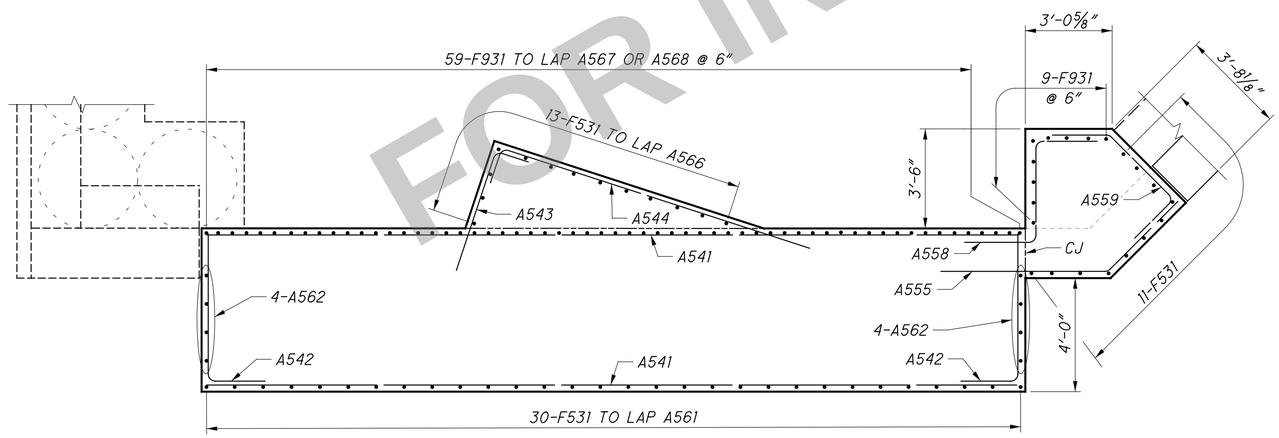
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A SECTION
17 | 35



B SECTION
17 | 35



C SECTION
17 | 35

NOTES:

1. FOR REQUIRED LAP LENGTHS AND REINFORCING NOTES, SEE SHEET 33 | 35.

FWD ABUTMENT SHEET REFERENCES

FOUNDATION PLAN:	8 | 35
GENERAL PLAN & ELEV:	15 | 35
ABUTMENT PLANS:	16 | 35
ABUTMENT ELEVATION:	17 | 35
WINGWALL PLANS:	18 | 35
WINGWALL ELEVATIONS:	19 | 35
ABUTMENT STEM SECTIONS:	20 | 35
TYPICAL DETAILS:	21 | 35 – 22 | 35
FIXED BEARING:	29 | 35
REINFORCING LIST:	33 | 35

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VDK	CAN	CTV	12-15-21
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EFD		NSRR BR#: BR0018444	

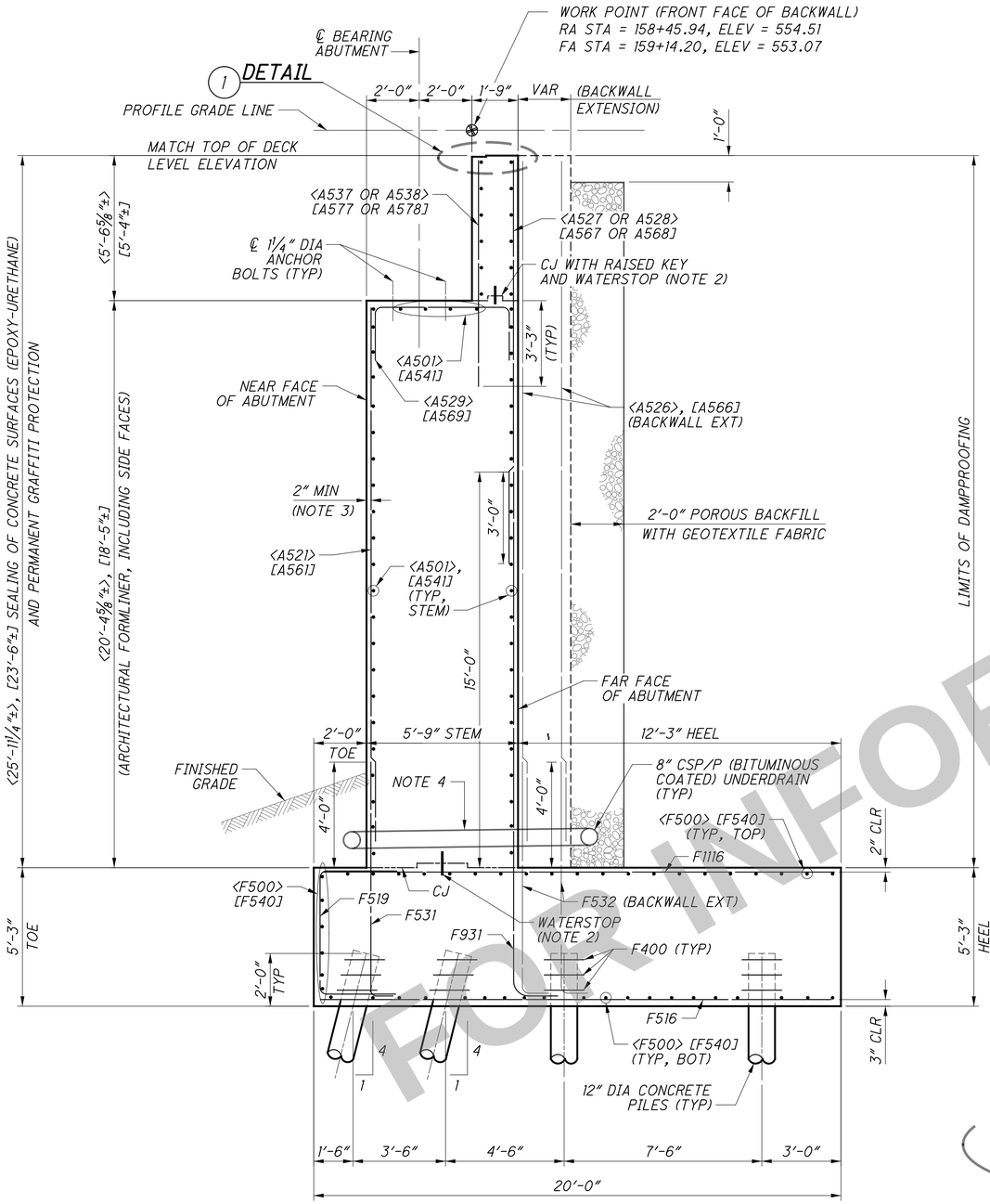
FORWARD ABUTMENT REINFORCING DETAILS

BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

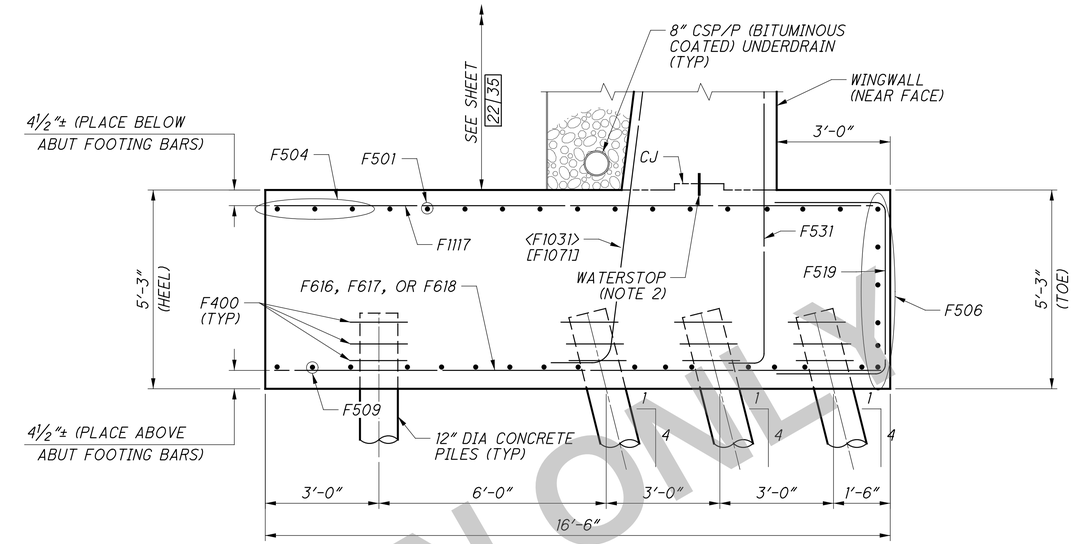
HAM-75-7.85
PID No. 77889

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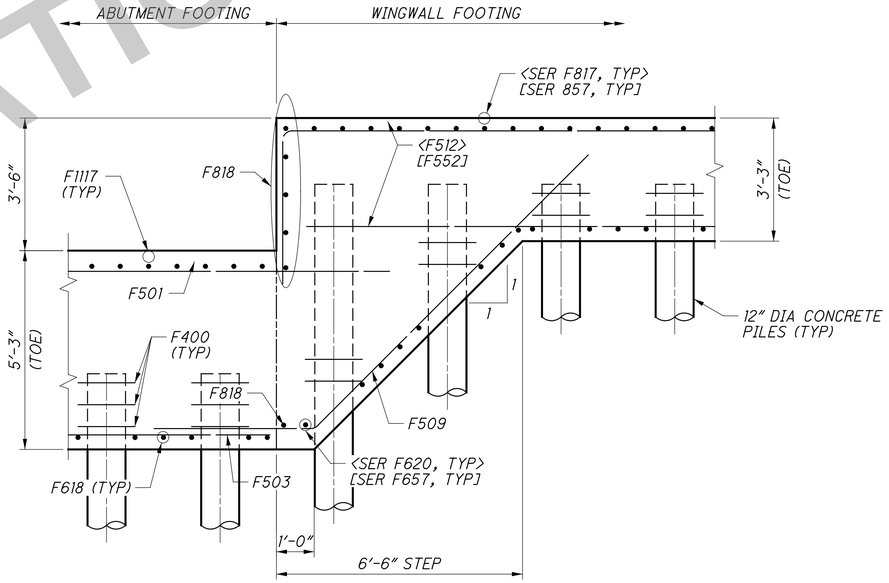


TYPICAL ABUTMENT SECTION



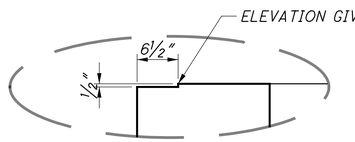
ABUTMENT FOOTING DETAIL

BELOW WINGWALL SECTION



FOOTING STEP DETAIL

ABUTMENT TO WINGWALL



1 DETAIL

NOTES:

1. DIMENSIONS AND CALLOUTS IN <DIM> REFERENCE THE REAR ABUTMENT
   DIMENSIONS AND CALLOUTS IN [DIM] REFERENCE THE FORWARD ABUTMENT
   DIMENSIONS AND CALLOUTS NOT IN BRACKETS ARE APPLICABLE TO BOTH ABUTMENTS
2. WATERSTOPS SHALL BE 6"x⅜" PVC AND SHALL BE CONTINUOUS ACROSS JOINT.
3. ADJUST CLEAR DISTANCE TO PLAN DIMENSION TO ACCOUNT FOR FORMLINER RELIEF
   AS PER FORMLINER GENERAL NOTE.
4. ADJUST REINFORCING TO CLEAR 8" DIA DUCTILE IRON UNDERDRAIN OUTLET PIPE.

ABUTMENT SHEET REFERENCES

FOUNDATION PLANS:	8 | 35
REAR ABUTMENT PLANS:	9 | 35 - 14 | 35
FWD ABUTMENT PLANS:	15 | 35 - 20 | 35
REINFORCING DETAILS:	33 | 35

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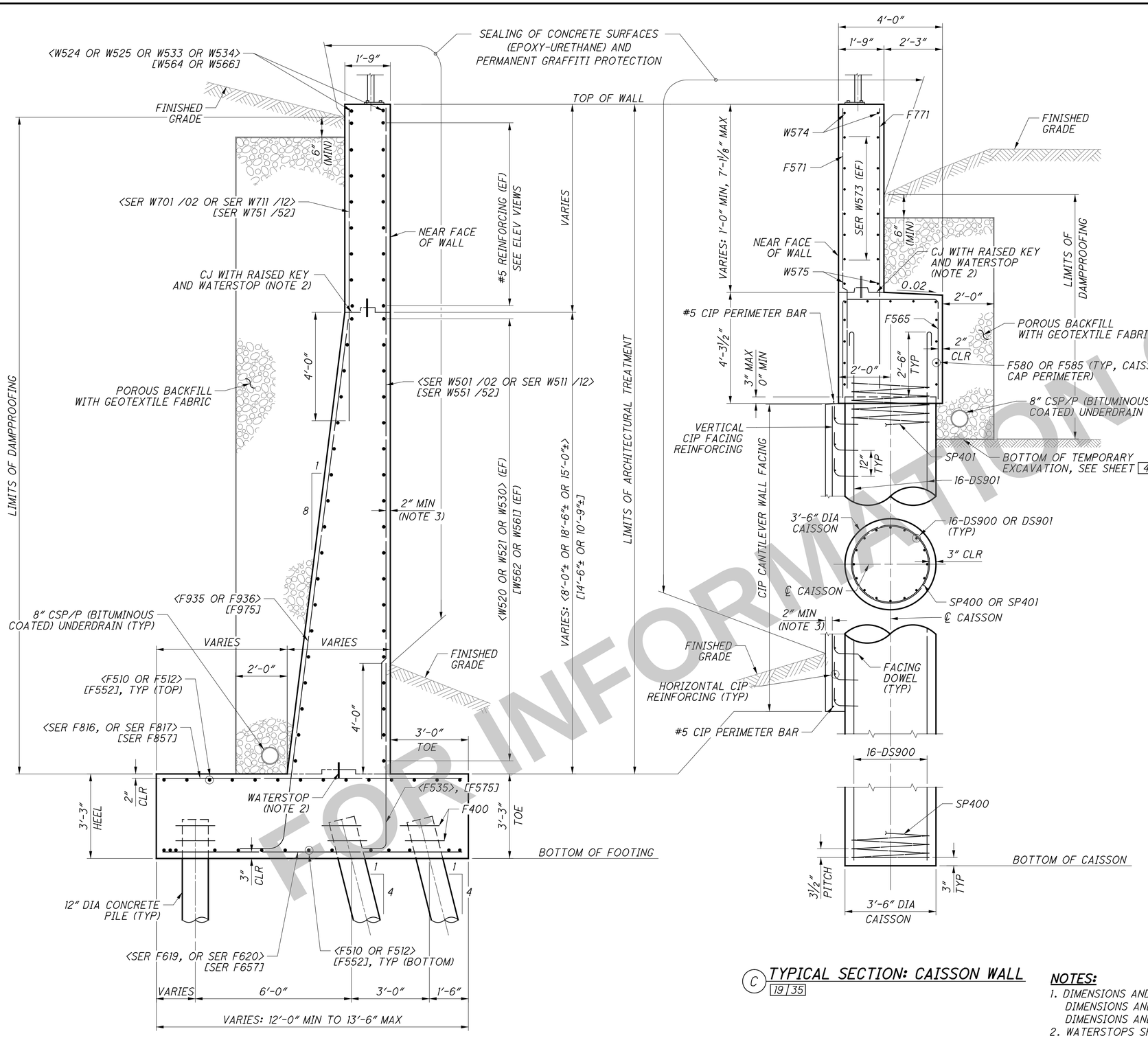
TYPICAL ABUTMENT SECTION
BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

HAM-75-7.85
PID No. 77889

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2017

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TYPICAL SECTION: WINGWALL

Ⓒ TYPICAL SECTION: CAISSON WALL
19|35

NOTES:

1. DIMENSIONS AND CALLOUTS IN <DIM> REFERENCE THE REAR WINGWALLS
   DIMENSIONS AND CALLOUTS IN [DIM] REFERENCE THE FORWARD WINGWALLS
   DIMENSIONS AND CALLOUTS NOT IN BRACKETS ARE APPLICABLE TO BOTH WINGWALLS
2. WATERSTOPS SHALL BE 6"x⅜" PVC AND SHALL BE CONTINUOUS ACROSS JOINT. FOR RAISED KEYWAY DETAIL, SEE TYPICAL STRUCTURAL DETAILS SHEET (1513/2017).
3. ADJUST CLEAR DISTANCE TO PLAN DIMENSION TO ACCOUNT FOR FORMLINER RELIEF AS PER FORMLINER GENERAL NOTE.

FOR INFORMATION ONLY

DESIGN AGENCY
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ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
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CHECKED	REVISED	ODOT SFN: TBD	
EFD		NSRR BR#: BR0018444	

TYPICAL WINGWALL DETAILS

BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

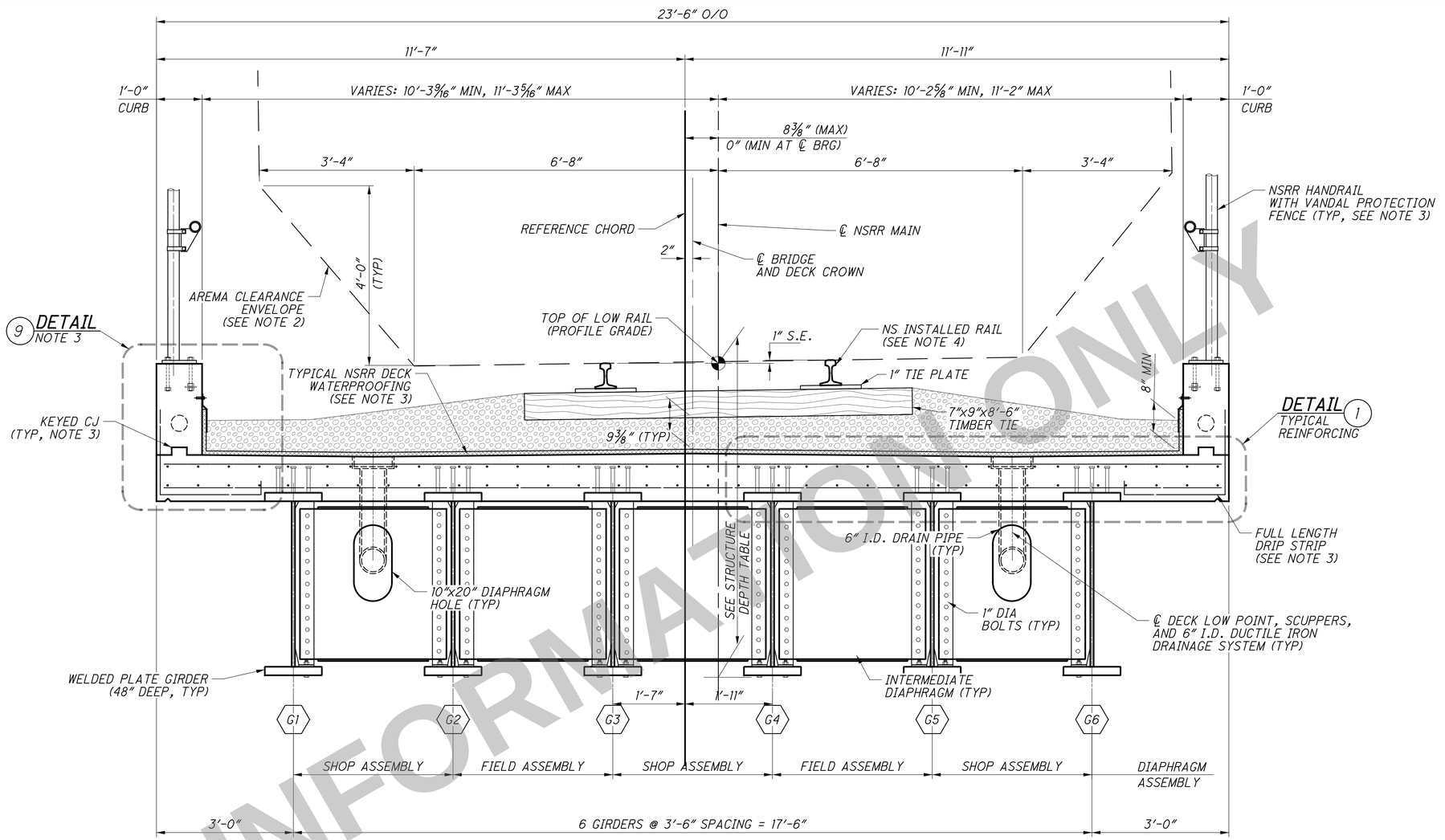
HAM-75-7.85
PID No. 77889

22 / 35

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2017

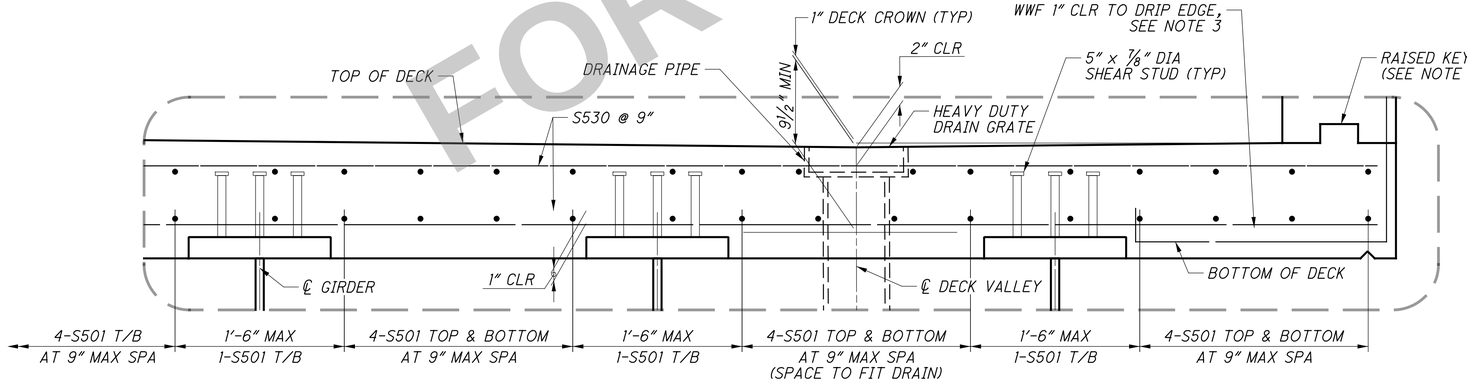
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STRUCTURE DEPTH TABLE	
ELEMENT	DEPTH
141 RE RAIL (NOTE 4)	7 7/16"
TIE PLATE	1"
TIE	7"
BALLAST UNDER TIE (AT DECK CROWN)	9 3/8"
WATERPROOFING	1 1/8"
CROWN HEIGHT	1"
MIN CONCRETE DECK	9 1/2"
GIRDER	48"
BOLT HEAD THICKNESS	5/8"
TOTAL DEPTH FROM PGL	85 1/16"



TYPICAL TRANSVERSE SECTION

LOOKING UPSTATION (NOTE 1)



1 TYPICAL SLAB REINFORCING DETAIL

MISC. DETAILS NOT SHOWN FOR CLARITY

NOTES:

1. THE TYPICAL TRANSVERSE SECTION IS DRAWN AND DIMENSIONED NORMAL TO THE CHORD. THE TYPICAL SECTION SHOWN IS SCHEMATIC. BOTTOM OF BEAM ELEVATIONS AND DECK LOW POINT ELEVATIONS ARE EQUAL ALONG THE SKEW. MISCELLANEOUS STEEL DETAILS ACCOUNT FOR VARIATIONS IN BOTTOM OF BEAM ELEVATIONS NORMAL TO THE REFERENCE CHORD. MOVING LEFT TO RIGHT ACROSS A TRUE SECTION NORMAL TO THE REFERENCE CHORD, EACH BOTTOM OF BEAM ELEVATION WILL INCREASE BY APPROXIMATELY 5/16".
2. THE AREMA CLEARANCE ENVELOPE SHOWN IS THE STANDARD CLEARANCE ENVELOPE WIDENED BY 12" IN EACH DIRECTION TO ACCOUNT FOR A MAXIMUM 8 DEGREE HORIZONTAL CURVATURE.
3. FOR TYPICAL CURB, KEYWAY, OVERHANG, DRIP EDGE, WATERPROOFING, DECK DRAINAGE, HANDRAIL AND VANDAL PROTECTION FENCE DETAILS, SEE RAILROAD TYPICAL DETAILS ON SHEETS (1509/2017) THROUGH (1514/2017).
4. RAIL TO BE EITHER 136 OR 141 RE RAIL, PER NS DIRECTION. THE VERTICAL AND BALLAST CLEARANCES ARE CALCULATED USING THE TALLER 141 RE RAIL PER NS DIRECTION.

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
VDT	DKU	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: TBD	NSRR BR#: BR0018444
EFD			

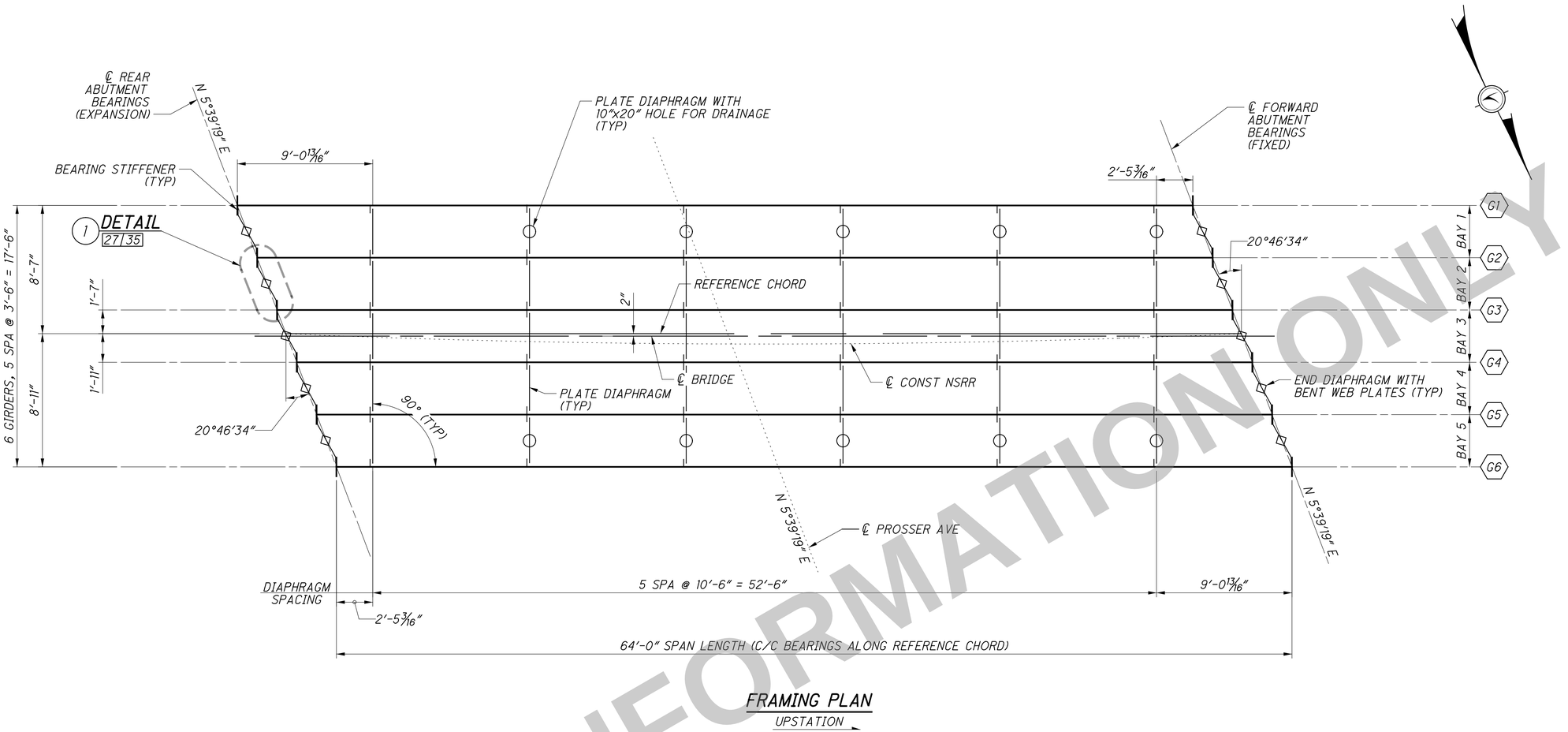
TRANSVERSE SECTION

BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

HAM-75-7.85
PID No. 77889

1635/2017

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FRAMING PLAN

UPSTATION

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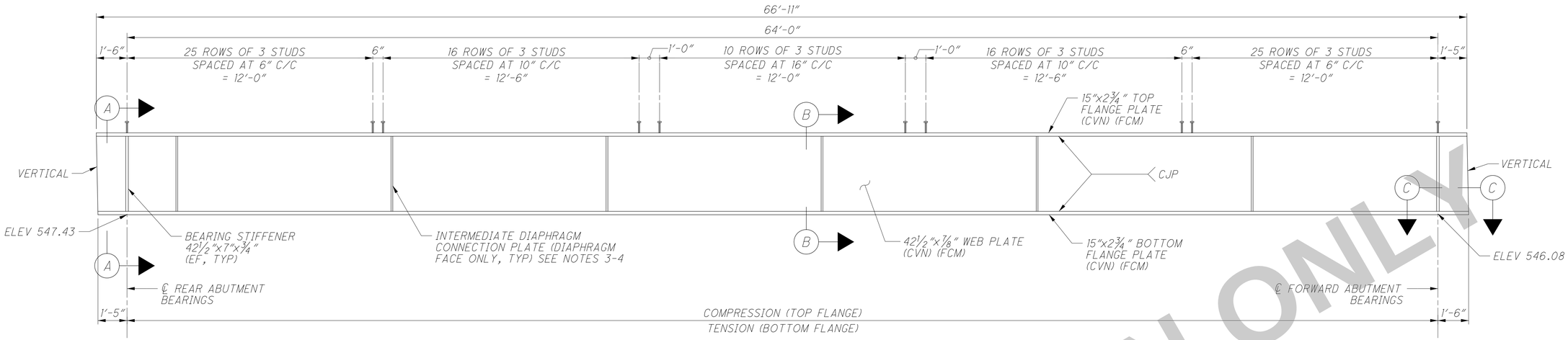
DESIGN AGENCY
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DESIGNED	DRAWN	REVIEWED	DATE
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CHECKED	REVISED	ODOT SFN: TBD	
EFD		NSRR BR#: BR0018444	

FRAMING PLAN
BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

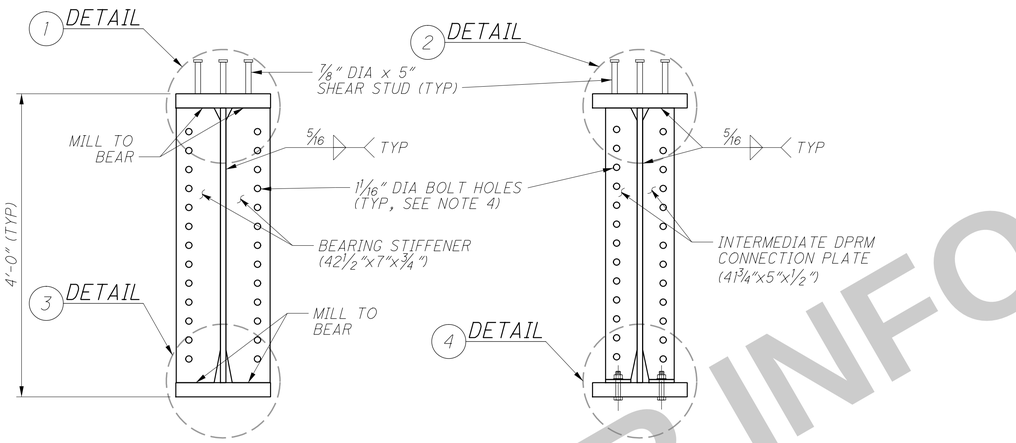
HAM-75-7.85
PID No. 77889

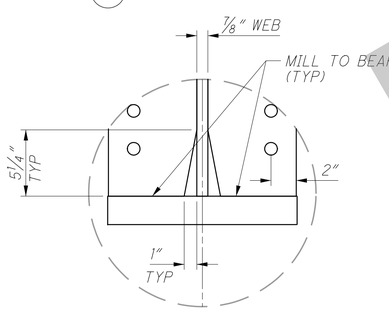
1636
2017



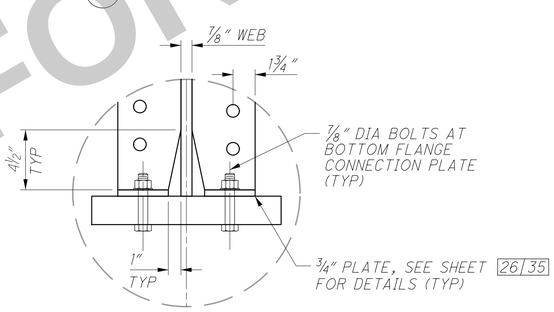
GIRDER ELEVATION

UPSTATION ►

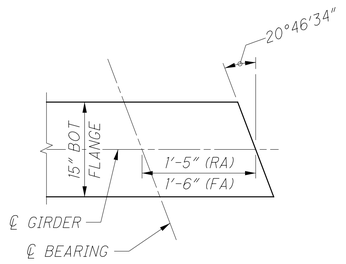




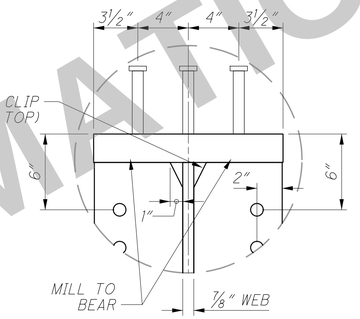
3 DETAIL
END STIFFENER



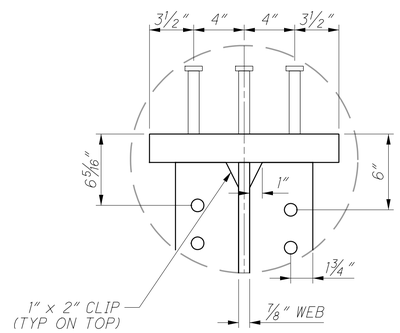
4 DETAIL
INTERMEDIATE DIAPHRAGM CONNECTION PLATE



C END BEVEL



1 DETAIL
BEARING STIFFENER



2 DETAIL
INTERMEDIATE DIAPHRAGM CONNECTION PLATE

NOTES:

1. HIGH STRENGTH BOLTS SHALL BE 1" DIAMETER ASTM F3125, GRADE A325, UNLESS OTHERWISE NOTED.
2. (CVN) DENOTES A CHARPY V-NOTCH TEST IS REQUIRED. WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.

   (FCM) DENOTES FRACTURE CRITICAL MEMBER. ALL FCM STEEL SHALL BE PROVIDED PER NORFOLK SOUTHERN SPECIFICATIONS FOR STRUCTURAL STEEL AND THE GENERAL NOTES ON SHEET: 1502/2017 .
3. FOR STIFFENER AND DIAPHRAGM DETAILS, SEE SHEET 26/35 AND 27/35 .
4. FOR TRANSVERSE STIFFENER AND DIAPHRAGM SPACING, SEE FRAMING PLAN SHEET 24/35 .

FOR INFORMATION ONLY

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2500 CORPORATE EXCHANGE DRIVE, SUITE 230
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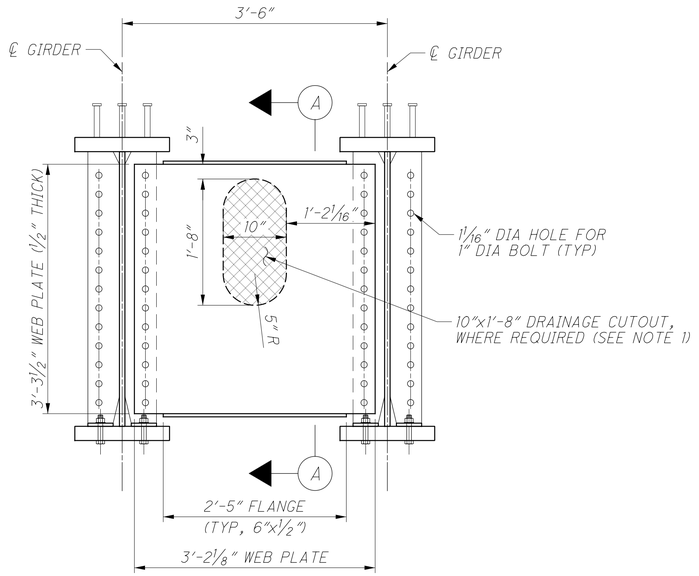
GIRDER ELEVATION AND SECTIONS
BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

HAM-75-7.85 PID No. 77889

25 / 35

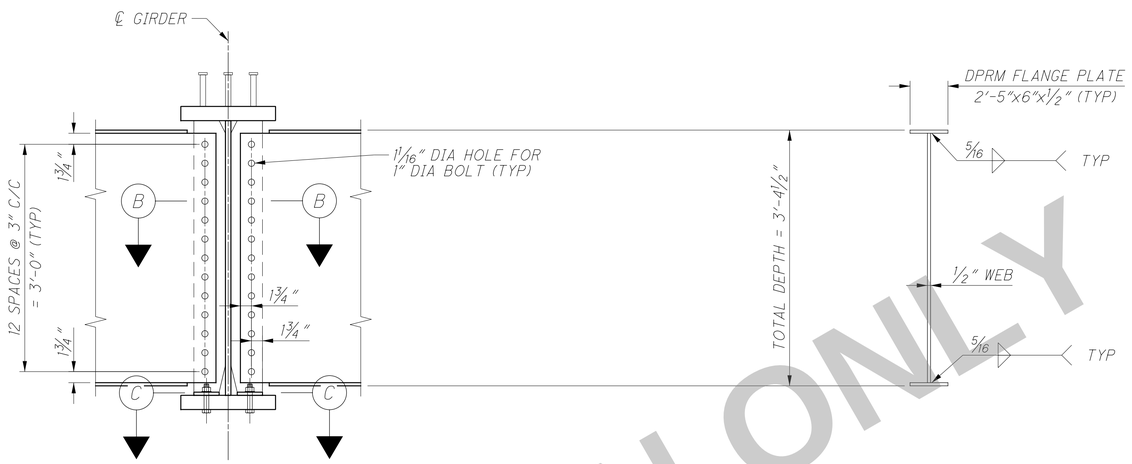
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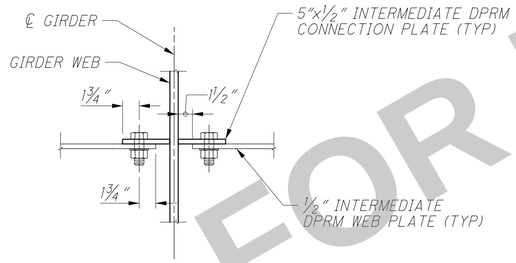
INTERMEDIATE DIAPHRAGM DETAILS

(NORMAL TO REFERENCE CHORD)

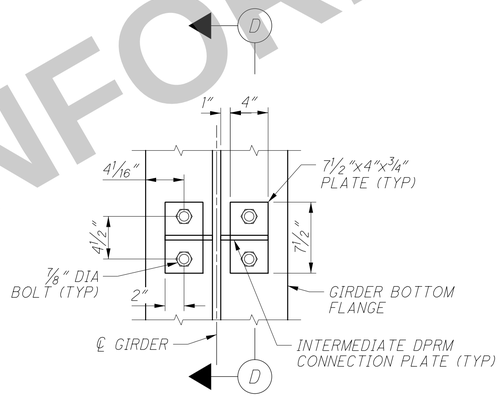


INTERMEDIATE DIAPHRAGM CONNECTION DETAILS

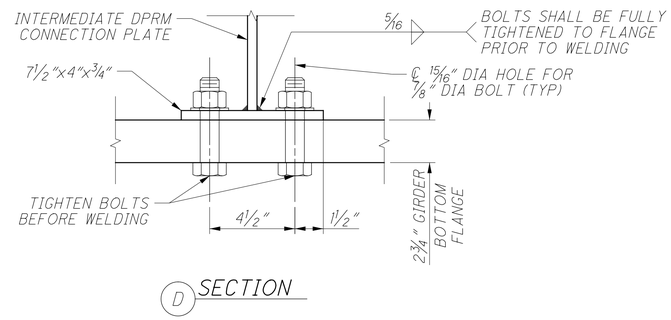
A SECTION



B SECTION



C SECTION



D SECTION

NOTES:

1. DRAINAGE HOLES ARE ONLY REQUIRED IN BAYS 1 AND 5. SEE FRAMING PLAN SHEET 24|35.

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DESIGN AGENCY
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DESIGNED	DRAWN	REVIEWED	DATE
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EFD		NSRR BR#: BR0018444	

SUPERSTRUCTURE DETAILS 1/2

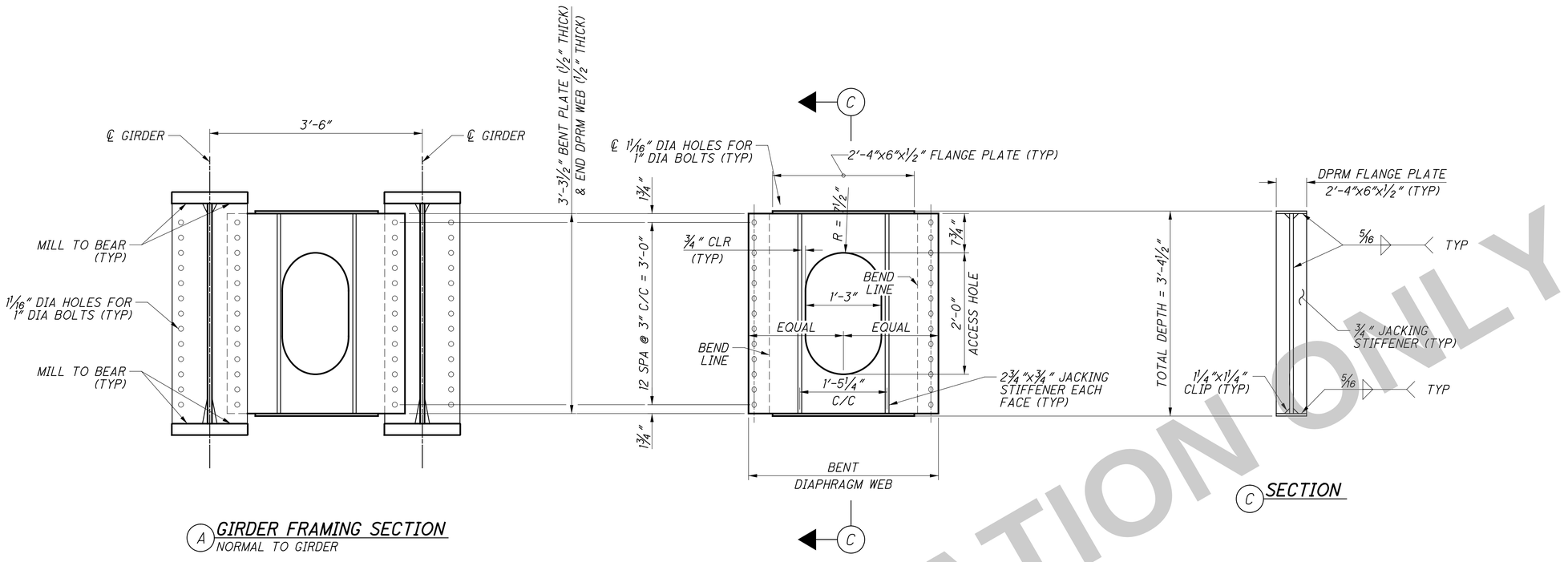
BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)

NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

HAM-75-7.85

PID No. 77889

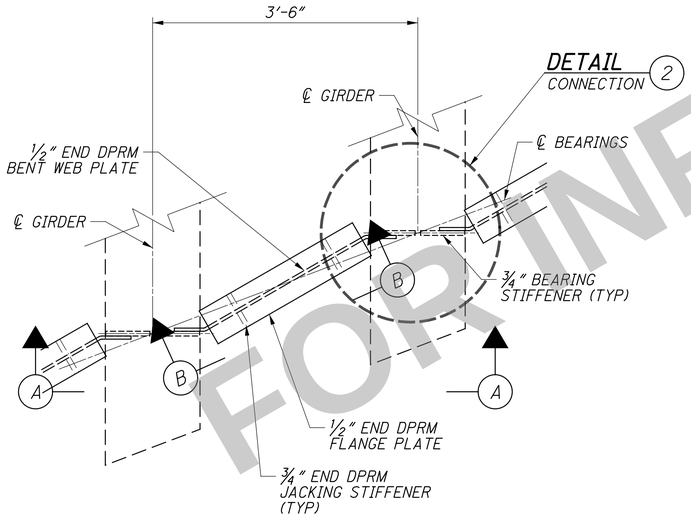
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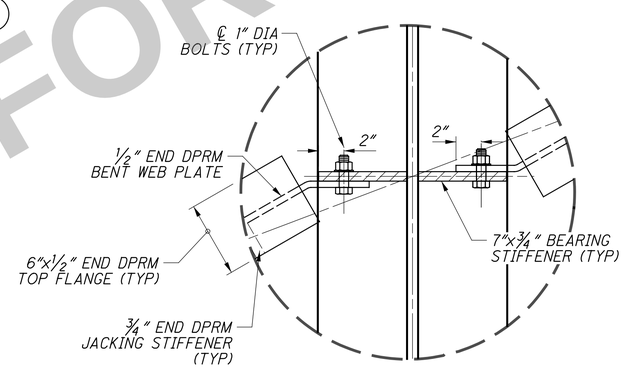
A GIRDER FRAMING SECTION
NORMAL TO GIRDER

B END DIAPHRAGM ELEVATION
PARALLEL TO DIAPHRAGM

C SECTION



1 TYPICAL END DIAPHRAGM DETAIL
SEE SHEET 24/35



2 CONNECTION DETAIL
BEARING STIFFENER AND END DIAPHRAGM WITH BENT WEB PLATES

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DESIGN AGENCY
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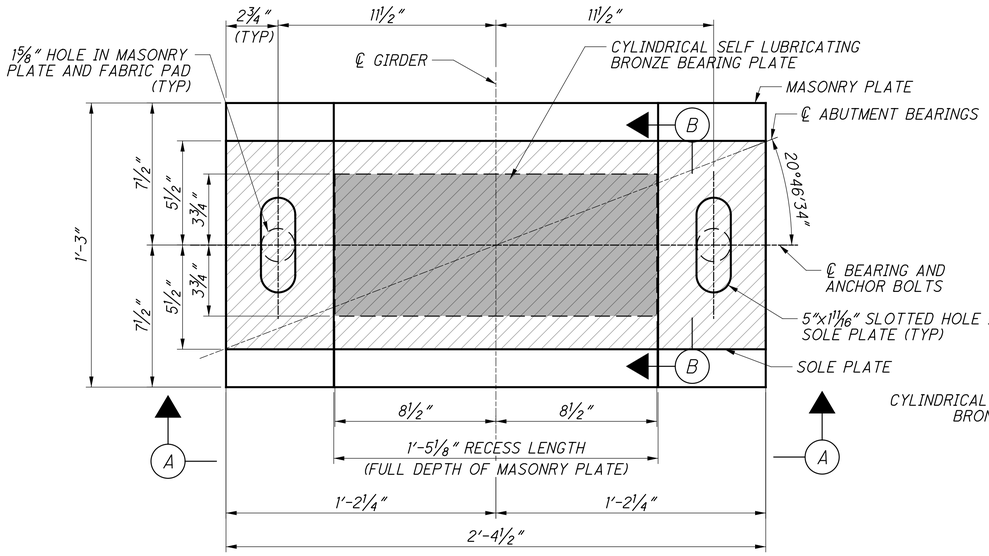
DESIGNED	DRAWN	REVIEWED	DATE
VDT	CJG	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: TBD	
EFD		NSRR BR#: BR0018444	

SUPERSTRUCTURE DETAILS 2/2
BRIDGE NO. HAM-75-PROSSER (INSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

HAM-75-7.85
PID No. 77889

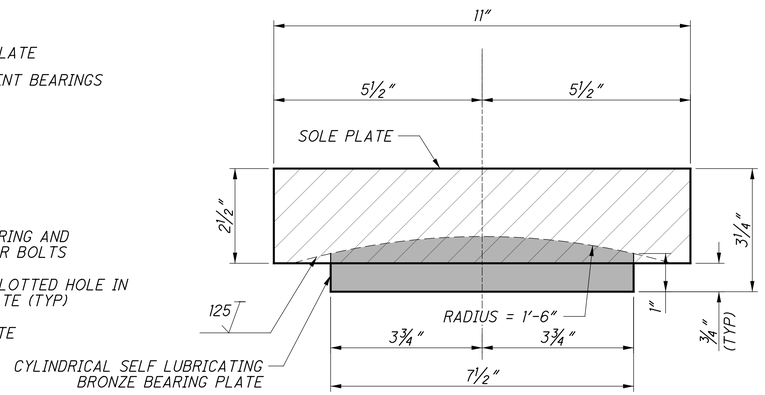
27 / 35

1639
2017



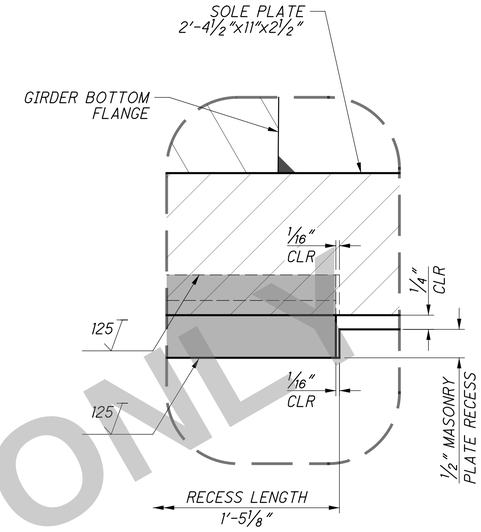
TYPICAL EXPANSION BEARING

6 REQUIRED (ANCHOR BOLTS NOT SHOWN)



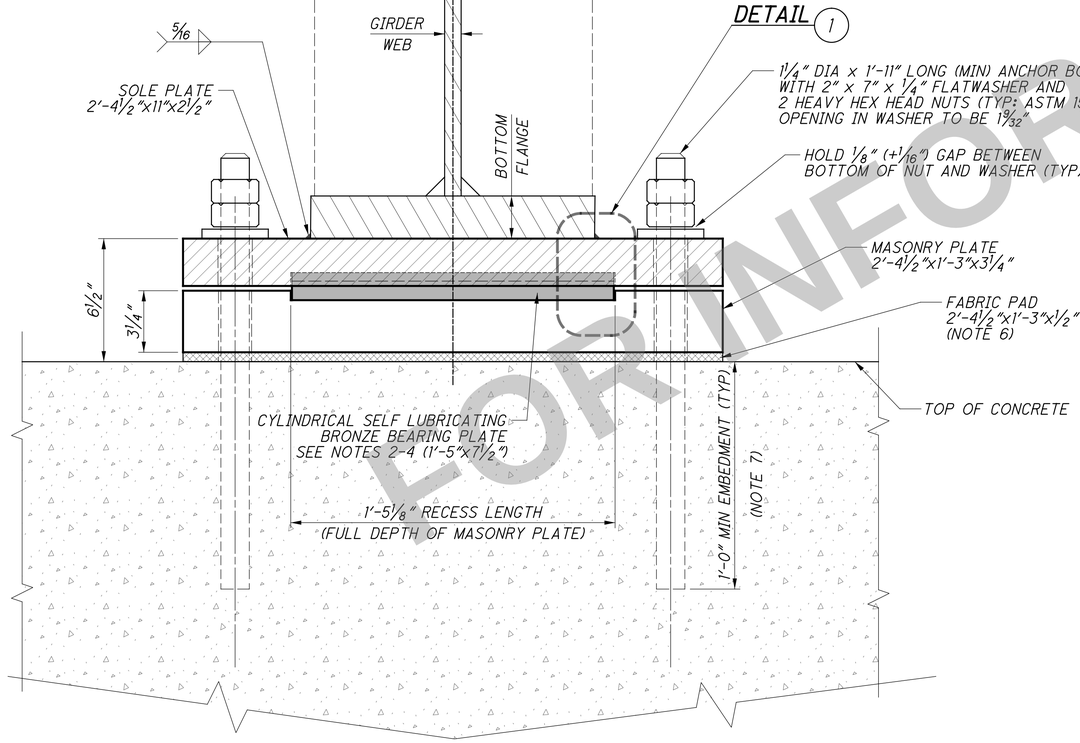
(B) SECTION

CYLINDRICAL BEARING ASSEMBLY



(1) DETAIL

RECESS DETAILS



(A) ELEVATION

LOAD TABLE	
DEAD LOAD (KIPS)	64.3
LIVE LOAD + IMPACT (KIPS)	173.8
SERVICE VERTICAL LOADS (KIPS)	238.1

NOTES:

1. BEARINGS SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF AREMA CHAPTER 15 AND THE NORFOLK SOUTHERN PUBLIC PROJECTS MANUAL.
2. BRONZE BEARING PLATES SHALL CONFORM TO THE STANDARD SPECIFICATION FOR BRONZE CASTINGS FOR BRIDGES AND TURNTABLES, ASTM B-22. ALLOY C91100 SHALL BE FURNISHED.
3. SOLID LUBRICANT SHALL CONSIST OF A COMBINATION OF SOLIDS HAVING NON-DETERIORATING CHARACTERISTICS, AS WELL AS LUBRICATING QUALITIES AND SHALL BE CAPABLE OF WITHSTANDING LONG TERM ATMOSPHERIC EXPOSURE, DE-ICING MATERIALS AND WATER. MOLYBDENUM DISULFIDE AND OTHER INGREDIENTS WHICH MAY PROMOTE ELECTROLYTIC OR CHEMICAL ACTION BETWEEN THE BEARING ELEMENTS SHALL NOT BE USED. SHELLAC, TARS AND ASPHALTS AND PETROLEUM PRODUCTS SHALL NOT BE USED AS BINDERS.
4. EXPANSION BEARINGS SHALL HAVE MARKINGS MATCHED IN THE ENDS OF THE SOLE PLATES AND BRONZE PLATES TO FACILITATE THEIR POSITIONING FOR THE PROPER TEMPERATURE CORRECTION.
5. EXPOSED SURFACES SHALL BE PAINTED IN ACCORDANCE WITH STRUCTURAL STEEL PAINT SYSTEM, SEE GENERAL NOTES. CARE SHALL BE TAKEN TO KEEP ALL SLIDING SURFACES FREE FROM PAINT.
6. FABRIC PADS SHALL BE PREFORMED FABRIC BEARING PADS, ½" THICK, AND SHALL BE EITHER:
   - SHOCK PAD STYLE 15175, AS MANUFACTURED BY THE ALERT MANUFACTURING AND SUPPLY COMPANY, CHICAGO, IL; OR
   - FABREEKA PADS, AS MANUFACTURED BY THE FABREEKA PRODUCTS COMPANY, BOSTON, MA; OR
   - SORBTEX PADS AS MANUFACTURED BY VOSS ENGINEERING, INC., CHICAGO, IL; OR
   - AN APPROVED EQUAL.
7. ANCHOR RODS SHALL BE IN COMPLIANCE WITH AREMA 15-5.3.7.d AND INSTALLED IN PREFORMED HOLES. AT A MINIMUM, THE ANCHOR RODS SHALL BE SWEDGED OR THREADED THE ENTIRE LENGTH OF EMBEDDMENT. DRILLED HOLES SHALL NOT BE USED. PREFORMED HOLES SHALL BE FILLED WITH NON-SHRINK, NON-METALLIC GROUT AND IS INCIDENTAL TO THE COST OF THE BEARINGS. ANCHOR BOLTS ARE TO BE SET IN THE PREFORMED HOLES PRIOR TO PLACING BEARINGS AND GIRDERS. CARE SHALL BE TAKEN TO NOT ALLOW GROUT TO ENCROACH INTO THE SLOTTED HOLES OF THE SOLE PLATE.
   FOR TYPICAL ANCHOR BLOCK OUT DETAIL, SEE SHEET 1513/2017

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2600 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED VDT | DRAWN VDK | CHECKED EFD | REVIEWED CTV | DATE 12-15-21 | REVISED

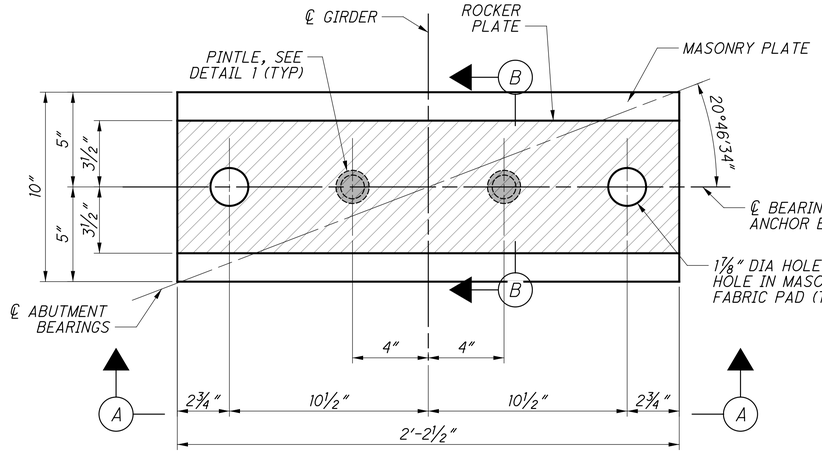
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NSRR BR#: BR0018444

EXPANSION BEARING
BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

HAM-75-7.85
PID No. 77889

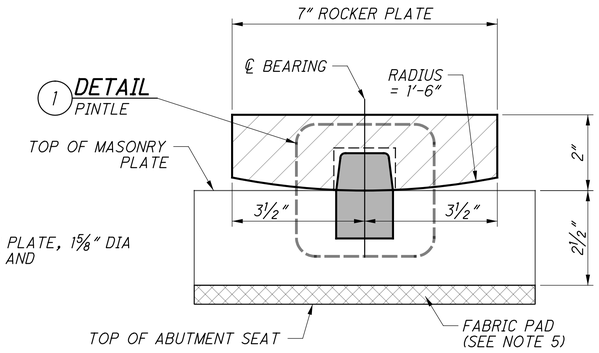
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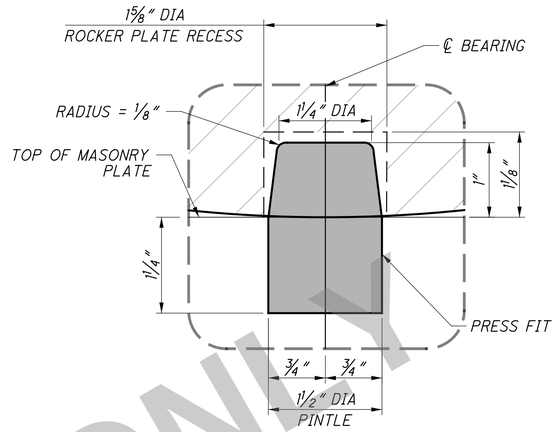


FIXED BEARING

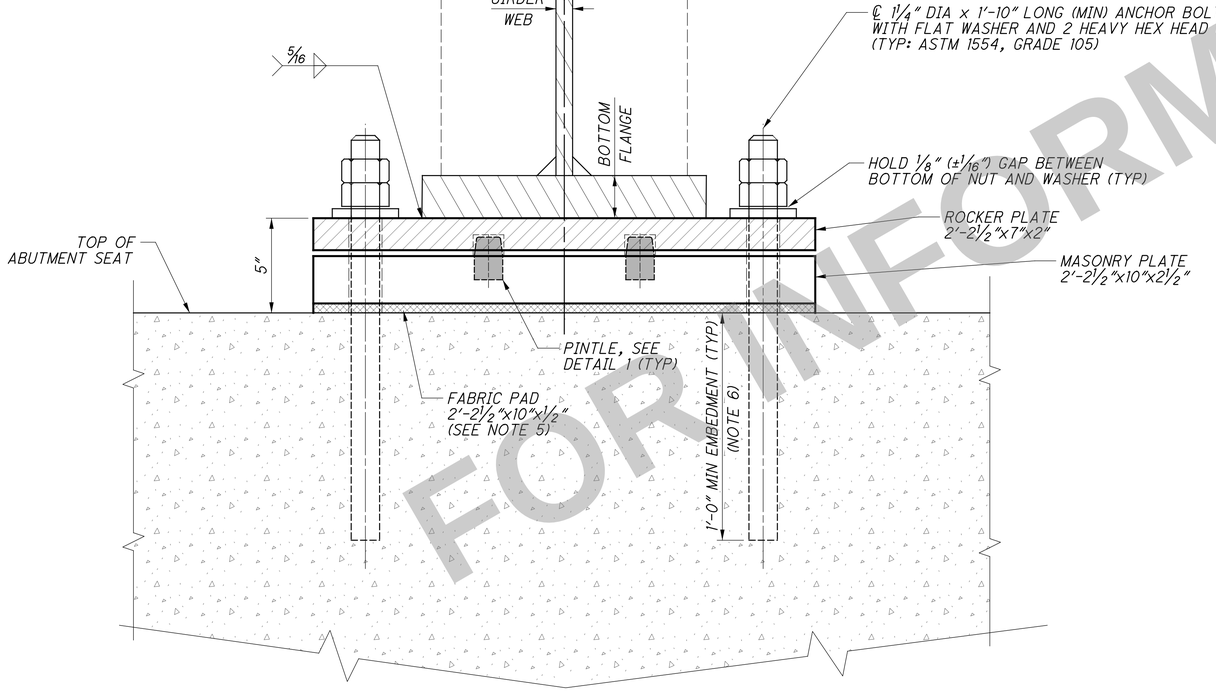
6 REQUIRED (ANCHOR BOLTS NOT SHOWN)



B SECTION
ROCKER PLATE DETAILS



1 PINTLE DETAIL
SEE NOTE 3



A ELEVATION

LOAD TABLE	
DEAD LOAD (KIPS)	64.3
LIVE LOAD + IMPACT (KIPS)	173.8
SERVICE VERTICAL LOADS (KIPS)	238.1

NOTES:

1. BEARINGS SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF AREMA CHAPTER 15 AND THE NORFOLK SOUTHERN PUBLIC PROJECTS MANUAL.
2. BEARINGS SHALL BE ASSEMBLED COMPLETE IN THE SHOP, CHECKED FOR FIT AND BEARING OF ALL CONTACT SURFACES MARKED FOR ASSEMBLY IN THE FIELD.
3. PROVIDE CARBON STEEL PINTLE STEEL CONFORMING TO THE REQUIREMENTS OF ASTM SPECIFICATION A668, CLASS D.
4. EXPOSED SURFACES SHALL BE PAINTED IN ACCORDANCE WITH STRUCTURAL STEEL PAINT SYSTEM, SEE GENERAL NOTES.
5. FABRIC PADS SHALL BE PROVIDED AS PER NOTE 6 ON SHEET 28/35.
6. ANCHOR RODS SHALL BE IN COMPLIANCE WITH AREMA 15-5.3.7.d AND INSTALLED IN PREFORMED HOLES. AT A MINIMUM, THE ANCHOR RODS SHALL BE SWEDGED OR THREADED THE ENTIRE LENGTH OF EMBEDDMENT. DRILLED HOLES SHALL NOT BE USED. PREFORMED HOLES SHALL BE FILLED WITH NON-SHRINK, NON-METALLIC GROUT AND IS INCIDENTAL TO THE COST OF THE BEARINGS. ANCHOR BOLTS ARE TO BE SET IN THE PREFORMED HOLES PRIOR TO PLACING BEARINGS AND GIRDERS.
   FOR TYPICAL ANCHOR BLOCK OUT DETAIL, SEE SHEET 1513/2017

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COLUMBUS, OHIO 43231

DESIGNED VDT | DRAWN VDK | CHECKED EFD | REVIEWED CTV | DATE 12-15-21 | REVISED

ODOT SFN: TBD
NSRR BR#: BR0018444

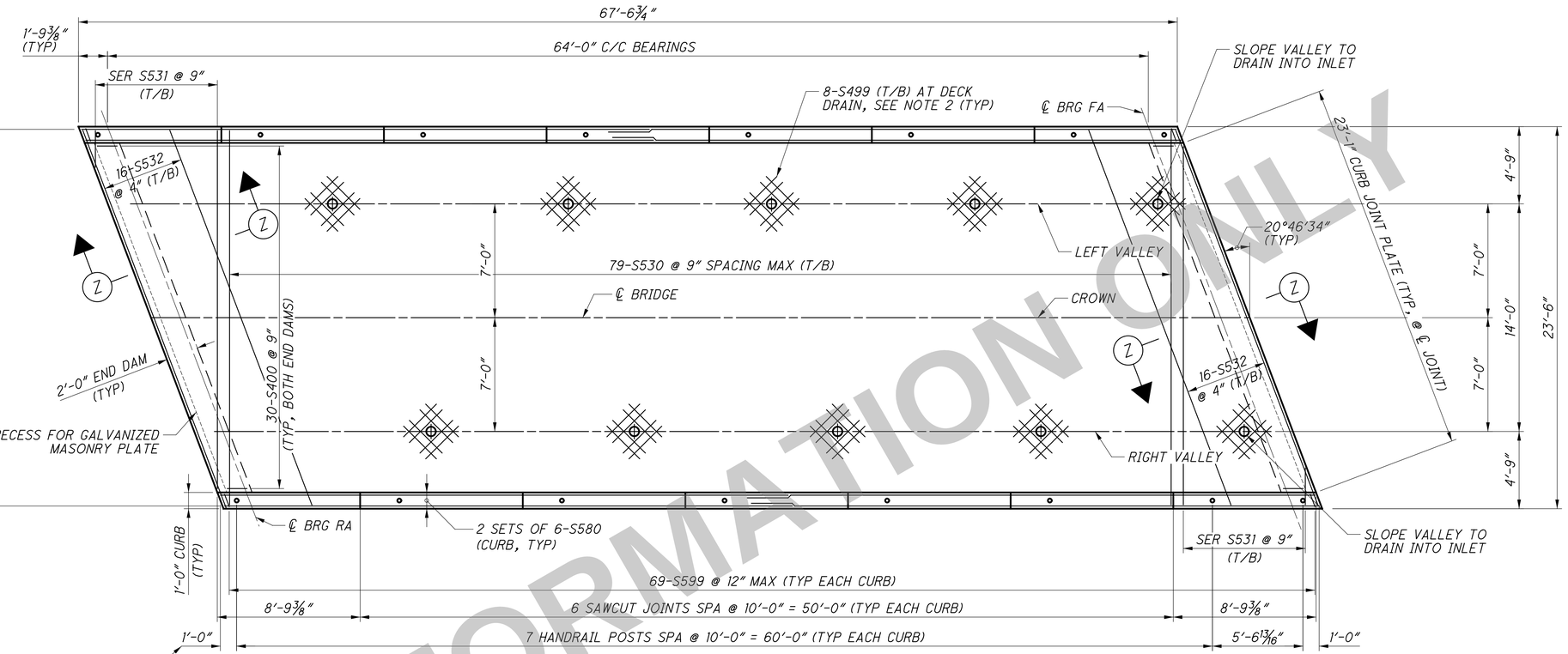
FIXED BEARING
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NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

HAM-75-7.85
PID No. 77889

29 / 35

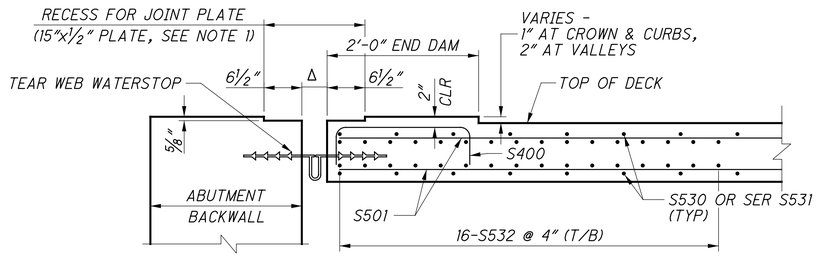
1641/2017

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DECK REINFORCING PLAN

UPSTATION



Z SECTION
ABUTMENT DAM DETAIL

Δ = 4" AT FORWARD ABUTMENT

Δ VALUE SHOULD BE LINEARLY INTERPOLATED FROM THE VALUES BELOW FOR REAR ABUTMENT:
Δ = 3⅞" @ 90°
Δ = 4" @ 65° (THERMAL NEUTRAL)
Δ = 4⅛" @ 40°

NOTES:

1. FOR DECK JOINT DETAILS, SEE GENERAL RAILROAD DETAILS, SHEET (1514/2017).
2. FOR CURB REINFORCING DETAILS AND REINFORCING AT DECK DRAINS, SEE GENERAL RAILROAD DETAILS, SHEET (1513/2017). FOR DRAIN LOCATION AND DETAILS, SEE SHEET 32 35.
3. FOR REINFORCING DETAILS, SEE SHEET 33 35.

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE SUITE 230
COLUMBUS, OHIO 43231

DESIGNED	DRAWN	REVIEWED	DATE
VDT	DKU	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: TBD	
EFD		NSRR BR#: BR0018444	

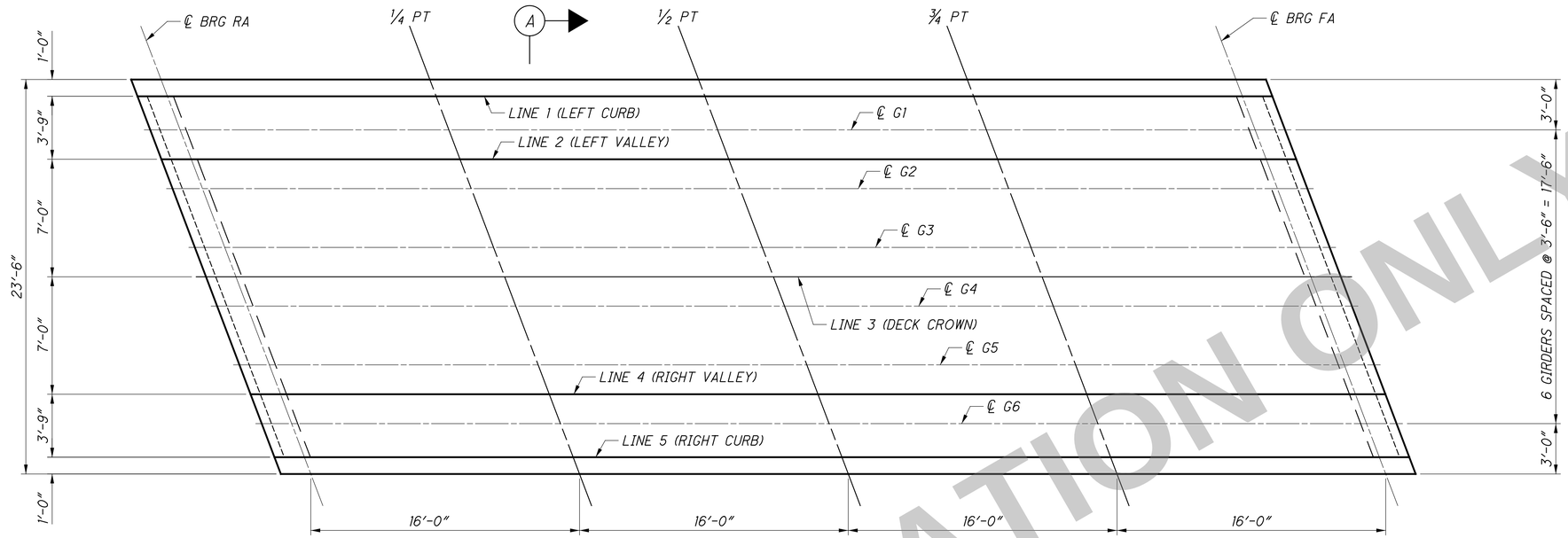
DECK PLAN

BRIDGE NO. HAM-75-PROSSER (INSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

HAM-75-7.85
PID No. 77889

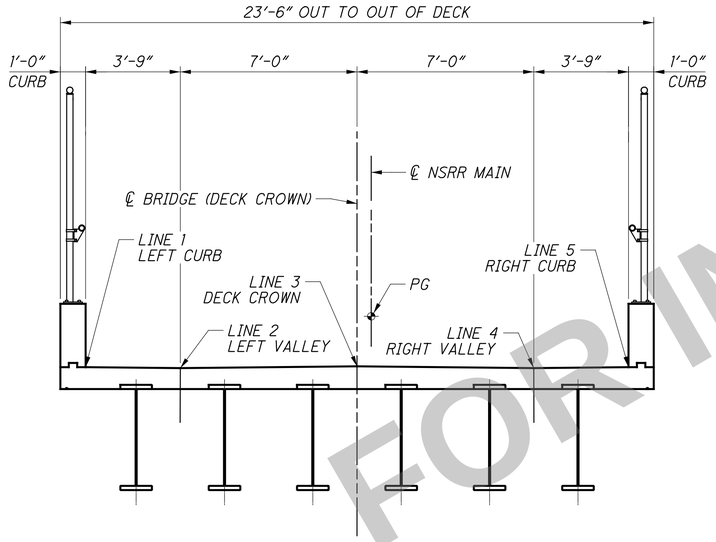
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SCREED AND ELEVATION LOCATION PLAN

UPSTATION



A TYPICAL TRANSVERSE SECTION

SCREED AND FINAL DECK LINES
(LOOKING UPSTATION)

NOTES:

1. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS. OTHER ANTICIPATED DEAD LOADS INCLUDE CURB CONCRETE, BALLAST, AND TRACKWORK BUT DOES NOT INCLUDE THE EFFECTS OF A FUTURE BALLAST.

2. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURED. (DOES NOT INCLUDE FUTURE BALLAST)

SCREED ELEVATION TABLE

LINE NO.	LOCATION	℄ BRG REAR ABUTMENT	1/4 PT	1/2 PT	3/4 PT	℄ BRG FORWARD ABUTMENT
LINE 1	LEFT CURB	552.30	551.98	551.65	551.31	550.96
LINE 2	LEFT VALLEY	552.22	551.90	551.57	551.23	550.87
LINE 3	DECK CROWN	552.30	551.98	551.65	551.31	550.96
LINE 4	RIGHT VALLEY	552.22	551.90	551.57	551.23	550.87
LINE 5	RIGHT CURB	552.30	551.98	551.65	551.31	550.96

FINAL DECK ELEVATION TABLE

LINE NO.	LOCATION	℄ BRG REAR ABUTMENT	1/4 PT	1/2 PT	3/4 PT	℄ BRG FORWARD ABUTMENT
LINE 1	LEFT CURB	552.30	551.97	551.63	551.29	550.96
LINE 2	LEFT VALLEY	552.22	551.88	551.55	551.21	550.87
LINE 3	DECK CROWN	552.30	551.97	551.63	551.29	550.96
LINE 4	RIGHT VALLEY	552.22	551.88	551.55	551.21	550.87
LINE 5	RIGHT CURB	552.30	551.97	551.63	551.29	550.96

FOR INFORMATION ONLY

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DESIGN AGENCY
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COLUMBUS, OHIO 43231

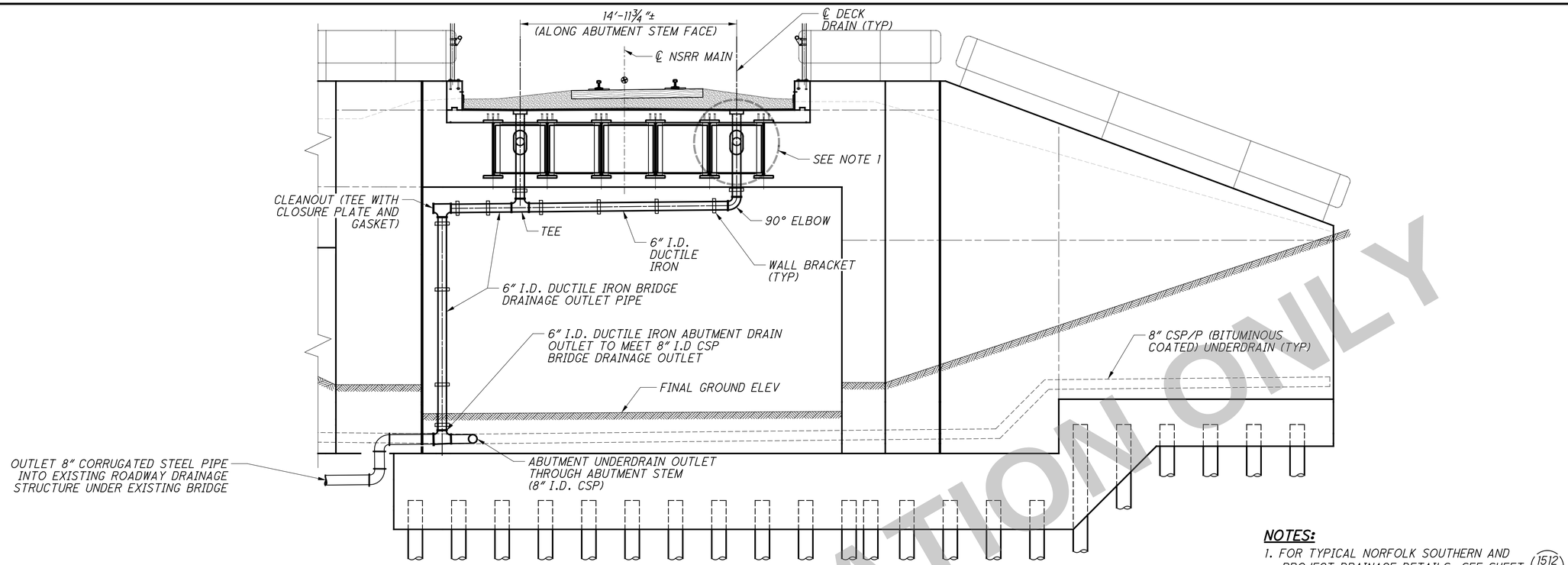
DESIGNED VDT | DRAWN DKU | REVIEWED CTV | DATE 12-15-21
CHECKED EFD | REVISED | ODOT SFN: TBD | NSRR BR#: BR0018444

FINAL DECK/SCREED ELEVATIONS
BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

HAM-75-7.85
PID No. 77889

31 / 35

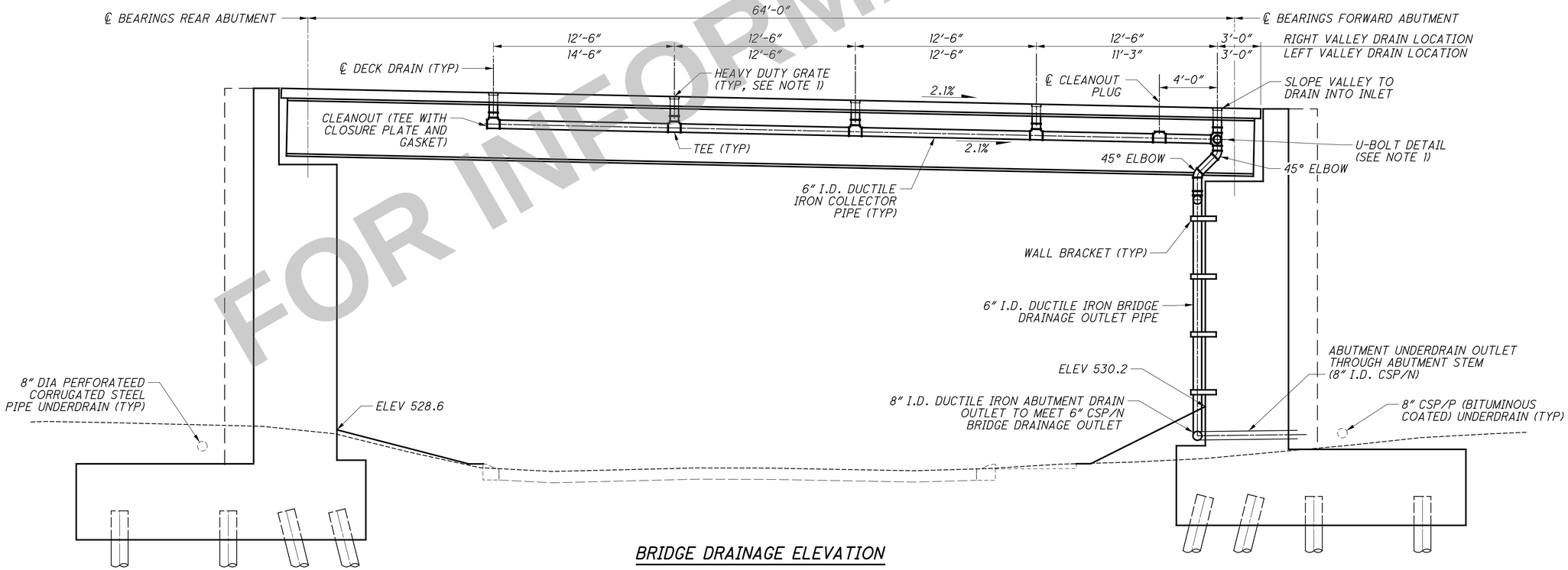
1643
2017



NOTES:

1. FOR TYPICAL NORFOLK SOUTHERN AND PROJECT DRAINAGE DETAILS, SEE SHEET 1512/2017

FORWARD ABUTMENT DRAINAGE ELEVATION



BRIDGE DRAINAGE ELEVATION

FOR INFORMATION ONLY

DESIGN AGENCY
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ENGINEERS & ARCHITECTS, P.C.
2600 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

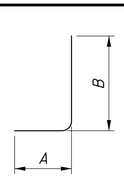
DESIGNED	DRAWN	REVIEWED	DATE
VDT	DKU	CTV	12-15-21
CHECKED	REVISED	ODOT SFN: TBD	
EFD		NSRR BR#: BR0018444	

BRIDGE DRAINAGE SCHEMATIC
BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

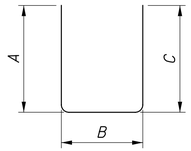
HAM-75-7.85
PID No. 77889

1644/2017

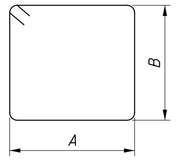
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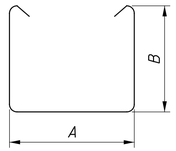
TYPE-1



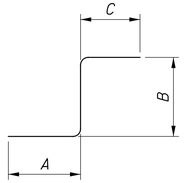
TYPE-2



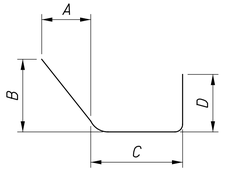
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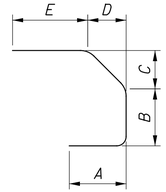
TYPE-4



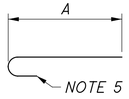
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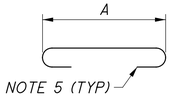
TYPE-10



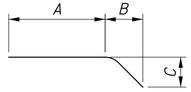
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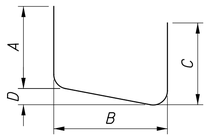
TYPE-16



TYPE-17



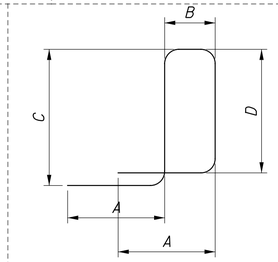
TYPE-19



TYPE-29

AREMA CLASS C LAP SPLICE LENGTHS (NOTE 6):

#4 BAR (Ld=1'-6"): ALL = 2'-7"
#5 BAR (Ld=1'-11"): DECK = 3'-3", OTHERS = 3'-8"
#6 BAR (Ld=2'-3"): DECK = 3'-10", OTHERS = 4'-5"
#7 BAR (Ld=2'-11"): ALL = 5'-6"
#8 BAR (Ld=3'-9"): TOP/ FOOTING = 7'-3", OTHERS = 6'-6"
#9 BAR (Ld=4'-9"): TOP/ FOOTING = 9'-2", OTHERS = 8'-1"
#10 BAR (Ld=6'-1"): TOP/ FOOTING = 11'-8", OTHERS = 10'-3"
#11 BAR (Ld=7'-5"): TOP/ FOOTING = 14'-4", OTHERS = 12'-7"
#14 BAR: MECHANICALLY SPLICE



TYPE-34

REINFORCING BEND DIAGRAMS AND LAP SPLICE LENGTHS

REINFORCING NOTES

1. ALL REINFORCING BARS SHALL BE EPOXY COATED. PAYMENT FOR REINFORCING, INCLUDING MECHANICAL CONNECTORS, SHALL BE MADE WITH ITEM 509 - EPOXY COATED REINFORCING STEEL
2. MAX REINFORCING SPACING IS 12" UNLESS NOTED OTHERWISE. REINFORCING SPACINGS GIVEN ARE CONSIDERED "MAX" UNLESS NOTED OTHERWISE.
3. "STR." IN THE TYPE COLUMN INDICATES STRAIGHT BARS.
4. "SER OF" DENOTES SERIES OF BARS, E.G "X" SER OF "Y" = "X" SERIES OF "Y" BARS PER SERIES.
5. REFER TO C.M.S SECTION 509.05 FOR STANDARD BEND DIMENSIONS.
6. TWO BARS OF EQUAL SIZE SHALL BE LAPPED THE DISTANCE OF THE APPLICABLE AREMA CLASS C LAP SPLICE LENGTH. WHEN BARS OF UNEQUAL SIZE ARE LAPPED, THE PROVIDED LAP SHALL BE THE MAXIMUM OF EITHER THE "Ld" VALUE OF THE LARGER BAR OR THE APPLICABLE AREMA CLASS C LAP SPLICE LENGTH OF THE SMALLER BAR.

MARK	NUMBER			LENGTH	WEIGHT			TYPE	DIMENSIONS				
	REAR ABUT	FWD ABUT	TOTAL		RA	FA	TOTAL		A	B	C	D	INC
FOOTING													
F400	268	173	441	5'-11"	1,059	684	1,743	3	1'-4"	1'-4"			
F500	46		46	32'-3"	1,547		1,547	STR.					
F501	26	13	39	19'-0"	515	258	773	STR.					
F502	4	2	6	7'-3"	30	15	45	STR.					
F503	28	14	42	17'-3"	504	252	756	STR.					
F504	6	3	9	5'-5"	34	17	51	STR.					
F505	4	2	6	9'-4"	39	19	58	19	5'-8"	2'-6"	2'-6"		
F506	12	6	18	20'-11"	262	131	393	19	17'-3"	2'-6"	2'-6"		
F509	32	16	48	15'-0"	501	250	751	19	10'-3"	3'-4"	3'-4"		
F510	28		28	17'-8"	516		516	STR.					
F512	28		28	32'-8"	954		954	STR.					
F516	34	29	63	19'-8"	697	595	1,292	STR.					
F519	34	33	67	10'-10"	384	373	757	2	3'-0"	5'-0"	3'-0"		
F531	85	63	148	10'-2"	901	668	1,569	1	1'-0"	9'-3"			
F535	53		53	8'-2"	451		451	1	1'-0"	7'-3"			
F540		46	46	32'-0"		1,535	1,535	STR.					
F552		28	28	18'-8"		545	545	STR.					
F560		4	4	7'-5"		31	31	STR.					
F561		4	4	8'-5"		35	35	STR.					
F565		27	27	10'-10"		305	305	2	3'-8"	3'-8"	3'-8"		
F566		4	4	14'-4"		60	60	2	3'-8"	7'-2"	3'-8"		
F567		4	4	10'-7"		44	44	2	3'-8"	3'-5"	3'-8"		
		1	1	4'-9"									
F571		SER OF	SER OF	to		229	229	STR.					2 3/4"
		28	28	11'-0"									
F575		20	20	8'-2"		170	170	1	1'-0"	7'-3"			
F580		5	5	26'-0"		136	136	STR.					
F581		4	4	7'-2"		30	30	1	3'-6"	3'-9"			
F582		4	4	10'-9"		45	45	1	3'-8"	7'-2"			
F585		8	8	27'-11"		233	233	STR.					
F616	12	6	18	6'-5"	115	58	173	STR.					
F617	10	5	15	12'-0"	180	90	270	STR.					
F618	12	6	18	16'-2"	291	146	437	STR.					
	1		1	11'-8"									
F619	SER OF		SER OF	to	466		466	STR.					3/4"
	25		25	13'-3"									
	1		1	11'-8"									
F620	SER OF		SER OF	to	851		851	STR.					1/2"
	45		45	13'-7"									
		1	1	11'-8"									
F657		SER OF	SER OF	to		354	354	STR.					1"
		19	19	13'-3"									
		1	1	4'-9"									
F771		SER OF	SER OF	to		449	449	STR.					2 3/4"
		28	28	11'-0"									
	1		1	11'-8"									
F816	SER OF		SER OF	to	829		829	STR.					3/4"
	25		25	13'-3"									
	1		1	11'-8"									
F817	SER OF		SER OF	to	1,512		1,512	STR.					1/2"
	45		45	13'-7"									
F818	12	6	18	13'-2"	422	211	633	STR.					
		1	1	11'-8"									
F857		SER OF	SER OF	to		864	864	STR.					3/4"
		26	26	13'-3"									
F931	80	68	148	20'-9"	5,644	4,797	10,441	1	1'-0"	20'-0"			
F935	37		37	11'-10"	1,489		1,489	1	1'-0"	11'-0"			
F936	67		67	18'-10"	4,290		4,290	1	1'-0"	18'-0"			
F975		39	39	14'-7"		1,934	1,934	1	1'-0"	13'-9"			
TABLE SUB-TOTAL					24,483	15,563	40,046						

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE SUITE 230
COLUMBUS, OHIO 43231

DESIGNED VDT | DRAWN EFD | CHECKED SNH | REVIEWED CTV | DATE 12-15-21 | REVISED

ODOT SFN: TBD
NSRR BR#: BR0018444

REINFORCING STEEL LIST SHEET 1 OF 3
BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

HAM-75-7.85
PID No. 77889

1645
2017

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MARK	NUMBER			LENGTH	WEIGHT			TYPE	DIMENSIONS				
	REAR ABUT	FWD ABUT	TOTAL		RA	FA	TOTAL		A	B	C	D	INC
FOOTING (CONTINUED)													
F1031	34		34	24'-3"	3,548		3,548	1	1'-0"	23'-6"			
F1071		17	17	20'-3"		1,481	1,481	1	1'-0"	19'-6"			
F1116	44	39	83	19'-8"	4,598	4,075	8,673	STR.					
F1117	46	23	69	16'-2"	3,951	1,976	5,927	STR.					
F1160		5	5	7'-5"		197	197	STR.					
F1161		5	5	8'-5"		224	224	STR.					
TABLE SUB-TOTAL					12,097	7,953	20,050						
FOOTING SUB-TOTAL					36,580	23,516	60,096						
ABUTMENT													
A501	60		60	31'-8"	1,982		1,982	STR.					
A502	44		44	7'-4"	337		337	1	2'-0"	5'-4"			
A503	27		27	6'-8"	188		188	1	1'-0"	5'-9"			
A504	27		27	12'-2"	343		343	1	1'-0"	11'-3"			
	1		1	5'-3"									
A505	SER OF		SER OF	to	34		34	STR.					2'-0"
	4		4	11'-3"									
	1		1	2'-0"									
A506	SER OF		SER OF	to	37		37	STR.					5 3/4"
	9		9	5'-10"									
A510	31		31	8'-7"	278		278	19	5'-1"	2'-4"	2'-4"		
A511	12		12	8'-1"	101		101	19	5'-1"	2'-0"	2'-0"		
A515	31		31	10'-8"	345		345	19	7'-3"	2'-5"	2'-5"		
A516	12		12	9'-1"	114		114	19	6'-1"	2'-0"	2'-0"		
A518	38		38	8'-0"	317		317	8	3'-0"	3'-10"	1'-3"		
A519	38		38	8'-2"	324		324	10	10"	10"	4'-0"	3'-0"	
A521	41		41	20'-0"	855		855	STR.					
A526	14		14	25'-7"	374		374	STR.					
A527	47		47	13'-9"	674		674	STR.					
A528	19		19	15'-8"	310		310	STR.					
A529	33		33	11'-2"	384		384	2	3'-0"	5'-4"	3'-0"		
A537	25		25	8'-6"	222		222	STR.					
A538	10		10	10'-4"	108		108	STR.					
A539	32		32	27'-0"	901		901	STR.					
A541		54	54	28'-8"		1,615	1,615	STR.					
A542		38	38	7'-4"		291	291	1	2'-0"	5'-4"			
A543		24	24	5'-7"		140	140	1	1'-0"	4'-8"			
A544		24	24	12'-8"		317	317	1	1'-0"	11'-9"			
		1	1	6'-11"									
A545		SER OF	SER OF	to		29	29	STR.					2'-5 1/4"
		3	3	11'-10"									
		1	1	2'-3"									
A546		SER OF	SER OF	to		33	33	STR.					3 3/4"
		9	9	4'-9"									
A550		3	3	2'-5"		8	8	STR.					
A551		3	3	2'-11"		9	9	STR.					
A555		32	32	9'-6"		317	317	19	5'-11"	2'-6"	2'-6"		
A556		13	13	7'-9"		105	105	19	4'-10"	2'-1"	2'-1"		
A558		19	19	9'-0"		178	178	8	3'-0"	3'-6"	2'-9"		
A559		19	19	9'-1"		180	180	10	2'-0"	2'-0"	3'-4"	3'-0"	
A561		38	38	17'-10"		707	707	STR.					
A566		13	13	23'-2"		314	314	STR.					
A567		46	46	11'-4"		544	544	STR.					
A568		13	13	13'-3"		180	180	STR.					
A569		30	30	11'-3"		352	352	2	3'-0"	5'-5"	3'-0"		
A577		24	24	8'-4"		209	209	STR.					
A578		8	8	10'-2"		85	85	STR.					
A579		20	20	24'-9"		516	516	STR.					
ABUTMENT SUB-TOTAL					8,228	6,129	14,357						

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS					
	SUPER		SUP		A	B	C	D	E	INC
SUPERSTRUCTURE										
S400	60	2'-7"	104	2	6"	1'-9"	6"			
S499	160	3'-0"	321	STR.						
S501	136	35'-6"	5,036	STR.						
S530	158	23'-2"	3,818	STR.						
	4	2'-3"								
S531	SER OF	to	557	STR.						1'-11 3/4"
	11	22'-1"								
S532	64	24'-9"	1,652	STR.						
S580	24	35'-6"	889	STR.						
S599	138	6'-6"	936	34	1'-0"	2'-0"	8"	2'-3"	1'-0"	
SUPERSTR. SUB-TOTAL			13,313							

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2600 CORPORATE EXCHANGE DRIVE SUITE 230
COLUMBUS, OHIO 43231

DESIGNED VDT | DRAWN EFD | REVIEWED CTV | DATE 12-15-21
CHECKED SNH | REVISED | ODOT SFN: TBD | NSRR BR#: BR0018444

REINFORCING STEEL LIST SHEET 2 OF 3
BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

HAM-75-7.85
PID No. 77889

1646
2017

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MARK	NUMBER			LENGTH	WEIGHT				TYPE	DIMENSIONS			
	REAR ABUT	FWD ABUT	TOTAL		RA	FA	SUP	TOTAL		A	B	C	INC
WINGWALL													
	1		1	22'-8"									
W501	SER OF		SER OF	to	235			235	STR.				7 1/4"
	9		9	27'-7"									
	1		1	8'-8"									
W502	SER OF		SER OF	to	276			276	STR.				7"
	19		19	19'-3"									
	1		1	25'-10"									
W511	SER OF		SER OF	to	250			250	STR.				2 1/2"
	9		9	27'-6"									
	1		1	15'-8"									
W512	SER OF		SER OF	to	677			677	STR.				2 1/2"
	34		34	22'-7"									
W520	102		102	7'-11"	842			842	STR.				
W521	20		20	17'-8"	369			369	STR.				
	2		2	2'-0"									
W522	SER OF		SER OF	to	200			200	STR.				1'-8 1/4"
	10		10	17'-3"									
	2		2	1'-8"									
W523	SER OF		SER OF	to	35			35	STR.				1'-8 1/2"
	4		4	6'-10"									
W524	2		2	8'-10"	18			18	STR.				
W525	2		2	20'-5"	43			43	STR.				
W530	34		34	32'-8"	1,158			1,158	STR.				
	2		2	6'-3"									
W531	SER OF		SER OF	to	233			233	STR.				4'-11 1/4"
	6		6	31'-0"									
W532	2		2	4'-7"	10			10	STR.				
W533	2		2	8'-0"	17			17	STR.				
W534	2		2	33'-2"	69			69	STR.				
W540		14	14	25'-0"		365		365	STR.				
		1	1	22'-1"									
W551		SER OF	SER OF	to		221		221	STR.				4 1/2"
		9	9	25'-1"									
		1	1	11'-5"									
W552		SER OF	SER OF	to		312		312	STR.				4 1/2"
		20	20	18'-7"									
W561		26	26	18'-8"		506		506	STR.				
W562		46	46	7'-11"		380		380	STR.				
		2	2	1'-9"									
W563		SER OF	SER OF	to		27		27	STR.				2'-7 1/2"
		3	3	7'-0"									
W564		2	2	8'-5"		18		18	STR.				
		2	2	2'-6"									
W565		SER OF	SER OF	to		155		155	STR.				2'-8 1/2"
		7	7	18'-9"									
W566		2	2	19'-10"		41		41	STR.				
W570		8	8	9'-7"		80		80	1	4'-0"	5'-8"		
W571		8	8	5'-8"		47		47	STR.				
W572		18	18	14'-9"		277		277	3	1'-5"	5'-8"		
		2	2	3'-2"									
W573		SER OF	SER OF	to		181		181	STR.				4'-6 1/4"
		6	6	25'-10"									
W574		2	2	28'-6"		59		59	STR.				
W575		2	2	27'-11"		58		58	STR.				
TABLE SUB-TOTAL					4,432	2,727		7,159					

MARK	NUMBER			LENGTH	WEIGHT				TYPE	DIMENSIONS			
	REAR ABUT	FWD ABUT	TOTAL		RA	FA	SUP	TOTAL		A	B	C	INC
WINGWALL (CONTINUED)													
	1		1	8'-5"									
W701	SER OF		SER OF	to	198			198	STR.				7"
	9		9	13'-2"									
	1		1	4'-10"									
W702	SER OF		SER OF	to	399			399	STR.				7 1/4"
	19		19	15'-9"									
	1		1	11'-5"									
W711	SER OF		SER OF	to	225			225	STR.				2 1/2"
	9		9	13'-2"									
	1		1	4'-10"									
W712	SER OF		SER OF	to	575			575	STR.				2 1/2"
	34		34	11'-9"									
		1	1	12'-0"									
W751		SER OF	SER OF	to		247		247	STR.				4 1/4"
		9	9	14'-10"									
		1	1	4'-10"									
W752		SER OF	SER OF	to		351		351	STR.				4 3/4"
		20	20	12'-5"									
W772		5	5	13'-2"		135		135	2	5'-9"	2'-0"	5'-9"	
TABLE SUB-TOTAL					1,397	733		2,130					
WINGWALL SUB-TOTAL					5,829	3,460		9,289					
TOTAL ALL REINFORCING					50,637	33,105	13,313	97,055					

FOR INFORMATION ONLY

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DESIGNED VDT | DRAWN EFD | CHECKED SNH | REVIEWED CTV | DATE 12-15-21

ODOT SFN: TBD
NSRR BR#: BR0018444

REINFORCING STEEL LIST SHEET 3 OF 3
BRIDGE NO. HAM-75-PROSSER (NSRR CT-0.89: CINCINNATI, OH)
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE

HAM-75-7.85
PID No. 77889

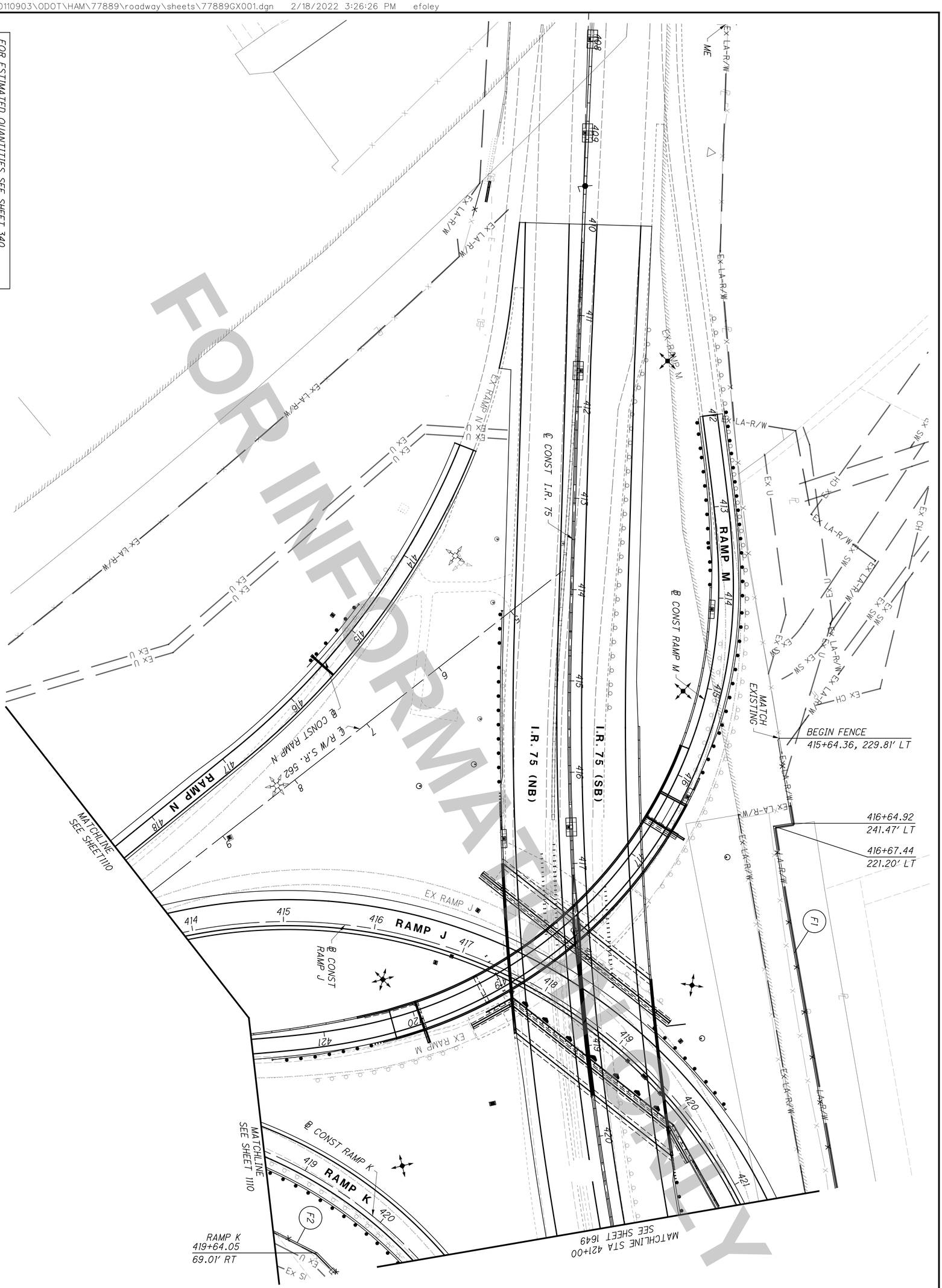
35 / 35

1647
2017

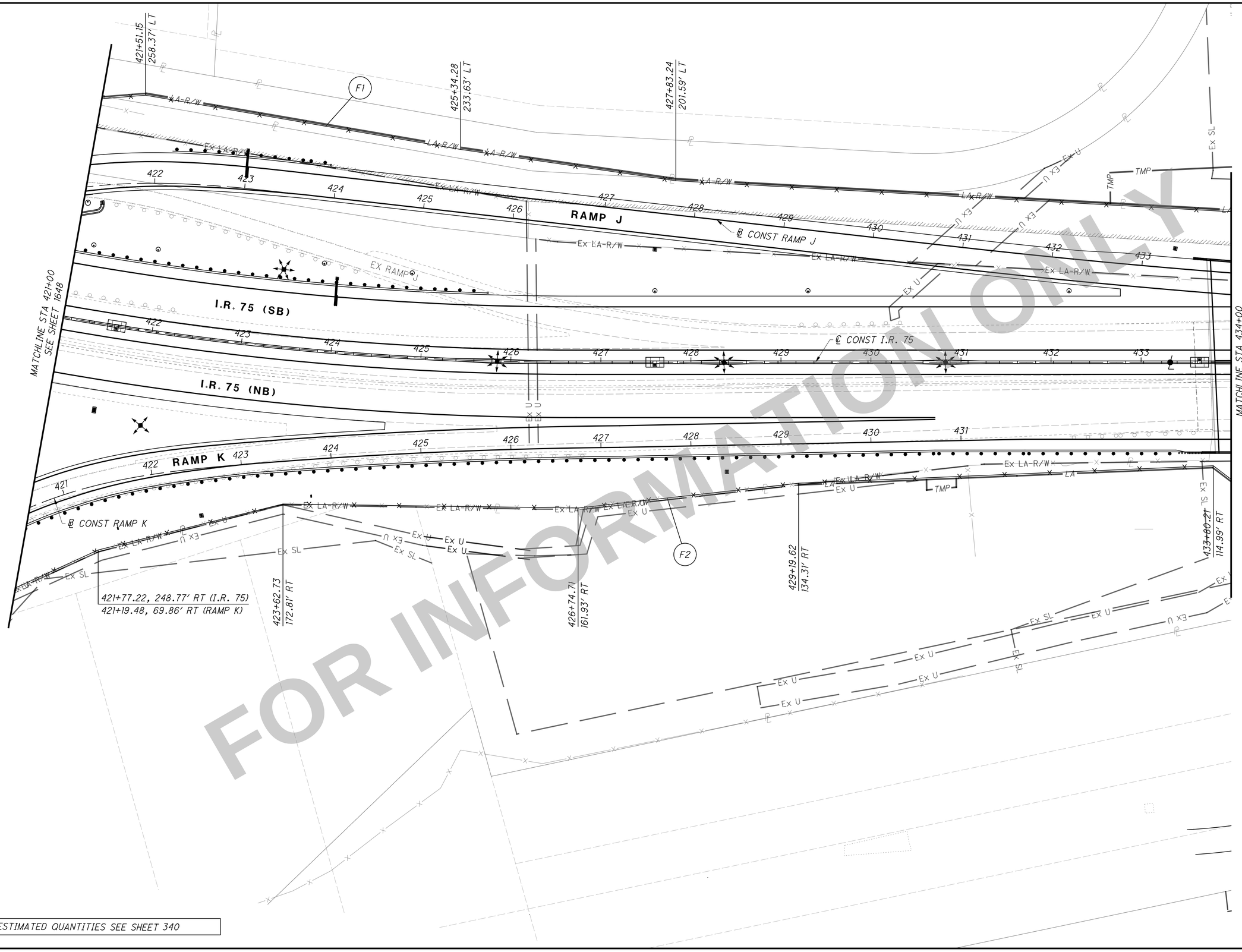
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FOR ESTIMATED QUANTITIES SEE SHEET 340



1648 2017	HAM-75-7.85	FENCING PLAN - I.R. 75 STA 408+00 TO STA 421+00	CALCULATED SEA CHECKED DLR	0 50 25 100 HORIZONTAL SCALE IN FEET



FOR INFORMATION ONLY

FOR ESTIMATED QUANTITIES SEE SHEET 340

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SEA
CHECKED DLR

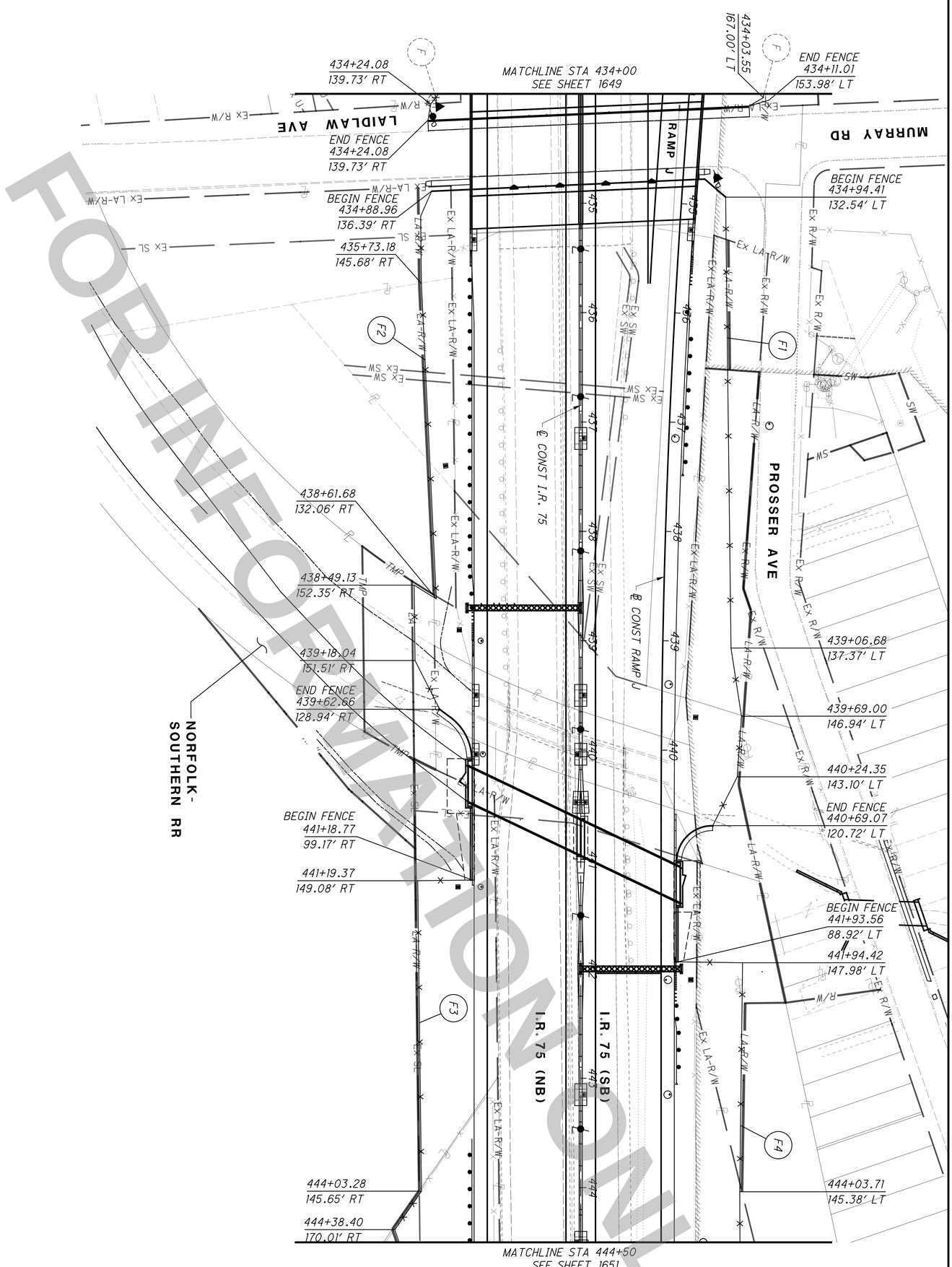
FENCING PLAN - I.R. 75
STA 421+00 TO STA 434+00

HAM-75-7.85

1649
2017

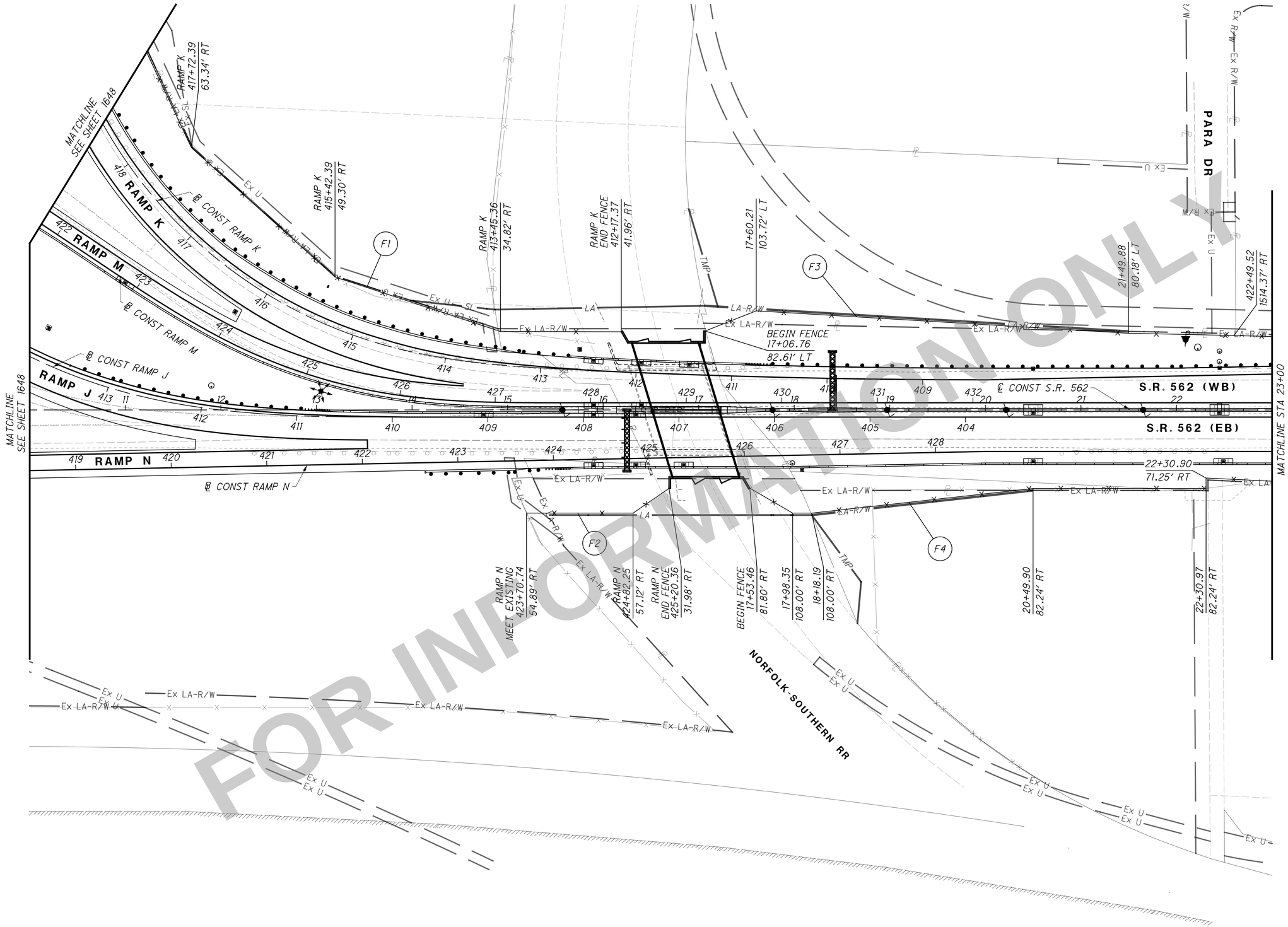
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FOR ESTIMATED QUANTITIES SEE SHEET 340



FOR INFORMATION ONLY

1650 2017	HAM-75-7.85	FENCING PLAN - I.R. 75 STA 434+00 TO STA 444+50	CALCULATED SEA CHECKED DLR	0 50 25 100 HORIZONTAL SCALE IN FEET



FOR INFORMATION ONLY

FOR ESTIMATED QUANTITIES SEE SHEET 340

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SEA
CHECKED DLR

FENCING PLAN - S.R. 562
STA 10+00 TO STA 23+00

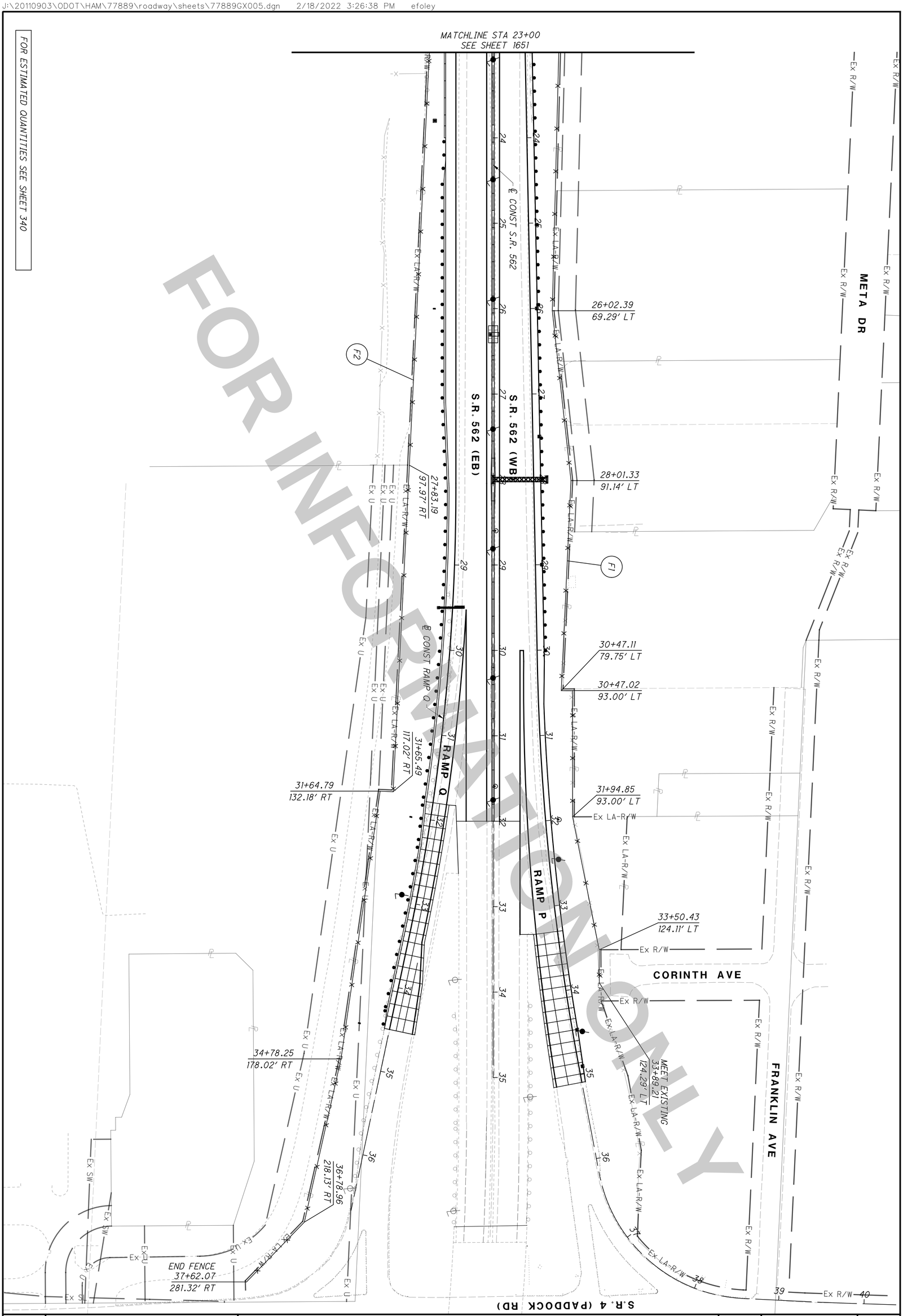
HAM-75-7.85

1651
2017

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FOR ESTIMATED QUANTITIES SEE SHEET 340



FOR INFORMATIONAL ONLY

1652 2017	HAM-75-7.85	FENCING PLAN - S.R. 562 STA 23+00 TO STA 35+00	CALCULATED SEA CHECKED DLR	0 50 25 100 HORIZONTAL SCALE IN FEET

FOR INFORMATION ONLY

FOR ESTIMATED QUANTITIES SEE SHEET 340

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SEA
CHECKED DLR

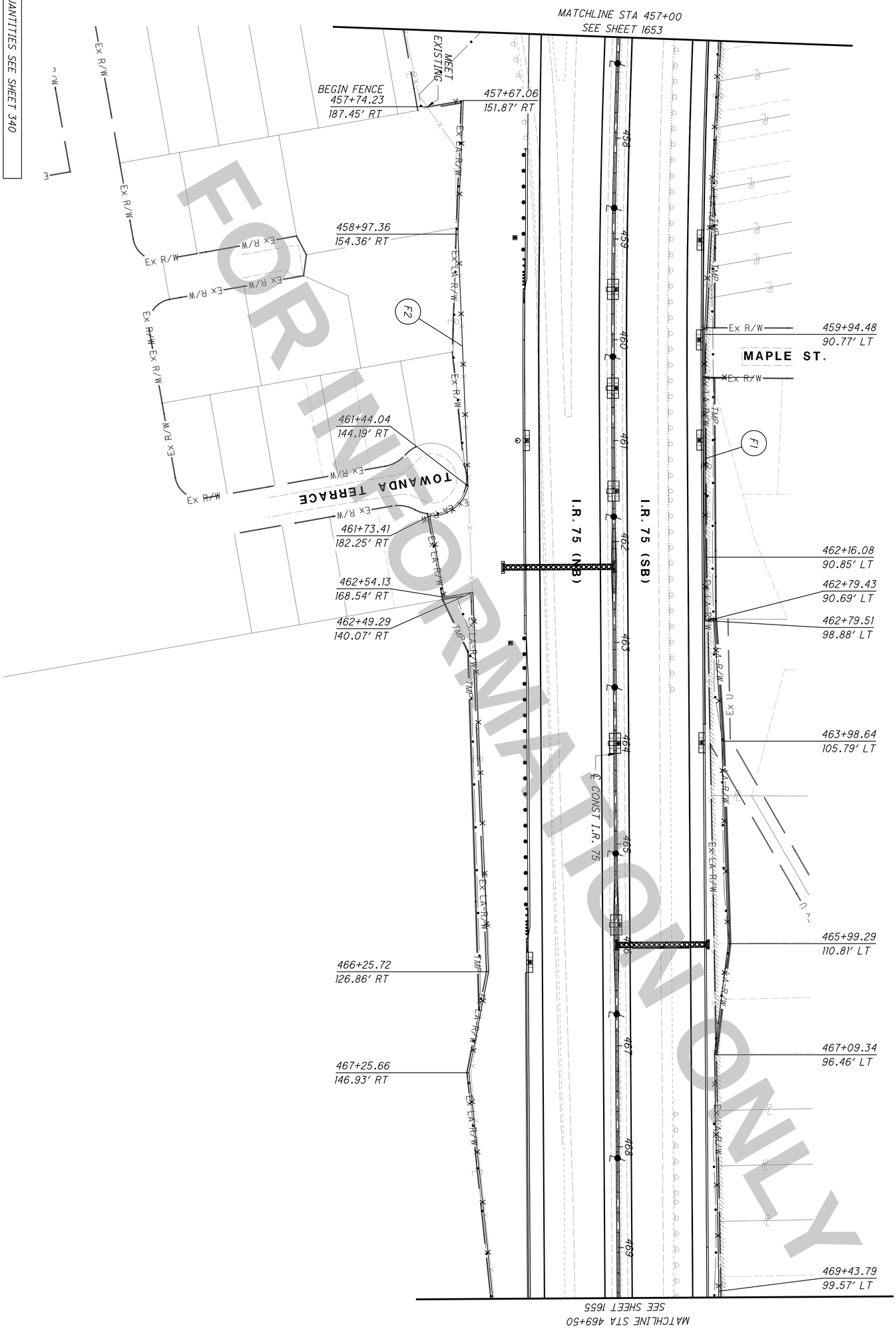
FENCING PLAN - I.R. 75
STA 444+50 TO STA 457+00

HAM-75-7.85

1653
2017

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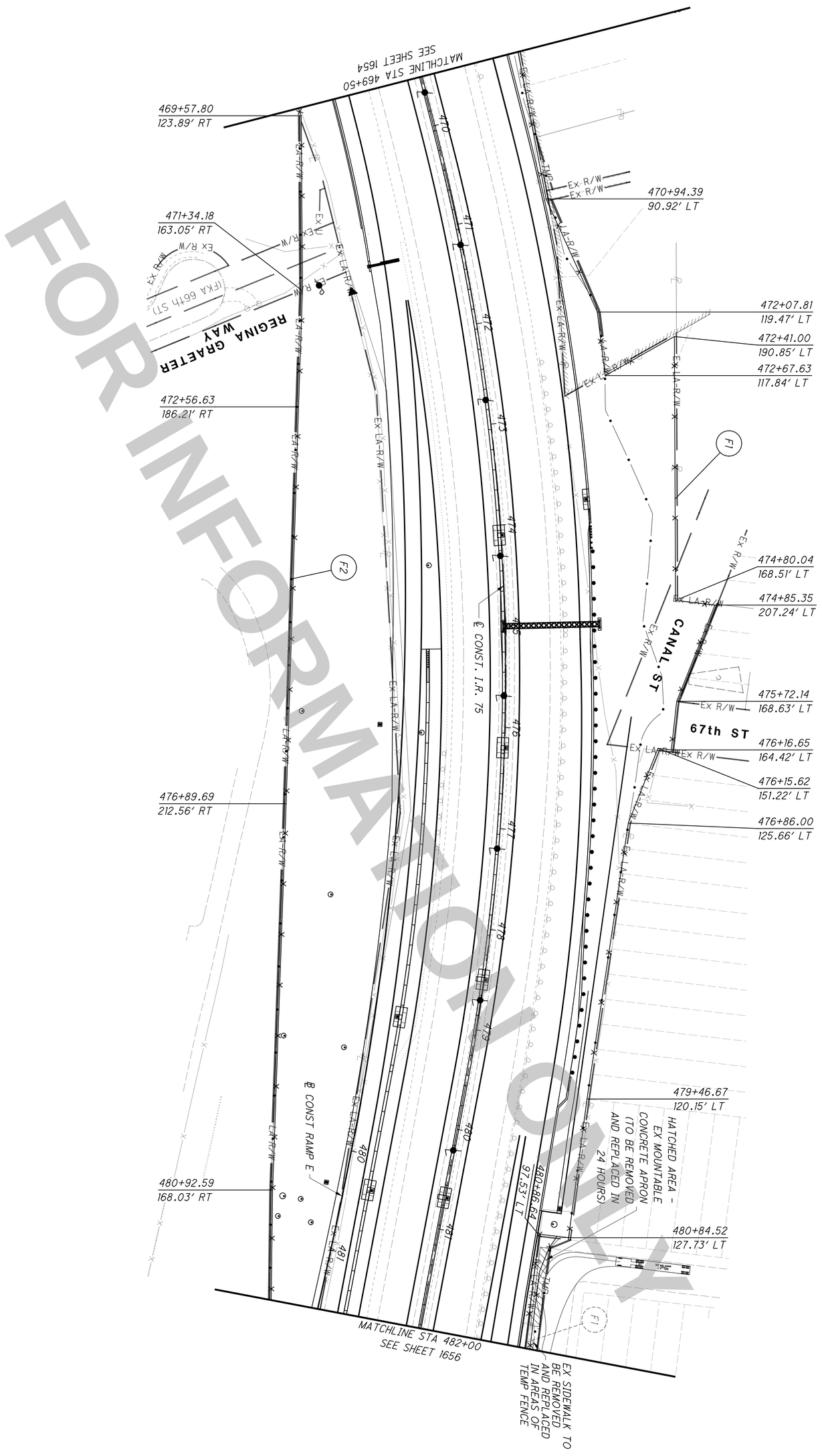
FOR ESTIMATED QUANTITIES SEE SHEET 340



FOR INFORMATION ONLY

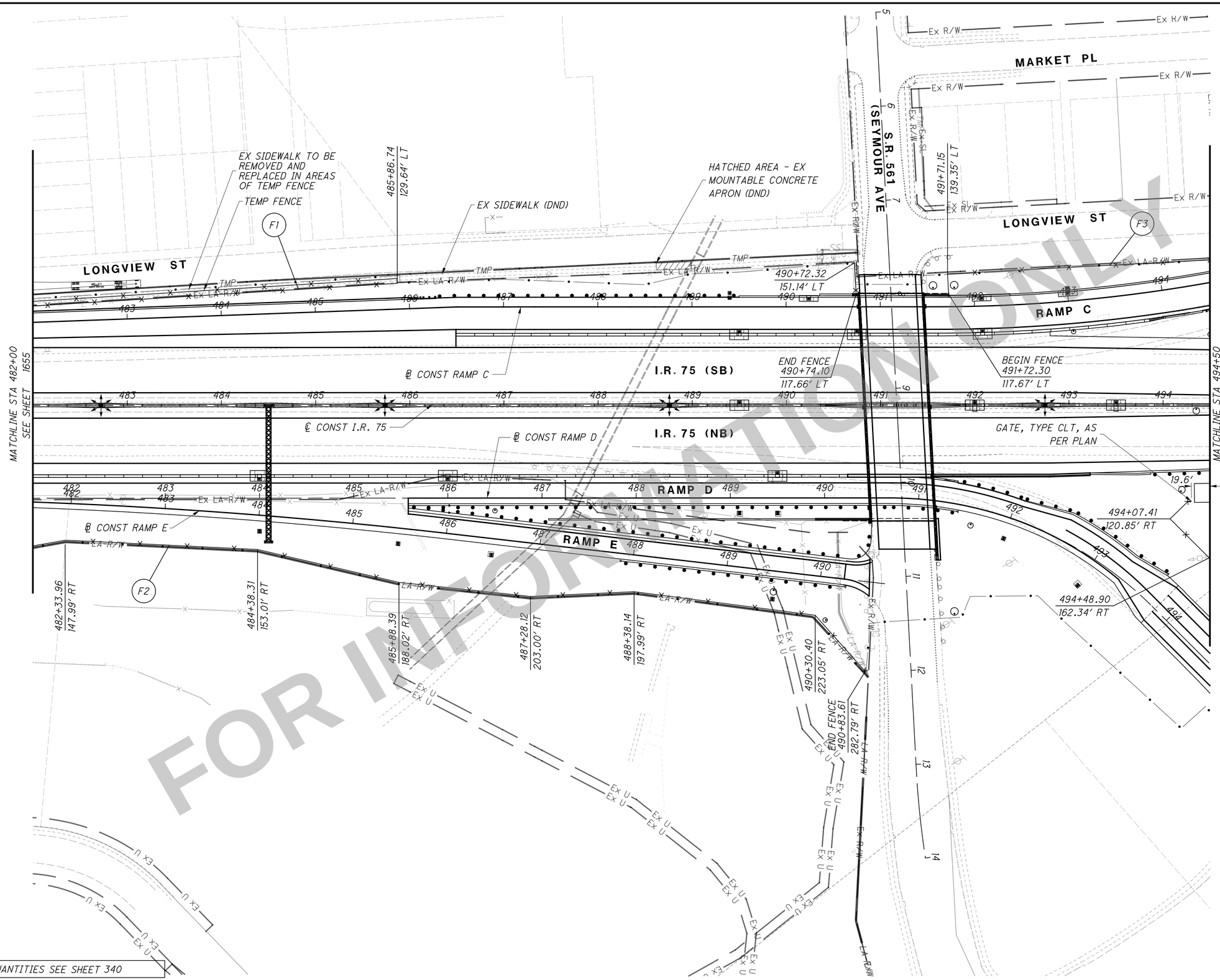
2017 / 1654	HAM-75-7.85	FENCING PLAN - I.R. 75 STA 457+00 TO STA 469+50	CALCULATED SEA CHECKED DLR	0 50 25 100 HORIZONTAL SCALE IN FEET

FOR ESTIMATED QUANTITIES SEE SHEET 340



FOR INFORMATION ONLY

1655 2017	HAM-75-7.85	FENCING PLAN - I.R. 75 STA 469+50 TO STA 482+00	CALCULATED SEA CHECKED DLR	0 50 25 100 HORIZONTAL SCALE IN FEET



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

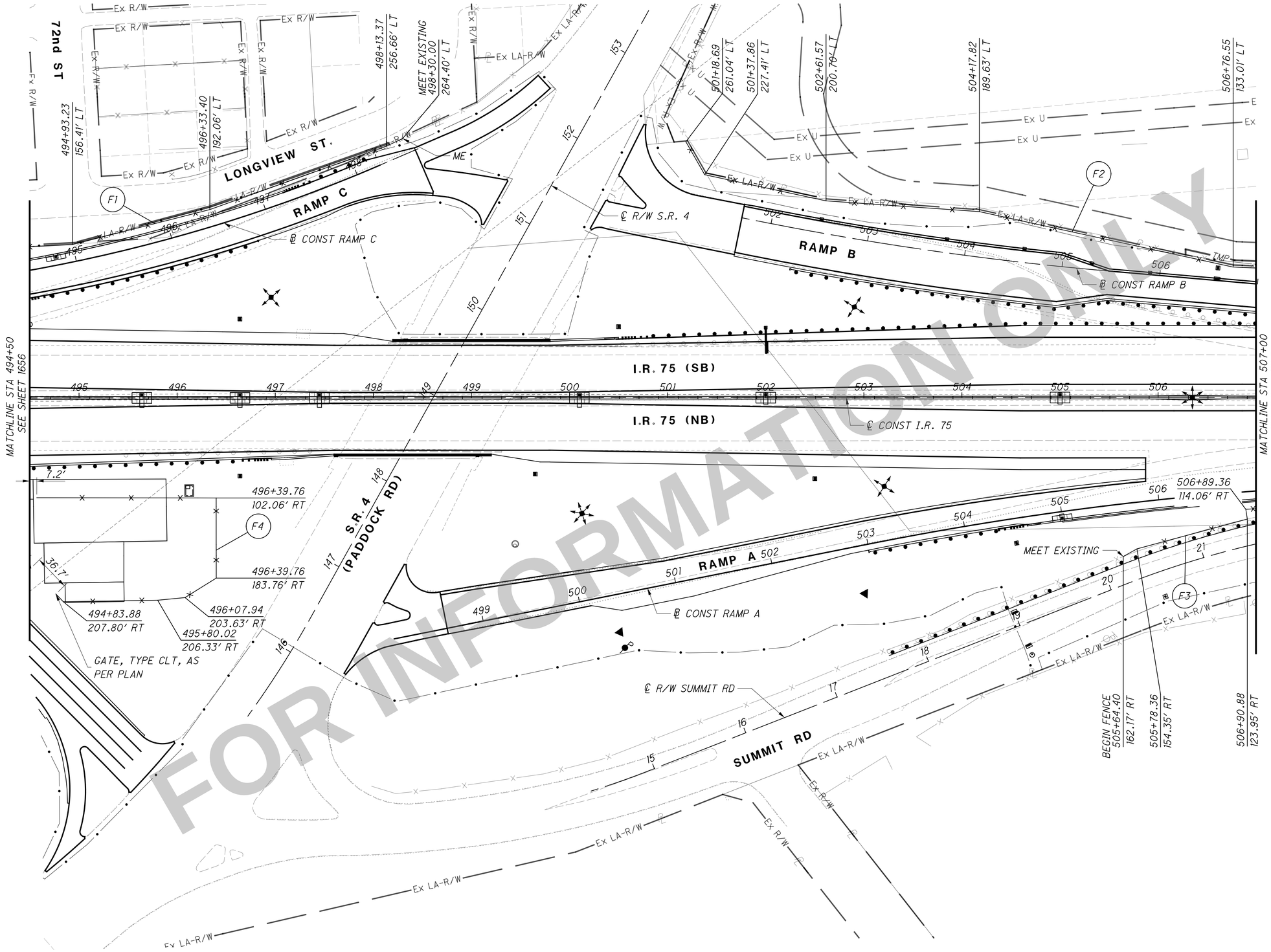
CALCULATED SEA
CHECKED DLR

FENCING PLAN - I.R. 75
STA 482+00 TO STA 494+50

HAM-75-7.85

1656
2017

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FOR INFORMATION ONLY

FOR ESTIMATED QUANTITIES SEE SHEET 340

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HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SEA CHECKED DLR

FENCING PLAN - I.R. 75
STA 494+50 TO STA 507+00

HAM-75-7.85

1657
2017

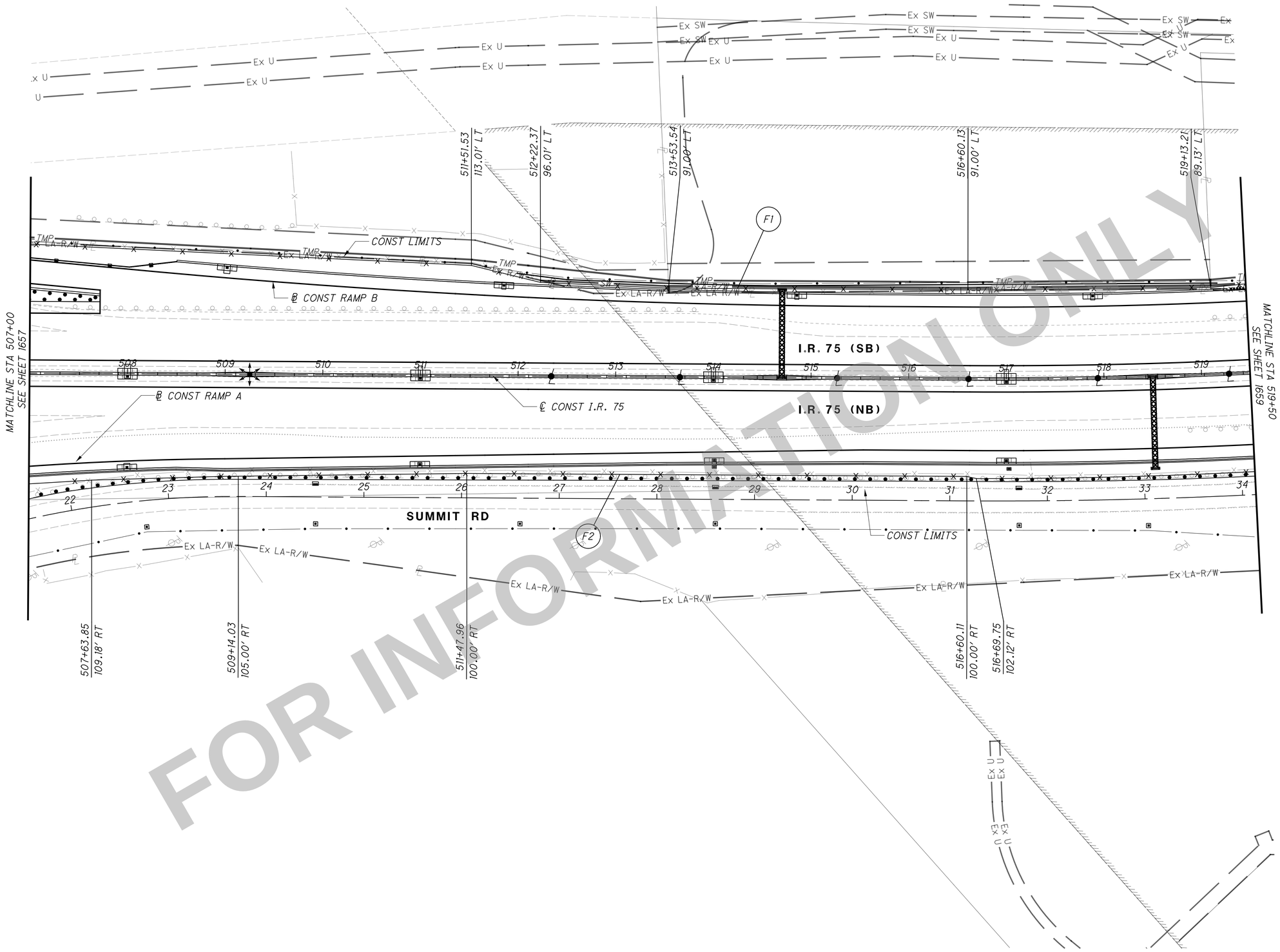
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STA 507+00 TO STA 519+50

HAM-75-7.85

1658
2017

CALCULATED SEA
CHECKED DLR

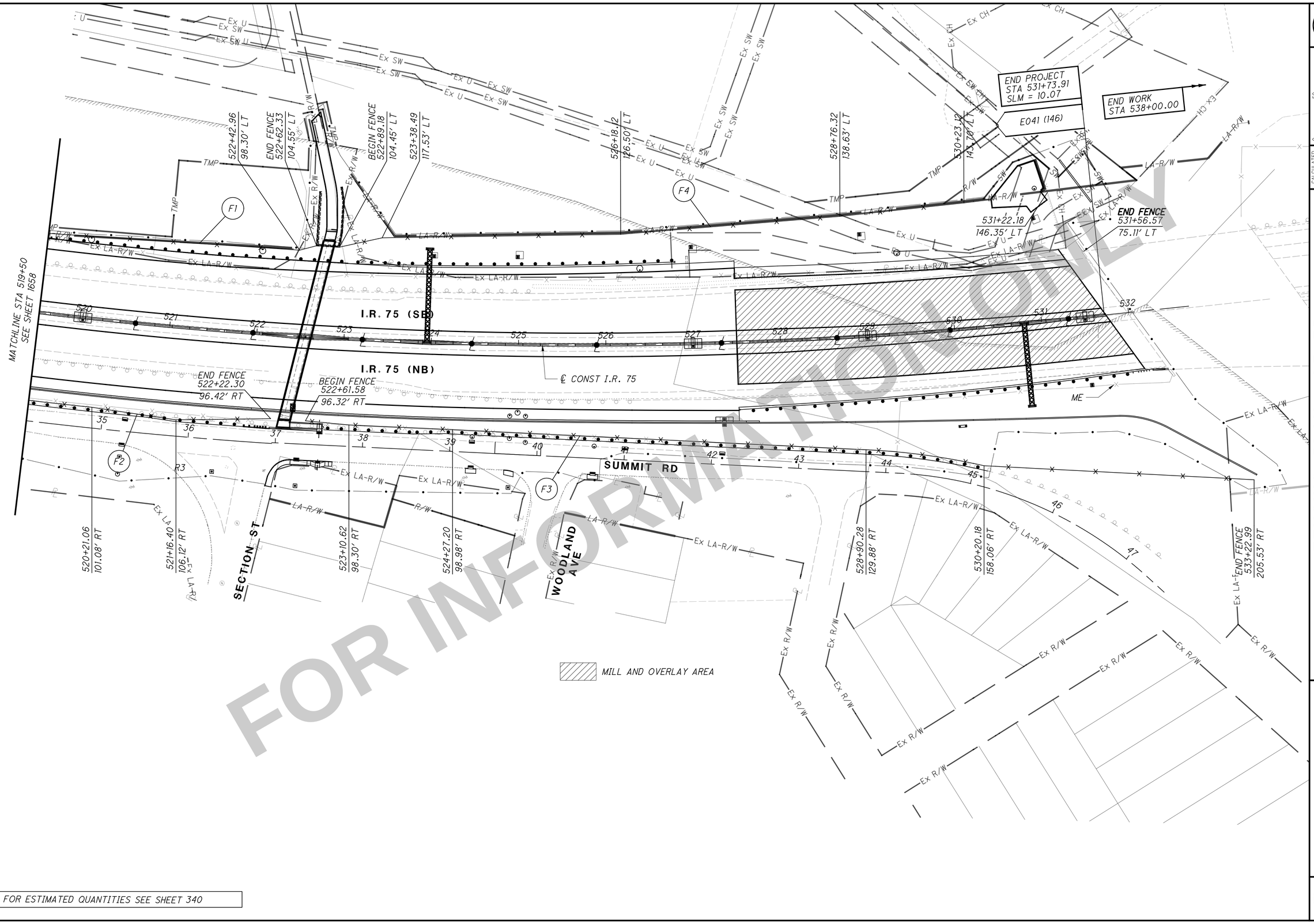
HORIZONTAL SCALE IN FEET
0 25 50 100



FOR ESTIMATED QUANTITIES SEE SHEET 340

FOR INFORMATION ONLY

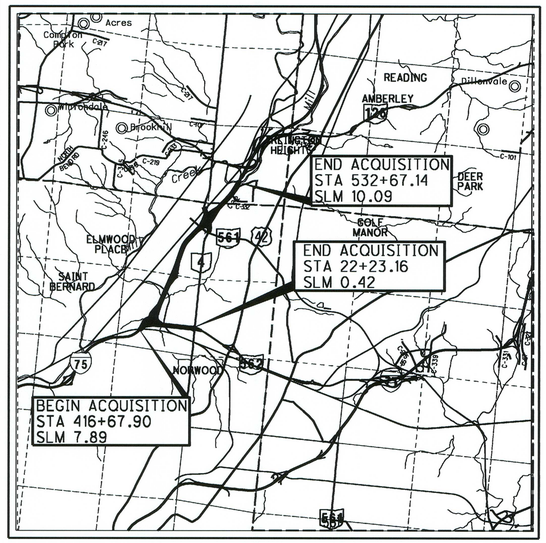
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RIGHT OF WAY LEGEND SHEET HAM-75-7.85

HAMILTON COUNTY
SPRINGFIELD AND MILL CREEK TOWNSHIPS
SECTION 1, TOWNSHIP 3, RANGE 1
SECTIONS 6,11 & 12, TOWNSHIP 3, FRAC RANGE 2
CITY OF CINCINNATI, VILLAGE OF ELMWOOD PLACE,
CITY OF ST BERNARD



LOCATION MAP

LATITUDE: 39°11'37" LONGITUDE: 84°28'35"

PROJECT DESCRIPTION

THE PROJECT CONSISTS OF COMPLETE ASPHALT PAVEMENT RECONSTRUCTION AND WIDENING OF 2.25 MILES OF I.R. 75 WITH AN ADDITIONAL NORTHBOUND AND SOUTHBOUND LANE AND 0.25 MILES OF RECONSTRUCTION AND WIDENING OF S.R. 562 IN HAMILTON COUNTY. ADDITIONAL WORK INCLUDES RECONSTRUCTION OF 11 RAMPS, 4 ROADWAY BRIDGES, 1 PEDESTRIAN BRIDGE, 3 RAIL ROAD BRIDGES AND 0.75 MILES OF RAIL ROAD RECONSTRUCTION. THIS WORK INCLUDES NOISE WALLS, RETAINING WALLS, ITS (ARTIMIS), LIGHTING, WATER WORK, STORM SEWER SYSTEMS, CULVERT REHABILITATION AND BMP STRUCTURES. THIS IS PHASE 8 OF THE MILL CREEK EXPRESSWAY PROJECT.

PLANS PREPARED BY:

FIRM NAME : EVANS, MECHWART, HAMBLETON & TILTON, INC.
R/W DESIGNER: JOSHUA M. MEYER S-8485
R/W REVIEWER: EDWARD J. MILLER S-8250
PRELIMINARY FIELD REVIEWER: MARTIN C. EGER, PE, PMP
PRELIMINARY FIELD REVIEW DATE: 8/9/2013
FINAL R/W FIELD REVIEWER: PAUL G. TREPANEY, PE
FINAL R/W FIELD REVIEW DATE: 1/23/2014
OWNERSHIP UPDATED BY: STEVEN E. ANELLO
DATE COMPLETED: 4/9/2014
PLAN COMPLETION DATE: 4/18/2014

INDEX OF SHEETS:

RIGHT OF WAY LEGEND	1
CENTERLINE PLAT	2 - 9
PROPERTY MAP	10 - 15
SUMMARY OF ADDITIONAL R/W	16 - 21
R/W TOPOGRAPHIC & BOUNDARY SHEETS	22 - 47
RAILROAD PLAT	48 - 52

STRUCTURE KEY

RESIDENTIAL
COMMERCIAL
OUT-BUILDING

TYPES OF TITLE LEGEND:
WL = FEE SIMPLE WITH LIMITATION OF ACCESS
WD = WARRANTY DEED
PRW = PROPERTY RIGHT FEE SIMPLE
SH = STANDARD HIGHWAY EASEMENT
LA = LIMITED ACCESS EASEMENT
T = TEMPORARY EASEMENT
CH = CHANNEL EASEMENT
A = AERIAL EASEMENT
SL = SLOPE EASEMENT
PRE = PROPERTY RIGHT EASEMENT
S = SEWER EASEMENT
U = TO BE ACQUIRED IN THE NAME OF RAILROAD

CONVENTIONAL SYMBOLS

County Line
Township Line
Section Line
Corporation Line or
Fence Line (Ex) (Pr)
Center Line
Right of Way (Ex) Ex R/W
Right of Way (Pr) R/W
Standard Highway Ease.(Ex) Ex SH
Temporary Right of Way TMP
Channel Ease. (Pr) CH
Utility Ease. (Ex) Ex U
Railroad or
Guardrail (Ex) (Pr)
Construction Limits
Edge of Pavement (Ex)
Edge of Pavement (Pr)
Edge of Shoulder (Ex)
Edge of Shoulder (Pr)
Ditch / Creek (Ex)
Ditch / Creek (Pr)
Tree Line (Ex)
Ownership Hook Symbol , Example
Property Line Symbol , Example
Break Line Symbol , Example
Tree (Pr) , Tree (Ex) , Shrub (Ex)
Tree (Remove) , Shrub (Remove)
Evergreen (Ex) , Stump
Evergreen (Remove) , Stump (Remove)
Wetland (Pr) , Grass (Pr) , Aerial Target
Post (Ex) , Mailbox (Ex) , Mailbox (Pr)
Light (Ex) , Telephone Marker (Ex) TEL
Fire Hydrant (Ex) , Water Meter (Ex)
Water Valve (Ex) , Utility Valve Unknown (Ex.)
Telephone Pole (Ex) , Power Pole (Ex)
Light Pole (Ex)

UTILITY OWNERS

GAS:DUKE ENERGY (GAS)
LAURA MATE
139 EAST 4TH STREET, ROOM 460A
CINCINNATI, OH 45201
513-287-2594

ELECTRIC:DUKE ENERGY (ELECTRIC)
MR. AARON WRIGHT
139 EAST 4TH STREET, 467A
CINCINNATI, OH. 45202
513-287-3674

CABLE:TIME WARNER CABLE
MR. KENT REIGER
11252 CORNELL PARK DRIVE
CINCINNATI, OH 45242
513-386-5499

TELEPHONE:CINCINNATI BELL TELEPHONE
MR. MARK CONNER
201 EAST 4TH STREET
BLDG. 121-900
CINCINNATI, OH 45201
513-565-7043

OIL:BP
BRAD KRABEL
150 WEST WARRENVILLE ROAD
BUILDING 605, 3RD FLOOR
NAPERVILLE, IL 60563
630-836-3465

VERIZON
MR. ALLEN GUEST
120 RAVINE STREET
AKRON, OH 44303
330-253-8267

SPRINT COMMUNICATIONS (ERICSSON)
MR. JOSEPH THOMAS
11370 ENTERPRISE PARK DRIVE
SHARONVILLE, OH 45251
513-612-4204

CENTURY LINK (QWEST)
MR. CHRIS STRAYER
8180 GREEN MEADOWS DRIVE, NORTH
LEWIS CENTER, OH 43035
303-886-1299

SANITARY:METROPOLITAN SEWER DISTRICT
MR. ROBERT FRANKLIN
1600 GEST STREET
CINCINNATI, OH 45204
513-577-7188

NOTE:
THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE OBTAINED FROM THE OWNER OF THE UTILITIES AS REQUIRED BY SECTION 153.64 O.R.C.

WATER:GREATER CINCINNATI WATER WORKS
MR. JON HUNSEDER
474 SPRING GROVE AVENUE
CINCINNATI, OH 45232
513-591-6856

SOUTHWEST OHIO WATER COMPANY
MR. FRANK DIVO
600 W. LOVELAND AVENUE, SUITE 3
LOVELAND, OH 45140
513-489-4844

TRAFFIC SURVEILLANCE: ARTIMIS
ODOT CENTRAL OFFICE OF TRAFFIC ENGINEERING
TRAFFIC SIGNALS & ITS SECTION HEAD
1980 WEST BROAD STREET
COLUMBUS, OH 43223
614-466-2168

STORM:CINCINNATI STORMWATER MANAGEMENT UTILITY
AMY PURSLEY P.E.
225 WEST GALBRAITH ROAD
CINCINNATI, OH 45215
513-352-4289

NOTE:
THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE REVISED CODE OF OHIO.

I, Edward J. Miller, P. S. have conducted a survey of the existing conditions for the Ohio Department of Transportation Beginning August 2011. The results of that survey are contained herein. The horizontal coordinates expressed herein are based on the Ohio State Plane Coordinates System South Zone on NAD 83 1995 datum. The Project Coordinates (US Survey Feet) are relative to State Plane Grid Coordinates (Meters or US Survey Feet) by a Project Adjustment Factor of 1.00008341406. As a part of this project I have reestablished the locations of the existing property lines and the existing centerline of Right of Way for property takes contained herein. As a part of this project I have established the proposed property lines, calculated the Gross Take, present roadway occupied (PRO), Net Take and Net Residue; as well as prepared the legal descriptions necessary to acquire the parcels as shown herein. As a part of this work I have set right of way monuments at the property corners, property line intersection, points along the right of way and/or angle points on the right of way, Section Corners and other points as shown herein. All of my work contained herein was conducted in accordance with Ohio Administrative Code 4733-37 commonly known as "Minimum Standards for Boundary Surveys in the State of Ohio" unless noted. The words I and my as used herein are to mean either myself or someone working under my direct supervision.

Edward J. Miller, Professional Land Surveyor 8250

Date: 4/18/14

SURVEYORS SEAL

STATE OF OHIO
EDWARD J MILLER
8250
REGISTERED
PROFESSIONAL SURVEYOR

FOR INFORMATION ONLY

FEDERAL PROJECT NO. E041(146)
PID NO. 77889
CALCULATED JMM CHECKED EJM
RIGHT OF WAY LEGEND SHEET
HAM-75-7.85
1 / 52
1660 2017

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Melissa Cowles
Hamilton County Recorder's Office
Doc#: 2014000079 Type: PLT
Filed: 09/30/14 09:15:23 AM $74.80
Off.Rec.: 12716 00779 F I 134
B1271B007PPD

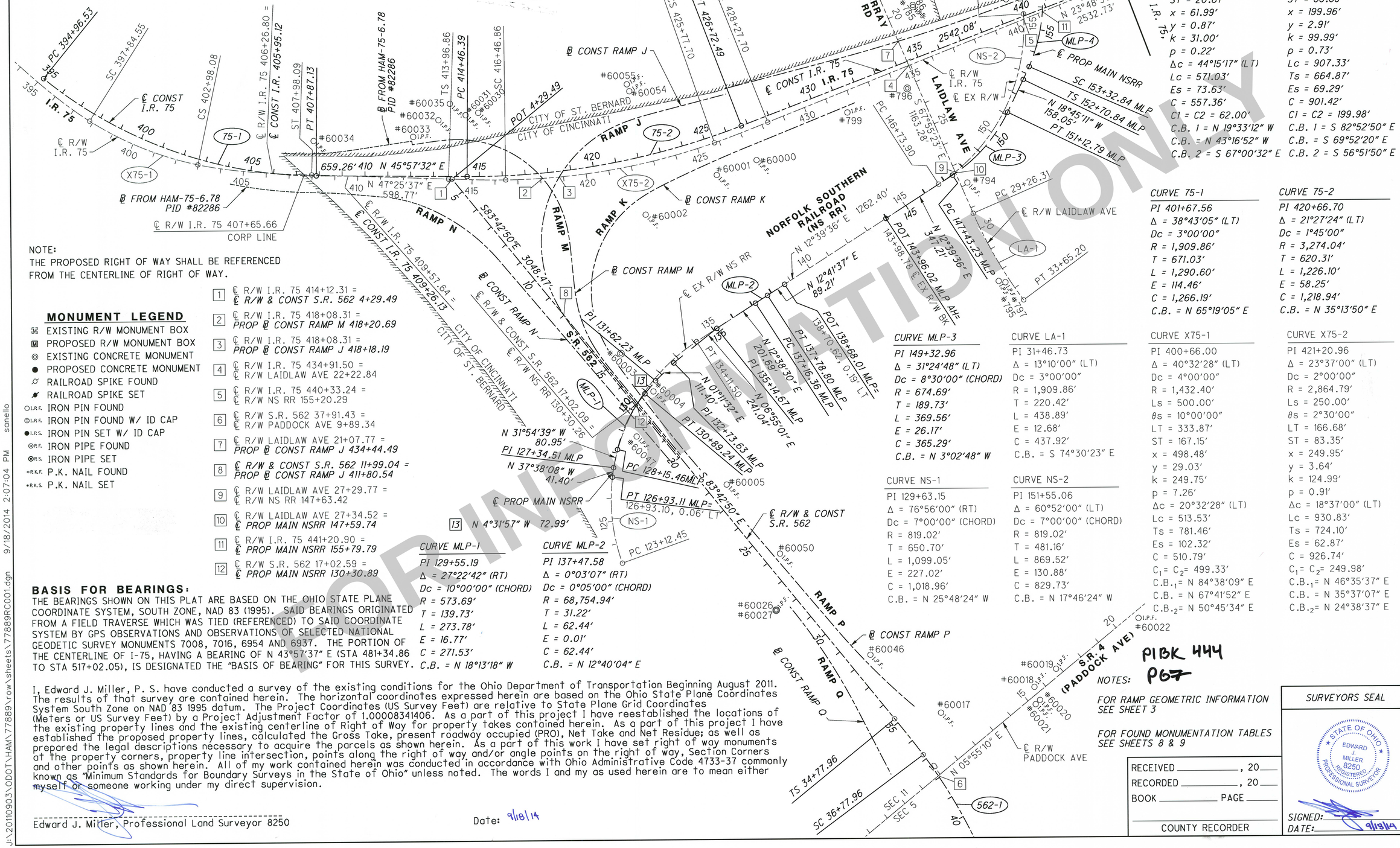
FILED FOR TRANSFER
2014 SEP 30 AM 10:07
DUSTY RHODES
AUDITOR
HAMILTON COUNTY OHIO
TRANSFER NOT NECESSARY
DUSTY RHODES
COUNTY AUDITOR

HAM-75-7.85

HAMILTON COUNTY
MILL CREEK TOWNSHIP
SEC 11 TOWN 3, FRAC RANGE 2
CITY OF ST. BERNARD,
CITY OF CINCINNATI, AND
VILLAGE OF ELMWOOD PLACE

BASIS OF EXISTING C/L OF RIGHT OF WAY AND RIGHT OF WAY WIDTH

THE EXISTING R/W WIDTH AND LOCATION WERE DETERMINED FROM THE OHIO DEPARTMENT OF TRANSPORTATION R/W PLANS TITLED HAM-75-9.30 (1964), HAM-75-9.93 (1972), HAM-75-9.75 (1995), HAM-126-13.00 (1972), HAM-4W-7.80 (1955), HAM-S.R.4-4.000 (2000 METRIC), HAM-4W-7.16 AND HAM-562-0.28 (1956), S.H. 987 SEC. CINCINNATI (PT) "B" ARLINGTON HEIGHTS AND LOCKLAND (PT) (1947) ON FILE FROM THE OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 8 OFFICE, LEBANON, OHIO.



NOTE:
THE PROPOSED RIGHT OF WAY SHALL BE REFERENCED FROM THE CENTERLINE OF RIGHT OF WAY.

MONUMENT LEGEND

- EXISTING R/W MONUMENT BOX
- PROPOSED R/W MONUMENT BOX
- EXISTING CONCRETE MONUMENT
- PROPOSED CONCRETE MONUMENT
- RAILROAD SPIKE FOUND
- RAILROAD SPIKE SET
- I.R.F. IRON PIN FOUND
- I.R.F. IRON PIN FOUND W/ ID CAP
- I.R.S. IRON PIN SET W/ ID CAP
- I.P.F. IRON PIPE FOUND
- I.P.S. IRON PIPE SET
- P.K.F. P.K. NAIL FOUND
- P.K.S. P.K. NAIL SET

1. ℄ R/W I.R. 75 414+12.31 = ℄ R/W & CONST S.R. 562 4+29.49
2. ℄ R/W I.R. 75 418+08.31 = PROP ℄ CONST RAMP M 418+20.69
3. ℄ R/W I.R. 75 418+08.31 = PROP ℄ CONST RAMP J 418+18.19
4. ℄ R/W I.R. 75 434+91.50 = ℄ R/W LAIDLAW AVE 22+22.84
5. ℄ R/W I.R. 75 440+33.24 = ℄ R/W NS RR 155+20.29
6. ℄ R/W S.R. 562 37+91.43 = ℄ R/W PADDOCK AVE 9+89.34
7. ℄ R/W LAIDLAW AVE 21+07.77 = PROP ℄ CONST RAMP J 434+44.49
8. ℄ R/W & CONST S.R. 562 11+99.04 = PROP ℄ CONST RAMP J 411+80.54
9. ℄ R/W LAIDLAW AVE 27+29.77 = ℄ R/W NS RR 147+63.42
10. ℄ R/W LAIDLAW AVE 27+34.52 = ℄ PROP MAIN NSRR 147+59.74
11. ℄ R/W I.R. 75 441+20.90 = ℄ PROP MAIN NSRR 155+79.79
12. ℄ R/W S.R. 562 17+02.59 = ℄ PROP MAIN NSRR 130+30.89

CURVE MLP-4
PI 156+39.55
Δ = 49°03'22" (LT)
Dc = 7°45'00" (CHORD)
R = 739.86'
Ls = 62.00'
θs = 2°24'02"
LT = 41.34'
ST = 20.67'
x = 61.99'
y = 0.87'
k = 31.00'
p = 0.22'
Δc = 44°15'17" (LT)
Lc = 571.03'
Es = 73.63'
C = 557.36'
C1 = C2 = 62.00'
C.B. 1 = N 19°33'12" W
C.B. = N 43°16'52" W
C.B. 2 = S 67°00'32" E

CURVE 562-1
PI 41+42.83
Δ = 27°41'00" (RT)
Dc = 2°30'00"
R = 2,291.83'
Ls = 200.00'
θs = 2°30'00"
LT = 133.35'
ST = 66.68'
x = 199.96'
y = 2.91'
k = 99.99'
p = 0.73'
Lc = 907.33'
Ts = 664.87'
Es = 69.29'
C = 901.42'
C1 = C2 = 199.98'
C.B. 1 = S 82°52'50" E
C.B. = S 69°52'20" E
C.B. 2 = S 56°51'50" E

CURVE 75-1
PI 401+67.56
Δ = 38°43'05" (LT)
Dc = 3°00'00"
R = 1,909.86'
T = 671.03'
L = 1,290.60'
E = 114.46'
C = 1,266.19'
C.B. = N 65°19'05" E

CURVE 75-2
PI 420+66.70
Δ = 21°27'24" (LT)
Dc = 1°45'00"
R = 3,274.04'
T = 620.31'
L = 1,226.10'
E = 58.25'
C = 1,218.94'
C.B. = N 35°13'50" E

CURVE MLP-1
PI 129+55.19
Δ = 27°22'42" (RT)
Dc = 10°00'00" (CHORD)
R = 573.69'
T = 139.73'
L = 273.78'
E = 16.77'
C = 271.53'
C.B. = N 18°13'18" W

CURVE MLP-2
PI 137+47.58
Δ = 0°03'07" (RT)
Dc = 0°05'00" (CHORD)
R = 68,754.94'
T = 31.22'
L = 62.44'
E = 0.01'
C = 62.44'
C.B. = N 12°40'04" E

CURVE MLP-3
PI 149+32.96
Δ = 31°24'48" (LT)
Dc = 8°30'00" (CHORD)
R = 674.69'
T = 189.73'
L = 369.56'
E = 26.17'
C = 365.29'
C.B. = N 3°02'48" W

CURVE LA-1
PI 31+46.73
Δ = 13°10'00" (LT)
Dc = 3°00'00"
R = 1,909.86'
T = 220.42'
L = 438.89'
E = 12.68'
C = 437.92'
C.B. = S 74°30'23" E

CURVE X75-1
PI 400+66.00
Δ = 40°32'28" (LT)
Dc = 4°00'00"
R = 1,432.40'
Ls = 500.00'
θs = 10°00'00"
LT = 333.87'
ST = 167.15'
x = 498.48'
y = 29.03'
k = 249.75'
p = 7.26'
Δc = 20°32'28" (LT)
Lc = 513.53'
Ts = 781.46'
Es = 102.32'
C = 510.79'
C1 = C2 = 499.33'
C.B.1 = N 84°38'09" E
C.B. = N 67°41'52" E
C.B.2 = N 50°45'34" E

CURVE X75-2
PI 421+20.96
Δ = 23°37'00" (LT)
Dc = 2°00'00"
R = 2,864.79'
Ls = 250.00'
θs = 2°30'00"
LT = 166.68'
ST = 83.35'
x = 249.95'
y = 3.64'
k = 124.99'
p = 0.91'
Δc = 18°37'00" (LT)
Lc = 930.83'
Ts = 724.10'
Es = 62.87'
C = 926.74'
C1 = C2 = 249.98'
C.B.1 = N 46°35'37" E
C.B. = N 35°37'07" E
C.B.2 = N 24°38'37" E

CURVE NS-1
PI 129+63.15
Δ = 76°56'00" (RT)
Dc = 7°00'00" (CHORD)
R = 819.02'
T = 650.70'
L = 1,099.05'
E = 227.02'
C = 1,018.96'
C.B. = N 25°48'24" W

CURVE NS-2
PI 151+55.06
Δ = 60°52'00" (LT)
Dc = 7°00'00" (CHORD)
R = 819.02'
T = 481.16'
L = 869.52'
E = 130.88'
C = 829.73'
C.B. = N 17°46'24" W

BASIS FOR BEARINGS:

THE BEARINGS SHOWN ON THIS PLAT ARE BASED ON THE OHIO STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 83 (1995). SAID BEARINGS ORIGINATED FROM A FIELD TRAVERSE WHICH WAS TIED (REFERENCED) TO SAID COORDINATE SYSTEM BY GPS OBSERVATIONS AND OBSERVATIONS OF SELECTED NATIONAL GEODETIC SURVEY MONUMENTS 7008, 7016, 6954 AND 6937. THE PORTION OF THE CENTERLINE OF I-75, HAVING A BEARING OF N 43°57'37" E (STA 481+34.86 TO STA 517+02.05), IS DESIGNATED THE "BASIS OF BEARING" FOR THIS SURVEY.

I, Edward J. Miller, P. S. have conducted a survey of the existing conditions for the Ohio Department of Transportation Beginning August 2011. The results of that survey are contained herein. The horizontal coordinates expressed herein are based on the Ohio State Plane Coordinates System South Zone on NAD 83 1995 datum. The Project Coordinates (US Survey Feet) are relative to State Plane Grid Coordinates (Meters or US Survey Feet) by a Project Adjustment Factor of 1.00008341406. As a part of this project I have reestablished the locations of the existing property lines and the existing centerline of Right of Way for property takes contained herein. As a part of this project I have established the proposed property lines, calculated the Gross Take, present roadway occupied (PRO), Net Take and Net Residue; as well as prepared the legal descriptions necessary to acquire the parcels as shown herein. As a part of this work I have set right of way monuments at the property corners, property line intersection, points along the right of way and/or angle points on the right of way, Section Corners and other points as shown herein. All of my work contained herein was conducted in accordance with Ohio Administrative Code 4733-37 commonly known as "Minimum Standards for Boundary Surveys in the State of Ohio" unless noted. The words I and my as used herein are to mean either myself or someone working under my direct supervision.

Edward J. Miller, Professional Land Surveyor 8250

Date: 9/18/14

PRELIMINARY NOT FOR CONSTRUCTION ONLY

NOTES:
PIBK 444
P67

FOR RAMP GEOMETRIC INFORMATION SEE SHEET 3

FOR FOUND MONUMENTATION TABLES SEE SHEETS 8 & 9

SURVEYORS SEAL

STATE OF OHIO
EDWARD J. MILLER
8250
REGISTERED PROFESSIONAL SURVEYOR

SIGNED: _____
DATE: 9/18/14

RECEIVED _____, 20__
RECORDED _____, 20__
BOOK _____ PAGE _____
COUNTY RECORDER

HORIZONTAL SCALE IN FEET
0 100 200 400

PID NO. 77889

R/W DESIGNER JMM
R/W REVIEWER EJM

CENTERLINE PLAT

HAM-75-7.85

2 / 52

1661 2017

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Wayne Cortes
Hamilton County Recorders Office
Doc #: 14-0091120 Type: PLT
Filed: 09/30/2014 03:52:00 PM $74.80
Off.Rec.: 12716 0 00787 F 1 157

2014 SEP 30 AM 10:07
DUSTY RHODES
AUDITOR
HAMILTON COUNTY OHIO

TRANSFER NOT NECESSARY
DUSTY RHODES
COUNTY AUDITOR

HAM-75-7.85

HAMILTON COUNTY
MILL CREEK TOWNSHIP
SEC 11 TOWN 3, FRAC RANGE 2
CITY OF ST. BERNARD,
CITY OF CINCINNATI, AND
VILLAGE OF ELMWOOD PLACE

MONUMENT LEGEND

- EXISTING R/W MONUMENT BOX
- PROPOSED R/W MONUMENT BOX
- EXISTING CONCRETE MONUMENT
- PROPOSED CONCRETE MONUMENT
- RAILROAD SPIKE FOUND
- RAILROAD SPIKE SET
- I.R.F. IRON PIN FOUND
- I.R.F. IRON PIN FOUND W/ ID CAP
- I.R.S. IRON PIN SET W/ ID CAP
- P.R.F. IRON PIPE FOUND
- P.R.S. IRON PIPE SET
- P.K.F. P.K. NAIL FOUND
- P.K.S. P.K. NAIL SET

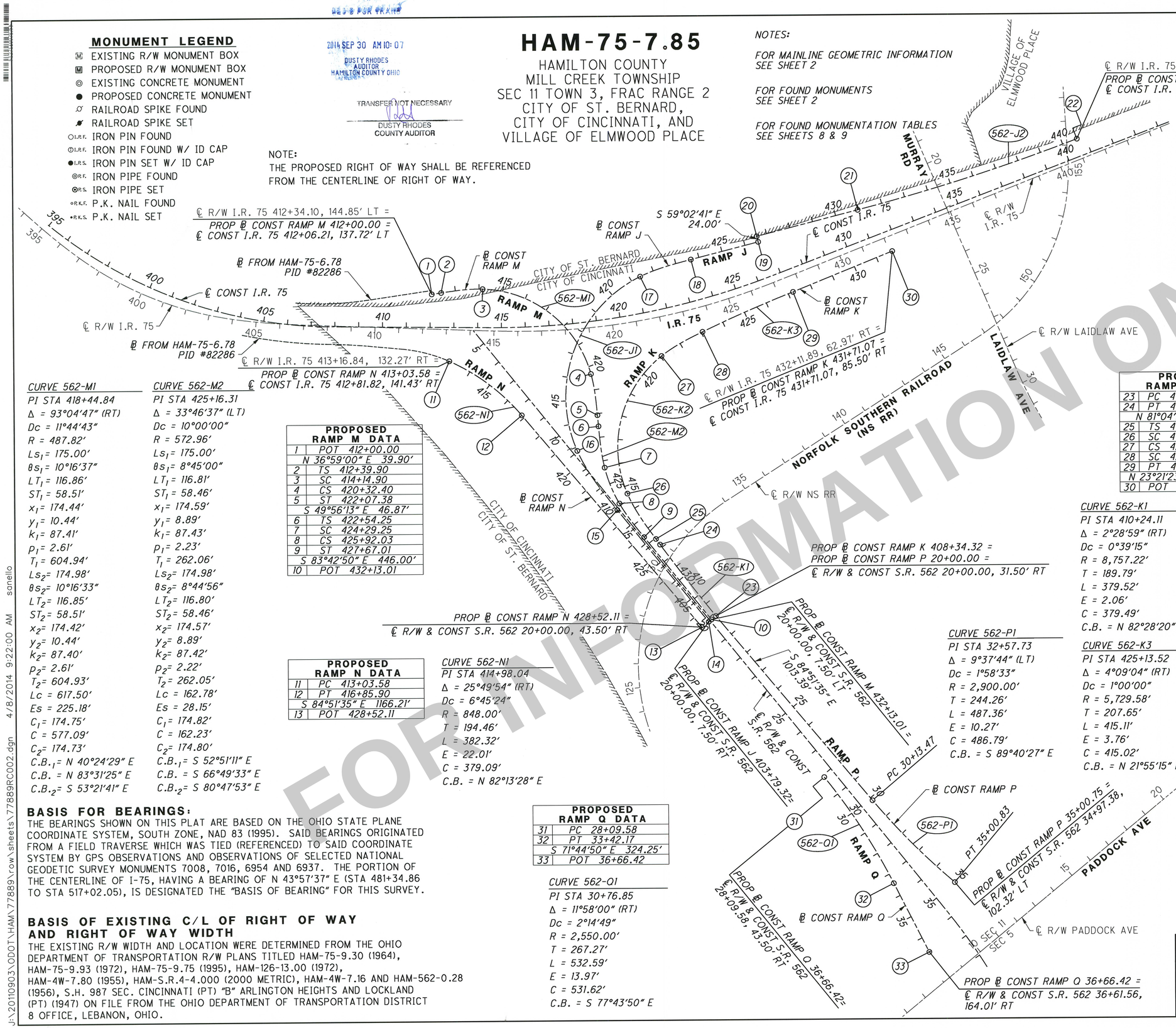
NOTE:
THE PROPOSED RIGHT OF WAY SHALL BE REFERENCED FROM THE CENTERLINE OF RIGHT OF WAY.

NOTES:

FOR MAINLINE GEOMETRIC INFORMATION
SEE SHEET 2

FOR FOUND MONUMENTS
SEE SHEET 2

FOR FOUND MONUMENTATION TABLES
SEE SHEETS 8 & 9



PROPOSED RAMP M DATA		
1	POT	412+00.00
N 36°59'00" E 39.90'		
2	TS	412+39.90
3	SC	414+14.90
4	CS	420+32.40
5	ST	422+07.38
S 49°56'13" E 46.87'		
6	TS	422+54.25
7	SC	424+29.25
8	CS	425+92.03
9	ST	427+67.01
S 83°42'50" E 446.00'		
10	POT	432+13.01

PROPOSED RAMP J DATA		
14	POT	403+79.32
N 83°42'50" W 605.01'		
15	TS	409+84.33
16	SC	412+84.33
17	CS	421+40.56
18	ST	423+65.55
N 30°57'19" E 292.28'		
19	POT	426+57.83 (RT)
20	POT	426+57.83 (LT)
N 30°57'19" E 438.12'		
21	PC	430+95.95
22	PT	440+63.91

PROPOSED RAMP K DATA		
23	PC	408+34.32
24	PT	412+13.84
N 81°04'33" W 29.14		
25	TS	412+42.98
26	SC	414+67.98
27	CS	421+05.87
28	SC	423+05.87
29	PT	427+20.98
N 23°21'23" E 450.09'		
30	POT	431+71.07

PROPOSED RAMP N DATA		
11	PC	413+03.58
12	PT	416+85.90
S 84°51'35" E 1166.21'		
13	POT	428+52.11

PROPOSED RAMP Q DATA		
31	PC	28+09.58
32	PT	33+42.17
S 71°44'50" E 324.25'		
33	POT	36+66.42

CURVE 562-M1
PI STA 418+44.84
Δ = 93°04'47" (RT)
Dc = 11°44'43"
R = 487.82'
Ls_1 = 175.00'
θs_1 = 10°16'37"
LT_1 = 116.86'
ST_1 = 58.51'
x_1 = 174.44'
y_1 = 10.44'
k_1 = 87.41'
p_1 = 2.61'
T_1 = 604.94'
Ls_2 = 174.98'
θs_2 = 10°16'33"
LT_2 = 116.85'
ST_2 = 58.51'
x_2 = 174.42'
y_2 = 10.44'
k_2 = 87.40'
p_2 = 2.61'
T_2 = 604.93'
Lc = 617.50'
Es = 225.18'
C_1 = 174.75'
C = 577.09'
C_2 = 174.73'
$C.B._1$ = N 40°24'29" E
C.B. = N 83°31'25" E
$C.B._2$ = S 53°21'41" E

CURVE 562-M2
PI STA 425+16.31
Δ = 33°46'37" (LT)
Dc = 10°00'00"
R = 572.96'
Ls_1 = 175.00'
θs_1 = 8°45'00"
LT_1 = 116.81'
ST_1 = 58.46'
x_1 = 174.59'
y_1 = 8.89'
k_1 = 87.43'
p_1 = 2.23'
T_1 = 262.06'
Ls_2 = 174.98'
θs_2 = 8°44'56"
LT_2 = 116.80'
ST_2 = 58.46'
x_2 = 174.57'
y_2 = 8.89'
k_2 = 87.42'
p_2 = 2.22'
T_2 = 262.05'
Lc = 162.78'
Es = 28.15'
C_1 = 174.82'
C = 162.23'
C_2 = 174.80'
$C.B._1$ = S 52°51'11" E
C.B. = S 66°49'33" E
$C.B._2$ = S 80°47'53" E

CURVE 562-N1
PI STA 414+98.04
Δ = 25°49'54" (RT)
Dc = 6°45'24"
R = 848.00'
T = 194.46'
L = 382.32'
E = 22.01'
C = 379.09'
C.B. = N 82°13'28" E

CURVE 562-P1
PI STA 32+57.73
Δ = 9°37'44" (LT)
Dc = 1°58'33"
R = 2,900.00'
T = 244.26'
L = 487.36'
E = 10.27'
C = 486.79'
C.B. = S 89°40'27" E

CURVE 562-Q1
PI STA 30+76.85
Δ = 11°58'00" (RT)
Dc = 2°14'49"
R = 2,550.00'
T = 267.27'
L = 532.59'
E = 13.97'
C = 531.62'
C.B. = S 77°43'50" E

CURVE 562-K1
PI STA 410+24.11
Δ = 2°28'59" (RT)
Dc = 0°39'15"
R = 8,757.22'
T = 189.79'
L = 379.52'
E = 2.06'
C = 379.49'
C.B. = N 82°28'20" W

CURVE 562-K2
PI STA 419+50.81
Δ = 74°57'08" (RT)
Dc = 11°45'00"
R = 487.62'
Ls_1 = 225.00'
θs_1 = 13°13'08"
LT_1 = 150.42'
ST_1 = 75.38'
x_1 = 223.81'
y_1 = 17.24'
k_1 = 112.30'
p_1 = 4.32'
T_1 = 707.83'
Ls_2 = 200.00'
θs_2 = 12°45'00"
LT_2 = 128.48'
ST_2 = 72.24'
x_2 = 198.93'
y_2 = 15.94'
k_2 = 99.84'
p_2 = 3.12'
T_2 = 687.17'
Lc = 637.89'
Es = 126.82'
C_1 = 224.47'
C = 593.37'
C_2 = 199.57'
$C.B._1$ = N 76°40'17" W
C.B. = N 30°22'51" W
$C.B._2$ = N 15°15'48" E

CURVE 562-K3
PI STA 425+13.52
Δ = 4°09'04" (RT)
Dc = 1°00'00"
R = 5,729.58'
T = 207.65'
L = 415.11'
E = 3.76'
C = 415.02'
C.B. = N 21°55'15" E

CURVE 562-J2
PI STA 435+80.44
Δ = 6°27'11" (LT)
Dc = 0°40'00"
R = 8,594.37'
T = 484.49'
L = 967.96'
E = 13.65'
C = 967.45'
C.B. = N 27°43'44" E

CURVE 562-J1
PI STA 420+13.05
Δ = 114°40'09" (RT)
Dc = 10°15'00"
R = 558.98'
Ls_1 = 300.00'
θs_1 = 15°22'30"
LT_1 = 200.76'
ST_1 = 100.69'
x_1 = 297.85'
y_1 = 26.70'
k_1 = 149.64'
p_1 = 6.69'
T_1 = 1028.72'
Ls_2 = 224.99'
θs_2 = 11°31'51"
LT_2 = 150.31'
ST_2 = 75.29'
x_2 = 224.08'
y_2 = 15.05'
k_2 = 112.34'
p_2 = 3.77'
T_2 = 933.30'
Lc = 856.23'
Es = 486.38'
C_1 = 299.04'
C = 774.94'
C_2 = 224.59'
$C.B._1$ = N 78°35'31" W
C.B. = N 24°27'26" W
$C.B._2$ = N 27°06'47" E

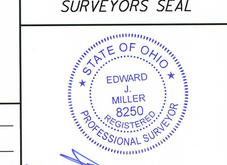
BASIS FOR BEARINGS:
THE BEARINGS SHOWN ON THIS PLAT ARE BASED ON THE OHIO STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 83 (1995). SAID BEARINGS ORIGINATED FROM A FIELD TRAVERSE WHICH WAS TIED (REFERENCED) TO SAID COORDINATE SYSTEM BY GPS OBSERVATIONS AND OBSERVATIONS OF SELECTED NATIONAL GEODETIC SURVEY MONUMENTS 7008, 7016, 6954 AND 6937. THE PORTION OF THE CENTERLINE OF I-75, HAVING A BEARING OF N 43°57'37" E (STA 481+34.86 TO STA 517+02.05), IS DESIGNATED THE "BASIS OF BEARING" FOR THIS SURVEY.

BASIS OF EXISTING C/L OF RIGHT OF WAY AND RIGHT OF WAY WIDTH
THE EXISTING R/W WIDTH AND LOCATION WERE DETERMINED FROM THE OHIO DEPARTMENT OF TRANSPORTATION R/W PLANS TITLED HAM-75-9.30 (1964), HAM-75-9.93 (1972), HAM-75-9.75 (1995), HAM-126-13.00 (1972), HAM-4W-7.80 (1955), HAM-S.R.4-4.000 (2000 METRIC), HAM-4W-7.16 AND HAM-562-0.28 (1956), S.H. 987 SEC. CINCINNATI (PT) "B" ARLINGTON HEIGHTS AND LOCKLAND (PT) (1947) ON FILE FROM THE OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 8 OFFICE, LEBANON, OHIO.

FOR INFORMATION ONLY

PIBK 444
PG 8

SURVEYORS SEAL



SIGNED: _____
DATE: 9/8/14

RECEIVED _____, 20___
RECORDED _____, 20___
BOOK _____ PAGE _____
COUNTY RECORDER

HORIZONTAL SCALE IN FEET
0 100 200 400

PID NO. 77889

R/W DESIGNER JMM
R/W REVIEWER EJM

CENTERLINE PLAT

HAM-75-7.85

3 / 52

1662 / 2017

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Miami Conten
Hamilton County Recorders Office
Doc #: 14-0099131 Type: PL
Filed: 09/30/14 09:56:50 AM $74.80
Off.Rec.: 12716 00788 F 1 158

REC'D FOR TRANS
2014 SEP 30 AM 10:07
DUSTY RHODES
AUDITOR
HAMILTON COUNTY OHIO

TRANSFER NOT NECESSARY
DUSTY RHODES
COUNTY AUDITOR

HAM-75-7.85

HAMILTON COUNTY
MILL CREEK TOWNSHIP
SEC 6, 11 & 12, TOWN 3, FRAC RANGE 2
CITY OF CINCINNATI AND
VILLAGE OF ELMWOOD PLACE

CL R/W SUMMIT RD DATA	
1	POT 9+95.01
	N 54°45'07" E 9.58'
2	PC 10+04.59
3	PT 14+92.82

CURVE 75-3
PI STA 456+41.20
Δ = 5°41'01" (LT)
Dc = 0°40'00"
R = 8,594.37'
T = 426.63'
L = 852.56'
E = 10.58'
C = 852.21'
C.B. = N 21°39'37" E

CURVE 75-4
PI STA 474+88.06
Δ = 25°08'30" (RT)
Dc = 2°45'00"
R = 2,083.48'
T = 464.60'
L = 914.25'
E = 51.17'
C = 906.93'
C.B. = N 31°23'22" E

CURVE X75-3
PI STA 457+35.67
Δ = 5°00'00" (LT)
Dc = 0°40'00"
R = 8,594.37'
T = 375.24'
L = 750.00'
E = 8.19'
C = 749.76'
C.B. = N 21°18'37" E

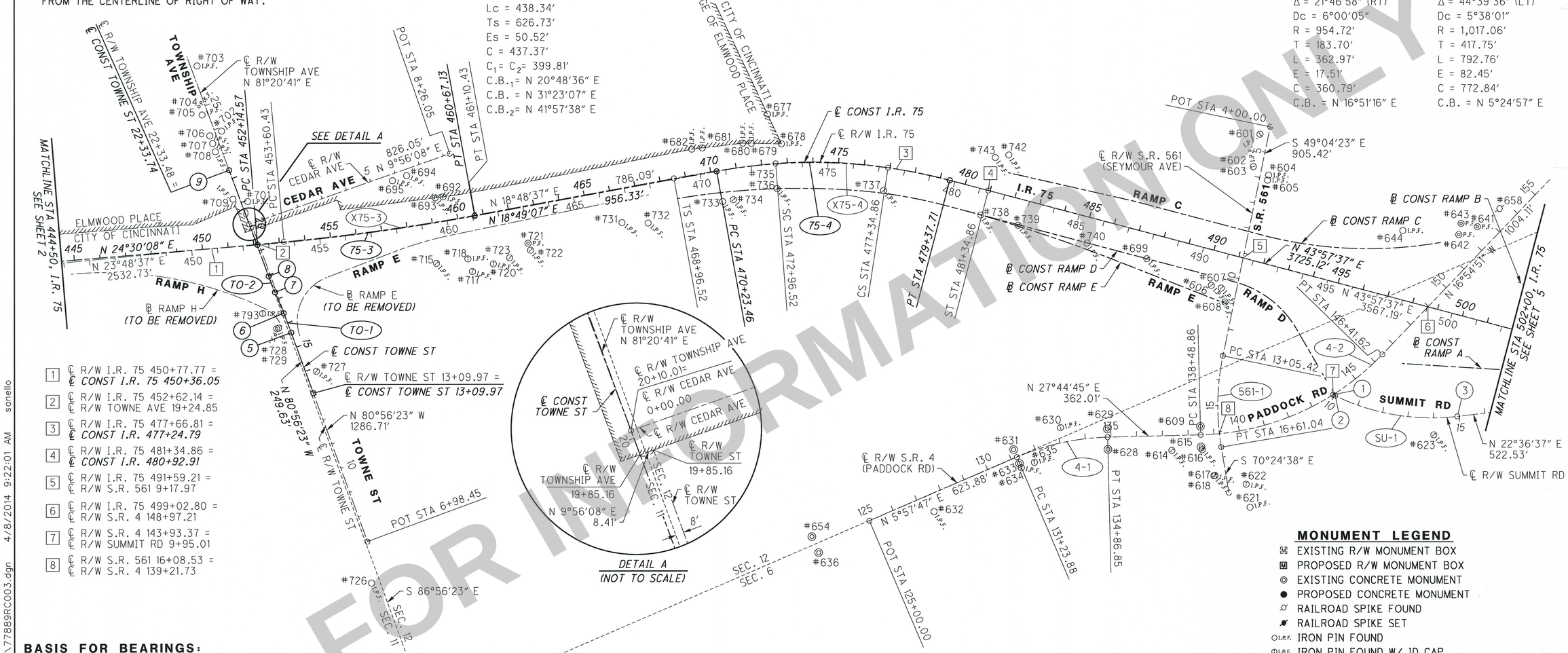
CURVE X75-4
PI STA 475+23.25
Δ = 25°09'00" (RT)
Dc = 3°00'00"
R = 1,909.86'
Ls = 400.00'
θ s = 6°00'00"
LT = 266.82'
ST = 133.47'
x = 399.56'
y = 13.95'
k = 199.93'
p = 3.49'
Δ c = 13°09'00" (RT)
Lc = 438.34'
Ts = 626.73'
Es = 50.52'
C = 437.37'
$C_1 = C_2$ = 399.81'
C.B.$_1$ = N 20°48'36" E
C.B. = N 31°23'07" E
C.B.$_2$ = N 41°57'38" E

CURVE SU-1
PI STA 12+55.32
Δ = 32°08'30" (LT)
Dc = 6°35'00"
R = 870.32'
T = 250.73'
L = 488.23'
E = 35.40'
C = 481.85'
C.B. = N 38°40'52" E

CURVE 4-1
PI= STA 133+07.58
Δ = 21°46'58" (RT)
Dc = 6°00'05"
R = 954.72'
T = 183.70'
L = 362.97'
E = 17.51'
C = 360.79'
C.B. = N 16°51'16" E

CURVE 4-2
PI= STA 142+66.61
Δ = 44°39'36" (LT)
Dc = 5°38'01"
R = 1,017.06'
T = 417.75'
L = 792.76'
E = 82.45'
C = 772.84'
C.B. = N 5°24'57" E

NOTE:
THE PROPOSED RIGHT OF WAY SHALL BE REFERENCED FROM THE CENTERLINE OF RIGHT OF WAY.



CL CONST TOWNE ST DATA	
5	PC 15+59.60
6	PT 16+40.40
	N 83°21'49" W 87.30'
7	PC 17+27.70
8	PT 17+95.00
	N 81°20'41" W 438.74'
9	POT 22+33.74

1 ℄ R/W I.R. 75 450+77.77 = ℄ CONST I.R. 75 450+36.05
2 ℄ R/W I.R. 75 452+62.14 = ℄ R/W TOWNE AVE 19+24.85
3 ℄ R/W I.R. 75 477+66.81 = ℄ CONST I.R. 477+24.79
4 ℄ R/W I.R. 75 481+34.86 = ℄ CONST I.R. 480+92.91
5 ℄ R/W I.R. 75 491+59.21 = ℄ R/W S.R. 561 9+17.97
6 ℄ R/W I.R. 75 499+02.80 = ℄ R/W S.R. 4 148+97.21
7 ℄ R/W S.R. 4 143+93.37 = ℄ R/W SUMMIT RD 9+95.01
8 ℄ R/W S.R. 561 16+08.53 = ℄ R/W S.R. 4 139+21.73

BASIS FOR BEARINGS:
THE BEARINGS SHOWN ON THIS PLAT ARE BASED ON THE OHIO STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 83 (1995). SAID BEARINGS ORIGINATED FROM A FIELD TRAVERSE WHICH WAS TIED (REFERENCED) TO SAID COORDINATE SYSTEM BY GPS OBSERVATIONS AND OBSERVATIONS OF SELECTED NATIONAL GEODETIC SURVEY MONUMENTS 7008, 7016, 6954 AND 6937. THE PORTION OF THE CENTERLINE OF I-75, HAVING A BEARING OF N 43°57'37" E (STA 481+34.86 TO STA 517+02.05), IS DESIGNATED THE "BASIS OF BEARING" FOR THIS SURVEY.

BASIS OF EXISTING C/L OF RIGHT OF WAY AND RIGHT OF WAY WIDTH
THE EXISTING R/W WIDTH AND LOCATION WERE DETERMINED FROM THE OHIO DEPARTMENT OF TRANSPORTATION R/W PLANS TITLED HAM-75-9.30 (1964), HAM-75-9.93 (1972), HAM-75-9.75 (1995), HAM-126-13.00 (1972), HAM-4W-7.80 (1955), HAM-S.R.4-4.000 (2000 METRIC), HAM-4W-7.16 AND HAM-562-0.28 (1956), S.H. 987 SEC. CINCINNATI (PT) "B" ARLINGTON HEIGHTS AND LOCKLAND (PT) (1947) ON FILE FROM THE OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 8 OFFICE, LEBANON, OHIO.

NOTES:
FOR RAMP GEOMETRIC INFORMATION SEE SHEET 6
FOR FOUND MONUMENTATION TABLES SEE SHEETS 8 & 9

CURVE TO-1
PI STA 16+00.01
Δ = 2°25'26" (LT)
Dc = 2°59'59"
R = 1,910.00'
T = 40.41'
L = 80.80'
E = 0.43'
C = 80.80'
C.B. = N 82°09'06" W

CURVE TO-2
PI STA 17+61.35
Δ = 2°01'08" (RT)
Dc = 2°59'59"
R = 1,910.00'
T = 33.65'
L = 67.30'
E = 0.30'
C = 67.30'
C.B. = N 82°21'15" W

CURVE 561-1
PI STA 14+85.32
Δ = 21°20'15" (LT)
Dc = 6°00'00"
R = 954.93'
T = 179.90'
L = 355.62'
E = 16.80'
C = 353.57'
C.B. = S 59°44'30" E

MONUMENT LEGEND
- EXISTING R/W MONUMENT BOX
- PROPOSED R/W MONUMENT BOX
- EXISTING CONCRETE MONUMENT
- PROPOSED CONCRETE MONUMENT
- RAILROAD SPIKE FOUND
- RAILROAD SPIKE SET
- I.P.F. IRON PIN FOUND
- I.P.F. IRON PIN FOUND W/ ID CAP
- I.P.S. IRON PIN SET W/ ID CAP
- P.F. IRON PIPE FOUND
- P.S. IRON PIPE SET
- P.K.F. P.K. NAIL FOUND
- P.K.S. P.K. NAIL SET

PID NO. 77889
R/W DESIGNER JMM
R/W REVIEWER EJM

CENTERLINE PLAT

HAM-75-7.85

SURVEYORS SEAL
STATE OF OHIO
EDWARD J. MILLER 8250 REGISTERED PROFESSIONAL SURVEYOR
SIGNED:
DATE: 9/8/14

PLBK 444
PG 9

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RECORDED _____, 20___
BOOK _____ PAGE _____
COUNTY RECORDER

4 / 52
1663 / 2017

FOR INFORMATION ONLY

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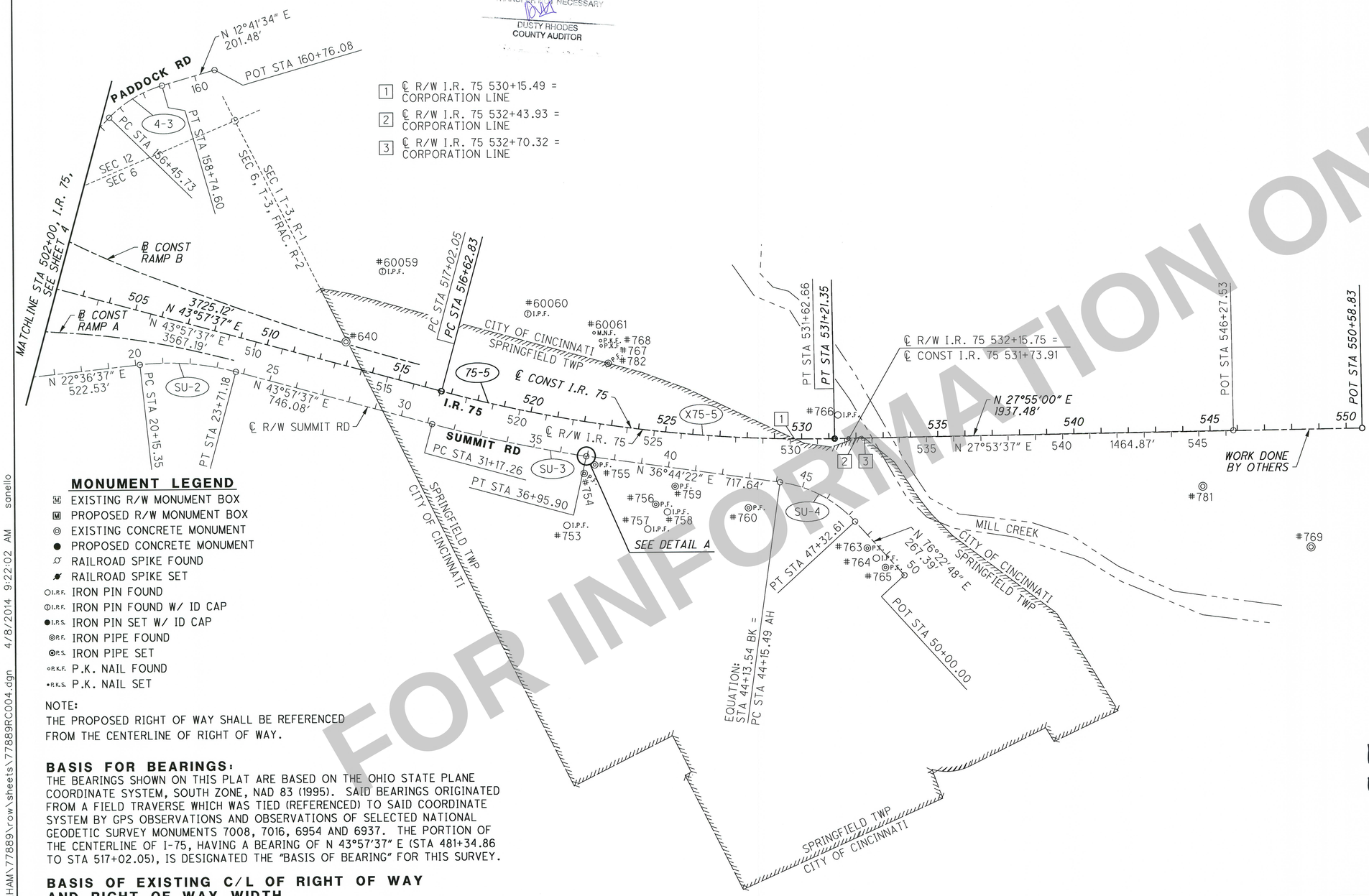
Warren Coutjes
Hamilton County Auditor & Recorders Office
Doc Id: 1:2014093003135 Type: PLT $74.80
Rec'd On: 9/30/2014 09:07:51 AM
Off.Rec.: 12716 00791 F 1 161

REC'D FOR TRANS
2014 SEP 30 AM 10:07
DUSTY RHODES
AUDITOR
HAMILTON COUNTY OHIO

TRANSFER NOT NECESSARY
DUSTY RHODES
COUNTY AUDITOR

HAM-75-7.85

HAMILTON COUNTY
SPRINGFIELD & MILL CREEK TOWNSHIPS
SEC 6 & 12, TOWN 3, FRAC RANGE 2
SEC 1, TOWN 3, RANGE 1
CITY OF CINCINNATI



DETAIL A
(NOT TO SCALE)

1 ℄ R/W I.R. 75 530+15.49 = CORPORATION LINE
2 ℄ R/W I.R. 75 532+43.93 = CORPORATION LINE
3 ℄ R/W I.R. 75 532+70.32 = CORPORATION LINE

MONUMENT LEGEND

- EXISTING R/W MONUMENT BOX
- PROPOSED R/W MONUMENT BOX
- EXISTING CONCRETE MONUMENT
- PROPOSED CONCRETE MONUMENT
- RAILROAD SPIKE FOUND
- RAILROAD SPIKE SET
- I.P.F. IRON PIN FOUND
- I.P.F. IRON PIN FOUND W/ ID CAP
- I.P.S. IRON PIN SET W/ ID CAP
- O.P.F. IRON PIPE FOUND
- O.P.S. IRON PIPE SET
- O.P.K.F. P.K. NAIL FOUND
- O.P.K.S. P.K. NAIL SET

NOTE:
THE PROPOSED RIGHT OF WAY SHALL BE REFERENCED FROM THE CENTERLINE OF RIGHT OF WAY.

BASIS FOR BEARINGS:

THE BEARINGS SHOWN ON THIS PLAT ARE BASED ON THE OHIO STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 83 (1995). SAID BEARINGS ORIGINATED FROM A FIELD TRAVERSE WHICH WAS TIED (REFERENCED) TO SAID COORDINATE SYSTEM BY GPS OBSERVATIONS AND OBSERVATIONS OF SELECTED NATIONAL GEODETIC SURVEY MONUMENTS 7008, 7016, 6954 AND 6937. THE PORTION OF THE CENTERLINE OF I-75, HAVING A BEARING OF N 43°57'37" E (STA 481+34.86 TO STA 517+02.05), IS DESIGNATED THE "BASIS OF BEARING" FOR THIS SURVEY.

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NOTES:

FOR RAMP GEOMETRIC INFORMATION SEE SHEET 7

FOR FOUND MONUMENTATION TABLES SEE SHEETS 8 & 9

CURVE 75-5
PI STA 523+96.89
Δ = 16°02'37" (LT)
Dc = 1°06'00"
R = 5,208.71'
T = 734.06'
L = 1,458.52'
E = 51.47'
C = 1,453.75'
C.B. = N 35°56'18" E

CURVE X75-5
PI STA 524+37.18
Δ = 16°04'00" (LT)
Dc = 1°06'00"
R = 5,208.71'
T = 735.13'
L = 1,460.61'
E = 51.62'
C = 1,455.83'
C.B. = N 35°55'37" E

CURVE 4-3
PI= STA 157+62.78
Δ = 29°36'25" (RT)
Dc = 12°56'10"
R = 442.91'
T = 117.05'
L = 228.87'
E = 15.21'
C = 226.33'
C.B. = N 2°06'38" W

CURVE SU-2
PI STA 21+95.35
Δ = 21°21'00" (RT)
Dc = 6°00'00"
R = 954.93'
T = 180.00'
L = 355.83'
E = 16.82'
C = 353.78'
C.B. = N 33°17'07" E

CURVE SU-3
PI STA 34+06.86
Δ = 6°12'57" (LT)
Dc = 1°04'27"
R = 5,333.71'
T = 289.60'
L = 578.64'
E = 7.86'
C = 578.35'
C.B. = N 40°51'09" E

CURVE SU-4
PI STA 45+80.70
Δ = 39°38'26" (RT)
Dc = 12°30'00"
R = 458.37'
T = 165.21'
L = 317.12'
E = 28.86'
C = 310.84'
C.B. = N 56°33'35" E

HORIZONTAL SCALE IN FEET
0 100 200 400

R/W DESIGNER JMM
R/W REVIEWER EJM

PID NO. 77889

CENTERLINE PLAT

PIBK 444
PG 10

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RECORDED _____, 20___
BOOK _____ PAGE _____
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COUNTY RECORDER

SURVEYORS SEAL

STATE OF OHIO
EDWARD J. MILLER
8250
REGISTERED PROFESSIONAL SURVEYOR

SIGNED: _____
DATE: 9/8/14

HAM-75-7.85

5 / 52

1664
2017

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Moore Coates
Hamilton County Recorders Office
Doc #: 14-0009139 Type: PAL $74.80
Filed: 09/30/2014 01:07:55 PM
Off Rec: 13215 00755

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2014 SEP 30 AM 10:07
DUSTY RHODES
AUDITOR
HAMILTON COUNTY OHIO

HAM-75-7.85

HAMILTON COUNTY
MILL CREEK TOWNSHIP
SEC 6, 11 & 12, TOWN 3, FRAC RANGE 2
CITY OF CINCINNATI AND
VILLAGE OF ELMWOOD PLACE

PROPOSED RAMP D DATA	
1	PC 469+76.37
2	PCC 472+26.37
3	PT 479+83.46
N 43°57'37" E 1085.57'	
4	PC 490+69.03
5	PT 493+78.68
N 88°52'06" E 230.01'	
6	POT 496+08.69

CURVE 75-D1
PI STA 471+01.69
Δ = 10°00'00" (RT)
Dc = 4°00'00"
R = 1,432.40'
T = 125.32'
L = 250.00'
E = 5.47'
C = 249.68'
C.B. = N 23°49'07" E

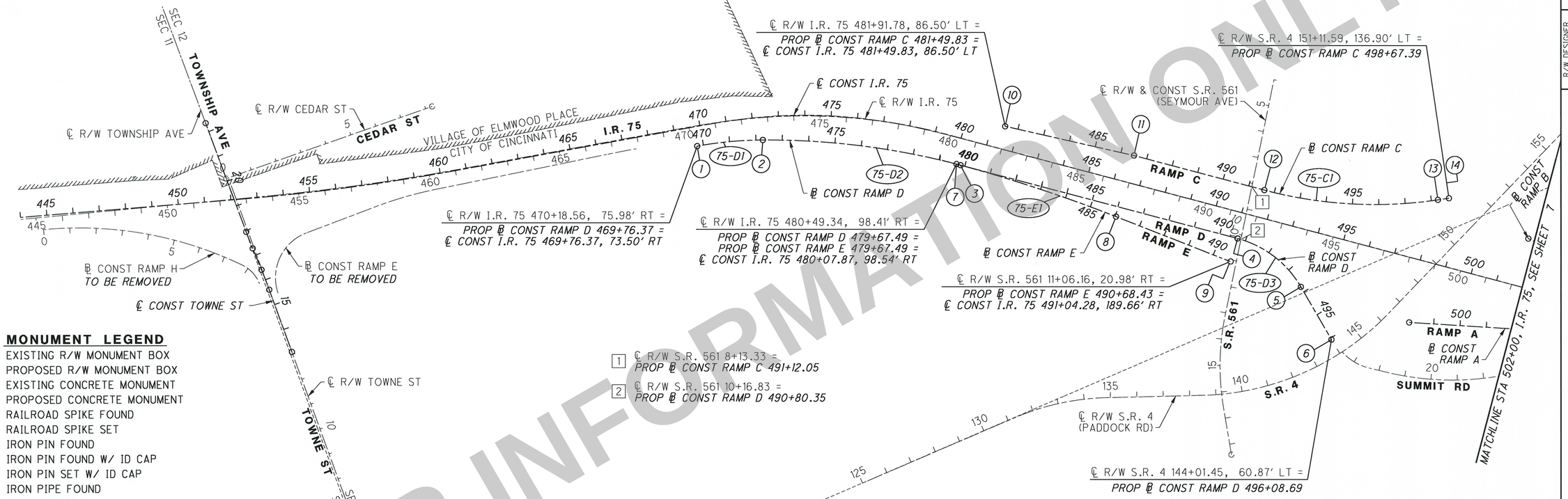
CURVE 75-D2
PI STA 476+07.13
Δ = 15°08'30" (RT)
Dc = 2°00'00"
R = 2,864.79'
T = 380.76'
L = 757.09'
E = 25.19'
C = 754.89'
C.B. = N 36°23'22" E

CURVE 75-D3
PI STA 492+32.30
Δ = 44°54'29" (RT)
Dc = 14°30'09"
R = 395.07'
T = 163.27'
L = 309.65'
E = 32.41'
C = 301.79'
C.B. = N 66°24'52" E

TRANSFER NOT NECESSARY
DUSTY RHODES
COUNTY AUDITOR

PROPOSED RAMP C DATA	
10	POT 481+49.83
N 41°53'54" E 500.24'	
11	PI 486+50.07
N 43°57'37" E 511.28'	
12	PC 491+61.35
13	PT 498+25.06
N 20°43'48" E 42.33'	
14	POT 498+67.39

CURVE 75-C1
PI STA 494+97.83
Δ = 23°13'49" (LT)
Dc = 3°30'00"
R = 1,637.00'
T = 336.48'
L = 663.71'
E = 34.22'
C = 659.18'
C.B. = N 32°20'42" E



MONUMENT LEGEND

- EXISTING R/W MONUMENT BOX
- PROPOSED R/W MONUMENT BOX
- EXISTING CONCRETE MONUMENT
- PROPOSED CONCRETE MONUMENT
- RAILROAD SPIKE FOUND
- RAILROAD SPIKE SET
- I.R.F. IRON PIN FOUND
- I.R.F. IRON PIN FOUND W/ ID CAP
- I.R.S. IRON PIN SET W/ ID CAP
- R.F. IRON PIPE FOUND
- R.S. IRON PIPE SET
- P.K.F. P.K. NAIL FOUND
- P.K.S. P.K. NAIL SET

NOTE:
THE PROPOSED RIGHT OF WAY SHALL BE REFERENCED FROM THE CENTERLINE OF RIGHT OF WAY.

BASIS FOR BEARINGS:

THE BEARINGS SHOWN ON THIS PLAT ARE BASED ON THE OHIO STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 83 (1995). SAID BEARINGS ORIGINATED FROM A FIELD TRAVERSE WHICH WAS TIED (REFERENCED) TO SAID COORDINATE SYSTEM BY GPS OBSERVATIONS AND OBSERVATIONS OF SELECTED NATIONAL GEODETIC SURVEY MONUMENTS 7008, 7016, 6954 AND 6937. THE PORTION OF THE CENTERLINE OF I-75, HAVING A BEARING OF N 43°57'37" E (STA 481+34.86 TO STA 517+02.05), IS DESIGNATED THE "BASIS OF BEARING" FOR THIS SURVEY.

BASIS OF EXISTING C/L OF RIGHT OF WAY AND RIGHT OF WAY WIDTH

THE EXISTING R/W WIDTH AND LOCATION WERE DETERMINED FROM THE OHIO DEPARTMENT OF TRANSPORTATION R/W PLANS TITLED HAM-75-9.30 (1964), HAM-75-9.93 (1972), HAM-75-9.75 (1995), HAM-126-13.00 (1972), HAM-4W-7.80 (1955), HAM-S.R.4-4.000 (2000 METRIC), HAM-4W-7.16 AND HAM-562-0.28 (1956), S.H. 987 SEC. CINCINNATI (PT) "B" ARLINGTON HEIGHTS AND LOCKLAND (PT) (1947) ON FILE FROM THE OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 8 OFFICE, LEBANON, OHIO.

1 ℄ R/W S.R. 561 8+13.33 =
PROP ℄ CONST RAMP C 491+12.05

2 ℄ R/W S.R. 561 10+16.83 =
PROP ℄ CONST RAMP D 490+80.35

NOTES:

FOR MAINLINE GEOMETRIC INFORMATION
SEE SHEET 4

FOR PROPOSED RAMP A & B DATA
SEE SHEET 7

FOR FOUND MONUMENTS
SEE SHEET 4

FOR FOUND MONUMENTATION TABLES
SEE SHEETS 8 & 9

PROPOSED RAMP E DATA	
7	PC 479+67.49
8	PT 486+03.92
N 50°33'00" E 464.51'	
9	POT 490+68.43

CURVE 75-E1
PI STA 482+86.03
Δ = 6°21'50" (RT)
Dc = 1°00'00"
R = 5,730.00'
T = 318.54'
L = 636.43'
E = 8.85'
C = 636.10'
C.B. = N 47°22'05" E

RECEIVED _____, 20___
RECORDED _____, 20___
BOOK _____ PAGE _____
COUNTY RECORDER

SURVEYORS SEAL

STATE OF OHIO
EDWARD J. MILLER
8250
REGISTERED PROFESSIONAL SURVEYOR

SIGNED: _____
DATE: 4/8/14

FOR INFORMATION ONLY

PIBK 444
PG 11

HORIZONTAL SCALE IN FEET
0 100 200 400

PID NO. 77889

R/W DESIGNER JMM
R/W REVIEWER EJM

CENTERLINE PLAT

HAM-75-7.85

6 / 52

1665 / 2017

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Maxine Coates
Hamilton County Recorders Office
Doc #: I6-009141 Type: PL
Rec'd: 09/30/14 09:59:40 AM $74.80
Off.Rec.: 12216 00076 F 1 166

REC'D FOR TRANS
2014 SEP 30 AM 10:07
DUSTY RHODES
AUDITOR
HAMILTON COUNTY OHIO

TRANSFER NOT NECESSARY
DUSTY RHODES
COUNTY AUDITOR

HAM-75-7.85

HAMILTON COUNTY
SPRINGFIELD & MILL CREEK TOWNSHIPS
SEC 6 & 12, TOWN 3, FRAC RANGE 2
SEC 1, TOWN 3, RANGE 1
CITY OF CINCINNATI

PROPOSED RAMP A DATA	
1	POT 498+06.69
N 32°40'50" E 481.70'	
2	PC 502+88.39
3	CS 506+96.24
4	ST 508+96.23

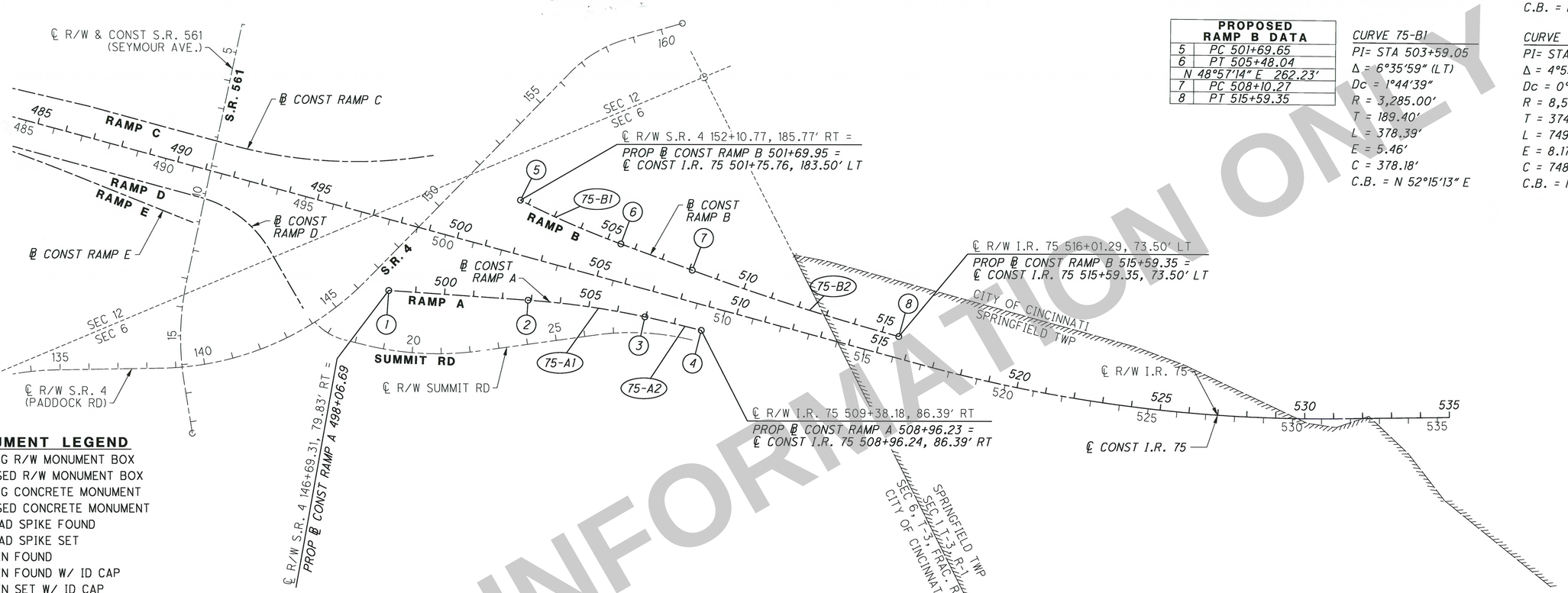
PROPOSED RAMP B DATA	
5	PC 501+69.65
6	PT 505+48.04
N 48°57'14" E 262.23'	
7	PC 508+10.27
8	PT 515+59.35

CURVE 75-A1
PI= STA 504+92.66
Δ = 8°09'26" (RT)
Dc = 2°00'00"
R = 2,864.79'
T = 204.27'
L = 407.85'
E = 7.27'
C = 407.51'
C.B. = N 36°45'32" E

CURVE 75-B1
PI= STA 503+59.05
Δ = 6°35'59" (LT)
Dc = 1°44'39"
R = 3,285.00'
T = 189.40'
L = 378.39'
E = 5.46'
C = 378.18'
C.B. = N 52°15'13" E

SPIRAL 75-A2
PI STA 507+62.91
Ls = 199.99'
θs = 2°00'00"
LT = 133.34'
ST = 66.67'
x = 199.97'
y = 2.33'
k = 99.99'
p = 0.58'
C = 199.98'
C.B. = N 42°10'15" E

CURVE 75-B2
PI= STA 511+85.05
Δ = 4°59'37" (LT)
Dc = 0°40'00"
R = 8,595.00'
T = 374.78'
L = 749.08'
E = 8.17'
C = 748.84'
C.B. = N 46°27'25" E



MONUMENT LEGEND

- EXISTING R/W MONUMENT BOX
- PROPOSED R/W MONUMENT BOX
- EXISTING CONCRETE MONUMENT
- PROPOSED CONCRETE MONUMENT
- RAILROAD SPIKE FOUND
- RAILROAD SPIKE SET
- I.R.F. IRON PIN FOUND
- I.R.F. IRON PIN FOUND W/ ID CAP
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NOTE:
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BASIS FOR BEARINGS:

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BASIS OF EXISTING C/L OF RIGHT OF WAY AND RIGHT OF WAY WIDTH

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NOTES:

FOR MAINLINE GEOMETRIC INFORMATION SEE SHEET 4 &5

FOR PROPOSED RAMP C, D & E DATA SEE SHEET 6

FOR FOUND MONUMENTS SEE SHEET 4 &5

FOR FOUND MONUMENTATION TABLES SEE SHEETS 8 & 9

FOR INFORMATION ONLY

PIBK 444
PG 12

RECEIVED _____, 20___
RECORDED _____, 20___
BOOK _____ PAGE _____
COUNTY RECORDER

SURVEYORS SEAL

STATE OF OHIO
EDWARD J. MILLER
8250
REGISTERED PROFESSIONAL SURVEYOR

SIGNED: _____
DATE: 4/8/14

R/W DESIGNER JMM
R/W REVIEWER EJM

PID NO. 77889

HORIZONTAL SCALE IN FEET
0 100 200 400

CENTERLINE PLAT

HAM-75-7.85

7 / 52

1666
2017

J:\20110903\ODOT\HAM\77889\row\sheets\77889RC006.dgn 4/8/2014 9:22:03 AM sanello

EXISTING MONUMENTATION FOUND I.R. 75

POINT	TYPE	STATION/OFFSET	NORTHING	EASTING
60034	5/8" REBAR FND	408+02.22, 148.38' LT	433672.5755	1404002.0600
60033	5/8" REBAR FND	412+36.87, 179.27' LT	433989.3743	1404301.2429
60032	5/8" REBAR FND	413+44.92, 255.17' LT	434118.3664	1404329.4650
60035	5/8" REBAR FND	413+92.86, 328.09' LT	434204.4987	1404315.4374
60031	5/8" REBAR W/#6452 AND #4911 CAP FND	414+64.08, 280.46' LT	434217.0605	1404399.4123
60030	5/8" REBAR FND	415+21.02, 292.10' LT	434262.8916	1404431.5610
60002	3/4" REBAR FND	422+16.70, 220.71' RT	434456.1448	1405265.7170
60055	3/4" OD IRON PIPE FND	422+61.54, 352.23' LT	434805.5736	1404809.5841
60054	5/8" REBAR FND	422+65.85, 320.34' LT	434791.6061	1404838.5020
60001	3/4" REBAR FND	425+42.34, 136.01' RT	434797.3549	1405366.9760
60000	3/4" REBAR FND	427+21.50, 135.21' RT	434965.3480	1405446.0560
799	5/8" REBAR FND	431+66.44, 90.16' RT	435391.4649	1405585.1518
796	CONC MONUMENT W/PROCTER & GAMBLE DISK FND	434+48.31, 90.11' RT	435649.3642	1405698.9007
785	5/8" REBAR W/MCGILL SMITH PUNSHON CAP FND	436+03.07, 229.05' LT	435919.7958	1405469.3804
786	5/8" REBAR W/MCGILL SMITH PUNSHON CAP FND	436+06.30, 238.34' LT	435926.4988	1405462.1879
787	3/4" OD IRON PIPE FND	439+93.85, 109.16' LT	436228.9117	1405736.8356
790	3/4" OD IRON PIPE FND	441+29.63, 117.96' LT	436356.6910	1405783.5993
60078	5/8" REBAR W/SPREEN #8238 CAP FND	440+07.94, 223.82' LT	436654.0515	1405799.0991
60079	5/8" REBAR W/SPREEN #8238 CAP FND	444+39.44, 230.28' LT	436685.4784	1405805.9135
693	5/8" REBAR W/ARNOLD #8276 CAP FND	459+68.60, 92.80' LT	438031.1033	1406526.7023
692	5/8" REBAR W/ARNOLD #8276 CAP FND	459+99.70, 91.54' LT	438059.6582	1406538.2381
715	1/2" REBAR W/CS&A #8011 CAP FND	459+32.62, 158.61' RT	437911.6695	1406750.8643
718	5/8" REBAR W/R.L.W. #6000 CAP FND	460+53.62, 161.96' RT	438026.6623	1406795.3514
717	5/8" REBAR W/RLW#6000 CAP FND	460+62.46, 213.27' RT	438018.3546	1406846.7730
720	5/8" REBAR W/RLW#6000 CAP FND	461+46.54, 198.59' RT	438103.7564	1406860.5020
723	5/8" REBAR W/BYRNSIDE #4391 CAP FND	462+12.78, 187.25' RT	438170.1130	1406871.1316
721	3/4" REBAR FND	462+93.53, 144.48' RT	438260.3414	1406856.6817
722	5/8" REBAR W/BYRNSIDE #4391 CAP FND	462+98.22, 172.65' RT	438255.7047	1406884.8605
731	3/4" REBAR FND	466+67.07, 131.77' RT	438618.0375	1406965.0894
732	3/4" REBAR FND	467+66.94, 151.81' RT	438706.1122	1407016.2609
682	1" REBAR FND	469+84.69, 98.91' LT	438993.5002	1406849.4497
681	1" REBAR FND	470+25.01, 96.62' LT	439031.3358	1406865.0883
733	3/4" REBAR FND	470+69.41, 120.88' RT	438999.7937	1407084.7913
734	5/8" REBAR W/WOOLPERT CAP FND	471+12.96, 120.29' RT	439039.6102	1407098.8439
680	1" REBAR FND	471+80.14, 90.92' LT	439178.3171	1406926.0760
679	1" REBAR FND	472+11.56, 86.31' LT	439206.6829	1406942.6118
677	5/8" REBAR FND	472+81.15, 191.64' LT	439316.5066	1406875.4058
735	5/8" REBAR W/ALS #6364 CAP FND	472+94.61, 98.02' RT	439208.6630	1407144.6005
736	5/8" REBAR W/WOOLPERT CAP FND	472+94.63, 99.31' RT	439208.1380	1407145.7779
678	1" REBAR FND	473+23.87, 73.90' LT	439308.1478	1407001.4053
737	5/8" REBAR W/ALS #6364 CAP FND	477+30.49, 90.01' RT	739566.1649	1407352.5766
738	5/8" REBAR FND	481+30.39, 99.06' RT	439850.1425	1407619.6871
743	1/2" REBAR FND	481+28.28, 130.14' LT	440007.7230	1407453.2326
742	1/2" REBAR FND	481+76.76, 152.97' LT	440058.4833	1407470.4734
739	5/8" REBAR W/ALS #6364 CAP FND	482+80.65, 100.79' RT	439957.1027	1407725.2338
740	5/8" REBAR FND IN N SIDE OF 30" COTTONWOOD TREE	485+57.69, 98.90' RT	440157.8304	1407916.1869
699	5/8" REBAR W/WOOLPERT CAP FND	487+97.60, 98.57' RT	440330.7518	1408082.4830
606	5/8" REBAR W/WOOLPERT CAP FND	490+66.61, 134.82' RT	440499.2230	1408295.3116
607	5/8" REBAR W/WOOLPERT CAP FND	491+06.92, 134.71' RT	440528.3248	1408323.2131
644	5/8" REBAR FND	497+33.17, 261.31' LT	441254.0067	1408472.8688
642	3/4" OD IRON PIPE FND	499+47.76, 301.37' LT	441436.2865	1408592.9946
643	3/4" OD IRON PIPE FND	499+45.24, 346.15' LT	441465.5529	1408559.0111
641	3/4" OD IRON PIPE FND	500+09.98, 349.74' LT	441514.6427	1408601.3660
640	CONC MONUMENT W/"X" CUT ON BRASS DISK FND	513+18.75, 84.96' LT	442272.9283	1409700.4600
60059	1/2" REBAR W/HOWARD #5005 CAP FND	513+82.32, 368.18' LT	442515.2900	1409540.7160
60060	1/2" REBAR W/HOWARD #5005 CAP FND	519+55.13, 349.44' LT	442906.2970	1409935.8450
60061	MAG NAIL FND	522+24.57, 325.84' LT	443085.0867	1410114.9202
768	PK NAIL FND	522+53.86, 301.13' LT	443091.5344	1410151.3418
767	PK NAIL FND	522+59.62, 282.63' LT	443084.4708	1410169.2842
782	3/4" OD IRON PIPE FND	522+96.48, 233.05' LT	443075.8758	1410237.8871
766	5/8" REBAR FND	531+76.85, 85.73' LT	443721.3887	1410812.7602
781	CONC MONUMENT W/5/8" REBAR FND	545+11.15, 202.64' RT	444765.7540	1411691.8560
769	CONC MONUMENT W/5/8" REBAR FND	549+04.37, 432.29' RT	445005.8530	1412078.7820

EXISTING MONUMENTATION FOUND I.R. 75

POINT	TYPE	STATION/OFFSET	NORTHING	EASTING
60053*	5/8" IRON PIN FND	422+15.61, 741.91' LT	434987.2020	1404462.8410
60056*	5/8" IRON PIN FND	429+17.28, 736.15' LT	435497.0978	1404728.5900
60057*	5/8" REBAR FND	430+46.94, 1131.37' LT	435775.2771	1404419.3450
60075*	CONC MON W/BRASS DISK CAPPED PROCTOR & GAMBLE FND	440+69.05, 398.62' LT	436414.5729	1405502.3660
60076*	CHISLED "X" FND	443+74.82, 324.61' LT	436664.4426	1405693.5180
60077*	CHISLED "X" FND	444+05.21, 334.61' LT	436696.2808	1405696.6410
60036*	5/8" OD IRON PIPE FND	445+49.07, 377.69' LT	436845.2909	1405715.3070
60037*	5/8" REBAR FND	446+61.95, 414.92' LT	436963.5916	1405726.8140
60041*	1/2" REBAR FND	447+04.34, 482.25' LT	437029.5539	1405682.3250
60040*	PK NAIL FND	448+47.90, 526.23' LT	437178.6548	1405700.0470
60038*	1/2" REBAR FND	449+29.39, 502.56' LT	437243.6503	1405754.5980
60039*	3/4" OD IRON PIPE FND	449+33.25, 555.81' LT	437268.6732	1405707.4430
690*	1/2" REBAR FND	460+83.13, 585.28' LT	438298.2565	1406098.6150
688*	1" SQUARE BAR FND	463+23.10, 504.00' LT	438497.4324	1406252.3740
689*	1" SQUARE BAR FND	463+22.72, 471.30' LT	438486.5309	1406283.2010
686*	5/8" REBAR W/G.A. KOOPMAN #8279 CAP FND	466+21.63, 339.72' LT	438727.0437	1406504.1280
687*	5/8" REBAR W/G.A. KOOPMAN #8279 CAP FND	466+20.68, 248.91' LT	438696.8626	1406589.7860
684*	3/4" OD IRON PIPE FND	467+23.60, 255.27' LT	438796.3380	1406616.9540
685*	3/4" OD IRON PIPE FND	466+71.69, 352.40' LT	438778.5247	1406508.2690
674*	3/4" OD IRON PIPE FND	469+50.31, 258.23' LT	439012.3492	1406687.4410
675*	1" REBAR FND	470+22.46, 209.53' LT	439066.4057	1406757.7380
676*	1" REBAR FND	470+71.64, 211.01' LT	439115.1297	1406773.5790
719*	5/8" REBAR W/RLW CAP FND	461+73.49, 276.16' RT	438104.2570	1406942.6180
724*	3/4" OD IRON PIPE FND	462+15.41, 284.03' RT	438141.3998	1406963.5890
725*	5/8" OD IRON PIPE FND	462+23.62, 331.37' RT	438133.9134	1407011.0510
714*	1/2" REBAR FND	459+42.80, 317.16' RT	437867.3736	1406903.4590
716*	1/2" REBAR FND	459+91.10, 368.71' RT	437897.2073	1406968.9580
730*	5/8" REBAR FND	459+60.64, 415.54' RT	437851.4279	1407002.3030
710*	1" IRON PIN FND	456+77.97, 435.56' RT	437566.9307	1406915.9170
638*	5/8" REBAR FND	471+18.03, 298.87' RT	438981.2101	1407267.6700
637*	5/8" REBAR W/CITY OF CINCINNATI ENG DIVISION FND	471+52.54, 325.81' RT	439000.6590	1407303.9620
744*	1/2" REBAR FND (BENT)	481+07.52, 429.47' LT	440200.4034	1407223.2190
745*	3/4" OD IRON PIPE FND	476+75.25, 427.24' LT	439829.4233	1406903.3560
746	5/8" REBAR FND	474+93.20, 457.37' LT	439658.9811	1406754.7200
645*	5/8" REBAR W/CITY OF CINCINNATI ENG DIVISION FND	474+12.23, 1041.81' RT	438861.323	1408025.5330
655*	5/8" REBAR W/CITY OF CINCINNATI ENG DIVISION FND	467+80.27, 1541.85' RT	438270.5245	1408336.3620
658*	GARDEN SPIKE FND	500+75.91, 439.94' LT	441624.7142	1408582.2030
60062*	5/8" REBAR W/AR AMENT #5684 CAP FND	521+14.30, 639.31' LT	443203.6262	1409807.9820
60063*	PK NAIL FND	521+01.80, 672.46' LT	443216.2787	1409775.4450
60064*	5/8" REBAR FND	521+63.24, 670.37' LT	443256.4154	1409810.9090

* NOT SHOWN ON ℄ PLAT BUT USED TO ESTABLISH R/W AND/OR BOUNDARY LINES

FOR INFORMATION ONLY

PLAT BK 444
PG 13

SURVEYORS SEAL

STATE OF OHIO
EDWARD J. MILLER
8250
REGISTERED PROFESSIONAL SURVEYOR

SIGNED: _____
DATE: 4/8/14

RECEIVED _____, 20___
RECORDED _____, 20___
BOOK _____ PAGE _____
COUNTY RECORDER

FEDERAL PROJECT NO. E041(146)
PID NO. 77889
CALCULATED JMM
CHECKED EJM

CENTERLINE PLAT

HAM-75-7.85

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1667
2017

RECD FOR TRANS
2014 SEP 30 AM 10:07
DUSTY RHODES
AUDITOR
HAMILTON COUNTY OHIO
TRANS
DUSTY RHODES
COUNTY AUDITOR
Warren County
Doc #: 14-0095147 Type: PL
Recorded: 09/30/2014 At: 474.00
Off Rec: 2014 00077 1 1 167
DUSTY RHODES
AUDITOR
HAMILTON COUNTY OHIO
2014 SEP 30 AM 10:07
RECD FOR TRANS

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REC'D FOR TRANS
2014 SEP 30 AM 10:07
DUSTY RHODES
AUDITOR
HAMILTON COUNTY OHIO
TRANSFER NOT NECESSARY
DUSTY RHODES
COUNTY AUDITOR
Hamilton County Recorders Office
Doc.# 14-0099143 Types: PR
Rec'd: 09/30/2014 10:07:34 AM $74.00
Off.Rec.: 12714 1007938 F 0 $1.00

EXISTING MONUMENTATION FOUND S.R. 562

POINT	TYPE	STATION/OFFSET	NORTHING	EASTING
60003	CONC MONUMENT W/PROCTER & GAMBLE DISK FND	14+87.11, 86.57' LT	433946.2987	1405612.4649
60004	1/2" REBAR W/J.T.K. #6549 CAP FND	17+04.81, 91.82' LT	433927.6758	1405829.4288
60047	5/8" REBAR FND	18+10.29, 89.60' RT	433735.7997	1405914.4103
60005	1/2" REBAR W/J.T.K. #6549 CAP FND	22+22.02, 81.52' LT	433860.8127	1406342.3966
60050	1/2" REBAR FND	26+02.48, 70.39' LT	433808.0863	1406719.3567
60026	5/8" REBAR FND	27+82.97, 99.12' RT	433619.8388	1406880.2001
60027	CONC MONUMENT W/1" BRASS DISK FND (DISTURBED)	27+83.00, 99.46' RT	433619.4892	1406880.1906
60046	1/2" REBAR FND	31+94.80, 95.14' LT	433767.8293	1407310.8220
60017	1" OD IRON PIPE FND	35+83.52, 173.82' LT	433802.8060	1407707.8724
60051	5/8" REBAR FND	25+33.45, 515.55' RT	433233.2280	1406586.5850
60052	5/8" REBAR FND	27+85.65, 514.00' RT	433207.1556	1406837.4350
60016	1/2" REBAR FND	31+93.79, 321.94' LT	433993.3845	1407334.6490
60015	5/8" REBAR FND	31+43.87, 324.36' LT	434001.2569	1407285.2990
60014	3/4" OD IRON PIPE FND	29+88.37, 382.06' LT	434075.6341	1407137.0470
	EXISTING MONUMENTATION FOUND S.R. 4 (PADDOCK RD)			
60021	1/2" REBAR FND (BENT)	15+16.71, 31.92' RT	434118.6427	1407978.1099
60020	1/2" REBAR FND	15+43.15, 29.89' RT	434145.1493	1407978.8126
60018	1/2" REBAR FND	15+60.79, 29.64' LT	434168.8397	1407921.4246
60019	5/8" REBAR W/NICHOLS #6657 CAP FND	16+85.60, 29.85' LT	434293.0027	1407934.0889
60022	CHISELED CROSS FOUND	21+06.71, 30.37' RT	434705.6592	1408037.4082
	EXISTING MONUMENTATION FOUND LAIDLAW AVE			
784	MAG NAIL FND	17+62.54, 29.27' RT	435871.1399	1405196.3405
672	CONC MONUMENT FND	17+62.94, 30.03' LT	435925.9371	1405219.0014
673	CONC MONUMENT FND	17+93.14, 30.06' LT	435914.6088	1405247.0002
796	CONC MONUMENT W/PROCTER & GAMBLE DISK FND	23+11.60, 45.89' RT	435649.3642	1405698.9007
794	3/4" OD IRON PIPE FND	27+93.11, 30.26' LT	435538.9573	1406173.7293
795	1" OD IRON PIPE FND	32+25.38, 60.47' RT	435311.6666	1406556.8652
797	5/8" REBAR W/#6452 CAP FND	32+48.57, 33.93' RT	435332.3042	1406585.9033
	EXISTING MONUMENTATION FOUND TOWNSHIP AVE/TOWN ST			
726	1/2" REBAR FND (BENT)	5+42.05, 40.34' LT (TOWNE)	437087.5986	1407707.9106
727	5/8" REBAR W/J.J.D. ASSOCIATES CAP FND	13+85.60, 40.27' RT (TOWNE)	437300.0384	1406887.5781
728	1/2" REBAR FND	15+92.77, 40.13' LT (TOWNE)	437253.2677	1406670.3339
729	1" OD IRON PIPE FND	15+93.35, 47.92' LT (TOWNE)	437245.6648	1406668.5338
793	5/8" REBAR W/ABERCROMBIE #6021 CAP FND	16+67.35, 78.96' LT (TOWNE)	437226.6675	1406590.5742
701	3/4" REBAR FND	20+94.65, 24.09' RT (TOWNSHIP)	437386.6977	1406183.1010
709	1" CARRIAGE BOLT FND	21+23.18, 25.27' LT (TOWNSHIP)	437342.1876	1406147.4579
708	5/8" REBAR FND	23+19.27, 25.30' LT (TOWNSHIP)	437371.6662	1405953.6060
707	5/8" REBAR W/ALS #6364 CAP FND	23+52.17, 23.84' LT (TOWNSHIP)	437378.0667	1405921.2920
706	5/8" REBAR FND	23+84.10, 23.92' LT (TOWNSHIP)	437382.7933	1405889.7210
705	5/8" REBAR FND	24+70.34, 23.63' LT (TOWNSHIP)	437396.0614	1405804.5040
704	PK NAIL FND	25+04.67, 23.60' LT (TOWNSHIP)	437401.2521	1405770.5638
702	5/8" REBAR FND	23+85.11, 25.61' RT (TOWNSHIP)	437431.9098	1405896.1760
703	5/8" REBAR W/ALS #6364 CAP FND	26+54.72, 24.36' RT (TOWNSHIP)	437471.2519	1405629.4440
	EXISTING MONUMENTATION FOUND CEDAR ST			
695	5/8" REBAR FND	5+81.31, 24.93' RT	437918.4569	1406387.8509
694	5/8" REBAR W/DETTMER #5126 CAP FND	6+39.40, 24.77' RT	437975.7052	1406397.7084
700*	5/8" REBAR FND	2+94.93, 204.99' LT	437676.0391	1406111.9620
696*	1" SQUARE BAR FND	5+75.31, 175.61' LT	437947.1515	1406189.2790
697*	5/8" REBAR FND	5+74.86, 235.72' LT	437957.0745	1406129.9940
698*	5/8" REBAR W/#7327, 3076 & 1727 CAP FND	5+73.28, 264.81' LT	437960.5395	1406101.0690
60013*	5/8" REBAR W/#7327, 3076 & 1727 CAP FND	5+72.66, 294.76' LT	437965.0999	1406071.4640
690*	1/2" REBAR FND	N/A	438298.2565	1406098.6150
	EXISTING MONUMENTATION FOUND S.R. 4 (PADDOCK RD)			
654	CONC MONUMENT W/ODOT ALUMINUM DISK FND	122+70.20, 31.45' LT	438669.3267	1408387.0194
636	CONC MONUMENT W/ODOT ALUMINUM DISK FND	122+70.29, 35.39' RT	438662.4677	1408453.5055
632	5/8" REBAR FND	127+42.88, 44.28' RT	439131.5811	1408511.4481
634	5/8" REBAR FND W/KLEINGER & ASSOCIATES CAP FND	131+23.36, 44.52' RT	439509.9726	1408551.2131
631	CONC MONUMENT W/ODOT ALUMINUM DISK FND	131+23.56, 31.81' LT	439518.1003	1408475.3192
633	CONC MONUMENT W/ODOT ALUMINUM DISK FND	131+24.19, 35.32' RT	439511.7439	1408542.1480
635	5/8" REBAR FND W/KLEINGER & ASSOCIATES CAP FND	131+81.14, 44.21' RT	439564.6397	1408558.2631
630	5/8" REBAR FND W/MCDOUGAL CAP FND	133+14.13, 58.49' LT	439718.5947	1408489.5923
629	CONC MONUMENT W/ODOT ALUMINUM DISK FND	134+86.59, 31.83' LT	439874.9888	1408583.3069
628	CONC MONUMENT W/ODOT ALUMINUM DISK FND	134+87.01, 47.28' RT	439838.5378	1408653.5182
614	5/8" REBAR FND W/KLEINGER & ASSOCIATES CAP FND	137+35.32, 57.58' RT	440053.5040	1408778.2314
609	CONC MONUMENT W/ODOT ALUMINUM DISK FND	138+48.78, 32.90' LT	440196.0386	1408750.9817
615	CONC MONUMENT W/ODOT ALUMINUM DISK FND	138+48.87, 47.24' RT	440158.8119	1408821.9440
616	5/8" REBAR FND W/KLEINGER & ASSOCIATES CAP FND	138+53.64, 57.83' RT	440158.3489	1408833.6593
658	GARDEN SPIKE FND	153+65.77, 62.91' LT	441624.7142	1408582.2032
659	CONC MONUMENT W/ODOT ALUMINUM DISK FND	156+45.75, 31.46' LT	441901.7269	1408530.832

* NOT SHOWN ON ℄ PLAT BUT USED TO ESTABLISH R/W AND/OR BOUNDARY LINES

EXISTING MONUMENTATION FOUND S.R. 561 (SEYMOUR AVE)

601	5/8" REBAR FND	4+35.88, 33.07' RT	440950.3040	1407876.6381
602	5/8" REBAR FND	5+63.83, 33.05' RT	440866.4957	1407973.3259
603	5/8" REBAR W/CITY OF CINCINNATI ALUM. CAP FND	5+63.72, 32.92' RT	440866.6632	1407973.3262
604	1/2" REBAR FND	5+83.78, 31.77' LT	440902.4000	1408030.8612
605	1/2" REBAR FND	6+03.80, 31.70' LT	440889.2368	1408045.9421
606	5/8" REBAR W/WOOLPERT CAP FND	10+47.71, 99.61' RT	440499.2230	1408295.3116
607	5/8" REBAR W/WOOLPERT CAP FND	10+49.72, 59.34' RT	440528.3248	1408323.2131
608	3/4" OD IRON PIPE FND	10+99.81, 34.67' RT	440514.1513	1408377.2146
609	CONC MONUMENT W/ODOT ALUM. DISK FND	15+74.51, 70.62' RT	440196.0386	1408750.9817
615	CONC MONUMENT W/ODOT ALUM. DISK FND	16+48.59, 77.78' RT	440158.8119	1408821.9440
616	5/8" REBAR FND W/KLEINGER & ASSOC. CAP FND	16+58.93, 74.20' RT	440158.3489	1408833.6593
617	5/8" REBAR FND W/KLEINGER & ASSOC. CAP FND	17+65.19, 46.30' RT	440148.9540	1408943.2714
618	5/8" REBAR FND	17+65.20, 42.11' RT	440152.8964	1408944.6871
621	5/8" REBAR FND	19+09.26, 71.70' LT	440211.8177	1409118.5700
622	5/8" REBAR W/G.J. BERDING CAP FND	18+19.09, 71.86' LT	440242.2055	1409033.6733
	EXISTING MONUMENTATION FOUND SUMMIT RD			
623	5/8" REBAR W/G.J. BERDING CAP FND	14+00.24, 55.43' RT	440977.9061	1409213.2683
753	5/8" REBAR FND	36+65.27, 260.36' RT	442655.8386	1410682.1083
754	2" OD IRON PIPE FND	36+96.70, 64.32' RT	442803.3326	1410547.2030
755	5/8" OD IRON PIPE FND	37+30.66, 28.10' RT	442852.2147	1410538.4849
759	2" OD IRON PIPE FND	40+33.78, 66.35' RT	443072.2503	1410750.4591
760	3/4" OD IRON PIPE FND	43+11.09, 108.36' RT	443269.3453	1410950.0036
763	3/4" OD IRON PIPE FND	48+34.87, 32.90' RT	443579.6605	1411290.9596
764	1/2" REBAR FND	48+84.20, 33.84' RT	443590.3636	1411339.1231
765	3/4" OD IRON PIPE FND	49+33.12, 30.66' RT	443604.9652	1411385.9214
756	3/4" OD IRON PIPE FND	39+72.05, 140.97' RT	442978.1386	1410773.3300
757	5/8" REBAR FND	39+55.17, 234.63' RT	442908.5928	1410838.2910
758	1/2" REBAR FND	40+18.04, 162.76' RT	443001.9660	1410818.3035
763	3/4" OD IRON PIPE FND	48+34.87, 32.90' RT	443579.6605	1411290.9600
764	1/2" REBAR FND	48+84.20, 33.84' RT	443590.3636	1411339.1230
765	3/4" OD IRON PIPE FND	49+33.12, 30.66' RT	443604.9652	1411385.9210

FOR INFORMATION ONLY

PIDK 444
PG14

RECEIVED _____, 20____
RECORDED _____, 20____
BOOK _____ PAGE _____
COUNTY RECORDER

SURVEYORS SEAL
STATE OF OHIO
EDWARD J. MILLER
8250
REGISTERED PROFESSIONAL SURVEYOR
SIGNED:
DATE: 4/8/14

FEDERAL PROJECT NO. E041(146)
PID NO. 77889
CALCULATED JMM
CHECKED EJM

CENTERLINE PLAT

HAM-75-7.85

9 / 52

1668
2017

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HAMILTON COUNTY
MILL CREEK TOWNSHIP
SEC 11 TOWN 3, FRAC RANGE 2
CITY OF ST BERNARD AND
CITY OF CINCINNATI

(10) NORFOLK SOUTHERN RAILWAY COMPANY
582-0002-0052-00

(18) STATE OF OHIO - MIAMI & ERIE CANAL

(199) NORFOLK SOUTHERN RAILWAY COMPANY
118-0003-0018-00

- [A] 10' PIPELINE EASEMENT DB 2888, PG 603
- [B] 50' ELECTRIC EASEMENT DB 3891, PG 363
- [C] 20' SEWER EASEMENT REC BK 289, PG 420 REC BK 308, PG 193
- [D] 30' SEWER EASEMENT PB 58, PG 47 & 48
- [E] SLOPE EASEMENT DB 2906, PG 258
- [F] EASEMENT FOR DRIVEWAY, PRIVATE UTILITIES, & STREET PURPOSES DB 3241, PG 588
- [G] 10' PIPELINE EASEMENT DB 2894, PG 53
- [H] 10' TUNNEL EASEMENT DB 2906, PG 258
- [HH] PIPELINE EASEMENT (NO WIDTH) DB 2905 PG 294
- [QQ] CHANNEL EASEMENT HAMILTON COUNTY COMMON PLEAS COURT CASE #A-158156
- [RR] 10' SEWER EASEMENT HAMILTON COUNTY COMMON PLEAS COURT CASE #A-158156
- [SS] CANAL LAND LEASE FOR ELEC TRANSMISSION AND DIST LEASE #723 (M-533)
- [TT] HIGHWAY EASEMENT ODOT CONDEMNATION VOL 42, PG 374 (2-14-1958)

ADJOINING PROJECT DATA

(14 LA) PORTION TO BE ACQUIRED AS PART OF HAM-75-7.72 (PID 82283)

FOR INFORMATION ONLY

REV. BY	DATE	DESCRIPTION
SEA	1-22-16	UPDATED OWNERSHIPS 10 & 199
DATE COMPLETED		4/18/2014

HORIZONTAL SCALE IN FEET: 0, 50, 100, 200

PID NO. 77889

R/W DESIGNER JMM
R/W REVIEWER EJM

PROPERTY MAP

HAM-75-7.85

10 / 52

1669
2017

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HAMILTON COUNTY
MILL CREEK TOWNSHIP
SEC 11 & 12, TOWN 3, FRAC RANGE 2
CITY OF ST BERNARD,
CITY OF CINCINNATI
AND VILLAGE OF ELMWOOD PLACE

FOR INFORMATION ONLY

(9) CINCINNATI SPECIALITIES, LLC.
582-0002-0031-00

LOT D
LOT 24
LOT 27
PLAT IN PARTITION OF THE JOHN ROSS ESTATE
CASE #166637 HAM. COM. PLEAS COURT
DB 601, PG 222

(11) JM SMUCKER, LLC
P.N.582-0002-0025-00

BLANKET
PIPELINE EASEMENT
DB 1813, PG 183 &
DB 2905, PG 24

MURRAY RD.
Ex R/W
℄ R/W

(15) OH MIE, LLC
582-0002-L002-00

SEWER EASEMENT
CITY OF CINCINNATI
DB 2636 PG 193

CITY OF
ST. BERNARD
VILLAGE OF
ELMWOOD PLACE

NORFOLK SOUTHERN
RAILROAD

(32) NORFOLK SOUTHERN
RAILWAY COMPANY
661-0003-0075-00

PROSSER AVE.
YOST'S 2nd SUBDIVISION OF ELMWOOD
PB 13, PG 66 & 67

VILLAGE OF ELMWOOD PLACE
661-0003-0162

VILLAGE OF ELMWOOD PLACE
CITY OF CINCINNATI

TOWNSHIP AVE.

G. YOST & OTHERS
PB 5, PG 304

CEDAR AVE

I.R. 75

℄ R/W I.R. 75

HIGHWAY EASEMENT
DB 2905, PG 307

SLOPE EASEMENT
DB 2098, PG 366

(12) MARTHA RUFFNERS EST.
PB 1, PG 233
LOT 4

JLMM HOLDINGS, LLC
118-0003-0004-00

(199) NORFOLK SOUTHERN RAILWAY COMPANY
118-0003-0016-00

(16) VIRGINIA HOLDING
CORPORATION
117-0004-0121-00

117-0004-0240-00
117-0004-0196-00

(21) MARTHA RUFFNERS EST.
PB 1, PG 233

(24) STATE OF OHIO,
AND ITS SUCCESSORS AND ASSIGNS,
FOR THE USE AND BENEFIT
OF THE BOARD OF TRUSTEES
OF THE UNIVERSITY OF
CINCINNATI
1117-0004-0261-00

(25) WB FISHWICK, LLC
117-0004-0255-00

(26) MICHEL INVESTMENTS CO.
117-0004-0263-00

TOWNE ST.
℄ R/W
TOWN ST

BUILDING RENTERS, LLC
117-0004-0244-00

EXPRESSWAY PARK SUBDIVISION BLOCK "B"
PB 186, PG 44 & 45
LOT 8

118-0003-0011-00
117-0004-0242-00

CITY DASH, LLC
118-0003-0002-00

EVAN RAGOUZIS
AND LAURA RAGOUZIS
117-0004-0003-00

SEWER EASEMENT
DB 1661, PG 560

SEWER EASEMENT
PB 186, PG 44

PARCEL 24 MATCHLINE

LAIDLAW AVE.

EXPRESSWAY PARK SUBDIVISION BLOCK "A"
PB 173, PG 16 & 17

ELM PARK
SUBDIVISION
PB 41, PG 43

ESTATE OF
H. KUHL AND
J.W. SPRONG
PB 2, PG 203
PART OF LOT 4
(PARCELS 37 - 40)

MATCHLINE STA. 428+50 I.R. 75,
SEE SHEET 10

MATCHLINE STA. 456+00 I.R. 75,
SEE SHEET 12

SEE SHEET 15

(10) NORFOLK SOUTHERN RAILWAY COMPANY
582-0002-0052-00

(14) OVD EXPRESS PROPERTIES, LLC
582-0002-0026-00

(18) STATE OF OHIO -
MIAMI & ERIE CANAL

(19) VILLAGE OF ELMWOOD PLACE
661-0003-0163

(21) NORFOLK SOUTHERN RAILWAY COMPANY
117-0004-0196-00
117-0004-0242-00

(22) NORFOLK SOUTHERN RAILWAY COMPANY
661-0003-0094-00

(22A) ANTHONY D. WOOD &
ELIZABETH A. WOOD
661-0003-0097-00

(23) CITY OF CINCINNATI
NO PARCEL NUMBER

(27) DYRAABA STATION II, LLC
661-0003-0139-00

(28) WILLIAM A. HUDSON AND
THERESA A. HUDSON
661-0003-0140-00

(29) AMBROSE HENSLEY
AND BONNIE HENSLEY
661-0003-0144-00

(30) JEANNE M. HORTON
661-0003-0143-00

(33) DONNA BORGMANN
661-003-0093-00 (LOT 221)
661-003-0092-00 (LOT 222)
661-003-0091-00 (LOT 223)

(34) THE VILLAGE OF ELMWOOD
PLACE EX R/W OF TOWNSHIP
AVE & CEDAR AVE

(35) RANDALL B. SMITH, LTD
661-0002-0380-00

(36) TINA F. FERGUSON AND
BYRON W. FERGUSON
661-0002-0382-00

(37) WILLIAM N. PORTER
AND JOHN DAVID SIMON
116-0001-0246-00

(38) PAULINE STRAYHORNE
116-0001-0012-00

(39) JACQUELINE SILAS
116-0001-0245-00

(40) ROSE SCHWARTZ
116-0001-0196-00

I	SLOPE EASEMENT DB 3241, PG 588 DB 3089, PG 273
J	24' ELECTRIC EASEMENT DB 4197, PG 431
K	SLOPE EASEMENT DB 2905, PG 307
L	8' SEWER EASEMENT DB 1657, PG 501
M	RECIPROCAL EASEMENT OR 5096, PG 247 OR 6704, PG 826
HH	PIPELINE EASEMENT (NO WIDTH) DB 2905 PG 294
N	INGRESS/EGRESS EASEMENT DB 3948, PG 962
O	SLOPE EASEMENT DB2494, PG 14
UU	50' PIPELINE EASEMENT FILE No M-46(M&E-616)

REV. BY	DATE	DESCRIPTION
SEA	3-7-17	CHANGED PARCEL 12-WL TO 12-LA
SEA	12-8-16	REMOVED 19 S, MODIFIED 19 WL
SEA	1-22-16	COMBINED OWNERSHIPS 16 & 17, UPDATED OWNERSHIPS 10,15,21,22,22A,25,32,199
SEA	12-11-15	ADDED EX SEWER EASEMENT TO PARCEL 15 AND PARCEL 33
DATE COMPLETED	4/18/2014	

HORIZONTAL SCALE IN FEET
0 50 100 200

PID NO. 77889

R/W DESIGNER JMM
R/W REVIEWER EJM

PROPERTY MAP

HAM-75-7.85

11 / 52

1670
2017

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HAMILTON COUNTY
MILL CREEK TOWNSHIP
SEC 12 TOWN 3, FRAC RANGE 2
CITY OF CINCINNATI AND
VILLAGE OF ELMWOOD PLACE

(42) *VILLAGE OF ELMWOOD PLACE 661-0002-0535-00*

(43) *JUDITH STEPHENS 661-0002-0534-00*

(44) *THE CITY OF CINCINNATI 661-0002-0533-90*

(45) *LARRY W. WOODRUM AND SHARON R. WOODRUM 661-0002-0531-00*

(46) *KAREN K. TAYLOR 661-0002-0529-00*

(47) *KARMAN M. MURDOCK 116-0001-0202-00*

(48) *TRACY LONG 661-0002-0528-00*

(49) *JANET UCHTMAN 661-0002-0527-00*

(50) *RUTH L. WALLACE JOHNSON 116-0001-0201-00*

(51) *KENNETH M. COLE AND PAULA J. DARPEL 661-0002-0526-00*

(52) *BERNICE GRIFFIN AND TAMARA L. MOORE 661-0002-0525-00*

(53) *ANGELIQUE L. BAILEY AND JASON BAILEY 661-0002-0524-00*

(54) *THE VILLAGE OF ELMWOOD PLACE 661-0002-0301-00 661-0001-0268-90*

(56) *ROBERT W. MASON AND PARALEE J. MASON 116-0001-0249-00*

(58) *CDE SERVICES, INC. 661-0002-0579-00 (LOT 1) 661-0002-0580-00 (LOT 2)*

(59) *WILKERSON PROPERTIES I, LLC 661-0002-0583-00 (LOT 5) 661-0002-0584-00 (LOT 6) 661-0002-0585-00 (LOT 7) 661-0002-0586-00 (LOT 8)*

(64) *SAI R & R GROUP, LLC 661-0002-0587-00*

(65) *SIAMAK KHORRAM AND FARNOOSH BOZORGI 661-0002-0588-00*

(66) *WILKERSON PROPERTIES I, LLC 661-0002-0589-00 (LOT 11) 661-0002-0590-00 (LOT 12) 661-0002-0591-00 (LOT 13)*

(68) *HASLER PROPERTIES, LLC 661-0002-0592-00*

(69) *ROBERT ERIC KAHN 661-0002-0593-00*

(70) *OHIO DEPARTMENT OF MENTAL HEALTH AND OHIO DEPARTMENT OF ADMINISTRATIVE SERVICES JOURNAL ENTRY VOL. 14, PG 230 OF 6 AUG. 1985.*

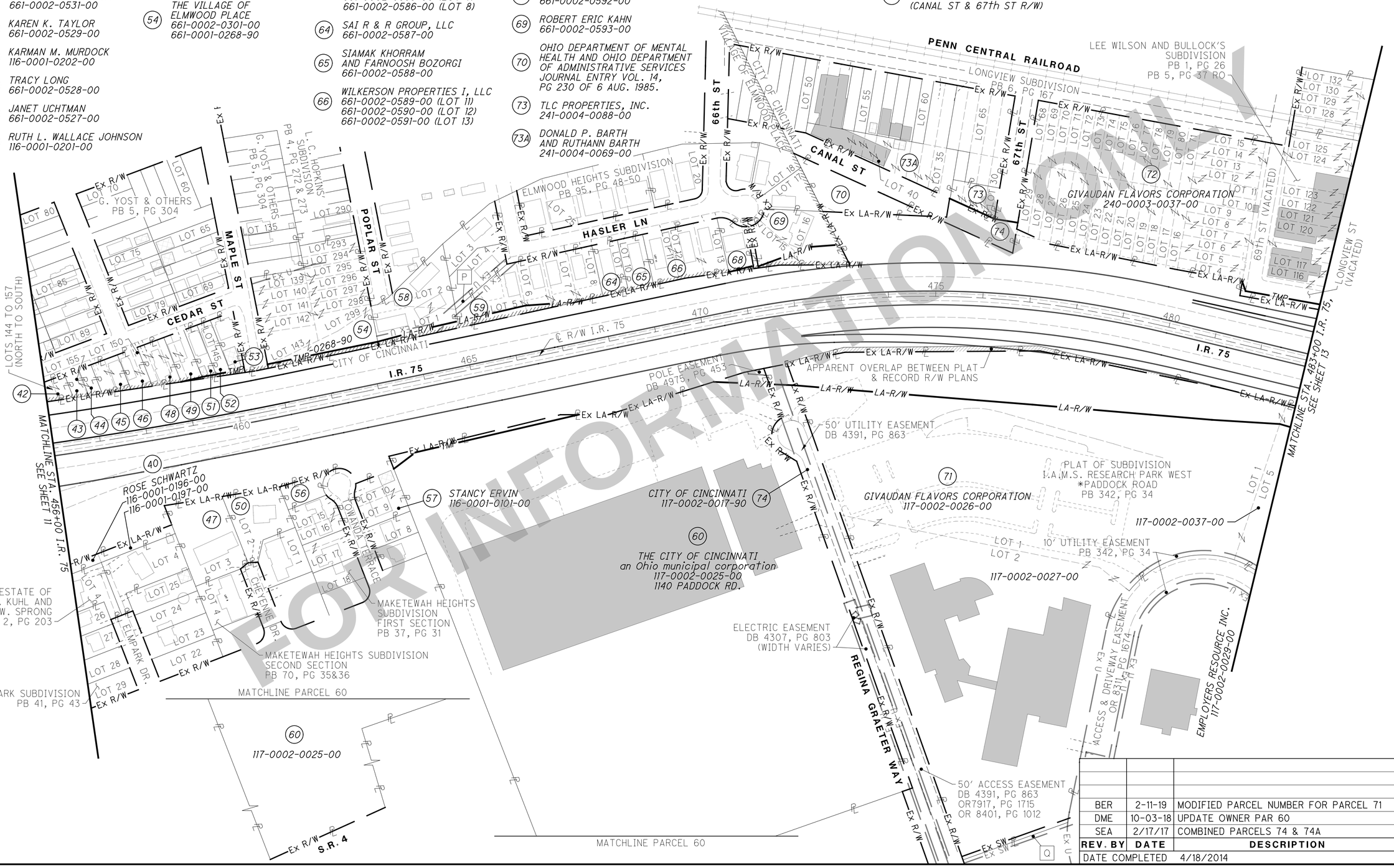
(73) *TLC PROPERTIES, INC. 241-0004-0088-00*

(73A) *DONALD P. BARTH AND RUTHANN BARTH 241-0004-0069-00*

(74) *CITY OF CINCINNATI NO PARCEL NO (CANAL ST & 67th ST R/W)*

[P] 20' ELECTRIC EASEMENT DB 3164, PG 656

[Q] 15' SANITARY SEWER EASEMENT OR 8528, PG 1964



FOR INFORMATION ONLY

REV. BY	DATE	DESCRIPTION
BER	2-11-19	MODIFIED PARCEL NUMBER FOR PARCEL 71
DME	10-03-18	UPDATE OWNER PAR 60
SEA	2/17/17	COMBINED PARCELS 74 & 74A
DATE COMPLETED		4/18/2014

HORIZONTAL SCALE IN FEET: 0, 50, 100, 200

PID NO. 77889

R/W DESIGNER JMM

R/W REVIEWER EJM

PROPERTY MAP

HAM-75-7.85

12 / 52

1671 2017

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HAMILTON COUNTY
SPRINGFIELD AND MILL CREEK TOWNSHIPS
SEC 6 & 12 TOWN 3, FRAC RANGE 2
SEC 1, TOWN 3, RANGE 1
CITY OF CINCINNATI

(80) *MARBLE ALLEY MOTORCARS, LLC*
240-0002-0058-00, 240-0002-0059-00
240-0002-0091-00

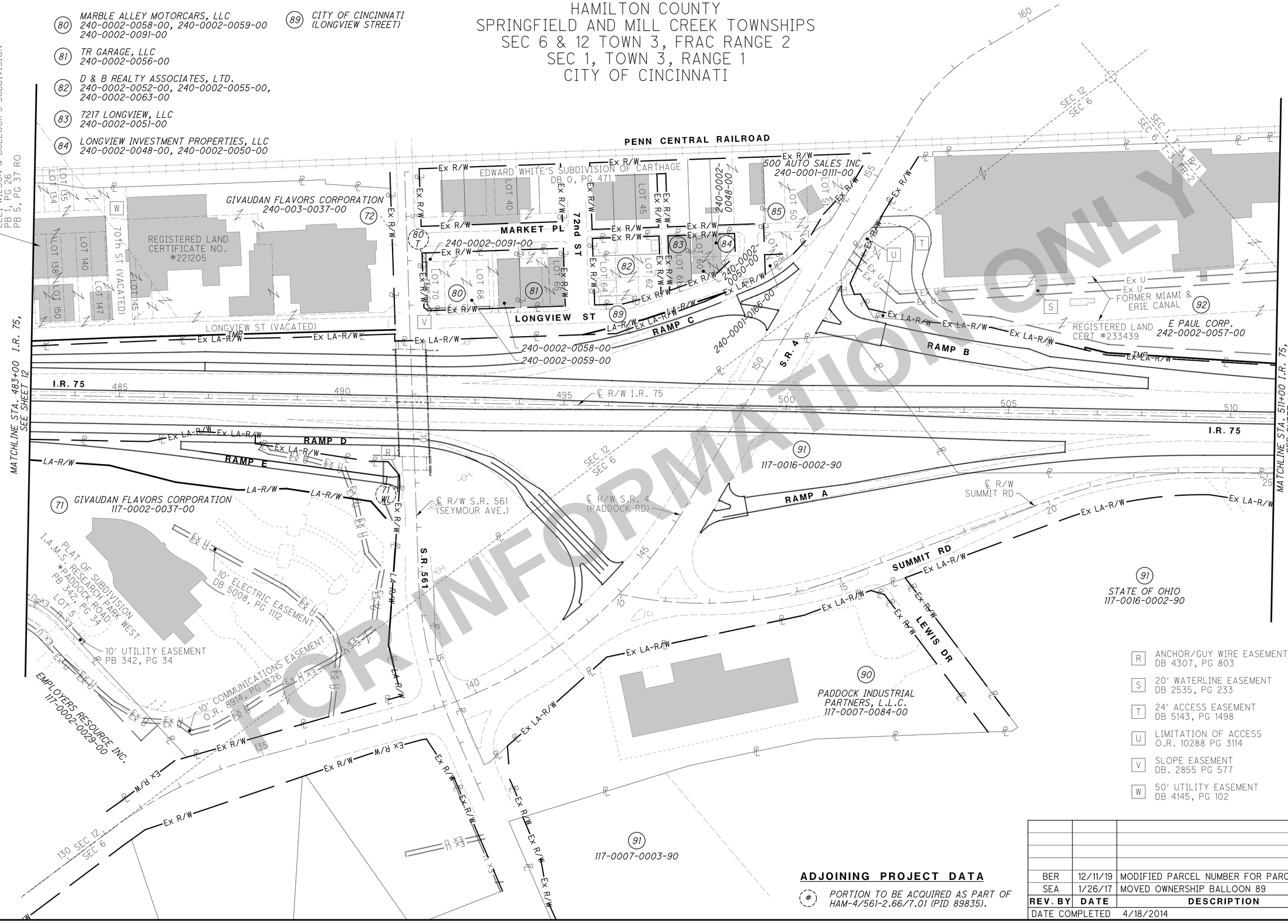
(81) *TR GARAGE, LLC*
240-0002-0056-00

(82) *D & B REALTY ASSOCIATES, LTD.*
240-0002-0052-00, 240-0002-0055-00,
240-0002-0063-00

(83) *7217 LONGVIEW, LLC*
240-0002-0051-00

(84) *LONGVIEW INVESTMENT PROPERTIES, LLC*
240-0002-0048-00, 240-0002-0050-00

(89) *CITY OF CINCINNATI*
(LONGVIEW STREET)



FOR INFORMATION ONLY

R ANCHOR/GUY WIRE EASEMENT DB 4307, PG 803

S 20' WATERLINE EASEMENT DB 2535, PG 233

T 24' ACCESS EASEMENT DB 5143, PG 1498

U LIMITATION OF ACCESS O.R. 10288 PG 3114

V SLOPE EASEMENT DB. 2855 PG 577

W 50' UTILITY EASEMENT DB 4145, PG 102

ADJOINING PROJECT DATA

(#) *PORTION TO BE ACQUIRED AS PART OF HAM-4/561-2.66/7.01 (PID 89835).*

REV. BY	DATE	DESCRIPTION
BER	12/11/19	MODIFIED PARCEL NUMBER FOR PARCEL 71
SEA	1/26/17	MOVED OWNERSHIP BALLOON 89
DATE COMPLETED	4/18/2014	

HORIZONTAL SCALE IN FEET 0 50 100 200

PID NO. 77889

R/W DESIGNER JMM R/W REVIEWER EJM

PROPERTY MAP

HAM-75-7.85

13 / 52

1672 2017

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HAMILTON COUNTY
SPRINGFIELD AND MILL CREEK TOWNSHIPS
SEC 6, TOWN 3, FRAC RANGE 2
SEC 1, TOWN 3, RANGE 1
CITY OF CINCINNATI

[X] ACCESS EASEMENT
PB 292, PG 42-43

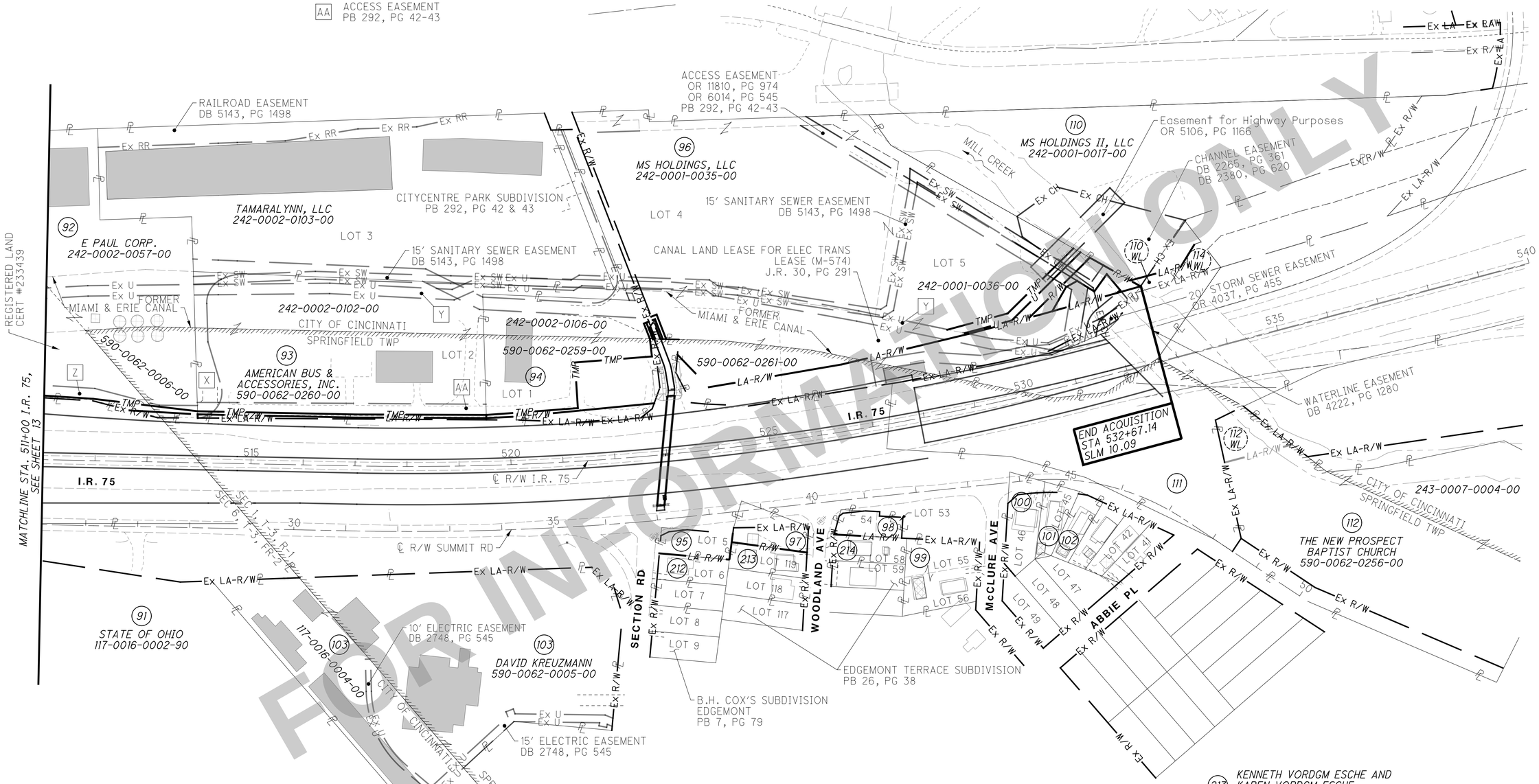
[Y] 20' WATERLINE EASEMENT
DB 2535, PG 223

[Z] 24' ACCESS EASEMENT
DB 5143, PG 1498

[AA] ACCESS EASEMENT
PB 292, PG 42-43

ADJOINING PROJECT DATA

(#) *PORTION TO BE ACQUIRED AS PART OF HAM-75-10.10 (PID 88124).*



FOR INFORMATIONAL PURPOSES ONLY

94 *CITYCENTRE PROPERTIES, LLC*
242-0002-0106-00
590-0062-0259-00

95 *ANDRE C. ANDERSON*
590-0062-0143-00

97 *LLOYD F. COFFEY AND*
JANICE H. COFFEY
590-0062-0103-00

98 *JAMES A. SNEED*
AND CAROLYN SNEED
590-0062-0120-00

99 *MARY H. LUCAS*
590-0062-0122-00 (LOT 55)
590-0062-0123-00 (LOT 56)

100 *PHILIP G. HOGAN AND*
PATRICIA A. HOGAN
590-0062-0112-00

101 *MARILYN J. NADLER*
590-0062-0111-00

102 *ALMA REAL ESTATE INVESTORS*
590-0062-0110-00

111 *DESALVO CONST CO.*
590-0062-0001-00

114 *DESALVO CONST CO.*
NO PARCEL NUMBER

212 *RAYCHEL M. SCHORK*
590-0062-0144-00

213 *KENNETH VORDGM ESCHE AND*
KAREN VORDGM ESCHE
590-0062-0102-00

214 *SHAYNEE DIAJHA LASHAY SCOTT*
590-0062-0125-00

REV. BY	DATE	DESCRIPTION
BLM	1-28-20	CHANGED PARCEL 96WD1, REMOVED PARCEL 96TV2
BER	10-23-18	REVISED PARCELS 95, 97 & 98 TO TOTAL TAKE

DATE COMPLETED 4/18/2014

HORIZONTAL SCALE IN FEET
0 50 100 200

PID NO. 77889

R/W DESIGNER JMM
R/W REVIEWER EJM

PROPERTY MAP

HAM-75-7.85

14 / 52

1673 / 2017

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HAMILTON COUNTY
MILL CREEK TOWNSHIP
SEC 11 TOWN 3, FRAC RANGE 2
CITY OF ST BERNARD AND
CITY OF CINCINNATI

FOR INFORMATION ONLY

MATCHLINE SEE SHEET 11

SEE SHEET 10

MATCHLINE 9+00 S.R. 562

CITY DASH, LLC
118-0003-0002-00

4921 PARA DRIVE, LLC
118-0003-0007-00

JLMM HOLDINGS, LLC
118-0003-0004-00

RAMSTETTER HOLDINGS, LLC
118-0003-0008-00

END ACQUISITION
STA 22+23.16
SLM 0.42

JOB HUFFMAN'S EST
PB 5, PG 32

SLOPE EASEMENT
DB 2906, PG 258

REGISTERED LAND
CERT #201209

HIGHWAY EASEMENT
DB 2942, PG 391

10' PIPELINE EASEMENT
DB 2888, PG 603

CITY OF CINCINNATI
CITY OF ST. BERNARD

ELECTRIC EASEMENT
DB 3288, PG 482

RAILROAD EASEMENT
DB 2234, PG 353
DB 2448, PG 251

CINCINNATI CHEMICAL WORKS INC. SUBDIVISION
PB 71, PG 9

ROBERT MINSHALL SUBDIVISION
CASE NO. 48495
BK. 375, PG 231
COMMON PLEAS COURT

PART OF LOT 5
AMBROSE HUFFMAN
PB 1, PG 42

AMBROSE HUFFMAN
PB 1, PG 42

10' Communication Easement
DB 2234, PG 353
Easement vacated by
DB 3161, PG 8

DIAMOND ALKALI COMPANY
131-0005-0001-00

131-0005-0002-00

118-0004-0032-00

RHODIA INC.
118-0004-0028-00

118-0004-0026-00

118-0004-0008-00

118-0004-0025-00

118-0003-0016-00

118-0003-0018-00

118-0003-0011-00

118-0002-0089-00

118-0002-0085-00

118-0002-0086-00

118-0002-0014-00

META DR

PARA DR

FRANKLIN AVE

CORINTH AVE

S.R. 562

S.R. 4

℄ R/W S.R. 562

℄ R/W S.R. 4
(PADDOCK RD)

RAMP M

RAMP K

RAMP J

RAMP N

LOT 4
LOT 3
LOT 2
LOT 1
LOT 13
LOT 12
LOT 11
LOT 10
LOT 9
LOT 8
LOT 7
LOT 6
LOT 5

199 NORFOLK SOUTHERN RAILWAY COMPANY
118-0003-0016-00, 118-0003-0018-00
118-0004-0008-00, 118-0003-0011-00
118-0004-0025-00, 118-0004-0026-00

200 WARBRO REALTY LLC
118-0004-0030-00

202 SINKRO PROPERTY HOLDING LIMITED
118-0002-0083-00

203 LIBERTY REAL ESTATE ENTERPRISES, LLC
118-0002-0084-00

204 INDUSTRIAL ENVIRONMENTS, LLC
118-0002-0085-00, 118-0002-0089-00

206 CSSI REAL ESTATE, LLC
118-0002-0014-00
118-0002-0086-00

207 LIANE REYES
118-0002-0052-00

208 LITSAN LIMITED PARTNERSHIP
131-0005-0045-00

209 YOLANNDA WARE AND THOMAS P KOENINGER
118-0002-0026-00, 118-0002-0030-00

210 BONNIE LEE JAMISON
118-0002-0028-00

211 APEX PROPERTIES INVESTMENT GROUP, LLC
118-0002-0016-00, 118-0002-0034-00

F EASEMENT FOR DRIVEWAY, PRIVATE UTILITIES, & STREET PURPOSES
DB 3241, PG 588

G 10' PIPELINE EASEMENT
DB 2894, PG 53
DB 3241, PG 588

BB 20' RAILROAD EASEMENT
DB 238, PG 60
DB 2938, PG 107
PB 71, PPG 9-10

CC INGRESS/EGRESS AND UTILITY EASEMENT
DB 3803, PG 430

DD 30' INGRESS/EGRESS EASEMENT & SEWER EASEMENT
DB 2373, PG 397
DB 2234, PG 353

EE 10' PIPELINE EASEMENT
DB 2898, PG 215

FF 5' ELECTRIC EASEMENT
DB 2905, PG 454

GG 50' UTILITY EASEMENT
DB 2756, PG 79

HH PIPELINE EASEMENT (NO WIDTH)
DB 2905 PG 294

II ANCHOR EASEMENT
DB 2974, PG 391
DB 2935, PG 544

JJ INGRESS/EGRESS AND UTILITY EASEMENT
DB 3803, PG 430

KK 104' UTILITY EASEMENT
DB 2621, PG 384

LL SEWER EASEMENT
DB 2621, PG 384

MM 24' INGRESS/EGRESS EASEMENT
DB 2621, PG 384

NN HIGHWAY EASEMENT
DB 2953, PG 591

OO BLANKET SIDETRACK EASEMENT
DB 2238, PG 503

PP BLANKET PIPELINE EASEMENT
DB 1786, PG 656

REV. BY	DATE	DESCRIPTION
SEA	1/22/16	UPDATED OWNERSHIPS 199 & 200
DATE COMPLETED	4/18/2014	

HORIZONTAL SCALE IN FEET
0 50 100 200

PID NO. 77889

R/W DESIGNER JMM
R/W REVIEWER EJM

PROPERTY MAP

HAM-75-7.85

15 / 52

1674
2017

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TOTAL NUMBER OF :

41 OWNERSHIPS
65 PARCELS
0 TOTAL TAKES
4 OWNERSHIPS W/ STRUCTURES INVOLVED

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE
NET TAKE = GROSS TAKE - PRO IN TAKE
ALL AREAS IN ACRES *(CALCULATED ACREAGE)*

GRANTEE:
ALL RIGHT OF WAY ACQUIRED IN THE NAME OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION UNLESS OTHERWISE SHOWN.

PARCEL NO.	OWNER	SHEET	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS	AS ACQUIRED BOOK	AS ACQUIRED PAGE
1-8	NOT USED																
9	CINCINNATI SPECIALTIES, LLC.	10 , 22 , 23	OR 8021	506	582-0002-0084-00	10.297	0.002										
			OR 6484	922	582-0002-0031-00	20.170	0.582										
			OR 8762	3350	582-0002-0064-00	0.544	0.000										
	TOTAL					31.011	0.584										
10-WL	NORFOLK SOUTHERN RAILWAY COMPANY	10 , 22 - 25	OR 12417	1943	582-0002-0052-00	5.643	0.000	0.151	0.000	0.151		5.492			280 FEET OF TRUCK DOCK TO BE REMOVED		
			DB 939	323													
11	SMUCKER SALES AND DISTRIBUTION COMPANY	10 , 11 , 24 - 27	OR 12096	294	582-0002-0025-00	11.058	0.000								NO TAKE REQUIRED		
12-LA	JLMM HOLDINGS, LLC	11 , 24 - 27	OR 9489	1132	118-0003-0004-00	11.0453	0.000	0.109	0.000	0.109	(S)		10.9363		* 1' OF FENCE ENCROACHING - REMOVE PRIVATE SIGN		
															3 BUSHES, 3 TREES		
															0.014 AC OF PIPELINE EASEMENT TO BE ACQUIRED E1		
12-SL		15 , 44 , 45						0.020	0.000	0.020							
12-T		11 , 24 - 25						0.008	0.000	0.008					TO REMOVE PRIVATE SIGN		
13	NOT USED																
14-T	OVD EXPRESS PROPERTIES, LLC	11 , 26 , 27	OR 11475	931	582-0002-0026-00	0.685	0.000	0.138	0.000	0.138					CONSTRUCT A SEWER		
15-S	OH MIE, LLC	11 , 26 , 27	OR 12772	173	582-0002-L002-00	19.906	0.000	0.046	0.000	0.046					TO MAINTAIN REGULATOR CHAMBER		
16-WL	VIRGINIA HOLDING CORPORATION (COMPANY)	11 , 26 , 27	DB 3706	330	117-0004-0240-00	0.881	0.000	0.059	0.000	0.059					0.031 AC OF SLOPE EASEMENT TO BE ACQUIRED E2		
16-WL1		11 , 26 , 27			117-0004-0121-00	0.871	0.000	0.058	0.000	0.058							
16-WL3		11 , 26 , 27	DB 1481	532	N/A	(0.328)	0.000	0.110	0.000	0.110					0.005 AC OF SEWER EASEMENT TO BE ACQUIRED E3		
	TOTAL					2.080	0.000	0.227	0.000	0.227			1.853				
18-WL	STATE OF OHIO - MIAMI AND ERIE CANAL	10 , 11 , 22 - 27			N/A		1.706	2.159	0.000	2.159				80% FEDERAL 20% STATE	492' OF FENCE TBR E4		
18-WL1		11 , 26 , 27			N/A		0.000	0.048	0.000	0.048					PORTION OF ELECTRIC LEASE AND PIPELINE TO BE ACUIRED		
18-WL2		11 , 26 , 27			N/A		0.000	0.164	0.000	0.164	(S)				BILLBOARD TO BE REMOVED (ADC# 11414, #11415)		
	TOTAL					(4.154)	1.706	2.371	0.000	2.371		0.077			PARCEL 18 HAS A CALCULATED AREA OF 4.154 ACRES		
19-WL	VILLAGE OF ELMWOOD PLACE	11 , 26 , 27	DB 2968	455	661-0003-0163	(0.352)	0.000	0.352	0.000	0.352		0.000			TOTAL TAKE		
20-WL	VILLAGE OF ELMWOOD PLACE	11 , 26 , 27	DB 2968	461	661-0003-0162	(1.666)	0.000	0.279	0.000	0.279							
20-WL1		11 , 29 , 30						0.035	0.000	0.035							
	TOTAL					(1.666)	0.000	0.314	0.000	0.314		1.352					
21-LA	NORFOLK SOUTHERN RAILWAY COMPANY	11 , 26 , 27	OR 12417	1943	117-0004-0196-00	(1.817)	0.347	0.074	0.000	0.074	(S)				BILLBOARD TO BE REMOVED (ADC #11412, #11413)		
		48 , 49	DB 846	97	117-0004-0242-00	0.480	0.000								(3,226 S.F.)		
			DB 985	397													
21-T		11 , 26 , 27	DB 985	538	117-0004-0196-00			0.171	0.000	0.171					TO REMOVE BILLBOARDS		
		48 , 49	DB 846	97													
22	NORFOLK SOUTHERN RAILWAY COMPANY	11 , 26 , 27	OR 12417	1943	661-0003-0094-00	(0.374)	0.000								NO TAKE REQUIRED		
		48 , 49	DB 846	97											+ PARCEL HAS RIGHT TO CROSS CANAL		
			DB 861	154											AGREEMENT 10/10/1899, CUST NO. 9052		
22A-WD	ANTHONY D. WOOD AND ELIZABETH A. WOOD	11 , 26 , 27	OR 12824	873	661-0003-0097-00	0.121	0.000	0.121	0.000	0.121	YES	0.000			TOTAL TAKE, 2-STY FRAME RESIDENCE, TREE, HEDGE ROW		
		48 , 49													& LIGHT POLE		
22A-U		11 , 26 , 27						0.042	0.000	0.042					IN THE NAME OF NORFOLK AND WESTERN RAILWAY COMPANY		
		48 , 49													(22A-U 1,263 S.F.)		
23	CITY OF CINCINNATI	11 , 26 , 27	DB 2905	303	N/A	(0.048)	0.000								NO TAKE REQUIRED		

FOR INFORMATION ONLY

NOTE: ALL TEMPORARY PARCELS TO BE OF 24 MONTH DURATION.

UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

TYPES OF TITLE LEGEND:
WL = FEE SIMPLE WITH LIMITATION OF ACCESS
WD = WARRANTY DEED
PRW = PROPERTY RIGHT FEE SIMPLE
SH = STANDARD HIGHWAY EASEMENT
LA = LIMITED ACCESS EASEMENT
T = TEMPORARY EASEMENT
CH = CHANNEL EASEMENT
A = AERIAL EASEMENT
SL = SLOPE EASEMENT
PRE = PROPERTY RIGHT EASEMENT
S = SEWER EASEMENT
U = TO BE ACQUIRED IN THE NAME OF RAILROAD

* DENOTES RIGHT OF WAY ENCROACHMENT

E1 *PIPELINE EASEMENT DB 2894, PG 53*
E2 *STATE OF OHIO SLOPE EASEMENT DB 2905, PG 307*
E3 *HAMILTON COUNTY INTERCEPTING SEWER EASEMENT DB 1657, PG 501*
E4 *SOHIO PIPELINE EASEMENT DB 2905, PG 294 - (BLANKET)*

REV. BY	DATE	DESCRIPTION
SEA	3-7-17	CHANGED PARCEL 12-WL TO 12-LA
SEA	12-8-16	REMOVED 19 S, MODIFIED 19 WL AND RECORD AREA
SEA	7-22-16	ADDED 22A-WD, REMOVED 22A-T
SEA	6-1-16	REVISED PARCEL 14-T
SEA	5-2-16	UPDATED DEED ACREAGE FOR OWNERSHIP 12
SEA	2-3-16	ADDED PARCEL 21-T
SEA	1-22-16	COMBINED OWNESHIPS 16 & 17, ADDED 16-WL3, UPDATED TOTAL OWNERSHIP NO., UPDATED OWNER INFORMATION FOR NOs 10,15,21,22,22A
SEA	4-13-15	UPDATED TOTAL PARCEL NO.
SEA	12-1-14	UPDATED PARCELS 22A-U, 22A-T & 20-WL
SEA	7-25-14	UPDATED TOTAL OWNERSHIP AND PARCEL NUMBERS (ADDED PARCEL 95 T)

FIELD REVIEW BY PGT DATE: 1/23/2014
OWNERSHIP VERIFIED BY SEA DATE: 4/9/2014
DATE COMPLETED 4/18/2014

FEDERAL PROJECT NO. EO41(146)
PID NO. 77889
STATE JOB NO. 486878
R/W DESIGNER JMM
R/W REVIEWER EJM

SUMMARY OF ADDITIONAL RIGHT OF WAY (PARCELS 1-23)

HAM-75-7.85

16 / 52

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NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE
NET TAKE = GROSS TAKE - PRO IN TAKE

ALL AREAS IN ACRES *(CALCULATED ACREAGE)*

GRANTEE:
ALL RIGHT OF WAY ACQUIRED IN THE NAME OF
THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION
UNLESS OTHERWISE SHOWN.

PARCEL NO.	OWNER	SHEET	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS	AS ACQUIRED BOOK	AS ACQUIRED PAGE
24-WL	STATE OF OHIO, AND ITS SUCCESSORS	11 , 26 , 27	OR 11845	1604	117-0004-0261-00	14.306	0.000	0.545	0.000	0.545					0.545 AC OF SLOPE EASEMENT TO BE ACQUIRED E1 E3		
24-U	AND ASSIGNS, FOR THE USE AND BENEFIT OF	11 , 26 , 27						0.183	0.000	0.183					IN THE NAME OF NORFOLK AND WESTERN RAILWAY COMPANY		
	THE BOARD OF TRUSTEES OF THE UNIVERSITY	48 , 49													(7974 S.F.) E1 = 0.490 AC E3 = 0.055 AC		
	OF CINCINNATI																
	TOTAL					(14.306)	0.000	0.728	0.000	0.728			13.578				
25-WL	WB FISHWICK, LLC	11 , 26 - 30	OR 12775	1517	117-0004-0255-00	3.205	0.000	0.537	0.000	0.537			2.668		0.524 AC OF SLOPE EASEMENT TO BE ACQUIRED E1		
25-T								0.010	0.000	0.010					TO CONSTRUCT A MANHOLE		
26	MICHEL INVESTMENTS CO.	11 , 29 , 30	OR 8150	541	117-0004-0263-00	1.849	0.000								NO TAKE REQUIRED		
27	DYRAABA STATION II, LLC	11 , 29 , 30	OR 12510	1334	661-0003-0139-00	0.172	0.000								NO TAKE REQUIRED		
28	WILLIAM A. HUDSON AND THERESA A. HUDSON	11 , 29 , 30	OR 10418	898	661-0003-0140-00	0.128	0.000								NO TAKE REQUIRED		
29	AMBROSE HENSLEY AND BONNIE HENSLEY	11 , 29 , 30	OR 9649	766	661-0003-0144-00	0.076	0.000								NO TAKE REQUIRED * 1' OF FENCE ENCROACHING		
30	JEANNE M. HORTON	11 , 29 , 30	OR 6551	609	661-0003-0143-00	0.076	0.000								NO TAKE REQUIRED		
31-T	BUILDING RENTERS, LLC	11 , 29 , 30	OR 8284	2405	117-0004-0244-00	1.144	0.000	0.031	0.000	0.031					GRADING & SEEDING		
32	NORFOLK SOUTHERN RAILWAY COMPANY	11 , 26 , 27	OR 12417	1943	661-0003-0075-00	8.400	0.000								NO TAKE REQUIRED		
		48 , 49	DB 846	97							YES				REMOVE 1-STY FRAME RESIDENCE		
			DB 891	399													
			DB 1428	430													
			DB 861	154													
33-S	DONNA BORGMANN	11 , 26 , 27	OR 11054	1829	661-0003-0093-00	0.090	0.000	0.091	0.000	0.091				80% FEDERAL 20% STATE	TO CONSTRUCT & MAINTAIN STORM SEWER &		
33-T		11 , 26 , 27			661-0003-0092-00	0.056	0.000	0.013	0.000	0.013					MAINTAIN REGULATOR CHAMBER		
					661-0003-0091-00	0.065	0.000								WOOD DECK POOL REMAINS, 71' OF WOOD FENCE		
															GRADING & SEEDING		
															0.044 AC OF SEWER EASEMENT TO BE ACQUIRED (33-S) E2		
34-WL	VILLAGE OF ELMWOOD PLACE	11 , 29 , 30			NA			0.088	0.088	0.000					EXISTING R/W OF TOWNSHIP AVE & CEDAR AVE		
35	RANDALL B. SMITH, LTD	11 , 29 , 30	OR 11859	974	661-0002-0380-00	0.147	0.000								NO TAKE REQUIRED		
36	TINA F. FERGUSON AND BYRON W. FERGUSON	11 , 29 , 30	OR 6748	1410	661-0002-0382-00	0.083	0.000								NO TAKE REQUIRED		
37-T	WILLIAM N. PORTER AND JOHN DAVID SIMON	11 , 29 , 30	OR 8317	2189	116-0001-0246-00	0.217	0.000	0.013	0.000	0.013					GRADING & SEEDING		
38-T	PAULINE STRAYHORNE	11 , 29 , 30	DB 3911	677	116-0001-0012-00	0.224	0.000	0.004	0.000	0.004					GRADING & SEEDING		
39	JACQUELINE SILAS	11 , 29 , 30	OR 11868	2218	116-0001-0245-00	0.146	0.000								NO TAKE REQUIRED		
			OR 8164	1463													
40	ROSE SCHWARTZ	11 , 12 , 29 - 32	DB 2609	220	116-0001-0196-00	0.059	0.000								NO TAKE REQUIRED		
			DB 2609	263	116-0001-0197-00	0.062	0.000										
41	NOT USED																
42	VILLAGE OF ELMWOOD PLACE	12 , 29 , 30	DB 4335	967	661-0002-0535-00	0.066	0.000								NO TAKE REQUIRED		
43	JUDITH STEPHENS	12 , 29 , 30	DB 4233	349	661-0002-0534-00	0.044	0.000								NO TAKE REQUIRED		
44	THE CITY OF CINCINNATI	12 , 29 , 30	DB 2877	241	661-0002-0533-90	0.040	0.000								NO TAKE REQUIRED		

FOR INFORMATION ONLY

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* DENOTES RIGHT OF WAY ENCROACHMENT

E1 *STATE OF OHIO SLOPE EASEMENT DB 2098, PG 366*
E2 *CITY OF CINCINNATI SEWER EASEMENT DB 2636, PG 193*
E3 *STATE OF OHIO SLOPE EASEMENT DB 2095, PG 307*

REV. BY	DATE	DESCRIPTION
SEA	4-26-16	UPDATED EASEMENT REMARKS FOR PARCEL 24
SEA	01-22-16	UPDATED ONWERSHIPS 25 & 32
SEA	12-11-15	ADDED EX SEWER EASEMET TO PARCEL 33
SEA	4-13-15	ADDED PARCEL 25-T

FIELD REVIEW BY PGT DATE: 1/23/2014
OWNERSHIP VERIFIED BY SEA DATE: 4/9/2014
DATE COMPLETED 4/18/2014

FEDERAL PROJECT NO. EO41(146)
PID NO. 77889
STATE JOB NO. 486878
R/W DESIGNER JMM
R/W REVIEWER EJM

SUMMARY OF ADDITIONAL RIGHT OF WAY (PARCELS 24-44)

HAM-75-7.85

17 / 52

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NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE
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ALL AREAS IN ACRES *(CALCULATED ACREAGE)*

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PARCEL NO.	OWNER	SHEET	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS	AS ACQUIRED BOOK	AS ACQUIRED PAGE
45	LARRY W. WOODRUM AND SHARON R. WOODRUM	12 , 29 - 32	DB 4155	910	661-0002-0531-00	0.110	0.000								NO TAKE REQUIRED * SHED ENCROACHING		
46	KAREN K. TAYLOR	12 , 31 , 32	OR 10191	2076	661-0002-0529-00	0.134	0.000								NO TAKE REQUIRED *SHED ENCROACHING		
47	KARMAN M. MURDOCK	12 , 31 , 32	OR 10573	706	116-0001-0202-00	0.465	0.000								NO TAKE REQUIRED		
48	TRACY LONG	12 , 31 , 32	OR 9744	476	661-0002-0528-00	0.111	0.000								NO TAKE REQUIRED * SHED ENCROACHING		
49-T	JANET UCHTMAN	12 , 31 , 32	OR 9256	1338	661-0002-0527-00	0.131	0.000	0.002	0.000	0.002					GRADING & SEEDING		
50	RUTH L. WALLACE JOHNSON	12 , 31 , 32	OR 9734	1675	116-0001-0201-00	0.326	0.000								NO TAKE REQUIRED		
51-T	KENNETH M. COLE AND PAULA J. DARPEL	12 , 31 , 32	DB 5050	654	661-0002-0526-00	0.091	0.000	0.003	0.000	0.003					GRADING & SEEDING		
52-T	BERNICE GRIFFIN AND TAMARA L. MOORE	12 , 31 , 32	OR 12008	2064	661-0002-0525-00	0.095	0.000	0.004	0.000	0.004					GRADING & SEEDING		
53-T	ANGELIQUE L. BAILEY AND JASON BAILEY	12 , 31 , 32	OR 8972	3218	661-0002-0524-00	0.128	0.000	0.005	0.000	0.005					GRADING & SEEDING		
54-T	THE VILLAGE OF ELMWOOD PLACE	12 , 31 , 32	DB 2968	458	661-0002-0301-00	(0.217)	0.000	0.0478	0.000	0.0478					GRADING & SEEDING AUDITOR SHOWS INCORRECT OWNER		
			DB 1130	573	661-0001-0268-90	1.731	0.000	0.0002	0.000	0.0002							
	TOTAL		DB 1128	511				0.048	0.000	0.048							
			DB 1135	344													
55	NOT USED																
56	ROBERT W. MASON AND PARALEE J. MASON	12 , 31 , 32	OR 9334	4519	116-0001-0249-00	0.100	0.000								NO TAKE REQUIRED		
57	STANCY ERVIN	12 , 31 , 32	OR 12012	734	116-0001-0101-00	0.213	0.000							80% FEDERAL 20% STATE	NO TAKE REQUIRED		
58-WL	CDE SERVICES, INC.	12 , 31 , 32	OR 10459	2149	661-0002-0579-00	0.248	0.000	0.047	0.000	0.047		0.201			0.035 AC OF ELECTRIC EASEMENT TO BE ACQUIRED E1		
					661-0002-0580-00	0.220	0.000	0.000	0.000	0.000		0.220					
59-WL	WILKERSON PROPERTIES I, LLC	12 , 31 , 32	OR 10479	1222	661-0002-0583-00	0.281	0.000	0.051	0.000	0.051		0.230					
			OR 10479	1222	661-0002-0584-00	0.138	0.000	0.015	0.000	0.015		0.123					
			OR 10479	1222	661-0002-0585-00	0.141	0.000	0.005	0.000	0.005		0.136					
			OR 10479	1222	661-0002-0586-00	0.139	0.000	0.000	0.000	0.000		0.139					
	TOTAL					0.699	0.000	0.071	0.000	0.071		0.628					
60-WL	CITY OF CINCINNATI	12 , 33 , 34	OR 13683	2448	117-0002-0025-00	11.475	0.000	0.048	0.000	0.048			11.427		* 1' OF FENCE ENCROACHING		
60-T		12 , 31 , 32						0.076	0.000	0.076					GRADING & SEEDING		
61-63																	
64	SAI R & R GROUP, LLC	12 , 31 , 32	OR 12411	1391	661-0002-0587-00	0.140	0.000								NO TAKE REQUIRED		
65	SIAMAK KHORRAM AND FARNOOSH BOZORGI	12 , 31 , 32	OR 9836	1932	661-0002-0588-00	0.139	0.000								NO TAKE REQUIRED		
66	WILKERSON PROPERTIES I, LLC	12 , 31 - 34	OR 10479	1222	661-0002-0589-00	0.148	0.000								NO TAKE REQUIRED		
					661-0002-0590-00	0.087	0.000										
					661-0002-0591-00	0.139	0.000										

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* DENOTES RIGHT OF WAY ENCROACHMENT

E1 *THE CINCINNATI GAS & ELECTRIC CO. DB 3164, PG 656*

REV. BY	DATE	DESCRIPTION
DME	10-03-18	UPDATE OWNER PARCEL 60
SEA	2/17/17	UPDATED AREAS FOR PARCEL 54-T
FIELD REVIEW BY PGT		DATE: 1/23/2014
OWNERSHIP VERIFIED BY SEA		DATE: 4/9/2014
DATE COMPLETED 4/18/2014		

FEDERAL PROJECT NO. EO41(146)
PID NO. 77889
STATE JOB NO. 486878
R/W DESIGNER JMM
R/W REVIEWER EJM

SUMMARY OF ADDITIONAL RIGHT OF WAY (PARCELS 45-66)

HAM-75-7.85

18 / 52

1677 2017

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NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE
NET TAKE = GROSS TAKE - PRO IN TAKE

ALL AREAS IN ACRES *(CALCULATED ACREAGE)*

GRANTEE:
ALL RIGHT OF WAY ACQUIRED IN THE NAME OF
THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION
UNLESS OTHERWISE SHOWN.

PARCEL NO.	OWNER	SHEET	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS	AS ACQUIRED BOOK	AS ACQUIRED PAGE
67	NOT USED																
68-T	HASLER PROPERTIES, LLC	12 , 33 , 34	OR 9548	2438	661-0002-0592-00	0.133	0.000	0.004	0.000	0.004					GRADING & SEEDING		
69-WL	ROBERT ERIC KAHN	12 , 33 , 34	OR 10964	273	661-0002-0593-00	0.445	0.000	0.116	0.000	0.116		0.329					
70	OHIO DEPARTMENT OF MENTAL HEALTH AND OHIO DEPARTMENT OF ADMINISTRATIVE SERVICES	12 , 33 , 34	JOURNAL ENTRY 14 PG 230, AUG. 6, 1985		N/A		0.000								NO TAKE REQUIRED		
71-WL	GIVAUDAN FLAVORS CORPORATION	12 , 13 , 33 - 36	OR 8401	1028	117-0002-0026-00	8.731	0.000	2.071	0.000	2.071			6.660		* 1017' OF FENCE ENCROACHING		
			OR 9319	5167	117-0002-0037-00	11.253	0.000	1.614	0.000	1.614			9.639		0.063 AC OF COMM EASEMENT TO BE ACQUIRED E1		
					117-0002-0027-00	5.902	0.000	0.000	0.000	0.000			5.902		9 TREES		
	TOTAL					25.886	0.000	3.685	0.000	3.685			22.201				
72-T	GIVAUDAN FLAVORS CORPORATION	12 , 13 , 33 - 36	OR 10985	349	240-0003-0037-00	11.314	0.000	0.236	0.000	0.236					+ GRADING & SEEDING * 1' OF FENCE *309 S.F OF P LOT OVERLAP 0.009 AC OF SS EASEMENT (PID 89835)		
73	TLC PROPERTIES, INC.	12 , 33 , 34	OR 10412	1940	241-0004-0088-00	0.121	0.000								NO TAKE REQUIRED		
73A	DONALD P. BARTH AND RUTHANN BARTH	12 , 33 , 34	OR 7442	1343	241-0004-0069-00	1.352	0.000								NO TAKE REQUIRED		
74-WL1	CITY OF CINCINNATI	12 , 33 , 34	OR 12134	1663	117-0002-0017-90	1.934	1.934	0.048	0.048	0.000			0.000	80% FEDERAL 20% STATE	ENTIRE PARCEL IS REGINA GRAETER WAY R/W		
74-WL2		12 , 33 , 34			NA			0.191	0.191	0.000					CANAL ST AND 67th ST R/W		
75-79	NOT USED																
80	MARBLE ALLEY MOTORCARS, LLC	13 , 35 , 36	OR 10199	796	240-0002-0058-00	0.179	0.000								TO BE ACQUIRED BY PID 89835 HAM-4/561-2.66/7.01		
					240-0002-0059-00	0.398	0.000										
					240-0002-0091-00	0.070	0.000										
81	TR GARAGE, LLC	13 , 35 , 36	OR 9230	5377	240-0002-0056-00	0.297	0.000								NO TAKE REQUIRED		
82	D & B REALTY ASSOCIATES, LTD.	13 , 37 , 38	OR 10778	1218	240-0002-0063-00	0.138	0.000								NO TAKE REQUIRED		
			OR 10878	1198	240-0002-0052-00	0.172	0.000										
			OR 11198	929	240-0002-0055-00	0.056	0.000										
83	7217 LONGVIEW, LLC	13 , 37 , 38	OR 11012	850	240-0002-0051-00	0.133	0.000								NO TAKE REQUIRED		
84	LONGVIEW INVESTMENT PROPERTIES, LLC	13 , 37 , 38	OR 11627	2220	240-0002-0050-00	0.082	0.000								NO TAKE REQUIRED		
					240-0002-0048-00	0.115	0.000										
85	500 AUTO SALES INC.	13 , 37 , 38	OR 11581	1281	240-0001-0111-00	0.830	0.037								NO TAKE REQUIRED		
					240-0001-0166-00	0.033	0.033								* 2' OF FENCE ENCROACHING		
86-88	NOT USED																
89-WL	CITY OF CINCINNATI	13 , 37 , 38			NA			0.057	0.057	0.000					EXISTING R/W OF LONGVIEW ST		
90	PADDOCK INDUSTRIAL PARTNERS, L.L.C.	13 , 37 , 38	OR 12563	1244	117-0007-0084-00	6.473	0.000								NO TAKE REQUIRED		

FOR INFORMATION ONLY

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TYPES OF TITLE LEGEND:
WL = FEE SIMPLE WITH LIMITATION OF ACCESS
WD = WARRANTY DEED
PRW = PROPERTY RIGHT FEE SIMPLE
SH = STANDARD HIGHWAY EASEMENT
LA = LIMITED ACCESS EASEMENT
T = TEMPORARY EASEMENT
CH = CHANNEL EASEMENT
A = AERIAL EASEMENT
SL = SLOPE EASEMENT
PRE = PROPERTY RIGHT EASEMENT
S = SEWER EASEMENT
U = TO BE ACQUIRED IN THE NAME OF RAILROAD

+ 72-T - SEE FENCE NOTE FOR GIVAUDAN PROPERTY IN GENERAL NOTES FOR TEMPORARY AND PERMANENT SECURITY REQUIREMENTS.

E1 *COMMUNICATIONS EASEMENT OR 8914, PG 1326*

* DENOTES RIGHT OF WAY ENCROACHMENT

REV. BY	DATE	DESCRIPTION
BER	2-11-19	MODIFIED PARCEL 71 WL
SEA	2/7/17	COMBINED PARCELS 74 AND 74-A
SEA	6/30/16	MODIFIED PARCEL 71 WL
SEA	12/14/15	MODIFIED PARCEL 72 T

FIELD REVIEW BY PGT DATE: 1/23/2014
OWNERSHIP VERIFIED BY SEA DATE: 4/9/2014
DATE COMPLETED 4/18/2014

FEDERAL PROJECT NO. EO41(146)
PID NO. 77889
STATE JOB NO. 486878
R/W DESIGNER JMM
R/W REVIEWER EJM

SUMMARY OF ADDITIONAL RIGHT OF WAY (PARCELS 67-90)

HAM-75-7.85

19 / 52

1678 2017

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* DENOTES RIGHT OF WAY ENCROACHMENT

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE
NET TAKE = GROSS TAKE - PRO IN TAKE

ALL AREAS IN ACRES *(CALCULATED ACREAGE)*

PARCEL NO.	OWNER	SHEET	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS	AS ACQUIRED BOOK	AS ACQUIRED PAGE
91	STATE OF OHIO	13 , 14 , 37 - 40	DB 2279	583	117-0016-0002-90	(76.118)	13.711	0.000	0.000	0.000					NO TAKE REQUIRED		
					117-0007-0003-90	(7.470)	2.284	0.000	0.000	0.000							
92-S	E PAUL CORP	14 , 39 - 40	OR 12162	719	242-0002-0057-00	11.419	0.111	0.007	0.000	0.007		11.301			0.023 AC OF ACCESS EASEMENT OVERLAP E1		
					590-0062-0006-00	0.567	0.000	0.016	0.000	0.016		0.551			PRIVATE LIGHT POLE		
	TOTAL					11.986	0.111	0.023	0.000	0.023		11.852					
92-T		13 , 14 , 37 - 40						0.100	0.000	0.100					CONSTRUCT A CURB, GRADING & SEEDING		
93-WL	AMERICAN BUS AND ACCESSORIES, INC.	14 , 39 , 40	OR 9543	1347	242-0002-0102-00	1.660	0.000	0.000	0.000	0.000		1.660			0.052 AC OF ACCESS EASEMENT TO BE ACQUIRED E2		
			OR 5591	387	590-0062-0260-00	2.017	0.000	0.052	0.000	0.052		1.965					
93-T		14 , 39 , 40						0.076	0.000	0.076					CONSTRUCT A CURB, GRADING & SEEDING		
94-WL	CITYCENTRE PROPERTIES, LLC	14 , 39 - 42	OR 10590	2648	590-0062-0259-00	1.206	0.000	0.129	0.000	0.129	YES	1.077			* 99' OF FENCE ENCROACHING		
94-WDV		14 , 41 , 42			242-0002-0106-00	0.554	0.000	0.004	0.000	0.004		0.550			REMOVE 2-STY COMMERCIAL BUILDING, LIGHT & FLAG POLE		
	TOTAL					1.760	0.000	0.133	0.000	0.133		1.627					
94-T		14 , 39 - 42						0.352	0.000	0.352					GRADING, PROP CURB & TO REMOVE A BUILDING		
94-T1		14 , 41 , 42						0.004	0.000	0.004					GRADING & SEEDING, 94-WDV TO BE ACQUIRED IN THE		
															NAME OF THE CITY OF CINCINNATI		
95-WL	ANDRE C. ANDERSON	14 , 41 , 42	OR 10095	1217	590-0062-0143-00	(0.156)	0.007	0.156	0.007	0.149	YES		0.000		TOTAL TAKE		
96-WL	MS HOLDINGS, LLC	14 , 41 , 42	OR 11551	1843	590-0062-0261-00	0.908	0.000	0.490	0.000	0.490	YES				REMOVE 1-STY MASONRY BUILDING		
					242-0001-0036-00	4.226	0.000	0.654	0.000	0.654	(S2)				2 BILLBOARDS TO BE REMOVED (ON PREMISE, NO PERMIT NEEDED)		
	TOTAL WL					5.134	0.000	1.144	0.000	1.144					PORTION OF WATERLINE, ACCESS, CHANNEL, SEWER		
															AND ELECTRIC EASEMENTS TO BE ACQUIRED (SEE BELOW)		
96-WDV		14 , 41 , 42			242-0001-0035-00	4.024	0.000	0.005	0.000	0.005					TO BE ACQUIRED IN THE NAME OF THE CITY OF CINCINNATI E3		
															E4 E5 E7 E8		
96-WD1		14 , 41 , 42 , 43			242-0001-0036-00	4.226	0.000	0.203	0.000	0.203							
	GRAND TOTAL					9.158	0.000	1.352	0.000	1.352		7.806					
96-SV		14 , 41 , 42 , 43						0.084	0.000	0.084					TO BE ACQUIRED IN THE NAME OF MSD** E5 E7		
96-U		14 , 41 , 42 , 43						0.089	0.000	0.089					TO BE ACQUIRED IN THE NAME OF SOUTHWESTERN		
															OHIO WATER COMPANY E4 E5 E7		
96-T	NOT USED																
96-T1		14 , 41 , 42						0.008	0.000	0.008					CONSTRUCT A SIDEWALK, GRADING & SEEDING		
96-TV2	NOT USED																
96-TV3		14 , 41 , 42 , 43						0.099	0.000	0.099					CONSTRUCT A WATERLINE, GRADING & SEEDING E4 E5 E6 E7		
															TO BE ACQUIRED IN THE NAME OF SOUTHWESTERN		
															OHIO WATER COMPANY		
97-WD	LLOYD F. COFFEY AND JANICE H. COFFEY	14 , 41 , 42	DB 4050	1406	590-0062-0103-00	(0.214)	0.086	0.214	0.086	0.128	YES		0.000		TOTAL TAKE		
98-WL	JAMES A. SNEED AND CAROLYN SNEED	14 , 41 , 42	DB 3818	710	590-0062-0120-00	(0.130)	0.004	0.130	0.004	0.126	YES		0.000		TOTAL TAKE		
99	MARY H. LUCAS	14 , 41 , 42	OR 7415	817	590-0062-0122-00	0.191	0.000								NO TAKE REQUIRED		
					590-0062-0123-00	0.191	0.000										
100	PHILIP G. HOGAN AND PATRICIA A. HOGAN	14 , 41 , 42	DB 4100	110	590-0062-0112-00	0.241	0.054								NO TAKE REQUIRED		
101	MARILYN J. NADLER	14 , 41 , 42	OR 7967	2116	590-0062-0111-00	0.158	0.019								NO TAKE REQUIRED		
102	ALMA REAL ESTATE INVESTORS	14 , 41 , 42	OR 12325	2202	590-0062-0110-00	0.128	0.001								NO TAKE REQUIRED		
103	DAVID KREUZMANN	14 , 39 - 42	OR 12440	1133	590-0062-0005-00	3.484	0.000								NO TAKE REQUIRED		
			OR 9347	4558	117-0016-0004-00	2.270	0.000										
104-109	NOT USED																

TYPE FUND: 80% FEDERAL, 20% STATE

FOR INFORMATION ONLY

GRANTEE:

ALL RIGHT OF WAY ACQUIRED IN THE NAME OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION UNLESS OTHERWISE SHOWN.

NOTE: ALL TEMPORARY PARCELS TO BE OF 24 MONTH DURATION.

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TYPES OF TITLE LEGEND:
WL = FEE SIMPLE WITH LIMITATION OF ACCESS
WD = WARRANTY DEED
WDV = WARRANTY DEED TO BE ACQUIRED IN THE NAME OF THE CITY OF CINCINNATI
LA = LIMITED ACCESS EASEMENT
T = TEMPORARY EASEMENT
TV = TEMPORARY EASEMENT TO BE AQUIRED IN THE NAME OF SOUTHWESTERN OHIO WATER COMPANY.
S = SEWER EASEMENT
U = UTILITY EASEMENT

*** - BOARD OF COUNTY COMMISSIONERS OF HAMILTON COUNTY, OHIO, FOR THE USE AND BENEFIT OF THE METROPOLITAN SEWER DISTRICT OF GREATOR CINCINNATI*

E1 - 24' ACCESS EASEMENT DB 5143, PG 1498
E2 - 24' ACCESS EASEMENT DB 292, PG 42
E3 - 20' WATERLINE EASEMENT DB 2535, PG 223 (0.122 AC), ACCESS EASEMENT OR 11810, PG 974 (0.221 AC)
STATE OF OHIO CHANNEL EASEMENT (0.064 AC), DB 2265, PG 361 - DB 2380, PG 620
STATE OF OHIO STORM SEWER EASEMENT (0.043 AC), OR 4037, PG 455
CINCINNATI GAS & ELECTRIC CO ELECTRIC LEASE (0.325 AC), JR 30, PG 291
E4 - E8 FOR AREAS OF OVERLAP WITH EXISTING EASEMENTS, SEE SHEET .

REV. BY	DATE	DESCRIPTION
BLM	1-28-20	CHANGED PARCEL 96WD1, REMOVED PARCEL 96TV2
BLM	11-18-19	ADDED PARCELS 96TV2, 96TV3, 96U, 96S, 96WDV1
BER	2-11-19	REVISED PARCEL 97 TO WDV
BER	10-23-18	REVISED PARCELS 95, 97 & 98 TO TOTAL TAKE
SEA	2-3-16	CHANGED PARCEL 94-TV TO 94-T1
SEA	1-22-16	CHANGED PARCEL 96-TV TO 96-T1 CHANGED APN FOR PARCEL 96-WDV
SEA	7-25-14	ADDED PARCEL 95 T
FIELD REVIEW BY	PGT	DATE: 1/23/2014
OWNERSHIP VERIFIED BY	SEA	DATE: 4/9/2014
DATE COMPLETED	4/18/2014	

FEDERAL PROJECT NO. EO41(146)
PID NO. 77889
STATE JOB NO. 486878
R/W DESIGNER JMM
R/W REVIEWER EJM

SUMMARY OF ADDITIONAL RIGHT OF WAY (PARCELS 91-111)

HAM-75-7.85

20 / 52

1679 / 2017

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NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE
NET TAKE = GROSS TAKE - PRO IN TAKE

(CALCULATED ACREAGE)

GRANTEE:
ALL RIGHT OF WAY ACQUIRED IN THE NAME OF
THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION
UNLESS OTHERWISE SHOWN.

PARCEL NO.	OWNER	SHEET	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS	AS ACQUIRED BOOK	AS ACQUIRED PAGE
110	MS HOLDINGS II, LLC	14 , 41 , 42	OR 12205	2235	242-0001-0017-00	4.482	0.000								TO BE ACQUIRED AS PART OF HAM-75-10.10 (PID 88124)		
111	DESALVO CONSTRUCTION CO.	14 , 41 , 42	DB 2245	145	590-0062-0001-00	2.411	2.411								TO BE ACQUIRED AS PART OF HAM-75-10.10 (PID 88124)		
					243-0007-0003-00	7.604	7.604										
112	THE NEW PROSPECT BAPTIST CHURCH	14 , 41 , 42	OR 11679	1076	590-0062-0256-00	3.433	0.390								TO BE ACQUIRED AS PART OF HAM-75-10.10 (PID 88124)		
					243-0007-0004-00	16.097	0.360										
113	NOT USED																
114	DESALVO CONSTRUCTION CO.	14 , 41 , 42	DB 2245	145	N/A	(0.074)	0.000								TO BE ACQUIRED AS PART OF HAM-75-10.10 (PID 88124)		
115-198	NOT USED																
199-LA	NORFOLK SOUTHERN RAILWAY COMPANY	15 , 44 , 45	OR 12417	1943	118-0003-0016-00	(1.969)	0.000	0.000	0.000	0	(S2)				2 BILLBOARDS TO BE REMOVED (ADC# 35619, #35672)		
		51 , 52	DB 2260	176	118-0003-0018-00	1.100	0.000	0.000	0.000	0							
			DB 1396	3	118-0004-0008-00	2.715	0.468	0.069	0.000	0.069							
			DB 1335	114	118-0003-0011-00	4.832	0.000	0.000	0.000	0							
			DB 1303	611	118-0004-0025-00	0.690	0.088	0.041	0.000	0.041							
			DB 2297	453													
			DB 985	195													
			DB 840	107													
	TOTAL 199 LA		DB 837	456				0.110	0.000	0.110							
			DB 842	322													
199-LA1		15 , 44 , 45			118-0004-0008-00			0.127	0.000	0.127	(S2)				2 BILLBOARDS TO BE REMOVED (ADC# 35620 #35621)		
		51 , 52			118-0004-0026-00	0.961	0.053	0.112	0.000	0.112							
	TOTAL 199 LA1							0.239	0.000	0.239					(199 LA 4,779 S.F. - 199 LA-1 10,422 S.F.)		
	GRAND TOTAL					12.267	0.609	0.349	0.000	0.349							
200-WL	WARBRO REALTY LLC	15 , 44 , 45	OR 9306	941	118-0004-0030-00	2.315	0.000	0.093	0.000	0.093		2.222					
		51 , 52															
200-T		15 , 44 , 45						0.019	0.000	0.019					TO REMOVE A BILLBOARD AND GRADING		
		51 , 52															
201-WL	RHODIA INC.	15 , 44 , 45	OR 10615	1641	118-0004-0032-00	(0.096)	0.096	0.096	0.096	0.000			0.000		PARCEL 118-0004-0032-00 IS COMPLETELY CONTAINED		
		51 , 52			118-0004-0028-00	6.657	0.000	0.072	0.000	0.072			6.585		WITHIN HIGHWAY LA-R/W EASEMENT (DB 2953, PG 591)		
	TOTAL					6.753	0.096	0.168	0.096	0.072			6.585		192' OF PARKING LOT TO BE REMOVED		
															* 24' OF ASPHALT PARKING LOT, *352' OF C.L. FENCE		
															* 6 UTILITY POLES, * 374' OF CONCRETE WALK		
201-T		15 , 44 , 45						0.029	0.000	0.029					FOR GRADING		
		51 , 52															
202	SINKRO PROPERTY HOLDING LIMITED	15 , 44 - 47	OR 11017	570	118-0002-0083-00	1.579	0.000								NO TAKE REQUIRED		
203	LIBERTY REAL ESTATE ENTERPRISES, LLC	15 , 46 , 47	OR 9487	5042	118-0002-0084-00	1.561	0.000								NO TAKE REQUIRED		
204	INDUSTRIAL ENVIRONMENTS, LLC	15 , 46 , 47	OR 8952	438	118-0002-0089-00	0.561	0.000								NO TAKE REQUIRED		
			OR 8783	4730	118-0002-0085-00	0.886	0.000										
205	DIAMOND ALKALI COMPANY	15 , 46 , 47	DB 1741	532	131-0005-0001-00	5.487	0.580								NO TAKE REQUIRED		
206	CSSI REAL ESTATE, LLC	15 , 46 , 47	OR 9681	1816	118-0002-0014-00	0.621	0.000								NO TAKE REQUIRED		
					118-0002-0086-00	1.286	0.000										
207	LIANE REYES	15 , 46 , 47	OR 8814	2584	118-0002-0052-00	0.206	0.000								NO TAKE REQUIRED * SHED ENCROACHING		
208	LITSAN LIMITED PARTNERSHIP	15 , 46 , 47	OR 8705	3791	131-0005-0045-00	1.125	0.000								NO TAKE REQUIRED		
209	YOLANNDA WARE AND THOMAS P. KOENINGER	15 , 46 , 47	OR 10344	20	118-0002-0026-00	0.300	0.000								NO TAKE REQUIRED		
					118-0002-0030-00	0.035	0.000										
210	BONNIE LEE JAMISON	15 , 46 , 47			118-0002-0028-00	0.282	0.000								NO TAKE REQUIRED		
211	APEX PROPERTIES INVESTMENT GROUP, LLC	15 , 46 , 47	OR 10603	2491	118-0002-0016-00	0.103	0.000								NO TAKE REQUIRED		
212	RAYCHEL M. SCHORK	14 , 41 , 42	OR 13492	1544	590-0062-0144-00	0.153	0.000								NO TAKE REQUIRED		
213	KENNETH VORDGM ESCHE AND KAREN VORDGM ESCHE	14 , 41 , 42	OR 12019	1237	590-0062-0102-00	0.172	0.000								NO TAKE REQUIRED		
214	SHAYNEE DIAJHA LASHAY SCOTT	14 , 41 , 42	OR 13449	1279	590-0062-0125-00	0.156	0.000								NO TAKE REQUIRED		

FOR INFORMATION ONLY

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A = AERIAL EASEMENT
SL = SLOPE EASEMENT
PRE = PROPERTY RIGHT EASEMENT
S = SEWER EASEMENT
U = TO BE ACQUIRED IN THE NAME OF RAILROAD

* DENOTES RIGHT OF WAY ENCROACHMENT

REV. BY	DATE	DESCRIPTION
BLM	11-18-19	ADDED PARCELS 96TV2, 96TV3, 96U, 96S, 96WDV1
BER	10-23-18	ADDED PARCELS 212, 213 & 214
SEA	01-22-16	UPDATED OWNERSHIPS 199 & 200

FIELD REVIEW BY PGT DATE: 1/23/2014
OWNERSHIP VERIFIED BY SEA DATE: 4/9/2014
DATE COMPLETED 4/18/2014

FEDERAL PROJECT NO. EO41(146)
PID NO. 77889
STATE JOB NO. 486878
R/W DESIGNER JMM
R/W REVIEWER EJM

SUMMARY OF ADDITIONAL RIGHT OF WAY (PARCELS 112-214)

HAM-75-7.85

21 / 52

1680 / 2017

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1 5/8" REBAR FND
2 5/8" REBAR FND
3 5/8" REBAR FND
4 5/8" REBAR W/#6452 & #4911 CAP FND
5 5/8" REBAR FND

ADJOINING PROJECT DATA

14 LA — PORTION TO BE ACQUIRED AS PART OF HAM-75-7.72 (PID 82283)

HAMILTON COUNTY
MILL CREEK TOWNSHIP
SEC 11 TOWN 3, FRAC RANGE 2
CITY OF ST BERNARD AND
CITY OF CINCINNATI

INDUSTRIAL
9
582-0002-0084-00

BEGIN WORK
STA 395+50.00
RESURFACING LIMITS

582-0002-0064-00

INDUSTRIAL
9
CINCINNATI SPECIALITIES, LLC.
582-0002-0031-00
501 MURRAY RD

BEGIN ACQUISITION
STA 416+67.90
SLM 7.89

10 NORFOLK SOUTHERN RAILWAY COMPANY
582-0002-0052-00

18 WL
18 STATE OF OHIO - MIAMI AND ERIE CANAL

CANAL LAND LEASE FOR ELEC TRANSMISSION AND DISTRIBUTION POLE LINE

MATCHLINE 419+50 SEE SHEET 24

5/8" REBAR FND

℄ R/W I.R. 75 407+65.66 = CORP LINE

℄ R/W I.R. 75 414+12.31 = ℄ R/W S.R. 562 4+29.49

℄ R/W S.R. 562 S 83°42'50" E 3048.47'

I.R. 75 (SB)
I.R. 75 (NB)
℄ CONST I.R. 75 N 47°25'37" E 598.77'
N 45°57'32" E 659.26'

ST 407+98.09
PT 407+87.13
PC 414+46.39
PT 413+96.86
SC 416+46.86

RAMP M
RAMP N
RAMP J

℄ CONST RAMP M
℄ CONST RAMP N
℄ CONST RAMP J

PROP GUARDRAIL
PROP MEDIAN BARRIER
CONST LIMIT
HIGHWAY EASEMENT
ELECTRIC EASEMENT
SEWER EASEMENT
PIPELINE EASEMENT
CHANNEL EASEMENT
PLAT IN PARTITION OF THE JOHN ROSS ESTATE CASE #166637 HAM. COM. PLEAS COURT DB 601, PG 222
492' OF FENCE TBR
ROSS RUN SEWER
CITY OF ST. BERNARD
CITY OF CINCINNATI
INDIANA & OHIO RAILWAY
WOODED
STONE
COMMERCIAL
LOT 21
LOT 22
LOT F
LOT G
LOT H

MATCHLINE STA 9+50 SEE SHEET 44

RESURFACING

CURVE X75-1
PI 400+66.00
Δ = 40°32'28" (LT)
Dc = 4°00'00"
R = 1,432.40'
Ls = 500.00'
θs = 10°00'00"
LT = 333.87'
ST = 167.15'
x = 498.48'
y = 29.03'
k = 249.75'
p = 7.26'
Δc = 20°32'28" (LT)
Lc = 513.53'
Es = 102.32'
Ts = 781.46'
C = 510.79'
$C_1 = C_2$ = 499.33'
$C.B._1$ = N 84°38'09" E
C.B. = N 67°41'52" E
$C.B._2$ = N 50°45'34" E

CURVE 75-1
PI 401+67.56
Δ = 38°43'05" (LT)
Dc = 3°00'00"
R = 1,909.86'
T = 671.03'
L = 1,290.60'
E = 114.46'
C = 1,266.19'
C.B. = N 65°19'05" E

CURVE 75-2
PI 420+66.70
Δ = 21°27'24" (LT)
Dc = 1°45'00"
R = 3,274.04'
T = 620.31'
L = 1,226.10'
E = 58.25'
C = 1,218.94'
C.B. = N 35°13'50" E

CURVE X75-2
PI 421+20.96
Δ = 23°37'00" (LT)
Dc = 2°00'00"
R = 2,864.79'
Ls = 250.00'
θs = 2°30'00"
LT = 166.68'
ST = 83.35'
x = 249.95'
y = 3.64'
k = 124.99'
p = 0.91'
Δc = 18°37'00" (LT)
Lc = 930.83'
Lc = 930.83'
Ts = 724.10'
C = 926.74'
$C_1 = C_2$ = 249.98'
$C.B._1$ = N 46°35'37" E
C.B. = N 35°37'07" E
$C.B._2$ = N 24°38'37" E

REV. BY	DATE	DESCRIPTION
SEA	1-22-16	UPDATED OWNERSHIP 10
DATE COMPLETED	4/18/2014	

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

PID NO. 77889
R/W DESIGNER JMM
R/W REVIEWER EJM

RIGHT OF WAY TOPO SHEET
407+00 TO STA 419+50

HAM-75-7.85

22 / 52

1681 2017

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HAMILTON COUNTY
MILL CREEK TOWNSHIP
SEC 11 TOWN 3, FRAC RANGE 2
CITY OF ST BERNARD AND
CITY OF CINCINNATI

A HIGHWAY EASEMENT
STATE OF OHIO
ODOT CONDEMNATION
VOL 42, PG 375 (2-14-1958)

B 50' ELECTRIC EASEMENT
THE CINCINNATI GAS & ELECTRIC COMPANY
DB 3891, PG 363

BEGIN WORK
STA 395+50.00
RESURFACING
LIMITS

INDUSTRIAL
(9)
582-0002-0084-00

582-0002-0064-00

CHANNEL EASEMENT
CASE #A-158156
HAMILTON COUNTY
COMMON PLEAS COURT

20' SEWER EASEMENT
REC BK 289, PG 420
REC BK 308, PG 193

10' SEWER EASEMENT
CASE #158156 HAMILTON COUNTY
COMMON PLEAS COURT

30' SEWER EASEMENT
PB 58, PG 47 & 48

LOT H

LOT 21
PLAT IN PARTITION OF THE JOHN ROSS ESTATE
CASE #166637 HAM. COM. PLEAS COURT
DB 601, PG 222

BEGIN ACQUISITION
STA 416+67.90
SLM 7.89

COMMERCIAL
(10) NORFOLK SOUTHERN
RAILWAY COMPANY
582-0002-0052-00

INDUSTRIAL
(9)
CINCINNATI SPECIALITIES, LLC.
582-0002-0031-00
501 MURRAY RD

LOT G
LOT 22
LOT F

1 416+90.75, 263.61' LT
2 417+75.71, 253.39' LT

408+02.22, 148.38' LT
5/8" REBAR FND

408+02.31
148.27' LT

410+52.24
154.08' LT

412+44.20
247.33' LT

413+34.70
269.15' LT

412+37.01
179.33' LT

412+95.16
187.28' LT

413+45.93
194.22' LT

413+81.49
342.28' LT

414+53.58
296.56' LT

415+09.96
308.88' LT

416+04.02
249.53' LT

416+67.90
260.16' LT

N 34°50'15" E
21.05'

N 55°24'19" W
58.19'

416+87.04
285.94' LT

417+69.54
296.03' LT

S 54°27'22" E 20.43'
N 35°32'38" E 75.24'
N 34°21'38" E 809.53'
S 34°14'31" W 904.90'

416+94.05
243.41' LT

416+78.68
202.82' LT

416+89.00
145.44' LT

STATE OF OHIO -
MIAMI AND ERIE CANAL

MIAMI & ERIE CANAL

CANAL LAND LEASE FOR
ELEC TRANSMISSION AND
DISTRICT POLE LINE
LEASE #723 (M-533)

MATCHLINE STA 419+50 SEE SHEET 25

CITY OF ST. BERNARD
CITY OF CINCINNATI

ST STA 407+98.09
PT STA 407+87.13

℄ R/W I.R. 75 409+57.64 =
℄ CONST I.R. 75 409+26.13

℄ R/W I.R. 75 407+65.66 =
CORP LINE

℄ CONST I.R. 75

409+41.16
53.50' RT

410+20.22
80.30' RT

N 47°25'37" E 598.77'

N 45°57'32" E
659.26'

TS STA 413+96.86
PC STA 414+46.39
SC STA 416+46.86

I.R. 75

℄ R/W I.R. 75 414+12.31 =
℄ R/W S.R. 562 4+29.49

S.R. 562

℄ R/W S.R. 562
S 83°42'50" E 3048.47'

℄ CONST I.R. 75
℄ R/W I.R. 75

10' PIPELINE EASEMENT
DB 2888, PG 603

CITY OF CINCINNATI
CITY OF ST. BERNARD

MATCHLINE STA 9+50
SEE SHEET 45

1 412+36.87, 179.27' LT
5/8" REBAR FND

2 413+44.92, 255.17' LT
5/8" REBAR FND

3 413+92.86, 328.09' LT
5/8" REBAR FND

4 414+64.08, 280.46' LT
5/8" REBAR W/#6452 & #4911 CAP FND

5 415+21.02, 292.10' LT
5/8" REBAR FND

ALL STATIONS & OFFSETS ARE FROM THE ℄ OF R/W I.R. 75 UNLESS OTHERWISE NOTED.

CURVE X75-1
PI 400+66.00
Δ = 40°32'28" (LT)
Dc = 4°00'00"
R = 1,432.40'
Ls = 500.00'
θs = 10°00'00"
LT = 333.87'
ST = 167.15'
x = 498.48'
y = 29.03'
k = 249.75'
p = 7.26'
Δc = 20°32'28" (LT)
Lc = 513.53'
Es = 102.32'
Ts = 781.46'
C = 510.79'
$C_1 = C_2$ = 499.33'
$C.B._1$ = N 84°38'09" E
C.B. = N 67°41'52" E
$C.B._2$ = N 50°45'34" E

CURVE 75-1
PI 401+67.56
Δ = 38°43'05" (LT)
Dc = 3°00'00"
R = 1,909.86'
T = 671.03'
L = 1,290.60'
E = 114.46'
C = 1,266.19'
C.B. = N 65°19'05" E

CURVE 75-2
PI 420+66.70
Δ = 21°27'24" (LT)
Dc = 1°45'00"
R = 3,274.04'
T = 620.31'
L = 1,226.10'
E = 58.25'
C = 1,218.94'
C.B. = N 35°13'50" E

CURVE X75-2
PI 421+20.96
Δ = 23°37'00" (LT)
Dc = 2°00'00"
R = 2,864.79'
Ls = 250.00'
θs = 2°30'00"
LT = 166.68'
ST = 83.35'
x = 249.95'
y = 3.64'
k = 124.99'
p = 0.91'
Δc = 18°37'00" (LT)
Lc = 930.83'
Lc = 930.83'
Ts = 724.10'
C = 926.74'
$C_1 = C_2$ = 249.98'
$C.B._1$ = N 46°35'37" E
C.B. = N 35°37'07" E
$C.B._2$ = N 24°38'37" E

ADJOINING PROJECT DATA
PORTION TO BE ACQUIRED AS PART OF
HAM-75-6.78 (PID 82286)

REV. BY	DATE	DESCRIPTION
SEA	1-22-16	UPDATED OWNERSHIP 10
DATE COMPLETED	4/18/2014	

HORIZONTAL SCALE IN FEET
0 25 50 100

PID NO. 77889

R/W DESIGNER JMM
R/W REVIEWER EJM

RIGHT OF WAY BOUNDARY SHEET
STA 407+00 TO STA 419+50

HAM-75-7.85

23 / 52

1682
2017

FOR INFORMATION ONLY

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HAMILTON COUNTY
MILL CREEK TOWNSHIP
SEC 11 TOWN 3, FRAC RANGE 2
CITY OF ST BERNARD AND
CITY OF CINCINNATI

(1) 5/8" REBAR FND

INDUSTRIAL (9)
CINCINNATI SPECIALITIES, LLC.
582-0002-0031-00
501 MURRAY RD

COMMERCIAL (14)
OVD EXPRESS PROPERTIES, LLC
582-0002-0026-00
531 MURRAY RD

INDUSTRIAL (11)
SMUCKER SALES AND DISTRIBUTION COMPANY
582-0002-0025-00
551 MURRAY RD

PLAT IN PARTITION OF THE JOHN ROSS ESTATE
CASE #166637 HAM. COM. PLEAS COURT
DB 601, PG 222

CURVE 75-2	CURVE X75-2
PI STA 420+66.70	PI STA 421+20.96
Δ = 21°27'24" (LT)	Δ = 23°37'00" (LT)
Dc = 1°45'00"	Dc = 2°00'00"
R = 3,274.04'	R = 2,864.79'
T = 620.31'	Ls = 250.00'
L = 1,226.10'	θs = 2°30'00"
E = 58.25'	LT = 166.68'
C = 1,218.94'	ST = 83.35'
C.B. = N 35°13'50" E	x = 249.95'
	y = 3.64'
	k = 124.99'
	p = 0.91'
	Δc = 18°37'00" (LT)
	Lc = 930.83'
	Ts = 724.10'
	Es = 62.87'
	C = 926.74'
	$C_1 = C_2$ = 249.98'
	$C.B._1$ = N 46°35'37" E
	C.B. = N 35°37'07" E
	$C.B._2$ = N 24°38'37" E

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

PID NO. 77889

R/W DESIGNER JMM
R/W REVIEWER EJM

RIGHT OF WAY TOPO SHEET
STA 419+50 TO STA 432+00

HAM-75-7.85

24 / 52

1683
2017

REV. BY	DATE	DESCRIPTION
SEA	3-7-17	CHANGED PARCEL 12-WL TO 12-LA
SEA	1-22-16	UPDATED OWNERSHIP'S 10 & 199
DATE COMPLETED		4/18/2014

FOR INFORMATION ONLY

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HAMILTON COUNTY
MILL CREEK TOWNSHIP
SEC 11 TOWN 3, FRAC RANGE 2
CITY OF ST BERNARD AND
CITY OF CINCINNATI

CURVE X75-2
PI STA 421+20.96
Δ = 23°37'00" (LT)
Dc = 2°00'00"
R = 2,864.79'
Ls = 250.00'
θs = 2°30'00"
LT = 166.68'
ST = 83.35'
x = 249.95'
y = 3.64'
k = 124.99'
p = 0.91'
Δc = 18°37'00" (LT)
Lc = 930.83'
Ts = 724.10'
Es = 62.87'
C = 926.74'
$C_1 = C_2$ = 249.98'
C.B.$_1$ = N 46°35'37" E
C.B. = N 35°37'07" E
C.B.$_2$ = N 24°38'37" E

CURVE 75-2
PI STA 420+66.70
Δ = 21°27'24" (LT)
Dc = 1°45'00"
R = 3,274.04'
T = 620.31'
L = 1,226.10'
E = 58.25'
C = 1,218.94'
C.B. = N 35°13'50" E

COMMERCIAL (10) NORFOLK SOUTHERN RAILWAY COMPANY 582-0002-0052-00
COMMERCIAL (14) OVD EXPRESS PROPERTIES, LLC 582-0002-0026-00 531 MURRAY RD

INDUSTRIAL (11) SMUCKER SALES AND DISTRIBUTION COMPANY 582-0002-0025-00 551 MURRAY RD

(9) INDUSTRIAL CINCINNATI SPECIALITIES, LLC. 582-0002-0031-00 501 MURRAY RD

PLAT IN PARTITION OF THE JOHN ROSS ESTATE CASE #166637 HAM. COM. PLEAS COURT DB 601, PG 222

CANAL LAND LEASE FOR ELEC TRANSMISSION AND DISTRIBUTION POLE LINE LEASE #723 (M-533)

MIAMI & ERIE CANAL CITY OF ST. BERNARD CITY OF CINCINNATI

(18) STATE OF OHIO – MIAMI AND ERIE CANAL

50' PIPELINE EASEMENT FILE No M-46 (M&E 616)

MATCHLINE STA 419+50 SEE SHEET 23

MATCHLINE STA 432+00 SEE SHEET 27

N 434671.7481
E 1404808.4947

N 434714.5874
E 1404824.1248

422+61.54, 352.23' LT
3/4" I PIPE FND

422+65.85, 320.34' LT
5/8" REBAR FND

422+65.89
320.46' LT

N 20°02'41" E
45.60'

421+36.01
278.50' LT

421+85.00
290.00' LT

N 34°15'47" E 355.26'
481.93'

N 34°21'38" E 809.53'

S 34°14'31" W
904.90'

LOT 22
LOT F
LOT E
LOT 27
LOT F

N 435008.1923
E 1405024.1315

425+77.70
265.00' LT

426+68.62
283.44' LT

N 32°46'31" E 241.34'
159.84'

426+63.70
240.62' LT

426+57.04
207.03' LT

N 66°11'23" W
40.79'

425+46.58
175.89' LT

426+57.91
166.24' LT

S 31°57'58" W
34.47'

426+93.34
161.91' LT

N 435211.1125
E 1405154.7803

428+27.70
230.78' LT

629.54'

S 27°46'12" W 764.61'

430+88.36
256.18' LT

430+85.45
213.28' LT

N 27°41'38" E 789.38'

10 WL

18 WL

14

HH

EX U

CS STA 425+77.70

PT STA 426+72.49

ST STA 428+27.70

N 24°30'08" E
2542.08'

N 23°48'37" E 2532.73'

420 421 422 423 424 425 426 427 428 429 430 431 432

75-2

X75-2

℄ CONST I.R. 75

℄ R/W I.R. 75

I.R. 75

10' TUNNEL EASEMENT DB 2906, PG 258

431+66.44, 90.16' RT
5/8" REBAR FND

431+66.26
90.00' RT

N 23°48'37" E
281.77'

207.30'

460.21'

S 22°05'57" W
285.13'

12 LA

12 T

TMP

1 2 3 4

429+60.00
110.74' RT

425+42.34, 136.01' RT
3/4" REBAR FND

425+42.17
135.80' RT

424+01.48
143.43' RT

426+68.64
134.96' RT

427+21.50, 135.21' RT
3/4" REBAR FND

427+21.33
135.13' RT

N 18°04'04" E

10' PIPELINE EASEMENT DB 2894, PG 53

422+16.70, 220.71' RT
3/4" REBAR FND

422+16.61
220.69' RT

421+16.72
295.83' RT

Ex LA-R/W
Ex U
Ex SL
LOT 28

SLOPE EASEMENT STATE OF OHIO DB 2906, PG 258

PLAT IN PARTITION OF THE JOHN ROSS ESTATE CASE #166637 HAMILTON COUNTY COMMON PLEAS COURT DB 601, PG 222

EASEMENT FOR DRIVEWAY, PRIVATE UTILITIES, & STREET PURPOSES PROCTER & GAMBLE CO. DB 3241, PG 588

MARTHA RUFFNERS EST PB 1, PG 233 SOUTH LINE LOT 4

LOT 4 LOT 3 LOT 2 LOT 1

JOB HUFFMAN'S EST PB 5, PG 32

PIPELINE EASEMENT (NO WIDTH) CENTERED ON LINE AS INSTALLED DB 2905, PG 294 (APPROX LOCATION)

INDUSTRIAL (12) JLMM HOLDINGS, LLC 118-0003-0004-00 925 LAIDLAW AVE

REGISTERED LAND #201209

INDUSTRIAL (12) 118-0003-0004-00

SLOPE EASEMENT DB 3241, PG 588 DB 3089, PG 273

24' ELECTRIC EASEMENT THE CINCINNATI GAS & ELECTRIC COMPANY DB 4197, PG 431

RAILROAD (199) NORFOLK SOUTHERN RAILWAY COMPANY 118-0003-0016-00

118-0003-0018-00

PARCEL 12 T DETAIL TABLE

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
1	431+02.00	106.50' RT	1-2	N 22°05'57" E	33.01'
2	431+35.00	105.51' RT	2-3	S 66°11'23" E	9.77'
3	431+35.00	115.28' RT	3-4	S 18°57'48" W	33.12'
4	431+02.00	118.08' RT	4-1	N 66°11'23" W	11.58'

ALL STATIONS & OFFSETS ARE FROM THE ℄ OF R/W IR. 75 UNLESS OTHERWISE NOTED.

FOR INFORMATION ONLY

REV. BY	DATE	DESCRIPTION
BRK	7-30-21	ADDED COORD. INFO
SEA	3-7-17	CHANGED PARCEL 12-WL TO 12-LA
SEA	1-22-16	UPDATED OWNERSHIP'S 10 & 199
DATE COMPLETED		4/18/2014

HORIZONTAL SCALE IN FEET 0 25 50 100

PID NO. 77889

R/W DESIGNER JMM R/W REVIEWER EJM

RIGHT OF WAY BOUNDARY SHEET STA 419+50 TO STA 432+00

HAM-75-7.85

25 / 52

1684 2017

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HAMILTON COUNTY
MILL CREEK TOWNSHIP
SEC 11 TOWN 3, FRAC RANGE 2
CITY OF ST. BERNARD,
CITY OF CINCINNATI, AND
VILLAGE OF ELMWOOD PLACE

PLAT IN PARTITION OF THE JOHN ROSS ESTATE
CASE #166637 HAM. COM. PLEAS COURT
DB 601, PG 222

MAG NAIL FND
CONC MONUMENT FND
POT 17+63.03
CONC MONUMENT FND
MURRAY RD
Ex R/W

LOT 27
INDUSTRIAL (11)
SMUCKER SALES AND DISTRIBUTION COMPANY
582-0002-0025-00
551 MURRAY RD

INDUSTRIAL (15)
OH MIE, LLC
582-0002-L002-00

NORFOLK SOUTHERN RAILWAY COMPANY
582-0002-0052-00 (10)

CITY OF ST. BERNARD
VILLAGE OF ELMWOOD PLACE
BLOODY RUN

WOOD DECK
POOL RUINS
TBR

COMMERCIAL (14)
STONE
WD GARGAGE
DND
TMP
WOODED
CONST LIMITS
CITY OF ST. BERNARD
CITY OF CINCINNATI
LAWN/WOODED
VILLAGE OF ELMWOOD PLACE
661-0003-0163

PROSSER AVE

RAMP J

PROP GUARDRAIL
PROP MEDIAN BARRIER
℄ CONST I.R. 75
STATE OF OHIO HIGHWAY EASEMENT
℄ R/W I.R. 75
PT 155+43.42
MLP-4
I.R. 75 (SB)
N 24°30'08" E 2542.08'
℄ R/W I.R. 75 441+20.90 =
℄ PROP MAIN NS RR 155+79.79
N 23°48'37" E 2532.73'
STATE OF OHIO HIGHWAY EASEMENT
I.R. 75 (NB)
MATCHLINE STA 432+00 SEE SHEET 24
MATCHLINE STA 444+50 SEE SHEET 29

ANTHONY D. WOOD AND ELIZABETH A. WOOD (22A)
661-0003-0097-00
5634 PROSSER AVE

NORFOLK SOUTHERN RAILWAY COMPANY (32)
661-0003-0075-00

WB FISHWICK, LLC (25)
117-0004-0255-00
5177 FISHWICK DR

DONNA BORGMANN (33)
661-003-0093-00 (LOT 221)
661-003-0092-00 (LOT 222)
661-003-0091-00 (LOT 223)
5605 PROSSER AVE

CONC MON W/BRASS DISK FND
CAPPED PROCTOR & GAMBLE
ST 159+65.87 MLP
CS 159+03.87 MLP
POST'S 2nd SUBDIVISION OF ELMWOOD
PB 13, PG 66 & 67
CHISLED "X" FND
REMOVE 2-STY RESIDENCE
POT STA 158+44.31
RAILROAD (22)
LAWN/WOODED
VILLAGE OF ELMWOOD PLACE
661-0003-0162
NSA-1 NOISEWALL
CONST LIMITS
REMOVE BILLBOARD
(ADC #11414, #11415)
VILLAGE OF ELMWOOD PLACE
CITY OF CINCINNATI
36" B
24" B
18" B
15" B
12" B

CONST LIMITS
CONC. PARKING
LAWN/WOODED
INDUSTRIAL (12)
JLMM HOLDINGS, LLC
118-0003-0004-00
925 LAIDLAW AVE
3.9' BLD CORNER TO PROP LA-R/W
LAIDLAW AVE
MARTHA RUFFNERS EST
PB 1, PG 233
117-0004-0240-00 (16)
VIRGINIA HOLDING CORPORATION (COMPANY)
117-0004-0121-00
BLOODY RUN SEWER
COMMERCIAL (16)
NORFOLK SOUTHERN RR
NS-2
RAILROAD (199)
NORFOLK SOUTHERN RAILWAY COMPANY
118-0003-0016-00
S 67°55'23" E 1163.28"
PC 29+26.31

REMOVE LIGHTED BILLBOARD
(ADC #11412, #11413)
RAILROAD (21)
NORFOLK SOUTHERN RAILWAY COMPANY
117-0004-0196-00
SLOPE EASEMENT
EXPRESSWAY PARK SUBDIVISION BLOCK "B"
PB 186, PG 44 & 45
LOT 8
INDUSTRIAL (24)
STATE OF OHIO, AND ITS SUCCESSORS AND ASSIGNS, FOR THE USE AND BENEFIT OF THE BOARD OF TRUSTEES OF THE UNIVERSITY OF CINCINNATI
1117-0004-0261-00
5121 FISHWICK DR

N 18°45'11" W 158.05'

CURVE MLP-4
PI 156+39.55
Δ = 49°03'22" (LT)
Dc = 7°45'00" (CHORD)
R = 739.86'
Ls = 62.00'
θs = 2°24'02"
LT = 41.34'
ST = 20.67'
x = 61.99'
y = 0.87'
k = 31.00'
p = 0.22'
Δc = 44°15'17" (LT)
Lc = 571.03'
Es = 73.63'
C = 557.36'
C1 = C2 = 62.00'
C.B.1 = N 19°33'12" W
C.B. = N 43°16'52" W
C.B.2 = S 67°00'32" E

32 TS 152+70.84 MLP
33 SC 153+32.84 MLP

CURVE NS-2
P.I. STA 151+55.06
Δ = 60°52'00" (LT)
Dc = 7°00'00" (CHORD)
R = 819.02'
T = 481.16'
L = 869.52'
E = 130.88'
C = 829.73'
C.B. = N 17°46'24" W

1 ℄ R/W I.R. 75 434+91.50 = ℄ R/W LAIDLAW AVE 22+22.84
2 ℄ R/W I.R. 75 440+33.24 = ℄ R/W NS RR 155+20.29

(14) OVD EXPRESS PROPERTIES, LLC
582-0002-0026-00
531 MURRAY RD
(18) STATE OF OHIO - MIAMI AND ERIE CANAL
(22) NORFOLK SOUTHERN RAILWAY COMPANY
661-0003-0094-00
(23) CITY OF CINCINNATI
NO PARCEL NUMBER

(5) 3/4" OD IRON PIPE FND
(6) 5/8" REBAR W/SPREEN #8238 CAP FND
(7) 5/8" REBAR W/SPREEN #8238 CAP FND
(1) CONC MONUMENT W/PROCTER & GAMBLE DISK FND
(2) 5/8" REBAR W/MCGILL SMITH PUNSHON CAP FND
(3) 5/8" REBAR W/MCGILL SMITH PUNSHON CAP FND
(4) 3/4" OD IRON PIPE FND

A 8' INTERCEPTING SEWER EASEMENT
B ELECTRIC EASEMENT
C EASEMENT FOR DRIVEWAY, PRIVATE UTILITIES & STREET PURPOSES
D SEWER EASEMENT

REV. BY	DATE	DESCRIPTION
SEA	3-7-17	CHANGED PARCEL 12-WL TO 12-LA
SEA	12-8-16	REMOVED 19 S, MODIFIED 19 WL
SEA	7-22-16	ADDED 22A-WD, REMOVED 22A-T
SEA	6-1-16	REVISED PARCEL 14-T
SEA	4-26-16	ADDED EX EASEMENT INFO TO PARCELS 24 & 25
SEA	2-3-16	ADDED PARCEL 21-T
SEA	1-22-16	COMBINED OWNESHIPS 16 & 17, ADDED 16-WL3, REMOVED 17-WL, UPDATED OWNERSHIPS 10,15, 21, 22, 22A, 25, 32 & 199
SEA	12-11-15	ADDED EX SEWER EASEMENT TO PARCEL 15 AND PARCEL 33
SEA	12-1-14	UPDATED PARCELS 22A-U, 22A-T & 20-WL
DATE COMPLETED	4/18/2014	

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

R/W DESIGNER: JMM
R/W REVIEWER: EJM

PID NO. 77889

RIGHT OF WAY TOPO SHEET
STA 432+00 TO STA 444+50

HAM-75-7.85

26 / 52

1685 / 2017

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HAMILTON COUNTY
MILL CREEK TOWNSHIP
SEC 11 TOWN 3, FRAC RANGE 2
CITY OF ST. BERNARD,
CITY OF CINCINNATI, AND
VILLAGE OF ELMWOOD PLACE

NOTE:
FOR PARCEL 15 S, 18 WL1, 18 WL2, 19WL, 22A WD, 22A U 33 S & 33 T DETAIL TABLES SEE SHEET 28

CURVE NS-2
P.I. STA 151+55.06
Δ = 60°52'00" (LT)
Dc = 7°00'00" (CHORD)
R = 819.02'
T = 481.16'
L = 869.52'
E = 130.88'
C = 829.73'
C.B. = N 17°46'24" W

20 441+63.84, 174.56' LT
26 442+75.00, 197.04' LT
27 442+75.00, 160.00' LT
30 442+61.80, 194.37' LT

17+62.54, 29.27' RT (MURRAY RD)
MAG NAIL FND

17+62.94, 30.03' LT (MURRAY RD)
CONC MONUMENT FND

17+93.14, 30.06' LT (MURRAY RD)
CONC MONUMENT FND

POT 17+63.03

PLAT IN PARTITION OF THE JOHN ROSS ESTATE
CASE #166637 HAM. COM. PLEAS COURT
DB 601, PG 222

LOT 27

INDUSTRIAL
11
SMUCKER SALES AND DISTRIBUTION COMPANY
582-0002-0025-00
551 MURRAY RD

MURRAY RD
Ex R/W

NORFOLK SOUTHERN RAILWAY COMPANY
582-0002-0052-00
10

COMMERCIAL
14

S 67°55'23" E 1163.28'

D SEWER EASEMENT
CITY OF CINCINNATI
DB 2636 PG 193

INDUSTRIAL
15
OH MIE, LLC
582-0002-L002-00

L1 N 28°05'09" E 85.86'
L2 S 22°04'37" W 30.00'
L3 434+94.18, 88.60' RT
L4 434+94.55, 100.91' RT

CITY OF ST. BERNARD
VILLAGE OF ELMWOOD PLACE

440+69.05, 398.62' LT
CONC MON W/BRASS DISK FND
CAPPED PROCTOR & GAMBLE

DONNA BORGMANN
661-003-0093-00 (LOT 221)
661-003-0092-00 (LOT 222)
661-003-0091-00 (LOT 223)
5605 PROSSER AVE
33

ANTHONY D. WOOD AND ELIZABETH A. WOOD
661-0003-0097-00
5634 PROSSER ST
22A

LOT 232 LOT 233 LOT 234 LOT 235 LOT 236
POT STA 158+44.31
ST 159+65.87 MLP
CS 159+03.87 MLP
32

444+05.21, 334.61' LT
CHISLED "X" FND

443+74.82, 324.61' LT
CHISLED "X" FND

YOST'S 2nd SUBDIVISION OF ELMWOOD
P.B. 13, PG 66 & 67
LOT 209 LOT 210 LOT 211 LOT 212 LOT 213 LOT 214 LOT 215 LOT 216 LOT 217 LOT 218 LOT 219

441+20.63, 117.96' LT
3/4" OD IRON PIPE FND
5

440+07.94, 223.82' LT
5/8" REBAR W/SPREEN #8238 CAP FND
6

444+39.44, 230.28' LT
5/8" REBAR W/SPREEN #8238 CAP FND
7

436+06.30, 238.34' LT
5/8" REBAR W/MCGILL SMITH PUNSHON CAP FND
3

439+93.85, 109.16' LT
3/4" OD IRON PIPE FND
4

433+10.00
232.00' LT

N 66°11'23" W
33.97'

N 21°49'33" E
144.40'

433+10.00
198.03' LT

146.13'

48.89'

434+54.31
237.00' LT

629.54'

N 27°41'38" E 789.38'

434+55.79
188.14' LT

434+85.78
189.05' LT

434+87.07
146.40' LT

78.51'

189.13'

146.47'

S 27°46'12" W 764.61'
434+58.17
109.66' LT

PROSSER AVE

RAILROAD
22
NORFOLK SOUTHERN RAILWAY COMPANY
661-0003-0094-00

VILLAGE OF ELMWOOD PLACE
661-0003-0162
20

444+47.31
155.00' LT

N 12°22'45" E
99.94'

13.47'

S 66°11'23" E
37.04'

N 25°28'21" E 172.38'

N 48°12'24" W
59.78'

133.42'

S 24°45'29" W
442+78.78
115.49' LT

441+45.38
117.70' LT

S 10°36'58" W
173.10'

439+83.75
73.21' LT

PT 155+43.42

STATE OF OHIO HIGHWAY EASEMENT
DB 2905, PG 307

N 24°30'08" E 2542.08'

℄ R/W I.R. 75 441+20.90 =
℄ PROP MAIN NS RR 155+79.79

N 23°48'37" E
2532.73'

℄ PROP MAIN NSRR

SLOPE EASEMENT DB 2095 PG 307

257.80'

443+40.21
67.10' RT

N 23°50'33" E
184.45'

N 59°14'59" E
168.85'
125.73'

S 05°36'16" W
176.04'

MATCHLINE STA 444+50 SEE SHEET 30

℄ R/W LAIDLAW AVE 22+03.67 =
℄ CONST I.R. 75 434+49.08

℄ CONST I.R. 75

I.R. 75

℄ R/W I.R. 75 434+91.50 =
℄ R/W LAIDLAW AVE 22+22.84

℄ R/W I.R. 75

℄ R/W I.R. 75 440+33.24 =
℄ R/W NS RR 155+20.29

STATE OF OHIO HIGHWAY EASEMENT
DB 2905, PG 307

MATCHLINE STA 432+00 SEE SHEET 25

S 22°04'37" W 46.17"
434+48.03
90.00' RT

N 22°04'37" E 30.00'
435+24.54
100.00' RT
436+08.73
100.00' RT
438+03.49
100.00' RT
439+10.20
100.00' RT

N 23°48'37" E 281.77'

S 22°05'57" W
460.21'
285.13'

434+20.00
97.00' RT

30.01'
434+49.51
120.00' RT

84.19'

N 23°48'37" E
194.76'

106.71'

37.50'

123.36'

S 21°48'00" W
438+98.23
120.00' RT

S 16°37'47" E
437+74.95
124.33' RT

S 61°44'32" W
37.42'

30.01'

30.35'

S 23°48'37" W
87.87'

436+13.32
130.00' RT

S 76°37'17" E

435+25.45
130.00' RT

N 69°39'23" W

S 69°00'50" E

88.64'

100.95'

117-0004-0240-00

LAIDLAW AVE

MARTHA RUFFNERS EST
PB 1, PG 233

SLOPE EASEMENT
DB 3241, PG 588
DB 3089, PG 273

JLMM HOLDINGS, LLC
118-0003-0004-00
925 LAIDLAW AVE

RAILROAD
199
NORFOLK SOUTHERN RAILWAY COMPANY
118-0003-0016-00

STATE OF OHIO -
MIAMI AND ERIE CANAL

CITY OF ST. BERNARD
CITY OF CINCINNATI

VILLAGE OF ELMWOOD PLACE
661-0003-0163
19

LOT 221 LOT 222 LOT 223 LOT 224 LOT 225 LOT 226 LOT 227 LOT 228 LOT 229 LOT 230 LOT 231

RAILROAD
22

LOT 220

VILLAGE OF ELMWOOD PLACE
CITY OF CINCINNATI

STATE OF OHIO HIGHWAY EASEMENT
DB 2905, PG 307

MLP-4

SLOPE EASEMENT
DB 2098 PG 366

COMMERCIAL
25

INDUSTRIAL
24

STATE OF OHIO,
AND ITS SUCCESSORS AND ASSIGNS,
FOR THE USE AND BENEFIT
OF THE BOARD OF TRUSTEES
OF THE UNIVERSITY OF CINCINNATI
1117-0004-0261-00
5121 FISHWICK DR

LOT 8
EXPRESSWAY PARK
SUBDIVISION BLOCK "B"
PB 186, PG 44 & 45

COMMERCIAL
16

VIRGINIA HOLDING CORPORATION (COMPANY)
117-0004-0121-00

NORFOLK SOUTHERN RAILWAY COMPANY
117-0004-0196-00

RAILROAD
21

NS-2

CURVE MLP-4

PI 156+39.55
Δ = 49°03'22" (LT)
Dc = 7°45'00" (CHORD)
R = 739.86'
Ls = 62.00'
θs = 2°24'02"
LT = 41.34'
ST = 20.67'
x = 61.99'
y = 0.87'

k = 31.00'
p = 0.22'
Δc = 44°15'17" (LT)
Lc = 571.03'
Es = 73.63'
C = 557.36'
C1 = C2 = 62.00'
C.B.1 = N 19°33'12" W
C.B.2 = S 67°00'32" E

439+08.62
335.00' RT

S 15°14'46" E 214.26'

N 18°45'11" W

158.05'

PC 29+26.31

NORFOLK SOUTHERN RR

34 440+48.02, 140.00' RT
35 438+85.38, 140.00' RT
36 440+22.58, 185.00' RT
37 438+52.99, 185.00' RT

440+58.25
120.00' RT

440+82.41
66.95' RT

441+30.00
140.00' RT

S 23°40'45" E
81.39'

440+75.00
200.00' RT

444+42.65
140.00' RT

444+77.77
165.00' RT

S 23°48'37" W 394.63'

N 23°48'37" E 160.02'

S 23°48'37" W 162.64'

S 23°48'37" W 169.60'

81.98'

32 TS 152+70.84 MLP
33 SC 153+32.84 MLP

14 OVD EXPRESS PROPERTIES, LLC
582-0002-0026-00
531 MURRAY RD

22 NORFOLK SOUTHERN RAILWAY COMPANY
661-0003-0094-00

23 CITY OF CINCINNATI
NO PARCEL NUMBER

25 WB FISHWICK, LLC
117-0004-0255-00
5177 FISHWICK DR

32 NORFOLK SOUTHERN RAILWAY COMPANY
661-0003-0075-00

RW CURVE DATA

CURVE	Δ	RADIUS	ARC LENGTH	CHORD LENGTH	CH BEARING
RWC1	01°47'00"	749.02'	23.31'	23.31'	S 35°16'28" E
RWC2	05°12'19"	889.02'	80.77'	80.74'	N 40°58'53" W
RWC3	01°26'52"	889.02'	22.46'	22.46'	S 39°06'10" E
RWC4	01°49'06"	749.02'	23.77'	23.77'	N 33°28'25" W
RWC5	15°29'43"	889.02'	240.43'	239.70'	N 30°37'52" W
RWC6	03°19'55"	889.02'	51.70'	51.69'	S 36°42'46" E
RWC7	04°14'32"	749.02'	55.46'	55.45'	N 30°26'36" W

REV. BY	DATE	DESCRIPTION
SEA	3-7-17	CHANGED PARCEL 12-WL TO 12-LA
SEA	12-8-16	REMOVED 19 S, MODIFIED 19 WL
SEA	7-22-16	ADDED 22A-WD, REMOVED 22A-T
SEA	6-1-16	REVISED PARCEL 14-T
SEA	4-26-16	ADDED EX EASEMENT INFO TO PARCELS 24 & 25
SEA	2-3-16	ADDED PARCEL 21-T
SEA	1-22-16	COMBINED OWNESHIPS 16 & 17, ADDED 16-WL3, REMOVED 17-WL, UPDATED OWNERSHIPS 10,15, 21, 22, 22A, 25, 32 & 199
SEA	12-11-15	ADDED EX SEWER EASEMENT TO PARCEL 15 AND PARCEL 33
SEA	12-1-14	UPDATED PARCELS 22A-U, 22A-T & 20-WL
DATE COMPLETED		4/18/2014

A 8' INTERCEPTING SEWER EASEMENT
BOARD OF COUNTY COMMISSIONERS OF
HAMILTON COUNTY, OHIO
DB 1657, P. 501

B 24' ELECTRIC EASEMENT
THE CINCINNATI GAS
& ELECTRIC COMPANY
DB 4197, P. 431

C EASEMENT FOR DRIVEWAY, PRIVATE UTILITIES & STREET PURPOSES
PROCTER AND GAMBLE COMPANY
DB 3241, P. 588

ALL STATIONS & OFFSETS ARE FROM THE ℄ OF R/W I.R. 75 UNLESS OTHERWISE NOTED.

FOR PETITION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

PID NO. 77889

R/W DESIGNER JMM
R/W REVIEWER EJM

RIGHT OF WAY BOUNDARY SHEET
STA 432+00 TO STA 444+50

HAM-75-7.85

27 / 52

1686
2017

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NOTE:
FOR PARCEL 15 S, 18 WL1, 18 WL2 19 WL
22A U, 22A T, 33 S & 33 T
PLAN LAYOUTS SEE SHEET 27

PARCEL 15 S DETAIL TABLE

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
12	437+04.35	279.06' LT	12-15	N 73°36'41" W	28.64'
15	437+00.65	307.46' LT	15-16	N 03°56'17" E	66.30'
16	437+63.00	330.00' LT	16-17	S 85°34'18" E	30.13'
17	437+73.00	301.57' LT	17-12	S 05°39'19" W	72.25'

PARCEL 18 WL1 DETAIL TABLE

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
1	436+94.12	131.20' LT	1-2	S 27°57'24" W	121.75'
2	435+72.69	140.00' LT	2-3	N 46°50'26" W	13.78'
3	435+77.26	153.00' LT	3-4	N 23°48'37" E	118.62'
4	436+95.87	153.00' LT	4-1	S 61°35'36" E	21.87'

PARCEL 18 WL2 DETAIL TABLE

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
20	441+63.84	174.56' LT	20-21	S 48°12'24" E	54.88'
21	441+46.89	122.36' LT	21-22	S 09°30'17" W	17.82'
22	441+29.63	117.96' LT	22-23	S 19°52'10" W	26.88'
23	441+02.81	116.11' LT	23-24	S 20°12'10" W	64.53'
24	440+38.41	112.05' LT	24-9	S 20°12'42" W	43.02'
9	439+95.48	109.35' LT	9-8	N 48°12'24" W	55.18'
8	440+12.52	161.83' LT	8-25	N 28°28'30" E	63.17'
25	440+75.47	156.69' LT	25-20	N 12°22'45" E	90.15'

PARCEL 19 WL DETAIL TABLE

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
1	436+94.12	131.20' LT	1-5	N 61°35'36" W	48.93'
5	436+98.04	179.97' LT	5-6	N 28°43'07" E	198.60'
6	438+95.92	162.97' LT	6-7	N 05°39'19" E	21.51'
7	439+16.35	169.68' LT	7-8	N 28°28'30" E	96.48'
8	440+12.52	161.83' LT	8-9	S 48°12'24" E	55.18'
9	439+95.48	109.35' LT	9-1	S 27°57'24" W	302.15'

PARCEL 22A U DETAIL TABLE

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
28	442+35.57	274.35' LT	28-29	N 05°39'19" E	30.00'
29	442+64.08	283.70' LT	29-26	S 73°22'25" E	87.35'
26	442+75.00	197.04' LT	26-30	S 12°22'45" W	13.47'
30	442+61.80	194.37' LT	30-28	N 84°20'41" W	84.17'

PARCEL 22A WD DETAIL TABLE

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
28	442+35.57	274.35' LT	28-31	N 05°39'19" E	60.00'
31	442+92.58	293.05' LT	31-38	S 84°20'41" E	91.25'
38	443+21.02	206.34' LT	38-30	S 12°22'45" W	60.42'
30	442+61.80	194.37' LT	30-28	N 84°20'41" W	84.17'

PARCEL 33 S DETAIL TABLE

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
11	437+01.09	222.89' LT	11-12	N 62°23'56" W	49.28'
12	437+04.35	279.06' LT	12-13	N 05°39'19" E	53.31'
13	437+55.00	295.67' LT	13-14	S 84°20'41" E	76.25'
14	437+78.76	223.22' LT	14-11	S 28°43'07" W	77.96'

PARCEL 33 T DETAIL TABLE

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
18	437+66.04	262.00' LT	18-13	N 84°20'41" W	35.44'
13	437+55.00	295.67' LT	13-17	N 05°39'19" E	18.94'
17	437+73.00	301.57' LT	17-19	S 80°56'48" E	27.48'
19	437+80.00	275.00' LT	19-18	S 19°09'33" E	19.07'

FOR INFORMATION ONLY

ALL STATIONS & OFFSETS ARE FROM
THE ℄ OF R/W I.R. 75 UNLESS
OTHERWISE NOTED.

REV. BY	DATE	DESCRIPTION
SEA	12-8-16	REMOVED 19 S, MODIFIED 19 WL
SEA	7-22-16	ADDED 22A-WD, REMOVED 22A-T
SEA	12-1-14	UPDATED PARCELS 22A-U & 22A-T
DATE COMPLETED		4/18/2014

HORIZONTAL SCALE IN FEET
0 25 50 100

PID NO. 77889

R/W DESIGNER JMM
R/W REVIEWER EJM

RIGHT OF WAY DETAIL TABLES

HAM-75-7.85

1687
2017

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HAMILTON COUNTY
MILL CREEK TOWNSHIP
SEC 11 & 12 TOWN 3, FRAC RANGE 2
CITY OF CINCINNATI AND
VILLAGE OF ELMWOOD PLACE

RES = RESIDENTIAL
COMM = COMMERCIAL

CURVE 75-3
PI STA 456+41.20
Δ = 5°41'01" (LT)
Dc = 0°40'00"
R = 8,594.37'
T = 426.63'
L = 852.56'
E = 10.58'
C = 852.21'
C.B. = N 21°39'37" E

CURVE X75-3
PI STA 457+35.67
Δ = 5°00'00" (LT)
Dc = 0°40'00"
R = 8,594.37'
T = 375.24'
L = 750.00'
E = 8.19'
C = 749.76'
C.B. = N 21°18'37" E

CURVE TO-1
PI STA 16+00.01
Δ = 2°25'26" (LT)
Dc = 2°59'59"
R = 1,910.00'
T = 40.41'
L = 80.80'
E = 0.43'
C = 80.80'
C.B. = N 82°09'06" W

CURVE TO-2
PI STA 17+61.35
Δ = 2°01'08" (RT)
Dc = 2°59'59"
R = 1,910.00'
T = 33.65'
L = 67.30'
E = 0.30'
C = 67.30'
C.B. = N 82°21'15" W

RES (27) DYRAABA STATION II, LLC
661-0003-0139-00
5682 SILVER ST

RES (28) WILLIAM A. HUDSON AND THERESA A. HUDSON
661-0003-0140-00
5684 SILVER ST

RES (29) AMBROSE HENSLEY AND BONNIE HENSLEY
661-0003-0144-00
7 TOWNSHIP AVE

RES (30) JEANNE M. HORTON
661-0003-0143-00
9 TOWNSHIP AVE

RES (34) THE VILLAGE OF ELMWOOD PLACE EX R/W OF TOWNSHIP AVE & CEDAR AVE

RES (35) RANDALL B. SMITH, LTD
661-0002-0380-00
8 TOWNSHIP AVE

RES (36) TINA F. FERGUSON AND BYRON W. FERGUSON
661-0002-0382-00
5701 CEDAR AVE

RES (37) WILLIAM N. PORTER AND JOHN DAVID SIMON
116-0001-0246-00
1020 TOWNE ST

RES (38) PAULINE STRAYHORNE
116-0001-0012-00
1028 TOWNE ST

RES (40) ROSE SCHWARTZ
116-0001-0196-00
1015 ELM PARK DR

PARK (42) VILLAGE OF ELMWOOD PLACE
661-0002-0535-00
5724 CEDAR AVE

RES (43) JUDITH STEPHENS
661-0002-0534-00
6028 CEDAR AVE

COMM (44) THE CITY OF CINCINNATI
661-0002-0533-90

RES (45) LARRY W. WOODRUM AND SHARON R. WOODRUM
661-0002-0531-00
6034 CEDAR AVE

(20) VILLAGE OF ELMWOOD PLACE
661-0003-0162

5/8" I PIPE FND
5/8" REBAR FND
3/4" I PIPE FND
SILVER ST
YOST'S 2nd SUBDIVISION OF ELMWOOD PB 13, PG 66 & 67
G. YOST & OTHERS PB 5, PG 304
POT 22+33.74
℄ R/W TOWNSHIP AVE
CEDAR AVE.
N 09°56'08" E 826.05'
Ex R/W
CONST LIMITS
WOODED
Ex LA-R/W
LA-R/W
NSA-2
NSA-1
WALL H
WALL I
1' OF FENCE ENCROACHING
VILLAGE OF ELMWOOD PLACE
CITY OF CINCINNATI
42" C
15" C
15" B
N 24°30'08" E 2542.08'
℄ CONST I.R. 75
BARRIER TYPE B-1
℄ R/W I.R. 75
N 23°48'37" E 2532.73'
℄ R/W I.R. 75 450+77.77 = ℄ CONST I.R. 75 450+36.05
℄ R/W I.R. 75 452+53.87 = ℄ CONST TOWNE AVE 19+27.09
℄ R/W I.R. 75 452+62.14 = ℄ R/W TOWNE AVE. 19+24.85
PC STA 452+14.57
PC STA 453+60.43
POT STA 19+85.16
I.R. 75 (SB)
I.R. 75 (NB)
MATCHLINE I.R. 75 STA 444+50, SEE SHEET 26
MATCHLINE I.R. 75 STA 457+00, SEE SHEET 31
BARRIER TYPE D
WALL S
PROP GUARDRAIL
EX RAMP TO BE REMOVED
RAMP H
RAMP E
PT 17+95.00
PC 17+27.70
℄ R/W TOWNSHIP AVE 20+10.01= ℄ R/W CEDAR AVE 0+00.00
PT 16+40.40
PC 15+59.60
CONST. LIMITS
LAWN
DND SATELLITES
DND BILLBOARD (ADC #16042)
BILLBOARD (ADC #24544)
SLOPE EASEMENT
RECIPROCAL EASEMENT AGREEMENT
Overhang Easement
Ex U
Ex SL
TMP
WB FISHWICK, LLC
117-0004-0255-00
5177 FISHWICK DR.
INDUSTRIAL (24) STATE OF OHIO, AND ITS SUCCESSORS AND ASSIGNS, FOR THE USE AND BENEFIT OF THE BOARD OF TRUSTEES OF THE UNIVERSITY OF CINCINNATI
117-0004-0261-00
5121 FISHWICK DR
EXPRESSWAY PARK SUBDIVISION BLOCK "B" PB 186, PG 44 & 45
LOT 1
LOT 8
COMMERCIAL (26) MICHEL INVESTMENTS CO.
117-0004-0263-00
5179 FISHWICK DR
LOT 2
EXPRESSWAY PARK SUBDIVISION BLOCK "A" PB 173, PG 16 & 17
DND FIRE DEPT PROTECTION
N 80°56'23" W 249.63'
S 80°56'23" E
COMMERCIAL (31) BUILDING RENTERS, LLC
117-0004-0244-00
5197 FISHWICK DR
ESTATE OF H. KUHL AND J.W. SPRONG PB 2, PG 203
PART OF LOT 4
LOT 26
ELM PARK SUBDIVISION PB 41, PG 43
RES (39) JACQUELINE SILAS
116-0001-0245-00
6205 ELM VIEW

(1) 1" CARRIAGE BOLT FND.
(2) 3/4" REBAR FND.
(3) 5/8" REBAR W/#6021 CAP FND.
(4) 1" O.D. IRON PIPE FND.
(5) 1/2" REBAR FND.
(6) 5/8" REBAR W/ALS #6364 CAP FND
(7) 5/8" REBAR FND
(8) 5/8" REBAR W/JJD ASSOC CAP FND

ALL STATIONS & OFFSETS ARE FROM THE ℄ OF R/W I.R. 75 UNLESS OTHERWISE NOTED.

FOR INFORMATION ONLY

REV. BY	DATE	DESCRIPTION
SEA	1-22-16	UPDATED OWNERSHIP 25
SEA	4-13-15	ADDED PARCEL 25-T
DATE COMPLETED		4/18/2014

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

PID NO. 77889

R/W DESIGNER JMM
R/W REVIEWER EJM

RIGHT OF WAY TOPO SHEET
STA 444+50 TO STA 457+00

HAM-75-7.85

29 / 52

1688 / 2017

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HAMILTON COUNTY
MILL CREEK TOWNSHIP
SEC 11 & 12 TOWN 3, FRAC RANGE 2
CITY OF CINCINNATI AND
VILLAGE OF ELMWOOD PLACE

RES = RESIDENTIAL
COMM = COMMERCIAL

PARCEL 37 T DETAIL TABLE (STATIONS & OFFSETS FROM TOWNE)

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
10	15+35.54	40.00' RT	10-11	N 09°05'25" E	10.00'
11	15+35.54	50.00' RT	11-12	S 77°07'32" E	75.16'
12	14+60.54	45.00' RT	12-13	S 09°05'25" W	5.00'
13	14+60.54	40.00' RT	13-10	N 80°56'23" W	75.00'

PARCEL 38 T DETAIL TABLE (STATIONS & OFFSETS FROM TOWNE)

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
13	14+60.54	40.00' RT	13-12	N 09°05'25" E	5.00'
12	14+60.54	45.00' RT	12-14	S 77°07'32" E	75.16'
14	13+85.54	40.00' RT	14-13	N 80°56'23" W	75.00'

CURVE 75-3
PI STA 456+41.20
Δ = 5°41'01" (LT)
Dc = 0°40'00"
R = 8,594.37'
T = 426.63'
L = 852.56'
E = 10.58'
C = 852.21'
C.B. = N 21°39'37" E

CURVE X75-3
PI STA 457+35.67
Δ = 5°00'00" (LT)
Dc = 0°40'00"
R = 8,594.37'
T = 375.24'
L = 750.00'
E = 8.19'
C = 749.76'
C.B. = N 21°18'37" E

RES (27) DYRAABA STATION II, LLC
661-0003-0139-00
5682 SILVER ST

RES (28) WILLIAM A. HUDSON AND THERESA A. HUDSON
661-0003-0140-00
5684 SILVER ST

RES (29) AMBROSE HENSLEY AND BONNIE HENSLEY
661-0003-0144-00
7 TOWNSHIP AVE

RES (30) JEANNE M. HORTON
661-0003-0143-00
9 TOWNSHIP AVE

R/W (34) THE VILLAGE OF ELMWOOD PLACE EX R/W OF TOWNSHIP AVE & CEDAR AVE

RES (35) RANDALL B. SMITH, LTD
661-0002-0380-00
8 TOWNSHIP AVE

RES (36) TINA F. FERGUSON AND BYRON W. FERGUSON
661-0002-0382-00
5701 CEDAR AVE

RES (37) WILLIAM N. PORTER AND JOHN DAVID SIMON
116-0001-0246-00
1020 TOWNE ST

RES (38) PAULINE STRAYHORNE
116-0001-0012-00
1028 TOWNE ST

RES (40) ROSE SCHWARTZ
116-0001-0196-00
1015 ELM PARK DR

PARK (42) VILLAGE OF ELMWOOD PLACE
661-0002-0535-00
5724 CEDAR AVE

RES (43) JUDITH STEPHENS
661-0002-0534-00
6028 CEDAR AVE

COMM (44) THE CITY OF CINCINNATI
661-0002-0533-90

RES (45) LARRY W. WOODRUM AND SHARON R. WOODRUM
661-0002-0531-00
6034 CEDAR AVE

VILLAGE OF ELMWOOD (20)
661-0003-0162

YOST'S 2nd SUBDIVISION OF ELMWOOD PB 15, PG 66 & 67

G. YOST & OTHERS PB 5, PG 304

Overhang Easement & The Cincinnati Gas & Electric Company DB 3886, PG 651

SILVER ST

TOWNSHIP AVE

CEDAR AVE

VILLAGE OF ELMWOOD PLACE
CITY OF CINCINNATI

MATCHLINE I.R. 75 STA 444+50, SEE SHEET 27

MATCHLINE I.R. 75 STA 457+00, SEE SHEET 32

I.R. 75

℄ CONST I.R. 75

℄ R/W I.R. 75

℄ R/W I.R. 75 450+77.77 = ℄ CONST I.R. 75 450+36.05

℄ R/W I.R. 75 452+53.87 = ℄ CONST TOWNE AVE 19+27.09

℄ R/W I.R. 75 452+62.14 = ℄ R/W TOWNE AVE 19+24.85

1 ℄ R/W TOWNSHIP AVE 20+10.01= ℄ R/W CEDAR AVE 0+00.00

℄ R/W TOWNE ST

℄ CONST TOWNE ST

TOWNE ST

PARK (42)

COMMERCIAL (25)
WB FISHWICK, LLC
117-0004-0255-00
5177 FISHWICK DR

SLOPE EASEMENT
STATE OF OHIO
DB 2098, PG 366

RECIPROCAL EASEMENT AGREEMENT
CHANNEL 64 ACQUISITION, INC. & FISH HEAD PROPERTIES
OR 6704, PG 826

EXPRESSWAY PARK SUBDIVISION BLOCK "B"
PB 186, PG 44 & 45
LOT 1

INDUSTRIAL (24)
STATE OF OHIO,
AND ITS SUCCESSORS AND ASSIGNS,
FOR THE USE AND BENEFIT
OF THE BOARD OF TRUSTEES
OF THE UNIVERSITY OF
CINCINNATI
1117-0004-0261-00
5121 FISHWICK DR

COMMERCIAL (26)
MICHEL INVESTMENTS CO.
117-0004-0263-00
5179 FISHWICK DR

LOT 2 COMMERCIAL (31)
BUILDING RENTERS, LLC
117-0004-0244-00
5197 FISHWICK DR

EXPRESSWAY PARK SUBDIVISION BLOCK "A" PB 173, PG 16 & 17

ESTATE OF H. KUHL AND J.W. SPRONG PB 2, PG 203
PART OF LOT 4
LOT 26
ELM PARK SUBDIVISION PB 41, PG 43
PART OF LOT 4
LOT 27

SLOPE EASEMENT
CITY OF CINCINNATI
DB 2494, PG 14

RES (39) JACQUELINE SILAS
116-0001-0245-00
6205 ELM VIEW

1 21+23.18, 25.27' LT**
1" CARRIAGE BOLT FND

2 20+94.65, 24.09' RT**
3/4" REBAR FND

3 452+51.47, 269.20' RT
5/8" REBAR W/#6021 CAP FND

4 R/W DEFLECTION
453+00.12, 332.79' RT
15+93.35, 48.00' LT*
453+00.20, 332.77' RT
15+93.35, 47.92' LT*
1" OD IRON PIPE FND

5 R/W DEFLECTION
15+93.20, 40.00' LT*
15+92.77, 40.13' LT*
1/2" REBAR FND

6 13+85.60, 40.27' RT*
5/8" REBAR W/JJD ASSOC CAP FND

* ℄ R/W TOWNE ST STATION & OFFSETS
** ℄ R/W TOWNSHIP AVE STATION & OFFSETS

ALL STATIONS & OFFSETS ARE FROM THE ℄ OF R/W I.R. 75 UNLESS OTHERWISE NOTED.

CURVE TO-1
PI STA 16+00.01
Δ = 2°25'26" (LT)
Dc = 2°59'59"
R = 1,910.00'
T = 40.41'
L = 80.80'
E = 0.43'
C = 80.80'
C.B. = N 82°09'06" W

CURVE TO-2
PI STA 17+61.35
Δ = 2°01'08" (RT)
Dc = 2°59'59"
R = 1,910.00'
T = 33.65'
L = 67.30'
E = 0.30'
C = 67.30'
C.B. = N 82°21'15" W

PARCEL 25 T DETAIL TABLE

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
2	448+50.00	113.76' RT	2-3	N 34°44'18" E	61.11'
3	449+10.00	125.34' RT	3-4	S 66°11'23" E	7.66'
4	449+10.00	133.00' RT	4-5	S 35°07'13" W	61.19'
5	448+50.00	121.00' RT	5-2	N 66°11'23" W	7.24'

PARCEL 31 T DETAIL TABLE (STATIONS & OFFSETS FROM TOWNE)

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
6	15+93.20	40.00' LT	6-7	S 80°56'23" E	268.20'
7	13+25.00	40.00' LT	7-8	S 09°03'37" W	5.00'
8	13+25.00	45.00' LT	8-9	N 80°56'23" W	268.29'
9	15+93.29	45.00' LT	9-6	N 10°09'03" E	5.00'

FOR INFORMATION ONLY

REV. BY	DATE	DESCRIPTION
SEA	1-22-16	UPDATED OWNERSHIP 25
SEA	4-13-15	ADDED PARCEL 25-T
DATE COMPLETED		4/18/2014

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

PID NO. 77889

R/W DESIGNER JMM
R/W REVIEWER EJM

RIGHT OF WAY BOUNDARY SHEET
STA 444+50 TO STA 457+00

HAM-75-7.85

30 / 52

1689 2017

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HAMILTON COUNTY
MILL CREEK TOWNSHIP
SEC 12 TOWN 3, FRAC RANGE 2
CITY OF CINCINNATI AND
VILLAGE OF ELMWOOD PLACE

CURVE 75-3
PI STA 456+41.20
Δ = 5°41′01″ (LT)
Dc = 0°40′00″
R = 8,594.37′
T = 426.63′
L = 852.56′
E = 10.58′
C = 852.21′
C.B. = N 21°39′37″ E

CURVE X75-3
PI STA 457+35.67
Δ = 5°00′00″ (LT)
Dc = 0°40′00″
R = 8,594.37′
T = 375.24′
L = 750.00′
E = 8.19′
C = 749.76′
C.B. = N 21°18′37″ E

CURVE X75-4
PI STA 475+23.25
Δ = 25°09′00″ (RT)
Dc = 3°00′00″
R = 1,909.86′
Ls = 400.00′
θ s = 6°00′00″
LT = 266.82′
ST = 133.47′
x = 399.56′
y = 13.95′
k = 199.93′
p = 3.49′
Δ c = 13°09′00″ (RT)
Lc = 438.34′
Ts = 626.73′
Es = 50.52′
C = 437.37′
C_1 = C_2 = 399.81′
C.B.$_1$ = N 20°48′36″ E
C.B. = N 31°23′07″ E
C.B.$_2$ = N 41°57′38″ E

RES (45) LARRY W. WOODRUM AND SHARON R. WOODRUM
661-0002-0531-00
6034 CEDAR AVE

RES (46) KAREN K. TAYLOR
661-0002-0529-00
6036 CEDAR AVE

RES (48) TRACY LONG
661-0002-0528-00
6140 CEDAR AVE

RES (49) JANET UCHTMAN
661-0002-0527-00
6144 CEDAR AVE

RES (51) KENNETH M. COLE AND PAULA J. DARPEL
661-0002-0526-00
6146 CEDAR AVE

RES (52) BERNICE GRIFFIN AND TAMARA L. MOORE
661-0002-0525-00
6148 CEDAR AVE

RES (53) ANGELIQUE L. BAILEY AND JASON BAILEY
661-0002-0524-00
6150 CEDAR AVE

RES (59) WILKERSON PROPERTIES I, LLC
661-0002-0583-00 LOT 5
661-0002-0584-00 LOT 6
661-0002-0585-00 LOT 7
661-0002-0586-00 LOT 8
6498, 6500, 6502, 6504 HASLER LN

RES (56) ROBERT W. MASON AND PARALEE J. MASON
116-0001-0249-00
1009 TOWANDA TE

RES (64) SAI R & R GROUP, LLC
661-0002-0587-00
6506 HASLER LN

RES (65) SIAMAK KHORRAM AND FARNOOSH BOZORGI
661-0002-0588-00
6508 HASLER LN

RES (66) WILKERSON PROPERTIES I, LLC
661-0002-0589-00 (LOT 11)
661-0002-0590-00 (LOT 12)
661-0002-0591-00 (LOT 13)
6510, 6512, 6514 HASLER LN

CEDAR ST
N 9°56′08″ E 826.05′
POT STA 468+96.52
MAPLE ST
POPLAR ST
SPRUCE ST
HASLER LN
G. YOST & OTHERS PB 5, PG 304
L. C. HOPKINS' SUBDIVISION PB 4, PG 272&273
ELMWOOD HEIGHTS SUBDIVISION PB 95, PG 48-50
661-0001-0268-90
661-0002-0301-00
661-0002-0579-00
CDE SERVICES, INC. 661-0002-0580-00 2 POPLAR ST
THE VILLAGE OF ELMWOOD PLACE
PARK (54)
RESIDENTIAL (58)
RESIDENTIAL (59)
5/8″ REBAR W/ #8279 CAP FND
3/4″ I PIPE FND
1″ REBAR FND
CONST LIMITS
SHEDS ENCROACHING
BARRIER TYPE D
BARRIER TYPE B-1
PT STA 461+10.43
PT STA 460+67.13
℄ R/W I.R. 75
I.R. 75 (SB)
I.R. 75 (NB)
℄ CONST I.R. 75
N 18°48′37″ E 786.09′
N 18°49′07″ E 956.33′
PROP GUARDRAIL
MATCHLINE I.R. 75 STA 457+00, SEE SHEET29
MATCHLINE I.R. 75 STA 469+50, SEE SHEET 33
TS STA 468+96.52
VILLAGE OF ELMWOOD PLACE
CITY OF CINCINNATI
LAWN/WOODED
NSA-1
WOODED
INDUSTRIAL
LAWN
THE CITY OF CINCINNATI
an Ohio municipal corporation
117-0002-0025-00
1140 PADDOCK RD.

RES (40) ROSE SCHWARTZ
116-0001-0197-00
1014 ELM PARK DR

RES (50) RUTH L. WALLACE JOHNSON
116-0001-0201-00
1020 CHEYENNE DR

RES (47) KARMAN M. MURDOCK
116-0001-0202-00
1025 CHEYENNE DR

RES (57) STANCY ERVIN
116-0001-0101-00
1008 TOWANDA TE

CHEYENNE DR
TOWANDA TERRACE
ELM PARK SUBDIVISION PB 41, PG 43
MAKETEWAH HEIGHTS SUBDIVISION SECOND SECTION PB 70, PG 35&36
MAKETEWAH HEIGHTS SUBDIVISION FIRST SECTION PB 37, PG 31

5/8″ REBAR W/ #6000 CAP FND
1/2″ REBAR W/ #8011 CAP FND
1/2″ REBAR FND
5/8″ REBAR FND
5/8″ REBAR W/#4391 CAP FND
3/4″ REBAR FND
5/8″ REBAR W/#4391 CAP FND

(1) 5/8″ REBAR FND
(2) 5/8″ REBAR W/#5126 CAP FND
(3) 5/8″ REBAR W/#8276 CAP FND
(4) 5/8″ REBAR W/#8276 CAP FND
(5) 3/4″ I PIPE FND
(6) 5/8″ I PIPE FND

FOR INFORMATION ONLY

REV. BY	DATE	DESCRIPTION
DME	10-03-18	UPDATE OWNER PAR 60
DATE COMPLETED		4/18/2014

HORIZONTAL SCALE IN FEET
0 25 50 100

PID NO. 77889

R/W DESIGNER JMM
R/W REVIEWER EJM

RIGHT OF WAY TOPO SHEET
STA 457+00 TO STA 469+50

HAM-75-7.85

31 / 52

1690 2017

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HAMILTON COUNTY
MILL CREEK TOWNSHIP
SEC 12 TOWN 3, FRAC RANGE 2
CITY OF CINCINNATI AND
VILLAGE OF ELMWOOD PLACE

CURVE 75-3
PI STA 456+41.20
Δ = 5°41'01" (LT)
Dc = 0°40'00"
R = 8,594.37'
T = 426.63'
L = 852.56'
E = 10.58'
C = 852.21'
C.B. = N 21°39'37" E

CURVE X75-3
PI STA 457+35.67
Δ = 5°00'00" (LT)
Dc = 0°40'00"
R = 8,594.37'
T = 375.24'
L = 750.00'
E = 8.19'
C = 749.76'
C.B. = N 21°18'37" E

CURVE X75-4
PI STA 475+23.25
Δ = 25°09'00" (RT)
Dc = 3°00'00"
R = 1,909.86'
Ls = 400.36'
θ s = 6°00'00"
LT = 266.82'
ST = 133.47'
x = 399.56'
y = 13.95'
k = 199.93'
p = 3.49'
Δ c = 13°09'00" (RT)
Lc = 438.34'
Ts = 626.73'
Es = 50.52'
C = 437.37'
C_1 = C_2 = 399.81'
C.B.$_1$ = N 20°48'36" E
C.B. = N 31°23'07" E
C.B.$_2$ = N 41°57'38" E

RES (45) LARRY W. WOODRUM AND SHARON R. WOODRUM
661-0002-0531-00
6034 CEDAR AVE

RES (46) KAREN K. TAYLOR
661-0002-0529-00
6036 CEDAR AVE

RES (48) TRACY LONG
661-0002-0528-00
6140 CEDAR AVE

RES (49) JANET UCHTMAN
661-0002-0527-00
6144 CEDAR AVE

RES (51) KENNETH M. COLE AND PAULA J. DARPEL
661-0002-0526-00
6146 CEDAR AVE

RES (52) BERNICE GRIFFIN AND TAMARA L. MOORE
661-0002-0525-00
6148 CEDAR AVE

RES (53) ANGELIQUE L. BAILEY AND JASON BAILEY
661-0002-0524-00
6150 CEDAR AVE

PARK (54) THE VILLAGE OF ELMWOOD PLACE

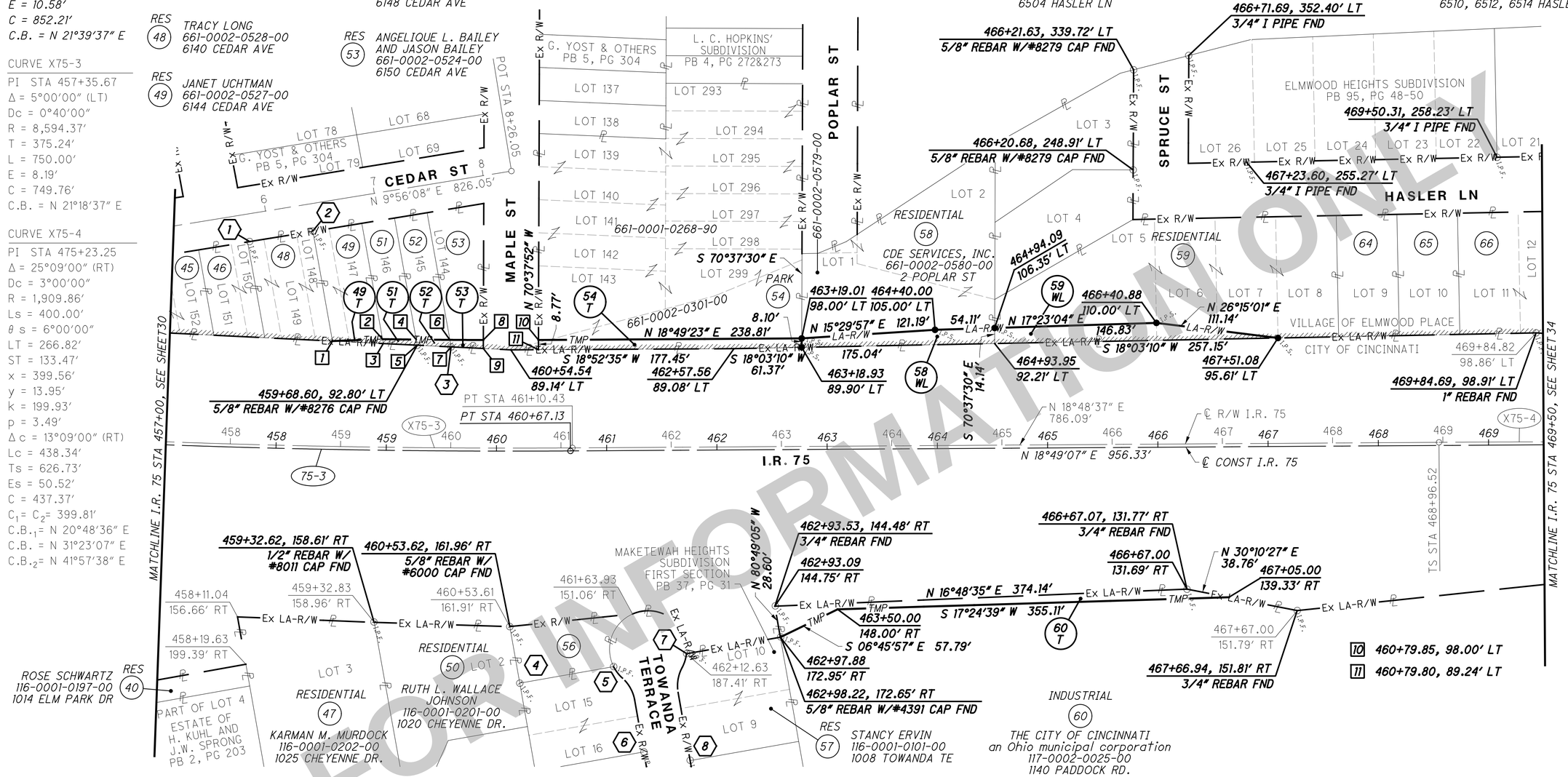
RES (59) WILKERSON PROPERTIES I, LLC
661-0002-0583-00 LOT 5
661-0002-0584-00 LOT 6
661-0002-0585-00 LOT 7
661-0002-0586-00 LOT 8
6498, 6500, 6502, 6504 HASLER LN

RES (64) SAI R & R GROUP, LLC
661-0002-0587-00
6506 HASLER LN

RES (56) ROBERT W. MASON AND PARALEE J. MASON
116-0001-0249-00
1009 TOWANDA TE

RES (65) SIAMAK KHORRAM AND FARNOOSH BOZORGI
661-0002-0588-00
6508 HASLER LN

RES (66) WILKERSON PROPERTIES I, LLC
661-0002-0589-00 (LOT 11)
661-0002-0590-00 (LOT 12)
661-0002-0591-00 (LOT 13)
6510, 6512, 6514 HASLER LN



PARCEL 49 T DETAIL TABLE

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
1	458+90.92	95.56' LT	1-2	N 17°02'15" E	45.44'
2	459+36.81	98.00' LT	2-3	S 80°57'58" E	4.03'
3	459+37.58	94.04' LT	3-1	S 21°59'56" W	46.17'

PARCEL 51 T DETAIL TABLE

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
5	459+68.68	92.89' LT	5-3	S 21°59'56" W	30.78'
3	459+37.58	94.04' LT	3-2	N 80°57'58" W	4.03'
2	459+36.81	98.00' LT	2-4	N 19°51'53" E	30.54'
4	459+67.70	98.00' LT	4-5	S 80°57'58" E	5.20'

PARCEL 52 T DETAIL TABLE

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
7	459+99.77	91.63' LT	7-5	S 21°59'56" W	30.78'
5	459+68.68	92.89' LT	5-4	N 80°57'58" W	5.20'
4	459+67.70	98.00' LT	4-6	N 19°39'32" E	30.52'
6	459+98.57	98.00' LT	6-7	S 80°57'58" E	6.48'

PARCEL 53 T DETAIL TABLE

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
7	459+99.77	91.63' LT	7-6	N 80°57'58" W	6.48'
6	459+98.57	98.00' LT	6-8	N 19°27'13" E	30.36'
8	460+29.28	98.00' LT	8-9	S 70°37'52" E	7.67'
9	460+29.27	90.33' LT	9-7	S 21°59'56" W	29.23'

1 5+81.31, 24.93' RT (CEDAR)
5/8" REBAR FND

2 6+39.40, 24.77' RT (CEDAR)
5/8" REBAR W/#5126 CAP FND

3 ℄ = 459+99.77, 91.63' LT
459+99.70, 91.54' LT
5/8" REBAR W/#8276 CAP FND

4 460+62.46, 213.27' RT
5/8" REBAR W/#6000 CAP FND

5 461+46.54, 198.59' RT
5/8" REBAR W/#6000 CAP FND

6 461+73.49, 276.16' RT
5/8" REBAR W/#6000 CAP FND

7 462+12.78, 187.25' RT
5/8" REBAR W/#4391 CAP FND

8 462+15.41, 284.03' RT
3/4" I PIPE FND

10 460+79.85, 98.00' LT

11 460+79.80, 89.24' LT

ALL STATIONS & OFFSETS ARE FROM THE ℄ OF R/W I.R. 75 UNLESS OTHERWISE NOTED.

REV. BY	DATE	DESCRIPTION
DME	10-03-18	UPDATE OWNER PAR 60
DATE COMPLETED		4/18/2014

HORIZONTAL SCALE IN FEET 0 25 50 100

PID NO. 77889

R/W DESIGNER JMM
R/W REVIEWER EJM

RIGHT OF WAY BOUNDARY SHEET
STA 457+00 TO STA 469+50

HAM-75-7.85

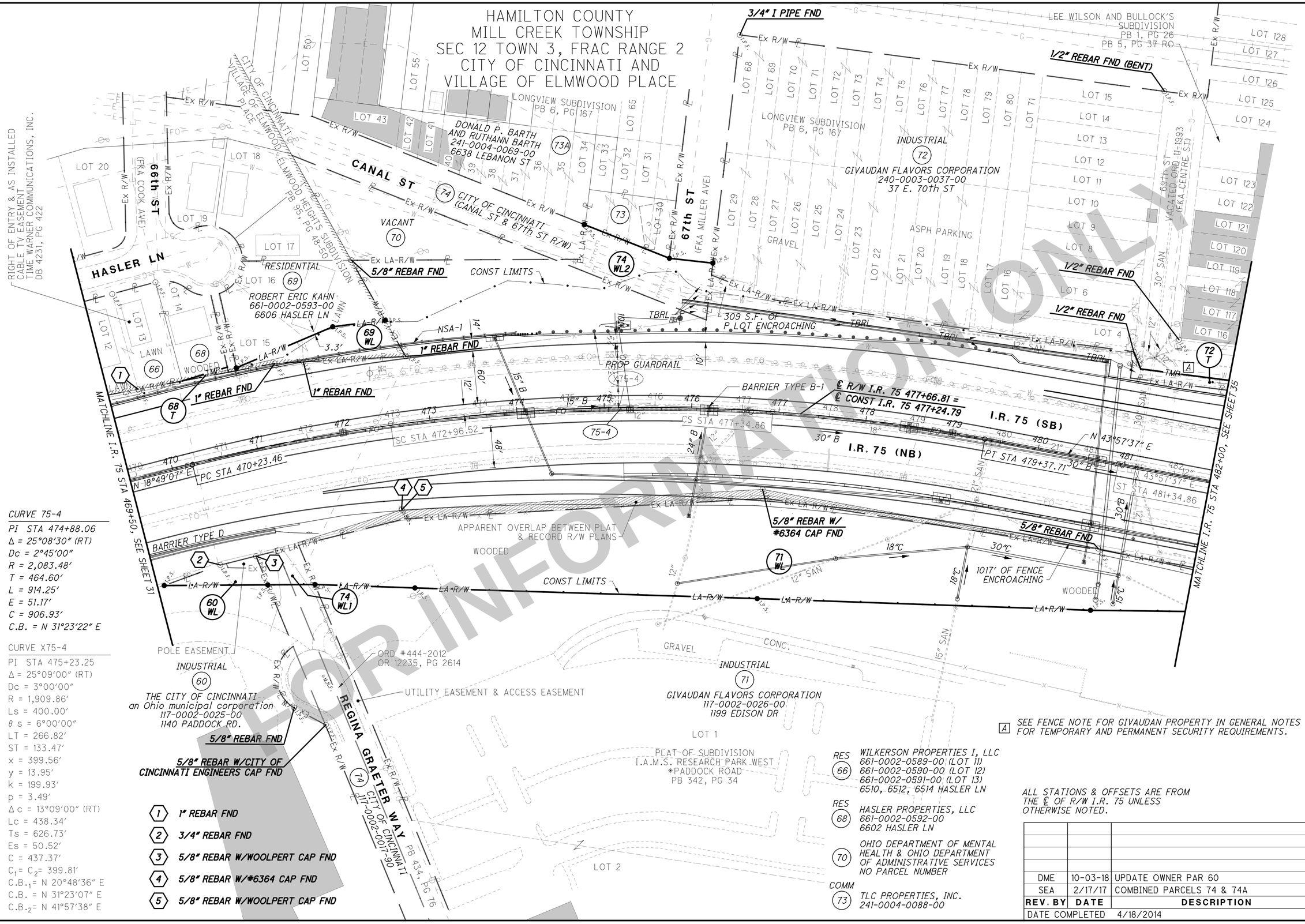
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1691 2017

FOR INFORMATION ONLY

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HAMILTON COUNTY
MILL CREEK TOWNSHIP
SEC 12 TOWN 3, FRAC RANGE 2
CITY OF CINCINNATI AND
VILLAGE OF ELMWOOD PLACE


RIGHT OF ENTRY & AS INSTALLED
CABLE TV EASEMENT
TIME WARNER COMMUNICATIONS, INC.
DB 4231, PG 422
CITY OF CINCINNATI
VILLAGE OF ELMWOOD PLACE
ELMWOOD HEIGHTS SUBDIVISION
PB 95, PG 48-50
66th ST
(FKA COOK AVE)
HASLER LN
LOT 20
LOT 19
LOT 18
LOT 17
LOT 16
LOT 15
LOT 14
LOT 13
LOT 12
LOT 50
LOT 55
LOT 43
LOT 42
LOT 41
LONGVIEW SUBDIVISION
PB 6, PG 167
DONALD P. BARTH
AND RUTHANN BARTH
241-0004-0069-00
6638 LEBANON ST
CANAL ST
CITY OF CINCINNATI
(CANAL ST & 67th ST R/W)
VACANT
RESIDENTIAL
ROBERT ERIC KAHN
661-0002-0593-00
6606 HASLER LN
LAWN
WOODED
67th ST
(FKA MILLER AVE)
LONGVIEW SUBDIVISION
PB 6, PG 167
INDUSTRIAL
GIVAUDAN FLAVORS CORPORATION
240-0003-0037-00
37 E. 70th ST
GRAVEL
ASPH PARKING
LEE WILSON AND BULLOCK'S
SUBDIVISION
PB 1, PG 26
PB 5, PG 37 RO
69th ST
VACATED ORD 11-1933
(FKA CENTRE ST)
3/4" I PIPE FND
1/2" REBAR FND (BENT)
1/2" REBAR FND
5/8" REBAR FND
1" REBAR FND
CONST LIMITS
309 S.F. OF
P.LOT ENCROACHING
PROP GUARDRAIL
BARRIER TYPE B-1
℄ R/W I.R. 75 477+66.81 =
℄ CONST I.R. 75 477+24.79
I.R. 75 (SB)
I.R. 75 (NB)
N 43°57'37" E
PT STA 479+37.71
ST STA 481+34.86
CS STA 477+34.86
SC STA 472+96.52
PC STA 470+23.46
N 18°49'07" E
MATCHLINE I.R. 75 STA 469+50, SEE SHEET 31
MATCHLINE I.R. 75 STA 482+00, SEE SHEET 35
BARRIER TYPE D
APPARENT OVERLAP BETWEEN PLAT
& RECORD R/W PLANS
5/8" REBAR W/
#6364 CAP FND
1017' OF FENCE
ENCROACHING
POLE EASEMENT
INDUSTRIAL
THE CITY OF CINCINNATI
an Ohio municipal corporation
117-0002-0025-00
1140 PADDOCK RD.
5/8" REBAR W/CITY OF
CINCINNATI ENGINEERS CAP FND
ORD #444-2012
OR 12235, PG 2614
UTILITY EASEMENT & ACCESS EASEMENT
REGINA GRAETER WAY
CITY OF CINCINNATI
117-0002-0017-90
PB 434, PG 76
INDUSTRIAL
GIVAUDAN FLAVORS CORPORATION
117-0002-0026-00
1199 EDISON DR
LOT 1
PLAT OF SUBDIVISION
I.A.M.S. RESEARCH PARK WEST
*PADDOCK ROAD
PB 342, PG 34
LOT 2
GRAVEL
CONC.
WOODED
12" SAN
15" SAN
30" SAN
18" SAN
24" B
30" B
15" B
18"C
30"C
15"C
TBRL
TMP
LA-R/W
Ex LA-R/W
Ex R/W
Ex LAER/W
Ex LA-R/W
Ex LA-R/W
Ex LA-R

HAMILTON COUNTY
MILL CREEK TOWNSHIP
SEC 12 TOWN 3, FRAC RANGE 2
CITY OF CINCINNATI AND
VILLAGE OF ELMWOOD PLACE

PARCEL 68 T DETAIL TABLE

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
1	471+27.85	92.04' LT	1-2	S 22°30'30" W	53.65'
2	470+75.54	94.02' LT	2-3	N 16°09'12" E	53.76'
3	471+27.81	98.00' LT	3-1	S 69°33'28" E	5.95'

PARCEL 69 WL DETAIL TABLE

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
4	471+37.57	91.76' LT	4-5	N 69°33'28" W	3.24'
5	471+37.54	95.00' LT	5-6	N 10°07'35" E	119.82'
6	472+50.00	120.00' LT	6-7	N 26°11'14" E	60.55'
7	473+07.13	118.00' LT	7-8	S 86°13'30" E	47.56'
8	473+23.81	73.78' LT	8-9	S 30°10'16" W	150.00'
9	471+80.19	90.91' LT	9-4	S 22°30'30" W	43.96'

RIGHT OF ENTRY & AS INSTALLED
CABLE TV EASEMENT
TIME WARNER COMMUNICATIONS, INC.
DB 4231, PG 422

66th ST (FKA COOK AVE)

ELMWOOD HEIGHTS SUBDIVISION
PB 95, PP 48-50

LOT 20 · LOT 19 · LOT 18 · LOT 17 · LOT 16 · LOT 15 · LOT 14 · LOT 13 · LOT 12

HASLER LN

RESIDENTIAL (69)

ROBERT ERIC KAHN
661-0002-0593
6606 HASLER LN

CITY OF CINCINNATI / VILLAGE OF ELMWOOD PLACE

CANAL ST (74) CITY OF CINCINNATI (CANAL ST & 67th ST R/W)

VACANT (70)

LONGVIEW SUBDIVISION
PB 6, PG 167

DONALD P. BARTH AND RUTHANN BARTH
241-0004-0069-00
6638 LEBANON ST (73A)

67th ST (FKA MILLER AVE)

INDUSTRIAL (72)
GIVAUDAN FLAVORS CORPORATION
240-0003-0037-00
37 E. 70th ST

LOT 68 · LOT 69 · LOT 70 · LOT 71 · LOT 72 · LOT 73 · LOT 74 · LOT 75 · LOT 76 · LOT 77 · LOT 78

LOT 43 · LOT 42 · LOT 41 · LOT 40 · LOT 39 · LOT 38 · LOT 37 · LOT 36 · LOT 35 · LOT 34 · LOT 33 · LOT 32 · LOT 31 · LOT 30 · LOT 29 · LOT 28 · LOT 27 · LOT 26 · LOT 25 · LOT 24 · LOT 23 · LOT 22 · LOT 21 · LOT 20 · LOT 19 · LOT 15 · LOT 14 · LOT 13 · LOT 12 · LOT 11 · LOT 10 · LOT 9 · LOT 8 · LOT 6 · LOT 4

LOT 123 · LOT 122 · LOT 121 · LOT 120 · LOT 119 · LOT 118 · LOT 117 · LOT 116

LEE WILSON AND BULLOCK'S SUBDIVISION
PB 1, PG 26
PB 5, PG 37 RO

MATCHLINE I.R. 75 STA 469+50, SEE SHEET 32

MATCHLINE I.R. 75 STA 482+00, SEE SHEET 36

I.R. 75

PC STA 470+23.46

SC STA 472+96.52

CS STA 477+34.86

PT STA 479+37.71

℄ R/W I.R. 75

℄ CONST I.R. 75

℄ R/W I.R. 75 477+66.81 = ℄ CONST I.R. 75 477+24.79

APPARENT OVERLAP BETWEEN PLAT & RECORD R/W PLANS

REGINA GRAETER WAY (FKA 66th ST) PB 434, PG 76

ORD #444-2012
OR 12235, PG 2614

UTILITY EASEMENT & ACCESS EASEMENT
OHIO DEPARTMENT OF MENTAL HEALTH
DB 4391, PG 863 - DB 4391, PG 865

INDUSTRIAL (60)
THE CITY OF CINCINNATI
an Ohio municipal corporation
117-0002-0025-00
1140 PADDOCK RD.

INDUSTRIAL (71)
GIVAUDAN FLAVORS CORPORATION
117-0002-0026-00
1199 EDISON DR

LOT 1
PLAT OF SUBDIVISION
I.A.M.S. RESEARCH PARK WEST
*PADDOCK ROAD
PB 342, PG 34

CITY OF CINCINNATI 117-0002-0017-90

[A] POLE EASEMENT
THE CINCINNATI GAS & ELECTRIC COMPANY
DB 4975, PG 453

[B] 69th ST
VACATED ORD. 11-1993
(FKA CENTRE ST)

CURVE 75-4
PI STA 474+88.06
Δ = 25°08'30" (RT)
Dc = 2°45'00"
R = 2,083.48'
T = 464.60'
L = 914.25'
E = 51.17'
C = 906.93'
C.B. = N 31°23'22" E

CURVE X75-4
PI STA 475+23.25
Δ = 25°09'00" (RT)
Dc = 3°00'00"
R = 1,909.86'
Ls = 400.00'
θ s = 6°00'00"
LT = 266.82'
ST = 133.47'
x = 399.56'
y = 13.95'
k = 199.93'
p = 3.49'
Δ c = 13°09'00" (RT)
Lc = 438.34'
Ts = 626.73'
Es = 50.52'
C = 437.37'
C_1 = C_2 = 399.81'
C.B.$_1$ = N 20°48'36" E
C.B. = N 31°23'07" E
C.B.$_2$ = N 41°57'38" E

1 — 470+25.01, 96.62' LT — 1" REBAR FND
2 — 470+69.41, 120.88' RT — 3/4" REBAR FND
3 — 471+12.96, 120.29' RT — 5/8" REBAR W/WOOLPERT CAP FND
4 — 472+94.61, 98.02' RT — 5/8" REBAR W/#6364 CAP FND
5 — 472+94.63, 99.31' RT — 5/8" REBAR W/WOOLPERT CAP FND

RES (66) WILKERSON PROPERTIES I, LLC
661-0002-0589-00 (LOT 11)
661-0002-0590-00 (LOT 12)
661-0002-0591-00 (LOT 13)
6510, 6512, 6514 HASLER LN

RES (68) HASLER PROPERTIES, LLC
661-0002-0592-00
6602 HASLER LN

(70) OHIO DEPARTMENT OF MENTAL HEALTH & OHIO DEPARTMENT OF ADMINISTRATIVE SERVICES
NO PARCEL NUMBER

COMM (73) TLC PROPERTIES, INC.
241-0004-0088-00

ALL STATIONS & OFFSETS ARE FROM THE ℄ OF R/W I.R. 75 UNLESS OTHERWISE NOTED.

REV. BY	DATE	DESCRIPTION
DME	10-03-18	UPDATE OWNER PAR 60
DME	10-03-18	CORRECT TYPO 479+54.57 TO 476+54.57
SEA	2/17/17	COMBINED PARCELS 74 & 74A

DATE COMPLETED 4/18/2014

FOR INFORMATION ONLY

N
HORIZONTAL SCALE IN FEET 0 25 50 100

PID NO. 77889

R/W DESIGNER JMM
R/W REVIEWER EJM

RIGHT OF WAY BOUNDARY SHEET
STA 469+50 TO STA 482+00

HAM-75-7.85

34 / 52

1693 2017

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A SEE FENCE NOTE FOR GIVAUDAN PROPERTY IN GENERAL NOTES FOR TEMPORARY AND PERMANENT SECURITY REQUIREMENTS.

HAMILTON COUNTY
MILL CREEK TOWNSHIP
SEC 6 & 12, TOWN 3, FRAC RANGE 2
CITY OF CINCINNATI

5/8" REBAR FND

5/8" REBAR FND

5/8" REBAR W/ ALUM CAP FND

POT STA 4+00.00

80 MARBLE ALLEY MOTORCARS, LLC
240-0002-0058-00, 240-0002-0059-00
240-0002-0091-00
7116 MARKET PL

81 TR GARAGE, LLC
240-0002-0056-00
7127 LONGVIEW AVE

V SLOPE EASEMENT
CITY OF CINCINNATI
DB 2855 PG 577

MARKET PLACE
(FKA MARKET ST)

MARKET ST
(VACATED ORD 86-1965)

MARBLE ALLEY
(VACATED ORD 251-60)

240-0002-0091-00

240-0002-0059-00

240-0002-0058-00

LOT 69 LOT 67 LOT 66 LOT 65

EDWARD WHITE'S SUBDIVISION OF CARTHAGE
DB 0, PG 471

COMMERCIAL 80

COMMERCIAL 81

LONGVIEW ST
(FKA FRANKLIN ST)

LEE, WILSON & BULLOCK'S SUBDIVISION
PB 1, PG 26
PB 5, PG 37 RO

LOT 123 LOT 122 LOT 121 LOT 120 LOT 119 LOT 118 LOT 117

LOT 137 LOT 138 LOT 139 LOT 140 LOT 141 LOT 142

LOT 151 LOT 150 LOT 149 LOT 148 LOT 147 LOT 146

LOT 145 LOT 144

70th ST
(VACATED ORD 475-1978)

REGISTERED LAND CERTIFICATE NO #221205

INDUSTRIAL
72
GIVAUDAN FLAVORS CORPORATION
240-0003-0037-00
37 E 70th ST

LOT 143

CONC

LAWN

ASPH DRIVE

LONGVIEW ST
(VACATED ORD 11-1993)

CONC WALK

8" SAN

DND

TMP

Ex LA-R/W

Ex R/W

CONST LIMIT

CONST LIMITS

WALL J1

BARRIER TYPE D WALL J3

WALL K

RAMP C

RAMP D

WALL Y

WALL Z

PROP GUARDRAIL

DND GATE OR PRIVATE UTILITIES

PRIVATE GAS LINE TO BE RELOCATED

I.R. 75 (SB)

I.R. 75 (NB)

℄ R/W I.R. 75

℄ CONST I.R. 75

N 43°57'37" E 3725.12'

N 43°57'37" E 3567.19'

℄ R/W I.R. 75 491+59.21 =
℄ R/W S.R. 561 9+17.97

S.R. 561 (SEYMOUR AVE.)

1017' OF FENCE ENCROACHING

5/8" REBAR W/ #6364 CAP FND

17.1' MINIMUM

UTILITY TANK DND

117-0002-0026-00

PLAT OF SUBDIVISION
I.A.M.S. RESEARCH PARK WEST
*PADDOCK ROAD
PB 342, PG 34

LOT 1
LOT 5

INDUSTRIAL
71
GIVAUDAN FLAVORS CORPORATION
117-0002-0037-00
1199 EDISON DR

10' COMMUNICATIONS EASEMENT

10' ELECTRIC EASEMENT
THE CINCINNATI GAS & ELECTRIC COMPANY
DB 5008, PG 1112

ASPHALT PARKING

CONC WALK

SEC 12
SEC 6

PC STA 13+05.42

CURVE 561-1
PI STA 14+85.32
Δ = 21°20'15" (LT)
Dc = 6°00'00"
R = 954.93'
T = 179.90'
L = 355.62'
E = 16.80'
C = 353.57'
C.B. = S 59°44'30" E

MATCHLINE I.R. 75 STA 482+00, SEE SHEET 33

MATCHLINE I.R. 75 STA 494+50, SEE SHEET 37

1 5/8" REBAR W/ WOOLPERT CAP FND
2 5/8" REBAR W/ WOOLPERT CAP FND
3 5/8" REBAR W/ WOOLPERT CAP FND
4 3/4" OD IRON PIPE FND
5 1/2" REBAR FND
6 1/2" REBAR FND

ADJOINING PROJECT DATA

XX PORTION TO BE ACQUIRED AS PART OF HAM-4/561-2.66/7.01 (PID 89835).

FOR INFORMATION ONLY

REV. BY	DATE	DESCRIPTION
BER	2/11/19	MODIFIED PARCEL NUMBER FOR PARCEL 71
SEA	6/30/16	MODIFIED PARCEL 71 WL
SEA	12/14/15	REMOVED PARCEL 72 SH & MODIFIED 72 T, AND CHANGED PRIVATE GAS LINE NOTE
DATE COMPLETED		4/18/2014

HORIZONTAL SCALE IN FEET
0 25 50 100

PID NO 77889

R/W DESIGNER JMM
R/W REVIEWER EJM

RIGHT OF WAY TOPO SHEET
STA 482+00 TO STA 494+50

HAM-75-7.85

35 / 52

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2017

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HAMILTON COUNTY
MILL CREEK TOWNSHIP
SEC 6 & 12, TOWN 3, FRAC RANGE 2
CITY OF CINCINNATI

FOR INFORMATION ONLY

4+35.88, 33.07' RT (561)
5/8" REBAR FND

POT STA 4+00.00

5+63.83, 33.05' RT (561)
5/8" REBAR FND

5+63.72, 32.92' RT (561)
5/8" REBAR W/ALUM. CAP FND

REGISTERED LAND CERTIFICATE NO #221205

VACATED ORD 312-1919

LEE, WILSON & BULLOCK'S SUBDIVISION
PB 1, PG 26
PB 5, PG 37 RO

LOT 123, LOT 122, LOT 121, LOT 120, LOT 119, LOT 118, LOT 117, LOT 116
LOT 137, LOT 138, LOT 139, LOT 140, LOT 141, LOT 142
LOT 151, LOT 150, LOT 149, LOT 148, LOT 147, LOT 146
LOT 145, LOT 144, LOT 143

70th ST (VACATED ORD 475-1978)

LONGVIEW ST (VACATED ORD 11-1993)

INDUSTRIAL
(72)
GIVAUDAN FLAVORS CORPORATION
240-0003-0037-00
37 E. 70th ST

MARBLE ALLEY MOTORCARS, LLC
240-0002-0058-00, 240-0002-0059-00
240-0002-0091-00
7116 MARKET PL

TR GARAGE, LLC
240-0002-0056-00
7127 LONGVIEW AVE

SLOPE EASEMENT
CITY OF CINCINNATI
DB 2855 PG 577

MARKET PLACE
(FKA MARKET ST)

MARKET ST
(VACATED ORD 86-1965)

MARBLE ALLEY
(VACATED ORD 251-60)

240-0002-0091-00

LOT 69, LOT 68, LOT 67, LOT 66, LOT 65, LOT 70

COMMERCIAL (80)
COMMERCIAL (81)

240-0002-0056-00
240-0002-0058-00

EDWARD WHITE'S SUBDIVISION OF CARTHAGE
DB 0, PG 471

(FKA FRANKLIN ST)
LONGVIEW ST

491+17.58
162.00' LT

S 49°04'23" E 9.67'
491+18.09
152.34' LT

N 40°37'19" E 360.61'
485+00.00
133.00' LT
S 40°23'59" W 499.16'

N 41°16'18" E 618.26'
486+28.64
130.64' LT
S 41°49'59" W 260.56'

488+89.02
140.31' LT
S 40°57'19" W 229.39'

491+16.21
152.24' LT
491+17.09
136.26' LT

℄ R/W S.R. 561

℄ CONST I.R. 75
℄ R/W I.R. 75
I.R. 75

N 43°57'37" E 3725.12'
N 43°57'37" E 3567.19'

MATCHLINE I.R. 75 STA 482+00, SEE SHEET 34

MATCHLINE I.R. 75 STA 494+50, SEE SHEET 38

482+80.65, 100.79' RT
5/8" REBAR W/#6364 CAP FND

N 43°57'37" E Ex LA-R/W 432.33'

485+67.19
100.00' RT
485+57.69, 98.90' RT
5/8" REBAR FND

486+76.45
75.00' RT
N 31°04'20" E Ex LA-R/W 112.08'

488+07.19
80.00' RT
N 46°09'02" E Ex LA-R/W 130.84'

S 46°02'23" E 20.00'

N 51°41'08" E 261.41'

488+07.19
100.00' RT

490+66.23
135.14' RT
S 47°03'46" E 85.53'

N 43°49'57" E 30.04'
490+96.27
135.07' RT
491+06.55
135.05' RT

N 87°24'12" W 40.03'
491+33.00, 165.09' RT (I.R. 75)
10+81.45, 34.91' RT (S.R. 561)

491+34.21, 183.42' RT (I.R. 75)
10+99.81, 34.67' RT (S.R. 561)

S 33°57'11" W 143.87'
50.19'
S 40°59'37" E
482+76.53
145.00' RT

S 46°46'26" W 203.71'
484+80.00
155.00' RT
S 57°05'39" W 154.03'
486+30.00
190.00' RT
S 50°04'33" W 140.80'
487+70.00
205.00' RT
S 41°21'28" W 110.11'
488+80.00
200.00' RT
S 51°27'22" W 191.64'
490+97.80
220.59' RT
490+70.00
225.00' RT
N 88°35'37" W 86.94'
491+28.79
289.04' RT
S 70°24'05" E 151.51'

117-0002-0026-00
LOT 1
LOT 5

INDUSTRIAL
(71)
GIVAUDAN FLAVORS CORPORATION
117-0002-0037-00
1199 EDISON DR.

PLAT OF SUBDIVISION
I.A.M.S. RESEARCH PARK WEST
*PADDOCK ROAD
PB 342, PG 34
LOT 5

10' COMMUNICATIONS EASEMENT
OR 8914, PG 1326

10' ELECTRIC EASEMENT
THE CINCINNATI GAS & ELECTRIC COMPANY
DB 5008, PG 1112

S.R. 561 (SEYMOUR AVE)

SEC 12
SEC 6

PC STA 13+05.42

905.42'

561-1

CURVE 561-1
PI STA 14+85.32
Δ = 21°20'15" (LT)
Dc = 6°00'00"
R = 954.93'
T = 179.90'
L = 355.62'
E = 16.80'
C = 353.57'
C.B. = S 59°44'30" E

1 487+97.60, 98.57' RT
5/8" REBAR W/WOOLPERT CAP FND

2 490+66.61, 134.82' RT
5/8" REBAR W/WOOLPERT CAP FND

3 491+06.92, 134.71' RT
5/8" REBAR W/WOOLPERT CAP FND

4 10+99.81, 34.67' RT (S.R. 561)
3/4" O.D. IRON PIPE FND

5 5+83.78, 31.77' LT (561)
1/2" REBAR FND

6 6+03.80, 31.70' LT (561)
1/2" REBAR FND

ALL STATIONS & OFFSETS ARE FROM THE ℄ OF R/W I.R. 75 UNLESS OTHERWISE NOTED.

(XX) **ADJOINING PROJECT DATA**
PORTION TO BE ACQUIRED AS PART OF HAM-4/561-2.66/7.01 (PID 89835).

REV. BY	DATE	DESCRIPTION
BER	2/11/19	MODIFIED PARCEL NUMBER FOR PARCEL 71
SEA	6/29/16	MODIFIED PARCEL 71 WL
SEA	12/14/15	REMOVED PARCEL 72 SH AND MODIFIED 72 T
DATE COMPLETED	4/18/2014	

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

PID NO. 77889

R/W DESIGNER JMM
R/W REVIEWER EJM

RIGHT OF WAY BOUNDARY SHEET
STA 482+00 TO STA 494+50

HAM-75-7.85

36 / 52

1695 / 2017

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(82) D & B REALTY ASSOCIATES, LTD.
118, 120 & 122 E 72nd ST

(83) 7217 LONGVIEW, LLC
240-0002-0051-00
7217 LONGVIEW AVE

(84) LONGVIEW INVESTMENT PROPERTIES, LLC
7225 LONGVIEW AVE

(89) THE CITY OF CINCINNATI
EX R/W OF LONGVIEW ST

HAMILTON COUNTY
MILL CREEK TOWNSHIP
SEC 6 & 12 TOWN 3, FRAC RANGE 2
CITY OF CINCINNATI

INDUSTRIAL
(92)
E PAUL CORP.
242-0002-0057-00
7324 PADDOCK RD

COMMERCIAL
(85)
500 AUTO SALES INC.
240-0001-0111-00
7329 PADDOCK RD

RESIDENTIAL
(82)
240-0002-0052-00
240-0002-0063-00
240-0002-0055-00

COMMERCIAL
(83)
240-0002-0048-00
LOT 60 | LOT 59
COMMERCIAL
(84)
240-0002-0050-00

72nd ST (FKA THIRD ST)
LONGVIEW ST
RAMP C
RAMP B
RAMP A
SUMMIT RD
PADDOCK RD (S.R. 4)
LEWIS DR
GARDEN SPIKE FND
IRON PIPE FND 3/4" OD
5/8" REBAR FND
5/8" REBAR W/ BERDING CAP FND
2' OF FENCE ENCROACHING
RETAINING WALL K
WALL V
EDWARD WHITE'S SUBDIVISION OF CARTHAGE DB 0, PG 471
VACATED ORD 433-1956
PINE ALLEY
GRANITE ALLEY
Access Easement DB 5143, PG 1498
SEC 12 / SEC 6
LA-R/W EASEMENT
20" WATERLINE EASEMENT
CANAL LAND LEASE FOR ELEC TRANS
FORMER MIAMI & ERIE CANAL
REGISTERED LAND CERT #233439
CONST LIMITS
PROP GUARDRAIL
BARRIER TYPE B-1
BARRIER TYPE D
LAWN
ASPH PAV'T
ASPH
I.R. 75 (SB)
I.R. 75 (NB)
℄ CONST I.R. 75
℄ R/W I.R. 75
℄ R/W I.R. 75 499+02.80 = ℄ R/W S.R. 4 148+97.21
℄ R/W S.R. 4 143+93.37 = ℄ R/W SUMMIT RD 9+95.01
MATCHLINE I.R. 75 STA 494+50, SEE SHEET 35
MATCHLINE I.R. 75 STA 507+00, SEE SHEET 39
N 16°54'51" W 1004.11'
N 43°57'37" E 3725.12'
N 43°57'37" E 3567.19'
N 22°36'37" E 522.53'
N 54°45'07" E 9.58'
PC STA 10+94.59
PT STA 146+41.62
PT STA 141+92.82
PC STA 20+15.35
CURVE 4-2
PI STA 142+66.61
Δ = 44°39'36" (LT)
Dc = 5°38'01"
R = 1,017.06'
T = 417.75'
L = 792.76'
E = 82.45'
C = 772.84'
C.B. = N 5°24'57" E
CURVE SU-1
PI STA 12+55.32
Δ = 32°08'30" (LT)
Dc = 6°35'00"
R = 870.32'
T = 250.73'
L = 488.23'
E = 35.40'
C = 481.85'
C.B. = N 38°40'52" E
CURVE SU-2
PI STA 21+95.35
Δ = 21°21'00" (RT)
Dc = 6°00'00"
R = 954.93'
T = 180.00'
L = 355.83'
E = 16.82'
C = 353.78'
C.B. = N 33°17'07" E
(90) PADDOCK INDUSTRIAL PARTNERS, L.L.C. 117-0007-0084-00 7150 PADDOCK RD
(91) STATE OF OHIO 117-0016-0002-90
CITY OF CINCINNATI 117-0016-0008-00

FOR INFORMATION ONLY

REV. BY	DATE	DESCRIPTION
SEA	1-22-16	REMOVED BALLOON WITHIN LEWIS DR
DATE COMPLETED	4/18/2014	

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

PID NO. 77889

R/W DESIGNER JMM
R/W REVIEWER EJM

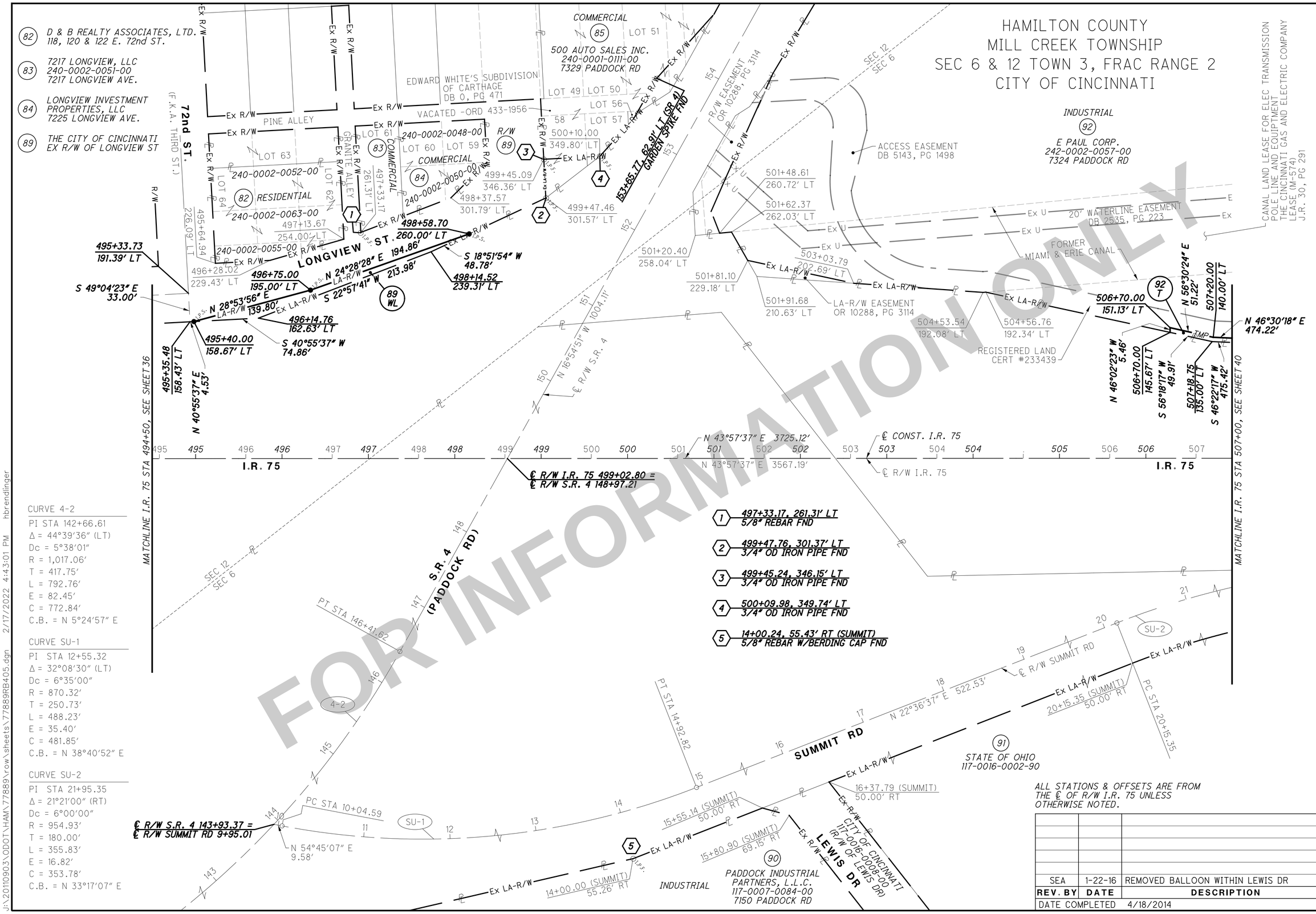
RIGHT OF WAY TOPO SHEET
STA 494+50 TO STA 507+00

HAM-75-7.85

37 / 52

1696 / 2017

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CURVE 4-2
PI STA 142+66.61
Δ = 44°39'36" (LT)
Dc = 5°38'01"
R = 1,017.06'
T = 417.75'
L = 792.76'
E = 82.45'
C = 772.84'
C.B. = N 5°24'57" E

CURVE SU-1
PI STA 12+55.32
Δ = 32°08'30" (LT)
Dc = 6°35'00"
R = 870.32'
T = 250.73'
L = 488.23'
E = 35.40'
C = 481.85'
C.B. = N 38°40'52" E

CURVE SU-2
PI STA 21+95.35
Δ = 21°21'00" (RT)
Dc = 6°00'00"
R = 954.93'
T = 180.00'
L = 355.83'
E = 16.82'
C = 353.78'
C.B. = N 33°17'07" E

ALL STATIONS & OFFSETS ARE FROM THE ℄ OF R/W I.R. 75 UNLESS OTHERWISE NOTED.

REV. BY	DATE	DESCRIPTION
SEA	1-22-16	REMOVED BALLOON WITHIN LEWIS DR
DATE COMPLETED		4/18/2014

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

PID NO. 77889

R/W DESIGNER JMM
R/W REVIEWER EJM

RIGHT OF WAY BOUNDARY SHEET
STA 494+50 TO STA 507+00

HAM-75-7.85

38 / 52

1697 2017

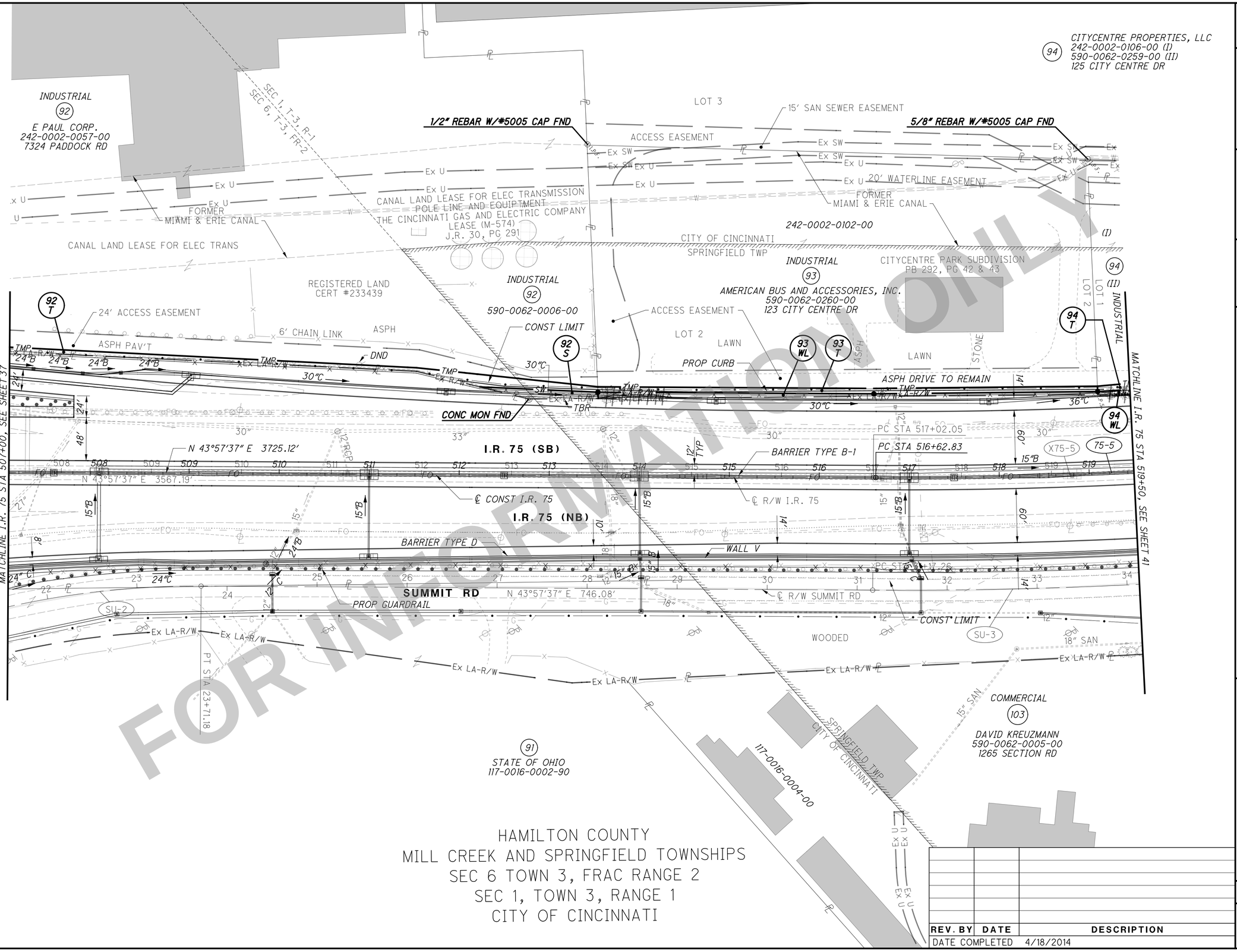
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CURVE 75-5
PI STA 523+96.89
Δ = 16°02'37" (LT)
Dc = 1°06'00"
R = 5,208.71'
T = 734.06'
L = 1,458.52'
E = 51.47'
C = 1,453.75'
C.B. = N 35°56'18" E

CURVE X75-5
PI STA 524+37.18
Δ = 16°04'00" (LT)
Dc = 1°06'00"
R = 5,208.71'
T = 735.13'
L = 1,460.61'
E = 51.62'
C = 1,455.83'
C.B. = N 35°55'37" E

CURVE SU-2
PI STA 21+95.35
Δ = 21°21'00" (RT)
Dc = 6°00'00"
R = 954.93'
T = 180.00'
L = 355.83'
E = 16.82'
C = 353.78'
C.B. = N 33°17'07" E

CURVE SU-3
PI STA 34+06.86
Δ = 6°12'57" (LT)
Dc = 1°04'27"
R = 5,333.71'
T = 289.60'
L = 578.64'
E = 7.86'
C = 578.35'
C.B. = N 40°51'09" E



FOR INFORMATION ONLY

HAMILTON COUNTY
MILL CREEK AND SPRINGFIELD TOWNSHIPS
SEC 6 TOWN 3, FRAC RANGE 2
SEC 1, TOWN 3, RANGE 1
CITY OF CINCINNATI

REV. BY	DATE	DESCRIPTION
DATE COMPLETED	4/18/2014	

HORIZONTAL SCALE IN FEET
0 25 50 100

PID NO. 77889

R/W DESIGNER JMM
R/W REVIEWER EJM

RIGHT OF WAY TOPO SHEET
STA 507+00 TO STA 519+50

HAM-75-7.85

39 / 52

1698
2017

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CURVE 75-5
PI STA 523+96.89
Δ = 16°02'37" (LT)
Dc = 1°06'00"
R = 5,208.71'
T = 734.06'
L = 1,458.52'
E = 51.47'
C = 1,453.75'
C.B. = N 35°56'18" E

CURVE X75-5
PI STA 524+37.18
Δ = 16°04'00" (LT)
Dc = 1°06'00"
R = 5,208.71'
T = 735.13'
L = 1,460.61'
E = 51.62'
C = 1,455.83'
C.B. = N 35°55'37" E

CURVE SU-2
PI STA 21+95.35
Δ = 21°21'00" (RT)
Dc = 6°00'00"
R = 954.93'
T = 180.00'
L = 355.83'
E = 16.82'
C = 353.78'
C.B. = N 33°17'07" E

CURVE SU-3
PI STA 34+06.86
Δ = 6°12'57" (LT)
Dc = 1°04'27"
R = 5,333.71'
T = 289.60'
L = 578.64'
E = 7.86'
C = 578.35'
C.B. = N 40°51'09" E

INDUSTRIAL
(92)
E PAUL CORP.
242-0002-0057-00
7324 PADDOCK RD

(94)
CITYCENTRE PROPERTIES, LLC
242-0002-0106-00 (I)
590-0062-0259-00 (II)
125 CITY CENTRE DR

513+82.32, 368.18' LT
1/2" REBAR W/#5005 CAP FND.

519+55.13, 349.44' LT
1/2" REBAR W/#5005 CAP FND.

LOT 3
15' SAN. SEWER EASEMENT
DB 5143, PG 1498
ACCESS EASEMENT
PB 292, PG 42-43
20' WATERLINE EASEMENT
DB 2535, PG 223
FORMER
MIAMI & ERIE CANAL
242-0002-0102-00
CANAL LAND LEASE FOR ELEC TRANSMISSION
POLE LINE AND EQUIPTMENT
THE CINCINNATI GAS AND ELECTRIC COMPANY
LEASE (M-574)
J.R. 30, PG 291
CITY OF CINCINNATI
SPRINGFIELD TWP
INDUSTRIAL
(92)
590-0062-0006-00
REGISTERED LAND
CERT #233439
CITYCENTRE PARK SUBDIVISION
PB 292, PG 42 & 43
INDUSTRIAL
(93)
AMERICAN BUS & ACCESSORIES, INC.
590-0062-0260-00
123 CITY CENTRE DR
LOT 2
LOT 1
(I)
(II)
INDUSTRIAL
(94)

92 T
24' ACCESS EASEMENT
DB 5143, PG 1498
TMP
Ex LA-R/W
℄
N 46°30'18" E 474.22'
S 46°22'17" W 475.42'

511+93.75
118.94' LT
N 49°36'50" E
202.45'
N 46°08'50" E
131.03'
511+93.75
115.00' LT
512+64.59
98.00' LT
S 57°21'22" W
72.84'
S 57°21'22" W
55.70'
513+18.75
85.00' LT
513+18.75, 84.96' LT
CONC MON W/"X" IN BRASS DISK FND
S 43°10'45" W
77.12'
92 S
513+95.22
99.00' LT
S 48°54'21" E
6.01'
513+95.87
86.05' LT
513+95.52
93.00' LT
N 43°57'37" E
306.53'
N 43°57'37" E 306.83'
S 43°10'45" W 555.00'
6.96'
93 WL
93 T
517+02.05
99.00' LT
517+02.05
93.00' LT
N 43°01'44" E
248.63'
N 43°01'46" E 248.33'
519+55.16
97.00' LT
6.00'
519+55.17
91.00' LT
3.43'
519+55.18
87.57' LT
S 48°54'21" E
176.47'
N 38°33'49" E
N 37°46'13" E
323.83'
94 T
S 43°10'45" W
62.60'
94 WL
MATCHLINE I.R. 75 STA 519+50, SEE SHEET 42

℄ CONST I.R. 75
℄ R/W I.R. 75
508 508 509 509 510 510 511 511 512 512 513 513 514 514 515 515 516 516 517 517 518 518 519 519
N 43°57'37" E 3567.19'
N 43°57'37" E 3725.12'
I.R. 75
PC STA 517+02.05
PC STA 516+62.83
75-5
X75-5
SEC 1, T-3, R-1
SEC 6, T-3, FR-2

MATCHLINE I.R. 75 STA 507+00, SEE SHEET 38

22 23 24 25 26 27 28 29 30 31 32 33 34
PC STA 31+17.26
SUMMIT RD
N 43°57'37" E 746.08'
℄ R/W SUMMIT RD
SU-2
SU-3
Ex LA-R/W
509+55.97, 175.00' RT
23+71.18, 50.00' RT (SUMMIT)
PT STA 23+71.18
513+68.78, 230.00' RT
27+83.96, 105.00' RT (SUMMIT)

(91)
STATE OF OHIO
117-0016-0002-90

117-0016-0004-00
SPRINGFIELD TWP
CITY OF CINCINNATI

COMMERCIAL
(103)
DAVID KREUZMANN
590-0062-0005-00
1265 SECTION RD

FOR INFORMATION ONLY

HAMILTON COUNTY
MILL CREEK AND SPRINGFIELD TOWNSHIPS
SEC 6 TOWN 3, FRAC RANGE 2
SEC 1, TOWN 3, RANGE 1
CITY OF CINCINNATI

ALL STATIONS & OFFSETS ARE FROM THE ℄ OF R/W I.R. 75 UNLESS OTHERWISE NOTED.

REV. BY	DATE	DESCRIPTION
DATE COMPLETED	4/18/2014	

HORIZONTAL SCALE IN FEET
0 25 50 100

PID NO. 77889
R/W DESIGNER JMM
R/W REVIEWER EJM

RIGHT OF WAY BOUNDARY SHEET
STA 507+00 TO STA 519+50

HAM-75-7.85

40 / 52

1699
2017

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1 5/8" IRON PIPE FND
2 2" IRON PIPE FND
3 3/4" IRON PIPE FND
4 5/8" REBAR FND

MILL AND OVERLAY AREA

HAMILTON COUNTY
SPRINGFIELD TOWNSHIP
SEC 1, TOWN 3, RANGE 1
CITY OF CINCINNATI

MAG NAIL FND
PK NAIL FND
3/4" O.D. IRON PIPE FND
2" O.D. IRON PIPE FND
3/4" I PIPE FND
1/2" REBAR FND
5/8" REBAR FND

ACCESS EASEMENT
CONC WALK
CONST LIMITS
ASPH DRIVE TO REMAIN
FLAG POLE
SECURITY CAMERA (TYP)
PROP GUARDRAIL
BARRIER TYPE B-1
DND HOUSE OR FLOWER BED
CANAL LAND LEASE FOR ELEC TRANS
FORMER MIAMI & ERIE CANAL
CITYCENTRE PARK SUBDIVISION PB 292, PG 42 & 43
CITY OF CINCINNATI SPRINGFIELD TWP
MILL CREEK
EASEMENT FOR HIGHWAY PURPOSES
CHANNEL EASEMENT
WATERLINE EASEMENT SOUTHWESTERN OHIO WATER CO FOR 30" WATERLINE UNDER MILL CREEK IN THE CANAL LANDS DB 4222, PG 1280
THE BILLBOARDS TBR FOR PARCEL 96 ARE CONSIDERED ON PREMISE AND NO PERMIT IS NEEDED

LOT 1 LOT 2 LOT 3 LOT 4 LOT 5 LOT 6 LOT 7 LOT 8 LOT 9 LOT 117 LOT 118 LOT 119 LOT 120 LOT 53 LOT 54 LOT 55 LOT 58 LOT 59 LOT 41 LOT 42 LOT 43 LOT 44 LOT 45 LOT 46 LOT 31 LOT 32

B.H. COX'S SUBDIVISION EDGEMONT PB 7, PG 79
EDGEMONT TERRACE SUBDIVISION PB 26, PG 38

SUMMIT RD
SECTION RD
WOODLAND AVE
McCLURE AVE

I.R. 75 (S.B.)
I.R. 75 (N.B.)
℄ CONST I.R. 75
℄ R/W I.R. 75
℄ R/W SUMMIT RD
MATCHLINE I.R. 75 STA 519+50, SEE SHEET 39

PT STA 36+95.90 POT STA 36+95.90
PT STA 531+21.35
PT STA 531+62.66
PT STA 47+32.61
END ACQUISITION STA 532+67.14 SLM 10.09
END WORK STA 532+45.99
EQUATION: STA 44+13.54 BK = PC STA 44+15.49 AH

CURVE 75-5	CURVE X75-5	CURVE SU-3	CURVE SU-4
PI STA 523+96.89	PI STA 524+37.18	PI STA 34+06.86	PI STA 45+80.70
Δ = 16°02'37" (LT)	Δ = 16°04'00" (LT)	Δ = 6°12'57" (LT)	Δ = 39°38'26" (RT)
Dc = 1°06'00"	Dc = 1°06'00"	Dc = 1°04'27"	Dc = 12°30'00"
R = 5,208.71'	R = 5,208.71'	R = 5,333.71'	R = 458.37'
T = 734.06'	T = 735.13'	T = 289.60'	T = 165.21'
L = 1,458.52'	L = 1,460.61'	L = 578.64'	L = 317.12'
E = 51.47'	E = 51.62'	E = 7.86'	E = 28.86'
C = 1,453.75'	C = 1,455.83'	C = 578.35'	C = 310.84'
C.B. = N 35°56'18" E	C.B. = N 35°55'37" E	C.B. = N 40°51'09" E	C.B. = N 56°33'35" E

N 27°53'37" E 1464.87'
N 27°53'37" E 1937.48'
N 36°44'22" E 717.64'
N 76°22'48" E 267.39'

COMMERCIAL (94) INDUSTRIAL
CITYCENTRE PROPERTIES, LLC
590-0062-0259-00
125 CITY CENTRE DR

COMMERCIAL (96)
MS HOLDINGS, LLC
242-0001-0035-00
120 CITY CENTRE DR

ASPH PARKING
590-0062-0261-00

ASPH PARKING
242-0001-0036-00

COMMERCIAL (110)
MS HOLDINGS II, LLC
242-0001-0017-00

RESIDENTIAL (111)
DESALVO CONST CO
590-0062-0001-00
1350 SUMMIT RD
(ALL IN EX R/W)

INSTITUTIONAL (112)
THE NEW PROSPECT BAPTIST CHURCH
590-0062-0256-00
1580 SUMMIT RD

COMMERCIAL (103)
DAVID KREUZMANN
590-0062-0005-00
1265 SECTION RD

RES (93) AMERICAN BUS AND ACCESSORIES, INC.
242-0002-0102-00
123 CITY CENTRE DR

RES (95) ANDRE C. ANDERSON
590-0062-0143-00
1242 SECTION RD

RES (97) LLOYD F. COFFEY AND JANICE H. COFFEY
590-0062-0103-00
1287 WOODLAND AVE

RES (98) JAMES A. SNEED AND CAROLYN SNEED
590-0062-0120-00
1290 WOODLAND AVE

RES (100) PHILIP G. HOGAN AND PATRICIA A. HOGAN
590-0062-0112-00
1331 SUMMIT RD

RES (101) MARILYN J. NADLER
590-0062-0111-00
1341 SUMMIT RD

RES (102) ALMA REAL ESTATE INVESTORS
590-0062-0110-00
1351 SUMMIT RD

RES (212) RAYCHEL M. SCHORK
590-0062-0144-00
1248 SECTION RD

RES (213) KENNETH VORDGM ESCHE AND KAREN VORDGM ESCHE
590-0062-0102-00
1293 WOODLAND AVE

RES (214) SHAYNEE DIAJHA LASHAY SCOTT
590-0062-0125-00
1298 WOODLAND AVE

RES (99)
590-0062-0122-00
MARY H. LUCAS
590-0062-0123-00
1341 MCCLURE AVE

A STATE OF OHIO PARCEL 708-WL (FEE)
B STATE OF OHIO PARCEL 710-WL (FEE)
C WATERLINE EASEMENT SOUTHWESTERN OHIO WATER CO FOR 30" WATERLINE UNDER MILL CREEK IN THE CANAL LANDS DB 4222, PG 1280

REV. BY	DATE	DESCRIPTION
BLM	1-28-20	CHANGED PARCEL 96WD1, REMOVED PARCEL 96TV2
BLM	11-18-19	ADDED PARCELS 96TV2, 96TV3, 96U, 96S, 96WDV1
BER	2-11-19	REVISED PARCEL 97 TO WDV
BER	10-23-18	REVISED PARCELS 95, 97 & 98 TO TOTAL TAKE
SEA	2-3-16	CHANGED PARCEL 94-TV TO 94-T1
SEA	1-22-16	CHANGED PARCEL 96-TV TO 96-T1

DATE COMPLETED 4/18/2014

HORIZONTAL SCALE IN FEET 0 25 50 100

PID NO. 77889
R/W DESIGNER JMM
R/W REVIEWER EJM

RIGHT OF WAY TOPO SHEET
STA 519+50 TO STA 534+00

HAM-75-7.85

41 / 52

1700 2017

FOR INFORMATION ONLY

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HAMILTON COUNTY
SPRINGFIELD TOWNSHIP
SEC 1, TOWN 3, RANGE 1
CITY OF CINCINNATI

ADJOINING PROJECT DATA
PORTION TO BE ACQUIRED AS PART OF HAM-75-10.10 (PID 88124).

NOTE:
FOR ℄ CURVE DATA AND PARCELS 94 WDV, 94 TV, 95 T, 96 WDV, 96 TV DETAIL TABLES, SEE SHEET 43

1 37+30.66, 28.10' RT* — 5/8" IRON PIPE FND
2 40+33.78, 66.35' RT* — 2" IRON PIPE FND
3 43+11.09, 108.36' RT* — 3/4" IRON PIPE FND
4 531+76.85, 85.73' LT — 5/8" REBAR FND

DETAIL B (NOT TO SCALE)

522+24.57, 325.84' LT — MAG NAIL FND
522+53.86, 301.13' LT — PK NAIL FND
RW = 522+96.43, 223.36' LT
522+96.48, 223.05' LT — 3/4" O.D. IRON PIPE FND
DETAIL B
522+59.62, 282.63' LT — PK NAIL FND
522+88.08 224.30' LT
523+45.99 271.51' LT
523+40.10 188.70' LT
N 88°50'58" E 86.94'
523+95.00 120.00' LT
N 33°06'34" E 258.79'
523+57.52 93.98' LT
S 45°30'09" W 84.84'
523+82.64 89.00' LT
S 33°53'28" W 295.19'
524+67.65 75.00' LT
S 48°01'48" W 25.17'
527+67.19 75.00' LT
S 31°26'09" W 197.18'
529+67.24 73.99' LT
530+62.21 73.11' LT
530+15.49
532+43.93
532+70.32
522+89.07 190.00' LT N 38°21'02" E
522+33.24 154.71' LT
522+98.98 129.06' LT
32.13'
522+84.98 100.00' LT
522+57.24 11.15' 75.00' LT
522+80.15 89.90' LT
S 27°11'57" E
S 74°28'29" W 65.19'
S 27°17'57" E
S 04°16'17" W 27.03'
521+35.00 190.00' LT N 50°48'08" W 88.00'
521+35.00 102.00' LT N 37°46'13" E 323.83'
147.12'
520+18.78 85.00' LT S 43°10'45" W 62.60'
521+33.78 75.00' LT S 44°53'26" W 113.67'
S 38°31'56" W 121.68'
N 38°33'49" E 176.47'
529+18.16 140.00' LT
N 27°46'14" E 142.90'
530+65.00 145.00' LT
N 29°16'19" E 251.78'
S 30°03'46" W 93.64'
N 27°01'07" E 199.44'
532+67.14 148.94' LT
S 15°43'28" W 158.69'
S 12°40'06" E 63.70'
N 27°53'37" E 1464.87'
N 27°55'00" E 1937.48'
PT STA 531+21.35
PT STA 531+62.66

14 S 54°05'13" E 94.33'
15 N 54°05'13" W 34.32'
16 N 41°58'13" W 34.64'
17 N 44°10'50" E 8.05'

MATCHLINE I.R. 75 STA 519+50, SEE SHEET 40

PT STA 36+95.90 POT STA 36+95.90

SUMMIT RD

DETAIL A
35+67.96* 80.00' RT
37+19.47* 24.88' RT
40+98.76* 24.99' RT
40+47.97* 29.64' RT
40+55.80* 24.99' RT
N 36°44'22" E 717.64'
43+72.99* 39.71' RT
43+10.99* 108.18' RT
43+93.54* 24.98' RT
44+15.49* 25.00' RT
45+36.50* 25.00' RT
47+33.77* 36.18' RT
PT STA 47+32.61
N 76°22'48" E 267.39'
EQUATION: STA 44+13.54 BK = PC STA 44+15.49 AH

36+96.70, 64.32' RT* — 2" O.D. IRON PIPE FND
39+72.05, 140.97' RT* — 3/4" I PIPE FND
40+18.04, 162.76' RT* — 1/2" REBAR FND
36+65.27, 260.36' RT* — 5/8" REBAR FND
39+55.17, 234.63' RT* — 5/8" REBAR FND
48+34.87, 32.90' RT* — 3/4" I PIPE FND
48+84.20, 33.84' RT* — 1/2" REBAR FND
533+40.04 136.28' RT

ALL STATIONS & OFFSETS ARE FROM THE ℄ OF R/W I.R. 75 UNLESS OTHERWISE NOTED.
* - STATIONS BASED ON ℄ OF R/W OF SUMMIT RD

DETAIL A (NOT TO SCALE)

END ACQUISITION STA 532+67.14 SLM 10.09
END WORK STA 532+45.99

ACCESS EASEMENT PB 292, PG 42-43
ACCESS EASEMENT OR 11810, PG 974
ACCESS EASEMENT OR 6014, PG 1454 PB 292, PG 42-43
15' SANITARY SEWER EASEMENT DB 5143, PG 1498
CHANNEL EASEMENT DB 2265, PG 361 DB 2380, PG 620
EASEMENT FOR HIGHWAY PURPOSES OR 5106, PG 1166
20' STORM SEWER EASEMENT OR 4037, PG 455
CANAL LAND LEASE FOR ELEC TRANSMISSION/ POLE LINE AND EQUIPMENT CINCINNATI GAS AND ELECTRIC COMPANY LEASE (M-574) J.R. 30, PG 291
WATERLINE EASEMENT DB 2535, PG 223
FORMER MIAMI & ERIE CANAL
WATERLINE EASEMENT SOUTHWESTERN OHIO WATER CO FOR 30" WATERLINE UNDER MILL CREEK IN THE CANAL LANDS DB 4222, PG 1280

STATE OF OHIO PARCEL 708-WL (FEE) DB 4037, PG 545 — A
STATE OF OHIO PARCEL 710-WL (FEE) DB 4037, PG 539 — B

LOT 1 LOT 2 LOT 3 LOT 4 LOT 5 LOT 6 LOT 7 LOT 8 LOT 9 LOT 53 LOT 58 LOT 59 LOT 120 LOT 119 LOT 118 LOT 117 LOT 46 LOT 45 LOT 44 LOT 43 LOT 42 LOT 41 LOT 32 LOT 31

242-0002-0106-00 — INDUSTRIAL (94) — CITYCENTRE PROPERTIES, LLC 125 CITY CENTRE DR
590-0062-0259-00
590-0062-0261-00 — CITY OF CINCINNATI SPRINGFIELD TWP
242-0001-0036-00 — CITYCENTRE PARK SUBDIVISION PB 292, PG 42 & 43
590-0062-0122-00 — RESIDENTIAL (99) — MARY H. LUCAS 590-0062-0123-00 1341 MCCLURE AVE
COMMERCIAL (96) — MS HOLDINGS, LLC 242-0001-0035-00 120 CITY CENTRE DR
COMMERCIAL (110)
RESIDENTIAL (111) — DESALVO CONST CO 590-0062-0001-00 1350 SUMMIT RD (ALL IN EX R/W)
COMMERCIAL (103) — DAVID KREUZMANN 590-0062-0005-00 1265 SECTION RD
INSTITUTIONAL (112)

SECTION RD
WOODLAND AVE
McCLURE AVE
SU-3
SU-4

℄ R/W I.R. 75
℄ CONST. I.R. 75
℄ R/W SUMMIT RD
CITY OF CINCINNATI SPRINGFIELD TWP

RES (93) AMERICAN BUS AND ACCESSORIES, INC. 242-0002-0102-00 123 CITY CENTRE DR
RES (95) ANDRE C. ANDERSON 590-0062-0143-00 1242 SECTION RD
RES (97) LLOYD F. COFFEY AND JANICE H. COFFEY 590-0062-0103-00 1287 WOODLAND AVE
RES (98) JAMES A. SNEED AND CAROLYN SNEED 590-0062-0120-00 1290 WOODLAND AVE
RES (100) PHILIP G. HOGAN AND PATRICIA A. HOGAN 590-0062-0112-00 1331 SUMMIT RD
RES (101) MARILYN J. NADLER 590-0062-0111-00 1341 SUMMIT RD
RES (102) ALMA REAL ESTATE INVESTORS 590-0062-0110-00 1351 SUMMIT RD
COMM (110) MS HOLDINGS II, LLC 242-0001-0017-00
(112) THE NEW PROSPECT BAPTIST CHURCH 590-0062-0256-00 1580 SUMMIT RD
(114) DESALVO CONST CO. NO PARCEL NUMBER
RES (212) RAYCHEL M. SCHORK 590-0062-0144-00 1248 SECTION RD
RES (213) KENNETH VORDGM ESCHE AND KAREN VORDGM ESCHE 590-0062-0102-00 1293 WOODLAND AVE
RES (214) SHAYNEE DIAJHA LASHAY SCOTT 590-0062-0125-00 1298 WOODLAND AVE

REV. BY	DATE	DESCRIPTION
BLM	1-28-20	CHANGED PARCEL 96WD1, REMOVED PARCEL 96TV2
BLM	11-18-19	ADDED PARCELS 96TV2, 96TV3, 96U, 96S, 96WDV1
BER	2-11-19	REVISED PARCEL 97 TO WDV
BER	10-23-18	REVISED PARCELS 95, 97 & 98 TO TOTAL TAKE
SEA	12-30-16	ADDED LEAD IN FOR PARCEL 95-T
SEA	2-3-16	CHANGED PARCEL 94-TV TO 94-T1
SEA	1-22-16	CHANGED PARCEL 96-TV TO 96-T1
DATE COMPLETED		4/18/2014

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

PID NO. 77889
R/W DESIGNER JMM
R/W REVIEWER EJM

RIGHT OF WAY BOUNDARY SHEET
STA 519+50 TO STA 534+00

HAM-75-7.85

42 / 52

1701 2017

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FOR INFORMATIONAL ONLY

NOTE:
FOR PARCEL 94 WDV, 94 T1, 95 WL,
96 WDV, 96 T1, 97 WD AND 98 WL
PLAN LAYOUTS SEE SHEET 42

PARCEL 94 WDV DETAIL TABLE

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
1	522+99.32	223.04' LT	1-2	S 44°10'50" W	5.41'
2	522+93.70	223.67' LT	2-3	N 68°23'27" W	33.45'
3	522+84.09	255.85' LT	3-4	N 21°36'33" E	5.00'
4	522+89.15	257.22' LT	4-1	S 68°23'27" E	35.53'

PARCEL 94 T1 DETAIL TABLE

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
2	522+93.70	223.67' LT	2-9	S 44°10'50" W	5.41'
9	522+88.08	224.30' LT	9-10	N 68°23'27" W	31.38'
10	522+79.04	254.47' LT	10-3	N 21°36'33" E	5.00'
3	522+84.09	255.85' LT	3-2	S 68°23'27" E	33.45'

PARCEL 96 WDV DETAIL TABLE

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
5	523+08.30	222.00' LT	5-6	N 68°23'27" W	38.86'
6	522+97.25	259.40' LT	6-7	N 21°36'33" E	5.00'
7	523+02.31	260.76' LT	7-8	S 68°23'27" E	40.94'
8	523+13.92	221.35' LT	8-5	S 44°10'50" W	5.41'

PARCEL 96 T1 DETAIL TABLE

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
6	522+97.25	259.40' LT	6-11	N 68°23'27" W	7.18'
11	522+95.19	266.31' LT	11-12	N 21°36'33" E	11.00'
12	523+06.35	269.30' LT	12-13	S 68°23'27" E	50.61'
13	523+20.65	220.56' LT	13-8	S 44°10'50" W	6.50'
8	523+13.92	221.35' LT	8-7	N 68°23'27" W	40.94'
7	523+02.31	260.76' LT	7-6	S 21°36'33" W	5.00'

PARCEL 95 WL DETAIL TABLE
(STATIONS & OFFSETS ARE FROM THE ℄ OF R/W OF SUMMIT RD)

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
18	37+06.39	15.28' RT	18-20	N 47°55'42" E	137.27'
19	37+54.77	24.85' RT	-	-	-
20	38+41.04	41.91' RT	20-22	S 39° 40' 47" E	50.04'
21	38+37.26	57.58' RT	-	-	-
22	38+29.29	90.55' RT	22-23	S 47° 55' 42" W	135.27'
23	36+96.70	64.32' RT	23-18	N 41°58'13" W	50.00'
24	37+02.61	34.18' RT	-	-	-

PARCEL 97 WD DETAIL TABLE
(STATIONS & OFFSETS ARE FROM THE ℄ OF R/W OF SUMMIT RD)

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
25	38+64.40	19.09' LT	25-26	N 63°37'42" E	139.29'
26	39+88.63	43.91' RT	26-27	S 31°47'24" E	6.99'
27	39+86.07	50.42' RT	27-28	S 43° 52' 16" E	43.00'
28	39+79.05	92.84' RT	28-21	S 50° 42' 18" W	146.11'
21	38+37.26	57.58' RT	21-29	N 39° 40' 47" W	27.85'
20	38+41.04	41.91' RT	-	-	-
29	38+43.80	30.50' RT	29-25	N 30°42'18" W	53.70'

PARCEL 98 WL DETAIL TABLE
(STATIONS & OFFSETS ARE FROM THE ℄ OF R/W OF SUMMIT RD)

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
35	40+52.41	17.59' RT	35-30	N 45°51'33" E	74.60'
30	41+26.37	29.42' RT	30-31	S 43°52'16" E	8.50'
31	41+24.98	37.80' RT	31-32	N 45°51'33" E	45.00'
32	41+69.41	44.94' RT	32-33	S 43°52'16" E	40.00'
33	41+62.89	84.40' RT	33-34	S 45°51'33" W	130.00'
34	40+34.54	63.80' RT	34-35	N 31°47'24" W	49.65'

AREAS OF OVERLAP WITH EXISTING EASEMENTS

PARCEL 96-SV
0.028 ACRES OF CHANNEL EASEMENT OVERLAP, (D.B. 2380, PG. 620)
0.029 ACRES OF ACCESS EASEMENT OVERLAP, (O.R. 6014, PG 545;
P.B. 292, PG. 42-43; O.R. 11810, PG. 974)

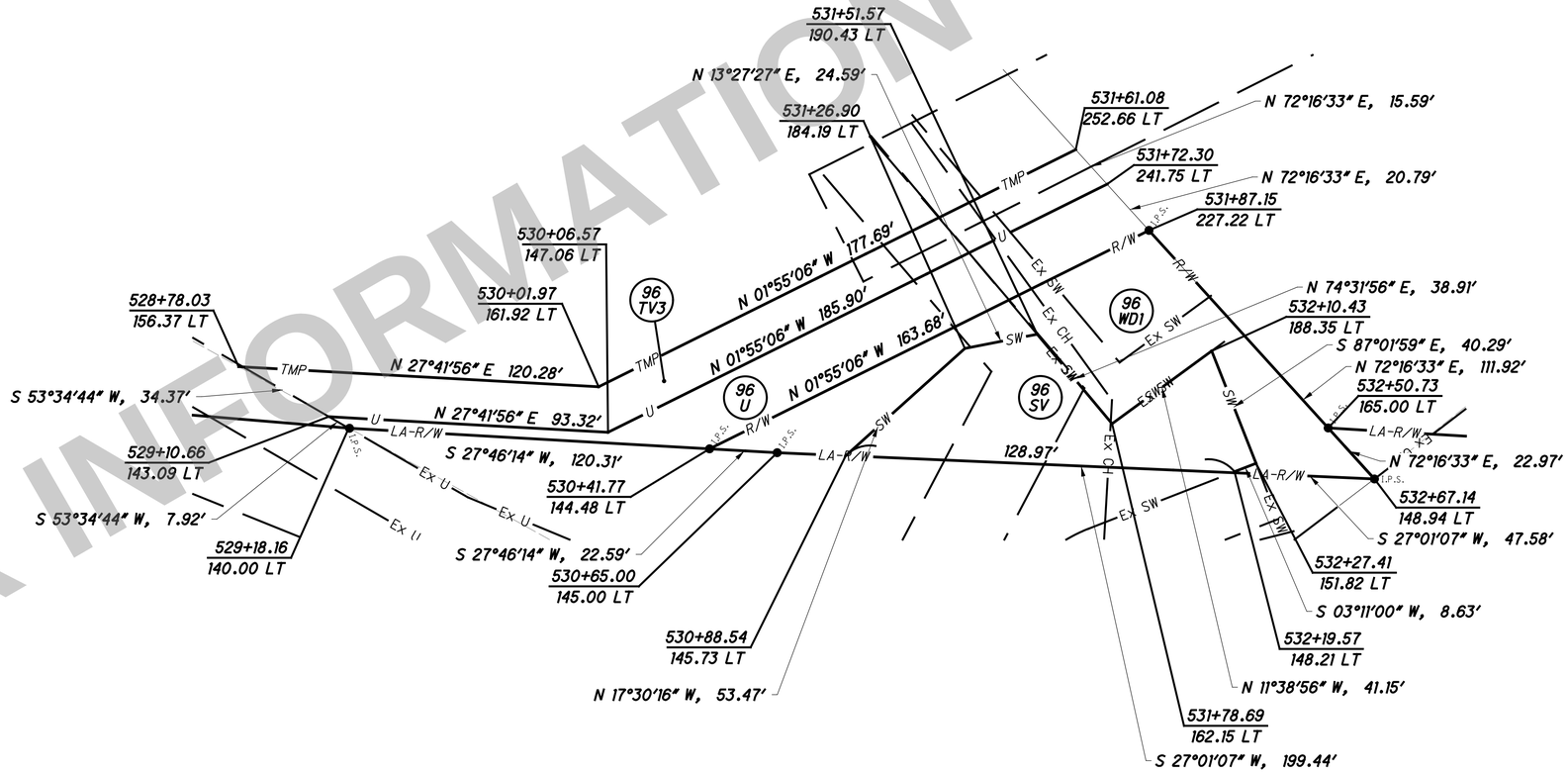
PARCEL 96-TV3
0.005 AC. OF SAN. SEWER EASEMENT T.B.A. (D.B. 5143, P. 1498)
0.014 AC. OF CHANNEL EASEMENT T.B.A. (D.B. 2380, P. 620)
0.007 AC. OF ACCESS EASEMENT T.B.A. (O.R. 6014, P. 545;
P.B. 292, PP. 42-43; O.R. 11810, P. 974)
0.015 AC. OF HIGHWAY EASEMENT T.B.A. (D.B. 5106, P. 1166)

PARCEL 96-U
0.007 AC. OF SAN. SEWER EASEMENT T.B.A. (D.B. 5143, P. 1498)
0.020 AC. OF CHANNEL EASEMENT T.B.A. (D.B. 2380, P. 620)
0.009 AC. OF ACCESS EASEMENT T.B.A. (O.R. 6014, P. 545;
P.B. 292, PP. 42-43; O.R. 11810, P. 974)

PARCEL 96-WD1
0.031 AC. OF SAN. SEWER EASEMENT T.B.A. (D.B. 5143, P. 1498)
0.106 AC. OF CHANNEL EASEMENT T.B.A. (D.B. 2380, P. 620)
0.035 AC. OF ACCESS EASEMENT T.B.A. (O.R. 6014, P. 545;
P.B. 292, PP. 42-43; O.R. 11810, P. 974)
0.001 AC. OF STORM SEWER EASEMENT T.B.A. (O.R. 4037, P. 455)

CURVE 75-5	CURVE X75-5	CURVE SU-3	CURVE SU-4
PI STA 523+96.89	PI STA 524+37.18	PI STA 34+06.86	PI STA 45+80.70
Δ = 16°02'37" (LT)	Δ = 16°04'00" (LT)	Δ = 6°12'57" (LT)	Δ = 39°38'26" (RT)
Dc = 1°06'00"	Dc = 1°06'00"	Dc = 1°04'27"	Dc = 12°30'00"
R = 5,208.71'	R = 5,208.71'	R = 5,333.71'	R = 458.37'
T = 734.06'	T = 735.13'	T = 289.60'	T = 165.21'
L = 1,458.52'	L = 1,460.61'	L = 578.64'	L = 317.12'
E = 51.47'	E = 51.62'	E = 7.86'	E = 28.86'
C = 1,453.75'	C = 1,455.83'	C = 578.35'	C = 310.84'
C.B. = N 35°56'18" E	C.B. = N 35°55'37" E	C.B. = N 40°51'09" E	C.B. = N 56°33'35" E

NOTE:
PARCEL 96-U AND 96-TV3 SHALL BE ACQUIRED IN THE NAME OF SOUTHWESTERN OHIO WATER COMPANY.



DETAIL C
(NOT TO SCALE)

ALL STATIONS & OFFSETS ARE FROM THE ℄ OF R/W I.R. 75 UNLESS OTHERWISE NOTED.

REV. BY	DATE	DESCRIPTION
BLM	1-28-20	CHANGED PARCELS 96WD1, REMOVED PARCEL 96TV2
BLM	11-18-19	ADDED PARCELS 96TV2, 96TV3, 96U, 96S, 96WDV1
BER	10-23-18	CHANGED PARCEL 95 T TO 95 WL ADDED PARCELS 97 WL & 98 WL
SEA	2-3-16	CHANGED PARCEL 94 TV TO 94 T1 CHANGED PARCEL 96 TV TO 96 T1
SEA	7-25-14	ADDED PARCEL 95 T
DATE COMPLETED		4/18/2014

PID NO. 77889
R/W DESIGNER JMM
R/W REVIEWER EJM

RIGHT OF WAY DETAIL TABLES

HAM-75-7.85

43 / 52

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2017

FOR INFORMATION ONLY

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HAMILTON COUNTY
MILL CREEK TOWNSHIP
SEC 11 TOWN 3, FRAC RANGE 2
CITY OF ST BERNARD AND
CITY OF CINCINNATI

PLAT IN PARTITION OF THE JOHN ROSS ESTATE CASE #166637 HAMILTON COUNTY COMMON PLEAS COURT DB 601, PG 222

JOB HUFFMAN'S EST. PB 5, PG 32

LOT 28

SLOPE EASEMENT

INDUSTRIAL (12) JLMM HOLDINGS, LLC 118-0003-0004-00 925 LAIDLAW AVE

LOT 2 LOT 1

REGISTERED LAND CERT #201209

PIPELINE EASEMENT

PROP GUARDRAIL

CONST LIMIT

NORFOLK SOUTHERN RAILWAY COMPANY 118-0003-0016-00, 118-0003-0018-00 118-0004-0008-00, 118-0003-0011-00 118-0004-0025-00, 118-0004-0026-00

RAILROAD (199)

PT STA 134+11.50
N 06°55'01" E
241.04'

20' RAILROAD EASEMENT

CINCINNATI CHEMICAL WORKS INC. SUBDIVISION PB 71, PG 9

LOT 3

5' ELECTRIC EASEMENT THE CINCINNATI GAS & ELECTRIC COMPANY

LOT 3 LOT 4

PI 132+73.63 MLP
N 01°11'32" E
111.40'

INDUSTRIAL (200) WARBRO REALTY LLC 118-0004-0030-00 4815 PARA DR

CONST LIMITS

ASPHALT PARKING

REMOVE BILLBOARDS (ADC #35619 & #35672)

PI 131+62.23 MLP

N 04°31'57" W 72.99'

HIGHWAY EASEMENT

PT 130+89.24 MLP

S 83°42'50" E 3048.47'

℄ R/W S.R. 562

S.R. 562

℄ CONST RAMP N

℄ CONST RAMP J

PROP BARRIER

ENCROACHMENT (352' OF FENCE, 24' OF PARKING LOT)

PROP MEDIAN BARRIER

REMOVE BILLBOARDS (ADC #35620 & #35621)

REMOVE 192' OF PARKING LOT

PARA DR

META DR

INDUSTRIAL (202) SINKRO PROPERTY HOLDING LIMITED 118-0002-0083-00 1005 META DR

LOT 5

WATERLINE EASEMENT

25' UTILITY EASEMENT

BLD CORNER 0.7' N OF EX R/W

DND BUILDING

CONC

BRUSH

LAWN

ASPHALT PARKING

CHAIN LINK

WOODED

AMBROSE HUFFMAN PB 1, PG 42

LOT3

LOT 6

INDUSTRIAL (201) RHODIA INC. 118-0004-0028-00 4803 PARA DR

END ACQUISITION STA 22+23.16 SLM 0.42

30' INGRESS/EGRESS EASEMENT & SEWER EASEMENT

CURVE NS-1
PI STA 129+63.15
Δ = 76°56'00" (RT)
Dc = 7°00'00" (CHORD)
R = 819.02'
T = 650.70'
L = 1,099.05'
E = 227.02'
C = 1,018.96'
C.B. = N 25°48'24" W

CURVE MPL-1
PI 129+55.19
Δ = 27°22'42" (RT)
Dc = 10°00'00" (CHORD)
R = 573.69'
T = 139.73'
L = 273.78'
E = 16.77'
C = 271.53'
C.B. = N 18°13'18" W

PC 128+15.46 MLP
N 31°54'39" W
80.95'

PI 127+34.51 MLP
N 37°38'08" W
41.40'

PT 126+93.11 MLP = 126+93.10, 0.06 LT

1 ℄ R/W S.R. 562 17+02.09 = ℄ R/W NS RR 130+30.26

2 ℄ R/W S.R. 562 17+02.59 = ℄ PROP MAIN NS RR 130+30.89

1 CONC MONUMENT W/ PROCTER & GAMBLE DISK FND

2 1/2" REBAR W/#6549 CAP FND

3 5/8" REBAR FND

4 1/2" REBAR W/#6549 CAP FND

10' PIPELINE EASEMENT

CITY OF CINCINNATI
CITY OF ST. BERNARD

10' PIPELINE EASEMENT DB 2898, PG 215

MATCHLINE STA 9+50 SEE SHEET 22

MATCHLINE STA 23+50 SEE SHEET 46

FOR INFORMATION ONLY

REV. BY	DATE	DESCRIPTION
SEA	1-22-16	REVISED OWNERSHIPS 199 & 200
DATE COMPLETED	4/18/2014	

HORIZONTAL SCALE IN FEET 0 25 50 100

PID NO. 77889

R/W DESIGNER JMM
R/W REVIEWER EJM

RIGHT OF WAY TOPO SHEET
STA 9+50 TO STA 23+50

HAM-75-7.85

44 / 52

1703 2017

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HAMILTON COUNTY
MILL CREEK TOWNSHIP
SEC 11 TOWN 3, FRAC RANGE 2
CITY OF ST BERNARD AND
CITY OF CINCINNATI

FOR INFORMATION ONLY

PLAT IN PARTITION OF THE JOHN ROSS ESTATE CASE #166637 HAMILTON COUNTY COMMON PLEAS COURT DB 601, PG 222

JOB HUFFMAN'S EST. PB 5, PG 32

421+16.72 (I.R. 75)
295.83' RT

SLOPE EASEMENT STATE OF OHIO DB 2906, PG 258

INDUSTRIAL (12)
JLMM HOLDINGS, LLC
118-0003-0004-00
925 LAIDLAW AVE

RAILROAD (199)

NORFOLK SOUTHERN RAILWAY COMPANY
118-0003-0016-00, 118-0003-0018-00
118-0004-0008-00, 118-0003-0011-00
118-0004-0025-00, 118-0004-0026-00

118-0004-0025-00

LOT 2
LOT 1

11+70.00
275.00' LT

REGISTERED LAND CERT #201209

PIPELINE EASEMENT SOHIO PETROLEUM COMPANY (NO WIDTH) CENTERED ON LINE AS INSTALLED DB 2905, PG 294 (APPROX LOCATION)

13+20.00
140.00' LT

S 77°33'41" E 88.44'
13+98.92
114.48' LT

N 65°47'38" W 95.81'
14+90.08
85.00' LT

14+86.85
105.00' LT

S 02°52'34" E 20.26'
PI 131+62.23 MLP
S 84°45'34" E 219.19'
N 04°31'57" W 72.99'
N 83°42'50" W 216.67'

PT 130+89.24 MLP

PT STA 134+11.50
N 06°55'01" E 241.04'

CINCINNATI CHEMICAL WORKS INC. SUBDIVISION PB 71, PG 9

20' RAILROAD EASEMENT DB 238, PG 60 DB 2938, PG 107 PB 71, PG 9-10

5' ELECTRIC EASEMENT THE CINCINNATI GAS & ELECTRIC COMPANY DB 2905, PG 454

PI 132+73.63 MLP
N 01°11'32" E 111.40'

LOT 3
LOT 4

INDUSTRIAL (200)
WARBRO REALTY LLC
118-0004-0030-00
4815 PARA DR

25' UTILITY EASEMENT STATE OF OHIO OR 11803, PG 1126

SEE DETAIL 1

S 80°15'25" E 444.80'
N 82°36'12" W 444.83'

17+24.24
27.15' LT

S 33°39'48" E 100.21'

℄ R/W S.R. 562

S 83°42'50" E 3048.47'

S.R. 562

21+50.00
82.18' LT

22+22.18
80.78' LT

22+22.02, 81.52' LT
1/2" REBAR W/#6549 CAP FND

22+62.14
79.78' LT

N 82°17'04" W 39.97'

META DR

INDUSTRIAL (202)
SINKRO PROPERTY HOLDING LIMITED
118-0002-0083-00
1005 META DR

LOT 5

WATERLINE EASEMENT CITY OF CINCINNATI DB 2875, PG 459

PARA DR

LOT 3

LOT 6

AMBROSE HUFFMAN PB 1, PG 42

30' INGRESS/EGRESS EASEMENT & SEWER EASEMENT THE DAVIDSON CHEMICAL CORPG DB 2373, PG 397 DB 2234, PG 353

DETAIL 1

S 81°01'29" E 5.21'
17+02.87
100.48' LT
17+06.01
109.00' LT
444.80'
17+08.07
100.24' LT
444.83'
17+05.26
90.80' LT
17+06.75
85.00' LT
RWC1 RWC2 RWC3 RWC4 RWC5 RWC6

1 ℄ R/W & CONST S.R. 562 17+02.09 = ℄ R/W NS RR 130+30.26

5 ℄ R/W S.R. 562 17+02.59 = ℄ PROP MAIN NS RR 130+30.89

1 14+87.11, 86.57' LT
CONC MONUMENT W/PROCTER & GAMBLE DISK FND

2 17+04.81, 91.82' LT
1/2" REBAR W/#6549 CAP FND

3 PROPERTY CORNER = 18+09.81, 89.88' RT
18+10.29, 89.60' RT
5/8" REBAR FND

PIPELINE EASEMENT SOHIO PETROLEUM COMPANY (NO WIDTH) CENTERED ON LINE AS INSTALLED DB 2905, PG 294 (APPROX LOCATION)

HIGHWAY EASEMENT DB 2942, PG 391

15+27.00
72.00' RT
15+44.15
110.00' RT
15+58.61
142.05' RT

S 83°42'50" E 273.37'
N 18°00'01" W 41.69'
N 83°42'50" W 274.15'

NORFOLK SOUTHERN RAILROAD

17+35.40
337.38' RT

17+88.59
49.67' RT
16.33'
N 21°32'08" W 29.13'
17+96.21
64.11' RT
25.25'
20.21'
18+00.37
72.00' RT
N 21°32'08" W 6.37'
N 16°36'01" W 122.99'

18+06.83
84.24' RT

HIGHWAY EASEMENT DB 2953, PG 591

118-0004-0032-00
S 83°42'50" E
S 81°00'52" E 427.43'
Ex LA-R/W
243.17'
173.16'
S 89°56'32" W 233.13'
21.84'
18+18.30
110.00' RT
20+50.00
84.24' RT
22+23.16
84.24' RT
22+32.92
73.35' RT
22+32.98
84.70' RT

S 30°09'43" E 87.02'
18+70.00
180.00' RT
S 11°23'30" W 43.48'
18+66.13
223.30' RT

INDUSTRIAL (201)
RHODIA INC.
118-0004-0028-00
4803 PARA DR

END ACQUISITION STA 22+23.16 SLM 0.42

LOT3

LOT 6

118-0004-0026-00

PC 128+15.46 MLP
N 31°54'39" W 80.95'
PI 127+34.51 MLP
N 37°38'08" W 41.40'
PT 126+93.11 MLP = 126+93.10, 0.06' LT

118-0004-0008-00

10' PIPELINE EASEMENT DB 2888, PG 603

10' PIPELINE EASEMENT DB 2898, PG 215

CITY OF CINCINNATI
CITY OF ST. BERNARD

MATCHLINE STA 9+50 SEE SHEET 23

MATCHLINE STA 23+50 SEE SHEET 47

CURVE NS-1

PI STA 129+63.15
Δ = 76°56'00" (RT)
Dc = 7°00'00" (CHORD)
R = 819.02'
T = 650.70'
L = 1,099.05'
E = 227.02'
C = 1,018.96'
C.B. = N 25°48'24" W

CURVE MPL-1

PI 129+55.19
Δ = 27°22'42" (RT)
Dc = 10°00'00" (CHORD)
R = 573.69'
T = 139.73'
L = 273.78'
E = 16.77'
C = 271.53'
C.B. = N 18°13'18" W

PARCEL 200 T DETAIL TABLE

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
2	17+06.01	109.00' LT	2-3	SEE CURVE RWRC4 DATA	
3	16+89.69	210.00' LT	3-4	S 10°17'20" E	106.26'
4	17+20.00	108.15' LT	4-2	N 80°15'25" W	14.02'

RW CURVE DATA

CURVE	Δ	RADIUS	ARC LENGTH	CHORD LENGTH	CH BEARING
RWC1	00°43'26"	789.02'	9.97'	9.97'	N 07°32'58" W
RWC2	00°39'29"	784.02'	9.00'	9.00'	N 06°57'52" W
RWC3	01°09'32"	789.02'	15.96'	15.96'	N 07°46'01" W
RWC4	07°28'56"	784.02'	102.38'	102.31'	N 02°53'40" W
RWC5	04°49'28"	789.02'	66.44'	66.42'	S 10°19'25" E
RWC6	00°26'06"	789.02'	5.99'	5.99'	S 08°07'44" E

ALL STATIONS & OFFSETS ARE FROM THE ℄ OF R/W S.R. 562 UNLESS OTHERWISE NOTED.

REV. BY	DATE	DESCRIPTION
SEA	1-22-16	REVISED OWNERSHIPS 199 & 200
DATE COMPLETED	4/18/2014	

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

PID NO. 77889

R/W DESIGNER JMM
R/W REVIEWER EJM

RIGHT OF WAY BOUNDARY SHEET
STA 9+50 TO STA 23+50

HAM-75-7.85

45 / 52

1704 2017

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HAMILTON COUNTY
MILL CREEK TOWNSHIP
SEC 11 TOWN 3, FRAC RANGE 2
CITY OF CINCINNATI

META DR
Ex R/W
CINCINNATI CHEMICAL WORKS INC. SUBDIVISION
PB 71, PG 9
3/4" I PIPE FND
FRANKLIN AVE
LOT 5
AMBROSE HUFFMAN
PB 1, PG 42
CORINTH AVE
5/8" REBAR FND
1/2" REBAR FND
1" I PIPE FND
118-0002-0014-00
ROBERT MINSHAL
SUBDIVISION
CASE NO 48495
BK 375, PG 231
COMMON PLEAS COURT
LOT 6
WOODED
LAWN
CONC
ASPH
BLD CORNER
0.2' N OF EX R/W
CONST LIMITS
RAMP P
EX RAMP P
END WORK
STA 44+07.00
℄ R/W S.R. 562 37+91.43 =
℄ R/W S.R. 4 9+89.34
S.R. 4
PADDOCK RD
℄ R/W S.R. 562
PROP MEDIAN BARRIER
24" B
18" RCP
S 83°42'50" E 3048.47'
S.R. 562
374' OF CONC WALK ENCROACHING
6 UTILITY POLES ENCROACHING
MATCH LINE STA 23+50 SEE SHEET 44
CONC WALK
CONC MONUMENT W/1" BRASS DISK FND
(DISTURBED)
PROP GUARDRAIL
RAMP Q
EX RAMP Q
ASPHALT DRIVE
TS STA 34+77.96
SC STA 36+77.96
562-1
LAWN

INDUSTRIAL
202
SINKRO PROPERTY HOLDING LIMITED
118-0002-0083-00
1005 META DR

INDUSTRIAL
203
LIBERTY REAL ESTATE ENTERPRISES, LLC
118-0002-0084-00
1031 META DR

INDUSTRIAL
204
INDUSTRIAL ENVIRONMENTS, LLC
118-0002-0085-00
118-0002-0089-00
1045, 1057 META DR

INDUSTRIAL
206
CSSI REAL ESTATE, LLC
118-0002-0086-00
1101 META DR

DND BUILDING

207 LIANE REYES
118-0002-0052-00
4815 CORINTH AVE

209 YOLANNDA WARE AND THOMAS P. KOENINGER
118-0002-0026-00,
118-0002-0030-00
1131 FRANKLIN AVE

210 BONNIE LEE JAMISON
118-0002-0028-00
1137 FRANKLIN AVE

211 APEX PROPERTIES INVESTMENT GROUP, LLC
118-0002-0016-00,
118-0002-0034-00
4817, 4825 PADDOCK RD

RESIDENTIAL 207
RESIDENTIAL 209
RESIDENTIAL 210
RESIDENTIAL 211

INDUSTRIAL
201
RHODIA INC.
118-0004-0028-00
4803 PARA DR

INDUSTRIAL
205
DIAMOND ALKALI COMPANY
131-0005-0001-00
131-0005-0002-00
4709, 4731 PADDOCK RD

INDUSTRIAL
208
LITSAN LIMITED PARTNERSHIP
131-0005-0045-00
4731 PADDOCK RD

AMBROSE HUFFMAN
PB 1, PG 42
LOT 6

CURVE 562-1
PI STA 41+42.83
Δ = 27°41'00" (RT)
Dc = 2°30'00"
R = 2,291.83'
Ls = 200.00'
θs = 2°30'00"
LT = 133.35'
ST = 66.68'
x = 199.96'
y = 2.91'
k = 99.99'
p = 0.73'
Lc = 907.33'
Ts = 664.87'
Es = 69.29'
C = 901.42'
C1 = C2 = 199.98'
C.B. 1 = S 82°52'50" E
C.B. 2 = S 56°51'50" E

ALL STATIONS & OFFSETS ARE FROM THE ℄ OF R/W S.R. 562 UNLESS OTHERWISE NOTED.

FOR INFORMATION ONLY

REV. BY	DATE	DESCRIPTION
DATE COMPLETED	4/18/2014	

HORIZONTAL SCALE IN FEET
0 25 50 100

PID NO 77889
R/W DESIGNER JMM
R/W REVIEWER EJM

RIGHT OF WAY TOPO SHEET
STA 23+50 TO STA 38+00
HAM-75-7.85

46 / 52
1705
2017

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HAMILTON COUNTY
MILL CREEK TOWNSHIP
SEC 11 TOWN 3, FRAC RANGE 2
CITY OF CINCINNATI

META DR

CINCINNATI CHEMICAL WORKS INC. SUBDIVISION
PB 71, PG 9

INDUSTRIAL (202)
SINKRO PROPERTY HOLDING LIMITED
118-0002-0083-00
1005 META DR

INDUSTRIAL (203)
LIBERTY REAL ESTATE ENTERPRISES, LLC
118-0002-0084-00
1031 META DR

INDUSTRIAL (204)
INDUSTRIAL ENVIRONMENTS, LLC
118-0002-0085-00
118-0002-0089-00
1045, 1057 META DR

INDUSTRIAL (206)
CSSI REAL ESTATE, LLC
118-0002-0086-00
1101 META DR

(207) LIANE REYES
118-0002-0052-00
4815 CORINTH AVE

(209) YOLANNDA WARE AND THOMAS P. KOENINGER
118-0002-0026-00,
118-0002-0030-00
1131 FRANKLIN AVE

(210) BONNIE LEE JAMISON
118-0002-0028-00
1137 FRANKLIN AVE

(211) APEX PROPERTIES INVESTMENT GROUP, LLC
118-0002-0016-00,
118-0002-0034-00
4817, 4825 PADDOCK RD

FRANKLIN AVE

LOT 5 AMBROSE HUFFMAN
PB 1, PG 42

CORINTH AVE

118-0002-0014-00

RESIDENTIAL (207)
RESIDENTIAL (209)
RESIDENTIAL (210)
RESIDENTIAL (211)

ROBERT MINSHAL SUBDIVISION
CASE NO 48495
BK 375, PG 231
COMMON PLEAS COURT
LOT 6

LOT 5 | LOT 6 | LOT 7 | LOT 8

Ex R/W
Ex LA-R/W
Ex U

29+88.37, 382.06' LT
3/4" I PIPE FND

31+43.87, 324.36' LT
5/8" REBAR FND

31+93.79, 321.94' LT
1/2" REBAR FND

33+50.31
149.70' LT

31+94.56
156.90' LT

33+50.42
126.11' LT

34+10.42
126.39' LT

34+97.82
157.77' LT

35+83.09
173.79' LT

35+83.52, 173.82' LT
1" OD IRON PIPE FND

11+69.43 (SR 4)
104.33' LT

END WORK
STA 44+07.00

30+45.01
95.00' LT

30+45.09
81.85' LT

31+94.85
95.00' LT

31+94.80, 95.14' LT
1/2" REBAR FND

28+01.11
93.13' LT

26+02.31
71.29' LT

26+02.48, 70.39' LT
1/2" REBAR FND

MATCHLINE STA 23+50 SEE SHEET 45

℄ R/W S.R. 562

S 83°42'50" E 3048.47'

S.R. 562

℄ R/W S.R. 562 37+91.43 =
℄ R/W S.R. 4 9+89.34

℄ R/W S.R. 4

S.R. 4 PADDOCK RD

TS STA 34+77.96

SC STA 36+77.96

562-1

27+82.97, 99.12' RT
5/8" REBAR FND

27+83.09
99.97' RT

27+83.00, 99.46' RT
CONC MONUMENT W/1" BRASS DISK FND
(DISTURBED)

31+63.40
118.92' RT

31+62.71
133.90' RT

34+77.96
180.00' RT

36+77.96
220.00' RT

8+38.72 (SR 4)
30.00' LT

INDUSTRIAL (201)
RHODIA INC.
118-0004-0028-00
4803 PARA DR

INDUSTRIAL (205)
DIAMOND ALKALI COMPANY
131-0005-0001-00
131-0005-0002-00
4709, 4731 PADDOCK RD

INDUSTRIAL (208)
LITSAN LIMITED PARTNERSHIP
131-0005-0045-00
4731 PADDOCK RD

AMBROSE HUFFMAN
PB 1, PG 42

LOT 6

27+85.65, 514.00' RT
5/8" REBAR FND

CURVE 562-1

PI STA 41+42.83
Δ = 27°41'00" (RT)
Dc = 2°30'00"
R = 2,291.83'
Ls = 200.00'
θs = 2°30'00"
LT = 133.35'
ST = 66.68'
x = 199.96'
y = 2.91'
k = 99.99'
p = 0.73'
Lc = 907.33'
Ts = 664.87'
Es = 69.29'
C = 901.42'
C1 = C2 = 199.98'
C.B. 1 = S 82°52'50" E
C.B. = S 69°52'20" E
C.B. 2 = S 56°51'50" E

ALL STATIONS & OFFSETS ARE FROM THE ℄ OF R/W S.R. 562 UNLESS OTHERWISE NOTED.

REV. BY	DATE	DESCRIPTION
DATE COMPLETED	4/18/2014	

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

PID NO 77889

R/W DESIGNER JMM
R/W REVIEWER EJM

RIGHT OF WAY BOUNDARY SHEET
STA 23+50 TO STA 38+00

HAM-75-7.85

1706
2017

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HAMILTN COUNTY
MILL CREEK TOWNSHIP
SEC 11 TOWN 3, FRAC RANGE 2
CITY OF CINCINNATI AND
VILLAGE OF ELMWOOD PLACE

1. 3/4" OD IRON PIPE FND
2. 3/4" OD IRON PIPE FND
3. CONC MON W/PROCTER &GAMBLE DISK FND
4. CHISLED "X" FND
5. CHISLED "X" FND
6. 5/8" REBAR W/SPREEN #8238 CAP FND
7. 5/8" REBAR W/SPREEN #8238 CAP FND

POT STA. 17+63.03

MURRAY RD.

S 67°55'23" E 459.81'

INDUSTRIAL (15)
OH MIE, LLC
582-0002-L002-00

CITY OF ST. BERNARD
VILLAGE OF ELMWOOD PLACE
BLOODY RUN

SEWER EASEMENT

CONST. LIMITS

VILLAGE OF ELMWOOD PLACE
661-0003-0163 (19)

GUARDRAIL TYPE 5

RAILROAD (32)

ASPH DRIVE

ST 159+65.87 MLP

CS 159+03.87 MLP

PROSSER AVE.

YOST'S 2nd SUBDIVISION OF ELMWOOD
P.B. 13, PG. 66 & 67

DND 5 BUSHES

DND

DIRT DR

RAILROAD (22)

VILLAGE OF ELMWOOD PLACE
661-0003-0162 (20)

NSA-1 NOISEWALL

CONST. LIMITS

REMOVE BILLBOARD
(ADC #1414, #11415)

ANTHONY D. WOOD AND
ELIZABETH A. WOOD
661-0003-0097-00
5634 PROSSER ST (22A)

CURVE NS-2
P.I. STA. 151+55.06
Δ = 60°52'00" (LT)
Dc = 7°00'00" (CHORD)
R = 819.02'
T = 481.16'
L = 869.52'
E = 130.88'
C = 829.73'
C.B. = N 17°46'24" W

PT STA. 155+43.42

℄ CONST I.R. 75

PROP MEDIAN BARRIER

541.74'

℄ R/W I.R. 75

I.R. 75

℄ R/W I.R. 75 434+91.50 =
℄ R/W LAIDLAW AVE 22+22.84

℄ R/W I.R. 75 440+33.24 =
℄ R/W NS RR 155+20.29

℄ R/W I.R. 75 441+20.90 =
℄ PROP MAIN NS RR 155+79.79

℄ PROP MAIN NSRR

I.R. 75 (SB)

N 24°30'08" E

N 23°48'37" E 1228.90'
1770.64'

I.R. 75 (NB)

℄ R/W I.R. 75 452+62.14 =
℄ R/W TOWNE AVE 19+24.85

POT Sta. 19+85.16

S 80°56'23" E

TOWNE ST.

CONC. PAD

HIGHWAY EASEMENT

VILLAGE OF ELMWOOD PLACE

CITY OF CINCINNATI

SLOPE EASEMENT
STATE OF OHIO
D.B. 2098, PG. 366

CONST. LIMITS

INDUSTRIAL (24)

STATE OF OHIO,
AND ITS SUCCESSORS AND ASSIGNS,
FOR THE USE AND BENEFIT
OF THE BOARD OF TRUSTEES
OF THE UNIVERSITY OF
CINCINNATI
1117-0004-0261-00
5121 FISHWICK DR

EXPRESSWAY PARK SUBDIVISION BLOCK "B"
PB 186, PG 44 & 45
LOT 8

REMOVE LIGHTED
BILLBOARD
(ADC #11412, #11413)

S 67°55'23" E 506.93'

℄ R/W LAIDLAW AVE.

LAIDLAW AVE.

℄ R/W LAIDLAW AVE. 27+29.77 =
℄ R/W NW RR 147+63.42

℄ R/W LAIDLAW AVE. 27+34.52 =
℄ PROP MAIN NS RR 147+59.74

N 12°39'36" E
1262.40'

PC STA. 146+73.90

PC 147+43.23 MLP

80°34'59"

MARTHA RUFFNERS EST
PB 1, PG 233

SLOPE EASEMENT
STATE OF OHIO

117-0004-0240-00

117-0004-0242-00

BLOODY RUN SEWER

COMMERCIAL (16)

VIRGINIA HOLDING COMPANY (CORPORATION)
117-0004-0121-00

NORFOLK SOUTHERN RAILWAY COMPANY
117-0004-0196-00

℄ R/W NS RR

PT 151+12.79 MLP

N 18°45'11" W 158.05

NORFOLK SOUTHERN RR

34 TS 152+70.84 MLP
35 SC 153+32.84 MLP

ALL STATIONS & OFFSETS ARE FROM
THE ℄ OF RAILROAD R/W UNLESS OTHERWISE NOTED.

(18) STATE OF OHIO - MIAMI AND ERIE CANAL

(22) NORFOLK SOUTHERN RAILWAY COMPANY
661-0003-0094-00

(32) NORFOLK SOUTHERN RAILWAY COMPANY
661-0003-0075-00

(23) CITY OF CINCINNATI
NO PARCEL NUMBER

(33) DONNA BORGMANN
661-003-0093-00 (LOT 221)
661-003-0092-00 (LOT 222)
661-003-0091-00 (LOT 223)
5605 PROSSER AVE

RAILROAD STATIONING BASED ON RAILROAD VALUATION MAP TITLED "RIGHT OF WAY AND TRACK MAP NORFOLK AND WESTERN RY. CINCINNATI DISTRICT (SCIOTO DIV.) CINCINNATI BELT LINE STATION 105+60 TO STATION 158+40" DATED DECEMBER 1, 1965. RR MAP #V-18-0/151.

CURVE MLP-3
PI 149+32.96
Δ = 31°24'48" (LT)
Dc = 8°30'00" (CHORD)
R = 674.69'
T = 189.73'
L = 369.56'
E = 26.17'
C = 365.29'
C.B. = N 3°02'48" W

CURVE MLP-4
PI 156+39.55
Δ = 49°03'22" (LT)
Dc = 7°45'00" (CHORD)
R = 739.86'
Ls = 62.00'
θs = 2°24'02"
LT = 41.34'
ST = 20.67'
x = 61.99'
y = 0.87'
k = 31.00'
p = 0.22'
Δc = 44°15'17" (LT)
Lc = 571.03'
Es = 73.63'
C = 557.36'
C1 = C2 = 62.00'
C.B.1 = N 19°33'12" W
C.B. = N 43°16'52" W
C.B.2 = S 67°00'32" E

REV. BY	DATE	DESCRIPTION
SEA	12-8-16	REMOVED 19 S, MODIFIED 19 WL
SEA	7-25-16	ADDED 22A WD, REMOVED 22A T
SEA	2-3-16	ADDED PARCEL 21-T
SEA	1-22-16	UPDATED OWNERSHIPS 15, 21, 22, 22A & 32 COMBINED PARCELS 16 & 17
SEA	12-1-14	UPDATED PARCELS 22A-U, 22A-T & 20-WL
DATE COMPLETED		4/18/2014

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

PID NO. 77889

R/W DESIGNER JMM
R/W REVIEWER EJM

RAILROAD PLAT TOPO SHEET
NORFOLK SOUTHERN RAILROAD

HAM-75-7.85

48 / 52

1707
2017

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HAMILTN COUNTY
MILL CREEK TOWNSHIP
SEC 11 TOWN 3, FRAC RANGE 2
CITY OF CINCINNATI AND
VILLAGE OF ELMWOOD PLACE

1 3/4" OD IRON PIPE FND
156+11.94 71.49' LT
156+34.32 160.39' LT**
439+93.85, 109.16' LT*

2 3/4" OD IRON PIPE FND
156+62.23 54.94' RT
156+95.56 35.04' LT**
441+29.63, 117.96' LT*

3 440+69.05, 398.62' LT*
CONC MON W/PROCTER &GAMBLE DISK FND

4 443+74.82, 324.61' LT*
CHISLED "X" FND

5 444+05.21, 334.61' LT*
CHISLED "X" FND

6 440+07.94, 223.82' LT*
5/8" REBAR W/SPREEN #8238 CAP FND

7 444+39.44, 230.28' LT*
5/8" REBAR W/SPREEN #8238 CAP FND

A 8' INTERCEPTING SEWER EASEMENT
BOARD OF COUNTY COMMISSIONERS OF HAMILTN COUNTY, OHIO
DB 1657, PG 501

B STATE OF OHIO HIGHWAY EASEMENT
DB 2905, PG 307

POT STA. 17+63.03

CURVE MLP-4
PI 156+39.55
Δ = 49°03'22" (LT)
Dc = 7°45'00" (CHORD)
R = 739.86'
Ls = 62.00'
θs = 2°24'02"
LT = 41.34'
ST = 20.67'
x = 61.99'
y = 0.87'
k = 31.00'
p = 0.22'
Δc = 44°15'17" (LT)
Lc = 571.03'
Es = 73.63'
C = 557.36'
C1 = C2 = 62.00'
C.B.1 = N 19°33'12" W
C.B. = N 43°16'52" W
C.B.2 = S 67°00'32" E

MURRAY RD.

S 67°55'23" E 459.81'

N 28°05'09" E 85.86'

121.75'

435+72.69* 140.00' LT

℄ R/W I.R. 75 434+87.07, 146.40' LT =
℄ R/W LAIDLAW AVE 20+76.37

146.47'

℄ CONST I.R. 75

℄ R/W I.R. 75

I.R. 75

541.74'

℄ R/W I.R. 75 434+91.50 =
℄ R/W LAIDLAW AVE 22+22.84

℄ R/W I.R. 75 434+94.55, 100.91' RT =
℄ R/W LAIDLAW AVE 23+80.00

100.95'

N 22°04'37" E 30.00'

435+24.54* 100.00' RT

436+08.73* 100.00' RT

153+71.41, 70.00' LT
439+10.20, 100.00' RT*

153+05.00 160.23' LT

N 23°48'37" E 385.66'

N 23°48'37" E 194.76'

37.50'

123.36'

S 21°48'00" W 161.73'

S 21°48'00" W

435+25.45* 130.00' RT

436+13.32* 130.00' RT

152+59.35 168.85' LT

153+45.94, 70.00' LT
153+33.09, 113.34' LT**

S 16°37'47" E

153+19.96, 70.00' LT
153+06.83, 107.92' LT**

S 67°55'23" E 506.93'

℄ R/W LAIDLAW AVE. 27+29.77 =
℄ R/W NW RY 147+63.42

℄ R/W LAIDLAW AVE. 27+34.52 =
℄ PROP MAIN NS RR 147+59.74

(N 18°36' E)
N 12°39'36" E
1262.40'

PC 146+73.90

PC 147+43.23 MLP

80°34'59"

℄ R/W I.R. 75 440+33.24 =
℄ R/W NS RR 155+20.29

℄ R/W I.R. 75 441+20.90 =
℄ PROP MAIN NS RR 155+79.79

℄ PROP MAIN NSRR

154+23.71, 70.00' RT
154+45.35, 8.38' RT**

154+77.38 70.00' RT

257.80'

N 23°50'33" E 155+51.23 312.36' RT

N 59°14'59" E 168.85'

125.73'

S 23°48'37" W 394.63'

155+23.86 432.66' RT

S 23°40'45" E 81.39'

153+67.83, 122.73' RT
153+95.60, 71.11' RT**

154+03.02, 70.00' RT
154+23.56, 12.32' RT**

154+35.57, 143.27' RT
154+69.19, 78.48' RT**

S 15°14'46" E 214.26'

NORFOLK SOUTHERN RR

N 18°45'11" W 158.05'

PT 151+12.79 MLP

151+81.66, 70.00' RT
151+90.53, 51.27' RT**

PT 155+43.42

STATE OF OHIO HIGHWAY EASEMENT
DB 2905, PG 307

42°33'48" (FROM BACK TANGENT)

N 24°30'08" E

N 23°48'37" E 1228.90'
1770.64'

POT Sta. 19+85.16

℄ R/W I.R. 75 452+62.14 =
℄ R/W TOWNE AVE. 19+24.85

S 80°56'23" E

TOWNE ST.

CURVE MLP-3
PI 149+32.96
Δ = 31°24'48" (LT)
Dc = 8°30'00" (CHORD)
R = 674.69'
T = 189.73'
L = 369.56'
E = 26.17'
C = 365.29'
C.B. = N 3°02'48" W

CURVE NS-2
P.I. STA. 151+55.06
Δ = 60°52'00" (LT)
Dc = 7°00'00" (CHORD)
R = 819.02'
T = 481.16'
L = 869.52'
E = 130.88'
C = 829.73'
C.B. = N 17°46'24" W

RW CURVE DATA

CURVE	Δ	RADIUS	ARC LENGTH	CHORD LENGTH	CH BEARING
RWC1	01°47'00"	749.02'	23.31'	23.31'	S 35°16'28" E
RWC2	05°12'19"	889.02'	80.77'	80.74'	N 40°58'53" W
RWC3	01°26'52"	889.02'	22.46'	22.46'	S 39°06'10" E
RWC4	01°49'06"	749.02'	23.77'	23.77'	N 33°28'25" W
RWC5	15°29'43"	889.02'	240.43'	239.70'	N 30°37'52" W
RWC6	03°19'55"	889.02'	51.70'	51.69'	S 36°42'46" E
RWC7	04°14'32"	749.02'	55.46'	55.45'	N 30°26'36" W

LOT 8 EXPRESSWAY PARK SUBDIVISION BLOCK "B"
PB 186, PG 44 & 45

32 153+71.43, 30.00' LT
153+70.03, 79.56' LT**

33 154+04.48, 30.00' RT
154+17.76, 27.29' LT**

34 TS 152+70.84 MLP

35 SC 153+32.84 MLP

36 153+55.43, 70.00' RT
153+73.90, 21.70'RT**

37 152+59.36 70.00' LT
152+51.01, 96.84' LT**

NOTE:
FOR AREA TABLE AND PARCEL 18 WL2, 19WL, 22A U, 22A T DETAIL TABLES SEE SHEET 50

20 157+26.63, 70.00' RT
157+61.12, 15.94' LT**

26 157+82.33, 168.79' RT
158+01.09, 89.45' RT**

27 157+47.10, 180.23' RT
157+68.70, 95.88' RT**

30 157+75.71, 157.06' RT
157+96.88, 76.82' RT**

31 157+95.54, 345.66' RT
157+89.81, 266.26' RT**

NOTES:

ALL STATIONS & OFFSETS ARE FROM THE EX ℄ OF RAILROAD R/W UNLESS OTHERWISE NOTED.

* STATIONS AND OFFSETS FROM ℄ R/W I.R. 75

** STATIONS AND OFFSETS FROM ℄ PROP MAIN NSRR

EXISTING RAILROAD STATIONING BASED ON RAILROAD VALUATION MAP TITLED "RIGHT OF WAY AND TRACK MAP NORFOLK AND WESTERN RY. CINCINNATI DISTRICT (SCIOTO DIV.) CINCINNATI BELTLINE STATION 105+60 TO STATION 158+40" DATED DECEMBER 1, 1965. RR MAP #V-18-0/151.

RAILROAD VALUATION MAP BEARINGS ARE SHOWN IN PARENTHESES ALONG THE ℄ R/W OF THE RAILROAD.

18 STATE OF OHIO - MIAMI AND ERIE CANAL

22 NORFOLK SOUTHERN RAILWAY COMPANY 661-0003-0094-00

32 NORFOLK SOUTHERN RAILWAY COMPANY 661-0003-0075-00

23 CITY OF CINCINNATI NO PARCEL NUMBER

33 DONNA BORGMANN
661-003-0093-00 (LOT 221)
661-003-0092-00 (LOT 222)
661-003-0091-00 (LOT 223)
5605 PROSSER AVE

22A ANTHONY D. WOOD AND ELIZABETH A. WOOD
661-0003-0097-00
5634 PROSSER ST

INDUSTRIAL
15 OH MIE, LLC
582-0002-L002-00

SEWER EASEMENT CITY OF CINCINNATI DB 2636 PG 193

CITY OF ST. BERNARD
VILLAGE OF ELMWOOD PLACE

PROSSER AVE.

POT STA. 158+44.31

158+13.30, 18.98' LT
158+70.06, 88.08' LT**

157+12.37, 72.41' LT
157+62.46 159.06' LT**

RAILROAD

ST 159+65.87 MLP

CS 159+03.87 MLP

159+37.15, 150.62' RT
159+38.50, 110.59' RT**

YOST'S 2nd SUBDIVISION OF ELMWOOD PB 13, PG 66 & 67

VILLAGE OF ELMWOOD PLACE
661-0003-0162

N 12°22'45" E 99.94'

13.47'

S 66°11'23" E 37.04'

N 25°28'21" E 172.38'

S 10°36'58" W 173.10'

N 48°12'24" W 59.78'

133.42'

S 24°45'29" W

156+66.84 70.00' RT

157+05.93 197.56' RT

VILLAGE OF ELMWOOD PLACE
CITY OF CINCINNATI

SLOPE EASEMENT STATE OF OHIO DB 2098, PG 366

STATE OF OHIO, AND ITS SUCCESSORS AND ASSIGNS, FOR THE USE AND BENEFIT OF THE BOARD OF TRUSTEES OF THE UNIVERSITY OF CINCINNATI
1117-0004-0261-00
5121 FISHWICK DR

24 INDUSTRIAL

16 COMMERCIAL

VIRGINIA HOLDING CORPORATION
117-0004-0121-00

117-0004-0240-00

MARTHA RUFFNERS EST PB 1, PG 233

SLOPE EASEMENT STATE OF OHIO DB 2095, PG 307

NORFOLK SOUTHERN RAILWAY COMPANY
117-0004-0196-00

117-0004-0242-00

LOT 1
LOT 4

RAILROAD

LAIDLAW AVE.

℄ R/W LAIDLAW AVE.

℄ R/W NS RR

Ex SL

Ex SW

Ex LA-R/W

LA-R/W

I.P.S.

TMP

SW

SL

FOR INFORMATION ONLY

SEA	12-8-16	REMOVED 19 S, MODIFIED 19 WL
SEA	7-25-16	ADDED 22A WD, REMOVED 22A T
SEA	2-3-16	ADDED PARCEL 21-T
SEA	1-22-16	UPDATED OWNERSHIPS 15, 21, 22, 22A & 32 COMBINED PARCELS 16 & 17
SEA	12-1-14	UPDATED PARCELS 22A-U, 22A-T & 20-WL
REV. BY	DATE	DESCRIPTION
DATE COMPLETED	4/18/2014	

HORIZONTAL SCALE IN FEET
0 25 50 100

PID NO. 77889

R/W DESIGNER JMM
R/W REVIEWER EJM

RAILROAD PLAT BOUNDARY SHEET
NORFOLK SOUTHERN RAILROAD

HAM-75-7.85

49 / 52

1708
2017

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NOTE:
FOR PARCEL 18 WL2, 19WL,
22A U, 22A WD PLAN LAYOUTS
SEE SHEET 49

RAILROAD AREA TABLE

PARCEL NO	GROSS AREA (S.F.)	PRO (S.F.)	DUAL USAGE AREA		NET TAKE ARE (S.F.)
			GROSS (S.F.)	PRO (S.F.)	
21-LA	3,226	0	-	-	3,227
21-T	7,469	0	-	-	7,469
22A-U	1,850	0	-	-	1,850
24-U	7,974	0	-	-	7,974

22A-U & 24-U SHOWN FOR REFERENCE ONLY

PARCEL 22A U DETAIL TABLE

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
28	158+43.69	107.42' RT	28-29	N 05°39'19" E	30.00'
	158+67.77**	41.90' RT**			
29	158+61.38	131.65' RT	29-26	S 73°22'25" E	87.35'
	158+77.92**	69.84' RT**			
26	157+82.33	168.79' RT	26-30	S 12°22'45" W	13.47'
	158+01.09**	89.45' RT**			
30	157+75.71	157.06' RT	30-28	N 84°20'41" W	84.17'
	157+96.88**	76.82' RT**			

PARCEL 22A WD DETAIL TABLE

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
28	442+35.57	274.35' LT	28-31	N 05°39'19" E	60.00'
31	442+92.58	293.05' LT	31-38	S 84°20'41" E	91.25'
38	443+21.02	206.34' LT	38-30	S 12°22'45" W	60.42'
30	442+61.80	194.37' LT	30-28	N 84°20'41" W	84.17'

STATIONS AND OFFSETS FROM ℄ EX R/W I.R. 75

PARCEL 18 WL2 DETAIL TABLE

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
20	157+26.63	70.00' RT	20-21	S 48°12'24" E	54.88'
	157+61.12**	15.94' LT**			
	441+63.84*	174.56' LT*			
21	441+46.89*	122.36' LT*	21-22	S 09°30'17" W	17.82'
22	441+29.63*	117.96' LT*	22-23	S 19°52'10" W	26.88'
23	441+02.81*	116.11' LT*	23-24	S 20°12'10" W	64.53'
24	440+38.41*	112.05' LT*	24-9	S 20°12'42" W	43.02'
9	439+95.48*	109.35' LT*	9-8	N 48°12'24" W	55.18'
8	156+67.80	70.00' LT	8-25	N 28°28'30" E	63.17'
	157+05.60**	159.80' LT**			
	440+12.52*	161.83' LT*			
25	156+82.35	8.53' LT	25-20	N 12°22'45" E	90.15'
	157+20.08**	97.77' LT**			
	440+75.47*	156.69' LT*			

PARCEL 19 WL DETAIL TABLE

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
1	436+94.12	131.20' LT	1-5	N 61°35'36" W	48.93'
5	436+98.04	179.97' LT	5-6	N 28°43'07" E	198.60'
6	438+95.92	162.97' LT	6-7	N 05°39'19" E	21.51'
7	439+16.35	169.68' LT	7-8	N 28°28'30" E	96.48'
8	440+12.52	161.83' LT	8-9	S 48°12'24" E	55.18'
9	439+95.48	109.35' LT	9-1	S 27°57'24" W	302.15'

FOR INFORMATION ONLY

NOTES:

ALL STATIONS & OFFSETS ARE FROM
THE EX ℄ OF RAILROAD R/W UNLESS OTHERWISE NOTED.

* STATIONS AND OFFSETS FROM ℄ R/W I.R. 75

** STATIONS AND OFFSETS FROM ℄ PROP MAIN NSRR

EXISTING RAILROAD STATIONING BASED ON RAILROAD
VALUATION MAP TITLED "RIGHT OF WAY AND
TRACK MAP NORFOLK AND WESTERN RY.
CINCINNATI DISTRICT (SCIOTO DIV.) CINCINNATI
BELTLINE STATION 105+60 TO STATION 158+40"
DATED DECEMBER 1, 1965. RR MAP #V-18-0/151.

RAILROAD VALUATION MAP BEARINGS ARE SHOWN
IN PARENTHESES ALONG THE ℄ R/W OF THE RAILROAD.

REV. BY	DATE	DESCRIPTION
SEA	12-8-16	MODIFIED 19 WL
SEA	7-25-16	ADDED 22A WD, REMOVED 22A T
SEA	2-3-16	ADDED PARCEL 21-T
SEA	12-1-14	UPDATED PARCELS 22A-U & 22A-T

DATE COMPLETED 4/18/2014

PID NO. 77889

R/W DESIGNER JMM
R/W REVIEWER EJM

RAILROAD PLAT DETAIL TABLES
NORFOLK SOUTHERN RAILROAD

HAM-75-7.85

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HAMILTON COUNTY
MILL CREEK TOWNSHIP
SEC 11 TOWN 3, FRAC RANGE 2
CITY OF ST BERNARD AND
CITY OF CINCINNATI

CURVE NS-1
PI 129+63.15
Δ = 76°56'00" (RT)
Dc = 7°00'00" (CHORD)
R = 819.02'
T = 650.70'
L = 1,099.05'
E = 227.02'
C = 1,018.96'
C.B. = N 25°48'24" W

CURVE MPL-1
PI 129+55.19
Δ = 27°22'42" (RT)
Dc = 10°00'00" (CHORD)
R = 573.69'
T = 139.73'
L = 273.78'
E = 16.77'
C = 271.53'
C.B. = N 18°13'18" W

I.R. 75 415
℄ R/W S.R. 562 4+29.49 =
℄ R/W I.R. 75 414+12.31
414
S 83°42'50" E
1272.60'

1 ***℄ R/W S.R. 562 17+02.09 =***
℄ R/W NS RR 130+30.26

2 ***℄ R/W S.R. 562 17+02.59 =***
℄ PROP MAIN NS RR 130+30.89

1 ***CONC. MONUMENT W/ PROCTER & GAMBLE DISK FND***
2 ***1/2" REBAR W/#6549 CAP FND***
3 ***5/8" REBAR FND***

ALL STATIONS & OFFSETS ARE FROM THE ℄ OF RAILROAD R/W UNLESS OTHERWISE NOTED.

RAILROAD STATIONING BASED ON RAILROAD VALUATION MAP TITLED "RIGHT OF WAY AND TRACK MAP NORFOLK AND WESTERN RY. CINCINNATI DISTRICT (SCIOTO DIV.) CINCINNATI BELT LINE STATION 105+60 TO STATION 158+40" DATED DECEMBER 1, 1965. RR MAP #V-18-0/151.

PLAT IN PARTITION OF THE JOHN ROSS ESTATE CASE #166637 HAMILTON COUNTY COMMON PLEAS COURT DB 601, PG 222

JOB HUFFMAN'S EST. PB. 5, PG 32

LOT 28

LOT 2
LOT 1

STONE

REGISTERED LAND CERT #201209

SLOPE EASEMENT

SLOPE EASEMENT

PROP GUARDRAIL

INDUSTRIAL (12)
JLMM HOLDINGS, LLC
118-0003-0004-00
925 LAIDLAW AVE

118-0004-0025-00
NORFOLK SOUTHERN RAILWAY COMPANY
118-0003-0016-00, 118-0003-0018-00
118-0004-0008-00, 118-0003-0011-00
118-0004-0025-00, 118-0004-0026-00

RAILROAD (199)

℄ EX R/W NS RR

℄ PROP MAIN NSRR

PT Sta. 134+11.50
N 06°55'01" E
241.04'

PI 132+73.63 MLP
N 01°11'32" E
111.40'

PI 131+62.23 MLP
N 04°31'57" W
72.99'

PT 130+89.24 MLP
S 83°37'13" E
1272.60'

20' RAILROAD EASEMENT

CINCINNATI CHEMICAL WORKS INC. SUBDIVISION
P.B. 71, PG. 9

LOT 3

LOT 3
LOT 4

5' ELECTRIC EASEMENT

INDUSTRIAL (200)
WARBRO REALTY LLC
118-0004-0030-00
4815 PARA DR

25' UTILITY EASEMENT
STATE OF OHIO
O.R. 11803, PG. 1126

LOT 5

WATERLINE EASEMENT

INDUSTRIAL (202)
SINKRO PROPERTY HOLDING LIMITED
118-0002-0083-00
1005 META DR

PARA DR.

META DR.

REMOVE BILLBOARDS (ADC #35619 & #35672)

WOODED

ASPHALT PARKING

LAWN

CONST LIMITS
100°49'07" (FROM FORWARD TANGENT MLP)

℄ R/W S.R. 562

S.R. 562

S 83°42'50" E 3048.47'

1/2" REBAR W/#6549 CAP FND

PROP. MEDIAN BARRIER

HIGHWAY EASEMENT

CONST LIMITS

ASPHALT PARKING

AMBROSE HUFFMAN
PB 1, PG 42

LOT 3

INDUSTRIAL (201)
RHODIA INC.
118-0004-0028-00
4803 PARA DR

LOT 6

REMOVE BILLBOARD (ADC #35620 & #35621)
118-0004-0026-00

PC 128+15.46 MLP
N 31°54'39" W
80.95'

PI 127+34.51 MLP
N 37°38'08" W
41.40'

PT 126+93.11 MLP =
126+93.10, 0.06' LT

118-0004-0008-00

PC 123+12.45

30' INGRESS/EGRESS EASEMENT & SEWER EASEMENT

10' PIPELINE EASEMENT
D.B. 2888, PG. 603

10' PIPELINE EASEMENT
D.B. 2898, PG. 215

CITY OF CINCINNATI
CITY OF ST. BERNARD

CITY OF CINCINNATI
CITY OF ST. BERNARD

FOR INFORMATION ONLY

REV. BY	DATE	DESCRIPTION
SEA	1-22-16	UPDATED OWNERSHIPS 199 & 200
DATE COMPLETED	4/18/2014	

HORIZONTAL SCALE IN FEET
0 25 50 100

PID NO. 77889

R/W DESIGNER JMM
R/W REVIEWER EJM

RAILROAD PLAT TOPO SHEET
NORFOLK SOUTHERN RAILROAD

HAM-75-7.85

51 / 52

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2017

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HAMILTON COUNTY
MILL CREEK TOWNSHIP
SEC 11 TOWN 3, FRAC RANGE 2
CITY OF ST BERNARD AND CITY OF CINCINNATI

FOR INFORMATION ONLY

PARCEL 200 T DETAIL TABLE

POINT	STATION	OFFSET	COURSE	BEARING	DISTANCE
8	131+35.85	35.00' RT	8-9	SEE CURVE RWRC4 DATA	
9	132+42.73	35.00' RT	9-10	S 10°17'20" E	106.26'
10	131+31.65	48.44' RT	10-8	N 80°15'25" W	14.02'

PLAT IN PARTITION OF THE JOHN ROSS ESTATE CASE #166637 HAMILTON COUNTY COMMON PLEAS COURT DB 601, PG 222

JOB HUFFMAN'S EST. P.B. 5, PG 32

421+16.72 (I.R. 75) 295.83' RT

SLOPE EASEMENT STAE OF OHIO DB 2906, PG 258

INDUSTRIAL (12) JLMM HOLDINGS, LLC 118-0003-0004-00 925 LAIDLAW AVE

1 131+57.96, 183.73' LT 14+87.11, 86.57' LT* CONC. MONUMENT W/ PROCTER & GAMBLE DISK FND

2 131+18.75, 29.82' RT 17+04.81, 91.82' LT* 1/2" REBAR W/#6549 CAP FND

3 PROPERTY CORNER = 128+98.47, 60.00' RT PROPERTY CORNER = 18+09.81, 89.88' RT* 128+98.47, 60.56' RT (REBAR) 18+10.29, 89.60' RT* (REBAR) 5/8" REBAR FND

LOT 28 · LOT 2 · LOT 1 · REGISTERED LAND CERT #201209

11+70.00* 275.00' LT

PIPELINE EASEMENT SOHIO PETROLEUM COMPANY (NO WIDTH) CENTERED ON LINE AS INSTALED DB 2905, PG294 (APPROX LOCATION)

13+20.00* 140.00' LT

131+91.74 265.62' LT

131+56.22, 181.14' LT 131+54.30, 189.80' LT**

S 77°33'41" E 88.44'

N 65°47'38" W 95.81'

RAILROAD (199) NORFOLK SOUTHERN RAILWAY COMPANY 118-0003-0018-00, 118-0003-0011-00, 118-0003-0016-00, 118-0003-0003-00, 118-0004-0008-00, 118-0004-0026-00, 118-0004-0025-00, 118-0004-0025-00

℄ EX R/W NS RR

132+16.50, 180.85' LT 132+08.85, 193.29' LT** 131+72.80, 180.52' LT 131+62.23, 189.62' LT**

N 12°39'36" E (N 18°36' E)

PT 134+11.50

N 06°55'01" E 241.04'

20' RAILROAD EASEMENT DB 238, PG 60 DB 2938, P. 107 P.B. 71, PP. 9-10

CINCINNATI CHEMICAL WORKS INC. SUBDIVISION PB 71, PG 9

5' ELECTRIC EASEMENT THE CINCINNATI GAS & ELECTRIC COMPANY DB 2905, PG 454

PI 132+73.63 MLP

N 01°11'32" E 111.40'

℄ PROP MAIN NSRR

SEE DETAIL 1

S 02°52'34" E 20.26'

PI 131+62.23 MLP

S 84°45'34" E 219.19'

N 04°31'57" W 72.99'

N 83°42'50" W 216.67'

PT 130+89.24 MLP

100°49'07" (FROM FORWARD TANGENT MLP)

N 33°39'48" W 100.21'

S 80°15'25" E 444.80'

N 82°36'12" W 444.83'

128+59.50, 440.37' RT 21+50.00, 82.18' LT*

22+22.18* 80.78' LT

22+62.14* 79.78' LT

22+22.02, 81.52' LT* 5/8" REBAR W/#6549 CAP FND

INDUSTRIAL (200) WARBRO REALTY LLC 118-0004-0030-00 4815 PARA DR

LOT 3 · LOT 4 · LOT 5

PARA DR. · META DR.

INDUSTRIAL (202) SINKRO PROPERTY HOLDING LIMITED 118-0002-0083-00 1005 META DR

WATERLINE EASEMENT CITY OF CINCINNATI DB 2875, PG 459

25' UTILITY EASEMENT STAE OF OHIO O.R. 11803, PG 1126

I.R. 75 · ℄ R/W I.R. 75 · ℄ R/W S.R. 562 4+29.49 = ℄ R/W I.R. 75 414+12.31

1272.60'

HIGHWAY EASEMENT DB 2942, PG 391

℄ R/W S.R. 562

S.R. 562 S 83°42'50" E 3048.47'

130+24.78, 189.22' LT 130+16.87, 189.08' LT**

S 83°42'50" E 273.37'

N 18°00'01" W 41.69'

129+90.94, 187.47' LT 129+85.59, 185.69' LT**

N 83°42'50" W 274.15'

129+62.34, 187.33' LT 129+59.05, 184.60' LT**

NORFOLK SOUTHERN RAILROAD

118-0004-0026-00

CURVE MPL-1
P.I. Sta. 129+55.19
Δ = 27°22'42" (RT)
Dc = 10°00'00" (CHORD)
R = 573.69'
T = 139.73'
L = 273.78'
E = 16.77'
C = 271.53'
C.B. = N 18°13'18" W

Ex LA-R/W 127+45.66, 143.48' LT 127+40.68, 142.76' LT**

N 21°32'08" W 29.13'

129+05.34 60.16' RT

N 21°32'08" W 6.37'

S 83°42'50" E 243.17'

S 89°56'32" W 233.13'

127+31.07 260.11' RT

S 81°00'52" E 427.43'

22+32.92* 73.35' RT

22+32.98* 84.70' RT

125+18.02 375.34' RT

173.16'

HIGHWAY EASEMENT DB 2953, PG 591

118-0004-0032-00

INDUSTRIAL (201) RHODIA INC. 118-0004-0028-00 4803 PARA DR

S 30°09'43" E 87.02'

18+70.00 180.00' RT

S 11°23'30" W 43.48'

127+48.40, 30.00' RT 127+49.50, 30.52' RT**

LOT 6 · LOT3

AMBROSE HUFFMAN PB 1, PG 42

PC 128+15.46 MLP

N 31°54'39" W 80.95'

PI 127+34.51 MLP

N 37°38'08" W 41.40'

PT 126+93.11 MLP = 126+93.10, 0.06' LT

10' PIPELINE EASEMENT DB 2898, PG 215

PC 123+12.45

N 64°16'24" W (N 58°20' W)

CURVE NS-1
PI STA 129+63.15
Δ = 76°56'00" (RT)
Dc = 7°00'00" (CHORD)
R = 819.02'
T = 650.70'
L = 1,099.05'
E = 227.02'
C = 1,018.96'
C.B. = N 25°48'24" W

DETAIL 1

RWC1 LA 131+27.96, 30.00' RT 131+29.56, 22.11' RT** · RWC2 131+26.45, 35.00' RT 131+28.34, 27.18' RT** · RWC3 · RWC4 131+35.85, 35.00' RT 131+37.34, 26.80' RT** · RWC5 · RWC6 · S 81°01'29" E 5.21' · LA-R/W 444.80' · Ex LA-R/W 444.83'

1 ℄ R/W S.R. 562 17+02.09 = ℄ R/W NS RR 130+30.26

2 131+11.41, 30.00' RT 131+13.63, 23.01' RT**

3 130+48.70, 30.00' RT 17+24.24, 27.15' LT*

4 129+47.50, 60.00' RT 17+88.59, 49.67' RT*

5 17+96.21, 64.11' RT* 129+29.90, 60.31' RT

6 17+05.26, 90.80' LT* 131+17.62, 30.00' RT

7 129+20.27, 60.34' RT 18+00.37, 72.00' RT*

12 ℄ R/W S.R. 562 17+02.59 = ℄ PROP MAIN NS RR 130+30.89

RW CURVE DATA

CURVE	Δ	RADIUS	ARC LENGTH	CHORD LENGTH	CH BEARING
RWC1	00°43'26"	789.02'	9.97'	9.97'	N 07°32'58" W
RWC2	00°39'29"	784.02'	9.00'	9.00'	N 06°57'52" W
RWC3	01°09'32"	789.02'	15.96'	15.96'	N 07°46'01" W
RWC4	07°28'56"	784.02'	102.38'	102.31'	N 02°53'40" W
RWC5	04°49'28"	789.02'	66.44'	66.42'	S 10°19'25" E
RWC6	00°26'06"	789.02'	5.99'	5.99'	S 08°07'44" E

RAILROAD AREA TABLE

PARCEL NO	GROSS AREA (S.F.)	PRO (S.F.)	DUAL USAGE AREA		NET TAKE ARE (S.F.)
			GROSS (S.F.)	PRO (S.F.)	
199-LA	4,779	0	-	-	4,779
199-LA1	10,422	0	-	-	10,422

NOTES:

ALL STATIONS & OFFSETS ARE FROM THE EX ℄ OF RAILROAD R/W UNLESS OTHERWISE NOTED.

* STATIONS AND OFFSETS FROM ℄ R/W S.R. 562

** STATIONS AND OFFSETS FROM ℄ PROP MAIN NSRR

EXISTING RAILROAD STATIONING BASED ON RAILROAD VALUATION MAP TITLED "RIGHT OF WAY AND TRACK MAP NORFOLK AND WESTERN RY. CINCINNATI DISTRICT (SCIOTO DIV.) CINCINNATI BELTLINE STATION 105+60 TO STATION 158+40" DATED DECEMBER 1, 1965. RR MAP #V-18-0/151.

RAILROAD VALUATION MAP BEARINGS ARE SHOWN IN PARENTHESES ALONG THE ℄ R/W OF THE RAILROAD.

REV. BY	DATE	DESCRIPTION
SEA	1-22-16	UPDATED OWNERSHIPS 199 & 200
DATE COMPLETED	4/18/2014	

HORIZONTAL SCALE IN FEET: 0 · 25 · 50 · 100

PID NO. 77889

R/W DESIGNER JMM · R/W REVIEWER EJM

RAILROAD PLAT BOUNDARY SHEET
NORFOLK SOUTHERN RAILROAD

HAM-75-7.85

52 / 52

1711 2017

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EXISTING TRACK
TEMPORARY TRACK
FINAL TRACK

NOTE: ALL TURNOUTS ARE #10 RH

EXISTING BRIDGE OVER SR-562
NS CINCINNATI-#BR0018448
CT-1.41 NORWOOD LATERAL
(TO BE REPLACED)

EX. RAIL AMERICA
(IORY) TRACKS

BEGIN STRUCTURE
PD STA. 6+65.56

NS CT-1.41

NORWOOD LATERAL

END STRUCTURE
PD STA. 8+25.39

TEMPORARY
TD8 TRACK ℄

NEW MAIN TRACK ℄ 'MLPt' & 'MLPs'

PT Sta. 134+11.50

END STRUCTURE
MLPs STA. 131+05.53
MLPt STA. A 131+05.53

BEGIN STRUCTURE
MLPs STA. 129+52.22
MLPt STA. 129+52.57

TRACK ℄ 'MLPt'

TRACK ℄ 'MLPs'

APPROXIMATE TRACK WORK
DISTURBANCE LIMITS

EXISTING 'MLE' ℄/℄

EXISTING SURVEY ℄./'MLE'

SR 562 EB

SR 562 WB

START WORK : START PROJECT
STA. 126+93.10 ± MLEt BK
= STA. 126+93.11 MLPt/MLPs AH

PC MLEt/MLPt Sta. 123+12.58

POT MLEt/MLPt Sta. 123+12.45 AH
= PC MLE Sta. 123+12.45 BK

POB Sta. 122+62.45

APPROXIMATE TRACK WORK
DISTURBANCE LIMITS

NORFOLK
SOUTHERN
BERRY YARD

D8
D8A
D7B
D
D5
D4
D3
D2
D1
MAIN
B
B1

NEW MAIN
℄ 'MLPs'

MATCHLINE, EX. MAIN STA. 140+00

EXISTING SURVEY
℄./'MLE'

ABANDONED TRACK

STOP WORK
POT Sta. 138+68.00 MLPs BK
= ± POT 138+70.62 MLE AH

PD-1 PD1-1 PD2-1 PD3-1 PD4-1 PD5-1 PD8-1 PD-2 TD8-1 TD8-2 PB-1 PB-2 PB1-1 MLPt-1 MLPs-1 MLPs-2 MLE-1 MLEt-1

MLE-1 / MLEt-1
Dc= 7°00'00.00"
MAS=10mph

MLPt-1
Dc= 12°00'00.00"
MAS=10mph

MLPs-1
Dc= 10°00'00.00"
MAS=10mph

MLPs-2
Dc= 0°05'00.00"
MAS=10mph

PD-1
Dc= 10°00'00.00"
MAS=10mph

PD-2
Dc= 10°00'00.00"
MAS=10mph

TD8-1
Dc= 5°30'00.00"
MAS=10mph

PD1-1
Dc= 7°30'00.00"
MAS=10mph

TD8-2
Dc= 10°00'00.00"
MAS=10mph

PD2-1
Dc= 10°00'00.00"
MAS=10mph

PD8-1
Dc= 7°30'00.00"
MAS=10mph

PD3-1
Dc= 8°00'00.00"
MAS=10mph

PD4-1
Dc= 10°00'00.00"
MAS=10mph

PD5-1
Dc= 10°00'00.00"
MAS=10mph

PB-1
Dc= 0°15'00.00"
MAS=10mph

PB-2
Dc= 0°20'00.00"
MAS=10mph

PB1-1
Dc= 7°30'00.00
MAS=10mph

TRACK PLAN ASSEMBLY

SCHEMATIC, NOTES, TYPICAL SECTIONS	1 | 117 – 7 | 117
DETAILED GEOMETRY TABULATIONS	8 | 117 – 19 | 117
FINAL PLAN AND PROFILE	20 | 117 – 27 | 117
TEMPORARY OPERATIONS PLAN AND PROFILE	28 | 117 – 35 | 117
YARD TRACK PROFILE SHEETS	36 | 117 – 43 | 117
FINAL CROSS SECTIONS	44 | 117 – 61 | 117
TEMPORARY CROSS SECTIONS	62 | 117 – 69 | 117
STAGED PLAN AND PROFILE	70 | 117 – 117 | 117

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

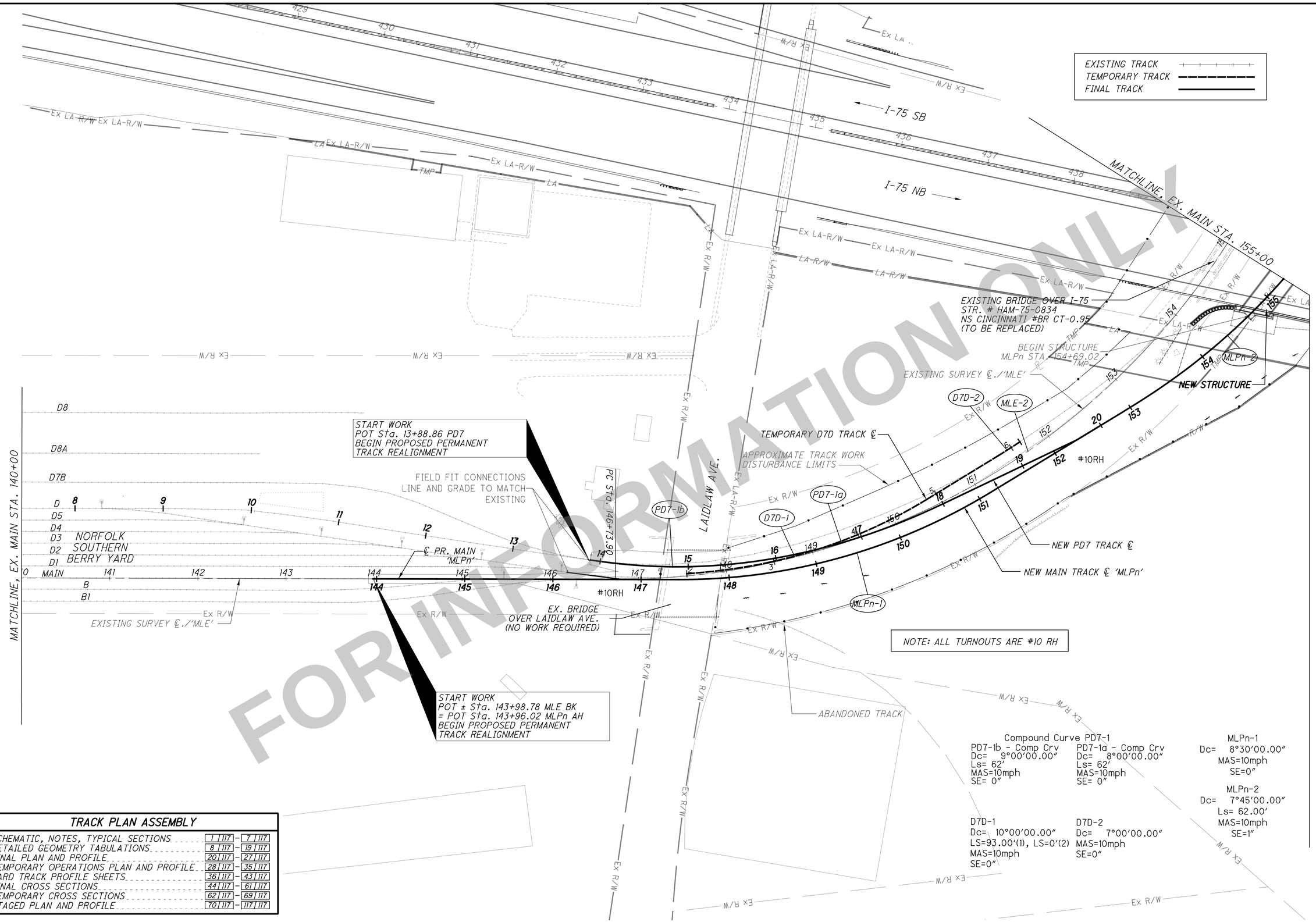
CALCULATED JRG
CHECKED RC

TRACK SCHEMATIC PLAN
NORFOLK SOUTHERN RAILROAD

HAM-75-7.85

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TRACK PLAN ASSEMBLY

SCHEMATIC, NOTES, TYPICAL SECTIONS	1 | 117	7 | 117
DETAILED GEOMETRY TABULATIONS	8 | 117	19 | 117
FINAL PLAN AND PROFILE	20 | 117	27 | 117
TEMPORARY OPERATIONS PLAN AND PROFILE	28 | 117	35 | 117
YARD TRACK PROFILE SHEETS	36 | 117	43 | 117
FINAL CROSS SECTIONS	44 | 117	61 | 117
TEMPORARY CROSS SECTIONS	62 | 117	69 | 117
STAGED PLAN AND PROFILE	70 | 117	117 | 117

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

CALCULATED JRG | CHECKED RC

TRACK SCHEMATIC PLAN
NORFOLK SOUTHERN RAILROAD

HAM-75-7.85

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TRACK PLAN ASSEMBLY

SCHEMATIC, NOTES, TYPICAL SECTIONS	1 | 117	7 | 117
DETAILED GEOMETRY TABULATIONS	8 | 117	19 | 117
FINAL PLAN AND PROFILE	20 | 117	27 | 117
TEMPORARY OPERATIONS PLAN AND PROFILE	28 | 117	35 | 117
YARD TRACK PROFILE SHEETS	36 | 117	43 | 117
FINAL CROSS SECTIONS	44 | 117	61 | 117
TEMPORARY CROSS SECTIONS	62 | 117	69 | 117
STAGED PLAN AND PROFILE	70 | 117	117 | 117

EXISTING TRACK
TEMPORARY TRACK
FINAL TRACK

EXISTING BRIDGE OVER I-75
STR. # HAM-75-0834
NS CINCINNATI-#BR CT-0.95
(TO BE REPLACED)

END STRUCTURE
MLPn STA. 156+93.35

EXISTING BRIDGE OVER PROSSER
STR. # HAM-75-PROSSER
NS CINCINNATI #BR CT-0.89
(TO BE REPLACED)

BEGIN STRUCTURE
MLPn STA. 158+41.83

MATCHLINE, EX. MAIN STA. 155+00

PT Sta. 155+43.42

PT Sta. 159+44.31

PC Sta. 159+03.25

EXISTING SURVEY ℄ /'MLE'

PCC Sta. 160+47.07

APPROXIMATE TRACK WORK DISTURBANCE LIMITS

PT Sta. 163+08.23

POE Sta. 166+83.32

℄ EX. MAIN 'MLE'

MLE-3a

MLE-3b

MLPn-2

NEW STRUCTURE

I-75 NB

I-75 SB

PROSSER ROAD

NEW MAIN TRACK ℄ 'MLPn'

END STRUCTURE
MLPn STA. 159+17.66

NEW STRUCTURE

N 67° 48' 33" W

STOP WORK : END PROJECT
POT ± Sta. 166+83.32 MLE
=POT Sta. 167+32.36 MLP
END PROPOSED PERMANENT
TRACK REALIGNMENT

MLPn-2
Dc= 7°45'00.00"
Ls= 62.00'
MAS=10mph
SE=1"

Ex R/W
Ex LA-R/W
LA-R/W
Ex R/W
SW

FOR INFORMATION ONLY

N

0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED JRG
CHECKED RC

TRACK SCHEMATIC PLAN
NORFOLK SOUTHERN RAILROAD

HAM-75-7.85

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SUGGESTED TRACK CONSTRUCTION SEQUENCING

ODOT - OHIO DEPT. OF TRANSPORTATION CONTRACTOR
NFA - NORFOLK SOUTHERN FORCE ACCOUNT CREWS

GENERAL SEQUENCING NOTES

1) STATION REFERENCES ARE APPROXIMATE AND ARE GENERALLY TAKEN ALONG 'MLE', THE EXISTING 'MAIN' TRACK
2) THE TERM 'BUILD TRACK' INCLUDES PLACEMENT OF BALLAST AND ANY T.O. INSTALLS AS APPROPRIATE
3) ALL TURNOUTS ARE #10, RIGHT HAND TURNOUTS
4) NO CONSTRUCTION TO OCCUR CLOSER THAN 10' TO ACTIVE TRACK UNLESS OTHERWISE DIRECTED.
5) CONTRACTOR SHALL ADJUST AND FURTHER REDUCE CONSTRUCTION SEQUENCING AS MAY BE NECESSARY TO MINIMISE OUTAGE TIMES AND PRESERVE ACCESS TO BOTH THE NORTH LADDER 'D' AND TO THE BRICK YARD TRACK D8/PD8 AT ALL TIMES.
6) FOR GREATER DETAIL AND WORK LIMITS, SEE CONSTRUCTION STAGING PLANS
7) THE TRACK WORK STAGES/NOMENCLATURE IS NOT SYNCHRONOUS WITH THE ROADWAY MOT PHASES.

D DETOUR & D8 IN SERVICE, MLE TEMP OOS, D7 RFS

STAGE 1A

ODOT	CONSTRUCT NEW BRIDGES I-75 & PROSSER	SEE ROADWAY/STRUCTURE PLANS
NFA	SEQUENTIALLY, REMOVE EXISTING YARD TRACKS B1, B, D1, & D2 & MLE	WL: STA. 128+00 TO 138+00
ODOT	DEMO EXISTING EAST HALF OF 562 BRIDGE	SEE ROADWAY/STRUCTURE PLANS
ODOT	CONSTRUCT NEW EAST HALF OF 562 BRIDGE	SEE ROADWAY/STRUCTURE PLANS
NFA	REHABILITATE EXISTING MLE TRACK	WL: STA. 147+30 TO 150+50 & 161+00 TO 163+50
NFA	REHABILITATE EXISTING D7 TRACK	WL: STA. 150+50 TO 152+50
NFA	C/T D7 & MLE TO CREATE D7D DETOUR TRACK	WL: STA. 147+50 TO 150+50 & 150+50 TO 152+50
ODOT	FILL/SURCHARGE EMBANKMENT, SUBBALLAST, MLPn OFFLINE	WL: STA. 149+00 TO 161+00
ODOT	SUBGRADE AND SUBALLAST WORK, MLPn ADJACENT TO MLE	WL: STA. 147+00 TO 149+00 & 161+00 TO 163+50
NFA	BUILD NEW TRACK MLPn - LIMITS OFFLINE	WL: STA. 149+00 TO 161+00

MLE TEMP OOS

STAGE 1B

NFA	SEQUENTIALLY WEST TO EAST, BUILD NEW YARD TRACKS MLP†, PD4, PD3, PD2 PD1, PB & PB1	WL: STA. 129+00 TO 138+00
NFA	REALIGN/REBUILD EXISTING TURNOUT IN PLACE	WL: STA. 147+00
NFA	CUT & THROW REHABBED MLE TO NEW MLP ALIGNMENT	WL: STA. 147+00 TO 149+00 & 161+00 TO 164+00

D DETOUR, D8, MLPn IN SERVICE, MLE RFS

NFA	PARTIAL BUILD TRACK TD8	WL: STA. 131+00 TO 133+00
NFA	REMOVE REMAINING EXISTING MLE AND D7 TRACKS	WL: STA. 149+00 TO 153+00

STAGE 2A

NFA	CUT/THROW EXISTING YARD TRACKS TO NEW YARD TRACKS	WL: STA. 135+00 TO 137+00
NFA	TIE-IN NEW MLP† - INSTALL NEW #10 RH T.O.	WL: STA. 127+00
NFA	LINE, SURFACE AND GRADE ADJUST AS NECESSARY	

MLP†, MLPn & D8 IN SERVICE
D8 TEMP OOS, D DETOUR RFS

STAGE 2A

NFA	PARTIAL REMOVE EXIST. YARD TRACKS D3, D4, D5 & D	WL: STA. 128+00 TO 134+00
NFA	FINISH BUILD NEW TRACK TD8, C/T EXISTING D8 TO TD8	WL: STA. 133+00 TO 135+00

MLP†, MLPn & TD8 IN SERVICE, D & D8 RFS

STAGE 2A

NFA	REMOVE EXISTING D & D8 TRACKS	WL: STA. 128+00 TO 134+00
ODOT	DEMO EXISTING WEST HALF OF 562 BRIDGE	SEE ROADWAY/STRUCTURE PLANS
NFA	REMOVE EXISTING D7 TRACK	WL: STA. 147+00 TO 153+00
ODOT	FILL/SURCHARGE EMBANKMENT, SUBGRADE, SUBBALLAST, PD7	WL: STA. 147+00 TO 153+00

MLP† & TD8 IN SERVICE, MLPn TEMPORARY OOS

STAGE 2A

NFA	BUILD NEW PD7 TRACK, INSTALL #10 RH TURNOUT AT MLPn	WL: STA. 147+00 TO 153+00
NFA	CUT/THROW/REALIGN EXISTING D7	
NFA	LINE, SURFACE & GRADE AS NECESSARY	

MLP†, MLPn & TD8 IN SERVICE

STAGE 2A

NFA	REMOVE REMAINING EXISTING MLE TRACK	WL: STA. 153+00 TO 161+00
ODOT	DEMO EXISTING I-75 & PROSSER AVENUE BRIDGES	SEE ROADWAY/STRUCTURE PLANS

STAGE 2B

ODOT	CONSTRUCT NEW WEST HALF OF 562 BRIDGE	SEE ROADWAY/STRUCTURE PLAN

MLP†, MLPn IN SERVICE
TD8 TEMPORARY OOS

STAGE 3A

NFA	PARTIAL BUILD NEW PD & PD8 TRACKS CUT/THROW TD8 TO PD8 LINE, SURFACE & GRADE AS NECESSARY	WL: STA. 128+00 TO 134+00

MLP†, MLPn & PD/PD8 IN SERVICE
TD8 RFS, MLP† TEMPORARY OOS

STAGE 3A

NFA	BUILD NEW PD8 & PARTIAL PD TRACKS CUT/THROW TD8 TO PD8 LINE, SURFACE & GRADE AS NECESSARY	WL: STA. 128+00 TO 134+00

MLP†, MLPn & PD/PD8 IN SERVICE
TD8 RFS, MLP† TEMPORARY OOS

STAGE 3B

NFA	REMOVE TEMPORARY TD8 TRACK AND TURNOUT	WL: STA. 128+00 TO 134+00
NFA	REALIGN/SHIFT MLP† TO FINAL MLPs ALIGNMENT	WL: STA. 128+00 TO 131+00
NFA	FINISH BUILD OF NEW YARD TRACKS PD, PD5 & PD4	WL: STA. 128+00 TO 138+00
NFA	CT EXISTING D, D4 & D5 TO FINAL ALIGNMENTS	WL: STA. 128+00 TO 138+00
NFA	LINE, SURFACE AND GRADE ADJUST AS NECESSARY	

END TRACK CONSTRUCTION

ALL TRACKS INCLUDING YARD TRACKS NOW IN SERVICE

ABBREVIATIONS

HORIZONTAL TRACK ALIGNMENT

PS - POINT OF SWITCH
PI/PITO - POINT OF INTERSECTION
PL - POINT ON LINE
PT - POINT OF TANGENT
SC - SPIRAL TO CURVE
CS - CURVE TO SPIRAL
TS - TANGENT TO SPIRAL
ST - SPIRAL TO TANGENT
POC/PCC - POINT OF TANGENCY ON CURVE
POE - POINT OF ENDING
PRC - POINT OF REVERSE CURVE
POB - POINT OF BEGINNING

VERTICAL TRACK ALIGNMENT

PVI - PT OF VERTICAL INTERSECTION
PVC - PT OF VERTICAL CURVE
PVT - PT OF VERTICAL TANGENT
G/GR - GRADE
L - LENGTH OF CURVE
R - RATE OF CHANGE
ETR - EXISTING TOP OF RAIL ELEVATION
el/ELEV - ELEVATION
XING - AT GRADE CROSSING

GENERAL TRACK NOMENCLATURE

MLE - MAINLINE EXISTING
MLE† - MAINLINE EXISTING TEMPORARY
MLP† - MAINLINE TEMPORARY SOUTH
MLPs - MAINLINE FINAL SOUTH
MLPn - MAINLINE FINAL NORTH
CT - CUT & THROW
T.O. - TURNOUT
O.O.S. - OUT OF SERVICE
E OR EX - EXISTING ALIGNMENT
NFA - NS FORCE ACCOUNT
ODOT - ODOT CONTRACTOR
WL - APPROXIMATE WORK LIMITS

MISCELLANEOUS

ABS - ABSOLUTE
AVE - AVENUE
AH - AHEAD
BK - BACK
℄ - BASELINE
BLDG - BUILDING
BLVD - BOULEVARD
CB - CATCH BASIN
℄ - CENTERLINE
CLR - CLEAR
CONC - CONCRETE
DWG - DRAWING
E - EAST
ESMT - EASEMENT
EXIST OR EX - EXISTING
EB - EAST BOUND
FT - FEET
FND - FOUNDATION
HW - HEADWALL
HORIZ - HORIZONTAL
L - LEFT
MAS - MAXIMUM ALLOWABLE SPEED
MIN - MINIMUM
MPH - MILES PER HOUR
N - NORTH
N/A - NOT APPLICABLE
NB - NORTH BOUND
NO - NUMBER
N.T.S. - NOT TO SCALE
PAV'T - PAVEMENT
PGL - PROFILE GRADE LINE
PR or PROP - PROPOSED
R - RIGHT
RR - RAILROAD
R/W - RIGHT-OF-WAY
CHARTER R/W - VAL MAP R/W
REQ'D - REQUIRED
S - SOUTH
SB - SOUTHBOUND
SEG - SEGMENT
STA - STATION
SHLDR - SHOULDER
SHT - SHEET
SWM - STORM WATER MANAGEMENT
Tk/TRK - TRACK
T/R - TOP OF RAIL
U/T - UNDER TRAFFIC
VERT - VERTICAL
W - WEST
W/ - WITH
WB - WEST BOUND

STANDARD RAILROAD SYMBOLOGY:

Existing Track/Standard Gauge
Existing Track Shift or C/T
Existing Track to be Removed
Proposed Track
Proposed Turnout (ps)
Temporary Track
Future Track Construction
10' Clear on track
Existing Right of Way (Ex R/W)
Temporary easement (TMP)
Utility easement (Ex U)
Limited Access Right of way (Ex LA-R/W)
Proposed Right of Way (R/W)
RR Abandoned

FOR INFORMATION ONLY

CALCULATED JRG
CHECKED RC

TRACK LEGEND, ABBREVIATIONS AND SEQUENCING
NORFOLK SOUTHERN RAILROAD

HAM-75-7.85

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ITEM 623 - CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN

MAINLINE ALIGNMENT DESIGNS HERE-IN ARE TIED TO THE SUPPLIED CENTERLINE EXHIBIT AND SURVEY REPORT BY EMH&T DATED 12-13-2011. AS PART OF THIS PAY ITEM, THE CONTRACTOR WILL FIELD VERIFY LOCATION OF TRACKS AND APPERTENANCES, ALIGNMENT TIE-INS AND TOP OF RAIL ELEVATIONS PRIOR TO ANY WORK. THE CONTRACTOR SHALL FIELD VERIFY THESE ITEMS PRIOR TO COORDINATION OF ANY TRACK WORK WITH THE RAILROAD.
FIELD ADJUSTMENT MAY BE REQUIRED.

TRACK HORIZONTAL ALIGNMENTS (CURVES)

NOTE : TRACK ALIGNMENT CURVES ARE 'CHORD' DEFINED

SPECIFICATIONS AND SPECIAL PROVISIONS

ALL WORK AND MATERIALS, ON, OVER, UNDER OR ADJACENT TO NORFOLK SOUTHERN RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

* NORFOLK SOUTHERN (NS) 'SPECIAL PROVISIONS FOR THE PROTECTION OF RAILWAY INTERESTS'
* AMERICAN RAILWAY ENGINEERING AND MAINTENANCE OF WAY ASSOCIATION (AREMA) RECOMMENDED PRACTICES.
* FEDERAL RAILROAD ADMINISTRATION
* NORFOLK SOUTHERN RAILWAY PUBLIC PROJECT MANUAL, CURRENT EDITION, INCLUDING APPENDICES
* NORFOLK SOUTHERN RAILWAY STANDARD SPECIFICATIONS FOR MATERIALS AND CONSTRUCTION, CURRENT EDITION
* NORFOLK SOUTHERN RAILWAY SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF PRIVATELY OWNED INDUSTRY TRACKS, CURRENT EDITION
* NORFOLK SOUTHERN RAILWAY QUALITY ASSURANCE SPECIFICATIONS FOR TIES AND TIMBERS

THE CONTRACTOR SHALL ALLOW A MINIMUM OF 12 MONTHS FOR DELIVERY OF MATERIAL TO BE SUPPLIED BY NS SPECIFIED SUPPLIERS.

RAILROAD OPERATIONS

THE CONTRACTOR'S WORK SHALL NOT INTERRUPT THE NORMAL OPERATIONS OF THE RAILROAD WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER IN CONSULTATION WITH THE NS AND/REPRESENTATIVES.

RAILROAD SAFETY RULES

THE CONTRACTOR SHALL TAKE PROPER PRECAUTIONS TO PROTECT THE PUBLIC AND EMPLOYEES OF THE NS AND FROM ANY AND ALL DAMAGES, AND INJURIES FROM HIS WORK.

THE CONTRACTOR SHALL REQUIRE ALL OF HIS EMPLOYEES AT THE PROJECT SITE TO USE PERSONAL PROTECTIVE EQUIPMENT CONSISTENT WITH THE RAILROADS' SAFETY RULES. THIS EQUIPMENT SHALL, AS A MINIMUM, INCLUDE SAFETY HAT, EYE PROTECTION WITH SIDE SHIELDS AND 6" MINIMUM HEIGHT, LACE-UP SAFETY TOE SHOES WHILE PERSONS OCCUPY THE RAILROADS' RIGHT OF WAY. WHEN CONDITIONS WARRANT, HEARING PROTECTION, FALL PROTECTION AND RESPIRATORY PROTECTION SHALL ALSO BE FURNISHED AND UTILIZED, CONSISTENT WITH OSHA AND FRA REGULATIONS GOVERNING BRIDGE WORKERS SAFETY AND HEALTH.

PRIOR TO COMMENCING WORK ON THE RAILROADS' RIGHT OF WAY, CONTRACTOR WILL PROVIDE RAILROAD WITH SIGNED DOCUMENTATION OF A TRAINING PROGRAM WITH REGARDS TO FRA FALL PROTECTION AS IT PERTAINS TO FRA 49 CFG PART 214.102 AND DOCUMENTATION OF A ROADWAY WORKERS SAFETY PROGRAM IN ACCORDANCE WITH CF R49 PART 214(C). ROADWAY WORKER SAFETY TRAINING WORK SHALL ALSO BE PROVIDED IN ACCORDANCE WITH PARAGRAPH A, SECTION 12 OF THE NORFOLK SOUTHERN SPECIAL PROVISIONS.

DOCUMENTATION WILL CONTAIN A LIST OF ALL CONTRACTOR'S EMPLOYEES TO BE INVOLVED WITH THIS PROJECT (ON-SITE INVOLVEMENT). CONTRACTOR SHALL FURNISH RAILROAD MANDATORY "FRA ON TRACK SAFETY MANUAL" TRAINING CONFIRMATION AND DOCUMENTATION OF E_RAIL SAFE TRAINING AND REGISTRATION FOR ALL TO VISIT OR WORK ON THE SITE.

WHEN WORKING ON THE RAILROADS' RIGHT OF WAY OR WITHIN THE SAFETY ZONE SURROUNDING THE PROPOSED TRACKS, A JOB BRIEFING IN ACCORDANCE WITH THE RAILROADS' ON-TRACK WORKER MANUALS, SHALL BE HELD PRIOR TO COMMENCING WORK OR WHEN WORK OR CONDITIONS CHANGE.

THE CONTRACTOR CANNOT COMMENCE THE DAY'S WORK ON THE RAILROADS' RIGHT OF WAY UNLESS THE RAILROADS' FLAGMAN IS ON THE JOB. A MINIMUM,TEN MINUTE SAFETY BRIEFING WILL BE HELD AT THE BEGINNING OF EACH WORKDAY IN THE PRESENCE OF THE NS FLAGMAN. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR'S SUPERVISORY PERSONNEL TO CARRY THROUGH FOR THE ENTIRE WORKDAY ALL OF THE ITEMS DISCUSSED DURING THE SAFETY BRIEFING.

RAILROADS' DESIGNATED REPRESENTATIVE(S) WILL DETERMINE WHEN FLAGGING PROTECTION IS REQUIRED.

ALL PERSONNEL WILL BE RAILROAD SAFETY TRAINED PRIOR TO VISITING CONSTRUCTION SITE.

TRACKWORK NOTES

ALL JOINTS SHALL BE OF THE TYPES AND SIZES SPECIFIED AND SHALL BE IN ACCORDANCE WITH NSRR AND AREMA STANDARDS. INSULATED JOINTS MUST BE SUPPORTED ON A SOUND, SMOOTH TIE, WELL TAMPED AND WELL DRAINED.

SUPER ELEVATION MARKING

AFTER CONSTRUCTION, CONTRACTOR SHALL MARK, ON THE WEB OF THE RAIL IN THE FIELD, LOCATIONS OF 'PC', 'FULL' AND 'PT' AND SUPERELEVATION DATA.

STAGED CONSTRUCTION

THESE PLANS SHOW STAGED TRACK WORK/CONSTRUCTION. CONTRACTOR SHALL INTEGRATE, STAGE AND COORDINATE ALL WORK WITH ADJACENT BRIDGE AND ROADWAY PROJECTS AS WILL BE NECESSARY. SEE BRIDGE AND ROADWAYS PLANS.

QUANTITY VERIFICATION BY CONTRACTOR

CONTRACTOR SHALL VERIFY QUANTITIES AND INDICATE ANY MAJOR DISPARITY TO ODOT AND NORFOLK SOUTHERN.

EXISTING TRACK ROADBED HARDPAN

THE EXISTING TRACK ROADBED HARDPAN SHALL NOT BE DISTURBED DURING CONSTRUCTION.

CONSTRUCTION SITE DRAINAGE

THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE OF RAILROAD FACILITIES THROUGHOUT CONSTRUCTION.

UTILITY INSTALLATION/RELOCATIONS

ALL UTILITY INSTALLATIONS OR RELOCATIONS THAT ARE REQUIRED IN CONJUNCTION WITH THIS PROJECT CAN BE INSTALLED OR RELOCATED AS PART OF THE PROJECT PROVIDED THE CONSTRUCTION IS PERFORMED BY THE PROJECT CONTRACTOR OR PROJECT CONTRACTOR'S SUB-CONTRACTOR. HOWEVER, THE UTILITY MUST SUBMIT AN APPLICATION FOR THE INSTALLATION OR RELOCATION TO RAILPROS FOR APPROPRIATE HANDLING OF LICENSE AGREEMENT AND APPLICABLE FEES.

FOR UTILITY APPLICATIONS INFORMATION, SEE:
http://www.nscorp.com/content/nscorp/en/real-estate/norfolk-southern-services/wire-pipeline-fiber-optic-projects.html

TO SUBMIT AN APPLICATION GO TO:
https://ns.railprospermitting.com/

NOTE: LICENSE AGREEMENT MUST BE EXECUTED PRIOR TO UTILITY BEING INSTALLED OR RELOCATED.

APPLICABILITY 'ONE CALL' UTILITY SERVICES

"ONE CALL" SERVICES DO NOT LOCATE BURIED RAILROAD SIGNAL AND COMMUNICATIONS LINES. THE CONTRACTOR SHALL CONTACT THE RAILROAD'S REPRESENTATIVE TWO (2) DAYS IN ADVANCE OF THOSE PLACES WHERE EXCAVATION, PILE DRIVING, OR HEAVY LOADS MAY DAMAGE RAILROAD UNDERGROUND LINES ON RAILROAD PROPERTY. UPON REQUEST FROM THE CONTRACTOR OR AGENCY, RAILROAD SIGNAL FORCES WILL LOCATE AND PAINT MARK OR FLAG RAILROAD UNDERGROUND SIGNAL, COMMUNICATION, AND POWER LINES LOCATED WITHIN THE AREA TO BE DISTURBED BY THE CONTRACTOR. THE CONTRACTOR SHALL AVOID EXCAVATION OR OTHER DISTURBANCE OF THESE LINES WHICH ARE CRITICAL TO THE SAFETY OF THE RAILROAD AND THE PUBLIC. IF DISTURBANCE OR EXCAVATION IS REQUIRED NEAR A BURIED RAILROAD SIGNAL, COMMUNICATION, OR POWER LINE, THE LINE SHALL BE POTHOLED MANUALLY WITH CAREFUL HAND EXCAVATION BY THE CONTRACTOR AND PROTECTED BY THE CONTRACTOR DURING THE COURSE OF THE DISTURBANCE UNDER THE SUPERVISION AND DIRECTION OF A RAILROAD SIGNAL REPRESENTATIVE.

ITEM 304 - AGGREGATE BASE, AS PER PLAN

SUBBALLAST TO BE PAID FOR WITH ITEM 304.
CONTRACTOR SHALL SUPPLY AND INSTALL SUBBALLAST.

SUBBALLAST SHALL BE CRUSHED RUN STONE (DENSE GRADED AGGREGATE), LIMESTONE OR GRANITE MATERIAL AND SHALL MEET THE REQUIREMENTS AS SET OUT IN CHAPTER 1, PART 2, SECTION 2.11, "SUBBALLAST SPECIFICATIONS" OF THE AMERICAN RAILWAY ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION (AREMA) MANUAL.

GRADATION AS FOLLOWS:

SIEVE SIZE	2"	1"	3/8"	NO. 10	NO. 40	NO. 200
% PASSING SIZE (OPTIMUM)	100	95	67	38	21	7
PERMISSIBLE RANGE % PASSING	100	90-100	50-84	26-50	12-30	0-10

SUBBALLAST SHALL BE SPREAD ON A GRADED ROADBED AS A BASE, WITH SUFFICIENT WIDTH TO ACCOMODATE THE DESIRED NUMBER OF TRACKS. THE SUBBALLAST SHALL BE COMPACTED TO 95 PERCENT OF IT'S MAXIMUM DRY DENSITY AND HAVE A MINIMUM DEPTH OF 12" PLACED IN (2) 6 INCH LIFTS. FOR INDEPENDANT YARD TRACKS, MIN. DEPTH SHALL BE 9 INCHES.

BALLAST - SUPPLIED AND PLACED BY NSRR

MATERIAL FOR BALLAST SHALL BE CLEAN CRUSHED STONE WITH A MINIMUM DEPTH OF 12 INCHES ACROSS THE YARD TO FACILITATE POSITIVE DRAINAGE. CRIBS (SPACING BETWEEN THE CROSSTIES) SHALL BE FILLED WITH BALLAST TO THE TOP OF THE TIES. FOR INDEPENDANT YARD TRACKS MIN. DEPTH SHALL BE 6 INCHES.

STONE FOR USE AS BALLAST ON TRACKS, OR PORTIONS OF TRACKS, TO BE OWNED BY THE RAILWAY COMPANY, SHALL BE FURNISHED BY RAILROAD APPROVED QUARRY, AND SHALL BE CRUSHED STONE (GRANITE) CONFORMING TO THE REQUIREMENTS OF NORFOLK SOUTHERN (NS) RAILWAY CHIEF ENGINEER

GRADATION SHALL CONFORM TO THE FOLLOWING TABLE:

SIEVE DESIGNATION	SEIVE OPENING	#3 BALLAST (MODIFIED) % PASSING SIEVE	#5 BALLAST % PASSING SIEVE
2 1/2"	2.5"	100	-
2"	2"	95-100	-
-	1.5"	30-65	-
1"	1"	0-15	90-100
-	0.75"	-	40-75
-	0.5"	100	15-35
3/8"	0.375"	-	0-15
NO. 4	0.187"	-	0-5
NO. 200	0.0029"	0.5 MAX	0.5 MAX

RAILROAD FLAGMEN SERVICES

A RAILROAD'S FLAGMAN MUST BE PRESENT WHENEVER THE CONTRACTOR IS WORKING OVER OR ON NS RIGHT OF WAY, OVER OR ON AN ACTIVE TEMPORARY TRACK WITHIN THE DESIGNATED SAFETY ZONE OR WHEN NEED IS DETERMINED BY THE RAILROADS OR ITS DESIGNATED REPRESENTATIVE(S).

PAYMENT FOR THE RAILROADS' FLAGMEN TO BE PAID DIRECTLY TO THE RAILROADS FROM ODOT. CONTRACTOR SHALL COORDINATE RAILROAD FLAGMAN NEEDS WITH ODOT WITH AT LEAST 45 DAYS NOTICE BEFORE IT IS REQUIRED.

ITEM 203 - EXCAVATION, AS PER PLAN

EXCAVATION SHALL BE IN CONFORMANCE WITH THE ODOT CMS AND NSRR PUBLIC PROJECTS MANUAL, THE MOST STRINGENT SHALL GOVERN. IF BENCHING OF SLOPES CARRYING RAILROAD LIVE LOAD IS REQUIRED, THE HEIGHT SHALL NOT EXCEED 2'-0".

ITEM 203 - GRANULAR EMBANKMENT, AS PER PLAN

THE CONTRACTOR SHALL SUPPLY AND PLACE AN INITIAL 6 INCHES OF BALLAST ATOP THE COMPLETED BRIDGE WATERPROOFING AT THE DIRECTION OF THE NS SUPERVISOR. THE BALLAST SHALL BE FROM A NS PREFERRED VENDOR (A LIST OF VENDORS IS AVAILABLE UPON REQUEST FROM NS). PAYMENT IS FOR THE AMOUNT OF BALLAST SUPPLIED AND PLACED ATOP THE COMPLETED BRIDGE WATERPROOFING PER NS REQUIREMENTS.

HAM-562-0026 BRIDGE QUANTITY: 186 CY
HAM-75-0834 BRIDGE QUANTITY: 124 CY
HAM-75-PROSSER BRIDGE QUANTITY: 31 CY

TOTAL BID QUANTITY IS 341 CY

ODOT PAY ITEM (CONTRACTOR FURNISHED AND INSTALLED)	QUANTITY	UNIT	SEE SHEET (OF 117)
ITEM 203 - EXCAVATION, AS PER PLAN	9,480	CY	44
ITEM 203 - GRANULAR EMBANKMENT, AS PER PLAN	341	CY	1716
ITEM 204, EMBANKMENT, AS PER PLAN	13,890	CY	44
ITEM 304 - AGGREGATE BASE, AS PER PLAN	1,696	CY	44
ITEM 623 - CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN	LUMP	LUMP	1716
ITEM 659 - SEEDING AND MULCHING	11,549	SY	44
ITEM 900 - SPECIAL - TRACK REMOVED	7,500	TKFT	1716A

FOR INFO

CALCULATED JRG
CHECKED RC

TRACKWORK NOTES 1 OF 2

HAM-75-7.85

5 / 117

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ITEM 900 - SPECIAL - TRACK REMOVED

THE CONTRACTOR SHALL REMOVE THE TRACK (2 RAILS, TIES, TURNOUTS, SWITCHES, CLIPS, TIE PLATES, AND OTHER ANCILLARY HARDWARE), WITHIN REMOVAL LIMITS SPECIFIED, AT THE DIRECTION OF THE RAILROAD SUPERVISOR.

AT THE TIME OF BIDDING THE CONTRACTOR IS NOT AUTHORIZED TO PERFORM THE TRACK REMOVALS. THE CONTRACTOR SHOULD PLAN FOR THE EVENTUALITY THAT THEY MAY BE REQUIRED TO PERFORM TRACK REMOVALS.

THIS QUANTITY WILL BE USED AS NECESSARY IF, DURING THE COURSE OF THE PROJECT, THE RAILROAD ALLOWS AND DIRECTS THE CONTRACTOR TO PERFORM TRACK REMOVALS.

THE CONTRACTOR SHALL BID A QUANTITY OF 7,500 FEET OF TRACK REMOVED. THIS QUANTITY MAY BE USED AS DIRECTED BY THE ENGINEER AND APPROVED BY THE RAILROAD SUPERVISOR. THE UNIT PRICE SHALL ASSUME TEN (10) TURNOUTS INCLUDED IN THE REMOVAL LENGTH.

THE QUANTITY IS BASED UPON THE POSSIBILITY THAT THE CONTRACTOR WILL PERFORM THE FOLLOWING REMOVALS, PLUS A 524 TKFT CONTINGENCY:

- *STAGE 1A (SOUTHERN YARD), DETAILED ON SHEET 1781-1792*
  TRACKS D2, D1, MLE, B, B1 (3,167 TKFT)
- *STAGE 1A (NORTH OF YARD), DETAILED ON SHEET 1785-1786*
  TRACK MLE (274 TKFT)
- *STAGE 1B (SOUTHERN YARD), DETAILED ON SHEET 1789-1790*
  TRACKS D4, D3, PD4, PD3, PD2 (965 TKFT)
- *STAGE 1B (NORTH OF YARD), DETAILED ON SHEET 1793-1794*
  TRACK D7D (529 TKFT)
- *STAGE 2A (SOUTHERN YARD), DETAILED ON SHEET 1798*
  TRACKS D, D5 (327 TKFT)
- *STAGE 2A (NORTH OF YARD), DETAILED ON SHEET 1801-1803*
  TRACK MLE (679 TKFT)
- *STAGE 2B (SOUTHERN YARD), DETAILED ON SHEET 1805-1806*
  TRACKS D, D8 (639 TKFT)
- *STAGE 3B (SOUTHERN YARD), DETAILED ON SHEET 1821-1822*
  TRACKS TD8 (396 TKFT)

REMOVALS MAY NOT COMMENCE WITHOUT AUTHORIZATION FROM THE RAILROAD SUPERVISOR AND ENGINEER.

THE CONTRACTOR WILL RETAIN OWNERSHIP OF ANY TRACK AND APPURTENANCES AFTER ITS REMOVAL. THE CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF TRACK MATERIALS REMOVED.

THE CONTRACTOR WILL BE REIMBURSED AT THE UNIT BID PRICE (TRACK FEET, TKFT) OF REMOVED TRACKWORK COMPLETED AND ACCEPTED BY THE ENGINEER AND RAILROAD SUPERVISOR.

FOR INFORMATION ONLY

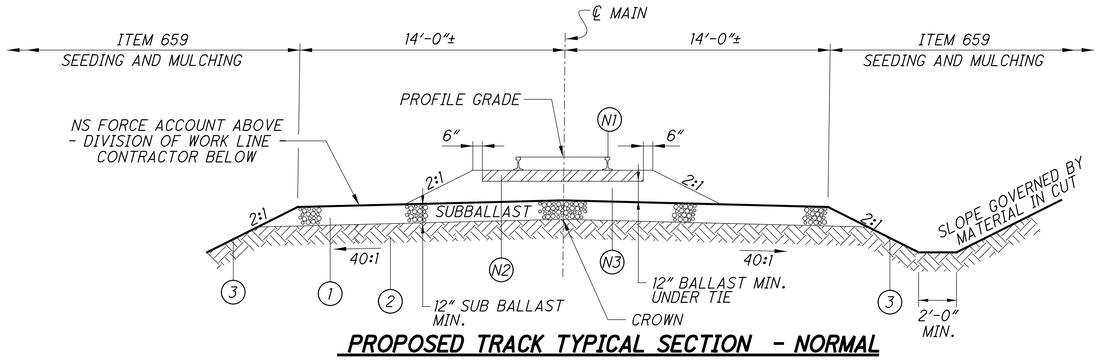
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TRACKWORK NOTES
2 OF 2

HAM-75-7.85

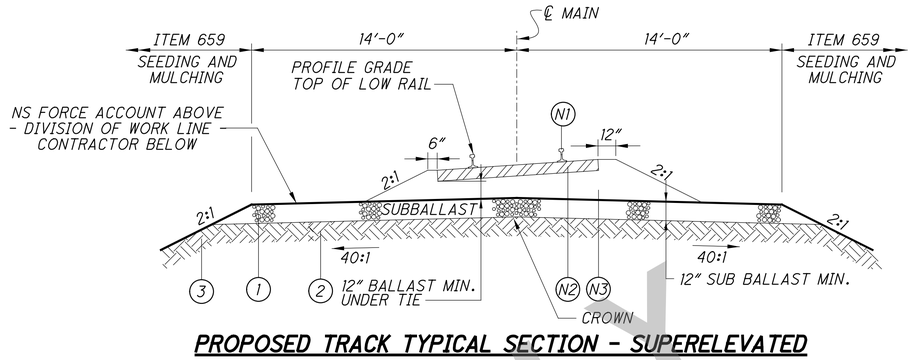
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PROPOSED TRACK TYPICAL SECTION - NORMAL

N.T.S.
STA. 152+60 TO STA. 153+33
STA. 159+65 TO STA. 164+00



PROPOSED TRACK TYPICAL SECTION - SUPERELEVATED

N.T.S.
STA. 153+33 TO STA. 159+65

SHOULDER WIDTH (SW)		
BALLAST WIDTH FROM END OF TIE TO EDGE OF SLOPE	JOINTED RAIL	WELDED RAIL
SW (INSIDE OF CURVE)	0"	6"
SW (OUTSIDE OF CURVE)	6"	12"
SW (TANGENT BOTH SIDES)	0"	6"

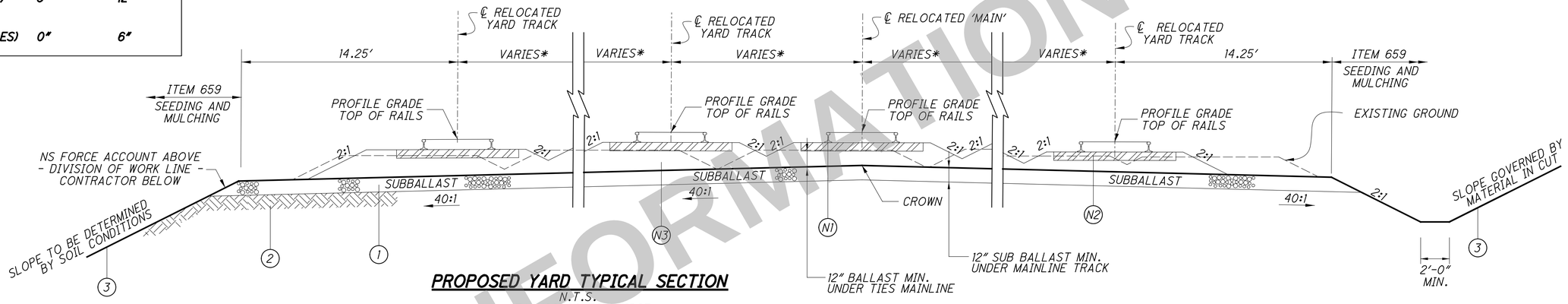
NOTES:

1. CONTRACTOR TO PROVIDE WORK UP TO TOP OF SUBBALLAST. RAILROAD FORCES SHALL CONSTRUCT TRACKWORK INCLUDING BALLAST, TIES, RAIL AND OTHER TRACK MATERIAL.
2. ITEM 201.04, SCALPING, SHALL BE REQUIRED IN ALL EMBANKMENT CONSTRUCTION AREAS EXCEPT WHERE THE EMBANKMENT HEIGHT IS GREATER THAN 9 FEET TO THE SUBGRADE ELEVATION AND WHEN THE EXISTING SIDE SLOPE IS 8:1 OR FLATTER.
3. DITCHING TO BE PROVIDED WHERE NECESSARY AND ROW WILL ALLOW

FILL SECTION

(1) TAMPING OF BALLAST MUST NOT DISTRUB COMPACTED SUBOBALLAST.

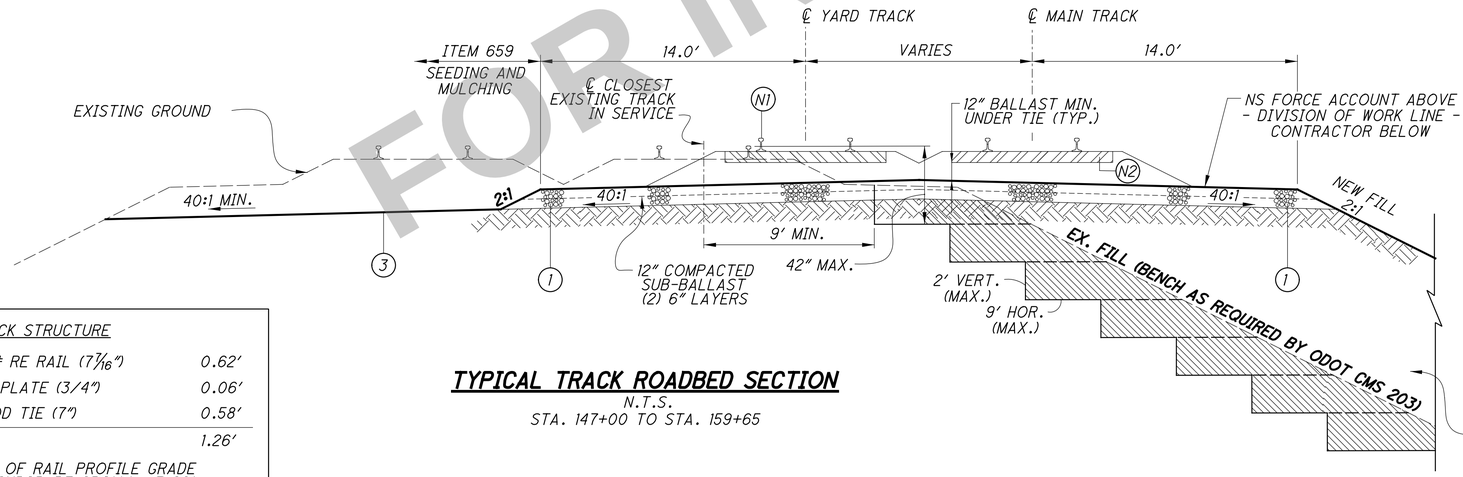
(2) TOP OF SUB-GRADE IS TO BE CROWNED.



PROPOSED YARD TYPICAL SECTION

N.T.S.
STA. 129+00 TO BRIDGE
BRIDGE TO STA. 132+00
STA. 147+00 TO STA. 153+33

* SEE GEOMETRY PLANS AND TABS



TYPICAL TRACK ROADBED SECTION

N.T.S.
STA. 147+00 TO STA. 159+65

TRACK STRUCTURE	
136# RE RAIL (7 1/16")	0.62'
TIE PLATE (3/4")	0.06'
WOOD TIE (7")	0.58'
	1.26'

TOP OF RAIL PROFILE GRADE TO SUBGRADE CROWN = 3.26'

LEGEND

NORFOLK SOUTHERN FORCE ACCOUNT	N1	CONTINUOUSLY WELDED RAIL, 136#, NIC
	N2	WOOD CROSS TIE SIZE NO. 4: 7"X9"X8'-6", NIC
	N3	PREPARED STONE BALLAST 12" MIN. DEPTH), NIC
ODOT CONTRACTOR	1	ITEM 304 AGGREGATE BASE SUBBALLAST, PER PLAN
	2	ITEM 204 EMBANKMENT
	3	ITEM 203 EXCAVATION

FOR INFORMATION ONLY

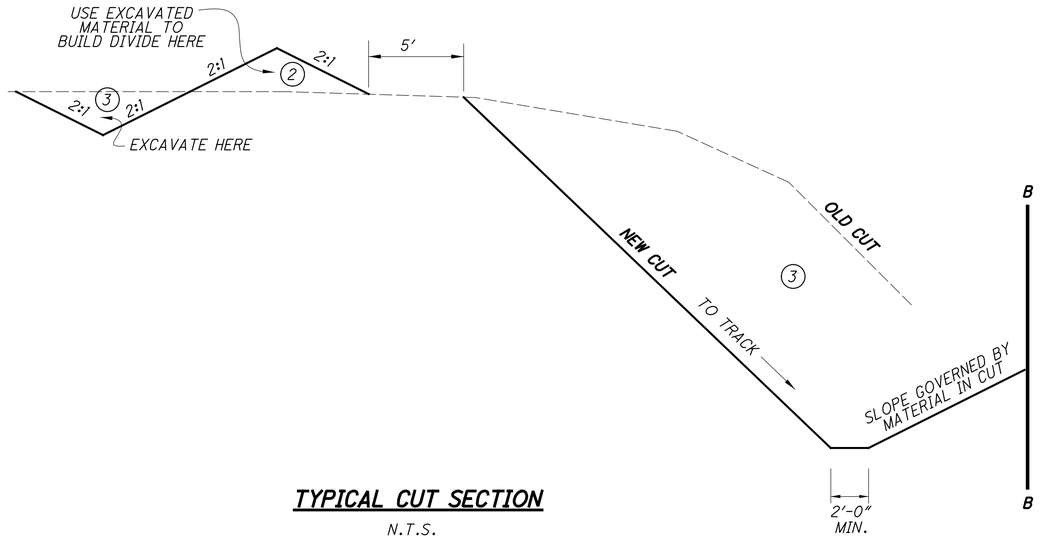
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TYPICAL TRACKWORK SECTIONS - PROPOSED NORFOLK SOUTHERN RAILROAD

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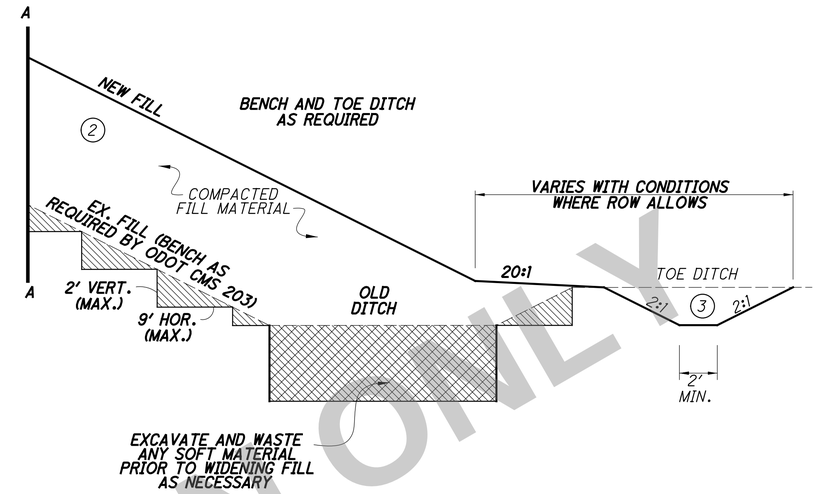
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TYPICAL CUT SECTION

N.T.S.



TYPICAL FILL SECTION

N.T.S.
STA. 147+00 TO STA. 167+32

LEGEND

NORFOLK SOUTHERN FORCE ACOUNT

- (N1) CONTINUOUSLY WELDED RAIL, 136#, NIC
- (N2) WOOD CROSS TIE SIZE NO. 4: 7"X9"X8'-6", NIC
- (N3) PREPARED STONE BALLAST - DEPTH VARIES, NIC

ODOT CONTRACTOR

- (1) ITEM 304 AGGREGATE BASE, AS PER PLAN
- (2) ITEM 204 EMBANKMENT
- (3) ITEM 203 EXCAVATION

SHOULDER WIDTH (SW)

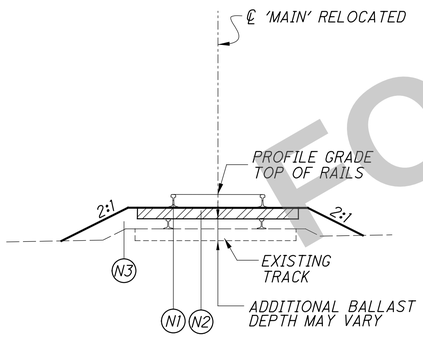
BALLAST WIDTH FROM END OF TIE TO EDGE OF SLOPE

	JOINTED RAIL	WELDED RAIL
SW (INSIDE OF CURVE)	0"	6"
SW (OUTSIDE OF CURVE)	6"	12"
SW (TANGENT BOTH SIDES)	0"	6"

FILL SECTION

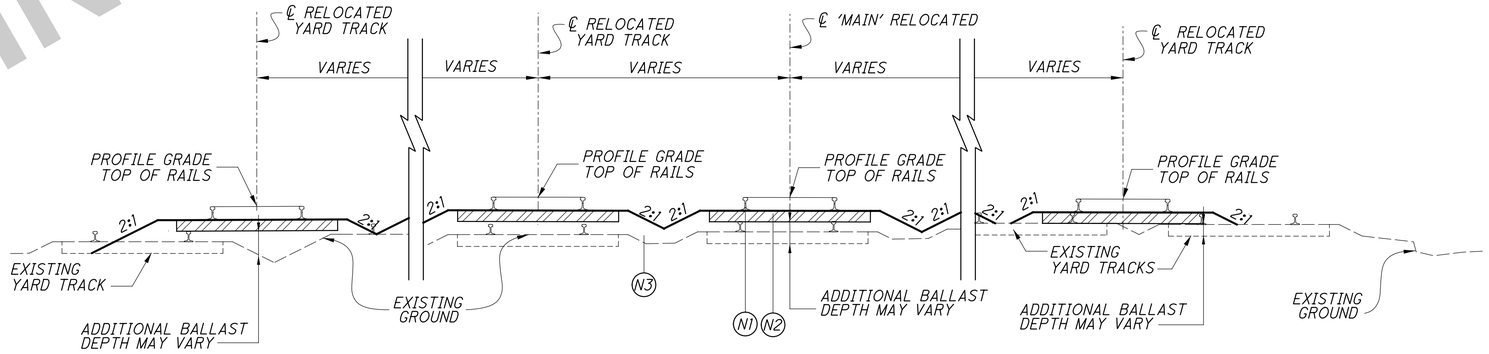
(1) TAMPING OF BALLAST MUST NOT DISTRUB COMPACTED SUBBALLAST.

(2) TOP OF SUB-GRADE IS TO BE CROWNED TO PROVIDE POSITIVE DRAINAGE.



PROPOSED TYPICAL 'MAIN' SECTION IN EXISTING BALLAST

N.T.S.
STA. 125+00+/- TO STA. 127+00 - BALLAST SECTION ONLY
STA. 164+00+/- TO STA. 167+00 - BALLAST SECTION ONLY



PROPOSED TYPICAL YARD SECTION IN EXISTING BALLAST

N.T.S.
STA. 127+00 TO STA. 129+00 - BALLAST SECTION ONLY
STA. 132+00 TO STA. 138+00 - BALLAST SECTION ONLY
STA. 144+00 TO STA. 147+00 - BALLAST SECTION ONLY

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TYPICAL TRACKWORK SECTIONS - PROPOSED NORFOLK SOUTHERN RAILROAD

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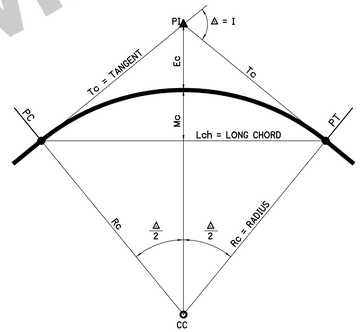
CURVES ARE NOT SUPERELEVATED UNLESS OTHERWISE INDICATED

FOR DETAILED GEOMETRY DATA SEE ALSO GEOMETRY TABULATIONS SHEETS

TRACK	SURVEY ℄ EXISTING MAINLINE (MLE) **	PR MAIN SOUTH (MLP†) temporary	PR MAIN SOUTH (MLPs) final	PR. MAIN NORTH (MLPn)	PD	PD1	PD2	PD3	PD4	PD5	PD7
CURVE IDENTIFIER CURVE DATA	MLE-1 P.I. Sta= 129+63.15 Dc= 7°00'00.00" R= 819.02' Δ = 76°56'00.00"(RT) L= 1099.73' T= 650.70'	MLE†-1 P.I. Sta= 125+06.47 Dc= 7°00'00.00" R= 819.02' Δ = 26°38'15.45"(RT) L= 380.77' T= 193.89' BF	MLE†-1 P.I. Sta= 125+06.47 Dc= 7°00'00.00" R= 819.02' Δ = 26°38'15.45"(RT) L= 380.77' T= 193.89' BF		PD-1 P.I. Sta= 6+79.71 Dc= 10°00'00.00" R= 573.69' Δ = 29°35'51.45"(RT) L= 296.35' T= 151.56'	PD1-1 P.I. Sta= 1+70.88 Dc= 7°30'00.00" R= 764.49' Δ = 5°52'31.35"(RT) L= 78.39' T= 39.23'	PD2-1 P.I. Sta= 2+86.34 Dc= 10°00'00.00" R= 573.69' Δ = 11°31'22.77"(RT) L= 115.23' T= 57.88'	PD3-1 P.I. Sta= 2+52.31 Dc= 8°00'00.00" R= 716.78' Δ = 11°30'18.84"(RT) L= 143.82' T= 72.21'	PD4-1 P.I. Sta= 3+68.38 Dc= 10°00'00.00" R= 573.69' Δ = 17°16'32.22"(RT) L= 172.98' T= 87.15'	PD5-1 P.I. Sta= 2+76.72 Dc= 10°00'00.00" R= 573.69' Δ = 9°19'12.95"(RT) L= 93.32' T= 46.76'	
CURVE IDENTIFIER CURVE DATA	MLE-2 P.I. Sta= 151+55.05 Dc= 7°00'00.00" R= 819.02' Δ = 60°52'00.00"(LT) L= 870.07' T= 481.15'	MLP†-1 P.I. Sta= 129+27.80 Dc= 12°00'00.00" R= 478.34' Δ = 21°39'13.08"(RT) L= 180.78 T= 91.48'	MLPs-1 P.I. Sta= 129+55.19 Dc= 10°00'00.00" R= 573.69' Δ = 27°22'42.08"(RT) L=274.13' T= 139.73'		PD-2 P.I. Sta= 11+87.60 Dc= 10°00'00.00" R= 573.69' Δ = 14°52'54.20"(RT) L= 148.82' T= 74.92'						
CURVE IDENTIFIER CURVE DATA	MLE-3a - Comp. Crv P.I. Sta= 159+75.63 Dc= 10°00'00.00" R= 573.69' Δ = 14°22'54.22"(LT) L= 144.00' T= 72.38' BF	EQUALITY MLP† POT 130+89.98 BK =A 130+89.24 AH EQUALS MLPs POT 130+89.25	EQUALITY MLP† POT 130+89.98 BK =A 130+89.24 AH EQUALS MLPs POT 130+89.25								
CURVE IDENTIFIER CURVE DATA	MLE-3b - Comp Crv P.I. Sta= 161+77.75 Dc= 2°00'00.01" R= 2864.93' Δ= 5°13'23.45"(LT) L= 261.17' T= 130.68' BF	MLP†-2 P.I. Sta= 137+47.58 Dc= 0°05'00.00" R= 68754.94' Δ = 0°03'07.32"(RT) L= 62.44' T= 31.22'	MLPs-2 P.I. Sta= 137+47.58 Dc= 0°05'00.00" R= 68754.94' Δ = 0°03'07.32"(RT) L= 62.44' T= 31.22'	MLPn-1 P.I. Sta= 149+32.96 Dc= 8°30'00.00" R= 674.68' Δ = 31°24'47.83"(LT) L= 369.91' T= 189.73'							PD7-1a - Comp Crv P.I. Sta= 14+81.94 Dc= 9°00'00.00" R= 637.28' Δ = 15°18'32.43"(LT) L= 170.28' T= 85.65' Ls= 62' SE= 0"
CURVE IDENTIFIER CURVE DATA				MLPn-2 P.I. Sta= 156+33.68 Dc= 7°45'00.00" R= 739.86' Δ = 44°15'16.82"(LT) L= 571.46' T= 300.84' Ls= 62' SE= 1"							PD7-1b - Comp Crv P.I. Sta= 16+95.85 Dc= 8°00'00.00" R= 739.86' Δ = 10°45'08.96"(LT) L= 134.52' T= 67.46' Ls= 62' SE= 0"

**PROVIDED BF=BEST FIT

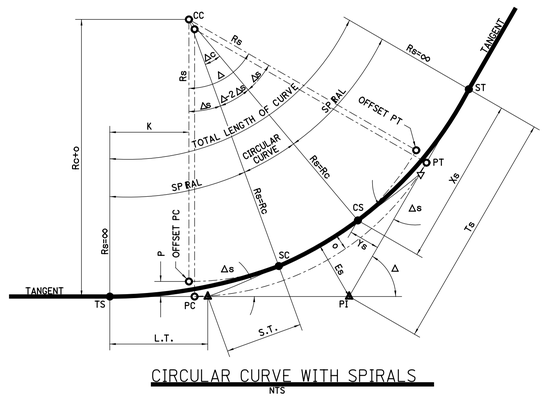
TRACK	PB	PB1	PD8	D7D	TD8
CURVE IDENTIFIER CURVE DATA	PB-1 P.I. Sta= 2+81.73 Dc= 0°15'00.00" R= 22918.33' Δ= 0°09'42.47"(RT) L= 64.72' T= 32.36'	PB1-1 P.I. Sta= 1+67.01 Dc= 7°30'00.00" R= 764.49' Δ= 5°42'01.35"(LT) L=76.06' T= 38.06'	PD8-1 P.I. Sta= 3+25.39 Dc= 7°30'00.00" R= 764.49' Δ = 7°37'28.38"(RT) L=101.73' T= 50.94'	D7D-1 P.I. Sta= 1+52.81 Dc= 10°00'00.00" R= 573.69' Δ = 19°28'30.93"(LT) L= 194.75' T= 98.45' LS=93.00'	TD8-1 P.I. Sta= 1+52.81 Dc= 5°30'00.00" R= 1042.14' Δ = 3°28'30.43"(LT) L= 63.21' T= 31.61'
	PB-2 P.I. Sta= 4+20.91 Dc= 0°20'00.00" R= 17188.76' Δ= 0°12'38.81"(LT) L= 63.24' T= 31.62'			D7D-2 P.I. Sta= 4+63.11 Dc= 7°00'00.00" R= 819.02' Δ = 2°05'55.30"(LT) L= 29.98' T= 15.00'	TD8-2 P.I. Sta= 4+63.11 Dc= 10°00'00.00" R= 1042.14' Δ = 13°19'08.18"(RT) L= 133.36' T= 66.98'



SIMPLE CIRCULAR CURVE

NTS

PC	Point of Curve		
PI	Point of Intersection		
PT	Point of Tangent		
CC	Curve Cente Point		
I	Angle of Intersection		
△c	Central Angle of Curve		
Rc	Radius of Curve		
Tc	Tanget of Curve		
Lc	Length of Curve		
Lch	Long Chord of Curve		
Mc	Middle Ordinate of Curve		
Ec	Extrernal of Curve		
Ea	Superelevation		
Eu	Underbalance		
Ee	Equilibrium Elevation		



CIRCULAR CURVE WITH SPIRALS

NTS

TS	Point of Tangent to Spiral	Xs	Horiz. Distance to TS to SC
SC	Point of Spiral to Curve	Ys	Vertical Distance TS to SC
CS	Point of Curve to Spiral	Xo	Horizontal Distance to Offset
ST	Point of Spiral to tangent	o	Offset
Ts	Tangent of Spiralled Curve	Lts	Long Tangent of Spiral
Es	External of Spiralled Curve	Sts	Short Tangent of Spiral
△s	Central Angle of Spiral	LCHs	Long Chord of Spiral
Ls	Length of Spiral	Rs	Radius of Spiral

FOR INFORMATION ONLY

CALCULATED JRG CHECKED RC

TRACK CURVE DATA
NORFOLK SOUTHERN RAILROAD

HAM-75-7.85

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MLE TRACK (SURVEY CENTERLINE MAINLINE) — FOR INFORMATION ONLY

CURVE ID	PT TYPE	STATION	NORTHING	EASTING	BEARING	DIST	R (FT)	Dc	DIR	LENGTH	DELTA	DIR	DELTA SPIRAL	DIR	Ls (ft)	Xs (ft)	Ys (ft)	Ea (IN)	MAS
	PT	122+62.45	433275.6794	1406300.7922															
					N 64°16'23.63" W	50.00													
	PC	123+12.45	433297.3834	1406255.7485															
MLE-1	PI	129+63.15	433579.8396	1405669.5490			819.02	7°00'00.00"	RT	1099.73	76°56'00.00"	RT							10 mph
	PT	134+11.50	434214.7200	1405812.1610															
					N 12°39'36.37" E	1262.40													
	PC	146+73.90	435446.4278	1406088.8372															
MLE-2	PI	151+55.05	435915.8867	1406194.2909			819.02	7°00'00.00"	RT	870.06	60°52'00.00"	RT							10 mph
	PT	155+43.42	436236.5525	1405835.5631															
					N 48°12'23.63" W	300.89													
	PI	158+44.31	436437.0798	1405611.2338															
					N 48°12'23.63" W	58.94													
	PC	159+03.25	436476.3620	1405567.2889															
MLE-3a	PI	159+75.63	436524.5997	1405513.3255			573.686	10°00'00.00"	LT	144.00	14°22'54.22"	LT							10 mph
	PCC	160+47.07	436557.9223	1405449.0719															
MLE-3b	PI	161+77.75	436618.0833	1405333.0676			2864.93	2°00'00.01"	LT	261.17	5°13'23.45"	LT							10 mph
	PT	163+08.23	436667.4339	1405212.0683															
					N 67°48'41.30" W	375.09													
	POT	166+83.32	436809.0883	1404864.7562															

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BERRY YARD - GEOMETRY TABULATION SHEET
NORFOLK SOUTHERN RAILROAD

HAM-75-7.85

1720
2017

TEMPORARY MAINLINE (MLPt) SOUTH

CURVE ID	PT TYPE	STATION	NORTHING	EASTING	BEARING	DIST	R (FT)	Dc	Tc	M	E	LENGTH	DELTA	Ea (IN)	MAS
MLE	*POB*	*121+62.71*	*433232.3857*	*1406390.6424*											
					N 64°16'23.63" W	*149.86*									
EQUALITY MLE BK	*PC*	*123+12.45*	*433297.3834*	*1406255.7485*											
EQUALITY MLEt / MLPt AH	*POT*	*123+12.45*	*433297.3834*	*1406255.7485*											
					N 64°16'23.63" W	*0.13*									
	PC	*123+12.58*	*433297.4383*	*1406255.6346*											
MLEt / MLPt-1	PI	125+06.47	433381.6031	1406080.9621			819.02	7°00'00.00"				380.77	26°38'15.45"	0	10 MPH
	PT	126+93.11	433535.1483	1405962.5643											
					N 37°38'08.18" W	10.15									
	PS PD/MLPt	127+03.26	433543.1836	1405956.3683											
					N 37°38'08.18" W	31.25									
	PITO	127+34.51	433567.9308	1405937.2859											
					N 31°54'39.18" W	101.81									
	PC	128+36.32	433654.3579	1405883.4669											
MLPt-1	PI	129+27.80	433732.0127	1405835.1106			478.34	12°00'00.00"	91.48	8.51	8.67	180.78	21°39'13.08"	0	10 MPH
	PT	130+16.77	433822.0307	1405818.8210											
					N 10°15'26.10" W	3.55									
	PS TD8/MLPt	130+20.32													
					N 10°15'26.10" W	31.25									
	PI/PITO	130+51.57	433856.2684	1405812.6253											
					N 4°31'57.10" W	38.41									
EQUALITY MLPt BK	POT	130+89.98	433894.5627	1405809.5896											
EQUALITY MLPs AH	POT	A 130+89.24	433894.5627	1405809.5896											
					N 4°31'57.10" W	41.74									
	PS PD4/MLPs	*A 131+30.98*													
					N 4°31'57.10" W	31.25									
	PI/PITO	A 131+62.23	433967.3207	1405803.8218											
					N 1°11'31.90" E	80.15									
	PS PD2/MLPs	*A 132+42.38*													
					N 1°11'31.90" E	31.25									
	PI/PITO	A 132+73.63	434078.6966	1405806.1397											
					N 6°55'00.90" E	80.14									
	PS MLPs/PB	*A 133+53.77*													
					N 6°55'00.90" E	31.25									
FOR INFORMATION ONLY	*PITO*	*A 133+85.02*													
					N 6°55'00.90" E	98.40									
	PS PD1/MLPs	*A 134+83.42*													
					N 6°55'00.90" E	31.25									
	PI/PITO	A 135+14.67	434317.9824	1405835.1681											
					N 12°38'29.90" E	201.69									
	PC	A 137+16.35	434514.7794	1405879.3076											
MLPt-2/MLPs-2	PI	A 137+47.57	434545.2433	1405886.1404			68754.94	0°05'00.00"	31.22	0.01	0.01	62.44	0°03'07.32"	0	10 MPH
	PT	A 137+78.79	434575.7010	1405893.0008											
					N 12°41'37.22" E	89.21									
	POE	A 138+68.00	434662.7264	1405912.6027											

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NORFOLK SOUTHERN RAILROAD

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1721
2017

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FINAL MAINLINE (MLPs) SOUTH

CURVE ID	PT TYPE	STATION	NORTHING	EASTING	BEARING	DIST	R (FT)	Dc	LENGTH	T	M	E	Lch	I	DELTA	Ea (IN)	MAS
	PC	*123+12.58*	*433297.4383*	*1406255.6346*													
MLPt-1	*PI*	*125+06.47*	*433381.6031*	*1406080.9621*			*819.02*	*7°00'00.00"*	*380.77*	*193.89*	*22.03*	*22.64*	*377.35*	*26°38'15.45"*	*26°38'15.45"*	*0*	10 mph
FOR INFORMATION ONLY																	
EQ MLPt BK	*PT*	*126+93.11*	*433535.1483*	*1405962.5643*													
EQ MLPs AH	PT	126+93.11	433535.1483	1405862.5643													
					N 37°38'08.17" W	*10.15*											
	PS PD/MLP	127+03.26	433543.1836	1405956.3683													
					N 37°38'08.18" W	31.25											
	PITO	127+34.51	433567.9308	1405937.2859													
					N 31°54'39.18" W	80.95											
	PC	128+15.46	433636.6465	1405894.4960													
MLPs-1	PI	129+55.19	433755.2633	1405820.6323			573.69	10°00'00.00"	274.13	139.73	16.30	16.77	271.53	27°22'42.08"	27°22'42.08"	0	10 mph
	PT	130+89.59	433894.5610	1405809.5897													
					N 4°31'57.10" W	0.39											
EQ MLPt BK	*POT*	*130+89.98*	*433894.5627*	*1405809.5896*													
EQ MLPs AH	POT	130+89.24	433894.5627	1405809.5896													
					N 4°31'57.10" W	41.74											
	PS PD4/MLP	*131+30.98*															
					N 4°31'57.10" W	31.25											
	PI/PITO	131+62.23	433967.3207	1405803.8218													
					N 1°11'31.90" E	80.15											
	PS PD2/MLP	*132+42.38*															
					N 1°11'31.90" E	31.25											
	PI/PITO	132+73.63	434078.6966	1405806.1397													
					N 6°55'00.90" E	80.14											
	PS MLP/PB	*133+53.77*															
					N 6°55'00.90" E	31.25											
FOR INFORMATION ONLY	*PITO*	*133+85.02*															
					N 6°55'00.90" E	98.40											
	PS PD1/MLP	*134+83.42*															
					N 6°55'00.90" E	31.25											
	PI/PITO	135+14.67	434317.9824	1405835.1681													
					N 12°38'29.90" E	201.69											
	PC	137+16.36	434514.7794	1405879.3076													
MLPs-2	PI	137+47.58	434545.2433	1405886.1404			68754.94	0°05'00.00"	62.44	31.22	0.01	0.01	0.00	0°03'07.32"	0°03'07.32"	0	10 mph
	PT	137+78.80	434575.7010	1405893.0008													
					N 12°41'37.22" E	89.21											
	POE	138+68.01	434662.7264	1405912.6027													

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1722
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FINAL MAINLINE (MLPn) NORTH

CURVE ID	PT TYPE	STATION	NORTHING	EASTING	BEARING	DIST	R (FT)	Dc	DIR	LENGTH	DELTA	DIR	TOTAL CENTRAL ANGLE (I)	DIR	DELTA SPIRAL		LONG TAN OF SPIRAL (Lts)	SHORT TAN OF SPIRAL (Sts)	LONG CHORD OF SPIRAL	Ls (ft)	Xs (ft)	Ys (ft)	Ea (IN)	MAS
EQ EML	*POT*	*143+98.78*	*435177.9979*	*1406028.5403*																				
EQ MLPn	POB	143+96.02	435177.9979	1406028.5403																				
					N 12°39'36.37" E																				
	PS B																							
					N 12°39'36.37" E																				
	PS B1	146+26.99																						
					N 12°39'36.37" E	100.06																		
	PS D	147+22.06																						
					N 12°39'36.37" E	4.99																		
	POT	147+27.05	435500.9818	1406101.0916																				
					N 12°39'36.37" E	16.18																		
	PC	147+43.23	435516.7663	1406104.6372																				
MLPn-1	PI	149+32.96	435701.8837	1406146.2198			674.69	8°30'00.00"	LT	369.91	31°24'47.83"	LT												10 MPH
	PT	151+12.79	435881.5416	1406085.2231																				
					N 18°45'11.46" W	148.05																		
	PS PD7	152+60.84																						
					N 18°45'11.46" W	10.00																		
	TS	152+70.84	436031.1992	1406034.4118																				
															2°24'02.41"	LT	41.34	20.67	62.00	62.00	61.99	0.87	1"	
	SC	153+32.84	436089.6191	1406013.6630																				
MLPn-2	PI	156+33.68	436370.1860	1405905.0982			739.86	7°45'00.00"	LT	571.46	44°15'16.82"	LT	49°03'21.63"	LT										10 MPH
	CS	159+03.87	436495.3788	1405631.5458																				
															2°24'02.41"	LT	41.34	20.67	62.00	62.00	61.99	0.87	1"	
	ST	159+65.87	436519.5933	1405574.4752																				
EQ MLPn	POE	167+32.36	436809.0912	1404864.7568																				
EQ EML	*POT*	*166+83.32*	*436809.0912*	*1404864.7568*																				

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1723
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PD TRACK

CURVE ID	PT TYPE	STATION	NORTHING	EASTING	BEARING	DIST	R (FT)	Dc	T	M	E	LONG CHORD	LENGTH	DELTA	MAS
	PS	4+00.00	433543.1836	1405956.3683											
					N 37°38'08.1805" W	128.14									
	PC	5+28.14	433644.6618	1405878.1191											
PD-1	PI	6+79.71	433764.6849	1405785.5699			573.69	10°00'00.00"	151.56	19.03	19.68	293.07	296.35	29°35'51.45"	10 mph
	PT	8+24.12	433914.7575	1405764.3771											
					N 8°02'16.7365" W	40.89									
	PI	8+65.01	433955.2488	1405758.6591											
					N 2°18'47.7318" W	247.66									
	PC	11+12.68	434202.7120	1405748.6625											
PD-2	PI	11+87.60	434277.5757	1405745.6384			573.69	10°00'00.00"	74.92	4.83	4.87	148.59	149.01	14°52'54.20"	10 mph
	PT	12+61.50	434350.7051	1405761.9425											
					N 12°34'06.47" E	113.50									
	POE	13+75.00	434461.4853	1405786.6407											

PD1 TRACK

CURVE ID	PT TYPE	STATION	NORTHING	EASTING	BEARING	DIST	R (FT)	Dc	T	M	E		LENGTH	DELTA	MASf/ MASp
	PS	0+00.00	434286.9598	1405831.4047											
					N 6°55'00.90" E	131.65									
	PC	1+31.65	434417.6540	1405847.2596											
PD1-1	PI	1+70.88	434456.6000	1405851.9842			764.49	7°30'00.00"	39.23	1.00	1.01	78.36	78.39	5°52'31.35"	10 mph
	PT	2+10.05	434494.8578	1405860.6707											
					N 12°47'32.25" E	125.27									
	POE	3+35.26	434617.0141	1405888.4067											

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NORFOLK SOUTHERN RAILROAD

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1724
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PD2 TRACK

CURVE ID	PT TYPE	STATION	NORTHING	EASTING	BEARING	DIST	R (FT)	Dc	T	M	E	LENGTH	Lch	DELTA	DIR	DELTA SPIRAL	DIR	Ls (ft)	Xs (ft)	Ys (ft)	Ea (IN)	MAS
	PS	0+00.00	434047.4531	1405805.4895																		
					N 1°11'31.90" E	228.46																
	PC	2+28.46	434275.8600	1405810.2428																		
PD2-1	PI	2+86.34	434333.7309	1405811.4471			573.69	10°00'00.00"	57.88	2.90	2.91	115.38	115.18	11°31'22.77"	RT							10 mph
	PT	3+43.69	434390.1947	1405824.1875																		
					N 12°42'54.67" E	192.06																
	POE	5+35.75	434577.5478	1405866.4615																		

PD3 TRACK

CURVE ID	PT TYPE	STATION	NORTHING	EASTING	BEARING	DIST	R (FT)	Dc	T	M	E	LENGTH	Lch	DELTA	DIR	DELTA SPIRAL	DIR	Ls (ft)	Xs (ft)	Ys (ft)	Ea (IN)	MAS
	PS	0+00.00	434078.5729	1405795.0025																		
					N 4°31'57.10" W	31.25																
	PI	0+31.25	434109.7252	1405792.5330																		
					N 1°11'31.90" E	148.85																
	PC	1+80.10	434258.5422	1405795.6300																		
PD3-1	PI	2+52.31	434330.7355	1405797.1324			716.78	8°00'00.00"	72.21	3.61	3.63	143.93	143.69	11°30'18.84"	RT							10 mph
	PT	3+23.91	434401.1786	1405813.0041																		
					N 12°41'50.7331" E	242.62																
	POE	5+66.54	434637.8657	1405866.3327																		

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1725
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PD4 TRACK

CURVE ID	PT TYPE	STATION	NORTHING	EASTING	BEARING	DIST	R (FT)	Dc	T	M	E	LENGTH	Lch	DELTA	DELTA SPIRAL	DIR	Ls (ft)	Xs (ft)	Ys (ft)	Ea (IN)	MAS
	PS	0+00.00	433936.1665	1405806.2915																	
					N 4°31'57.10" W	281.23															
	PC	2+81.23	434216.5216	1405784.0669																	
PD4-1	PI	3+68.38	434303.3981	1405777.1800			573.69	10°00'00.00"	87.15	6.51	6.58	172.98	172.32	17°16'32.22"							10 mph
	PT	4+53.99	434388.4006	1405796.4033																	
					N 12°44'35.12" E	320.94															
	POE	7+74.94	434701.4399	1405867.1972																	

PD5 TRACK

CURVE ID	PT TYPE	STATION	NORTHING	EASTING	BEARING	DIST	R (FT)	Dc	T	M	E	LENGTH	Lch	DELTA	DELTA SPIRAL	DIR	Ls (ft)	Xs (ft)	Ys (ft)	Ea (IN)	MAS
	PS	0+00.00	434045.3251	1405755.0203																	
					N 2°18'47.73" W	31.25															
	PITO	0+31.25	434076.5496	1405753.7590																	
					N 3°24'41.27" E	198.71															
	PC	2+29.96	434274.9077	1405765.5835																	
PD5-1	PI	2+76.72	434321.5885	1405768.3662			573.69	10°00'00.00"	46.76	1.90	1.90	93.32	93.22	9°19'12.95"							10 mph
	PT	3+23.16	434367.2024	1405778.6723																	
					N 12°43'54.22" E	167.80															
	POE	4+90.97	434530.8800	1405815.6539																	

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1726
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PD8 TRACK

CURVE ID	PT TYPE	STATION	NORTHING	EASTING	BEARING	DIST	R (FT)	Dc	LENGTH	T	M	E	Lch	DELTA	MAS
	PS	0+00.00	433924.3058	1405763.0287											
					N 8°02'16.73" W	274.45									
	PC	2+74.45	434196.0569	1405724.6529											
PD8-1	PI	3+25.39	434246.4983	1405717.5297			764.49	7°30'00.00"	101.73	50.94	1.69	1.70	101.66	7°37'28.38"	10 mph
	PT	3+76.11	434297.4388	1405717.1621											
					N 0°24'48.35" W	77.07									
	POT	4+53.17	434374.5028	1405716.6060											

TD8 TRACK

CURVE ID	PT TYPE	STATION	NORTHING	EASTING	BEARING	DIST	R (FT)	Dc	LENGTH	T	M	E	Lch	DELTA	MAS
	PS	0+00.00	433825.5179	1405818.1899											
					N 10°15'26.10" W	121.20									
	PC	1+21.20	433944.7796	1405796.6083											
TD8-1	PI	1+52.81	433975.8882	1405790.9789			1042.14	5°30'00.00"	63.21	31.61	0.48	0.48	63.20	3°28'30.43"	10 mph
	PT	1+84.38	434006.5983	1405783.4742											
					N 13°43'56.53" W	211.75									
	PC	3+96.13	434212.2955	1405733.2075											
TD8-2	PI	4+63.11	434277.3621	1405717.3070			573.69	10°00'00.00"	133.36	66.98	3.87	3.90	133.06	13°19'08.18"	10 mph
	PT	5+29.32	434344.3415	1405716.8237											
					N 0°24'48.35" W	30.16									
	POT	5+59.48	434374.5028	1405716.6060											

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NORFOLK SOUTHERN RAILROAD

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PB TRACK

CURVE ID	PT TYPE	STATION	NORTHING	EASTING	BEARING	DIST	R (FT)	Dc	LENGTH	T	M	E	Lch	DELTA	MAS
	PS	0+00.00	434158.2610	1405815.7918											
					N 6°55'00.90" E	31.25									
	PI	0+31.25	434189.2835	1405819.5553											
					N 12°38'29.90" E	218.12									
	PC	2+49.37	434402.1180	1405867.2918											
PB-1	PI	2+81.73	434433.6930	1405874.3738			22918.33	0°15'00.00"	64.72	32.36	0.02	0.02	64.72	0°09'42.47"	10 mph
	PT	3+14.09	434465.2478	1405881.5449											
					N 12°48'12.37" E	75.21									
	PC	3+89.30	434538.5829	1405898.2108											
PB-2	PI	4+20.91	434569.4141	1405905.2174			17188.76	0°20'00.00"	63.23	31.62	0.03	0.03	63.23	0°12'38.81"	10 mph
	PT	4+52.53	434600.2709	1405912.1106											
					N 12°35'33.55" E	47.47									
	POE	5+00.00	434646.6016	1405922.4605											

PB1 TRACK

CURVE ID	PT TYPE	STATION	NORTHING	EASTING	BEARING	DIST	R (FT)	Dc	LENGTH	T	M	E	Lch	DELTA	MAS
	PS	0+00.00	434269.9297	1405837.6434											
					N 12°38'29.90" E	31.25									
	PI	0+31.25	434300.4221	1405844.4825											
					N 18°21'58.90" E	97.70									
	PC	1+28.95	434393.1456	1405875.2670											
PB1-1	PI	1+67.01	434429.2678	1405887.2598			764.49	7°30'00.00"	76.06	38.06	0.95	0.95	76.03	5°42'01.35"	10 mph
	PT	2+05.01	434466.4026	1405895.6053											
					N 12°39'57.55" E	164.76									
	POE	3+69.77	434627.2086	1405931.7442											

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BERRY YARD - GEOMETRY TABULATION SHEET
NORFOLK SOUTHERN RAILROAD

HAM-75-7.85

1728
2017

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PD7 TRACK

CURVE ID	PT TYPE	STATION	NORTHING	EASTING	BEARING	DIST	CURVE RADIUS (FT)	DEGREE OF CURVE (Dc)	CURVE LENGTH (Lc)	CURVE DELTA	T	M	E	Lch	I	Ts	Es	P	K	SPIRAL DELTA	LONG TAN OF SPIRAL (Lts)	SHORT TAN OF SPIRAL (Sts)	LONG CHORD OF SPIRAL (LCHs)	Ls (ft)	Xs (ft)	Ys (ft)	Ea (IN)	MAS
	PT	*7+00.03*	*434767.6737*	*1405855.1880*																								
					N 12°38'32.85" E	*256.04*																							
	PC	*9+56.07*	*435017.5046*	*1405911.2263*																								
	PI	*9+99.40*	*435059.7905*	*1405920.7112*			*573.69*	*10°00'00.00"*	*86.51*	*8°38'23.64"*	*43.34*	*1.63*	*1.63*	*86.43*														*10 mph*
	PT	*10+42.57*	*435100.1716*	*1405936.4408*																								
					N 21°16'56.49" E	*198.00*																							
	PC	*12+40.46*	*435284.6686*	*1406008.3077*																								
	PI	*12+65.78*	*435308.2539*	*1406017.4949*			*5729.65*	*1°00'00.00"*	*50.62*	*0°30'22.39"*	*25.31*	*0.06*	*0.06*	*50.62*														10 mph
	PT	*12+91.09*	*435331.9195*	*1406026.4733*																								
					N 20°46'34.10" E	97.78																							
	POT	13+88.86	435423.3382	1406061.1565																								
					N 20°46'34.10" E	7.43																							
	PC	13+96.29	435430.2836	1406063.7915																								
PD7-1b	PI	14+81.94	435510.3619	1406094.1722			637.27	9°00'00.00"	170.28	15°18'32.43"	85.65	5.68	5.73	169.77														10 mph
	CS	15+66.39	435595.6200	1406102.3323																								
	PI-scs	15+95.73	435616.7488	1406134.534											33°48'16.56"	241.35	30.48											
	SPI	*15+96.81*	435625.8966	1406105.2301														0.03	3.44	5°15'54.43"	31.63	30.42	61.98	62	61.92	2.79	0	
	SC	16+28.39	435657.5251	1406105.3416																								
PD7-1a	PI-c	16+95.85	435724.9804	1406105.5794			716.78	8°00'00.00"	134.52	10°45'08.96"	67.46	3.15	3.17	134.32														10 mph
	CS	17+62.91	435791.2958	1406093.2282																								
	SPI	*17+83.47*	435811.6167	1406089.4434												25.31	0.06	0.22	31.00	2°28'40.75"	41.34	20.67	61.99	62	61.99	0.89	0	
	ST	18+24.80	435851.8900	1406080.1245																								
					N 13°01'42.46" W	143.95																							
	PITO	19+68.75	435992.1361	1406047.6727																								
					N 18°45'11.46" W	31.25																							
	PS	20+00.00	436021.7271	1406037.6261																								

FOR INFORMATION ONLY

CALCULATED JRG
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BERRY YARD - GEOMETRY TABULATION SHEET
NORFOLK SOUTHERN RAILROAD

HAM-75-7.85

1729
2017

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D7D DETOUR TRACK

CURVE ID	PT TYPE	STATION	NORTHING	EASTING	BEARING	DIST	CURVE RADIUS (FT)	DEGREE OF CURVE (Dc)	CURVE LENGTH (Lc)	CURVE DELTA	T	M	E	Lch	Ts	Es	TOTAL CENTRAL ANGLE (I)	P	K	SPIRAL DELTA	DIR	LONG TAN OF SPIRAL (Lts)	SHORT TAN OF SPIRAL (Sts)	LONG CHORD OF SPIRAL (LCHs)	Ls (ft)	Xs (ft)	Ys (ft)	Ea (IN)	MASf
EQ. MLE	*POC*	*147+55.52*	*435526.6472*	*1406100.0627*																									
					N 8°26'57.34" E																									
EQ. D7D	CS	2+00.00	435526.6472	1406100.0627																									
	SPI	2+49.30	435575.4166	1406107.3072														0.19	13.91	7°53'49.35"	LT	49.30	43.84	92.93	93	92.73	6.02	0	
	SC	2+93.00	435619.2566	1406107.7297																									
	PI-sc	3+52.49	435677.4785	1406122.4680											152.49	17.07	27°22'19.75"											0	10 mph
	PI-c	3+91.45	435717.7017	1406108.6786			573.69	10°00'00.00"	195	19°28'30.40"	98.45	8.27	8.39	194.06															
	PT	4+87.75	435810.8308	1406076.7518																									
					N 18°55'22.41" W	94.00																								
	PC	5+81.75	435899.7507	1406046.2680																									
	PI	5+96.75	435913.9416	1406041.4030			819.02	7°00'00.00"	30	2°05'55.30"																		0	10 mph
	PCC	6+11.73	435927.9448	1406036.0217																									

FOR INFORMATION ONLY

CALCULATED JRG
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BERRY YARD - GEOMETRY TABULATION SHEET
NORFOLK SOUTHERN RAILROAD

HAM-75-7.85

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1730
2017

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D7D Centerline Coordinates Report

Station	Type	Northing	Easting	Elevation
2+00.00	TS	435,526.65	1,406,100.06	549.74
2+25.00	POS	435,551.43	1,406,103.34	549.78
2+50.00	POS	435,576.31	1,406,105.78	549.79
2+75.00	POS	435,601.26	1,406,107.28	549.76
2+93.00	SC	435,619.26	1,406,107.73	549.73
3+00.00	POC	435,626.26	1,406,107.75	549.71
3+25.00	POC	435,651.25	1,406,107.15	549.66
3+50.00	POC	435,676.19	1,406,105.45	549.60
3+75.00	POC	435,701.03	1,406,102.67	549.55
4+00.00	POC	435,725.73	1,406,098.81	549.49
4+25.00	POC	435,750.23	1,406,093.87	549.44
4+50.00	POC	435,774.50	1,406,087.88	549.38
4+75.00	POC	435,798.49	1,406,080.83	549.33
4+87.75	PT	435,810.60	1,406,076.83	549.29
5+00.00	POT	435,822.42	1,406,072.78	549.26
5+25.00	POT	435,846.07	1,406,064.67	549.19
5+50.00	POT	435,869.71	1,406,056.57	549.11
5+75.00	POT	435,893.36	1,406,048.46	549.02
5+81.75	PC	435,899.75	1,406,046.27	549.00
6+00.00	POC	435,916.94	1,406,040.16	548.94
6+11.73	PT	435,927.93	1,406,036.03	548.90

MLPn Centerline Coordinates Report

Station	Type	Northing	Easting	Elevation
145+75.00	POT	435,352.63	1,406,067.77	549.92
146+00.00	POT	435,377.02	1,406,073.25	549.91
146+25.00	POT	435,401.41	1,406,078.73	549.89
146+50.00	POT	435,425.81	1,406,084.20	549.87
146+75.00	POT	435,450.20	1,406,089.68	549.86
147+00.00	POT	435,474.59	1,406,095.16	549.84
147+25.00	POT	435,498.98	1,406,100.64	549.82
147+27.05	PI	435,500.98	1,406,101.09	549.82
147+43.23	PC	435,516.77	1,406,104.64	549.81
147+50.00	POC	435,523.38	1,406,106.09	549.81
147+75.00	POC	435,547.92	1,406,110.87	549.79
148+00.00	POC	435,572.62	1,406,114.74	549.78
148+25.00	POC	435,597.44	1,406,117.69	549.77
148+50.00	POC	435,622.36	1,406,119.71	549.81
148+75.00	POC	435,647.33	1,406,120.82	549.89
149+00.00	POC	435,672.33	1,406,121.00	550.01
149+25.00	POC	435,697.32	1,406,120.25	550.16
149+50.00	POC	435,722.26	1,406,118.58	550.36
149+75.00	POC	435,747.12	1,406,115.98	550.59
150+00.00	POC	435,771.87	1,406,112.46	550.86
150+25.00	POC	435,796.48	1,406,108.03	551.17
150+50.00	POC	435,820.90	1,406,102.70	551.53
150+75.00	POC	435,845.10	1,406,096.46	551.92
151+00.00	POC	435,869.06	1,406,089.32	552.34
151+12.79	POC	435,881.22	1,406,085.33	552.56
151+13.13	PT	435,881.54	1,406,085.22	552.56
151+25.00	POT	435,893.10	1,406,081.30	552.76
151+50.00	POT	435,916.77	1,406,073.26	553.19
151+75.00	POT	435,940.44	1,406,065.22	553.61
152+00.00	POT	435,964.12	1,406,057.19	554.03
152+25.00	POT	435,987.79	1,406,049.15	554.46
152+50.00	POT	436,011.46	1,406,041.11	554.88
152+70.84	TS	436,031.20	1,406,034.41	555.23
152+75.00	POS	436,035.14	1,406,033.08	555.30
153+00.00	POS	436,058.78	1,406,024.95	555.73
153+25.00	POS	436,082.29	1,406,016.46	556.15
153+32.84	SC	436,089.62	1,406,013.66	556.28
153+50.00	POC	436,105.55	1,406,007.29	556.57
153+75.00	POC	436,128.48	1,405,997.34	557.00
154+00.00	POC	436,151.07	1,405,986.62	557.38
154+25.00	POC	436,173.28	1,405,975.15	557.70
154+50.00	POC	436,195.08	1,405,962.93	557.96
154+75.00	POC	436,216.47	1,405,949.98	558.17
155+00.00	POC	436,237.40	1,405,936.32	558.31
155+25.00	POC	436,257.87	1,405,921.95	558.40
155+50.00	POC	436,277.83	1,405,906.91	558.42
155+75.00	POC	436,297.27	1,405,891.20	558.39
156+00.00	POC	436,316.18	1,405,874.84	558.30
156+25.00	POC	436,334.52	1,405,857.85	558.15
156+50.00	POC	436,352.27	1,405,840.25	557.94

MLPn Centerline Coordinates Report

Station	Type	Northing	Easting	Elevation
156+75.00	POC	436,369.42	1,405,822.06	557.67
157+00.00	POC	436,385.95	1,405,803.30	557.34
157+25.00	POC	436,401.83	1,405,784.00	556.95
157+50.00	POC	436,417.05	1,405,764.17	556.50
157+75.00	POC	436,431.59	1,405,743.84	555.99
158+00.00	POC	436,445.44	1,405,723.02	555.47
158+25.00	POC	436,458.58	1,405,701.75	554.94
158+50.00	POC	436,470.99	1,405,680.05	554.42
158+75.00	POC	436,482.66	1,405,657.95	553.89
159+00.00	POC	436,493.58	1,405,635.46	553.37
159+03.87	POC	436,495.20	1,405,631.94	553.29
159+04.31	CS	436,495.38	1,405,631.55	553.28
159+25.00	POS	436,503.93	1,405,612.22	552.84
159+50.00	POS	436,513.59	1,405,589.17	552.32
159+65.87	ST	436,519.59	1,405,574.48	551.98
159+75.00	POT	436,523.04	1,405,566.02	551.79
160+00.00	POT	436,532.48	1,405,542.87	551.27
160+25.00	POT	436,541.93	1,405,519.73	550.74
160+50.00	POT	436,551.37	1,405,496.58	550.22
160+75.00	POT	436,560.81	1,405,473.43	549.69
161+00.00	POT	436,570.25	1,405,450.28	549.17
161+25.00	POT	436,579.70	1,405,427.13	548.64
161+50.00	POT	436,589.14	1,405,403.98	548.11
161+75.00	POT	436,598.58	1,405,380.84	547.59
162+00.00	POT	436,608.02	1,405,357.69	547.06
162+25.00	POT	436,617.46	1,405,334.54	546.54
162+50.00	POT	436,626.91	1,405,311.39	546.01
162+75.00	POT	436,636.35	1,405,288.24	545.49
163+00.00	POT	436,645.79	1,405,265.09	544.96
163+25.00	POT	436,655.23	1,405,241.95	544.44
163+50.00	POT	436,664.68	1,405,218.80	543.91
163+75.00	POT	436,674.12	1,405,195.65	543.39
164+00.00	POT	436,683.56	1,405,172.50	542.86
164+25.00	POT	436,693.00	1,405,149.35	542.33
164+50.00	POT	436,702.45	1,405,126.21	541.79
164+75.00	POT	436,711.89	1,405,103.06	541.23
165+00.00	POT	436,721.33	1,405,079.91	540.65
165+25.00	POT	436,730.77	1,405,056.76	540.06
165+50.00	POT	436,740.21	1,405,033.61	539.47
165+75.00	POT	436,749.66	1,405,010.46	538.88
166+00.00	POT	436,759.10	1,404,987.32	538.29

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CALCULATED JRG
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TRACK STAKEOUT DATA
STAGE 1A ALIGNMENTS

HAM-75-7.85

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MLPt Centerline Coordinates Report

Station	Type	Northing	Easting	Elevation
126+50.00	POC	433,501.53	1,405,989.93	551.49
126+75.00	POC	433,520.74	1,405,973.93	551.41
126+93.11	PT	433,534.96	1,405,962.71	551.35
127+00.00	POT	433,540.60	1,405,958.36	551.32
127+03.26	PI	433,543.18	1,405,956.37	551.31
127+25.00	POT	433,560.40	1,405,943.09	551.24
127+34.51	PI	433,567.93	1,405,937.29	551.21
127+50.00	POT	433,581.08	1,405,929.10	551.16
127+75.00	POT	433,602.30	1,405,915.88	551.07
128+00.00	POT	433,623.52	1,405,902.67	550.99
128+25.00	POT	433,644.74	1,405,889.45	550.90
128+36.32	PC	433,654.36	1,405,883.47	550.89
128+50.00	POC	433,666.07	1,405,876.41	550.89
128+75.00	POC	433,687.98	1,405,864.37	550.98
129+00.00	POC	433,710.49	1,405,853.50	551.16
129+25.00	POC	433,733.53	1,405,843.82	551.37
129+50.00	POC	433,757.05	1,405,835.35	551.57
129+75.00	POC	433,780.98	1,405,828.13	551.73
130+00.00	POC	433,805.26	1,405,822.17	551.78
130+16.77	PT	433,821.71	1,405,818.88	551.77
130+25.00	POT	433,830.13	1,405,817.36	551.75
130+50.00	POT	433,854.73	1,405,812.90	551.69
130+51.57	PI	433,856.27	1,405,812.63	551.68
130+75.00	POT	433,879.63	1,405,810.77	551.63
130+89.24	POT	433,894.56	1,405,809.59	551.59

PD4 Centerline Coordinates Report

Station	Type	Northing	Easting	Elevation
0+00.00	POB	433,936.17	1,405,806.29	551.48
0+25.00	POT	433,961.09	1,405,804.32	551.42
0+50.00	POT	433,986.01	1,405,802.34	551.36
0+75.00	POT	434,010.93	1,405,800.36	551.30
1+00.00	POT	434,035.85	1,405,798.39	551.24
1+25.00	POT	434,060.78	1,405,796.41	551.18
1+50.00	POT	434,085.70	1,405,794.44	551.12
1+75.00	POT	434,110.62	1,405,792.46	551.05
2+00.00	POT	434,135.54	1,405,790.49	550.99
2+25.00	POT	434,160.46	1,405,788.51	550.93
2+50.00	POT	434,185.38	1,405,786.54	550.87
2+75.00	POT	434,210.31	1,405,784.56	550.81
2+81.23	PC	434,216.52	1,405,784.07	550.79
3+00.00	POC	434,235.25	1,405,782.89	550.72
3+25.00	POC	434,260.24	1,405,782.28	550.61
3+50.00	POC	434,285.23	1,405,782.75	550.47
3+75.00	POC	434,310.18	1,405,784.31	550.31
4+00.00	POC	434,335.04	1,405,786.96	550.12
4+25.00	POC	434,359.76	1,405,790.69	549.92
4+50.00	POC	434,384.29	1,405,795.49	549.72
4+53.99	PT	434,388.19	1,405,796.35	549.69
4+75.00	POT	434,408.89	1,405,801.04	549.52
5+00.00	POT	434,433.28	1,405,806.55	549.32
5+25.00	POT	434,457.66	1,405,812.07	549.14
5+50.00	POT	434,482.04	1,405,817.58	549.00
5+75.00	POT	434,506.43	1,405,823.10	548.90
6+00.00	POT	434,530.81	1,405,828.61	548.84
6+25.00	POT	434,555.20	1,405,834.12	548.82
6+50.00	POT	434,579.58	1,405,839.64	548.82
6+75.00	POT	434,603.97	1,405,845.15	548.83
7+00.00	POT	434,628.35	1,405,850.67	548.83

PD3 Centerline Coordinates Report

Station	Type	Northing	Easting	Elevation
0+00.00	POB	434,078.57	1,405,795.00	551.13
0+25.00	POT	434,103.49	1,405,793.03	551.07
0+31.25	PI	434,109.73	1,405,792.53	551.05
0+50.00	POT	434,128.47	1,405,792.92	551.01
0+75.00	POT	434,153.47	1,405,793.44	550.95
1+00.00	POT	434,178.46	1,405,793.96	550.89
1+25.00	POT	434,203.45	1,405,794.48	550.83
1+50.00	POT	434,228.45	1,405,795.00	550.75
1+75.00	POT	434,253.44	1,405,795.52	550.65
1+80.10	PC	434,258.54	1,405,795.63	550.62
2+00.00	POC	434,278.43	1,405,796.32	550.51
2+25.00	POC	434,303.37	1,405,797.97	550.33
2+50.00	POC	434,328.25	1,405,800.49	550.13
2+75.00	POC	434,353.01	1,405,803.87	549.92
3+00.00	POC	434,377.65	1,405,808.12	549.72
3+23.91	PT	434,401.06	1,405,812.98	549.53
3+25.00	POT	434,402.24	1,405,813.24	549.52
3+50.00	POT	434,426.63	1,405,818.74	549.33
3+75.00	POT	434,451.01	1,405,824.23	549.17
4+00.00	POT	434,475.40	1,405,829.73	549.05
4+25.00	POT	434,499.79	1,405,835.22	548.97
4+50.00	POT	434,524.18	1,405,840.72	548.93
4+75.00	POT	434,548.57	1,405,846.21	548.92
5+00.00	POT	434,572.96	1,405,851.71	548.91

PD2 Centerline Coordinates Report

Station	Type	Northing	Easting	Elevation
0+00.00	POB	434,047.45	1,405,805.49	551.21
0+25.00	POT	434,072.45	1,405,806.01	551.15
0+50.00	POT	434,097.44	1,405,806.53	551.09
0+75.00	POT	434,122.44	1,405,807.05	551.03
1+00.00	POT	434,147.43	1,405,807.57	550.97
1+25.00	POT	434,172.43	1,405,808.09	550.90
1+50.00	POT	434,197.42	1,405,808.61	550.82
1+75.00	POT	434,222.42	1,405,809.13	550.73
2+00.00	POT	434,247.41	1,405,809.65	550.62
2+25.00	POT	434,272.40	1,405,810.17	550.49
2+28.46	PC	434,275.86	1,405,810.24	550.47
2+50.00	POC	434,297.39	1,405,811.10	550.34
2+75.00	POC	434,322.30	1,405,813.10	550.19
3+00.00	POC	434,347.11	1,405,816.18	550.04
3+25.00	POC	434,371.76	1,405,820.34	549.89
3+43.69	PT	434,390.05	1,405,824.16	549.79
3+50.00	POT	434,396.35	1,405,825.58	549.76
3+75.00	POT	434,420.74	1,405,831.08	549.64
4+00.00	POT	434,445.13	1,405,836.58	549.55
4+25.00	POT	434,469.51	1,405,842.09	549.47
4+50.00	POT	434,493.90	1,405,847.59	549.41
4+75.00	POT	434,518.29	1,405,853.09	549.36

PD1 Centerline Coordinates Report

Station	Type	Northing	Easting	Elevation
0+00.00	POB	434,286.96	1,405,831.40	550.63
0+25.00	POT	434,311.78	1,405,834.42	550.57
0+50.00	POT	434,336.60	1,405,837.43	550.51
0+75.00	POT	434,361.41	1,405,840.44	550.45
1+00.00	POT	434,386.23	1,405,843.45	550.39
1+25.00	POT	434,411.05	1,405,846.46	550.33
1+31.65	PC	434,417.65	1,405,847.26	550.31
1+50.00	POC	434,435.84	1,405,849.69	550.27
1+75.00	POC	434,460.52	1,405,853.70	550.16
2+00.00	POC	434,485.05	1,405,858.51	550.00
2+09.99	POC	434,494.80	1,405,860.66	549.92
2+10.05	PT	434,494.86	1,405,860.67	549.92
2+25.00	POT	434,509.49	1,405,863.99	549.81
2+50.00	POT	434,533.87	1,405,869.53	549.63
2+75.00	POT	434,558.25	1,405,875.06	549.51
3+00.00	POT	434,582.63	1,405,880.60	549.45
3+25.00	POT	434,607.01	1,405,886.14	549.43
3+35.26	POE	434,617.01	1,405,888.41	549.42

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TD8 Centerline Coordinates Report

Station	Type	Northing	Easting	Elevation
0+00.00	POB	433825.52	1405818.19	551.76
0+25.00	POT	433850.12	1405813.74	551.7
0+50.00	POT	433874.72	1405809.29	551.64
0+75.00	POT	433899.32	1405804.83	551.58
1+00.00	POT	433923.92	1405800.38	551.52
1+21.20	PC	433944.78	1405796.61	551.46
1+25.00	POC	433948.52	1405795.92	551.45
1+50.00	POC	433973.05	1405791.09	551.34
1+75.00	POC	433997.45	1405785.67	551.17
1+84.38	PT	434006.57	1405783.48	551.09
2+00.00	POT	434021.77	1405779.77	550.95
2+25.00	POT	434046.05	1405773.83	550.68
2+50.00	POT	434070.34	1405767.9	550.36
2+75.00	POT	434094.63	1405761.96	549.99
3+00.00	POT	434118.91	1405756.03	549.62
3+25.00	POT	434143.2	1405750.09	549.25
3+50.00	POT	434167.48	1405744.16	548.87
3+75.00	POT	434191.77	1405738.22	548.5
3+96.13	PC	434212.3	1405733.21	548.18
4+00.00	POC	434216.06	1405732.3	548.13
4+25.00	POC	434240.5	1405727.06	547.76
4+50.00	POC	434265.15	1405722.89	547.42
4+75.00	POC	434289.95	1405719.8	547.1
5+00.00	POC	434314.87	1405717.79	546.8
5+25.00	POC	434339.85	1405716.87	546.53
5+29.32	PT	434344.17	1405716.82	546.48
5+50.00	POT	434365.02	1405716.67	546.28
5+59.48	POE	434374.5	1405716.61	546.19

PB1 Centerline Coordinates Report

Station	Type	Northing	Easting	Elevation
0+00.00	POB	434,269.93	1,405,837.64	550.67
0+25.00	POT	434,294.32	1,405,843.11	550.61
0+31.25	PI	434,300.42	1,405,844.48	550.59
0+50.00	POT	434,318.22	1,405,850.39	550.55
0+75.00	POT	434,341.94	1,405,858.27	550.49
1+00.00	POT	434,365.67	1,405,866.15	550.43
1+25.00	POT	434,389.40	1,405,874.02	550.37
1+28.95	PC	434,393.15	1,405,875.27	550.36
1+50.00	POC	434,413.21	1,405,881.62	550.31
1+75.00	POC	434,437.26	1,405,888.45	550.25
2+00.00	POC	434,461.52	1,405,894.49	550.20
2+04.96	POC	434,466.35	1,405,895.59	550.20
2+05.01	PT	434,466.40	1,405,895.61	550.20
2+25.00	POT	434,485.96	1,405,900.00	550.16
2+50.00	POT	434,510.35	1,405,905.48	550.12
2+75.00	POT	434,534.74	1,405,910.96	550.09
3+00.00	POT	434,559.13	1,405,916.45	550.05

PB Centerline Coordinates Report

Station	Type	Northing	Easting	Elevation
0+00.00	POB	434,158.26	1,405,815.79	550.94
0+25.00	POT	434,183.08	1,405,818.80	550.88
0+31.25	PI	434,189.28	1,405,819.56	550.87
0+50.00	POT	434,207.58	1,405,823.66	550.82
0+75.00	POT	434,231.97	1,405,829.13	550.76
1+00.00	POT	434,256.37	1,405,834.60	550.70
1+25.00	POT	434,280.76	1,405,840.07	550.64
1+50.00	POT	434,305.15	1,405,845.54	550.58
1+75.00	POT	434,329.55	1,405,851.02	550.52
2+00.00	POT	434,353.94	1,405,856.49	550.46
2+25.00	POT	434,378.34	1,405,861.96	550.40
2+49.37	PC	434,402.12	1,405,867.29	550.34
2+50.00	POC	434,402.73	1,405,867.43	550.33
2+75.00	POC	434,427.12	1,405,872.91	550.27
3+00.00	POC	434,451.51	1,405,878.43	550.21
3+14.09	PT	434,465.25	1,405,881.54	550.18
3+14.09	PT	434,465.25	1,405,881.54	550.18
3+25.00	POT	434,475.89	1,405,883.96	550.15
3+50.00	POT	434,500.26	1,405,889.50	550.09
3+75.00	POT	434,524.64	1,405,895.04	550.03
3+89.30	PC	434,538.58	1,405,898.21	550.00
4+00.00	POC	434,549.02	1,405,900.58	549.97
4+25.00	POC	434,573.41	1,405,906.09	549.91

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PD7 Centerline Coordinates Report				
Station	**Type**	**Northing**	**Easting**	**Elevation**
13+25.00	POT	435,363.63	1,406,038.50	549.28
13+50.00	POT	435,387.00	1,406,047.37	549.32
13+75.00	POT	435,410.38	1,406,056.24	549.35
13+88.86	PI	435,423.34	1,406,061.16	549.38
13+96.29	PC	435,430.28	1,406,063.79	549.39
14+00.00	POC	435,433.75	1,406,065.10	549.39
14+25.00	POC	435,457.34	1,406,073.37	549.43
14+50.00	POC	435,481.24	1,406,080.71	549.47
14+75.00	POC	435,505.41	1,406,087.10	549.51
15+00.00	POC	435,529.81	1,406,092.54	549.55
15+25.00	POC	435,554.40	1,406,097.03	549.59
15+50.00	POC	435,579.15	1,406,100.54	549.63
15+66.39	POC	435,595.45	1,406,102.32	549.65
15+66.57	CS	435,595.62	1,406,102.33	549.65
15+75.00	POS	435,604.19	1,406,103.09	549.67
16+00.00	POS	435,629.14	1,406,104.67	549.74
16+25.00	POS	435,654.13	1,406,105.32	549.85
16+28.39	SC	435,657.53	1,406,105.34	549.87
16+50.00	POC	435,679.13	1,406,105.09	550.00
16+75.00	POC	435,704.11	1,406,103.99	550.18
17+00.00	POC	435,729.03	1,406,102.02	550.41
17+25.00	POC	435,753.86	1,406,099.18	550.67
17+50.00	POC	435,778.59	1,406,095.48	550.97
17+62.80	POC	435,791.19	1,406,093.25	551.14
17+62.91	CS	435,791.30	1,406,093.23	551.14
17+75.00	POS	435,803.27	1,406,090.90	551.31
18+00.00	POS	435,827.72	1,406,085.66	551.69
18+24.80	ST	435,851.89	1,406,080.12	552.10
18+25.00	POT	435,852.09	1,406,080.08	552.10
18+50.00	POT	435,876.44	1,406,074.44	552.52
18+75.00	POT	435,900.80	1,406,068.81	552.95
19+00.00	POT	435,925.16	1,406,063.17	553.37
19+25.00	POT	435,949.51	1,406,057.54	553.79
19+50.00	POT	435,973.87	1,406,051.90	554.22
19+68.75	PI	435,992.14	1,406,047.67	554.53
19+75.00	POT	435,998.05	1,406,045.66	554.64
20+00.00	POE	436,021.73	1,406,037.63	555.06

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PD Centerline Coordinates Report				
Station	**Type**	**Northing**	**Easting**	**Elevation**
4+00.00	POB	433,543.18	1,405,956.37	551.31
4+25.00	POT	433,562.98	1,405,941.10	551.23
4+50.00	POT	433,582.78	1,405,925.84	551.14
4+75.00	POT	433,602.58	1,405,910.57	551.06
5+00.00	POT	433,622.37	1,405,895.30	550.97
5+25.00	POT	433,642.17	1,405,880.04	550.89
5+28.14	PC	433,644.66	1,405,878.12	550.88
5+50.00	POC	433,662.22	1,405,865.11	550.84
5+75.00	POC	433,682.89	1,405,851.05	550.85
6+00.00	POC	433,704.16	1,405,837.91	550.92
6+25.00	POC	433,725.98	1,405,825.71	551.03
6+50.00	POC	433,748.31	1,405,814.48	551.16
6+75.00	POC	433,771.11	1,405,804.22	551.30
7+00.00	POC	433,794.33	1,405,794.97	551.43
7+25.00	POC	433,817.94	1,405,786.74	551.56
7+50.00	POC	433,841.88	1,405,779.55	551.65
7+75.00	POC	433,866.11	1,405,773.40	551.66
8+00.00	POC	433,890.58	1,405,768.32	551.60
8+24.12	PT	433,914.39	1,405,764.43	551.47
8+25.00	POT	433,915.63	1,405,764.25	551.46
8+50.00	POT	433,940.38	1,405,760.76	551.29
8+65.01	PI	433,955.25	1,405,758.66	551.19
8+75.00	POT	433,965.23	1,405,758.26	551.12
9+00.00	POT	433,990.21	1,405,757.25	550.95
9+25.00	POT	434,015.19	1,405,756.24	550.78
9+50.00	POT	434,040.17	1,405,755.23	550.61
9+75.00	POT	434,065.15	1,405,754.22	550.44
10+00.00	POT	434,090.13	1,405,753.21	550.27
10+25.00	POT	434,115.11	1,405,752.20	550.10
10+50.00	POT	434,140.09	1,405,751.19	549.93
10+75.00	POT	434,165.06	1,405,750.18	549.76
11+00.00	POT	434,190.04	1,405,749.17	549.59
11+12.68	PC	434,202.71	1,405,748.66	549.50
11+25.00	POC	434,215.03	1,405,748.30	549.42
11+50.00	POC	434,240.03	1,405,748.37	549.25
11+75.00	POC	434,265.00	1,405,749.53	549.08
12+00.00	POC	434,289.89	1,405,751.78	548.91
12+25.00	POC	434,314.67	1,405,755.11	548.74
12+50.00	POC	434,339.28	1,405,759.52	548.59
12+61.50	PT	434,350.52	1,405,761.90	548.53
12+75.00	POT	434,363.89	1,405,764.88	548.48
13+00.00	POT	434,388.29	1,405,770.32	548.42
13+25.00	POT	434,412.69	1,405,775.76	548.41
13+50.00	POT	434,437.09	1,405,781.20	548.44
13+75.00	POE	434,461.49	1,405,786.64	548.47

PD8 Centerline Coordinates Report				
Station	**Type**	**Northing**	**Easting**	**Elevation**
0+00.00	POB	433,924.31	1,405,763.03	551.40
0+25.00	POT	433,949.06	1,405,759.53	551.23
0+50.00	POT	433,973.81	1,405,756.04	551.06
0+75.00	POT	433,998.57	1,405,752.54	550.89
1+00.00	POT	434,023.32	1,405,749.05	550.72
1+25.00	POT	434,048.08	1,405,745.55	550.55
1+50.00	POT	434,072.83	1,405,742.05	550.34
1+75.00	POT	434,097.59	1,405,738.56	550.08
2+00.00	POT	434,122.34	1,405,735.06	549.77
2+25.00	POT	434,147.10	1,405,731.57	549.42
2+50.00	POT	434,171.85	1,405,728.07	549.02
2+74.45	PC	434,196.06	1,405,724.65	548.61
2+75.00	POC	434,196.60	1,405,724.58	548.60
3+00.00	POC	434,221.41	1,405,721.50	548.19
3+25.00	POC	434,246.31	1,405,719.24	547.78
3+50.00	POC	434,271.27	1,405,717.80	547.37
3+75.00	POC	434,296.26	1,405,717.17	547.01
3+76.11	POC	434,297.37	1,405,717.16	546.99
3+76.18	PT	434,297.44	1,405,717.16	546.99
4+00.00	POT	434,321.33	1,405,716.99	546.69
4+25.00	POT	434,346.33	1,405,716.81	546.42
4+50.00	POT	434,371.33	1,405,716.63	546.19

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PD5 Centerline Coordinates Report				
Station	**Type**	**Northing**	**Easting**	**Elevation**
0+00.00	POB	434,045.33	1,405,755.02	550.57
0+25.00	POT	434,070.30	1,405,754.01	550.40
0+31.25	PI	434,076.55	1,405,753.76	550.36
0+50.00	POT	434,095.27	1,405,754.87	550.23
0+75.00	POT	434,120.22	1,405,756.36	550.06
1+00.00	POT	434,145.18	1,405,757.85	549.89
1+25.00	POT	434,170.13	1,405,759.34	549.73
1+50.00	POT	434,195.09	1,405,760.83	549.61
1+75.00	POT	434,220.04	1,405,762.31	549.56
2+00.00	POT	434,245.00	1,405,763.80	549.55
2+25.00	POT	434,269.96	1,405,765.29	549.55
2+29.96	PC	434,274.91	1,405,765.58	549.55
2+50.00	POC	434,294.89	1,405,767.13	549.54
2+75.00	POC	434,319.72	1,405,770.02	549.47
3+00.00	POC	434,344.40	1,405,774.00	549.33
3+23.16	PT	434,367.09	1,405,778.65	549.19
3+25.00	POT	434,368.99	1,405,779.08	549.18
3+50.00	POT	434,393.38	1,405,784.59	549.02
3+75.00	POT	434,417.77	1,405,790.10	548.87
4+00.00	POT	434,442.15	1,405,795.61	548.71
4+25.00	POT	434,466.54	1,405,801.12	548.57
4+50.00	POT	434,490.92	1,405,806.63	548.48
4+75.00	POT	434,515.31	1,405,812.14	548.45
5+00.00	POT	434,539.69	1,405,817.64	548.48

MLPs Centerline Coordinates Report				
Station	**Type**	**Northing**	**Easting**	**Elevation**
127+03.26	PI	433,543.18	1,405,956.37	551.31
127+28.26	POT	433,562.98	1,405,941.10	551.23
127+34.51	PI	433,567.93	1,405,937.29	551.21
127+53.26	POT	433,583.85	1,405,927.37	551.14
127+78.26	POT	433,605.07	1,405,914.16	551.06
128+03.26	POT	433,626.29	1,405,900.95	550.98
128+15.46	PC	433,636.65	1,405,894.50	550.93
128+28.26	POC	433,647.59	1,405,887.85	550.89
128+53.26	POC	433,669.37	1,405,875.59	550.85
128+78.26	POC	433,691.66	1,405,864.28	550.85
129+03.26	POC	433,714.43	1,405,853.96	550.91
129+28.26	POC	433,737.63	1,405,844.64	551.03
129+53.26	POC	433,761.21	1,405,836.33	551.15
129+78.26	POC	433,785.12	1,405,829.07	551.28
130+03.26	POC	433,809.34	1,405,822.85	551.41
130+28.26	POC	433,833.80	1,405,817.69	551.51
130+53.26	POC	433,858.46	1,405,813.61	551.57
130+78.26	POC	433,883.27	1,405,810.60	551.59
130+89.24	POC	433,894.21	1,405,809.62	551.58

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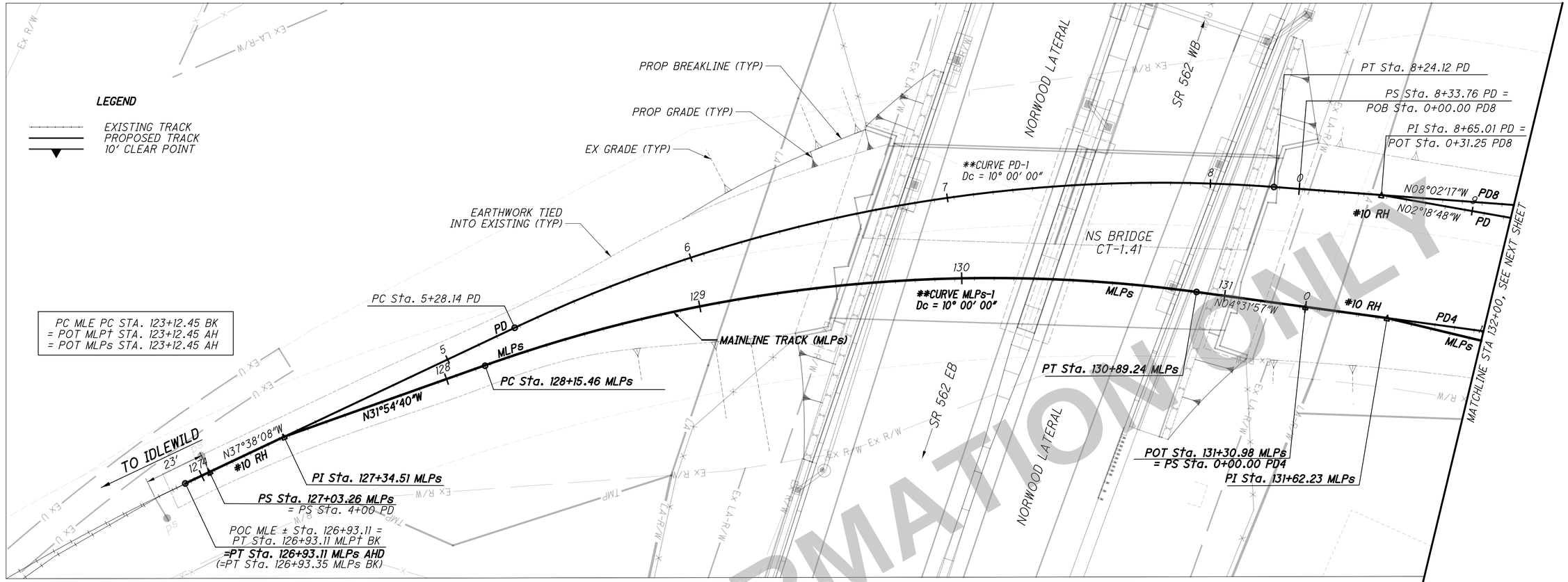
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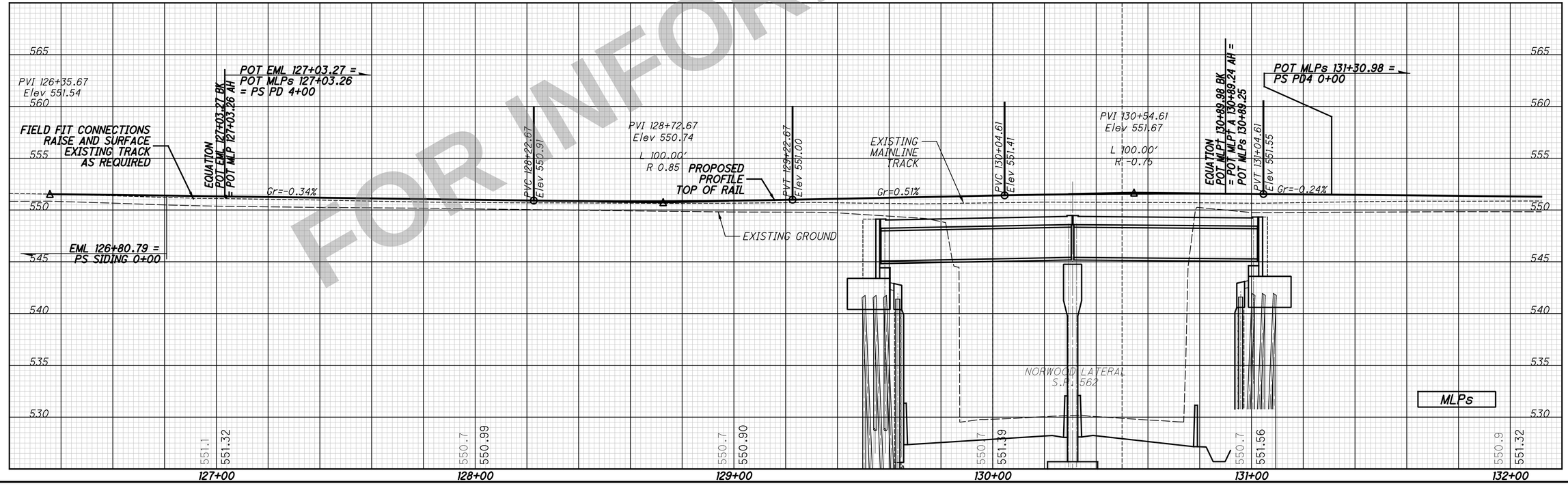
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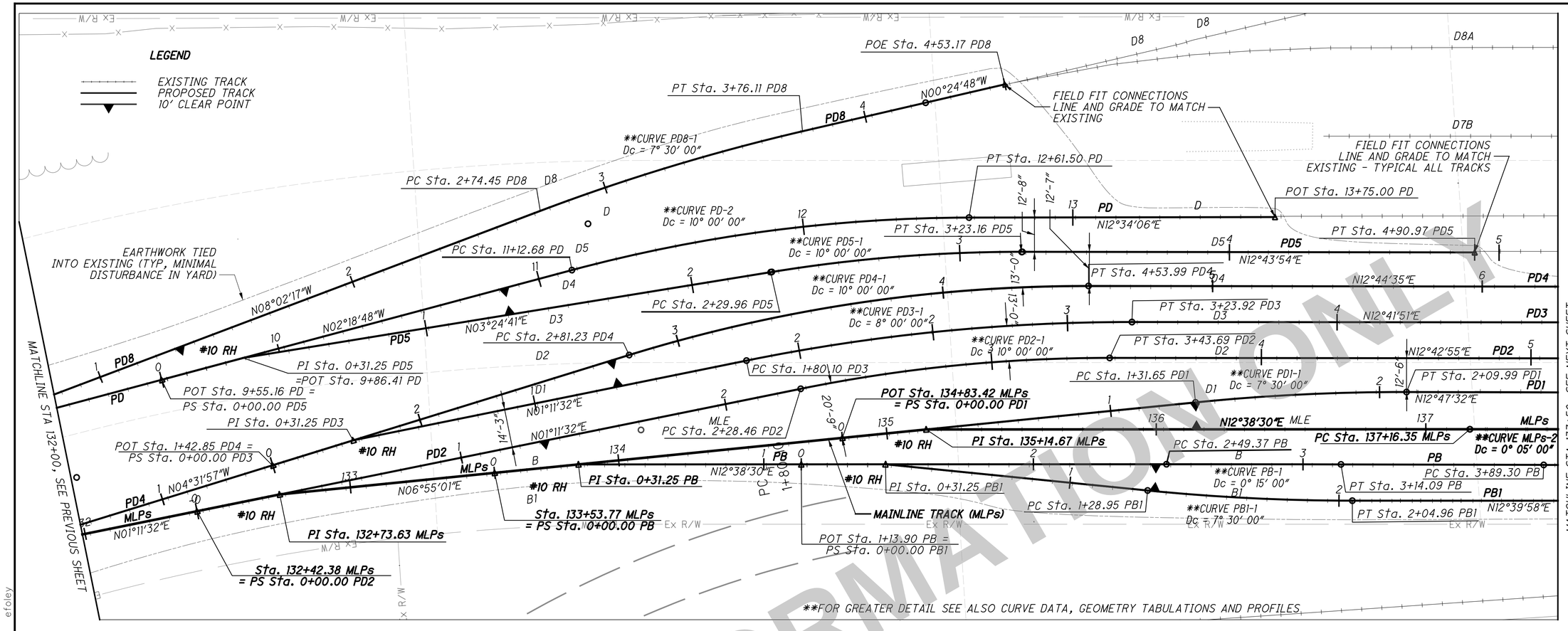
CALCULATED JRG
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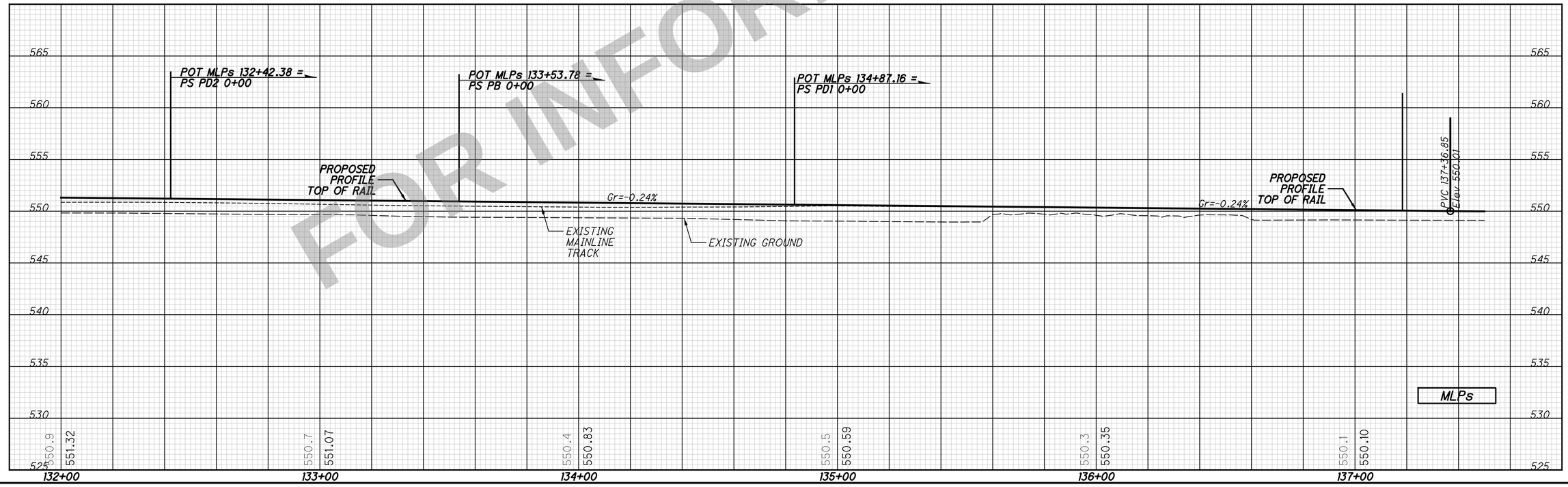
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20 / 117

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PLAN AND PROFILE
NSRR - STA 132+00 TO STA 137+50

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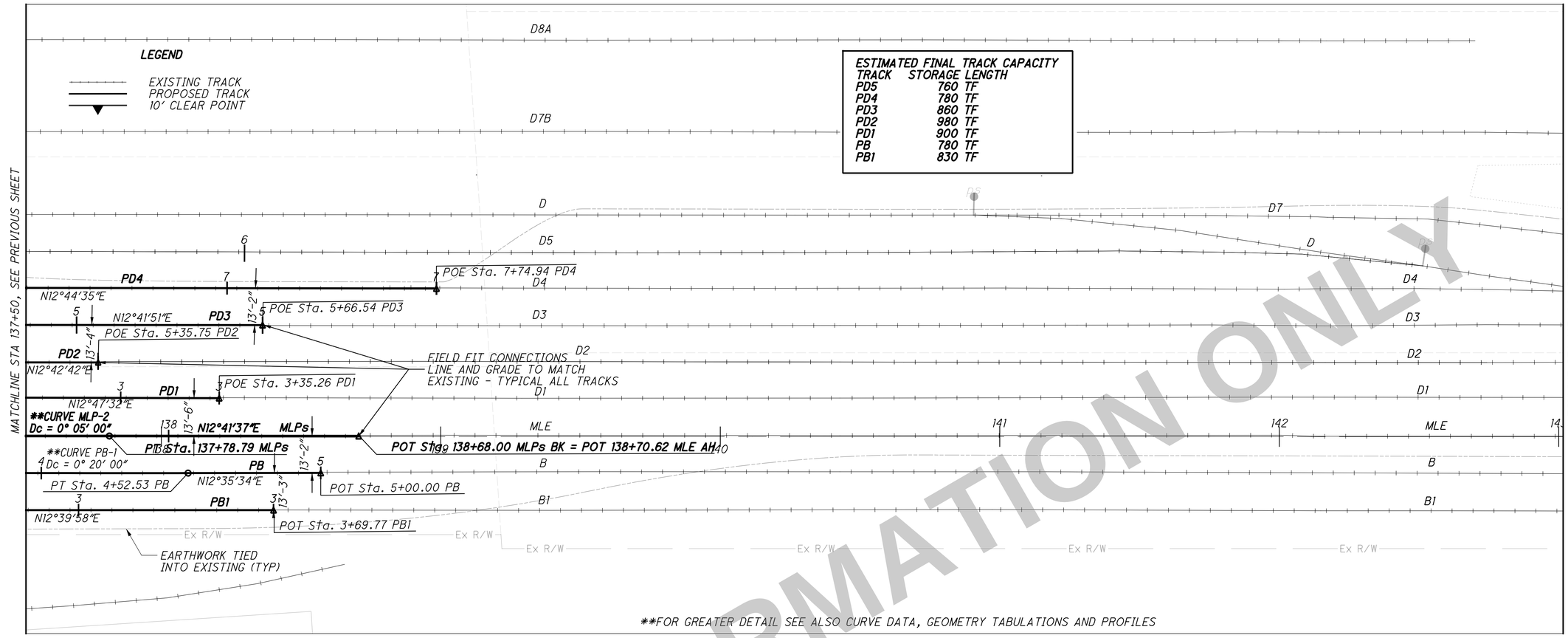
21 / 117

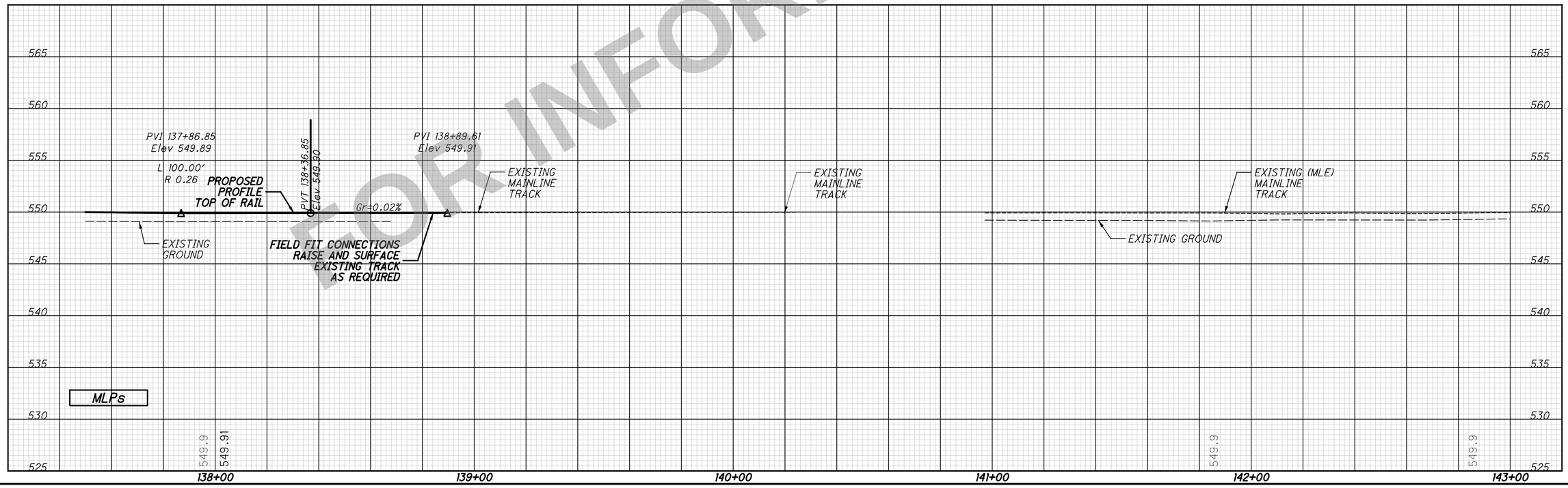
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HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

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PLAN AND PROFILE
NSRR - STA 137+50 TO STA 143+00
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22 / 117
1733
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HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED JRG
CHECKED RC

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LEGEND

EXISTING TRACK
PROPOSED TRACK
10' CLEAR POINT

MATCHLINE STA 143+00, SEE PREVIOUS SHEET

D7B
D7
D
D3
D2
D1
B
B1

FIELD FIT CONNECTIONS LINE AND GRADE TO MATCH EXISTING

MLE
MLPn
MAINLINE TRACK (MLPn)

POT Sta. 143+98.78 MLE BK = POT Sta. 143+96.02 MLPn AH

EARTHWORK TIED INTO EXISTING (TYP, MINIMAL DISTURBANCE IN THE YARD)

EXISTING SWITCH IS WITHIN EXISTING LLT

PS 146+29.75 EML = PS 146+26.99 MLPn

REALIGN EXISTING TURNOUT

PS Sta. 147+24.72 MLE BK, 1.58Rt = PS Sta. +/- 147+22.06 MLPn AH

POT Sta. 147+27.05 MLPn

PC Sta. 147+43.23 MLPn

POT Sta. 13+88.86 PD7

PC Sta. 13+96.29 PD7

PC Sta. 146+73.70 MLE

**CURVE PD7-1
Dc(1)= 9°00'00.00"
Dc(2)= 8°00'00.00"

N20°46'34"E
N19°48'46"E
N12°39'37"E

MAINLINE TRACK (MLPn)
TRACK 7 (PD7)

**CURVE MLPn-1
Dc = 8° 30' 00"

14'-6"

LAIDLAW AVE

MATCHLINE STA 148+00, SEE NEXT SHEET

Ex R/W

**FOR GREATER DETAIL SEE ALSO CURVE DATA, GEOMETRY TABULATIONS AND PROFILES

POT MLE Sta. 143+98.78 BK = POT MLPn Sta. 143+96.02 AH

POT MLPn 145+44.53 = PS EXIST. PB TURNOUT

PVI 145+61.86
Elev 549.93

POT MLPn 146+27.04 = PS EXIST. PB1 TURNOUT

POT MLPn +/- 147+22.06 = PS REALIGNED D TURNOUT

FIELD FIT CONNECTIONS RAISE AND SURFACE EXISTING LADDER AS REQUIRED

PROPOSED PROFILE TOP OF LOW RAIL MLPn TRACK

Gr=+0.06%

EXISTING GROUND

EXISTING (MLE) MAINLINE TRACK

FIELD FIT CONNECTIONS RAISE AND SURFACE EXISTING LADDER AS REQUIRED

EXISTING (MLE) MAINLINE TRACK

POC MLE STA. 147+55.52 = PCC D7D TRACK STA. 2+00 = +/- MLPn POT 147+52.67, 4.7' LT FINISHED ELEV. 549.80

LAIDLAW AVENUE

MLPn

**FOR PD7 SEE FINAL PROFILES

555 550 545 540 535 530 525 520

549.9 550.0 549.2 550.1 549.4 T/R EX 549.8 549.1 T/R/ PR 549 549.8 549.2 549.84 548.7 549.78

143+00 144+00 145+00 146+00 147+00 148+00

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

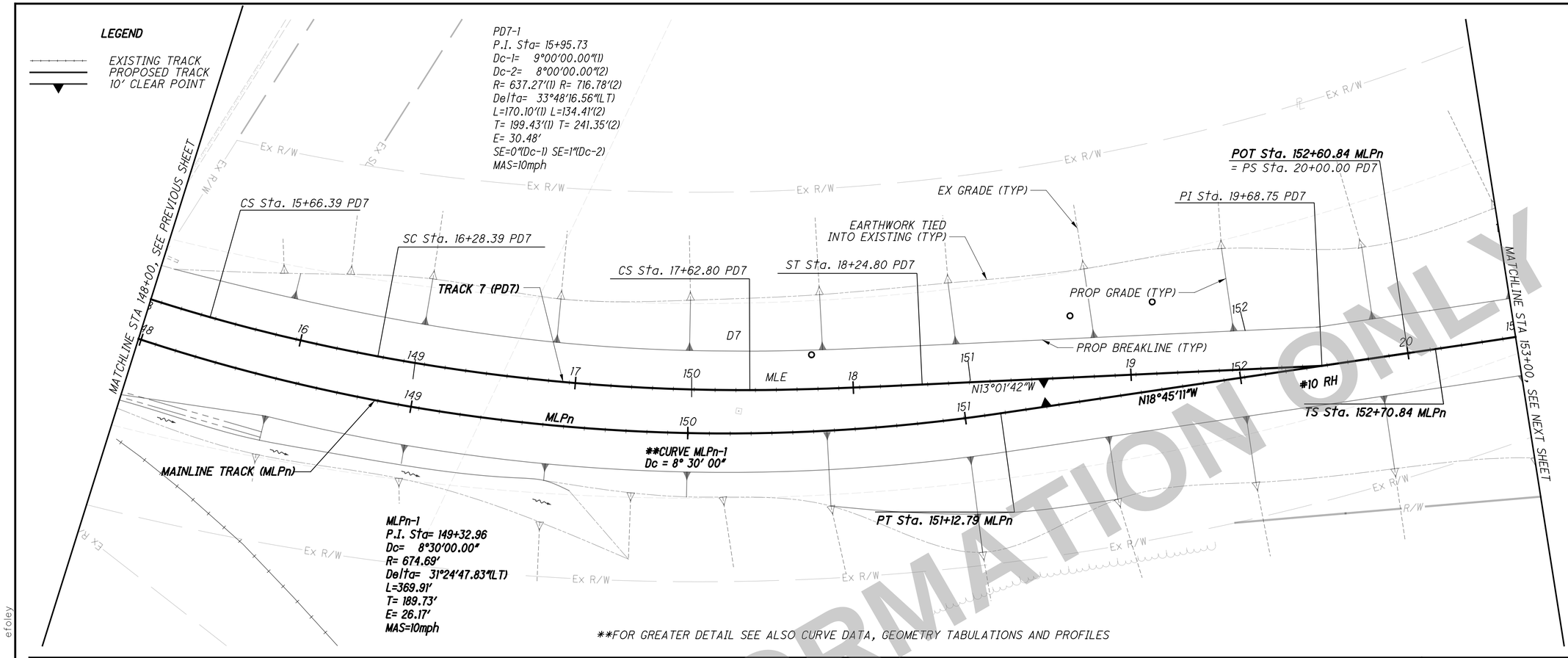
PLAN AND PROFILE
NSRR - STA 143+00 TO STA 148+00

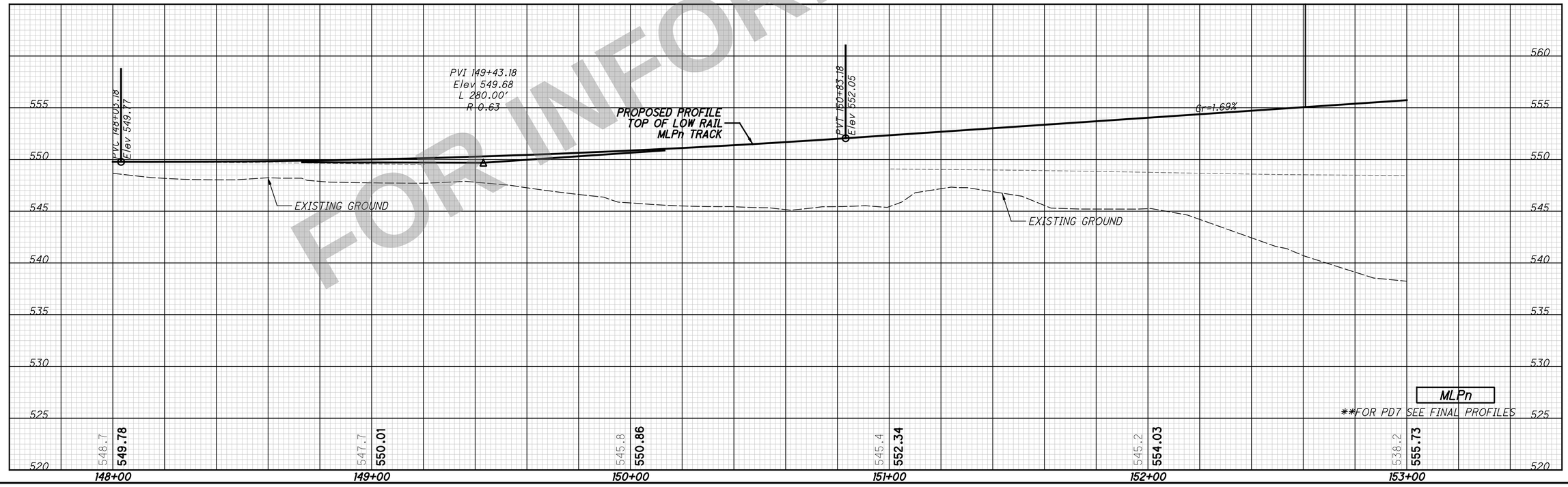
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23 / 117

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HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED JRG
CHECKED RC

PLAN AND PROFILE
NSRR - STA 148+00 TO STA 153+00

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24 / 117

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2017

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LEGEND

EXISTING TRACK
PROPOSED TRACK
10' CLEAR POINT

I-75 NB

PT Sta. 155+42.42 MLE

FORMER (MLE) ALIGNMENT

MLE

NS BRIDGE
CT-0.95

MATCHLINE STA 153+00, SEE PREVIOUS SHEET

MATCHLINE STA 158+00, SEE NEXT SHEET

PROP BREAKLINE (TYP)

**CURVE MLPn-2
Dc = 7° 45' 00"

MLPn-2

SC Sta. 153+32.84 MLPn

BEGIN NEW STRUCTURE
MLPn STA. 154+69.02

END NEW STRUCTURE
MLPn STA. 156+93.35

MAINLINE TRACK (MLPn)

PROP GRADE (TYP)

EX GRADE (TYP)

EARTHWORK TIED
INTO EXISTING (TYP)

MLPn-2
P.I. Sta= 156+33.68
Dc= 7°45'00.00"
R= 739.86'
Delta= 44°15'16.82"(LT)
L=571.46'
Ls= 62.00'
T= 300.84'
E= 58.82'
SE=1"
MAS=10mph

I-75 SB

**FOR GREATER DETAIL SEE ALSO CURVE DATA, GEOMETRY TABULATIONS AND PROFILES

PVI 155+70.07
Elev 560.30
L 400.00'
R -0.95

PVC 153+70.07
Elev 556.91

PROPOSED PROFILE
TOP OF LOW RAIL
MLPn TRACK

Gr=1.69%

Gr=-2.10%

PVT 157+70.07
Elev 556.10

EXISTING GROUND

I - 75

MLPn

538.2 555.73
534.3 557.38
529.5 558.31
529.5 558.30
541.2 557.34
531.2 555.47

153+00 154+00 155+00 156+00 157+00 158+00

565 560 555 550 545 540 535 530

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

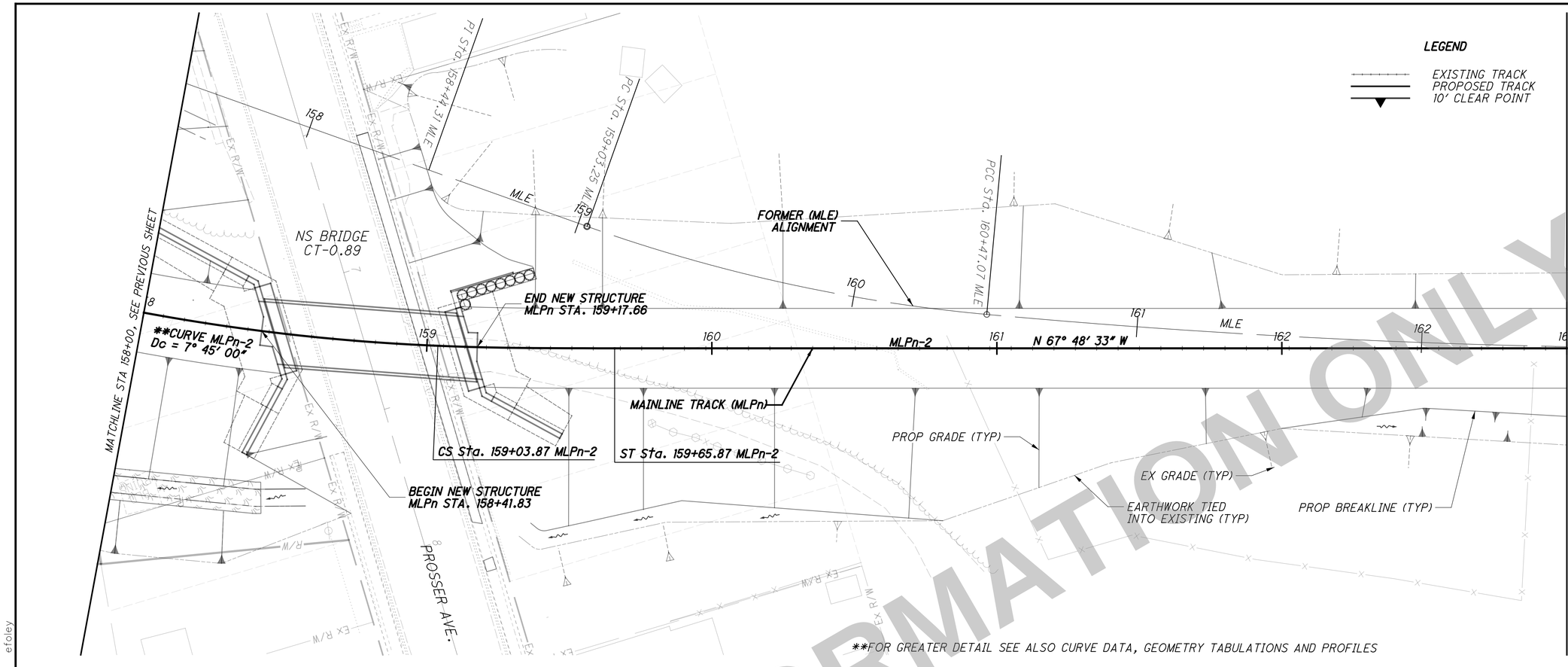
PLAN AND PROFILE
NSRR - STA 153+00 TO STA 158+00

HAM-75-7.85

25 / 117

1736
2017

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HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

PLAN AND PROFILE
NSRR - STA 158+00 TO STA 163+00

HAM-75-7.85

1737
2017

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LEGEND

EXISTING TRACK
PROPOSED TRACK
10' CLEAR POINT

EX R/W

MATCHLINE STA 163+00, SEE PREVIOUS SHEET

PT Sta. 163+08.23 MLE

MLE 163 | MLE | 164 | MLE 164 | 165 | MLE 165 | 166 | MLE 166 | 167 | MLE 167 | MLE

N 67° 48' 33" W

MLPn

FIELD FIT CONNECTIONS
LINE AND GRADE TO MATCH
EXISTING

POE Sta. 166+83.32 MLE

PROP BREAKLINE (TYP)

MAINLINE TRACK (MLPn)

PROP GRADE (TYP)

EX GRADE (TYP)

EARTHWORK TIED
INTO EXISTING (TYP)

POT Sta. 167+32.36 MLPn
= ± POT Sta. 166+83.32 MLE

FOR INFORMATION ONLY

**FOR GREATER DETAIL SEE ALSO CURVE DATA, GEOMETRY TABULATIONS AND PROFILES

**PROPOSED PROFILE
TOP OF LOW RAIL
MLPn TRACK**

Gr=-2.10%

EXISTING GROUND

PVC 164+07.88
Elev 542.70

PVI 164+57.88
Elev 541.65
L 100.00'
R -0.26

PVT 165+07.88
Elev 540.47

PVI 166+00.07
Elev 538.29

Gr=-2.36%

EXISTING (MLE)
MAINLINE
TRACK

FIELD FIT CONNECTIONS
RAISE AND SURFACE
EXISTING TRACK
AS REQUIRED

MLPn

565 560 555 550 545 540 535 530 525

544.9 544.1 **544.96**
542.8 542.3 **542.86**
540.6 540.0 **540.65**
538.3 537.6 **538.29**
536.1 535.5

163+00 **164+00** **165+00** **166+00**

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

PLAN AND PROFILE
NSRR - STA 163+00 TO STA 167+00

HAM-75-7.85

27 / 117

1738
2017

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EXISTING D DETOUR & D/D8 (BRICK YARD) TRACK IN SERVICE - STAGES 1A, 1B & 2A

PROPOSED PD/PD8 (BRICK YARD) TRACK IN SERVICE STAGE 3B

PD TRACK IN SERVICE AFTER STAGE 3B

TD8 TRACK IN SERVICE STAGE 2B & 3A

MLP† TRACK IN SERVICE STAGES 2B, 3A & 3B

MLPs TRACK IN SERVICE AFTER STAGE 3B

PC MLE PC STA. 123+12.45
= POT MLP† STA. 123+12.45
= POT MLPs STA. 123+12.45

#10 RH

PT Sta. 126+93.11 MLP†
=PT Sta. 126+93.11 MLPs

**MLE-1
Dc= 7°00'00.00"
MAS=10mph

**MLP†-1
Dc= 12°00'00.00"
MAS=10mph

**FOR GREATER DETAIL SEE ALSO STAGING PLANS, CURVE DATA, GEOMETRY TABULATIONS AND PROFILES

EXIST. SURVEY ℄/MLE TRK

EQ 130+89.98 MLP† BK
= A 130+89.24 MLP† AHD
= PT 130+89.25 MLPs

MLP† & NEW YARD TRACKS PB, PB1, PD1, PD2, PD3, PD4 IN SERVICE - STAGES 2B, 3A & 3B

MATCHLINE STA 132+00, SEE NEXT SHEET

NS BRIDGE CT-1.41

NORWOOD LATERAL

SR 562 WB

SR 562 EB

POT EML 127+03.27 =
POT MLP† 127+03.26
= PS PD 4+00

EQUATION
POT EML 127+03.27 BK
= POT MLP† 127+03.26 AH

PVI 126+35.67
Elev 551.54

FIELD FIT CONNECTIONS
RAISE AND SURFACE
EXISTING TRACK
AS REQUIRED

Gr=-0.34%

EXISTING MAINLINE TRACK

EML 126+80.79 =
PS SIDING 0+00

PVC 128+20.56
Elev 551.92

PVI 128+55.56
Elev 550.80
L 70.00'
R 1.65

PVT 128+90.56
Elev 551.09

PROPOSED PROFILE TOP OF RAIL
Gr=0.82%

PVC 129+49.37
Elev 551.57

PVI 129+83.37
Elev 551.85
L 68.00'
R -1.56

PVT 130+17.37
Elev 551.77

POT MLP† 130+20.32 =
PS TD8 0+00

EQUATION
POT MLP† 130+89.98 BK
= POT MLP† A 130+89.24 AH

POT MLP† A 131+30.97 =
PS PD4 0+00 =
POT MLP 131+30.98

Gr=-0.24%

EXISTING GROUND

NORWOOD LATERAL
S.R. 562

MLP†

**SEE ALSO FINAL PROFILES

565 560 555 550 545 540 535 530

551.1 551.32 | 550.7 550.99 | 550.6 551.16 | 550.7 551.78 | 550.7 551.56 | 550.9 551.32

127+00 128+00 129+00 130+00 131+00 132+00

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

TEMPORARY OPERATIONS PLAN AND PROFILE
NSRR - STA 127+00 TO STA 132+00

HAM-75-7.85

28 / 117

1739
2017

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MLP†-2
Dc= 0°05'00.00"
MAS=10mph

PD-1
Dc= 10°00'00.00"
MAS=10mph

PD1-1
Dc= 7°30'00.00"
MAS=10mph

PD2-1
Dc= 10°00'00.00"
MAS=10mph

PD3-1
Dc= 8°00'00.00"
MAS=10mph

PD4-1
Dc= 10°00'00.00"
MAS=10mph

PB-1
Dc= 0°15'00.00"
MAS=10mph

PB1-1
Dc= 7°30'00.00"
MAS=10mph

PD-2
Dc= 7°30'00.00"
MAS=10mph

PB-2
Dc= 0°20'00.00"
MAS=10mph

EXISTING D DETOUR &
D/D8 (BRICK YARD) TRACK
IN SERVICE
STAGES 1A, 1B & 2A

PROPOSED PD/PD8
(BRICK YARD) TRACK
IN SERVICE
STAGE 3B

PD & PD5
TRACKS IN
SERVICE AFTER
STAGE 3B

EXISTING D3, D4 & D5
IN SERVICE STAGE 1A

EXISTING D5
IN SERVICE
STAGE 1B & 2A

EXISTING D DETOUR
IN SERVICE
STAGES 1A, 1B & 2A

TD8 TRACK
IN SERVICE
STAGES 2B & 3A

MLP† & NEW YARD TRACKS
PB, PB1, PD1, PD2, PD3, PD4
IN SERVICE - STAGES 2B, 3A & 3B

MATCHLINE STA 132+00, SEE PREVIOUS SHEET

MATCHLINE STA 137+50, SEE NEXT SHEET

Ex R/W

TMP

Sta. 134+11.50 M.E

**FOR GREATER DETAIL SEE ALSO STAGING PLANS, CURVE DATA, GEOMETRY TABULATIONS AND PROFILES

POT MLP† A 132+42.38 =
PS PD2 0+00 =
POT MLP 132+42.38 =

POT MLP† 133+53.77 =
PS PB 0+00 =
POT MLP 133+53.78

POT MLP† A 134+83.42 =
PS PD1 0+00 =
POT MLP 134+83.42

PROPOSED PROFILE

EXISTING
MAINLINE
TRACK

Gr=-0.24%

PROPOSED TEMPORARY D8
SEE
FOR PROFILE OF TD8 TRACK

EXISTING GROUND

PVC A 137+36.11
@Elev. 550.01

MLP†

**SEE ALSO FINAL PROFILES

565 560 555 550 545 540 535 530 525

550.9 551.32 | 550.7 551.08 | 550.4 550.83 | 550.5 550.59 | 550.3 550.35 | 550.1 550.10

132+00 133+00 134+00 135+00 136+00 137+00

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

TEMPORARY OPERATIONS PLAN AND PROFILE
NSRR - STA 132+00 TO STA 137+50

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1740
2017

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MATCHLINE STA 137+50, SEE PREVIOUS SHEET

MLP†-2
Dc= 0°05'00.00"
MAS=10mph

PB-2
Dc= 0°20'00.00"
MAS=10mph

EXISTING D DETOUR
IN SERVICE
STAGES 1A, 1B & 2A

EXISTING D5
IN SERVICE
STAGE 1B & 2A

EXISTING D3, D4 & D5
IN SERVICE STAGE 1A

EXISTING D DETOUR
IN SERVICE
STAGES 1A, 1B & 2A

D
D5
D4
D3
D2
D1
B
B1

MLP† & NEW
YARD TRACKS
PB, PB1, PD1,
PD2, PD3, PD4
IN SERVICE
STAGE 2B

EXISTING MLE
& YARD TRACKS
B, B1, D1, D2, D3 & D4
STUB ENDED DURING
STAGE 1A, 1B & 2A

A 138+00
A 138+68
MLE
138
139
140
141
142
143

EXIST. SURVEY ℄/MLE TRK

POT Sta. 138+68.00 MLPs BK = POT ± 138+70.62 MLE AH

Ex R/W

**FOR GREATER DETAIL SEE ALSO STAGING PLANS, CURVE DATA, GEOMETRY TABULATIONS AND PROFILES

PVI A 137+86.11
Elev 549.89
L 100.00'
R 0.26

PROPOSED
PROFILE
TOP OF RAIL

PVT A 138+36.11
Elev 549.90

PVI A 138+88.87
Elev 549.91

Gr=0.02%

EXISTING
MAINLINE
TRACK

EXISING
GROUND

FIELD FIT CONNECTIONS
RAISE AND SURFACE
EXISTING TRACK
AS REQUIRED

EXISTING
MAINLINE
TRACK

EXISTING GROUND

565
560
555
550
545
540
535
530
525

MLP†

MLE

**SEE ALSO FINAL PROFILES

549.91

138+00
139+00
140+00
141+00
142+00
143+00

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

TEMPORARY OPERATIONS PLAN AND PROFILE
NSRR - STA 137+50 TO STA 143+00

HAM-75-7.85

30 / 117

1741
2017

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MLPn-1
Dc= 8°30'00.00"
MAS=10mph

TEMPORARY D7-MLPn
Dc= 11°15'00.00"
MAS=10mph

PD7-1a
Dc= 9°00'00.00"
MAS=10mph

D7D-1
Dc= 10°00'00.00"
Delta= 27°22'20.40"
T=98.45'
L=194.75'
Ls= 93.00'(1)
MAS=10mph

PD7-1b
Dc= 8°00'00.00"
MAS=10mph

D7D-2
Dc= 7°00'00.00"
Delta= 2°05'55.30"
T=15.00'
L=29.98'
MAS=10mph

EXISTING D DETOUR
IN SERVICE
STAGES 1A, 1B & 2A

NEW PD7
IN SERVICE
STAGES 2B THRU 3B

MLE STA. 147+55.52 =
OS D7D 2+00.00

LAIDLAW AVE

MATCHLINE STA 148+00

D7D 2+00

MATCHLINE STA 143+00

144 145 146 147

MLPt & YARD TRACKS
PB, PB1, PD1,
PD2, PD3, PD4
IN SERVICE
STAGES 2B, 3A & 3B

POT ± Sta. 143+98.78 MLE BK =
POT Sta. 143+96.02 MLPn AH

TEMP D7
TRACK SHIFT
IN SERVICE
STAGE 1A

MLPn IN SERVICE
STAGES 1B THRU 3B

Ex R/W

**FOR GREATER DETAIL SEE ALSO STAGING PLANS, CURVE DATA, GEOMETRY TABULATIONS AND PROFILES

EQ POC MLE STA. 147+55.52 =
PCC D7D TRACK STA. 2+00 =
+/- MLPn POT 147+52.67, 4.7' LT
TEMPORARY ELEV. 549.74

POT MLPn 146+27.04 =
PS EXIST. PB1 TURNOUT

PS MLE +/- 141+26.28 =
EXISTING D TURNOUT

PVI 2+00.00
Elev 549.74

PVC 2+10.00
Elev 549.76

Gr=0.16%

EXISTING GROUND

EXISTING TRACK

D7D DETOUR TRACK
PROPOSED PROFILE T/R
TO MATCH EXISTING MLE

525.6
549.74
549.74

D7D

**FOR MLPn SEE FINAL PLAN & PROFILE
FOR PD7 SEE FINAL PROFILES

555 550 545 540 535 530 525 520

143+00 144+00 145+00 146+00 147+00 148+00

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

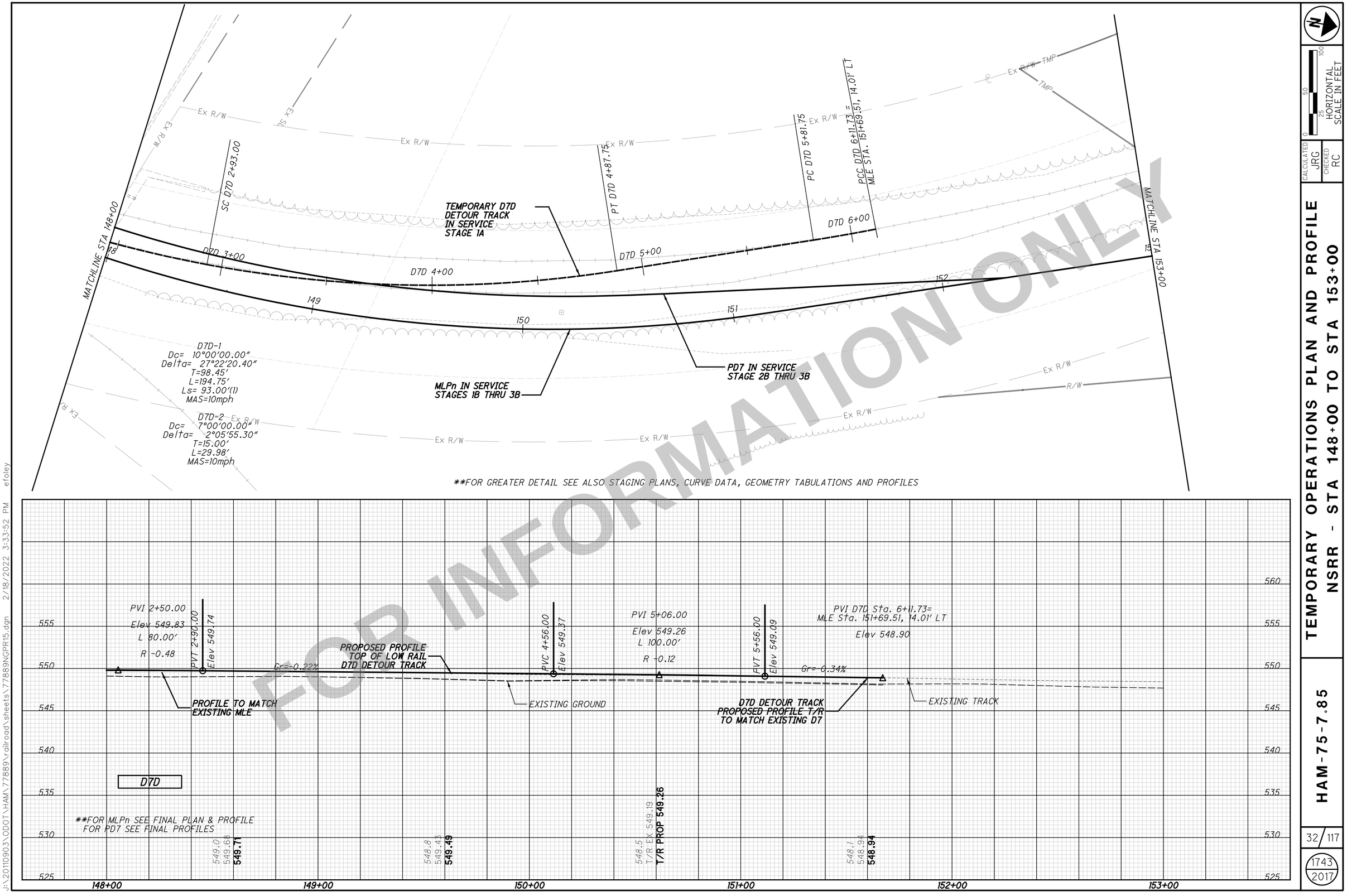
TEMPORARY OPERATIONS PLAN AND PROFILE
NSRR - STA 143+00 TO STA 148+00

HAM-75-7.85

31 / 117

1742
2017

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HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED JRG
CHECKED RC

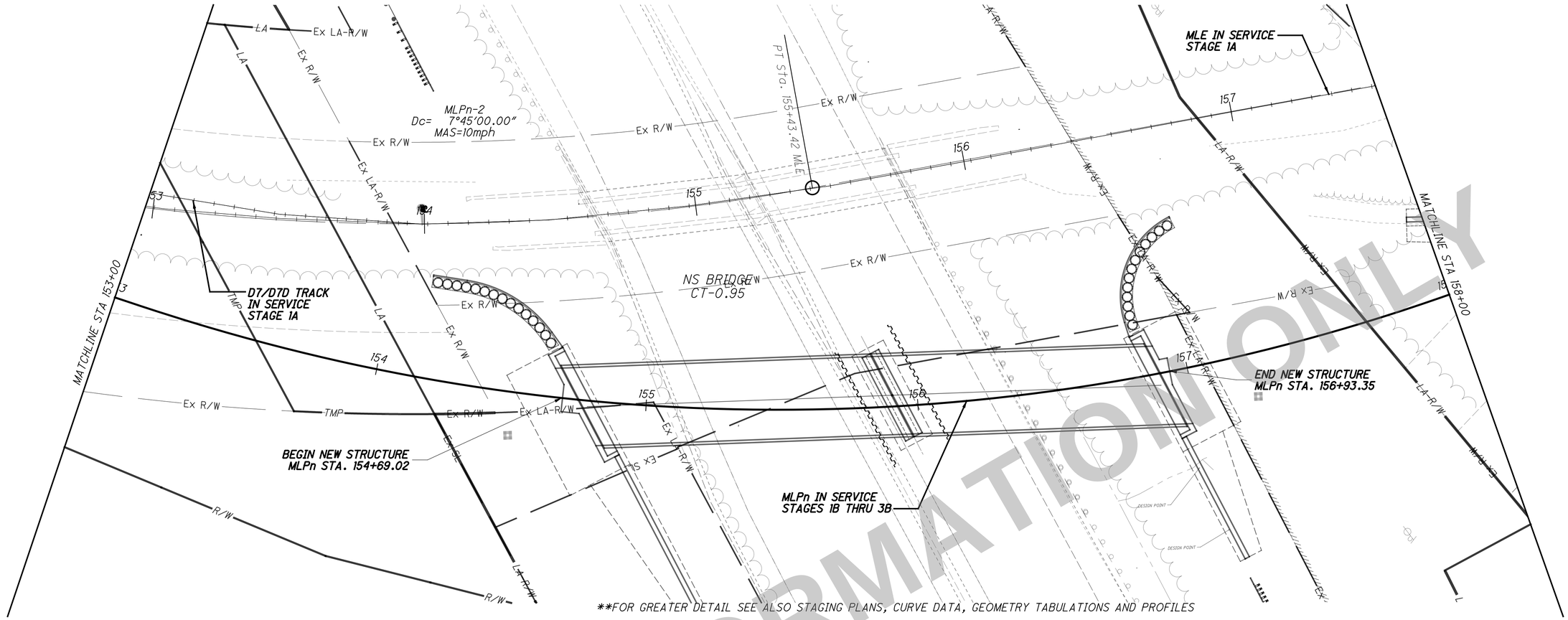
TEMPORARY OPERATIONS PLAN AND PROFILE
NSRR - STA 148+00 TO STA 153+00

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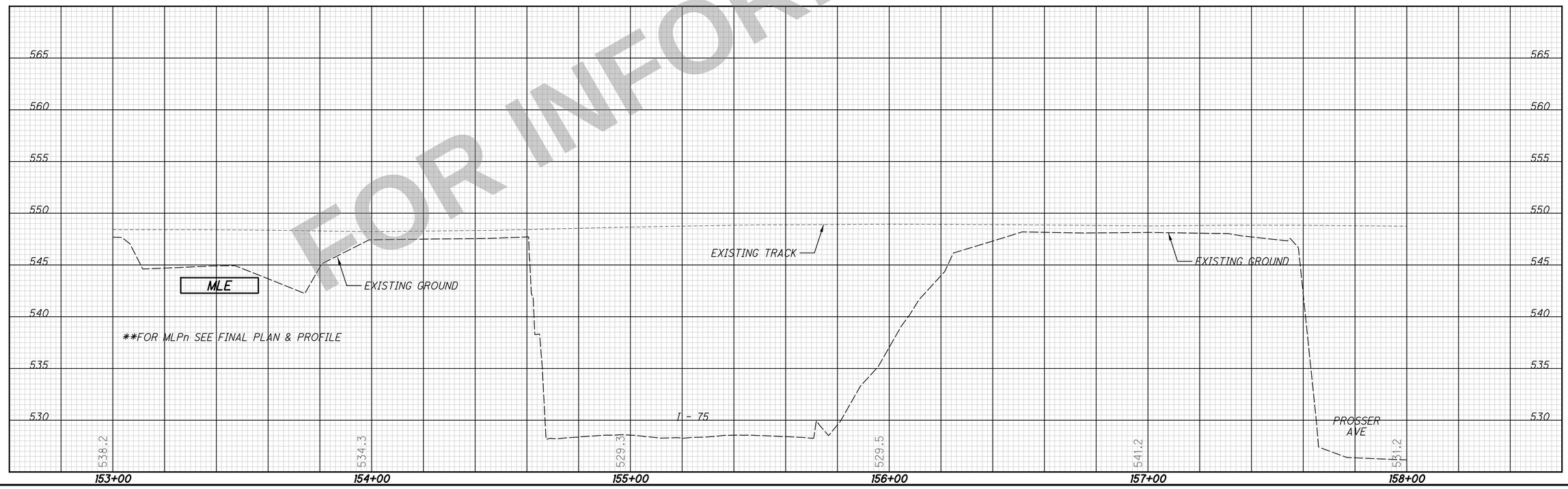
32 / 117

1743
2017

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**FOR GREATER DETAIL SEE ALSO STAGING PLANS, CURVE DATA, GEOMETRY TABULATIONS AND PROFILES



**FOR MLPn SEE FINAL PLAN & PROFILE

FOR INFORMATION ONLY

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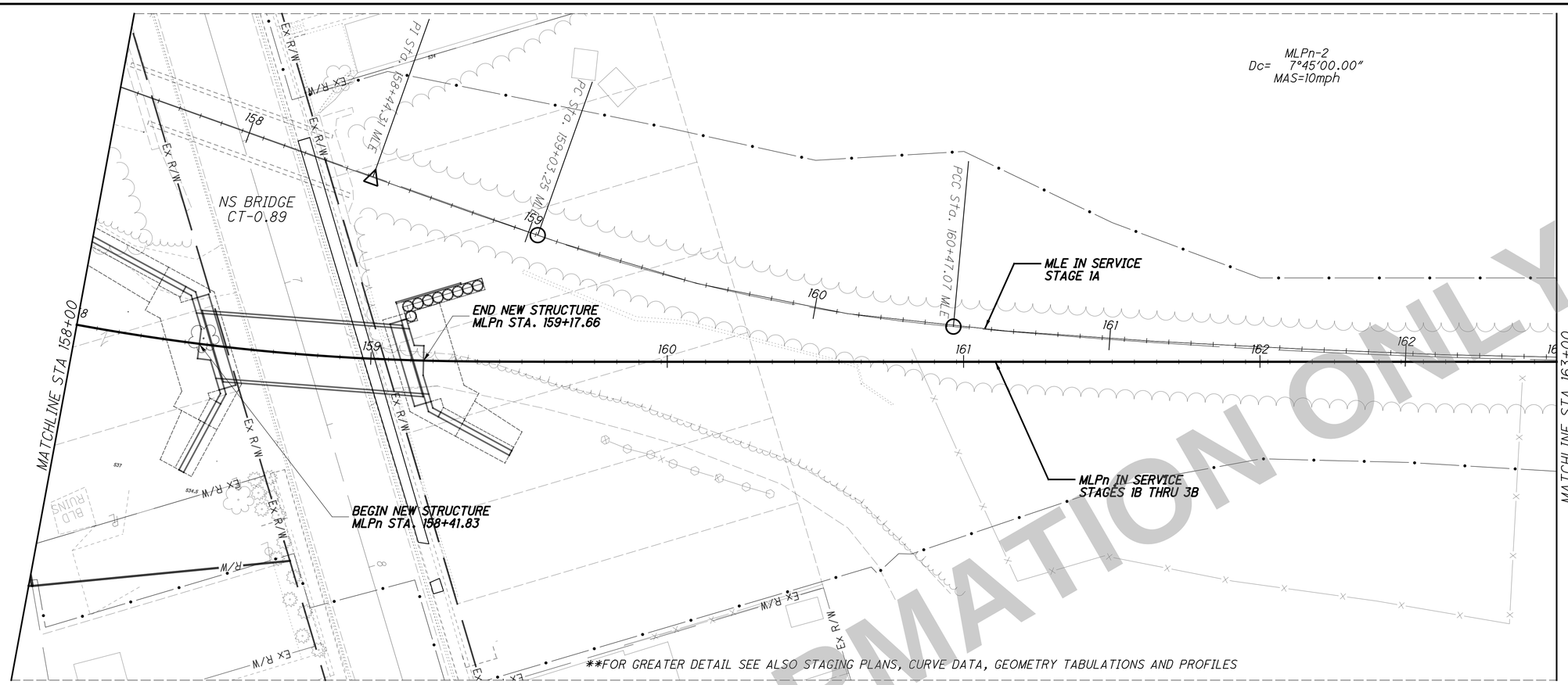
HORIZONTAL SCALE IN FEET
0 10 20 40

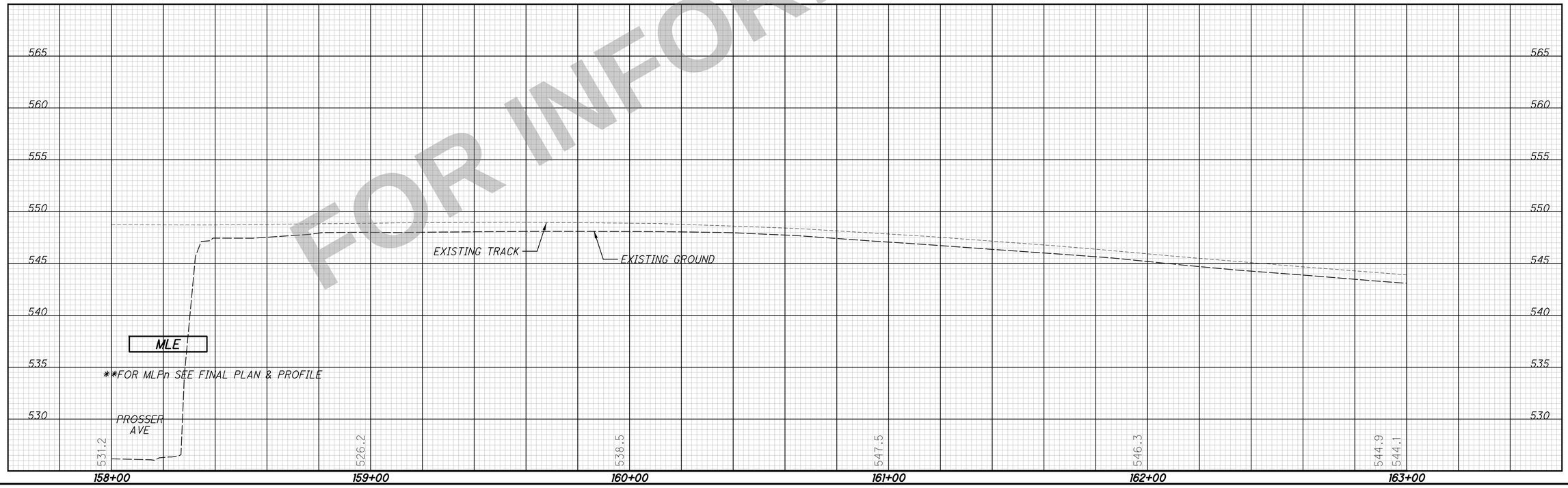
CALCULATED JRG
CHECKED RC

TEMPORARY OPERATIONS PLAN AND PROFILE
NSRR - STA 153+00 TO STA 158+00

HAM-75-7.85

1744
2017





FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

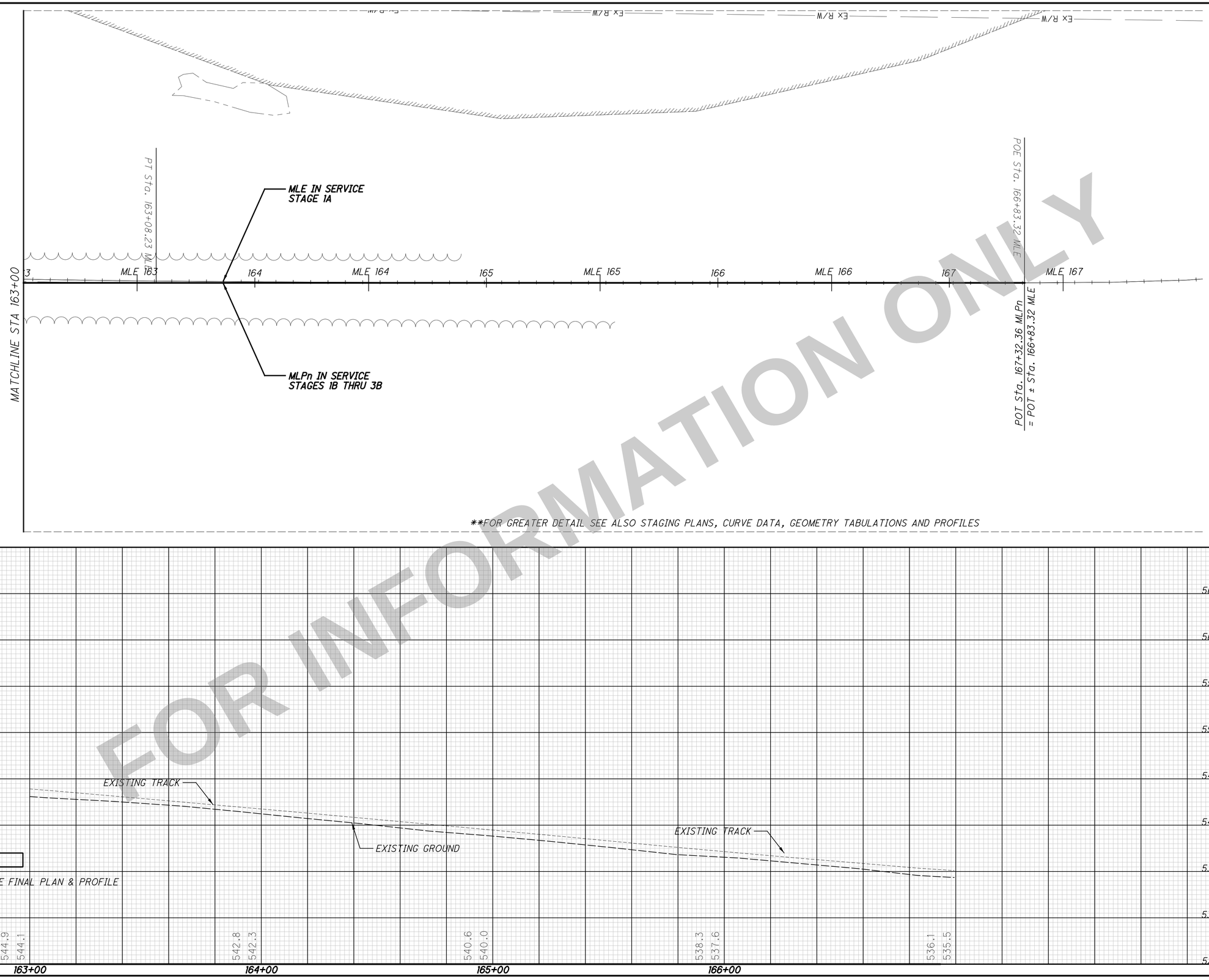
TEMPORARY OPERATIONS PLAN AND PROFILE
NSRR - STA 158+00 TO STA 163+00

HAM-75-7.85

34 / 117

1745
2017

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FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

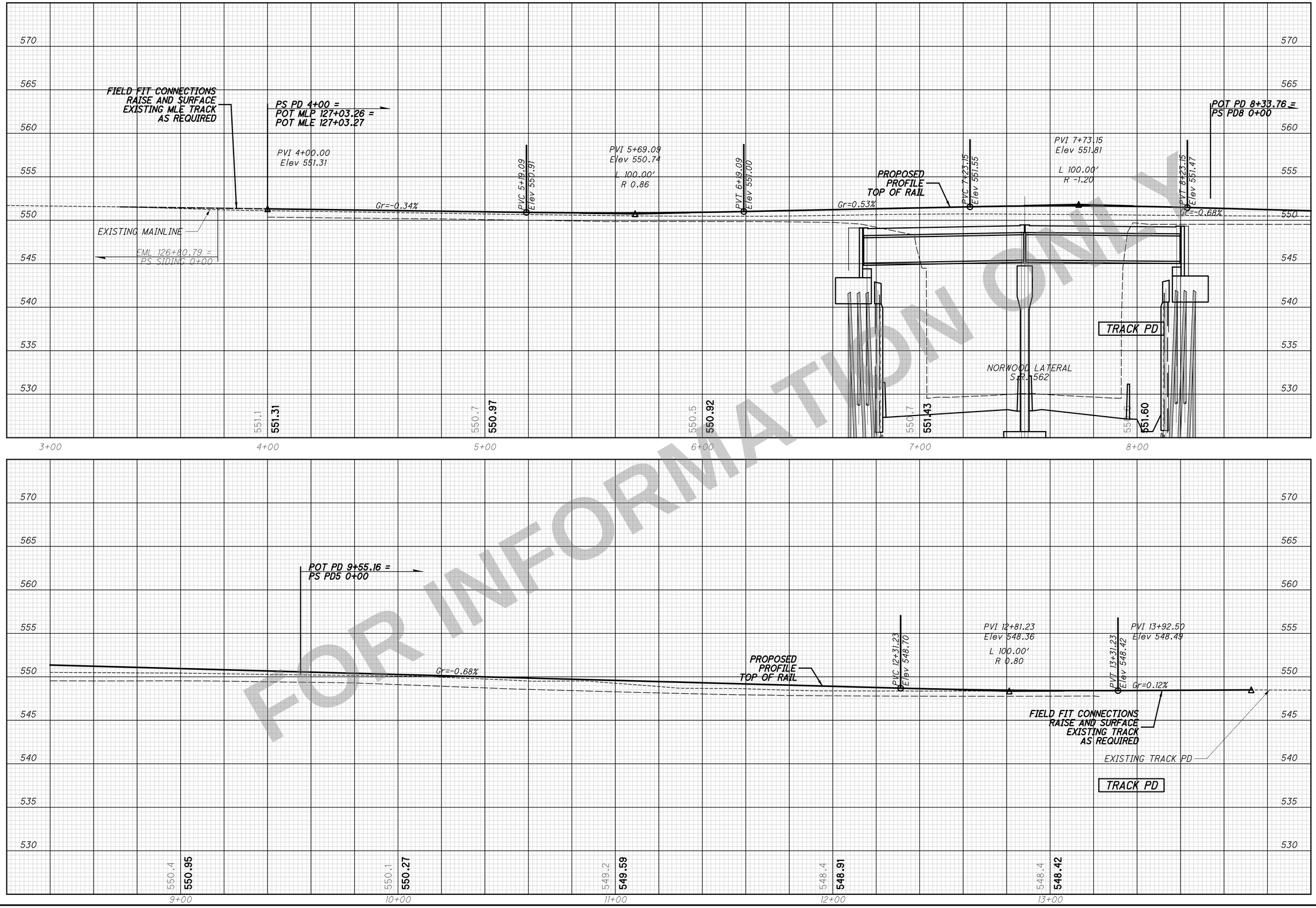
TEMPORARY OPERATIONS PLAN AND PROFILE
NSRR - STA 163+00 TO STA 168+00

HAM-75-7.85

35 / 117

1746
2017

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FOR INFORMATION ONLY

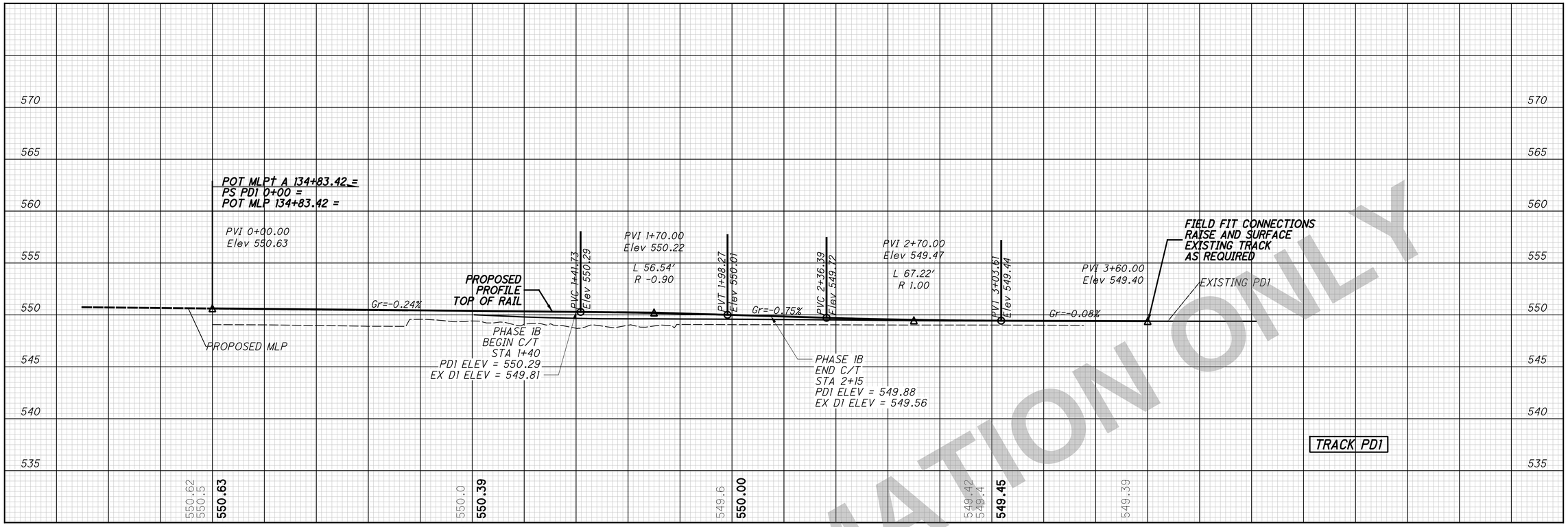
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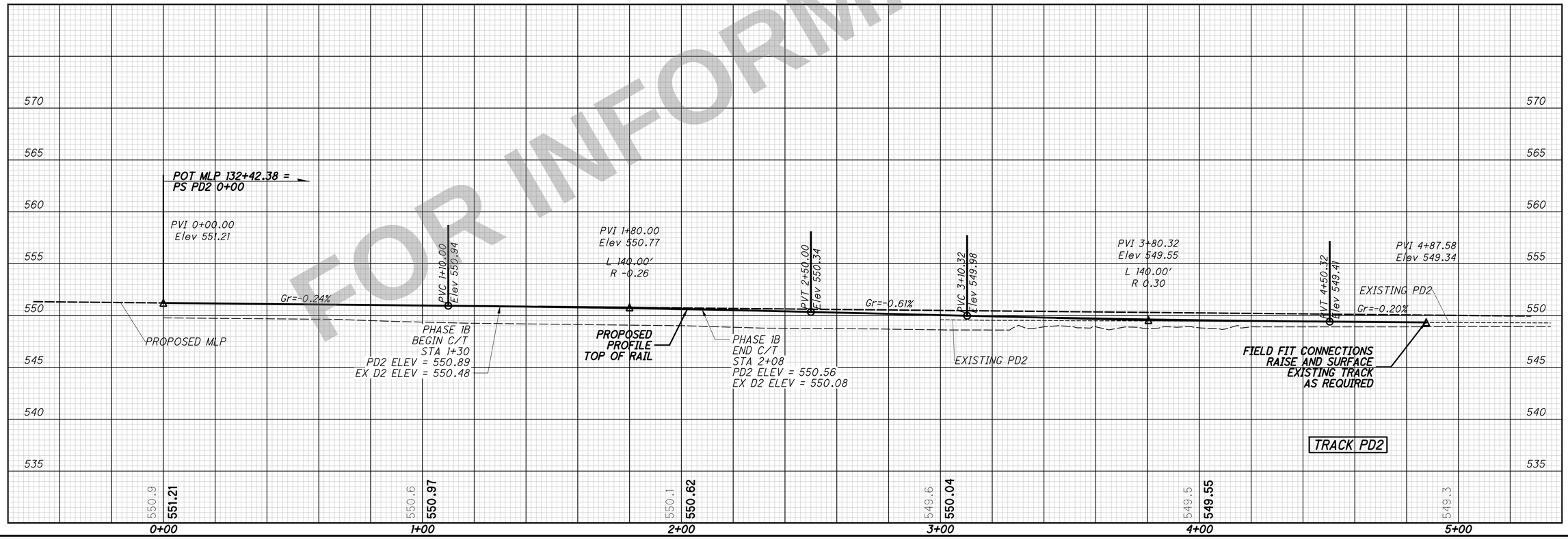
CALCULATED JRG
CHECKED RC

TRACK PROFILES
NSRR BERRY YARD - TRACK D

HAM-75-7.85

1747
2017





FOR INFORMATION ONLY

CALCULATED JRG
CHECKED RC

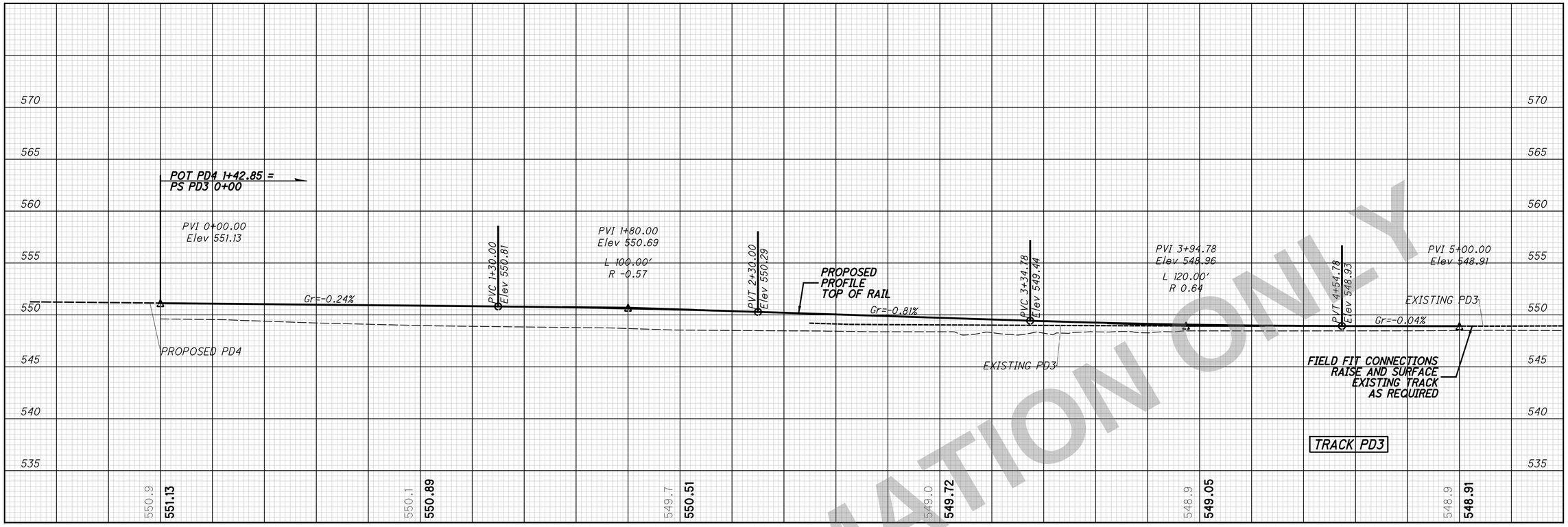
TRACK PROFILES
NSRR BERRY YARD - TRACKS D1 AND D2

HAM-75-7.85

37 / 117

1748
2017

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FOR INFORMATION ONLY

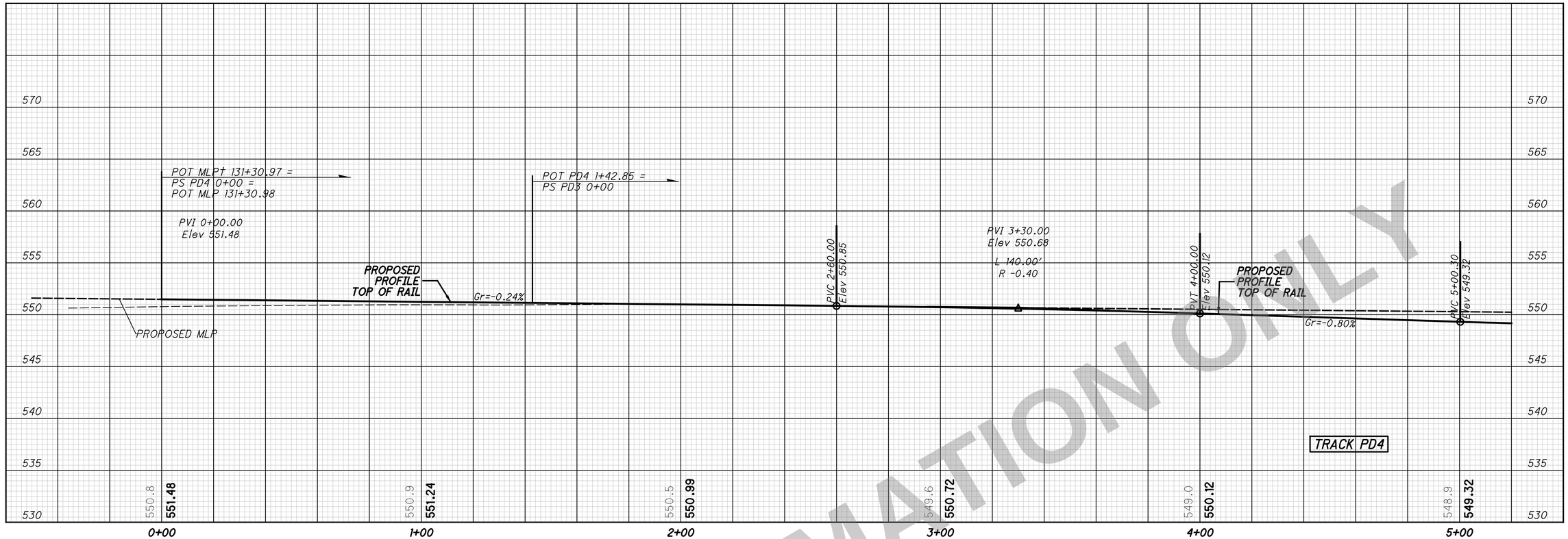
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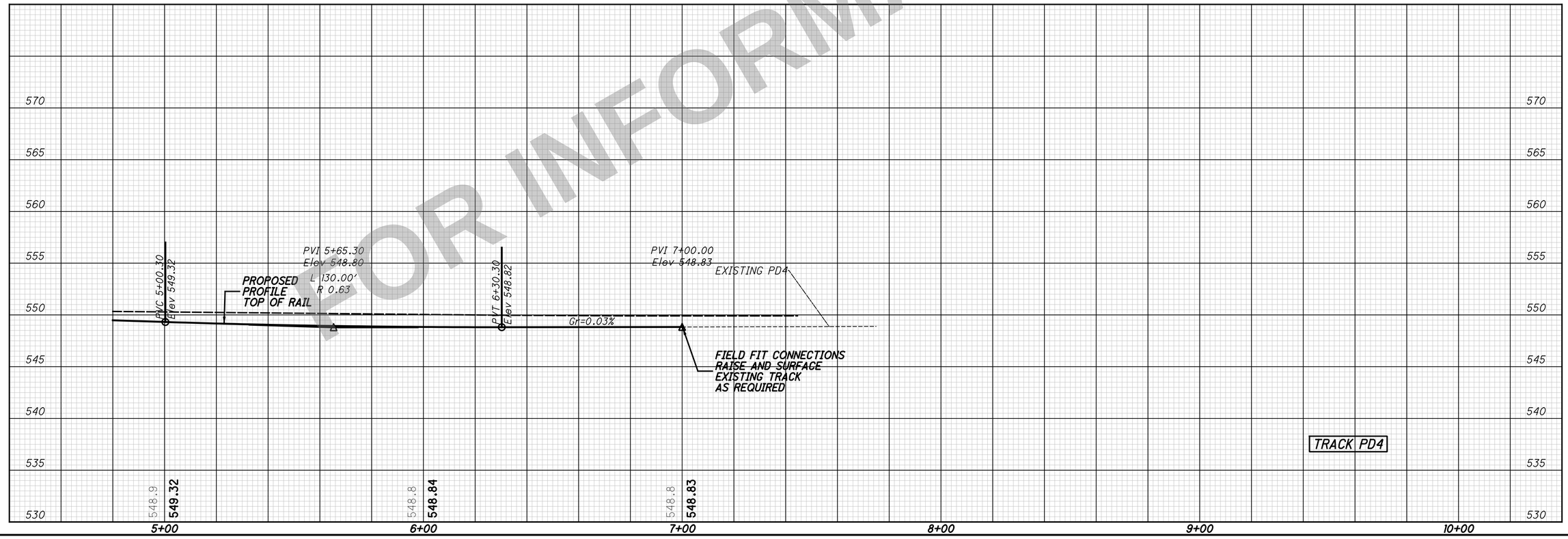
CALCULATED JRG
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TRACK PROFILES
NSRR BERRY YARD - TRACK D3

HAM-75-7.85

1749
2017





FOR INFORMATION ONLY

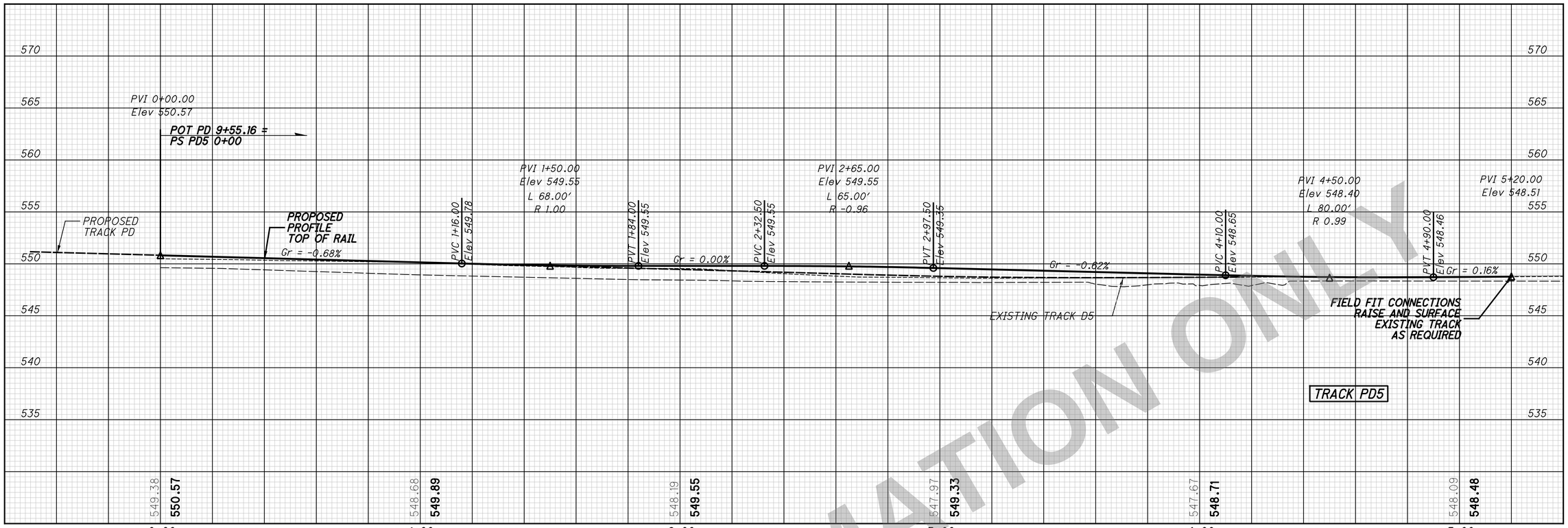
CALCULATED JRG
CHECKED RC

TRACK PROFILES
NSSR BERRY YARD - TRACK D4

HAM-75-7.85

1750
2017

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FOR INFORMATION ONLY

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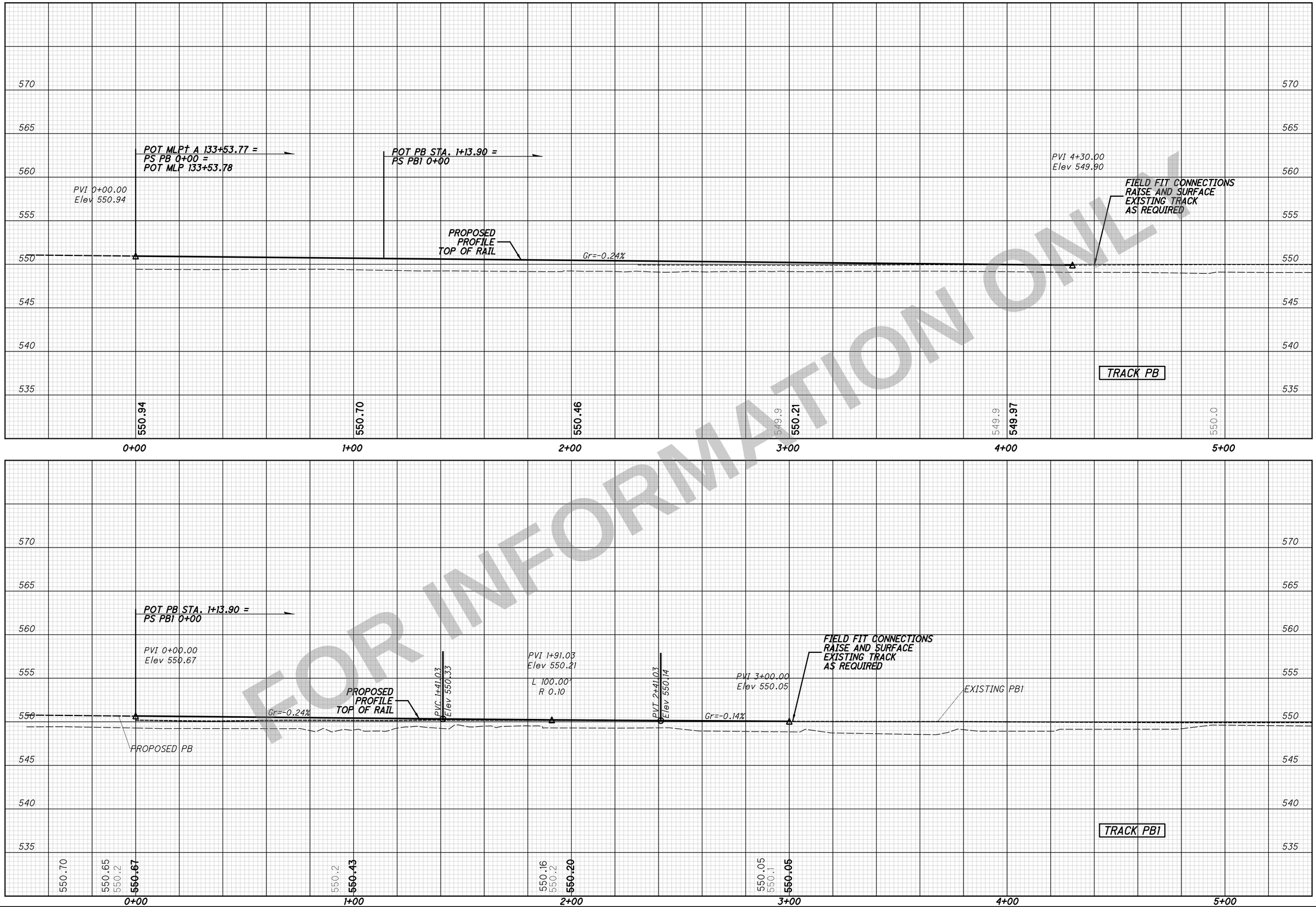
CALCULATED JRG
CHECKED RC

TRACK PROFILES
NSRR BERRY YARD - TRACK D5

HAM-75-7.85

40 / 117

1751
2017



FOR INFORMATION ONLY

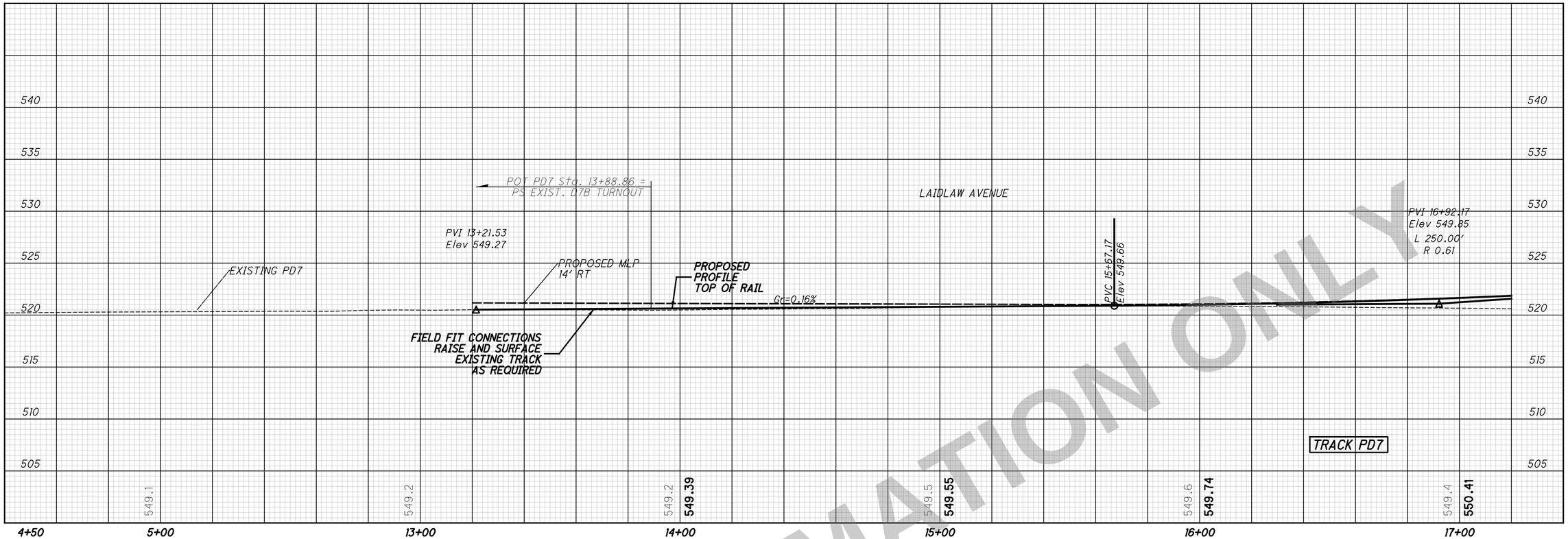
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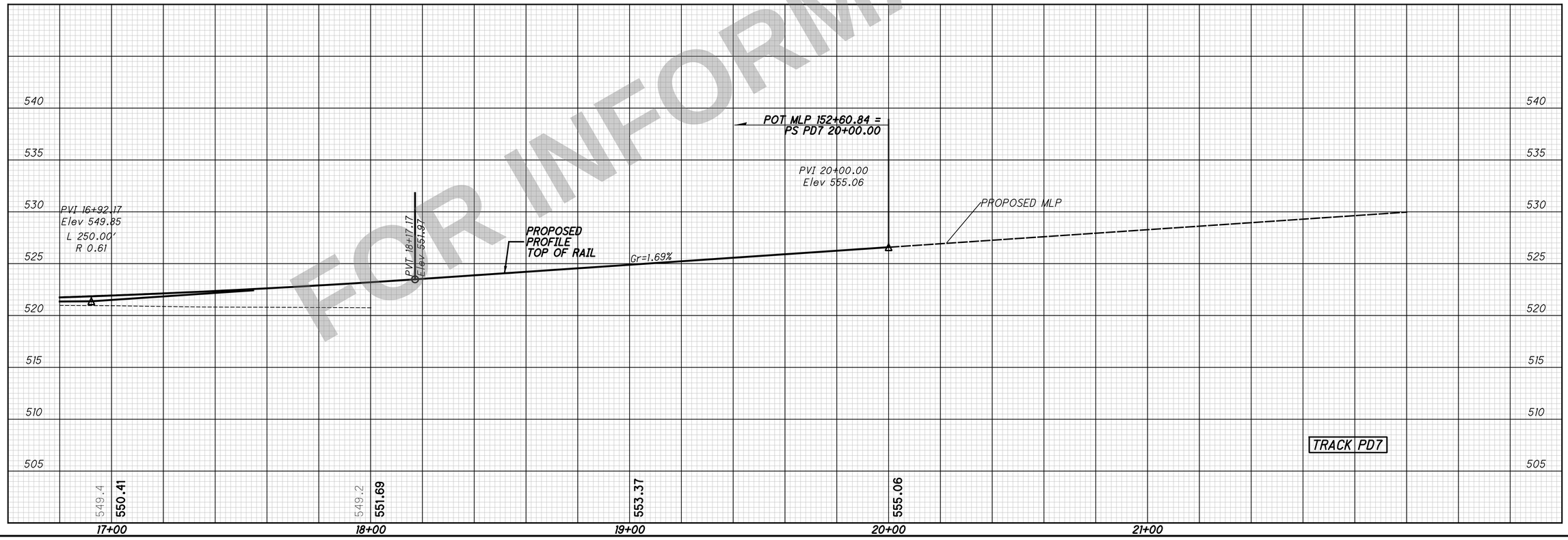
CALCULATED JRG
CHECKED RC

TRACK PROFILES
NSRR BERRY YARD TRACKS B AND B1

HAM-75-7.85

1752
2017





FOR INFORMATION ONLY

CALCULATED JRG
CHECKED RC

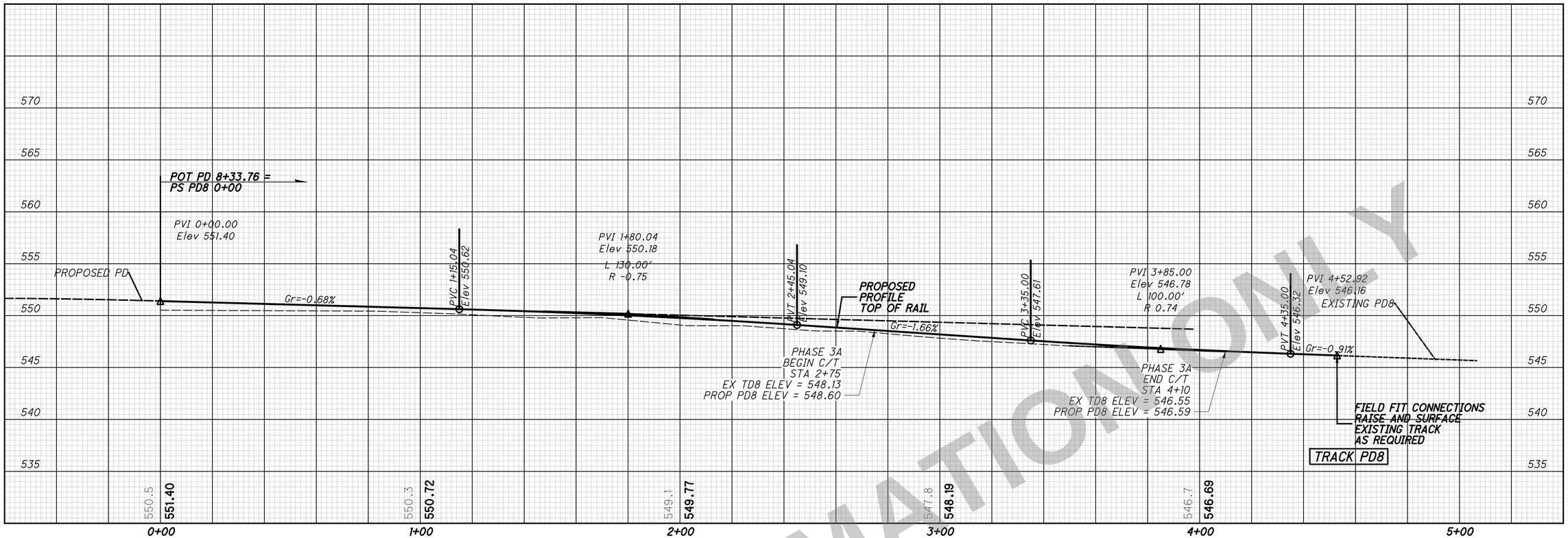
TRACK PROFILES
NSRR BERRY YARD - TRACK D7

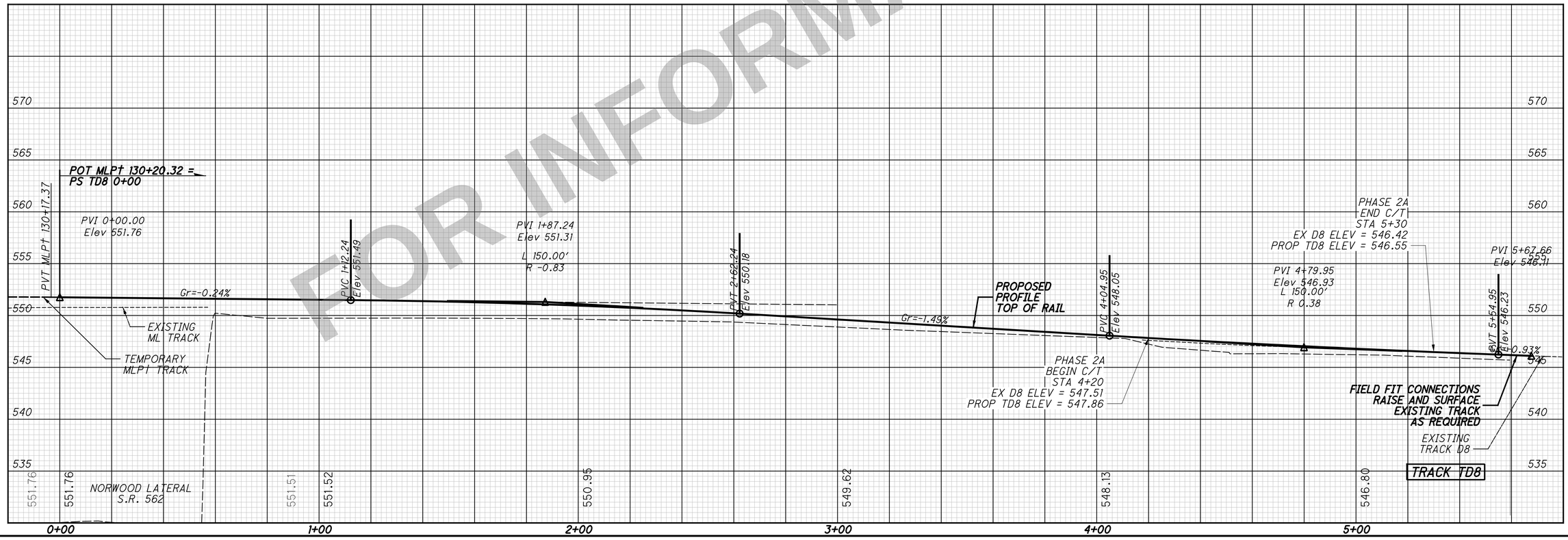
HAM-75-7.85

1753
2017

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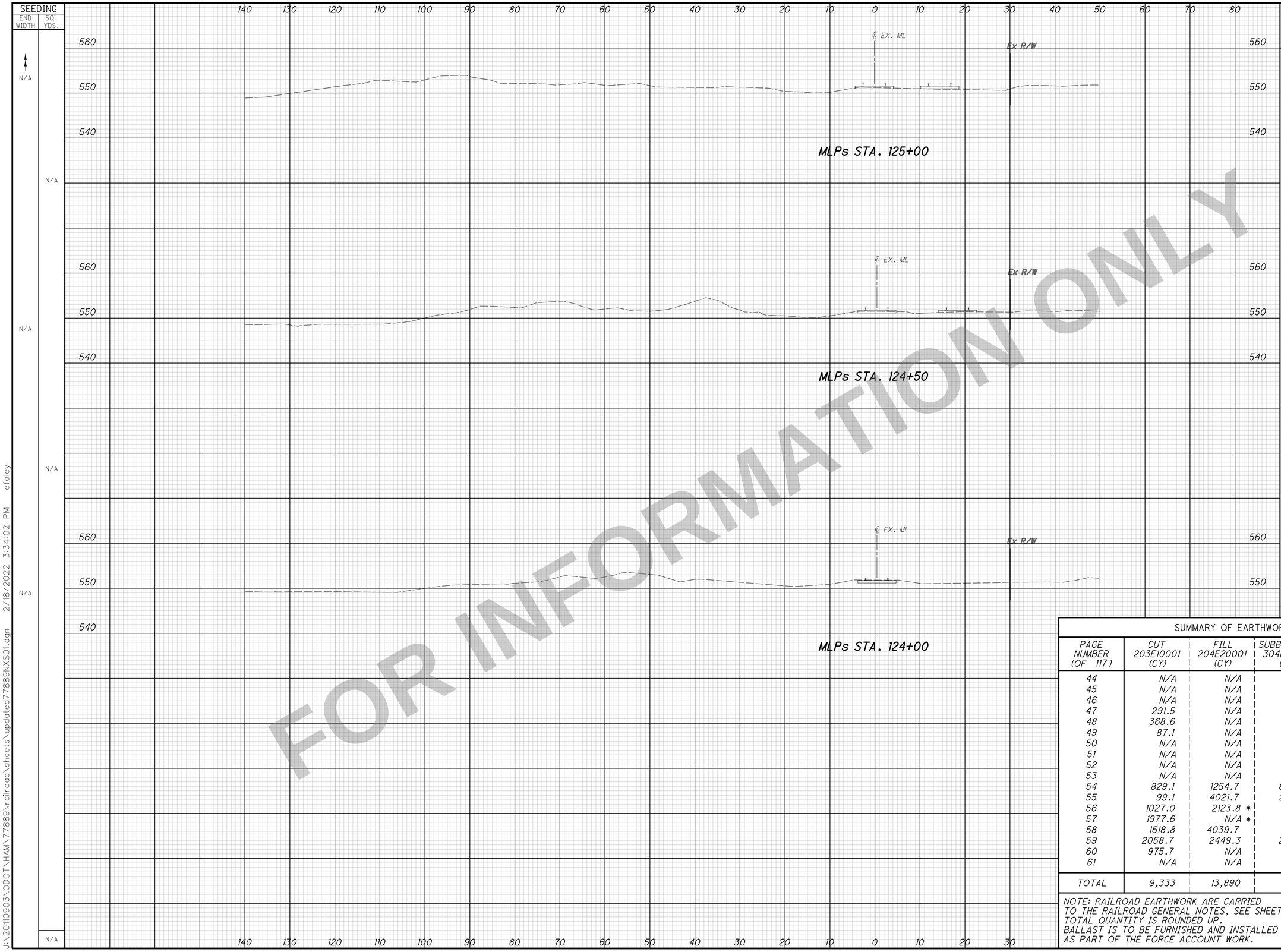
FOR INFORMATION ONLY

CALCULATED JRG
CHECKED RC

TRACK PROFILES
NSRR BERRY YARD - TRACK D8

HAM-75-7.85

1754
2017



FOR INFORMATION ONLY

FINAL CROSS SECTIONS
PROPOSED NSRR - STA 124+00 TO STA 125+00

HAM-75-7.85

44 / 117

1755 2017

SUMMARY OF EARTHWORK QUANTITIES

PAGE NUMBER (OF 117)	CUT 203E10001 (CY)	FILL 204E20001 (CY)	SUBBALLAST 304E20001 (CY)	SEEDING 659E10000 (SY)
44	N/A	N/A	N/A	N/A
45	N/A	N/A	N/A	N/A
46	N/A	N/A	N/A	139.0
47	291.5	N/A	148.2	264.0
48	368.6	N/A	105.8	485.6
49	87.1	N/A	N/A	371.8
50	N/A	N/A	N/A	N/A
51	N/A	N/A	N/A	N/A
52	N/A	N/A	N/A	N/A
53	N/A	N/A	N/A	N/A
54	829.1	1254.7	629.0	1177.5
55	99.1	4021.7	234.6	1351.3
56	1027.0	2123.8 *	137.5	1444.0
57	1977.6	N/A *	82.5	1295.4
58	1618.8	4039.7	110.0	1685.2
59	2058.7	2449.3	220.0	2001.9
60	975.7	N/A	27.5	850.8
61	N/A	N/A	N/A	482.2
TOTAL	9,333	13,890	1,696	11,549

NOTE: RAILROAD EARTHWORK ARE CARRIED TO THE RAILROAD GENERAL NOTES, SEE SHEET 4 117
TOTAL QUANTITY IS ROUNDED UP.
BALLAST IS TO BE FURNISHED AND INSTALLED BY THE RAILROAD AS PART OF THE FORCE ACCOUNT WORK.

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SEEDING	
END WIDTH	SQ. YDS.
N/A	N/A
N/A	
N/A	
N/A	
N/A	

NOTE:
MAINLINE ALIGNMENT DESIGNS HERE-IN ARE TIED TO THE SUPPLIED CENTERLINE EXHIBIT & SURVEY REPORT BY EMH&T DATED 12-13-2011.

MLPs STA. 126+50

℄ MLP
℄ EX. ML
CONSTRUCTION STAGE 2A
Ex R/W
0.00 = OFFSET
551.49 = ELEVATION (TYP.)

MLPs STA. 126+00

℄ EX. ML
Ex R/W
GRADE ADJUST EXISTING AS REQUIRED (TYPICAL)

MLPs STA. 125+50

℄ EX. ML
Ex R/W

END AREA			VOLUME		
CUT	FILL	SUB BALLAST	CUT	FILL	SUB BALLAST
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
SQ. FT.			CU. YD		

CALCULATED JRG
CHECKED RC

FINAL CROSS SECTIONS
PROPOSED NSRR - 125+50 TO 126+50

HAM - 75-7.85

45 / 117

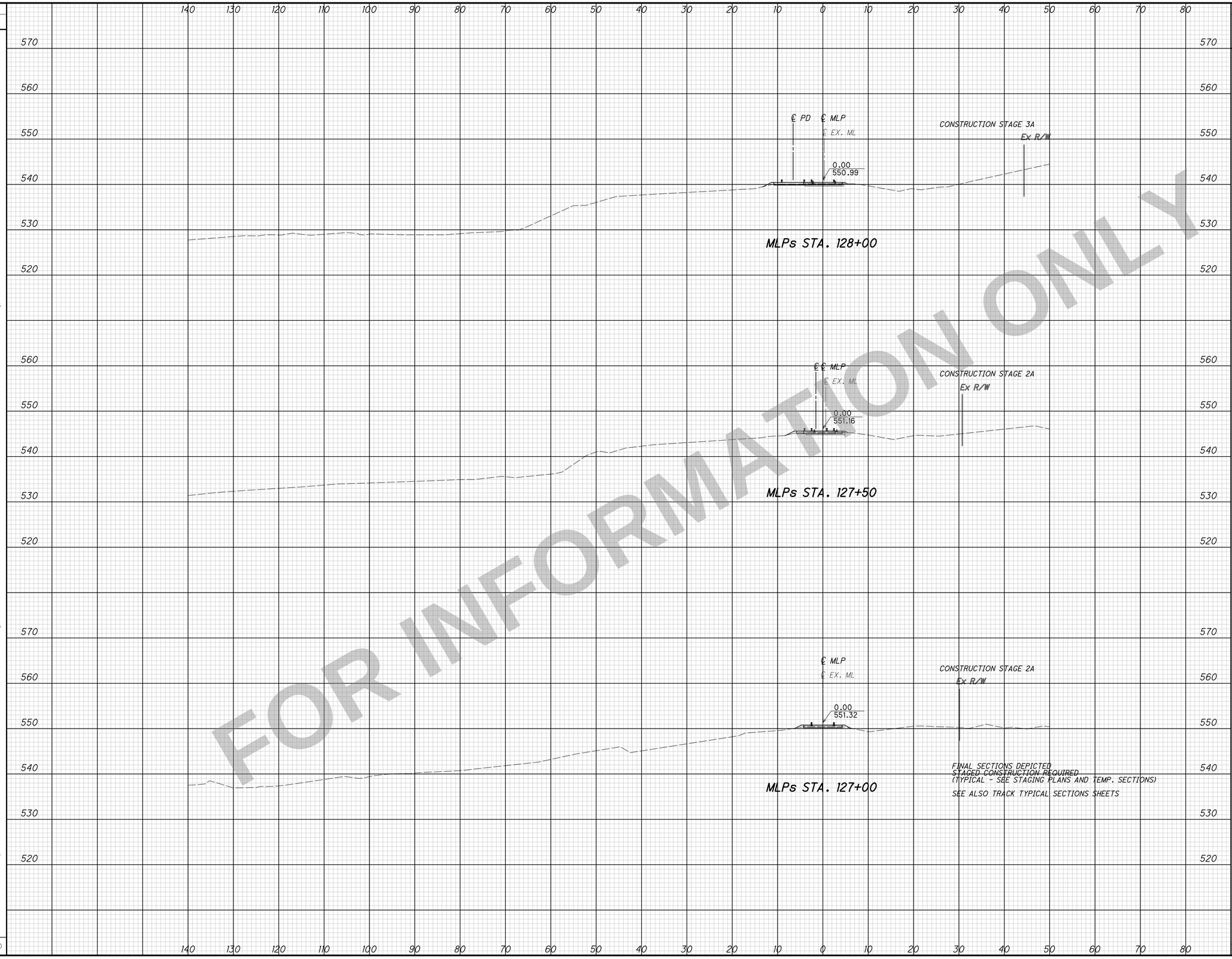
1756
2017

FOR INFORMATION ONLY

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FOR INFORMATION ONLY

SEEDING END WIDTH	SEEDING SQ. YDS.
10.0	55.6
10.0	55.6
10.0	27.8
N/A	139.0



END AREA CUT	END AREA FILL	END AREA SUB BALLAST	VOLUME CUT	VOLUME FILL	VOLUME SUB BALLAST
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
SQ. FT.			CU. YD		

CALCULATED JRG
CHECKED RC

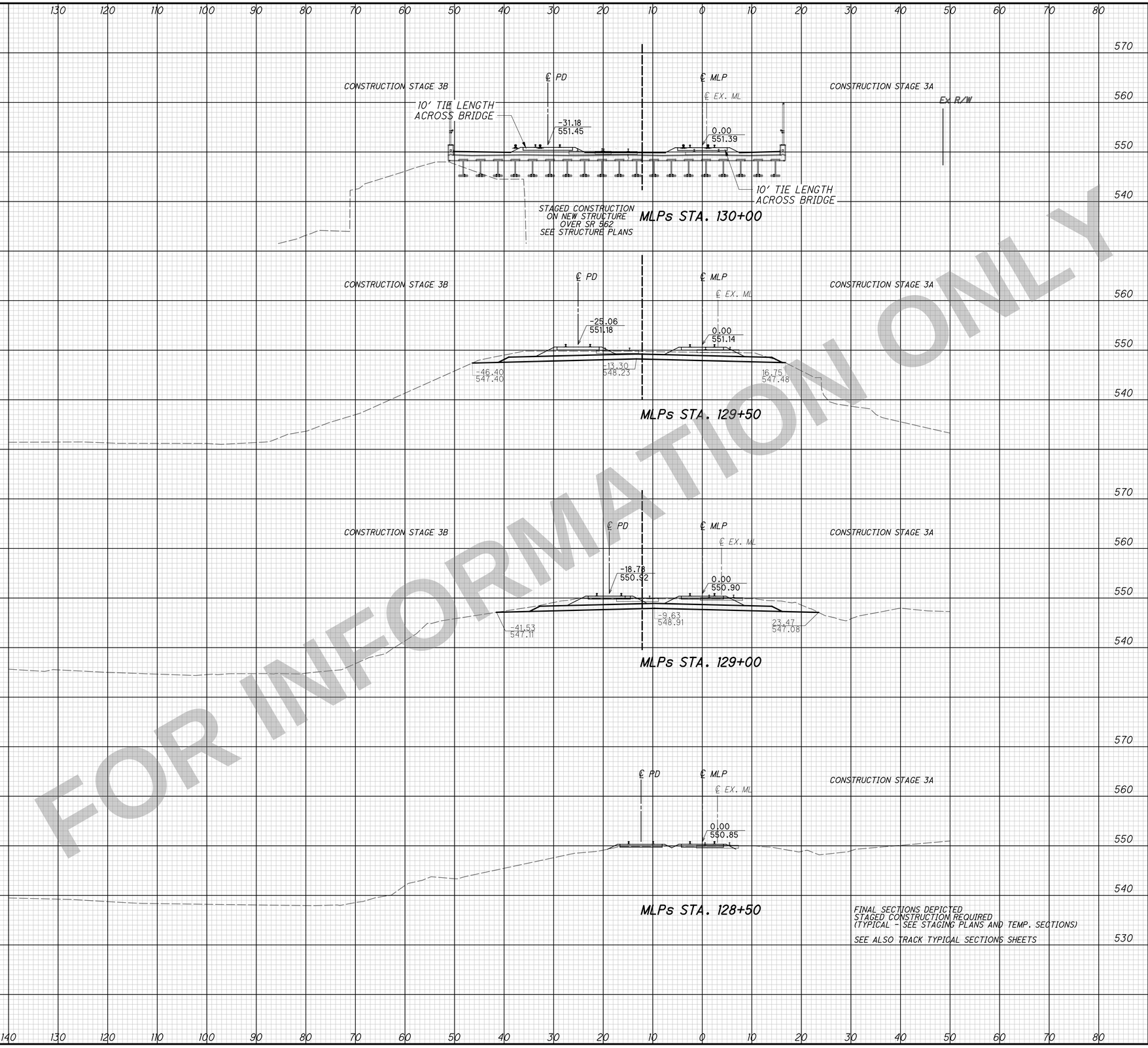
FINAL CROSS SECTIONS
PROPOSED NSRR - STA 127+00 TO STA 128+00

HAM-75-7.85

46/117

1757
2017

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FOR INFORMATION ONLY

SEEDING END WIDTH	SEEDING SQ. YDS.
N/A	
	27.8
10.0	
	90.3
	22.5
	90.3
	10.0
	55.6
10.0	264.0

END AREA	CUT	FILL	SUB BALLAST
	N/A	N/A	N/A
	99.5	N/A	55.5
	57.8	N/A	49.0
	N/A	N/A	N/A
SQ. FT.	N/A	N/A	N/A

VOLUME	CUT	FILL	SUB BALLAST
	92.2	N/A	51.4
	145.7	N/A	96.8
	53.6	N/A	N/A
	N/A	N/A	N/A
CU. YD	291.5	N/A	148.2

CALCULATED JRG

CHECKED RC

FINAL CROSS SECTIONS
PROPOSED NSRR - STA 128+50 TO STA 130+00

HAM-75-7.85

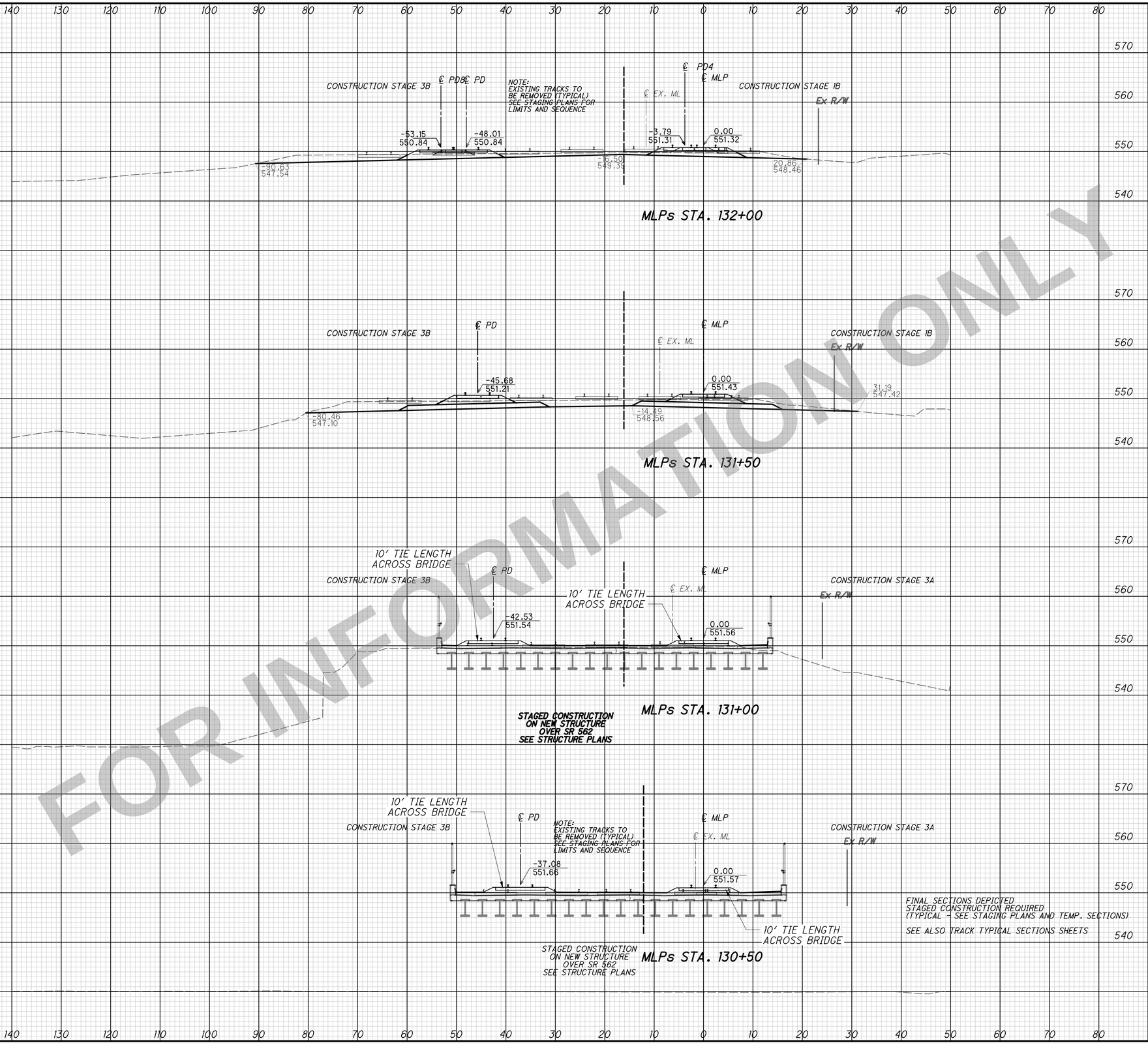
47/117

1758
2017

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FOR INFORMATION ONLY

SEEDING END WIDTH	SEEDING SQ. YDS.
73.8	
	345.3
50.5	
	140.3
N/A	
	N/A
N/A	
	N/A
N/A	
	485.6



END AREA CUT	END AREA FILL	END AREA SUB BALLAST	VOLUME CUT	VOLUME FILL	VOLUME SUB BALLAST
94.0	N/A	N/A	227.8	N/A	52.9
152.0	N/A	57.1			
N/A	N/A	N/A	140.8	N/A	52.9
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	368.6	N/A	105.8
SQ. FT.			CU. YD		

CALCULATED JRG
CHECKED RC

FINAL CROSS SECTIONS
PROPOSED NSRR - STA 130+50 TO STA 132+00

HAM-75-7.85

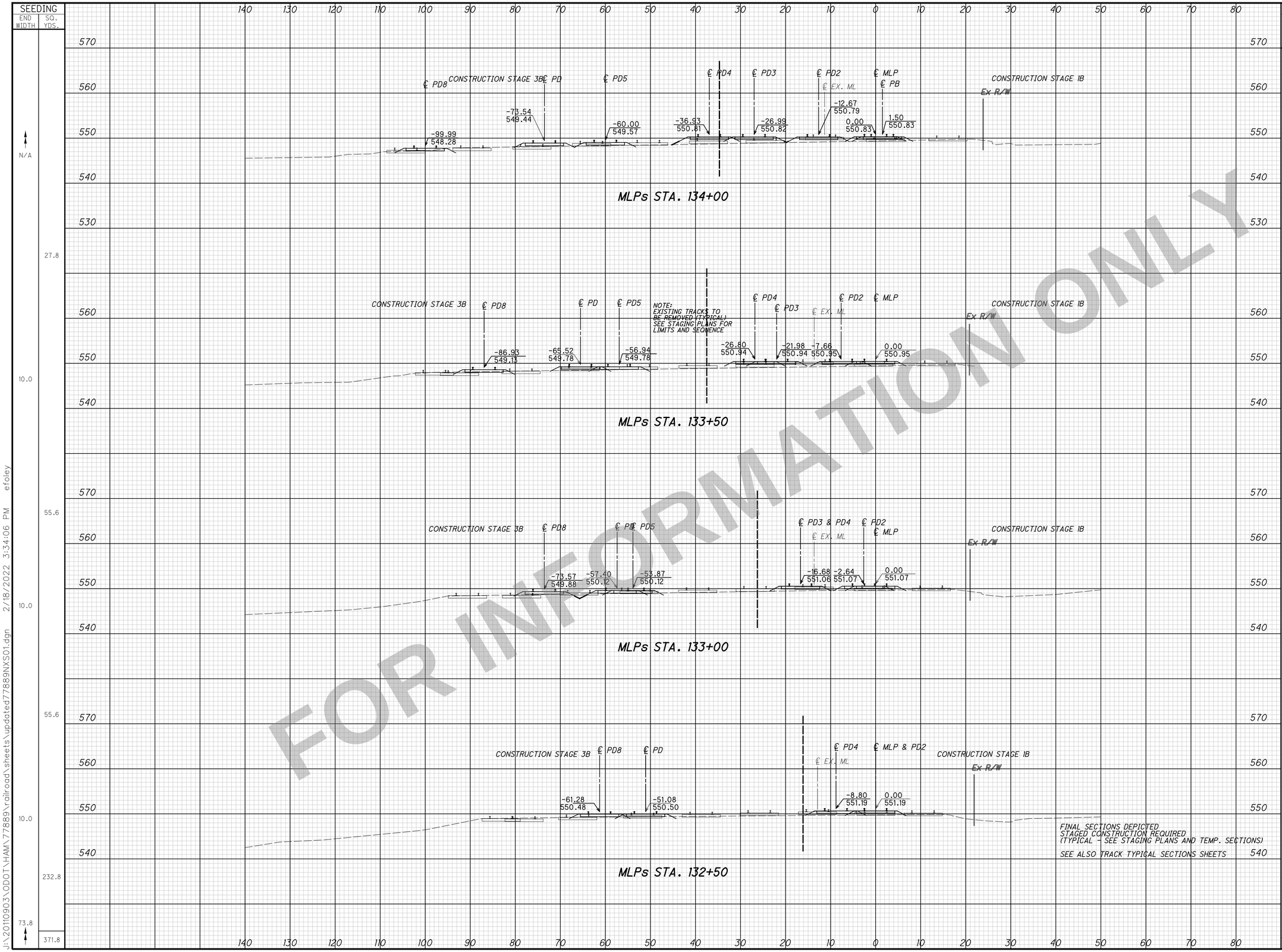
48 / 117

1759
2017

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FOR INFORMATION ONLY

SEEDING END WIDTH	SEEDING SQ. YDS.
N/A	
	27.8
10.0	
	55.6
10.0	
	232.8
73.8	371.8



END AREA CUT	END AREA FILL	END AREA SUB BALLAST	VOLUME CUT	VOLUME FILL	VOLUME SUB BALLAST
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
94.0	N/A	N/A	87.1	N/A	N/A
SQ. FT.			CU. YD		

CALCULATED JRG
CHECKED RC

FINAL CROSS SECTIONS
PROPOSED NSRR - STA 132+50 TO STA 134+00

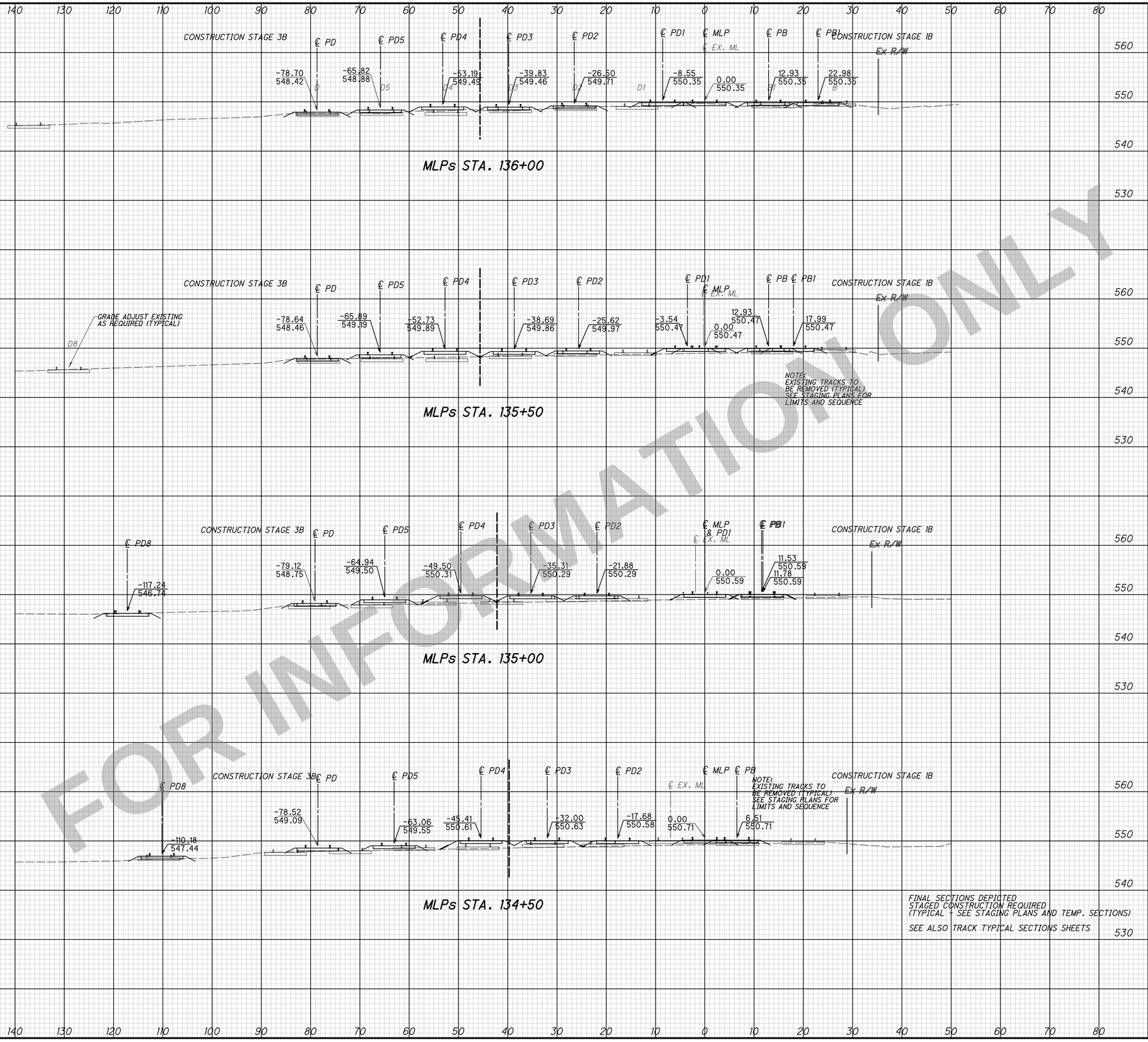
HAM-75-7.85

49/117

1760
2017

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SEEDING END WIDTH	SEEDING SQ. YDS.
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A



FOR INFORMATION ONLY

END AREA CUT	END AREA FILL	END AREA SUB BALLAST	VOLUME CUT	VOLUME FILL	VOLUME SUB BALLAST
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
SQ. FT.			CU. YD		

CALCULATED JRG

CHECKED RC

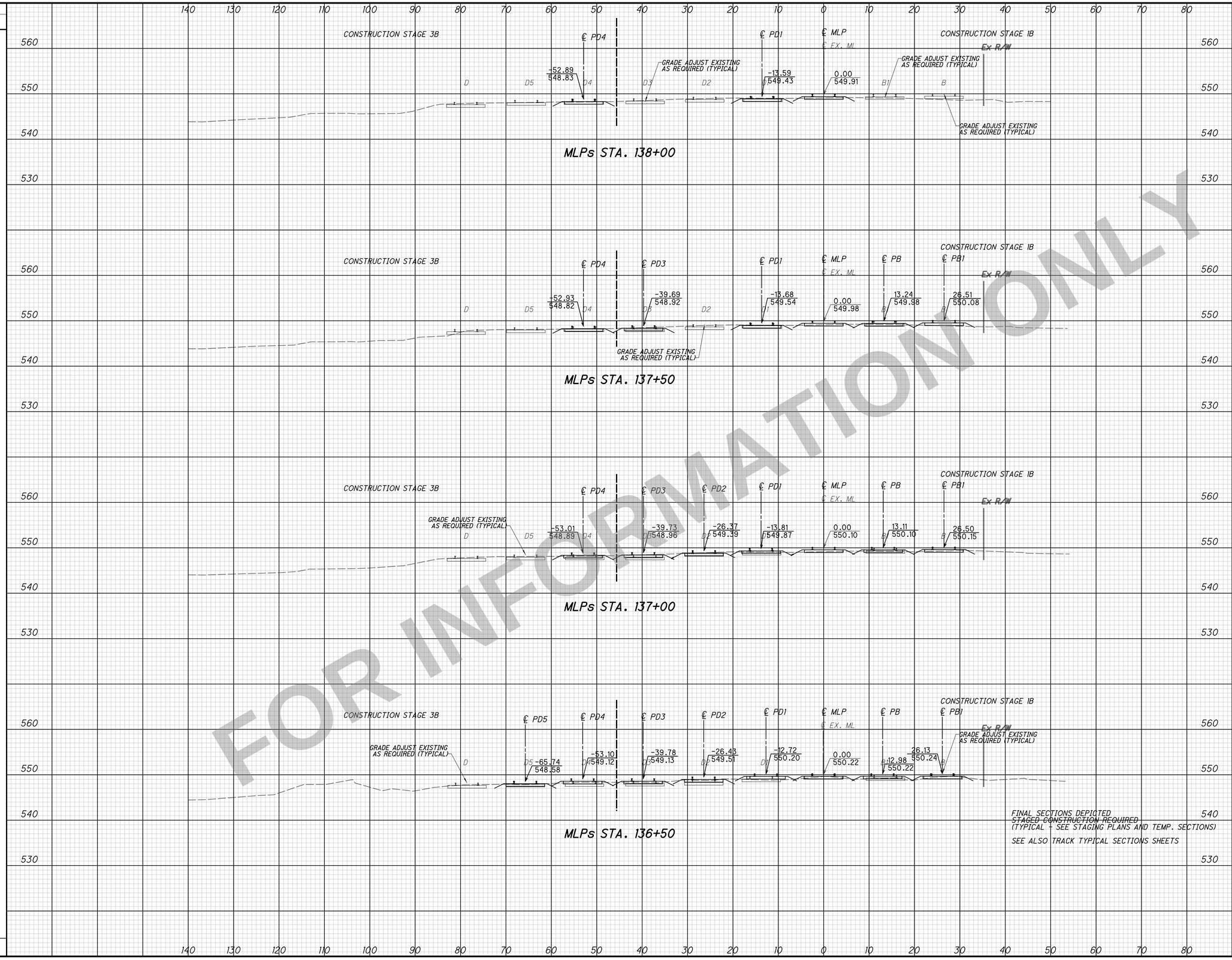
FINAL CROSS SECTIONS
PROPOSED NSRR - STA 134+50 TO STA 136+00

HAM-75-7.85

50 / 117

1761
2017

SEEDING	
END WIDTH	SQ. YDS.
N/A	
	N/A
N/A	
	N/A
N/A	
	N/A
N/A	
	N/A



FOR INFORMATION ONLY

END AREA			VOLUME		
CUT	FILL	SUB BALLAST	CUT	FILL	SUB BALLAST
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
SQ. FT.			CU. YD		

CALCULATED JRG

CHECKED RC

FINAL CROSS SECTIONS
PROPOSED NSRR - STA 136+50 TO STA 138+00

HAM-75-7.85

51 / 117

1762
2017

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SEEDING	
END WIDTH	SQ. YDS.
N/A	
N/A	
N/A	
N/A	

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80

560 550 540 530

CONSTRUCTION STAGE 3B

℄ MLP
℄ EX. ML

CONSTRUCTION STAGE 1B
Ex R/W

GRADE ADJUST EXISTING AS REQUIRED (TYPICAL)

D D5 D4 D3 D2 D1 0.00 549.91 B1 B

MLPs STA. 138+68

CONSTRUCTION STAGE 3B

℄ MLP
℄ EX. ML

CONSTRUCTION STAGE 1B
Ex R/W

GRADE ADJUST EXISTING AS REQUIRED (TYPICAL)

GRADE ADJUST EXISTING AS REQUIRED (TYPICAL)

D D5 D4 D3 D2 D1 0.00 549.91 B1 B

MLPs STA. 138+50

FOR INFORMATION ONLY

END AREA		
CUT	FILL	SUB BALLAST
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
SQ. FT.		

VOLUME		
CUT	FILL	SUB BALLAST
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
CU. YD		

CALCULATED JRG

CHECKED RC

FINAL CROSS SECTIONS
PROPOSED NSRR - STA 138+50 TO STA 138+68

HAM-75-7.85

1763
2017

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SEEDING	
END WIDTH	SQ. YDS.
N/A THIS PAGE N/A	N/A N/A
N/A N/A	N/A N/A
N/A N/A	N/A N/A
N/A N/A	N/A N/A
N/A N/A	N/A N/A
N/A THIS PAGE N/A	N/A

50 40 30 20 10 0 10 20 30 40 50

CONSTRUCTION STAGE 1B

℄ EX. ML

Ex R/W

GRADE ADJUST EXISTING AS REQUIRED (TYPICAL)

GRADE ADJUST EXISTING AS REQUIRED (TYPICAL)

560 550 540 530

MLPn STA. 145+50

CONSTRUCTION STAGE 1B

℄ EX. ML

Ex R/W

560 550 540 530

MLPn STA. 145+00

CONSTRUCTION STAGE 1B

℄ EX. ML

Ex R/W

560 550 540 530

MLPn STA. 144+50

CONSTRUCTION STAGE 1B

℄ EX. ML

Ex R/W

560 550 540 530

MLPn STA. 144+00

50 40 30 20 10 0 10 20 30 40

CONSTRUCTION STAGE 1B

CONSTRUCTION STAGE 2A

CONSTRUCTION STAGE 1B

℄ PD7

℄ MLP

℄ EX. ML

-14.58
549.54

-0.00
549.81

ON EXISTING LAIDLAW AVE. STRUCTURE

560 550 540 530

MLPn STA. 147+50

CONSTRUCTION STAGE 1B

CONSTRUCTION STAGE 2A

CONSTRUCTION STAGE 1B

℄ PD7

℄ MLP

℄ EX. ML

Ex R/W

-15.78
549.47

0.00
549.84

560 550 540 530

MLPn STA. 147+00

CONSTRUCTION STAGE 1B

CONSTRUCTION STAGE 2A

CONSTRUCTION STAGE 1B

℄ PD7

℄ MLP

℄ EX. ML

Ex R/W

-20.89
549.39

0.00
549.87

560 550 540 530

MLPn STA. 146+50

CONSTRUCTION STAGE 1B

CONSTRUCTION STAGE 2A

CONSTRUCTION STAGE 1B

℄ PD7

℄ MLP

℄ EX. ML

Ex R/W

GRADE ADJUST EXISTING AS REQUIRED (TYPICAL)

-28.01
549.31

0.00
549.91

FINAL SECTIONS DEPICTED
STAGED CONSTRUCTION REQUIRED
(TYPICAL - SEE STAGING PLANS AND TEMP. OP. SECTIONS)

SEE ALSO TRACK TYPICAL SECTIONS SHEETS

560 550 540 530

MLPn STA. 146+00

50 40 30 20 10 0 10 20 30 40 50 60

END AREA			
CUT	FILL	SUB BALLAST	
N/A THIS PAGE N/A	N/A THIS PAGE N/A	N/A THIS PAGE N/A	
N/A	N/A	N/A	
N/A	N/A	N/A	
N/A	N/A	N/A	
N/A	N/A	N/A	
N/A THIS PAGE N/A	N/A THIS PAGE N/A	N/A THIS PAGE N/A	SQ. FT.

VOLUME			
CUT	FILL	SUB BALLAST	
N/A	N/A	N/A	
N/A	N/A	N/A	
N/A	N/A	N/A	
N/A	N/A	N/A	
N/A	N/A	N/A	
N/A THIS PAGE N/A	N/A THIS PAGE N/A	N/A THIS PAGE N/A	CU. YD

CALCULATED JRG

CHECKED RC

FINAL CROSS SECTIONS
PROPOSED NSRR - STA 144+00 TO STA 147+50

HAM-75-7.85

53 / 117

1764
2017

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SEEDING END WIDTH	SEEDING SQ. YDS.
16.9 ← THIS PAGE	45.4
	104.8
	298.9
20.8	62.2
	115.0
	261.4
20.6	31.9
	94.8
	153.4
13.5	23.3
	37.5
	111.7
N/A → THIS PAGE 16.9	1177.5

MLPn STA. 149+50

CONSTRUCTION STAGE 2A | CONSTRUCTION STAGE 1A

℄ PD7 | ℄ MLP | ℄ EX. ML

-15.88 / 550.53 | 0.00 / 550.36

-8.75 / 547.33 | 19.02 / 545.25

-46.63 / 546.00

MLPn STA. 149+00

CONSTRUCTION STAGE 2A | CONSTRUCTION STAGE 1A

NOTE: EXISTING TRACKS TO BE REMOVED (TYPICAL) SEE STAGING PLANS FOR LIMITS AND SEQUENCE

℄ PD7 | ℄ MLP | ℄ EX. ML

-15.76 / 549.95 | 0.00 / 550.01

-7.84 / 546.96 | 19.09 / 545.36

-46.63 / 546.00

MLPn STA. 148+50

CONSTRUCTION STAGE 2A | C/T TRACK STAGE 1B SUBGRADE/SUBBALLAST 1A

℄ PD7 | ℄ MLP | ℄ EX. ML

-15.38 / 549.72 | 0.00 / 549.81

-7.76 / 546.77 | 19.09 / 545.67

-38.74 / 549.99

MLPn STA. 148+00

CONSTRUCTION STAGE 2A | C/T TRACK STAGE 1B

℄ PD7 | ℄ MLP | ℄ EX. ML

FINAL SECTIONS DEPICTED STAGED CONSTRUCTION REQUIRED (TYPICAL - SEE STAGING PLANS AND TEMP. SECTIONS)

SEE ALSO TRACK TYPICAL SECTIONS SHEETS

-14.92 / 549.62 | 0.00 / 549.78

-33.83 / 546.07 | 17.35 / 546.00

MLPn STA. 151+50

CONSTRUCTION STAGE 2A | CONSTRUCTION STAGE 1A

℄ PD7 | ℄ MLP | ℄ EX. ML

-7.98 / 553.18 | 0.00 / 553.19

-11.88 / 548.15 | 36.67 / 539.27

-46.35 / 546.94

MLPn STA. 151+00

CONSTRUCTION STAGE 2A | CONSTRUCTION STAGE 1A

℄ PD7 | ℄ MLP | ℄ EX. ML

-12.85 / 552.33 | 0.00 / 552.34

-10.65 / 548.13 | 56.00 / 539.65

-49.13 / 546.76

MLPn STA. 150+50

CONSTRUCTION STAGE 2A | CONSTRUCTION STAGE 1A

℄ PD7 | ℄ MLP | ℄ EX. ML

-15.17 / 551.53 | 0.00 / 551.53

-10.40 / 548.16 | 27.06 / 542.40

-51.12 / 546.48

MLPn STA. 150+00

CONSTRUCTION STAGE 2A | CONSTRUCTION STAGE 1A

NOTE: EXISTING TRACKS TO BE REMOVED (TYPICAL) SEE STAGING PLANS FOR LIMITS AND SEQUENCE

℄ | ℄ MLP | ℄ EX. ML

-15.71 / 550.85 | 0.00 / 550.86

-9.86 / 547.76 | 22.91 / 543.81

-47.75 / 546.82

2:1 (TYP.)

END AREA	CUT	FILL	SUB BALLAST
	48.5 ← THIS PAGE	5.6 ← THIS PAGE	16.6 ← THIS PAGE
	282.5	46.3	38.1
	94.5	9.3	N/A
	314.2	45.9	42.8
	113.4	19.7	N/A
	140.5	45.5	45.6
	123.8	35.5	N/A
	64.9	47.9	46.4
	N/A → THIS PAGE 48.5	N/A → THIS PAGE 16.6	N/A → THIS PAGE 46.3
SQ. FT.	829.1	1254.7	629.0

VOLUME	CUT	FILL	SUB BALLAST
	132.5	13.8	15.4
	552.5	85.4	75.0
	192.5	26.9	N/A
	421.1	84.7	81.9
	219.7	51.2	N/A
	190.2	86.5	85.2
	114.7	77.8	N/A
	75.5	44.4	85.9
CU. YD			

CALCULATED JRG

CHECKED RC

FINAL CROSS SECTIONS
PROPOSED NSRR - STA 148+00 TO STA 151+50

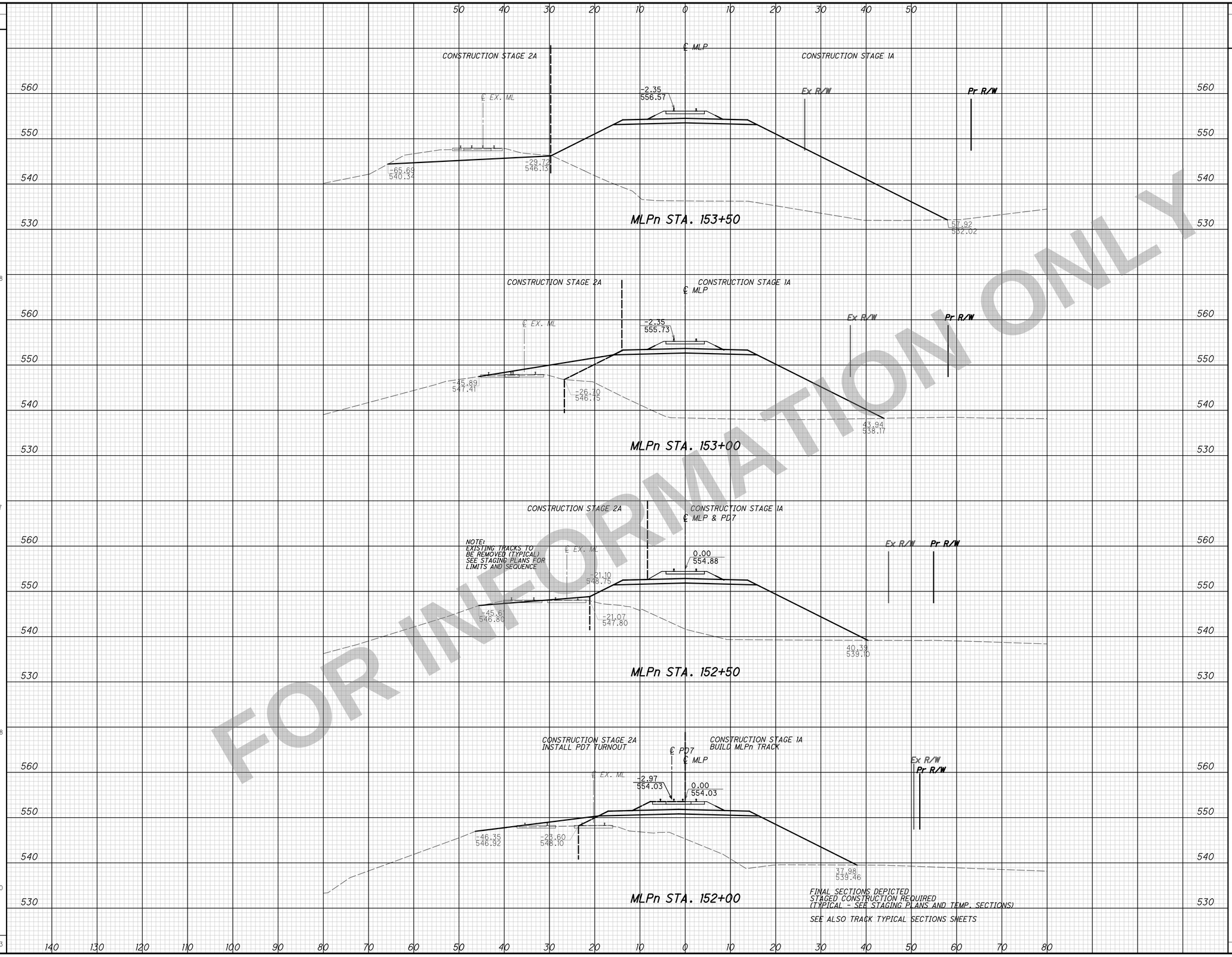
HAM-75-7.85

54 / 117

1765 / 2017

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SEEDING	
END WIDTH	SQ. YDS.
98.6	
	444.8
61.5	
331.7	
57.9	
304.8	
51.8	
270.0	
45.4	
	1351.3



END AREA	CUT	FILL	SUB BALLAST
	63.2	1017.2	29.7
	5.0	701.0	29.7
	8.1	463.4	29.7
	5.9	357.3	33.3
	5.6	282.5	38.1
SQ. FT.			

VOLUME	CUT	FILL	SUB BALLAST
	63.2	1591.0	55.0
	12.2	1078.2	55.0
	13.0	760.0	58.4
	10.7	592.5	66.2
	99.1	4021.7	234.6
CU. YD			

CALCULATED JRG
CHECKED RC

FINAL CROSS SECTIONS
PROPOSED NSRR - STA 152+00 TO STA 133+50

HAM-75-7.85

55 / 117

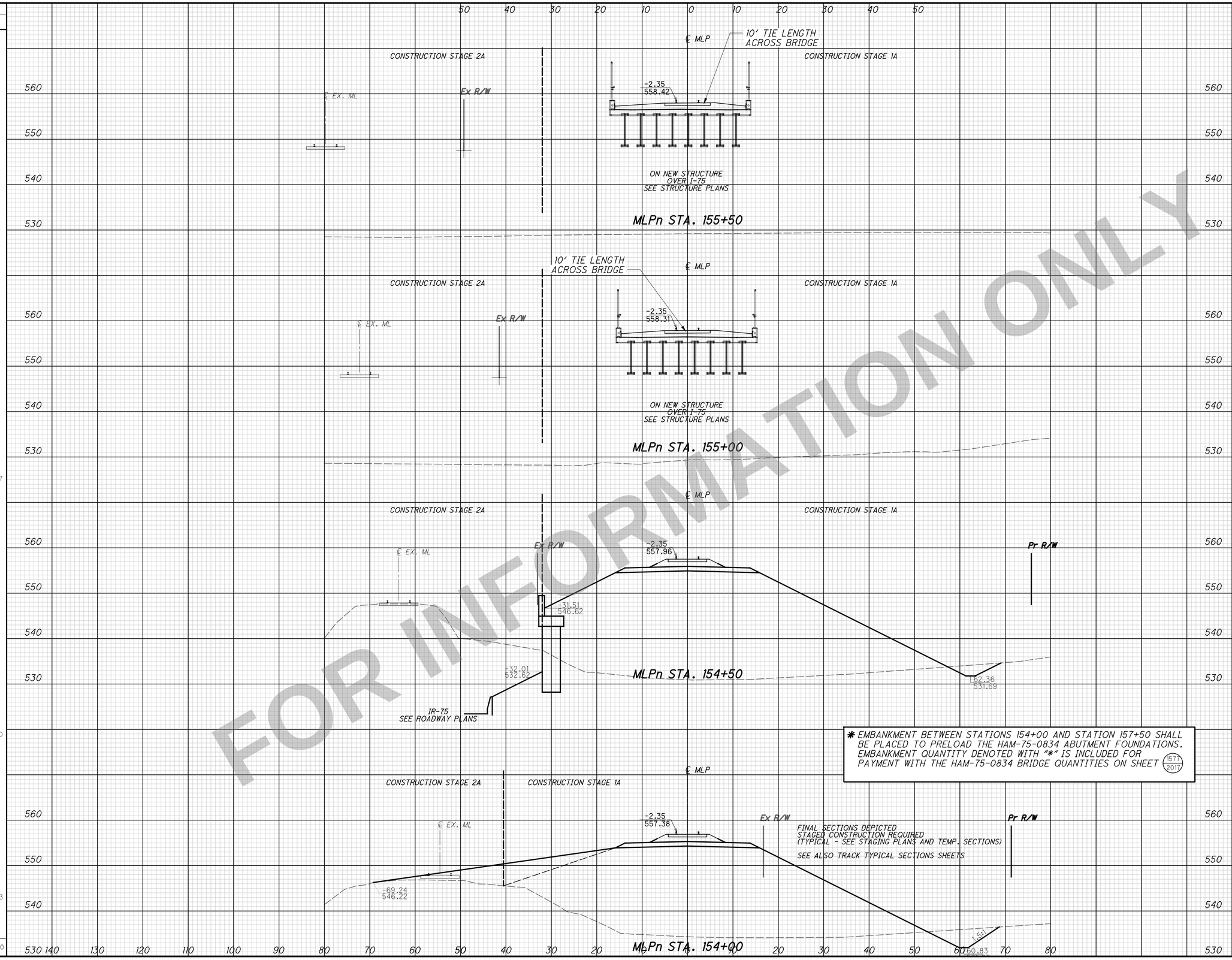
1766
2017

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SEEDING END WIDTH	SEEDING SQ. YDS.
N/A	
	N/A
N/A	
	253.7
91.3	
	585.0
119.3	
	605.3
98.6	
	1444.0



✱ EMBANKMENT BETWEEN STATIONS 154+00 AND STATION 157+50 SHALL BE PLACED TO PRELOAD THE HAM-75-0834 ABUTMENT FOUNDATIONS. EMBANKMENT QUANTITY DENOTED WITH "✱" IS INCLUDED FOR PAYMENT WITH THE HAM-75-0834 BRIDGE QUANTITIES ON SHEET 1577 2017

END AREA CUT	END AREA FILL	END AREA SUB BALLAST	VOLUME CUT	VOLUME FILL	VOLUME SUB BALLAST
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	450.4	✱ 1414.0	27.5
486.4	1527.1	29.7	484.2	✱ 2596.0	55.0
36.5	1276.5	29.7	92.4	2123.8	55.0
63.2	1017.2	29.7	1027.0	2123.8	137.5
SQ. FT.			CU. YD		

CALCULATED JRG
CHECKED RC

FINAL CROSS SECTIONS
PROPOSED NSRR - STA 154+00 TO STA 155+50

HAM-75-7.85

56 / 117

1767 2017

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SEEDING	
END WIDTH	SQ. YDS.
183.1	
	902.0
141.6	
	393.4
N/A	
	N/A
N/A	
	N/A
N/A	
	1295.4

50 40 30 20 10 0 10 20 30 40 50

CONSTRUCTION STAGE 2A

℄ MLP

CONSTRUCTION STAGE 1A

560 550 540 530

-2.35
556.50

-109.50
541.08

-85.01
535.20

71.84
543.59

53.23
534.81

FOR GRADING AND DRAINAGE
SEE ROADWAY AND
STRUCTURES PLANS

MLPn STA. 157+50

CONSTRUCTION STAGE 2A

℄ MLP

CONSTRUCTION STAGE 1A

560 550 540 530

-2.35
557.34

-124.76
538.20

-54.25
543.01

-49.50
544.20

44.42
539.68

-84.51
529.13

FOR GRADING AND DRAINAGE
SEE ROADWAY AND
STRUCTURES PLANS

MLPn STA. 157+00

10' TIE LENGTH
ACROSS BRIDGE

℄ MLP

CONSTRUCTION STAGE 1A

Ex R/W

560 550 540 530

-2.35
557.94

ON NEW STRUCTURE
OVER I-75
SEE STRUCTURE PLANS

MLPn STA. 156+50

✱ EMBANKMENT BETWEEN STATIONS 154+00 AND STATION 157+50 SHALL BE PLACED TO PRELOAD THE HAM-75-0834 ABUTMENT FOUNDATIONS. EMBANKMENT QUANTITY DENOTED WITH "✱" IS INCLUDED FOR PAYMENT WITH THE HAM-75-0834 BRIDGE QUANTITIES ON SHEET 1577/2017

℄ MLP

10' TIE LENGTH
ACROSS BRIDGE

CONSTRUCTION STAGE 1A

Ex R/W

560 550 540 530

-2.35
558.30

FINAL SECTIONS DEPICTED
STAGED CONSTRUCTION REQUIRED
(TYPICAL - SEE STAGING PLANS AND TEMP. SECTIONS)

SEE ALSO TRACK TYPICAL SECTIONS SHEETS

ON NEW STRUCTURE
OVER I-75
SEE STRUCTURE PLANS

MLPn STA. 156+00

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80

END AREA			VOLUME			
CUT	FILL	SUB BALLAST	CUT	FILL	SUB BALLAST	CALCULATED JRG / CHECKED RC
572.5	595.5	29.7	1253.8	1307.7 ✱	55.0	
781.6	816.8	29.7				
N/A	N/A	N/A	N/A	N/A	N/A	
N/A	N/A	N/A	N/A	N/A	N/A	
N/A	N/A	N/A	N/A	N/A	N/A	
N/A	N/A	N/A	723.8	756.3 ✱	27.5	
N/A	N/A	N/A	N/A	N/A	N/A	
N/A	N/A	N/A	N/A	N/A	N/A	
N/A	N/A	N/A	1977.6	N/A	82.5	
SQ. FT.			CU. YD			

FINAL CROSS SECTIONS
PROPOSED NSRR - STA 156+00 TO STA 157+50

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57 / 117

1768 / 2017

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SEEDING END WIDTH	SEEDING SQ. YDS.
122.1	
	339.2
N/A	
	N/A
N/A	
	418.7
150.7	
	927.3
183.1	
	1685.2

60 50 40 30 20 10 0 10 20 30 40 50 60

CONSTRUCTION STAGE 2A — ℄ MLP — CONSTRUCTION STAGE 1A

℄ EX. ML

-2.35
552.32

-39.08
537.19

-87.08
534.00

MLPn STA. 159+50

54.35
530.06

CONSTRUCTION STAGE 2A — ℄ MLP — CONSTRUCTION STAGE 1A

℄ EX. ML

-2.35
553.37

ON NEW STRUCTURE
OVER PROSSER AVE
SEE STRUCTURE PLANS

MLPn STA. 159+00

CONSTRUCTION STAGE 2A — ℄ MLP — CONSTRUCTION STAGE 1A

℄ EX. ML

-2.35
554.42

Pr R/W

ON NEW STRUCTURE
OVER PROSSER AVE
SEE STRUCTURE PLANS

MLPn STA. 158+50

CONSTRUCTION STAGE 2A — ℄ MLP — CONSTRUCTION STAGE 1A

-2.35
555.47

Pr R/W

FINAL SECTIONS DEPICTED
STAGED CONSTRUCTION REQUIRED
(TYPICAL - SEE STAGING PLANS AND TEMP. SECTIONS)

SEE ALSO TRACK TYPICAL SECTIONS SHEETS

-94.05
546.07

-60.83
530.72

56.17
535.27

MLPn STA. 158+00

PROSSER AVE WING WALL
SEE STRUCTURES PLANS

560 550 540 530

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80

END AREA	CUT	FILL	SUB BALLAST
	473.5	883.5	29.7
	N/A	N/A	N/A
	572.5	595.5	29.7
SQ. FT.	1618.8	4039.7	110.0

VOLUME	CUT	FILL	SUB BALLAST
	438.5	818.1	27.5
	N/A	N/A	N/A
	325.1	1335.1	27.5
	N/A	N/A	N/A
	855.2	1886.5	55.0
CU. YD	N/A	N/A	N/A

CALCULATED JRG
CHECKED RC

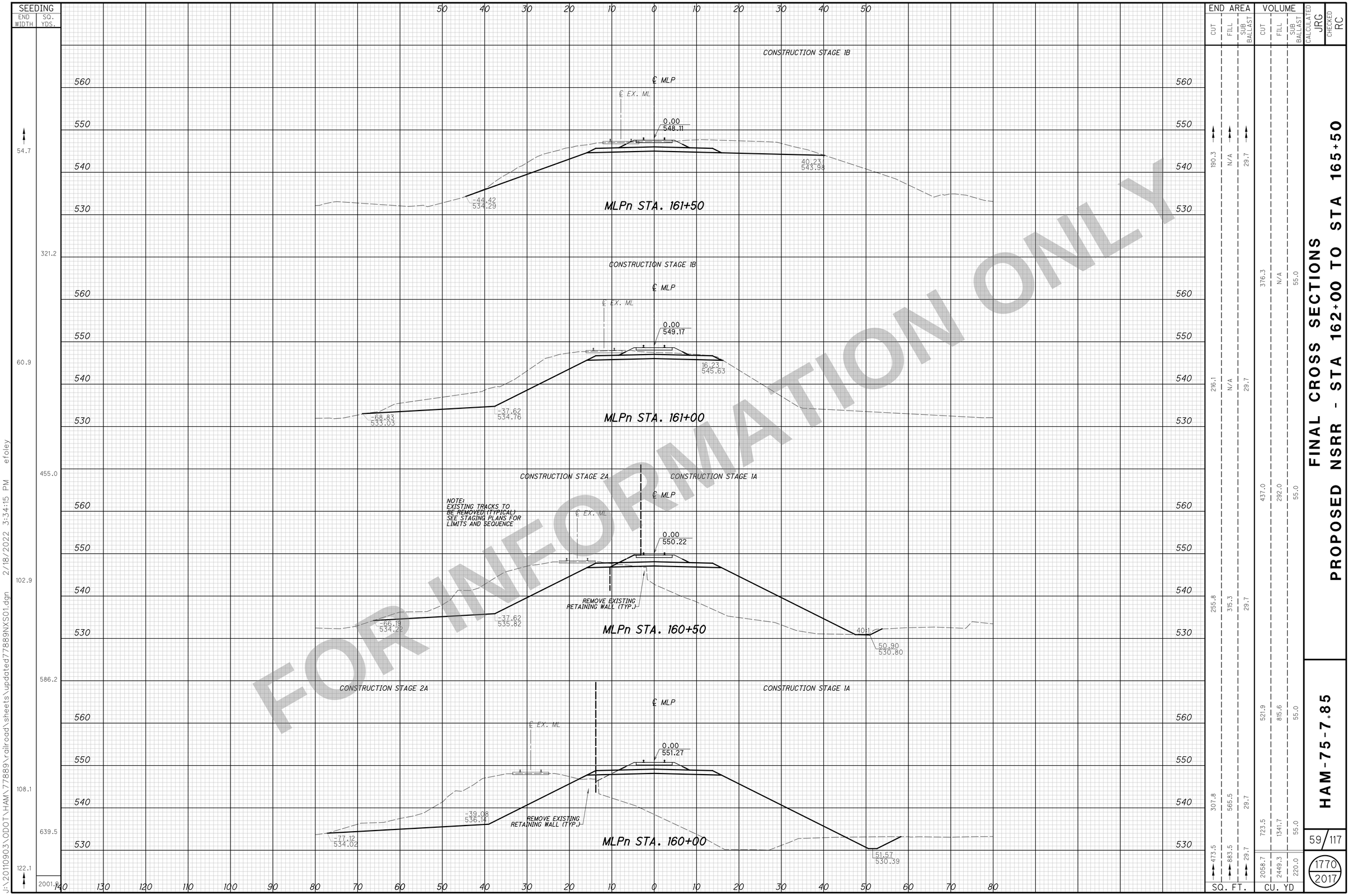
FINAL CROSS SECTIONS
PROPOSED NSRR - STA 158+00 TO STA 161+50

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58 / 117

1769
2017

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SEEDING
END WIDTH
SQ. YDS.
54.7
321.2
60.9
455.0
102.9
586.2
108.1
639.5
122.1
2001.1
END AREA
CUT
FILL
SUB BALLAST
190.3
N/A
29.7
216.1
N/A
29.7
255.8
315.3
29.7
307.8
565.5
29.7
473.5
883.5
29.7
VOLUME
CUT
FILL
SUB BALLAST
376.3
N/A
55.0
437.0
292.0
55.0
521.9
815.6
55.0
723.5
1341.7
55.0
2058.7
2449.3
220.0
SQ. FT.
CU. YD
CALCULATED
JRG
CHECKED
RC
CONSTRUCTION STAGE 1B
℄ MLP
℄ EX. ML
0.00
548.11
40.23
543.38
-44.42
534.29
MLPn STA. 161+50
CONSTRUCTION STAGE 1B
℄ MLP
℄ EX. ML
0.00
549.17
16.23
545.63
-68.83
533.03
-37.62
534.76
MLPn STA. 161+00
CONSTRUCTION STAGE 2A
CONSTRUCTION STAGE 1A
NOTE:
EXISTING TRACKS TO BE REMOVED (TYPICAL)
SEE STAGING PLANS FOR LIMITS AND SEQUENCE
℄ MLP
℄ EX. ML
0.00
550.22
REMOVE EXISTING RETAINING WALL (TYP.)
-66.19
534.22
-37.62
535.82
40.11
50.90
530.80
MLPn STA. 160+50
CONSTRUCTION STAGE 2A
CONSTRUCTION STAGE 1A
℄ MLP
℄ EX. ML
0.00
551.27
-38.08
536.71
REMOVE EXISTING RETAINING WALL (TYP.)
-77.12
534.02
51.57
530.39
MLPn STA. 160+00
560
550
540
530
140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80
FOR INFORMATION ONLY
FINAL CROSS SECTIONS
PROPOSED NSRR - STA 162+00 TO STA 165+50
HAM-75-7.85
59/117
1770
2017
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SEEDING END WIDTH	SEEDING SQ. YDS.
35.3	
	201.2
37.1	
	202.3
35.7	
	197.3
35.3	
	250.0
54.7	
	850.9

CONSTRUCTION STAGE 1B

℄ MLP
℄ EX. ML
0.00
543.91
-12.35
541.47
16.30
540.67
33.54
548.79

MLPn STA. 163+50

CONSTRUCTION STAGE 1B

℄ MLP
℄ EX. ML
0.00
544.96
-11.70
542.39
17.83
540.96
33.91
548.50

FINAL SECTIONS DEPICTED
STAGED CONSTRUCTION REQUIRED
(TYPICAL - SEE STAGING PLANS AND TEMP. SECTIONS)

SEE ALSO TRACK TYPICAL SECTIONS SHEETS

MLPn STA. 163+00

CONSTRUCTION STAGE 1B

℄ MLP
℄ EX. ML
0.00
546.01
-19.30
543.40
17.83
542.01
31.15
548.17

MLPn STA. 162+50

CONSTRUCTION STAGE 1B

℄ MLP
℄ EX. ML
0.00
547.06
-22.31
544.37
17.83
543.06
28.11
547.70

MLPn STA. 162+00

END AREA	CUT	FILL	SUB BALLAST
	113.5	N/A	N/A
	112.1	N/A	N/A
	107.6	N/A	N/A
	98.4	N/A	N/A
	190.3	N/A	29.7
SQ. FT.			

VOLUME	CUT	FILL	SUB BALLAST
	105.1	N/A	N/A
	208.9	N/A	N/A
	203.5	N/A	N/A
	190.8	N/A	N/A
	267.4	N/A	27.5
	975.7	N/A	27.5
CU. YD			

CALCULATED JRG
CHECKED RC

FINAL CROSS SECTIONS
PROPOSED NSRR - STA 166+00 TO STA 167+25

HAM-75-7.85

60 / 117

1771
2017

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SEEDING END WIDTH	SEEDING SQ. YDS.
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16.1 N/A	97.3 N/A
18.9 N/A	91.7 27.8
14.1 10.0	137.3 55.6
35.3 10.0 THIS PAGE	482.2

CONSTRUCTION STAGE 1B

℄ MLP
℄ EX. ML
0.00
539.47
12.38
537.78
MLPn STA. 165+50

℄ EX. ML
MLPn STA. 167+25

℄ MLP
℄ EX. ML
0.00
540.65
MLPn STA. 165+00

℄ EX. ML
MLPn STA. 167+00

℄ MLP
℄ EX. ML
0.00
541.79
MLPn STA. 164+50

GRADE ADJUST EXISTING AS REQUIRED (TYPICAL)
℄ EX. ML
0.00
537.13
MLPn STA. 166+50

℄ MLP
℄ EX. ML
0.00
542.86
MLPn STA. 164+00

℄ MLP
℄ EX. ML
0.00
538.29
MLPn STA. 166+00

END AREA SQ. FT. CUT	FILL	SUB BALLAST
N/A THIS PAGE	N/A THIS PAGE	N/A THIS PAGE
N/A	N/A	N/A
N/A	N/A	N/A
N/A THIS PAGE	N/A THIS PAGE	N/A THIS PAGE

VOLUME CU. YD CUT	FILL	SUB BALLAST
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

CALCULATED JRG
CHECKED RC

FINAL CROSS SECTIONS
PROPOSED NSRR - STA 166+00 TO STA 167+25

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61 / 117

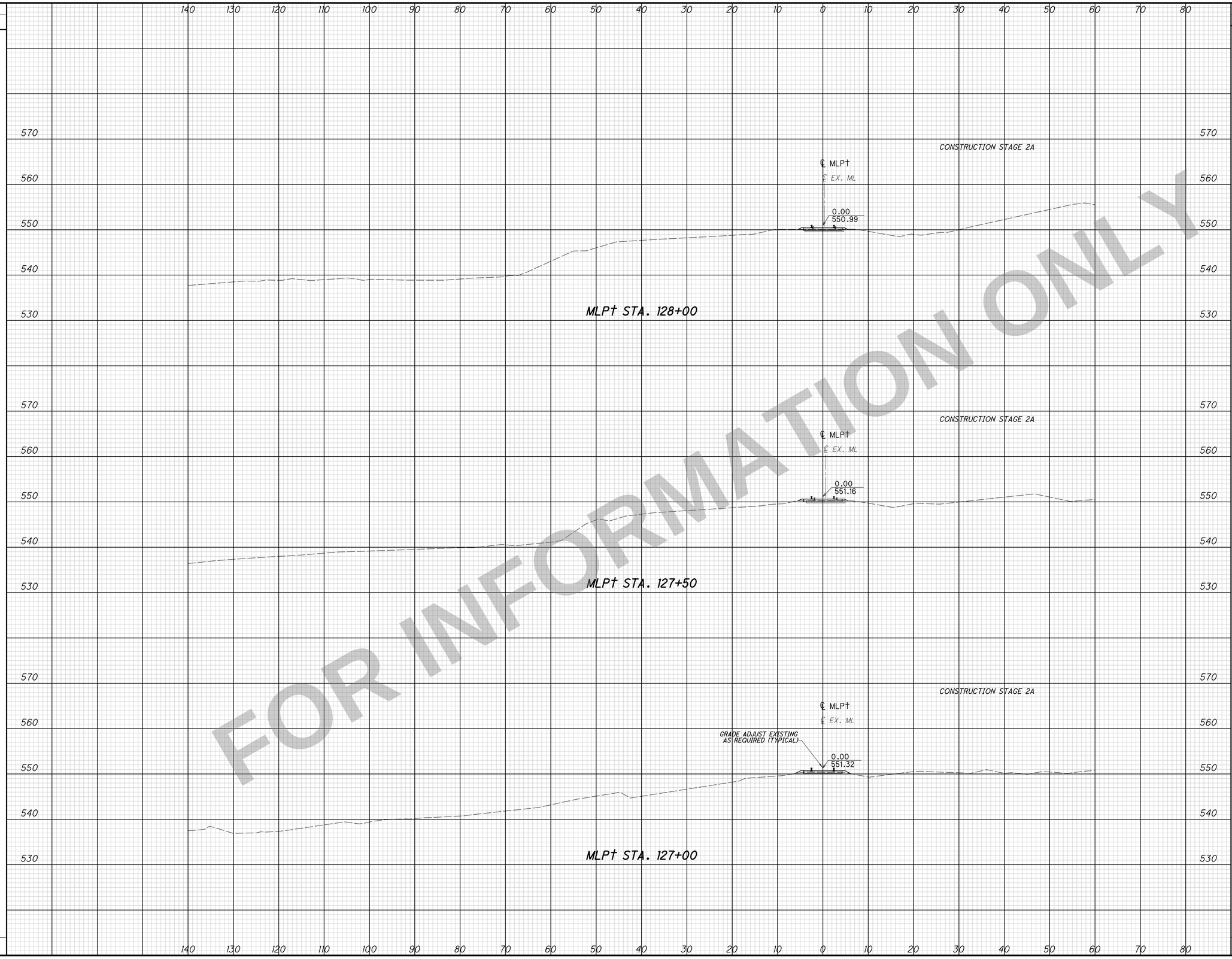
1772
2017

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SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED JRG
CHECKED RC



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TEMPORARY OPERATIONS CROSS SECTIONS - WEST
PROPOSED NSRR - STA 127+04 TO STA 128+00

HAM-75-7.85

62 / 117

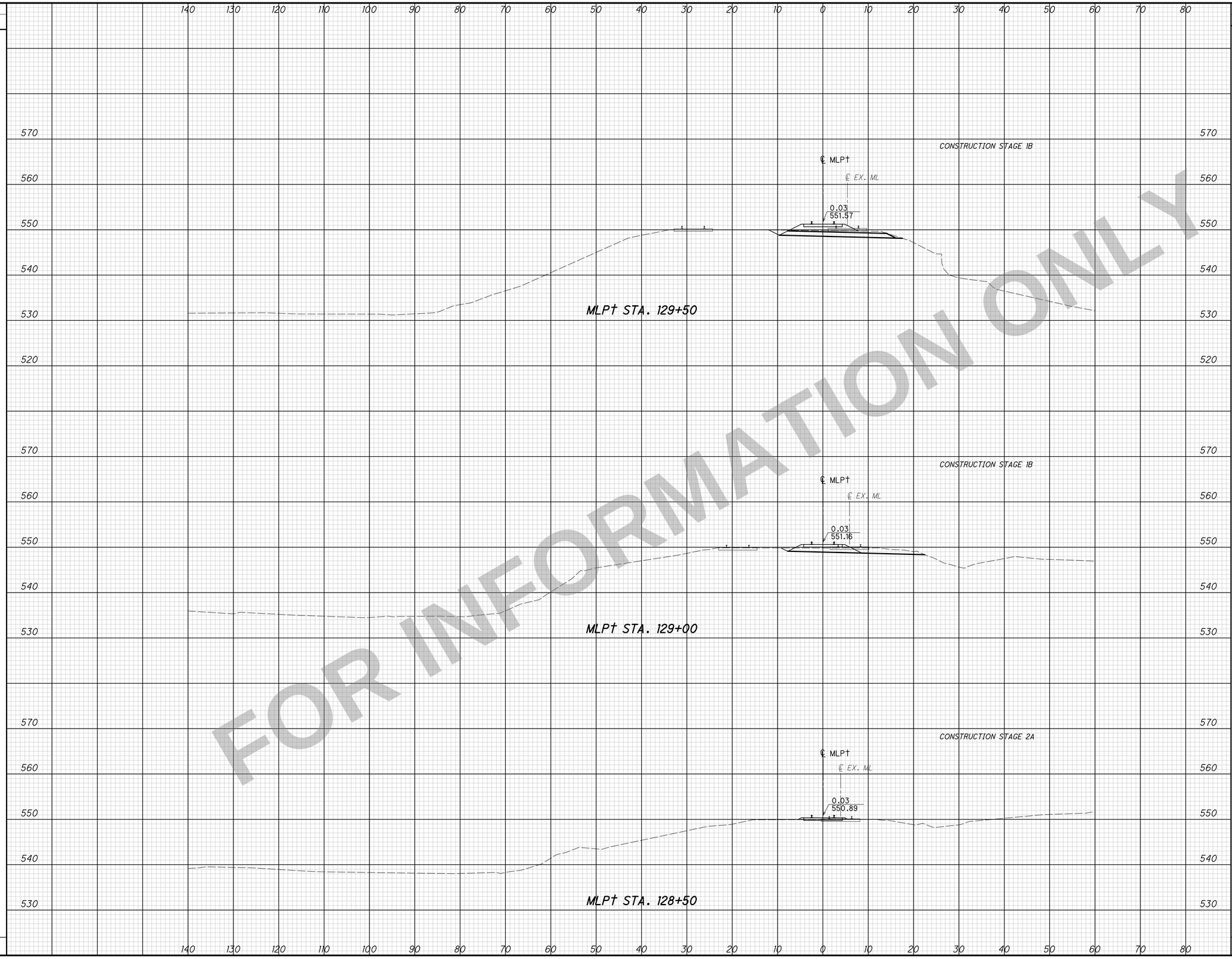
1773
2017

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SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED JRG
CHECKED RC



FOR INFORMATION ONLY

TEMPORARY OPERATIONS CROSS SECTIONS - WEST
PROPOSED NSRR - STA 128+50 TO STA 129+50

HAM-75-7.85

63 / 117

1774
2017

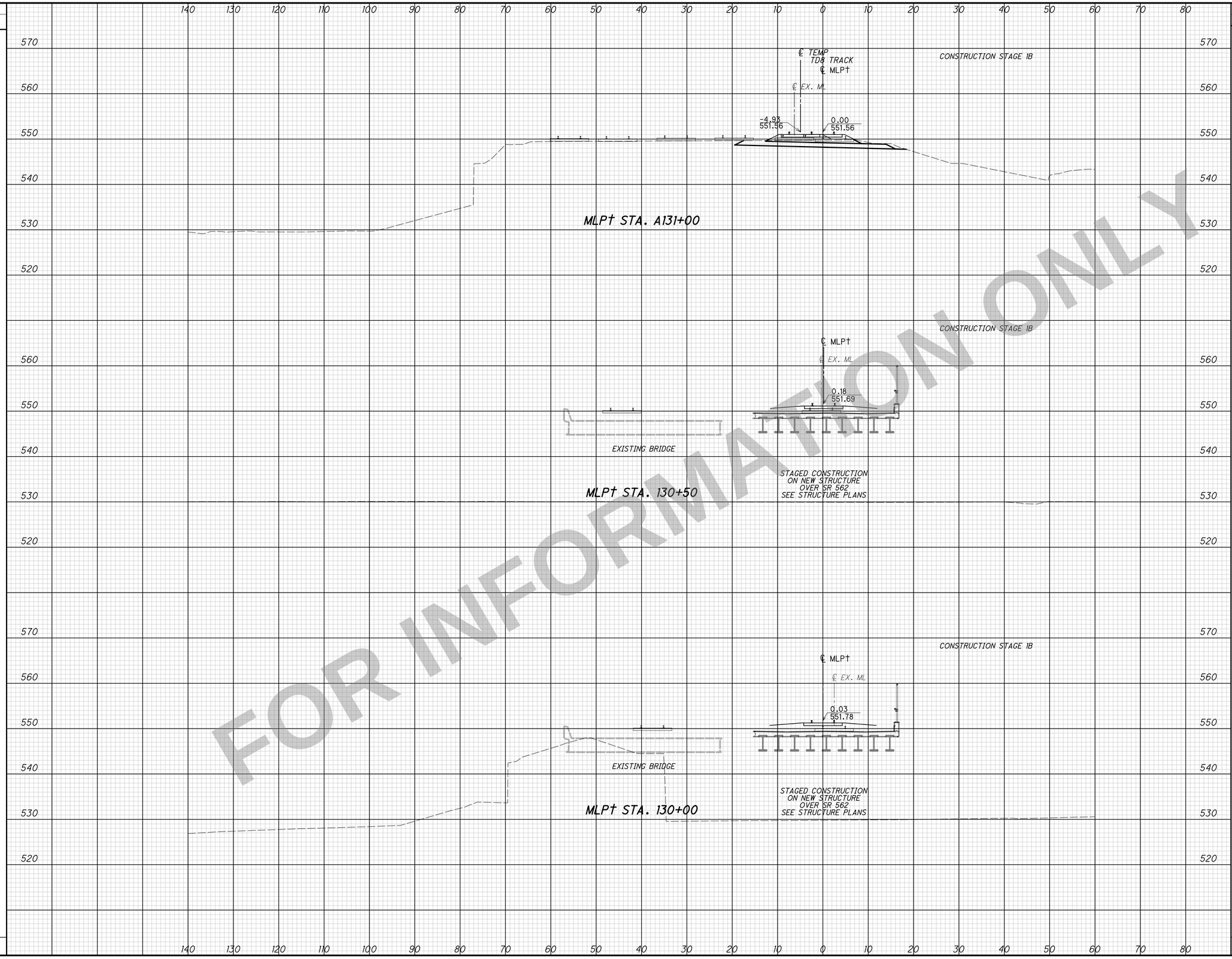
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SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED JRG

CHECKED RC



FOR INFORMATION ONLY

TEMPORARY OPERATIONS CROSS SECTIONS - WEST
PROPOSED NSRR - STA 130+00 TO STA 131+00

HAM-75-7.85

1775
2017

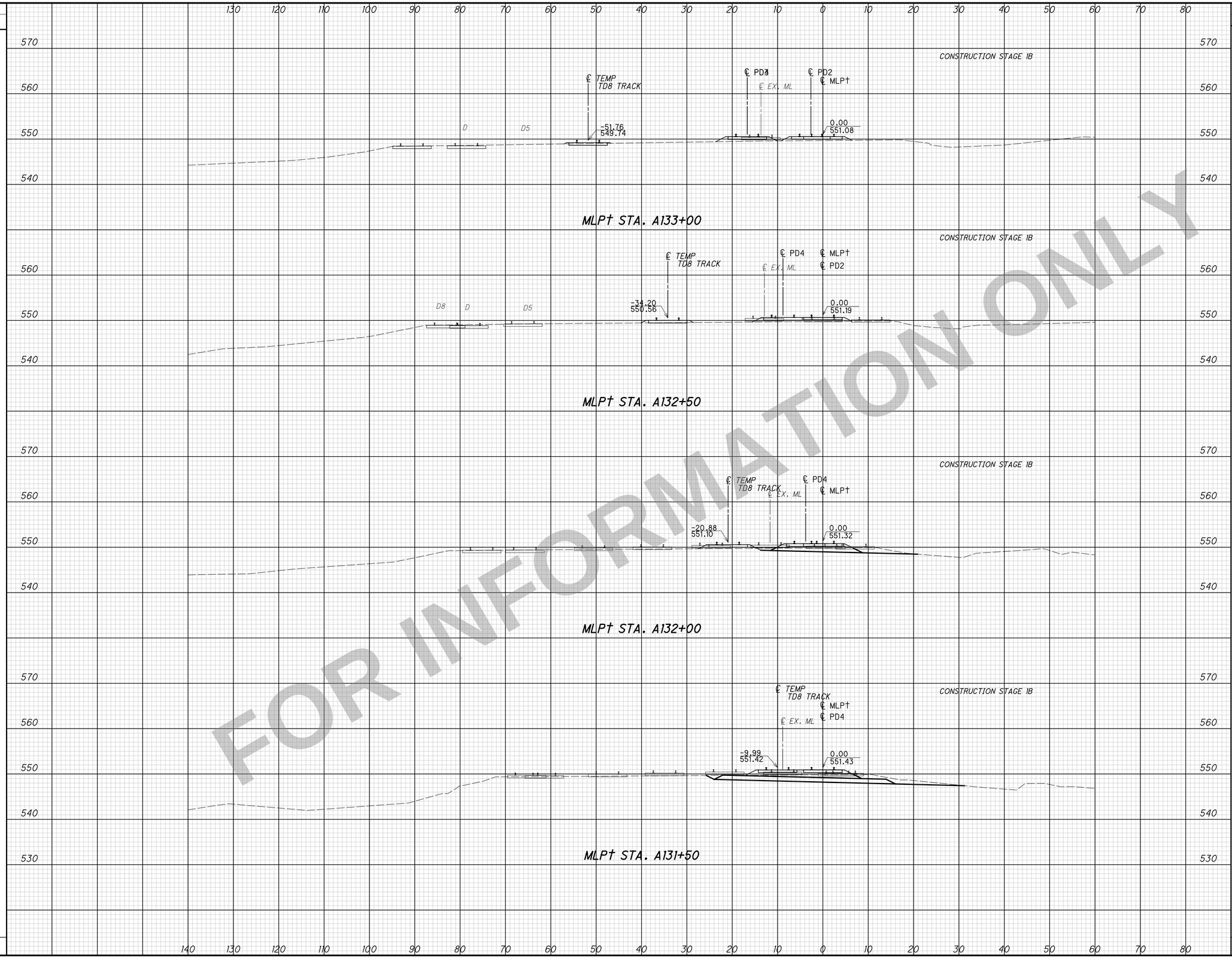
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SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED JRG

CHECKED RC



FOR INFORMATION ONLY

TEMPORARY OPERATIONS CROSS SECTIONS - WEST
PROPOSED NSRR - STA 131+50 TO STA 133+00

HAM-75-7.85

1776
2017

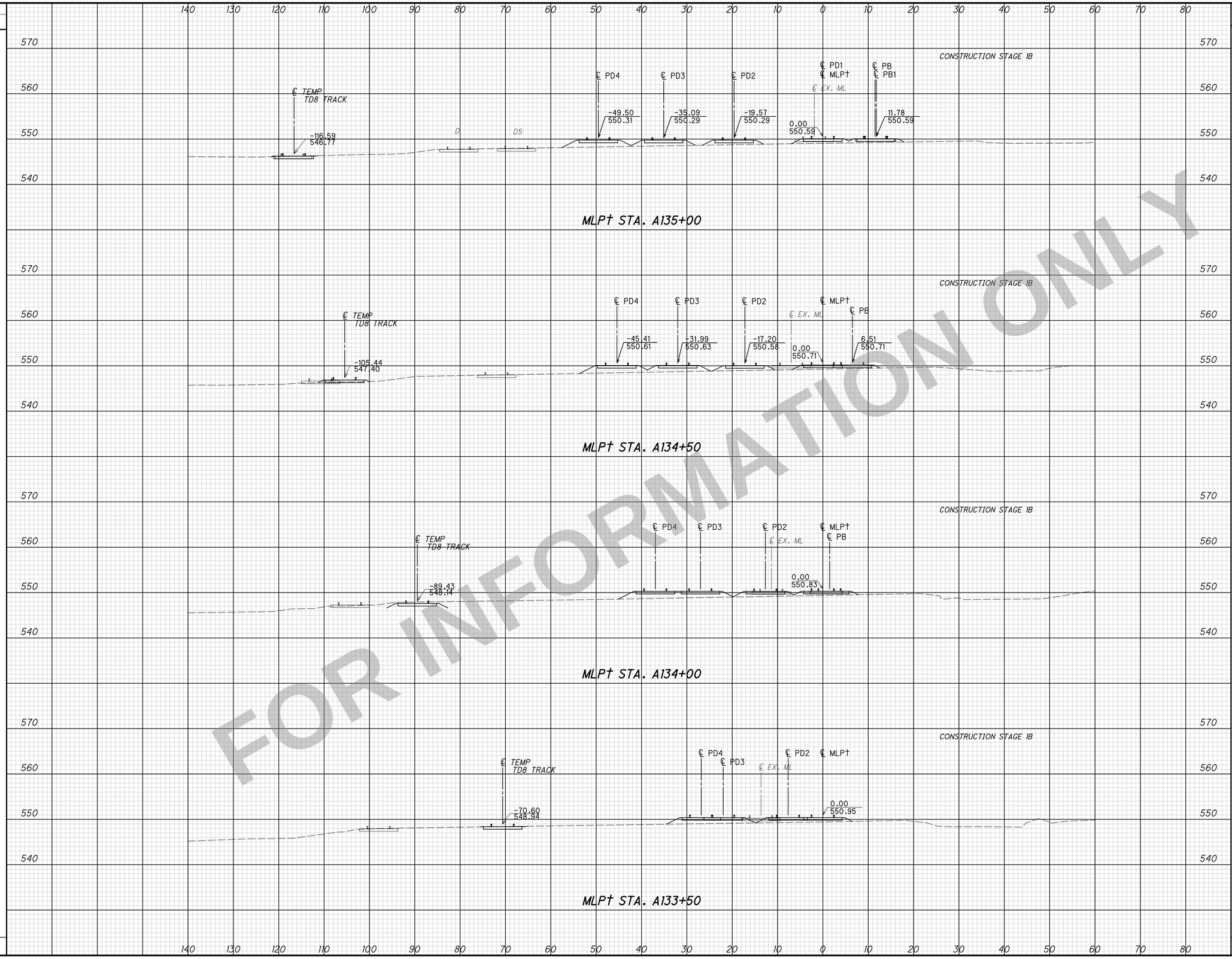
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SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED JRG

CHECKED RC



FOR INFORMATION ONLY

TEMPORARY OPERATIONS CROSS SECTIONS - WEST
PROPOSED NSRR - STA 133+50 TO STA 135+00

HAM-75-7.85

1777
2017

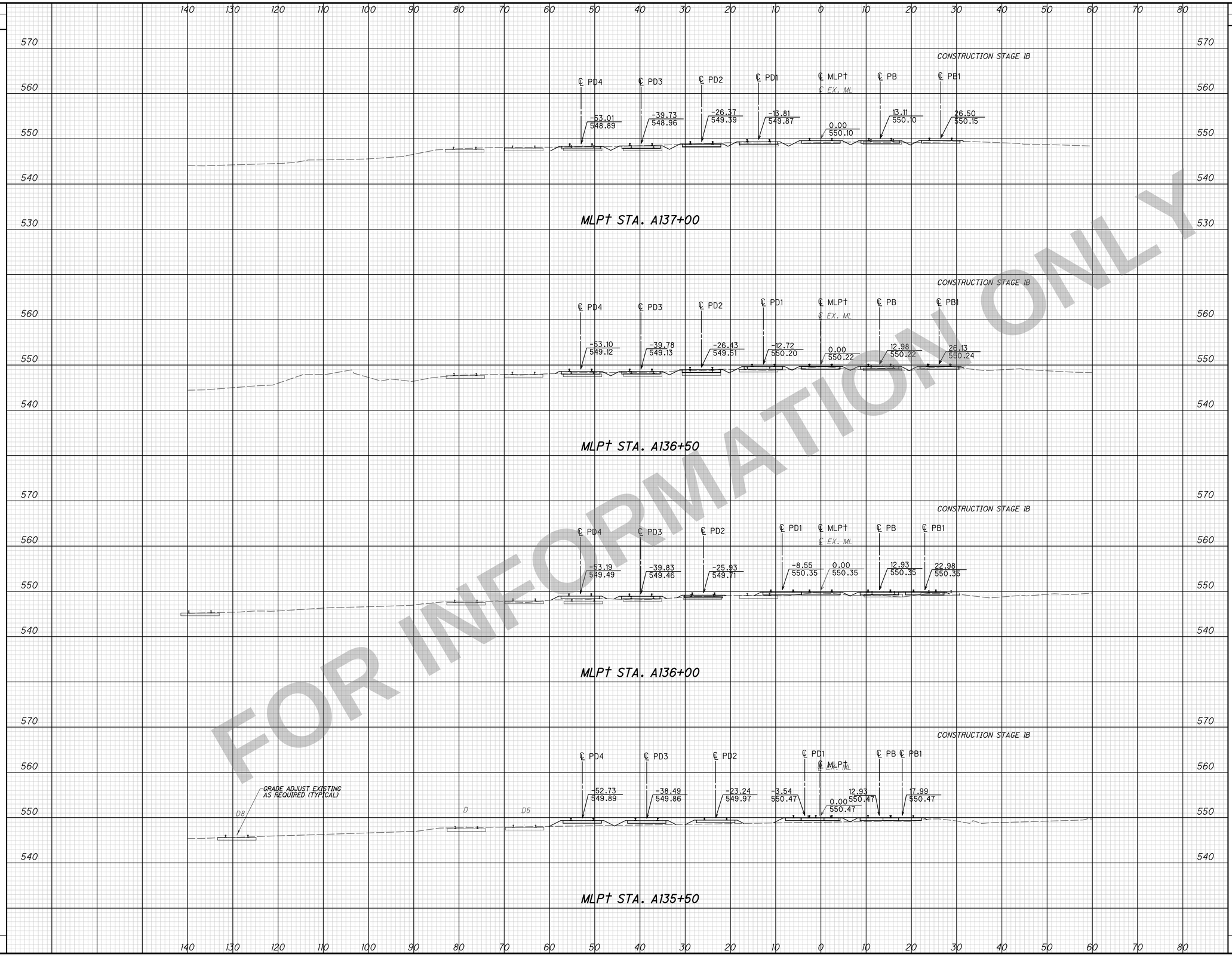
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SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED JRG

CHECKED RC



FOR INFORMATION ONLY

TEMPORARY OPERATIONS CROSS SECTIONS - WEST
PROPOSED NSRR - STA 135+50 TO STA 137+00

HAM-75-7.85

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2017

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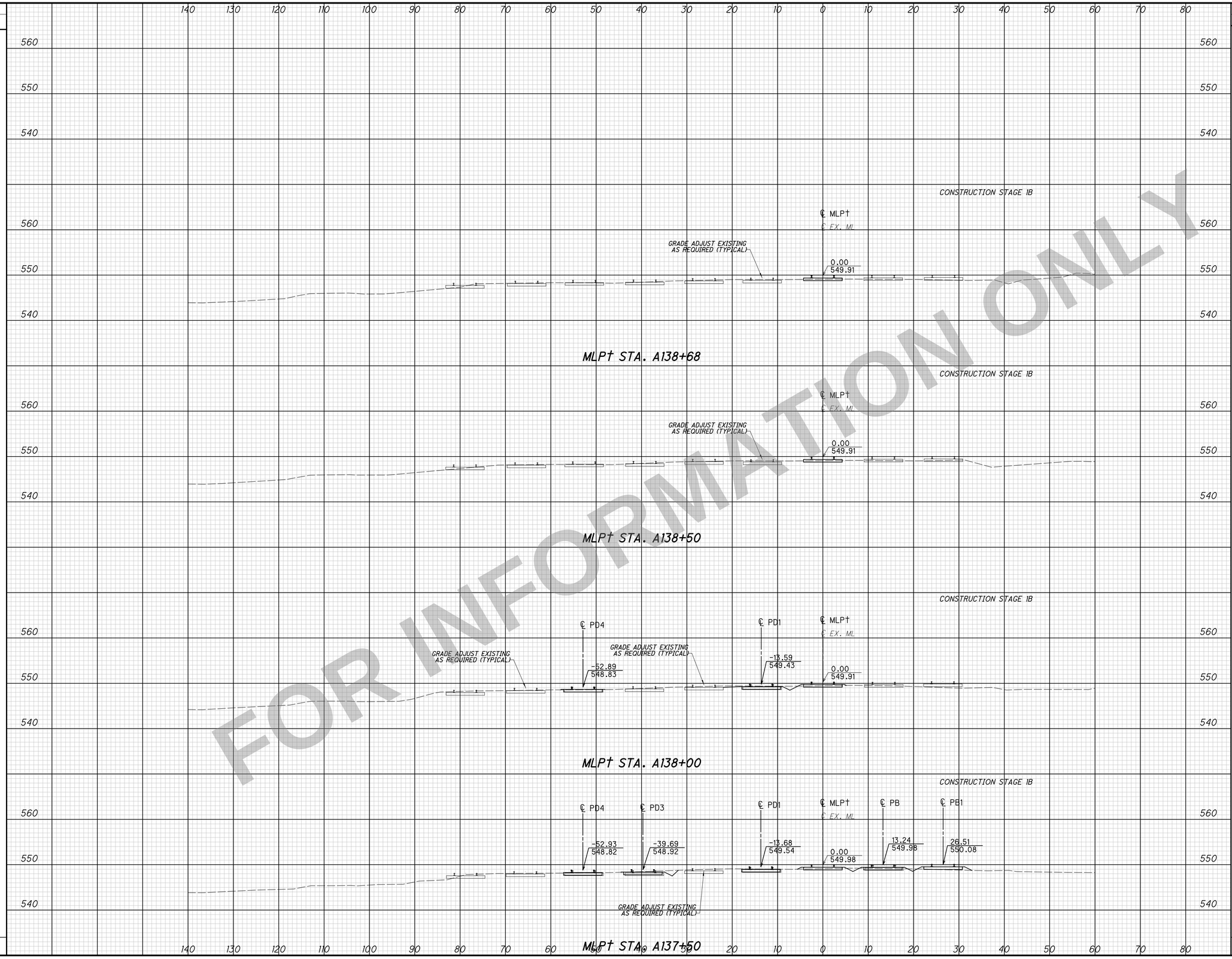
SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED JRG

CHECKED RC



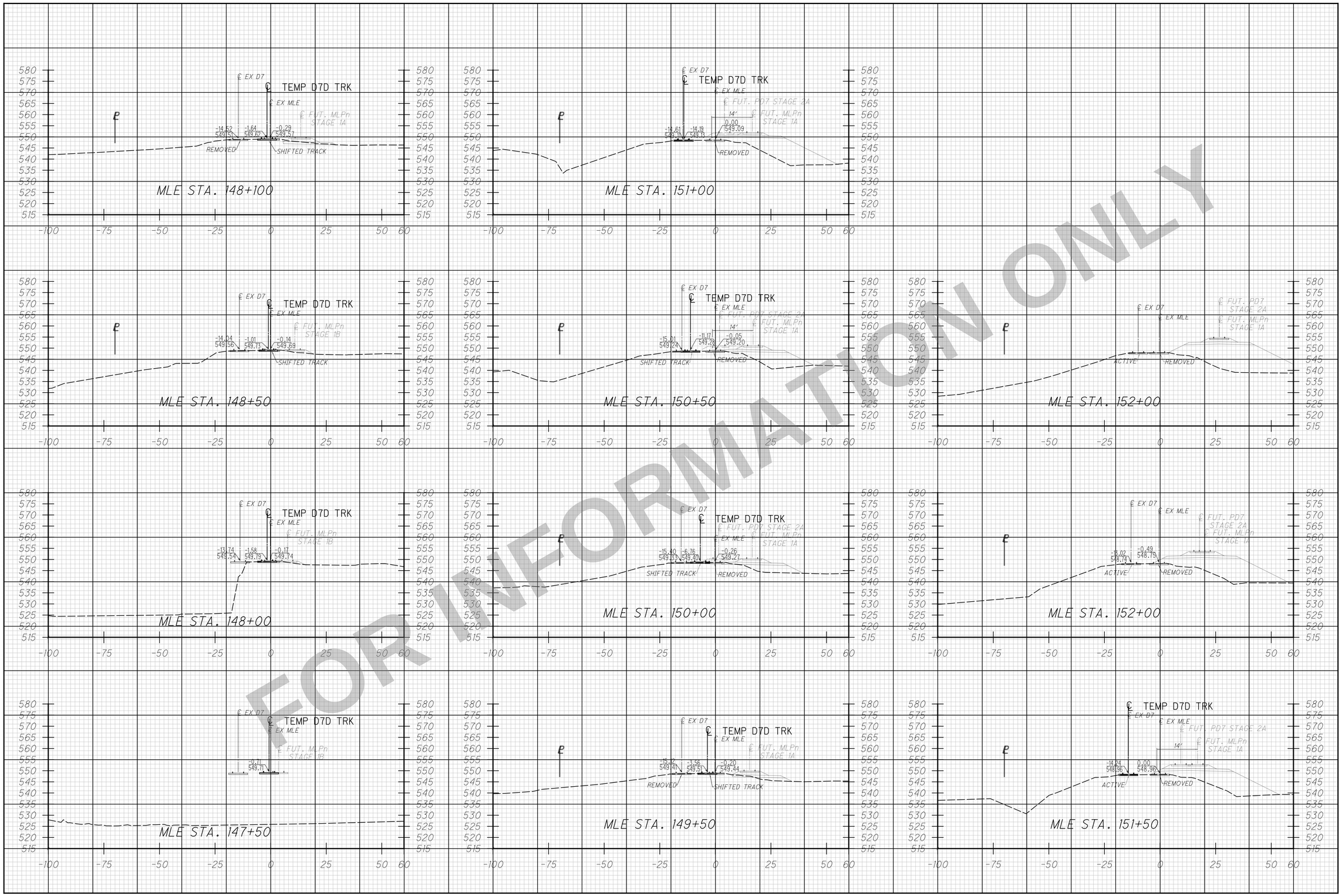
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TEMPORARY OPERATIONS CROSS SECTIONS - WEST PROPOSED NSRR - STA 137+50 TO STA 138+90

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1779
2017

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CALCULATED JRG
CHECKED RC

TEMPORARY OPERATIONS CROSS SECTIONS - EAST D7D DETOUR TRACK STA. 147+50 TO 152+50

HAM-75-7.85

1780
2017

FOR INFORMATION ONLY

D TRACK IN SERVICE
AS DETOUR TRACK
D8 IN SERVICE TO BRICK YARD

NS BRIDGE
CT-1.41

D3, D4, D5, D IN SERVICE

MLE STA 129+30
OFFSET 19.18' LT

MLE STA 128+90
OFFSET 15.09' LT

MLE STA 128+13

MLE STA 128+70

MLE STA 131+01
OFFSET 8.64' RT

TO IDLEWILD

EXIST. SURVEY ℄/MLE TRK

NORWOOD LATERAL

SR 562

MATCHLINE STA 132+00

DEMO AND REMOVE YARD TRACKS AND TURNOUTS AS REQUIRED, TRACKS MLE, B, B1, D1, D2

DEMO EAST PORTION OF EXISTING BRIDGE
CONSTRUCT EAST PORTION OF NEW BRIDGE
SEE STRUCTURES PLANS

1 SUB-STAGE SEQUENCE OF CONSTRUCTION

SEE ALSO SEQUENCING SHEET 1715

EXISTING MAINLINE TRACK

BEGIN REMOVAL
MLE STA 128+13

EXISTING GROUND

NORWOOD LATERAL
S.R. 562

565
560
555
550
545
540
535
530

551.1
550.7
550.6
550.7
550.7
550.7
550.9

127+00
128+00
129+00
130+00
131+00
132+00

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

TRACK CONSTRUCTION STAGE 1A
NSRR - STA 127+00 TO STA 132+00

HAM-75-7.85

70 / 117

1781
2017

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ESTIMATED TRACK WORK THIS STAGE					
TRACK	C/T	REALIGN	CONSTRUCTION	T.O.s REM	REMOVAL
D4	0 TF	0 TF	0 TF	-	0 TF
D3	0 TF	0 TF	0 TF	-	0 TF
D2	0 TF	0 TF	0 TF	-	582 TF
D1	0 TF	0 TF	0 TF	1	703 TF
MLE	0 TF	0 TF	0 TF	2	779 TF
B	0 TF	0 TF	0 TF	-	618 TF
B1	0 TF	0 TF	0 TF	-	485 TF

TRACK WORK LEGEND

EXISTING TRACK
SHIFT TRACK
REMOVE TRACK
PROPOSED TRACK

TRACKS IN SERVICE
D/D7, D3, D4, D5
STAGE 1A

D8
D8A
D7B
D
D5
D4
D3
D2
D1
MLE
B
B1

D8 IN SERVICE TO BRICK YARD

D TRACK IN SERVICE AS DETOUR TRACK

D3, D4 & D5 IN SERVICE

MLE STA 134+95, OFFSET 26.69' LT

MLE STA 136+22, OFFSET 14.25' LT

MLE STA 135+92

EXIST. SURVEY ℄/MLE TRK

MLE STA 135+92, OFFSET 13.35' RT

MLE STA 135+92, OFFSET 26.03' RT

MATCHLINE STA 132+00

MATCHLINE STA 137+50

P.T. Sta. 134+11.50 MLE

EXISTING TRACKS MLE, D1, D2, B, B1 OUT OF SERVICE Sta. 128+00 to Sta. 136+00

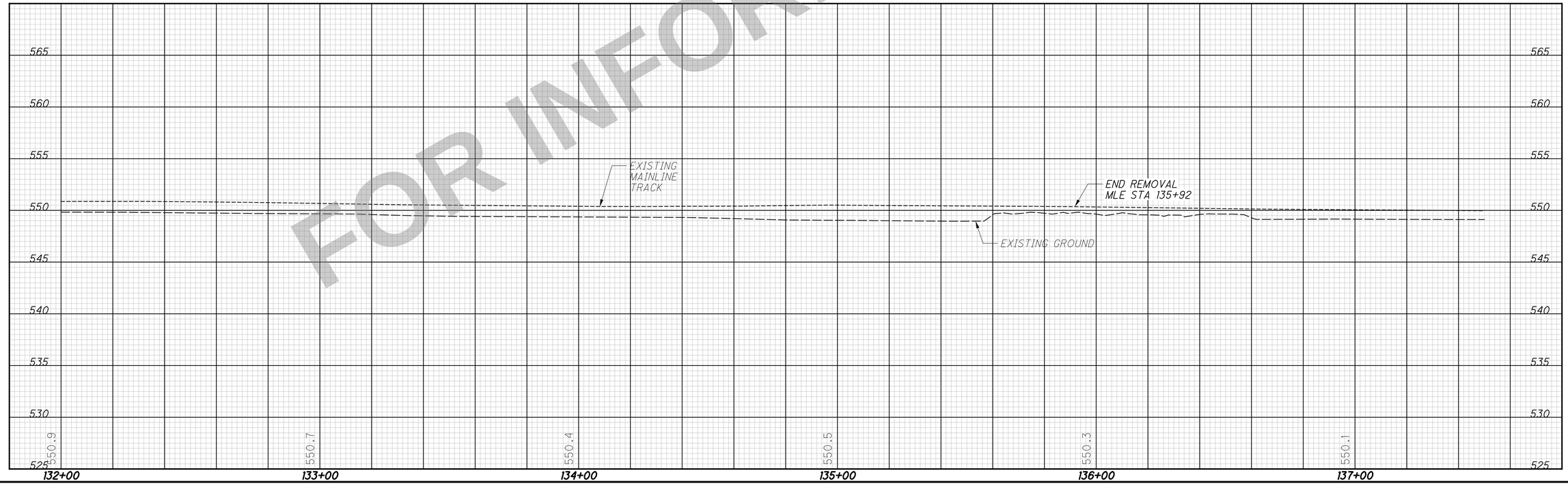
DEMO AND REMOVE YARD TRACKS AND TURNOUTS AS REQUIRED, TRACKS MLE, B, B1, D1, D2

Ex R/W

133 134 135 136 137

FS

TMP



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

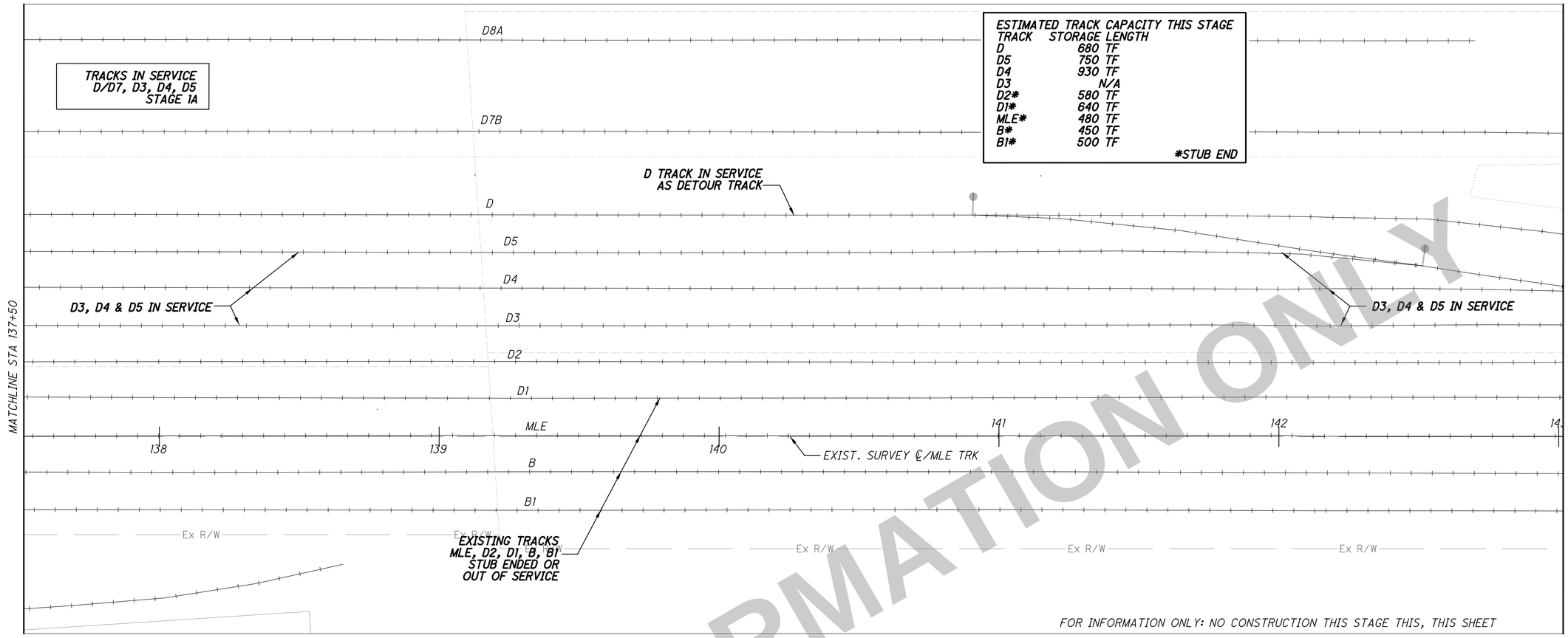
TRACK CONSTRUCTION STAGE 1A
NSRR - STA 132+00 TO STA 137+50

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71 / 117

1782
2017

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HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

TRACK CONSTRUCTION STAGE 1A
NSRR - STA 137+50 TO STA 143+00

HAM-75-7.85

72/117

1783
2017

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TRACKS IN SERVICE
MLE, D, D3, D4, D5
STAGE 1A

D7B
D7
D TRACK IN SERVICE AS DETOUR TRACK
D3
D2
D1
MLE
EXIST. SURVEY ℄/MLE TRK
B
B1
MATCHLINE STA 143+00
MATCHLINE STA 148+00
PC Sta. 146+73.50 MLE
Ex R/W
LAIDLAW AVE
2 C/T MLE TRACK TO MEET C/T D7 TRACK STA. 147+30 TO 150+50 COORDINATE W/RAILROAD
1 REHABILITATE MLE TRACK STA. 147+30 TO 150+50 COORDINATE W/RAILROAD
D7 TRACK OOS
EXISTING PS IN CURVE FIELD FIT CONNECTIONS
D7D 2+00
3 FUTURE ℄ MLPn TRACK SUBGRADE AND SUBBALLAST WORK ONLY THIS STAGE STA. 147+00 TO 148+35 COORDINATE WITH RAILROAD
EXISTING SURVEY ℄ MLE
**SEE ALSO GEOMETRY TAB SHEETS ALIGNMENT AND TEMPORARY OPERATIONS PLANS

143+00 144+00 145+00 146+00 147+00 148+00

POT MLE STA. 143+96.78 BK = POT MLPn STA. 143+96.02 AH
POT MLPn 145+44.53 = PS EXIST. PB TURNOUT
PVI 145+61.86 Elev 549.93
POT MLPn 146+27.04 = PS EXIST. PB1 TURNOUT
POT MLPn +/- 147+22.06 = PS REALIGNED D TURNOUT
FIELD FIT CONNECTIONS RAISE AND SURFACE EXISTING LADDER AS REQUIRED
PROPOSED PROFILE TOP OF LOW RAIL MLPn TRACK
Gr=-0.06%
EXISTING GROUND
EXISTING (MLE) MAINLINE TRACK
FIELD FIT CONNECTIONS RAISE AND SURFACE EXISTING LADDER AS REQUIRED
T/R EX 549.8
T/R PR 549
EXISTING (MLE) MAINLINE TRACK
POC MLE STA. 147+55.52 = PCC D7D TRACK STA. 2+00 = +/- MLPn POT 147+52.67, 4.7' LT FINISHED ELEV. 549.80
549.84
549.78
LAIDLAW AVENUE
STAGE 1B PROPOSED MLPn FOR INFORMATION ONLY
EQ POC MLE STA. 147+55.52 = PCC D7D TRACK STA. 2+00 = +/- MLPn POT 147+52.67, 4.7' LT TEMPORARY ELEV. 549.74
POT MLPn 146+27.04 = PS EXIST. PB1 TURNOUT
PS MLE +/- 147+25.28 = EXISTING D TURNOUT
PVI 2+00.00 Elev 549.74
PVC 2+10.00 Elev 549.76
STAGE 1A D7D TEMPORARY DETOUR TRACK
Gr=0.16%
EXISTING GROUND
EXISTING TRACK
D7D DETOUR TRACK PROPOSED PROFILE T/R TO MATCH EXISTING MLE
LAIDLAW AVENUE
549.74
555 550 545 540
(143+00) (144+00) (145+00) (146+00) (147+00) 2+00 (148+00) 3+00

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED JRG
CHECKED RC

TRACK CONSTRUCTION STAGE 1A
NSRR - STA 143+00 TO STA 148+00

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73 / 117

1784
2017

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ESTIMATED TRACK WORK THIS STAGE					
TRACK	C/T	REALIGN	CONSTRUCTION	TURNOUTS	REMOVAL
MLPn	0 TF	0 TF	1282 TF	-	0 TF
D7	132 TF	23 TF	-	-	-
MLE	132 TF	157 TF	-	-	274 TF

* REHABILATE TRACK AS NECESSARY PRIOR TO C/T
REALIGN TRACK AS NECESSARY AFTER C/T

Ex R/W
Ex R/W TMP
TMP
EX R/W
EX SL
MATCHLINE STA 148+00
MATCHLINE STA 153+00

REHABILITATE EXISTING MLE TRACK STA. 147+30 TO 150+50 COORDINATE W/ RAILROAD [1]

REHABILITATE D7 TRACK STA. 150+00 TO STA. 151+55 [1]

BEGIN C/T MLE STA 150+23 OFFSET 15.63' LT

C/T D7 TRACK TO MEET C/T MLE TRACK STA. 150+00 TO STA. 151+50 COORDINATE W/RAILROAD [2]

D7 DETOUR TRACK IN SERVICE AFTER C/T

END C/T MLE STA 151+55 OFFSET 14.15' LT

D7 OOS

D7D 3+00
D7D 4+00
D7D 5+00
D7D 6+00
D7D-1
D7D-2

BEGIN C/T MLE STA 148+87

D7
MLE
MLPn
MLE STA 150+50

MLE IN SERVICE BEFORE C/T TO D7 DETOUR TRACK

REMOVE EXISTING MLE TRK FOR LIMITS SHOWN [3]

EXISTING SURVEY ℄ MLE

END C/T MLE STA 150+19

PARTIAL CONSTRUCTION OFFLINE OF NEW MLP TRACK ON EMBANKMENT STA. 148+35 TO 161+17 [4]

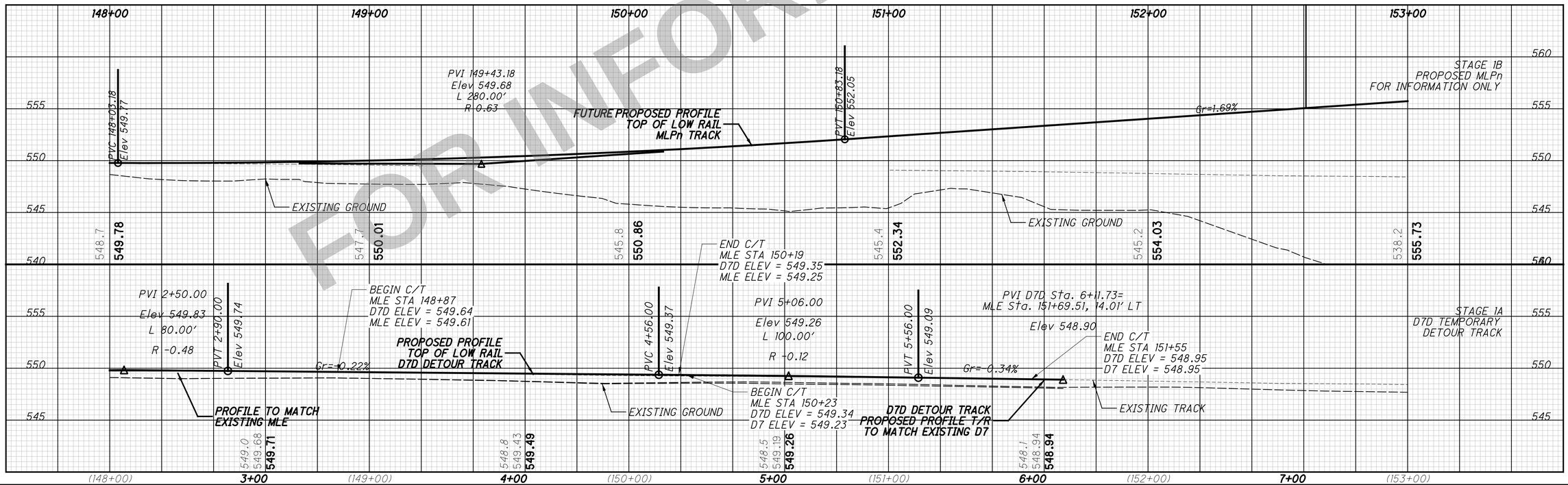
BUILD NEW MLPn TRACK TRACK ON EMBANKMENT [4]

FUTURE ℄ MLPn TRACK PLACE SUBGRADE AND SUBBALLAST ONLY THIS STAGE STA. 147+00 TO 148+35 COORDINATE WITH RAILROAD [4]

TEMPORARY TRACK SHIFT MLE TO MEET SHIFTED D7 TRACK STA. 147+30 TO 150+50 COORDINATE W/RAILROAD [2]

**SEE ALSO GEOMETRY TAB SHEETS ALIGNMENT AND TEMPORARY OPERATIONS PLANS

FOR INFORMATION ONLY



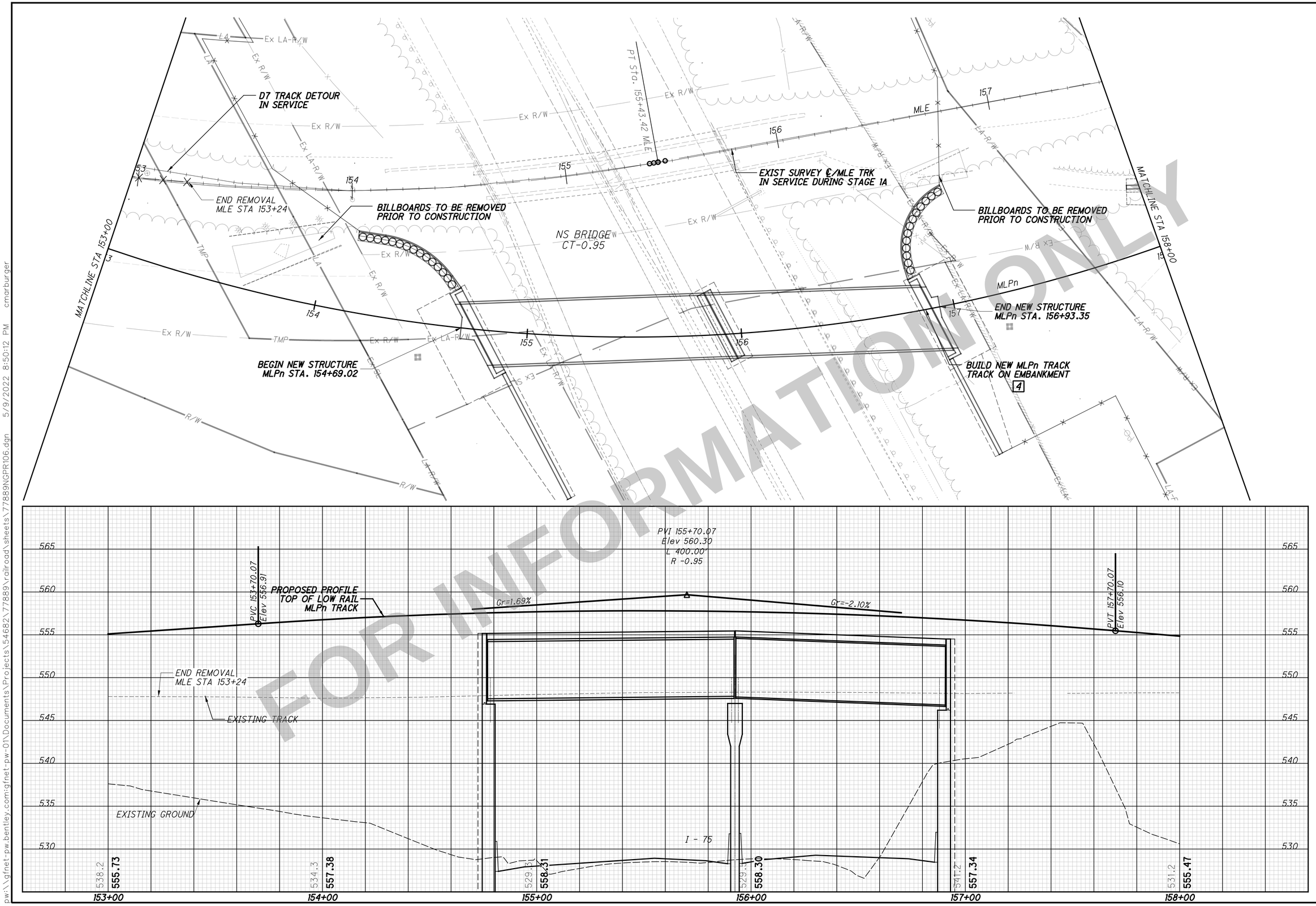
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HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED JRG
CHECKED RC

TRACK CONSTRUCTION STAGE 1A
NSRR - STA 148+00 TO STA 153+00

HAM-75-7.85

1785
2017



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HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

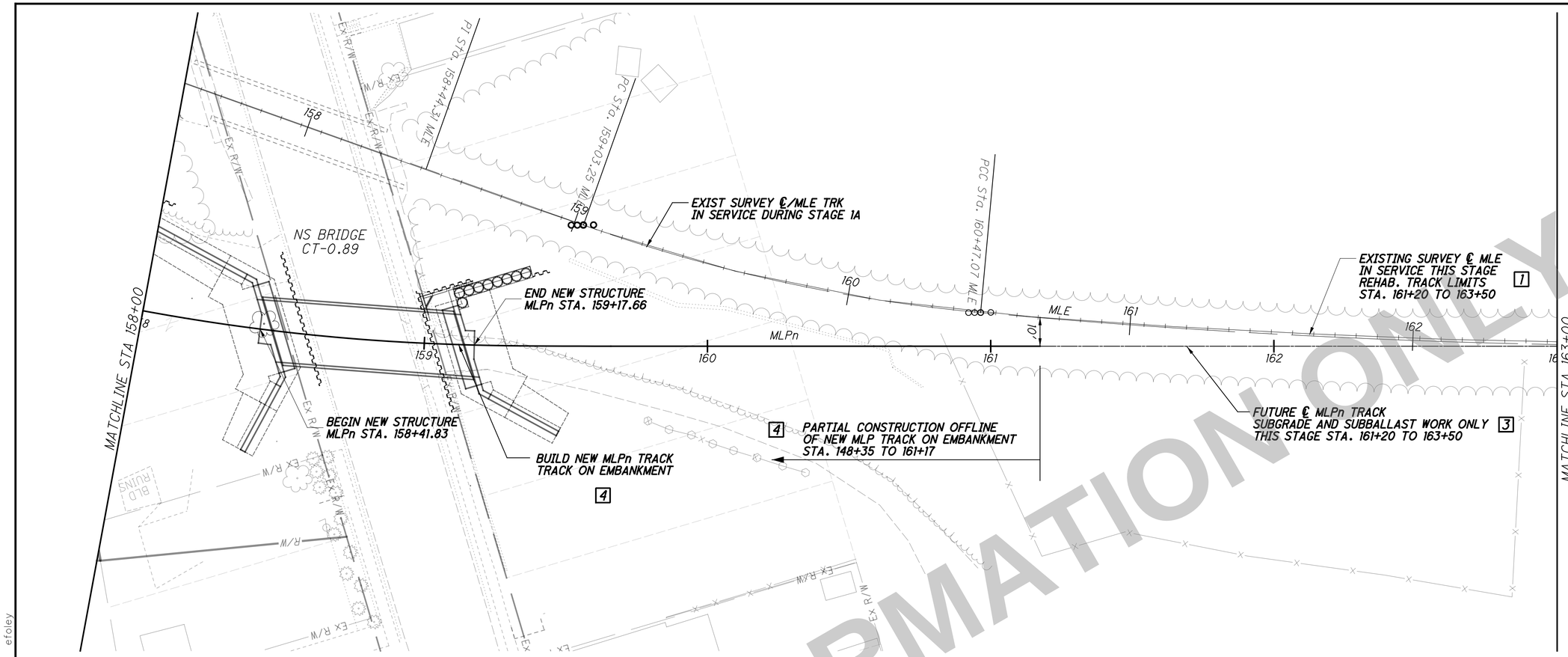
TRACK CONSTRUCTION STAGE 1A
NSRR - STA 153+00 TO STA 158+00

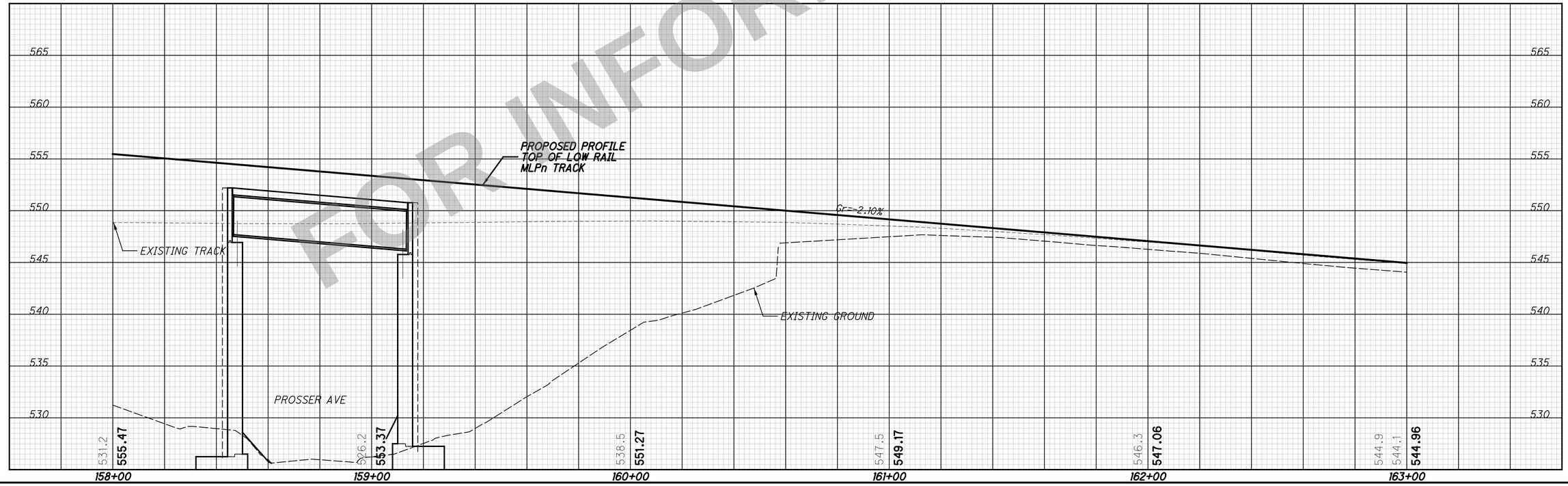
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75 / 117

1786
2017

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HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

TRACK CONSTRUCTION STAGE 1A
NSRR - STA 158+00 TO STA 163+00

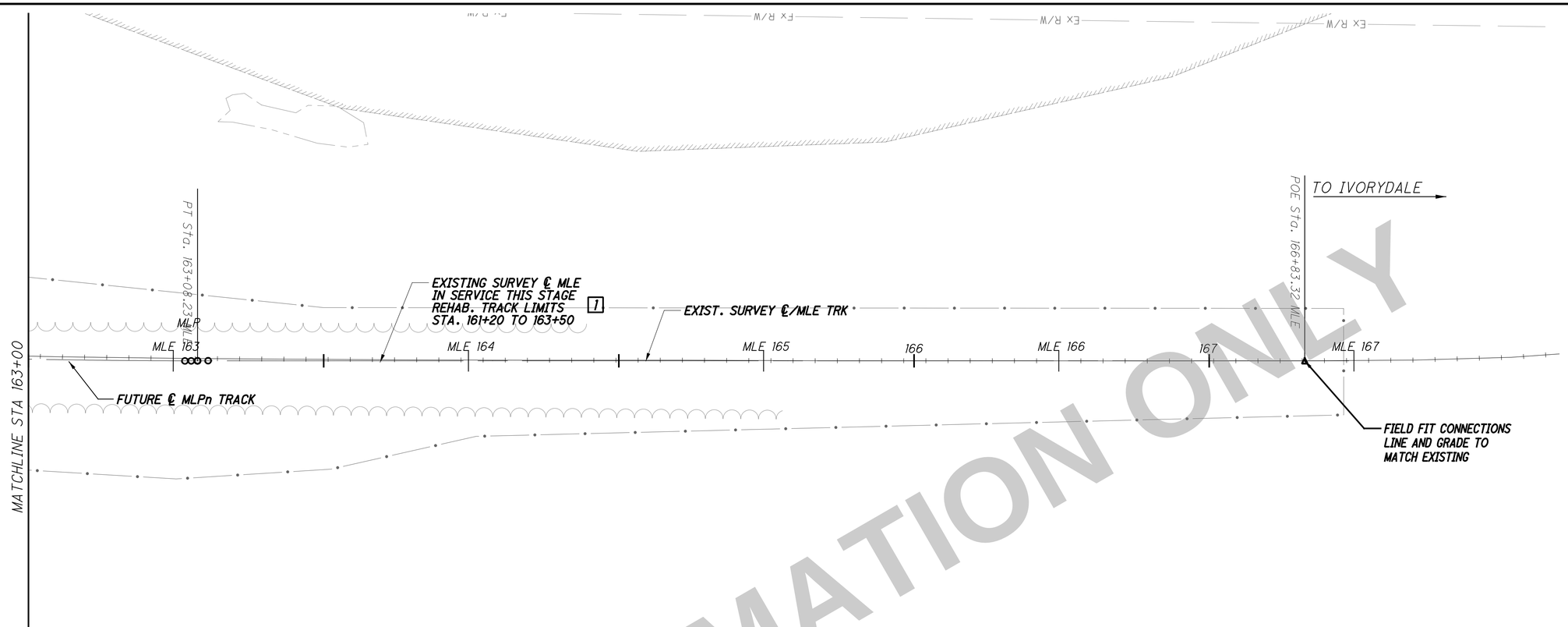
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76 / 117

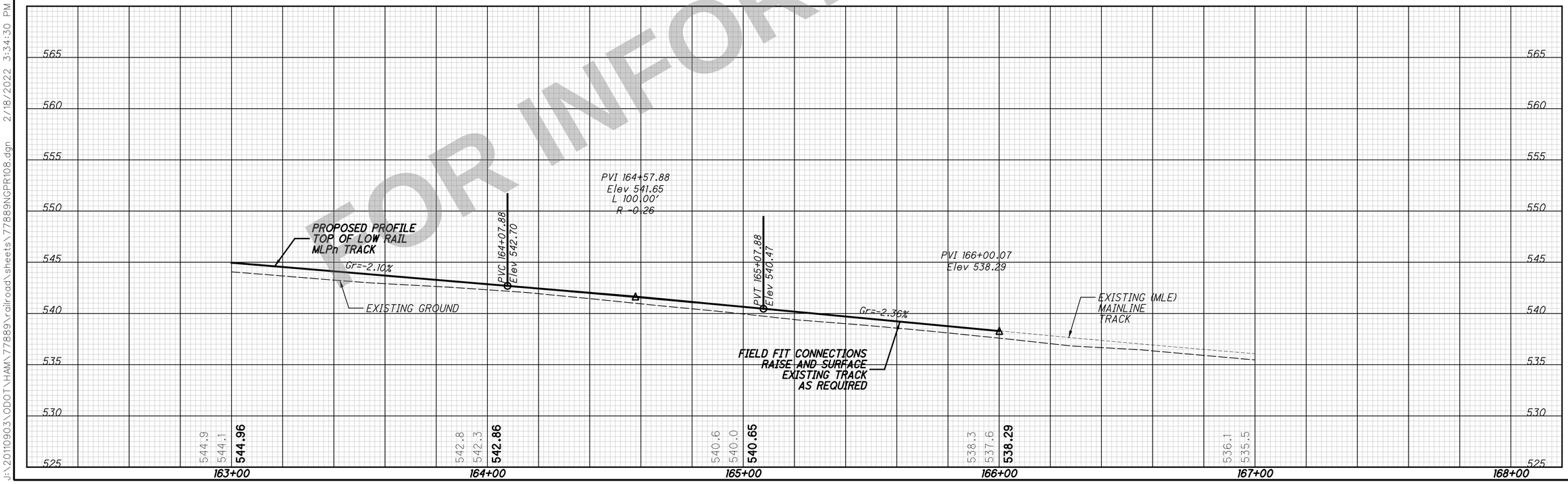
1787
2017

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FOR INFORMATION ONLY



FOR INFORMATION ONLY: NO CONSTRUCTION THIS STAGE, THIS SHEET



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HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

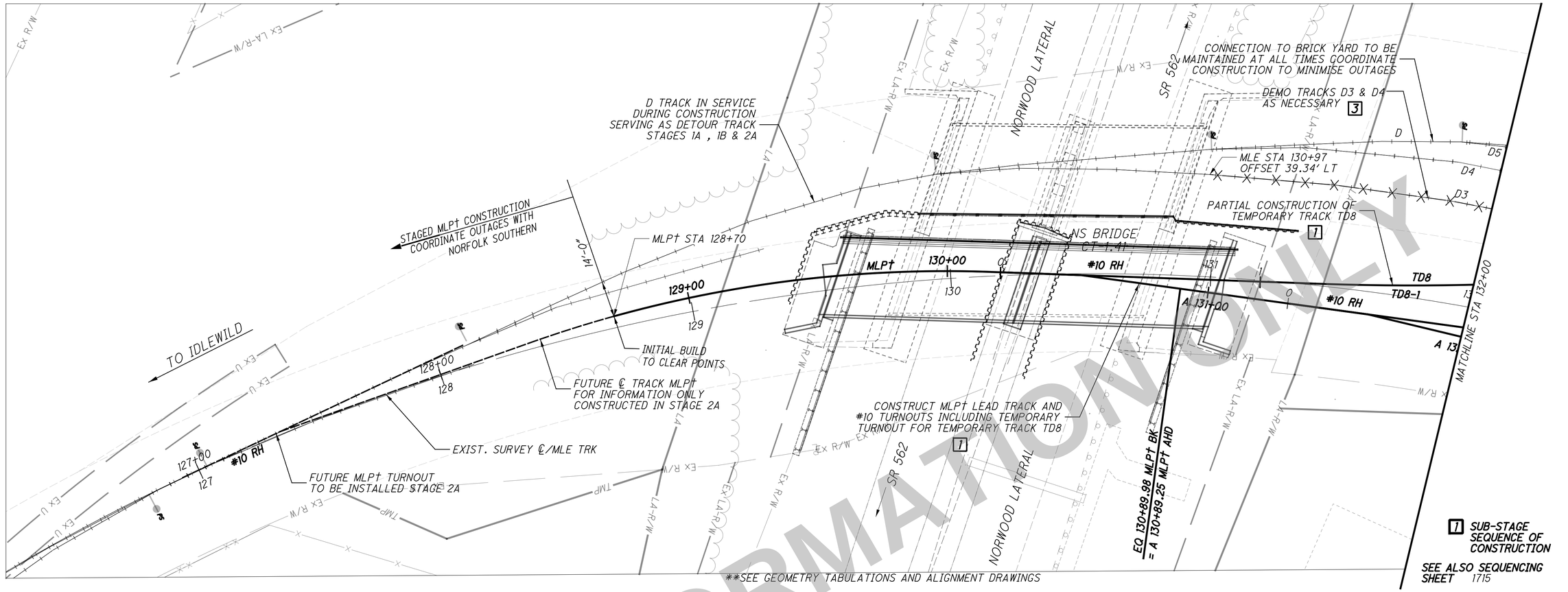
TRACK CONSTRUCTION STAGE 1A
NSRR - STA 163+00 TO STA 168+00

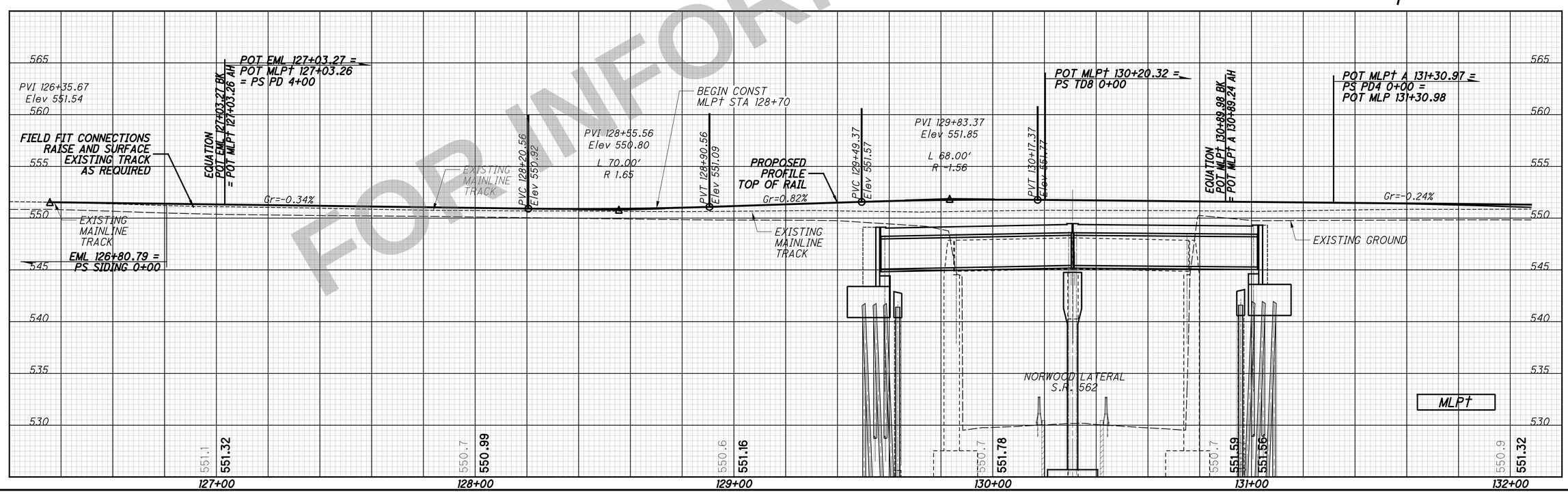
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77 / 117

1788
2017

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TRACK CONSTRUCTION STAGE 1B
NSRR - STA 127+00 TO STA 132+00

HAM-75-7.85

78 / 117

1789
2017

CALCULATED JRG
CHECKED RC

HORIZONTAL SCALE IN FEET
0 10 20 40

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ESTIMATED TRACK WORK THIS STAGE

TRACK	C/T	REALIGN	CONSTRUCTION	TURNOUTS	TRACK REMOVAL
D8	0 TF	0 TF	0 TF	-	0 TF
D4	-	-	-	-	271 TF
D3	-	-	-	-	388 TF
PD4	0 TF	321 TF	423 TF	(2) #10 RH	118 TF
PD3	0 TF	243 TF	293 TF	-	94 TF
PD2	0 TF	192 TF	313 TF	#10 RH	94 TF
PD1	75 TF	120 TF	80 TF	(2) #10 RH	0 TF
MLP†	0 TF	282 TF	716 TF	-	0 TF
PB	0 TF	269 TF	200 TF	#10 RH	0 TF
PB1	78 TF	171 TF	90 TF	-	0 TF
MLE	0 TF	0 TF	0 TF	-	0 TF
TD8	0 TF	0 TF	242 TF	#10 RH	0 TF

TRACK WORK LEGEND

EXISTING TRACK
SHIFT TRACK
REMOVE TRACK
PROPOSED TRACK

TRACKS IN SERVICE
D/D7, D5, D8
STAGE 1B

CONNECTION TO BRICK YARD TO BE MAINTAINED AT ALL TIMES COORDINATE CONSTRUCTION TO MINIMISE OUTAGES

COORDINATE CONSTRUCTION TO MINIMISE OUTAGE TO BRICK TRACK 'D8'/'TD8'/'PD8'

REMOVE TRACKS AS REQUIRED DURING NEW TRACK CONSTRUCTION (TYP)

D TRACK IN SERVICE SERVING AS DETOUR TRACK STAGES 1A, 1B & 2A

D5 TRACK IN SERVICE DURING STAGES 1A & 1B

TRACKS D3 & D4 IN SERVICE STAGES 1A & 1B UNTIL CUT & THROW

PLACE NEW TRACKS PD2, PD3, AND PD4 IN SERVICE, STUB ENDED AFTER STAGE 1B [4]

MLE STA 132+00 OFFSET 53.87' LT

END INITIAL REMOVAL, BEGIN FINAL REMOVAL MLE STA 134+59 OFFSET 52.67' LT [4]

DEMO TRACKS D3 & D4 [3]

PARTIAL CONSTRUCTION TEMPORARY TRACK TD8 TO CLEAR [1]

END INITIAL REMOVAL, BEGIN FINAL REMOVAL MLE STA 134+70 OFFSET 39.73' LT

BEGIN REMOVAL MLE STA 134+95 OFFSET 26.69' LT

END REMOVAL, BEGIN REALIGN/SHIFT PD4 STA 4+55 5

END REMOVAL, BEGIN REALIGN/SHIFT PD3 STA 3+24

END REMOVAL, BEGIN REALIGN/SHIFT PD2 STA 3+44

BEGIN C/T MLE STA 136+22 OFFSET 14.02' LT

END C/T, BEGIN REALIGN/SHIFT PD1 STA 2+15

END NEW CONST, BEGIN REALIGN/SHIFT MLE STA 135+92

END NEW CONST, BEGIN REALIGN/SHIFT PB STA 2+31

BEGIN C/T MLE STA 135+92 OFFSET 26.03' RT [4]

CUT AND THROW TRACKS AS REQUIRED

END C/T BEGIN REALIGN/SHIFT STA 2+08

PLACE NEW TRACKS MLE, PD1, PB, PB1 IN SERVICE, STUB ENDED AFTER STAGE 1B [4]

CONSTRUCT NEW TRACK, NEW TIES, RAIL AND OTM PB, PB1, MLP†/s, PD1, PD2, PD3, PD4 AND INSTALL #10 TURNOUTS AS INDICATED [1]

CONSTRUCT NEW TRACK, NEW TIES, RAIL AND OTM PB, PB1, MLP†/s, PD1, PD2, PD3, PD4 AND INSTALL #10 TURNOUTS AS INDICATED [1]

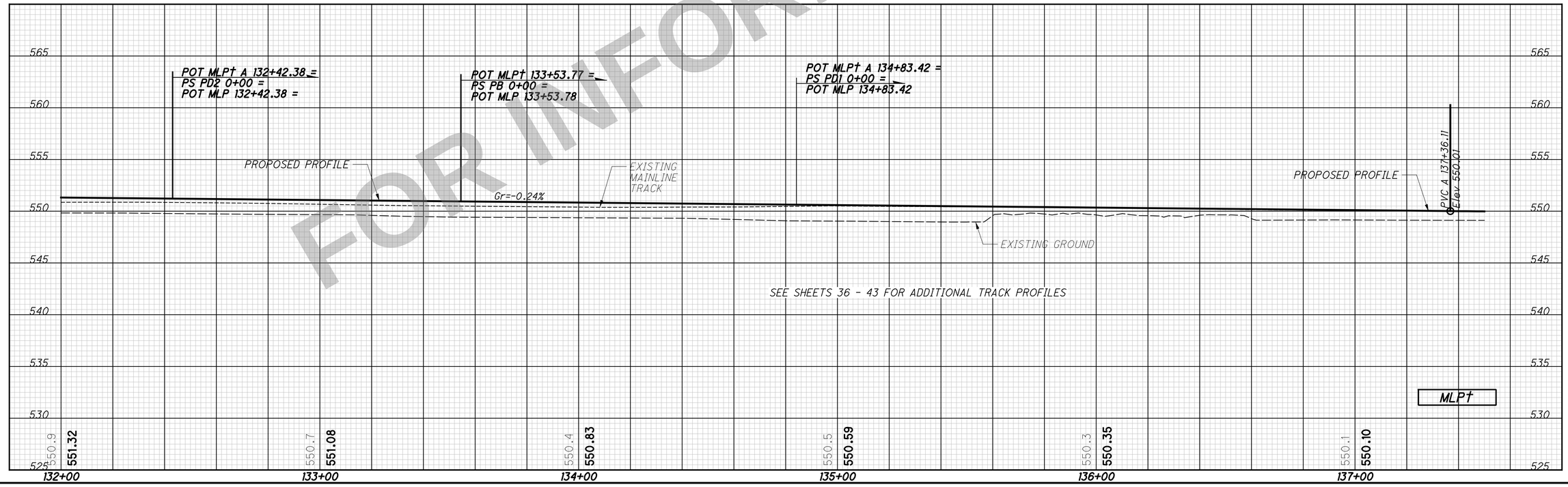
**SEE GEOMETRY TABULATIONS AND ALIGNMENT DRAWINGS

MATCHLINE STA 132+00

MATCHLINE STA 137+50

Ex R/W

Sta. 134+11.50 MLE



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET (0, 10, 20, 40)

CALCULATED JRG CHECKED RC

TRACK CONSTRUCTION STAGE 1B
NSRR - STA 132+00 TO STA 137+50

HAM-75-7.85

1790 2017

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TRACKS IN SERVICE
D/D7, D5, D8
STAGE 1B

ESTIMATED TRACK CAPACITY THIS STAGE

TRACK	STORAGE LENGTH	
D	N/A	
D5	700 TF	
D4*	300 TF	
D3*	440 TF	
D2*	580 TF	
D1*	610 TF	
MLE*	480 TF	TEMP. O.O.S.
B*	450 TF	TEMP. O.O.S.
B1*	500 TF	TEMP. O.O.S.
		*STUB END

D8A
D7B
D TRACK IN SERVICE SERVING AS DETOUR TRACK STAGES 1A, 1B & 2A
D
D5
D4
D3
D2
D1
B
B1
MLE
MATCHLINE STA 137+50
MATCHLINE STA 143+00
END REALIGN/SHIFT PD4 STA 7+76
PD4
7
PD3
5
13'-4"
13'-2"
END REALIGN/SHIFT PD3 STA 5+67
PD2
END REALIGN/SHIFT PD2 STA 5+36
3
RD1
END REALIGN/SHIFT PD1 STA 3+33
FIELD FIT CONNECTIONS LINE AND GRADE TO MATCH EXISTING (TYPICAL)
1
A 138+00
13'-6"
MLPs
A 138+68
138
139
140
141
142
143
EXIST. SURVEY ℄/MLE TRK
4
PB
13'-2"
5
END REALIGN/SHIFT MLPs STA 138+68
3
PB1
3
13'-3"
Ex R/W
END REALIGN/SHIFT PB STA 5+00
END REALIGN/SHIFT PB1 STA 3+00

FOR INFORMATION ONLY

PVI A 137+86.11
Elev 549.89
L 100.00'
R 0.26
PROPOSED PROFILE TOP OF RAIL
PVT A 138+36.11
Elev 549.90
PVI A 138+88.87
Elev 549.91
END REALIGN/SHIFT MLPs STA 138+68
EXISTING MAINLINE TRACK
Gr=0.02%
EXISING GROUND
FIELD FIT CONNECTIONS RAISE AND SURFACE EXISTING TRACK AS REQUIRED
EXISTING MAINLINE TRACK
EXISTING GROUND
MLPt
549.91
565
560
555
550
545
540
535
530
525
138+00
139+00
140+00
141+00
142+00
143+00

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED JRG
CHECKED RC

TRACK CONSTRUCTION STAGE 1B
NSRR - STA 137+50 TO STA 143+00

HAM-75-7.85

80 / 117

1791
2017

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FOR INFORMATION ONLY

TRACKS IN SERVICE
D/D7, D5, D8
STAGE 1B

D7B
D7
D
D3
D2
D1
B
B1

D TRACK IN SERVICE
SERVING AS DETOUR TRACK
STAGES 1A, 1B & 2A

1 C/T - RELOCATE D7D DETOUR TRACK TO NEW TRACKBED FOR MLPn ALIGNMENT COORDINATE OUTAGES W/ RAILROAD STA. 147+22 TO 148+35

MLE IN SERVICE UNTIL
AFTER STAGE 1B C/T

EXISTING PS IN CURVE
FIELD FIT CONNECTIONS

1 REALIGN EXISTING TURNOUT
RAISE AND SURFACE EXISTING
TRACKS AS REQUIRED

1 FIELD FIT CONNECTIONS

SHIFT EXISTING TRACK AS NECESSARY
1

EXIST. SURVEY ℄/MLE TRK
MLE

MLPn

FIELD FIT CONNECTIONS
1

EXISTING SWITCH IS
WITHIN EXISTING LLT
TO REMAIN

PC Sta. 146+73.50 MLE

BEGIN C/T
STA 147+22

MLPn TRACK
PLACED IN SERVICE
AFTER STAGE 1B C/T

LAIDLAW AVE

MATCHLINE STA 143+00

MATCHLINE STA 148+00

144 144 145 145 146 146 147 147

Ex R/W

POT MLE Sta. 143+98.78 BK
= POT MLPn Sta. 143+96.02 AH

POT MLPn 145+44.53 =
PS EXIST. PB TURNOUT

POT MLPn 146+27.04 =
PS EXIST. PB1 TURNOUT

PVI 145+61.86
Elev 549.93

POT MLP
POT MLPn +/- 147+22.06 =
PS REALIGNED D TURNOUT

FIELD FIT CONNECTIONS
RAISE AND SURFACE
EXISTING LADDER
AS REQUIRED

PROPOSED PROFILE
TOP OF LOW RAIL
MLPn TRACK

Gr=+0.06%

BEGIN C/T
STA 147+22
MLPn ELEV = 549.83
MLE ELEV = 549.69

EXISTING GROUND

EXISTING (MLE)
MAINLINE
TRACK

FIELD FIT CONNECTIONS
RAISE AND SURFACE
EXISTING LADDER
AS REQUIRED

EXISTING (MLE)
MAINLINE
TRACK

POC MLE STA. 147+55.52 =
PCC D7D TRACK STA. 2+00 =
+/- MLPn POT 147+52.67, 4.7' LT
FINISHED ELEV. 549.80

LAIDLAW AVENUE

555 550 545 540 535 530 525 520

549.9 550.0 549.2 550.1 549.4 T/R EX 549.8 549.1 T/R/ PR 549 549.8 549.2 549.84 548.7 549.78

143+00 144+00 145+00 146+00 147+00 148+00

N

0 10 20 40
HORIZONTAL
SCALE IN FEET

CALCULATED JRG
CHECKED RC

TRACK CONSTRUCTION STAGE 1B
NSRR - STA 143+00 TO STA 148+00

HAM-75-7.85

81 / 117

1792
2017

ESTIMATED TRACK WORK THIS STAGE					
TRACK	C/T	REALIGN	CONSTRUCTION	TURNOUTS	REMOVAL
MLE	233 TF	333 TF	0 TF	-	0 TF
MLPn	0 TF	0 TF	0 TF	-	0 TF
D7D	113 TF	0 TF	0 TF	-	529 TF

1 CUT/THROW TRACK STAGE 1B COORDINATE OUTAGES W/ NS

2 MLE/D7 TRACK IN SERVICE UNTIL STAGE 1B C/T TO MLP AFTER C/T REMOVE EXIST. DETOUR TRK - LIMITS SHOWN

END C/T, BEGIN REMOVAL MLE STA 148+35

CLEAR POINT STA 148+35

C/T - RELOCATE EXISTING D7D TK TO NEW TRACK BED FOR MLPn ALIGNMENT COORDINATE OUTAGES W/ RAILROAD 147+22 TO 148+35

1

MLPn TRACK BUILT IN STAGE 1A PLACED IN SERVICE AFTER STAGE 1B C/T

MATCHLINE STA 148+00

MATCHLINE STA 153+00

D7

MLE

MLPn

10'

Ex R/W

Ex R/W TMP

TMP

EX R/W

EX SL

R/W

148 149 150 151 152 153

PVC 148+05.18
Elev 549.77

END C/T, BEGIN REMOVAL
STA 148+35
MLPn ELEV = 549.83
MLE ELEV = 549.71

PVI 149+43.18
Elev 549.68
L 280.00'
R 0.63

PROPOSED PROFILE
TOP OF LOW RAIL
MLPn TRACK

PVT 150+83.18
Elev 552.05

Gr=1.69%

EXISTING GROUND

EXISTING GROUND

560 555 550 545 540 535 530 525 520

548.7 549.78 547.7 550.01 545.8 550.86 545.4 552.34 545.2 554.03 538.2 555.73

148+00 149+00 150+00 151+00 152+00 153+00

FOR INFORMATION ONLY

N

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED JRG
CHECKED RC

TRACK CONSTRUCTION STAGE 1B
NSRR - STA 148+00 TO STA 153+00

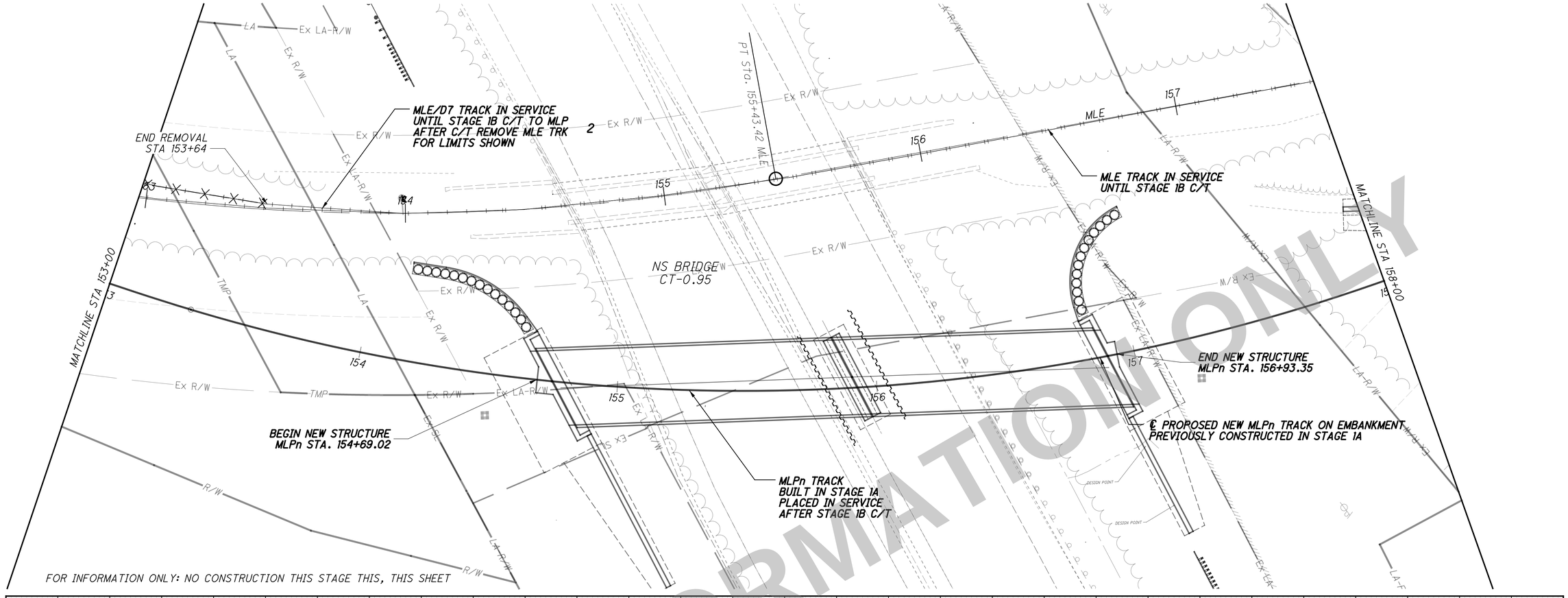
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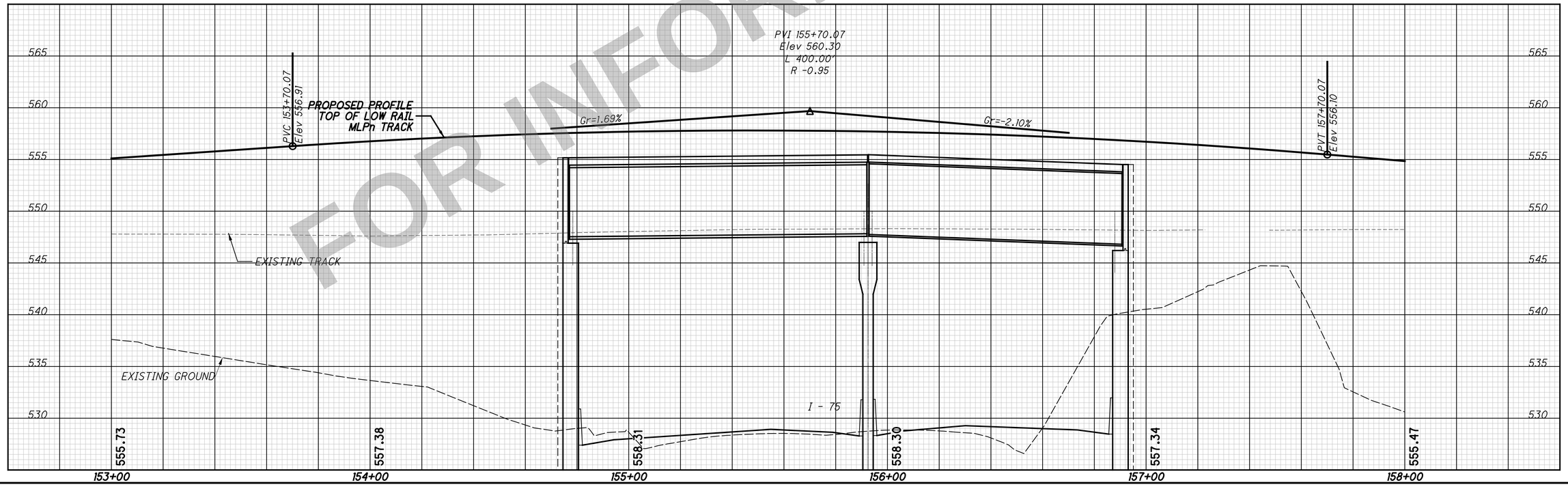
82 / 117

1793
2017

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HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

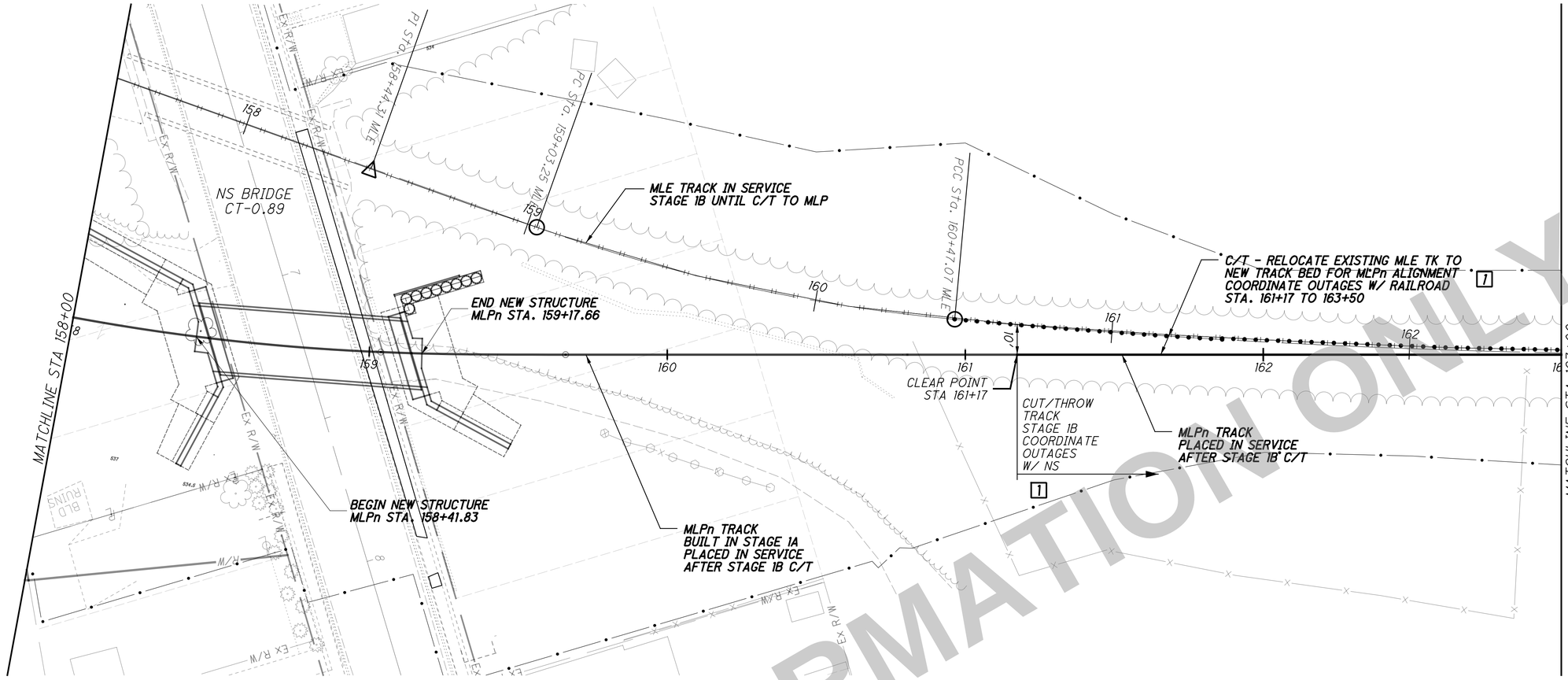
TRACK CONSTRUCTION STAGE 1B
NSRR - STA 153+00 TO STA 158+00

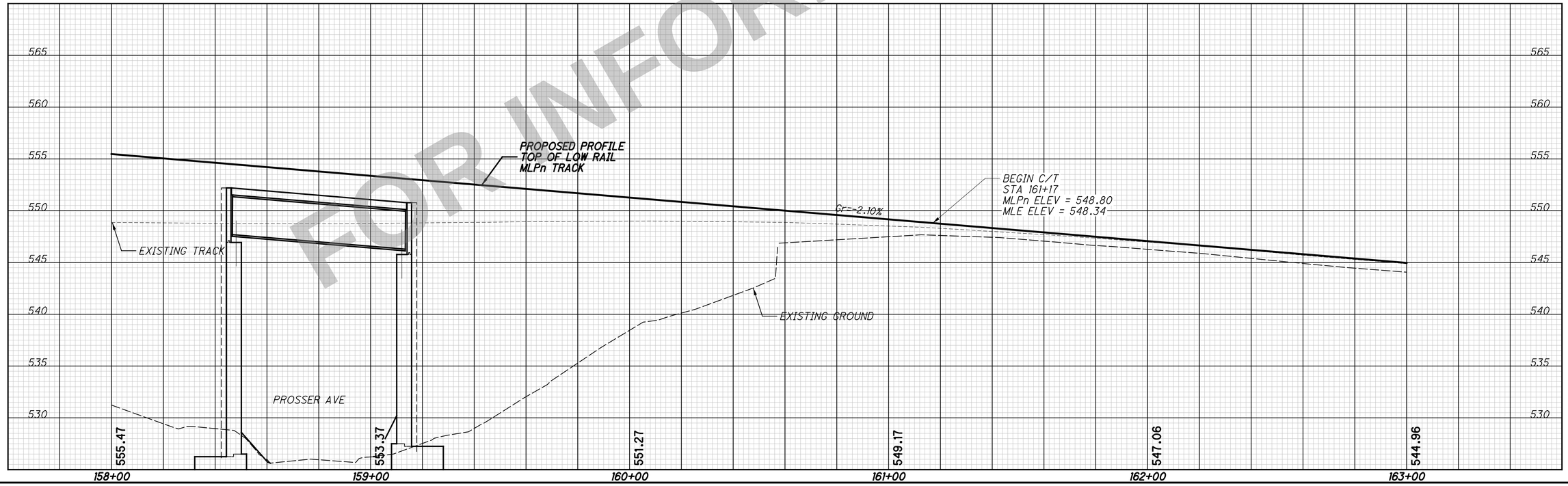
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83 / 117

1794
2017

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HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

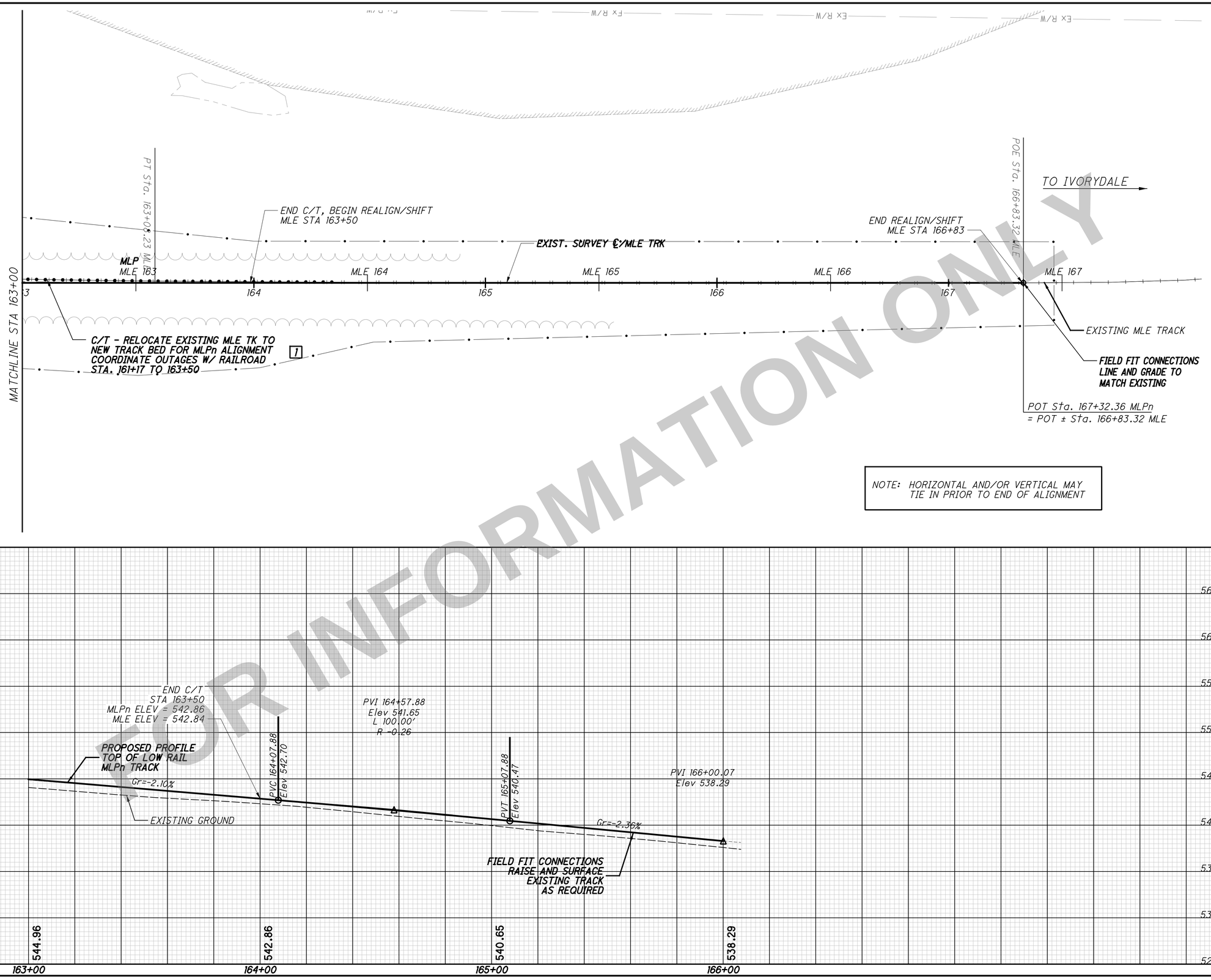
TRACK CONSTRUCTION STAGE 1B
NSRR - STA 158+00 TO STA 163+00

HAM-75-7.85

84 / 117

1795
2017

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HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

TRACK CONSTRUCTION STAGE 1B
NSRR - STA 163+00 TO STA 168+00

HAM-75-7.85

85 / 117

1796
2017

CONNECTION TO BRICK YARD TO BE MAINTAINED AT ALL TIMES COORDINATE CONSTRUCTION TO MINIMISE OUTAGES

D TRACK IN SERVICE DURING CONSTRUCTION SERVING AS DETOUR TRACK STAGES 1A , 1B & 2A

STAGED MLPŧ CONSTRUCTION COORDINATE OUTAGES WITH NORFOLK SOUTHERN

TO IDLEWILD

FIELD FIT CONNECTIONS RAISE AND SURFACE TRACK AS REQUIRED - SEE PROFILES [1]

EXISTING SURVEY ℄/MLE TRACK

INSTALL NEW #10 TURNOUT
FINISH CONSTRUCTION OF NEW MLPŧ TRACK
COORDINATE OUTAGES W/ RAILROAD
PLACE NEW MLPŧ IN SERVICE

INITIAL BUILD TO CLEAR POINTS

EXIST. SURVEY ℄/MLE TRK

NORWOOD LATERAL

SR 562

NS BRIDGE CT-1.41

#10 RH MLPŧ

NEW TD8 TRACK

TD8

NEW MLPŧ TRACK IN SERVICE

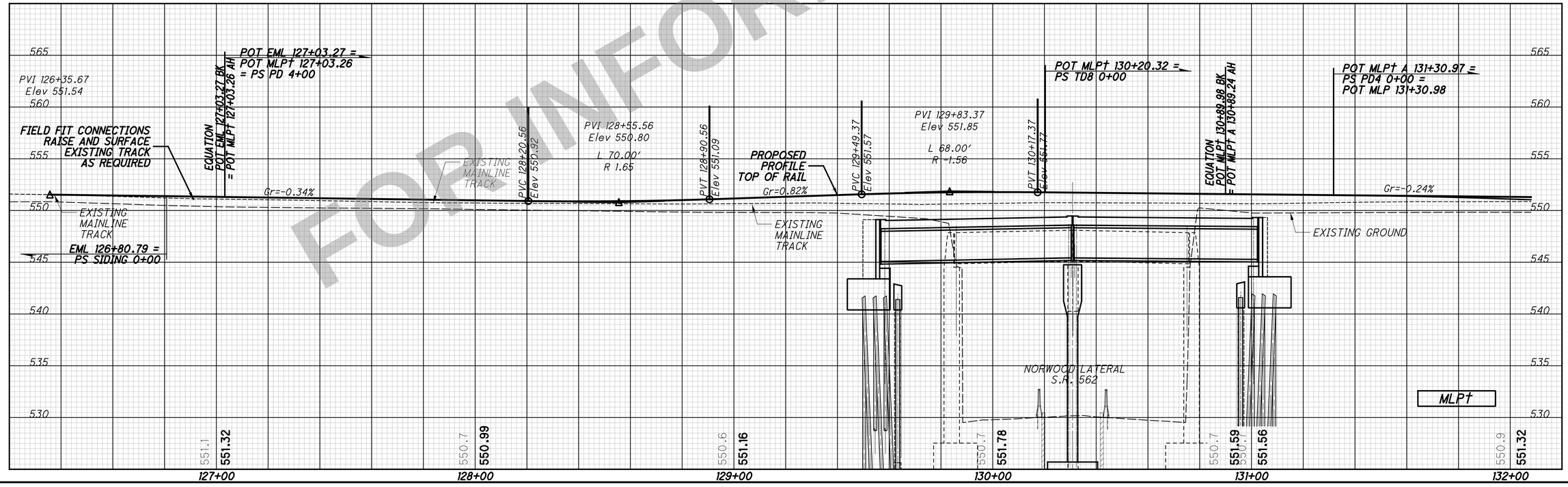
MATCHLINE STA 132+00

EQ 130+89.98 MLPŧ BK
= A 130+89.25 MLPŧ AHD

[1] SUB-STAGE SEQUENCE OF CONSTRUCTION

SEE ALSO SEQUENCING SHEET 1715

**SEE ALSO GEOMETRIC TABULATIONS AND ALIGNMENT PLANS



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

TRACK CONSTRUCTION STAGE 2A
NSRR - STA 127+00 TO STA 132+00

HAM-75-7.85

86 / 117

1797
2017

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ESTIMATED TRACK WORK THIS STAGE

TRACK	C/T	REALIGN	CONSTRUCTION	NEW T.O.	TRACK REMOVAL	T.O. REMOVAL
D8	102 TF	0 TF	0 TF	-	0 TF	-
D	0 TF	0 TF	0 TF	-	117 TF	-
D5	0 TF	0 TF	0 TF	-	210 TF	-
D4	0 TF	0 TF	0 TF	-	0 TF	-
D3	0 TF	0 TF	0 TF	-	0 TF	-
MLPt/s	0 TF	166 TF	0 TF	#10 RH	0 TF	#10 RH
TD8	0 TF	0 TF	157 TF	-	0 TF	-

TRACK WORK LEGEND

EXISTING TRACK
SHIFT TRACK
REMOVE TRACK
PROPOSED TRACK

END C/T
MLE STA 135+18
OFFSET 121.53' LT

BEGIN C/T
MLE STA 134+14
OFFSET 97.41' LT

BEGIN REMOVAL
MLE STA 133+35
OFFSET 77.60' LT

BEGIN REMOVAL
MLE STA 132+40
OFFSET 64.70' LT

CONNECTION TO BRICK YARD
TO BE MAINTAINED AT ALL TIMES
COORDINATE CONSTRUCTION
TO MINIMIZE OUTAGES

CUT & THROW TRACK TO NEW TEMPORARY
TRACK TD8 ALIGNMENT AT END OF STAGE 2A 6

NEW YARD TRACKS
PB, PB1, MLPt/s,
PD1, PD2, PD3, PD4
IN SERVICE

TAKE EXISTING TRACKS
D5 & D OUT OF SERVICE 3

END REMOVAL
MLE STA 134+44
OFFSET 78.51' LT

END REMOVAL
MLE STA 134+35
OFFSET 64.98' LT

DEMO AND REMOVE YARD
TRACKS D3 & D4 AS REQ.
AFTER NEW MLPt & YARD
IS PLACED IN SERVICE 4

CONSTRUCT TEMPORARY
TRACK TD8 AFTER YARD
TRACKS ARE REMOVED 5

NEW TD8 TRACK

MATCHLINE STA 132+00

MATCHLINE STA 137+50

PLACE IN SERVICE
NEW MLPt TRACK
& NEW YARD TRACKS 2

NEW MLPt TRACK
IN SERVICE

**SEE ALSO GEOMETRIC TABULATIONS AND ALIGNMENT PLANS

FOR INFORMATION ONLY

POT MLPt A 132+42.38 =
PS PD2 0+00 =
POT MLP 132+42.38 =

POT MLPt 133+53.77 =
PS PB 0+00 =
POT MLP 133+53.78

POT MLPt A 134+83.42 =
PS PD1 0+00 =
POT MLP 134+83.42

PROPOSED PROFILE

EXISTING MAINLINE TRACK

Gr=-0.24%

EXISTING GROUND

PVC A 137+36.11
Elev 550.01

SEE SHEETS 36 - 43 FOR ADDITIONAL TRACK PROFILES

MLPt

565 / 560 / 555 / 550 / 545 / 540 / 535 / 530 / 525

550.9 551.32 | 550.7 551.08 | 550.4 550.83 | 550.5 550.59 | 550.3 550.35 | 550.1 550.10

132+00 | 133+00 | 134+00 | 135+00 | 136+00 | 137+00

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

TRACK CONSTRUCTION STAGE 2A
NSRR - STA 132+00 TO STA 137+50

HAM-75-7.85

87 / 117

1798
2017

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NEW YARD TRACKS
PB, PB1, MLP†/s,
PD1, PD2, PD3, PD4
IN SERVICE

ESTIMATED TRACK CAPACITY THIS STAGE

TRACK	STORAGE LENGTH
D*	650 TF
D5*	715 TF
PD4	700 TF
PD3	800 TF
PD2	900 TF
PD1	760 TF
MLP†	N/A
PB	680 TF
PB1	700 TF

*STUB END

TAKE EXISTING TRACKS
D5 & D OUT OF SERVICE
3

D8A
D7B
D
D5
D4
D3
D2
D1
B
B1
MLE

PD4
PD3
PD2
PD1
MLP†
PB
PB1

MATCHLINE STA 137+50
MATCHLINE STA 143+00

A 138+00
A 138+68
138
139
140
141
142
143

EXIST. SURVEY ℄/MLE TRK

Ex R/W

NEW MLP† TRACK
IN SERVICE

FOR INFORMATION ONLY: NO CONSTRUCTION THIS STAGE, THIS SHEET

FOR INFORMATION ONLY

PVI A 137+86.11
Elev 549.89
L 100.00'
R 0.26
PROPOSED
PROFILE
TOP OF RAIL

PVT A 138+36.11
Elev 549.90

Gr=0.02%

PVI A 138+88.87
Elev 549.91

FIELD FIT CONNECTIONS
RAISE AND SURFACE
EXISTING TRACK
AS REQUIRED

EXISTING
MAINLINE
TRACK

EXISTING (MLE)
MAINLINE
TRACK

EXISTING GROUND

MLP†

565
560
555
550
545
540
535
530
525

549.9
549.91

138+00
139+00
140+00
141+00
142+00
143+00

Existing

HORIZONTAL
SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

TRACK CONSTRUCTION STAGE 2A
NSRR - STA 137+50 TO STA 143+00

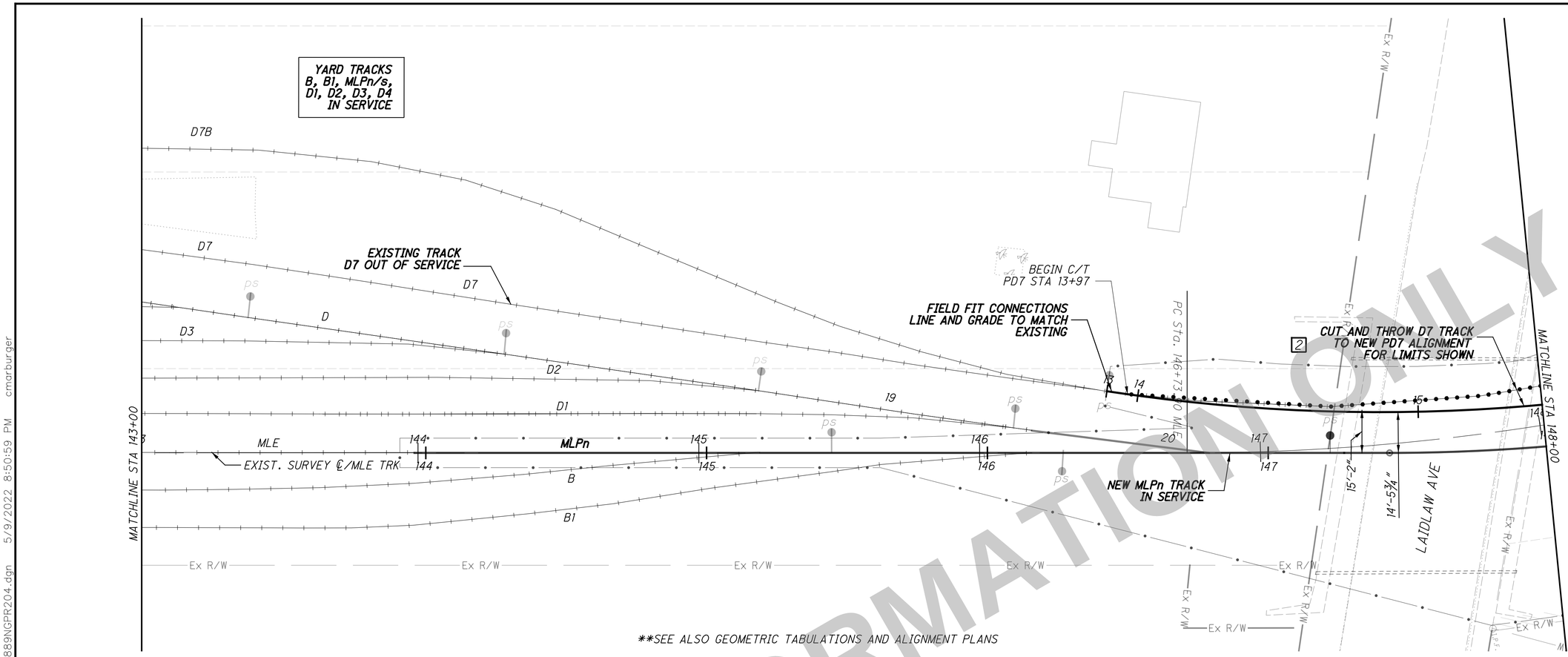
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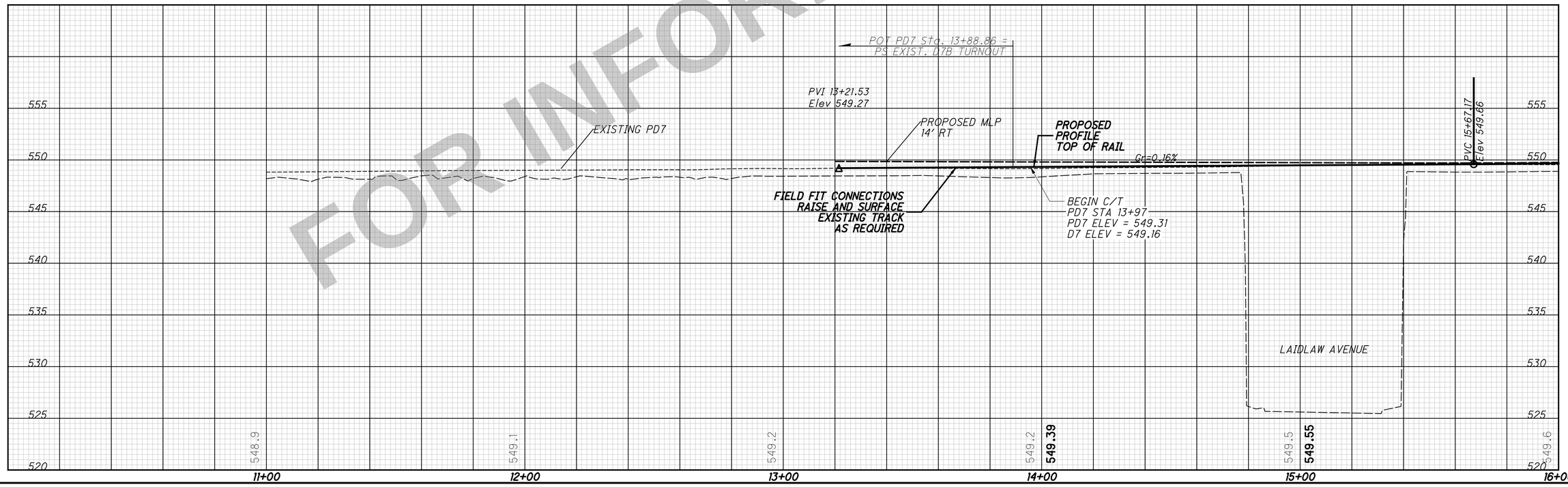
88 / 117

1799
2017

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FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

TRACK CONSTRUCTION STAGE 2A
NSRR - STA 143+00 TO STA 148+00

HAM-75-7.85

89 / 117

1800
2017

ESTIMATED TRACK WORK THIS STAGE						
TRACK	C/T	REALIGN	CONSTRUCTION	NEW T.O.s	TRACK REMOVAL	T.O. REMOVAL
D7	230 TF	0 TF	0 TF	-	0 TF	1
MLE	-	-	0 TF	-	679 TF	-
PD7	-	-	313 TF	-	0 TF	-
MLPn	0 TF	-	0 TF	#10 RH	120 TF	-

LEGEND

- EXISTING TRACK
- SHIFT TRACK
- REMOVE TRACK
- PROPOSED TRACK

MATCHLINE STA 148+00

CUT/THROW TRACK D7 TO NEW PD7 ALIGNMENT FOR LIMITS SHOWN [2]

END C/T PD7 STA 16+28 OFFSET 11.13' LT

[1] CONSTRUCT PD7 TRACK ON NEW ALIGNMENT

PD7

MLPn

15'-11⅛"

NEW MLPn TRACK IN SERVICE

15'-7⅜"

14'-0"

[1] INSTALL NEW #10 TURNOUT COORDINATE OUTAGES WITH RAILROAD

MATCHLINE STA 153+00

Ex R/W

Ex R/W TMP

TMP

R/W

Ex S/

Ex R/W

**SEE ALSO GEOMETRIC TABULATIONS AND ALIGNMENT PLANS

PVC 15+67.17 Elev 549.66

END C/T PD7 STA 16+28 PD7 ELEV = 548.86 D7 ELEV = 548.58

PVI 16+92.17 Elev 549.85 L 250.00' R 0.61

PVT 18+17.17 Elev 551.97

PROPOSED PROFILE TOP OF RAIL

Gr=1.69%

PVI 20+00.00 Elev 555.06

PROPOSED MLP

OLAW AVENUE

549.55 549.6 549.74 549.4 550.41 549.2 551.69 553.37 555.06

15+00 16+00 17+00 18+00 19+00 20+00

FOR INFORMATION ONLY

N

HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED JRG CHECKED RC

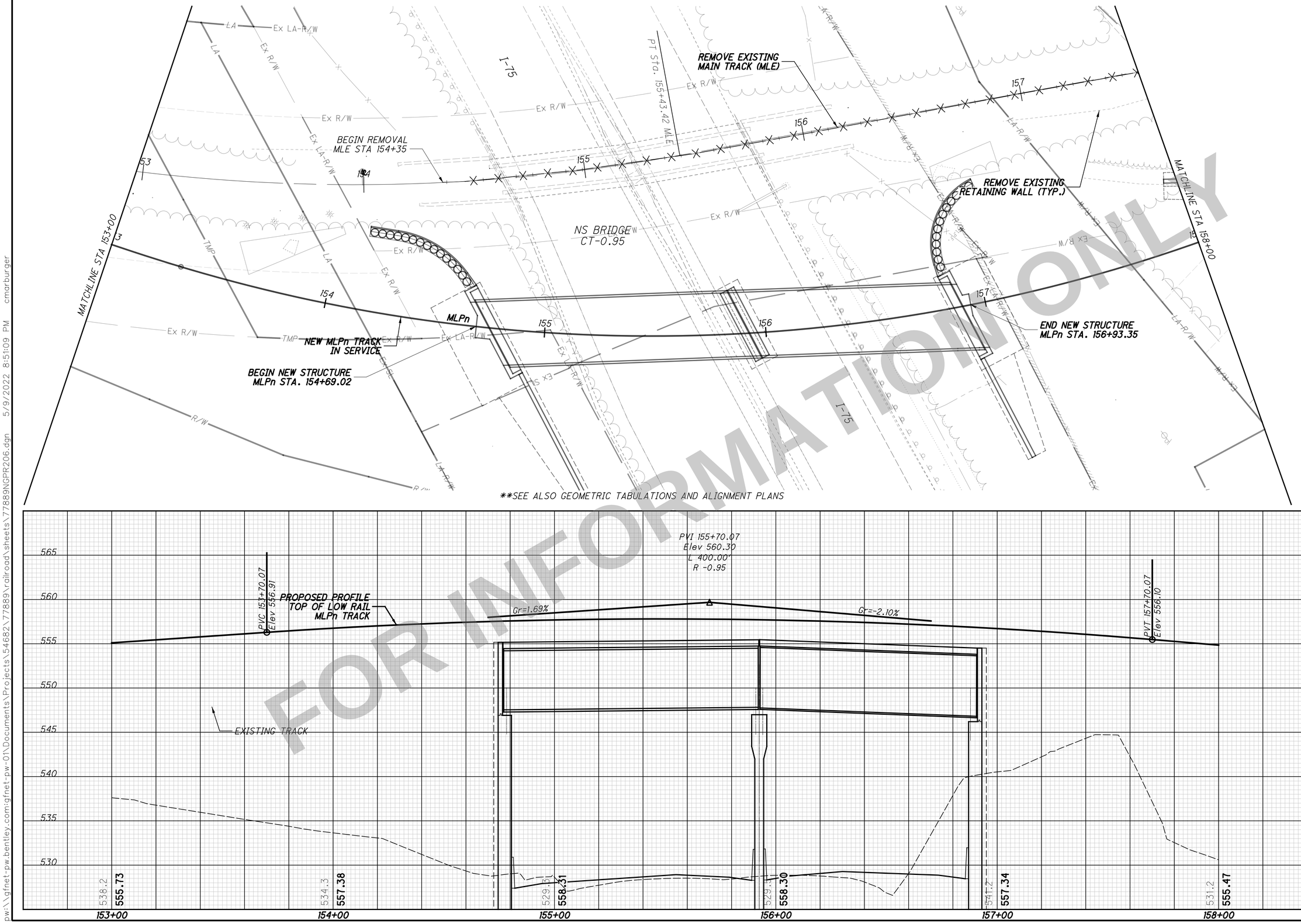
TRACK CONSTRUCTION STAGE 2A
NSRR - STA 148+00 TO STA 153+00

HAM-75-7.85

90 / 117

1801 2017

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FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

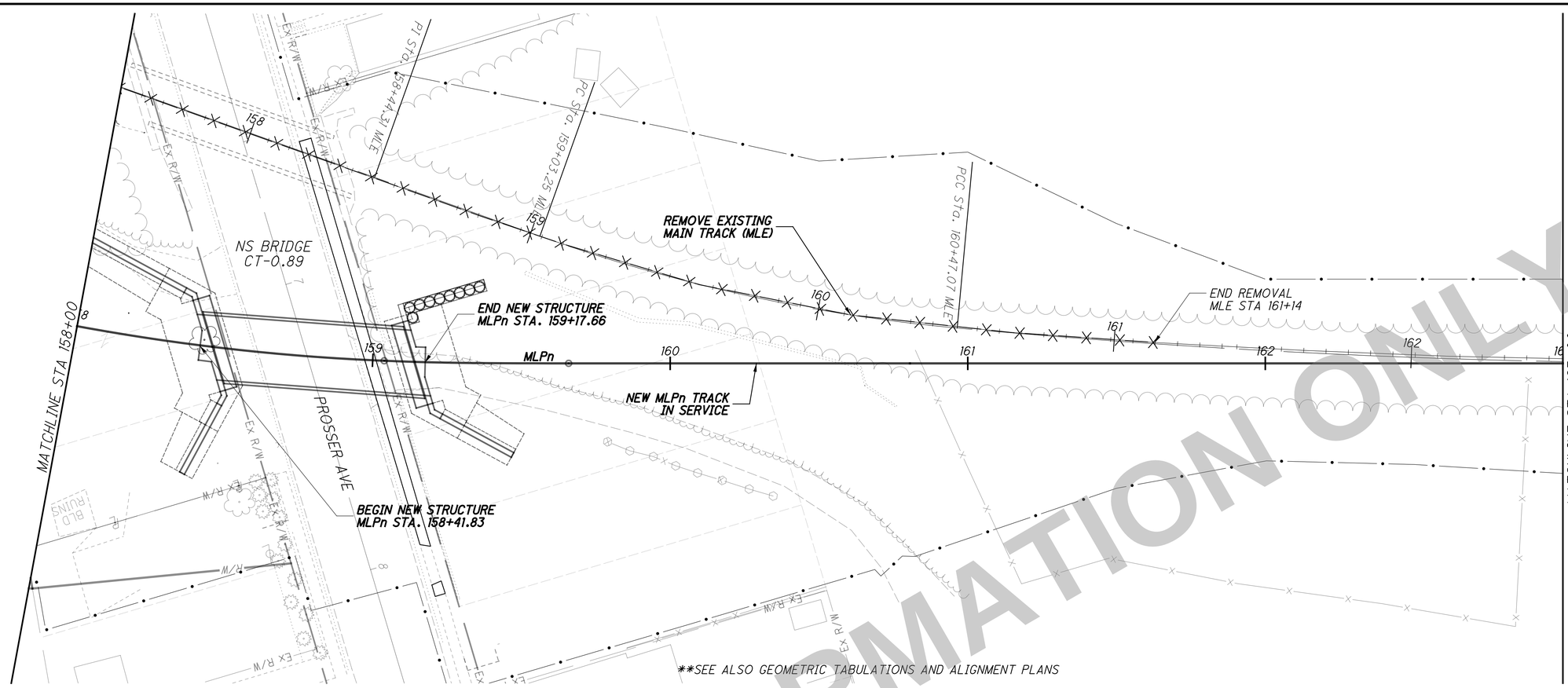
TRACK CONSTRUCTION STAGE 2A
NSRR - STA 153+00 TO STA 158+00

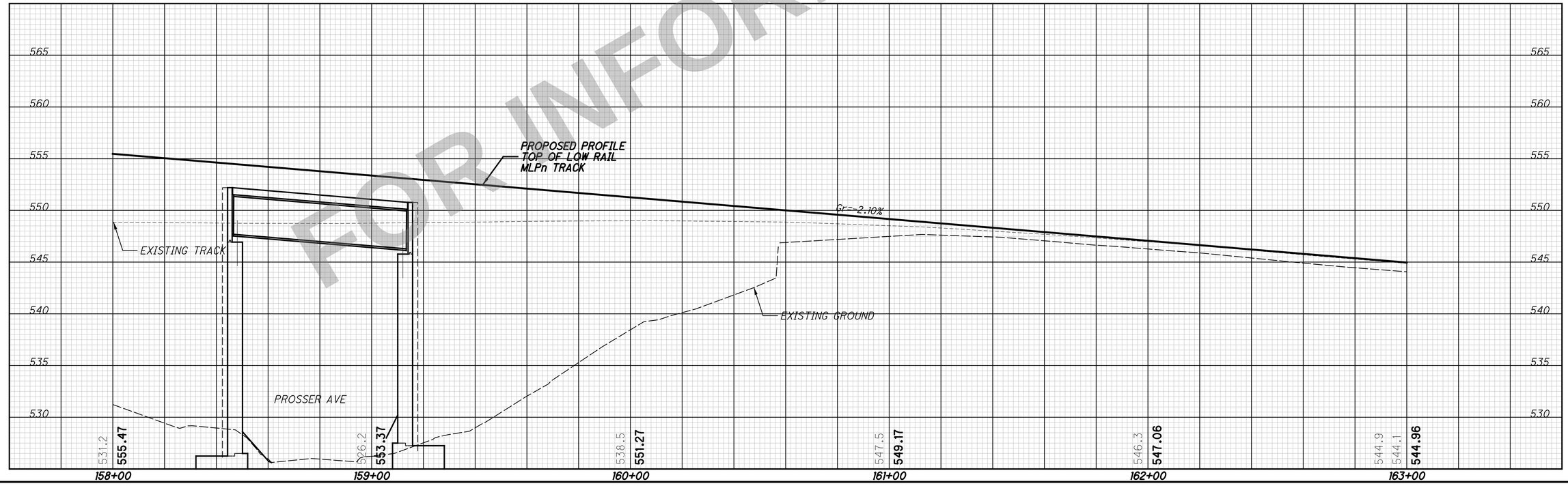
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91 / 117

1802
2017

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HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

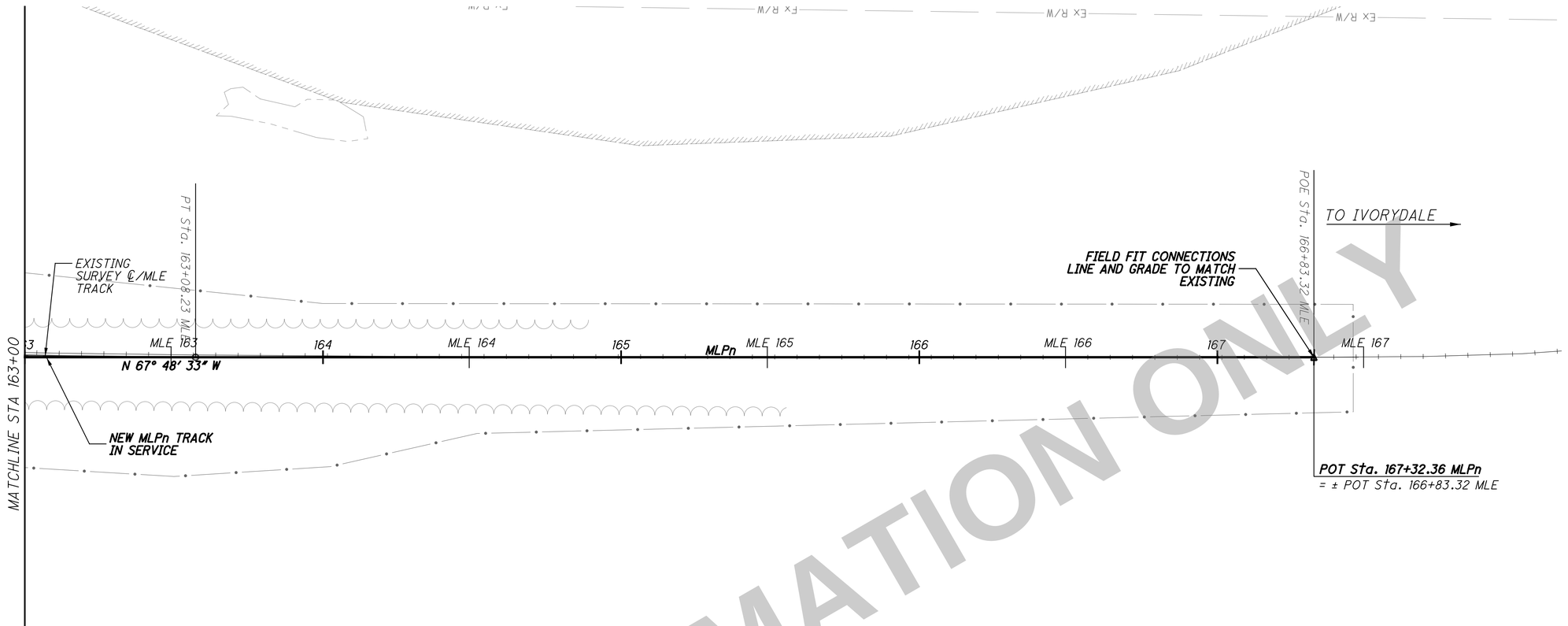
TRACK CONSTRUCTION STAGE 2A
NSRR - STA 158+00 TO STA 163+00

HAM-75-7.85

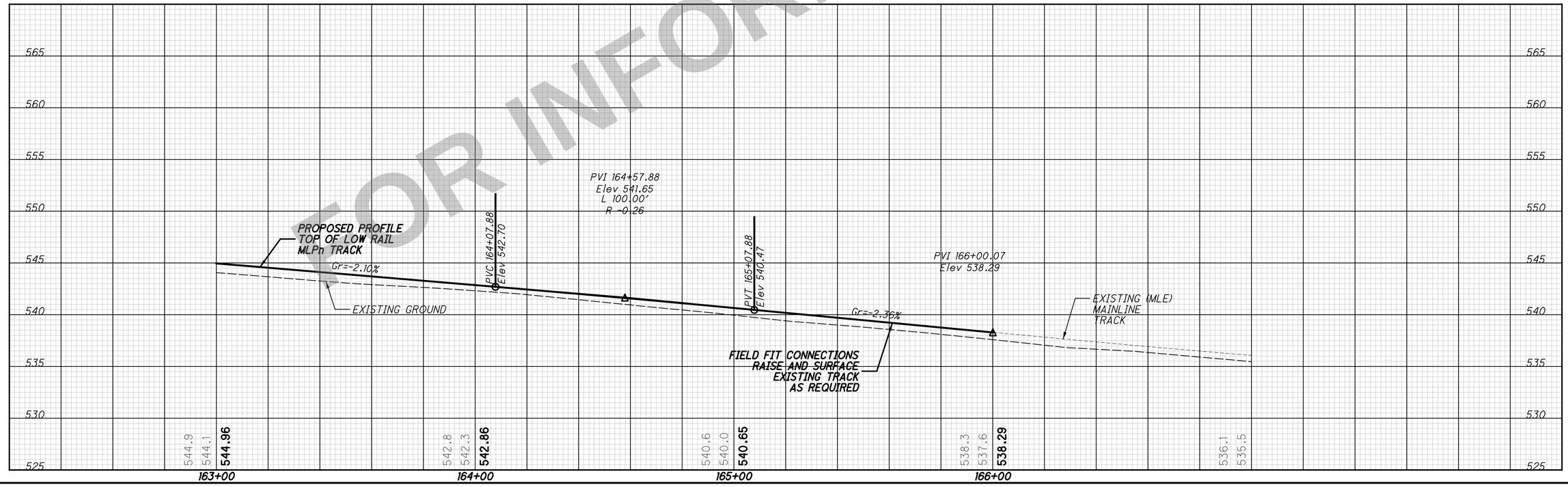
92 / 117

1803
2017

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**FOR GREATER DETAIL SEE ALSO CURVE DATA, GEOMETRY TABULATIONS AND PROFILES



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

TRACK CONSTRUCTION STAGE 2A
NSRR - STA 163+00 TO STA 168+00

HAM-75-7.85

93 / 117

1804
2017

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FOR INFORMATION ONLY

2 DEMO REMAINING TKS AND BRIDGE ONLY AFTER TD8 IS PLACED IN SERVICE - SEE STRUCTURES PLANS

END REMOVAL MLE STA 130+98 OFFSET 39.34' LT

TEMPORARY TRACK TD8 CONNECTION TO BRICK YARD PLACED IN SERVICE

1

NS BRIDGE CT-1.41

NORWOOD LATERAL

SR 562

BEGIN REMOVAL MLE STA 128+15 OFFSET 6.63' LT

TO IDLEWILD

PD

MLPŧ

#10 RH

127+00

128+00

129+00

130+00

131+00

MATCHLINE STA 132+00

TD8

PD4

NEW MLPŧ TRACK IN SERVICE

EQ 130+89.98 MLPŧ Bk = A 130+89.25 MLPŧ AHD

1 SUB-STAGE SEQUENCE OF CONSTRUCTION

SEE ALSO SEQUENCING SHEET 1715

**SEE ALSO GEOMETRIC TABULATIONS AND ALIGNMENT PLANS

POT EML 127+03.27 = POT MLPŧ 127+03.26 = PS PD 4+00

EQUATION POT EML 127+03.27 BK = POT MLPŧ 127+03.26 AH

PVI 126+35.67 Elev 551.54

FIELD FIT CONNECTIONS RAISE AND SURFACE EXISTING TRACK AS REQUIRED

EML 126+80.79 = PS SIDING 0+00

Gr=-0.34%

EXISTING MAINLINE TRACK

PVC 128+20.56 Elev 550.92

PVI 128+55.56 Elev 550.80

L 70.00'

R 1.65

PVT 128+90.56 Elev 551.09

PROPOSED PROFILE TOP OF RAIL

Gr=0.82%

PVC 129+49.37 Elev 551.57

PVI 129+83.37 Elev 551.85

L 68.00'

R -1.56

PVT 130+17.37 Elev 551.77

POT MLPŧ 130+20.32 = PS TD8 0+00

EQUATION POT MLPŧ 130+89.98 BK = POT MLPŧ A 130+89.24 AH

POT MLPŧ A 131+30.97 = PS PD4 0+00 = POT MLP 131+30.98

Gr=-0.24%

EXISTING GROUND

NORWOOD LATERAL S.R. 562

MLPŧ

551.1 551.32

550.7 550.99

550.6 551.16

550.7 551.78

550.7 551.59

551.56

550.9 551.32

565 560 555 550 545 540 535 530

127+00 128+00 129+00 130+00 131+00 132+00

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED JRG CHECKED RC

TRACK CONSTRUCTION STAGE 2B
NSRR - STA 127+00 TO STA 132+00

HAM-75-7.85

94 / 117

1805 2017

ESTIMATED TRACK WORK THIS STAGE					
TRACK	C/T	REALIGN	CONSTRUCTION	REM. T.O.	REMOVE TK
TD8	0 TF	0 TF	0 TF	-	-
D	0 TF	0 TF	0 TF	-	498 TF
D8	0 TF	0 TF	0 TF	4	141 TF

TRACK WORK LEGEND

EXISTING TRACK
SHIFT TRACK
REMOVE TRACK
PROPOSED TRACK

NEW YARD TRACKS PB, PB1, MLP†/s, PD1, PD2, PD3, PD4 & TD8 IN SERVICE

1 CUT/THROW TRACK TO MEET TEMPORARY TD8 AT END OF STAGE 2A PLACE IN SERVICE

2 DEMO REMAINING TRACKS AND TURNOUTS AFTER TEMPORARY TK TD8 IS PLACED IN SERVICE

FIELD FIT CONNECTIONS LINE AND GRADE TO MATCH EXISTING

CONNECTION TO BRICK YARD TO BE MAINTAINED AT ALL TIMES COORDINATE CONSTRUCTION TO MINIMISE OUTAGES

END REMOVAL MLE STA 134+14 OFFSET 97.41' LT

END REMOVAL MLE STA 133+89 OFFSET 78.14' LT

END REMOVAL MLE STA 132+39 OFFSET 64.59' LT

CONNECTION TO BRICK YARD TEMPORARY TK TD8 IN SERVICE

NEW MLP† TRACK & NEW YARD TRACKS IN SERVICE

NEW MLP† TRACK IN SERVICE

MATCHLINE STA 132+00

MATCHLINE STA 137+50

Ex R/W

TMP

Sta. 134+11.50 MLE

**SEE ALSO GEOMETRIC TABULATIONS AND ALIGNMENT PLANS

POT MLP† A 132+42.38 =
PS PD2 0+00 =
POT MLP 132+42.38 =

POT MLP† 133+53.77 =
PS PB 0+00 =
POT MLP 133+53.78

POT MLP† A 134+83.42 =
PS PD1 0+00 =
POT MLP 134+83.42

PROPOSED PROFILE

EXISTING MAINLINE TRACK

Gr=-0.24%

EXISTING GROUND

PROPOSED TEMPORARY D8
SEE 43 OF 117
FOR PROFILE OF TD8 TRACK

PVC A 137+36.11
Elev 550.01

MLP†

565 560 555 550 545 540 535 530 525

550.9 551.32 | 550.7 551.08 | 550.4 550.83 | 550.5 550.59 | 550.3 550.35 | 550.1 550.10

132+00 133+00 134+00 135+00 136+00 137+00

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED JRG CHECKED RC

TRACK CONSTRUCTION STAGE 2B
NSRR - STA 132+00 TO STA 137+50

HAM-75-7.85

95 / 117

1806 2017

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NEW YARD TRACKS
PB, PB1, MLPt/s,
PD1, PD2, PD3, PD4
IN SERVICE

ESTIMATED TRACK CAPACITY THIS STAGE

TRACK	STORAGE LENGTH
D*	650 TF
D5*	715 TF
PD4	700 TF
PD3	800 TF
PD2	900 TF
PD1	760 TF
MLPt	N/A
PB	680 TF
PB1	700 TF

*STUB END

MATCHLINE STA 137+50

MATCHLINE STA 143+00

D8A

D7B

D

D5

D4 D4

D3

D2

D1 D1

MLE

B

B1

PD4

PD3

PD2

PD1

MLPt

PB

PB1

A 138+00

A 138+68

138

139

140

141

142

MLE

EXIST. SURVEY ℄/MLE TRK IN SERVICE

Ex R/W

NEW MLPt TRACK
& NEW YARD TRACKS
IN SERVICE

NEW MLPt TRACK
IN SERVICE

FOR INFORMATION ONLY: NO CONSTRUCTION THIS STAGE, THIS SHEET

PVI A 137+86.11
Elev 549.89

L 100.00'
R 0.26

PROPOSED
PROFILE
TOP OF RAIL

PVT A 138+36.11
Elev 549.90

Gr=0.02%

PVI A 138+88.87
Elev 549.91

FIELD FIT CONNECTIONS
RAISE AND SURFACE
EXISTING TRACK
AS REQUIRED

EXISTING
MAINLINE
TRACK

EXISTING (MLE)
MAINLINE
TRACK

EXISTING GROUND

MLPt

549.9

549.91

549.9

549.9

565 560 555 550 545 540 535 530 525

138+00 139+00 140+00 141+00 142+00 143+00

Existing

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HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

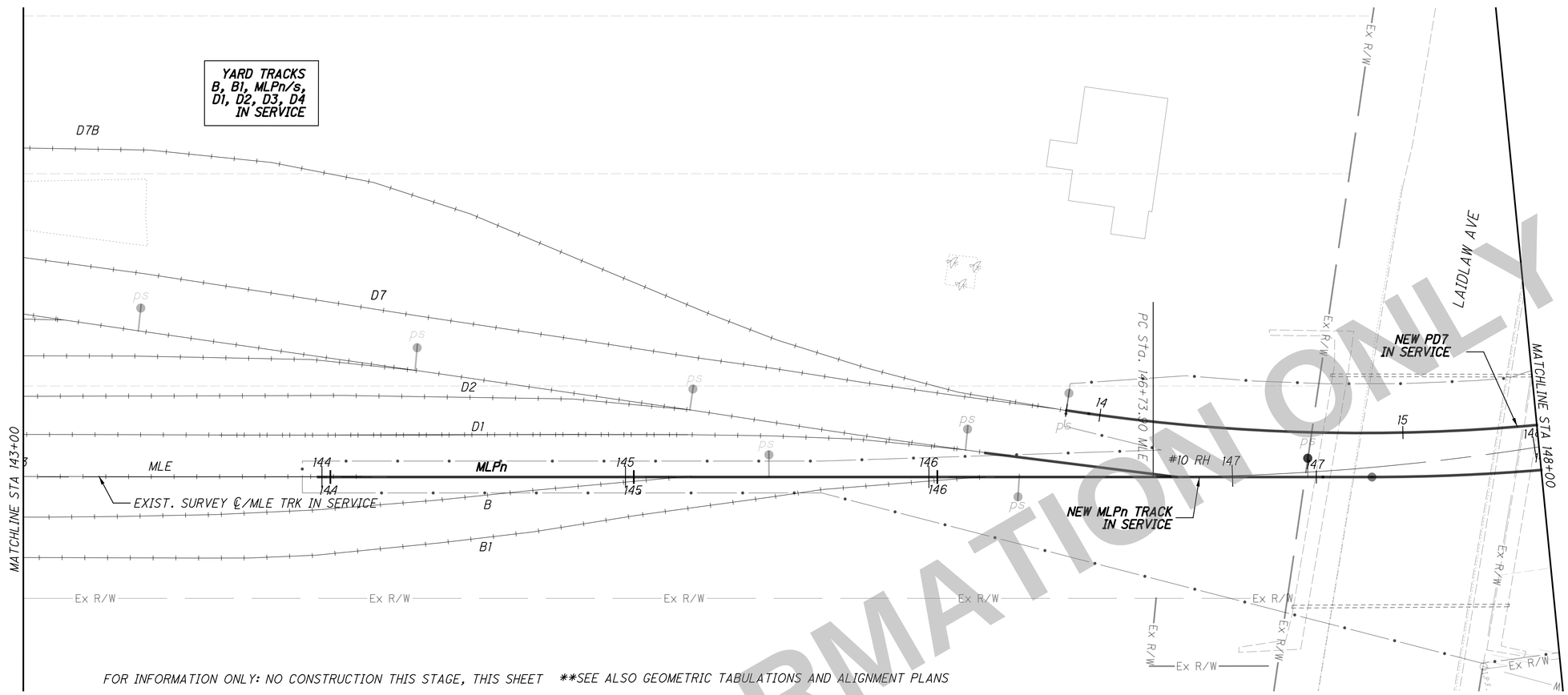
TRACK CONSTRUCTION STAGE 2B
NSRR - STA 137+50 TO STA 143+00

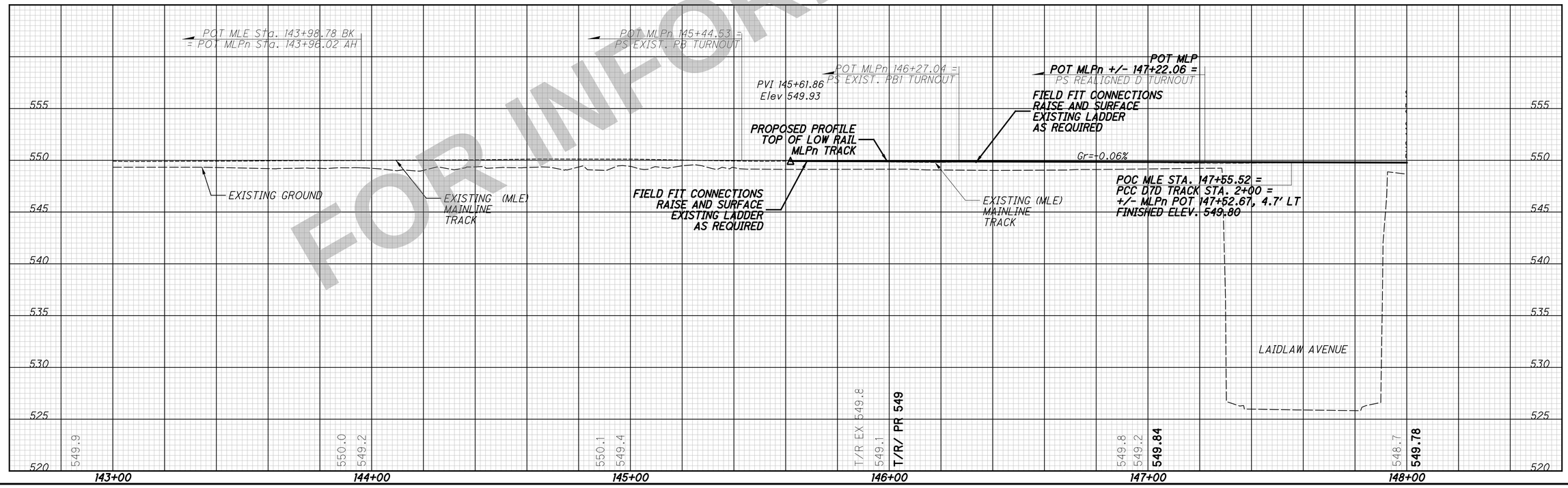
HAM-75-7.85

96 / 117

1807
2017

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HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

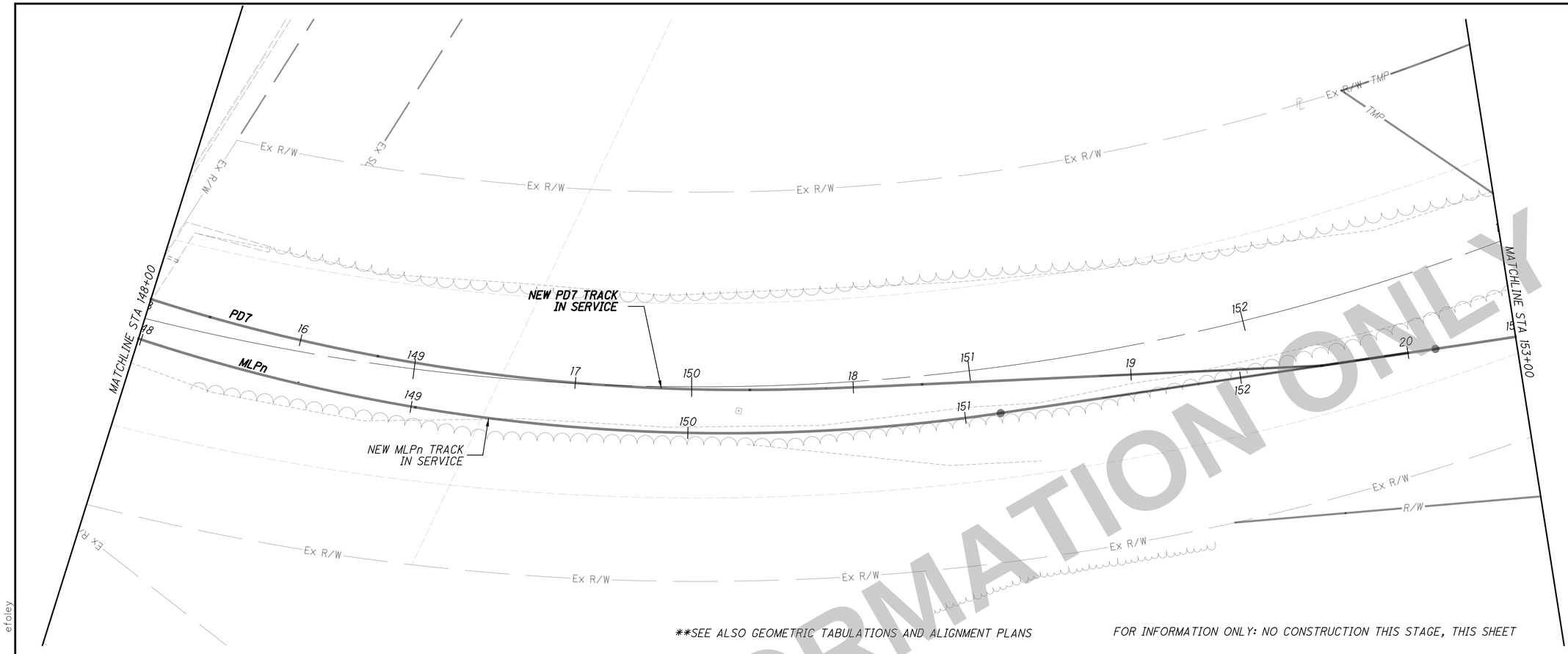
TRACK CONSTRUCTION STAGE 2B
NSRR - STA 143+00 TO STA 148+00

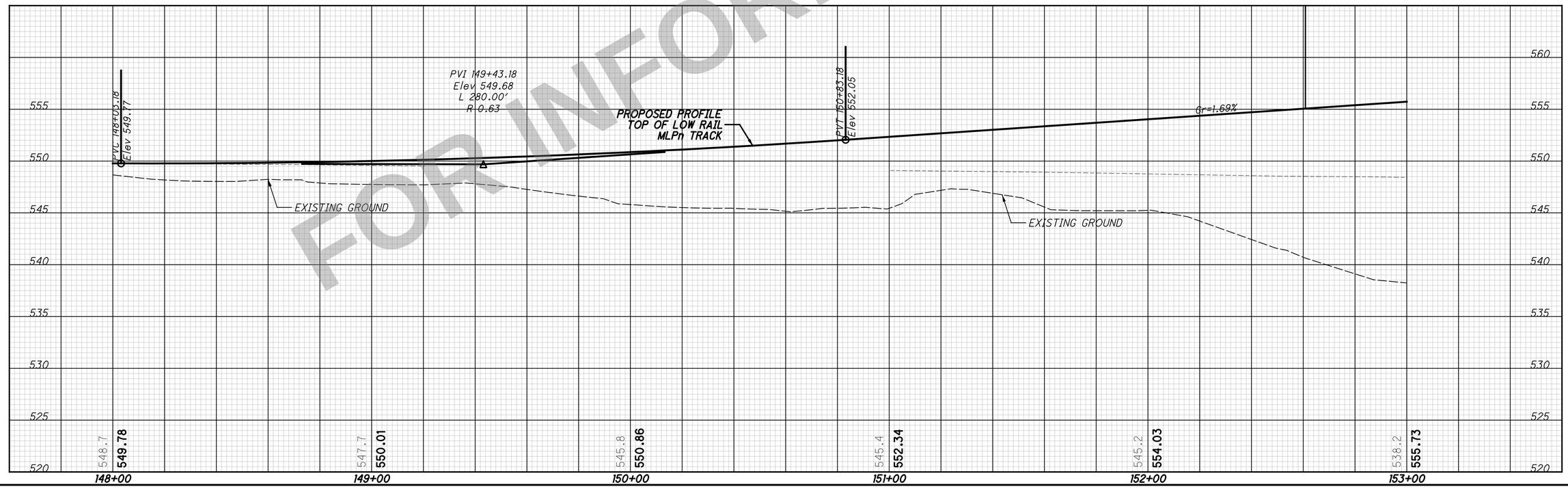
HAM-75-7.85

97 / 117

1808
2017

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FOR INFORMATION ONLY

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HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED JRG
CHECKED RC

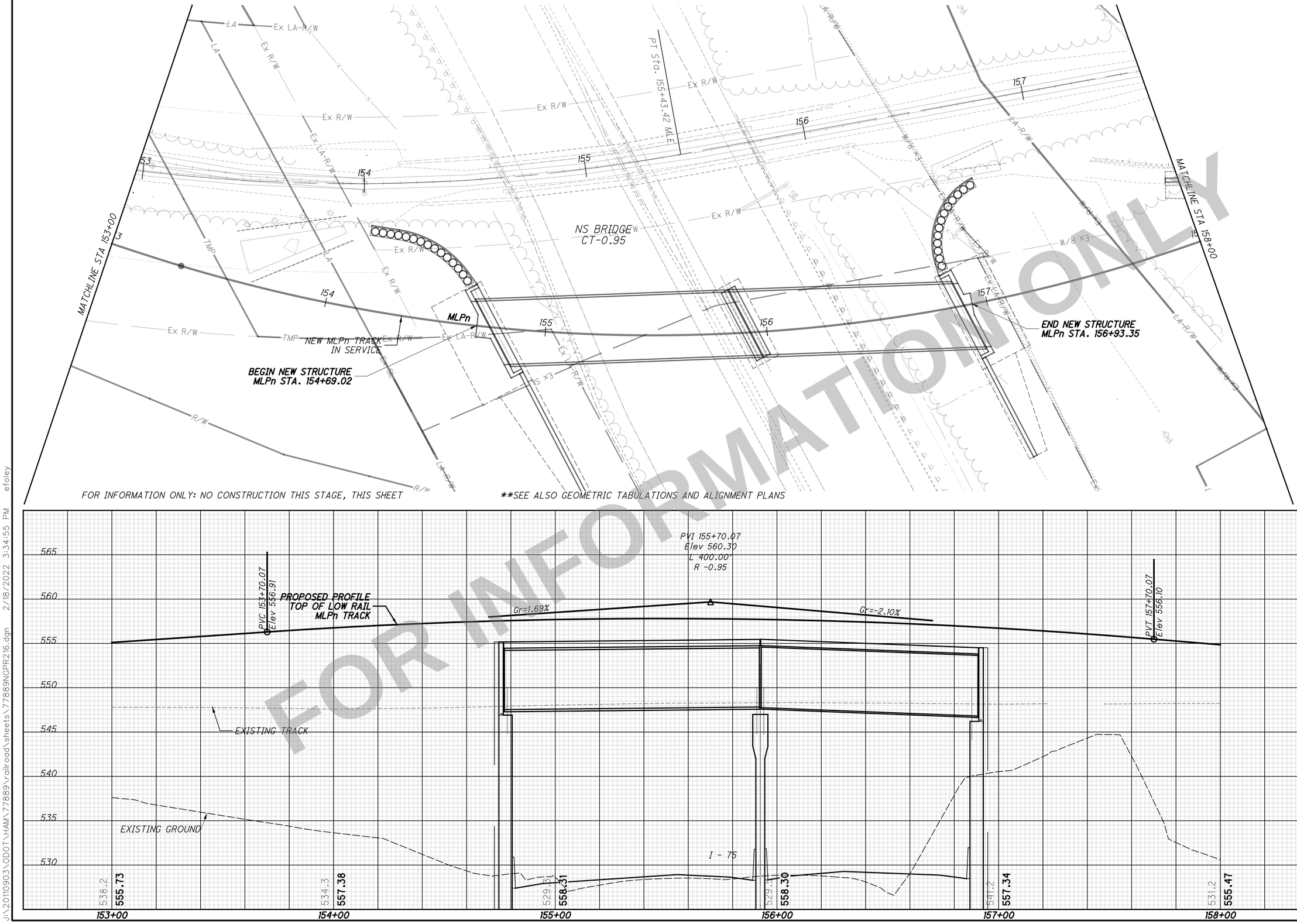
TRACK CONSTRUCTION STAGE 2B
NSRR - STA 148+00 TO STA 153+00

HAM-75-7.85

98 / 117

1809
2017

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FOR INFORMATION ONLY: NO CONSTRUCTION THIS STAGE, THIS SHEET

**SEE ALSO GEOMETRIC TABULATIONS AND ALIGNMENT PLANS

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

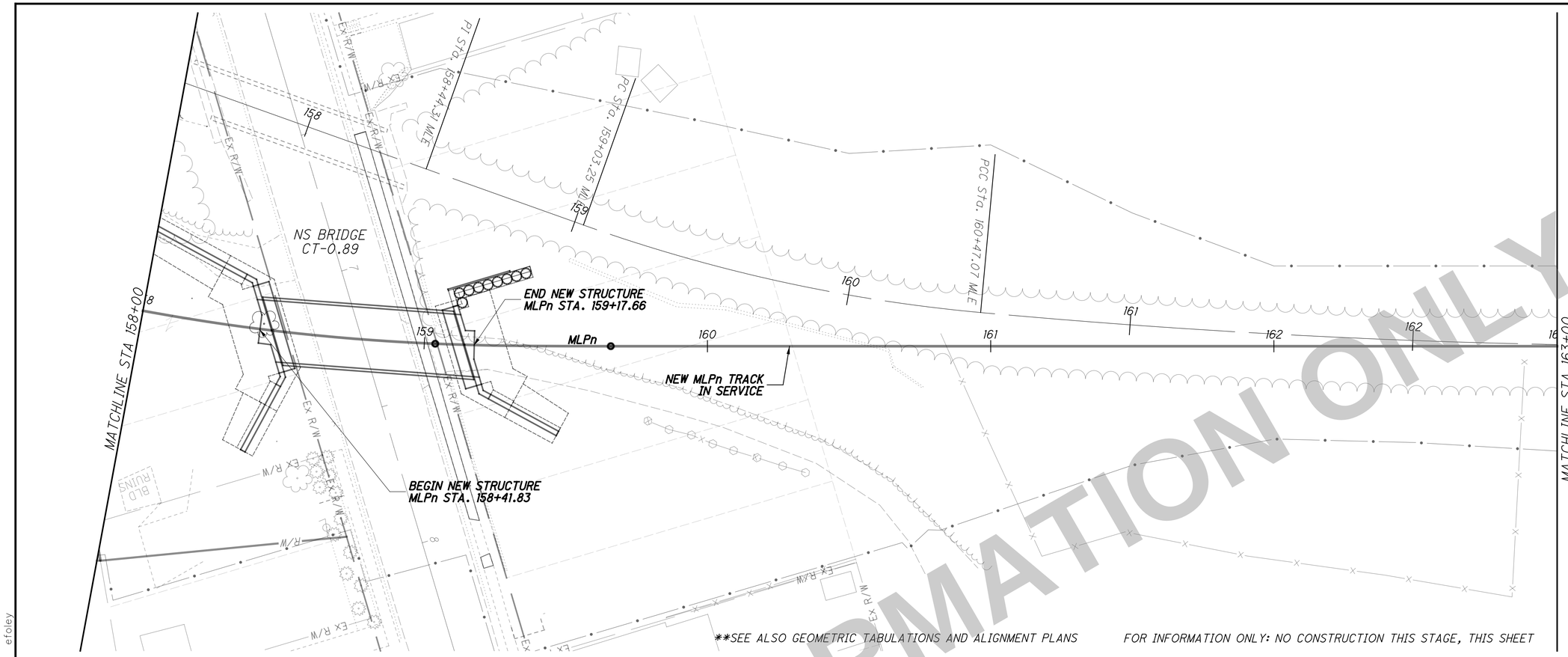
TRACK CONSTRUCTION STAGE 2B
NSRR - STA 153+00 TO STA 158+00

HAM-75-7.85

99 / 117

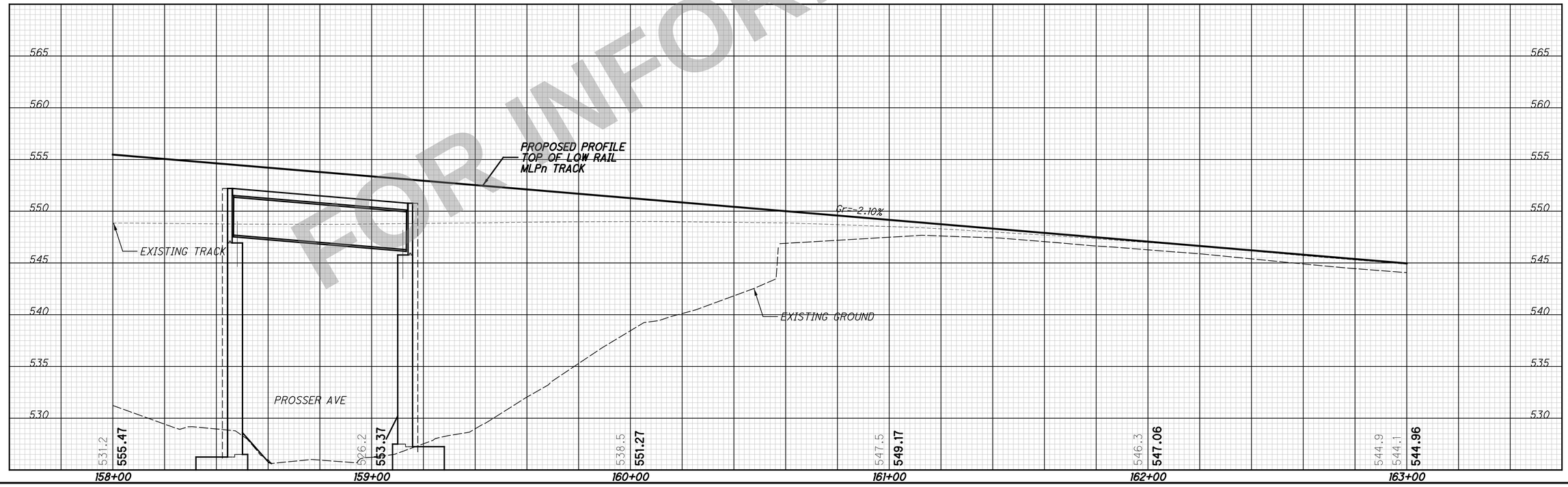
1810
2017

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**SEE ALSO GEOMETRIC TABULATIONS AND ALIGNMENT PLANS

FOR INFORMATION ONLY: NO CONSTRUCTION THIS STAGE, THIS SHEET



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HORIZONTAL SCALE IN FEET
0 10 20 40

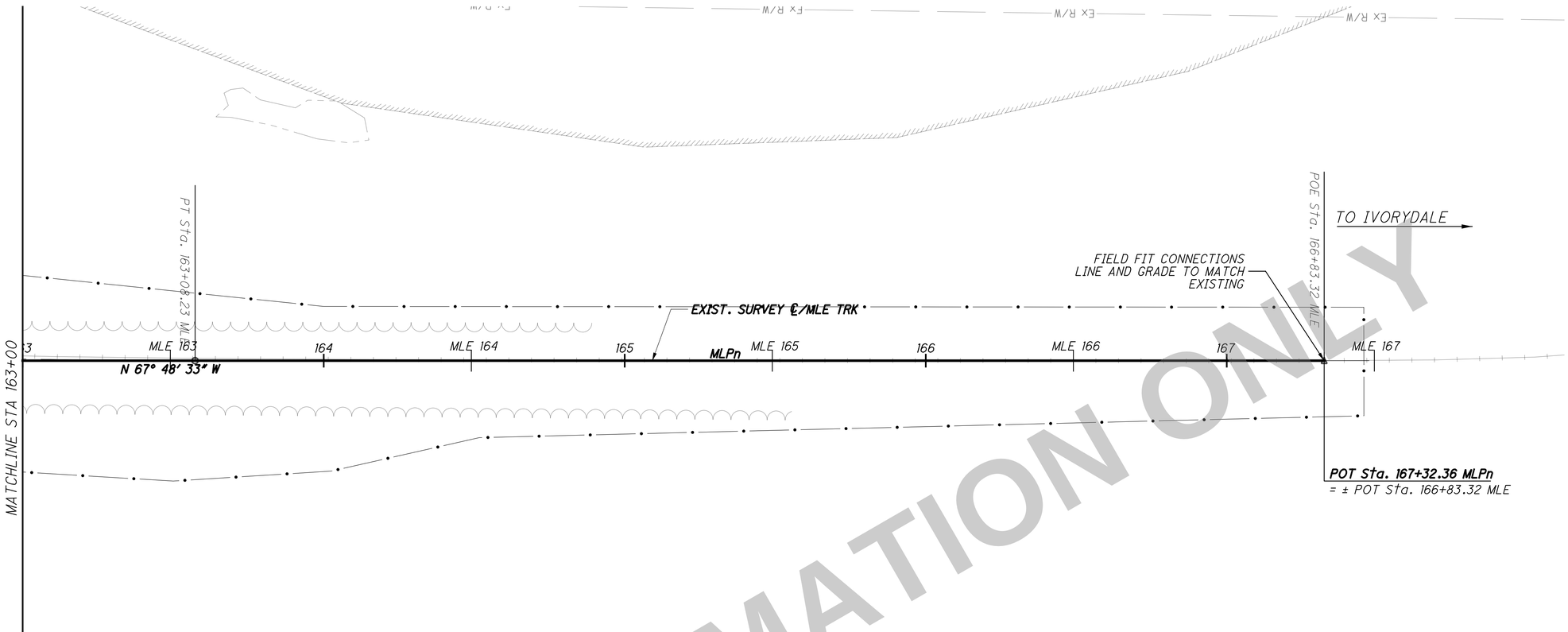
CALCULATED JRG
CHECKED RC

TRACK CONSTRUCTION STAGE 2B
NSRR - STA 158+00 TO STA 163+00

HAM-75-7.85

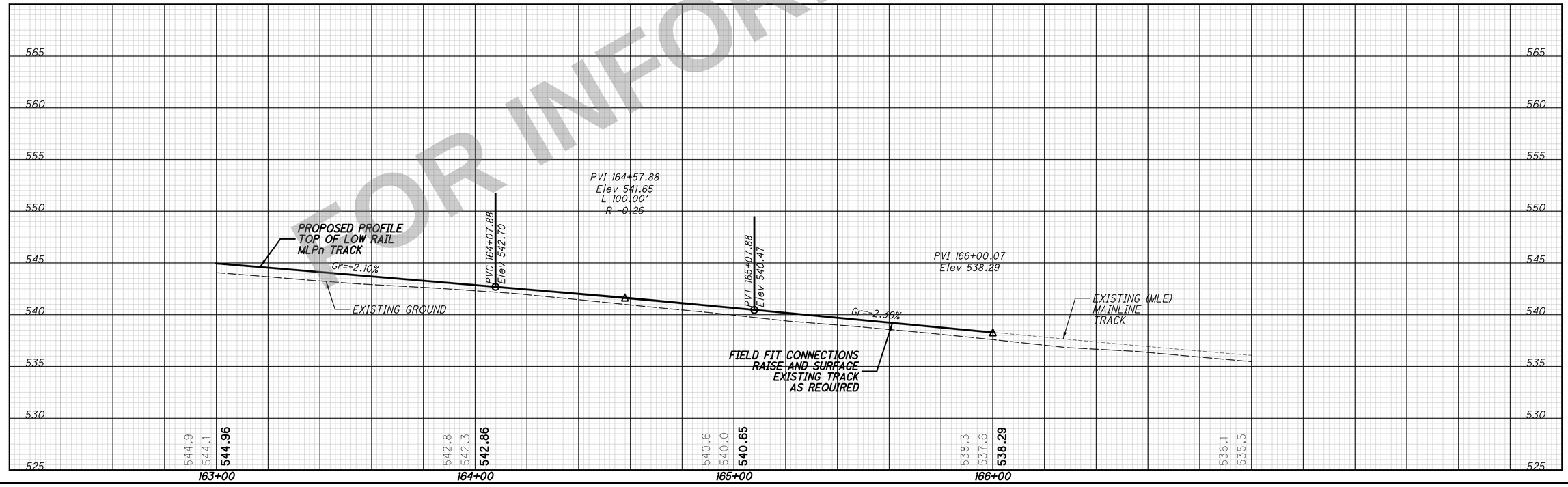
100 / 117

1811
2017



FOR INFORMATION ONLY

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HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

TRACK CONSTRUCTION STAGE 2B
NSRR - STA 163+00 TO STA 168+00

HAM-75-7.85

101 / 117

1812
2017

CONSTRUCT EAST SIDE OF NEW BRIDGE BEFORE STAGE 3A SEE STRUCTURES PLANS

1 PARTIAL CONSTRUCTION OF NEW TRACK PD STA. 127+00 TO 132+00

1 PARTIAL CONSTRUCTION OF NEW TRACKS PD8, PD STA. 132+00 TO 134+00

BEGIN NEW PD TRACK STA 5+28

BEGIN NEW PD8 TRACK STA 0+31

TO IDLEWILD

NS BRIDGE CT-1.41

NORWOOD LATERAL

SR 562

BRICK YARD CONNECTION TEMPORARY TD8 TRACK IN SERVICE

MLPt TRACK IN SERVICE

MATCHLINE STA 132+00

EXIST. SURVEY ℄/MLE TRK

1 SUB-STAGE SEQUENCE OF CONSTRUCTION

SEE ALSO SEQUENCING SHEET 1715

**SEE ALSO GEOMETRIC TABULATIONS AND ALIGNMENT PLANS

FOR INFORMATION ONLY

PVI 126+35.67 Elev 551.54

FIELD FIT CONNECTIONS RAISE AND SURFACE EXISTING TRACK AS REQUIRED

EXISTING MAINLINE TRACK

EQUATION POT EML 127+03.27 BK = POT MLP 127+03.26 AH

POT EML 127+03.27 = POT MLPs 127+03.26 = PS PD 4+00

EML 126+80.79 = PS SIDING 0+00

PVC 128+22.67 Elev 550.91

PVI 128+72.67 Elev 550.74

L 100.00'
R 0.85

PROPOSED PROFILE TOP OF RAIL

PVT 129+22.67 Elev 551.00

EXISTING GROUND

Gr=-0.34%

Gr=0.51%

PVC 130+04.61 Elev 551.41

PVI 130+54.61 Elev 551.67

L 100.00'
R -0.75

EQUATION POT MLPt 130+89.98 BK = POT MLPT A 130+89.24 AH POT MLPs 130+89.25

PVT 131+04.61 Elev 551.55

Gr=-0.24%

POT MLPs 131+30.98 = PS PD4 0+00

MLPs

565 560 555 550 545 540 535 530

551.6 551.1 551.32 550.7 550.99 550.7 550.90 550.7 551.39 550.7 551.56

126+00 127+00 128+00 129+00 130+00 131+00

TRACK CONSTRUCTION STAGE 3A
NSRR - STA 127+00 TO STA 132+00

HAM-75-7.85

102 / 117

1813
2017

CALCULATED JRG CHECKED RC

HORIZONTAL SCALE IN FEET 0 10 20 40

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ESTIMATED TRACK WORK THIS STAGE				
TRACK	C/T	REALIGN	CONSTRUCTION	NEW T.O.s
TD8	135 TF	0 TF	0 TF	-
PD8	0 TF	0 TF	244 TF	-
PD	0 TF	0 TF	406 TF	#10 RH

NEW YARD TRACKS PB, PB1, MLPt/s, PD1, PD2, PD3, PD4 IN SERVICE

MAINTAIN CONNECTION TO BRICK YARD AT ALL TIMES COORDINATE CONSTRUCTION TO MINIMISE OUTAGES

END C/T STA 4+10

CUT / THROW TD8 TO MEET NEW PD8 END OF STAGE 3A [2]

END NEW PD8 TRACK, BEGIN C/T STA 2+75

BRICK YARD CONNECTION TEMPORARY TD8 TRACK IN SERVICE

TRACK WORK LEGEND

EXISTING TRACK
SHIFT TRACK
REMOVE TRACK
PROPOSED TRACK/CLEARANCE POINT

PARTIAL CONSTRUCTION NEW TRACKS PD & PD8 STA. 132+00 TO 134+00 [1]

FUTURE CONSTRUCTION TKS PD & PD5 - STAGE 3B

END NEW PD TRACK STA 9+34

MATCHLINE STA 132+00

MATCHLINE STA 137+50

PS Sta. 134+11.50 MLE

NEW MLPs TRACK IN SERVICE

NEW MLPs TRACK IN SERVICE

D8 D8A D7B D D5 PD4 PD3 PD2 PD1 MLPs PB PB1 PD8 PD MLP MLE

#10 RH

Ex R/W

**SEE ALSO GEOMETRIC TABULATIONS AND ALIGNMENT PLANS

POT MLPs 132+42.38 = PS PD2 0+00

POT MLPs 133+53.78 = PS PB 0+00

POT MLPs 134+87.16 = PS PD1 0+00

Gr=-0.24%

Gr=-0.24%

EXISTING MAINLINE TRACK

EXISTING GROUND

PVC 137+36.85 Elev 550.01

MLPs

565 560 555 550 545 540 535 530 525

550.9 551.32 550.7 551.07 550.4 550.83 550.5 550.59 550.3 550.35 550.1 550.10

132+00 133+00 134+00 135+00 136+00 137+00

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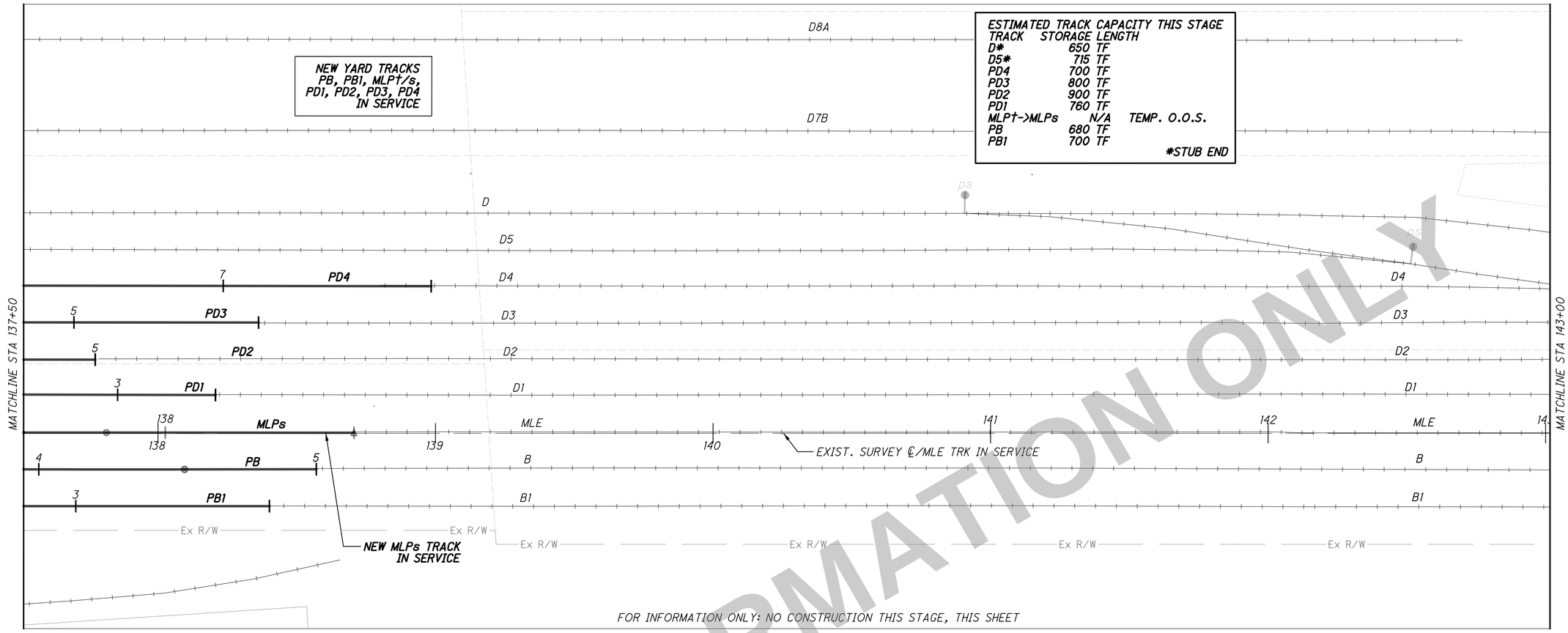
HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED JRG CHECKED RC

TRACK CONSTRUCTION STAGE 3A
NSRR - STA 132+00 TO STA 137+50

HAM-75-7.85

1814 2017



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

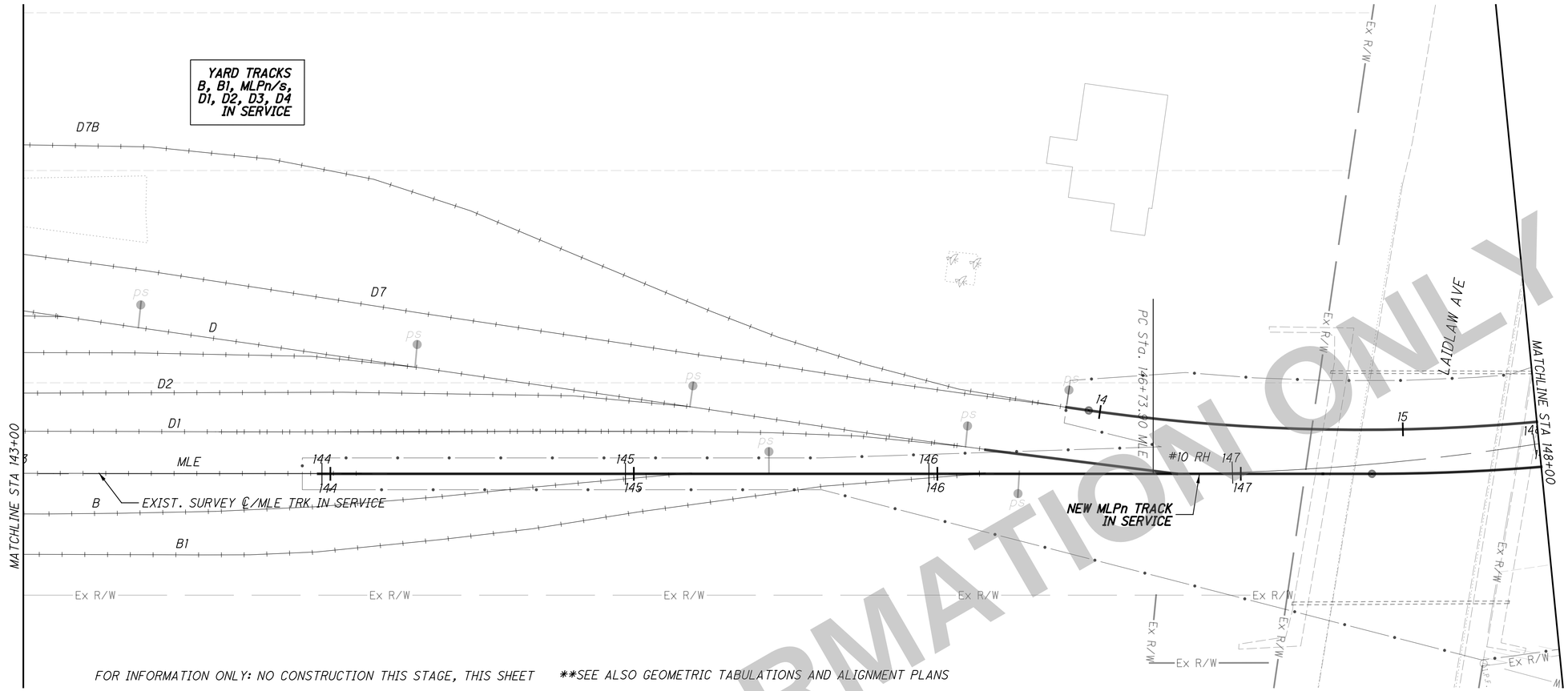
TRACK CONSTRUCTION STAGE 3A
NSRR - STA 137+50 TO STA 143+00

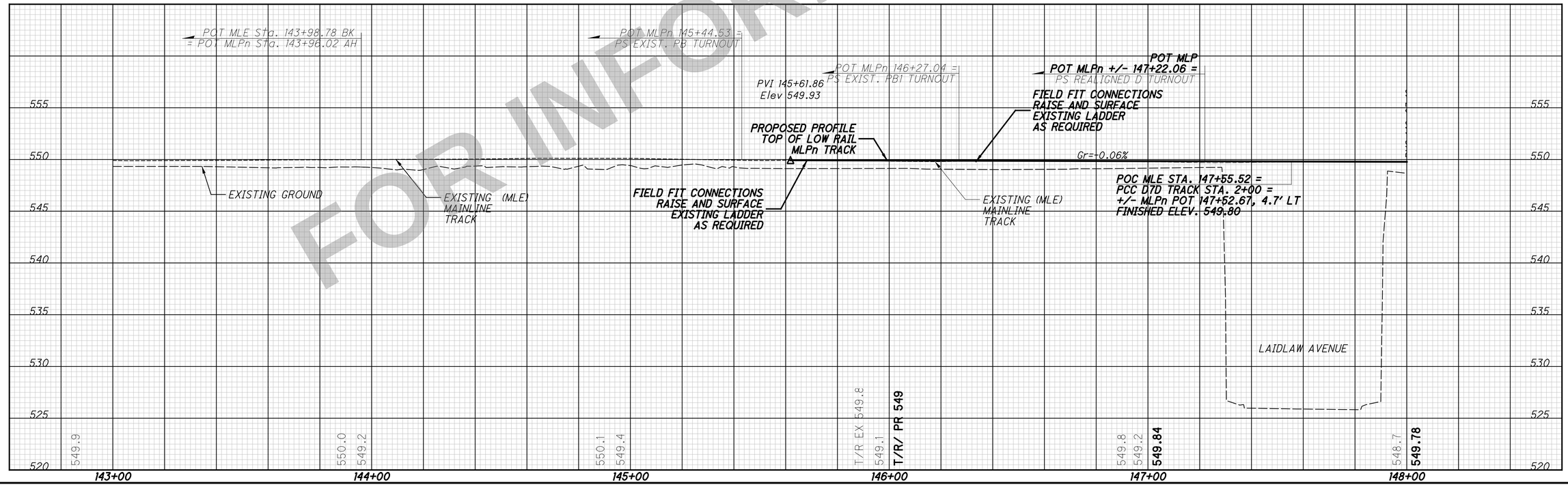
HAM-75-7.85

104 / 117

1815
2017

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FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

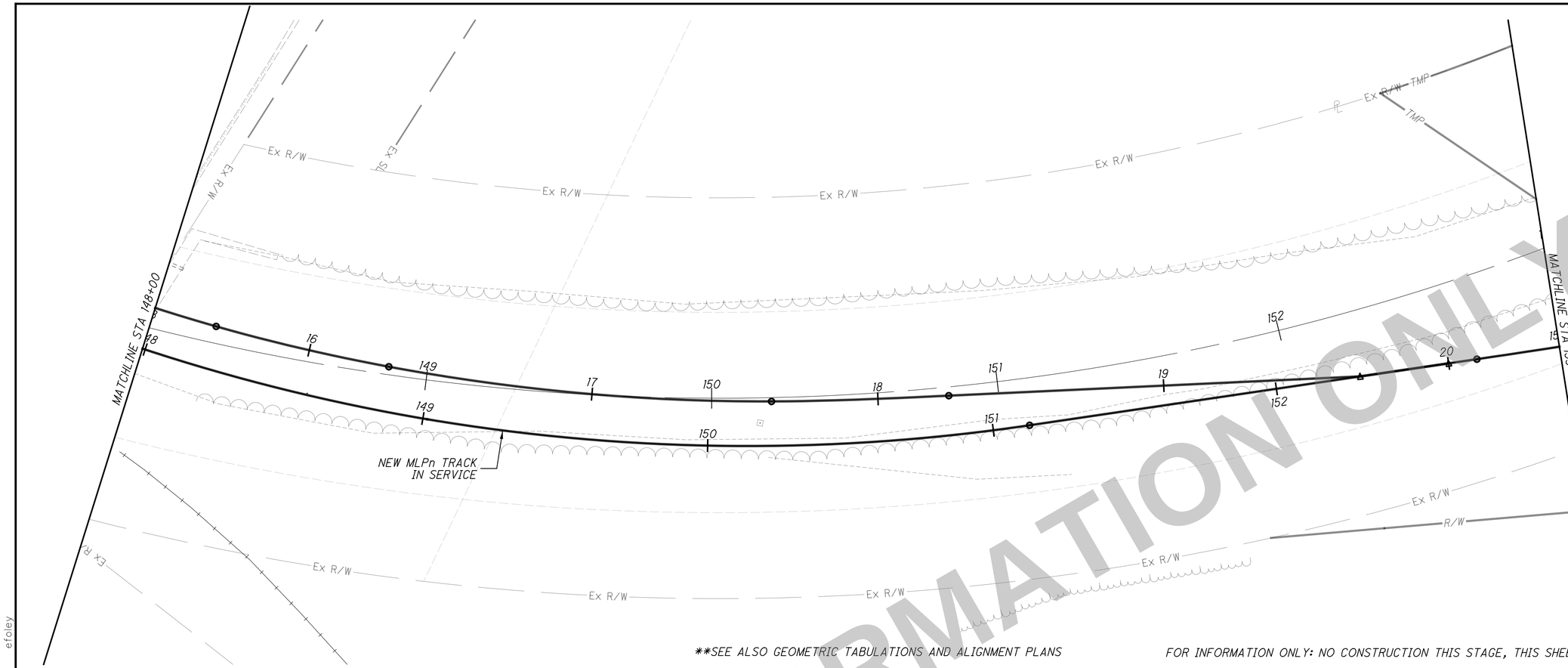
TRACK CONSTRUCTION STAGE 3A
NSRR - STA 143+00 TO STA 148+00

HAM-75-7.85

105 / 117

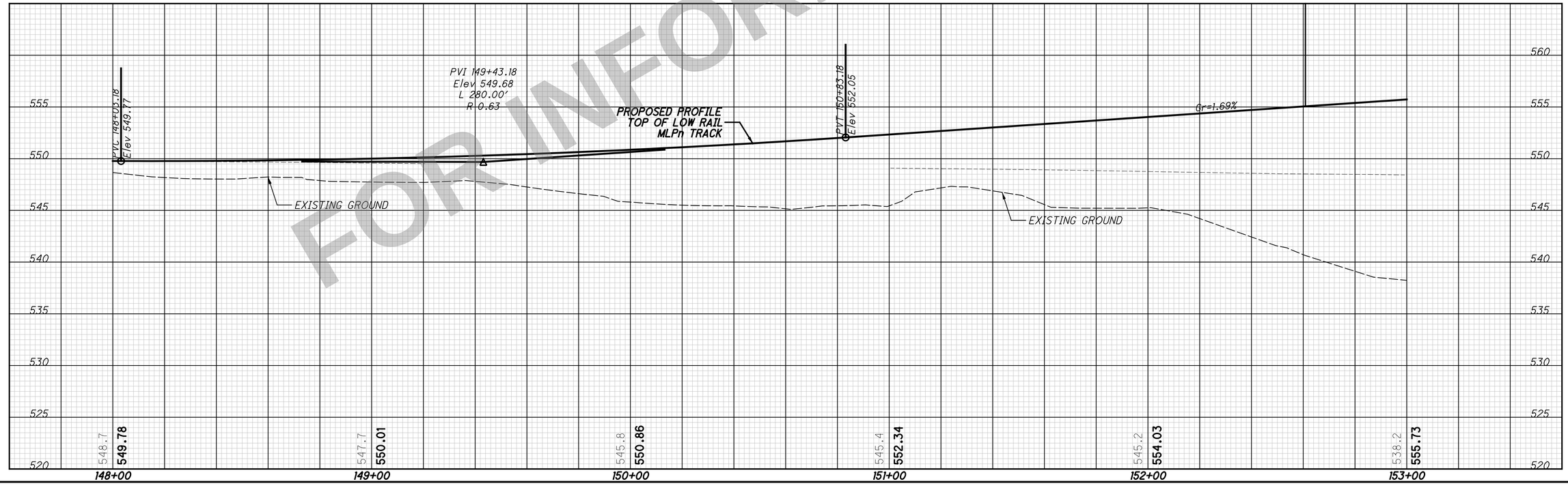
1816
2017

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**SEE ALSO GEOMETRIC TABULATIONS AND ALIGNMENT PLANS

FOR INFORMATION ONLY: NO CONSTRUCTION THIS STAGE, THIS SHEET



FOR INFORMATION ONLY

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HORIZONTAL SCALE IN FEET
0 25 50 100

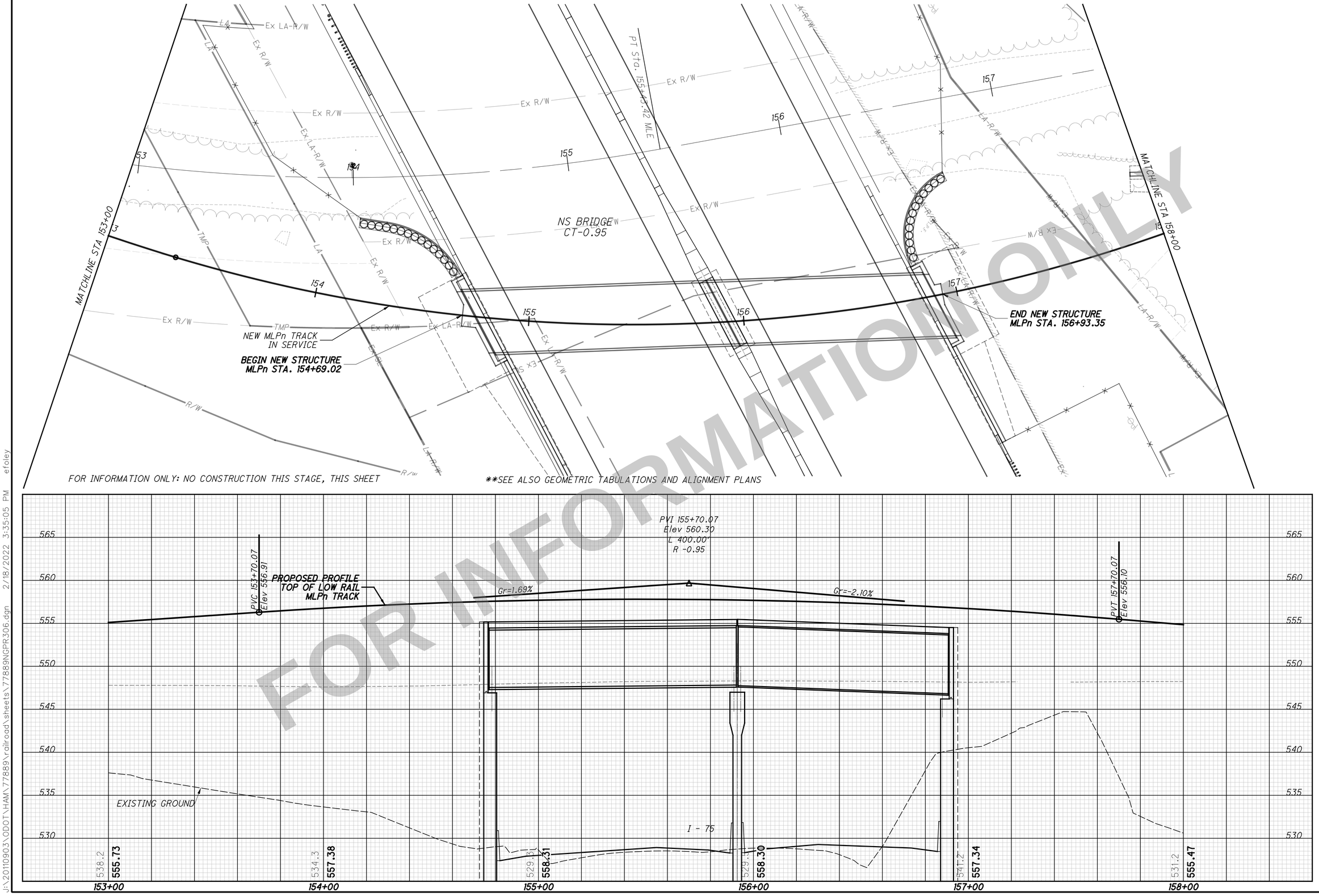
CALCULATED JRG
CHECKED RC

TRACK CONSTRUCTION STAGE 3A
NSRR - STA 148+00 TO STA 153+00

HAM-75-7.85

106 / 117

1817
2017



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

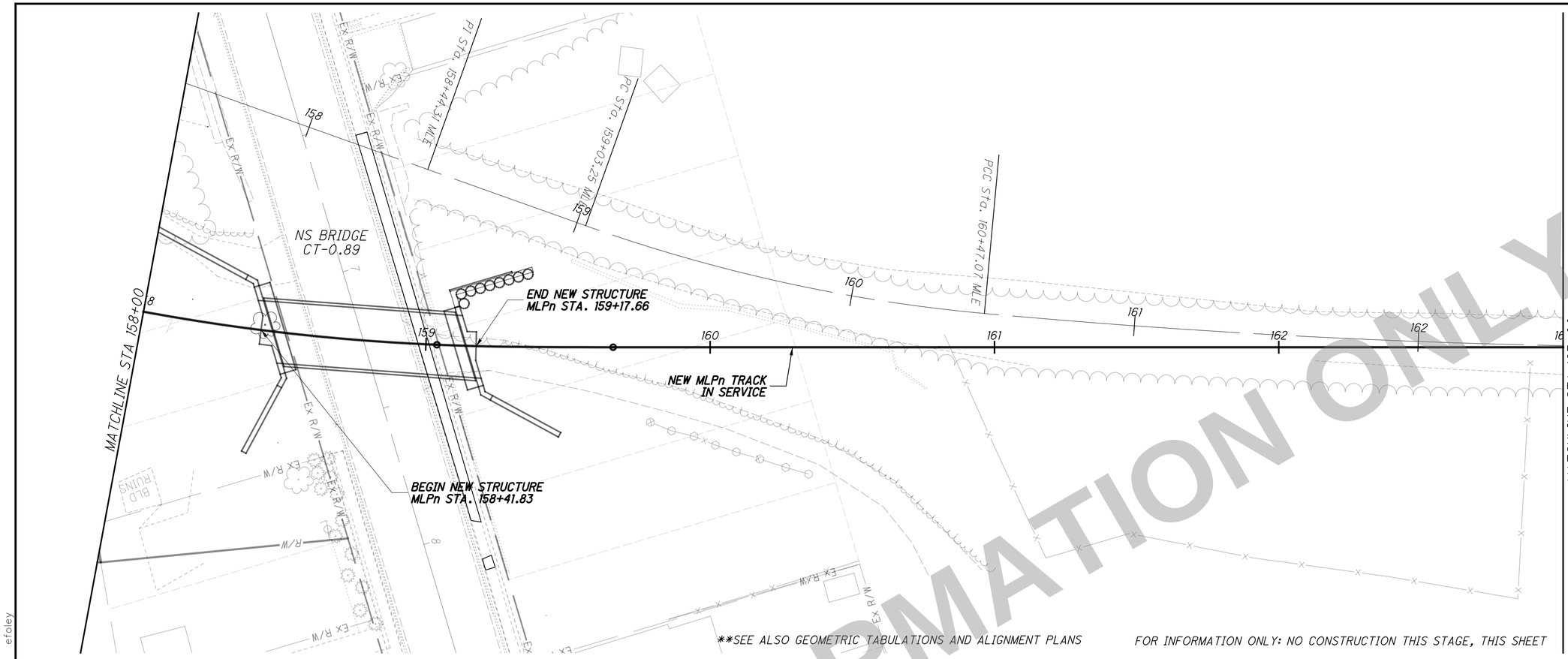
TRACK CONSTRUCTION STAGE 3A
NSRR - STA 153+00 TO STA 158+00

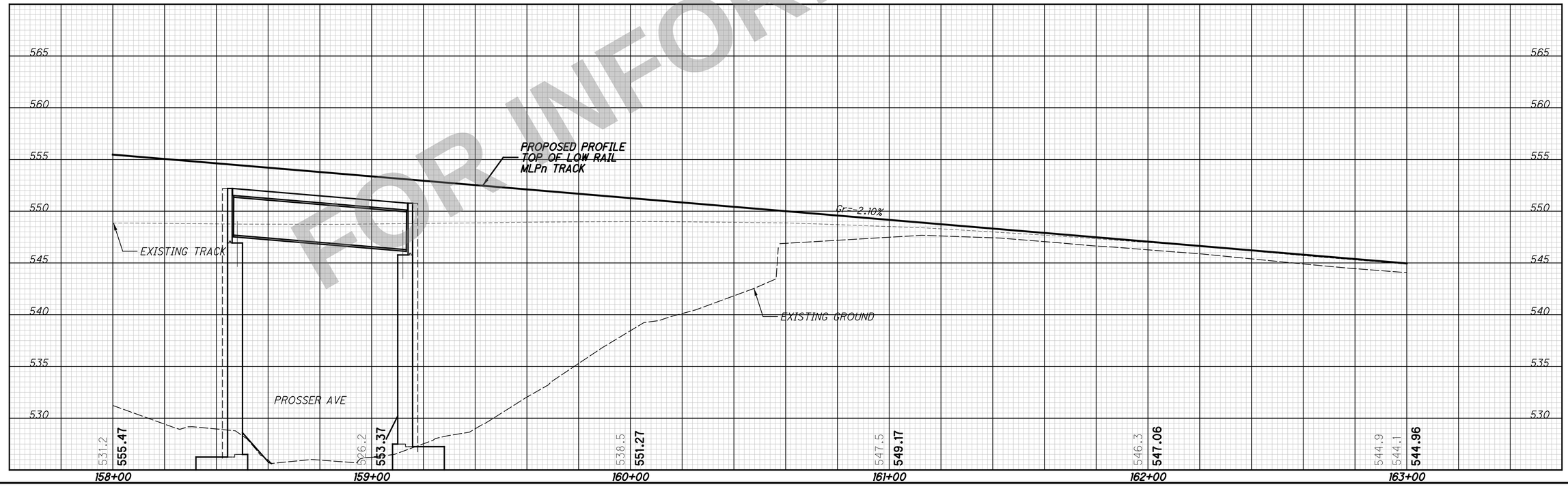
HAM-75-7.85

107 / 117

1818
2017

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FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

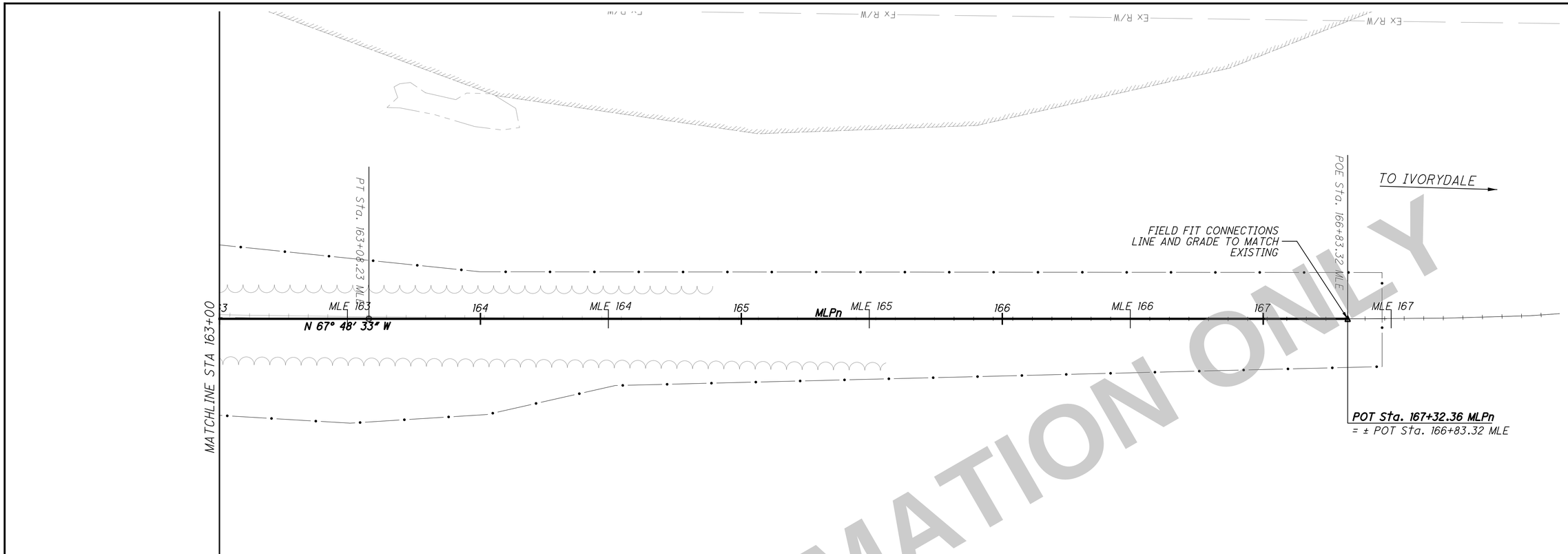
TRACK CONSTRUCTION STAGE 3A
NSRR - STA 158+00 TO STA 163+00

HAM-75-7.85

108 / 117

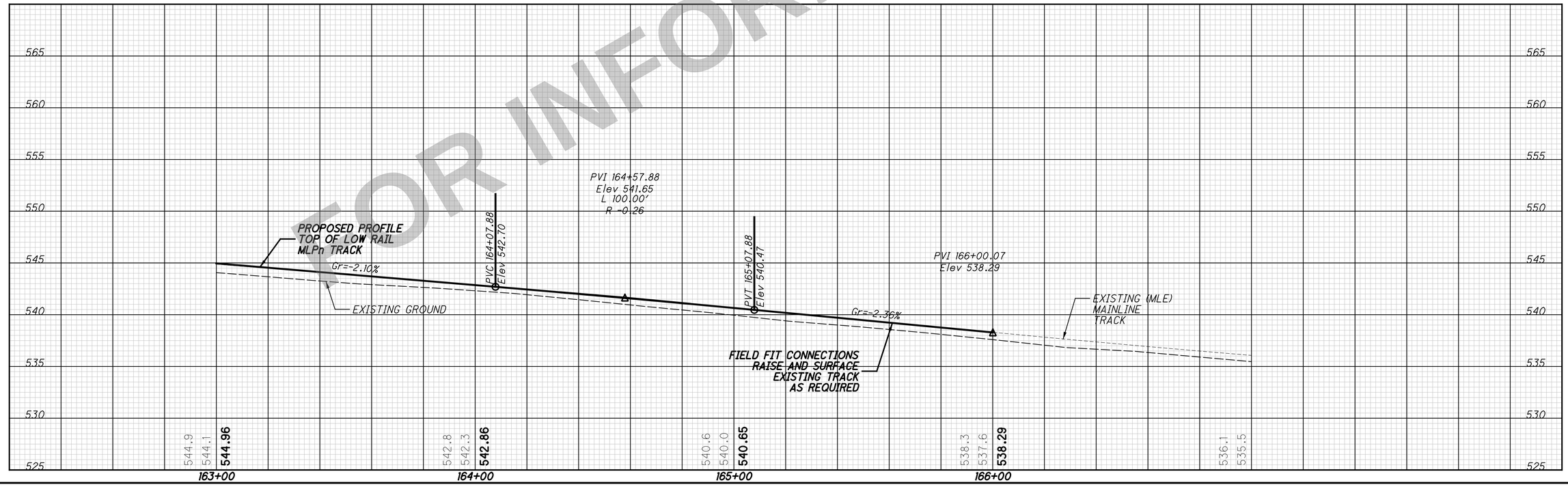
1819
2017

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FOR INFORMATION ONLY: NO CONSTRUCTION THIS STAGE, THIS SHEET

**FOR GREATER DETAIL SEE ALSO CURVE DATA, GEOMETRY TABULATIONS AND PROFILES



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

TRACK CONSTRUCTION STAGE 3A
NSRR - STA 163+00 TO STA 168+00

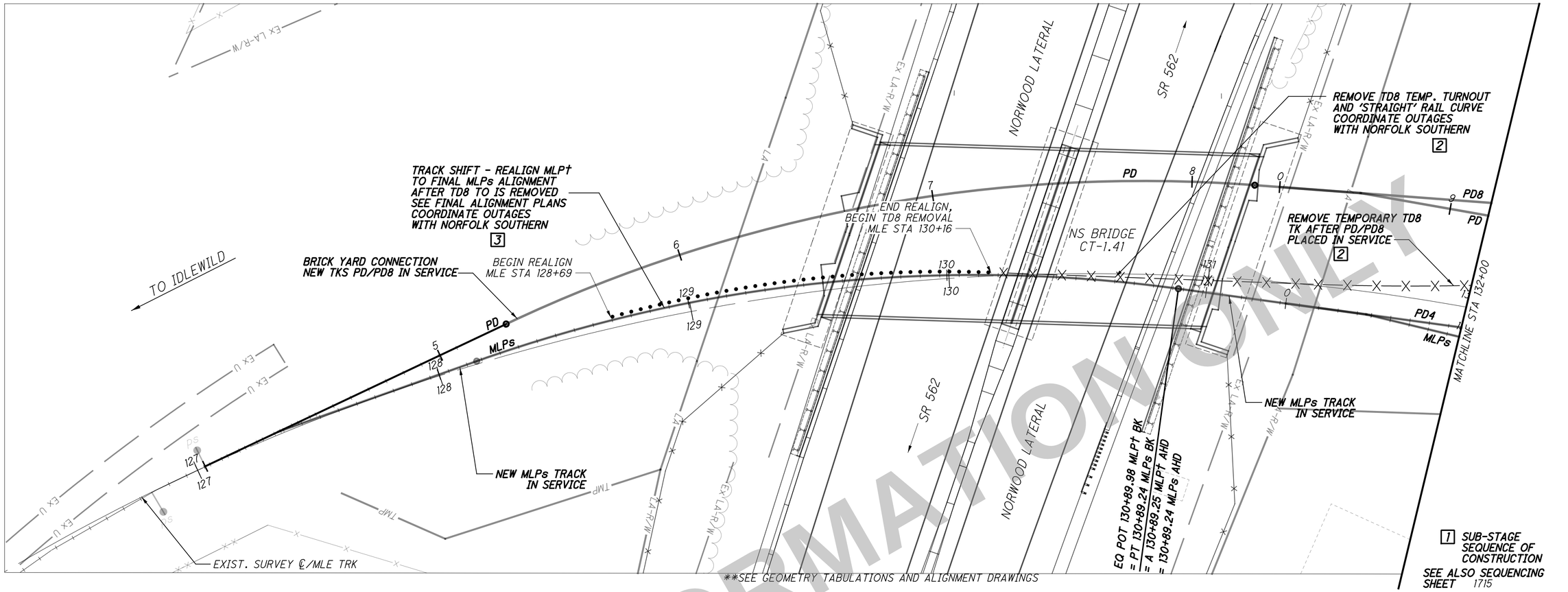
HAM-75-7.85

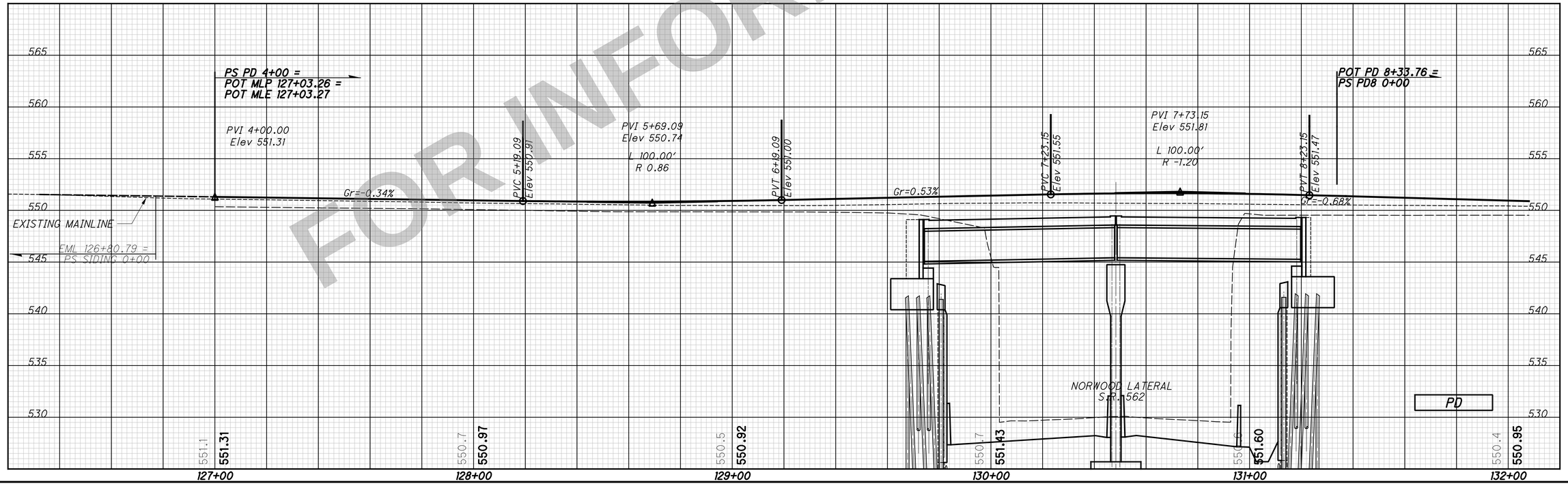
109 / 117

1820
2017

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FOR INFORMATION ONLY

TRACK CONSTRUCTION STAGE 3B
NSRR - STA 127+00 TO STA 132+00

HAM-75-7.85

110 / 117

1821
2017

CALCULATED JRG
CHECKED RC

HORIZONTAL SCALE IN FEET
0 10 20 40

ESTIMATED TRACK WORK THIS STAGE						
TRACK	C/T	REALIGN	CONSTRUCTION	NEW T.O.s	REMOVE TRACK	REMOVE T.O.s
TD8	0 TF	0 TF	0 TF	-	396 TF	1
PD5	161 TF	168 TF	131 TF	#10 RH	0 TF	-
PD	110 TF	113 TF	197 TF	-	0 TF	-
MPLs	0 TF	147 TF	0 TF	-	0 TF	-

NEW YARD TRACKS PB, PB1, MLPt/s, PD1, PD2, PD3, PD4 IN SERVICE

MAINTAIN CONNECTION TO BRICK YARD AT ALL TIMES COORDINATE CONSTRUCTION TO MINIMISE OUTAGES

TRACK WORK LEGEND

EXISTING TRACK
SHIFT TRACK
REMOVE TRACK
PROPOSED TRACK

CUT / THROW TRACKS PD8 TO FINAL ALIGNMENT PLACE IN SERVICE - STAGE 3A [1]

BEGIN C/T MLE STA 134+23 OFFSET 78.31' LT

[3] CUT / THROW TRACKS PD & PD5 TO FINAL ALIGNMENTS AS NECESSARY PLACE IN SERVICE

FIELD FIT CONNECTIONS LINE AND GRADE TO MATCH EXISTING

END C/T, BEGIN REALIGN STA 12+62

FIELD FIT CONNECTIONS LINE AND GRADE TO MATCH EXISTING - TYPICAL ALL TRACKS

END REALIGN STA 13+75

END TD8 REMOVAL MLE STA 133+94 OFFSET 76.80' LT

BRICK YARD CONNECTION TRACKS PD/PD8 IN SERVICE

BEGIN C/T MLE STA 133+93 OFFSET 64.93' LT

END C/T, BEGIN REALIGN STA 3+24

END REALIGN STA 4+92

BEGIN NEW PD TRACK STA 9+34

[3] FINISH CONSTRUCTION OF PD AND PD5 AFTER REMOVAL OF TD8

[2] REMOVE TEMP. TD8 AFTER TKS PD/PD8 PLACED IN SERVICE

BEGIN NEW PD5 TRACK STA 0+31

MATCHLINE STA 132+00

MATCHLINE STA 137+50

PD Sta. 134+11.50 MLE

NEW MLPs TRACK IN SERVICE

NEW MLPs TRACK IN SERVICE

FIELD FIT CONNECTIONS LINE AND GRADE TO MATCH EXISTING - TYPICAL ALL TRACKS

**SEE GEOMETRY TABULATIONS AND ALIGNMENT DRAWINGS

POT PD 9+55.16 = PS PD5 0+00

BEGIN NEW PD TRACK STA 9+34

Gr=-0.68%

BEGIN C/T PD ELEV = 549.23 D ELEV = 548.77

END C/T PD ELEV = 548.52 D ELEV = 548.35

PVC 12+31.23 Elev 548.70

PVI 12+81.23 Elev 548.36 L 100.00' R 0.80

PVT 13+31.23 Elev 548.42

PVI 13+92.50 Elev 548.49

Gr=0.12%

FIELD FIT CONNECTIONS RAISE AND SURFACE EXISTING TRACK AS REQUIRED

EXISTING TRACK PD

PD

565 560 555 550 545 540 535 530 525

550.4 550.95 550.1 550.27 549.2 549.59 548.4 548.91 548.4 548.42

132+00 133+00 134+00 135+00 136+00 137+00

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED JRG CHECKED RC

TRACK CONSTRUCTION STAGE 3B
NSRR - STA 132+00 TO STA 137+50

HAM-75-7.85

111 / 117

1822 2017

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NEW YARD TRACKS
PB, PB1, MLP†/s,
PD1, PD2, PD3, PD4
IN SERVICE

ESTIMATED TRACK CAPACITY THIS STAGE

TRACK	STORAGE LENGTH
D	670 TF
D5	715 TF
PD4	700 TF
PD3	800 TF
PD2	900 TF
PD1	760 TF
MLPs	N/A
PB	680 TF
PB1	700 TF

*STUB END

D8A
D7B
D
D5
PD4
PD3
PD2
PD1
MLPs
PB
PB1
D4
D3
D2
D1
MLE
B
B1
7
5
3
138
4
MATCHLINE STA 137+50
MATCHLINE STA 143+00
139
140
141
142
EXIST. SURVEY ℄/MLE TRK
Ex R/W
NEW MLPs TRACK
IN SERVICE

FOR INFORMATION ONLY: NO CONSTRUCTION THIS STAGE, THIS SHEET

PVI 137+86.85
Elev 549.89
L 100.00'
R 0.26
PROPOSED
PROFILE
TOP OF RAIL
PVT 138+36.85
Elev 549.90
PVI 138+89.61
Elev 549.91
Gr=0.02%
EXISTING
MAINLINE
TRACK
EXISTING
GROUND
FIELD FIT CONNECTIONS
RAISE AND SURFACE
EXISTING TRACK
AS REQUIRED
EXISTING (MLE)
MAINLINE
TRACK
565
560
555
550
545
540
535
530
525
549.9
549.91
138+00
139+00
140+00
141+00
142+00
143+00

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED JRG
CHECKED RC

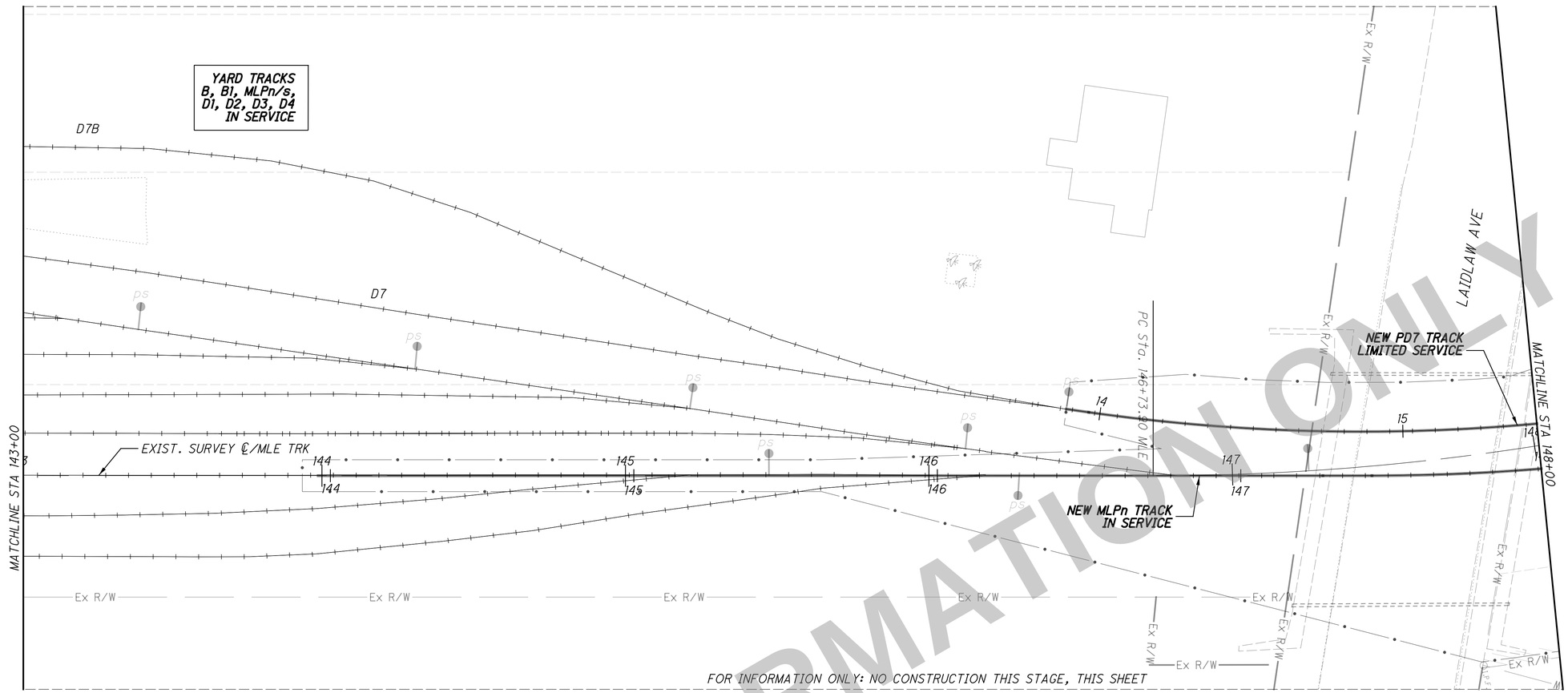
TRACK CONSTRUCTION STAGE 3B
NSRR - STA 137+50 TO STA 143+00

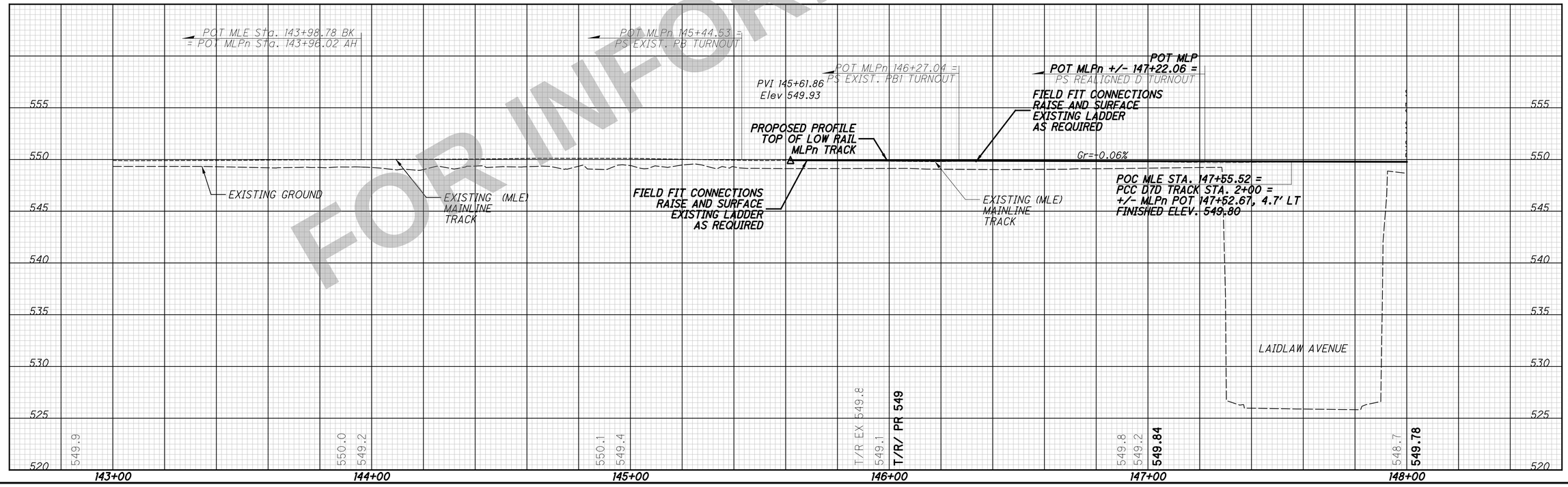
HAM-75-7.85

112 / 117

1823
2017

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FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

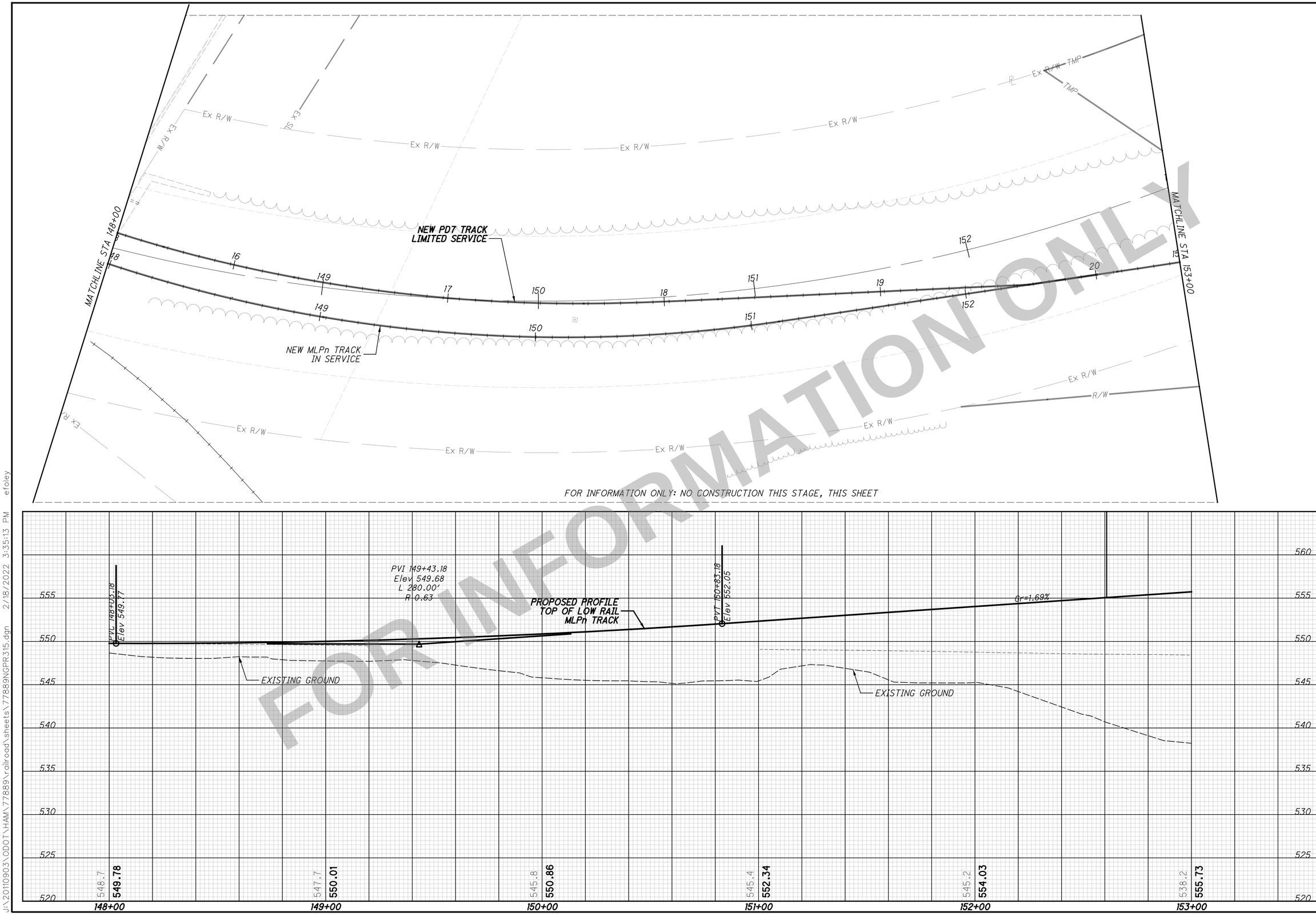
TRACK CONSTRUCTION STAGE 3B
NSRR - STA 143+00 TO STA 148+00

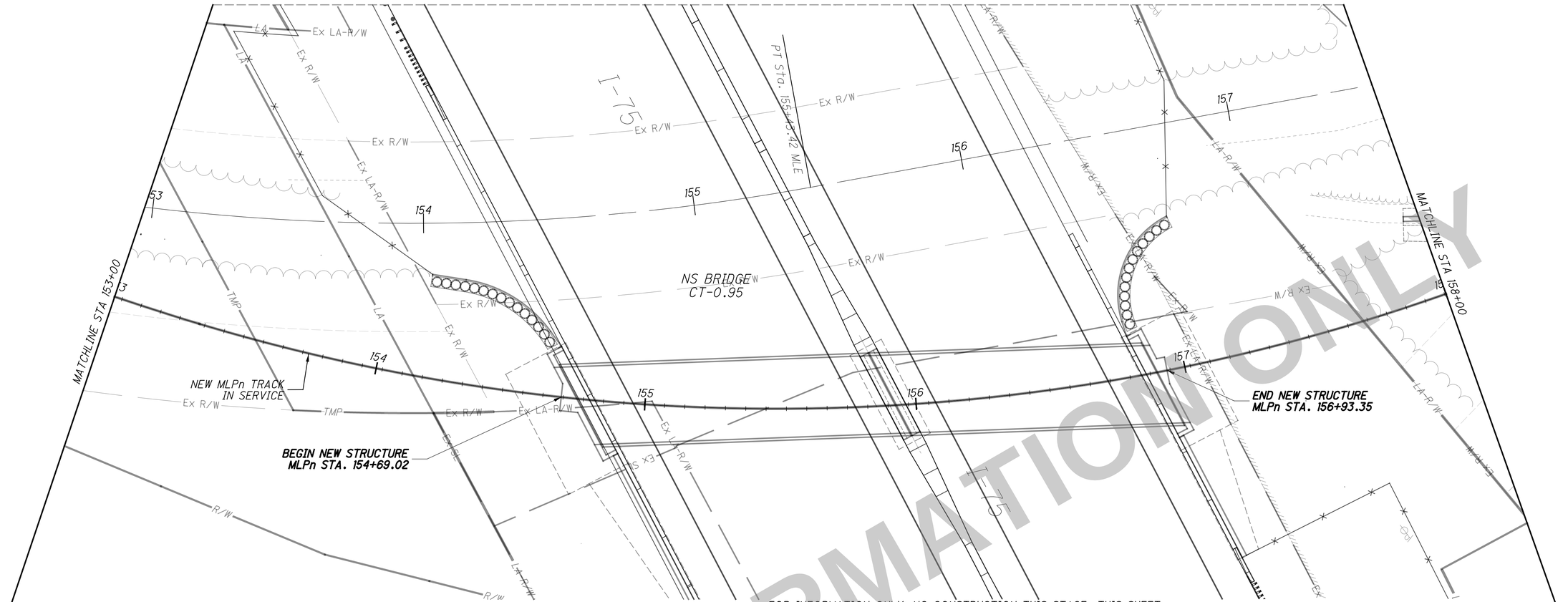
HAM-75-7.85

113 / 117

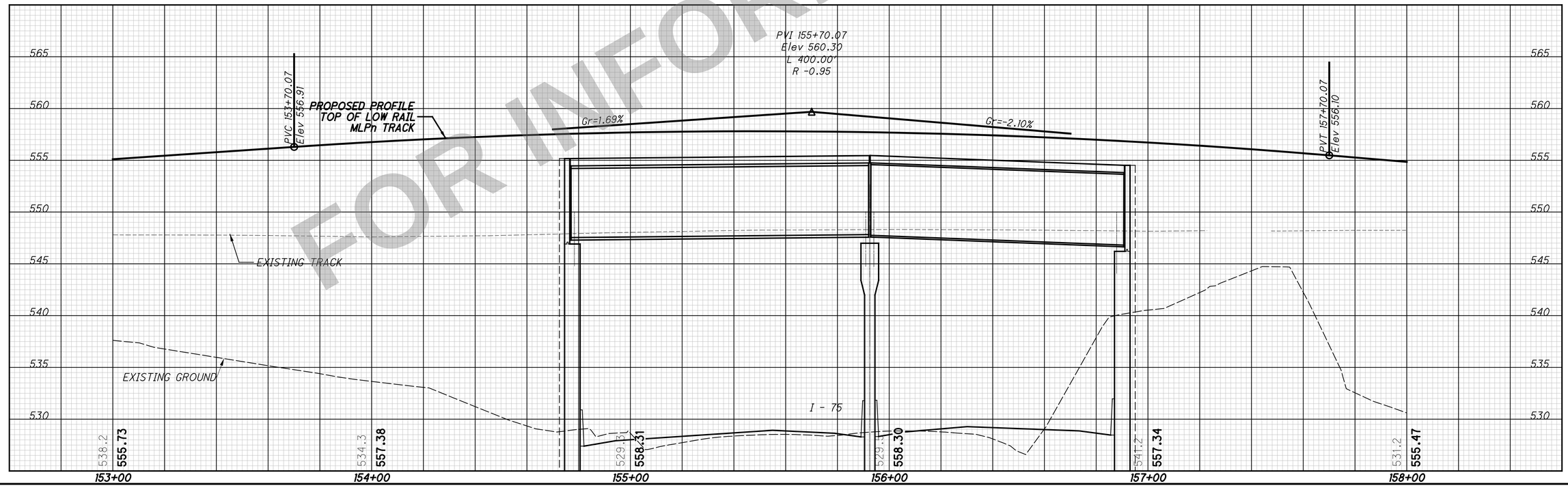
1824
2017

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MATCHLINE STA 148+00
MATCHLINE STA 153+00
NEW PD7 TRACK
LIMITED SERVICE
NEW MLPn TRACK
IN SERVICE
Ex R/W
Ex R/W TMP
TMP
Ex R/W
Ex R/W
Ex R/W



FOR INFORMATION ONLY: NO CONSTRUCTION THIS STAGE, THIS SHEET



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED JRG
CHECKED RC

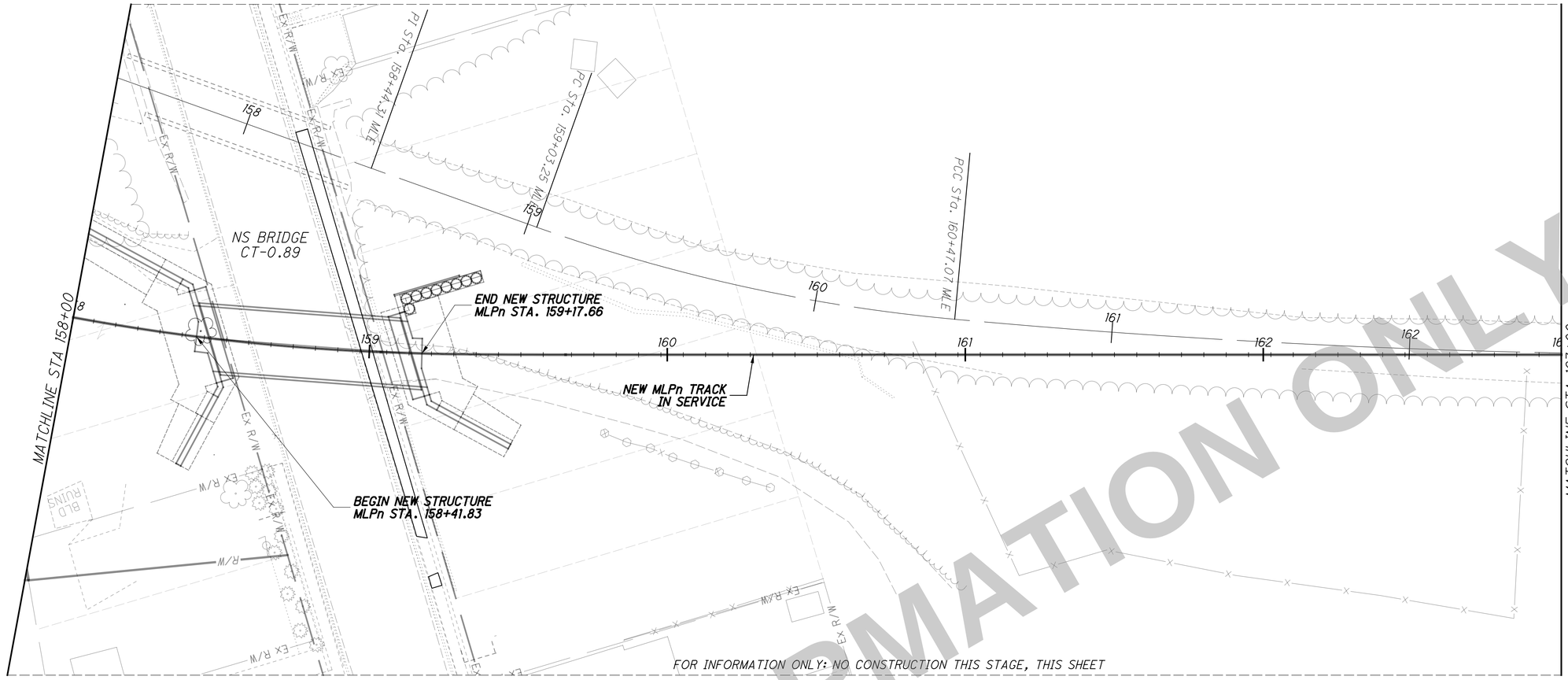
TRACK CONSTRUCTION STAGE 3B
NSRR - STA 153+00 TO STA 158+00

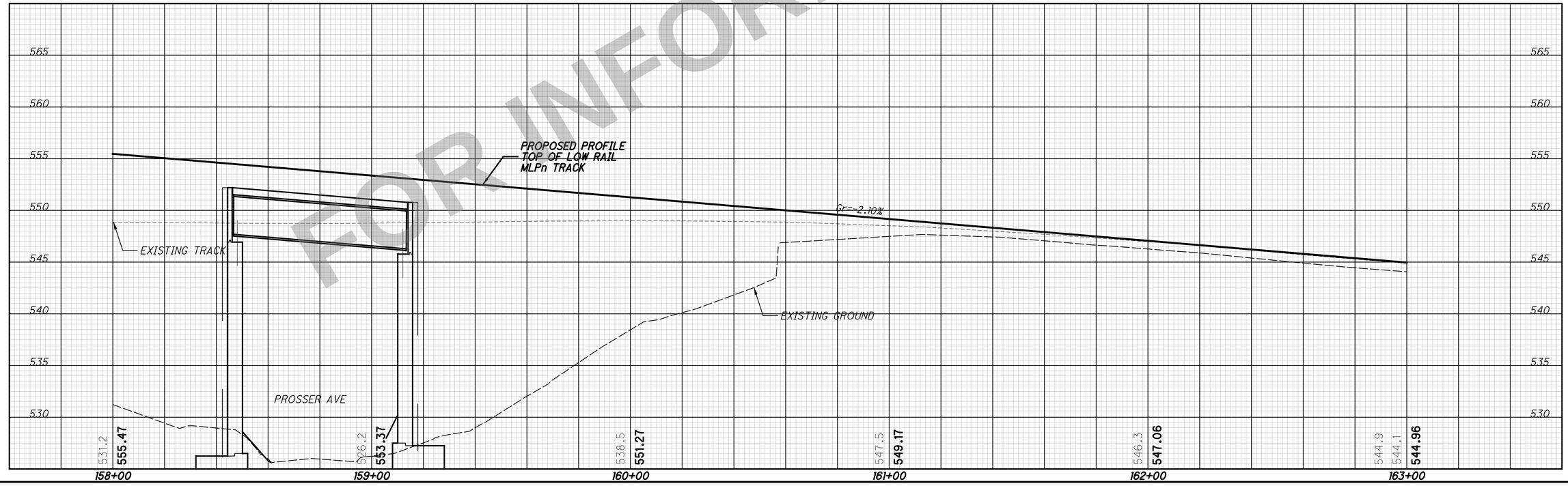
HAM-75-7.85

115 / 117

1826 2017

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FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

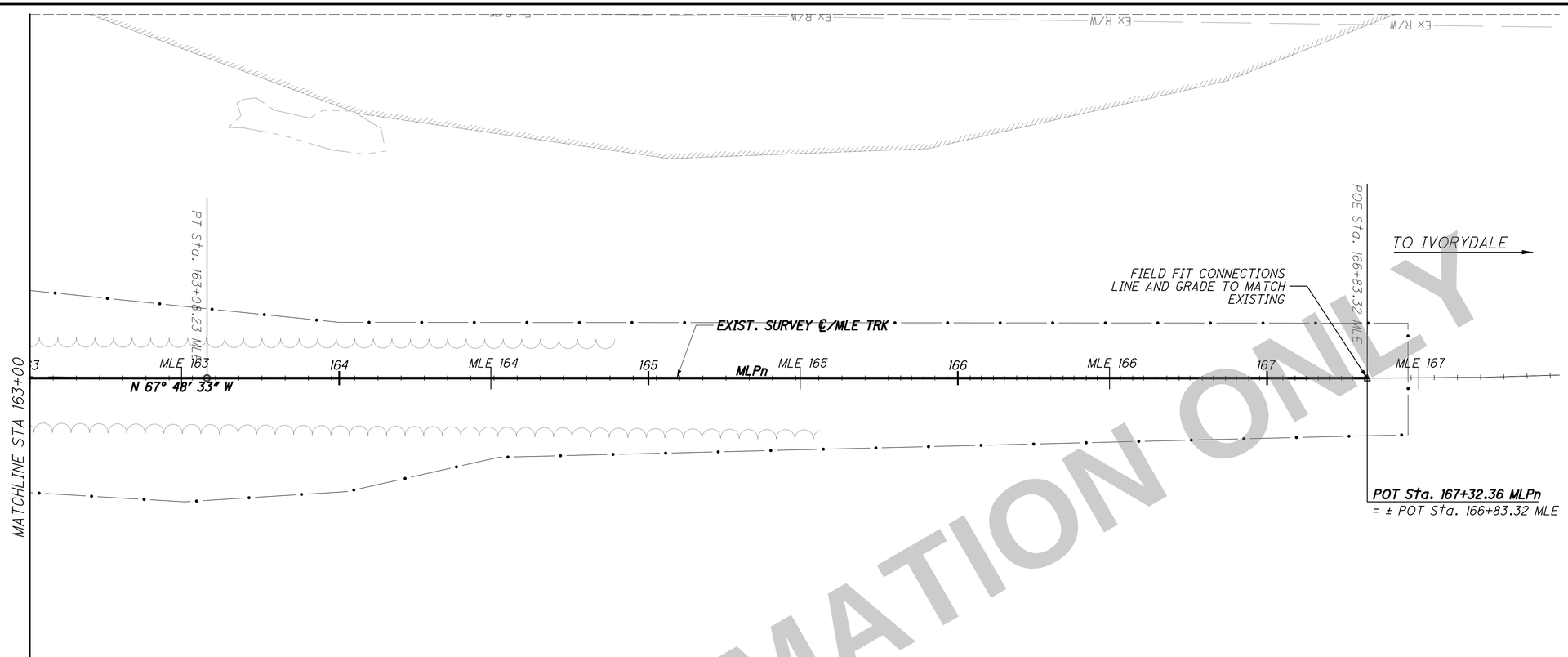
TRACK CONSTRUCTION STAGE 3B
NSRR - STA 158+00 TO STA 163+00

HAM-75-7.85

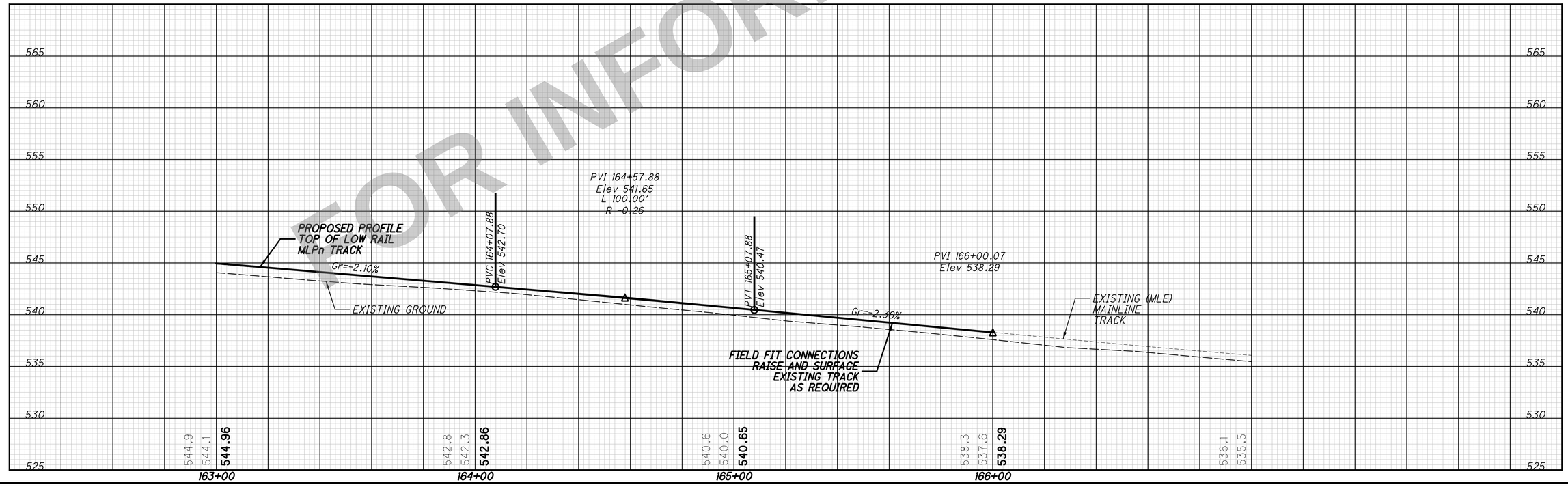
116 / 117

1827
2017

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HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JRG
CHECKED RC

TRACK CONSTRUCTION STAGE 3B
NSRR - STA 163+00 TO STA 168+00

HAM-75-7.85

117 / 117

1828
2017

PROJECT DESCRIPTION

THE ROADWAY EXPLORATION PERFORMED FOR THE HAM-75-7.85 PROJECT IN HAMILTON COUNTY, OHIO. THIS PROJECT REPRESENTS THE NORTHERN PORTION OF THE HAM-75-2.30 MILL CREEK EXPRESSWAY IMPROVEMENTS BETWEEN I-75 MAINLINE STATION 410+00 AND 531+73.91. THE OVERALL PROJECT WILL CONSIST OF ROADWAY IMPROVEMENTS, AND SEVERAL RETAINING WALL AND BRIDGE REPLACEMENTS ALONG I-75 FROM VINE STREET TO STATE ROUTE 126. IT IS UNDERSTOOD THAT THE EXISTING ROADWAY WILL BE WIDENED FROM THREE LANES IN BOTH DIRECTIONS TO ADD AN ADDITIONAL LANE TO THE OUTSIDE OF THE EXISTING ALIGNMENT. BASED ON THE PROPOSED PROFILE INFORMATION PROVIDED, CUTS OF UP TO 3.0 FEET FILL HEIGHTS OF UP TO 7.0 FEET WILL BE REQUIRED TO ACHIEVE THE PROPOSED SUBGRADE ELEVATION. INTERCHANGE RAMPS ARE PROPOSED AT THE INTERCHANGES WITH SR-562M SEYMOUR AVENUE, AND PADDOCK ROAD. THESE RAMPS ARE NOT INCLUDED IN THIS ROADWAY EXPLORATION SET AS BORINGS WERE NOT OBTAINED ALONG THESE ALIGNMENTS.

HISTORIC RECORDS

BORINGS FROM THE HAM-75-7.16 MILLCREEK EXPRESS WAY/HAM-562-0.28 NORWOOD LATERAL, HAM-4W-7.81 AND HAM-75-9.75 PROJECTS ARE PRESENTED IN THIS ROADWAY EXPLORATION.

GEOLOGY

THE SITE LIES WITHIN THE ILLINOIAN TILL PLAIN OF THE TILL PLAINS SECTION. THIS AREA IS CHARACTERIZED BY ROLLING GROUND MORAINE DEPOSITS WITH MANY BURIED VALLEYS ALTERNATING BETWEEN BROAD FLOODPLAINS AND BEDROCK GORGES. THE SITE AREA CONTAINS SILTY LOAM TILL DEPOSITED AS GROUND MORAINE COVERED WITH LOESS AND DISSECTED BY THE MODERN DAY MILL CREEK. BASED ON BEDROCK GEOLOGY AND TOPOGRAPHY MAPS OF THE AREA, FROM THE OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR), THE UNDERLYING BEDROCK CONSISTS OF THE ORDOVICIAN-AGED POINT PLEASANT FORMATION. ALONG THE PROJECT ALIGNMENT, THE BEDROCK SURFACE DIRECTLY BENEATH I-75 LIES ALONG THE SLOPE OF A BEDROCK VALLEY AND THE BEDROCK SURFACE RANGES BETWEEN APPROXIMATE ELEVATIONS OF 385 TO 425 FEET MSL. OVERALL, THE BEDROCK SURFACE ALONG THE MAJORITY OF THE PROJECT ALIGNMENT SLOPES DOWNWARD TO THE NORTHWEST. ACCORDING TO BEDROCK TOPOGRAPHY MAPPING, THE DEPTH TO TOP OF BEDROCK IN THE VICINITY OF THE PROJECT RANGES FROM APPROXIMATELY 120 TO 170 FEET BELOW THE EXISTING GROUND SURFACE.

RECONNAISSANCE

CTL ENGINEERING PERSONNEL PERFORMED A SITE RECONNAISSANCE IN 2007 TO LOCATE ALL OF THE SUBGRADE BORING LOCATIONS. RESOURCE INTERNATIONAL PERFORMED A SITE RECONNAISSANCE IN 2006 TO LOCATE BORING LOCATIONS AS A PART OF HAM-75-10.10 (PID 76256) PRELIMINARY EXPLORATION. THE PROJECT ALIGNMENT STARTS AT THE SOUTH END OF THE I-75 AND SR 562 INTERCHANGE AND EXTENDS NORTH TO THE MILL CREEK CROSSING, JUST SOUTH OF THE I-75 AND SR 126 INTERCHANGE. THE IMPROVEMENTS ALSO INCLUDE RECONFIGURING THE INTERCHANGE RAMPS BETWEEN I-75 AND SR 562 AND WIDENING OF SR 562 NEAR THE INTERCHANGE. THE EXISTING I-75 MAINLINE ALONG THE PROJECT ALIGNMENT IS A SIX-LANE, ASPHALT PAVED ROADWAY AND THERE ARE EXISTING INTERCHANGES WITH SR 562, TOWNE STREET AND PADDOCK ROAD. THE EXISTING SR 562 IS A FOUR-LANE, ASPHALT PAVED ROADWAY THAT CONNECTS I-75 WITH I-71 TO THE EAST. THE EXISTING NORFOLK SOUTHERN IS A SINGLE TRACK RAILWAY WHERE IT CROSSES OVER PROSSER AVENUE AND I75, WHICH TURNS SOUTH ALONG THE EAST SIDE OF I-75 AND CROSSES LAIDLAW AVENUE INTO BERRY YARD, AND THEN EXITS THE YARD TO THE SOUTH WHERE UP TO SIX TRACKS CROSS OVER SR 562. THE LAND USAGE AROUND THE PROJECT IS PRIMARILY COMMERCIAL AND RESIDENTIAL.

SUBSURFACE EXPLORATION

BETWEEN AUGUST 17 AND SEPTEMBER 11, 2006, A TOTAL OF THIRTEEN (13) SUBGRADE BORINGS, DESIGNATED AS N-001-0-06 THROUGH N-007-0-06 AND S-001-0-06 THROUGH S-006-0-06, WERE DRILLED BY RII TO DEPTHS RANGING FROM 7.3 TO 26.8 FEET BELOW EXISTING GRADE ALONG THE PROPOSED ALIGNEMNT OF I-75. IN ADDITION TO THE AFOREMENTIONED BORINGS, BETWEEN JULY 9 AND OCTOBER 5, 2007, A TOTAL OF TWENTY NINE (29) SUBGRADE BORINGS, DESIGNATED AS B-158-0-07, B-159-0-07, B-164-0-07 THROUGH B-167-0-07, B-170-0-07, B-171-0-07, B-174-0-07, B-180-0-07, B-183-0-07,B-185-0-07, B-187-0-07, B-189-0-07, B-190-0-07, B-191-0-07, B-193-0-07, B-194-0-07 THROUGH B-196-0-07, B-199-0-07 THROUGH B-202-0-07, B-207-0-07, B-209-0-07, B-213-0-07, B-215-0-07, AND B-216-0-07, WERE DRILLED BY CTL ENGINEERING TO DEPTHS RANGING FROM 6.0 TO 15.0 FEET BELOW EXISTING GRADE ALONG THE PROPOSED ALIGNMENT OF I-75.

THE BORINGS WERE DRILLED WITH TRUCK, TRACK AND ATV-MOUNTED ROTARY DRILL RIGS USING A 3.25-INCH INSIDE DIAMETER, HOLLOW-STEM AUGER, OR A 4.5-INCH OUTSIDE DIAMETER, SOLID FLIGHT AUGER TO ADVANCE THE HOLES. IN GENERAL, STANDARD PENETRATION TEST (SPT) AND SPLIT SPOON SAMPLING WAS PEFORMED IN CONTINUOUSLY TO A DEPTH OF 6.0 FEET BELOW THE PAVEMENT SECTION AND AT 2.5 TO 5.0 FOOT INTERVALS THEREAFTER USING AN AUTOMATIC HAMMER SYSTEM. NO CALIBRATION DATA IS AVAILABLE FOR THE HAMMER USED DURING THE SPT TESTING FOR THE EXPLORATIONS PERFORMED IN 2006 BY RII OR IN 2007 BY CTL ENGINEERING.

EXPLORATION FINDINGS

FOURTEEN (14) BORINGS ENCOUNTERED 0.2 TO 0.7 FEET OF TOPSOIL AT THE EXISTING GROUND SURFACE. TWENTY-THREE (23) BORINGS WERE DRILLED THROUGH THE EXISTING PAVEMENT OF I-75. NINETEEN (19) BORINGS ENCOUTERED 0.4 TO 1.0 FEET OF ASPHALT AT THE EXISTING GROUND SURFACE. EIGHTEEN (18) BORINGS ENCOUNTERED 0.3 TO 0.9 FEET OF CONCRETE BELOW THE ASPHALT OR AT THE GROUND SURFACE. SIXTEEN (16) BORINGS ENCOUNTERED 0.2 TO 0.1 FEET OF AGGREGATE BASE BENEATH THE ASPHALT AND/OR CONCRETE.

LEGEND

DESCRIPTION	ODOT CLASS	CLASSIFIED MECH./VISUAL	
GRAVEL AND/OR STONE FRAGMENTS	*A-1-a*	*2*	*4*
GRAVEL AND/OR STONE FRAGMENTS WITH SAND	*A-1-b*	*14*	*7*
GRAVEL AND/OR ST. FRAGS. WITH SAND AND SILT	*A-2-4*	*6*	*1*
GRAVEL AND/OR ST. FRAGS. WITH SAND, SILT AND CLAY	*A-2-6*	*1*	*3*
FINE SAND	*A-3*	*0*	*8*
COARSE AND FINE SAND	*A-3a*	*14*	*28*
SANDY SILT	*A-4a*	*22*	*22*
SILT	*A-4b*	*5*	*4*
SILT AND CLAY	*A-6a*	*12*	*27*
SILTY CLAY	*A-6b*	*3*	*6*
CLAY	*A-7-6*	*4*	*3*
	TOTAL	*83*	*116*

PAVEMENT OR BASE = X = APPROXIMATE THICKNESS *VISUAL*

SOD AND TOPSOIL = X = APPROXIMATE THICKNESS *VISUAL*

EXPLORATION LOCATION - PLAN VIEW

HISTORIC BORING LOCATION - PLAN VIEW

DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.

WC INDICATES WATER CONTENT IN PERCENT.

W— INDICATES FREE WATER ELEVATION.

▼— INDICATES STATIC WATER ELEVATION.

X/Y/Z NUMBER OF BLOWS FOR STANDARD PENETRATION TEST
X= NUMBER OF BLOWS FOR FIRST 6 INCHES
Y= NUMBER OF BLOWS FOR SECOND 6 INCHES
Z= NUMBER OF BLOWS FOR THIRD 6 INCHES

N_{60} INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.

● INDICATES A PLASTIC MATERIAL WITH A MOISTURE CONTENT EQUAL TO OR GREATER THAN THE LIQUID LIMIT MINUS 3.

INDICATES A NON-PLASTIC MATERIAL WITH A MOISTURE CONTENT GREATER THAN 25% OR GREATER THAN 19% WITH A WET APPEARANCE.

* INDICATES A SAMPLE TAKEN WITHIN 3 FT OF PROPOSED GRADE.

SS INDICATES A SPLIT-SPOON SAMPLE.

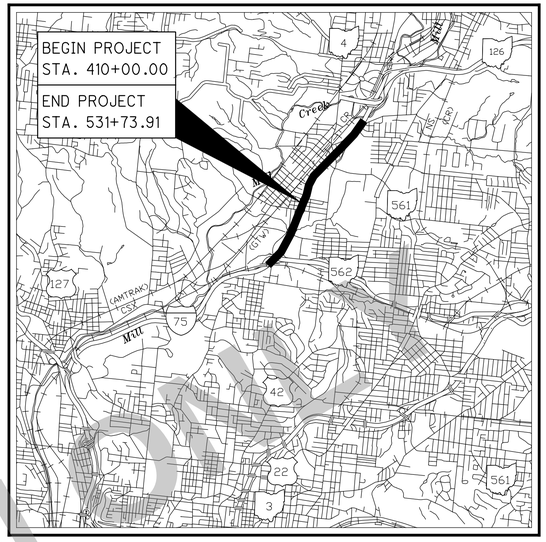
EXPLORATION FINDINGS (CONTINUED)

BENEATH THE TOPSOIL IN BORINGS B-158-0-07, B-202-0-07 AND BELOW THE CONCRETE LAYER IN BORING B-216-0-07, EXISTING FILL CONSISTING OF VERY LOOSE TO MEDIUM DENSE GRAVEL WITH SAND, SILT AND CLAY AND SILT (ODOT A-1-b, A-4b), AND STIFF TO VERY STIFF SANDY SILT AND SILT AND CLAY (ODOT A-4a, A-6a) WAS ENCOUNTERED EXTENDING TO DEPTHS RANGING FROM 4 TO 10 FEET BELOW THE GROUND SURFACE.

UNDERLYING THE SURFACE MATERIALS, AND FROM THE GROUND SURFACE IN BORINGS B-170-0-07, B-189-0-07, B-194-0-07, B-195-0-07 AND B-201-0-07, NATURAL COHESIVE AND GRANULAR SOILS WERE ENCOUNTERED. THE COHESIVE SOILS WERE GENERALLY DESCRIBED AS MEDIUM STIFF TO HARD SANDY SILT, SILT, SILT AND CLAY, SILTY CLAY AND CLAY (ODOT A-4a, A-4b, A-6a, A-6b, A-7-6). THE GRANULAR SOILS WERE GENERALLY DESCRIBED AS LOOSE TO MEDIUM DENSE GRAVEL, GRAVEL AND SAND, GRAVEL WITH SAND AND SILT, COARSE AND FINE SAND AND SILT (ODOT A-1-a, A-1-b, A-2-4, A-3a, A-4b).

BEDROCK WAS NOT ENCOUNTERED IN ANY OF THE BORINGS PERFORMED FOR THE VARIOUS SUBGRADE EXPLORATIONS.

GROUNDWATER WAS ENCOUNTERED IN BORINGS S-003-0-06, B-183-0-07 AND B-185-0-07 AT ELEVATIONS RANGING FROM 542 TO 543 FEET MSL.



LOCATION MAP

SCALE IN MILES

0 1 2 3 4

N

PARTICLE SIZE DEFINITIONS

BOULDERS	COBBLES	GRAVEL	COARSE SAND	FINE SAND	SILT	CLAY
12″	3″	2.0 mm (No. 10 SIEVE)	0.42 mm (No. 40 SIEVE)	0.074 mm (No. 200 SIEVE)	0.005 mm	

SPECIFICATIONS

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JANUARY 2008.

AVAILABLE INFORMATION

ALL AVAILABLE SOIL AND BEDROCK INFORMATION THAT CAN BE CONVENIENTLY SHOWN ON THE GEOTECHNICAL EXPLORATION SHEETS HAS BEEN SO REPORTED. ADDITIONAL EXPLORATIONS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, IF ANY, MAY BE INSPECTED IN THE DISTRICT DEPUTY DIRECTOR'S OFFICE OR THE OFFICE OF GEOTECHNICAL ENGINEERING AT 1980 WEST BROAD STREET.

INDEX OF SHEETS

LOCATION FROM STA.	TO STA.	PLAN VIEW SHEET	PROFILE SHEET	CROSS-SECTION SHEET	CUT MAX.	FILL EMB. MAX.
I-75						
410+00	423+00	4	4	-	- FT	3 FT
423+00	436+00	5	5	-	- FT	3 FT
436+00	449+00	6	6	-	- FT	2 FT
449+00	462+00	7	7	-	- FT	7 FT
462+00	475+00	8	8	-	<1 FT	5 FT
475+00	488+00	9	9	-	<1 FT	2 FT
488+00	501+00	10	10	-	3 FT	- FT
501+00	514+00	11	11	-	1 FT	- FT
514+00	527+00	12	12	-	<1 FT	<1 FT
527+00	533+00	13	13	-	<1 FT	<1 FT

RECON. - CTL 2007
RII - IC 08/02/06 - 08/04/06

DRILLING - CTL 07/09/07 - 08/03/07
RII - IC 08/17/06 & 08/20/06
RII - CM 08/17/06 - 09/11/06

DRAWN - RRM 06/26/15
REVIEWED - BRT 06/26/15

FOR INFORMATION ONLY

DESIGN AGENCY
RESOURCE INTERNATIONAL
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231

PID NO. 77889

SOIL PROFILE

HAM-75-7.85

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1829 2017

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SUMMARY OF SOIL TEST DATA
℄ CONST. I-75

EXPLORATION NO., STATION & OFFSET	FROM	TO	SAMPLE ID	% REC	HP tsf	% GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS (GI)	SO4 ppm
B-158-0-07	00.50	02.00	SS-1	-	-	15	14	31	14	26	NP	NP	NP	7	A-4a (1)	
STA. 412+23.60, 78.7' RT.	02.00	03.50	SS-2	-	-	14	19	26	20	21	27	17	10	10	A-4a (1)	
LATITUDE = 39.173936372	03.50	05.00	SS-3	-	-	SAME AS SS-2								10	A-4a (VISUAL)	
LONGITUDE = -84.490090156	05.00	06.50	SS-4	-	-	FILL: MD. DE., DK. BR. & GY. GRAVEL WITH SAND, SILT, & CLAY								8	A-2-6 (VISUAL)	
	08.50	10.00	SS-5	-	-	FILL: MD. DE., BLACK GRAVEL AND/OR STONE FRAGMENTS								5	A-1-a (VISUAL)	
B-159-0-07	00.50	02.00	SS-1	-	-	20	26	29	9	16	NP	NP	NP	10	A-3a (0)	
STA. 416+28.20, 38.3' LT.	02.00	03.50	SS-2	-	-	3	6	34	40	17	23	14	9	11	A-4a (5)	
LATITUDE = 39.174957199	03.50	05.00	SS-3	-	-	DE., BROWN COARSE AND FINE SAND, LI. CL., LI. SI.								8	A-3a (VISUAL)	
LONGITUDE = -84.489397775	05.00	06.50	SS-4	-	-	SAME AS SS-3								7	A-3a (VISUAL)	
	08.50	10.00	SS-5	-	-	V. ST., BROWN SILT AND CLAY, LI. SA., TR. GR.								18	A-6a (VISUAL)	
B-164-0-07	00.50	02.00	SS-1	-	-	6	8	37	21	28	NP	NP	NP	5	A-4a (3)	
STA. 420+05.10, 100.8' RT.	02.00	03.50	SS-2	-	-	8	7	50	27	8	NP	NP	NP	6	A-4a (0)	
LATITUDE = 39.175541607	03.50	05.00	SS-3	-	-	SAME AS SS-1								10	A-4a (VISUAL)	
LONGITUDE = -84.488183121	05.00	06.50	SS-4	-	-	SAME AS SS-1								13	A-4a (VISUAL)	
	08.50	10.00	SS-5	-	-	ST., BROWN SILT AND CLAY, TR. GR., SM. SA.								12	A-6a (VISUAL)	
B-165-0-07	00.50	02.00	SS-1	-	-	ST., BROWN SANDY SILT, SM. CL., TR. GR.								8	A-4a (VISUAL)	
STA. 424+16.67, 35.8' LT.	02.00	03.50	SS-2	-	-	2	5	13	38	42	44	16	28	22	A-7-6 (16)	
LATITUDE = 39.176695801	03.50	05.00	SS-3	-	-	5	5	15	44	31	31	16	15	19	A-6a (10)	
LONGITUDE = -84.487842203	05.00	06.50	SS-4	-	-	SAME AS SS-3								23	A-6a (VISUAL)	
	08.50	10.00	SS-5	-	-	MD. ST., GRAY CLAY, LI. SI.								37	A-7-6 (VISUAL)	
	13.50	15.00	SS-6	-	-	LO. BR. COARSE AND FINE SAND, TR. CL., TR. SI., TR. GR.								7	A-3a (VISUAL)	
B-166-0-07	00.50	02.00	SS-1	-	-	ST. TO MD. ST., DK. BR. & BLK. SILT AND CLAY, LI. GR., LI. SA								14	A-6a (VISUAL)	
STA. 428+14.70, 118.2' RT.	02.00	03.50	SS-2	-	-	SAME AS SS-1								36	A-6a (VISUAL)	
LATITUDE = 39.177529221	03.50	05.00	SS-3	-	-	60	5	9	16	10	36	22	14	16	A-2-6 (0)	
LONGITUDE = -84.486751434	05.00	06.50	SS-4	-	-	27	11	35	22	5	NP	NP	NP	14	A-2-4 (0)	
	08.50	10.00	SS-5	-	-	ST., BR. SILT AND CLAY, "AND" SA., TR. GR.								12	A-6a (VISUAL)	
B-167-0-07	00.50	02.00	SS-1	-	-	MD. ST., BROWN SANDY SILT, TR. GR.								28	A-4a (VISUAL)	
STA. 432+00.00, 70.0' LT.	02.00	03.50	SS-2	-	-	1	1	3	47	48	42	23	19	29	A-7-6 (12)	
LATITUDE = 39.178704664	03.50	05.00	SS-3	-	-	0	3	11	38	48	42	25	17	29	A-7-6 (11)	
LONGITUDE = -84.486825089	05.00	06.50	SS-4	-	-	LO., BROWN COARSE AND FINE SAND, TR. GR.								4	A-3a (VISUAL)	
	08.50	10.00	SS-5	-	-	MD. ST., BROWN SANDY SILT, SM. CL.								17	A-4a (VISUAL)	
B-170-0-07	00.00	01.50	SS-1	-	-	ST., BROWN SANDY SILT, SM. CL., LI. GR.								8	A-4a (VISUAL)	
STA. 436+05.70, 98.5' RT.	01.50	03.00	SS-2	-	-	SAME AS SS-3								14	A-6a (VISUAL)	
LATITUDE = 39.179545951	03.00	04.50	SS-3	-	-	4	7	37	14	38	26	14	12	13	A-6a (4)	
LONGITUDE = -84.485714254	04.50	06.00	SS-4	-	-	2	3	50	20	25	NP	NP	NP	19	A-4a (2)	
	08.50	10.00	SS-5	-	-	SAME AS SS-4								17	A-4a (VISUAL)	
B-171-0-07	01.50	03.00	SS-1	-	-	54	17	14	12	3	NP	NP	NP	4	A-1-a (0)	
STA. 439+61.50, 34.4' LT.	03.00	04.50	SS-2	-	-	19	18	36	11	16	NP	NP	NP	13	A-3a (0)	
LATITUDE = 39.180587478	04.50	06.00	SS-3	-	-	SAME AS SS-2								9	A-3a (VISUAL)	
LONGITUDE = -84.485649732																
B-174-0-07	02.00	03.50	SS-1	-	-	SAME AS SS-1								7	A-3a (VISUAL)	
STA. 444+07.50, 69.3' RT.	03.50	05.00	SS-2	-	-	0	0	85	7	8	NP	NP	NP	13	A-3a (0)	
LATITUDE = 39.181600209	05.00	06.50	SS-3	-	-	3	13	70	7	7	NP	NP	NP	11	A-3a (0)	
LONGITUDE = -84.484692771	06.50	08.00	SS-4	-	-	SAME AS SS-1								22	A-3a (VISUAL)	
B-180-0-07	00.50	02.00	SS-1	-	-	0	1	5	32	62	36	21	15	16	A-6a (10)	
STA. 451+04.60, 91.4' RT.	02.00	03.50	SS-2	-	-	8	5	27	35	25	23	15	8	10	A-4a (5)	
LATITUDE = 39.183334761	03.50	05.00	SS-3	-	-	V. ST. TO ST., DK. BR. SILT AND CLAY, TR. GR., SM. SA.								11	A-6a (VISUAL)	
LONGITUDE = -84.483650708	05.00	06.50	SS-4	-	-	SAME AS SS-3								11	A-6a (VISUAL)	
	08.50	10.00	SS-5	-	-	SAME AS SS-3								18	A-6a (VISUAL)	
B-183-0-07	01.50	03.00	SS-1	-	-	61	12	11	13	3	NP	NP	NP	4	A-1-b (0)	
STA. 454+09.30, 50.0' LT.	03.00	04.50	SS-2	-	-	3	4	25	55	13	21	16	5	13	A-4b (7)	
LATITUDE = 39.184255514	04.50	06.00	SS-3	-	-	MD. ST., DK. BR. CLAY, TR. GR., TR. SA., LI. SI.								22	A-7-6 (VISUAL)	
LONGITUDE = -84.483694022	06.00	07.50	SS-4	-	-	ST., BROWN SANDY SILT, TR. GR., SM. CL.								14	A-4a (VISUAL)	
	07.50	09.00	SS-5	-	-	1	1	4	56	38	33	20	13	20	A-6a (9)	
	09.00	10.50	SS-6	-	-	SAME AS SS-5								21	A-6a (VISUAL)	
	10.50	12.00	SS-7	-	-	SAME AS SS-5								17	A-6a (VISUAL)	
	12.00	13.50	SS-8	-	-	1	2	15	53	29	30	17	13	16	A-6a (9)	
	13.50	15.00	SS-9	-	-	SAME AS SS-8								20	A-6a (VISUAL)	

SUMMARY OF SOIL TEST DATA
℄ CONST. I-75

EXPLORATION NO., STATION & OFFSET	FROM	TO	SAMPLE ID	% REC	HP tsf	% GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS (GI)	SO4 ppm
B-185-0-07	01.50	03.00	SS-1	-	-	V. DE., BROWN GRAVEL WITH SAND, TR. SI.								4	A-1-b (VISUAL)	
STA. 458+01.40, 83.6' RT.	03.00	04.50	SS-2	-	-	2	7	58	16	17	NP	NP	NP	12	A-3a (0)	
LATITUDE = 39.185136055	04.50	06.00	SS-3	-	-	60	6	22	8	4	NP	NP	NP	14	A-1-b (0)	
LONGITUDE = -84.48276418	06.00	07.50	SS-4	-	-	V. LO., DARK BROWN FINE SAND, SM. SI., LI. CL.								17	A-3 (VISUAL)	
	08.50	10.00	SS-5	-	-	V. LO., BR. COARSE AND FINE SAND, LI. SI., TR. GR., TR. CL.								19	A-3a (VISUAL)	
B-187-0-07	01.50	03.00	SS-1	-	-	29	7	38	21	5	NP	NP	NP	7	A-2-4 (0)	
STA. 462+07.30, 49.5' LT.	03.00	04.50	SS-2	-	-	1	8	73	16	2	NP	NP	NP	7	A-3a (0)	
LATITUDE = 39.186311991	04.50	06.00	SS-3	-	-	SAME AS SS-2								36	A-3a (VISUAL)	
LONGITUDE = -84.482763147																
B-189-0-07	01.50	03.00	SS-1	-	-	0	1	6	69	24	26	18	8	15	A-4b (8)	
STA. 466+02.20, 56.9' RT.	03.00	04.50	SS-2	-	-	2	1	7	44	46	38	16	22	18	A-6b (13)	
LATITUDE = 39.187257495	04.50	06.00	SS-3	-	-	SAME AS SS-2								21	A-6b (VISUAL)	
LONGITUDE = -84.48198496	06.00	07.50	SS-4	-	-	SAME AS SS-2								23	A-6b (VISUAL)	
	07.50	09.00	SS-5	-	-	ST., GY. AND BR. SILT AND CLAY, TR. GR., TR. SA.								17	A-6a (VISUAL)	
	09.00	10.50	SS-6	-	-	SAME AS SS-5								25	A-6a (VISUAL)	
B-190-0-07	00.50	02.00	SS-1	-	-	0	0	4	74	22	NP	NP	NP	20	A-4b (8)	
STA. 470+08.70, 69.4' LT.	02.00	03.50	SS-2	-	-	SAME AS SS-1								16	A-4b (VISUAL)	
LATITUDE = 39.188426115	03.50	05.00	SS-3	-	-	0	0	3	83	14	NP	NP	NP	24	A-4b (8)	
LONGITUDE = -84.481977075	05.00	06.50	SS-4	-	-	ST., GRAY SILT AND CLAY								21	A-6a (VISUAL)	
	08.50	10.00	SS-5	-	-	ST., GRAY SILTY CLAY								21	A-6b (VISUAL)	
B-191-0-07	00.50	02.00	SS-1	-	-	ST., BROWN SILT AND CLAY, TR. GR.								16	A-6a (VISUAL)	
STA. 474+01.30, 59.3' RT.	02.00	03.50	SS-2	-	-	1	1	5	48	45	35	19	16	17	A-6b (10)	
LATITUDE = 39.189287104	03.50	05.00	SS-3	-	-	0	1	4	59	36	33	19	14	23	A-6a (10)	
LONGITUDE = -84.481029826	05.00	06.50	SS-4	-	-	SAME AS SS-3								30	A-6a (VISUAL)	
	08.50	10.00	SS-5	-	-	SAME AS SS-3								28	A-6a (VISUAL)	
	13.50	15.00	SS-6	-	-	SAME AS SS-3								29	A-6a (VISUAL)	
	18.50	20.00	SS-7	-	-	V. ST., BROWN SILTY CLAY, SM. SA.								14	A-6b (VISUAL)	
B-193-0-07	02.00	03.50	SS-1	-	-	60	12	8	14	6	NP	NP	NP	4	A-1-b (0)	
STA. 478+07.50, 46.7' LT.	03.50	05.00	SS-2	-	-	17	15	31	18	19	NP	NP	NP	10	A-4a (0)	
LATITUDE = 39.190372496	05.00	06.50	SS-3	-	-	SAME AS SS-2								12	A-4a (VISUAL)	
LONGITUDE = -84.480554481																
B-194-0-07	00.00	01.50	SS-1	-	-	2	6	58	16	18	NP	NP	NP	10	A-3a (0)	
STA. 482+03.30, 87.2' RT.	01.50	03.00	SS-2	-	-	0	4	69	11	16	NP	NP	NP	8	A-3a (0)	
LATITUDE = 39.190935729	03.00	04.50	SS-3	-	-	SAME AS SS-1								6	A-3a (VISUAL)	
LONGITUDE = -84.479264071	04.50	06.00	SS-4	-	-	SAME AS SS-1								11	A-3a (VISUAL)	
	08.50	10.00	SS-5	-	-	SAME AS SS-1								13	A-3a (VISUAL)	
B-195-0-07	00.00	01.50	SS-1	-	-	42	19	21	7	11	NP	NP	NP	6	A-1-b (0)	
STA. 485+96.30, 64.6' LT.	01.50	03.00	SS-2	-	-	48	11	22	8	11	NP	NP	NP	8	A-1-b (0)	
LATITUDE = 39.192011082	03.00	04.50	SS-3	-	-	MD. DE., BROWN COARSE AND FINE SAND, SM. CL.								13	A-3a (VISUAL)	
LONGITUDE = -84.478716718	04.50	06.00	SS-4	-	-	ST., BROWN SILTY CLAY, SM. SA.								14	A-6b (VISUAL)	
	08.50	10.00	SS-5	-	-	SAME AS SS-4								17	A-6b (VISUAL)	
B-196-0-07	00.50	02.00	SS-1	-	-	LO., BR. COARSE AND FINE SAND, SM. GR., LI. CL.								8	A-3a (VISUAL)	
STA. 490+10.80, 87.3' RT.	02.00	03.50	SS-2	-	-	SAME AS SS-2								6	A-3a (VISUAL)	
LATITUDE = 39.192564052	03.50	05.00	SS-3	-	-	45	24	20	10	1	NP	NP	NP	6	A-1-b (0)	
LONGITUDE = -84.477330796	05.00	06.50	SS-4	-	-	34	33	21	5	7	NP	NP	NP	5	A-1-b (0)	
	08.50	10.00	SS-5	-	-	SAME AS SS-4								5	A-1-b (VISUAL)	
B-199-0-07	00.50	02.00	SS-1	-	-	11	16	47	19	7	NP	NP	NP	9	A-3a (0)	
STA. 494+09.80, 109.6' LT.	02.00	03.50	SS-2	-	-	47	23	17	9	4	NP	NP	NP	5	A-1-b (0)	
LATITUDE = 39.193735511	03.50	05.00	SS-3	-	-	SAME AS SS-2								5	A-1-b (VISUAL)	
LONGITUDE = -84.47688592	05.00	06.50	SS-4	-	-	MD. DE., BROWN COARSE AND FINE SAND, LI. GR.								5	A-3a (VISUAL)	
	06.50	08.00	SS-5	-	-	SAME AS SS-4								4	A-3a (VISUAL)	
	08.50	10.00	SS-6	-	-	SAME AS SS-4								4	A-3a (VISUAL)	
B-200-0-07	00.50	02.00	SS-1	-	-	SAME AS SS-3								3	A-1-b (VISUAL)	
STA. 497+01.40, 70.2' RT.	02.00	03.50	SS-2	-	-	SAME AS SS-3								3	A-1-b (VISUAL)	
LATITUDE = 39.193988636	03.50	05.00	SS-3	-	-	32	37	21	10	0	NP	NP	NP	3	A-1-b (0)	
LONGITUDE = -84.475721864	05.00	06.50	SS-4	-	-	51	37	9	3	0	NP	NP	NP	3	A-1-a (0)	
	08.50	10.00	SS-5	-	-	SAME AS SS-4								3	A-1-a (VISUAL)	

FOR INFORMATION ONLY

DRAWN RRM
CHECKED BRT

SOIL PROFILE
SUMMARY OF SOIL TEST DATA

HAM-75-7.85

1830
2017

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SUMMARY OF SOIL TEST DATA
℄ CONST. I-75

EXPLORATION NO., STATION & OFFSET	FROM	TO	SAMPLE ID	% REC	HP tsf	% GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS (GI)	SO4 ppm
B-201-0-07	00.50	02.00	SS-1	-	-	MD. DE., BR. GRAVEL WITH SAND, SILT & CLAY								6	A-2-6 (VISUAL)	
STA. 500+11.40, 60.4' LT.	02.00	03.50	SS-2	-	-	SAME AS SS-1								7	A-2-6 (VISUAL)	
LATITUDE = 39.194857096	03.50	05.00	SS-3	-	-	19	16	31	22	12	NP	NP	NP	10	A-2-4 (0)	
LONGITUDE = -84.475318193	05.00	06.50	SS-4	-	-	21	18	29	18	14	NP	NP	NP	9	A-2-4 (0)	
	08.50	10.00	SS-5	-	-	NO RECOVERY										
B-202-0-07	00.50	02.00	SS-1	-	-	26	25	32	9	8	NP	NP	NP	15	A-1-b (0)	
STA. 504+18.48, 64.9' RT.	02.00	03.50	SS-2	-	-	41	20	25	7	7	NP	NP	NP	15	A-1-b (0)	
LATITUDE = 39.195444702	03.50	05.00	SS-3	-	-	SAME AS SS-1									A-1-b (VISUAL)	
LONGITUDE = -84.474017347	05.00	06.50	SS-4	-	-	FILL: LO., BR., BLK. & GR. SILT, SM. CL., TR. GR.								13	A-4b (VISUAL)	
	08.50	10.00	SS-5	-	-	SAME AS SS-4									A-4b (VISUAL)	
N-001-0-06	02.10	04.10	SS-1	75	4.50	10	12	37	23	18	22	14	8	7	A-4a (1)	
STA. 506+25.14, 19.3' RT.	04.10	06.10	SS-2	79	4.25	2	6	25	16	51	42	18	24	15	A-7-6 (12)	
LATITUDE = 39.195946436	06.10	08.10	SS-3	75	4.50	SAME AS SS-2								21	A-7-6 (VISUAL)	
LONGITUDE = -84.473640897																
S-001-0-06	01.80	03.80	SS-1	58	4.50	22	13	20	32	13	26	15	11	16	A-6a (2)	
STA. 508+25.27, 60.1' LT.	03.80	05.80	SS-2	88	2.00	1	4	28	24	43	22	16	6	15	A-4a (6)	
LATITUDE = 39.196498176	05.80	07.80	SS-3	92	1.50	SAME AS SS-2								15	A-4a (VISUAL)	
LONGITUDE = -84.473368054	10.30	11.80	SS-4	100	2.00	SAME AS SS-2								21	A-4a (VISUAL)	
	15.30	16.80	SS-5	100	3.00	1	5	27	18	49	28	17	11	15	A-6a (7)	
	20.30	21.80	SS-6	100	3.25	SAME AS SS-5								20	A-6a (VISUAL)	
	25.30	26.80	SS-7	89	2.75	SAME AS SS-5								20	A-6a (VISUAL)	
N-002-0-06	01.20	03.20	SS-1	17	3.00	32	8	11	35	14	24	16	8	10	A-4a (3)	
STA. 510+25.17, 64.9' RT.	03.20	05.20	SS-2	92	2.00	0	2	5	77	16	NP	NP	NP	26	A-4b (8)	
LATITUDE = 39.196668541	05.20	07.20	SS-3	79	3.00	SAME AS SS-2								20	A-4b (VISUAL)	
LONGITUDE = -84.472565378	09.70	11.20	SS-4	89	-	0	5	86	9					18	A-3 (VISUAL)	
	14.70	16.20	SS-5	71	-	LO., BR. COARSE AND FINE SAND, TR. SI., TR. CL.								4	A-3 (VISUAL)	
	19.70	21.20	SS-6	71	-	SAME AS SS-5								6	A-3 (VISUAL)	
S-002-0-06	01.40	03.40	SS-1	42	-	20	18	28	34					11	A-2-4 (VISUAL)	
STA. 512+25.21, 20.0' LT.	03.40	05.40	SS-2	83	4.5+	7	9	38	18	28	23	13	10	12	A-4a (2)	
LATITUDE = 39.197230213	05.40	07.40	SS-3	75	4.5+	7	14	43	36					13	A-4a (VISUAL)	
LONGITUDE = -84.472306834																
N-003-0-06	02.20	04.20	SS-1	79	-	3	10	51	36					13	A-4a (VISUAL)	
STA. 514+25.19, 25.1' RT.	04.20	06.20	SS-2	100	3.25	0	11	37	31	21	23	16	7	14	A-4a (3)	
LATITUDE = 39.1975497	06.20	08.20	SS-3	100	-	0	12	49	39					15	A-4a (VISUAL)	
LONGITUDE = -84.471711369																
B-207-0-07	01.00	02.50	SS-1	-	-	22	21	33	20	4	NP	NP	NP	7	A-3a (0)	
STA. 516+01.33, 49.2' LT.	02.50	04.00	SS-2	-	-	9	13	32	20	26	21	13	8	14	A-4a (2)	
LATITUDE = 39.198043447	04.00	05.50	SS-3	-	-	SAME AS SS-2								20	A-4a (VISUAL)	
LONGITUDE = -84.471482542	05.50	07.00	SS-4	-	-	SAME AS SS-2								17	A-4a (VISUAL)	
	08.50	10.00	SS-5	-	-	ST., DK. BR. SILTY CLAY, SM. SA., LI. GR.								14	A-6b (VISUAL)	
S-003-0-06	00.80	02.80	SS-1	75	-	75	13	6	6					3	A-1-a (VISUAL)	
STA. 516+24.71, 69.7' LT.	02.80	04.80	SS-2	79	2.25	8	24	31	20	17	20	14	6	13	A-4a (0)	
LATITUDE = 39.198128818	04.80	06.80	SS-3	83	-	30	17	23	14	16	24	15	9	20	A-2-4 (0)	
LONGITUDE = -84.471479765	09.30	10.80	SS-4	67	1.75	ST. TO V.ST., BR. SILT AND CLAY, SM. SA., TR. GR.								13	A-6a (VISUAL)	
	14.30	15.80	SS-5	100	2.00	SAME AS SS-4								13	A-6a (VISUAL)	
	19.30	20.80	SS-6	72	0.25	SAME AS SS-4								14	A-6a (VISUAL)	
N-004-0-06	00.90	02.90	SS-1	75	-	67	16	14	3					3	A-1-a (VISUAL)	
STA. 518+25.20, 55.2' RT.	02.90	04.90	SS-2	25	-	47	27	18	8					4	A-1-b (VISUAL)	
LATITUDE = 39.198308837	04.90	06.90	SS-3	83	2.50	4	17	37	24	18	20	15	5	14	A-4a (1)	
LONGITUDE = -84.470678665	09.40	10.90	SS-4	89	2.00	SAME AS SS-3								12	A-4a (VISUAL)	
	14.40	15.90	SS-5	83	-	10	18	39	33					23	A-3a (VISUAL)	
	19.40	20.90	SS-6	83	-	LO., BROWN FINE SAND, SM. SI., TR. GR.								5	A-3a (VISUAL)	
B-209-0-07	00.00	01.50	SS-1	-	-	SAME AS SS-2								7	A-6a (VISUAL)	
STA. 520+04.35, 60.1' RT.	01.50	03.00	SS-2	-	-	12	9	27	19	33	27	15	12	10	A-6a (4)	
LATITUDE = 39.198681501	03.00	04.50	SS-3	-	-	SAME AS SS-2								10	A-6a (VISUAL)	
LONGITUDE = -84.470255211	04.50	06.00	SS-4	-	-	20	19	34	13	14	NP	NP	NP	7	A-3a (0)	
	08.50	10.00	SS-5	-	-	SAME AS SS-4								8	A-3a (VISUAL)	

SUMMARY OF SOIL TEST DATA
℄ CONST. I-75

EXPLORATION NO., STATION & OFFSET	FROM	TO	SAMPLE ID	% REC	HP tsf	% GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS (GI)	SO4 ppm
S-004-0-06	01.30	03.30	SS-1	79	-	22	15	30	19	14	19	13	6	9	A-2-4 (0)	
STA. 520+25.06, 19.8' LT.	03.30	05.30	SS-2	83	4.50	12	5	32	24	27	22	13	9	13	A-4a (3)	
LATITUDE = 39.198863487	05.30	07.30	SS-3	67	2.75	SAME AS SS-2								13	A-4a (VISUAL)	
LONGITUDE = -84.470428717																
N-005-0-06	01.80	03.80	SS-1	83	3.00	25	16	19	24	16	26	16	10	13	A-4a (1)	
STA. 522+25.19, 20.1' RT.	03.80	05.80	SS-2	67	-	1	48	41	10					6	A-3a (VISUAL)	
LATITUDE = 39.199231691	05.80	07.80	SS-3	63	-	1	51	40	8					4	A-3a (VISUAL)	
LONGITUDE = -84.469886058																
B-213-0-07	01.00	02.50	SS-1	-	-	31	22	26	10	11	NP	NP	NP	16	A-1-b (0)	
STA. 524+21.91, 52.7' LT.	02.50	04.00	SS-2	-	-	23	22	40	12	3	NP	NP	NP	7	A-3a (0)	
LATITUDE = 39.199786134	04.00	05.50	SS-3	-	-	SAME AS SS-2								6	A-3a (VISUAL)	
LONGITUDE = -84.46969401	05.50	07.00	SS-4	-	-	SAME AS SS-2								6	A-3a (VISUAL)	
S-005-0-06	01.20	03.20	SS-1	83	1.50	16	19	21	29	15	26	16	10	13	A-4a (2)	
STA. 524+25.01, 55.0' LT.	03.20	05.20	SS-2	79	2.00	15	15	32	25	13	NP	NP	NP	9	A-4a (1)	
LATITUDE = 39.199796714	05.20	07.20	SS-3	67	2.25	SAME AS SS-2								12	A-4a (VISUAL)	
LONGITUDE = -84.469694689	09.70	11.20	SS-4	100	1.50	SAME AS SS-2								11	A-4a (VISUAL)	
N-006-0-06	01.30	03.30	SS-1	63	-	34	36	12	10	8	NP	NP	NP	3	A-1-b (0)	
STA. 526+25.18, 60.1' RT.	03.30	05.30	SS-2	79	-	17	11	55	7	10	NP	NP	NP	5	A-3a (0)	
LATITUDE = 39.200083572	05.30	07.30	SS-3	75	-	0	12	79	9					4	A-3 (VISUAL)	
LONGITUDE = -84.468967972	09.80	11.30	SS-4	89	-	MD. DE., BROWN FINE SAND, TR. SI.								4	A-3 (VISUAL)	
	14.80	16.30	SS-5	100	-	SAME AS SS-4								0	A-3 (VISUAL)	
	19.80	21.30	SS-6	39	-	SAME AS SS-4								5	A-3 (VISUAL)	
B-215-0-07	01.50	03.00	SS-1	-	-	1	1	19	42	37	30	18	12	18	A-6a (9)	
STA. 528+05.72, 59.0' RT.	03.00	04.50	SS-2	-	-	3	15	68	6	8	NP	NP	NP	7	A-3a (0)	
LATITUDE = 39.200514115	04.50	06.00	SS-3	-	-	SAME AS SS-2								4	A-3a (VISUAL)	
LONGITUDE = -84.468637958	06.00	07.50	SS-4	-	-	SAME AS SS-2								5	A-3a (VISUAL)	
	08.50	10.00	SS-5	-	-	SAME AS SS-2								5	A-3a (VISUAL)	
S-006-0-06	01.70	03.70	SS-1	54	-	53	12	11	24		NP	NP	NP	6	A-1-b (0)	
STA. 528+25.49, 20.1' LT.	03.70	05.70	SS-2	92	2.50	17	10	17	29	27	33	17	16	18	A-6b (7)	
LATITUDE = 39.200670064	05.70	07.70	SS-3	75	3.50	SAME AS SS-2								20	A-6b (VISUAL)	
LONGITUDE = -84.468844795																
N-007-0-06	02.10	04.10	SS-1	92	-	19	9	33	39					12	A-4a (VISUAL)	
STA. 530+25.28, 19.8' RT.	04.10	06.10	SS-2	75	3.50	6	9	30	38	17	23	16	7	11	A-4a (4)	
LATITUDE = 39.201097656	06.10	08.10	SS-3	50	-	20	17	24	24	15	24	13	11	10	A-6a (1)	
LONGITUDE = -84.468381398																
B-216-0-07	01.00	02.50	SS-1	-	-	12	13	13	33	29	25	14	11	12	A-6a (6)	
STA. 530+89.94, 68.7' LT.	02.50	04.00	SS-2	-	-	NO RECOVERY										
LATITUDE = 39.201366321	04.00	05.50	SS-3	-	-	15	16	19	22	28	22	14	8	13	A-4a (3)	
LONGITUDE = -84.468554415	05.50	07.00	SS-4	-	-	SO., BROWN SILTY CLAY, SM. SA., SM. GR.								17	A-6b (VISUAL)	

FOR INFORMATION ONLY

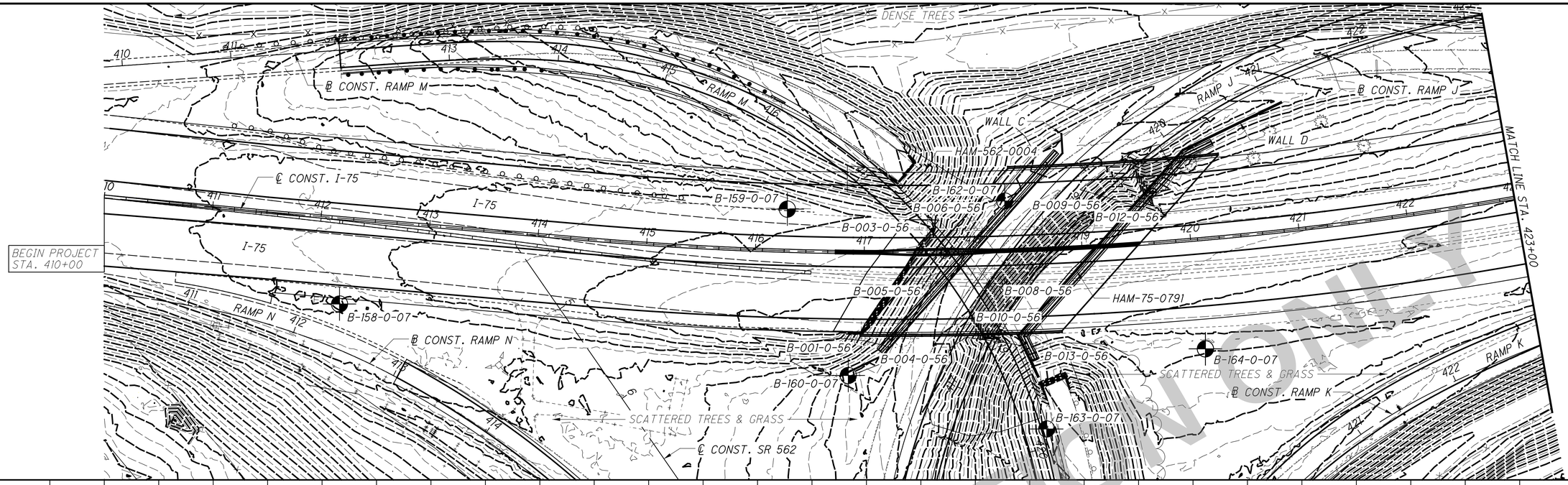
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CHECKED BRT

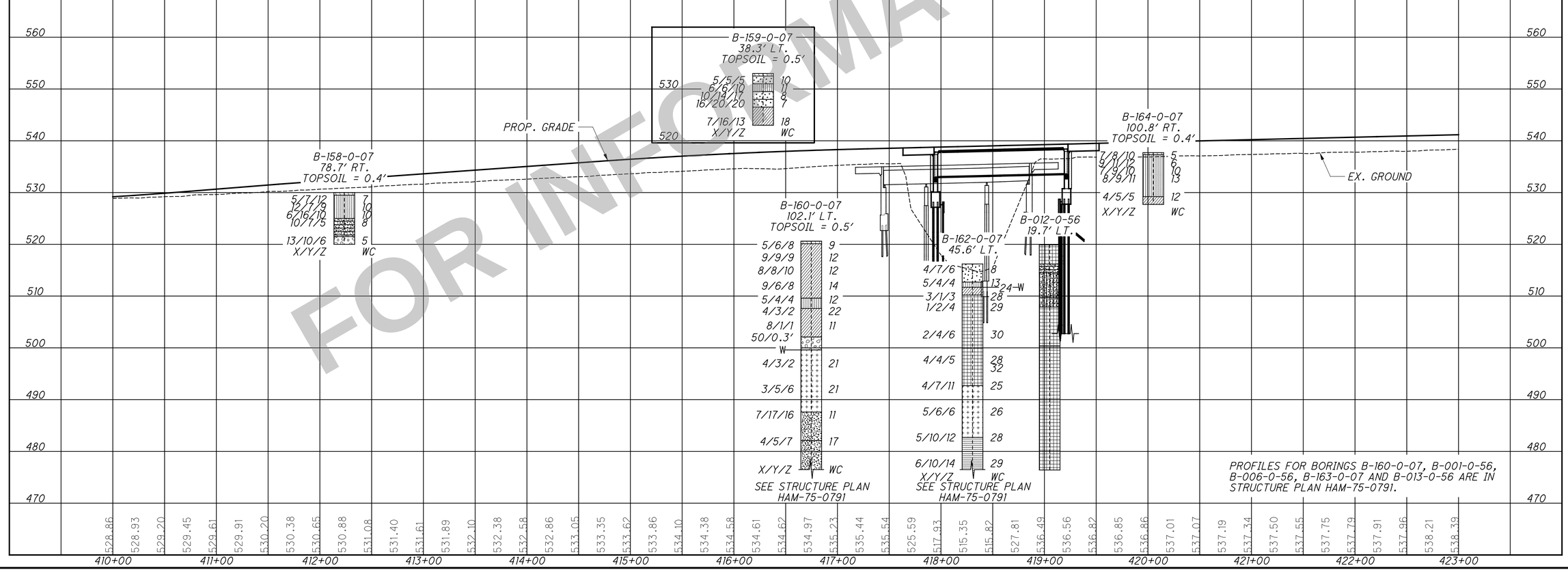
SUMMARY OF SOIL TEST DATA
SOIL PROFILE

HAM-75-7.85

1831
2017

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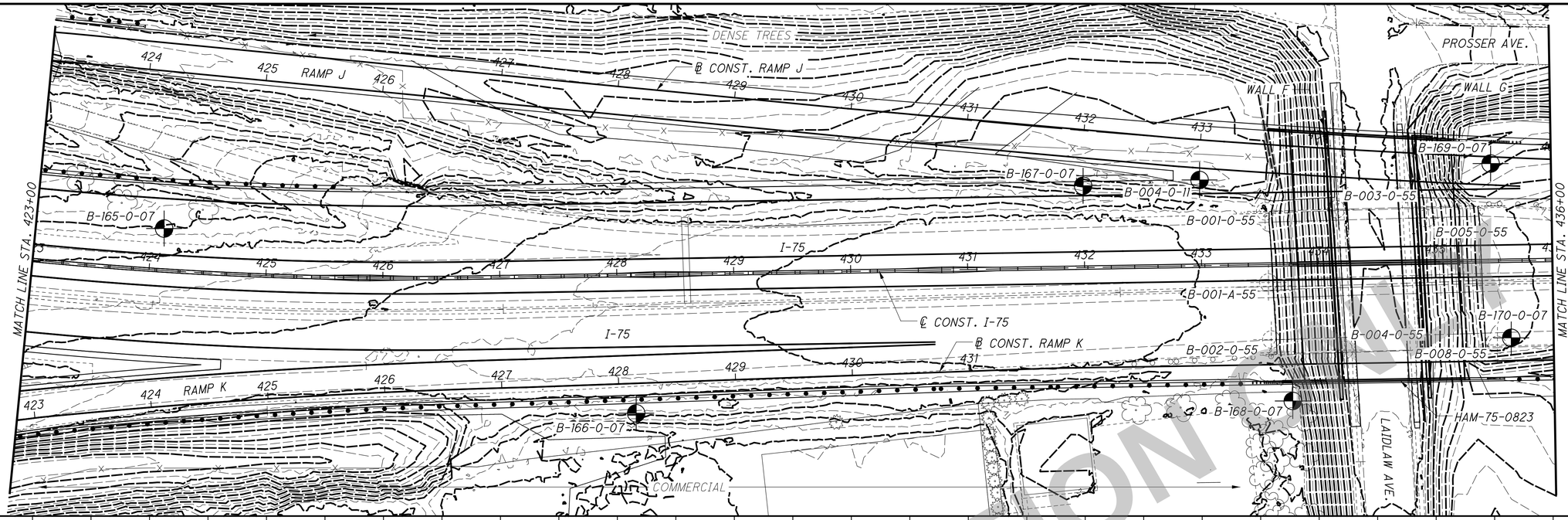
HORIZONTAL SCALE IN FEET
0 25 50 100

DRAWN RRM
CHECKED BRT

SOIL PROFILE
STA. 410+00 TO STA. 423+00 I-75
HAM-75-7.85

4 / 13

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2017



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HORIZONTAL SCALE IN FEET
0 25 50 100

DRAWN RRM
CHECKED BRT

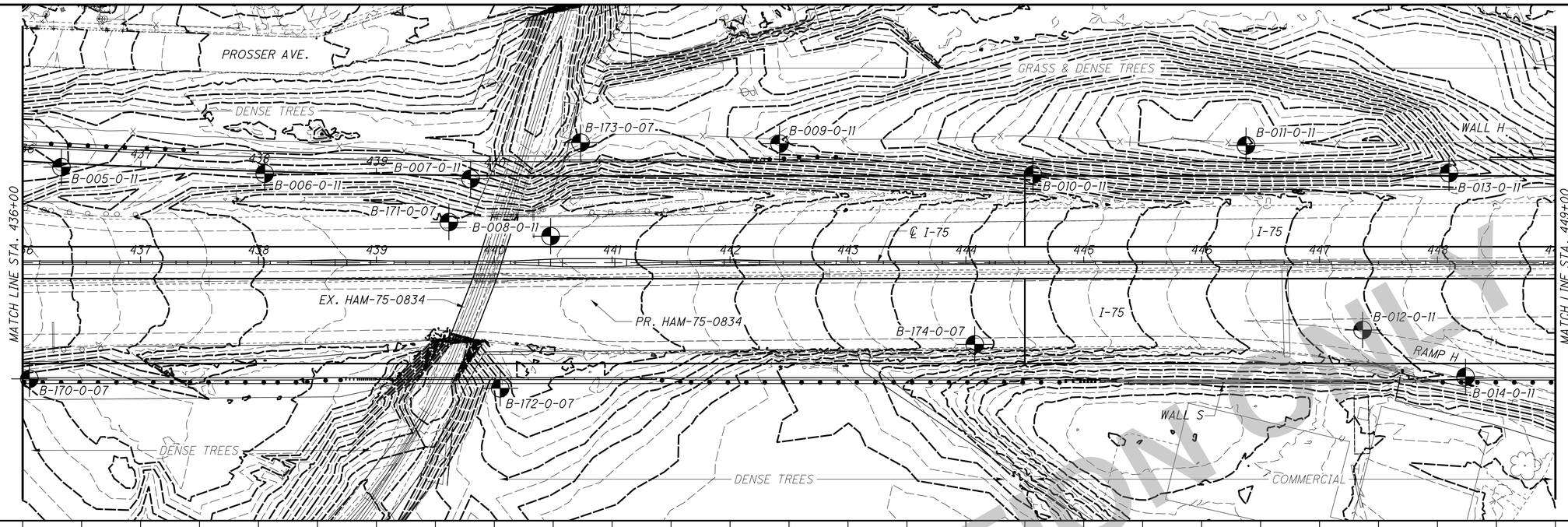
SOIL PROFILE
STA. 423+00 TO STA. 436+00 I-75

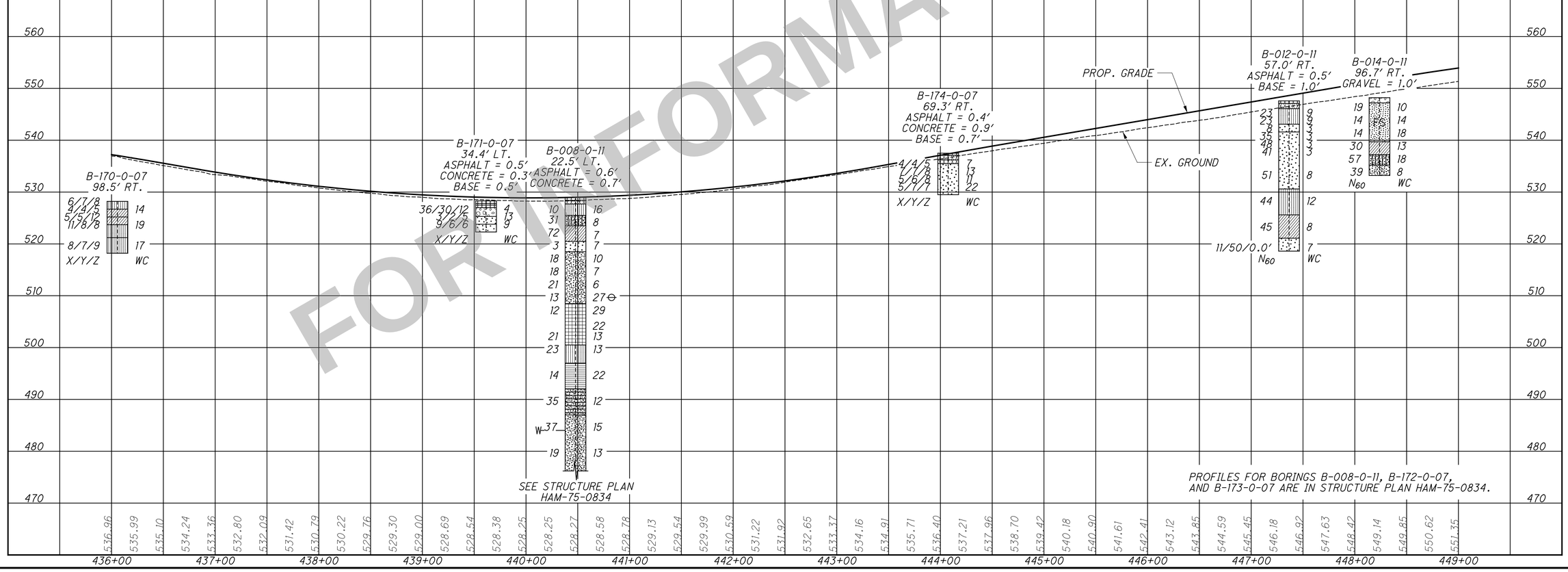
HAM-75-7.85

5 / 13

1833
2017

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HORIZONTAL SCALE IN FEET
0 25 50 100

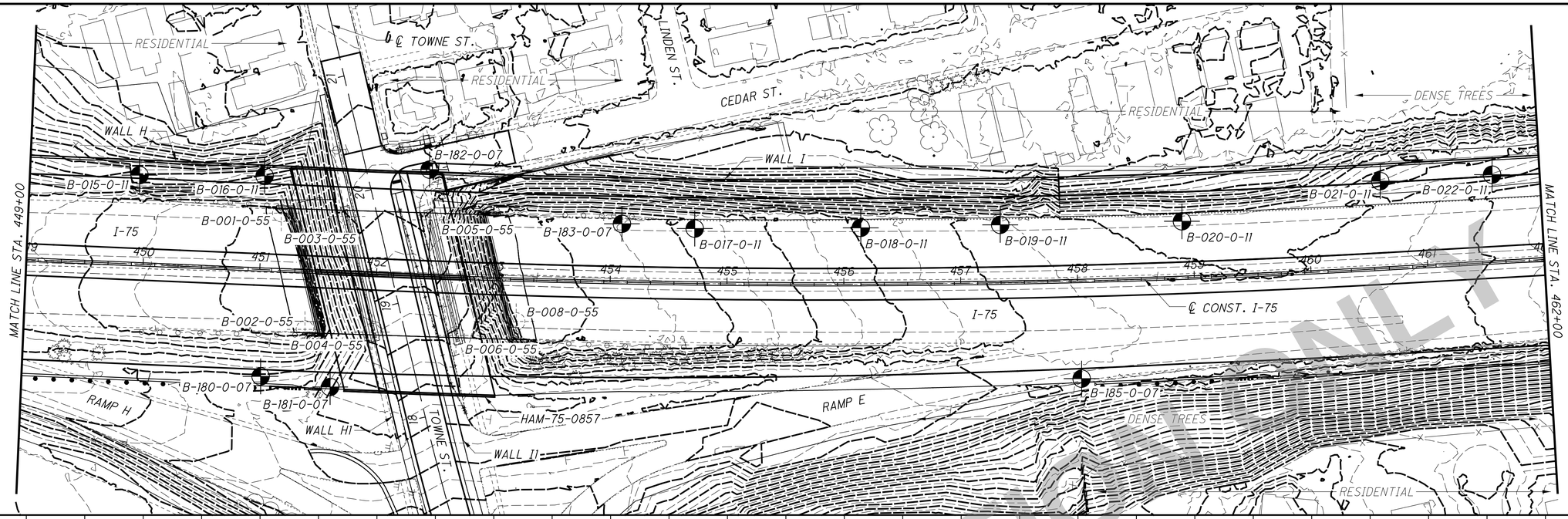
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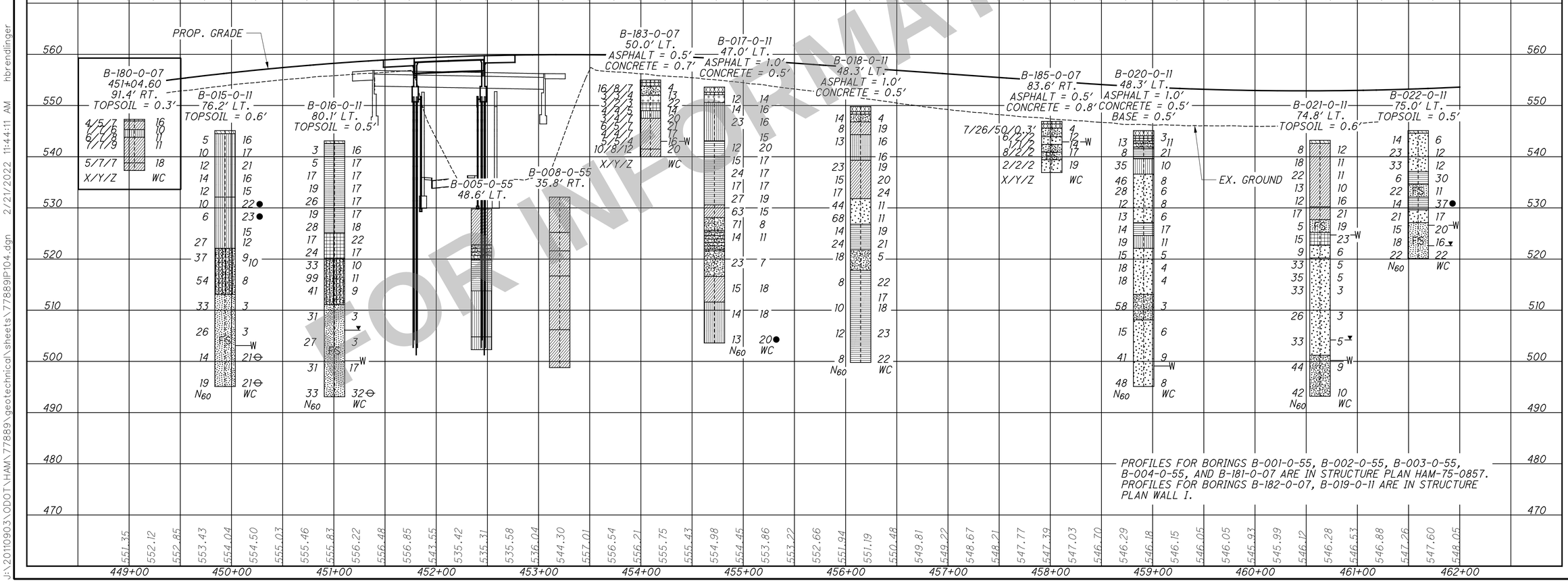
SOIL PROFILE
STA. 436+00 TO STA. 449+00 I-75

HAM-75-7.85

6 / 13

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HORIZONTAL SCALE IN FEET
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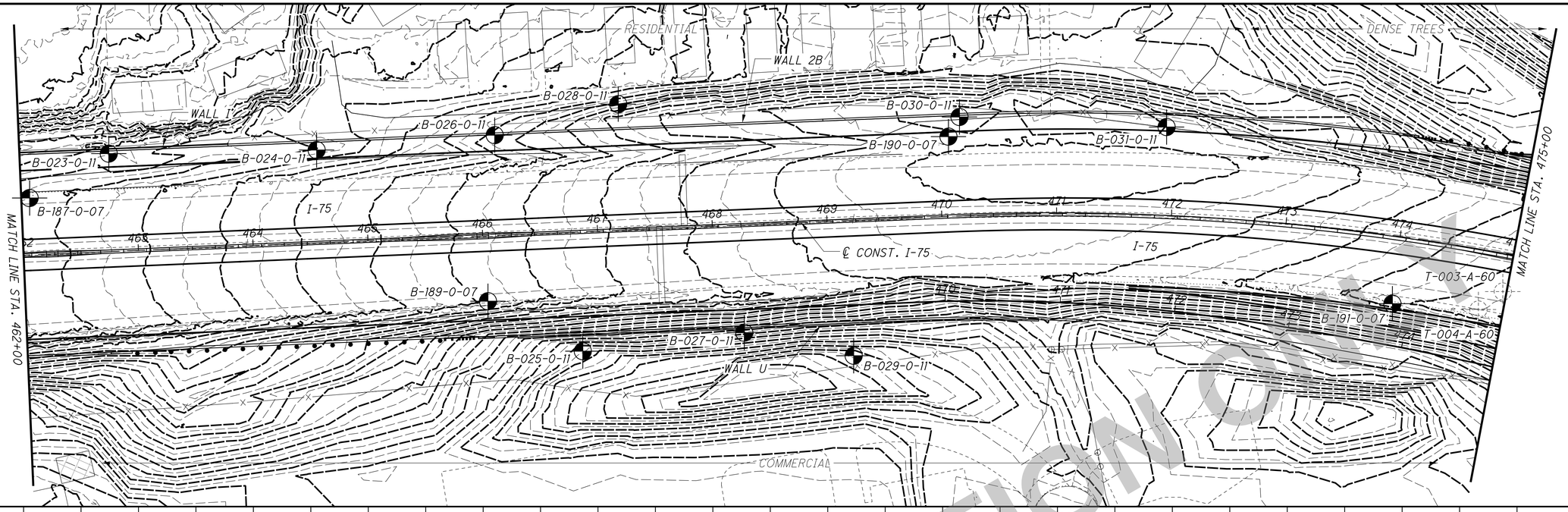
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CHECKED BRT

SOIL PROFILE
STA. 449+00 TO STA. 462+00 I-75
HAM-75-7.85

7 / 13

1835
2017

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HORIZONTAL SCALE IN FEET
0 25 50 100

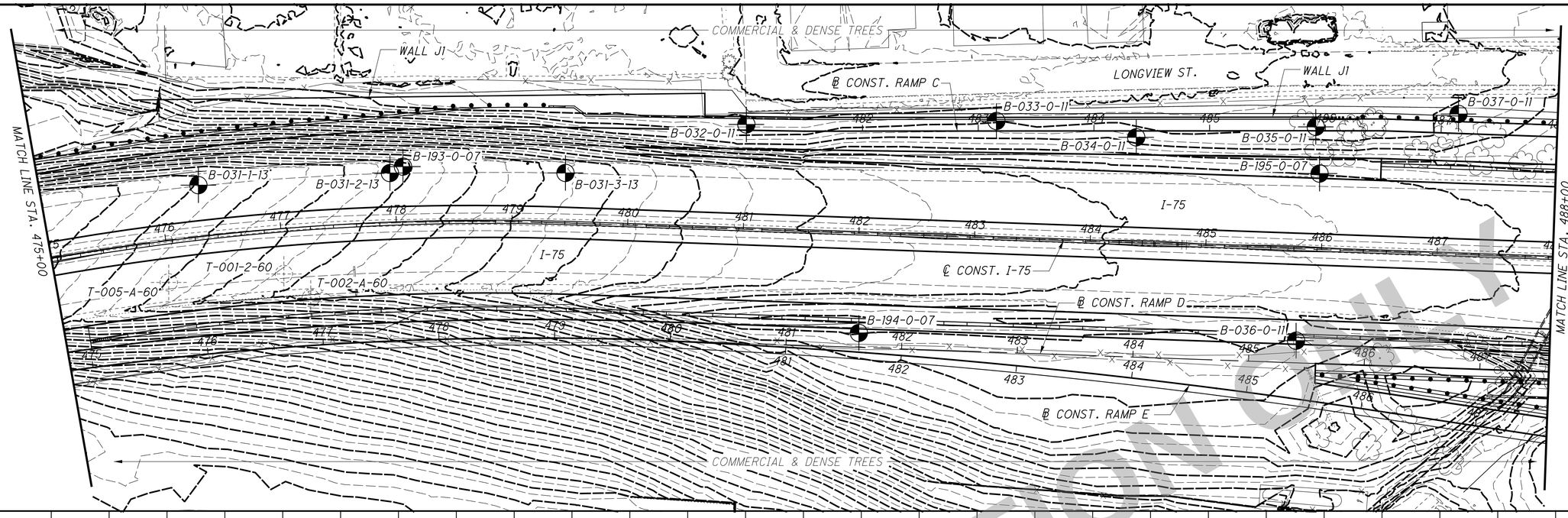
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CHECKED BRT

SOIL PROFILE
STA. 462+00 TO STA. 475+00 I-75
HAM-75-7.85

8 / 13

1836 2017

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PROFILES FOR BORINGS B-031-2-13, B-033-0-11, B-035-0-11 ARE IN STRUCTURE PLAN HAM-75-7.85, WALL J1.

PROP. GRADE

EX. GROUND

B-031-1-13
44.1′ LT.
ASPHALT = 0.3′
CONCRETE = 1.0′
BASE = 0.4′

B-193-0-07
46.7′ LT.
ASPHALT = 0.5′
CONCRETE = 0.7′
BASE = 0.8′

B-031-3-13
43.2′ LT.
ASPHALT = 0.5′
CONCRETE = 1.0′
BASE = 0.5′

B-194-0-07
87.2′ RT.

B-032-0-11
90.5′ LT.
TOPSOIL = 0.4′

B-034-0-11
91.3′ LT.
TOPSOIL = 0.6′

B-195-0-07
64.6′ LT.

B-037-0-11
121.3′′ LT.
TOPSOIL = 0.4′

SEE STRUCTURE PLAN WALL J1

WC

N_{60}

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

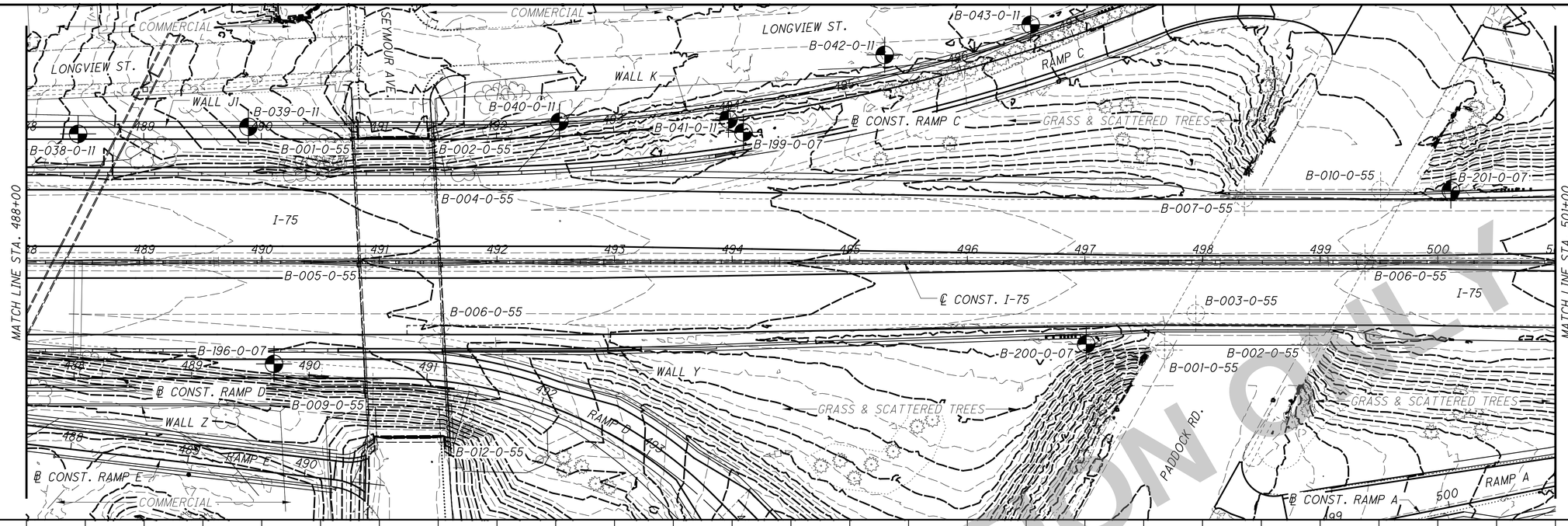
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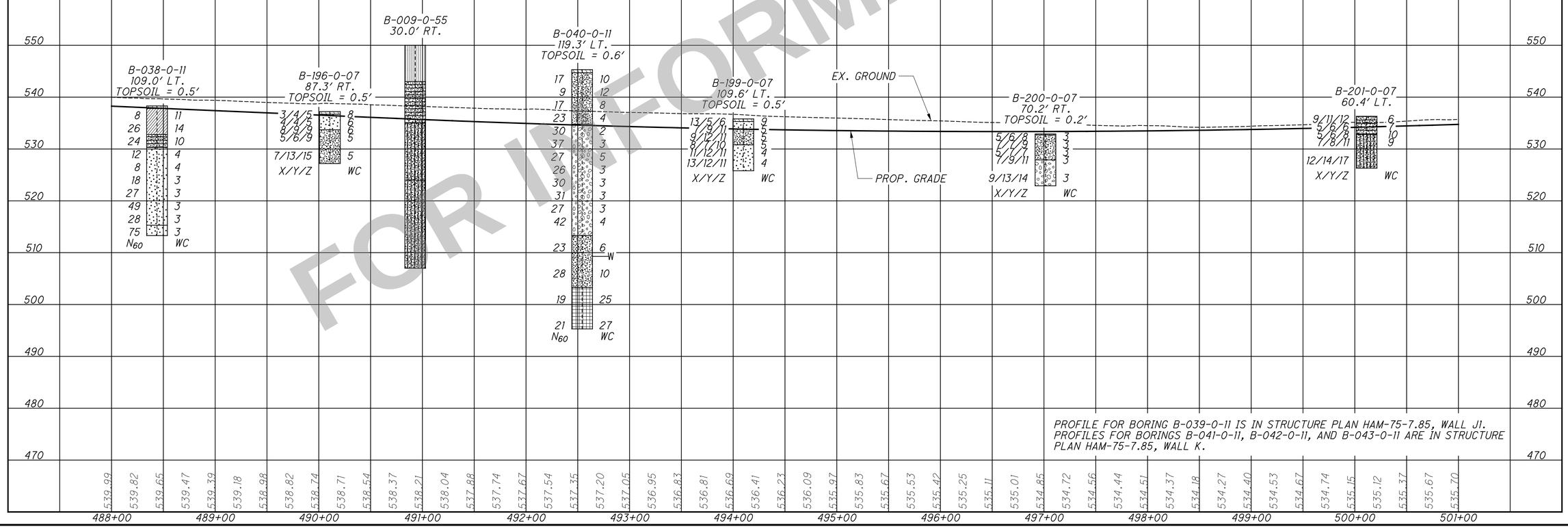
SOIL PROFILE
STA. 475+00 TO STA. 488+00 I-75
HAM-75-7.85

9 / 13

1837
2017

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FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

DRAWN RRM
CHECKED BRT

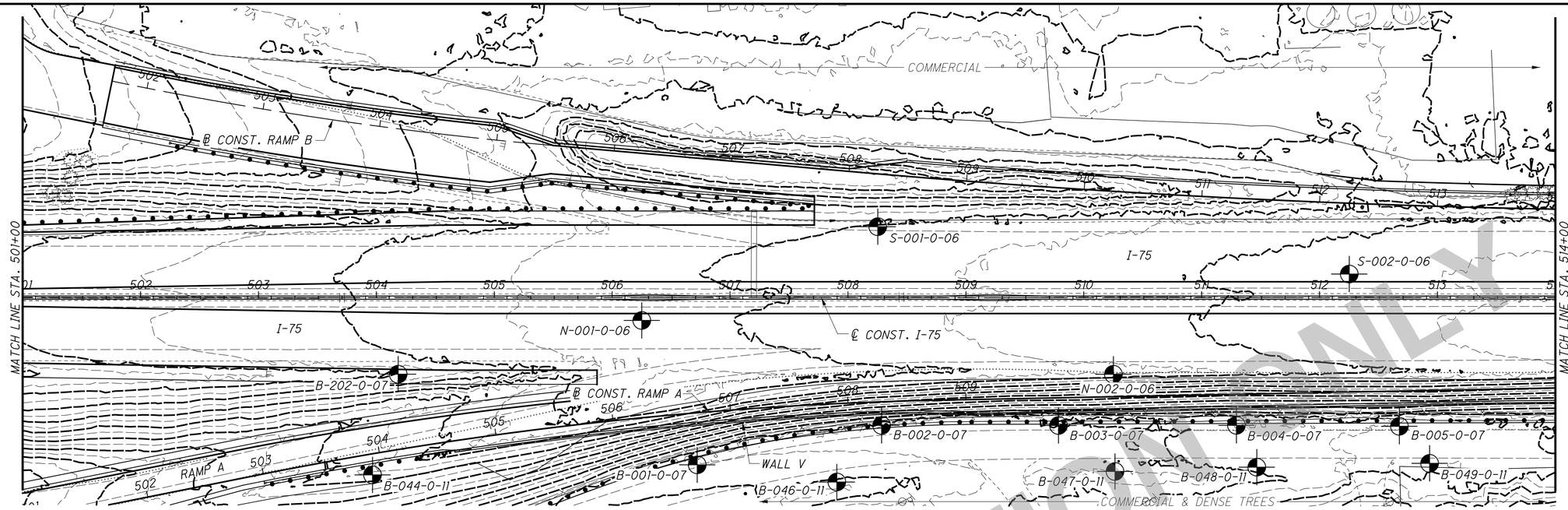
SOIL PROFILE
STA. 488+00 TO STA. 501+00 I-75

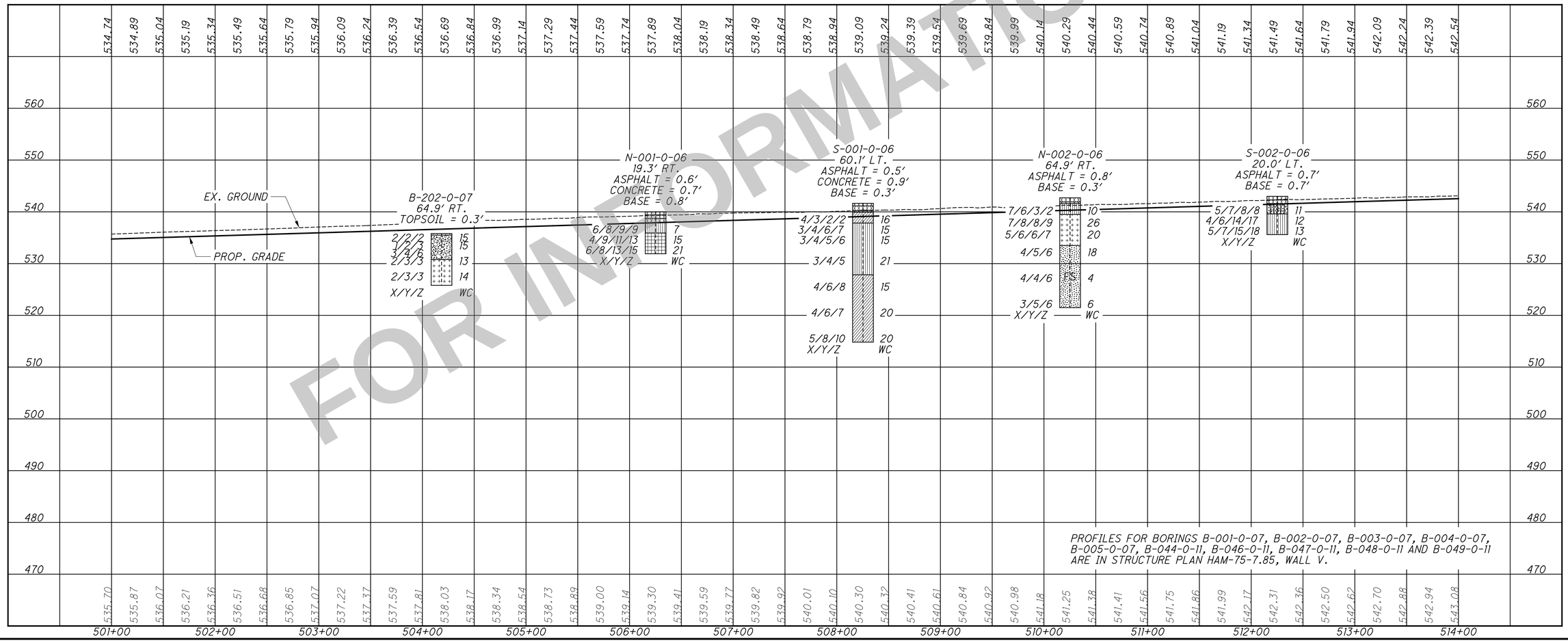
HAM-75-7.85

10 / 13

1838 2017

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PROFILES FOR BORINGS B-001-0-07, B-002-0-07, B-003-0-07, B-004-0-07, B-005-0-07, B-044-0-11, B-046-0-11, B-047-0-11, B-048-0-11 AND B-049-0-11 ARE IN STRUCTURE PLAN HAM-75-7.85, WALL V.

FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

DRAWN RRM
CHECKED BRT

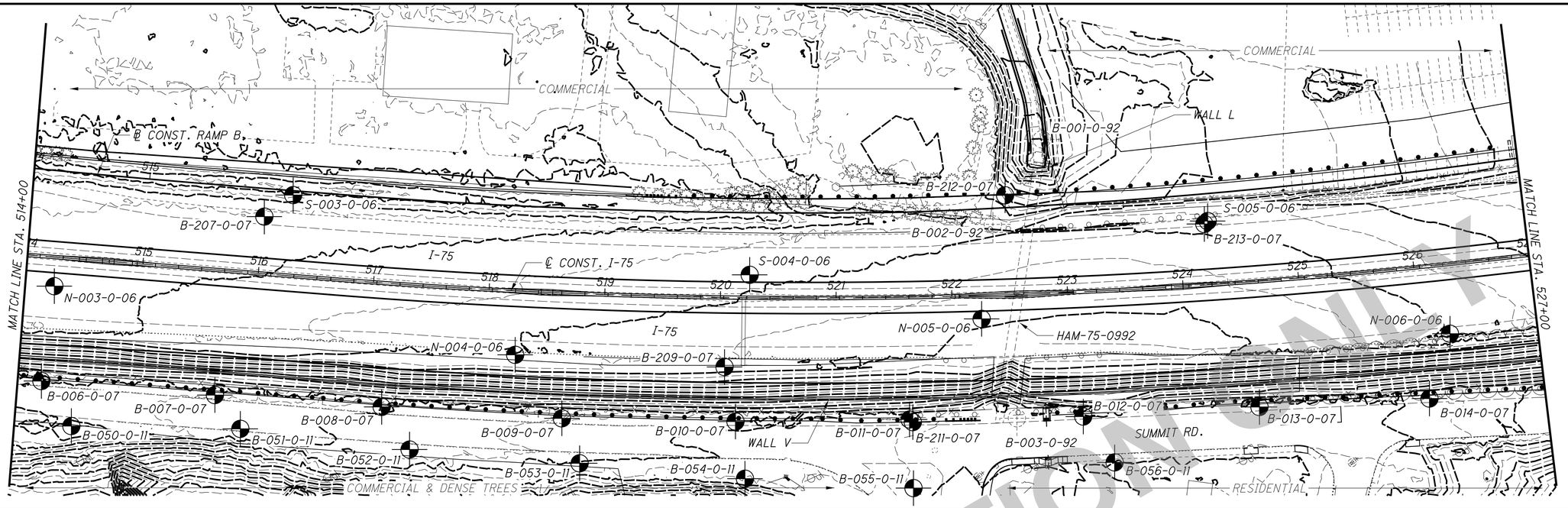
SOIL PROFILE
STA. 501+00 TO STA. 514+00 I-75

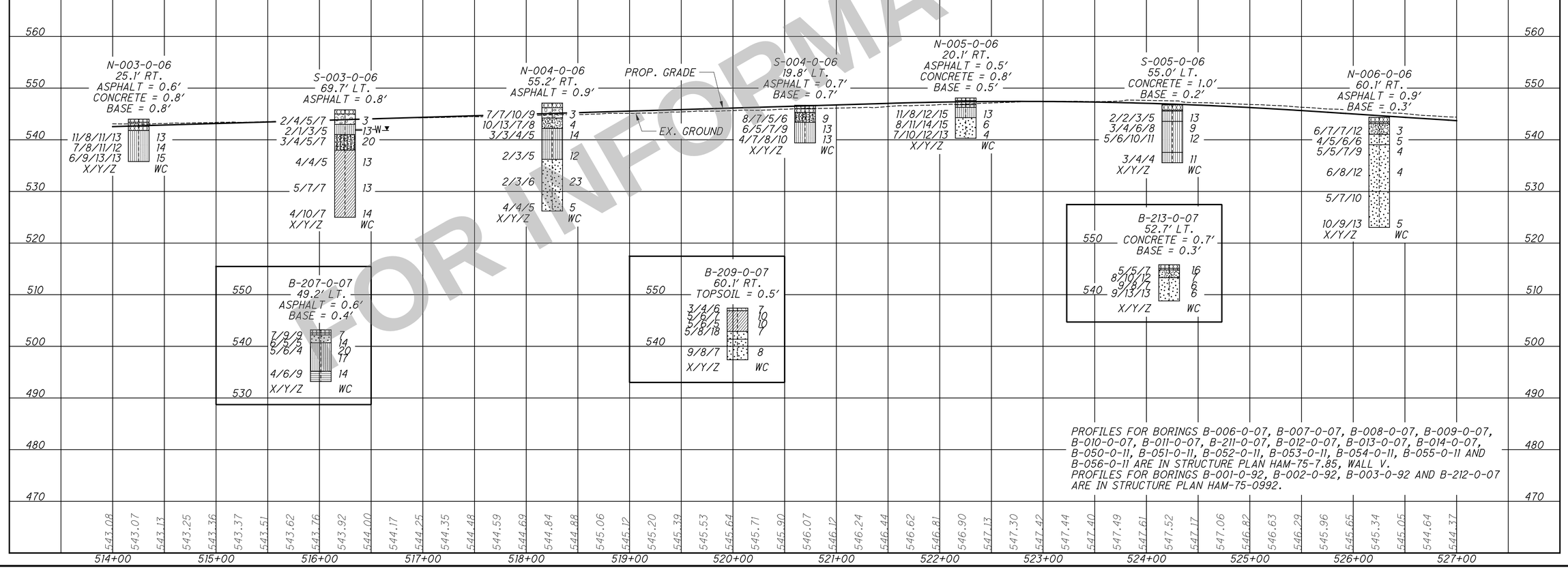
HAM-75-7.85

11 / 13

1839
2017

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HORIZONTAL SCALE IN FEET
0 25 50 100

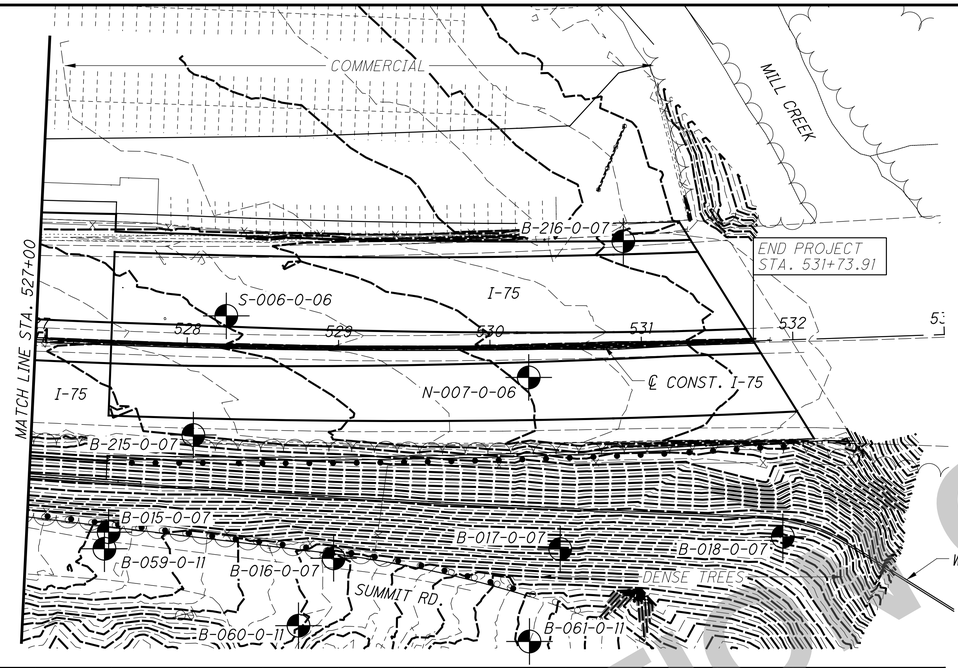
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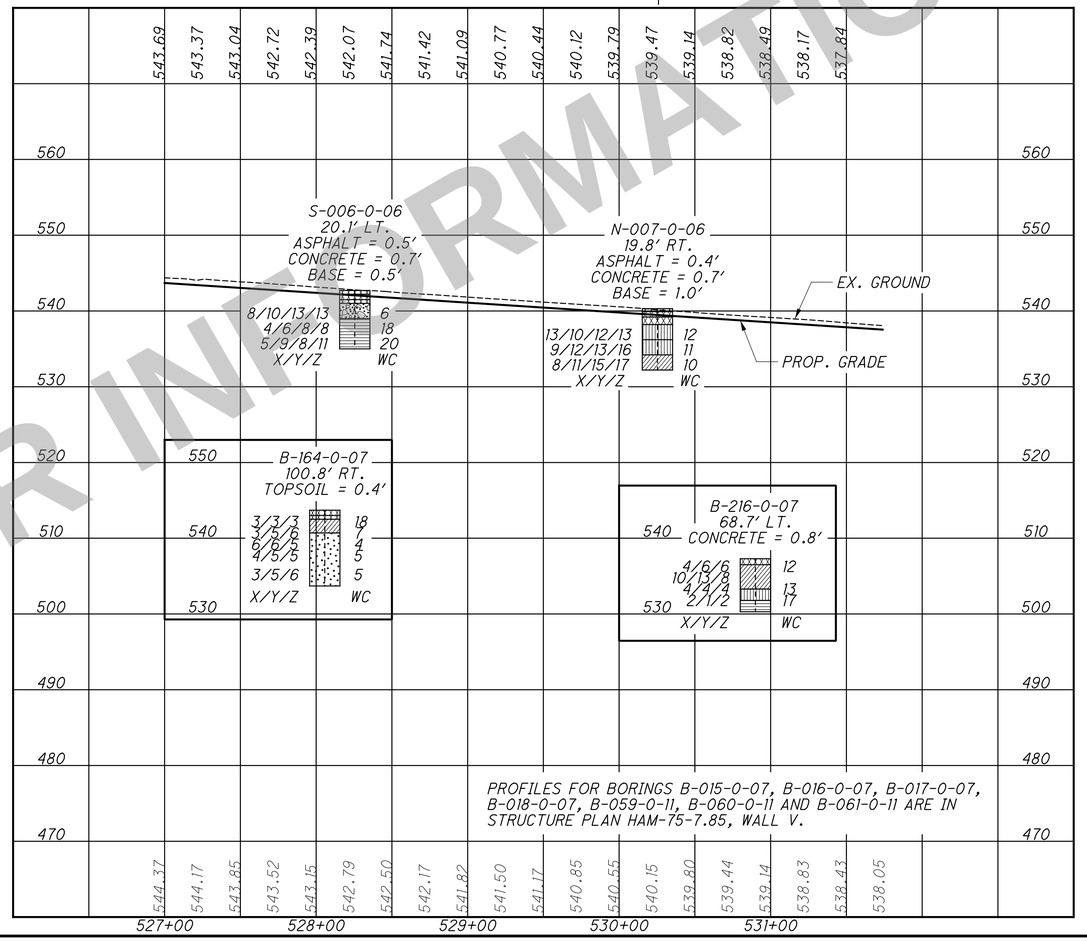
SOIL PROFILE
STA. 514+00 TO STA. 527+00 I-75
HAM-75-7.85

12 / 13

1840
2017

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FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 25 50 100

DRAWN RRM
CHECKED BRT

SOIL PROFILE

STA. 527+00 TO STA. 533+00 I-75

HAM-75-7.85

13 / 13

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PROJECT DESCRIPTION

THE STRUCTURE FOUNDATION EXPLORATION PERFORMED FOR THE HAM-75-7.85 PROJECT IN HAMILTON COUNTY, OHIO. THIS PROJECT REPRESENTS THE NORTHERN PORTION OF HAM-75-2.30 MILL CREEK EXPRESSWAY IMPROVEMENTS BETWEEN I-75 MAINLINE STATION 410+00 AND 531+73.91. THIS STRUCTURE FOUNDATION EXPLORATION PLAN INCLUDES BRIDGES HAM-75-0791 I-75 OVER SR 562 RAMP J, HAM-75-0823 I-75 OVER LAIDLAW AVENUE, HAM-75-0834 NORFOLK SOUTHERN RAILROAD OVER I-75, HAM-75-0857 I-75 OVER TOWNE STREET, HAM-75-0992 PEDESTRIAN PATH BRIDGE OVER I-75, HAM-PROSR-00.000 NORFOLK SOUTHERN RAILROAD OVER PROSSER AVENUE, HAM-562-0004 SR 562 RAMP M OVER I-75 AND HAM-562-0026 NORFOLK SOUTHERN RAILROAD OVER SR 562. ALL EXISTING STRUCTURES WILL BE REMOVED AND REPLACED WITH NEW STRUCTURES. THE ALIGNMENT OF NORFOLK SOUTHERN RAILROAD WILL BE SHIFTED NORTH OF THE EXISTING ALIGNMENT WHERE IT CROSSES I-75 AND PROSSER AVENUE.

HISTORIC RECORDS

BORINGS B-001-0-56, B-003-0-56, B-004-0-56, B-005-0-56, B-006-0-56, B-008-0-56, B-009-0-56, B-010-0-56, B-012-0-56, B-013-0-56 PERFORMED FOR THE HAM-4W-0724/HAM-4W-0745 STRUCTURES, B-001-0-55, B-002-0-55, B-003-0-55, B-004-0-55, B-005-0-55, B-008-0-55 PERFORMED FOR THE HAM-4W-0775 STRUCTURE AND B-001-0-56, B-003-0-56, B-004-0-56, B-006-0-56, B-006-A-56 PERFORMED FOR THE HAM-562-0031 STRUCTURE (HAM-75-7.16 MILLCREEK EXPRESS WAY/HAM-562-0.28 NORWOOD LATERAL); BORINGS B-001-0-55, B-002-0-55, B-003-0-55, B-004-0-55, B-005-0-55, B-006-0-55, B-008-0-55 PERFORMED FOR HAM-4W-0808 STRUCTURE (HAM-4W-7.81); BORINGS B-001-0-92, B-002-0-92, B-003-0-92 PERFORMED FOR HAM-75-0992 STRUCTURE (HAM-75-9.75), ARE PRESENTED IN THIS STRUCTURE FOUNDATION EXPLORATION.

GEOLOGY

THE SITE LIES WITHIN THE ILLINOIAN TILL PLAIN OF THE TILL PLAINS SECTION. THIS AREA IS CHARACTERIZED BY ROLLING GROUND MORAINE DEPOSITS WITH MANY BURIED VALLEYS ALTERNATING BETWEEN BROAD FLOODPLAINS AND BEDROCK GORGES. THE SITE AREA CONTAINS SILTY LOAM TILL DEPOSITED AS GROUND MORAINE COVERED WITH LOESS AND DISSECTED BY THE MODERN DAY MILL CREEK. BASED ON BEDROCK GEOLOGY AND TOPOGRAPHY MAPS OF THE AREA, FROM THE OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR), THE UNDERLYING BEDROCK CONSISTS OF THE ORDOVICIAN-AGED POINT PLEASANT FORMATION. THE BEDROCK SURFACE FORMS A VALLEY ROUGHLY BENEATH, AND FOLLOWING, THE ALIGNMENT OF MILL CREEK WHICH IS ALIGNED NORTHEAST-TO-SOUTHWEST. I-75 IS ALIGNED ROUGHLY PARALLEL TO THIS MAIN BEDROCK VALLEY FROM THE APPROXIMATE INTERSECTION WITH STATE ROUTE 126 TO THE APPROXIMATE INTERSECTION WITH REGINA GRAETER WAY, AND LIES JUST EAST OF THE BOTTOM OF THE BEDROCK VALLEY. ALONG THE PROJECT ALIGNMENT, THE BEDROCK SURFACE DIRECTLY BENEATH I-75 LIES ALONG THE SLOPE OF THE BEDROCK VALLEY AND THE BEDROCK SURFACE RANGES BETWEEN APPROXIMATE ELEVATIONS OF 385 TO 425 FEET MSL. A SMALLER BEDROCK VALLEY BRANCHES OFF TO THE SOUTHEAST OF THE BEDROCK VALLEY THAT FOLLOWS MILL CREEK JUST SOUTH OF THE INTERCHANGE WITH STATE ROUTE 562, AND RUNS ROUGHLY PARALLEL WITH ROSS RUN AND GENERALLY BENEATH THE SR 562 ALIGNMENT. OVERALL, THE BEDROCK SURFACE ALONG THE MAJORITY OF THE PROJECT ALIGNMENT SLOPES DOWNWARD TO THE NORTHWEST. ACCORDING TO BEDROCK TOPOGRAPHY MAPPING, THE DEPTH TO TOP OF BEDROCK IN THE VICINITY OF THE PROJECT RANGES FROM APPROXIMATELY 120 TO 170 FEET BELOW THE EXISTING GROUND SURFACE.

RECONNAISSANCE

CTL ENGINEERING PERSONNEL PERFORMED A SITE RECONNAISSANCE IN 2007 TO LOCATE ALL OF THE STRUCTURE BORING LOCATIONS. RESOURCE INTERNATIONAL PERFORMED A SITE RECONNAISSANCE FOR THE BORINGS PERFORMED AS PART OF THE CURRENT EXPLORATION ON AUGUST 25, 2011. THE PROJECT ALIGNMENT STARTS AT THE SOUTH END OF THE I-75 AND SR 562 INTERCHANGE AND EXTENDS NORTH TO THE MILL CREEK CROSSING, JUST SOUTH OF THE I-75 AND SR 126 INTERCHANGE. THE IMPROVEMENTS ALSO INCLUDE RECONFIGURING THE INTERCHANGE RAMPS BETWEEN I-75 AND SR 562 AND WIDENING OF SR 562 NEAR THE INTERCHANGE. THE EXISTING I-75 MAINLINE ALONG THE PROJECT ALIGNMENT IS A SIX-LANE, ASPHALT PAVED ROADWAY AND THERE ARE EXISTING INTERCHANGES WITH SR 562, TOWNE STREET AND PADDOCK ROAD. THE EXISTING SR 562 IS A FOUR-LANE, ASPHALT PAVED ROADWAY THAT CONNECTS I-75 WITH I-71 TO THE EAST. THE EXISTING NORFOLK SOUTHERN IS A SINGLE TRACK RAILWAY WHERE IT CROSSES OVER PROSSER AVENUE AND I-75, WHICH TURNS SOUTH ALONG THE EAST SIDE OF I-75 AND CROSSES LAIDLAW AVENUE INTO BERRY YARD, AND THEN EXITS THE YARD TO THE SOUTH WHERE UP TO SIX TRACKS CROSS OVER SR 562. THE LAND USAGE AROUND THE PROJECT IS PRIMARILY COMMERCIAL AND RESIDENTIAL.

SUBSURFACE EXPLORATION

BETWEEN JULY 11 AND OCTOBER 5, 2007, SIXTEEN (16) TEST BORINGS WERE PERFORMED BY CTL ENGINEERING FOR THE BRIDGE STRUCTURE REPLACEMENTS. THE TEST BORINGS WERE DRILLED WITH TRUCK AND ATV-MOUNTED ROTARY DRILL RIGS USING 3-1/4 INCH INSIDE DIAMETER, HOLLOW-STEM AUGERS. STANDARD PENETRATION TESTING (SPT) AND SPLIT-SPOON SAMPLING WAS PERFORMED IN ALL OF THE BORINGS AT 2.5-FOOT TO 5.0- FOOT INTERVALS USING AN AUTOMATIC HAMMER SYSTEM. NO CALIBRATION DATA IS AVAILABLE FOR THE HAMMER USED DURING THE SPT TESTING FOR THE BORINGS PERFORMED BY CTL ENGINEERING FOR THIS PROJECT.

IN ADDITION TO THE AFOREMENTIONED BORINGS, BETWEEN OCTOBER 11 AND NOVEMBER 17, 2011, TWO (2) STRUCTURAL BORINGS, DESIGNATED AS B-003-0-11 AND B-008-0-11, WERE DRILLED TO A DEPTH OF 120.0 AND 100.0 FEET, RESPECTIVELY, BELOW THE GROUND SURFACE AS PART OF THE CURRENT EXPLORATION. THE BORINGS WERE DRILLED USING AN ATV-MOUNTED ROTARY DRILLING MACHINE UTILIZING A 4.25-INCH INSIDE DIAMETER, HOLLOW-STEM AUGER TO ADVANCE THE HOLES. THE HAMMER FOR THE CME-750X DRILL RIG USED BY RESOURCE INTERNATIONAL FOR THIS PROJECT WAS CALIBRATED ON MAY 6, 2011, AND HAS A DRILL ROD ENERGY RATIO OF 77.1 PERCENT.

LEGEND

DESCRIPTION	ODOT CLASS	CLASSIFIED MECH./VISUAL	
GRAVEL AND/OR STONE FRAGMENTS	*A-1-a*	*6*	*8*
GRAVEL AND/OR STONE FRAGMENTS WITH SAND	*A-1-b*	*24*	*33*
GRAVEL AND/OR STONE FRAGS. WITH SAND AND SILT	*A-2-4*	*1*	*8*
GRAVEL AND/OR STONE FRAGS. WITH SAND, SILT & CLAY	*A-2-6*	*0*	*5*
FINE SAND	*A-3*	*20*	*35*
COARSE AND FINE SAND	*A-3a*	*40*	*52*
SANDY SILT	*A-4a*	*23*	*29*
SILT	*A-4b*	*9*	*11*
SILT AND CLAY	*A-6a*	*20*	*31*
SILTY CLAY	*A-6b*	*8*	*16*
ELASTIC CLAY	*A-7-5*	*1*	*1*
CLAY	*A-7-6*	*15*	*26*
	TOTAL	*167*	*255*
PAVEMENT OR BASE = X = APPROXIMATE THICKNESS	*VISUAL*		
SOD AND TOPSOIL = X = APPROXIMATE THICKNESS	*VISUAL*		

BORING LOCATION - PLAN VIEW

HISTORIC BORING LOCATION - PLAN VIEW

DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.

X/Y/Z — NUMBER OF BLOWS FOR STANDARD PENETRATION TEST
X= NUMBER OF BLOWS FOR FIRST 6 INCHES
Y= NUMBER OF BLOWS FOR SECOND 6 INCHES
Z= NUMBER OF BLOWS FOR THIRD 6 INCHES

N_{60} — INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.

WC — INDICATES WATER CONTENT IN PERCENT.

W — INDICATES FREE WATER ELEVATION.

● — INDICATES A PLASTIC MATERIAL WITH A MOISTURE CONTENT EQUAL TO OR GREATER THAN THE LIQUID LIMIT MINUS 3.

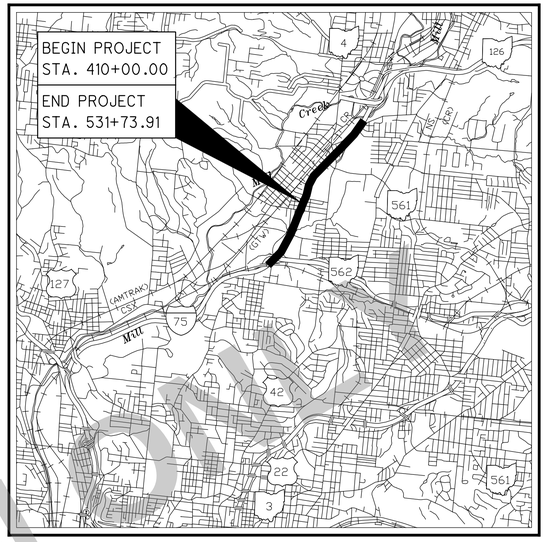
○ — INDICATES A NON-PLASTIC MATERIAL WITH A MOISTURE CONTENT GREATER THAN 25% OR GREATER THAN 19% WITH A WET APPEARANCE.

NP — INDICATES A NON-PLASTIC SAMPLE.

SS — INDICATES A SPLIT SPOON SAMPLE, STANDARD PENETRATION TEST.

ST — INDICATES A SHELBY TUBE SAMPLE.

3S — FOR INSTANCES OF NO RECOVERY FROM STANDARD SS INTERCAL, A 3.0 INCH O.D. SPLIT SPOON IS DRIVEN THE FULL LENGTH OF THE STANDARD SS INTERVAL PLUS AN ADDITIONAL 6.0 INCHES TO OBTAIN A REPRESENTATIVE SAMPLE. ONLY THE FINAL 6.0 INCHES OF SAMPLE IS RETAINED. BLOW COUNTS FROM 3S SAMPLING ARE NOT CORRELATED WITH N60 VALUES.



LOCATION MAP

SCALE IN MILES

0 1 2 3 4

N

PARTICLE SIZE DEFINITIONS

12″	3″	2.0 mm	0.42 mm	0.074 mm	0.005 mm
BOULDERS	COBBLES	GRAVEL	COARSE SAND	FINE SAND	SILT	CLAY
		No. 10 SIEVE	No. 40 SIEVE	No. 200 SIEVE		

LEGEND

HISTORIC BORING DESCRIPTIONS	ODOT CLASS	CLASSIFIED MECH./VISUAL	
GRAVEL AND/OR STONE FRAGMENTS WITH SAND	*A-1-b*	*1*	*17*
GRAVEL AND/OR STONE FRAGS. WITH SAND AND SILT	*A-2-4*	*-*	*4*
FINE SAND	*A-3*	*1*	*3*
COARSE AND FINE SAND	*A-3a*	*1*	*8*
SILT	*A-4b*	*-*	*3*
SILT AND CLAY	*A-6a*	*-*	*-*
SILTY CLAY	*A-6b*	*1*	*-*
CLAY	*A-7-6*	*-*	*-*
	TOTAL	*4*	*35*

RECON. - CTL 2007
RII 08/25/11

DRILLING - CTL 07/11/07 TO 10/05/07
RII 10/25/11 TO 11/11/11

DRAWN - RRM 02/06/15

REVIEWED - BRT 02/06/15

FOR INFORMATION ONLY

DESIGN AGENCY
RESOURCE INTERNATIONAL
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231

PID NO. 77889

STRUCTURE FOUNDATION EXPLORATION
BRIDGES HAM-75-0791, HAM-75-0823, HAM-75-0834, HAM-75-0857, HAM-75-0992, HAM-75-PROSSER, HAM-562-0004, HAM-562-0026

HAM-75-7.85

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EXPLORATION FINDINGS

AT THE EXISTING GROUND SURFACE IN BORINGS B-160-0-07, B-161-0-07, B-163-0-07, B-168-0-07, B-169-0-07, B-172-0-07, B-173-0-07, B-181-0-07, B-182-0-07 AND B-276-0-07, 0.2 TO 0.5 FEET OF TOPSOIL WAS ENCOUNTERED, IDENTIFIED BY THE SIGNIFICANT PRESENCE OF ORGANIC MATTER AND VEGETATION. BORING B-003-0-11 WAS DRILLED THROUGH THE EXISTING PAVEMENT OF SR 562 AND ENCOUNTERED 4.0 INCHES OF ASPHALT OVERLYING 8.0 INCHES OF CONCRETE. BORING B-008-0-11 WAS DRILLED THROUGH THE EXISTING PAVEMENT OF I-75 AND ENCOUNTERED 7.0 INCHES OF ASPHALT OVERLYING 9.0 INCHES OF CONCRETE.

BENEATH THE TOPSOIL IN BORING B-160-0-07 AND FROM THE EXISTING GROUND SURFACE IN BORINGS B-162-0-07, B-211-0-07, B-276-0-07, B-281-0-07 AND B-008-0-11, MATERIAL IDENTIFIED AS EXISTING FILL WAS ENCOUNTERED EXTENDING TO DEPTHS RANGING FROM 2.5 TO 18.5 FEET BELOW THE GROUND SURFACE. THE FILL CONSISTED PRIMARILY OF BROWN AND BROWNISH GRAY GRAVEL AND SAND, GRAVEL WITH SAND AND SILT, COARSE AND FINE SAND, SANDY SILT AND SILT AND CLAY (ODOT A-1-b, A-2-4, A-3a, A-4a, A-6a).

UNDERLYING THE SURFACE MATERIALS AND EXISTING FILL, AND FROM THE GROUND SURFACE IN BORINGS B-212-0-07, B-276-0-07 AND B-280-0-07, NATURAL COHESIVE AND GRANULAR SOILS WERE ENCOUNTERED. THE COHESIVE SOILS WERE GENERALLY DESCRIBED AS GRAY, BROWN, DARK BROWN, LIGHT BROWN AND BROWNISH GRAY SANDY SILT, SILT, SILT AND CLAY, SILTY CLAY, ELASTIC CLAY AND CLAY (ODOT A-4a, A-4b, A-6a, A-6b, A-7-5, A-7-6). THE GRANULAR SOILS WERE GENERALLY DESCRIBED AS BROWN, GRAY, LIGHT BROWN, DARK BROWN AND BROWNISH GRAY GRAVEL, GRAVEL AND SAND, GRAVEL WITH SAND AND SILT, GRAVEL WITH SAND, SILT AND CLAY, FINE SAND, COARSE AND FINE SAND, SANDY SILT AND SILT (ODOT A-1-a, A-1-b, A-2-4, A-2-6, A-3, A-3a, A-4a, A-4b).

BASED ON THE SPT BLOW COUNTS OBTAINED, THE RELATIVE CONSISTENCY OF THE COHESIVE SOILS ENCOUNTERED IN THE 2007 CTL ENGINEERING BORINGS RANGED FROM SOFT (2 < N < 4 BLOWS PER FOOT [BPF]) TO HARD (N > 30 BPF) AND THE RELATIVE DENSITY OF THE GRANULAR SOIL RANGED FROM VERY LOOSE (N < 5 BPF) TO VERY DENSE (N > 50 BPF). THE SPT BLOW COUNTS (N) FROM THE 2007 EXPLORATION BORINGS RANGED FROM 2 BPF TO SPLIT SPOON SAMPLER REFUSAL. SPLIT SPOON SAMPLER REFUSAL IS DEFINED AS EXCEEDING 100 BLOWS WITH LESS THAN 6.0 INCHES OF PENETRATION BY THE SPLIT SPOON SAMPLER.

FOR 2011 EXPLORATION BORINGS, THE SHEAR STRENGTH AND CONSISTENCY OF THE COHESIVE SOILS WERE PRIMARILY DERIVED FROM THE HAND PENETROMETER VALUES (HP). THE COHESIVE SOILS ENCOUNTERED RANGED FROM STIFF (1.0 < HP ≤ 2.0 TONS PER SQUARE FOOT [TSF]) TO HARD (HP > 4.0 TSF). THE UNCONFINED COMPRESSIVE STRENGTH OF THE COHESIVE SOIL SAMPLES TESTED FROM THE 2011 EXPLORATION BORINGS RANGED FROM 1.5 TO OVER 4.5 TSF. BASED ON THE SPT BLOW COUNTS OBTAINED (N60), THE GRANULAR SOIL ENCOUNTERED RANGED FROM VERY LOOSE (N60 < 5 BPF) TO VERY DENSE (N60 > 50 BPF). OVERALL BLOW COUNTS (N60) RECORDED FROM THE SPT SAMPLING IN THE 2011 BORINGS RANGED FROM 1 TO 72 BPF.

NATURAL MOISTURE CONTENTS OF THE SOIL SAMPLES TESTED RANGED FROM 1 TO 33 PERCENT. THE NATURAL MOISTURE CONTENTS OF THE COHESIVE SOIL SAMPLES TESTED FOR PLASTICITY INDEX RANGED FROM 10 PERCENT BELOW TO 14 PERCENT ABOVE THEIR CORRESPONDING PLASTIC LIMITS. IN GENERAL, THE SOILS EXHIBITED NATURAL MOISTURE CONTENTS ESTIMATED TO BE SIGNIFICANTLY BELOW TO SIGNIFICANTLY ABOVE OPTIMUM MOISTURE LEVELS.

BEDROCK WAS NOT ENCOUNTERED IN ANY OF THE BORINGS PERFORMED FOR THIS EXPLORATION.

WITH THE EXCEPTION OF BORINGS B-212-0-07 AND B-281-0-07 GROUNDWATER WAS ENCOUNTERED AT ELEVATIONS RANGING FROM 448.1 TO 515.1 FEET MSL.

SPECIFICATIONS

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JULY 2007 AND APRIL 2010.

AVAILABLE INFORMATION

ALL AVAILABLE SOIL AND BEDROCK INFORMATION THAT CAN BE CONVENIENTLY SHOWN ON THE SOIL PROFILE SHEETS HAS BEEN SO REPORTED. ADDITIONAL SUBSURFACE EXPLORATIONS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, IF ANY, MAY BE INSPECTED IN THE DISTRICT DEPUTY DIRECTOR'S OFFICE, THE OFFICE OF GEOTECHNICAL ENGINEERING AT 1980 WEST BROAD STREET.

FOR INFORMATION ONLY

DRAWN RRM
CHECKED BRT

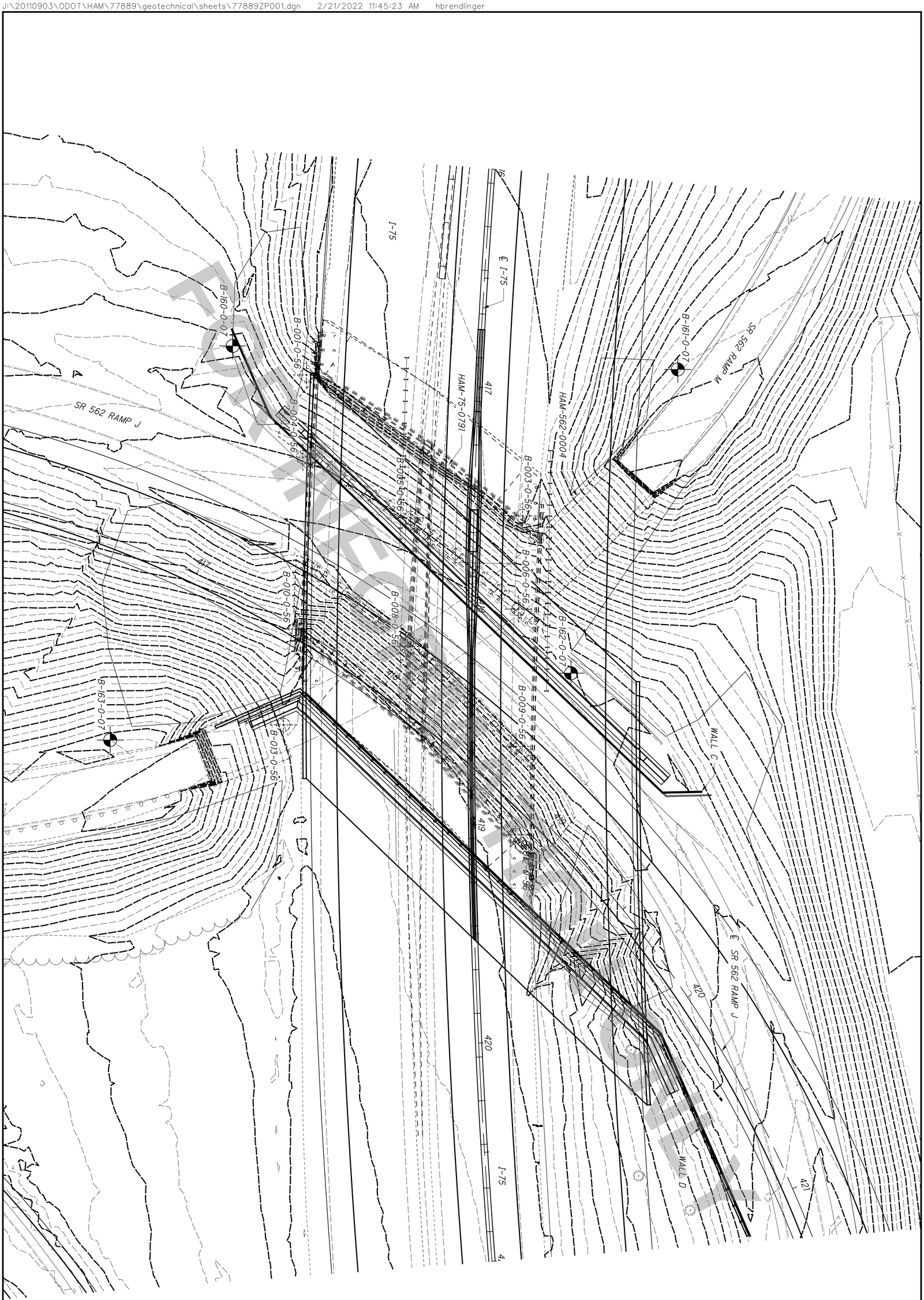
STRUCTURE FOUNDATION EXPLORATION
BRIDGES HAM-75-0791, HAM-75-0823, HAM-75-0834, HAM-75-0857, HAM-75-0992, HAM-75-PROSSER, HAM-562-0004, HAM-562-0026

HAM-75-7.85

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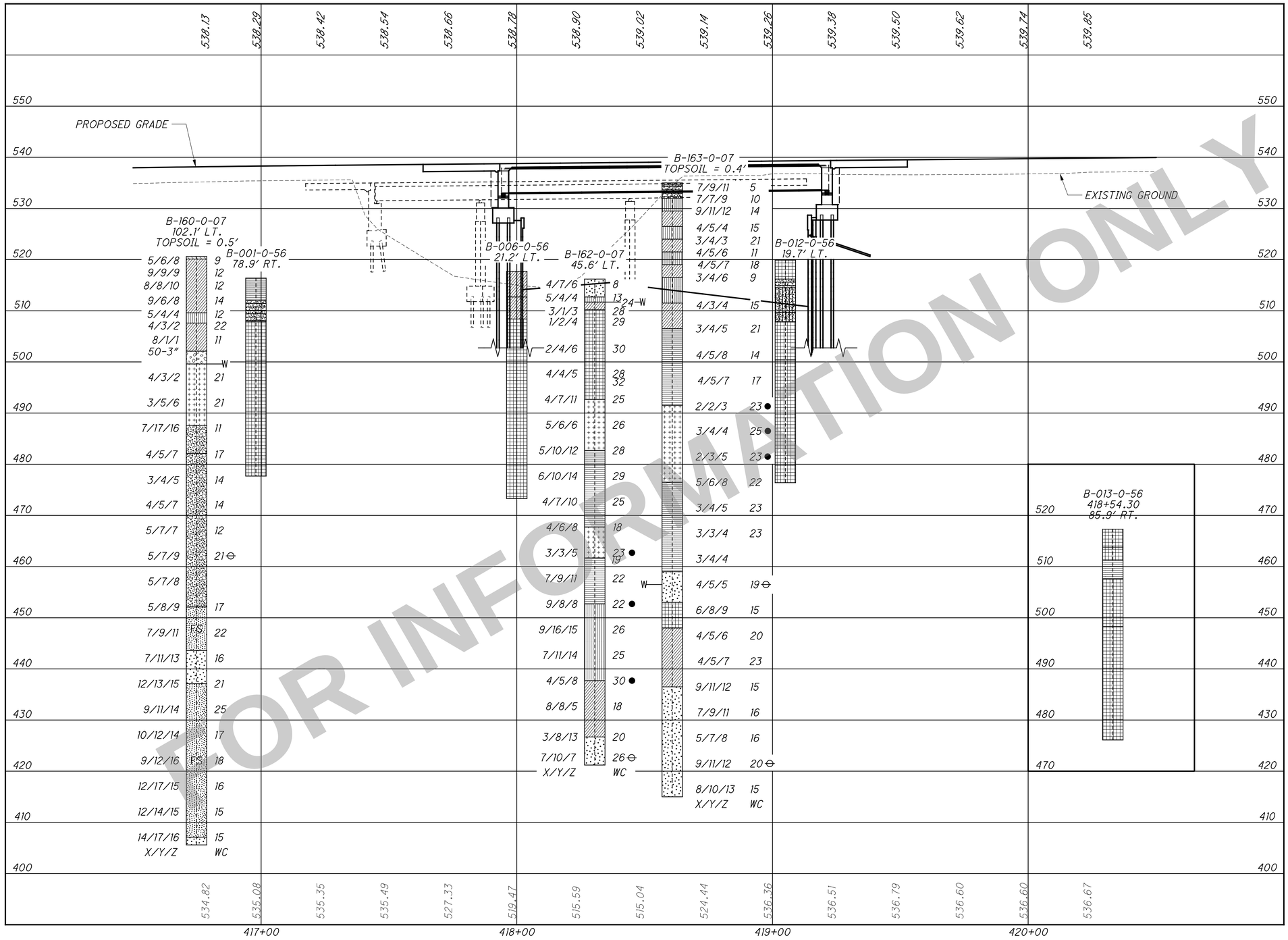
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FOR REFERENCE ONLY

2017 1844	3 / 48	HAM-75-7.85	STRUCTURE FOUNDATION EXPLORATION BRIDGE NO. HAM-75-0791 I-75 OVER SR 562 RAMP J	DRAWN RRM CHECKED BRT	0 10 20 40 HORIZONTAL SCALE IN FEET	



FOR INFORMATION ONLY

PROFILES FOR BORINGS B-003-0-56, B-004-0-56, B-005-0-56, B-008-0-56, B-009-0-56 AND B-010-0-56 WERE NOT SHOWN ON THE HISTORIC PLANS.

HORIZONTAL SCALE IN FEET
0 10 20 40

DRAWN RRM
CHECKED BRT

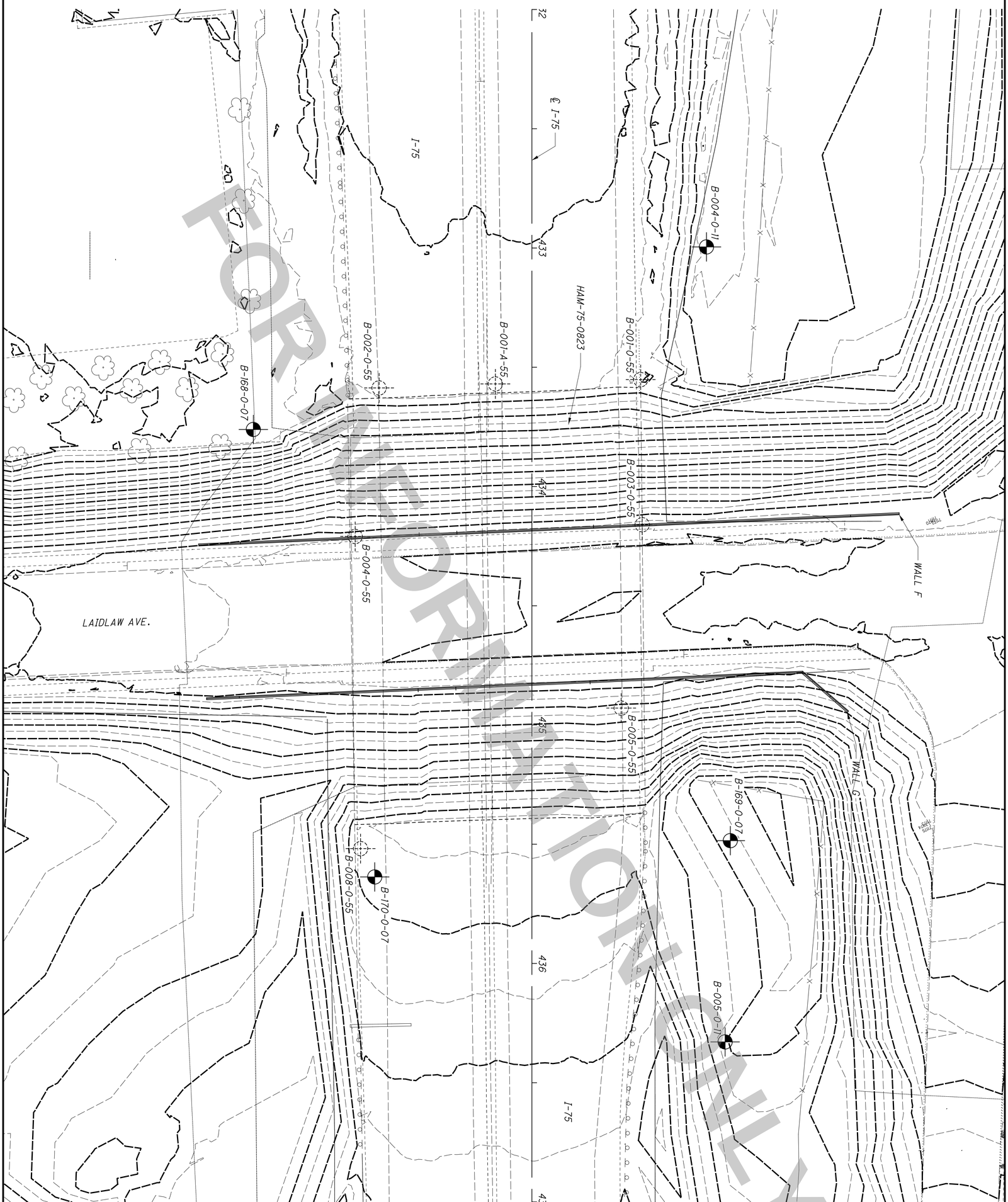
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BRIDGE NO. HAM-75-0791 I-75 OVER SR 562 RAMP J

HAM-75-7.85

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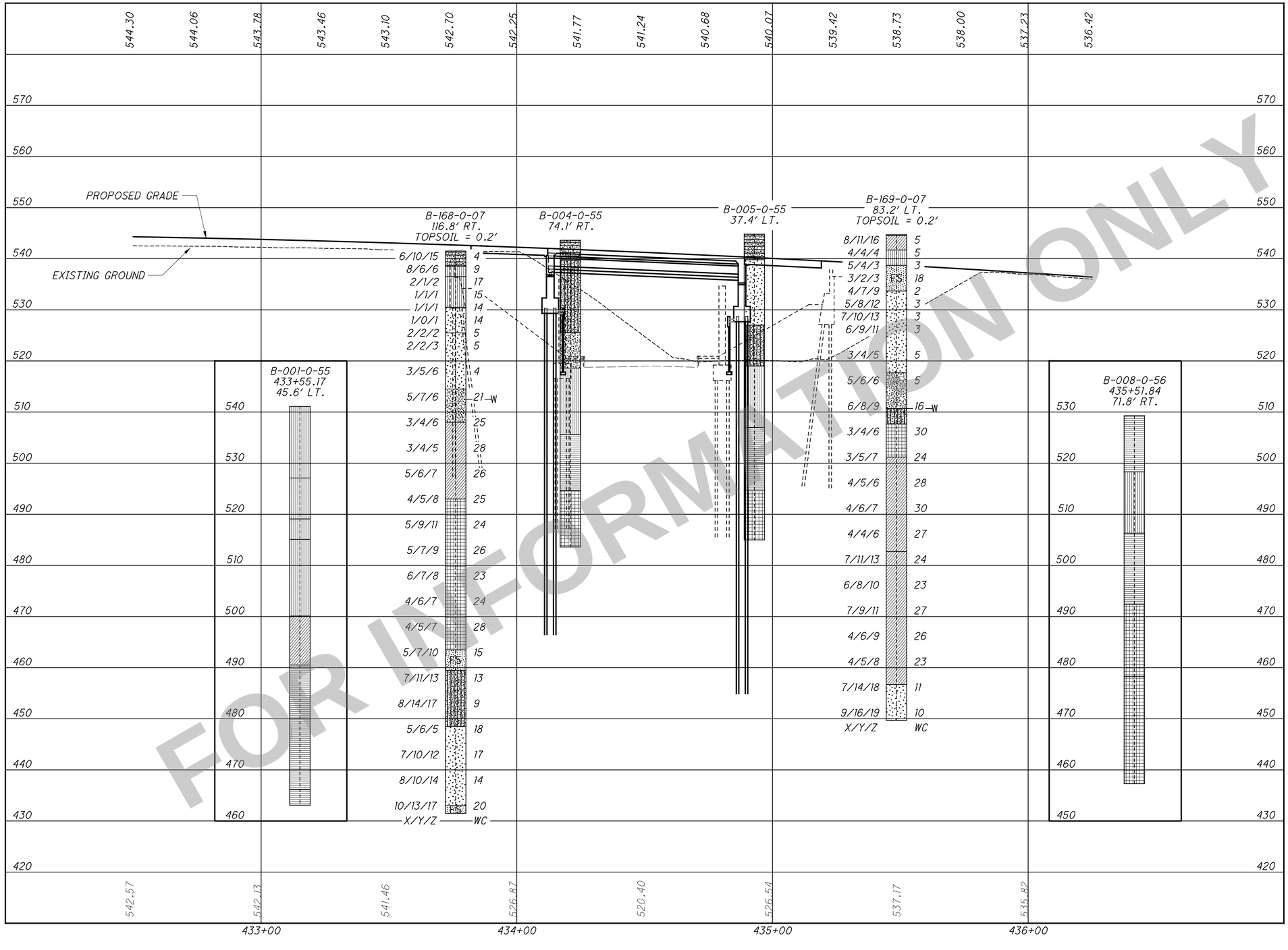
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FOR INFORMATIONAL

1846 2017	5 / 48	HAM-75-7.85	STRUCTURE FOUNDATION EXPLORATION BRIDGE NO. HAM-75-0823 I-75 OVER LAIDLAW AVE.	DRAWN RRM CHECKED BRT	0 20 10 40 HORIZONTAL SCALE IN FEET	N



FOR INFORMATION ONLY

PROFILES FOR BORINGS B-001-A-56, B-002-0-56, AND B-003-0-56, WERE NOT SHOWN ON THE HISTORIC PLANS.

HORIZONTAL SCALE IN FEET
0 10 20 40

DRAWN RRM
CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
BRIDGE NO. HAM-75-0823 I-75 OVER LAIDLAW AVE.

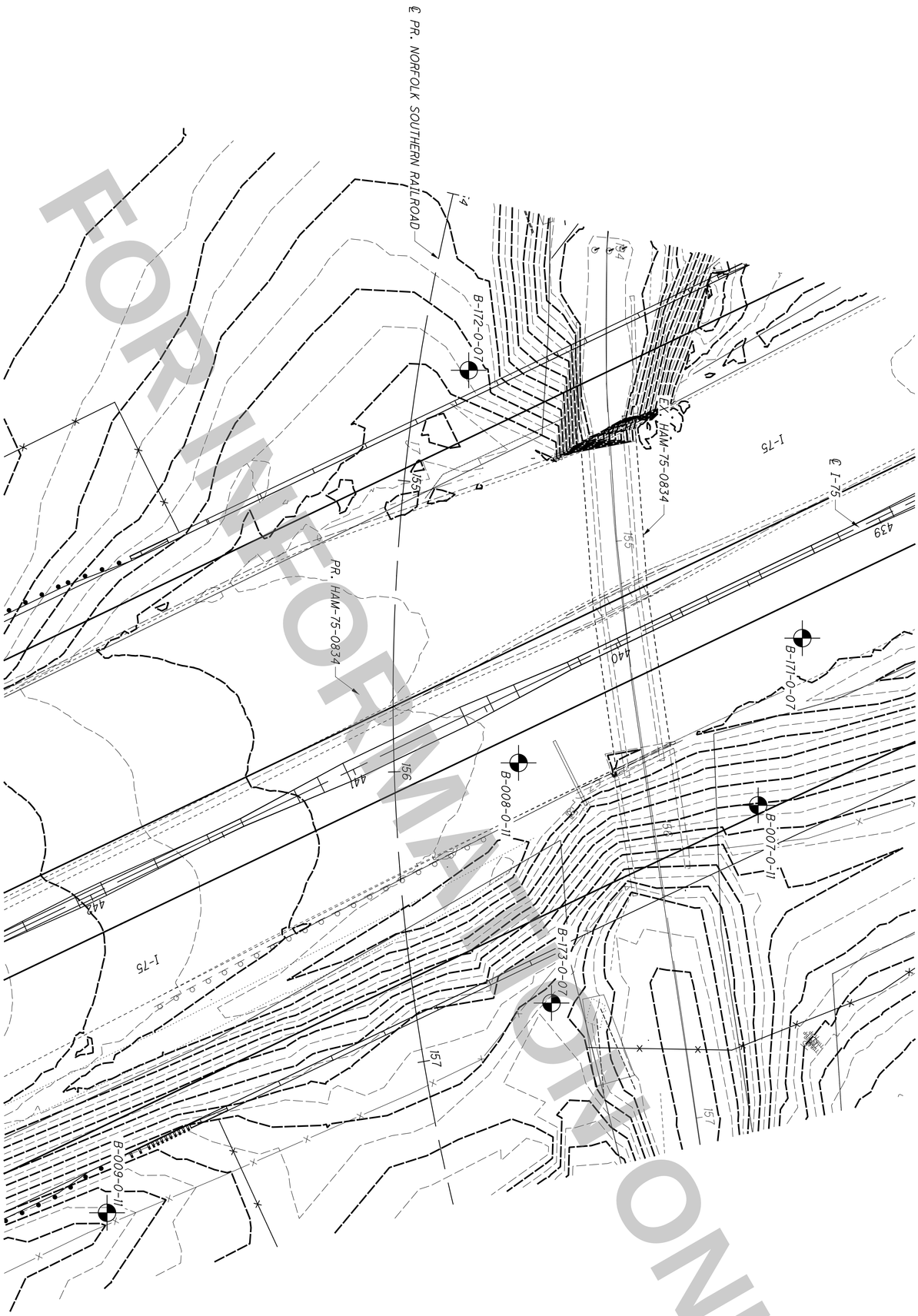
HAM-75-7.85

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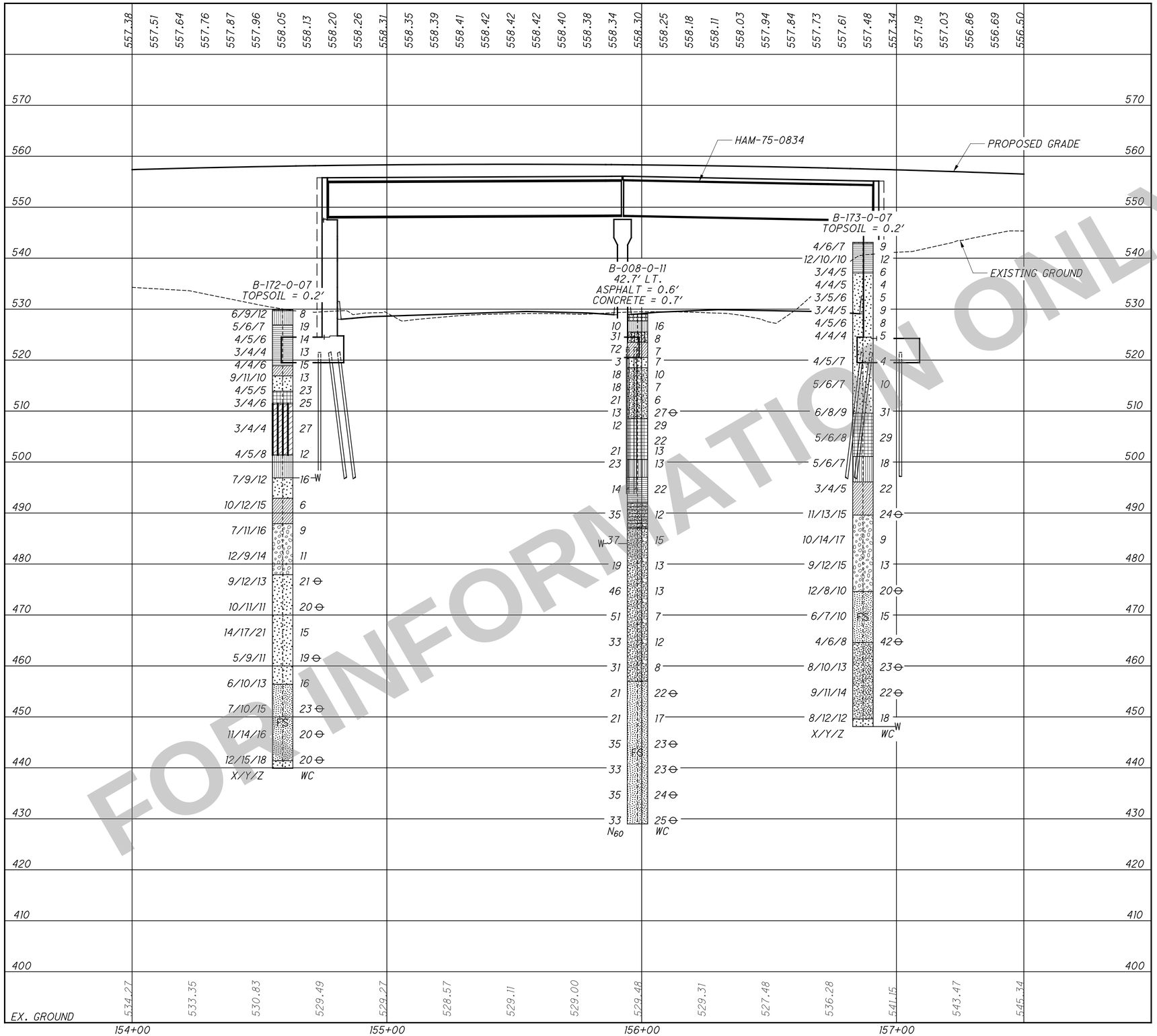
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FOR INFORMATION ONLY

2017 1848	7 / 48	**HAM-75-7.85**	**STRUCTURE FOUNDATION EXPLORATION** **BRIDGE NO. HAM-75-0834** **NORFOLK SOUTHERN RAILROAD OVER I-75**	CALCULATED RRM CHECKED BRT	0 20 10 40 HORIZONTAL SCALE IN FEET



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED RRM
CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
BRIDGE NO. HAM-75-0834
NORFOLK SOUTHERN RAILROAD OVER I-75

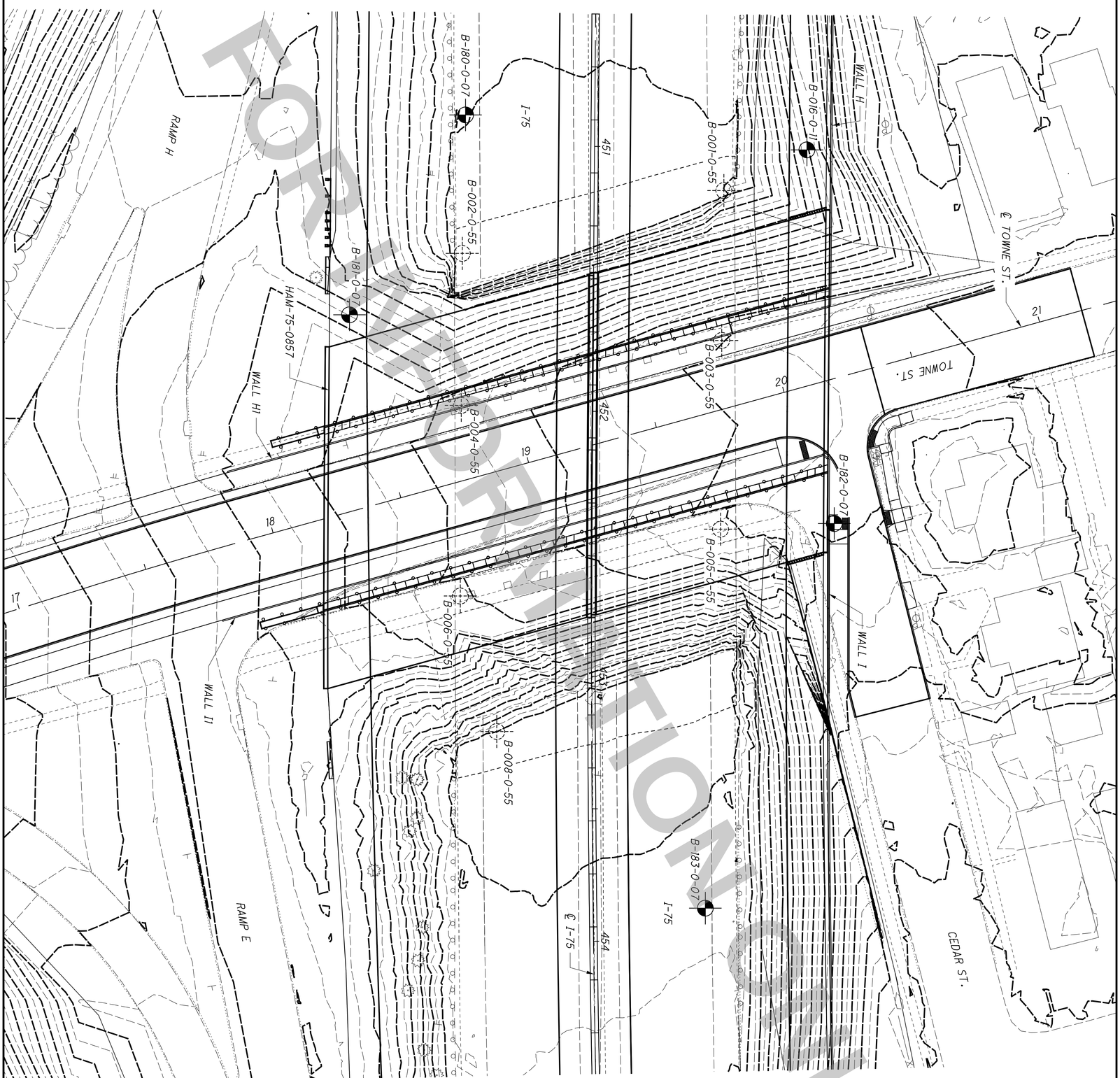
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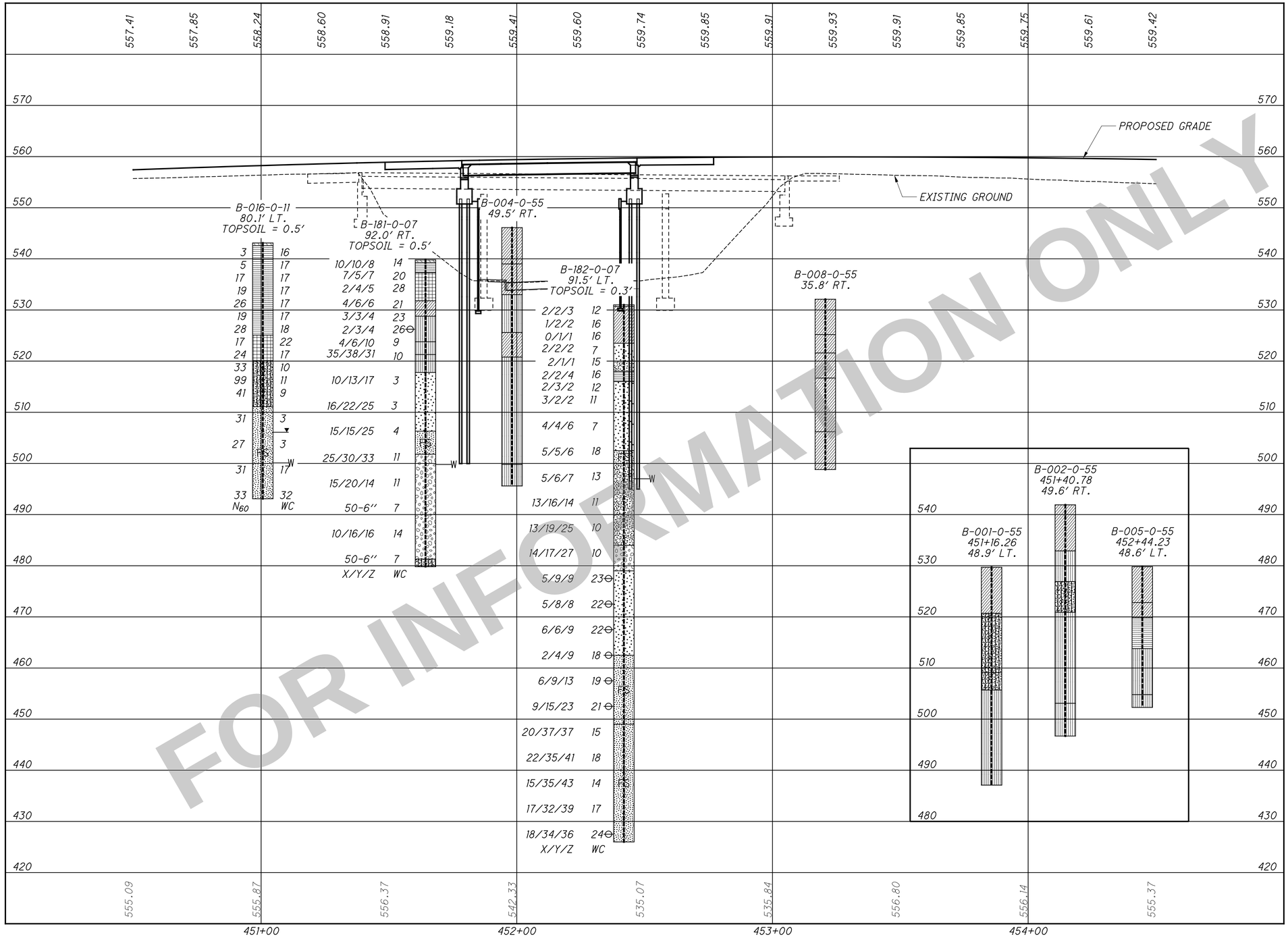
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FOR INFORMATIONAL ONLY

2017 / 1850	9 / 48	HAM-75-7.85	STRUCTURE FOUNDATION EXPLORATION BRIDGE NO. HAM-75-0857 I-75 OVER TOWNE STREET	DRAWN RRM CHECKED BRT	0 10 20 40 HORIZONTAL SCALE IN FEET	N



FOR INFORMATION ONLY

PROFILES FOR BORINGS B-003-0-55 AND B-006-0-55 WERE NOT SHOWN ON THE HISTORIC PLANS.

HORIZONTAL SCALE IN FEET
0 10 20 40

DRAWN RRM
CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
BRIDGE NO. HAM-75-0857 I-75 OVER TOWNE STREET

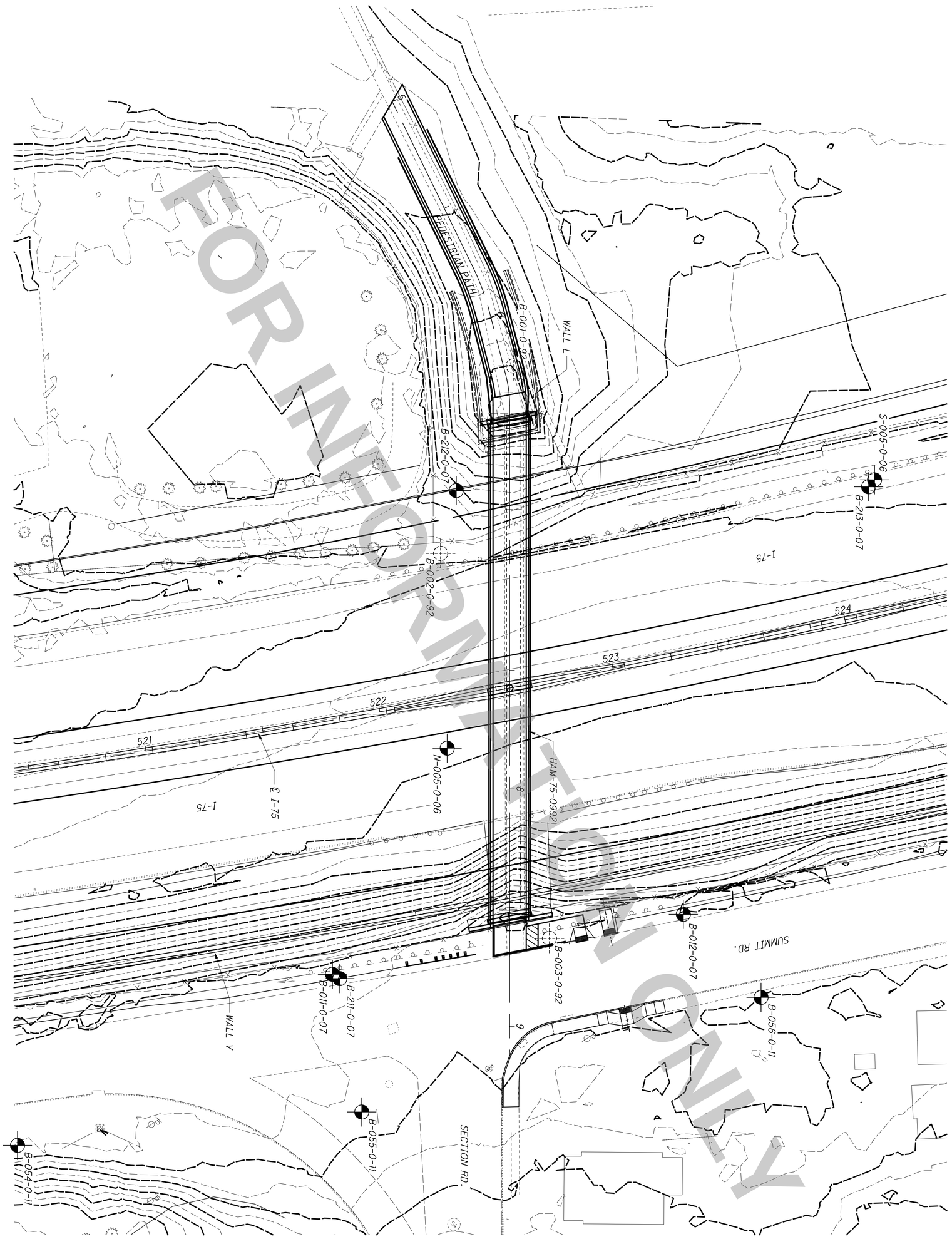
HAM-75-7.85

10 / 48

1851
2017

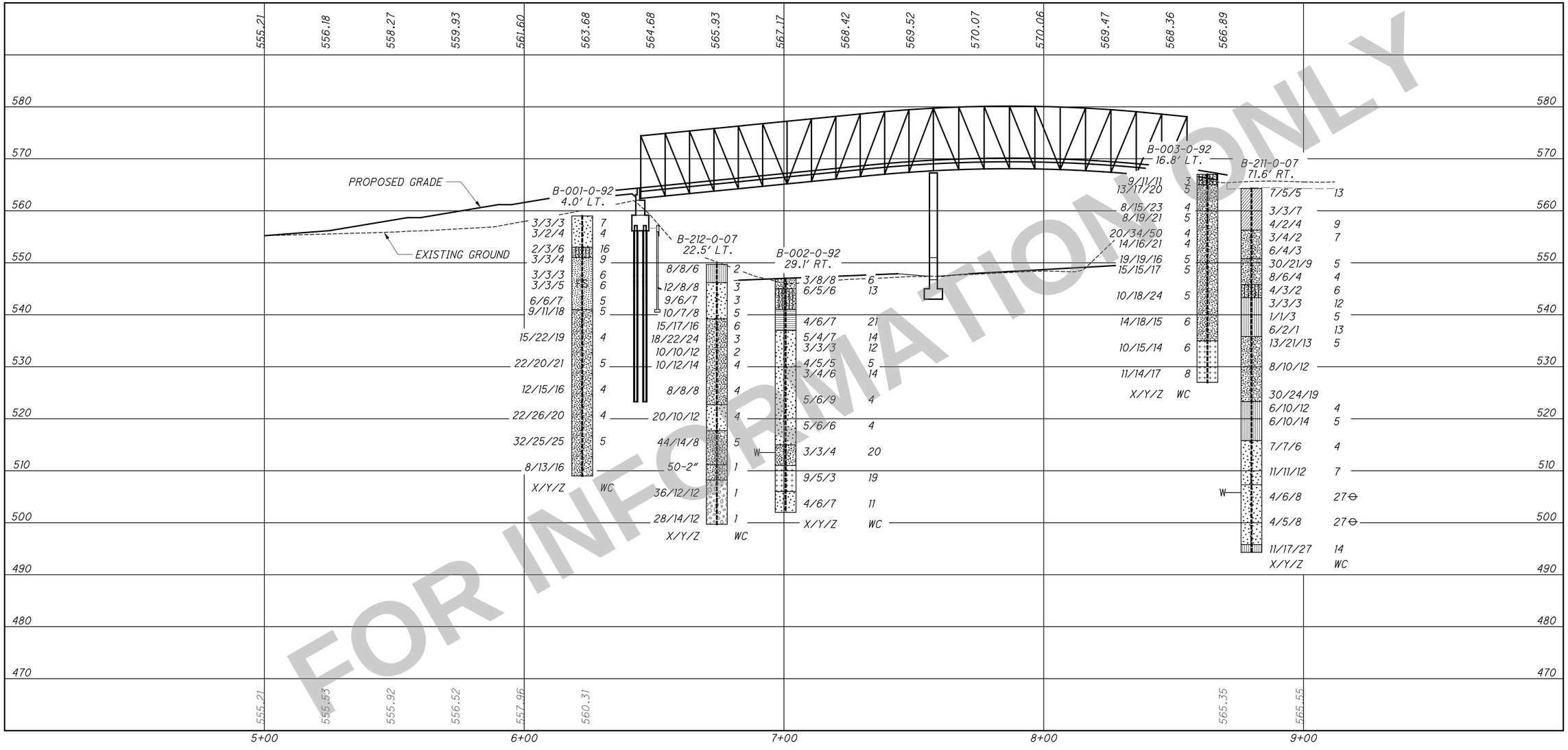
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FOR INFORMATION ONLY

2017 1852	11 / 48	HAM-75-7.85	STRUCTURE FOUNDATION EXPLORATION BRIDGE NO. HAM-75-0992 PEDESTRIAN PATH BRIDGE OVER I-75	DRAWN RRM CHECKED BRT	0 20 10 40 HORIZONTAL SCALE IN FEET	



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

DRAWN RRM
CHECKED BRT

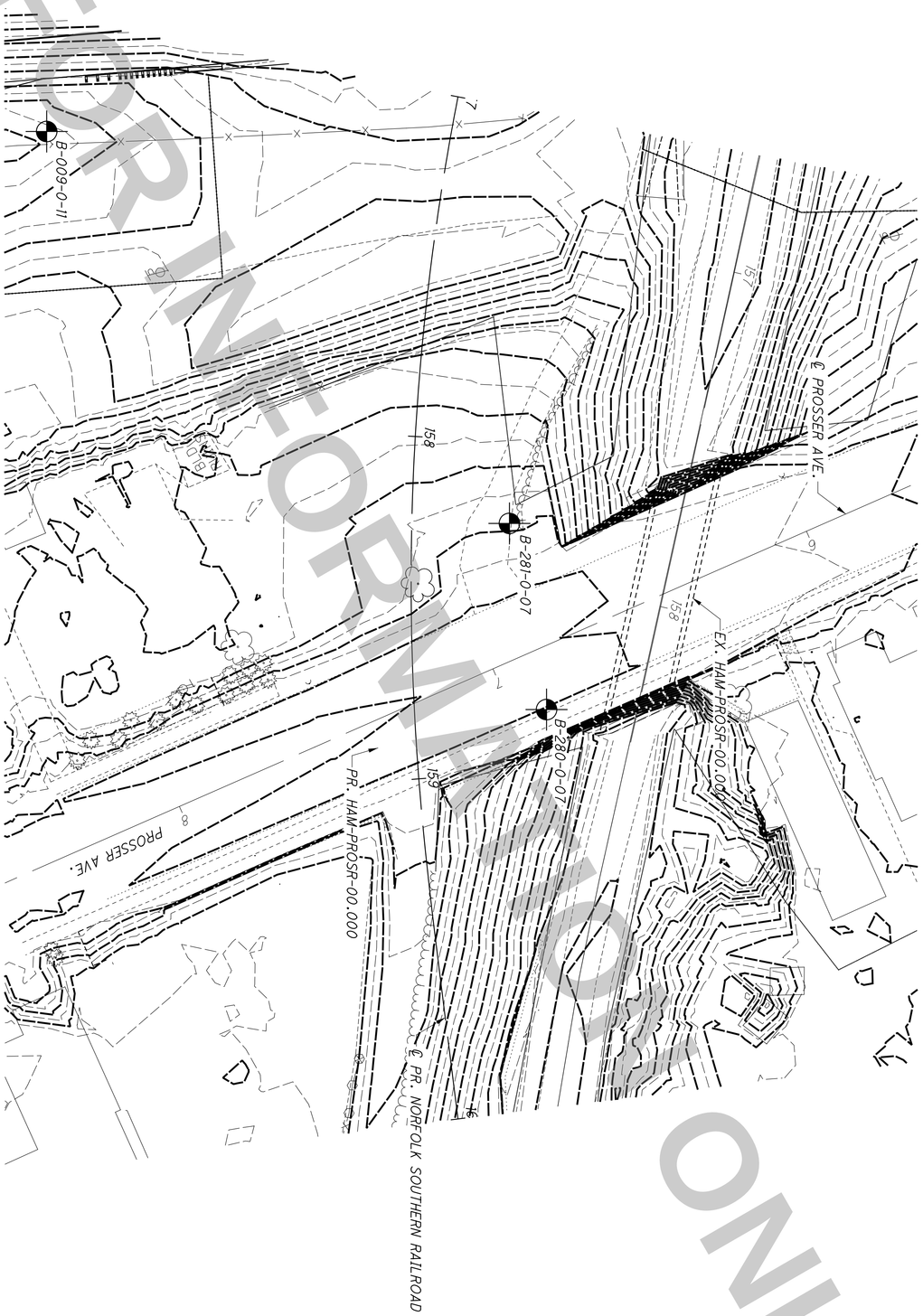
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BRIDGE NO. HAM-75-0992 PEDESTRIAN PATH BRIDGE OVER I-75

HAM-75-7.85

1853
2017

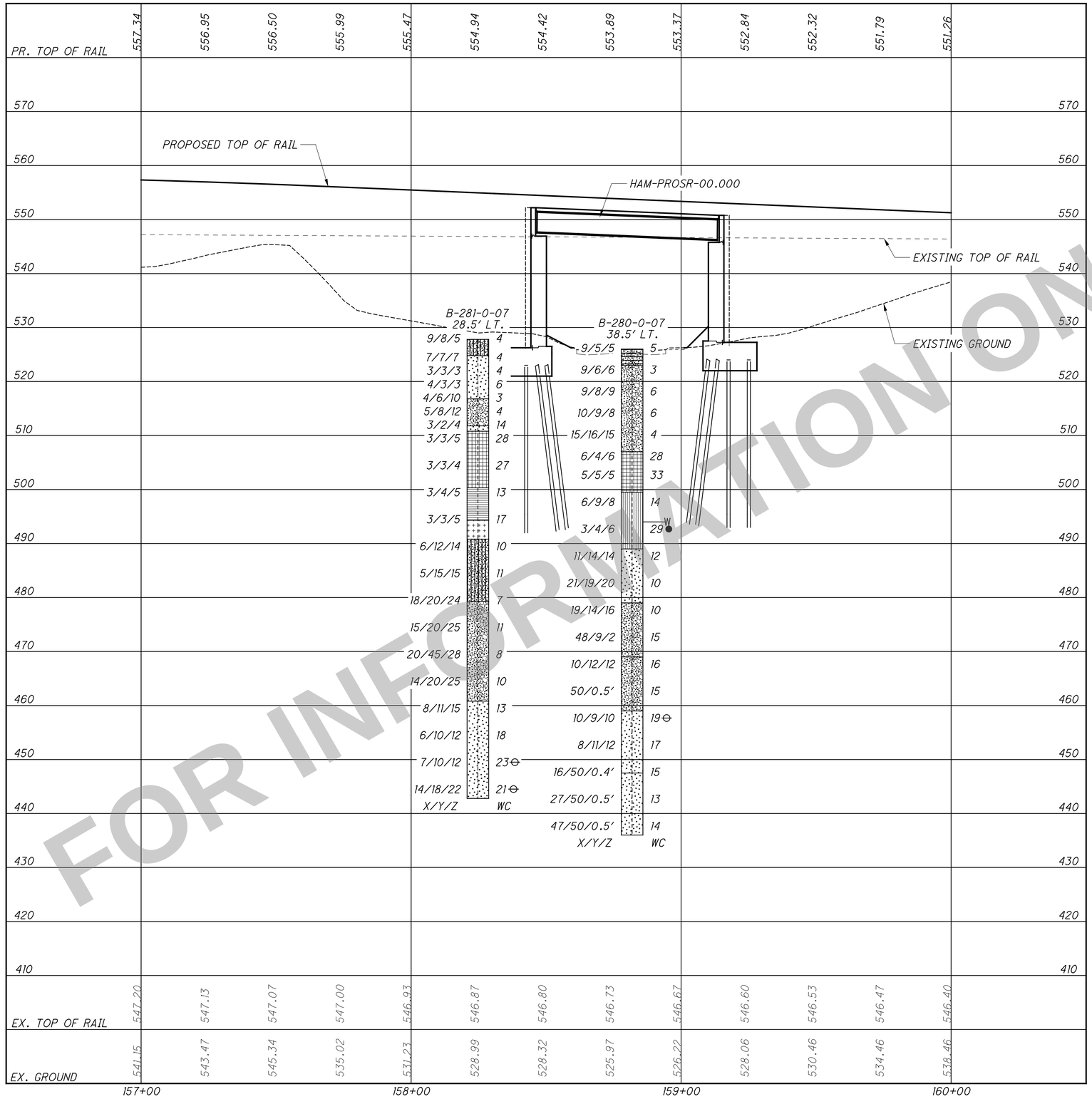
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FOR INFORMATION ONLY

2017 / 1854	13 / 48	HAM-75-7.85	STRUCTURE FOUNDATION EXPLORATION BRIDGE NO. HAM-75-PROSSER NORFOLK SOUTHERN RAILROAD OVER PROSSER AVE	DRAWN RRM CHECKED BRT	0 20 10 40 HORIZONTAL SCALE IN FEET	N



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET

DRAWN RRM
CHECKED BRT

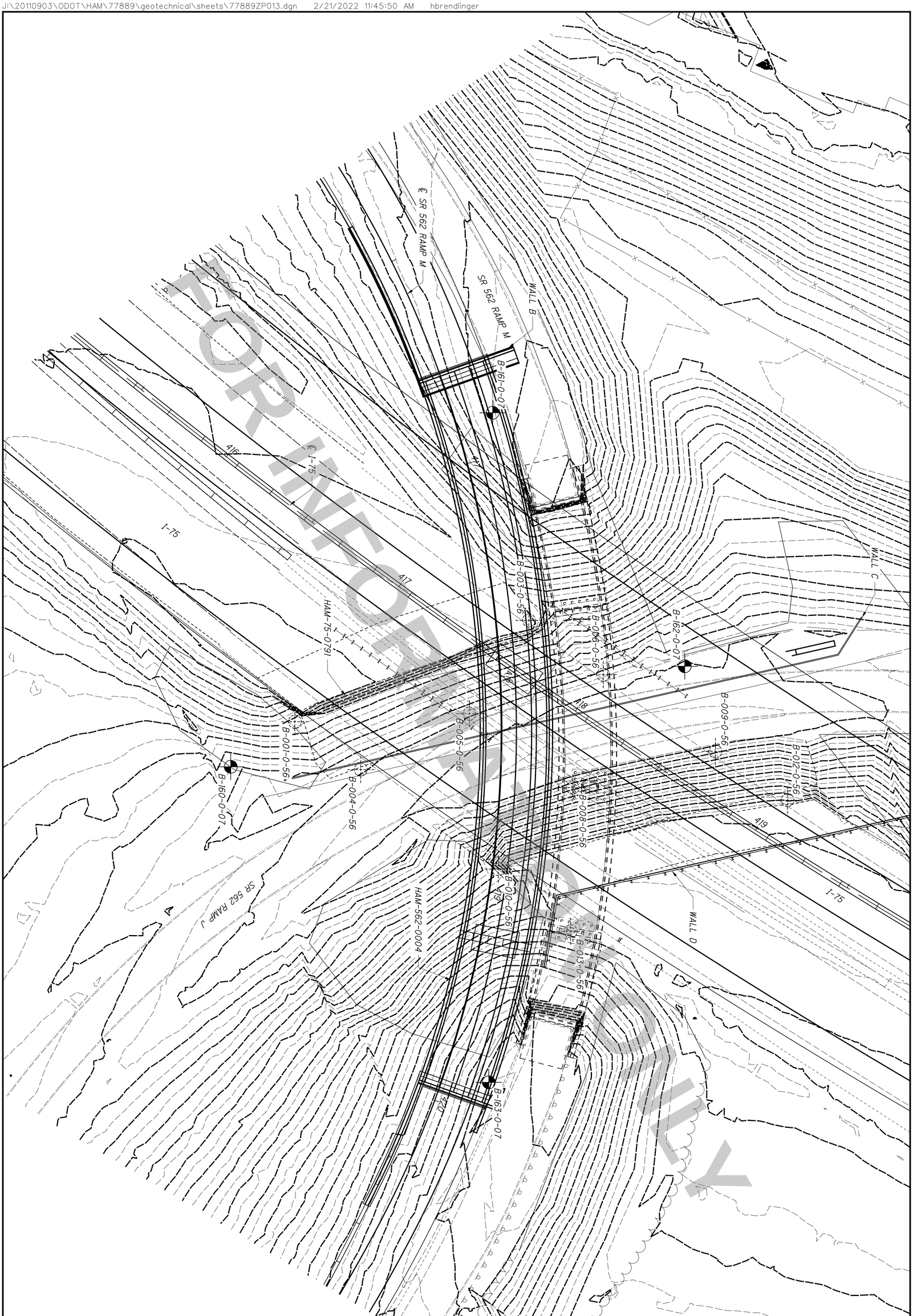
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BRIDGE NO. HAM-75-PROSSER
NORFOLK SOUTHERN RAILROAD OVER PROSSER AVE

HAM-75-7.85

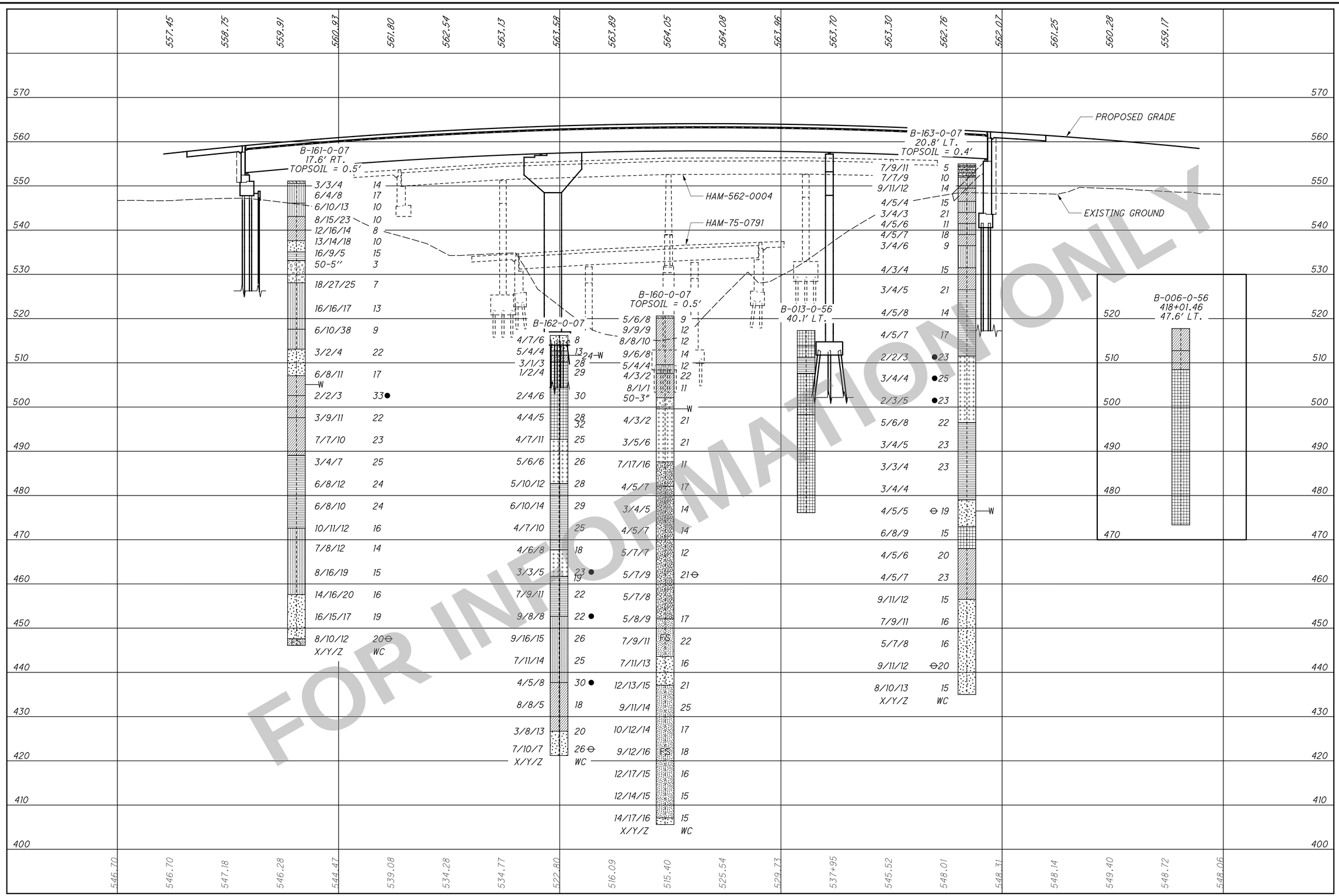
1855
2017

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2017 / 18559	15 / 48	HAM-75-7.85	STRUCTURE FOUNDATION EXPLORATION BRIDGE NO. HAM-562-0004 SR 562 RAMP M OVER I-75	DRAWN RRM CHECKED BRT	0 10 20 40 HORIZONTAL SCALE IN FEET	



FOR INFORMATION ONLY

PROFILES FOR BORINGS B-003-0-56, B-004-0-56, B-005-0-56, B-008-0-56, B-009-0-56 AND B-010-0-56 WERE NOT SHOWN ON THE HISTORIC PLANS.

HORIZONTAL SCALE IN FEET
0 10 20 40

DRAWN RRM
CHECKED BRT

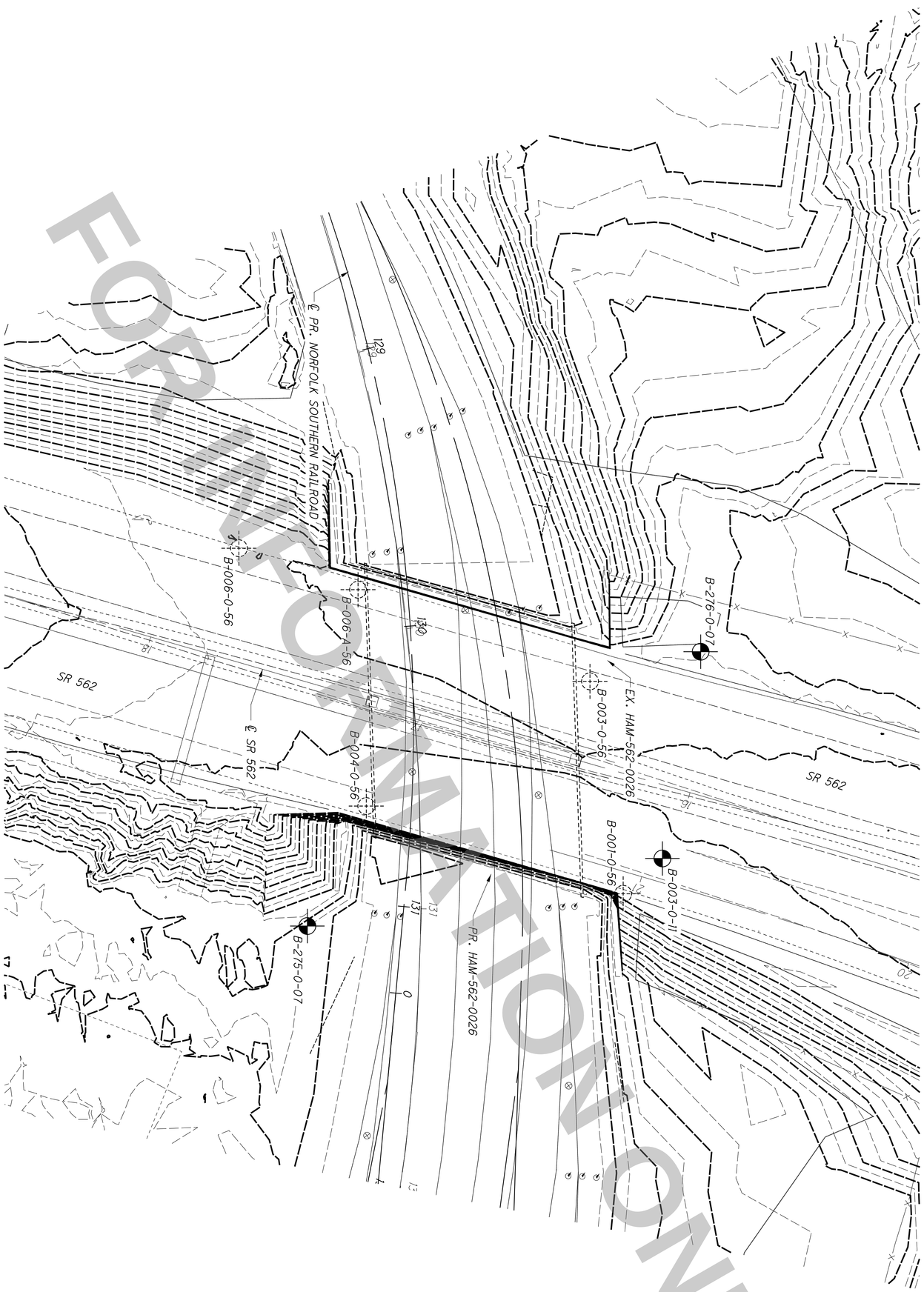
STRUCTURE FOUNDATION EXPLORATION
BRIDGE NO. HAM-562-0004 SR 562 RAMP M OVER I-75

HAM-75-7.85

1857
2017

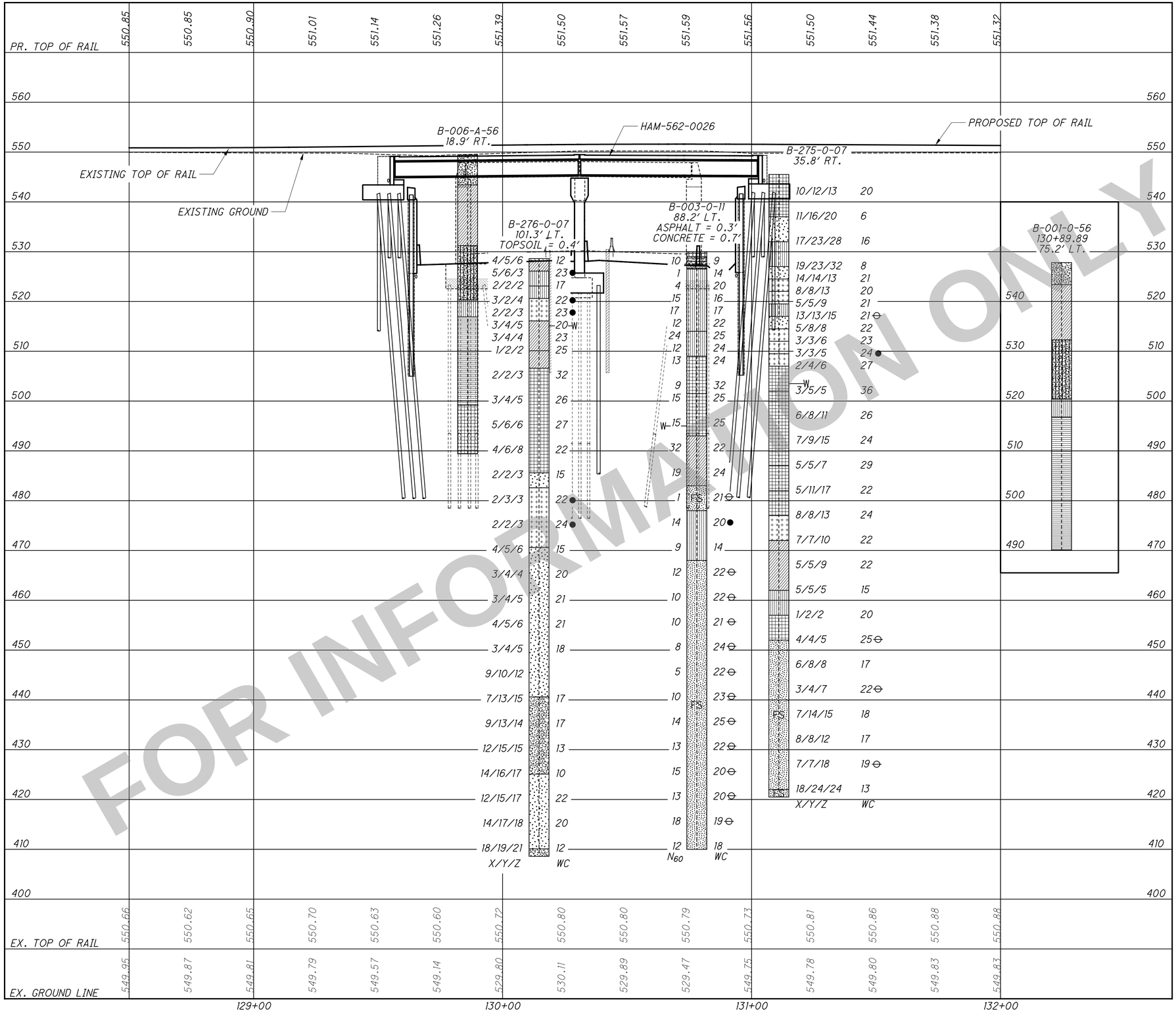
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FOR INFORMATION ONLY

2017 / 18858	17 / 48	HAM-75-7.85	STRUCTURE FOUNDATION EXPLORATION BRIDGE NO. HAM-562-0026 NORFOLK SOUTHERN RAILROAD OVER SR 562	DRAWN RRM CHECKED BRT	0 20 10 40 HORIZONTAL SCALE IN FEET



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

DRAWN RRM
CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
BRIDGE NO. HAM-562-0026
NORFOLK SOUTHERN RAILROAD OVER SR 562

HAM-75-7.85

18 / 48

1859
2017

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LOG OF BORING

1 / 4

Date Started 8/1/07 Sampler: Type SS / ST Dia. 1.375"
Date Completed 8/1/07 Casing: Length 115.0ft Dia. 3.25"
Water Elev. 499.6ft
Boring No. B-160-0-07 Station & Offset 416+74.74, 102.1' LT Surface Elev. 520.6ft

Project Identification: HAM-75-5.58 PID 82278
Hamilton County, Ohio
CTL Project No. 04120070g

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
520.6	0	AUGERED				0.5'	TOPSOIL (0.6')										VISUAL
520.1		5/6/8					STIFF TO VERY STIFF, BROWN SILT AND CLAY, AND SAND, SOME TO TRACE GRAVEL, DAMP -FILL	1								9	VISUAL
517.6	4	9/9/9						2	6	12	29	37	16	27	12	12	A-6a
515.1	6	8/8/10						3								12	VISUAL
512.1	10	9/6/8						4								14	VISUAL
509.6	12	5/4/4				11.0'	MEDIUM STIFF, BROWN SANDY SILT, LITTLE GRAVEL, LITTLE CLAY, DAMP -FILL	5	15	10	26	35	14	26	9	12	A-4a
507.6						13.0'											
507.1	14	4/3/2					SOFT TO MEDIUM STIFF, BROWN SILT AND CLAY, SOME SAND, TRACE GRAVEL, BRICK FRAGMENTS, MOIST -FILL	6	3	7	22	51	17	31	13	22	A-6a
504.6	16	8/1/1						7								11	VISUAL
502.1	18	50-3"				18.5'	NO RECOVERY	8									
499.6	20					21.0'											
497.1	22	4/3/2					MEDIUM STIFF TO STIFF, GRAY TO BROWN SILT, SOME CLAY, TRACE SAND, MOIST	9	0	0	7	67	26	30	10	21	A-4b
492.1	28	3/5/6						10								21	VISUAL
487.6	32					33.0'											
487.1	34	7/17/16					DENSE, GRAY AND BROWN GRAVEL AND/ OR STONE FRAGMENTS WITH SAND, TRACE CLAY, LITTLE SILT, WET	11	34	17	36	11	2	NP	NP	11	A-1-b

LOG OF BORING (Continued)

2 / 4

Project Identification: HAM-75-5.58 PID 82278
Hamilton County, Ohio
Boring No. B-160-0-07

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
485.6																	
	36																
482.1	38	4/5/7				38.5'	LOOSE TO MEDIUM DENSE, GRAY AND BROWN GRAVEL AND/ OR STONE FRAGMENTS WITH SAND, TRACE CLAY, TRACE SILT, WET	12								17	VISUAL
	40																
	42																
477.1	44	3/4/5						13								14	VISUAL
	46																
472.1	48	4/5/7						14	19	32	44	4	1	NP	NP	14	A-1-b
	50																
	52																
467.1	54	5/7/7						15								12	VISUAL
	56																
	58																
462.1	60	5/7/9						16								21	VISUAL
	62																
457.1	64	5/7/8					NO RECOVERY	17									
	66																
	68																
452.1	70	5/8/9			FS	68.5'	MEDIUM DENSE, BROWN FINE SAND, TRACE SILT, TRACE CLAY, MOIST	18	0	13	79	7	1	NP	NP	17	A-3

FOR INFORMATION ONLY

DRAWN RRM CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
2007 CTL BORING LOGS

HAM-75-7.85

19 / 48

1860 / 2017

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LOG OF BORING (Continued)

3/4

Project Identification: HAM-75-5.58 PID 82278
Hamilton County, Ohio

Boring No. B-160-0-07

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
449.5																	
	72				FS												
447.1		7/9/11						19								22	VISUAL
	74																
	76																
443.6						77.0′												
							MEDIUM DENSE, LIGHT BROWN COARSE AND FINE SAND, LITTLE SILT, MOIST	20									16	VISUAL
442.1	78	7/11/13															
	80																
	82																
437.1						83.5′												
	84	12/13/15					MEDIUM DENSE TO DENSE, BROWN FINE SAND, TRACE SILT, TRACE CLAY, MOIST	21	0	1	92	6	1	NP	NP	21	A-3
	86																
	88																
432.1		9/11/14						22								25	VISUAL
	90																
	92																
427.1		10/12/14						23								17	VISUAL
	94																
	96				FS												
	98																
422.1		9/12/16						24	0	9	85	5	1	NP	NP	18	A-3
	100																
	102																
417.1		12/17/15						25								16	VISUAL
	104																
	106																

LOG OF BORING (Continued)

4/4

Project Identification: HAM-75-5.58 PID 82278
Hamilton County, Ohio

Boring No. B-160-0-07

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
413.5																	
412.1	108	12/14/15			FS			26								15	VISUAL
	110																
	112																
407.1		14/17/16				113.5′											
	114					115.0′	DENSE, BROWN COARSE AND FINE SAND, TRACE GRAVEL, TRACE SILT, TRACE CLAY, MOIST	27	6	23	59	7	5	NP	NP	15	A-3a
405.6							BOTTOM OF BORING = 115.0′										

FOR INFORMATION ONLY

DRAWN RRM CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
2007 CTL BORING LOGS

HAM-75-7.85

20/48

1861/2017

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LOG OF BORING

1/3

Date Started 8/1/07 Sampler: Type SS / ST Dia. 1.375″ Project Identification: HAM-75-5.58 PID 82278

Date Completed 8/1/07 Casing: Length 105.5ft Dia. 3.25″ Hamilton County, Ohio

Water Elev. 505.1ft

Boring No. B-161-0-07 Station & Offset 416+80.95, 17.6 LT Surface Elev. 551.1ft CTL Project No. 04120070g

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
551.1	0	AUGERED				0.5′	TOPSOIL (.5′)										VISUAL
550.6		3/3/4					MEDIUM STIFF TO STIFF, DARK BROWN SANDY SILT, LITTLE CLAY, TRACE GRAVEL, MOIST	1								14	VISUAL
	2																
548.1		6/4/8						2	2	10	34	38	16	24	10	17	A-4a
	4																
545.6						5.0′											
	6	6/10/13					VERY STIFF, BROWN SANDY SILT, TRACE CLAY, DAMP	3								10	VISUAL
	8					8.0′											
542.6		8/15/23					VERY STIFF TO HARD, BROWNISH GRAY SILT AND CLAY, AND SAND, LITTLE GRAVEL, DAMP	4	12	18	21	30	19	26	11	10	A-6a
	10																
540.1		12/16/14						5								8	VISUAL
	12																
537.6						13.5′											
	14	13/14/18					DENSE, BROWN AND DARK GRAY COARSE AND FINE SAND, LITTLE GRAVEL, LITTLE SILT, TRACE CLAY, DAMP	6	20	27	34	17	2	NP	NP	10	A-3a
535.1	16					16.0′											
		16/9/5					STIFF, BROWN SILTY CLAY, SOME SAND, LITTLE GRAVEL, MOIST	7								15	VISUAL
	18					18.0′											
532.6		50-5″					VERY DENSE, BROWN GRAVEL AND/ OR STONE FRAGMENTS, SOME SAND, DRY	8	65	10	21	4	0	NP	NP	3	A-1-a
	20																
	22					23.0′											
527.6																	
	24	18/27/25					HARD, GRAY SANDY SILT, SOME GRAVEL, LITTLE CLAY, DAMP TO MOIST	9								7	VISUAL
	26																
	28																
522.6		16/16/17						10	27	5	17	38	13	NP	NP	13	A-4a
	30																
	32																
517.6						33.5′											
	34	6/10/38					HARD, BROWN SILTY SAND, AND GRAVEL, MOIST	11								9	VISUAL

LOG OF BORING (Continued)

2/3

Project Identification: HAM-75-5.58 PID 82278

Hamilton County, Ohio

Boring No. B-161-0-07

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
516.1																	
	36																
						38.0′											
	38																
512.6		3/2/4					LOOSE, GRAY COARSE AND FINE SAND, TRACE CLAY, LITTLE SILT, MOIST	12	0	8	62	21	9	NP	NP	22	A-3a
	40																
	42																
507.6						43.5′											
	44	6/8/11					VERY STIFF, GRAY SILT AND CLAY, TRACE SAND, TRACE GRAVEL, MOIST	13								17	VISUAL
	46																
	48																
502.6		2/2/3				48.5′	MEDIUM STIFF, GRAY SILT AND CLAY, TRACE SAND, WET	14	0	1	1	55	43	33	14	33	A-6a
	50																
	52																
497.6		3/9/11				53.5′	VERY STIFF, GRAY SILT AND CLAY, TRACE SAND, TRACE GRAVEL, WET TO MOIST	15								22	VISUAL
	54																
	56																
492.6		7/7/10						16								23	VISUAL
	58																
	60																
	62					62.0′											
487.6		3/4/7					STIFF TO VERY STIFF, GRAY SILTY CLAY, MOIST	17	0	0	0	39	61	40	19	25	A-6b
	64																
	66																
482.6																	
	68	6/8/12						18								24	VISUAL
	70																

FOR INFORMATION ONLY

DRAWN RRM CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
2007 CTL BORING LOGS

HAM-75-7.85

21/48

1862/2017

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LOG OF BORING
(Continued)

3
3

Project Identification: HAM-75-5.58 PID 82278
Hamilton County, Ohio

Boring No. B-161-0-07

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)		Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
480.0																
477.6	72						19								24	VISUAL
	74	6/8/10														
	76															
472.6	78				78.5′	VERY STIFF TO HARD, GRAY SANDY SILT, TRACE CLAY, MOIST	20	0	11	35	44	10	21	5	16	A-4a
	80	10/11/12														
	82															
468.1	84	7/8/12					21								14	VISUAL
	86															
	88															
462.6	90	8/16/19					22								15	VISUAL
	92															
457.6	94	14/16/20			93.5′	DENSE, GRAY COARSE AND FINE SAND, SOME SILT, TRACE GRAVEL, TRACE CLAY, MOIST	23	1	14	59	25	1	NP	NP	16	A-3a
	96															
452.6	98	16/15/17					24								19	VISUAL
	100															
	102															
447.6	104	8/10/12			103.5′	MEDIUM DENSE, GRAY AND BROWN FINE SAND, TRACE GRAVEL, TRACE SILT, WET	25	2	30	59	9	0	NP	NP	20	A-3
446.1					FS 105.0′	BOTTOM OF BORING = 105.0′										

FOR INFORMATION ONLY

DRAWN RRM
CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
2007 CTL BORING LOGS

HAM-75-7.85

1863
2017

LOG OF BORING

1 / 3

Date Started 7/31/07 Sampler: Type SS / ST Dia. 1.375″ Project Identification: HAM-75-5.58 PID 82278

Date Completed 7/31/07 Casing: Length 95.0ft Dia. 3.25″ Hamilton County, Ohio

Water Elev. 511.7ft

Boring No. B-162-0-07 Station & Offset 418+30.50, 45.6′ LT Surface Elev. 516.2ft CTL Project No. 04120070g

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
516.2	0																
515.2	2	4/7/6					MEDIUM DENSE, BROWN COARSE AND FINE SAND, SOME SILT, TRACE CLAY, TRACE GRAVEL, DAMP -FILL	1	9	27	31	26	7	NP	NP	8	A-3a
512.7	4	5/4/4				3.5′	MEDIUM STIFF, BROWN SANDY SILT, AND GRAVEL, TRACE CLAY, MOIST	2A								13	VISUAL
511.7						4.5′	MEDIUM STIFF, GRAY TO BROWN SILT AND CLAY, TRACE SAND, MOIST	2B								24	VISUAL
510.2	6	3/1/3				6.0′	SOFT TO MEDIUM STIFF, GRAY TO BROWN CLAY, AND SILT,TRACE SAND, MOIST	3	0	0	0	45	55	46	24	28	A-7-6
507.7	8							4								29	VISUAL
	10	1/2/4															
	12																
502.7	14	2/4/6				13.5′	STIFF, GRAY TO BROWN CLAY, SOME SILT, TRACE SAND, MOIST	5	0	0	0	27	73	49	26	30	A-7-6
	16																
	18																
497.7		4/4/5						6A								28	VISUAL
496.7	20						-SILT LAYERS ARE INTERBEDDED	6B								32	VISUAL
	22																
492.7	24	4/7/11				23.5′	STIFF TO VERY STIFF, GRAY TO BROWN SILT, SOME CLAY, TRACE SAND, MOIST	7	0	0	1	71	28	30	9	25	A-4b
	26																
487.7	28	5/6/6						8								26	VISUAL
	30																
	32																
482.7	34	5/10/12				33.5′	VERY STIFF, GRAY TO BROWN SILTY CLAY, TRACE SAND, MOIST	9	0	0	0	55	45	40	17	28	A-6b

LOG OF BORING (Continued)

2 / 3

Project Identification: HAM-75-5.58 PID 82278

Hamilton County, Ohio

Boring No. B-162-0-07

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
481.2																	
	36																
477.7	38	6/10/14						10								29	VISUAL
	40																
	42																
472.7	44	4/7/10						11								25	VISUAL
	46																
467.7	48	4/6/8				48.5′	MEDIUM STIFF TO STIFF, GRAY SILT, LITTLE CLAY, LITTLE SAND, TRACE GRAVEL, MOIST	12	0	7	13	63	17	25	8	18	A-4b
	50																
	52																
462.7	54	3/3/5				54.5′		13A								23	VISUAL
461.7							MEDIUM STIFF TO VERY STIFF, GRAY SILTY CLAY, SOME SAND, TRACE GRAVEL, MOIST -SAND LAYERS ARE INTERBEDDED	13B								19	VISUAL
	56																
	58																
457.7	60	7/9/11						14	0	8	19	28	45	38	18	22	A-6b
	62																
452.7	64	9/8/8				63.5′	VERY STIFF TO HARD, GRAY SANDY SILT, TRACE GRAVEL, TRACE CLAY, WET	15	3	16	41	31	9	18	5	22	A-4a
	66																
	68																
447.7	70	9/16/15						16								26	VISUAL

FOR INFORMATION ONLY

DRAWN RRM CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
2007 CTL BORING LOGS

HAM-75-7.85

23 / 48

1864 / 2017

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LOG OF BORING
(Continued)

3
3

Project Identification: HAM-75-5.58 PID 82278
Hamilton County, Ohio

Boring No. B-162-0-07

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
445.1																	
	72																
442.7	74	7/11/14						17								25	VISUAL
	76																
	78					78.5′											
437.7		4/5/8					STIFF, GRAY SILT AND CLAY, SOME SAND, TRACE GRAVEL, MOIST	18	0	2	23	50	25	31	13	30	A-6a
	80																
	82																
432.7	84	8/8/5						19								18	VISUAL
	86																
	88																
426.7	90	3/8/13				89.5′	MEDIUM DENSE, GRAY TO BROWN COARSE AND FINE SAND, LITTLE SILT, TRACE GRAVEL, TRACE CLAY, MOIST	20	0	11	78	11	0	NP	NP	20	A-3a
	92																
422.7	94	7/10/7						21								26	VISUAL
421.2						95.0′											

BOTTOM OF BORING = 95.0′

FOR INFORMATION ONLY

DRAWN RRM
CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
2007 CTL BORING LOGS

HAM-75-7.85

1865
2017

LOG OF BORING

1 / 4

Date Started 8/3/07 Sampler: Type SS / ST Dia. 1.375″ Project Identification: HAM-75-5.58 PID 82278

Date Completed 8/7/07 Casing: Length 120.0ft Dia. 3.25″ Hamilton County, Ohio

Water Elev. 476.5ft

Boring No. B-163-0-07 Station & Offset 419+84.08, 20.8′ LT Surface Elev. 555.0ft CTL Project No. 04120070g

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
555.0	0					0.4′	TOPSOIL (0.4″)										VISUAL
554.6		AUGERED 7/9/11					MEDIUM DENSE, BROWN GRAVEL AND/OR STONE FRAGMENTS WITH SAND, SILT, AND CLAY, DAMP	1								5	VISUAL
554.5	2																
552.0		7/7/9				3.0′	VERY STIFF, BROWN SANDY SILT, LITTLE CLAY, LITTLE GRAVEL, DAMP	2								10	VISUAL
	4																
549.5						5.5′	VERY STIFF, BROWN, LIGHT BROWN, AND GRAY, MOTTLED SILT AND CLAY, SOME SAND, TRACE GRAVEL, DAMP	3	4	7	28	46	15	29	14	14	A-6a
	6	9/11/12															
546.5	8					8.5′											
		4/5/4					STIFF, BROWN SANDY SILT, AND CLAY, TRACE GRAVEL, MOIST	4								15	VISUAL
	10																
544.0		3/4/3				11.0′	MEDIUM STIFF, BROWN SILT AND CLAY, SOME SAND, TRACE GRAVEL, MOIST	5	1	4	23	52	20	35	15	21	A-6a
	12																
541.5						13.5′											
	14	4/5/6					STIFF, BROWN SANDY SILT, SOME CLAY, TRACE GRAVEL, DAMP	6								11	VISUAL
539.0	16					16.0′											
		4/5/7					STIFF, BROWN SILT AND CLAY, SOME GRAVEL, SOME SAND, MOIST	7	26	4	25	31	14	29	14	18	A-6a
536.5	18					18.5′											
		3/4/6					STIFF, DARK BROWN SANDY SILT, SOME CLAY, LITTLE GRAVEL, DAMP	8								9	VISUAL
	20																
	22																
531.5						23.5′											
	24	4/3/4					MEDIUM STIFF, LIGHT BROWN SILT AND CLAY, LITTLE GRAVEL, AND SAND, MOIST	9	12	17	32	13	26	27	11	15	A-6a
	26																
526.5	28					28.5′											
		3/4/5					STIFF, LIGHT BROWN SILTY CLAY, LITTLE SAND, TRACE TO LITTLE GRAVEL, DAMP TO MOIST	10								21	VISUAL
	30																
	32																
521.5																	
	34	4/5/8						11	15	6	11	40	28	34	16	14	A-6b

LOG OF BORING (Continued)

2 / 4

Project Identification: HAM-75-5.58 PID 82278

Hamilton County, Ohio

Boring No. B-163-0-07

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
520.0																	
	36																
516.5	38	4/5/7						12								17	VISUAL
	40																
	42																
511.5						43.5′											
	44	2/2/3					MEDIUM STIFF, GRAY SILT, SOME CLAY, TRACE SAND, MOIST	13	0	0	0	73	27	26	5	23	A-4b
	46																
506.5	48	3/4/4						14								25	VISUAL
	50																
	52																
501.5	54	2/3/5						15								23	VISUAL
	56																
	58																
496.5		5/6/8				58.5′	MEDIUM STIFF TO STIFF, GRAY SILTY CLAY, TRACE SAND, DAMP	16	0	0	0	58	42	39	16	22	A-6b
	60																
	62																
491.5	64	3/4/5						17								23	VISUAL
	66																
	68																
486.5		3/3/4						18								23	VISUAL
	70																

FOR INFORMATION ONLY

DRAWN RRM CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
2007 CTL BORING LOGS

HAM-75-7.85

25 / 48

1866 2017

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LOG OF BORING (Continued)

3/4

Project Identification: HAM-75-5.58 PID 82278
Hamilton County, Ohio

Boring No. B-163-0-07

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
483.9																	
	72						NO RECOVERY	19									
481.5	74	3/4/4															
479.0	76					76.0′											
	78						LOOSE, GRAY COARSE AND FINE SAND, LITTLE CLAY, TRACE SILT, TRACE GRAVEL, WET	20	4	21	47	8	20	NP	NP	19	A-3a
476.5		4/5/5															
	80																
473.0	82					82.0′											
	84						VERY STIFF, GRAY CLAY, SOME SAND, TRACE SILT, MOIST -SAND LAYERS ARE INTERBEDDED	21								15	VISUAL
471.5		6/8/9															
	86																
468.0						87.0′											
	88						STIFF, GRAY SILT AND CLAY, LITTLE SAND, TRACE GRAVEL, MOIST	22								20	VISUAL
466.5		4/5/6															
	90																
	92																
461.5		4/5/7						23	1	2	10	44	43	33	12	23	A-6a
	94																
	96																
	98																
456.5		9/11/12				98.5′											
	100						MEDIUM DENSE, BROWN TO GRAY COARSE AND FINE SAND, TRACE CLAY, TRACE SILT, TRACE GRAVEL, WET	24								15	VISUAL
	102																
451.5		7/9/11						25	0	22	66	9	3	NP	NP	16	A-3a
	104																
	106																

LOG OF BORING (Continued)

4/4

Project Identification: HAM-75-5.58 PID 82278
Hamilton County, Ohio

Boring No. B-163-0-07

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
447.9																	
	108																
446.5		5/7/8						26								16	VISUAL
	110																
	112																
441.5		9/11/12						27								20	VISUAL
	114																
	116																
	118																
436.5		8/10/13						28	4	26	60	5	5	NP	NP	15	A-3a
435.0	120					120.0′											
							BOTTOM OF BORING = 120.0′										

FOR INFORMATION ONLY

DRAWN RRM CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
2007 CTL BORING LOGS

HAM-75-7.85

26/48

1867/2017

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LOG OF BORING

Date Started 8/8/07 Sampler: Type SS / ST Dia. 1.375" Project Identification: HAM-75-5.58 PID 82278

Date Completed 8/8/07 Casing: Length 90.0ft Dia. 3.25" Hamilton County, Ohio

Water Elev. 496.9ft

Boring No. B-172-0-07 Station & Offset 154+59.09, 17.1' LT Surface Elev. 529.9ft CTL Project No. 04120070g

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
529.9	0	AUGERED				0.2'	TOPSOIL (.2')										VISUAL
528.9	2	6/9/12				3.0'	VERY STIFF, LIGHT BROWN SANDY SILT, LITTLE CLAY, LITTLE GRAVEL, DAMP	1								8	VISUAL
526.4	4	5/6/7					MEDIUM STIFF TO STIFF, BROWN SILTY CLAY, TRACE SAND, DAMP TO MOIST	2	0	2	5	53	40	40	22	19	A-6b
523.9	6	4/5/6						3								14	VISUAL
521.4	8	3/4/4						4								13	VISUAL
518.9	10	4/4/6				11.0'	STIFF, BROWN SILT AND CLAY, TRACE GRAVEL, SOME SAND, DAMP	5	9	7	18	43	23	30	14	15	A-6a
516.4	12	9/11/10				13.0'	MEDIUM DENSE, BROWN COARSE AND FINE SAND, SOME GRAVEL, TRACE SILT, MOIST	6								13	VISUAL
513.9	14	4/5/5				16.0'	STIFF, GRAY CLAY, SOME SILT, MOIST - SILT LAYERS ARE INTERBEDDED	7								23	VISUAL
511.4	16	3/4/6				18.5'	MEDIUM STIFF TO STIFF, GRAY ELASTIC CLAY, AND SILT, DAMP TO MOIST	8	0	0	0	39	61	46	11	25	A-7-5
506.4	18	3/4/4						9								27	VISUAL
501.4	20	4/5/8				28.5'	STIFF, GRAY SANDY SILT, TRACE CLAY, TRACE GRAVEL, MOIST	10	1	6	49	41	3	NP	NP	12	A-4a
496.4	22	7/9/12				33.0'	MEDIUM DENSE, BROWN COARSE AND FINE SAND, LITTLE SILT, MOIST	11								16	VISUAL

LOG OF BORING (Continued)

Project Identification: HAM-75-5.58 PID 82278

Hamilton County, Ohio

Boring No. B-172-0-07

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
494.9	36					37.0'											
491.4	38	10/12/15					VERY STIFF, GRAY TO BROWN SILT AND CLAY, AND GRAVEL, SOME SAND, DAMP	12	40	11	12	26	11	31	15	6	A-6a
	40					42.0'											
486.4	42	7/11/16					MEDIUM DENSE, BROWN GRAVEL AND/ OR STONE FRAGMENTS, SOME SAND, LITTLE SILT, MOIST	13								9	VISUAL
	44																
	46																
481.4	48	12/9/14						14	61	18	10	11	0	NP	NP	11	A-1-a
	50					52.0'											
476.4	52	9/12/13					MEDIUM DENSE TO DENSE, BROWN COARSE AND FINE SAND, LITTLE SILT, TRACE GRAVEL, TRACE CLAY, WET	15								21	VISUAL
	54																
	56																
471.4	58	10/11/11						16	4	37	41	12	6	NP	NP	20	A-3a
	60																
	62																
466.4	64	14/17/21						17								15	VISUAL
	66																
461.4	68	5/9/11						18								19	VISUAL
	70																

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DRAWN RRM CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
2007 CTL BORING LOGS

HAM-75-7.85

1868 2017

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LOG OF BORING
(Continued)

3
3

Project Identification: HAM-75-5.58 PID 82278
Hamilton County, Ohio

Boring No. B-172-0-07

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
458.8																	
	72																
456.4						73.5′											
	74	6/10/13					MEDIUM DENSE, BROWN FINE SAND, TRACE GRAVEL, TRACE SILT, TRACE CLAY, WET	19	2	9	81	4	4	NP	NP	16	A-3
	76																
	78																
451.4		7/10/15						20								23	VISUAL
	80																
					FS												
	82																
446.4		11/14/16						21								20	VISUAL
	84																
	86																
	88																
441.4		12/15/18				88.5′											
							DENSE, BROWN COARSE AND FINE SAND, TRACE GRAVEL, TRACE SILT, TRACE CLAY, WET	22	1	6	75	10	8	NP	NP	20	A-3a
439.9	90					90.0′											
							BOTTOM OF BORING = 90.0′										

FOR INFORMATION ONLY

DRAWN RRM
CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
2007 CTL BORING LOGS

HAM-75-7.85

28 / 48

1869
2017

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LOG OF BORING

1 / 3

Date Started 8/1/07 Sampler: Type SS / ST Dia. 1.375"
Date Completed 8/1/07 Casing: Length 95ft Dia. 3.25"
Water Elev. 448.1ft
Boring No. B-173-0-07 Station & Offset 156+86.84, 46.5' LT. Surface Elev. 543.1ft

Project Identification: HAM-75-5.58 PID 82278
Hamilton County, Ohio
CTL Project No. 04120070g

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
543.1	0	AUGERED				0.2'	TOPSOIL (.2')										VISUAL
542.1	2	4/6/7					STIFF TO VERY STIFF, BROWN SILTY CLAY, LITTLE TO SOME SAND, LITTLE GRAVEL, DAMP	1							9	VISUAL
539.6	4	12/10/10						2	11	8	22	42	17	34	18	12	A-6b
537.1	6	3/4/5				6.0'	LOOSE TO MEDIUM DENSE, BROWN COARSE AND FINE SAND, TRACE GRAVEL, TRACE TO LITTLE SILT, TRACE CLAY, DAMP TO DRY	3	2	26	61	7	4	NP	NP	6	A-3a
	8																
534.6	10	4/4/5						4								4	VISUAL
532.1	12	3/5/6						5								5	VISUAL
529.6	14	3/4/5						6	8	36	43	13	0	NP	NP	9	A-3a
527.1	16	4/5/6						7								8	VISUAL
524.6	18	4/4/4						8								5	VISUAL
	20																
	22																
519.6	24	4/5/7						9	0	36	52	12	0	NP	NP	4	A-3a
	26																
515.1	28	5/6/7						10								10	VISUAL
	30																
	32																
509.6	34	6/8/9				33.5'	VERY STIFF TO STIFF, BLUISH GRAY CLAY, LITTLE TO SOME SILT, TRACE SAND, MOIST	11	0	0	2	35	63	48	27	31	A-7-6

LOG OF BORING (Continued)

2 / 3

Project Identification: HAM-75-5.58 PID 82278
Hamilton County, Ohio

Boring No. B-173-0-07

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
508.1	36																
504.6	38	5/6/8						12								29	VISUAL
	40																
	42					42.0'											
499.6	44	5/6/7					STIFF, GRAY AND BROWN SANDY SILT, LITTLE CLAY, MOIST	13	0	3	38	46	13	20	5	18	A-4a
	46																
	48					47.0'											
494.6	50	3/4/5					STIFF, GRAY SILT AND CLAY, TRACE SAND, MOIST	14								22	VISUAL
	52																
489.6	54	11/13/15				53.5'	MEDIUM DENSE TO DENSE, BROWN GRAVEL AND/ OR STONE FRAGMENTS, LITTLE SAND, TRACE SILT, MOIST TO WET	15	76	14	6	4	0	NP	NP	24	A-1-a
	56																
484.6	58	10/14/17						16								9	VISUAL
	60																
	62																
479.6	64	9/12/15						17								13	VISUAL
	66																
	68					68.5'											
474.6	70	12/8/10			FS		MEDIUM DENSE, BROWN FINE SAND, LITTLE GRAVEL, TRACE SILT, WET	18	13	29	48	10	0	NP	NP	20	A-3

FOR INFORMATION ONLY

DRAWN RRM CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
2007 CTL BORING LOGS

HAM-75-7.85

29 / 48

1870 2017

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LOG OF BORING
(Continued)

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Project Identification: HAM-75-5.58 PID 82278
Hamilton County, Ohio

Boring No. B-173-0-07

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
472.0																	
	72																
469.6		6/7/10			FS			19								15	VISUAL
	74																
	76																
	78																
464.6		4/6/8				78.5′	MEDIUM DENSE, BROWN GRAVEL AND/ OR STONE FRAGMENTS WITH SAND, LITTLE SILT, TRACE CLAY, WET	20	33	29	25	12	1	NP	NP	42	A-1-b
	80																
	82																
459.6		8/10/13						21								23	VISUAL
	84																
	86																
	88																
454.6		9/11/14						22								22	VISUAL
	90																
	92																
449.6		8/12/12				93.5′	MEDIUM DENSE, BROWN COARSE AND FINE SAND, LITTLE SILT, TRACE CLAY, WET	23	0	5	81	13	1	NP	NP	18	A-3a
448.1	94					95.0′	BOTTOM OF BORING = 95.0′										

FOR INFORMATION ONLY

DRAWN RRM
CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
2007 CTL BORING LOGS

HAM-75-7.85

1871
2017

LOG OF BORING

1 / 2

Date Started 7/31/07 Sampler: Type SS / ST Dia. 1.375″ Project Identification: HAM-75-5.58 PID 82278

Date Completed 7/31/07 Casing: Length 60.0ft Dia. 3.25″ Hamilton County, Ohio

Water Elev. 499.8ft

Boring No. B-181-0-07 Station & Offset 451+64.30, 92.0′ RT Surface Elev. 539.8ft CTL Project No. 04120070g

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
539.8	0	AUGERED				0.5′	TOPSOIL (.5′)										VISUAL
539.3	2	10/10/8				2.5′	VERY STIFF, BROWN SILTY CLAY, LITTLE GRAVEL, LITTLE SAND, DAMP	1	14	4	14	40	28	36	17	14	A-6b
536.8	4	7/5/7					STIFF, DARK BROWN AND BROWN CLAY, AND SILT, SOME SAND, TRACE GRAVEL, DAMP TO MOIST -ORGANICS PRESENT	2	1	6	24	44	25	51	33	20	A-7-6
534.3	6	2/4/5						3								28	VISUAL
	8					8.0′											
531.3	10	4/6/6					STIFF, GRAY SILT AND CLAY, AND SAND, MOIST	4	0	4	41	34	21	28	12	21	A-6a
528.8	12	3/3/4				11.0′	MEDIUM STIFF, GRAY SANDY SILT, TRACE CLAY, TRACE GRAVEL, MOIST	5								23	VISUAL
526.3	14	2/3/4						6	3	7	40	44	6	NP	NP	26	A-4a
523.8	16	4/6/10				16.0′	VERY STIFF, GRAY TO DARK BROWN SANDY SILT, SOME GRAVEL, LITTLE CLAY, DAMP	7	21	12	16	35	16	23	8	9	A-4a
521.3	18	35/38/31				18.5′	HARD, GRAY TO DARK BROWN SANDY SILT, SOME GRAVEL, LITTLE CLAY, DAMP	8								10	VISUAL
	20					22.0′											
516.3	24	10/13/17					MEDIUM DENSE TO DENSE, BROWN COARSE AND FINE SAND, TRACE GRAVEL, TRACE SILT, TRACE CLAY, DAMP	9	6	42	41	9	2	NP	NP	3	A-3a
	26																
511.3	28	16/22/25						10								3	VISUAL
	30																
	32																
506.3	34	15/15/25			FS	33.5′	DENSE, BROWN FINE SAND, TRACE GRAVEL, TRACE SILT, TRACE CLAY, DAMP	11	4	25	61	9	1	NP	NP	4	A-3

LOG OF BORING (Continued)

2 / 2

Project Identification: HAM-75-5.58 PID 82278

Hamilton County, Ohio

Boring No. B-181-0-07

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
504.8	36				FS	38.0′											
501.3	38	25/30/33					DENSE TO VERY DENSE, BROWN GRAVEL AND/ OR STONE FRAGMENTS, AND SAND, LITTLE TO TRACE SILT, TRACE CLAY, MOIST	12	54	19	18	7	2	NP	NP	11	A-1-a
	40																
496.3	42	15/20/14						13								11	VISUAL
	44																
	46																
491.3	48	50-6″						14								7	VISUAL
	50																
	52																
486.3	54	10/16/16						15								14	VISUAL
	56																
	58																
481.3		50-6″				58.5′	VERY DENSE, BROWN GRAVEL AND/ OR STONE FRAGMENTS WITH SAND AND SILT, TRACE CLAY, DAMP	16	32	21	19	23	5	NP	NP	7	A-2-4
479.8	60					60.0′	BOTTOM OF BORING = 60.0′										

FOR INFORMATION ONLY

DRAWN RRM CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
2007 CTL BORING LOGS

HAM-75-7.85

31 / 48

1872 / 2017

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LOG OF BORING

1 / 3

Date Started 8/22/07 Sampler: Type SS / ST Dia. 1.375"
Date Completed 8/22/07 Casing: Length 105.0ft Dia. 3.25"
Water Elev. 497.0ft
Boring No. B-182-0-07 Station & Offset 452+41.88, 91.5' LT Surface Elev. 531.0ft

Project Identification: HAM-75-5.58 PID 82278
Hamilton County, Ohio
CTL Project No. 04120070g

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
531.0	0	AUGERED				0.3'	TOPSOIL (.3')										VISUAL
530.0	2	2/2/3					SOFT TO MEDIUM STIFF, BROWN SILT AND CLAY, AND SAND, TRACE TO LITTLE GRAVEL, DAMP TO MOIST	1								12	VISUAL
527.5	4	1/2/2						2	11	17	25	32	15	28	15	16	A-6a
525.0	6	0/1/1						3								16	VISUAL
522.5	8	2/2/2				7.5'	VERY LOOSE, BROWN COARSE AND FINE SAND, TRACE SILT, TRACE GRAVEL, MOIST	4								7	VISUAL
520.0	12	2/1/1				11.0'	VERY LOOSE, BROWN TO DARK BROWN GRAVEL AND/ OR STONE FRAGMENTS WITH SAND, LITTLE SILT, TRACE CLAY, MOIST	5	33	31	14	19	3	NP	NP	15	A-1-b
517.5	14	2/2/4				13.0'	MEDIUM STIFF, BROWN SILTY CLAY, LITTLE TO SOME SAND, MOIST	6								16	VISUAL
515.0	16	2/3/2				15.0'	VERY LOOSE TO LOOSE, BROWN COARSE AND FINE SAND, TRACE TO LITTLE SILT, TRACE CLAY, MOIST	7	0	22	66	12	0	NP	NP	12	A-3a
512.5	18	3/2/2						8								11	VISUAL
507.5	24	4/4/6						9								7	VISUAL
502.5	28	5/5/6			FS	28.5'	MEDIUM DENSE, BROWN FINE SAND, TRACE GRAVEL, TRACE SILT, MOIST	10	1	12	80	7	0	NP	NP	18	A-3
497.5	34	5/6/7				31.0'	MEDIUM DENSE TO DENSE, BROWN GRAVEL AND/ OR STONE FRAGMENTS WITH SAND, TRACE SILT, TRACE CLAY, WET	11	33	43	14	6	4	NP	NP	13	A-1-b

LOG OF BORING (Continued)

2 / 3

Project Identification: HAM-75-5.58 PID 82278
Hamilton County, Ohio

Boring No. B-182-0-07

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
495.0	36																
492.5	38	13/16/14						12								11	VISUAL
487.5	44	13/19/25						13								10	VISUAL
						47.0'											
482.5	48	14/17/27					DENSE, BROWN GRAVEL AND/ OR STONE FRAGMENTS, AND SAND, TRACE SILT, TRACE CLAY, WET	14	54	24	15	5	2	NP	NP	10	A-1-a
						52.0'											
477.5	54	5/9/9					MEDIUM DENSE, BROWN COARSE AND FINE SAND, SOME SILT, WET	15	0	0	79	21	0	NP	NP	23	A-3a
472.5	58	5/8/8						16								22	VISUAL
467.5	64	6/6/9						17								22	VISUAL
462.5	68	2/4/9			FS	68.5'	MEDIUM DENSE TO DENSE, BROWN FINE SAND, TRACE SILT, TRACE CLAY, WET	18	0	3	88	7	2	NP	NP	18	A-3

FOR INFORMATION ONLY

DRAWN RRM CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
2007 CTL BORING LOGS

HAM-75-7.85

32 / 48

1873 / 2017

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LOG OF BORING
(Continued)

3
3

Project Identification: HAM-75-5.58 PID 82278
Hamilton County, Ohio

Boring No. B-182-0-07

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics								ODOT Class
									% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	
457.9																	
457.5	74	6/9/13						19								19	VISUAL
	76																
	78				FS												
452.5		9/15/23						20								21	VISUAL
	80																
	82					82.0′											
447.5	84	20/37/37					VERY DENSE, BROWN FINE SAND, TRACE SILT, MOIST TO WET	21	0	0	90	10	0	NP	NP	15	A-3
	86																
	88																
442.5		22/35/41						22								18	VISUAL
	90																
	92																
437.5	94	15/35/43			FS			23								14	VISUAL
	96																
	98																
432.5		17/32/39						24								17	VISUAL
	100																
	102																
427.5																	
	104	18/34/36						25								24	VISUAL
426.0						105.0′											

BOTTOM OF BORING = 105.0′

FOR INFORMATION ONLY

DRAWN RRM
CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
2007 CTL BORING LOGS

HAM-75-7.85

1874
2017

LOG OF BORING

Project Identification: HAM-75-2.30 PID 76257
Hamilton County, Ohio

Date Started 10/5/07 Sampler: Type SS Dia. 1.375"
Date Completed 10/5/07 Casing: Length 70.0ft Dia. 3.25"

Water Elev. 505.8ft
Boring No. B-211 Station & Offset 521+64.73, 107.8 RT Surface Elev. 564.3ft

CTL Project No. 04120070g

Elev. (ft)	Depth (ft)	Std. Pen./ RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
564.3	0																
564.3		7/5/5					MEDIUM STIFF TO STIFF, BROWN SILT AND CLAY, SOME SAND, LITTLE GRAVEL, DAMP -FILL	1								13	VISUAL
	2																
560.8																	
	4	3/3/7					NO RECOVERY	2									VISUAL
558.3	6																
		4/2/4						3								9	VISUAL
	8					8.0'											
555.8																	
		3/4/2					LOOSE, BROWN GRAVEL AND/ OR STONE FRAGMENTS WITH SAND, LITTLE SILT, TRACE CLAY, RED BRICK, DAMP -FILL	4	43	14	20	17	6	NP	NP	7	A-1-b
	10																
553.3																	
	12	6/4/3					NO RECOVERY	5									VISUAL
						13.5'											
550.8																	
	14	30/21/9					LOOSE TO MEDIUM DENSE, GRAVEL AND/ OR STONE FRAGMENTS WITH SAND, LITTLE SILT, MOSTLY RED BRICK FRAGMENTS, LIMESTONE FRAGMENTS, DAMP -FILL	6								5	VISUAL
548.3	16																
		8/6/4						7	64	11	5	20	0	NP	NP	4	A-1-b
	18																
545.8						18.5'											
		4/3/2					LOOSE, DARK BROWN GRAVEL AND/ OR STONE FRAGMENTS WITH SAND AND SILT, TRACE CLAY, DAMP	8								6	VISUAL
	20																
543.3						21.0'											
		3/3/3					SOFT TO MEDIUM STIFF, BROWN SANDY SILT, LITTLE CLAY, TRACE GRAVEL, DAMP	9	0	12	48	24	16	NP	NP	12	A-4a
	22																
540.8																	
	24	1/1/3						10	1	16	43	26	14	NP	NP	5	A-4a
538.3	26																
		6/2/1						11								13	VISUAL
	28																
535.8						28.5'											
		13/21/13					MEDIUM DENSE TO DENSE, BROWN GRAVEL AND/ OR STONE FRAGMENTS WITH SAND, TRACE CLAY, TRACE TO LITTLE SILT, DAMP	12	49	13	25	10	3	NP	NP	5	A-1-b
	30																
	32																
530.8																	
	34	8/10/12					NO RECOVERY	13									VISUAL

LOG OF BORING (Continued)

Project Identification: HAM-75-2.30 PID 76257
Hamilton County, Ohio

Boring No. B-211

Elev. (ft)	Depth (ft)	Std. Pen./ RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
529.3																	
	36																
	38																
525.8		30/24/19					NO RECOVERY	14									VISUAL
	40																
523.3						41.0'											
		6/10/12					VERY STIFF, BROWN SANDY SILT, LITTLE CLAY, DAMP	15	0	2	60	21	17	NP	NP	4	A-4a
	42																
520.8																	
	44	6/10/14						16								5	VISUAL
	46																
515.8						48.5'											
	48	7/7/6					MEDIUM DENSE, BROWN COARSE AND FINE SAND, TRACE GRAVEL, LITTLE SILT, LITTLE CLAY, DAMP	17	0	17	49	18	16	NP	NP	4	A-3a
	50																
	52																
510.8																	
	54	11/11/12						18								7	VISUAL
	56																
	58					57.0'											
505.8		4/6/8					MEDIUM DENSE, BROWN COARSE AND FINE SAND, LITTLE SILT, LITTLE CLAY, WET	19	0	0	65	17	18	NP	NP	27	A-3a
	60																
	62																
500.8																	
	64	4/5/8						20								27	VISUAL
	66																
	68																
495.8		11/17/27				68.5'	HARD, BROWN SANDY SILT, TRACE CLAY, MOIST	21	0	0	55	43	2	NP	NP	14	A-4a
494.3	70					70.0'											

BOTTOM OF BORING = 70.0'

FOR INFORMATION ONLY

DRAWN RRM CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
2007 CTL BORING LOGS

HAM-75-7.85

1875 2017

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LOG OF BORING

Project Identification: HAM-75-2.30 PID 76257
Hamilton County, Ohio

Date Started 10/5/07 Sampler: Type SS Dia. 1.375"
Date Completed 10/5/07 Casing: Length 50ft Dia. 3.25"

Water Elev.

Boring No. B-212 Station & Offset 522+49.2, 86.1 LT Surface Elev. 549.7ft CTL Project No. 04120070g

Elev. (ft)	Depth (ft)	Std. Pen./ RQD	Rec. (ft)	Loss (ft)	Description	Sample No.	Physical Characteristics % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
549.7	0														
549.7		8/8/6			STIFF, BROWN SANDY SILT, SOME GRAVEL, LITTLE CLAY, DRY	1								2	VISUAL
	2														
546.2															
	4	12/8/8													
543.7					3.5'										
	6	9/6/7			MEDIUM DENSE, BROWN COARSE AND FINE SAND, SOME SILT, TRACE TO LITTLE GRAVEL, DAMP	2	5	6	56	33	0	NP	NP	3	A-3a
	8					3								3	VISUAL
541.2		10/7/8				4	12	18	45	25	0	NP	NP	5	A-3a
	10				10.5'										
538.7		15/17/16			MEDIUM DENSE TO DENSE, BROWN GRAVEL AND/ OR STONE FRAGMENTS WITH SAND, TRACE CLAY, TRACE SILT, DAMP	5								6	VISUAL
	12														
536.2		18/22/24				6	39	27	17	10	7	NP	NP	3	A-1-b
	14														
533.7	16	10/10/12				7								2	VISUAL
	18														
531.2		10/12/14				8	47	30	10	8	5	NP	NP	4	A-1-b
	20														
	22														
526.2		8/8/8				9								4	VISUAL
	24														
	26														
					27.0'										
521.2	28	20/10/12			MEDIUM DENSE, BROWN COARSE AND FINE SAND, LITTLE SILT, TRACE GRAVEL, TRACE CLAY, DAMP	10	5	43	39	11	2	NP	NP	4	A-3a
	30														
	32				32.0'										
516.2															
	34	44/14/8			MEDIUM DENSE, BROWN GRAVEL AND/ OR STONE FRAGMENTS WITH SAND, LITTLE SILT, TRACE CLAY,	11	29	24	27	19	1	NP	NP	5	A-1-b

LOG OF BORING (Continued)

Project Identification: HAM-75-2.30 PID 76257
Hamilton County, Ohio

Boring No. B-212

Elev. (ft)	Depth (ft)	Std. Pen./ RQD	Rec. (ft)	Loss (ft)	Description	Sample No.	Physical Characteristics % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
514.7															
	36				DAMP										
511.2					38.5'										
	38	50-2"			VERY DENSE, BROWN GRAVEL AND/ OR STONE FRAGMENTS WITH SAND, LITTLE SILT, TRACE CLAY, DRY	12								1	VISUAL
	40														
	42				41.5'										
506.2															
	44	36/12/12			MEDIUM DENSE, BROWN GRAVEL AND/ OR STONE FRAGMENTS, LITTLE SAND, TRACE SILT, TRACE CLAY, DRY	13								1	VISUAL
	46														
	48														
501.2		28/14/12				14	82	6	8	3	1	NP	NP	1	A-1-a
499.7	50				50.0'										

BOTTOM OF BORING = 50.0'

FOR INFORMATION ONLY

DRAWN RRM CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
2007 CTL BORING LOGS

HAM-75-7.85

1876 2017

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LOG OF BORING

Date Started 7/11/07 Sampler: Type SS / ST Dia. 1.375″ Project Identification: HAM-75-5.58 PID 82278

Date Completed 7/11/07 Casing: Length 125.0ft Dia. 3.25″ Hamilton County, Ohio

Water Elev. 503.5ft

Boring No. B-275-0-07 Station & Offset 131+10.97, 35.8′ RT. Surface Elev. 545.5ft CTL Project No. 04120070g

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
545.5	0																
	2																
542.0	4	10/12/13					VERY STIFF, BROWN CLAY, AND SILT, TRACE SAND, DAMP	1	0	0	1	40	59	44	22	20	A-7-6
	6																
537.0	8	11/16/20				8.5′	DENSE, LIGHT BROWN COARSE AND FINE SAND, LITTLE SILT, TRACE CLAY, DAMP	2								6	VISUAL
	10																
532.0	12	17/23/28				13.5′	HARD, BROWN SANDY SILT, LITTLE CLAY, DAMP	3	0	1	47	37	15	NP	NP	16	A-4a
	14																
	16																
527.0	18	19/23/32				18.5′	VERY DENSE, BROWN COARSE AND FINE SAND, TRACE CLAY, DAMP	4								8	VISUAL
	20																
524.5	22	14/14/13				21.0′	MEDIUM DENSE, LIGHT BROWN SILT, LITTLE SAND, TRACE CLAY, MOIST	5	0	0	12	84	4	NP	NP	21	A-4b
522.0	24	8/8/13				23.5′	VERY STIFF, BROWN SILT, SOME CLAY, MOIST	6								20	VISUAL
519.5	26	5/5/9				26.0′	STIFF, GRAY SANDY SILT, LITTLE CLAY, MOIST	7								21	VISUAL
	28																
517.0	30	13/13/15				28.5′	MEDIUM DENSE, BROWN COARSE AND FINE SAND, LITTLE SILT, TRACE CLAY, WET	8	0	3	83	13	1	NP	NP	21	A-3a
514.5	32	5/8/8				31.0′	VERY STIFF, GRAY SILT, LITTLE CLAY, MOIST	9								22	VISUAL
512.0	34	3/3/6				33.5′	STIFF, GRAY SILT, SOME CLAY, MOIST	10								23	VISUAL

LOG OF BORING (Continued)

Project Identification: HAM-75-5.58 PID 82278

Hamilton County, Ohio

Boring No. B-275-0-07

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
510.5																	
509.5	36	3/3/5				36.0′	MEDIUM STIFF, GRAY SILT, TRACE SAND, TRACE CLAY, MOIST	11	0	0	1	93	6	27	7	24	A-4b
507.0	38	2/4/6				38.5′	STIFF, GRAY CLAY, TRACE TO LITTLE SILT, MOIST	12								27	VISUAL
	40																
	42																
502.0	44	3/5/5				43.5′	STIFF TO VERY STIFF, GRAY CLAY, AND SILT, TRACE SAND, MOIST	13	0	0	1	44	55	47	25	36	A-7-6
	46																
497.0	48	6/8/11						14								26	VISUAL
	50																
	52																
492.0	54	7/9/15						15								24	VISUAL
	56																
487.0	58	5/5/7				58.5′	STIFF, GRAY CLAY, SOME SILT, MOIST	16								29	VISUAL
	60																
	62																
482.0	64	5/11/17				63.5′	VERY STIFF, GRAY CLAY, AND SILT, TRACE SAND, DAMP	17	0	1	6	40	53	41	18	22	A-7-6
	66																
	68																
477.0	70	8/8/13				68.5′	VERY STIFF, GRAY SILT, SOME CLAY, DAMP	18								24	VISUAL

FOR INFORMATION ONLY

DRAWN RRM CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
2007 CTL BORING LOGS

HAM-75-7.85

1877 2017

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LOG OF BORING (Continued)

3/4

Project Identification: HAM-75-5.58 PID 82278
Hamilton County, Ohio

Boring No. B-275-0-07

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
474.4																	
	72																
472.0						73.5′											
	74	7/7/10					STIFF TO VERY STIFF, GRAY SILT AND CLAY, SOME SAND, MOIST	19	0	4	21	46	29	32	13	22	A-6a
	76																
	78																
467.0		5/5/9						20								22	VISUAL
	80																
	82																
462.0						83.5′											
	84	5/5/5					STIFF, BROWN SANDY SILT, TRACE CLAY, TRACE GRAVEL, MOIST	21	3	13	46	31	7	NP	NP	15	A-4a
	86																
	88																
457.0		1/2/2				88.5′											
	90						SOFT, BROWN CLAY, TRACE SAND, SOME SILT, DAMP	22								20	VISUAL
	92																
452.0						93.5′											
	94	4/4/5					LOOSE TO MEDIUM DENSE, BROWN FINE SAND, TRACE TO LITTLE GRAVEL, TRACE SILT, WET	23	1	48	46	5	0	NP	NP	25	A-3
	96																
	98																
447.0		6/8/8						24								17	VISUAL
	100																
	102																
442.0																	
	104	3/4/7						25								22	VISUAL
	106																

FS

LOG OF BORING (Continued)

4/4

Project Identification: HAM-75-5.58 PID 82278
Hamilton County, Ohio

Boring No. B-275-0-07

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
438.4																	
	108																
437.0		7/14/15						26	4	38	51	7	0	NP	NP	18	A-3
	110																
	112																
432.0																	
	114	8/8/12						27								17	VISUAL
	116																
	118																
427.0		7/7/18						28								19	VISUAL
	120																
	122																
422.0						123.5′											
	124	18/24/24					DENSE, BROWN FINE SAND, LITTLE GRAVEL, TRACE SILT, MOIST	29	12	35	45	8	0	NP	NP	13	A-3
420.5						125.0′											

FS

BOTTOM OF BORING = 125.0′

FOR INFORMATION ONLY

DRAWN RRM CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
2007 CTL BORING LOGS

HAM-75-7.85

37/48

1878/2017

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LOG OF BORING

1 / 4

Date Started 7/17/07 Sampler: Type SS / ST Dia. 1.375"
Date Completed 7/17/07 Casing: Length 120.0ft Dia. 3.25"
Water Elev. 515.1ft
Boring No. B-276-0-07 Station & Offset 130+14.64, 101.3' LT. Surface Elev. 528.6ft

Project Identification: HAM-75-5.58 PID 82278
Hamilton County, Ohio
CTL Project No. 04120070g

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
528.6	0	AUGERED				0.4'	TOPSOIL (.4')										VISUAL
528.1	2	4/5/6				2.5'	STIFF, BROWN SILT AND CLAY, SOME SAND, TRACE GRAVEL, BRICK FRAGMENTS, DAMP -FILL	1								12	VISUAL
525.6	4	5/6/3					STIFF, BROWN AND GRAY SANDY SILT, LITTLE CLAY, MOIST	2	0	1	45	42	12	24	10	23	A-4a
523.1	6	2/2/2				5.5'	SOFT, BROWN AND GRAY SANDY SILT, LITTLE CLAY, MOIST	3								17	VISUAL
520.1	8	3/2/4				8.0'	MEDIUM STIFF, GRAY SILT, SOME SAND, TRACE CLAY, MOIST	4	0	0	28	69	3	NP	NP	22	A-4b
517.6	12	2/2/3				12.5'		5								23	VISUAL
515.1	14	3/4/5					MEDIUM STIFF TO STIFF, BROWN AND GRAY SILT AND CLAY, TRACE SAND, MOIST	6	0	1	3	48	48	32	14	20	A-6a
512.6	16	3/4/4						7								23	VISUAL
510.1	18	1/2/2				18.5'	SOFT, BROWN AND GRAY SILT AND CLAY, TRACE SAND, MOIST	8								25	VISUAL
505.1	22	2/2/3				22.0'	MEDIUM STIFF TO STIFF, GRAY CLAY, SOME TO LITTLE SILT, TRACE SAND, MOIST	9	0	0	1	35	64	51	29	32	A-7-6
500.1	28	3/4/5						10								26	VISUAL
495.1	34	5/6/6						11								27	VISUAL

LOG OF BORING (Continued)

2 / 4

Project Identification: HAM-75-5.58 PID 82278
Hamilton County, Ohio
Boring No. B-276-0-07

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
493.6	36																
490.1	38	4/6/8						12								22	VISUAL
	40																
	42					43.0'											
485.1	44	2/2/3					LOOSE, GRAY AND BROWN, COARSE AND FINE SAND, LITTLE SILT, LITTLE CLAY, MOIST	13	0	9	60	19	12	16	3	15	A-3a
	46					46.0'											
480.1	48	2/3/3					MEDIUM STIFF, BROWN SILT, AND SAND, LITTLE CLAY, MOIST	14	0	3	34	50	13	24	8	22	A-4b
	50																
	52																
475.1	54	2/2/3						15								24	VISUAL
	56																
	58					58.0'											
470.1	60	4/5/6					LOOSE TO MEDIUM DENSE, GRAY COARSE AND FINE SAND, LITTLE TO TRACE SILT, TRACE CLAY, MOIST	16	0	9	72	11	8	NP	NP	15	A-3a
	62																
465.1	64	3/4/4						17								20	VISUAL
	66																
460.1	68	3/4/5						18								21	VISUAL
	70																

FOR INFORMATION ONLY

DRAWN RRM CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
2007 CTL BORING LOGS

HAM-75-7.85

38 / 48

1879 2017

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LOG OF BORING (Continued)

3/4

Project Identification: HAM-75-5.58 PID 82278
Hamilton County, Ohio

Boring No. B-276-0-07

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
457.5																	
	72																
455.1	74	4/5/6						19	0	29	59	11	1	NP	NP	21	A-3a
	76																
	78																
450.1	80	3/4/5						20								18	VISUAL
	82																
445.1	84	9/10/12					NO RECOVERY	21									VISUAL
	86																
	88																
							88.0'										
440.1	90	7/13/15					MEDIUM DENSE, BROWN GRAVEL AND/ OR STONE FRAGMENTS WITH SAND, TRACE SILT, TRACE CLAY, MOIST	22	1	48	44	6	1	NP	NP	17	A-1-b
	92																
435.1	94	9/13/14						23								17	VISUAL
	96																
	98																
430.1	100	12/15/15						24								13	VISUAL
	102																
							103.5'										
425.1	104	14/16/17					DENSE, BROWN COARSE AND FINE SAND, LITTLE SILT, TRACE GRAVEL, TRACE CLAY, MOIST	25	5	18	56	16	5	NP	NP	10	A-3a
	106																

LOG OF BORING (Continued)

4/4

Project Identification: HAM-75-5.58 PID 82278
Hamilton County, Ohio

Boring No. B-276-0-07

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
421.5																	
420.1	108	12/15/17						26								22	VISUAL
	110																
	112																
415.1	114	14/17/18						27								20	VISUAL
	116																
	118																
410.1		18/19/21					118.5'										
408.6	120						DENSE, BROWN GRAVEL AND/OR STONE FRAGMENTS WITH SAND, TRACE SILT, MOIST	28	12	47	34	7	0	NP	NP	12	A-1-b
							120.0' BOTTOM OF BORING = 120.0'										

FOR INFORMATION ONLY

DRAWN RRM | CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
2007 CTL BORING LOGS

HAM-75-7.85

39/48

1880/2017

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LOG OF BORING

1 / 3

Date Started 8/23/07 Sampler: Type SS / ST Dia. 1.375″ Project Identification: HAM-75-5.58 PID 82278

Date Completed 8/23/07 Casing: Length 90.0ft Dia. 3.25″ Hamilton County, Ohio

Water Elev. 494.0ft

Boring No. B-280-0-07 Station & Offset 158+81.86, 38.5′ LT. Surface Elev. 526.0ft CTL Project No. 04120070g

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)	Description	Sample No.	% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
526.0	0	9/5/5			LOOSE, BROWN GRAVEL AND/ OR STONE FRAGMENTS WITH SAND, SILT AND CLAY, DAMP	1								5	VISUAL
	2														
522.0	4	9/6/6			MEDIUM DENSE TO DENSE, BROWN GRAVEL AND/ OR STONE FRAGMENTS WITH SAND, TRACE CLAY, TRACE TO LITTLE SILT, DAMP	2								3	VISUAL
	6														
518.0	8	9/8/9				3	25	41	22	11	1	NP	NP	6	A-1-b
	10														
514.0	12	10/9/8				4								6	VISUAL
	14														
510.0	16	15/16/15				5	35	43	16	5	1	NP	NP	4	A-1-b
	18														
506.0	20	6/4/6			STIFF, GRAY CLAY, SOME SILT, TRACE SAND, MOIST	6	0	0	2	32	66	43	24	28	A-7-6
	22														
502.5	24	5/5/5				7								33	VISUAL
	26														
497.5	28	6/9/8			STIFF TO VERY STIFF, GRAY SANDY SILT, SOME CLAY, TRACE GRAVEL, MOIST TO WET -SAND LAYERS ARE INTERBEDDED	8	2	4	38	35	21	20	7	14	A-4a
	30														
492.5	32														
	34	3/4/6				9								29	VISUAL

3.0′ 19.0′ 26.5′

LOG OF BORING (Continued)

2 / 3

Project Identification: HAM-75-5.58 PID 82278

Hamilton County, Ohio

Boring No. B-280-0-07

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)	Description	Sample No.	% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
491.0	36														
	38														
487.5	40	11/14/14			MEDIUM DENSE TO DENSE, BROWN AND GRAY COARSE AND FINE SAND, LITTLE SILT, LITTLE GRAVEL, TRACE CLAY, MOIST	10	13	15	52	13	7	NP	NP	12	A-3a
	42														
482.5	44	21/19/20				11								10	VISUAL
	46														
477.5	48	19/14/16			MEDIUM DENSE, BROWN GRAVEL AND/ OR STONE FRAGMENTS WITH SAND, LITTLE SILT, TRACE CLAY, MOIST TO WET	12	49	24	11	11	5	NP	NP	10	A-1-b
	50														
472.5	52	48/9/2				13								15	VISUAL
	54														
467.5	56	10/12/12			MEDIUM DENSE TO VERY DENSE, BROWN GRAVEL AND/ OR STONE FRAGMENTS WITH SAND, TRACE SILT, WET	14	6	47	37	10	0	NP	NP	16	A-1-b
	58														
462.5	60	50-6″				15								15	VISUAL
	62														
457.5	64	10/9/10			MEDIUM DENSE, COARSE AND FINE SAND, TRACE SILT, TRACE CLAY, TRACE GRAVEL, WET	16								19	VISUAL
	66														
	68														
	70														

37.0′ 47.0′ 57.0′ 67.0′

FOR INFORMATION ONLY

DRAWN RRM CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
2007 CTL BORING LOGS

HAM-75-7.85

1881 / 2017

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LOG OF BORING
(Continued)

3
3

Project Identification: HAM-75-5.58 PID 82278
Hamilton County, Ohio

Boring No. B-280-0-07

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics								ODOT Class
									% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	
454.9																	
	72																
452.5		8/11/12						17	4	4	78	10	4	NP	NP	17	A-3a
	74																
	76																
	78																
447.5		16/50-5"				78.5'	VERY DENSE, COARSE AND FINE SAND, LITTLE SILT, TRACE CLAY, TRACE GRAVEL, WET	18								15	VISUAL
	80																
	82																
442.5		27/50-6"						19								13	VISUAL
	84																
	86																
	88																
437.5		47/50-6"						20	2	12	69	13	4	NP	NP	14	A-3a
436.0	90					90.0'											

BOTTOM OF BORING = 90.0' VISUAL

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DRAWN RRM CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
2007 CTL BORING LOGS

HAM-75-7.85

41 / 48

1882
2017

LOG OF BORING

1 / 3

Date Started 9/9/07 Sampler: Type SS / ST Dia. 1.375″ Project Identification: HAM-75-5.58 PID 82278

Date Completed 9/9/07 Casing: Length 85.0ft Dia. 3.25″ Hamilton County, Ohio

Water Elev. Dry

Boring No. B-281-0-07 Station & Offset 158+24.73, 28.5′ LT. Surface Elev. 527.8ft CTL Project No. 04120070g

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)	Description	Sample No.	% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
527.8	0														
527.8		9/8/5			MEDIUM DENSE, BROWN GRAVEL AND/ OR STONE FRAGMENTS WITH SAND AND SILT, LITTLE CLAY, ASPHALT FRAGMENTS, DRY - FILL	1								4	VISUAL
	2														
524.3		7/7/7			LOOSE TO MEDIUM DENSE, BROWN COARSE AND FINE SAND, LITTLE SILT, TRACE TO SOME GRAVEL, TRACE CLAY, DRY TO DAMP	2	4	35	42	17	2	NP	NP	4	A-3a
	4														
521.8	6	3/3/3				3								4	VISUAL
	8														
519.3		4/3/3				4								6	VISUAL
	10														
516.8		4/6/10			MEDIUM DENSE, BROWN GRAVEL AND/ OR STONE FRAGMENTS WITH SAND, LITTLE SILT, TRACE CLAY, DAMP	5	20	32	29	11	8	NP	NP	3	A-1-b
	12														
514.3		5/8/12				6								4	VISUAL
	14														
511.8	16	3/2/4			LOOSE, BROWN COARSE AND FINE SAND, LITTLE SILT, LITTLE GRAVEL, TRACE CLAY, MOIST	7								14	VISUAL
	18														
509.3		3/3/5			MEDIUM STIFF, GRAY CLAY, AND SILT, MOIST	8	0	0	0	42	58	49	26	28	A-7-6
	20														
	22														
504.3	24	3/3/4				9								27	VISUAL
	26														
	28														
499.3		3/4/5			STIFF, GRAY SILTY CLAY, SOME SAND, TRACE GRAVEL, MOIST	10								13	VISUAL
	30														
	32														
494.3	34	3/3/5			MEDIUM STIFF, GRAY SILT, SOME SAND, LITTLE CLAY, TRACE GRAVEL, DAMP	11	2	4	21	53	20	25	7	17	A-4b

3.0′ 11.0′ 16.0′ 17.0′ 27.5′ 33.5′

LOG OF BORING (Continued)

2 / 3

Project Identification: HAM-75-5.58 PID 82278

Hamilton County, Ohio

Boring No. B-281-0-07

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)	Description	Sample No.	% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	ODOT Class
492.8	36														
	38														
489.3		6/12/14			MEDIUM DENSE, BROWN AND GRAY GRAVEL AND/ OR STONE FRAGMENTS WITH SAND AND SILT, LITTLE CLAY, MOIST	12								10	VISUAL
	40														
	42														
484.3		5/15/15				13								11	VISUAL
	44														
	46														
479.3	48	18/20/24			DENSE TO VERY DENSE, BROWN AND GRAY GRAVEL AND/ OR STONE FRAGMENTS WITH SAND, TRACE SILT, TRACE CLAY, MOIST	14	51	14	21	7	7	NP	NP	7	A-1-b
	50														
	52														
474.3	54	15/20/25				15								11	VISUAL
	56														
	58														
469.3		20/45/28				16								8	VISUAL
	60														
	62														
464.3	64	14/20/25				17	32	25	33	6	4	NP	NP	10	A-1-b
	66														
	68														
459.3		8/11/15			MEDIUM DENSE TO DENSE, BROWN COARSE AND FINE SAND, TRACE GRAVEL, TRACE TO LITTLE SILT, TRACE CLAY, MOIST TO WET	18								13	VISUAL
	70														

37.0′ 48.5′ 67.0′

FOR INFORMATION ONLY

DRAWN RRM CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
2007 CTL BORING LOGS

HAM-75-7.85

42 / 48

1883 / 2017

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LOG OF BORING
(Continued)

3
3

Project Identification: HAM-75-5.58 PID 82278
Hamilton County, Ohio

Boring No. B-281-0-07

Elev. (ft)	Depth (ft)	Std. Pen. RQD	Rec. (ft)	Loss (ft)			Description	Sample No.	Physical Characteristics								ODOT Class
									% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	
456.7																	
	72																
454.3		6/10/12						19	0	6	82	8	4	NP	NP	18	A-3a
	74																
	76																
	78																
449.3		7/10/12						20								23	VISUAL
	80																
	82																
444.3		14/18/22						21								21	VISUAL
	84																
442.8						85.0'											

BOTTOM OF BORING = 85.0'

FOR INFORMATION ONLY

DRAWN RRM
CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
2007 CTL BORING LOGS

HAM-75-7.85

1884
2017

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RESOURCE INTERNATIONAL, INC.

PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 130+78.01 / 88.2' Lt	EXPLORATION ID B-003-0-11	
TYPE: BRIDGE REPLACEMENT	SAMPLING FIRM / LOGGER: RII / A.D.	HAMMER: CME AUTOMATIC	ALIGNMENT: CL PROPOSED RAILROAD		
PID: 77889 BR ID: HAM-562-0026	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 530.0 (MSL) EOB: 120.0 ft.	PAGE 1 OF 2	
START: 11/16/11 END: 11/17/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG : 39.174159297 ° N / 84.485737826 ° W		

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	HOLE SEALED
4.0" - ASPHALT	530.0																	
8.0" - CONCRETE	529.7																	
LOOSE, BROWNISH GRAY **GRAVEL WITH SAND, SILT, AND CLAY**, DAMP.	529.0		3 4 4	10	33	SS-1	-	-	-	-	-	-	-	-	-	9	A-2-6 (V)	
VERY LOOSE TO MEDIUM DENSE, BROWN **SANDY SILT**, LITTLE CLAY, TRACE FINE GRAVEL, DAMP TO MOIST.	526.5	2.5	2 1 WOH	1	44	SS-2	-	-	-	-	-	-	-	-	-	14	A-4a (V)	
		5.0	2 1 2	4	50	SS-3	-	3	4	41	38	14	NP	NP	NP	20	A-4a (V)	
		7.5	4 7 5	15	56	SS-4	-	-	-	-	-	-	-	-	-	16	A-4a (V)	
		10.0	4 5 8	17	39	SS-5	-	-	-	-	-	-	-	-	-	17	A-4a (V)	
		12.5	8 4 5	12	67	SS-6	-	-	-	-	-	-	-	-	-	22	A-4a (V)	
	514.0	15.0																
STIFF TO VERY STIFF, GRAY **SANDY SILT**, AND CLAY, MOIST.		17.5	7 7 12	24	56	SS-7	3.00	0	1	2	49	48	29	19	10	25	A-4a (V)	
		20.0	4 2 7	12	44	SS-8	2.00	-	-	-	-	-	-	-	-	24	A-4a (V)	
	509.0	22.5																
STIFF, GRAY **CLAY**, SOME SILT, MOIST.			3 3 7	13	56	SS-9	2.00	-	-	-	-	-	-	-	-	24	A-7-6 (V)	
		25.0			0	ST-10	-	-	-	-	-	-	-	-	-	-		
	501.5	27.5	3 3 4	9	67	SS-11	1.50	0	0	0	25	75	48	22	26	32	A-7-6 (V)	
VERY STIFF TO HARD, GRAY **CLAY**, SOME SILT, MOIST.		30.0	3 5 7	15	67	SS-12	3.50	-	-	-	-	-	-	-	-	25	A-7-6 (V)	
		32.5																
	493.0	35.0	3 4 8	15	72	SS-13	4.50	-	-	-	-	-	-	-	-	25	A-7-6 (V)	
VERY STIFF TO HARD, GRAY **SILT AND CLAY**, MOIST.		37.5																
		40.0	8 12 13	32	67	SS-14	4.5+	0	0	0	41	59	34	19	15	22	A-6a (V)	
		42.5																
	483.0	45.0	6 7 8	19	67	SS-15	3.25	-	-	-	-	-	-	-	-	24	A-6a (V)	
VERY LOOSE, GRAY **FINE SAND**, TRACE SILT, WET.		47.5																
F.S	478.0	50.0	2 1 WOH	1	56	SS-16	-	-	-	-	-	-	-	-	-	21	A-3 (V)	
STIFF TO VERY STIFF, GRAY **SANDY SILT**, SOME CLAY, TRACE FINE GRAVEL, MOIST TO WET.		52.5																
		55.0	4 3 8	14	39	SS-17	2.50	0	6	22	46	26	21	14	7	20	A-4a (V)	
		57.5																
	468.0	60.0	WOH 3 4	9	61	SS-18	1.75	2	7	26	38	27	24	14	10	14	A-4a (V)	
LOOSE TO MEDIUM DENSE, GRAY **FINE SAND**, LITTLE TO SOME COARSE SAND, TRACE SILT, TRACE FINE GRAVEL, MOIST TO WET.		62.5																
		65.0	3 4 5	12	44	SS-19	-	-	-	-	-	-	-	-	-	22	A-3 (V)	
		67.5																
F.S		70.0	2 3 5	10	56	SS-20	-	-	-	-	-	-	-	-	-	22	A-3 (V)	
		72.5																
		75.0	2 3 5	10	56	SS-21	-	1	12	80	7	0	NP	NP	NP	21	A-3 (V)	
		77.5																
			2 2	8	50	SS-22	-	-	-	-	-	-	-	-	-	24	A-3 (V)	

FOR INFORMATION ONLY

2013 STD ODOT BOR LOG (11X17)-LONG-LAT - OH DOT.GDT - 1/7/14 11:12 - C:\USERS\ELIM.RII\CLEVELAND\DESKTOP\B-10-020-BRIDGE B-003.GPJ

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PID: 77889 | BR ID: HAM-562-0026 | PROJECT: HAM-75-7.85 | STATION / OFFSET: 130+78.01 / 88.2 Lt | START: 11/16/11 | END: 11/17/11 | PG 2 OF 2 | B-003-0-11

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	HOLE SEALED
LOOSE TO MEDIUM DENSE, GRAY **FINE SAND**, LITTLE TO SOME COARSE SAND, TRACE SILT, TRACE FINE GRAVEL, MOIST TO WET. *(continued)*	450.0	82.5	4															
		85.0	2 1 3	5	44	SS-23	-	-	-	-	-	-	-	-	-	22	A-3 (V)	
		87.5																
		90.0	2 3 5	10	50	SS-24	-	-	-	-	-	-	-	-	-	23	A-3 (V)	
		92.5																
		95.0	5 4 7	14	44	SS-25	-	-	-	-	-	-	-	-	-	25	A-3 (V)	
		97.5																
F S		100.0	7 6 4	13	39	SS-26	-	4	32	58	6	0	NP	NP	NP	22	A-3 (V)	
		102.5																
		105.0	4 6 6	15	50	SS-27	-	-	-	-	-	-	-	-	-	20	A-3 (V)	
		107.5																
		110.0	6 5 5	13	44	SS-28	-	-	-	-	-	-	-	-	-	20	A-3 (V)	
		112.5																
		115.0	4 6 8	18	50	SS-29	-	-	-	-	-	-	-	-	-	19	A-3 (V)	
		117.5																
	410.0	EOB 120.0	5 5 4	12	56	SS-30	-	-	-	-	-	-	-	-	-	18	A-3 (V)	

NOTES: GROUNDWATER INITIALY ENCOUNTERED @ 35.0'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: TREMIED 376 LBS. CEMENT/50 LBS BENTONITE/80 GAL WATER

FOR INFORMATION ONLY

2013 STD ODOT BOR LOG (11X17)-LONG-LAT - OH DOT.GDT - 1/3/14 11:23 - C:\USERS\ELIM.RICLEVELAND\DESKTOP\B-10-020-BRIDGE B-003.GPJ

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RESOURCE INTERNATIONAL, INC.

PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 155+98.36 / 42.7' Lt	EXPLORATION ID B-008-0-11	
TYPE: BRIDGE REPLACEMENT	SAMPLING FIRM / LOGGER: RII / S.M.	HAMMER: CME AUTOMATIC	ALIGNMENT: CL PROPOSED RAILROAD		
PID: 77889 BR ID: HAM-75-0834	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 529.0 (MSL) EOB: 100.0 ft.	PAGE 1 OF 2	
START: 10/25/11 END: 10/27/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG : 39.180792305 ° N / 84.485491076 ° W		

MATERIAL DESCRIPTION AND NOTES	ELEV. 529.0	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	HOLE SEALED
0.6' - ASPHALT (7.0")	528.4																	
0.7' - CONCRETE (9.0")	527.7																	
FILL: STIFF, BROWN **SANDY SILT**, LITTLE FINE GRAVEL, MOIST.	525.5	2.5	5 4 4	10	67	SS-1	1.50	-	-	-	-	-	-	-	-	16	A-4a (V)	
FILL: DENSE, BROWNISH GRAY **GRAVEL WITH SAND AND SILT**, DRY.	523.5	5.0	16 14 10	31	0	SS-2	-	-	-	-	-	-	-	-	-	-		
			18	-	100	3S-2A	-	-	-	-	-	-	-	-	-	8	A-2-4 (V)	
HARD, BROWN **SILT AND CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DRY.	520.5	7.5	18 30 26	72	0	SS-3	-	-	-	-	-	-	-	-	-	-		
			16	-	100	3S-3A	-	-	-	-	-	-	-	-	-	7	A-6a (V)	
VERY LOOSE, BROWN **COARSE AND FINE SAND**, LITTLE SILT, TRACE CLAY, TRACE FINE GRAVEL, DRY.	518.5	10.0	2 1 1	3	72	SS-4	-	6	24	45	16	9	NP	NP	NP	7	A-3a (0)	
MEDIUM DENSE, BROWN **GRAVEL AND SAND**, LITTLE SILT, TRACE CLAY, DRY TO WET.		12.5	4 7 7	18	78	SS-5	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	
-COBBLES PRESENT THROUGHOUT		15.0	7 6 8	18	78	SS-6	-	-	-	-	-	-	-	-	-	7	A-1-b (V)	
		17.5	7 8 8	21	78	SS-7	-	31	20	32	11	6	NP	NP	NP	6	A-1-b (0)	
		20.0	6 2 8	13	78	SS-8	-	-	-	-	-	-	-	-	-	27	A-1-b (V)	
STIFF TO VERY STIFF, GRAY **CLAY**, TRACE SILT, DAMP TO MOIST.	508.5	22.5	2 3 6	12	83	SS-9	2.00	-	-	-	-	-	-	-	-	29	A-7-6 (V)	
-CONSOLIDATION TEST PERFORMED @ 24.0'		25.0			100	ST-10	1.75	0	0	0	9	91	54	23	31	22	A-7-6 (19)	
-qu @ 25.3' = 3,256 psf		27.5	3 6 10	21	100	SS-11	3.50	-	-	-	-	-	-	-	-	13	A-7-6 (V)	
VERY STIFF, GRAY **SANDY SILT**, TRACE FINE GRAVEL, TRACE CLAY, DAMP.	500.5	30.0	5 8 10	23	89	SS-12	3.00	-	-	-	-	-	-	-	-	13	A-4a (V)	
VERY STIFF, GRAY **SILTY CLAY**, TRACE COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.	497.0	32.5																
		35.0	3 6 5	14	89	SS-13	2.50	-	-	-	-	-	-	-	-	22	A-6b (V)	
DENSE, GRAY **GRAVEL WITH SAND, SILT, AND CLAY**, DAMP.	492.0	37.5																
-COBBLES PRESENT THROUGHOUT		40.0	32 12 15	35	83	SS-14	-	-	-	-	-	-	-	-	-	12	A-2-6 (V)	
MEDIUM DENSE TO VERY DENSE, BROWN CHANGING TO GRAY **GRAVEL AND SAND**, LITTLE SILT, TRACE CLAY, DRY TO MOIST.	487.0	42.5																
-INTRODUCED MUD @ 45.0'		45.0	16 14 15	37	89	SS-15	-	-	-	-	-	-	-	-	-	15	A-1-b (V)	
		47.5																
-COBBLES PRESENT THROUGHOUT		50.0	13 8 7	19	78	SS-16	-	-	-	-	-	-	-	-	-	13	A-1-b (V)	
		52.5																
		55.0	8 19 17	46	67	SS-17	-	44	22	20	12	2	NP	NP	NP	13	A-1-b (0)	
		57.5																
		60.0	4 21 19	51	72	SS-18	-	-	-	-	-	-	-	-	-	7	A-1-b (V)	
		62.5																
-COBBLES PRESENT THROUGHOUT		65.0	13 14 12	33	67	SS-19	-	-	-	-	-	-	-	-	-	12	A-1-b (V)	
		67.5																
		70.0	13 12 12	31	78	SS-20	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	
	457.0	72.5																
MEDIUM DENSE TO DENSE, BROWNISH GRAY **FINE SAND**, TRACE COARSE SAND, TRACE FINE GRAVEL, TRACE SILT, MOIST TO WET.		75.0	4 7 9	21	67	SS-21	-	-	-	-	-	-	-	-	-	22	A-3 (V)	
F S		77.5																
			8 9	21	78	SS-22	-	-	-	-	-	-	-	-	-	17	A-3 (V)	

FOR INFORMATION ONLY

2013 STD ODOT BOR LOG (11X17)LONG-LAT - OH DOT.GDT - 1/7/14 11:57 - C:\USERS\ELIM.RIICLEVELAND\DESKTOP\B-10-020-BRIDGE B-008.GPJ

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PID: 77889 | BR ID: HAM-75-0834 | PROJECT: HAM-75-7.85 | STATION / OFFSET: 155+98.36 / 42.7 Lt | START: 10/25/11 | END: 10/27/11 | PG 2 OF 2 | B-008-0-11

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	HOLE SEALED
	450.0																	
MEDIUM DENSE TO DENSE, BROWNISH GRAY **FINE SAND**, TRACE COARSE SAND, TRACE FINE GRAVEL, TRACE SILT, MOIST TO WET. *(continued)* -COBBLES PRESENT THROUGHOUT		82.5	7															
		85.0	4 13 14	35	78	SS-23	-	1	4	86	9	0	NP	NP	NP	23	A-3 (0)	
		87.5																
-SHALE FRAGMENTS PRESENT FROM 88.5' TO 90.0'	F.S.	90.0	6 12 14	33	72	SS-24	-	-	-	-	-	-	-	-	-	23	A-3 (V)	
		92.5																
-COBBLES PRESENT THROUGHOUT		95.0	5 14 13	35	83	SS-25	-	-	-	-	-	-	-	-	-	24	A-3 (V)	
		97.5																
	430.0	EOB 100.0	6 12 14	33	89	SS-26	-	-	-	-	-	-	-	-	-	25	A-3 (V)	

FOR INFORMATION ONLY

NOTES: GROUNDWATER INITIALY ENCOUNTERED @ 45.0'; SEEPAGE ENCOUNTERED @ 30.0'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: TREMIED 168 LBS. CEMENT/50 LBS BENTONITE/45 GAL WATER

2013 STD ODOT BOR LOG (11X17)-LONG-LAT - OH DOT.GDT - 1/3/14 11:33 - C:\USERS\ELIM.RINCLEVELAND\DESKTOP\B-10-020-BRIDGE B-008.GPJ

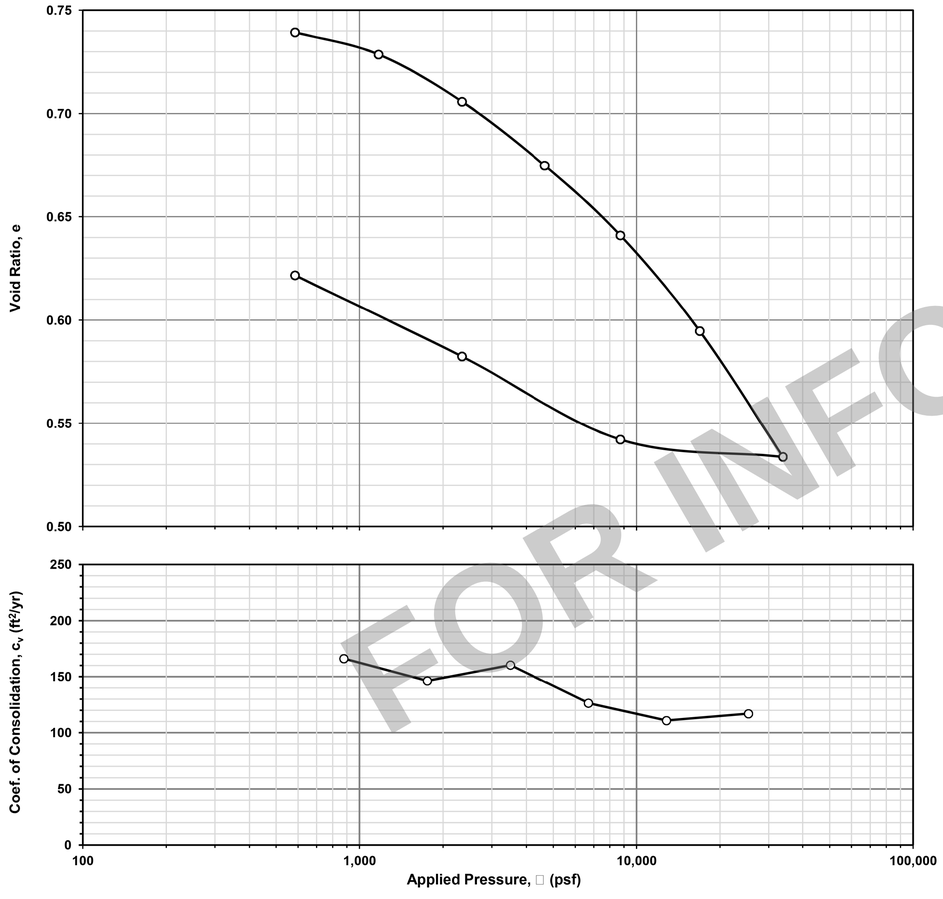
One-Dimensional Consolidation Test Report (ASTM D2435)

Project Number:	B-10-020	Boring Number:	B-008-0-11
Project Name:	HAM-75-7.85	Sample No. / Depth:	ST-10 / 24.0 ft
Project Location:	Hamilton County, Ohio	Date of Testing:	11/3/2011 to 11/16/2011
Client:	EMH&T	Technician:	JJH

Soil Description: Gray CLAY, trace silt
Soil Classification: ODOT A-7-6

Physical Characteristics	L.L.	P.L.	P.I.	Gravel%	C. Sand%	F. Sand%	Silt%	Clay%
	54	23	31	0	0	0	8	91

Natural S_o	Natural w_o	γ_d (pcf)	γ_{sat} (pcf)	σ_{vo}' (psf)	S_G	e_o	σ_p' (psf)	c_c	c_r
102.2%	28.9%	94.1	121.9	2880	2.67	0.771	4886	0.230	0.068



6350 Presidential Gateway
Columbus, Ohio 43231
Telephone: (614) 823-4949
Fax Number: (614) 823-4990

UNCONFINED COMPRESSION

ASTM D -2166

PROJECT	HAM-75-7.85 - HAM-75-0834
JOB No.	B-10-020
STATION & OFFSET	297+85.78 / 32.8' Lt
BORING / SAMPLE No.	B-008-0-11 / ST-10
SAMPLE DEPTH	24'11" to 25'5"
DATE OF TESTING	November 3, 2011
TESTED BY	J.H.

SOIL DESCRIPTION: Gray CLAY, trace silt, damp

PHYSICAL CHARACTERISTICS	Gravel %	C. Sand %	F. Sand %	Silt %	Clay %	LL	PL	PI
	0	0	0	9	91	54	23	31

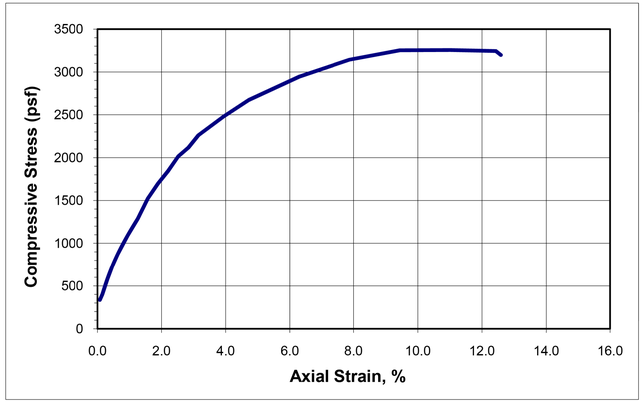
DIAMETER, D_0	2.858	in	72.593	mm	
AREA, A_0	6.4153	in^2	41.389	cm^2	
HEIGHT, L_0	6.355	in	161.42	mm	
VOLUME, V_0	40.769	in^3	668.09	cm^3	
MACH. RATE	0.635	in/min			
WATER CONT.	30.47	%			

STRAIN RATE	1	%/min	
WET SOIL + PAN MASS	1361.9	g	
PAN MASS	56.2	g	
DRY SOIL + PAN MASS	1057	g	
WET DENSITY	122.01	lb/ft^3	
DRY DENSITY	93.52	lb/ft^3	
UNCONFINED COMPRESSION STRESS, q_u	**3256**	**psf**	1.63 tsf
HAND PENETROMETER			2.50 tsf

Failure Sketch



Unconfined Compression Test



FOR INFORMATION ONLY

DRAWN RRM CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
LABORATORY TEST DATA

HAM-75-7.85

48 / 48

1889 2017

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PROJECT DESCRIPTION

THE STRUCTURE FOUNDATION EXPLORATION PERFORMED FOR THE HAM-75-7.85 PROJECT IN HAMILTON COUNTY, OHIO. THIS PROJECT REPRESENTS THE NORTHERN PORTION OF HAM-75-2.30 MILL CREEK EXPRESSWAY IMPROVEMENTS BETWEEN I-75 MAINLINE STATION 410+00 AND 531+73.91. THIS STRUCTURE FOUNDATION EXPLORATION PLAN INCLUDES RETAINING WALLS H, I, J, K, S, U AND V. ALL OF THE WALLS ARE PROPOSED NEW STRUCTURES REQUIRED TO ACCOMMODATE THE PROPOSED WIDENED ALIGNMENT OF I-75.

HISTORIC RECORDS

BORINGS B-001-0-07 THROUGH B-018-0-07 PERFORMED FOR THE HAM-75-10.10 STEP 7 PRELIMINARY ENGINEERING, PID NO. 76256, WERE USED AS PART OF THE CURRENT EXPLORATION. SELECT BORINGS PERFORMED BY CTL ENGINEERING FOR THE HAM-75-2.30, PID NO. 76257, ARE ALSO REFERENCED IN THIS STRUCTURE FOUNDATION EXPLORATION.

GEOLOGY

THE SITE LIES WITHIN THE ILLINOIAN TILL PLAIN OF THE TILL PLAINS SECTION. THIS AREA IS CHARACTERIZED BY ROLLING GROUND MORAINE DEPOSITS WITH MANY BURIED VALLEYS ALTERNATING BETWEEN BROAD FLOODPLAINS AND BEDROCK GORGES. THE SITE AREA CONTAINS SILTY LOAM TILL DEPOSITED AS GROUND MORAINE COVERED WITH LOESS AND DISSECTED BY THE MODERN DAY MILL CREEK. BASED ON BEDROCK GEOLOGY AND TOPOGRAPHY MAPS OF THE AREA, FROM THE OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR), THE UNDERLYING BEDROCK CONSISTS OF THE ORDOVICIAN-AGED POINT PLEASANT FORMATION. THE BEDROCK SURFACE FORMS A VALLEY ROUGHLY BENEATH, AND FOLLOWING, THE ALIGNMENT OF MILL CREEK WHICH IS ALIGNED NORTHEAST-TO-SOUTHWEST. I-75 IS ALIGNED ROUGHLY PARALLEL TO THIS MAIN BEDROCK VALLEY FROM THE APPROXIMATE INTERSECTION WITH STATE ROUTE 126 TO THE APPROXIMATE INTERSECTION WITH REGINA GRAETER WAY, AND LIES JUST EAST OF THE BOTTOM OF THE BEDROCK VALLEY. ALONG THE PROJECT ALIGNMENT, THE BEDROCK SURFACE DIRECTLY BENEATH I-75 LIES ALONG THE SLOPE OF THE BEDROCK VALLEY AND THE BEDROCK SURFACE RANGES BETWEEN APPROXIMATE ELEVATIONS OF 385 TO 425 FEET MSL. A SMALLER BEDROCK VALLEY BRANCHES OFF TO THE SOUTHEAST OF THE BEDROCK VALLEY THAT FOLLOWS MILL CREEK JUST SOUTH OF THE INTERCHANGE WITH STATE ROUTE 562, AND RUNS ROUGHLY PARALLEL WITH ROSS RUN AND GENERALLY BENEATH THE SR 562 ALIGNMENT. OVERALL, THE BEDROCK SURFACE ALONG THE MAJORITY OF THE PROJECT ALIGNMENT SLOPES DOWNWARD TO THE NORTHWEST. ACCORDING TO BEDROCK TOPOGRAPHY MAPPING, THE DEPTH TO TOP OF BEDROCK IN THE VICINITY OF THE PROJECT RANGES FROM APPROXIMATELY 120 TO 170 FEET BELOW THE EXISTING GROUND SURFACE.

RECONNAISSANCE

THE PROJECT ALIGNMENT STARTS AT THE SOUTH END OF THE I-75 AND SR 562 INTERCHANGE AND EXTENDS NORTH TO THE MILL CREEK CROSSING, JUST SOUTH OF THE I-75 AND SR 126 INTERCHANGE. THE IMPROVEMENTS ALSO INCLUDE RECONFIGURING THE INTERCHANGE RAMPS BETWEEN I-75 AND SR 562 AND WIDENING OF SR 562 NEAR THE INTERCHANGE. THE EXISTING I-75 MAINLINE ALONG THE PROJECT ALIGNMENT IS A SIX-LANE, ASPHALT PAVED ROADWAY AND THERE ARE EXISTING INTERCHANGES WITH SR 562, TOWNE STREET AND PADDOCK ROAD. THE LAND USAGE AROUND THE PROJECT IS PRIMARILY COMMERCIAL AND RESIDENTIAL.

SUBSURFACE EXPLORATION

BETWEEN SEPTEMBER 27, 2011, AND JANUARY 32, 2012, FORTY-THREE (43) STRUCTURAL BORINGS, IDENTIFIED AS B-012-0-11, B-014-0-11 THROUGH B-023-0-11, B-025-0-11, B-027-0-11, B-029-0-11, B-032-0-11 THROUGH B-035-0-11 AND B-037-0-11 THROUGH B-061-0-11, WERE DRILLED TO DEPTHS RANGING FROM 15.0 TO 35.0 FEET BELOW THE GROUND SURFACE. THE BORING LOCATIONS WERE DETERMINED AND FIELD STAKED BY RII REPRESENTATIVES. THE BORINGS WERE DRILLED WITH AN ALL TERRAIN VEHICLE (ATV) MOUNTED ROTARY DRILLING MACHINE, UTILIZING EITHER A 3.25-INCH OR 4.25-INCH INSIDE DIAMETER, CONTINUOUS, HOLLOW-STEM AUGER OR A 4.5-INCH CONTINUOUS, SOLID FLIGHT AUGER TO ADVANCE THE HOLES. THE HAMMERS FOR THE CME-750X AND CME-750 ATV-MOUNTED DRILL RIGS USED FOR THIS PROJECT WERE CALIBRATED ON MAY 6, 2011, AND HAVE A DRILL ROD ENERGY RATIO OF 77.1 AND 78.4 PERCENT, RESPECTIVELY.

IN ADDITION TO THE AFOREMENTIONED BORINGS, EIGHTEEN (18) STRUCTURAL BORINGS, DESIGNATED AS B-001-0-07 THROUGH B-018-0-07, WERE DRILLED TO DEPTHS RANGING FROM 30.0 TO 50.0 FEET BELOW THE GROUND SURFACE AS PART OF THE 2007 STRUCTURE FOUNDATION EXPLORATION. THE BORINGS WERE DRILLED USING AN ATV-MOUNTED ROTARY DRILLING MACHINE UTILIZING A 2.25-INCH OR 3.75-INCH INSIDE DIAMETER, CONTINUOUS, HOLLOW-STEM AUGER TO ADVANCE THE HOLES. NO CALIBRATION DATA IS AVAILABLE FOR THE HAMMER USED DURING THE SPT TESTING FOR THE 2007 BORINGS PERFORMED FOR THIS PROJECT.

EXPLORATION FINDINGS

AT THE EXISTING GROUND SURFACE IN BORINGS B-012-0-11, B-017-0-11 THROUGH B-020-0-11, AND B-057-0-11 THROUGH B-061-0-11, 3.0 TO 12.0 INCHES OF ASPHALT OVERLYING 5.0 TO 10.0 INCHES OF CONCRETE WAS ENCOUNTERED AT THE GROUND SURFACE, WITH THE EXCEPTION OF B-012-0-11 WHICH DID NOT ENCOUNTER CONCRETE. UNDERLYING THE ASPHALT AND CONCRETE IN BORINGS B-012-0-11, B-020-0-11 AND B-058-0-11, 6.0 TO 12.0 INCHES OF AGGREGATE BASE MATERIAL WAS ALSO ENCOUNTERED. WITH THE EXCEPTION OF BORING B-014-0-11, THE REMAINING BORINGS ENCOUNTERED 3.0 TO 12.0 OF TOPSOIL AT THE GROUND SURFACE, IDENTIFIED BY THE SIGNIFICANT PRESENCE OF ORGANIC MATTER AND VEGETATION. BORING B-014-0-11 ENCOUNTERED 12.0 INCHES OF GRAVEL AT THE GROUND SURFACE.

(CONTINUED ON SHEET 2)

LEGEND

DESCRIPTION	ODOT CLASS	CLASSIFIED MECH./VISUAL	
GRAVEL AND/OR STONE FRAGMENTS	*A-1-a*	*7*	*23*
GRAVEL AND/OR STONE FRAGMENTS WITH SAND	*A-1-b*	*22*	*92*
GRAVEL AND/OR STONE FRAGS. WITH SAND AND SILT	*A-2-4*	*1*	*13*
GRAVEL AND/OR STONE FRAGS. WITH SAND, SILT & CLAY	*A-2-6*	*4*	*6*
FINE SAND	*A-3*	*17*	*144*
COARSE AND FINE SAND	*A-3a*	*24*	*89*
SANDY SILT	*A-4a*	*30*	*52*
SILT	*A-4b*	*6*	*17*
ELASTIC SILT AND CLAY	*A-5*	*1*	*1*
SILT AND CLAY	*A-6a*	*32*	*83*
SILTY CLAY	*A-6b*	*35*	*61*
CLAY	*A-7-6*	*40*	*69*
	TOTAL	*219*	*659*
PAVEMENT OR BASE = X = APPROXIMATE THICKNESS	*VISUAL*		
SOD AND TOPSOIL = X = APPROXIMATE THICKNESS	*VISUAL*		

2007 AND 2011 BORING LOCATION - PLAN VIEW

HISTORIC BORING LOCATION - PLAN VIEW

DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.

X/Y/Z — NUMBER OF BLOWS FOR STANDARD PENETRATION TEST
X= NUMBER OF BLOWS FOR FIRST 6 INCHES
Y= NUMBER OF BLOWS FOR SECOND 6 INCHES
Z= NUMBER OF BLOWS FOR THIRD 6 INCHES

N_{60} — INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.

WC — INDICATES WATER CONTENT IN PERCENT.

W — INDICATES FREE WATER ELEVATION.

INDICATES STATIC WATER ELEVATION.

INDICATES A PLASTIC MATERIAL WITH A MOISTURE CONTENT EQUAL TO OR GREATER THAN THE LIQUID LIMIT MINUS 3.

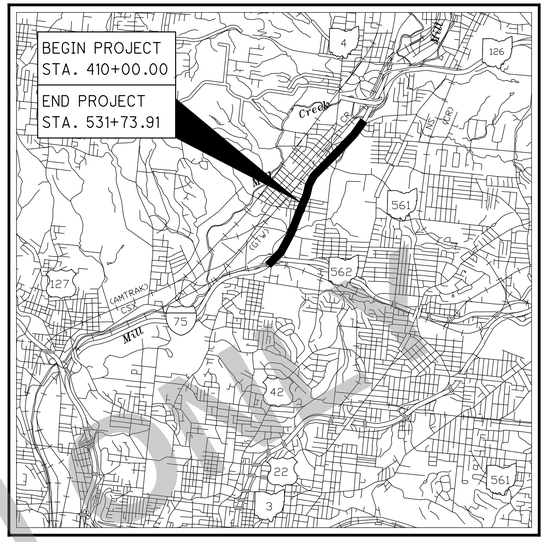
INDICATES A NON-PLASTIC MATERIAL WITH A MOISTURE CONTENT GREATER THAN 25% OR GREATER THAN 19% WITH A WET APPEARANCE.

AS — INDICATES AN AUGER SAMPLE.

SS — INDICATES A SPLIT SPOON SAMPLE, STANDARD PENETRATION TEST.

ST — INDICATES A SHELBY TUBE SAMPLE.

3S — FOR INSTANCES OF NO RECOVERY FROM STANDARD SS INTERVAL, A 3.0 INCH O.D. SPLIT SPOON IS DRIVEN THE FULL LENGTH OF THE STANDARD SS INTERVAL PLUS AN ADDITIONAL 6.0 INCHES TO OBTAIN A REPRESENTATIVE SAMPLE. ONLY THE FINAL 6.0 INCHES OF SAMPLE IS RETAINED. BLOW COUNTS FROM 3S SAMPLING ARE NOT CORRELATED WITH N60 VALUES.



LOCATION MAP

SCALE IN MILES

0 1 2 3 4

N

PARTICLE SIZE DEFINITIONS

12"		3"	2.0 mm		0.42 mm		0.074 mm	0.005 mm
BOULDERS	COBBLES		GRAVEL	COARSE SAND		FINE SAND	SILT	CLAY
			No. 10 SIEVE	No. 40 SIEVE		No. 200 SIEVE		

FOR INFORMATION ONLY

RECON. - RB 08/24/11 TO 08/31/11
DRILLING - TF, AB, SM 09/27/11 TO 01/23/12
DRAWN - RRM 02/06/15
REVIEWED - BRT 02/06/15

DESIGN AGENCY
RESOURCE INTERNATIONAL
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231

PID NO. 77889

STRUCTURE FOUNDATION EXPLORATION
WALLS H, I, J, K, S, U, V, Y AND Z

HAM-75-7.85

1890 2017

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EXPLORATION FINDINGS (CONTINUED FROM SHEET 1)

BENEATH THE SURFACE MATERIALS IN BORINGS B-015-0-11 THROUGH B-023-0-11, B-025-0-11, B-035-0-11, B-040-0-11, B-043-0-11, B-044-0-11 AND B-055-0-11, MATERIAL IDENTIFIED AS EXISTING FILL OR POSSIBLE WAS ENCOUNTERED EXTENDING TO DEPTHS RANGING FROM 3.0 TO 28.0 FEET BELOW THE GROUND SURFACE. THE FILL CONSISTED OF BROWN, GRAY, BROWNISH GRAY, DARK BROWN, DARK GRAY AND BLACK GRAVEL, GRAVEL AND SAND, GRAVEL WITH SAND AND SILT, GRAVEL WITH SAND, SILT AND CLAY, FINE SAND, COARSE AND FINE SAND, SANDY SILT, SILT, SILT AND CLAY AND SILTY CLAY (ODOT A-1-a, A-1-b, A-2-4, A-2-6, A-3, A-3a, A-4a, A-4b, A-6a, A-6b).

UNDERLYING THE SURFACE MATERIALS AND EXISTING FILL, NATURAL COHESIVE AND GRANULAR SOILS WERE ENCOUNTERED. THE COHESIVE SOILS WERE GENERALLY DESCRIBED AS GRAY, BROWN, BROWNISH GRAY, GRAYISH BROWN, DARK BROWN, DARK GRAY AND BLACK SANDY SILT, SILT, ELASTIC SILT, SILT AND CLAY, SILTY CLAY AND CLAY (ODOT A-4a, A-4b, A-5, A-6a, A-6b, A-7-6). THE GRANULAR SOILS WERE GENERALLY DESCRIBED AS BROWN, GRAY, DARK BROWN, LIGHT BROWN AND BROWNISH GRAY GRAVEL, GRAVEL AND SAND, GRAVEL WITH SAND AND SILT, GRAVEL WITH SAND, SILT AND CLAY, FINE SAND, COARSE AND FINE SAND, SANDY SILT AND SILT (ODOT A-1-a, A-1-b, A-2-4, A-2-6, A-2-7, A-3, A-3a, A-4a, A-4b).

THE SHEAR STRENGTH AND CONSISTENCY OF THE COHESIVE SOILS ARE PRIMARILY DERIVED FROM THE HAND PENETROMETER VALUES (HP). THE COHESIVE SOIL ENCOUNTERED RANGED FROM SOFT ($0.25 < HP \leq 0.5$ TSF) TO HARD ($HP > 4.0$ TSF). THE UNCONFINED COMPRESSIVE STRENGTH OF THE COHESIVE SOIL SAMPLES TESTED, OBTAINED FROM THE HAND PENETROMETER, RANGED FROM 0.5 TSF TO OVER 4.5 TSF (LIMIT OF THE INSTRUMENT). THE RELATIVE DENSITY OF GRANULAR SOILS IS PRIMARILY DERIVED FROM SPT BLOW COUNTS (N60). BASED ON THE SPT BLOW COUNTS OBTAINED, THE GRANULAR SOIL ENCOUNTERED RANGED FROM VERY LOOSE ($N60 < 5$ BLOWS PER FOOT [BPF]) TO VERY DENSE ($N60 > 50$ BPF). OVERALL BLOW COUNTS RECORDED FROM THE SPT SAMPLING RANGED FROM 0 BPF (SPLIT SPOON ADVANCED UNDER THE WEIGHT OF THE HAMMER [WOH] ALONE WITHOUT REQUIRING THE HAMMER TO LIFT AND DROP) TO SPLIT SPOON SAMPLER REFUSAL. SPLIT SPOON REFUSAL IS DEFINED AS OBTAINING IN EXCESS OF 50 BLOWS WITH LESS THAN 6 INCHES OF PENETRATION.

NATURAL MOISTURE CONTENTS OF THE SOIL SAMPLES TESTED RANGED FROM 0 TO 37 PERCENT. THE NATURAL MOISTURE CONTENTS OF THE COHESIVE SOIL SAMPLES TESTED FOR PLASTICITY INDEX RANGED FROM 7 PERCENT BELOW TO 10 PERCENT ABOVE THEIR CORRESPONDING PLASTIC LIMITS. IN GENERAL, THE SOILS EXHIBITED NATURAL MOISTURE CONTENTS ESTIMATED TO BE SIGNIFICANTLY BELOW TO SIGNIFICANTLY ABOVE OPTIMUM MOISTURE LEVELS.

GROUNDWATER WAS ENCOUNTERED INITIALLY DURING THE DRILLING PROCESS IN BORINGS B-015-0-11, B-016-0-11, B-020-0-11 THROUGH B-022-0-11, B-032-0-11 THROUGH B-035-0-11, B-039-0-11 THROUGH B-041-0-11, B-047-0-11, B-051-0-11 AND B-058-0-11 AT DEPTHS RANGING FROM 15.5 TO 46.0 FEET BELOW THE GROUND SURFACE. AT THE COMPLETION OF DRILLING AND PRIOR REMOVING THE AUGERS, GROUNDWATER ACCUMULATED IN THE AUGER STEMS IN BORINGS B-016-0-11, B-021-0-11, B-022-0-11, B-035-0-11 AND B-039-0-11 TO DEPTHS RANGING FROM 25.4 TO 39.0 FEET BELOW THE GROUND SURFACE. THE REMAINING BORINGS WERE OBSERVED TO BE DRY, MEANING NO MEASUREABLE AMOUNT OF WATER HAD ACCUMULATED WITHIN THE BOREHOLES DURING OR AT THE COMPLETION OF DRILLING.

THE BORINGS FOR THE 2007 EXPLORATION WERE GENERALLY DRILLED ALONG THE WEST SIDE OF SUMMIT ROAD ALONG THE PROPOSED ALIGNMENT OF RETAINING WALL V. BORINGS B-001-0-07, B-003-0-07 THROUGH B-010-0-07 AND B-015-0-07 ENCOUNTERED 3.0 TO 9.0 INCHES OF TOPSOIL AT THE GROUND SURFACE, IDENTIFIED BY THE SIGNIFICANT PRESENCE OF ORGANIC MATTER AND VEGETATION. BORING B-002-0-07 ENCOUNTERED 4.0 INCHES OF CONCRETE OVERLYING 10.0 INCHES OF CONCRETE FOLLOWED BY 8.0 INCHES OF AGGREGATE BASE AT THE GROUND SURFACE.

UNDERLYING THE SURFACE MATERIALS AND FROM THE EXISTING GROUND SURFACE IN BORINGS B-011-0-07 THROUGH B-014-0-07 AND B-016-0-07 THROUGH B-018-0-07, NATURAL COHESIVE AND GRANULAR SOILS WERE ENCOUNTERED. THE COHESIVE SOILS WERE GENERALLY DESCRIBED AS BROWN, GRAY, REDDISH BROWN AND REDDISH GRAY SANDY SILT, SILT AND CLAY, SILTY CLAY AND CLAY (ODOT A-4a, A-6a, A-6b, A-7-6). THE GRANULAR SOILS WERE GENERALLY DESCRIBED AS BROWN AND GRAY GRAVEL AND SAND, GRAVEL WITH SAND, SILT AND CLAY, FINE SAND, COARSE TO FINE SAND, SANDY SILT AND SILT (ODOT A-1-b, A-2-6, A-3, A-3a, A-4a, A-4b).

THE SPT BLOW COUNTS INDICATE THAT THE RELATIVE CONSISTENCY OF THE COHESIVE SOIL RANGES FROM SOFT ($2 \leq N60 \leq 4$ BPF) TO HARD ($N60 > 30$ BPF) AND THE RELATIVE DENSITY OF THE GRANULAR SOIL RANGES FROM VERY LOOSE ($N60 < 5$ BPF) TO DENSE ($31 \leq N60 \leq 50$ BPF). THE SPT BLOW COUNTS RANGED FROM 4 BPF TO SPLIT SPOON SAMPLER REFUSAL, GENERALLY INCREASING WITH DEPTH. THE UNCONFINED COMPRESSIVE STRENGTH OF THE COHESIVE SOIL SAMPLES TESTED RANGED FROM 1.0 TSF TO OVER 4.5 TSF.

NATURAL MOISTURE CONTENTS OF THE SOIL SAMPLES TESTED RANGED FROM 2 TO 37 PERCENT. THE NATURAL MOISTURE CONTENTS OF THE SOIL SAMPLES TESTED FOR PLASTICITY INDEX RANGED FROM 19 PERCENT BELOW TO 16 PERCENT ABOVE THEIR CORRESPONDING PLASTIC LIMITS. THE MOISTURE CONTENTS OF THE NATIVE SOILS ARE GENERALLY CONSIDERED TO BE SIGNIFICANTLY BELOW TO SIGNIFICANTLY ABOVE OPTIMUM MOISTURE LEVELS.

GROUNDWATER WAS NOT ENCOUNTERED IN ANY OF THE 2007 BORINGS PERFORMED FOR THIS EXPLORATION.

BEDROCK WAS NOT ENCOUNTERED IN ANY OF THE 2007 OR 2011 BORINGS PERFORMED FOR THIS EXPLORATION.

SPECIFICATIONS

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JULY 2011.

AVAILABLE INFORMATION

ALL AVAILABLE SOIL AND BEDROCK INFORMATION THAT CAN BE CONVENIENTLY SHOWN ON THE SOIL PROFILE SHEETS HAS BEEN SO REPORTED. ADDITIONAL SUBSURFACE EXPLORATIONS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, IF ANY, MAY BE INSPECTED IN THE DISTRICT DEPUTY DIRECTOR'S OFFICE, THE OFFICE OF GEOTECHNICAL ENGINEERING AT 1980 WEST BROAD STREET.

FOR INFORMATION ONLY

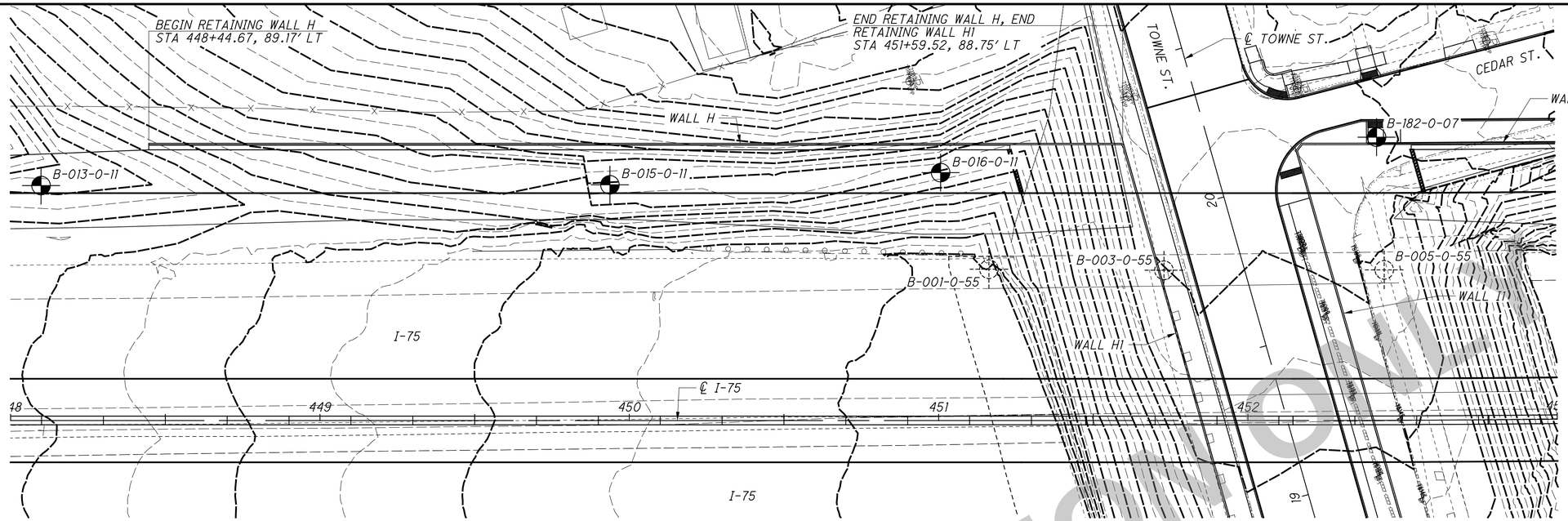
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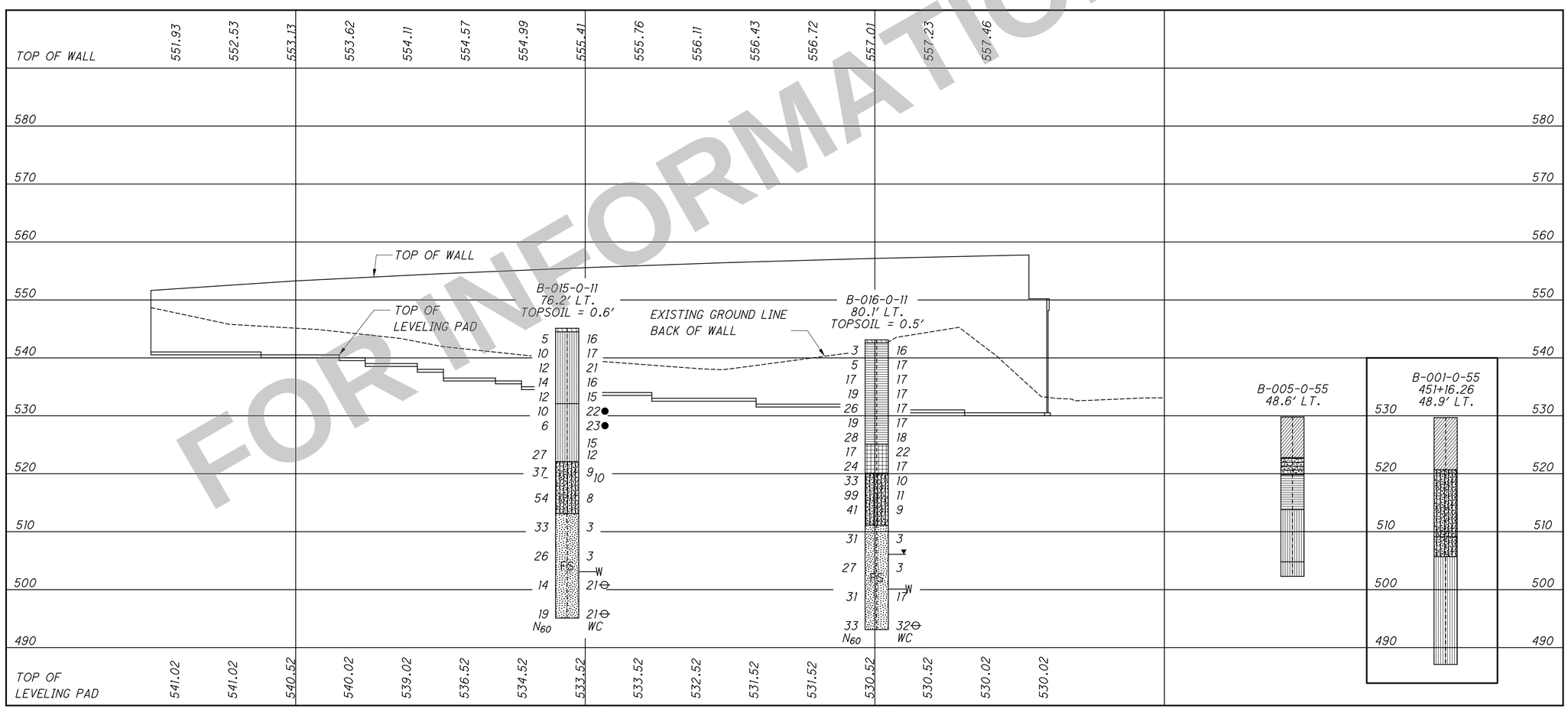
STRUCTURE FOUNDATION EXPLORATION
WALLS H, I, J, K, S, U, V, Y AND Z

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FOR INFORMATION

HORIZONTAL SCALE IN FEET
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STRUCTURE FOUNDATION EXPLORATION
WALL H

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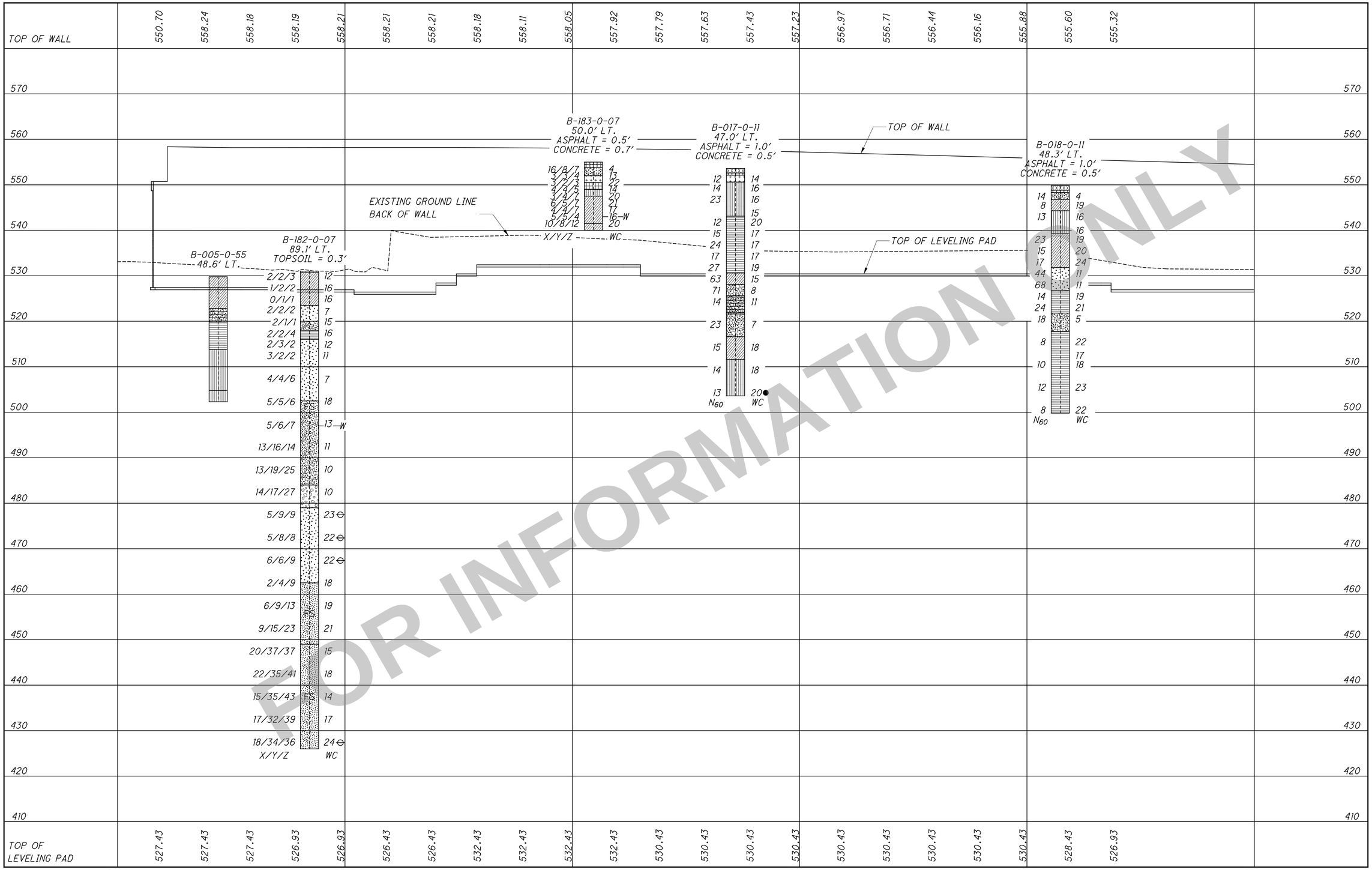
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2017 1893	4 / 105	**HAM-75-7.85**	**STRUCTURE FOUNDATION EXPLORATION** **WALL I** **STA. 452+00 TO STA. 457+00**	DRAWN RRM CHECKED BRT	0 20 10 40 HORIZONTAL SCALE IN FEET



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HORIZONTAL SCALE IN FEET

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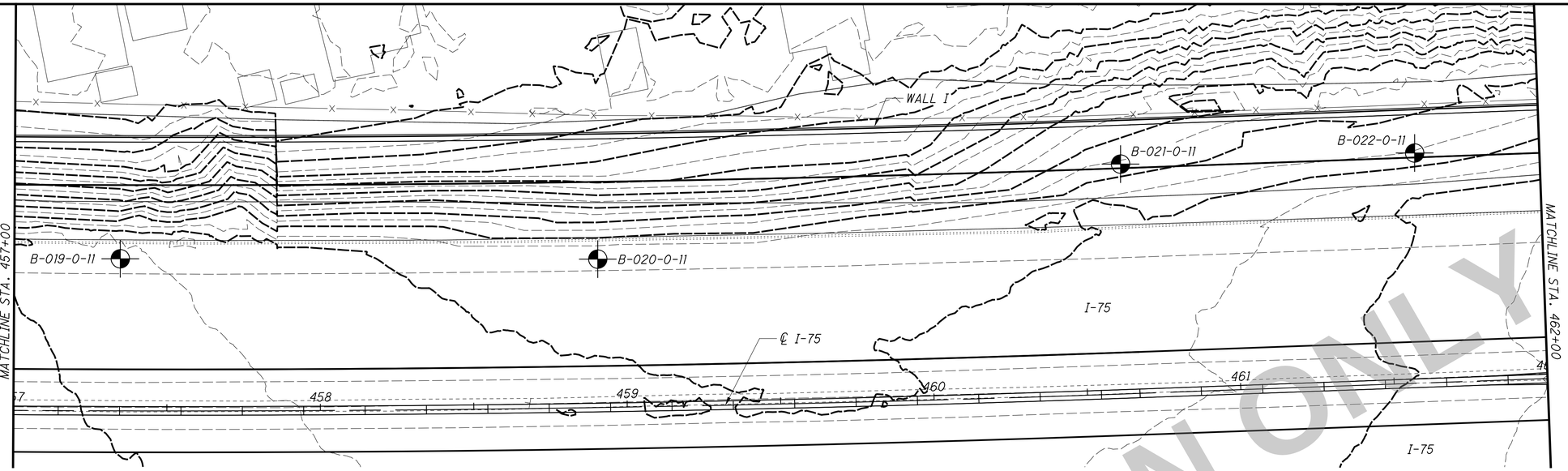
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WALL 1
STA. 452+00 TO STA. 457+00

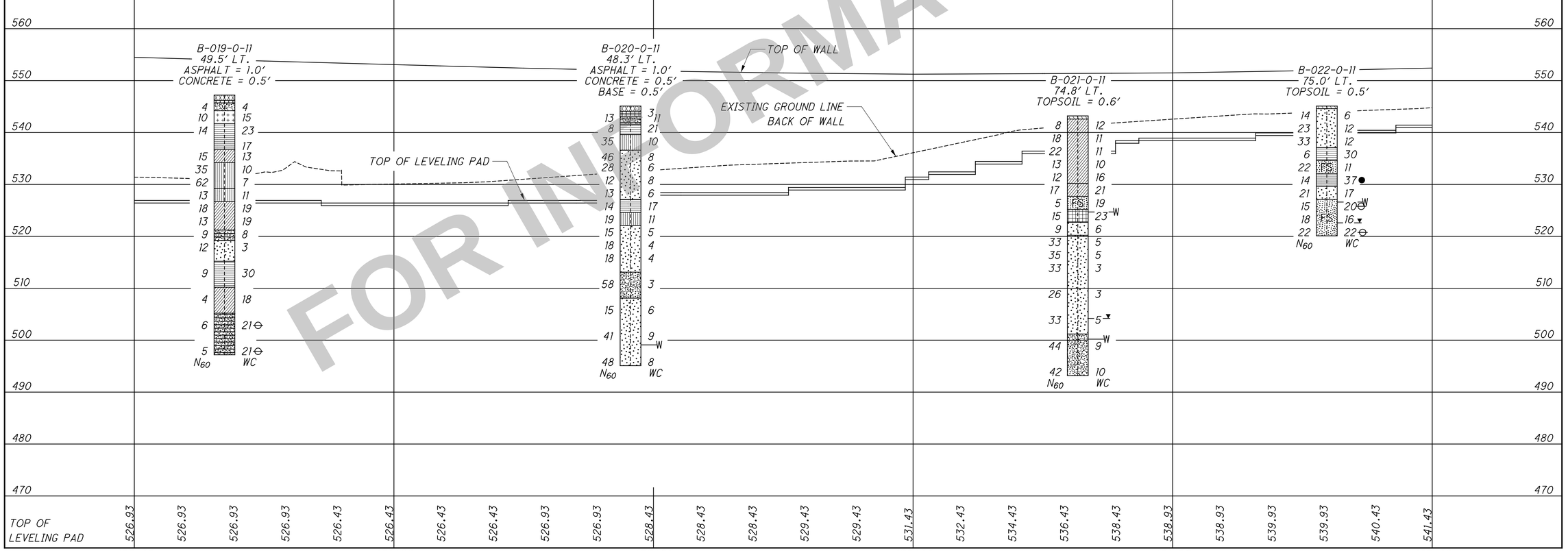
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HORIZONTAL SCALE IN FEET
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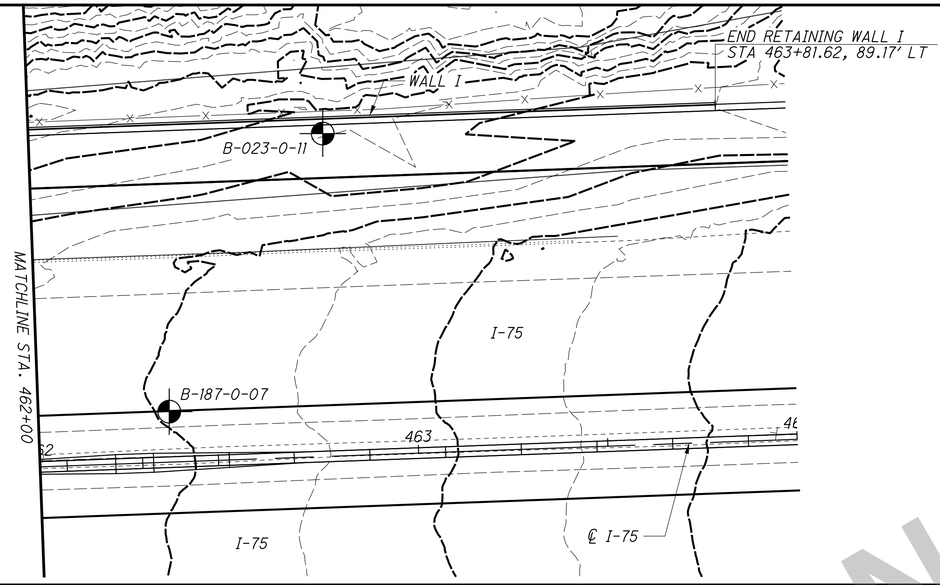
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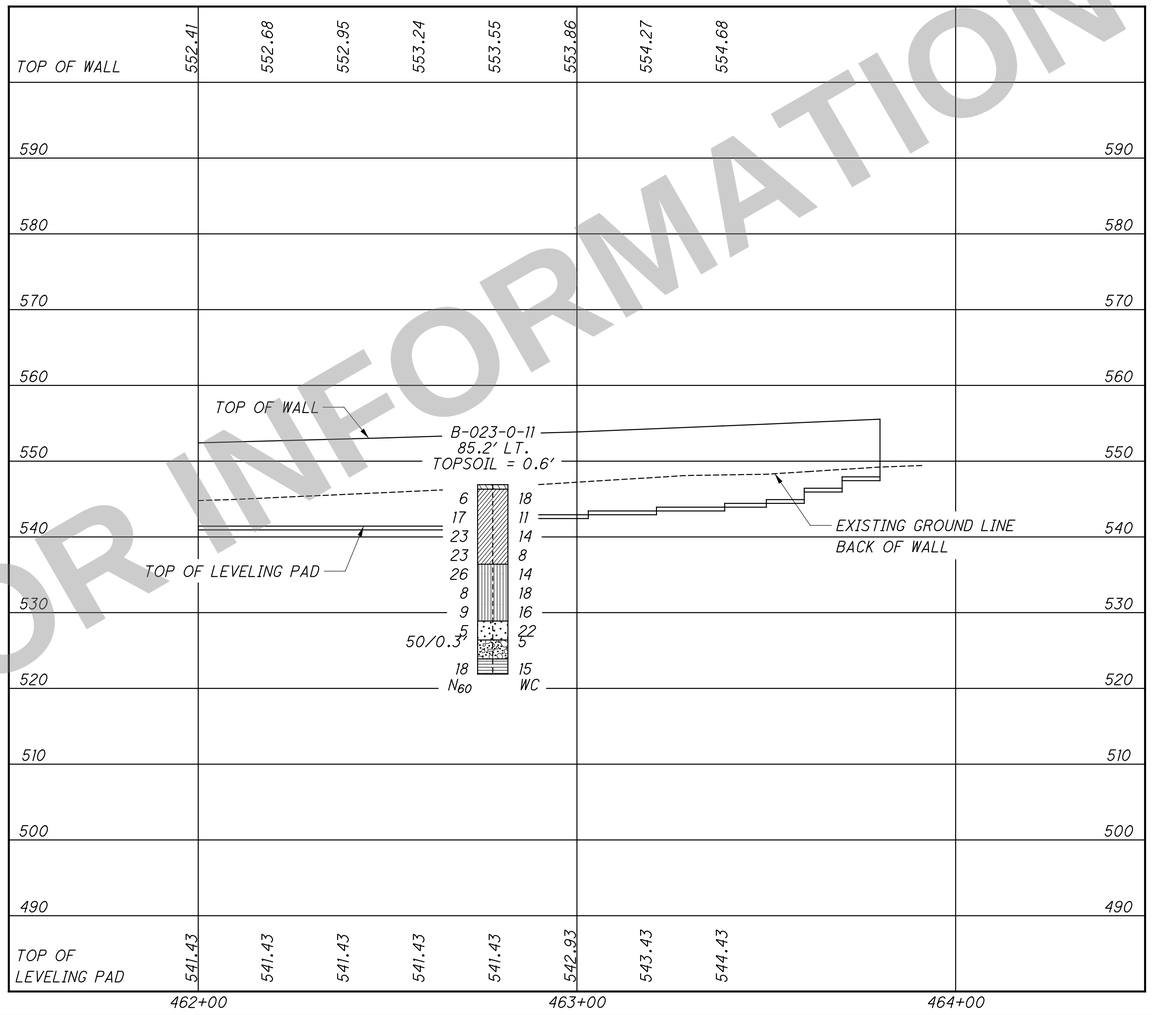
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HORIZONTAL SCALE IN FEET
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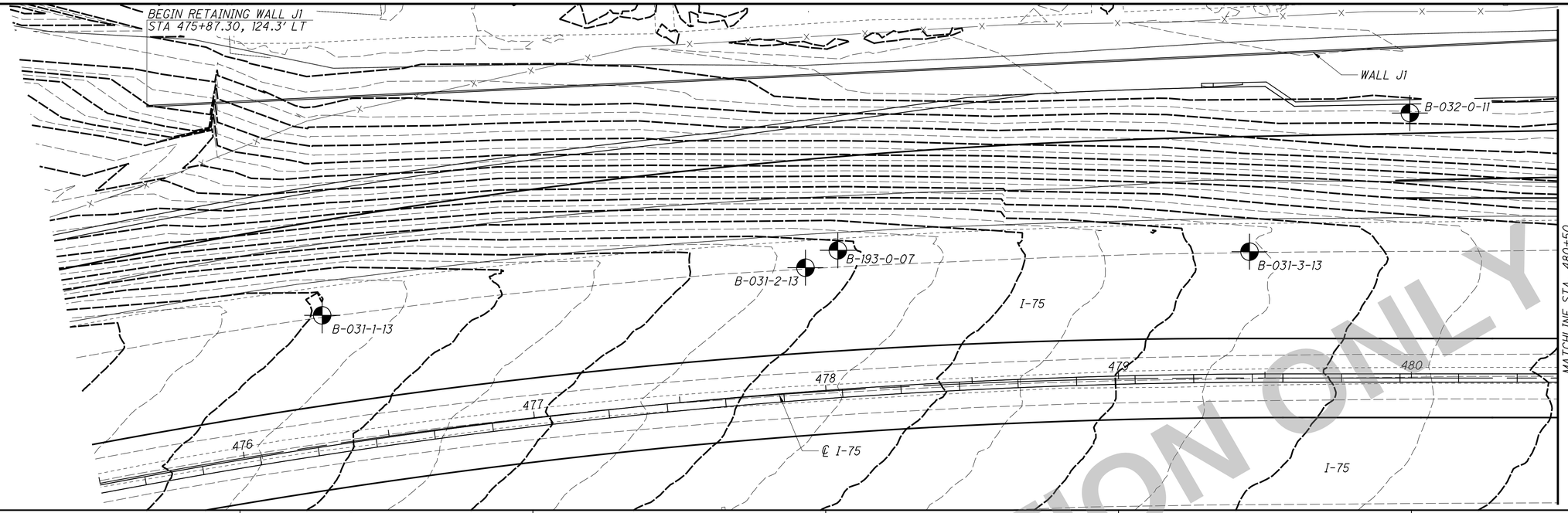
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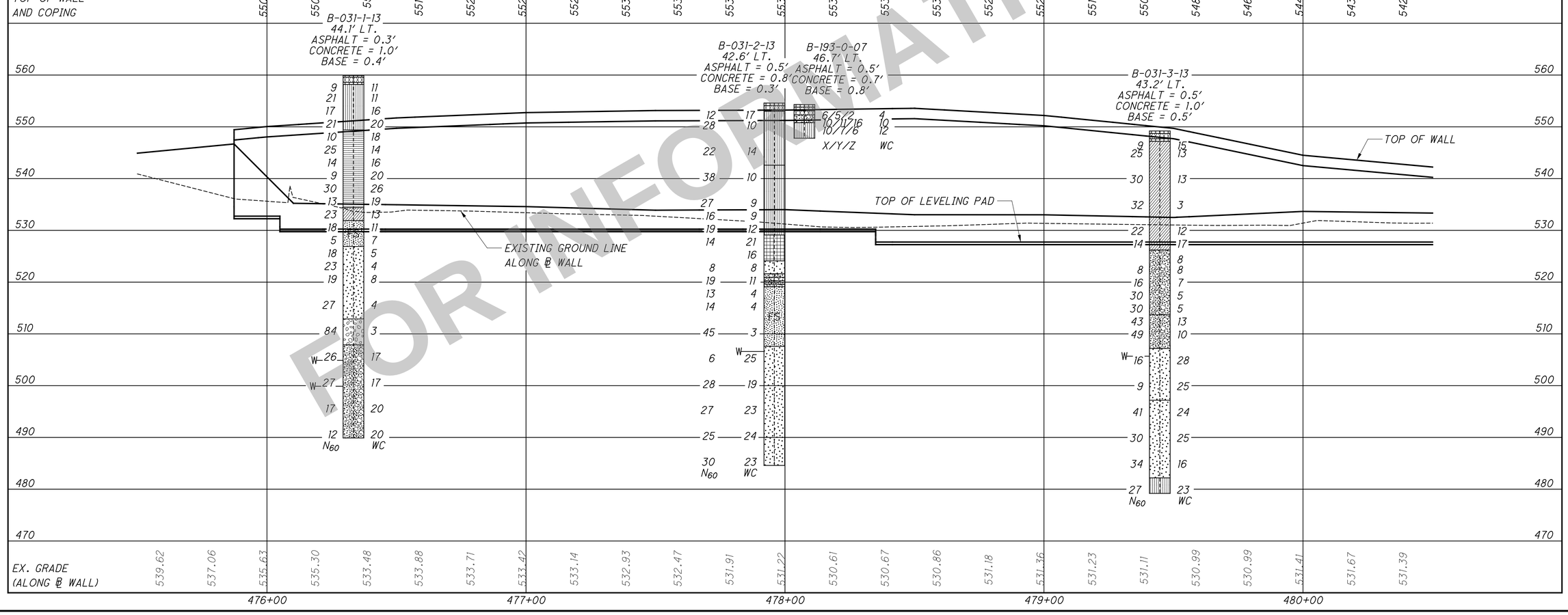
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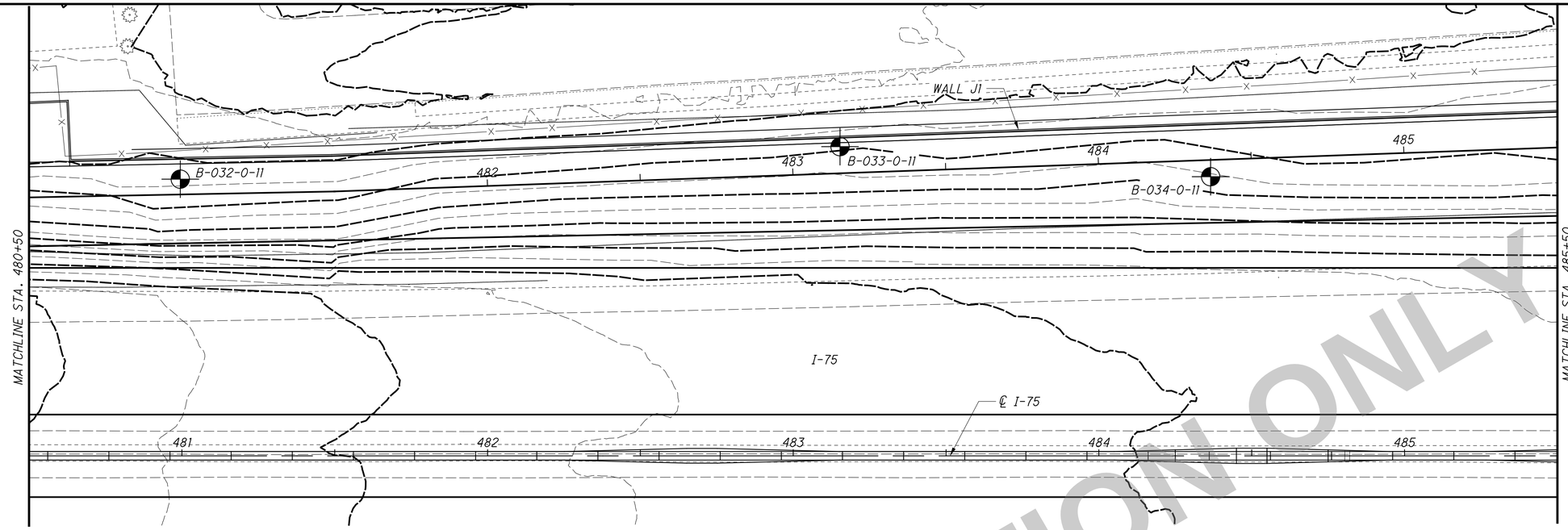
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WALL J1
STA. 475+50 TO STA. 480+50

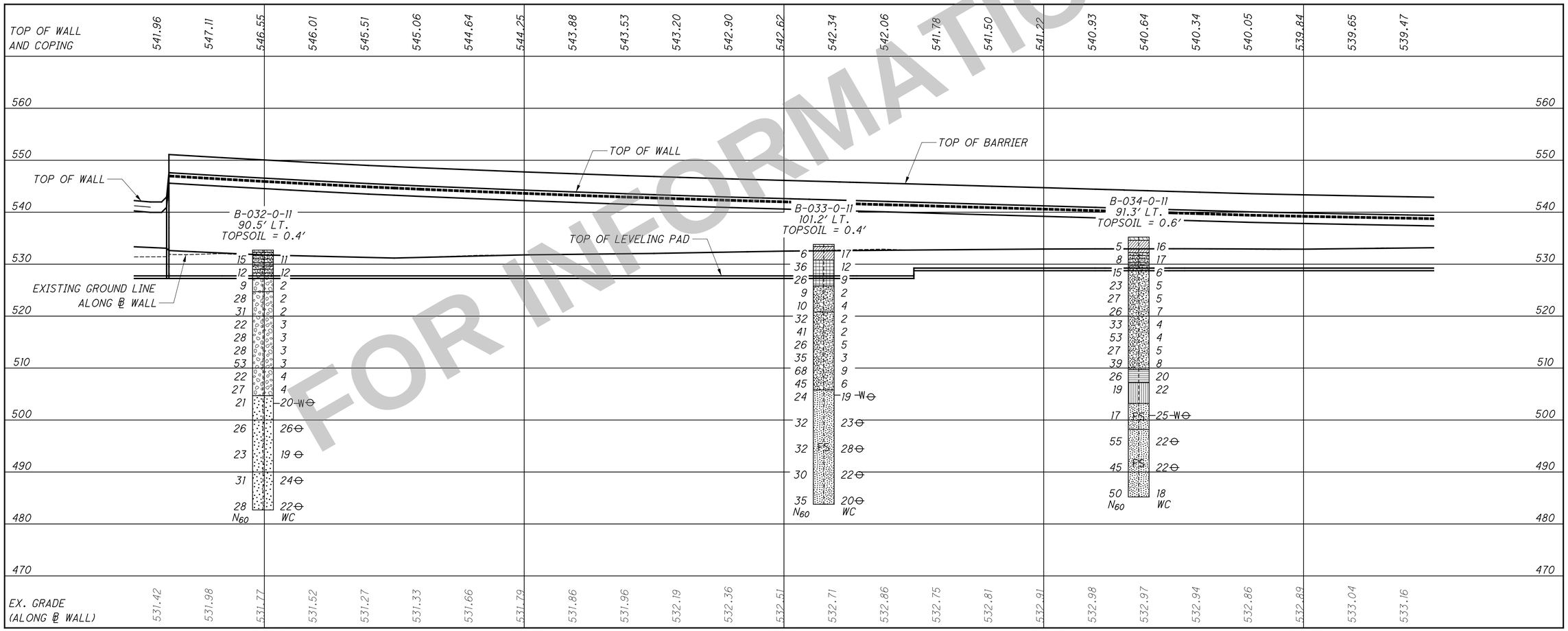
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HORIZONTAL SCALE IN FEET
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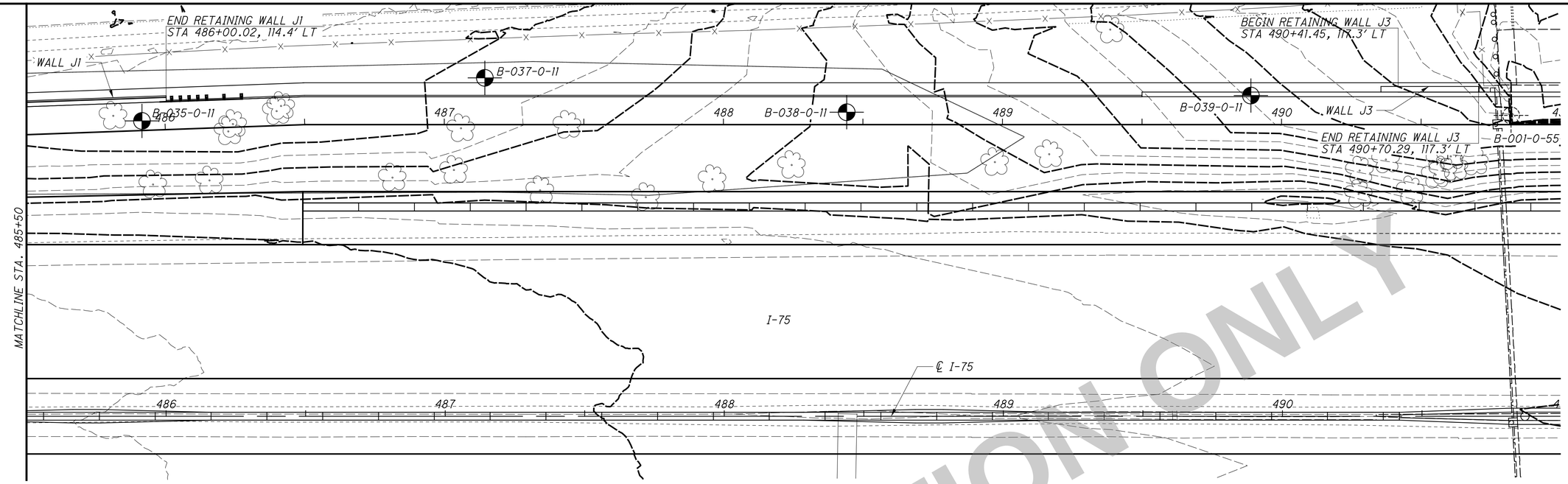
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STA. 480+50 TO STA. 480+50

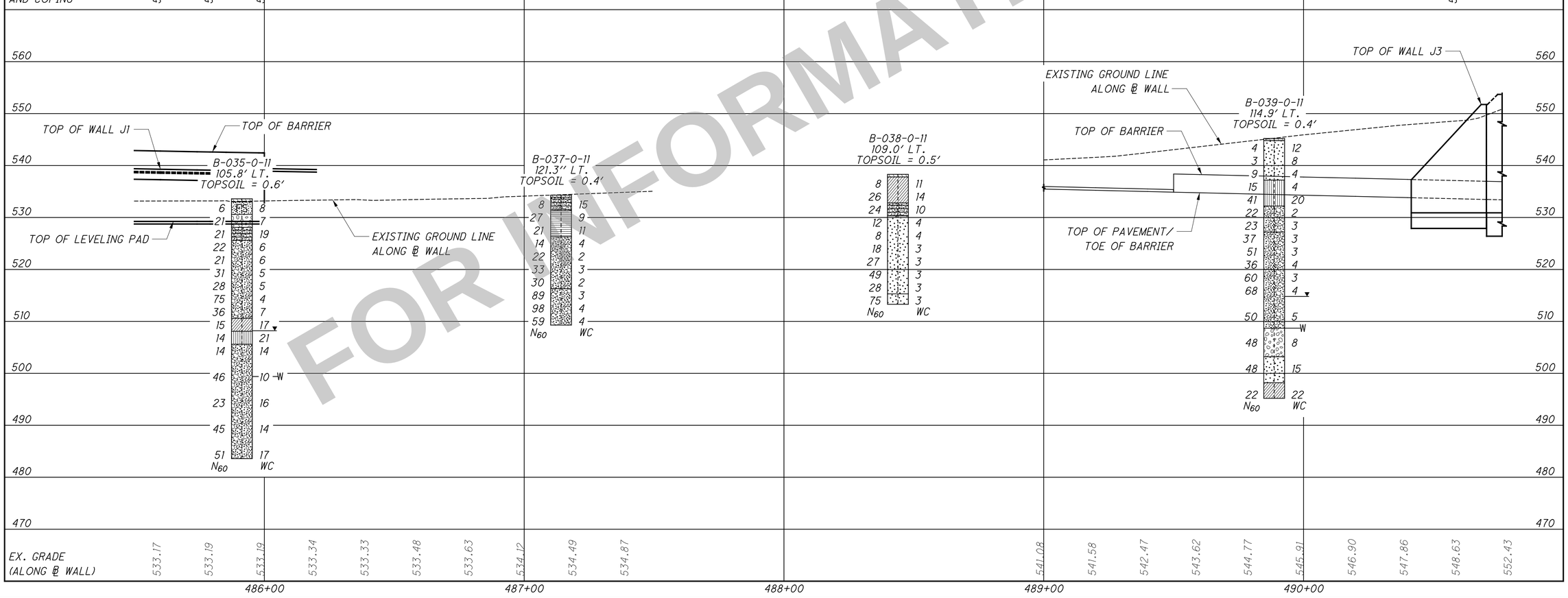
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HORIZONTAL SCALE IN FEET
0 10 20 40

DRAWN RRM
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STRUCTURE FOUNDATION EXPLORATION
WALL J1 AND WALL J3
STA. 485+50 TO STA. 491+00

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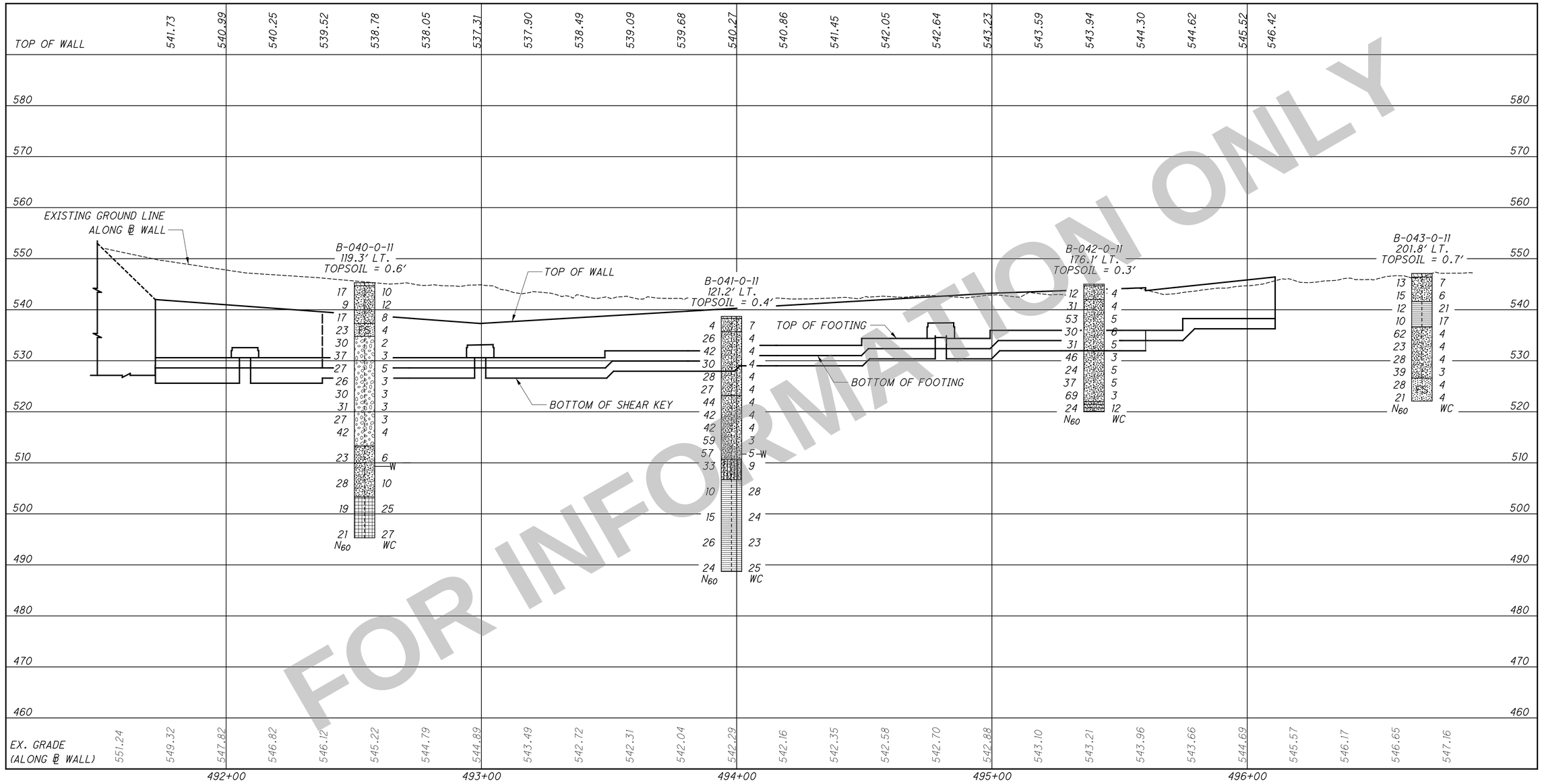
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2017 (1900)	11/105	HAM-75-7.85	STRUCTURE FOUNDATION EXPLORATION WALL K	DRAWN RRM CHECKED BRT	0 20 10 40 HORIZONTAL SCALE IN FEET	



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0 10 20 40
HORIZONTAL
SCALE IN FEET

DRAWN RRM
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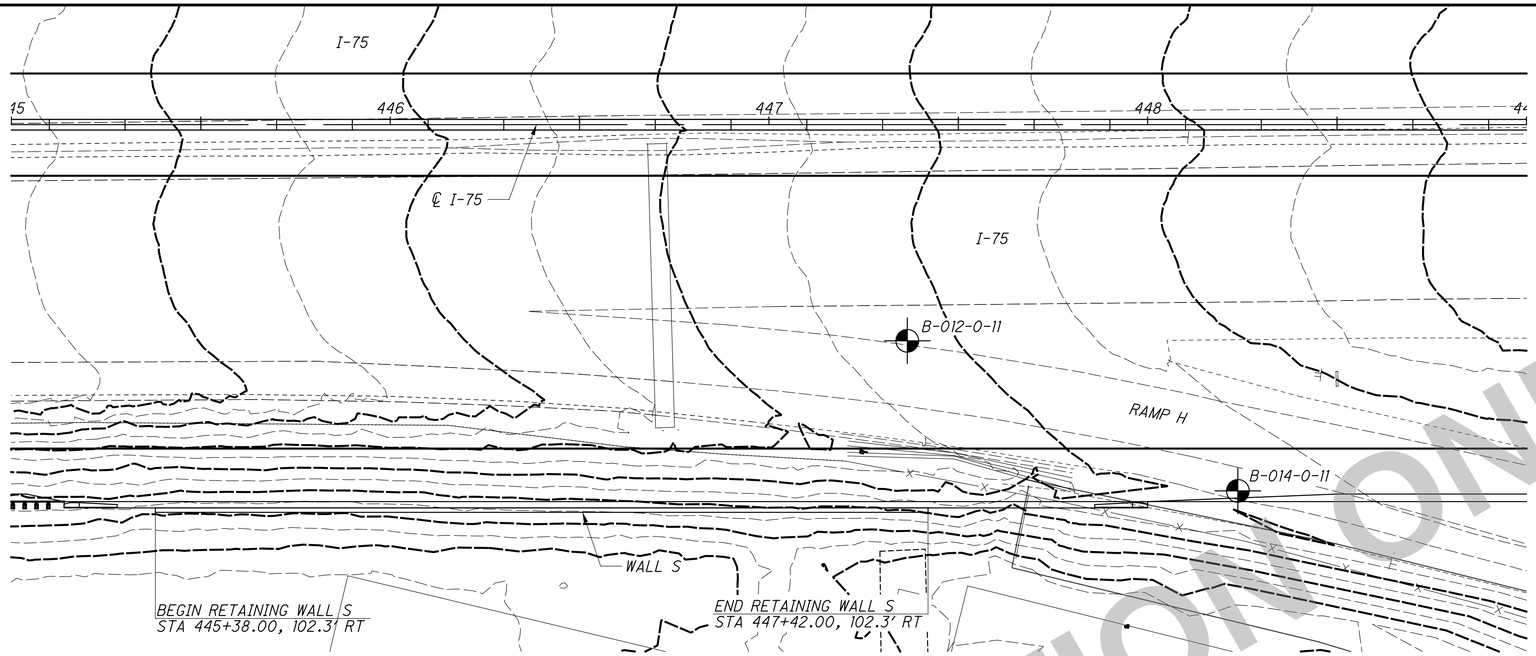
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WALL K

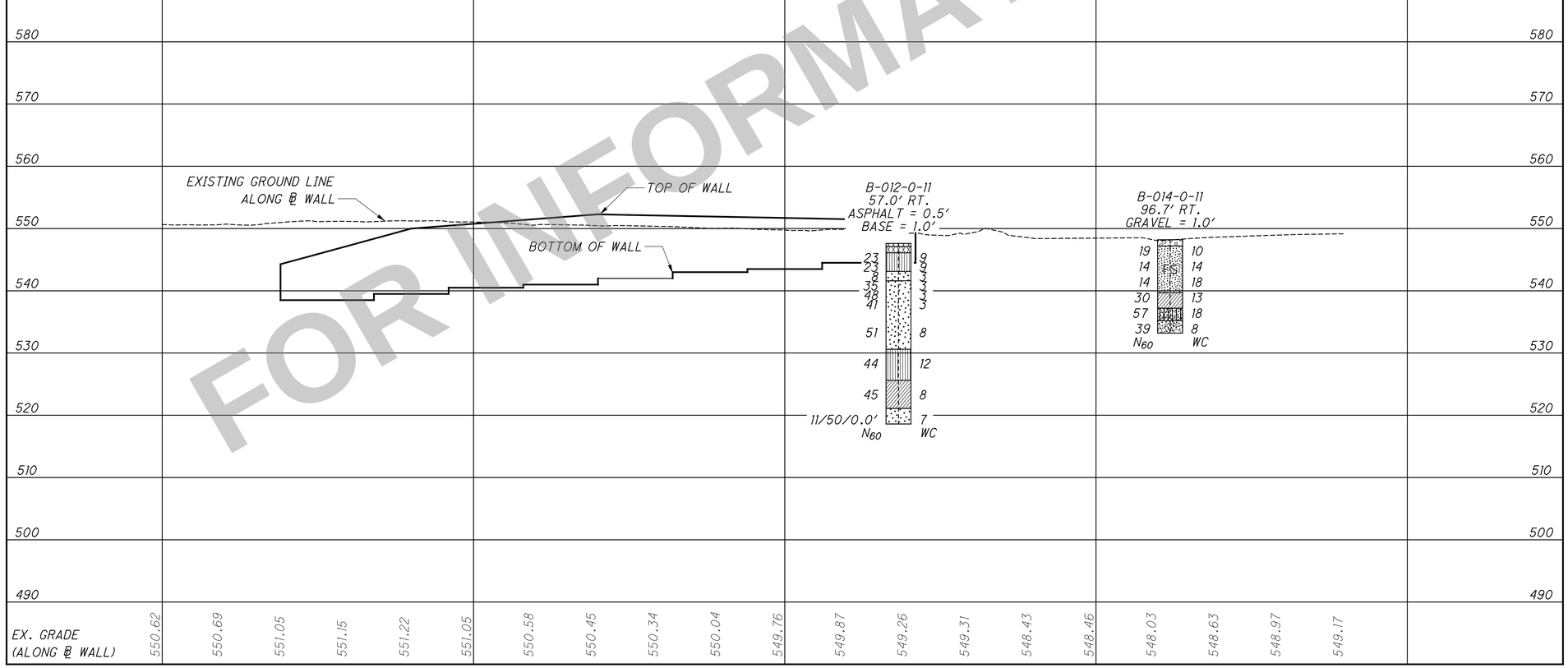
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HORIZONTAL SCALE IN FEET
0 10 20 40

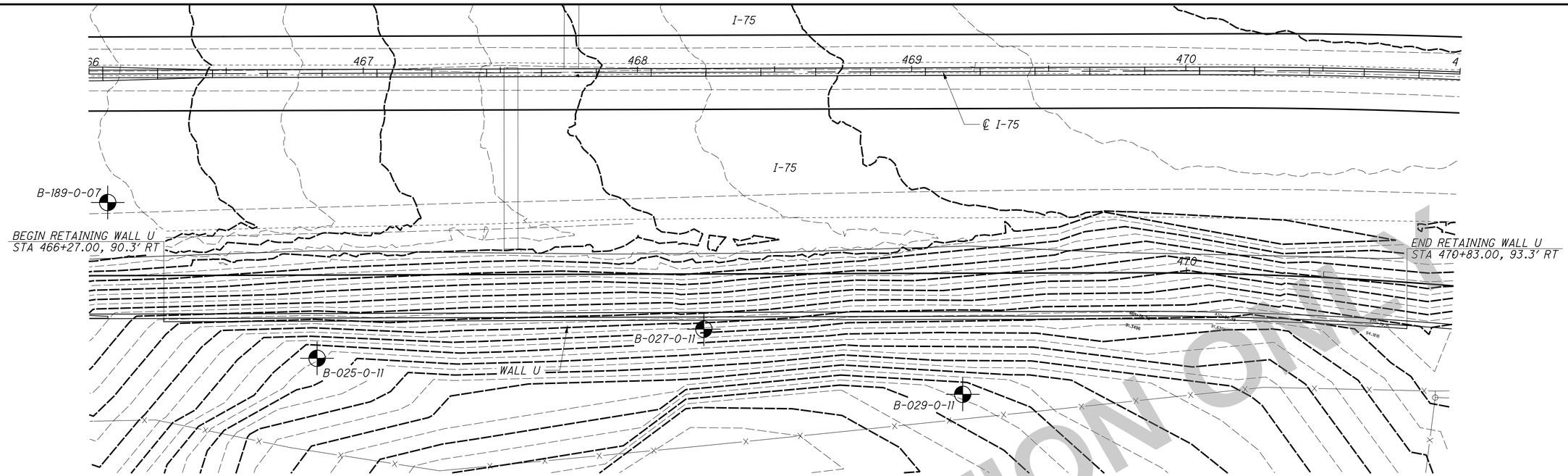
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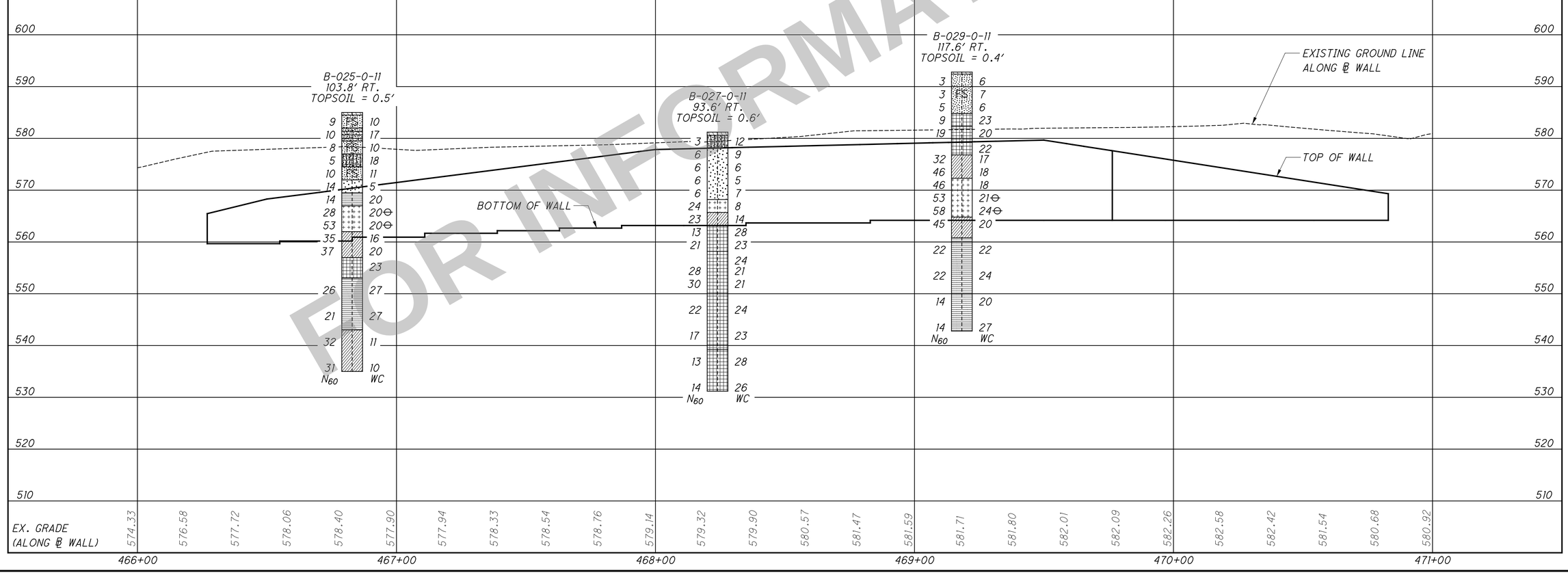
STRUCTURE FOUNDATION EXPLORATION
WALLS S

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FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

DRAWN RRM
CHECKED BRT

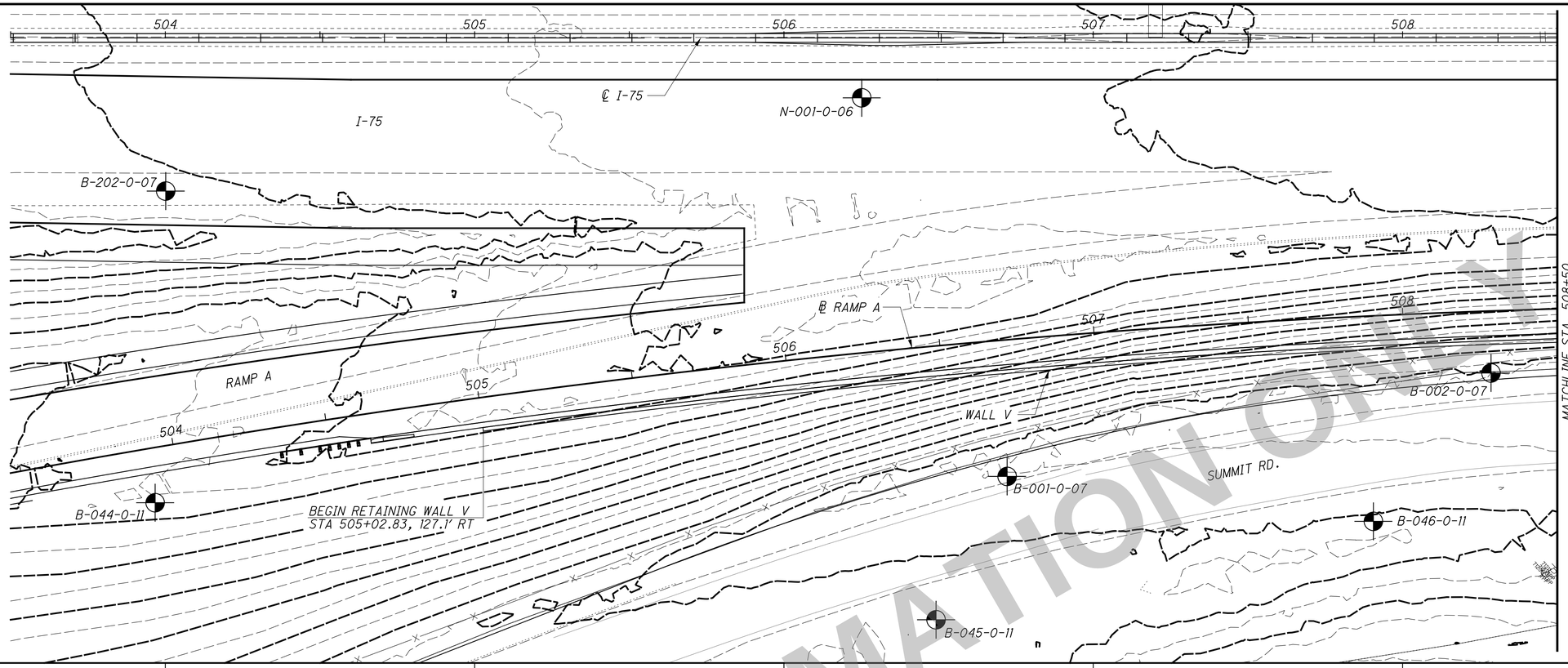
STRUCTURE FOUNDATION EXPLORATION
WALL U

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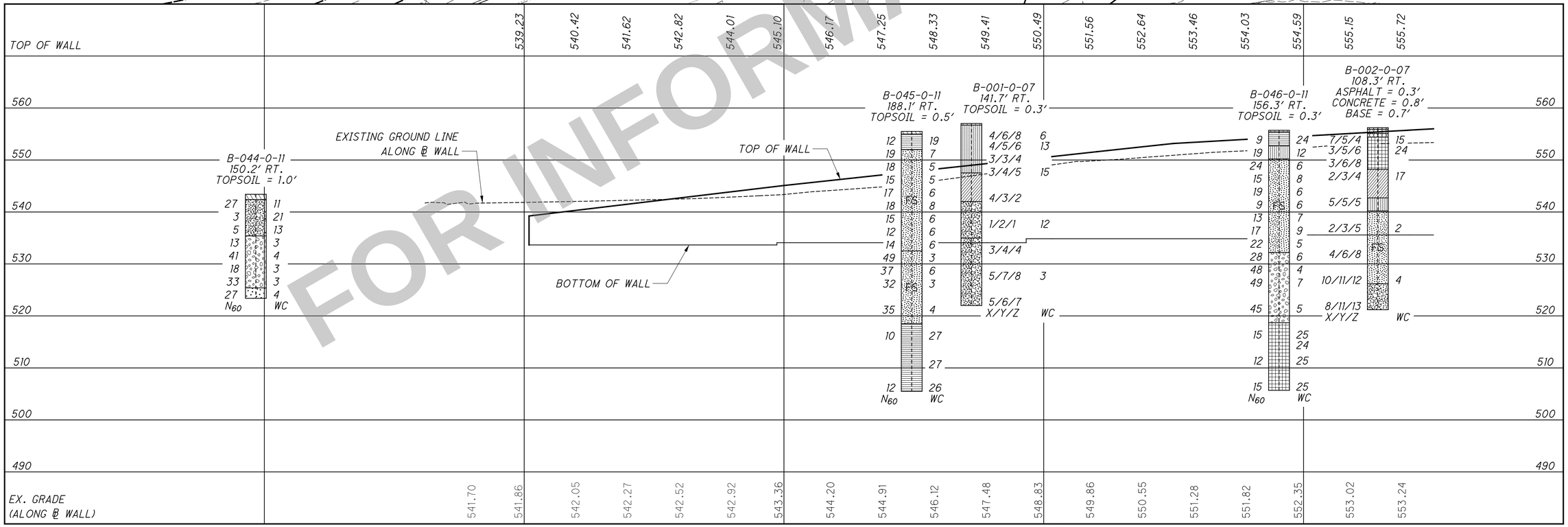
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HORIZONTAL SCALE IN FEET
0 10 20 40

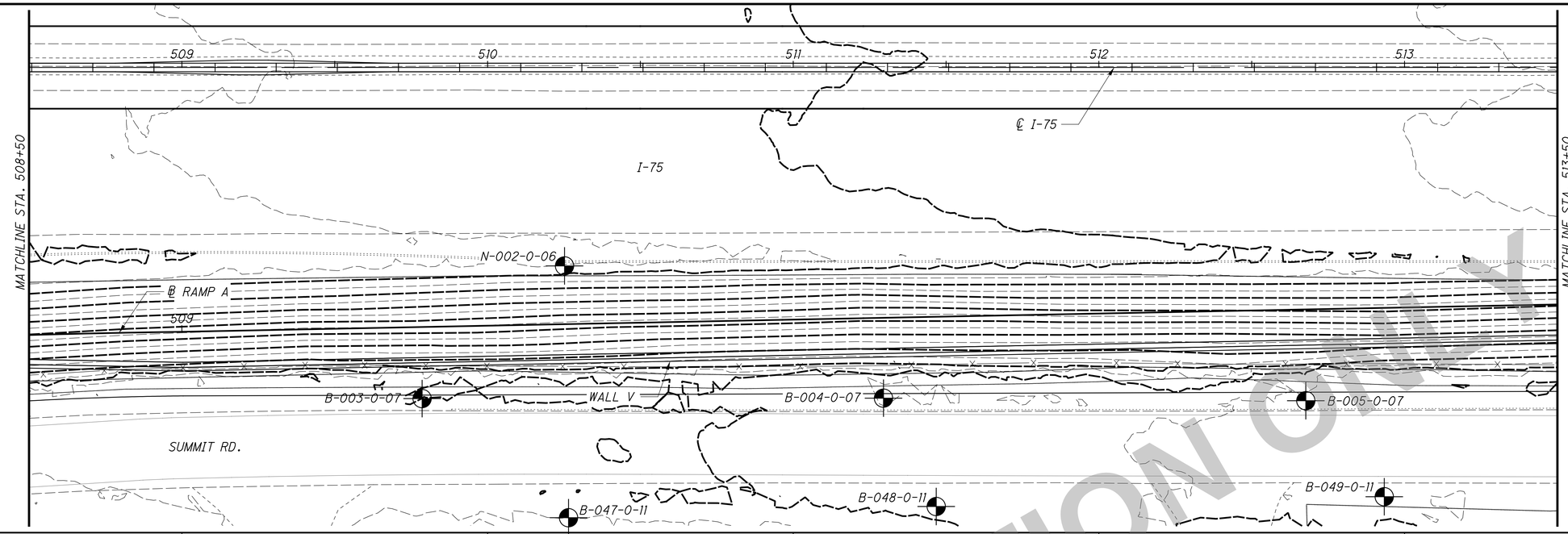
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STRUCTURE FOUNDATION EXPLORATION
WALL V
STA. 504+00 TO STA. 508+50

HAM-75-7.85

15 / 105

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2017



FOR INFORMATION ONLY

TOP OF WALL: 556.28 | 556.85 | 557.41 | 557.47 | 557.53 | 557.58 | 557.64 | 557.70 | 557.76 | 557.82 | 557.88 | 557.93 | 557.99 | 558.05 | 558.11 | 558.17 | 558.23 | 558.28 | 558.34 | 558.40 | 558.46 | 558.52 | 558.58 | 558.63 | 558.69

580 / 570 / 560 / 550 / 540 / 530 / 520 / 510 / 500 / 490

EXISTING GROUND LINE ALONG ℄ WALL

TOP OF WALL

BOTTOM OF WALL

B-003-0-07
108.4′ RT.
TOPSOIL = 0.5′

6/7/9	5	
4/5/6	13	
4/5/5		
5/6/7	15	
6/6/7		
5/7/8		
6/10/13		
7/10/10 X/Y/Z	WC	

B-047-0-11
147.4′ RT.
TOPSOIL = 1.0′

6	21	
12	20	
21	14	
	21	17
15	4	
10	6	
10	6	
W 5	20	
8	23	
5	26	
8	23	
9	22	
8	18	
14	7	
8	7	
10 N60	7	WC

B-004-0-07
108.2′ RT.
TOPSOIL = 0.4′

8/8/7	4	
3/3/4	20	
3/4/6		
5/6/8	29	
5/13/11		
4/8/8	3	
2/3/3	7	
5/6/9 X/Y/Z	WC	

B-048-0-11
143.7′ RT.
TOPSOIL = 0.8′

8	18	
13	20	
24	23	
	15	
22	13	
33	10	
46	10	
39	3	
28	4	
19	3	
23	3	
18	4	
39	3	
32	4	
36	5	
39 N60	5	WC

B-005-0-07
109.1′ RT.
TOPSOIL = 0.4′

4/5/5	13	
3/2/3		
2/3/3	34	
2/3/3		
5/7/10	11	
5/8/11		
5/6/10	6	
5/6/10		
6/10/13 X/Y/Z	WC	

B-049-0-11
140.5′ RT.
TOPSOIL = 0.8′

5	30	
5	28	
8	30	
	16	
14	14	
15	17	
46	11	
21	3	
22	2	
21	4	
24	3	
26	3	
22	3	
35	3	
28	3	
27 N60	3	WC

EX. GRADE (ALONG ℄ WALL): 553.71 | 554.38 | 556.02 | 555.33 | 555.91 | 555.07 | 555.01 | 554.79 | 554.81 | 554.90 | 555.03 | 555.13 | 555.20 | 555.20 | 554.93 | 554.65 | 554.43 | 554.31 | 554.04 | 553.67 | 553.65 | 553.66 | 553.92 | 554.00 | 554.08

509+00 | 510+00 | 511+00 | 512+00 | 513+00

HORIZONTAL SCALE IN FEET
0 10 20 40

DRAWN RRM
CHECKED BRT

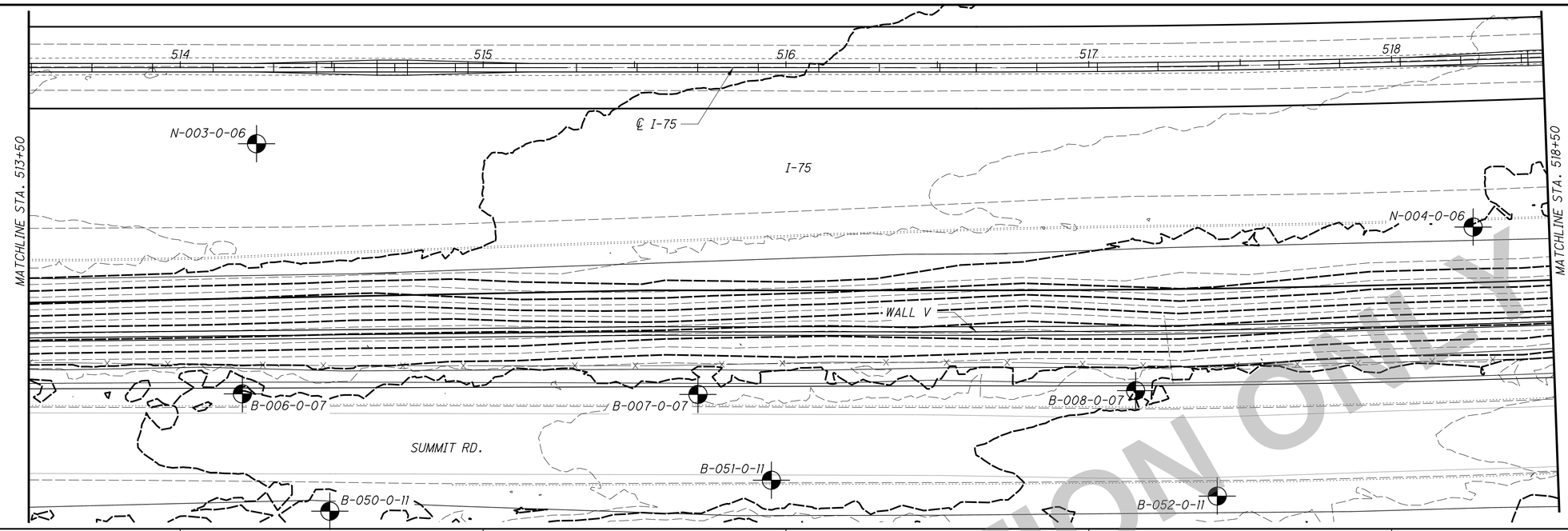
STRUCTURE FOUNDATION EXPLORATION
WALL V
STA. 508+50 TO STA. 513+50

HAM-75-7.85

16 / 105

1905
2017

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FOR INFORMATION ONLY

TOP OF WALL: 558.75 | 558.81 | 558.87 | 558.93 | 558.98 | 559.04 | 559.10 | 559.16 | 559.22 | 559.28 | 559.33 | 559.39 | 559.45 | 559.51 | 559.57 | 559.63 | 559.68 | 559.74 | 559.80 | 559.86 | 559.92 | 559.98 | 560.03 | 560.09 | 560.15

580 / 570 / 560 / 550 / 540 / 530 / 520 / 510 / 500 / 490

EXISTING GROUND LINE ALONG ℄ WALL

B-006-0-07
107.7′ RT.
TOPSOIL = 0.8′

2/2/3	17	
3/4/6		
4/5/7	29	
2/3/3	37	
3/4/5		
10/14/23	10	
6/10/18		
4/7/10	3	FS
5/6/10 X/Y/Z		WC

B-050-0-11
146.4′ RT.
TOPSOIL = 1.0′

5	30	
4	25	
6	30	
9		
19	13	
13	11	
44	11	
35	10	
37	4	
22	3	
33	4	
18	3	
22	3	FS
27	3	
24	3	
31	5	WC
N_{60}		

B-007-0-07
107.9′ RT.
TOPSOIL = 0.5′

2/2/2	13	
2/2/3	28	
2/1/2	34	
3/8/10		
6/7/9	9	
9/11/15		
11/13/17	10	
10/13/18		
6/9/10 X/Y/Z	9	WC

B-051-0-11
136.2′ RT.
TOPSOIL = 0.3′

6	29	
5	29	
12	25	
	23	
30	11	
35	14	
22	11	
33	10	
36	12	
35	4	
36	3	
23	3	
18	3	FS
39	3	
42	3	
37	3	WC
N_{60}		

TOP OF WALL

B-008-0-07
106.9′ RT.
TOPSOIL = 0.3′

9/8/7	6	
2/3/3	20	
3/3/4		
4/5/7		
5/7/9	13	
5/8/9		
7/9/11	3	FS
5/6/8 X/Y/Z		WC

B-052-0-11
142.0′ RT.
TOPSOIL = 0.6′

12	17	
9	30	
9	31	
24	19	
10	14	
31	13	
22	10	
62	11	
28	12	
30	6	
21	3	
19	3	WC
22	4	FS
26	3	
N_{60}	5	WC

BOTTOM OF WALL

EX. GRADE (ALONG ℄ WALL): 554.18 | 554.22 | 554.26 | 554.32 | 554.46 | 554.57 | 554.61 | 554.66 | 554.82 | 555.07 | 555.17 | 555.50 | 555.68 | 555.76 | 555.53 | 555.31 | 555.66 | 555.35 | 555.26 | 555.45 | 555.84 | 556.20 | 556.37 | 556.32 | 556.22

514+00 | 515+00 | 516+00 | 517+00 | 518+00

HORIZONTAL SCALE IN FEET
0 10 20 40

DRAWN RRM
CHECKED BRT

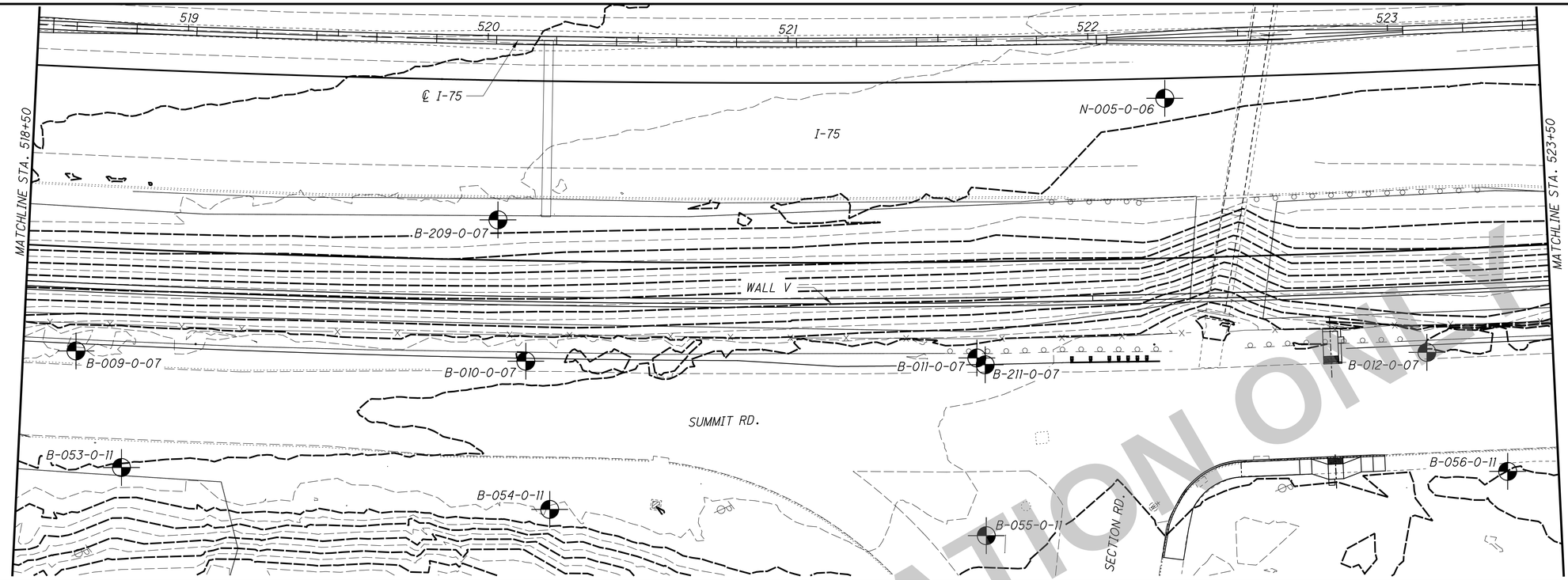
STRUCTURE FOUNDATION EXPLORATION
WALL V
STA. 513+50 TO STA. 518+50

HAM-75-7.85

17 / 105

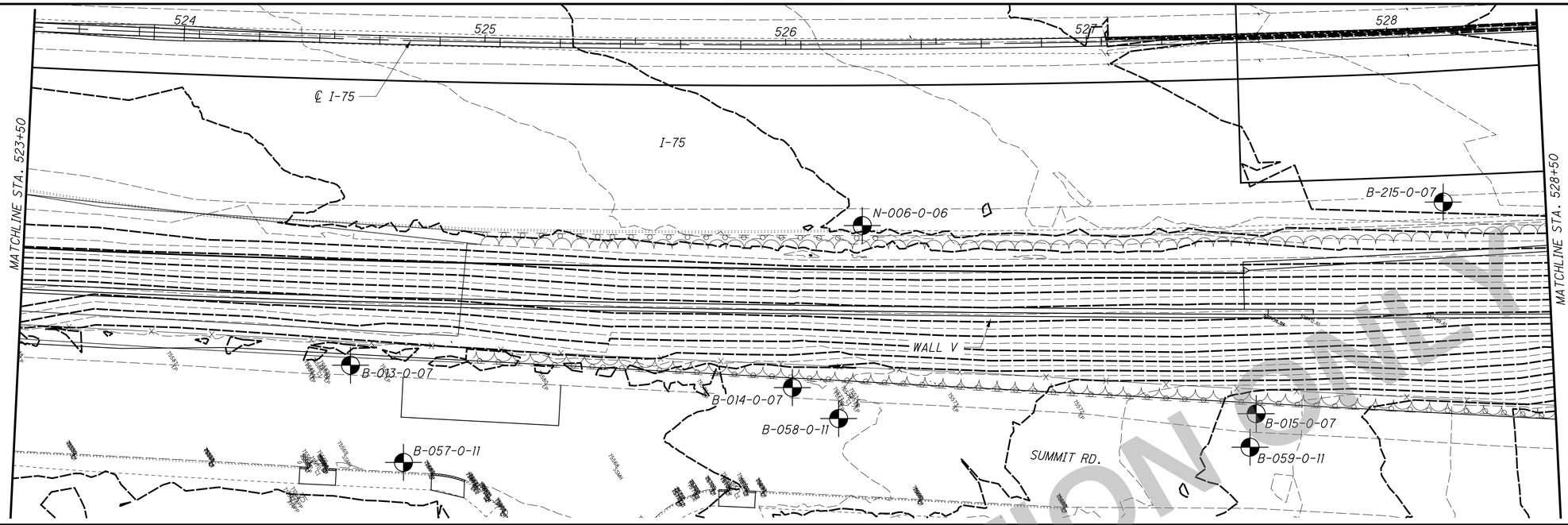
1906
2017

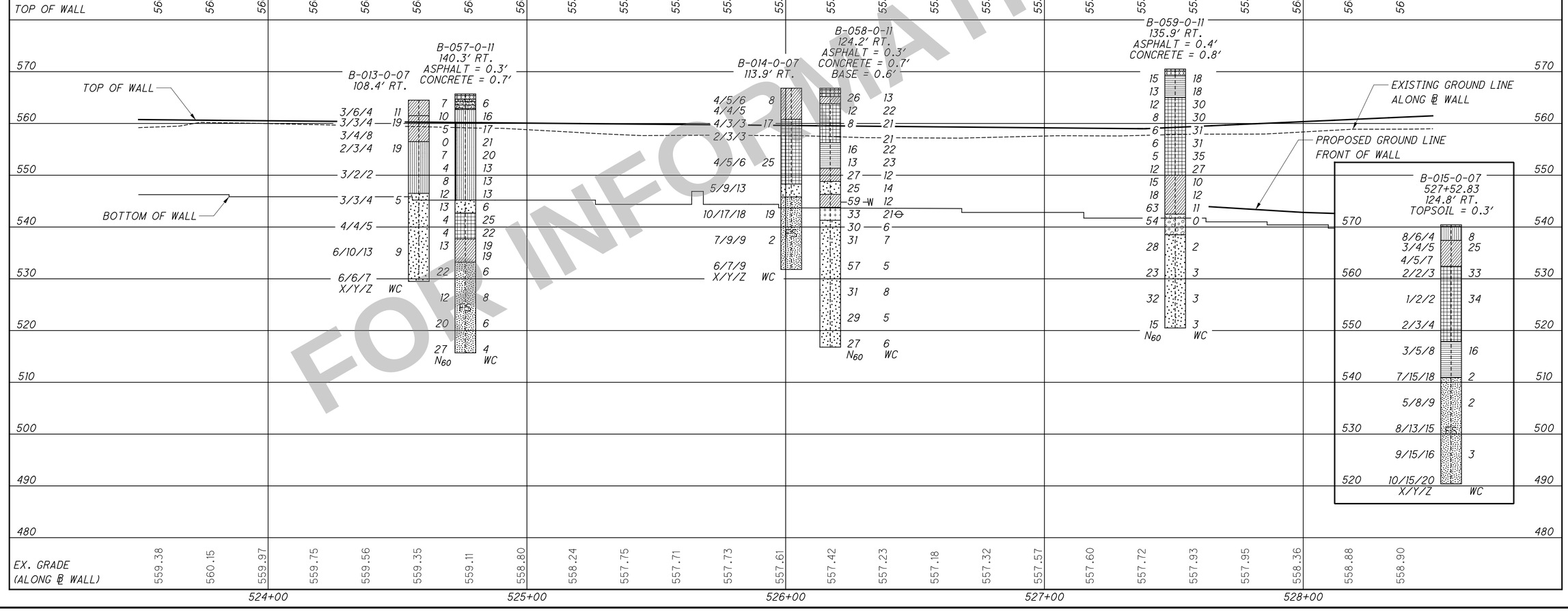
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FOR INFORMATION ONLY

| | | |





FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

DRAWN RRM
CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
WALL V
STA. 523+50 TO STA. 528+50

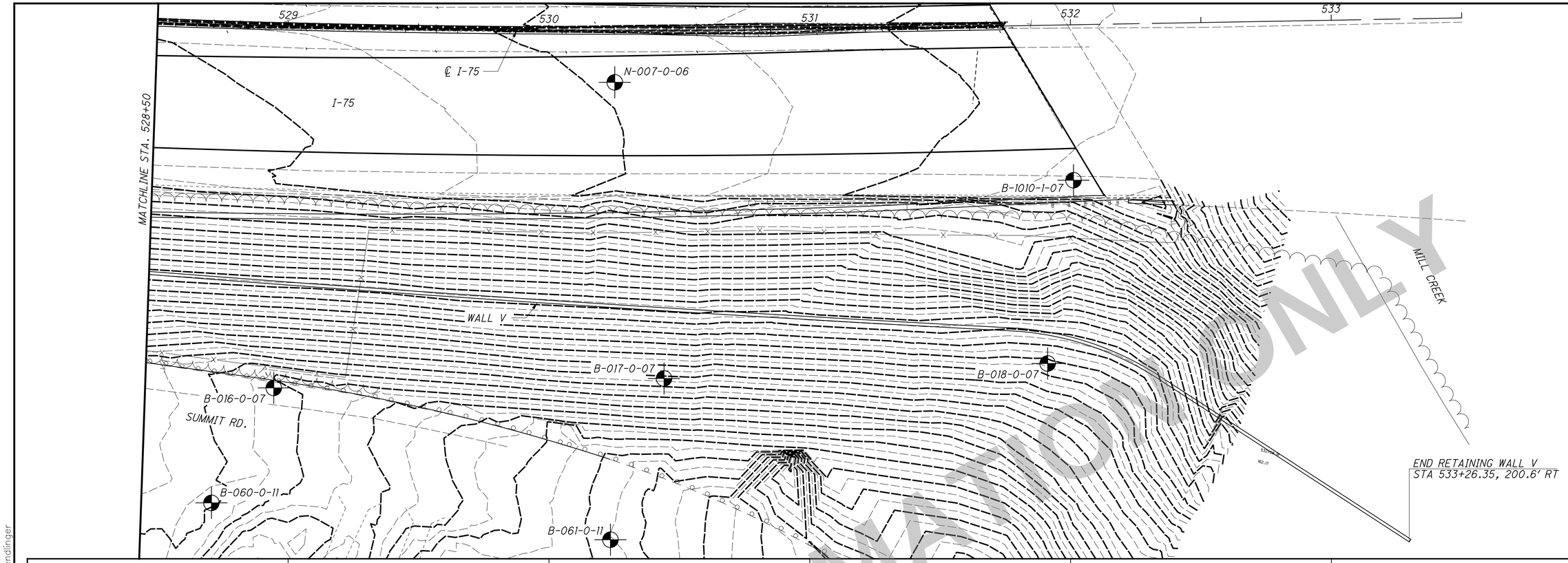
HAM-75-7.85

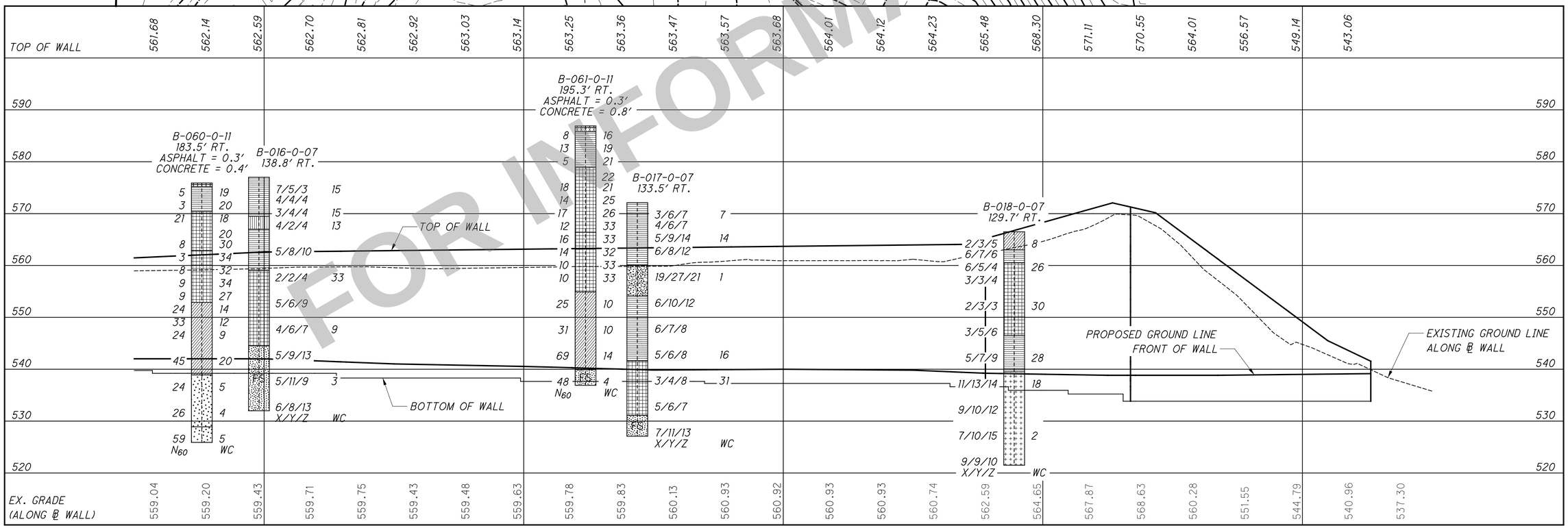
19 / 105

1908 / 2017

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HORIZONTAL SCALE IN FEET
0 10 20 40

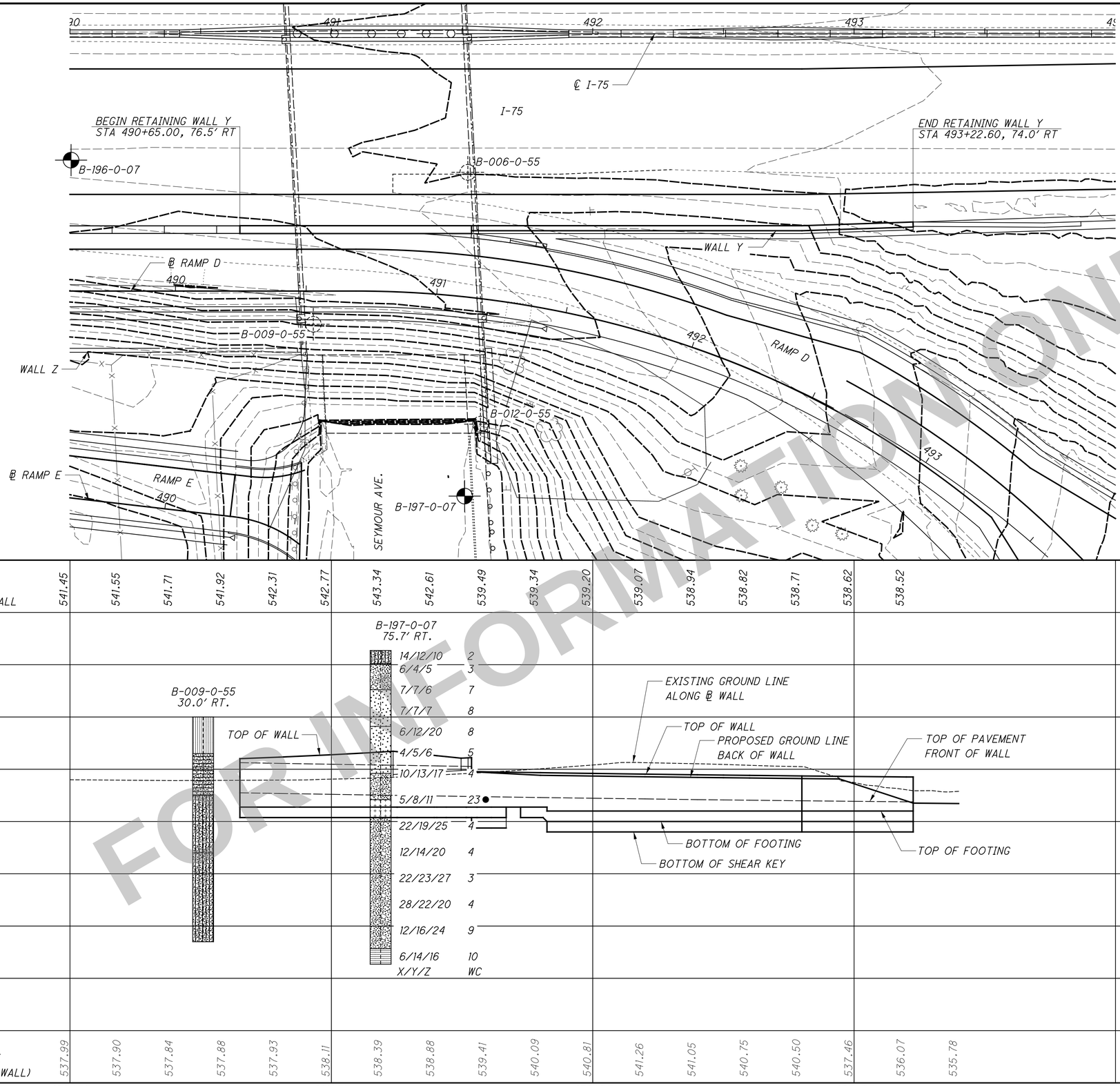
DRAWN RRM
CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
WALL V
STA. 528+50 TO STA. 533+50

HAM-75-7.85

20/105

1909
2017



FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

DRAWN RRM
CHECKED BRT

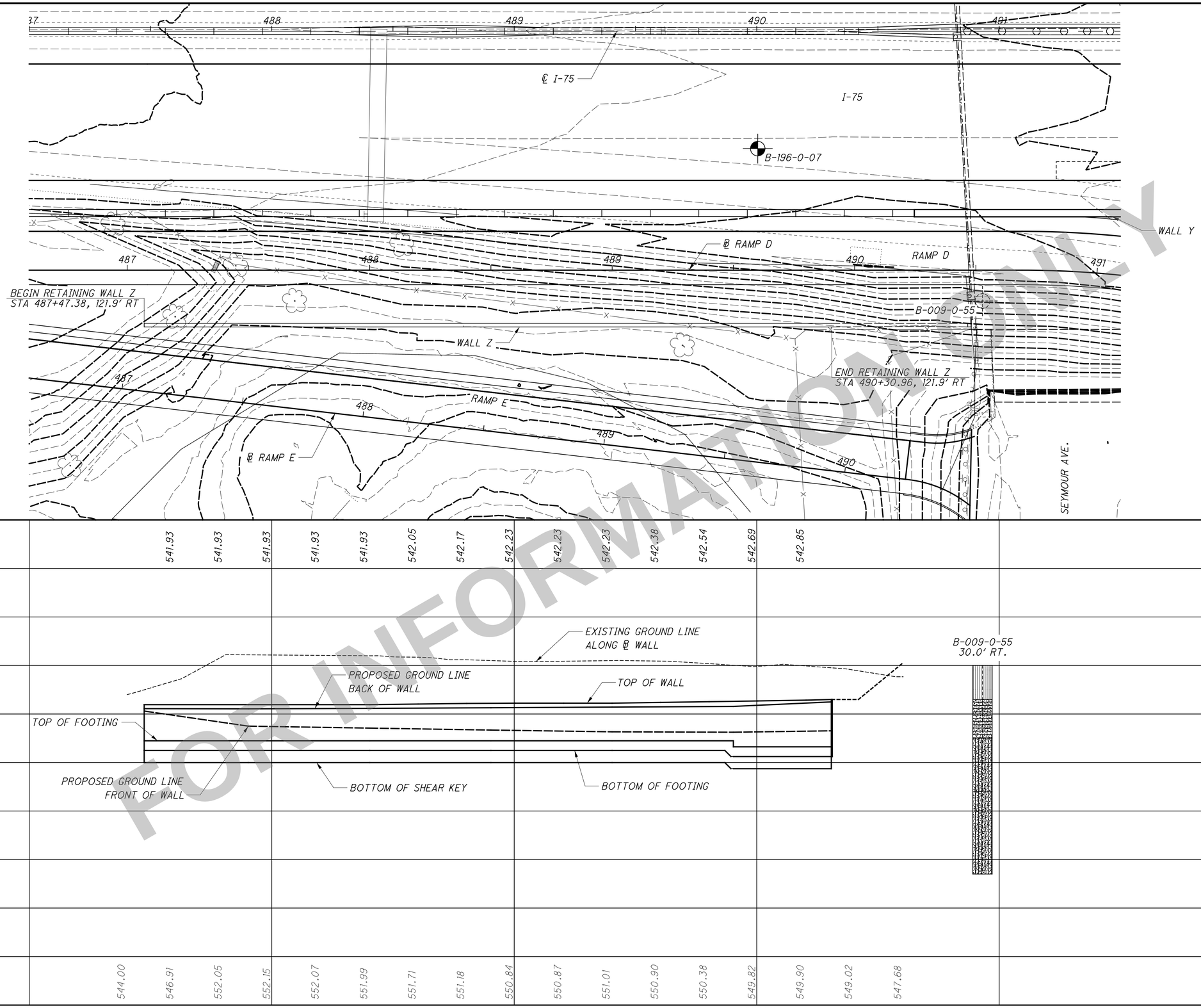
FOUNDATION EXPLORATION

WALL Y

STRUCTURE

HAM-75-7.85

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HORIZONTAL SCALE IN FEET
0 10 20 40

DRAWN RRM
CHECKED BRT

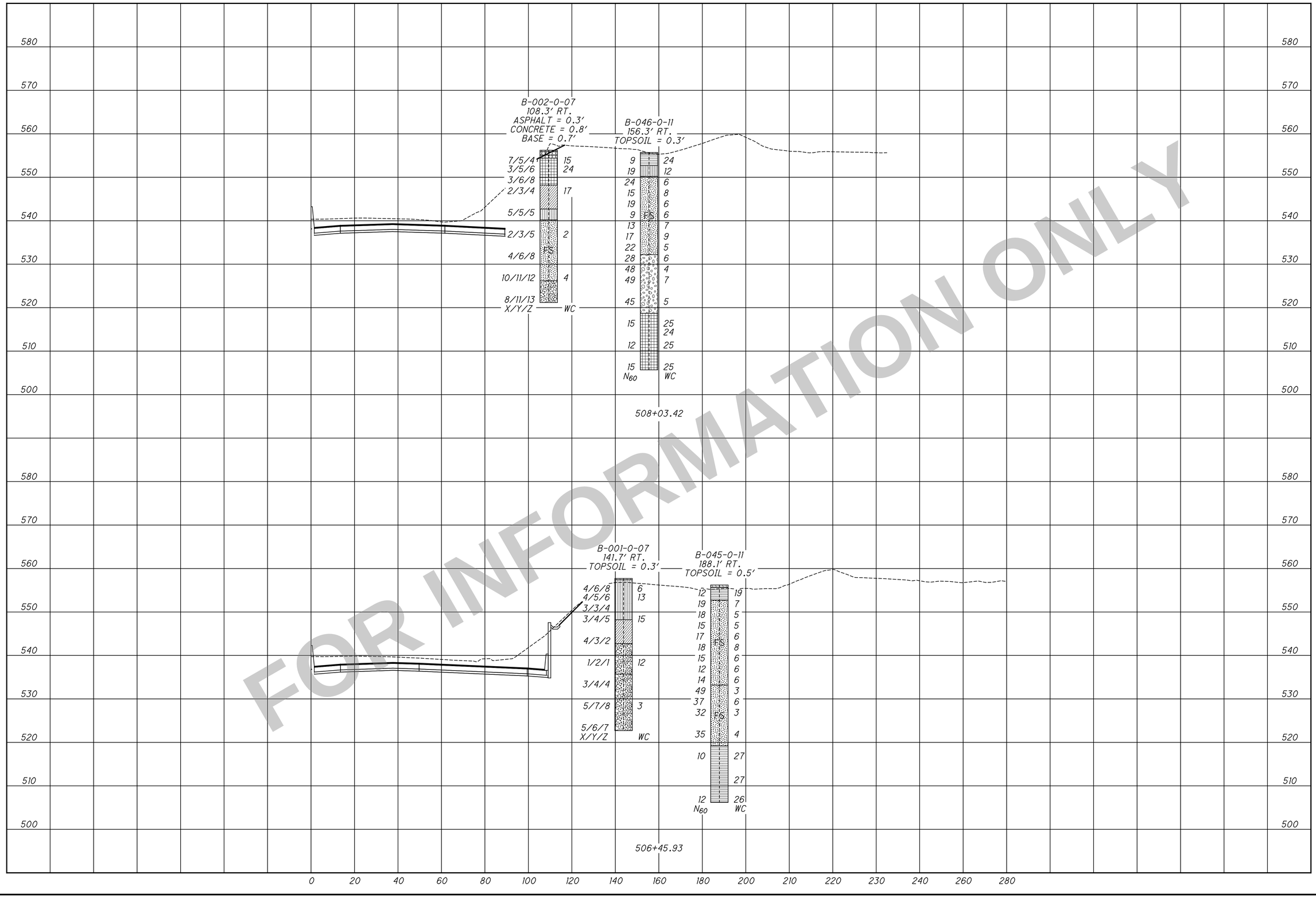
FOUNDATION EXPLORATION
STRUCTURE
WALL Z

HAM-75-7.85

22 / 105

1911
2017

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0 10 20 40
HORIZONTAL SCALE IN FEET

DRAWN RRM
CHECKED BRT

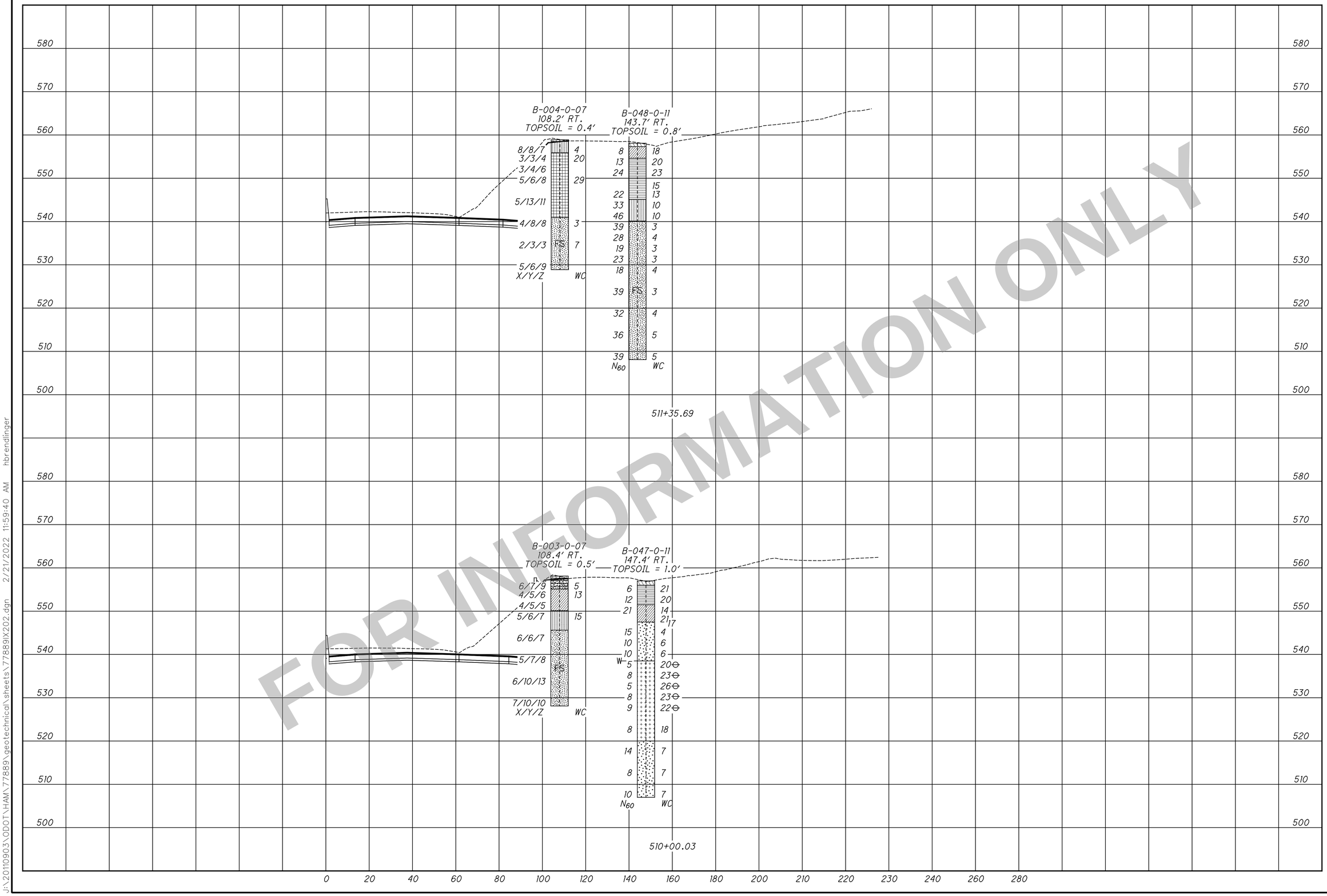
STRUCTURE FOUNDATION EXPLORATION
WALL V CROSS SECTIONS
STA. 506+45.93 & STA. 508+03.42

HAM-75-7.85

23/105

1912
2017

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0 10 20 40
HORIZONTAL SCALE IN FEET

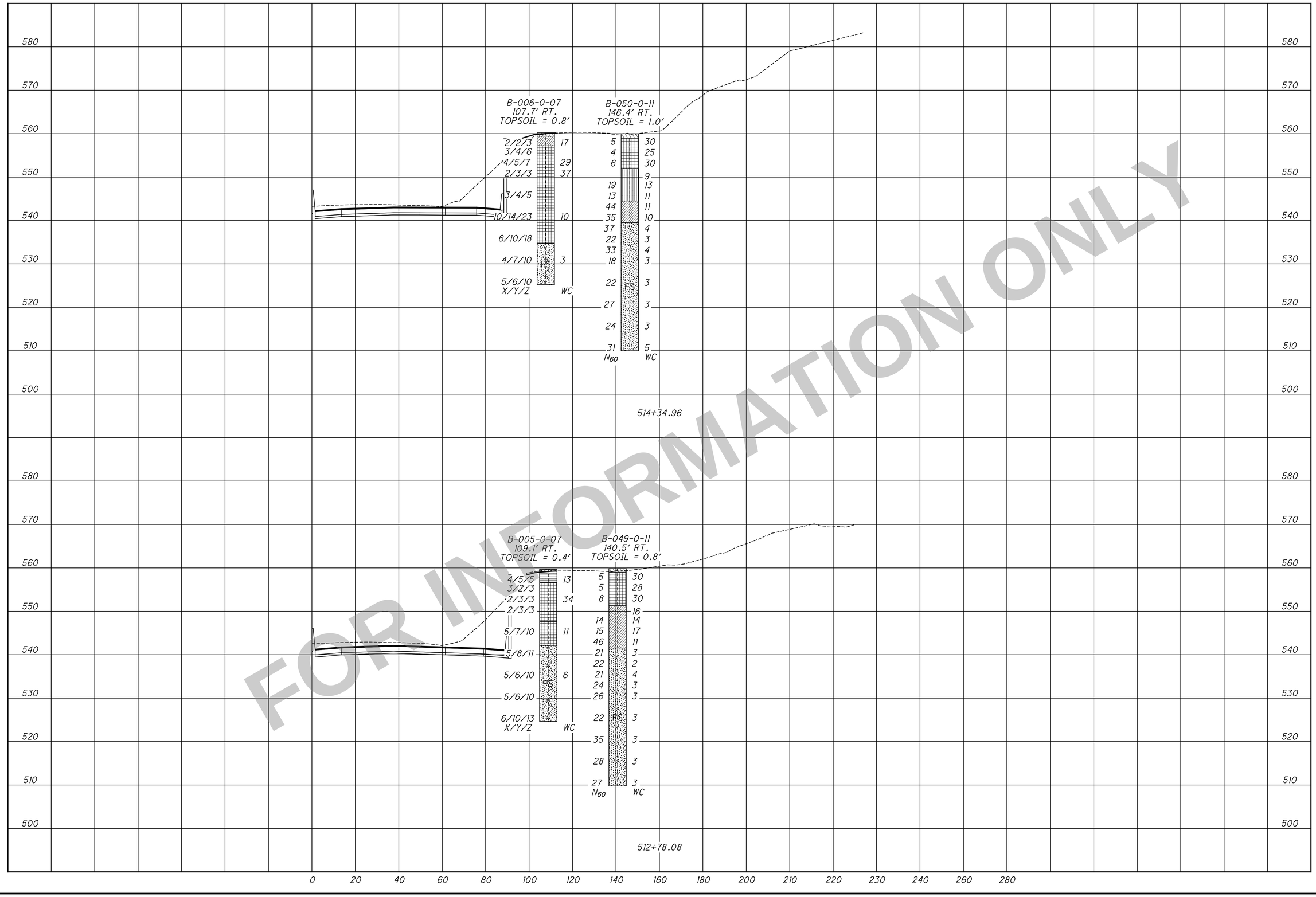
DRAWN RRM
CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
WALL V CROSS SECTIONS
STA. 510+00.03 & STA. 511+35.69

HAM-75-7.85

24/105

1913
2017



FOR INFORMATION ONLY

0 10 20 40
HORIZONTAL SCALE IN FEET

DRAWN RRM
CHECKED BRT

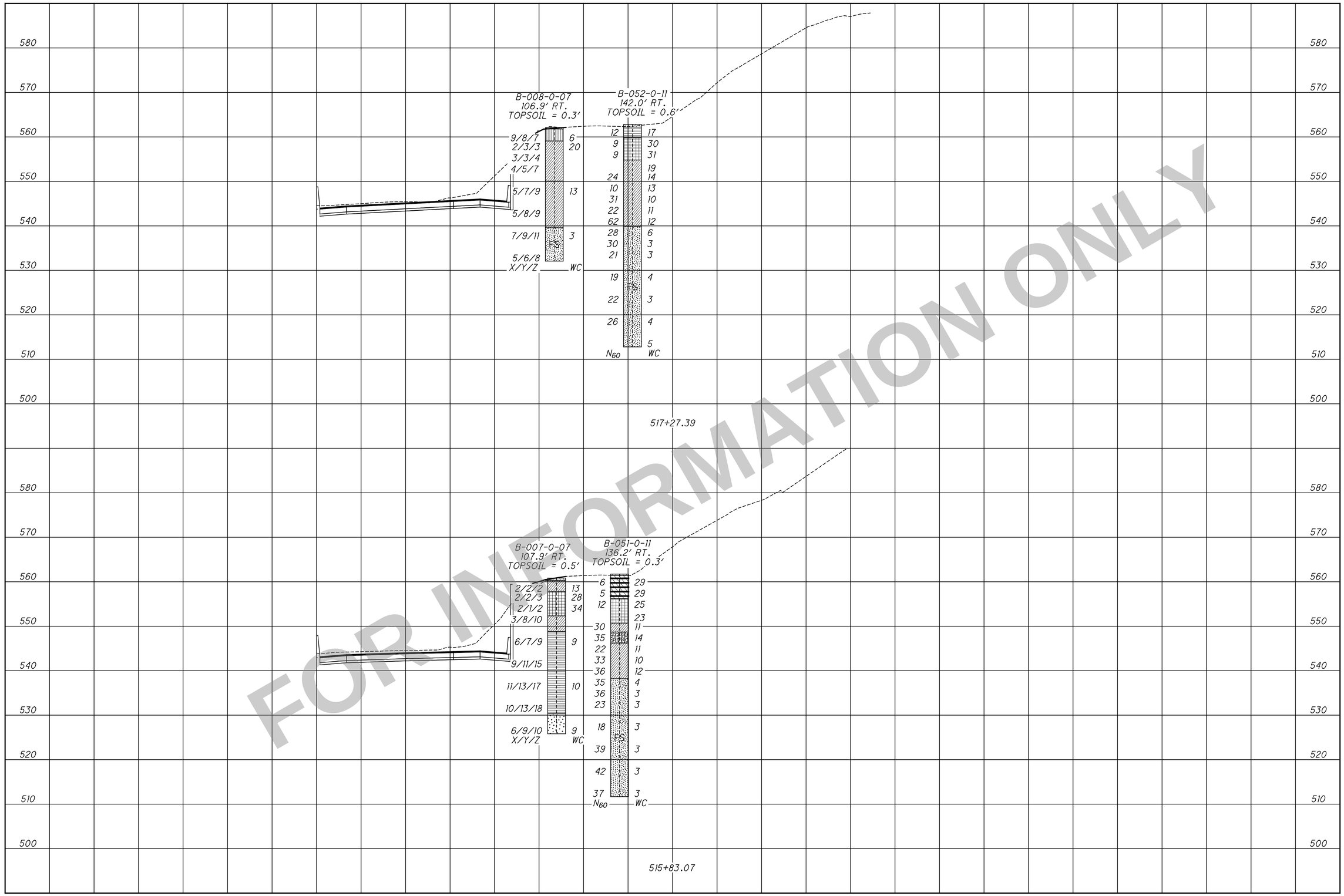
STRUCTURE FOUNDATION EXPLORATION
WALL V CROSS SECTIONS
STA. 512+78.08 & STA. 514+34.96

HAM-75-7.85

25/105

1914
2017

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0 10 20 40
HORIZONTAL SCALE IN FEET

DRAWN RRM
CHECKED BRT

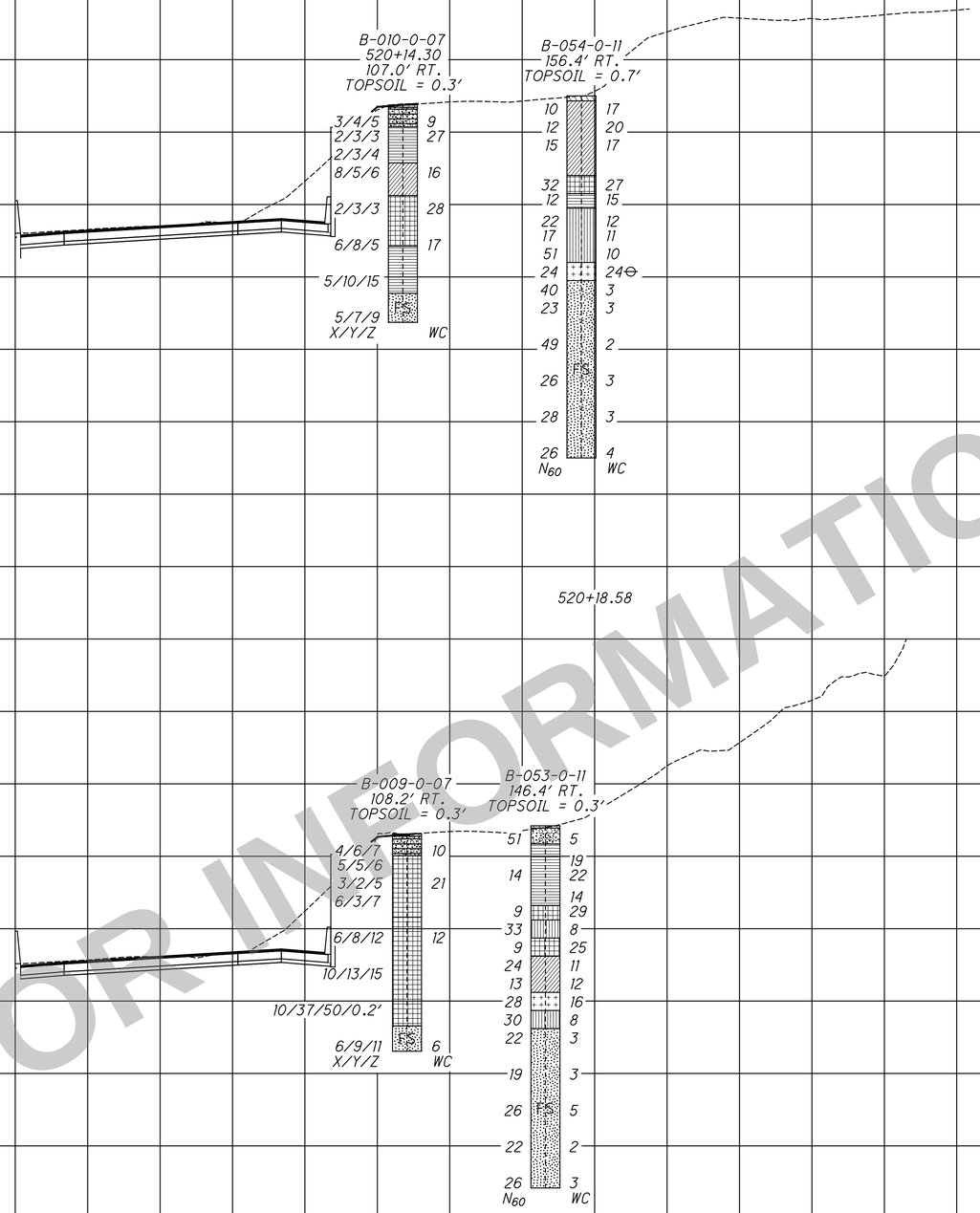
STRUCTURE FOUNDATION EXPLORATION
WALL V CROSS SECTIONS
STA. 515+83.07 & STA. 517+27.39

HAM-75-7.85

26 / 105

1915
2017

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HORIZONTAL SCALE IN FEET
0 10 20 40

DRAWN RRM
CHECKED BRT

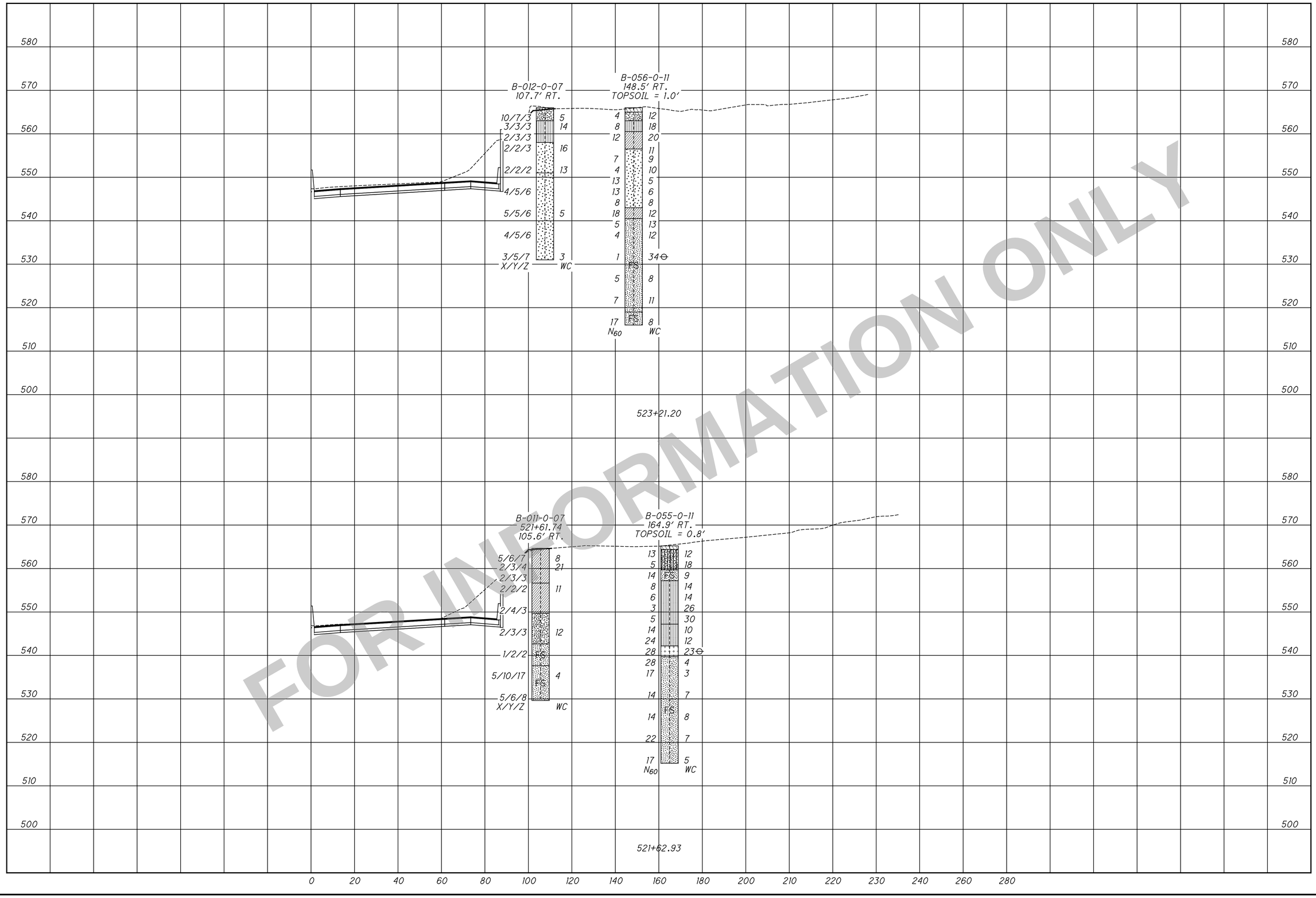
STRUCTURE FOUNDATION EXPLORATION
WALL V CROSS SECTIONS
STA. 518+75.50 & STA. 520+18.58

HAM-75-7.85

27/105

1916
2017

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0 10 20 40
HORIZONTAL
SCALE IN FEET

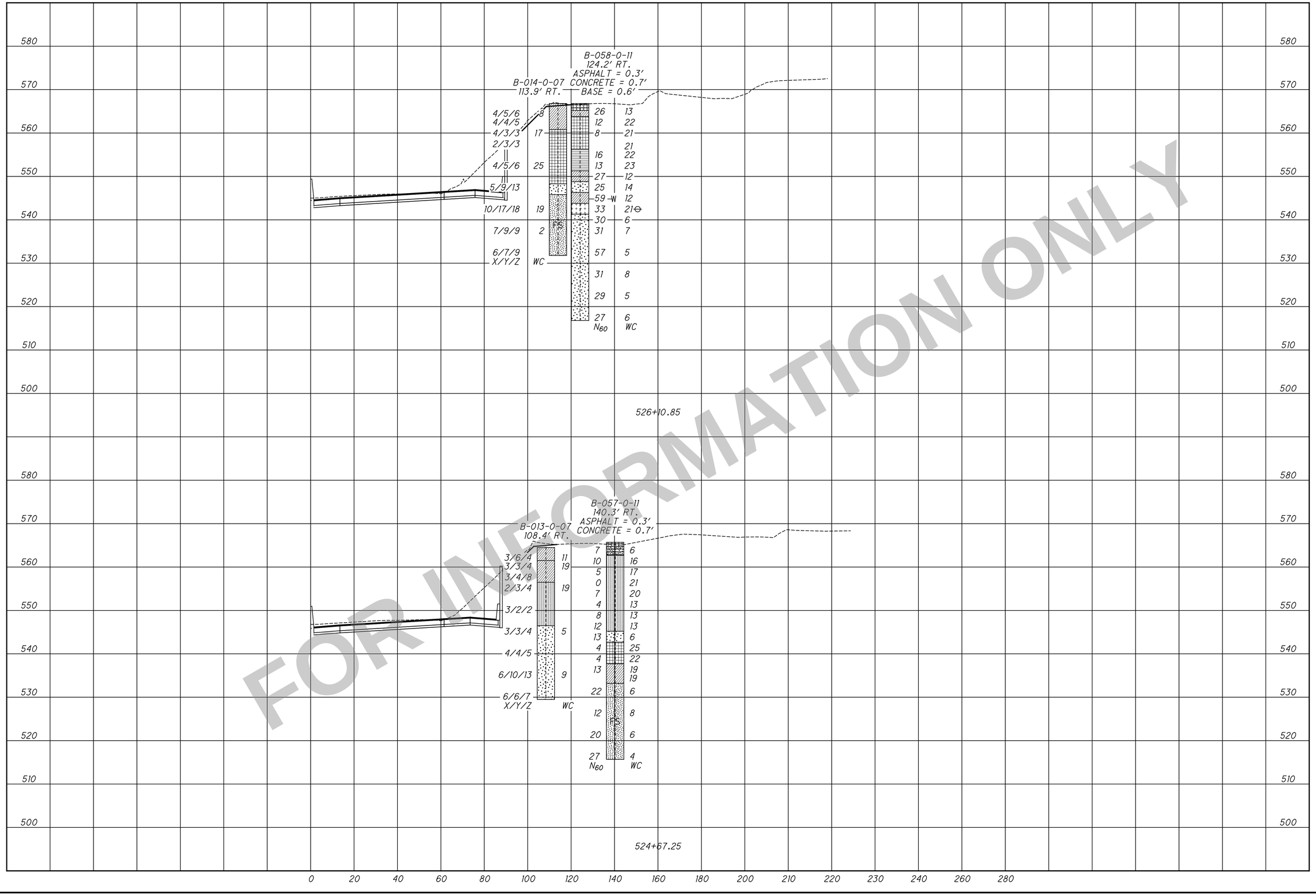
DRAWN RRM
CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
WALL V CROSS SECTIONS
STA. 521+62.93 & STA. 523+21.20

HAM-75-7.85

28/105

1917
2017



FOR INFORMATION ONLY

0 10 20 40 HORIZONTAL SCALE IN FEET

DRAWN RRM CHECKED BRT

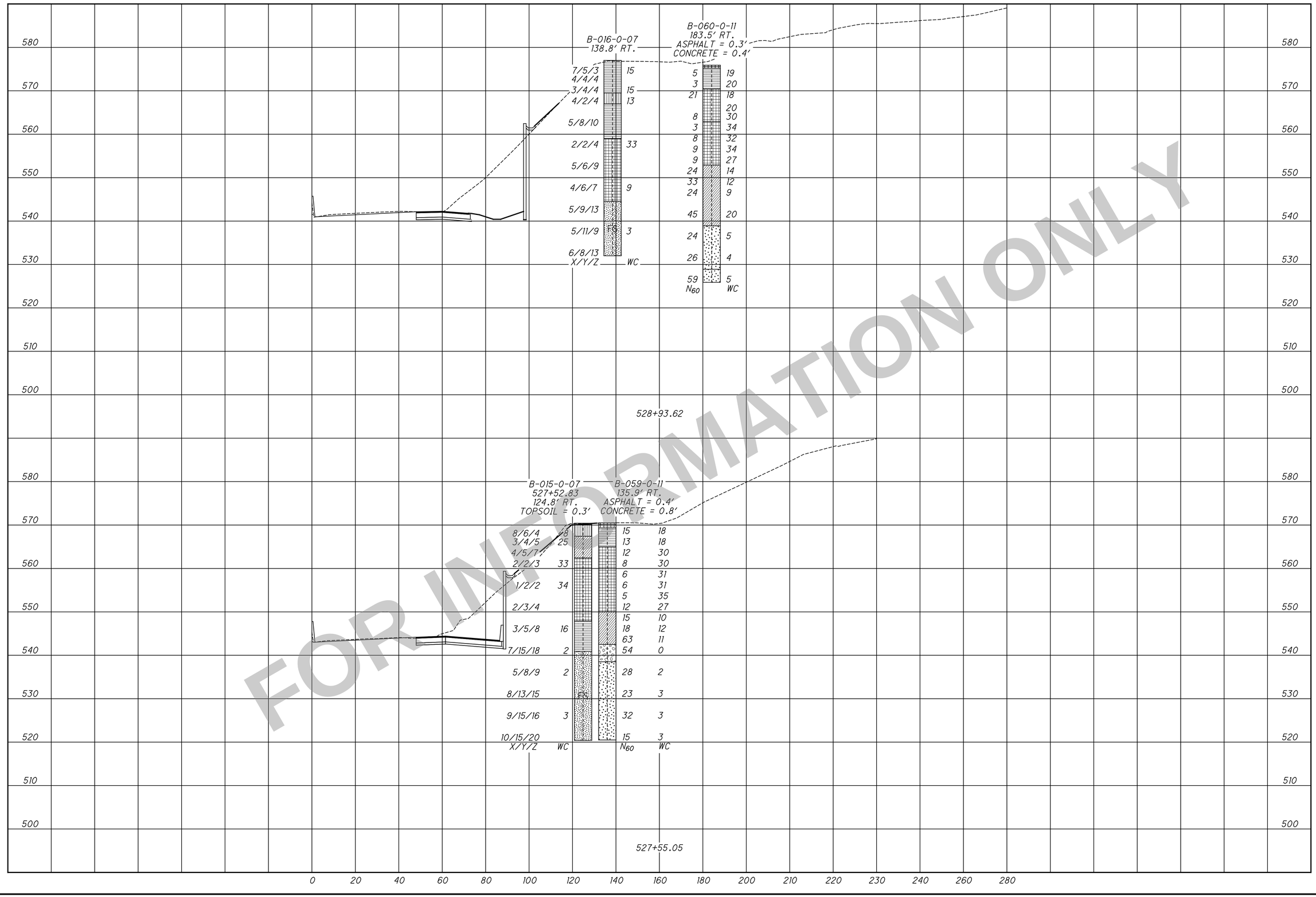
STRUCTURE FOUNDATION EXPLORATION
WALL V CROSS SECTIONS
STA. 524+67.25 & STA. 526+10.85

HAM-75-7.85

29/105

1918 2017

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FOR INFORMATION ONLY

0 10 20 40
HORIZONTAL
SCALE IN FEET

DRAWN RRM
CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
WALL V CROSS SECTIONS
STA. 527+55.05 & STA. 528+93.62

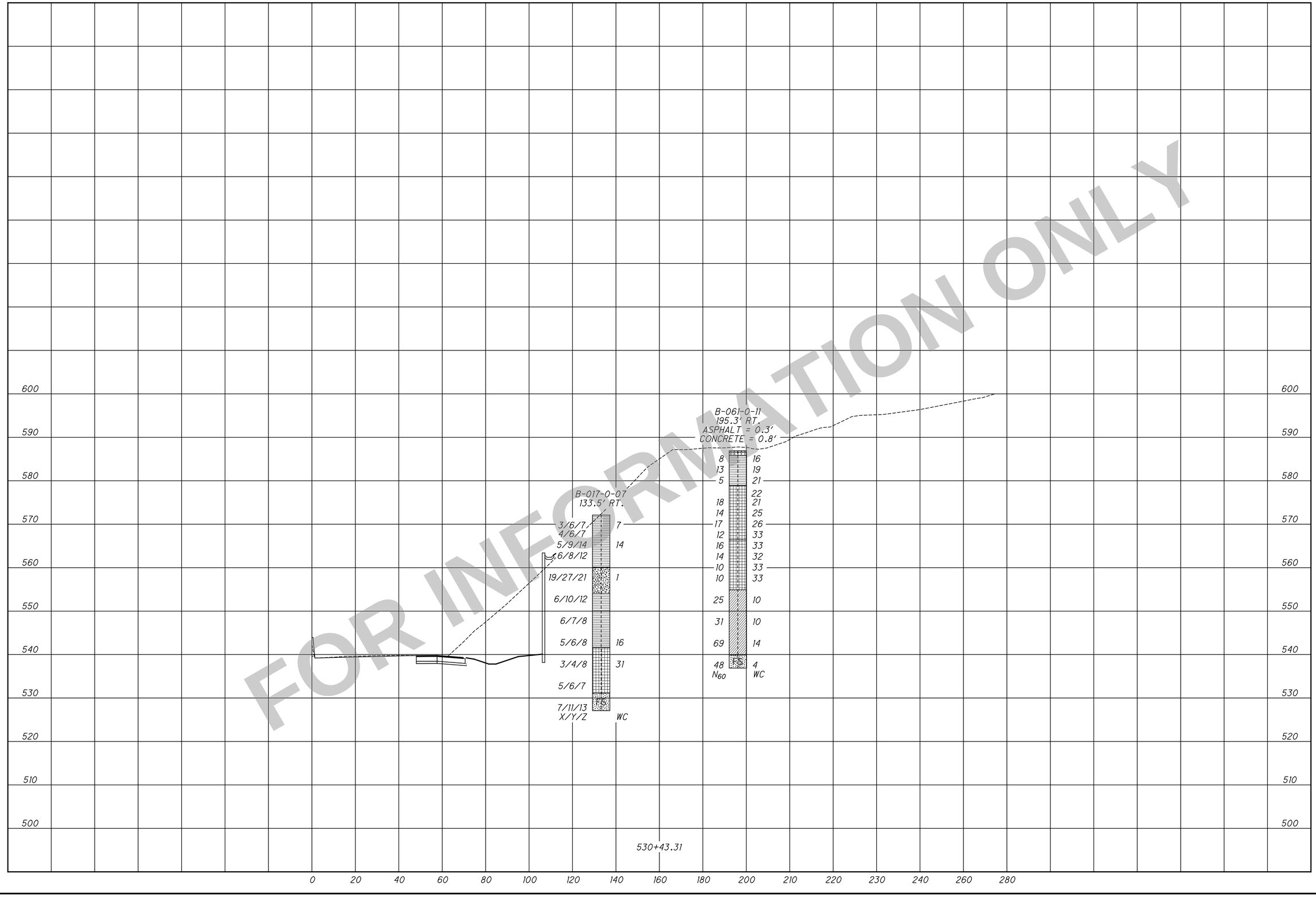
HAM-75-7.85

30/105

1919
2017

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0 10 20 40
HORIZONTAL SCALE IN FEET

DRAWN RRM
CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
WALL V CROSS SECTION
STA. 530+43.31

HAM-75-7.85

31 / 105

1920
2017

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 447+36.53 / 57.0' Rt	EXPLORATION ID B-012-0-11
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / A.D.	HAMMER: CME AUTOMATIC	ALIGNMENT: PROPOSED CL I-75	
PID: 77889 BR ID: NA	DRILLING METHOD: 4.25" - CFA	CALIBRATION DATE: 5/6/11	ELEVATION: 547.6 (MSL) EOB: 29.0 ft.	PAGE 1 OF 1
START: 1/23/12 END: 1/23/12	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG : 39.182443791 ° N / 84.484274455 ° W	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.5' - ASPHALT (6.0")	547.1																	
1.0' - AGGREGATE BASE (12.0")	546.1																	
VERY STIFF TO HARD, BROWN **SANDY SILT**, LITTLE CLAY, TRACE FINE GRAVEL, DAMP.		1																
		2	6 9 9	23	39	SS-1	4.00	9	10	29	37	15	18	13	5	9	A-4a (3)	
		3																
		4	10 8 10	23	56	SS-2	4.50	-	-	-	-	-	-	-	-	9	A-4a (V)	
	543.1																	
LOOSE, BROWN **COARSE AND FINE SAND**, TRACE SILT, TRACE CLAY, DRY.		5	13 3 3	8	67	SS-3	-	-	-	-	-	-	-	-	-	3	A-3a (V)	
	541.6	6																
DENSE TO VERY DENSE, BROWN **COARSE AND FINE SAND**, TRACE SILT, TRACE CLAY, TRACE TO LITTLE FINE GRAVEL, DRY TO MOIST.		7	12 13 14	35	67	SS-4	-	0	6	83	8	3	NP	NP	NP	3	A-3a (0)	
		8	11 15 22	48	61	SS-5	-	-	-	-	-	-	-	-	-	3	A-3a (V)	
		9																
		10	8 14 18	41	61	SS-6	-	-	-	-	-	-	-	-	-	3	A-3a (V)	
		11																
		12																
		13																
		14	12 18 22	51	61	SS-7	-	-	-	-	-	-	-	-	-	8	A-3a (V)	
	530.6	15																
HARD, GRAY **SANDY SILT**, LITTLE FINE GRAVEL, LITTLE CLAY, DAMP.		16																
		17																
		18																
		19	10 16 18	44	56	SS-8	-	19	9	30	31	11	16	13	3	12	A-4a (1)	
-COBBLES PRESENT @ 20.0'		20																
	525.6	21																
HARD, GRAY **SILT AND CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DRY.		22																
		23																
		24	5 15 20	45	56	SS-9	4.5+	-	-	-	-	-	-	-	-	8	A-6a (V)	
	521.1	25																
VERY DENSE, GRAY **COARSE AND FINE SAND**, LITTLE FINE GRAVEL, DAMP.		26																
		27																
		28																
	518.6	EOB 29	11 50/0"	-	67	SS-10	-	-	-	-	-	-	-	-	-	7	A-3a (V)	

FOR INFORMATION ONLY

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 17.4'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 100 LBS BENTONITE CHIPS AND SOIL CUTTINGS

STRUCTURE FOUNDATION EXPLORATION
WALLS H, I, J, K, S, U, V, Y, Z

DRAWN RRM CHECKED BRT

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 448+23.81 / 96.7' Rt	EXPLORATION ID B-014-0-11
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / A.D.	HAMMER: CME AUTOMATIC	ALIGNMENT: PROPOSED CL I-75	
PID: 77889 BR ID: NA	DRILLING METHOD: 4.5" SFA	CALIBRATION DATE: 5/6/11	ELEVATION: 548.2 (MSL) EOB: 15.0 ft.	PAGE 1 OF 1
START: 11/18/11 END: 11/18/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG : 39.18262825 ° N / 84.48402906 ° W	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
1.0' - GRAVEL (12.0")	548.2 / 547.2																	
LOOSE, BROWN **COARSE AND FINE SAND**, TRACE CLAY, TRACE SILT, TRACE FINE GRAVEL, MOIST TO WET.		1	7 7 8	19	72	SS-1	-	-	-	-	-	-	-	-	-	10	A-3a (V)	
		2																
		3																
		4	6 7 4	14	72	SS-2	-	2	13	67	8	10	NP	NP	NP	14	A-3a (0)	
		5																
		6																
		7	5 5 6	14	67	SS-3	-	-	-	-	-	-	-	-	-	18	A-3a (V)	
	539.7	8																
HARD, BROWN **SILT AND CLAY**, SOME COARSE TO FINE SAND, DAMP.		9	5 10 13	30	61	SS-4	4.5+	0	12	23	35	30	26	15	11	13	A-6a (6)	
	537.2	10																
VERY DENSE, BROWN **GRAVEL WITH SAND AND SILT**, MOIST.		11																
		12	12 14 30	57	67	SS-5	-	-	-	-	-	-	-	-	-	18	A-2-4 (V)	
	535.2	13																
DENSE, BROWN **GRAVEL AND SAND**, TRACE SILT, MOIST.		14	9 12 18	39	56	SS-6	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	
	533.2	15 EOB																

FOR INFORMATION ONLY

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 100 LBS BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85 | DRILLING FIRM / OPERATOR: RII / T.F. | DRILL RIG: CME-750X (SN 310218) | STATION / OFFSET: 449+93.73 / 76.2' Lt | EXPLORATION ID: B-015-0-11

TYPE: RETAINING WALL | SAMPLING FIRM / LOGGER: RII / S.M. | HAMMER: CME AUTOMATIC | ALIGNMENT: PROPOSED CL I-75 | PAGE: 1 OF 1

PID: 77889 BR ID: NA | DRILLING METHOD: 4.25" HSA | CALIBRATION DATE: 5/6/11 | ELEVATION: 545.1 (MSL) EOB: 50.0 ft.

START: 10/7/11 END: 10/7/11 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 77.1 | LAT / LONG : 39.183244191 ° N / 84.484352815 ° W

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.6' - TOPSOIL (7.0")	545.1																	
FILL: STIFF TO VERY STIFF, BROWNISH GRAY CHANGING TO BROWN **SANDY SILT**, SOME CLAY, TRACE FINE GRAVEL, DAMP TO MOIST.	544.5		2 2 2	5	67	SS-1	2.00	-	-	-	-	-	-	-	-	16	A-4a (V)	
			3 3 5	10	67	SS-2	1.50	3	13	43	27	14	NP	NP	NP	17	A-4a (1)	
			3 4 5	12	56	SS-3	3.75	-	-	-	-	-	-	-	-	21	A-4a (V)	
			3 5 6	14	67	SS-4	2.00	-	-	-	-	-	-	-	-	16	A-4a (V)	
			4 4 5	12	67	SS-5	2.00	-	-	-	-	-	-	-	-	15	A-4a (V)	
	532.1																	
MEDIUM STIFF TO VERY STIFF, DARK GRAY TO BROWNISH GRAY **SANDY SILT**, LITTLE TO SOME CLAY, TRACE FINE GRAVEL, DAMP TO MOIST. -TRACE ROOT FIBERS PRESENT IN SS-6			3 5 3	10	44	SS-6	2.00	2	4	23	42	29	25	15	10	22	A-4a (7)	
-ORGANIC ODOR PRESENT IN SS-7			3 3 2	6	33	SS-7	1.00	-	-	-	-	-	-	-	-	23	A-4a (V)	
-CONSOLIDATION TEST PERFORMED @ 20.3'					42	ST-8	1.25	7	6	31	37	19	24	15	9	15	A-4a (4)	
			4 8 13	27	100	SS-9	3.75	-	-	-	-	-	-	-	-	12	A-4a (V)	
	522.1																	
DENSE TO VERY DENSE, GRAY **GRAVEL WITH SAND AND SILT**, LITTLE CLAY, DAMP.			13 14 15	37	0	SS-10	-	-	-	-	-	-	-	-	-	-		
			24	-	100	3S-10A	-	-	-	-	-	-	-	-	-	9	A-2-4 (V)	
-COBBLES PRESENT THROUGHOUT			8 50/0"	-	67	SS-11	-	-	-	-	-	-	-	-	-	10	A-2-4 (V)	
			18 19 23	54	89	SS-12	-	-	-	-	-	-	-	-	-	8	A-2-4 (V)	
-COBBLES PRESENT THROUGHOUT	513.1																	
MEDIUM DENSE TO DENSE, BROWN **FINE SAND**, LITTLE COARSE SAND, TRACE SILT, TRACE CLAY, TRACE FINE GRAVEL, DRY TO WET.			7 13 13	33	67	SS-13	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
			3 7 13	26	72	SS-14	-	2	16	74	6	2	NP	NP	NP	3	A-3 (0)	
-COBBLES PRESENT THROUGHOUT		W																
			3 4 7	14	67	SS-15	-	-	-	-	-	-	-	-	-	21	A-3 (V)	
	495.1	EOB	3 5 10	19	56	SS-16	-	-	-	-	-	-	-	-	-	21	A-3 (V)	

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 42.0'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: TREMIED 188 LBS CEMENT / 25 LBS BENTONITE POWDER / 40 GAL WATER

FOR INFORMATION ONLY

STRUCTURE FOUNDATION EXPLORATION
WALLS H, I, J, K, S, U, V, Y, Z

DRAWN RRM CHECKED BRT

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PROJECT: HAM-75-7.85
TYPE: RETAINING WALL
PID: 77889 BR ID: NA
START: 11/29/11 END: 11/29/11

DRILLING FIRM / OPERATOR: RII / T.F.
SAMPLING FIRM / LOGGER: RII / S.M.
DRILLING METHOD: 4.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: CME-750X (SN 310218)
HAMMER: CME AUTOMATIC
CALIBRATION DATE: 5/6/11
ENERGY RATIO (%): 77.1

STATION / OFFSET: 451+00.66 / 80.1' Lt
ALIGNMENT: PROPOSED CL I-75
ELEVATION: 543.1 (MSL) EOB: 50.0 ft.
LAT / LONG : 39.18351819 ° N / 84.484216773 ° W

EXPLORATION ID
B-016-0-11

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.5' - Topsoil (6.0")	542.6																	
POSSIBLE FILL: MEDIUM STIFF, BROWN **SILTY CLAY**, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.			WOH 1 1	3	67	SS-1	0.75	-	-	-	-	-	-	-	-	16	A-6b (V)	
			1 1 3	5	78	SS-2	1.00	6	6	21	35	32	32	16	16	17	A-6b (9)	
	537.6																	
POSSIBLE FILL: STIFF TO HARD, BROWN TO BROWNISH GRAY **SILTY CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.			3 6 7	17	78	SS-3	2.00	-	-	-	-	-	-	-	-	17	A-6b (V)	
			6 6 9	19	100	SS-4	2.00	-	-	-	-	-	-	-	-	17	A-6b (V)	
			5 9 11	26	89	SS-5	4.5+	8	6	10	35	41	40	19	21	17	A-6b (12)	
			5 6 9	19	89	SS-6	3.50	-	-	-	-	-	-	-	-	17	A-6b (V)	
	525.1		6 9 13	28	78	SS-7	2.00	-	-	-	-	-	-	-	-	18	A-6b (V)	
VERY STIFF, BROWNISH GRAY **CLAY**, AND FINE TO COARSE SAND, TRACE FINE GRAVEL, DAMP.			5 5 8	17	78	SS-8	3.00	6	39	16	12	27	62	25	37	22	A-7-6 (6)	
	520.1		5 5 14	24	89	SS-9	3.50	-	-	-	-	-	-	-	-	17	A-7-6 (V)	
DENSE TO VERY DENSE, GRAY TO BROWN **GRAVEL WITH SAND AND SILT**, TRACE CLAY, DAMP TO MOIST.			6 11 15	33	83	SS-10	-	-	-	-	-	-	-	-	-	10	A-2-4 (V)	
			22 35 42	99	89	SS-11	-	-	-	-	-	-	-	-	-	11	A-2-4 (V)	
			13 13 19	41	89	SS-12	-	-	-	-	-	-	-	-	-	9	A-2-4 (V)	
	511.1																	
MEDIUM DENSE TO DENSE, BROWN **FINE SAND**, SOME COARSE SAND, TRACE SILT, TRACE FINE GRAVEL, TRACE CLAY, DRY TO WET.			11 10 14	31	56	SS-13	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
		▼																
			4 9 12	27	61	SS-14	-	3	29	60	5	3	NP	NP	NP	3	A-3 (0)	
F S		W																
			6 9 15	31	56	SS-15	-	-	-	-	-	-	-	-	-	17	A-3 (V)	
			5 11 15	33	56	SS-16	-	-	-	-	-	-	-	-	-	32	A-3 (V)	
	493.1	EOB																

NOTES: GROUNDWATER ENCOUNTERED INITIALLY @ 43.0' AND AT COMPLETION @ 37.0' (IN AUGER STEMS); CAVE-IN DEPTH @ 28.8'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

FOR INFORMATION ONLY

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 454+71.82 / 47.0' Lt	EXPLORATION ID B-017-0-11
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / S.M.	HAMMER: CME AUTOMATIC	ALIGNMENT: PROPOSED CL I-75	
PID: 77889 BR ID: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 535.6 (MSL) EOB: 50.0 ft.	PAGE 1 OF 1
START: 11/2/11 END: 11/2/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG : 39.184419052 ° N / 84.483606946 ° W	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
1.0' - ASPHALT (12.0")	534.6																	
0.5' - CONCRETE (6.0")	534.1																	
FILL: HARD, BROWN **SILT**, SOME COARSE TO FINE SAND, LITTLE CLAY, MOIST.	532.6	2	5 4 5	12	44	SS-1	4.5+	-	-	-	-	-	-	-	-	14	A-4b (V)	
FILL: VERY STIFF, BROWN **SANDY SILT**, LITTLE CLAY, TRACE TO LITTLE FINE GRAVEL, MOIST.		4	6 4 7	14	50	SS-2	2.50	0	4	31	46	19	23	14	9	16	A-4a (6)	
		7	6 9 9	23	72	SS-3	3.00	-	-	-	-	-	-	-	-	16	A-4a (V)	
-CONSOLIDATION TEST PERFORMED @ 10.0'	525.1	10			46	ST-4	-	11	7	29	39	14	24	15	9	15	A-4a (4)	
FILL: STIFF TO VERY STIFF, BROWN AND GRAY **SILTY CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.		12	3 4 5	12	56	SS-5	2.00	-	-	-	-	-	-	-	-	20	A-6b (V)	
		14	6 5 7	15	78	SS-6	2.00	-	-	-	-	-	-	-	-	17	A-6b (V)	
		17	7 9 10	24	83	SS-7	3.00	3	4	15	44	34	34	17	17	17	A-6b (11)	
		19	4 5 8	17	78	SS-8	2.75	-	-	-	-	-	-	-	-	17	A-6b (V)	
	512.6	22	8 10 11	27	89	SS-9	3.50	-	-	-	-	-	-	-	-	19	A-6b (V)	
FILL: VERY STIFF, BROWN AND GRAY **SILT AND CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP. -TRACE CONCRETE FRAGMENTS PRESENT IN SS-10	510.1	24	13 30 19	63	39	SS-10	3.50	-	-	-	-	-	-	-	-	15	A-6a (V)	
FILL: VERY DENSE, DARK GRAY **GRAVEL AND SAND**, LITTLE SILT, MOIST. -TRACE ASPHALT AND CONCRETE FRAGMENTS PRESENT IN SS-11	507.6	27	17 22 33	71	33	SS-11	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	
MEDIUM DENSE, BROWN **GRAVEL WITH SAND, SILT, AND CLAY**, MOIST.		29	6 6 5	14	78	SS-12	-	-	-	-	-	-	-	-	-	11	A-2-6 (V)	
-COBBLES PRESENT THROUGHOUT	503.6																	
MEDIUM DENSE, BROWN **GRAVEL AND SAND**, LITTLE SILT, MOIST.		34	4 8 10	23	22	SS-13	-	-	-	-	-	-	-	-	-	7	A-1-b (V)	
-COBBLES PRESENT THROUGHOUT	498.6																	
VERY STIFF, BROWN **SILT AND CLAY**, LITTLE COARSE TO FINE SAND, MOIST.		39	4 5 7	15	100	SS-14	3.75	-	-	-	-	-	-	-	-	18	A-6a (V)	
-COBBLES PRESENT THROUGHOUT	493.6																	
MEDIUM DSTIFF TO STIFF, GRAYISH BROWN **SANDY SILT**, LITTLE CLAY, TRACE FINE GRAVEL, MOIST.		44	4 5 6	14	89	SS-15	1.50	10	11	34	30	15	22	16	6	18	A-4a (2)	
-COBBLES PRESENT THROUGHOUT																		
	485.6	49	4 5 5	13	100	SS-16	1.25	-	-	-	-	-	-	-	-	20	A-4a (V)	
		EOB 50																

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 32.6'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 100 LBS BENTONITE CHIPS AND SOIL CUTTINGS

FOR INFORMATION ONLY

STRUCTURE FOUNDATION EXPLORATION
WALLS H, I, J, K, S, U, V, Y, Z

DRAWN RRM
CHECKED BRT

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PROJECT: HAM-75-7.85 | DRILLING FIRM / OPERATOR: RII / T.F. | DRILL RIG: CME-750X (SN 310218) | STATION / OFFSET: 456+14.66 / 48.3' Lt | EXPLORATION ID: B-018-0-11
TYPE: RETAINING WALL | SAMPLING FIRM / LOGGER: RII / S.M. | HAMMER: CME AUTOMATIC | ALIGNMENT: PROPOSED CL I-75
PID: 77889 BR ID: NA | DRILLING METHOD: 4.25" HSA | CALIBRATION DATE: 5/6/11 | ELEVATION: 549.8 (MSL) EOB: 50.0 ft. | PAGE: 1 OF 1
START: 11/2/11 END: 11/2/11 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 77.1 | LAT / LONG : 39.184784282 ° N / 84.48343121 ° W

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
1.0' - ASPHALT (12.0")	549.8																	
0.5' - CONCRETE (6.0")	548.8																	
FILL: MEDIUM DENSE, LIGHT BROWN **GRAVEL AND SAND**, LITTLE SILT, DAMP.	548.3		7 6 5	14	22	SS-1	-	-	-	-	-	-	-	-	-	4	A-1-b (V)	
FILL: STIFF, BROWN **SILT AND CLAY**, SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, MOIST.	546.8		1 3 3	8	44	SS-2	1.50	11	6	17	40	26	31	16	15	19	A-6a (8)	
FILL: STIFF, BROWN TO BROWNISH GRAY **SANDY SILT**, LITTLE CLAY, TRACE FINE GRAVEL, MOIST.	544.3		3 3 7	13	100	SS-3	1.50	-	-	-	-	-	-	-	-	16	A-4a (V)	
					33	ST-4	-	6	5	36	35	18	22	14	8	16	A-4a (4)	
FILL: STIFF TO VERY STIFF, BLUISH GRAY AND BROWN **SILT AND CLAY**, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.	539.3		8 8 10	23	56	SS-5	1.75	-	-	-	-	-	-	-	-	19	A-6a (V)	
			5 7 5	15	78	SS-6	2.50	-	-	-	-	-	-	-	-	20	A-6a (V)	
			5 6 7	17	78	SS-7	2.25	-	-	-	-	-	-	-	-	24	A-6a (V)	
FILL: DENSE TO VERY DENSE, BROWN **COARSE AND FINE SAND**, LITTLE SILT, TRACE CLAY, MOIST.	531.8		8 13 21	44	83	SS-8	-	0	11	60	19	10	NP	NP	NP	11	A-3a (0)	
			12 21 32	68	78	SS-9	-	-	-	-	-	-	-	-	-	11	A-3a (V)	
STIFF TO VERY STIFF, BROWN **SILTY CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.	526.8		12 5 6	14	67	SS-10	2.00	1	6	14	44	35	37	17	20	19	A-6b (12)	
-COBBLES PRESENT THROUGHOUT			5 8 11	24	72	SS-11	4.00	-	-	-	-	-	-	-	-	21	A-6b (V)	
MEDIUM DENSE, BROWN **GRAVEL AND SAND**, LITTLE SILT, DAMP.	521.8		9 7 7	18	67	SS-12	-	-	-	-	-	-	-	-	-	5	A-1-b (V)	
MEDIUM STIFF TO STIFF, MOTTLED ORANGISH BROWN AND REDDISH BROWN **SILTY CLAY**, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.	517.8		5 3 3	8	44	SS-13	2.00	-	-	-	-	-	-	-	-	22	A-6b (V)	
-CU TRIAXIAL TEST PERFORMED @ 36.8'					80	ST-14	-	1	3	22	39	35	31	14	17	17	A-6b (11)	
			3 3 5	10	83	SS-15	1.75	-	-	-	-	-	-	-	-	18	A-6b (V)	
			4 4 5	12	89	SS-16	1.00	2	7	25	29	37	37	15	22	23	A-6b (11)	
	499.8	EOB	4 3 3	8	100	SS-17	1.00	-	-	-	-	-	-	-	-	22	A-6b (V)	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 28.2'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 100 LBS BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 457+34.72 / 49.5' Lt	EXPLORATION ID B-019-0-11
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / S.M.	HAMMER: CME AUTOMATIC	ALIGNMENT: PROPOSED CL I-75	
PID: 77889 BR ID: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 547.2 (MSL) EOB: 50.0 ft.	PAGE 1 OF 1
START: 11/1/11 END: 11/1/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG : 39.185093098 ° N / 84.483290141 ° W	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
1.0' - ASPHALT (12.0")	546.2																	
0.5' - CONCRETE (6.0")	545.7																	
FILL: VERY LOOSE, BROWNISH GRAY **GRAVEL AND SAND**, LITTLE SILT, DAMP (AGGREGATE BASE). -PVC DRAIN TILE PRESENT IN SS-1	544.2		5 1 2	4	33	SS-1	-	-	-	-	-	-	-	-	-	4	A-1-b (V)	
FILL: VERY STIFF, BROWN AND GRAY **SILT**, SOME FINE SAND, LITTLE CLAY, TRACE FINE GRAVEL, DAMP.	541.7		11 4 4	10	6	SS-2	2.50	8	0	29	50	13	21	16	5	15	A-4b (6)	
FILL: VERY STIFF, MOTTLED BROWN AND GRAY **SILTY CLAY**, SOME FINE SAND, TRACE FINE GRAVEL, MOIST.	536.7		4 5 6	14	67	SS-3	2.25	-	-	-	-	-	-	-	-	23	A-6b (V)	
					60	ST-4	-	1	0	20	36	43	32	14	18	17	A-6b (11)	
FILL: VERY STIFF, MOTTLED BROWN AND GRAY **SILT AND CLAY**, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.	534.2		5 5 7	15	67	SS-5	2.50	-	-	-	-	-	-	-	-	13	A-6a (V)	
FILL: DENSE TO VERY DENSE, BROWN **SANDY SILT**, LITTLE CLAY, TRACE FINE GRAVEL, DAMP.	529.2		5 10 17	35	78	SS-6	-	-	-	-	-	-	-	-	-	10	A-4a (V)	
			12 21 27	62	67	SS-7	-	-	-	-	-	-	-	-	-	7	A-4a (V)	
FILL: STIFF, BROWN **SANDY SILT**, TRACE CLAY, DAMP.	526.7		3 5 5	13	78	SS-8	1.50	0	20	38	25	17	18	13	5	11	A-4a (1)	
FILL: VERY STIFF TO HARD, BROWN **SILT AND CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.	521.7		3 5 9	18	89	SS-9	3.50	-	-	-	-	-	-	-	-	19	A-6a (V)	
			3 5 5	13	78	SS-10	4.25	-	-	-	-	-	-	-	-	19	A-6a (V)	
LOOSE, BROWN **GRAVEL WITH SAND, SILT, AND CLAY**, DAMP.	519.2		3 3 4	9	33	SS-11	-	-	-	-	-	-	-	-	-	8	A-2-6 (V)	
MEDIUM DENSE, BROWN **COARSE AND FINE SAND**, SOME FINE GRAVEL, TRACE SILT, DRY.	515.2		3 5 4	12	44	SS-12	-	-	-	-	-	-	-	-	-	3	A-3a (V)	
STIFF, BROWN **SILTY CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.	510.2		4 3 4	9	78	SS-13	1.25	-	-	-	-	-	-	-	-	30	A-6b (V)	
SOFT, BROWN **SILT AND CLAY**, AND COARSE TO FINE SAND, MOIST.	505.2		WOH WOH 3	4	89	SS-14	0.50	0	15	41	16	28	27	13	14	18	A-6a (3)	
LOOSE, BROWN **GRAVEL WITH SAND, SILT, AND CLAY**, WET.	497.2		1 2 3	6	78	SS-15	-	-	-	-	-	-	-	-	-	21	A-2-6 (V)	
		EOB	1 2 2	5	89	SS-16	-	-	-	-	-	-	-	-	-	21	A-2-6 (V)	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 24.0'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 100 LBS BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85 | DRILLING FIRM / OPERATOR: RII / T.F. | DRILL RIG: CME-750X (SN 310218) | STATION / OFFSET: 458+91.16 / 48.3' Lt | EXPLORATION ID: B-020-0-11
TYPE: RETAINING WALL | SAMPLING FIRM / LOGGER: RII / S.M. | HAMMER: CME AUTOMATIC | ALIGNMENT: PROPOSED CL I-75
PID: 77889 BR ID: NA | DRILLING METHOD: 4.25" HSA | CALIBRATION DATE: 5/6/11 | ELEVATION: 545.1 (MSL) EOB: 50.0 ft.
START: 11/1/11 END: 11/1/11 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 77.1 | LAT / LONG : 39.18549519 ° N / 84.483105261 ° W
PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
1.0' - ASPHALT (12.0")	544.1																	
0.5' - CONCRETE (6.0")	543.6																	
0.5' - AGGREGATE BASE (6.0")	543.1		6 5 5	13	33	SS-1	-	-	-	-	-	-	-	-	-	3	A-1-b (V)	
FILL: MEDIUM DENSE, BROWNISH GRAY **GRAVEL WITH SAND, SILT, AND CLAY**, MOIST.	541.6						-	-	-	-	-	-	-	-	-	11	A-2-6 (V)	
FILL: STIFF, MOTTLED BROWN AND GRAY **SILTY CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.	539.6		4 2 4	8	56	SS-2	1.50	10	4	13	33	40	36	17	19	21	A-6b (11)	
FILL: MEDIUM DENSE, GRAY **SILTY SAND**, LITTLE CLAY, MOIST.	536.6		5 14 13	35	78	SS-3	-	-	-	-	-	-	-	-	-	10	A-4a (V)	
FILL: MEDIUM DENSE TO DENSE, GRAY TO BROWN **COARSE AND FINE SAND**, LITTLE SILT, LITTLE CLAY, TRACE FINE GRAVEL, MOIST.	527.1				0	ST-4	-	-	-	-	-	-	-	-	-	-		
			9 15 21	46	67	SS-4A	-	0	9	64	15	12	NP	NP	NP	8	A-3a (0)	
			5 11 11	28	78	SS-5	-	-	-	-	-	-	-	-	-	6	A-3a (V)	
			4 4 5	12	78	SS-6	-	-	-	-	-	-	-	-	-	8	A-3a (V)	
			4 5 5	13	89	SS-7	-	-	-	-	-	-	-	-	-	6	A-3a (V)	
FILL: VERY STIFF, GRAY **SILTY CLAY**, TRACE COARSE TO FINE SAND, MOIST.	524.6		4 5 6	14	78	SS-8	3.50	0	1	5	58	36	37	17	20	17	A-6b (12)	
FILL: MEDIUM DENSE, GRAY AND BROWN **SANDY SILT**, SOME CLAY, TRACE FINE GRAVEL, DAMP.	522.1		5 7 8	19	78	SS-9	-	-	-	-	-	-	-	-	-	11	A-4a (V)	
MEDIUM DENSE, BROWN **COARSE AND FINE SAND**, LITTLE SILT, LITTLE CLAY, TRACE FINE GRAVEL, DAMP.	513.1		9 5 7	15	67	SS-10	-	-	-	-	-	-	-	-	-	5	A-3a (V)	
			7 7 7	18	78	SS-11	-	-	-	-	-	-	-	-	-	4	A-3a (V)	
			3 5 9	18	78	SS-12	-	-	-	-	-	-	-	-	-	4	A-3a (V)	
VERY DENSE, BROWN **GRAVEL AND SAND**, LITTLE SILT, DAMP.	508.1		9 30 15	58	72	SS-13	-	26	29	34	11	0	NP	NP	NP	3	A-1-b (0)	
MEDIUM DENSE, BROWN **COARSE AND FINE SAND**, TRACE TO LITTLE FINE GRAVEL, LITTLE SILT, DAMP TO MOIST.			4 5 7	15	78	SS-14	-	-	-	-	-	-	-	-	-	6	A-3a (V)	
			41 20 12	41	78	SS-15	-	-	-	-	-	-	-	-	-	9	A-3a (V)	
		W																
	495.1	EOB	21 19 18	48	72	SS-16	-	-	-	-	-	-	-	-	-	8	A-3a (V)	

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 46.0'; CAVE-IN DEPTH @ 25.5'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 100 LBS BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 461+59.39 / 75.0' Lt	EXPLORATION ID B-022-0-11
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / S.M.	HAMMER: CME AUTOMATIC	ALIGNMENT: PROPOSED CL I-75	
PID: 77889 BR ID: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 545.1 (MSL) EOB: 25.0 ft.	PAGE 1 OF 1
START: 10/6/11 END: 10/6/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG : 39.186215212 ° N / 84.482904319 ° W	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.5' - TOPSOIL (6.0")	544.6																	
FILL: MEDIUM DENSE TO DENSE, BROWN **COARSE AND FINE SAND**, LITTLE SILT, LITTLE CLAY, TRACE FINE GRAVEL, DAMP TO MOIST.		1	4 5 6	14	56	SS-1	-	-	-	-	-	-	-	-	-	6	A-3a (V)	
		2																
		3																
		4	5 10 8	23	56	SS-2	-	4	13	54	15	14	NP	NP	NP	12	A-3a (0)	
		5																
		6																
		7	6 12 14	33	78	SS-3	-	-	-	-	-	-	-	-	-	12	A-3a (V)	
	537.1	8																
MEDIUM STIFF, BROWN **SILTY CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.		9	2 1 4	6	67	SS-4	1.00	2	5	15	39	39	40	20	20	30	A-6b (12)	
	534.6	10																
MEDIUM DENSE, BROWN **FINE SAND**, TRACE SILT, MOIST.		11																
F.S.		12	5 8 9	22	56	SS-5	-	-	-	-	-	-	-	-	-	11	A-3 (V)	
	532.1	13																
STIFF, BROWN **SILTY CLAY**, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, WET.		14	4 5 6	14	67	SS-6	1.25	2	4	19	40	35	37	19	18	37	A-6b (11)	
	529.6	15																
MEDIUM DENSE, BROWN **COARSE AND FINE SAND**, LITTLE SILT, TRACE FINE GRAVEL, WET.		16																
-TRACE COBBLES PRESENT IN SS-7		17	6 9 7	21	78	SS-7	-	-	-	-	-	-	-	-	-	17	A-3a (V)	
	527.1	18																
MEDIUM DENSE, BROWN **FINE SAND**, TRACE FINE GRAVEL, TRACE SILT, WET.		19	4 5 7	15	78	SS-8	-	-	-	-	-	-	-	-	-	20	A-3 (V)	
		20																
		21																
F.S.		22	6 5 9	18	100	SS-9	-	-	-	-	-	-	-	-	-	16	A-3 (V)	
		23																
		24	4 9 8	22	100	SS-10	-	-	-	-	-	-	-	-	-	22	A-3 (V)	
	520.1	25	EOB															

W

NOTES: GROUNDWATER ENCOUNTERED INITIALLY @ 18.5' AND AT COMPLETION @ 22.5'; CAVE-IN DEPTH @ 13.2'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 462+77.77 / 85.2' Lt	EXPLORATION ID B-023-0-11
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / S.M.	HAMMER: CME AUTOMATIC	ALIGNMENT: PROPOSED CL I-75	
PID: 77889 BR ID: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 546.9 (MSL) EOB: 25.0 ft.	PAGE 1 OF 1
START: 10/6/11 END: 10/6/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG : 39.186533569 ° N / 84.482812865 ° W	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.6' - TOPSOIL (7.0")	546.3																	
FILL: VERY STIFF TO HARD, DARK AND LIGHT BROWN **SILT AND CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST. -TRACE ROOT FIBERS PRESENT IN SS-1		1	2 2 3	6	56	SS-1	3.25	-	-	-	-	-	-	-	-	18	A-6a (V)	
		2																
		3	2 7 6	17	44	SS-2	4.50	0	6	28	40	26	29	16	13	11	A-6a (7)	
		4																
		5																
		6	4 8 10	23	22	SS-3	4.50	-	-	-	-	-	-	-	-	14	A-6a (V)	
		7																
		8																
		9	7 8 10	23	56	SS-4	4.50	-	-	-	-	-	-	-	-	8	A-6a (V)	
	536.4	10																
LOOSE TO MEDIUM DENSE, BROWN **SANDY SILT**, TRACE CLAY, TRACE FINE GRAVEL, MOIST.		11																
		12	8 10 10	26	78	SS-5	-	-	-	-	-	-	-	-	-	14	A-4a (V)	
		13																
		14	2 3 3	8	56	SS-6	-	8	10	39	34	9	NP	NP	NP	18	A-4a (2)	
		15																
		16																
		17	4 3 4	9	44	SS-7	-	-	-	-	-	-	-	-	-	16	A-4a (V)	
	528.9	18																
LOOSE, DARK BROWN **COARSE AND FINE SAND**, SOME SILT, TRACE CLAY, TRACE FINE GRAVEL, WET.		19	3 2 2	5	44	SS-8	-	2	43	21	28	6	NP	NP	NP	22	A-3a (0)	
	526.4	20																
VERY DENSE, GRAY **GRAVEL AND SAND**, LITTLE SILT, TRACE CLAY, DAMP. -DROVE SPOON ON COBBLE @ 21.0'		21	50/4"	-	50	SS-9	-	-	-	-	-	-	-	-	-	5	A-1-b (V)	
	523.9	22																
HARD, BROWN **SILTY CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.		23																
		24	20 6 8	18	67	SS-10	4.50	-	-	-	-	-	-	-	-	15	A-6b (V)	
	521.9	EOB 25																

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NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 13.0'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

STRUCTURE FOUNDATION EXPLORATION
WALLS H, I, J, K, S, U, V, Y, Z

DRAWN RRM CHECKED BRT

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 466+82.88 / 103.8' Rt	EXPLORATION ID B-025-0-11
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / S.M.	HAMMER: CME AUTOMATIC	ALIGNMENT: PROPOSED CL I-75	
PID: 77889 BR ID: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 585.0 (MSL) EOB: 50.0 ft.	PAGE 1 OF 1
START: 12/1/11 END: 12/1/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG : 39.18743732 ° N / 84.481745821 ° W	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.5' - TOPSOIL (6.0")	585.0																	
	584.5																	
FILL: LOOSE, BROWN **FINE SAND**, TRACE SILT, DAMP.		1	3 4 3	9	78	SS-1	-	-	-	-	-	-	-	-	-	10	A-3 (V)	
	582.0	2																
LOOSE, BROWN **GRAVEL WITH SAND, SILT, AND CLAY**, MOIST.		3	3 4 4	10	78	SS-2	1.25	0	9	59	9	23	31	19	12	17	A-2-6 (0)	
	579.5	4																
LOOSE, BROWNISH GRAY **FINE SAND**, TRACE SILT, DAMP.		5																
	577.0	6	3 3 3	8	78	SS-3	-	-	-	-	-	-	-	-	-	10	A-3 (V)	
LOOSE, BROWN **GRAVEL WITH SAND AND SILT**, MOIST.		7																
	574.5	8																
LOOSE, BROWNISH GRAY **FINE SAND**, TRACE SILT, MOIST.		9	3 2 2	5	67	SS-4	-	-	-	-	-	-	-	-	-	18	A-2-4 (V)	
	572.0	10																
MEDIUM DENSE, BROWNISH GRAY **COARSE AND FINE SAND**, TRACE SILT, TRACE CLAY, DRY.		11	4 4 4	10	89	SS-5	-	-	-	-	-	-	-	-	-	11	A-3 (V)	
	569.5	12																
VERY STIFF, BROWNISH GRAY **SILTY CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.		13	3 4 7	14	89	SS-6	-	-	-	-	-	-	-	-	-	5	A-3a (V)	
	567.0	14																
DENSE TO VERY DENSE, BROWNISH GRAY **SILT**, TRACE TO LITTLE CLAY, TRACE FINE SAND, WET.		15	5 5 6	14	78	SS-7	3.50	-	-	-	-	-	-	-	-	20	A-6b (V)	
	562.0	16																
HARD, GRAY **SILT AND CLAY**, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.		17																
	557.0	18																
VERY STIFF, GRAY **CLAY**, SOME SILT, TRACE FINE SAND, MOIST.		19	6 9 13	28	83	SS-8	-	0	0	4	77	19	NP	NP	NP	20	A-4b (8)	
	553.0	20																
VERY STIFF, BROWNISH GRAY **SILTY CLAY**, TRACE COARSE TO FINE SAND, MOIST.		21	7 21 20	53	89	SS-9	-	0	0	10	86	4	NP	NP	NP	20	A-4b (8)	
	543.0	22																
HARD, GRAY **SILT AND CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.		23																
	535.0	24	4 12 15	35	100	SS-10	4.5+	-	-	-	-	-	-	-	-	16	A-6a (V)	
EOB		25																
		26																
		27	11 15 14	37	89	SS-11	4.5+	-	-	-	-	-	-	-	-	20	A-6a (V)	
		28																
		29			71	ST-12	2.75	0	0	1	30	69	51	23	28	23	A-7-6 (17)	
		30																
		31																
		32																
		33																
		34	5 7 13	26	100	SS-13	3.50	-	-	-	-	-	-	-	-	27	A-6b (V)	
		35																
		36																
		37																
		38																
		39	5 7 9	21	100	SS-14	2.50	0	1	2	42	55	36	18	18	27	A-6b (11)	
		40																
		41																
		42																
		43																
		44	5 10 15	32	100	SS-15	4.25	-	-	-	-	-	-	-	-	11	A-6a (V)	
		45																
		46																
		47																
		48																
		49	6 10 14	31	100	SS-16	4.50	-	-	-	-	-	-	-	-	10	A-6a (V)	
		50																

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 30.0'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

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1932 2017	43/105	HAM-75-7.85	STRUCTURE FOUNDATION EXPLORATION WALLS H, I, J, K, S, U, V, Y, Z
			DRAWN RRM CHECKED BRT

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PROJECT: HAM-75-7.85
TYPE: RETAINING WALL
PID: 77889 BR ID: NA
START: 12/1/11 END: 12/1/11

DRILLING FIRM / OPERATOR: RII / T.F.
SAMPLING FIRM / LOGGER: RII / S.M.
DRILLING METHOD: 4.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: CME-750X (SN 310218)
HAMMER: CME AUTOMATIC
CALIBRATION DATE: 5/6/11
ENERGY RATIO (%): 77.1

STATION / OFFSET: 468+23.96 / 93.6' Rt
ALIGNMENT: PROPOSED CL I-75
ELEVATION: 581.2 (MSL) EOB: 50.0 ft.
LAT / LONG : 39.187815061 ° N / 84.481630021 ° W

EXPLORATION ID B-027-0-11
PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.6' - TOPSOIL (7.0")	581.2																	
VERY LOOSE, BROWN **GRAVEL WITH SAND AND SILT**, DAMP.	580.6		WOH 1 1	3	67	SS-1	-	-	-	-	-	-	-	-	-	12	A-2-4 (V)	
LOOSE, BROWN **COARSE AND FINE SAND**, TRACE SILT, TRACE CLAY, DRY TO DAMP.	578.2		3 3 2	6	78	SS-2	-	0	14	75	9	2	NP	NP	NP	9	A-3a (0)	
			3 2 3	6	83	SS-3	-	-	-	-	-	-	-	-	-	6	A-3a (V)	
			2 2 3	6	78	SS-4	-	-	-	-	-	-	-	-	-	5	A-3a (V)	
			4 3 2	6	89	SS-5	-	-	-	-	-	-	-	-	-	7	A-3a (V)	
MEDIUM DENSE, BROWNISH GRAY **SILT**, LITTLE CLAY, TRACE COARSE TO FINE SAND, DAMP.	568.2		4 9 10	24	94	SS-6	-	0	1	7	79	13	NP	NP	NP	8	A-4b (8)	
HARD, LIGHT BROWN **SILT AND CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.	565.7		5 9 9	23	100	SS-7	4.50	-	-	-	-	-	-	-	-	14	A-6a (V)	
VERY STIFF, BROWN **CLAY**, LITTLE SILT, TRACE COARSE TO FINE SAND, DAMP TO MOIST.	563.2		4 5 5	13	78	SS-8	2.50	-	-	-	-	-	-	-	-	28	A-7-6 (V)	
			6 8 8	21	72	SS-9	2.75	-	-	-	-	-	-	-	-	23	A-7-6 (V)	
VERY STIFF TO HARD, BROWN CHANGING TO BROWNISH GRAY **CLAY**, SOME SILT, TRACE COARSE TO FINE SAND, DAMP TO MOIST.	558.2				75	ST-10	4.50	0	1	1	31	67	51	24	27	24	A-7-6 (17)	
			8 10 12	28	94	SS-11	4.5+	-	-	-	-	-	-	-	-	21	A-7-6 (V)	
			8 8 15	30	100	SS-12	4.5+	-	-	-	-	-	-	-	-	21	A-7-6 (V)	
			9 8 9	22	100	SS-13	4.00	-	-	-	-	-	-	-	-	24	A-7-6 (V)	
			4 6 7	17	89	SS-14	4.00	-	-	-	-	-	-	-	-	23	A-7-6 (V)	
STIFF, GRAY **CLAY**, SOME SILT, TRACE FINE SAND, MOIST.	539.2		3 4 6	13	100	SS-15	1.25	0	0	1	30	69	46	20	26	28	A-7-6 (16)	
	531.2	EOB	4 4 7	14	89	SS-16	1.25	-	-	-	-	-	-	-	-	26	A-7-6 (V)	

FOR INFORMATION ONLY

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

STRUCTURE FOUNDATION EXPLORATION
WALLS H, I, J, K, S, U, V, Y, Z

DRAWN RRM
CHECKED BRT

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 469+18.29 / 117.6' Rt	EXPLORATION ID B-029-0-11
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / S.M.	HAMMER: CME AUTOMATIC	ALIGNMENT: PROPOSED CL I-75	
PID: 77889 BR ID: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 592.8 (MSL) EOB: 50.0 ft.	PAGE 1 OF 1
START: 12/2/11 END: 12/2/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG : 39.18804209 ° N / 84.481448909 ° W	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.4' - TOPSOIL (5.0")	592.8																	
VERY LOOSE TO LOOSE, BROWN **FINE SAND**, SOME COARSE SAND, TRACE SILT, TRACE CLAY, DAMP.	592.4		1 1 1	3	100	SS-1	-	-	-	-	-	-	-	-	-	6	A-3 (V)	
			2 1 1	3	100	SS-2	-	0	34	58	6	2	NP	NP	NP	7	A-3 (0)	
			2 2 2	5	100	SS-3	-	-	-	-	-	-	-	-	-	6	A-3 (V)	
STIFF, BROWNISH GRAY **CLAY**, AND SILT, LITTLE COARSE TO FINE SAND, MOIST.	584.8		3 3 4	9	78	SS-4	1.25	-	-	-	-	-	-	-	-	23	A-7-6 (V)	
VERY STIFF TO HARD, BROWN TO BROWNISH GRAY **CLAY**, AND SILT, LITTLE COARSE TO FINE SAND, DAMP TO MOIST.	582.3		3 6 9	19	78	SS-5	3.00	-	-	-	-	-	-	-	-	20	A-7-6 (V)	
-qu @ 14.8' = 2.96 tsf	576.8				75	ST-6	2.75	0	3	9	37	51	53	22	31	22	A-7-6 (19)	
HARD, BROWNISH GRAY **SILT AND CLAY**, TRACE COARSE TO FINE SAND, MOIST.	572.3		5 11 14	32	89	SS-7	4.5+	-	-	-	-	-	-	-	-	17	A-6a (V)	
			9 13 23	46	100	SS-8	4.5+	-	-	-	-	-	-	-	-	18	A-6a (V)	
DENSE TO VERY DENSE, BROWNISH GRAY CHANGING TO GRAY **SILT**, LITTLE CLAY, TRACE FINE SAND, MOIST TO WET.			7 14 22	46	94	SS-9	-	-	-	-	-	-	-	-	-	18	A-4b (V)	
			9 13 28	53	78	SS-10	-	0	0	10	71	19	NP	NP	NP	21	A-4b (8)	
			11 14 31	58	100	SS-11	-	-	-	-	-	-	-	-	-	24	A-4b (V)	
HARD, GRAY **SILT AND CLAY**, LITTLE FINE SAND, TRACE FINE GRAVEL, MOIST.	564.8		15 20 15	45	100	SS-12	4.5+	-	-	-	-	-	-	-	-	20	A-6a (V)	
VERY STIFF, GRAY **SILTY CLAY**, MOIST.	560.8		4 7 10	22	100	SS-13	3.00	-	-	-	-	-	-	-	-	22	A-6b (V)	
			6 8 9	22	100	SS-14	3.50	0	0	0	47	53	40	19	21	24	A-6b (12)	
			4 5 6	14	100	SS-15	3.25	-	-	-	-	-	-	-	-	20	A-6b (V)	
			3 6 5	14	100	SS-16	2.50	-	-	-	-	-	-	-	-	27	A-6b (V)	
	542.8	EOB																

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 15.7'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / J.K.	DRILL RIG: MOBILE B-53 (SN 624400)	STATION / OFFSET: 476+33.38 / 44.1' LT	EXPLORATION ID B-031-1-13
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: RII / T.F.	HAMMER: AUTOMATIC	ALIGNMENT: PR CL I-75	
PID: 77889 BR ID: N/A	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 4/26/13	ELEVATION: 559.9 (MSL) EOB: 70.0 ft.	PAGE 1 OF 2
START: 7/7/14 END: 7/8/14	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.7	LAT / LONG: 39.190083513, 84.480507003	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.3' - ASPHALT (4.0")	559.9																	
1.0' - CONCRETE (12.0")	559.6																	
0.4' - AGGREGATE BASE (4.0")	558.6																	
FILL: VERY STIFF, BROWN AND BLACK **SANDY SILT**, SOME FINE GRAVEL, LITTLE CLAY, DAMP TO MOIST.	558.2		4 4 3	9	44	SS-1	2.50	-	-	-	-	-	-	-	-	11	A-4a (V)	
-ROOT FIBERS AND PLASTIC FRAGMENTS PRESENT IN SS-1			7 8 8	21	56	SS-2	3.00	23	19	21	20	17	24	14	10	11	A-4a (0)	
-CINDERS AND BRICK FRAGMENTS PRESENT THROUGHOUT			8 6 7	17	67	SS-3	-	-	-	-	-	-	-	-	-	16	A-4a (V)	
-PETROLEUM ODOR PRESENT IN SS-4	549.4		10 8 8	21	61	SS-4	-	-	-	-	-	-	-	-	-	20	A-4a (V)	
FILL: STIFF TO VERY STIFF, BROWN **SILTY CLAY**, AND COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.			2 3 5	10	83	SS-5	2.00	-	-	-	-	-	-	-	-	18	A-6b (V)	
-BRICK AND ROCK FRAGMENTS PRESENT IN SS-6			10 10 9	25	94	SS-6	3.00	-	-	-	-	-	-	-	-	14	A-6b (V)	
			3 5 6	14	100	SS-7	2.50	2	4	32	28	34	32	14	18	16	A-6b (9)	
-ORGANICS PRESENT IN SS-8			3 3 4	9	100	SS-8	1.75	-	-	-	-	-	-	-	-	20	A-6b (V)	
-ATTEMPTED SHELBY TUBE @ 20.0'. TUBE CRUSHED @ 21.0'.					0	ST-9	-	-	-	-	-	-	-	-	-	-		
			15 15 8	30	44	SS-10	2.00	-	-	-	-	-	-	-	-	26	A-6b (V)	
	534.4		4 5 5	13	67	SS-11	1.75	0	7	47	18	28	28	12	16	19	A-6b (4)	
VERY STIFF, BROWN **SILT AND CLAY**, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.	531.9		6 9 9	23	78	SS-12	3.00	-	-	-	-	-	-	-	-	13	A-6a (V)	
LOOSE TO MEDIUM DENSE, BROWN **FINE SAND**, LITTLE COARSE SAND, TRACE SILT, TRACE CLAY, DAMP TO MOIST.			6 7 7	18	50	SS-13	-	-	-	-	-	-	-	-	-	11	A-3 (V)	
F S	526.9		2 2 2	5	78	SS-14	-	0	14	76	6	4	NP	NP	NP	7	A-3 (0)	
MEDIUM DENSE, BROWN **COARSE AND FINE SAND**, LITTLE SILT, TRACE CLAY, TRACE FINE GRAVEL, DAMP TO MOIST.			3 5 9	18	100	SS-15	-	-	-	-	-	-	-	-	-	5	A-3a (V)	
			6 9 9	23	94	SS-16	-	-	-	-	-	-	-	-	-	4	A-3a (V)	
			6 8 7	19	100	SS-17	-	1	19	56	17	7	NP	NP	NP	8	A-3a (0)	
			9 10 11	27	100	SS-18	-	-	-	-	-	-	-	-	-	4	A-3a (V)	
	512.9																	
VERY DENSE, BROWN **GRAVEL**, SOME COARSE TO FINE SAND, TRACE SILT, TRACE CLAY, DAMP.			33 29 36	84	83	SS-19	-	60	21	13	4	2	NP	NP	NP	3	A-1-a (0)	

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PID: 77889	BR ID: N/A	PROJECT: HAM-75-7.85	STATION / OFFSET: 476+33.38 / 44.1 LT	START: 7/7/14	END: 7/8/14	PG 2 OF 2	B-031-1-13

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
VERY DENSE, BROWN **GRAVEL**, SOME COARSE TO FINE SAND, TRACE SILT, TRACE CLAY, DAMP. *(continued)*	508.9																	
MEDIUM DENSE, BROWN **GRAVEL AND SAND**, TRACE CLAY, TRACE SILT, MOIST TO WET.	507.9	52																
		53																
		54	7 8 12	26	94	SS-20	-	-	-	-	-	-	-	-	-	17	A-1-b (V)	
		W 55																
		56																
		57																
		58																
		59	5 8 13	27	61	SS-21	-	-	-	-	-	-	-	-	-	17	A-1-b (V)	
		W 60																
		61																
		62																
		63																
-HEAVING SANDS ENCOUNTERED @ 65.0'		64	2 4 9	17	89	SS-22	-	6	62	26	2	4	NP	NP	NP	20	A-1-b (0)	
-INTRODUCED MUD @ 65.0'		65																
		66																
		67																
		68																
		69	4 5 4	12	83	SS-23	-	-	-	-	-	-	-	-	-	20	A-1-b (V)	
	489.9	EOB 70																

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NOTES: SEEPAGE ENCOUNTERED @ 55.0'; GROUNDWATER INITIALLY ENCOUNTERED @ 60.0'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 100 LBS BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / J.K.	DRILL RIG: MOBILE B-53 (SN 624400)	STATION / OFFSET: 477+95.88 / 42.6' LT	EXPLORATION ID B-031-2-13
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: RII / T.F.	HAMMER: AUTOMATIC	ALIGNMENT: PR CL I-75	
PID: 77889 BR ID: N/A	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 4/26/13	ELEVATION: 554.6 (MSL) EOB: 70.0 ft.	PAGE 1 OF 2
START: 7/9/14 END: 7/9/14	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.7	LAT / LONG: 39.190446873, 84.480154307	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.5' - ASPHALT (6.0")	554.1																	
0.8'- CONCRETE (9.0")	553.3																	
0.3' - AGGREGATE BASE (4.0")	553.0																	
FILL: STIFF TO VERY STIFF, DARK BROWN TO BROWN AND GRAY **SANDY SILT**, SOME CLAY, TRACE FINE GRAVEL, DAMP TO MOIST.		1	6 5 4	12	50	SS-1	2.00	-	-	-	-	-	-	-	-	17	A-4a (V)	
		2																
		3	3 7 15	28	61	SS-2	3.75	10	15	26	27	22	22	14	8	10	A-4a (3)	
-CINDERS, BRICK AND ROCK FRAGMENTS PRESENT THROUGHOUT		4																
		5																
		6																
		7																
		8																
		9	5 7 10	22	83	SS-3	3.00	-	-	-	-	-	-	-	-	14	A-4a (V)	
		10																
		11																
	542.6	12																
FILL: MEDIUM DENSE TO DENSE, BROWN **SANDY SILT**, SOME CLAY, TRACE FINE GRAVEL, DAMP TO MOIST.		13																
		14	8 16 13	38	33	SS-4	-	-	-	-	-	-	-	-	-	10	A-4a (V)	
		15																
		16																
		17																
		18																
		19	6 10 11	27	44	SS-5	-	-	-	-	-	-	-	-	-	9	A-4a (V)	
		20																
		21																
		22	4 8 4	16	39	SS-6	-	2	22	37	18	21	21	13	8	9	A-4a (1)	
		23																
		24	6 7 8	19	83	SS-7	-	-	-	-	-	-	-	-	-	12	A-4a (V)	
	529.1	25																
STIFF, BROWN **CLAY**, SOME COARSE TO FINE SAND, SOME FINE GRAVEL, LITTLE SILT, DAMP TO MOIST.		26																
		27	2 4 7	14	94	SS-8	2.00	-	-	-	-	-	-	-	-	21	A-7-6 (V)	
		28																
		29			100	ST-9	2.00	29	24	11	11	25	48	17	31	16	A-7-6 (4)	
	524.1	30																
LOOSE, BROWN **COARSE AND FINE SAND**, TRACE SILT, TRACE FINE GRAVEL, DAMP.		31																
		32	8 3 3	8	44	SS-10	-	-	-	-	-	-	-	-	-	8	A-3a (V)	
	521.6	33																
MEDIUM DENSE, BROWN **GRAVEL WITH SAND, SILT, AND CLAY**, MOIST. -LIMESTONE FRAGMENTS PRESENT IN SS-11		34	6 9 6	19	72	SS-11	-	-	-	-	-	-	-	-	-	11	A-2-6 (V)	
	519.1	35																
MEDIUM DENSE TO DENSE, BROWN **FINE SAND**, SOME COARSE SAND, TRACE FINE GRAVEL, TRACE SILT, TRACE CLAY, DAMP.		36																
		37	3 4 6	13	78	SS-12	-	-	-	-	-	-	-	-	-	4	A-3 (V)	
		38																
		39	4 5 6	14	89	SS-13	-	1	22	69	5	3	NP	NP	NP	4	A-3 (0)	
		40																
		41																
		42																
		43																
		44	6 16 19	45	89	SS-14	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
		45																
		46																
	507.6	47																
LOOSE TO MEDIUM DENSE, BROWN **COARSE AND FINE SAND**, TRACE FINE GRAVEL, TRACE SILT, TRACE CLAY, WET. -INTRODUCED MUD @ 48.0'		48 W																
		49	2 2 3	6	83	SS-15	-	-	-	-	-	-	-	-	-	25	A-3a (V)	
		50																

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PID: 77889	BR ID: N/A	PROJECT: HAM-75-7.85	STATION / OFFSET: 477+95.88 / 42.6 LT	START: 7/9/14	END: 7/9/14	PG 2 OF 2	B-031-2-13

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
LOOSE TO MEDIUM DENSE, BROWN **COARSE AND FINE SAND**, TRACE FINE GRAVEL, TRACE SILT, TRACE CLAY, WET. *(continued)*	503.6	52																
		53																
		54	4 8 14	28	67	SS-16	-	-	-	-	-	-	-	-	-	19	A-3a (V)	
		55																
		56																
		57																
		58																
		59	7 9 12	27	33	SS-17	-	-	-	-	-	-	-	-	-	23	A-3a (V)	
		60																
		61																
		62																
		63																
		64	8 9 10	25	56	SS-18	-	1	46	42	5	6	NP	NP	NP	24	A-3a (0)	
		65																
		66																
		67																
		68																
		69	8 12 11	30	78	SS-19	-	-	-	-	-	-	-	-	-	23	A-3a (V)	
	484.6	EOB 70																

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NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 48.0'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 100 LBS BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / J.K.	DRILL RIG: MOBILE B-53 (SN 624400)	STATION / OFFSET: 479+44.71 / 43.2' LT	EXPLORATION ID B-031-3-13
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: RII / E.S.	HAMMER: AUTOMATIC	ALIGNMENT: PR CL I-75	
PID: 77889 BR ID: N/A	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 4/26/13	ELEVATION: 549.2 (MSL) EOB: 70.0 ft.	PAGE 1 OF 2
START: 7/14/14 END: 7/14/14	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.7	LAT / LONG: 39.190762982, 84.479805706	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.5' - ASPHALT (6.0")	548.7																	
1.0' - CONCRETE (12.0")	547.7																	
0.5' - AGGREGATE BASE (6.0")	547.2																	
FILL: STIFF TO HARD, BROWN TO GRAY **SILT AND CLAY**, SOME TO AND COARSE TO FINE SAND, TRACE TO LITTLE FINE GRAVEL, DAMP TO MOIST.			6 3 4	9	56	SS-1	1.50	-	-	-	-	-	-	-	-	15	A-6a (V)	
			2 8 11	25	78	SS-2	3.50	13	10	21	29	27	28	16	12	13	A-6a (5)	
			7 11 12	30	100	SS-3	3.00	-	-	-	-	-	-	-	-	13	A-6a (V)	
-CINDERS AND BRICK FRAGMENTS PRESENT THROUGHOUT																		
			45 15 10	32	56	SS-4	4.50	-	-	-	-	-	-	-	-	3	A-6a (V)	
-ROCK FRAGMENTS PRESENT IN SS-4																		
			7 7 10	22	106	SS-5	2.75	6	17	35	18	24	25	14	11	12	A-6a (2)	
			4 5 6	14	100	SS-6	3.75	-	-	-	-	-	-	-	-	17	A-6a (V)	
	526.2																	
LOOSE TO MEDIUM DENSE, BROWN **GRAVEL AND SAND**, TRACE TO LITTLE SILT, TRACE CLAY, DAMP.					88	ST-7	-	56	21	7	11	5	21	18	3	8	A-1-b (0)	
			2 3 3	8	78	SS-8	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	
			7 7 5	16	89	SS-9	-	-	-	-	-	-	-	-	-	7	A-1-b (V)	
			3 9 14	30	89	SS-10	-	-	-	-	-	-	-	-	-	5	A-1-b (V)	
			6 10 13	30	78	SS-11	-	25	40	21	9	5	NP	NP	NP	5	A-1-b (0)	
	513.7																	
DENSE, BROWN **GRAVEL AND SAND**, TRACE SILT, TRACE CLAY, MOIST.			10 15 18	43	89	SS-12	-	-	-	-	-	-	-	-	-	13	A-1-b (V)	
-ROCK FRAGMENTS PRESENT IN SS-13			11 19 19	49	89	SS-13	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	
	507.2																	
LOOSE TO MEDIUM DENSE, BROWN **COARSE AND FINE SAND**, TRACE FINE GRAVEL, TRACE SILT, TRACE CLAY, WET.		W	4 5 7	16	56	SS-14	-	-	-	-	-	-	-	-	-	28	A-3a (V)	
			3 3 4	9	44	SS-15	-	6	11	66	9	8	NP	NP	NP	25	A-3a (0)	

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PID: 77889	BR ID: N/A	PROJECT: HAM-75-7.85	STATION / OFFSET: 479+44.71 / 43.2 LT	START: 7/14/14	END: 7/14/14	PG 2 OF 2	B-031-3-13

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
	498.2																	
	497.2	52																
MEDIUM DENSE TO DENSE, BROWN **COARSE AND FINE SAND**, TRACE FINE GRAVEL, TRACE SILT, TRACE CLAY, MOIST TO WET.		53																
		54	11 15 17	41	89	SS-16	-	-	-	-	-	-	-	-	-	24	A-3a (V)	
		55																
		56																
		57																
		58																
		59	10 11 12	30	83	SS-17	-	10	24	51	7	8	NP	NP	NP	25	A-3a (0)	
		60																
		61																
		62																
		63																
		64	10 11 15	34	72	SS-18	-	-	-	-	-	-	-	-	-	16	A-3a (V)	
		65																
		66																
	482.2	67																
MEDIUM DENSE, BROWN **SANDY SILT**, TRACE FINE GRAVEL, TRACE CLAY, WET.		68																
		69	7 7 14	27	83	SS-19	-	-	-	-	-	-	-	-	-	23	A-4a (V)	
	479.2	EOB 70																

FOR INFORMATION ONLY

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 43.5'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 100 LBS BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 480+99.46 / 90.5' Lt	EXPLORATION ID B-032-0-11
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / S.M.	HAMMER: CME AUTOMATIC	ALIGNMENT: PROPOSED CL I-75	
PID: 77889 BR ID: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 532.7 (MSL) EOB: 50.0 ft.	PAGE 1 OF 1
START: 9/29/11 END: 9/29/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG : 39.191055614 ° N / 84.479969446 ° W	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.4' - TOPSOIL (5.0")	532.3																	
MEDIUM DENSE, BROWN **GRAVEL WITH SAND, SILT, AND CLAY**, DAMP.			3 7 5	15	78	SS-1	2.25	-	-	-	-	-	-	-	-	11	A-2-6 (V)	
-TRACE ORGANICS PRESENT IN SS-2	527.7		3 4 5	12	67	SS-2	2.00	8	28	33	14	17	33	17	16	12	A-2-6 (1)	
LOOSE, BROWN **GRAVEL**, AND COARSE TO FINE SAND, TRACE SILT, TRACE CLAY, DRY.	524.7		4 4 3	9	44	SS-3	-	-	-	-	-	-	-	-	-	2	A-1-a (V)	
MEDIUM DENSE TO VERY DENSE, BROWN **GRAVEL**, AND COARSE TO FINE SAND, TRACE SILT, TRACE CLAY, DRY.			5 9 13	28	61	SS-4	-	-	-	-	-	-	-	-	-	2	A-1-a (V)	
			11 11 13	31	78	SS-5	-	-	-	-	-	-	-	-	-	2	A-1-a (V)	
			5 8 9	22	83	SS-6	-	-	-	-	-	-	-	-	-	3	A-1-a (V)	
			8 12 10	28	78	SS-7	-	-	-	-	-	-	-	-	-	3	A-1-a (V)	
-COBBLES PRESENT THROUGHOUT			6 10 12	28	78	SS-8	-	54	30	10	5	1	NP	NP	NP	3	A-1-a (0)	
			16 21 20	53	89	SS-9	-	-	-	-	-	-	-	-	-	3	A-1-a (V)	
			8 9 8	22	83	SS-10	-	-	-	-	-	-	-	-	-	4	A-1-a (V)	
	504.7		9 9 12	27	89	SS-11	-	-	-	-	-	-	-	-	-	4	A-1-a (V)	
MEDIUM DENSE TO DENSE, BROWN **COARSE AND FINE SAND**, LITTLE SILT, TRACE CLAY, TRACE FINE GRAVEL, WET.		W	6 8 8	21	89	SS-12	-	-	-	-	-	-	-	-	-	20	A-3a (V)	
-INTRODUCED MUD @ 30.0'			2 8 12	26	100	SS-13	-	-	-	-	-	-	-	-	-	26	A-3a (V)	
			4 6 12	23	89	SS-14	-	1	4	80	12	3	NP	NP	NP	19	A-3a (0)	
-COBBLES PRESENT THROUGHOUT			4 11 13	31	100	SS-15	-	-	-	-	-	-	-	-	-	24	A-3a (V)	
	482.7	EOB	6 8 14	28	100	SS-16	-	-	-	-	-	-	-	-	-	22	A-3a (V)	

NOTES: GROUNDWATER INITIALY ENCOUNTERED @ 29.5'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85
TYPE: RETAINING WALL
PID: 77889 BR ID: NA
START: 9/28/11 END: 9/28/11

DRILLING FIRM / OPERATOR: RII / T.F.
SAMPLING FIRM / LOGGER: RII / S.M.
DRILLING METHOD: 4.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: CME-750X (SN 310218)
HAMMER: CME AUTOMATIC
CALIBRATION DATE: 5/6/11
ENERGY RATIO (%): 77.1

STATION / OFFSET: 483+15.31 / 101.2' Lt
ALIGNMENT: PROPOSED CL I-75
ELEVATION: 533.8 (MSL) EOB: 50.0 ft.
LAT / LONG : 39.191518417 ° N / 84.479485137 ° W

EXPLORATION ID
B-033-0-11

PAGE
1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.4' - TOPSOIL (5.0")	533.4																	
MEDIUM STIFF, BROWN **SILT AND CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DRY TO DAMP.	530.8		1 2 3	6	50	SS-1	1.00	-	-	-	-	-	-	-	-	17	A-6a (V)	
HARD, BROWN **CLAY**, AND COARSE TO FINE SAND, SOME SILT, TRACE FINE GRAVEL, DAMP. -COBBLES PRESENT THROUGHOUT	525.8		7 13 15	36	78	SS-2	4.50	1	28	30	13	28	41	16	25	12	A-7-6 (5)	
			17 13 7	26	67	SS-3	4.50	-	-	-	-	-	-	-	-	9	A-7-6 (V)	
LOOSE, BROWN **GRAVEL AND SAND**, TRACE SILT, TRACE CLAY, DRY.	520.8		3 3 4	9	22	SS-4	-	-	-	-	-	-	-	-	-	2	A-1-b (V)	
			4 3 5	10	56	SS-5	-	-	-	-	-	-	-	-	-	4	A-1-b (V)	
MEDIUM DENSE TO VERY DENSE, BROWN **GRAVEL AND SAND**, TRACE SILT, TRACE CLAY, DRY TO MOIST.			7 12 13	32	78	SS-6	-	-	-	-	-	-	-	-	-	2	A-1-b (V)	
			16 16 16	41	78	SS-7	-	-	-	-	-	-	-	-	-	2	A-1-b (V)	
			5 9 11	26	67	SS-8	-	28	43	21	7	1	NP	NP	NP	5	A-1-b (0)	
-COBBLES PRESENT THROUGHOUT			7 12 15	35	89	SS-9	-	-	-	-	-	-	-	-	-	3	A-1-b (V)	
			12 28 25	68	50	SS-10	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	
	505.8		16 16 19	45	78	SS-11	-	-	-	-	-	-	-	-	-	6	A-1-b (V)	
MEDIUM DENSE TO DENSE, BROWN **FINE SAND**, TRACE SILT, TRACE COARSE SAND, TRACE FINE GRAVEL, TRACE CLAY, WET. -INTRODUCED MUD @ 30.0'		W	11 9 10	24	61	SS-12	-	-	-	-	-	-	-	-	-	19	A-3 (V)	
			9 11 14	32	100	SS-13	-	1	2	87	9	1	NP	NP	NP	23	A-3 (0)	
-COBBLES PRESENT THROUGHOUT		F.S.	8 11 14	32	100	SS-14	-	-	-	-	-	-	-	-	-	28	A-3 (V)	
			11 12 11	30	100	SS-15	-	-	-	-	-	-	-	-	-	22	A-3 (V)	
	483.8	EOB	10 12 15	35	100	SS-16	-	-	-	-	-	-	-	-	-	20	A-3 (V)	

NOTES: GROUNDWATER INITIALY ENCOUNTERED @ 29.0'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85
TYPE: RETAINING WALL
PID: 77889 BR ID: NA
START: 9/28/11 END: 9/28/11

DRILLING FIRM / OPERATOR: RII / T.F.
SAMPLING FIRM / LOGGER: RII / S.M.
DRILLING METHOD: 4.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: CME-750X (SN 310218)
HAMMER: CME AUTOMATIC
CALIBRATION DATE: 5/6/11
ENERGY RATIO (%): 77.1

STATION / OFFSET: 484+36.55 / 91.3' Lt
ALIGNMENT: PROPOSED CL I-75
ELEVATION: 535.2 (MSL) EOB: 50.0 ft.
LAT / LONG : 39.191744711 ° N / 84.479169544 ° W

EXPLORATION ID
B-034-0-11
PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.6' - TOPSOIL (7.0")	534.6																	
MEDIUM STIFF, DARK BROWN **SILT AND CLAY**, SOME COARSE TO FINE SAND, MOIST. -TRACE ORGANICS PRESENT IN SS-1	532.2		1 2 2	5	33	SS-1	1.00	-	-	-	-	-	-	-	-	16	A-6a (V)	
LOOSE, BROWN **GRAVEL WITH SAND, SILT, AND CLAY**, DAMP.	529.7		1 2 4	8	33	SS-2	3.00	7	35	24	9	25	50	20	30	17	A-2-7 (4)	
MEDIUM DENSE TO VERY DENSE, BROWN **GRAVEL AND SAND**, TRACE SILT, TRACE CLAY, DRY TO DAMP.			3 5 7	15	67	SS-3	-	-	-	-	-	-	-	-	-	6	A-1-b (V)	
			6 9 9	23	67	SS-4	-	-	-	-	-	-	-	-	-	5	A-1-b (V)	
			12 9 12	27	78	SS-5	-	-	-	-	-	-	-	-	-	5	A-1-b (V)	
			14 8 12	26	78	SS-6	-	-	-	-	-	-	-	-	-	7	A-1-b (V)	
			14 12 14	33	83	SS-7	-	20	46	23	10	1	NP	NP	NP	4	A-1-b (0)	
			12 20 21	53	67	SS-8	-	-	-	-	-	-	-	-	-	4	A-1-b (V)	
			20 13 8	27	78	SS-9	-	-	-	-	-	-	-	-	-	5	A-1-b (V)	
			9 16 14	39	72	SS-10	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	
	509.7																	
VERY STIFF, BROWN **SILTY CLAY**, LITTLE COARSE TO FINE SAND, MOIST.	507.2		9 9 11	26	44	SS-11	3.50	0	2	14	42	42	32	16	16	20	A-6b (10)	
MEDIUM DENSE, GRAY **SANDY SILT**, LITTLE CLAY, TRACE FINE GRAVEL, MOIST.	503.2		3 3 12	19	50	SS-12	-	-	-	-	-	-	-	-	-	22	A-4a (V)	
MEDIUM DENSE, BROWN **FINE SAND**, LITTLE COARSE SAND, TRACE SILT, TRACE CLAY, WET. -INTRODUCED MUD @ 35.0'	498.2	W	4 7 6	17	67	SS-13	-	-	-	-	-	-	-	-	-	25	A-3 (V)	
DENSE TO VERY DENSE, BROWN **FINE SAND**, LITTLE COARSE SAND, TRACE SILT, TRACE CLAY, WET.			9 19 24	55	89	SS-14	-	-	-	-	-	-	-	-	-	22	A-3 (V)	
			12 16 19	45	67	SS-15	-	-	-	-	-	-	-	-	-	22	A-3 (V)	
	485.2	EOB	9 21 18	50	56	SS-16	-	-	-	-	-	-	-	-	-	18	A-3 (V)	

NOTES: GROUNDWATER INITIALY ENCOUNTERED @ 34.3'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: TREMIED 188 LBS CEMENT / 25 LBS BENTONITE POWDER / 40 GAL WATER

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PROJECT: HAM-75-7.85
TYPE: RETAINING WALL
PID: 77889 BR ID: NA
START: 9/28/11 END: 9/28/11

DRILLING FIRM / OPERATOR: RII / T.F.
SAMPLING FIRM / LOGGER: RII / S.M.
DRILLING METHOD: 4.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: CME-750X (SN 310218)
HAMMER: CME AUTOMATIC
CALIBRATION DATE: 5/6/11
ENERGY RATIO (%): 77.1

STATION / OFFSET: 485+91.35 / 105.8' Lt
ALIGNMENT: PROPOSED CL I-75
ELEVATION: 533.6 (MSL) EOB: 50.0 ft.
LAT / LONG : 39.192084006 ° N / 84.478836739 ° W

EXPLORATION ID B-035-0-11
PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.6' - TOPSOIL (7.0")	533.0																	
FILL: LOOSE, BROWN **GRAVEL**, AND COARSE TO FINE SAND, TRACE SILT, TRACE CLAY, DRY. -TRACE ASPHALT FRAGMENTS PRESENT IN SS-1	530.6		2 2 3	6	33	SS-1	-	-	-	-	-	-	-	-	-	8	A-1-a (V)	
MEDIUM DENSE, BROWN **GRAVEL**, AND FINE TO COARSE SAND, TRACE SILT, TRACE CLAY, DRY. -COBBLE PRESENT IN SS-2	528.1		6 12 4	21	44	SS-2	-	51	26	12	8	3	NP	NP	NP	7	A-1-a (0)	
MEDIUM DENSE, BROWN **GRAVEL WITH SAND, SILT, AND CLAY**, MOIST. -COBBLE PRESENT IN SS-3	525.6		7 9 7	21	33	SS-3	2.75	-	-	-	-	-	-	-	-	19	A-2-6 (2)	
MEDIUM DENSE TO VERY DENSE, BROWN **GRAVEL AND SAND**, TRACE SILT, TRACE CLAY, DRY.	510.6		10 8 9	22	39	SS-4	-	-	-	-	-	-	-	-	-	6	A-1-b (V)	
			10 8 8	21	67	SS-5	-	-	-	-	-	-	-	-	-	6	A-1-b (V)	
			4 10 14	31	50	SS-6	-	39	33	15	10	3	NP	NP	NP	5	A-1-b (0)	
			10 10 12	28	78	SS-7	-	-	-	-	-	-	-	-	-	5	A-1-b (V)	
			18 27 31	75	22	SS-8	-	-	-	-	-	-	-	-	-	4	A-1-b (V)	
			15 15 13	36	83	SS-9	-	-	-	-	-	-	-	-	-	7	A-1-b (V)	
VERY STIFF, GRAY **SILT AND CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.	508.1	▼	6 6 6	15	33	SS-10	2.25	2	2	12	46	38	26	14	12	17	A-6a (9)	
MEDIUM DENSE, GRAY **SANDY SILT**, LITTLE CLAY, MOIST.	505.6		8 6 5	14	39	SS-11	-	-	-	-	-	-	-	-	-	21	A-4a (V)	
MMEDIUM DENSE TO VERY DENSE, BROWN CHANGING TO GRAY **GRAVEL AND SAND**, TRACE SILT, TRACE CLAY, MOIST TO WET.			5 6 5	14	44	SS-12	-	-	-	-	-	-	-	-	-	14	A-1-b (V)	
-COBBLES PRESENT THROUGHOUT		W	15 17 19	46	67	SS-13	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	
			12 10 8	23	33	SS-14	-	-	-	-	-	-	-	-	-	16	A-1-b (V)	
			11 17 18	45	44	SS-15	-	36	36	17	7	4	NP	NP	NP	14	A-1-b (0)	
	483.6	EOB	15 21 19	51	44	SS-16	-	-	-	-	-	-	-	-	-	17	A-1-b (V)	

NOTES: GROUNDWATER ENCOUNTERED INITIALY @ 34.2' AND AT COMPLETION @ 25.4'; CAVE-IN DEPTH @ 16.7'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 487+14.20 / 121.3' Lt	EXPLORATION ID B-037-0-11
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / S.M.	HAMMER: CME AUTOMATIC	ALIGNMENT: PROPOSED CL I-75	
PID: 77889 BR ID: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 534.3 (MSL) EOB: 25.0 ft.	PAGE 1 OF 1
START: 9/27/11 END: 9/27/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG : 39.192360602 ° N / 84.478582797 ° W	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.4' - TOPSOIL (5.0")	533.9																	
LOOSE, DARK BROWN **GRAVEL WITH SAND, SILT, AND CLAY**, DAMP.		1	3 3 3	8	67	SS-1	2.25	-	-	-	-	-	-	-	-	15	A-2-6 (V)	
	531.3	2																
HARD, BROWN **SILTY CLAY**, AND COARSE TO FINE SAND, LITTLE FINE GRAVEL, DRY TO DAMP.		3																
		4	4 9 12	27	56	SS-2	4.50	-	-	-	-	-	-	-	-	9	A-6b (V)	
-COBBLES PRESENT THROUGHOUT		5																
		6																
		7	8 9 7	21	39	SS-3	4.50	12	25	26	13	24	37	17	20	11	A-6b (3)	
	526.3	8																
MEDIUM DENSE TO DENSE, BROWN **GRAVEL AND SAND**, LITTLE SILT, TRACE CLAY, DRY.		9	2 5 6	14	22	SS-4	-	-	-	-	-	-	-	-	-	4	A-1-b (V)	
		10																
		11																
		12	8 8 9	22	39	SS-5	-	-	-	-	-	-	-	-	-	2	A-1-b (V)	
-COBBLES PRESENT THROUGHOUT		13																
		14	5 11 15	33	56	SS-6	-	-	-	-	-	-	-	-	-	3	A-1-b (V)	
		15																
		16																
		17	17 16 7	30	78	SS-7	-	25	41	20	13	1	NP	NP	NP	2	A-1-b (0)	
	516.3	18																
VERY DENSE, BROWN **GRAVEL AND SAND**, LITTLE SILT, TRACE CLAY, DRY.		19	9 33 36	89	67	SS-8	-	-	-	-	-	-	-	-	-	3	A-1-b (V)	
		20																
		21																
		22	25 33 43	98	83	SS-9	-	-	-	-	-	-	-	-	-	4	A-1-b (V)	
-COBBLES PRESENT THROUGHOUT		23																
		24	11 21 25	59	67	SS-10	-	-	-	-	-	-	-	-	-	4	A-1-b (V)	
	509.3	EOB 25																

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 11.8'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

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2017 / 1945	56 / 105	HAM-75-7.85	STRUCTURE FOUNDATION EXPLORATION WALLS H, I, J, K, S, U, V, Y, Z

DRAWN RRM CHECKED BRT

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 488+43.87 / 109.0' Lt	EXPLORATION ID B-038-0-11
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / S.M.	HAMMER: CME AUTOMATIC	ALIGNMENT: PROPOSED CL I-75	
PID: 77889 BR ID: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 538.3 (MSL) EOB: 25.0 ft.	PAGE 1 OF 1
START: 9/27/11 END: 9/27/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG : 39.19259927 ° N / 84.478240581 ° W	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.5' - TOPSOIL (6.0")	538.3 / 537.8																	
STIFF TO VERY STIFF, DARK BROWN **SILT AND CLAY**, SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, DAMP. -TRACE ORGANICS PRESENT IN SS-1 -COBBLES PRESENT THROUGHOUT		1–4	2 3 3	8	50	SS-1	2.00	-	-	-	-	-	-	-	-	11	A-6a (V)	
		4–5	6 14 6	26	44	SS-2	3.00	12	17	18	34	19	28	15	13	14	A-6a (5)	
MEDIUM DENSE, BROWN **GRAVEL WITH SAND, SILT, AND CLAY**, DAMP.	532.8	6–7	8 10 9	24	78	SS-3	4.5+	-	-	-	-	-	-	-	-	10	A-2-6 (V)	
LOOSE TO DENSE, BROWN **COARSE AND FINE SAND**, LITTLE SILT, TRACE FINE GRAVEL, TRACE CLAY, DRY.	530.3	8–9	5 5 4	12	50	SS-4	-	-	-	-	-	-	-	-	-	4	A-3a (V)	
		11–12	3 3 3	8	78	SS-5	-	4	30	49	15	2	NP	NP	NP	4	A-3a (0)	
		14–15	4 6 8	18	67	SS-6	-	-	-	-	-	-	-	-	-	3	A-3a (V)	
		16–17	10 11 10	27	78	SS-7	-	-	-	-	-	-	-	-	-	3	A-3a (V)	
		19–20	6 18 20	49	33	SS-8	-	-	-	-	-	-	-	-	-	3	A-3a (V)	
		21–22	16 12 10	28	56	SS-9	-	-	-	-	-	-	-	-	-	3	A-3a (V)	
VERY DENSE, BROWN **COARSE AND FINE SAND**, LITTLE SILT, TRACE FINE GRAVEL, TRACE CLAY, DRY.	515.3	24–25	7 23 35	75	72	SS-10	-	-	-	-	-	-	-	-	-	3	A-3a (V)	
	513.3 EOB																	

FOR INFORMATION ONLY

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 11.6'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

STRUCTURE FOUNDATION EXPLORATION
WALLS H, I, J, K, S, U, V, Y, Z

DRAWN RRM
CHECKED BRT

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 489+88.69 / 114.9' Lt	EXPLORATION ID B-039-0-11
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / S.M.	HAMMER: CME AUTOMATIC	ALIGNMENT: PROPOSED CL I-75	
PID: 77889 BR ID: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 545.2 (MSL) EOB: 50.0 ft.	PAGE 1 OF 1
START: 9/27/11 END: 9/27/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG : 39.192902551 ° N / 84.477909539 ° W	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.4' - TOPSOIL (5.0")	545.2																	
VERY LOOSE TO LOOSE, DARK BROWN TO BROWN **COARSE AND FINE SAND**, LITTLE SILT, TRACE CLAY, TRACE FINE GRAVEL, DRY TO DAMP.	544.8		2 1 2	4	44	SS-1	-	7	17	52	16	8	NP	NP	NP	12	A-3a (0)	
-COBBLES PRESENT THROUGHOUT			2 1 1	3	44	SS-2	-	-	-	-	-	-	-	-	-	8	A-3a (V)	
			3 4 3	9	50	SS-3	-	-	-	-	-	-	-	-	-	4	A-3a (V)	
MEDIUM DENSE TO DENSE, BROWN **SANDY SILT**, TRACE FINE GRAVEL, TRACE CLAY, DRY TO MOIST.	537.2		3 4 8	15	67	SS-4	-	10	12	34	41	3	NP	NP	NP	4	A-4a (2)	
			11 16 16	41	78	SS-5	-	-	-	-	-	-	-	-	-	20	A-4a (V)	
MEDIUM DENSE, BROWN **GRAVEL AND SAND**, TRACE SILT, TRACE CLAY, DRY.	532.2		5 8 9	22	67	SS-6	-	-	-	-	-	-	-	-	-	2	A-1-b (V)	
			7 7 11	23	67	SS-7	-	-	-	-	-	-	-	-	-	3	A-1-b (V)	
DENSE TO VERY DENSE, BROWN **GRAVEL AND SAND**, TRACE SILT, TRACE CLAY, DRY.	527.2		7 13 16	37	67	SS-8	-	-	-	-	-	-	-	-	-	3	A-1-b (V)	
			20 19 21	51	78	SS-9	-	-	-	-	-	-	-	-	-	3	A-1-b (V)	
-COBBLES PRESENT THROUGHOUT			6 10 18	36	78	SS-10	-	26	54	13	6	1	NP	NP	NP	4	A-1-b (0)	
			20 22 25	60	78	SS-11	-	-	-	-	-	-	-	-	-	3	A-1-b (V)	
			11 21 32	68	83	SS-12	-	-	-	-	-	-	-	-	-	4	A-1-b (V)	
-COBBLES PRESENT THROUGHOUT		▼																
			19 21 18	50	78	SS-13	-	-	-	-	-	-	-	-	-	5	A-1-b (V)	
DENSE, BROWN **GRAVEL**, AND FINE TO COARSE SAND, TRACE SILT, TRACE CLAY, DRY.	508.7	W																
-COBBLES PRESENT THROUGHOUT			12 19 18	48	89	SS-14	-	57	30	7	5	1	NP	NP	NP	8	A-1-a (0)	
DENSE, BROWN **COARSE AND FINE SAND**, LITTLE SILT, MOIST.	503.2		9 17 20	48	50	SS-15	-	-	-	-	-	-	-	-	-	15	A-3a (V)	
VERY STIFF, GRAY **SILT AND CLAY**, LITTLE COARSE TO FINE SAND, MOIST.	498.2		7 9 8	22	44	SS-16	3.50	-	-	-	-	-	-	-	-	22	A-6a (V)	
	495.2	EOB																

NOTES: GROUNDWATER ENCOUNTERED INITIALY @ 36.5' AND AT COMPLETION @ 30.4' ; CAVE-IN DEPTH @ 17.7'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

FOR INFORMATION ONLY

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 492+53.19 / 119.3' Lt	EXPLORATION ID B-040-0-11
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / S.M.	HAMMER: CME AUTOMATIC	ALIGNMENT: PR CL I-75	
PID: 77889 SFN: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 545.3 (MSL) EOB: 50.0 ft.	PAGE 1 OF 1
START: 10/3/11 END: 10/3/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG : 39.193444319 ° N / 84.477287988 ° W	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.6' - TOPSOIL (7.0")	544.7																	
FILL: LOOSE TO MEDIUM DENSE, DARK BROWN **GRAVEL AND SAND**, TRACE SILT, TRACE CLAY, MOIST TO WET.		1	6 6 7	17	67	SS-1	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	
-TRACE ROOT FIBERS PRESENT THROUGHOUT		4	7 4 3	9	22	SS-2	-	40	22	27	8	3	NP	NP	NP	12	A-1-b (0)	
		7	5 5 8	17	33	SS-3	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	
	537.3																	
MEDIUM DENSE, BROWN **FINE SAND**, LITTLE COARSE SAND, LITTLE SILT, DRY.		10	7 9 9	23	11	SS-4	-	-	-	-	-	-	-	-	-	4	A-3 (V)	
-TRACE WOOD FRAGMENTS AND ORGANIC ODOR PRESENT IN SS-4	534.8																	
MEDIUM DENSE TO DENSE, BROWN **GRAVEL**, AND FINE TO COARSE SAND, LITTLE SILT, TRACE CLAY, DRY TO DAMP.		13	10 11 12	30	72	SS-5	-	-	-	-	-	-	-	-	-	2	A-1-a (V)	
		16	7 14 15	37	78	SS-6	-	-	-	-	-	-	-	-	-	3	A-1-a (V)	
		19	9 12 9	27	56	SS-7	-	50	21	15	11	3	NP	NP	NP	5	A-1-a (0)	
		22	6 9 11	26	61	SS-8	-	-	-	-	-	-	-	-	-	3	A-1-a (V)	
-COBBLES PRESENT THROUGHOUT		25	8 11 12	30	67	SS-9	-	-	-	-	-	-	-	-	-	3	A-1-a (V)	
		28	7 9 15	31	78	SS-10	-	-	-	-	-	-	-	-	-	3	A-1-a (V)	
		31	9 9 12	27	67	SS-11	-	-	-	-	-	-	-	-	-	3	A-1-a (V)	
		34	14 19 14	42	72	SS-12	-	-	-	-	-	-	-	-	-	4	A-1-a (V)	
	513.3																	
MEDIUM DENSE, BROWN **GRAVEL AND SAND**, TRACE SILT, DAMP TO MOIST.		34	5 8 10	23	67	SS-13	-	-	-	-	-	-	-	-	-	6	A-1-b (V)	
	W	36																
		39	8 10 12	28	72	SS-14	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	
	503.3																	
VERY STIFF, GRAY TO BROWNISH GRAY **CLAY**, SOME SILT, MOIST.		44	4 6 9	19	67	SS-15	2.50	0	0	0	27	73	45	20	25	25	A-7-6 (15)	
		49	3 7 9	21	78	SS-16	2.50	-	-	-	-	-	-	-	-	27	A-7-6 (V)	
	495.3	EOB 50																

NOTES: GROUNDWATER INITIALY ENCOUNTERED @ 36.0'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: TREMIED 188 LBS CEMENT / 25 LBS BENTONITE POWDER / 40 GAL WATER

FOR INFORMATION ONLY

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 493+96.89 / 121.2' LT	EXPLORATION ID B-041-0-11
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / S.M.	HAMMER: CME AUTOMATIC	ALIGNMENT: PR CL I-75	
PID: 77889 SFN: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 538.7 (MSL) EOB: 50.0 ft.	PAGE 1 OF 1
START: 10/4/11 END: 10/4/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG : 39.193737748 ° N / 84.47694903 ° W	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.4' - TOPSOIL (5.0")	538.3																	
VERY LOOSE, BROWN **GRAVEL AND SAND**, TRACE SILT, TRACE CLAY, DAMP. -TRACE ROOT FIBERS PRESENT IN SS-1	535.7		2 1 2	4	56	SS-1	-	-	-	-	-	-	-	-	-	7	A-1-b (V)	
MEDIUM DENSE TO DENSE, BROWN **GRAVEL AND SAND**, TRACE SILT, TRACE CLAY, DAMP. -TRACE ROOT FIBERS PRESENT IN SS-2			2 6 14	26	67	SS-2	-	40	22	27	8	3	NP	NP	NP	4	A-1-b (0)	
			17 14 19	42	78	SS-3	-	-	-	-	-	-	-	-	-	4	A-1-b (V)	
			6 12 11	30	78	SS-4	-	-	-	-	-	-	-	-	-	4	A-1-b (V)	
			14 11 11	28	78	SS-5	-	-	-	-	-	-	-	-	-	4	A-1-b (V)	
	523.2		4 10 11	27	83	SS-6	-	-	-	-	-	-	-	-	-	4	A-1-b (V)	
DENSE TO VERY DENSE, BROWN **GRAVEL AND SAND**, TRACE SILT, TRACE CLAY, DRY TO DAMP.			13 15 19	44	78	SS-7	-	-	-	-	-	-	-	-	-	4	A-1-b (V)	
			4 14 19	42	89	SS-8	-	31	45	18	5	1	NP	NP	NP	4	A-1-b (0)	
			9 12 21	42	89	SS-9	-	-	-	-	-	-	-	-	-	4	A-1-b (V)	
			14 21 25	59	56	SS-10	-	-	-	-	-	-	-	-	-	3	A-1-b (V)	
		W	10 23 21	57	56	SS-11	-	-	-	-	-	-	-	-	-	5	A-1-b (V)	
	510.7																	
DENSE, BROWNISH GRAY **GRAVEL WITH SAND AND SILT**, DAMP.			13 13 13	33	89	SS-12	-	-	-	-	-	-	-	-	-	9	A-2-4 (V)	
	506.7																	
VERY STIFF, GRAY **SILTY CLAY**, TRACE COARSE TO FINE SAND, MOIST.			2 4 4	10	78	SS-13	2.50	-	-	-	-	-	-	-	-	28	A-6b (V)	
			2 4 8	15	89	SS-14	3.50	-	-	-	-	-	-	-	-	24	A-6b (V)	
			4 8 12	26	78	SS-15	3.50	0	1	1	39	59	37	20	17	23	A-6b (11)	
	488.7	EOB	6 8 11	24	89	SS-16	3.75	-	-	-	-	-	-	-	-	25	A-6b (V)	

FOR INFORMATION ONLY

NOTES: GROUNDWATER INITIALY ENCOUNTERED @ 27.0'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: TREMIED 188 LBS CEMENT / 25 LBS BENTONITE POWDER / 40 GAL WATER

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 495+29.72 / 176.1' Lt	EXPLORATION ID B-042-0-11
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / S.M.	HAMMER: CME AUTOMATIC	ALIGNMENT: PR CL I-75	
PID: 77889 SFN: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 545.0 (MSL) EOB: 25.0 ft.	PAGE 1 OF 1
START: 10/4/11 END: 10/4/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG : 39.194107936 ° N / 84.476773485 ° W	

MATERIAL DESCRIPTION AND NOTES	ELEV. 545.0	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.3' - TOPSOIL (4.0")	544.7																	
MEDIUM DENSE, BROWNISH GRAY **GRAVEL AND SAND**, TRACE SILT, TRACE CLAY, DAMP.		1	5 4 5	12	50	SS-1	-	-	-	-	-	-	-	-	-	4	A-1-b (V)	
	542.0	2																
MEDIUM DENSE TO VERY DENSE, BROWNISH GRAY **GRAVEL AND SAND**, TRACE SILT, TRACE CLAY, DRY TO DAMP.		3																
		4	4 9 15	31	44	SS-2	-	-	-	-	-	-	-	-	-	4	A-1-b (V)	
		5																
		6																
		7	14 21 20	53	78	SS-3	-	38	31	22	8	1	NP	NP	NP	5	A-1-b (0)	
		8																
		9	5 12 11	30	78	SS-4	-	-	-	-	-	-	-	-	-	6	A-1-b (V)	
-COBBLES PRESENT THROUGHOUT		10																
		11																
		12	8 10 14	31	67	SS-5	-	-	-	-	-	-	-	-	-	5	A-1-b (V)	
		13																
		14	14 17 19	46	33	SS-6	-	-	-	-	-	-	-	-	-	3	A-1-b (V)	
		15																
		16																
		17	14 7 12	24	78	SS-7	-	-	-	-	-	-	-	-	-	5	A-1-b (V)	
		18																
		19	9 16 13	37	78	SS-8	-	32	32	25	9	2	NP	NP	NP	5	A-1-b (0)	
		20																
		21																
		22	12 29 25	69	83	SS-9	-	-	-	-	-	-	-	-	-	3	A-1-b (V)	
	522.0	23																
MEDIUM DENSE, BROWNISH GRAY **GRAVEL WITH SAND, SILT, AND CLAY**, MOIST.		24	5 7 12	24	72	SS-10	-	-	-	-	-	-	-	-	-	12	A-2-6 (V)	
	520.0	EOB 25																

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NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 10.4'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

STRUCTURE FOUNDATION EXPLORATION
WALLS H, I, J, K, S, U, V, Y, Z

DRAWN RRM
CHECKED BRT

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 496+53.86 / 201.8' Lt	EXPLORATION ID B-043-0-11
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / S.M.	HAMMER: CME AUTOMATIC	ALIGNMENT: PR CL I-75	
PID: 77889 SFN: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 547.1 (MSL) EOB: 25.0 ft.	PAGE 1 OF 1
START: 10/4/11 END: 10/4/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG : 39.194406205 ° N / 84.47654299 ° W	

MATERIAL DESCRIPTION AND NOTES	ELEV. 547.1	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.7' - TOPSOIL (8.0")	546.4																	
FILL: MEDIUM DENSE, BROWN **GRAVEL AND SAND**, LITTLE SILT, TRACE CLAY, DRY. BRICK FRAGMENTS PRESENT IN SS-1			6 4 6	13	44	SS-1	-	-	-	-	-	-	-	-	-	7	A-1-b (V)	
			5 5 7	15	44	SS-2	-	34	24	24	12	6	NP	NP	NP	6	A-1-b (0)	
	541.6																	
STIFF, BROWN **SILTY CLAY**, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.			4 5 4	12	56	SS-3	2.00	-	-	-	-	-	-	-	-	21	A-6b (V)	
			2 2 6	10	44	SS-4	1.50	10	13	16	35	26	36	19	17	17	A-6b (8)	
	536.6																	
MEDIUM DENSE TO VERY DENSE, BROWNISH GRAY **GRAVEL AND SAND**, TRACE SILT, TRACE CLAY, DAMP.			17 23 25	62	78	SS-5	-	-	-	-	-	-	-	-	-	4	A-1-b (V)	
			4 9 9	23	78	SS-6	-	-	-	-	-	-	-	-	-	4	A-1-b (V)	
			8 10 12	28	72	SS-7	-	24	48	20	7	1	NP	NP	NP	4	A-1-b (0)	
			9 13 17	39	78	SS-8	-	-	-	-	-	-	-	-	-	3	A-1-b (V)	
	526.6																	
MEDIUM DENSE, BROWNISH GRAY **FINE SAND**, LITTLE COARSE SAND, LITTLE FINE GRAVEL, DRY. F.S.			13 13 9	28	83	SS-9	-	-	-	-	-	-	-	-	-	4	A-3 (V)	
			6 7 9	21	78	SS-10	-	-	-	-	-	-	-	-	-	4	A-3 (V)	
	522.1	EOB																

FOR INFORMATION ONLY

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 3.0'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 25 LBS BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 503+96.72 / 150.2' Rt	EXPLORATION ID B-044-0-11
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / S.M.	HAMMER: CME AUTOMATIC	ALIGNMENT: PROPOSED CL I-75	
PID: 77889 BR ID: NA	DRILLING METHOD: 4.5" CFA	CALIBRATION DATE: 5/6/11	ELEVATION: 543.4 (MSL) EOB: 20.0 ft.	PAGE 1 OF 1
START: 11/22/11 END: 11/22/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG : 39.195249413 ° N / 84.473852731 ° W	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
1.0' - TOPSOIL (12.0")	543.4																	
	542.4																	
FILL: VERY LOOSE TO MEDIUM DENSE, DARK BROWN, BLACK AND REDDISH BROWN **GRAVEL AND SAND**, LITTLE SILT, TRACE CLAY, MOIST TO WET.		1	10 14 7	27	72	SS-1	-	-	-	-	-	-	-	-	-	11	A-1-b (V)	
		2																
		3																
-BRICK, ASPHALT AND CONCRETE FRAGMENTS PRESENT THROUGHOUT		4	2 1 1	3	33	SS-2	-	42	20	21	14	3	NP	NP	NP	21	A-1-b (0)	
		5																
		6																
	535.4	7	3 2 2	5	39	SS-3	-	-	-	-	-	-	-	-	-	13	A-1-b (V)	
MEDIUM DENSE TO DENSE, BROWN **GRAVEL**, SOME FINE TO COARSE SAND, TRACE SILT, TRACE CLAY, DRY TO DAMP.		8																
		9	2 3 7	13	28	SS-4	-	-	-	-	-	-	-	-	-	3	A-1-a (V)	
		10																
		11																
		12	14 16 16	41	72	SS-5	-	59	20	14	6	1	NP	NP	NP	4	A-1-a (0)	
		13																
		14	15 8 6	18	78	SS-6	-	-	-	-	-	-	-	-	-	3	A-1-a (V)	
		15																
		16																
		17	9 11 15	33	83	SS-7	-	-	-	-	-	-	-	-	-	3	A-1-a (V)	
	525.4	18																
MEDIUM DENSE, BROWN **COARSE AND FINE SAND**, LITTLE SILT, TRACE FINE GRAVEL, DRY.		19	3 9 12	27	67	SS-8	-	-	-	-	-	-	-	-	-	4	A-3a (V)	
	523.4	EOB 20																

FOR INFORMATION ONLY

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 16.3'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85
TYPE: RETAINING WALL
PID: 77889 BR ID: NA
START: 11/15/11 END: 11/15/11

DRILLING FIRM / OPERATOR: RII / T.F.
SAMPLING FIRM / LOGGER: RII / A.D.
DRILLING METHOD: 4.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: CME-750X (SN 310218)
HAMMER: CME AUTOMATIC
CALIBRATION DATE: 5/6/11
ENERGY RATIO (%): 77.1

STATION / OFFSET: 506+49.18 / 188.1' Rt
ALIGNMENT: PROPOSED CL I-75
ELEVATION: 555.5 (MSL) EOB: 50.0 ft.
LAT / LONG : 39.195680732 ° N / 84.473145925 ° W

EXPLORATION ID B-045-0-11
PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.5' - TOPSOIL (6.0")	555.5																	
VERY STIFF, BROWN **SILTY CLAY**, SOME COARSE TO FINE SAND, DAMP.	555.0		5 4 5	12	56	SS-1	2.50	0	4	32	27	37	39	17	22	19	A-6b (11)	
	552.0																	
MEDIUM DENSE, BROWN **FINE SAND**, LITTLE COARSE SAND, TRACE SILT, TRACE CLAY, DAMP.			4 6 9	19	50	SS-2	-	-	-	-	-	-	-	-	-	7	A-3 (V)	
			6 7 7	18	61	SS-3	-	-	-	-	-	-	-	-	-	5	A-3 (V)	
			4 4 8	15	56	SS-4	-	-	-	-	-	-	-	-	-	5	A-3 (V)	
			6 6 7	17	67	SS-5	-	-	-	-	-	-	-	-	-	6	A-3 (V)	
P.S.			3 7 7	18	61	SS-6	-	0	17	73	9	1	NP	NP	NP	8	A-3 (0)	
			5 6 6	15	61	SS-7	-	-	-	-	-	-	-	-	-	6	A-3 (V)	
			3 4 5	12	56	SS-8	-	-	-	-	-	-	-	-	-	6	A-3 (V)	
	532.5		8 5 6	14	61	SS-9	-	-	-	-	-	-	-	-	-	6	A-3 (V)	
DENSE, BROWN **FINE SAND**, SOME COARSE SAND, SOME FINE GRAVEL, TRACE SILT, DRY TO DAMP.			7 20 18	49	67	SS-10	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
			12 12 17	37	67	SS-11	-	23	26	44	7	0	NP	NP	NP	6	A-3 (0)	
			7 11 14	32	56	SS-12	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
			4 11 16	35	67	SS-13	-	-	-	-	-	-	-	-	-	4	A-3 (V)	
	518.5																	
VERY STIFF, GRAY **SILTY CLAY**, MOIST.			WOH 4 4	10	72	SS-14	1.50	-	-	-	-	-	-	-	-	27	A-6b (V)	
-qu @ 44.9' = 0.97 tsf					96	ST-15	1.50	0	0	0	48	52	35	19	16	27	A-6b (10)	
			3 5 4	12	94	SS-16	3.00	-	-	-	-	-	-	-	-	26	A-6b (V)	
	505.5	EOB																

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 19.5'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 100 LBS BENTONITE CHIPS AND SOIL CUTTINGS

FOR INFORMATION ONLY

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PROJECT: HAM-75-7.85 | DRILLING FIRM / OPERATOR: RII / T.F. | DRILL RIG: CME-750X (SN 310218) | STATION / OFFSET: 507+90.55 / 156.3' Rt | EXPLORATION ID: B-046-0-11

TYPE: RETAINING WALL | SAMPLING FIRM / LOGGER: RII / A.D. | HAMMER: CME AUTOMATIC | ALIGNMENT: PROPOSED CL I-75

PID: 77889 BR ID: NA | DRILLING METHOD: 4.25" HSA | CALIBRATION DATE: 5/6/11 | ELEVATION: 555.7 (MSL) EOB: 50.0 ft.

START: 11/15/11 END: 11/15/11 | SAMPLING METHOD: SPT | ENERGY RATIO (%): 77.1 | LAT / LONG : 39.196032716 ° N / 84.472894673 ° W

PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.3' - TOPSOIL (4.0")	555.4																	
STIFF, BROWN **SILTY CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST. -TRACE ORGANICS PRESENT IN SS-1	552.7		4 3 4	9	56	SS-1	2.00	-	-	-	-	-	-	-	-	24	A-6b (V)	
STIFF, DARK BROWN **SANDY SILT**, LITTLE CLAY, TRACE FINE GRAVEL, DAMP.	550.2		4 7 8	19	44	SS-2	2.00	1	12	29	41	17	22	13	9	12	A-4a (5)	
LOOSE TO MEDIUM DENSE, BROWN **FINE SAND**, SOME COARSE SAND, TRACE SILT, TRACE CLAY, TRACE FINE GRAVEL, DAMP.	532.2		9 9 10	24	56	SS-3	-	-	-	-	-	-	-	-	-	6	A-3 (V)	
			3 5 7	15	61	SS-4	-	-	-	-	-	-	-	-	-	8	A-3 (V)	
			5 7 8	19	56	SS-5	-	3	34	53	9	1	NP	NP	NP	6	A-3 (0)	
		FS	3 3 4	9	61	SS-6	-	-	-	-	-	-	-	-	-	6	A-3 (V)	
			5 5 5	13	56	SS-7	-	-	-	-	-	-	-	-	-	7	A-3 (V)	
			4 5 8	17	56	SS-8	-	-	-	-	-	-	-	-	-	9	A-3 (V)	
			9 8 9	22	61	SS-9	-	-	-	-	-	-	-	-	-	5	A-3 (V)	
MEDIUM DENSE TO DENSE, BROWN **GRAVEL**, AND FINE TO COARSE SAND, TRACE SILT, DAMP TO MOIST.	518.7		5 11 11	28	50	SS-10	-	-	-	-	-	-	-	-	-	6	A-1-a (V)	
			20 19 18	48	56	SS-11	-	54	25	14	7	0	NP	NP	NP	4	A-1-a (0)	
			6 18 20	49	50	SS-12	-	-	-	-	-	-	-	-	-	7	A-1-a (V)	
			7 17 18	45	56	SS-13	-	-	-	-	-	-	-	-	-	5	A-1-a (V)	
STIFF TO VERY STIFF, GRAY **CLAY**, SOME SILT, MOIST.			3 5 7	15	61	SS-14	1.50	-	-	-	-	-	-	-	-	25	A-7-6 (V)	
				92		ST-15	2.25	0	0	0	29	71	51	21	30	24	A-7-6 (18)	
			3 4 5	12	67	SS-16	2.25	-	-	-	-	-	-	-	-	25	A-7-6 (V)	
	505.7	EOB	4 4 8	15	67	SS-17	2.50	-	-	-	-	-	-	-	-	25	A-7-6 (V)	

FOR INFORMATION ONLY

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 17.3'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 100 LBS BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85
TYPE: RETAINING WALL
PID: 77889 BR ID: NA
START: 11/10/11 END: 11/11/11

DRILLING FIRM / OPERATOR: RII / S.M.
SAMPLING FIRM / LOGGER: RII / A.D.
DRILLING METHOD: 4.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: CME-750X (SN 310218)
HAMMER: CME AUTOMATIC
CALIBRATION DATE: 5/6/11
ENERGY RATIO (%): 77.1

STATION / OFFSET: 510+26.50 / 147.4' Rt
ALIGNMENT: PROPOSED CL I-75
ELEVATION: 557.0 (MSL) EOB: 50.0 ft.
LAT / LONG : 39.196525283 ° N / 84.472353115 ° W

EXPLORATION ID
B-047-0-11

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
1.0' - TOPSOIL (12.0")	557.0 556.0																	
STIFF TO VERY STIFF, BROWN TO MOTTLED BROWN AND GRAY **SILTY CLAY**, LITTLE COARSE TO FINE SAND, MOIST. -TRACE ORGANICS PRESENT IN SS-1		1 2 3 4 5	WOH 1 4	6	56	SS-1	2.00	-	-	-	-	-	-	-	-	21	A-6b (V)	
			4 4 5	12	67	SS-2	2.25	0	2	16	37	45	36	18	18	20	A-6b (11)	
	551.5																	
STIFF TO VERY STIFF, MOTTLED BROWN AND GRAY **SILT AND CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST. -SAND LENSES PRESENT THROUGHOUT		6 7 8 9	5 8 8	21	56	SS-3	2.50	-	-	-	-	-	-	-	-	14	A-6a (V)	
	547.5				79	ST-4	2.00	-	-	-	-	-	-	-	-	21	A-6a (V)	
MEDIUM DENSE TO LOOSE, BROWN **COARSE TO FINE SAND**, LITTLE SILT, TRACE CLAY, MOIST TO WET.		10					-	-	-	-	-	-	-	-	-	17	A-3a (V)	
		11 12	2 5 7	15	72	SS-5	-	-	-	-	-	-	-	-	-	4	A-3a (V)	
		13 14	2 4 4	10	67	SS-6	-	-	-	-	-	-	-	-	-	6	A-3a (V)	
		15 16 17	4 4 4	10	61	SS-7	-	0	16	69	15	0	NP	NP	NP	6	A-3a (0)	
	538.5 W	18																
LOOSE, BROWN TO GRAY **SILT**, SOME COARSE TO FINE SAND, TRACE CLAY, MOIST TO WET.		19 20	2 1 3	5	61	SS-8	-	-	-	-	-	-	-	-	-	20	A-4b (V)	
		21 22	1 2 4	8	56	SS-9	-	-	-	-	-	-	-	-	-	23	A-4b (V)	
		23 24 25	2 2 2	5	61	SS-10	-	-	-	-	-	-	-	-	-	26	A-4b (V)	
		26 27	1 2 4	8	72	SS-11	-	0	1	23	67	9	NP	NP	NP	23	A-4b (8)	
		28 29	4 4 3	9	56	SS-12	-	-	-	-	-	-	-	-	-	22	A-4b (V)	
		30 31 32 33																
-COBBLE PRESENT @ 34.7'		34	1 2 4	8	61	SS-13	-	-	-	-	-	-	-	-	-	18	A-4b (V)	
	520.0	35 36 37 38																
LOOSE TO MEDIUM DENSE, GRAY **COARSE TO FINE SAND**, LITTLE SILT, TRACE CLAY, DAMP.		39	7 4 7	14	44	SS-15	-	-	-	-	-	-	-	-	-	7	A-3a (V)	
		40 41 42 43																
		44	3 3 3	8	56	SS-16	-	-	-	-	-	-	-	-	-	7	A-3a (V)	
		45 46 47 48																
	507.0	49	4 4 4	10	61	SS-17	-	-	-	-	-	-	-	-	-	7	A-3a (V)	
		EOB 50																

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 18.5'; CAVE-IN DEPTH @ 13.3'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 25 LBS. BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / S.M.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 511+46.78 / 143.7' Rt	EXPLORATION ID B-048-0-11
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / A.D.	HAMMER: CME AUTOMATIC	ALIGNMENT: PROPOSED CL I-75	
PID: 77889 BR ID: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 558.1 (MSL) EOB: 50.0 ft.	PAGE 1 OF 1
START: 11/10/11 END: 11/10/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG : 39.196774772 ° N / 84.472074775 ° W	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.8' - TOPSOIL (9.0")	558.1																	
	557.3																	
VERY STIFF, BROWN **SILT AND CLAY**, SOME COARSE TO FINE SAND, MOIST. -TRACE ORGANICS PRESENT IN SS-1		1	2 2 4	8	72	SS-1	2.50	-	-	-	-	-	-	-	-	18	A-6a (V)	
	554.6	2																
VERY STIFF TO HARD, MOTTLED BROWN AND GRAY **SILTY CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.		3	3 4 6	13	67	SS-2	4.5+	1	2	10	34	53	39	18	21	20	A-6b (12)	
		4																
		5																
		6	6 9 10	24	67	SS-3	4.50	-	-	-	-	-	-	-	-	23	A- 6b (V)	
		7																
		8																
-qu @ 9.9' = 3.51 tsf		9			75	ST-4	4.00	6	5	9	25	55	34	18	16	15	A-6b (10)	
		10																
-COBBLE PRESENT @ 13.0'	545.1	11	11 9 8	22	67	SS-5	3.00	-	-	-	-	-	-	-	-	13	A- 6b (V)	
HARD, GRAY **SANDY SILT**, SOME CLAY, LITTLE FINE GRAVEL, DAMP.		12																
		13																
		14	6 10 16	33	56	SS-6	4.50	-	-	-	-	-	-	-	-	10	A-4a (V)	
		15																
		16																
		17	3 18 18	46	56	SS-7	4.5+	13	9	15	39	24	24	14	10	10	A-4a (6)	
	540.1	18																
MEDIUM DENSE TO DENSE, BROWN **FINE SAND**, TRACE SILT, TRACE COARSE SAND, TRACE CLAY, DRY TO DAMP.		19	2 12 18	39	39	SS-8	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
		20																
		21																
		22	7 10 12	28	67	SS-9	-	-	-	-	-	-	-	-	-	4	A-3 (V)	
		23																
		24	8 6 9	19	67	SS-10	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
		25																
		26																
		27	8 8 10	23	61	SS-11	-	0	1	92	7	0	NP	NP	NP	3	A-3 (0)	
		28																
		29	5 6 8	18	67	SS-12	-	-	-	-	-	-	-	-	-	4	A-3 (V)	
		30																
		31																
		32																
		33																
		34	7 12 18	39	78	SS-13	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
		35																
		36																
		37																
		38																
		39	5 10 15	32	72	SS-14	-	-	-	-	-	-	-	-	-	4	A-3 (V)	
		40																
		41																
		42																
		43																
		44	8 13 15	36	61	SS-15	-	-	-	-	-	-	-	-	-	5	A-3 (V)	
		45																
		46																
		47																
		48																
		49	3 15 15	39	67	SS-16	-	-	-	-	-	-	-	-	-	5	A-3 (V)	
	508.1	50	EOB															

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 22.4'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS

FOR INFORMATION ONLY

2017 1956	67/105	HAM-75-7.85	STRUCTURE FOUNDATION EXPLORATION WALLS H, I, J, K, S, U, V, Y, Z

DRAWN RRM CHECKED BRT

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PROJECT: HAM-75-7.85
TYPE: RETAINING WALL
PID: 77889 BR ID: NA
START: 11/10/11 END: 11/10/11

DRILLING FIRM / OPERATOR: RII / S.M.
SAMPLING FIRM / LOGGER: RII / A.D.
DRILLING METHOD: 4.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: CME-750X (SN 310218)
HAMMER: CME AUTOMATIC
CALIBRATION DATE: 5/6/11
ENERGY RATIO (%): 77.1

STATION / OFFSET: 512+93.35 / 140.5' Rt
ALIGNMENT: PROPOSED CL I-75
ELEVATION: 559.8 (MSL) EOB: 50.0 ft.
LAT / LONG : 39.197076426 ° N / 84.471732333 ° W

EXPLORATION ID
B-049-0-11

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.8' - TOPSOIL (10.0")	559.8																	
	559.0																	
MEDIUM STIFF, GRAYISH BROWN **CLAY**, SOME SILT, TRACE FINE SAND, MOIST.		1	2 2 2	5	67	SS-1	0.75	0	0	1	32	67	46	22	24	30	A-7-6 (15)	
		2																
		3																
		4	3 2 2	5	67	SS-2	0.75	-	-	-	-	-	-	-	-	28	A-7-6 (V)	
		5																
		6																
		7	3 3 3	8	67	SS-3	1.00	-	-	-	-	-	-	-	-	30	A-7-6 (V)	
	551.3	8																
STIFF TO HARD, GRAY **SILT AND CLAY**, SOME COARSE TO FINE SAND, LITTLE TO SOME FINE GRAVEL, DAMP TO MOIST.		9			65	ST-4	2.00	20	10	13	29	28	25	14	11	16	A-6a (5)	
		10																
		11																
		12	3 5 6	14	56	SS-5	2.00	-	-	-	-	-	-	-	-	14	A-6a (V)	
		13																
		14	6 7 5	15	61	SS-6	2.00	-	-	-	-	-	-	-	-	17	A-6a (V)	
		15																
		16																
		17	20 16 20	46	56	SS-7	4.5+	13	10	16	37	24	26	14	12	11	A-6a (6)	
	541.3	18																
MEDIUM DENSE TO DENSE, BROWN **FINE SAND**, TRACE SILT, TRACE COARSE SAND, TRACE CLAY, DRY.		19	6 7 9	21	50	SS-8	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
		20																
		21																
		22	7 8 9	22	56	SS-9	-	-	-	-	-	-	-	-	-	2	A-3 (V)	
		23																
		24	7 6 10	21	61	SS-10	-	-	-	-	-	-	-	-	-	4	A-3 (V)	
		25																
		26																
		27	6 8 11	24	61	SS-11	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
		28																
		29	5 8 12	26	67	SS-12	-	0	0	90	10	0	NP	NP	NP	3	A-3 (0)	
		30																
		31																
		32																
		33																
F.S.		34	8 8 9	22	67	SS-13	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
		35																
		36																
		37																
		38																
		39	11 10 17	35	67	SS-14	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
		40																
		41																
		42																
		43																
		44	9 10 12	28	67	SS-15	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
		45																
		46																
		47																
		48																
		49	12 12 9	27	67	SS-16	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
	509.8	EOB 50																

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 22.0'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / S.M.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 514+49.40 / 146.4' Rt	EXPLORATION ID B-050-0-11
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / A.D.	HAMMER: CME AUTOMATIC	ALIGNMENT: PROPOSED CL I-75	
PID: 77889 BR ID: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 560.0 (MSL) EOB: 50.0 ft.	PAGE 1 OF 1
START: 11/9/11 END: 11/9/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG : 39.197372662 ° N / 84.471338961 ° W	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
1.0' - TOPSOIL (12.0")	560.0																	
	559.0																	
MEDIUM STIFF TO STIFF, BROWN AND GRAY **CLAY**, SOME SILT, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.		1	2 2 2	5	61	SS-1	1.25	-	-	-	-	-	-	-	-	30	A-7-6 (V)	
		2																
		3	3 1 2	4	33	SS-2	1.50	6	5	6	28	55	46	22	24	25	A-7-6 (15)	
		4																
		5																
		6	2 2 3	6	67	SS-3	1.00	-	-	-	-	-	-	-	-	30	A-7-6 (V)	
		7																
	552.0	8																
STIFF TO VERY STIFF, BROWNISH GRAY **SANDY SILT**, SOME FINE GRAVEL, SOME CLAY, DAMP TO MOIST.		9			88	ST-4	1.50	23	12	20	25	20	20	13	7	9	A-4a (2)	
-qu @ 9.8' = 1.42 tsf		10																
		11																
		12	3 8 7	19	56	SS-5	2.50	-	-	-	-	-	-	-	-	13	A-4a (V)	
		13																
-COBBLES PRESENT @ 14.0'		14	3 6 4	13	50	SS-6	2.75	-	-	-	-	-	-	-	-	11	A-4a (V)	
	544.5	15																
HARD, BROWNISH GRAY **SILT AND CLAY**, SOME COARSE TO FINE SAND, SOME FINE GRAVEL, MOIST.		16																
		17	5 18 16	44	56	SS-7	4.5+	21	12	16	34	17	25	12	13	11	A-6a (4)	
		18																
		19	14 15 12	35	33	SS-8	4.25	-	-	-	-	-	-	-	-	10	A-6a (V)	
	539.5	20																
MEDIUM DENSE TO DENSE, BROWN **FINE SAND**, SOME COARSE SAND, TRACE SILT, TRACE CLAY, TRACE FINE GRAVEL, DRY TO DAMP.		21																
		22	9 14 15	37	56	SS-9	-	-	-	-	-	-	-	-	-	4	A-3 (V)	
		23																
		24	5 7 10	22	56	SS-10	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
		25																
		26	9 11 15	33	61	SS-11	-	-	-	-	-	-	-	-	-	4	A-3 (V)	
		27																
		28																
		29	3 5 9	18	61	SS-12	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
		30																
		31																
		32																
		33																
		34	4 6 11	22	67	SS-13	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
F.S		35																
		36																
		37																
		38																
		39	5 11 10	27	56	SS-14	-	1	33	56	9	1	NP	NP	NP	3	A-3 (0)	
		40																
		41																
		42																
		43																
		44	6 9 10	24	56	SS-15	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
		45																
		46																
		47																
		48																
		49	9 11 13	31	56	SS-16	-	-	-	-	-	-	-	-	-	5	A-3 (V)	
	510.0	50	EOB															

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 23.1'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

FOR INFORMATION ONLY

2017 1958 69/105	HAM-75-7.85	STRUCTURE FOUNDATION EXPLORATION WALLS H, I, J, K, S, U, V, Y, Z	DRAWN RRM CHECKED BRT

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / S.M.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 515+95.19 / 136.2' Rt	EXPLORATION ID B-051-0-11
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / A.D.	HAMMER: CME AUTOMATIC	ALIGNMENT: PROPOSED CL I-75	
PID: 77889 BR ID: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 561.7 (MSL) EOB: 50.0 ft.	PAGE 1 OF 1
START: 11/9/11 END: 11/9/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG : 39.197685782 ° N / 84.471016526 ° W	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.3' - TOPSOIL (3.0")	561.4																	
MEDIUM STIFF TO VERY STIFF, GRAYISH BROWN **ELASTIC SILT AND CLAY**, DAMP.			3 2 3	6	67	SS-1	2.50	-	-	-	-	-	-	-	-	29	A-5 (V)	
			2 1 3	5	56	SS-2	1.00	0	0	0	32	68	45	36	9	29	A-5 (9)	
	556.2																	
STIFF TO VERY STIFF, BROWN **CLAY**, LITTLE SILT, TRACE FINE SAND, MOIST.			4 4 5	12	61	SS-3	1.25	-	-	-	-	-	-	-	-	25	A-7-6 (V)	
					88	ST-4	4.00	0	0	1	10	89	52	21	31	23	A-7-6 (18)	
	550.7																	
VERY STIFF, BROWN **SILT AND CLAY**, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.			7 10 13	30	67	SS-5	4.00	-	-	-	-	-	-	-	-	11	A-6a (V)	
	548.7																	
DENSE, BROWNISH GRAY **GRAVEL WITH SAND AND SILT**, MOIST.			5 13 14	35	44	SS-6	-	-	-	-	-	-	-	-	-	14	A-2-4 (V)	
	546.2																	
VERY STIFF TO HARD, GRAY **SILT AND CLAY**, SOME COARSE TO FINE SAND, SOME FINE GRAVEL, DAMP.			10 7 10	22	67	SS-7	3.00	-	-	-	-	-	-	-	-	11	A-6a (V)	
-COBBLES PRESENT @ 16.0'			4 12 14	33	39	SS-8	3.00	21	11	15	32	21	25	13	12	10	A-6a (4)	
			10 12 16	36	50	SS-9	4.5+	-	-	-	-	-	-	-	-	12	A-6a (V)	
	538.2																	
MEDIUM DENSE TO DENSE, BROWN **FINE SAND**, SOME COARSE SAND, TRACE SILT, TRACE FINE GRAVEL, TRACE CLAY, DRY TO DAMP.			13 13 14	35	67	SS-10	-	-	-	-	-	-	-	-	-	4	A-3 (V)	
			10 13 15	36	56	SS-11	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
			5 8 10	23	56	SS-12	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
			4 6 8	18	61	SS-13	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
F.S			5 12 18	39	67	SS-14	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
			14 15 18	42	50	SS-15	-	4	22	66	7	1	NP	NP	NP	3	A-3 (0)	
			10 12 17	37	56	SS-16	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
	511.7	EOB 50																

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 15.5'; CAVE-IN DEPTH @ 23.4'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LB. BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / S.M.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 517+40.29 / 142.0' Rt	EXPLORATION ID B-052-0-11
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / A.D.	HAMMER: CME AUTOMATIC	ALIGNMENT: PROPOSED CL I-75	
PID: 77889 BR ID: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 562.8 (MSL) EOB: 50.0 ft.	PAGE 1 OF 1
START: 11/8/11 END: 11/8/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG : 39.197980553 ° N / 84.470655243 ° W	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.6' - TOPSOIL (7.0")	562.2																	
VERY STIFF, MOTTLED BROWN AND GRAY **SILTY CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.	559.8	1–2	5 5 4	12	67	SS-1	2.50	4	5	10	35	46	34	17	17	17	A-6b (11)	
STIFF, MOTTLED BROWN AND GRAY **CLAY**, SOME SILT, TRACE COARSE TO FINE SAND, MOIST.	554.8	3–4	2 3 4	9	50	SS-2	1.50	-	-	-	-	-	-	-	-	30	A-7-6 (V)	
		6–7	3 3 4	9	56	SS-3	1.50	-	-	-	-	-	-	-	-	31	A-7-6 (V)	
VERY STIFF, BROWN TO GRAY **SILT AND CLAY**, SOME COARSE TO FINE SAND, LITTLE TO SOME FINE GRAVEL, DAMP TO MOIST.		9–10			75	ST-4	3.75	32	9	14	13	32	29	15	14	19	A-6a (3)	
		11–12	5 7 12	24	61	SS-5	3.25	-	-	-	-	-	-	-	-	14	A-6a (V)	
		13–14	6 4 4	10	67	SS-6	3.50	-	-	-	-	-	-	-	-	13	A-6a (V)	
-COBBLES PRESENT @ 17.0'		16–17	4 13 11	31	61	SS-7	3.50	17	12	14	34	23	24	13	11	10	A-6a (5)	
		18–19	7 7 10	22	56	SS-8	3.50	-	-	-	-	-	-	-	-	11	A-6a (V)	
	539.8	21–22	11 24 24	62	56	SS-9	4.00	-	-	-	-	-	-	-	-	12	A-6a (V)	
MEDIUM DENSE, BROWN **FINE SAND**, TRACE COARSE SAND, TRACE SILT, TRACE CLAY, TRACE FINE GRAVEL, DRY TO DAMP.		23–24	7 9 13	28	44	SS-10	-	-	-	-	-	-	-	-	-	6	A-3 (V)	
		26–27	13 12 11	30	67	SS-11	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
		29–30	4 6 10	21	56	SS-12	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
F S		34–35	4 7 8	19	67	SS-13	-	1	2	89	7	1	NP	NP	NP	4	A-3 (0)	
		39–40	6 7 10	22	67	SS-14	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
		44–45	6 9 11	26	67	SS-15	-	-	-	-	-	-	-	-	-	4	A-3 (V)	
-BLOW COUNTS NOT RECORDED ON FIELD LOGS FOR SS-16		49–50			67	SS-16	-	-	-	-	-	-	-	-	-	5	A-3 (V)	
	512.8 EOB																	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 23.5'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

FOR INFORMATION ONLY

1960 2017 71/105	HAM-75-7.85	STRUCTURE FOUNDATION EXPLORATION WALLS H, I, J, K, S, U, V, Y, Z	DRAWN RRM CHECKED BRT

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 518+83.68 / 146.4' Rt	EXPLORATION ID B-053-0-11
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / S.M.	HAMMER: CME AUTOMATIC	ALIGNMENT: PROPOSED CL I-75	
PID: 77889 BR ID: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 564.2 (MSL) EOB: 50.0 ft.	PAGE 1 OF 1
START: 11/4/11 END: 11/4/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG : 39.198277606 ° N / 84.470301951 ° W	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.3' - TOPSOIL (4.0")	564.2																	
DENSE, BROWN **GRAVEL AND SAND**, TRACE SILT, DAMP.	563.9		15 8 32	51	44	SS-1	-	-	-	-	-	-	-	-	-	5	A-1-b (V)	
MEDIUM STIFF TO STIFF, BROWN **SILTY CLAY**, SOME TO AND COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.	561.7																	
-SAMPLE INTERVAL FOR STANDARD SPLIT SPOON MISSED FROM 3.5' TO 5.0', SAMPLE 3S-2 OBTAINED TO GET REPRESENTATIVE SAMPLE FROM THIS AREA			8	-	100	3S-2A	0.75	1	4	32	28	35	30	13	17	19	A-6b (8)	
			4 5 6	14	78	SS-3	2.00	-	-	-	-	-	-	-	-	22	A-6b (V)	
-CONSOLIDATION TEST PERFORMED @ 8.5'					100	ST-4	-	1	3	17	37	42	35	16	19	14	A-6b (12)	
	553.2																	
MEDIUM STIFF, GRAY **CLAY**, LITTLE SILT, TRACE FINE SAND, MOIST.	551.2		1 2 5	9	89	SS-5	1.00	0	0	1	19	80	48	21	27	29	A-7-6 (16)	
VERY STIFF, BROWN, BLACK AND GRAY **SANDY SILT**, SOME CLAY, LITTLE FINE GRAVEL, DRY.	548.7		13 12 14	33	78	SS-6	3.00	-	-	-	-	-	-	-	-	8	A-4a (V)	
STIFF, BROWN AND GRAY **CLAY**, SOME SILT, LITTLE COARSE TO FINE SAND, MOIST.	546.2		3 4 3	9	89	SS-7	1.25	-	-	-	-	-	-	-	-	25	A-7-6 (V)	
HARD, BROWN AND GRAY **SILT AND CLAY**, SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, DAMP.	541.2		2 8 11	24	67	SS-8	4.5+	-	-	-	-	-	-	-	-	11	A-6a (V)	
			4 4 6	13	89	SS-9	4.5+	15	9	19	32	25	25	13	12	12	A-6a (5)	
MEDIUM DENSE, BROWN **SILT**, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.	538.7		11 10 12	28	89	SS-10	-	-	-	-	-	-	-	-	-	16	A-4b (V)	
VERY STIFF, BROWN **SANDY SILT**, SOME CLAY, TRACE FINE GRAVEL, DRY.	536.2		8 10 13	30	33	SS-11	3.50	-	-	-	-	-	-	-	-	8	A-4a (V)	
MEDIUM DENSE, BROWN **FINE SAND**, SOME COARSE SAND, TRACE SILT, TRACE CLAY, TRACE FINE GRAVEL, DRY TO DAMP.			6 9 8	22	72	SS-12	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
			7 6 9	19	78	SS-13	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
F.S.			5 8 12	26	83	SS-14	-	-	-	-	-	-	-	-	-	5	A-3 (V)	
			6 8 9	22	89	SS-15	-	3	26	63	5	3	NP	NP	NP	2	A-3 (0)	
	514.2	EOB	5 9 11	26	89	SS-16	-	-	-	-	-	-	-	-	-	3	A-3 (V)	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 27.2'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85
TYPE: RETAINING WALL
PID: 77889 BR ID: NA
START: 11/7/11 END: 11/7/11

DRILLING FIRM / OPERATOR: RII / S.M.
SAMPLING FIRM / LOGGER: RII / A.D.
DRILLING METHOD: 4.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: CME-750X (SN 310218)
HAMMER: CME AUTOMATIC
CALIBRATION DATE: 5/6/11
ENERGY RATIO (%): 77.1

STATION / OFFSET: 520+22.83 / 156.4' Rt
ALIGNMENT: PROPOSED CL I-75
ELEVATION: 565.0 (MSL) EOB: 50.0 ft.
LAT / LONG : 39.198563487 ° N / 84.469953404 ° W

EXPLORATION ID
B-054-0-11

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.7' - TOPSOIL (8.0")	565.0																	
	564.3																	
STIFF TO VERY STIFF, BROWN AND BLACK TO MOTTLED BROWN AND GRAY **SILT AND CLAY**, LITTLE COARSE TO FINE SAND, LITTLE FINE GRAVEL, MOIST. -TRACE ORGANICS PRESENT IN SS-1		1	2 3 5	10	56	SS-1	2.00	-	-	-	-	-	-	-	-	17	A-6a (V)	
		2																
		3																
		4	3 4 5	12	44	SS-2	2.50	-	-	-	-	-	-	-	-	20	A-6a (V)	
		5																
		6																
		7	3 5 7	15	72	SS-3	2.50	19	7	10	31	33	29	17	12	17	A-6a (7)	
		8																
		9																
		10			0	ST-4	-	-	-	-	-	-	-	-	-	-		
	554.0																	
VERY STIFF, GRAY **CLAY**, SOME SILT, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.		11																
		12	5 9 16	32	0	SS-5	-	-	-	-	-	-	-	-	-	-		
		13	23	-	100	3S-5A	-	-	-	-	-	-	-	-	-	27	A-7-6 (V)	
	551.5																	
STIFF, GRAY **SILTY CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.		14	5 4 5	12	56	SS-6	1.50	-	-	-	-	-	-	-	-	15	A-6b (V)	
	549.5	15																
VERY STIFF TO HARD, GRAY **SANDY SILT**, SOME CLAY, LITTLE FINE GRAVEL, DAMP.		16																
		17	6 8 9	22	0	SS-7	-	-	-	-	-	-	-	-	-	-		
-COBBLES PRESENT @ 17.5'		18	12	-	100	3S-7	3.00	-	-	-	-	-	-	-	-	12	A-4a (V)	
		19	4 5 8	17	56	SS-8	2.50	22	11	14	29	24	24	15	9	11	A-4a (4)	
		20																
-COBBLES PRESENT @ 21.0'		21																
		22	8 15 25	51	83	SS-9	4.5+	-	-	-	-	-	-	-	-	10	A-4a (V)	
	542.0	23																
VERY STIFF, GRAY **SILT**, SOME COARSE TO FINE SAND, LITTLE CLAY, TRACE FINE GRAVEL, WET.		24	13 6 13	24	56	SS-10	3.50	-	-	-	-	-	-	-	-	24	A-4b (V)	
	539.5	25																
MEDIUM DENSE TO DENSE, BROWN **FINE SAND**, LITTLE COARSE SAND, LITTLE SILT, DRY TO DAMP.		26																
		27	18 16 15	40	67	SS-11	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
		28																
		29	4 8 10	23	50	SS-12	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
		30																
		31																
		32																
		33																
		34	17 22 16	49	39	SS-13	-	-	-	-	-	-	-	-	-	2	A-3 (V)	
		35																
		36																
		37																
P.S.		38																
		39	4 9 11	26	67	SS-14	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
		40																
		41																
		42																
		43																
		44	5 11 11	28	61	SS-15	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
		45																
		46																
		47																
		48																
		49	7 9 11	26	67	SS-16	-	-	-	-	-	-	-	-	-	4	A-3 (V)	
	515.0	50	EOB															

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 23.0'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

FOR INFORMATION ONLY

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / S.M.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 521+64.10 / 164.9' Rt	EXPLORATION ID B-055-0-11
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / A.D.	HAMMER: CME AUTOMATIC	ALIGNMENT: PROPOSED CL I-75	
PID: 77889 BR ID: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 565.2 (MSL) EOB: 50.0 ft.	PAGE 1 OF 1
START: 11/8/11 END: 11/8/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG : 39.198864156 ° N / 84.469613398 ° W	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.8' - TOPSOIL (10.0")	565.2																	
FILL: LOOSE TO MEDIUM DENSE, BROWN AND BLACK **GRAVEL WITH SAND AND SILT**, LITTLE CLAY, DAMP TO MOIST.	564.4	1	4 6 4	13	50	SS-1	-	27	12	30	18	13	23	15	8	12	A-2-4 (0)	
-CLAY TILE FRAGMENTS PRESENT THROUGHOUT		2																
		3	3 2 2	5	67	SS-2	-	-	-	-	-	-	-	-	-	18	A-2-4 (V)	
	559.7	4																
MEDIUM DENSE, BROWN **FINE SAND**, TRACE SILT, DAMP.		5																
		6	4 7 4	14	67	SS-3	-	-	-	-	-	-	-	-	-	9	A-3 (V)	
	557.2	7																
VERY LOOSE TO LOOSE, BROWN **SANDY SILT**, LITTLE CLAY, MOIST TO WET.		8																
		9	3 3 3	8	61	SS-4	-	-	-	-	-	-	-	-	-	14	A-4a (V)	
		10																
		11																
		12	3 2 3	6	67	SS-5	-	0	0	56	25	19	NP	NP	NP	14	A-4a (2)	
		13																
		14	2 1 1	3	61	SS-6	-	-	-	-	-	-	-	-	-	26	A-4a (V)	
		15																
		16																
		17	1 2 2	5	67	SS-7	-	-	-	-	-	-	-	-	-	30	A-4a (V)	
	547.2	18																
VERY STIFF TO HARD, GRAY **SANDY SILT**, SOME CLAY, SOME FINE GRAVEL, DAMP.		19																
		20	3 6 5	14	56	SS-8	3.75	-	-	-	-	-	-	-	-	10	A-4a (V)	
		21																
		22	7 9 10	24	67	SS-9	4.5+	22	12	14	27	25	24	15	9	12	A-4a (3)	
	542.2	23																
VERY STIFF, BROWN **SILT**, SOME FINE SAND, LITTLE CLAY, WET.		24	9 7 15	28	72	SS-10	4.00	-	-	-	-	-	-	-	-	23	A-4b (V)	
	539.7	25																
MEDIUM DENSE, BROWN **FINE SAND**, LITTLE COARSE SAND, TRACE SILT, DRY TO DAMP.		26																
		27	14 11 11	28	56	SS-11	-	-	-	-	-	-	-	-	-	4	A-3 (V)	
		28																
		29	9 6 7	17	67	SS-12	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
		30																
		31																
		32																
		33																
		34	10 6 5	14	61	SS-13	-	-	-	-	-	-	-	-	-	7	A-3 (V)	
		35																
		36																
		37																
		38																
		39	4 5 6	14	72	SS-14	-	-	-	-	-	-	-	-	-	8	A-3 (V)	
		40																
		41																
		42																
		43																
		44	8 8 9	22	56	SS-15	-	-	-	-	-	-	-	-	-	7	A-3 (V)	
		45																
		46																
		47																
		48																
		49	5 5 8	17	61	SS-16	-	-	-	-	-	-	-	-	-	5	A-3 (V)	
	515.2	50	EOB															

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 22.0'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LB. BENTONITE CHIPS AND SOIL CUTTINGS

FOR INFORMATION ONLY

2017 1963 74/105	HAM-75-7.85	STRUCTURE FOUNDATION EXPLORATION WALLS H, I, J, K, S, U, V, Y, Z	DRAWN RRM CHECKED BRT

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PROJECT: HAM-75-7.85
TYPE: RETAINING WALL
PID: 77889 BR ID: NA
START: 11/29/11 END: 11/29/11

DRILLING FIRM / OPERATOR: RII / A.B.
SAMPLING FIRM / LOGGER: RII / A.D.
DRILLING METHOD: 3.25" - HSA
SAMPLING METHOD: SPT

DRILL RIG: MOBILE B-53 (SN 624400)
HAMMER: AUTOMATIC
CALIBRATION DATE: 5/6/11
ENERGY RATIO (%): 78.4

STATION / OFFSET: 523+33.46 / 148.5' Rt
ALIGNMENT: PROPOSED CL I-75
ELEVATION: 566.0 (MSL) EOB: 50.0 ft.
LAT / LONG : 39.19927707 ° N / 84.46929617 ° W

EXPLORATION ID
B-056-0-11

PAGE
1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
1.0' - TOPSOIL (12.0")	565.0																	
VERY LOOSE, BROWN **GRAVEL AND SAND**, TRACE SILT, MOIST.	563.0		1 2 1	4	44	SS-1	-	-	-	-	-	-	-	-	-	12	A-1-b (V)	
SOFT, BROWN **SANDY SILT**, SOME CLAY, MOIST.	560.5		2 3 3	8	39	SS-2	0.50	0	8	33	39	20	22	16	6	18	A-4a (5)	
STIFF, BROWN **SILT AND CLAY**, SOME COARSE TO FINE SAND, MOIST.	556.4		2 4 5	12	56	SS-3	1.50	-	-	-	-	-	-	-	-	20	A-6a (V)	
					58	ST-4	1.25	-	-	-	-	-	-	-	-	-	A-6a (V)	
							-	-	-	-	-	-	-	-	-	11	A-3 (V)	
VERY LOOSE TO MEDIUM DENSE, LIGHT BROWN **COARSE AND FINE SAND**, LITTLE SILT, TRACE CLAY, TRACE FINE GRAVEL, DAMP TO MOIST.			2 3 2	7	61	SS-5	-	-	-	-	-	-	-	-	-	9	A-3a (V)	
			2 1 2	4	56	SS-6	-	-	-	-	-	-	-	-	-	10	A-3a (V)	
			7 5 5	13	44	SS-7	-	1	21	58	18	2	NP	NP	NP	5	A-3a (0)	
			4 5 5	13	61	SS-8	-	-	-	-	-	-	-	-	-	6	A-3a (V)	
	543.0		5 3 3	8	50	SS-9	-	-	-	-	-	-	-	-	-	8	A-3a (V)	
STIFF, LIGHT BROWN **SILT AND CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.	540.5		7 6 8	18	11	SS-10	1.50	-	-	-	-	-	-	-	-	12	A-6a (V)	
VERY LOOSE TO LOOSE, LIGHT BROWN **FINE SAND**, TRACE COARSE SAND, TRACE SILT, TRACE CLAY, DAMP TO WET.			2 2 2	5	61	SS-11	-	-	-	-	-	-	-	-	-	13	A-3 (V)	
			1 2 1	4	67	SS-12	-	-	-	-	-	-	-	-	-	12	A-3 (V)	
			WOH WOH 1	1	61	SS-13	-	-	-	-	-	-	-	-	-	34	A-3 (V)	
			2 2 2	5	56	SS-14	-	0	6	86	7	1	NP	NP	NP	8	A-3 (0)	
			3 2 3	7	61	SS-15	-	-	-	-	-	-	-	-	-	11	A-3 (V)	
	519.0																	
MEDIUM DENSE, LIGHT BROWN **FINE SAND**, TRACE COARSE SAND, TRACE SILT, TRACE CLAY, DAMP.	516.0	EOB	5 6 7	17	61	SS-16	-	-	-	-	-	-	-	-	-	8	A-3 (V)	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 30.5'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LB. BENTONITE CHIPS AND SOIL CUTTINGS

FOR INFORMATION ONLY

1964 2017 75/105

HAM-75-7.85

STRUCTURE FOUNDATION EXPLORATION
WALLS H, I, J, K, S, U, V, Y, Z

DRAWN RRM
CHECKED BRT

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PROJECT: HAM-75-7.85
TYPE: RETAINING WALL
PID: 77889 BR ID: NA
START: 11/21/11 END: 11/21/11

DRILLING FIRM / OPERATOR: RII / A.B.
SAMPLING FIRM / LOGGER: RII / A.D.
DRILLING METHOD: 3.25" - HSA
SAMPLING METHOD: SPT

DRILL RIG: MOBILE B-53 (SN 624400)
HAMMER: AUTOMATIC
CALIBRATION DATE: 5/6/11
ENERGY RATIO (%): 78.4

STATION / OFFSET: 524+76.23 / 140.3' Rt
ALIGNMENT: PROPOSED CL I-75
ELEVATION: 565.7 (MSL) EOB: 50.0 ft.
LAT / LONG : 39.199621604 ° N / 84.469026372 ° W

EXPLORATION ID
B-057-0-11

PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV. 565.7	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.3' - ASPHALT (3.0")	565.4																	
0.7' - CONCRETE (8.0")	564.7																	
LOOSE, GRAY **GRAVEL WITH SAND, SILT, AND CLAY**, DAMP.	562.7	2	5 4 1	7	33	SS-1	-	-	-	-	-	-	-	-	-	6	A-2-6 (V)	
VERY LOOSE TO MEDIUM DENSE, GRAY **SANDY SILT**, TRACE TO SOME CLAY, TRACE FINE GRAVEL, MOIST.		4	2 3 5	10	33	SS-2	-	-	-	-	-	-	-	-	-	16	A-4a (V)	
		7	2 2 2	5	33	SS-3	-	5	10	30	29	26	NP	NP	NP	17	A-4a (4)	
		9	WOH WOH WOH	0	39	SS-4	-	-	-	-	-	-	-	-	-	21	A-4a (V)	
		12	2 2 3	7	39	SS-5	-	-	-	-	-	-	-	-	-	20	A-4a (V)	
		14	WOH 2 1	4	33	SS-6	-	-	-	-	-	-	-	-	-	13	A-4a (V)	
		17	3 2 4	8	56	SS-7	-	0	16	45	38	1	NP	NP	NP	13	A-4a (1)	
		19	3 4 5	12	50	SS-8	-	-	-	-	-	-	-	-	-	13	A-4a (V)	
	545.2																	
MEDIUM DENSE, GRAY **COARSE AND FINE SAND**, LITTLE SILT, TRACE CLAY, DAMP.	542.7	22	5 6 4	13	61	SS-9	-	-	-	-	-	-	-	-	-	6	A-3a (V)	
STIFF, GRAY **CLAY**, AND SILT, TRACE COARSE TO FINE SAND, MOIST.		24	2 1 2	4	61	SS-10	1.50	-	-	-	-	-	-	-	-	25	A-7-6 (V)	
		27	WOH 2 1	4	67	SS-11	1.25	0	1	2	49	48	42	19	23	22	A-7-6 (14)	
	537.7																	
STIFF TO VERY STIFF, GRAY **SILT AND CLAY**, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.		29	3 4 6	13	61	SS-12	2.25	-	-	-	-	-	-	-	-	19	A-6a (V)	
		31			88	ST-13	1.50	7	4	15	46	28	27	16	11	19	A-6a (8)	
	533.2																	
MEDIUM DENSE, BROWN **FINE SAND**, TRACE COARSE SAND, TRACE SILT, TRACE CLAY, DRY TO DAMP.		34	10 11 6	22	61	SS-14	-	-	-	-	-	-	-	-	-	6	A-3 (V)	
F.S.		39	6 5 4	12	67	SS-15	-	-	-	-	-	-	-	-	-	8	A-3 (V)	
		44	5 7 8	20	67	SS-16	-	-	-	-	-	-	-	-	-	6	A-3 (V)	
	515.7	49	10 11 10	27	67	SS-17	-	-	-	-	-	-	-	-	-	4	A-3 (V)	
		EOB 50																

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 44.4'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85
TYPE: RETAINING WALL
PID: 77889 BR ID: NA
START: 11/23/11 END: 11/23/11

DRILLING FIRM / OPERATOR: RII / A.B.
SAMPLING FIRM / LOGGER: RII / A.D.
DRILLING METHOD: 3.25" - HSA
SAMPLING METHOD: SPT

DRILL RIG: MOBILE B-53 (SN 624400)
HAMMER: AUTOMATIC
CALIBRATION DATE: 5/6/11
ENERGY RATIO (%): 78.4

STATION / OFFSET: 526+17.22 / 124.2' Rt
ALIGNMENT: PROPOSED CL I-75
ELEVATION: 566.8 (MSL) EOB: 50.0 ft.
LAT / LONG : 39.19997097 ° N / 84.468791636 ° W

EXPLORATION ID
B-058-0-11
PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV. 566.8	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.3' - ASPHALT (3.0")	566.5	1																
0.8' - CONCRETE (8.0")	565.7																	
0.6' - AGGREGATE BASE (7.0")	565.1																	
VERY STIFF, BROWNISH GRAY **SILT AND CLAY**, SOME COARSE TO FINE SAND, DAMP.	563.8	2	11 13 7	26	33	SS-1	3.75	-	-	-	-	-	-	-	-	13	A-6a (V)	
STIFF TO VERY STIFF, BROWNISH GRAY **CLAY**, AND COARSE TO FINE SAND, SOME SILT, MOIST.		3																
		4	3 4 5	12	33	SS-2	2.50	-	-	-	-	-	-	-	-	22	A-7-6 (V)	
		5																
		6																
		7	2 3 3	8	56	SS-3	1.50	0	2	36	30	32	47	18	29	21	A-7-6 (14)	
		8																
		9																
		10			42	ST-4	1.50	0	2	36	28	34	43	17	26	21	A-7-6 (12)	
	556.3	11																
VERY STIFF TO HARD, BROWNISH GRAY TO BROWN **SILTY CLAY**, SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, MOIST.		12	3 5 7	16	56	SS-5	3.00	-	-	-	-	-	-	-	-	22	A-6b (V)	
		13																
		14	3 4 6	13	67	SS-6	4.50	-	-	-	-	-	-	-	-	23	A-6b (V)	
	551.3	15																
HARD, BROWN **SILT AND CLAY**, SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, DAMP.		16																
		17	6 9 12	27	67	SS-7	4.5+	16	11	16	34	23	30	15	15	12	A-6a (6)	
	548.8	18																
MEDIUM DENSE, BROWN **COARSE AND FINE SAND**, LITTLE FINE GRAVEL, LITTLE SILT, TRACE CLAY, MOIST.		19	8 9 10	25	56	SS-8	-	-	-	-	-	-	-	-	-	14	A-3a (V)	
	546.3	20																
HARD, BROWN **SILT AND CLAY**, SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, DAMP.		21																
		22	11 24 21	59	56	SS-9	4.5+	-	-	-	-	-	-	-	-	12	A-6a (V)	
	543.8	23																
VERY STIFF, BROWN **SILT**, LITTLE CLAY, LITTLE COARSE TO FINE SAND, WET.		24	9 9 16	33	67	SS-10	4.00	-	-	-	-	-	-	-	-	21	A-4b (V)	
	541.3	25																
MEDIUM DENSE TO VERY DENSE, BROWN **COARSE AND FINE SAND**, LITTLE SILT, TRACE CLAY, DAMP.		26																
		27	8 10 13	30	61	SS-11	-	-	-	-	-	-	-	-	-	6	A-3a (V)	
		28																
		29	8 11 13	31	67	SS-12	-	-	-	-	-	-	-	-	-	7	A-3a (V)	
		30																
		31																
		32																
		33																
		34	13 21 23	57	56	SS-13	-	-	-	-	-	-	-	-	-	5	A-3a (V)	
		35																
		36																
		37																
		38																
		39	9 11 13	31	56	SS-14	-	0	1	78	18	3	NP	NP	NP	8	A-3a (0)	
		40																
		41																
		42																
		43																
		44	7 11 11	29	56	SS-15	-	-	-	-	-	-	-	-	-	5	A-3a (V)	
		45																
		46																
		47																
		48																
		49	11 11 10	27	61	SS-16	-	-	-	-	-	-	-	-	-	6	A-3a (V)	
	516.8	50	EOB															

W

NOTES: GROUNDWATER INITIALY ENCOUNTERED @ 22.0'; CAVE-IN DEPTH @ 21.0'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

FOR INFORMATION ONLY

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / A.B.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 527+50.52 / 135.9' Rt	EXPLORATION ID B-059-0-11
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / T.F.	HAMMER: CME AUTOMATIC	ALIGNMENT: PROPOSED CL I-75	
PID: 77889 BR ID: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 570.5 (MSL) EOB: 50.0 ft.	PAGE 1 OF 1
START: 12/6/11 END: 12/6/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG : 39.200281574 ° N / 84.468509172 ° W	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.4' - ASPHALT (5.0")	570.5																	
0.8' - CONCRETE (9.0")	570.1																	
	569.3																	
VERY STIFF TO HARD, BROWN TO BROWNISH GRAY **SILTY CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.		1																
		2	10 7 5	15	39	SS-1	2.75	-	-	-	-	-	-	-	-	18	A-6b (V)	
		3																
		4	2 4 6	13	44	SS-2	4.50	-	-	-	-	-	-	-	-	18	A-6b (V)	
	565.0	5																
MEDIUM STIFF TO STIFF, GRAY **CLAY**, SOME SILT, MOIST.		6																
		7	3 3 6	12	89	SS-3	2.50	-	-	-	-	-	-	-	-	30	A-7-6 (V)	
		8																
		9	2 3 3	8	83	SS-4	2.00	-	-	-	-	-	-	-	-	30	A-7-6 (V)	
		10																
		11																
		12	2 2 3	6	67	SS-5	1.00	0	0	0	29	71	52	22	30	31	A-7-6 (18)	
		13																
		14	2 2 3	6	100	SS-6	1.25	-	-	-	-	-	-	-	-	31	A-7-6 (V)	
		15																
		16																
		17	1 2 2	5	100	SS-7	1.25	-	-	-	-	-	-	-	-	35	A-7-6 (V)	
		18																
		19	3 4 5	12	89	SS-8	1.50	-	-	-	-	-	-	-	-	27	A-7-6 (17)	
	550.0	20																
VERY STIFF TO HARD, GRAY TO BROWN **SILT AND CLAY**, SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, DAMP TO MOIST.		21																
		22	3 5 7	15	100	SS-9	3.75	-	-	-	-	-	-	-	-	10	A-6a (V)	
		23																
		24	4 6 8	18	72	SS-10	3.50	12	8	16	38	26	26	13	13	12	A-6a (7)	
		25																
		26																
		27	4 21 28	63	67	SS-11	4.50	-	-	-	-	-	-	-	-	11	A-6a (V)	
	542.5	28																
VERY DENSE, GRAY **GRAVEL**, LITTLE COARSE TO FINE SAND, DRY.		29	13 16 26	54	17	SS-12	-	-	-	-	-	-	-	-	-	0	A-1-a (V)	
	538.5	30																
MEDIUM DENSE TO DENSE, GRAYISH BROWN **COARSE AND FINE SAND**, TRACE SILT, TRACE CLAY, DRY.		31																
		32																
		33																
		34	7 9 13	28	67	SS-13	-	-	-	-	-	-	-	-	-	2	A-3a (V)	
		35																
		36																
		37																
		38																
		39	7 8 10	23	83	SS-14	-	0	1	88	9	2	NP	NP	NP	3	A-3a (0)	
		40																
		41																
		42																
		43																
		44	7 10 15	32	94	SS-15	-	-	-	-	-	-	-	-	-	3	A-3a (V)	
		45																
		46																
		47																
		48																
		49	7 3 9	15	78	SS-16	-	-	-	-	-	-	-	-	-	3	A-3a (V)	
	520.5	50	EOB															

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 29.6'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

FOR INFORMATION ONLY

1967 2017	78/105	HAM-75-7.85	STRUCTURE FOUNDATION EXPLORATION WALLS H, I, J, K, S, U, V, Y, Z

DRAWN RRM CHECKED BRT

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / A.B.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 528+76.00 / 183.5' Rt	EXPLORATION ID B-060-0-11
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / T.F.	HAMMER: CME AUTOMATIC	ALIGNMENT: PROPOSED CL I-75	
PID: 77889 BR ID: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 575.9 (MSL) EOB: 50.0 ft.	PAGE 1 OF 1
START: 12/7/11 END: 12/7/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG : 39.200523523 ° N / 84.468135429 ° W	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.3' - ASPHALT (4.0")	575.6																	
0.4' - CONCRETE (5.0")	575.2																	
SOFT TO STIFF, DARK BROWN **SILTY CLAY**, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.		1	1 2 2	5	50	SS-1	1.50	-	-	-	-	-	-	-	-	19	A-6b (V)	
		2																
		3																
		4	1 1 1	3	78	SS-2	0.50	5	2	25	37	31	33	15	18	20	A-6b (10)	
	570.4	5																
STIFF TO VERY STIFF, MOTTLED BROWN AND GRAY **CLAY**, AND SILT, TRACE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.		6																
		7	3 7 9	21	89	SS-3	3.50	-	-	-	-	-	-	-	-	18	A-7-6 (V)	
		8																
-qu @ 9.8' = 3.3 tsf		9			96	ST-4	2.50	2	2	5	39	52	43	20	23	20	A-7-6 (14)	
		10																
		11																
		12	1 3 3	8	61	SS-5	2.00	-	-	-	-	-	-	-	-	30	A-7-6 (V)	
	562.9	13																
SOFT TO MEDIUM STIFF, GRAY **CLAY**, SOME SILT, MOIST.		14	1 1 1	3	100	SS-6	0.50	-	-	-	-	-	-	-	-	34	A-7-6 (V)	
		15																
		16																
		17	2 2 4	8	100	SS-7	1.00	0	0	0	23	77	55	22	33	32	A-7-6 (V)	
		18																
		19	2 3 4	9	100	SS-8	1.00	-	-	-	-	-	-	-	-	34	A-7-6 (V)	
		20																
		21																
		22	2 4 3	9	100	SS-9	1.00	-	-	-	-	-	-	-	-	27	A-7-6 (V)	
	552.9	23																
VERY STIFF TO HARD, GRAY **SILT AND CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DRY TO MOIST.		24	5 9 10	24	89	SS-10	3.25	-	-	-	-	-	-	-	-	14	A-6a (V)	
		25																
		26																
		27	9 12 14	33	100	SS-11	3.00	-	-	-	-	-	-	-	-	12	A-6a (V)	
		28																
		29	6 9 10	24	94	SS-12	3.25	-	-	-	-	-	-	-	-	9	A-6a (V)	
		30																
		31																
		32																
		33																
		34	13 13 22	45	67	SS-13	4.25	-	-	-	-	-	-	-	-	20	A-6a (V)	
	538.9	35																
MEDIUM DENSE, BROWN **COARSE AND FINE SAND**, LITTLE SILT, TRACE CLAY, DAMP.		36																
		37																
		38																
		39	6 8 11	24	67	SS-14	-	0	1	86	10	3	NP	NP	NP	5	A-3a (0)	
		40																
		41																
		42																
		43																
		44	12 8 12	26	83	SS-15	-	-	-	-	-	-	-	-	-	4	A-3a (V)	
	528.9	45																
VERY DENSE, BROWN **COARSE AND FINE SAND**, LITTLE SILT, TRACE CLAY, DAMP.		46																
		47																
		48																
		49	7 23 23	59	100	SS-16	-	-	-	-	-	-	-	-	-	5	A-3a (V)	
	525.9	EOB 50																

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 41.5'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

FOR INFORMATION ONLY

1968 2017	79 / 105	HAM-75-7.85	STRUCTURE FOUNDATION EXPLORATION WALLS H, I, J, K, S, U, V, Y, Z

DRAWN RRM
CHECKED BRT

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PROJECT: HAM-75-7.85
TYPE: RETAINING WALL
PID: 77889 BR ID: NA
START: 11/30/11 END: 11/30/11

DRILLING FIRM / OPERATOR: RII / A.B.
SAMPLING FIRM / LOGGER: RII / A.D.
DRILLING METHOD: 3.25" - HSA
SAMPLING METHOD: SPT

DRILL RIG: MOBILE B-53 (SN 624400)
HAMMER: AUTOMATIC
CALIBRATION DATE: 5/6/11
ENERGY RATIO (%): 78.4

STATION / OFFSET: 530+23.82 / 195.3' Rt
ALIGNMENT: PROPOSED CL I-75
ELEVATION: 586.9 (MSL) EOB: 50.0 ft.
LAT / LONG : 39.20086991 ° N / 84.467835916 ° W

EXPLORATION ID
B-061-0-11
PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.3' - ASPHALT (4.0")	586.6																	
0.8' - CONCRETE (9.0")	585.8																	
STIFF TO VERY STIFF, DARK BROWN **SILTY CLAY**, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.		1	3 3 3	8	56	SS-1	1.50	-	-	-	-	-	-	-	-	16	A-6b (V)	
		2																
		3																
		4	3 5 5	13	50	SS-2	2.75	1	2	25	41	31	37	16	21	19	A-6b (12)	
		5																
		6	1 2 2	5	11	SS-3	3.00	-	-	-	-	-	-	-	-	21	A-6b (V)	
	578.9	7																
VERY STIFF TO HARD, BROWNISH GRAY TO GRAY **CLAY**, SOME TO AND SILT, TRACE TO LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.		8																
		9			60	ST-4	4.00	6	4	10	33	47	46	20	26	22	A-7-6 (16)	
-CU TRIAXIAL TEST PERFORMED @ 9.5'		10																
		11																
		12	5 6 8	18	61	SS-5	4.50	-	-	-	-	-	-	-	-	21	A-7-6 (V)	
		13																
		14	5 5 6	14	61	SS-6	4.50	-	-	-	-	-	-	-	-	25	A-7-6 (V)	
		15																
		16																
		17	3 5 8	17	61	SS-7	3.50	0	1	0	42	57	42	20	22	26	A-7-6 (13)	
		18																
		19	2 5 4	12	72	SS-8	2.50	-	-	-	-	-	-	-	-	33	A-7-6 (V)	
	566.4	20																
STIFF, GRAY **CLAY**, SOME SILT, MOIST.		21																
		22	3 5 7	16	56	SS-9	2.00	-	-	-	-	-	-	-	-	33	A-7-6 (V)	
		23																
		24	3 5 6	14	61	SS-10	2.00	-	-	-	-	-	-	-	-	32	A-7-6 (V)	
		25																
		26																
		27	3 3 5	10	67	SS-11	1.25	0	0	0	26	74	52	24	28	33	A-7-6 (18)	
		28																
		29	3 4 4	10	78	SS-12	1.25	-	-	-	-	-	-	-	-	33	A-7-6 (V)	
	554.9	30																
VERY STIFF TO HARD, GRAY **SILT AND CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.		31																
		32																
		33																
		34	4 8 11	25	83	SS-13	4.00	-	-	-	-	-	-	-	-	10	A-6a (V)	
		35																
		36																
		37																
		38																
		39	6 11 13	31	67	SS-14	4.00	19	12	15	33	21	29	14	15	10	A-6a (6)	
-COBBLES PRESENT @ 40.5'		40																
		41																
		42																
		43																
		44	17 23 30	69	61	SS-15	4.5+	-	-	-	-	-	-	-	-	14	A-6a (V)	
	539.9	45																
DENSE, LIGHT BROWN **FINE SAND**, TRACE SILT, DRY.		46																
		47																
		48																
		49	14 17 20	48	50	SS-16	-	-	-	-	-	-	-	-	-	4	A-3 (V)	
	536.9	50	EOB															

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 12.0'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LB. BENTONITE CHIPS AND SOIL CUTTINGS

FOR INFORMATION ONLY

1969 2017	80/105	HAM-75-7.85	STRUCTURE FOUNDATION EXPLORATION WALLS H, I, J, K, S, U, V, Y, Z

DRAWN RRM
CHECKED BRT

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PROJECT: HAM-75-10.10	DRILLING FIRM / OPERATOR: RII / C.M.	DRILL RIG: Mobile 53	STATION / OFFSET: 506+72.15 / 141.7' RT	EXPLORATION ID B-001-0-07
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / C.M.	HAMMER: AUTOMATIC	ALIGNMENT: I-75	
PID: 76256 BR ID: N/A	DRILLING METHOD: 2.25" HSA	CALIBRATION DATE: N/A	ELEVATION: 557.01 EOB: 35.0 ft.	PAGE 1 OF 1
START: 6/6/07 END: 6/6/07	SAMPLING METHOD: SPT	ENERGY RATIO (%): N/A	COORD: N=441680.317 / E=1409443.918	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS	INST.
4" - TOPSOIL	556.6																	
STIFF TO MEDIUM STIFF, BROWN **SANDY SILT**, SOME TO TRACE FINE GRAVEL, SOME CLAY, DRY TO DAMP.	557.0		4 6 8	14	83	SS-1	4.5	24	17	11	24	24	26	16	10	6	A-4a	
			4 5 6	11	0	AS-2	2.5	-	-	-	-	-	-	-	-	13	A-4a (V)	
			3 3 4	7	83	SS-3	4.0	-	-	-	-	-	-	-	-	-	A-4a (V)	
	547.5		3 4		89	SS-4A	3.5	0	10	39	22	29	25	15	10	15	A-4a	
MEDIUM STIFF, DARK BROWN **SILT AND CLAY**, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.			5			SS-4B	2.0	-	-	-	-	-	-	-	-	-	A-6a (V)	
			4 3 2	5	67	SS-5	2.0	-	-	-	-	-	-	-	-	-	A-6a (V)	
	542.0																	
VERY LOOSE, DARK BROWN **GRAVEL AND SAND**, SOME SILT, TRACE GLASS FRAGMENTS, MOIST.			1 2 1	3	44	SS-6		-	-	-	-	-	-	-	-	12	A-1-b (V)	
	535.0																	
LOOSE TO MEDIUM DENSE, DARK BROWN **GRAVEL AND SAND**, SOME SILT, TRACE CLAY, DAMP.			3 4 4	8	89	SS-7		-	-	-	-	-	-	-	-	-	A-1-b (V)	
			5 7 8	15	89	SS-8		35	21	20	- 24 -		-	-	-	3	A-1-b	
			5 6 7	13	94	SS-9		-	-	-	-	-	-	-	-	-	A-1-b (V)	
	522.0	EOB																

FOR INFORMATION ONLY

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

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PROJECT: HAM-75-10.10	DRILLING FIRM / OPERATOR: RII / C.M.	DRILL RIG: CME 750X	STATION / OFFSET: 508+28.58 / 108.3' RT	EXPLORATION ID B-002-0-07
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / C.M.	HAMMER: AUTOMATIC	ALIGNMENT: I-75	
PID: 76256 BR ID: N/A	DRILLING METHOD: 3.75" HSA	CALIBRATION DATE: N/A	ELEVATION: 556.20 EOB: 35.0 ft.	PAGE 1 OF 1
START: 6/6/07 END: 6/6/07	SAMPLING METHOD: SPT	ENERGY RATIO (%): N/A	COORD: N=441687.423 / E=1409445.217	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS	INST.
4.0" - ASPHALT	556.2																	
10.0" - CONCRETE	555.8																	
8" - AGGREGATE BASE	555.0																	
FILL: STIFF, BROWN **CLAY**, TRACE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.	554.4		7 5 4	9	56	SS-1	4.5	-	-	-	-	-	-	-	-	15	A-7-6 (V)	
			3 5 6	11	100	SS-2	4.0	2	1	4	26	67	44	22	22	24	A-7-6	
			3 6 8	14	89	SS-3	3.0	-	-	-	-	-	-	-	-	-	A-7-6 (V)	
FILL: MEDIUM STIFF, BROWN **SILT AND CLAY**, LITTLE COARSE TO FINE SAND, TRACE COARSE TO FINE GRAVEL, DAMP.	548.2		2 3 4	7	100	SS-4	4.0	-	-	-	-	-	-	-	-	17	A-6a (V)	
FILL: LOOSE, BROWN **SANDY SILT**, TRACE COARSE TO FINE GRAVEL, TRACE GLASS FRAGMENTS, DAMP.	542.7		5 5 5	10	89	SS-5		-	-	-	-	-	-	-	-	-	A-4a (V)	
LOOSE TO MEDIUM DENSE, BROWN **FINE SAND AND COARSE SAND**, TRACE FINE GRAVEL, TRACE SILT, DRY.	540.2		2 3 5	8	94	SS-6		2	37	58	- 3 -		-	-	-	2	A-3	
			4 6 8	14	100	SS-7		-	-	-	-	-	-	-	-	-	A-3 (V)	
			10 11 12	23	78	SS-8		-	-	-	-	-	-	-	-	4	A-3 (V)	
MEDIUM DENSE, BROWN **GRAVEL AND SAND**, TRACE SILT, DAMP.	526.2		8 11 13	24	94	SS-9		-	-	-	-	-	-	-	-	-	A-1-b (V)	
	521.2	EOB																

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

FOR INFORMATION ONLY

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PROJECT: HAM-75-10.10	DRILLING FIRM / OPERATOR: RII / C.M.	DRILL RIG: Mobile 53	STATION / OFFSET: 509+78.58 / 108.4' RT	EXPLORATION ID B-003-0-07
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / C.M.	HAMMER: AUTOMATIC	ALIGNMENT: I-75	
PID: 76256 BR ID: N/A	DRILLING METHOD: 2.25" HSA	CALIBRATION DATE: N/A	ELEVATION: 558.10 EOB: 30.0 ft.	PAGE 1 OF 1
START: 6/6/07 END: 6/6/07	SAMPLING METHOD: SPT	ENERGY RATIO (%): N/A	COORD: N=441924.063 / E=1409632.595	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS	INST.
6" - TOPSOIL	558.1																	
MEDIUM DENSE, BROWN **GRAVEL WITH SAND, SILT AND CLAY** , DAMP.	557.6																	
		1																
		2	6 7 9	16	100	SS-1		-	-	-	-	-	-	-	-	5	A-2-6 (V)	
	555.1	3																
STIFF, BROWN **SILT AND CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.		4	4 5 6	11	78	SS-2	4.5	2	2	15	35	46	32	17	15	13	A-6a	
		5																
		6																
		7	4 5 5	10	100	SS-3	4.25	-	-	-	-	-	-	-	-	-	A-6a (V)	
	550.1	8																
STIFF, BROWN **SANDY SILT**, TRACE FINE GRAVEL, MOIST.		9	5 6 7	13	100	SS-4	2.0	-	-	-	-	-	-	-	-	15	A-4a (V)	
	545.6	10																
MEDIUM DENSE, BROWN **FINE SAND**, SOME COARSE SAND, TRACE SILT, TRACE FINE GRAVEL, DRY.		11																
		12																
		13																
		14	6 6 7	13	56	SS-5		-	-	-	-	-	-	-	-	-	A-3 (V)	
		15																
		16																
		17																
		18																
		19	5 7 8	15	100	SS-6		2	21	69	- 8	-	-	-	-	-	A-3	
		20																
		21																
F-S		22																
		23																
		24	6 10 13	23	83	SS-7		-	-	-	-	-	-	-	-	-	A-3 (V)	
		25																
		26																
		27																
		28																
		29	7 10 10	20	78	SS-8		-	-	-	-	-	-	-	-	-	A-3 (V)	
	528.1	EOB 30																

FOR INFORMATION ONLY

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

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PROJECT: HAM-75-10.10	DRILLING FIRM / OPERATOR: RII / C.M.	DRILL RIG: CME 750X	STATION / OFFSET: 511+29.53 / 108.2' RT	EXPLORATION ID B-004-0-07
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / C.M.	HAMMER: AUTOMATIC	ALIGNMENT: I-75	
PID: 76256 BR ID: N/A	DRILLING METHOD: 3.75" HSA	CALIBRATION DATE: N/A	ELEVATION: 558.89 EOB: 30.0 ft.	PAGE 1 OF 1
START: 6/6/07 END: 6/6/07	SAMPLING METHOD: SPT	ENERGY RATIO (%): N/A	COORD: N=442032.819 / E=1409737.272	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS	INST.
5" - TOPSOIL	558.9 / 558.4																	
STIFF, BROWN **SANDY SILT**, SOME CLAY, TRACE FINE GRAVEL, DRY.	555.9		8 8 7	15	89	SS-1	4.0	9	16	28	26	21	22	13	9	4	A-4a	
MEDIUM STIFF TO STIFF, BROWN CHANGING TO BROWNISH GRAY **CLAY**, LITTLE SILT, TRACE COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.			3 3 4	7	100	SS-2	4.0	-	-	-	-	-	-	-	-	20	A-7-6 (V)	
			3 4 6	10	100	SS-3	3.5	-	-	-	-	-	-	-	-	-	A-7-6 (V)	
			5 6 8	14	100	SS-4	4.25	2	1	2	12	83	49	22	27	29	A-7-6	
	545.4																	
VERY STIFF, BROWNISH GRAY **CLAY**, LITTLE SILT, TRACE COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.			5 13 11	24	89	SS-5	2.25	-	-	-	-	-	-	-	-	-	A-7-6 (V)	
	540.9																	
LOOSE TO MEDIUM DENSE, BROWN **FINE SAND**, LITTLE COARSE SAND, TRACE SILT, DRY TO DAMP.			4 8 8	16	100	SS-6		-	-	-	-	-	-	-	-	3	A-3 (V)	
		FS	2 3 3	6	100	SS-7		0	11	89	-	5 -	NP	NP	NP	7	A-3	
	528.9	EOB	5 6 9	15	100	SS-8		-	-	-	-	-	-	-	-	-	A-3 (V)	

FOR INFORMATION ONLY

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

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PROJECT: HAM-75-10.10	DRILLING FIRM / OPERATOR: RII / I.C.	DRILL RIG: CME 750X	STATION / OFFSET: 512+67.70 / 109.1' RT	EXPLORATION ID B-005-0-07
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / I.C.	HAMMER: AUTOMATIC	ALIGNMENT: I-75	
PID: 76256 BR ID: N/A	DRILLING METHOD: 3.75" HSA	CALIBRATION DATE: N/A	ELEVATION: 559.64 EOB: 35.0 ft.	PAGE 1 OF 1
START: 6/6/07 END: 6/6/07	SAMPLING METHOD: SPT	ENERGY RATIO (%): N/A	COORD: N=442131.701 / E=1409833.791	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS	INST.
5" - TOPSOIL	559.6																	
STIFF, BROWN **SILTY CLAY**, LITTLE FINE TO COARSE SAND, LITTLE FINE GRAVEL, DAMP.	559.2		4 5 5	10	67	SS-1	4.5	15	7	6	22	50	37	21	16	13	A-6b	
MEDIUM STIFF, BROWN **CLAY**, LITTLE SILT, MOIST.	556.6		3 2 3	5	100	SS-2	2.25	-	-	-	-	-	-	-	-	-	A-7-6 (V)	
			2 3 3	6	100	SS-3	4.0	0	0	0	16	84	50	25	25	34	A-7-6	
			2 3 3	6	100	SS-4	2.0	-	-	-	-	-	-	-	-	-	A-7-6	
VERY STIFF, GRAYISH BROWN **CLAY**, LITTLE SILT, DAMP. -DRILLERS NOTED COBBLES IN SS-5	547.6		5 7 10	17	100	SS-5	3.0	-	-	-	-	-	-	-	-	11	A-7-6 (V)	
MEDIUM DENSE, BROWN **FINE SAND**, TRACE COARSE SAND, TRACE SILT, DAMP.	542.1		5 8 11	19	100	SS-6		-	-	-	-	-	-	-	-	-	A-3 (V)	
		F.S.	5 6 10	16	100	SS-7		0	6	86	- 8	-	-	-	-	6	A-3	
			5 6 10	16	100	SS-8		-	-	-	-	-	-	-	-	-	A-3 (V)	
	524.6	EOB	6 10 13	23	100	SS-9		-	-	-	-	-	-	-	-	-	A-3 (V)	

FOR INFORMATION ONLY

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

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PROJECT: HAM-75-10.10	DRILLING FIRM / OPERATOR: RII / I.C.	DRILL RIG: Mobile 53	STATION / OFFSET: 514+20.52 / 107.7' RT	EXPLORATION ID B-006-0-07
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / I.C.	HAMMER: AUTOMATIC	ALIGNMENT: I-75	
PID: 76256 BR ID: N/A	DRILLING METHOD: 2.25" HSA	CALIBRATION DATE: N/A	ELEVATION: 560.21 EOB: 35.0 ft.	PAGE 1 OF 1
START: 6/6/07 END: 6/6/07	SAMPLING METHOD: SPT	ENERGY RATIO (%): N/A	COORD: N=442242.658 / E=1409938.882	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS	INST.
9" - TOPSOIL	560.2																	
	559.4																	
MEDIUM STIFF, BROWN **SILT AND CLAY**, AND FINE TO COARSE SAND, LITTLE FINE GRAVEL, MOIST.		1	2 2 3	5	56	SS-1	3.0	17	27	17	18	21	28	16	12	17	A-6a	
	557.2	2																
MEDIUM STIFF TO STIFF, BROWN CHANGING TO GRAY **CLAY**, LITTLE SILT, MOIST.		3	3 4 6	10	78	SS-2	4.5	-	-	-	-	-	-	-	-	-	A-7-6 (V)	
		4																
		5	4 5 7	12	100	SS-3	4.0	-	-	-	-	-	-	-	-	29	A-7-6 (V)	
		6																
		7																
		8																
		9	2 3 3	6	89	SS-4	2.0	0	0	0	18	82	45	21	24	37	A-7-6	
		10																
		11																
		12																
		13																
	545.2	14	3 4 5	9	0	AS-5	1.75	-	-	-	-	-	-	-	-	-	A-7-6 (V)	
VERY STIFF TO HARD, GRAY **CLAY**, LITTLE SILT, TRACE FINE GRAVEL, DAMP.		15																
		16																
		17																
		18																
		19	10 14 23	37	83	SS-6	3.5	-	-	-	-	-	-	-	-	10	A-7-6 (V)	
-LIMESTONE FRAGMENTS PRESENT THROUGHOUT		20																
		21																
		22																
		23																
		24	6 10 18	28	100	SS-7	4.25	-	-	-	-	-	-	-	-	-	A-7-6 (V)	
	534.7	25																
MEDIUM DENSE, BROWN **FINE SAND**, TRACE COARSE SAND, TRACE SILT, DRY.		26																
		27																
		28																
		29	4 7 10	17	100	SS-8		-	-	-	-	-	-	-	-	3	A-3 (V)	
		30																
		31																
		32																
		33																
		34	5 6 10	16	89	SS-9		-	-	-	-	-	-	-	-	-	A-3 (V)	
	525.2	35	EOB															

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

FOR INFORMATION ONLY

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PROJECT: HAM-75-10.10	DRILLING FIRM / OPERATOR: RII / C.M.	DRILL RIG: Mobile 53	STATION / OFFSET: 515+70.95 / 107.9' RT	EXPLORATION ID B-007-0-07
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / C.M.	HAMMER: AUTOMATIC	ALIGNMENT: I-75	
PID: 76256 BR ID: N/A	DRILLING METHOD: 2.25" HSA	CALIBRATION DATE: N/A	ELEVATION: 560.83 EOB: 35.0 ft.	PAGE 1 OF 1
START: 6/5/07 END: 6/5/07	SAMPLING METHOD: SPT	ENERGY RATIO (%): N/A	COORD: N=442350.803 / E=1410043.441	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS	INST.
6" - TOPSOIL	560.3																	
SOFT, DARK BROWN **SILT AND CLAY**, AND FINE TO COARSE SAND, LITTLE FINE GRAVEL, DAMP.	557.8	W	2 2 2	4	83	SS-1	2.25	18	19	18	18	27	27	16	11	13	A-6a	
SOFT TO MEDIUM STIFF, BROWN CHANGING TO GRAY **CLAY**, LITTLE SILT, TRACE COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.	552.3		2 2 3	5	89	SS-2	2.0	-	-	-	-	-	-	-	-	28	A-7-6 (V)	
			2 1 2	3	100	SS-3	1.25	1	1	1	17	80	46	22	24	34	A-7-6	
VERY STIFF, DARK BROWN **SILT AND CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.	548.8		3 8 10	18	89	SS-4	4.5	-	-	-	-	-	-	-	-	-	A-6a (V)	
VERY STIFF TO HARD, GRAY **SILTY CLAY**, TRACE COARSE TO FINE SAND, TRACE FINE GRAVEL, DRY.			6 7 9	16	89	SS-5	3.25	-	-	-	-	-	-	-	-	9	A-6b (V)	
			9 11 15	26	94	SS-6	4.5+	-	-	-	-	-	-	-	-	-	A-6b (V)	
			11 13 17	30	83	SS-7	4.5+	-	-	-	-	-	-	-	-	10	A-6b (V)	
			10 13 18	31	89	SS-8	4.5	-	-	-	-	-	-	-	-	-	A-6b (V)	
MEDIUM DENSE, BROWN **COARSE TO FINE SAND**, LITTLE SILT, TRACE FINE GRAVEL, MOIST.	525.8	EOB	6 9 10	19	78	SS-9		11	8	63	- 18 -		-	-	-	9	A-3	

FOR INFORMATION ONLY

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

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PROJECT: HAM-75-10.10	DRILLING FIRM / OPERATOR: RII / I.C.	DRILL RIG: CME 750X	STATION / OFFSET: 517+14.40 / 106.9' RT	EXPLORATION ID B-008-0-07
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / I.C.	HAMMER: AUTOMATIC	ALIGNMENT: I-75	
PID: 76256 BR ID: N/A	DRILLING METHOD: 3.75" HSA	CALIBRATION DATE: N/A	ELEVATION: 562.08 EOB: 30.0 ft.	PAGE 1 OF 1
START: 6/5/07 END: 6/5/07	SAMPLING METHOD: SPT	ENERGY RATIO (%): N/A	COORD: N=442455.695 / E=1410142.852	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS	INST.
4" - TOPSOIL	562.1																	
STIFF, BROWN **SANDY SILT**, SOME CLAY, LITTLE FINE GRAVEL, DRY.	561.7		9 8 7	15	89	SS-1	4.0	19	17	23	16	25	25	15	10	6	A-4a	
MEDIUM STIFF TO STIFF, BROWN CHANGING TO BROWNISH GRAY **SILT AND CLAY**, AND COARSE TO FINE SAND, LITTLE FINE GRAVEL, WET.	559.1		2 3 3	6	89	SS-2	3.25	-	-	-	-	-	-	-	-	20	A-6a (V)	
			3 3 4	7	100	SS-3	1.0	14	9	33	20	24	22	8	14	-	A-6a	
			4 5 7	12	83	SS-4	1.5	-	-	-	-	-	-	-	-	-	A-6a (V)	
VERY STIFF, BROWNISH GRAY **SILT AND CLAY**, AND COARSE TO FINE SAND, LITTLE FINE GRAVEL, MOIST.	550.1		5 7 9	16	100	SS-5	2.75	-	-	-	-	-	-	-	-	13	A-6a (V)	
-COBBLES ENCOUNTERED FROM 13.0-22.5'			5 8 9	17	11	SS-6		-	-	-	-	-	-	-	-	-	A-6a (V)	
MEDIUM DENSE, BROWN **FINE SAND**, LITTLE COARSE SAND, TRACE SILT, DRY.	539.6		7 9 11	20	100	SS-7		0	20	80	-	4 -	-	-	-	3	A-3 (V)	
F S	532.1	EOB	5 6 8	14	100	SS-8		-	-	-	-	-	-	-	-	-	A-3	

FOR INFORMATION ONLY

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

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PROJECT: HAM-75-10.10	DRILLING FIRM / OPERATOR: RII / C.M.	DRILL RIG: Mobile 53	STATION / OFFSET: 518+67.26 / 108.2' RT	EXPLORATION ID B-009-0-07
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / C.M.	HAMMER: AUTOMATIC	ALIGNMENT: I-75	
PID: 76256 BR ID: N/A	DRILLING METHOD: 2.25" HSA	CALIBRATION DATE: N/A	ELEVATION: 563.08 EOB: 30.0 ft.	PAGE 1 OF 1
START: 6/5/07 END: 6/5/07	SAMPLING METHOD: SPT	ENERGY RATIO (%): N/A	COORD: N=442569.721 / E=1410249.33	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS	INST.
3" - TOPSOIL	563.1																	
MEDIUM DENSE, BROWNISH GRAY **GRAVEL WITH SAND, SILT AND CLAY**, DAMP.	562.8		4 6 7	13	83	SS-1		-	-	-	-	-	-	-	-	10	A-2-6 (V)	
	560.1																	
MEDIUM STIFF TO STIFF, BROWN **CLAY**, SOME SILT, TRACE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.			5 5 6	11	0	SS-2	3.75	-	-	-	-	-	-	-	-	-	A-7-6 (V)	
			3 2 5	7	83	SS-3	3.25	1	1	2	26	70	44	23	21	21	A-7-6	
			6 3 7	10	89	SS-4	3.5	-	-	-	-	-	-	-	-	-	A-7-6 (V)	
	551.6																	
VERY STIFF TO HARD, BROWN **CLAY**, SOME SILT, TRACE COARSE TO FINE SAND, TRACE FINE GRAVEL, DRY.			6 8 12	20	67	SS-5	4.5	-	-	-	-	-	-	-	-	12	A-7-6 (V)	
			10 13 15	28	44	SS-6	4.5	-	-	-	-	-	-	-	-	-	A-7-6 (V)	
			10 37 50/2"		89	SS-7	3.25	-	-	-	-	-	-	-	-	-	A-7-6 (V)	
	536.6																	
MEDIUM DENSE, BROWN **FINE SAND**, TRACE SILT, TRACE COARSE SAND, TRACE FINE GRAVEL, DAMP.																		
F S	533.1	EOB	6 9 11	20	89	SS-8		3	6	82	- 9	-	-	-	-	6	A-3	

FOR INFORMATION ONLY

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

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PROJECT: HAM-75-10.10	DRILLING FIRM / OPERATOR: RII / I.C.	DRILL RIG: CME 750X	STATION / OFFSET: 520+14.30 / 107.0' RT	EXPLORATION ID B-010-0-07
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / I.C.	HAMMER: AUTOMATIC	ALIGNMENT: I-75	
PID: 76256 BR ID: N/A	DRILLING METHOD: 3.75" HSA	CALIBRATION DATE: N/A	ELEVATION: 563.73 EOB: 30.0 ft.	PAGE 1 OF 1
START: 6/5/07 END: 6/5/07	SAMPLING METHOD: SPT	ENERGY RATIO (%): N/A	COORD: N=442683.915 / E=1410346.713	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS	INST.
3" - TOPSOIL	563.4																	
MEDIUM DENSE, BROWNISH GRAY **GRAVEL WITH SAND, SILT, AND CLAY**, MOIST.	560.7		3 4 5	9	100	SS-1		-	-	-	-	-	-	-	-	9	A-2-6 (V)	
MEDIUM STIFF, BROWNISH GRAY **SILTY CLAY**, TRACE COARSE TO FINE SAND, MOIST.	555.7		2 3 3	6	100	SS-2	2.0	0	1	8	29	62	39	21	18	27	A-6b	
			2 3 4	7	100	SS-3	2.75	-	-	-	-	-	-	-	-	-	A-6b (V)	
STIFF, DARK BROWN **SILT AND CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.	551.2		8 5 6	11	100	SS-4	2.0	-	-	-	-	-	-	-	-	16	A-6a (V)	
MEDIUM STIFF TO STIFF, BROWN **CLAY**, LITTLE SILT, MOIST.	544.2		2 3 3	6	100	SS-5	2.25	0	0	0	19	81	52	25	27	28	A-7-6	
			6 8		100	SS-6A	3.0	-	-	-	-	-	-	-	-	17	A-7-6 (V)	
			5			SS-6B		-	-	-	-	-	-	-	-	-	A-6b (V)	
STIFF TO VERY STIFF, BROWN **SILTY CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.	537.7		5 10 15	25	11	SS-7		-	-	-	-	-	-	-	-	-	A-6b (V)	
MEDIUM DENSE, BROWN **FINE SAND**, TRACE SILT, TRACE COARSE SAND, DRY.	533.7	EOB	5 7 9	16	100	SS-8		-	-	-	-	-	-	-	-	-	A-3	

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

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PROJECT: HAM-75-10.10	DRILLING FIRM / OPERATOR: RII / I.C.	DRILL RIG: CME 750X	STATION / OFFSET: 521+61.74 / 105.6' RT	EXPLORATION ID B-011-0-07
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / I.C.	HAMMER: AUTOMATIC	ALIGNMENT: I-75	
PID: 76256 BR ID: N/A	DRILLING METHOD: 3.75" HSA	CALIBRATION DATE: N/A	ELEVATION: 564.65 EOB: 35.0 ft.	PAGE 1 OF 1
START: 6/5/07 END: 6/5/07	SAMPLING METHOD: SPT	ENERGY RATIO (%): N/A	COORD: N=442801.265 / E=1410440.871	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS	INST.
STIFF TO MEDIUM STIFF, BROWN **SILT AND CLAY**, AND COARSE TO FINE SAND, TRACE FINE GRAVEL, DRY TO MOIST.	564.7																	
		2	5 6 7	13	83	SS-1	2.25	-	-	-	-	-	-	-	-	8	A-6a (V)	
		4	2 3 4	7	0	SS-2	1.25	4	10	41	16	29	27	14	13	21	A-6a	
		7	2 3 3	6	83	SS-3	1.25	-	-	-	-	-	-	-	-	-	A-6a	
	556.7																	
SOFT TO MEDIUM STIFF, BROWN **SILT AND CLAY**, SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, DAMP.		9	2 2 2	4	89	SS-4	1.25	14	11	20	23	32	28	16	12	11	A-6a (V)	
		14	2 4 3	7	67	SS-5	2.0	-	-	-	-	-	-	-	-	-	A-6a (V)	
	549.7																	
LOOSE, BROWN **GRAVEL AND SAND**, LITTLE SILT, MOIST.		19	2 3 3	6	44	SS-6		49	18	20	-	13	-	-	-	12	A-1-b	
	542.7																	
VERY LOOSE, BROWN **FINE SAND**, TRACE SILT, TRACE COARSE SAND, DRY.		24	1 2 2	4	89	SS-7		-	-	-	-	-	-	-	-	-	A-3 (V)	
F S	537.7																	
MEDIUM DENSE, BROWN **FINE SAND**, TRACE SILT, TRACE COARSE SAND, DAMP.		29	5 10 17	27	89	SS-8		-	-	-	-	-	-	-	-	4	A-3 (V)	
F S																		
	529.7	34	5 6 8	14	94	SS-9		-	-	-	-	-	-	-	-	-	A-3 (V)	
		EOB 35																

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

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DRAWN RRM CHECKED BRT

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PROJECT: HAM-75-10.10	DRILLING FIRM / OPERATOR: RII / C.M.	DRILL RIG: Mobile 53	STATION / OFFSET: 523+08.85 / 107.7' RT	EXPLORATION ID B-012-0-07
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / C.M.	HAMMER: AUTOMATIC	ALIGNMENT: I-75	
PID: 76256 BR ID: N/A	DRILLING METHOD: 2.25" HSA	CALIBRATION DATE: N/A	ELEVATION: 566.00 EOB: 35.0 ft.	PAGE 1 OF 1
START: 6/5/07 END: 6/5/07	SAMPLING METHOD: SPT	ENERGY RATIO (%): N/A	COORD: N=443006.626 / E=1410593.059	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS	INST.
LOOSE, BROWN **GRAVEL AND SAND**, TRACE SILT, DAMP.	566.0		10 7 3	10	33	SS-1		-	-	-	-	-	-	-	-	5	A-1-b (V)	
	563.0																	
MEDIUM STIFF, BROWN **SANDY SILT**, SOME CLAY, TRACE FINE GRAVEL, DAMP.			3 3 3	6	83	SS-2	2.0	1	7	29	36	27	25	15	10	14	A-4a	
			2 3 3	6	89	SS-3	2.25	-	-	-	-	-	-	-	-	-	A-4a (V)	
	558.0																	
VERY LOOSE TO LOOSE, BROWN **COARSE TO FINE SAND**, SOME CLAY, LITTLE SILT, TRACE FINE GRAVEL, WET.			2 2 3	5	94	SS-4		-1	18	55	8	20	NP	NP	NP	16	A-3a	
	551.0		2 2 2	4	94	SS-5		-	-	-	-	-	-	-	-	13	A-3a (V)	
MEDIUM DENSE, BROWN **COARSE TO FINE SAND**, LITTLE SILT, DRY TO DAMP.			4 5 6	11	89	SS-6		-	-	-	-	-	-	-	-	-	A-3a (V)	
			5 5 6	11	100	SS-7		0	20	80	- 19 -		-	-	-	5	A-3a (V)	
			4 5 6	11	89	SS-8		-	-	-	-	-	-	-	-	-	A-3a (V)	
	531.0	EOB	3 5 7	12	67	SS-9		-	-	-	-	-	-	-	-	3	A-3a (V)	

FOR INFORMATION ONLY

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

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PROJECT: HAM-75-10.10	DRILLING FIRM / OPERATOR: RII / C.M.	DRILL RIG: Mobile 53	STATION / OFFSET: 524+58.22 / 108.4' RT	EXPLORATION ID B-013-0-07
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / C.M.	HAMMER: AUTOMATIC	ALIGNMENT: I-75	
PID: 76256 BR ID: N/A	DRILLING METHOD: 2.25" HSA	CALIBRATION DATE: N/A	ELEVATION: 564.50 EOB: 35.0 ft.	PAGE 1 OF 1
START: 6/4/07 END: 6/4/07	SAMPLING METHOD: SPT	ENERGY RATIO (%): N/A	COORD: N=443041.709 / E=1410624.496	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS	INST.
FILL: STIFF, DARK BROWN **SILT AND CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.	564.5		3 6 4	10	56	SS-1	4.5+	-	-	-	-	-	-	-	-	11	A-6a (V)	
MEDIUM STIFF TO STIFF, REDDISH BROWN CHANGING TO DARK BROWN **SILT AND CLAY**, SOME COARSE TO FINE SAND, MOIST.	561.5		3 3 4	7	89	SS-2	2.0	-1	5	29	31	36	29	15	14	19	A-6a	
	556.5		3 4 8	12	100	SS-3	4.0	-	-	-	-	-	-	-	-	-	A-6a (V)	
SOFT TO MEDIUM STIFF, REDDISH BROWN **SANDY SILT**, SOME CLAY, MOIST.	546.5		2 3 4	7	89	SS-4	1.0	0	13	46	17	24	23	14	9	19	A-4a	
			3 2 2	4	83	SS-5	1.0	-	-	-	-	-	-	-	-	-	A-4a (V)	
LOOSE TO MEDIUM DENSE, BROWN **COARSE TO FINE SAND**, LITTLE SILT, TRACE FINE GRAVEL, DAMP TO MOIST.			3 3 4	7	89	SS-6		1	29	60	- 10 -		-	-	-	5	A-3a	
			4 4 5	9	94	SS-7		-	-	-	-	-	-	-	-	-	A-3a (V)	
			6 10 13	23	83	SS-8		-	-	-	-	-	-	-	-	9	A-3a (V)	
	529.5	EOB	6 6 7	13	50	SS-9		-	-	-	-	-	-	-	-	-	A-3a (V)	

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

FOR INFORMATION ONLY

STRUCTURE FOUNDATION EXPLORATION
WALLS H, I, J, K, S, U, V, Y, Z

DRAWN RRM CHECKED BRT

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PROJECT: HAM-75-10.10	DRILLING FIRM / OPERATOR: RII / C.M.	DRILL RIG: Mobile 53	STATION / OFFSET: 526+02.18 / 113.9' RT	EXPLORATION ID B-014-0-07
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / C.M.	HAMMER: AUTOMATIC	ALIGNMENT: I-75	
PID: 76256 BR ID: N/A	DRILLING METHOD: 2.25" HSA	CALIBRATION DATE: N/A	ELEVATION: 566.80 EOB: 35.0 ft.	PAGE 1 OF 1
START: 6/4/07 END: 6/4/07	SAMPLING METHOD: SPT	ENERGY RATIO (%): N/A	COORD: N=443159.904 / E=1410712.118	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS	INST.
STIFF, BROWN **SILT AND CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DRY TO DAMP.	566.8		4 5 6	11	83	SS-1	4.5	-	-	-	-	-	-	-	-	8	A-6a (V)	
			4 4 5	9	89	SS-2	3.5	-	-	-	-	-	-	-	-	-	A-6a (V)	
	560.8																	
MEDIUM STIFF TO STIFF, BROWN **CLAY**, SOME SILT, SOME TO TRACE FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.			4 3 3	6	89	SS-3	2.0	1	1	23	33	42	42	19	23	17	A-7-6	
			2 3 3	6	94	SS-4	2.0	-	-	-	-	-	-	-	-	-	A-7-6 (V)	
			4 5 6	11	100	SS-5	2.75	1	0	1	21	77	48	22	26	25	A-7-6	
	548.3																	
MEDIUM DENSE, BROWN **COARSE TO FINE SAND**, LITTLE SILT, DAMP.			5 9 13	22	89	SS-6		-	-	-	-	-	-	-	-	-	A-3a (V)	
	545.8																	
MEDIUM DENSE TO DENSE, BROWN **FINE SAND**, LITTLE COARSE SAND, TRACE SILT, DRY TO WET.			10 17 18	35	89	SS-7		-	-	-	-	-	-	-	-	19	A-3 (V)	
			7 9 9	18	83	SS-8		0	17	83	- 6 -		-	-	-	2	A-3	
	531.8	EOB	6 7 9	16	78	SS-9		-	-	-	-	-	-	-	-	-	A-3 (V)	

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

FOR INFORMATION ONLY

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PROJECT: HAM-75-10.10	DRILLING FIRM / OPERATOR: RII / I.C.	DRILL RIG: CME 750X	STATION / OFFSET: 527+52.83 / 124.8' RT	EXPLORATION ID B-015-0-07
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / I.C.	HAMMER: AUTOMATIC	ALIGNMENT: I-75	
PID: 76256 BR ID: N/A	DRILLING METHOD: 3.75" HSA	CALIBRATION DATE: N/A	ELEVATION: 570.41 EOB: 50.0 ft.	PAGE 1 OF 1
START: 6/3/07 END: 6/3/07	SAMPLING METHOD: SPT	ENERGY RATIO (%): N/A	COORD: N=443283.492 / E=1410804.81	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS	INST.
4" - TOPSOIL	570.4																	
STIFF, BROWN **SANDY SILT**, SOME FINE GRAVEL, DRY.	570.0																	
-SAMPLE OBTAINED FROM AUGER CUTTINGS		1																
		2	8 6 4	10	0	AS-1		-	-	-	-	-	-	-	-	8	A-4a (V)	
	567.4	3																
STIFF, BROWN **SILT AND CLAY**, TRACE COARSE TO FINE SAND, MOIST.		4	3 4 5	9	100	SS-2	3.5	0	1	1	39	59	34	21	13	25	A-6a	
		5																
		6																
		7	4 5 7	12	100	SS-3	4.25	-	-	-	-	-	-	-	-	-	A-6a (V)	
	562.4	8																
SOFT TO MEDIUM STIFF, GRAY **CLAY**, SOME SILT, TRACE FINE SAND, MOIST.		9	2 2 3	5	100	SS-4	3.0	0	0	1	28	71	46	25	21	33	A-7-6	
		10																
		11																
		12																
		13																
		14	1 2 2	4	100	SS-5	1.25	0	0	0	24	76	43	22	21	34	A-7-6	
		15																
		16																
		17																
		18																
		19	2 3 4	7	100	SS-6	1.75	-	-	-	-	-	-	-	-	-	A-7-6 (V)	
	547.9	20																
STIFF TO MEDIUM STIFF, GRAY **SILTY CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.		21																
		22																
		23																
		24	3 5 8	13	100	SS-7	4.5+	-	-	-	-	-	-	-	-	16	A-6b (V)	
		25																
		26																
		27																
		28																
	540.9	29	7 15 18		89	SS-8A SS-8B	4.5	- 0	- 11	- 89	- - 7	- -	- -	- -	- -	- 2	A-6b (V) A-3	
MEDIUM DENSE TO DENSE, BROWN **FINE SAND**, LITTLE COARSE SAND, TRACE SILT, DRY.		30																
		31																
		32																
		33																
		34	5 8 9	17	94	SS-9		-	-	-	-	-	-	-	-	2	A-3 (V)	
		35																
		36																
		37																
		38																
		39	8 13 15	28	89	SS-10		-	-	-	-	-	-	-	-	-	A-3 (V)	
F S		40																
		41																
		42																
		43																
		44	9 15 16	31	100	SS-11		-	-	-	-	-	-	-	-	3	A-3 (V)	
		45																
		46																
		47																
		48																
		49	10 15 20	35	94	SS-12		-	-	-	-	-	-	-	-	-	A-3 (V)	
	520.4	50	EOB															

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

FOR INFORMATION ONLY

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PROJECT: HAM-75-10.10	DRILLING FIRM / OPERATOR: RII / I.C.	DRILL RIG: CME 750X	STATION / OFFSET: 528+98.01 / 138.8' RT	EXPLORATION ID B-016-0-07
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / I.C.	HAMMER: AUTOMATIC	ALIGNMENT: I-75	
PID: 76256 BR ID: N/A	DRILLING METHOD: 3.75" HSA	CALIBRATION DATE: N/A	ELEVATION: 577.00 EOB: 45.0 ft.	PAGE 1 OF 1
START: 6/3/07 END: 6/3/07	SAMPLING METHOD: SPT	ENERGY RATIO (%): N/A	COORD: N=443403.644 / E=1410893.76	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS	INST.
MEDIUM STIFF, DARK BROWN **SILTY CLAY**, AND COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.	577.0		7 5 3	8	0	SS-1	4.5+	-	-	-	-	-	-	-	-	15	A-6b (V)	
			4 4 4	8	100	SS-2	3.5	-	-	-	-	-	-	-	-	-	A-6b (V)	
			3 4 4	8	100	AS-3		1	10	37	18	34	35	18	17	15	A-6b (V)	
LOOSE, BROWN **SANDY SILT**, LITTLE CLAY, DAMP.	569.5		4 2 4	6	100	SS-4		0	52	48	- 46 -		-	-	-	13	A-4a	
VERY STIFF, BROWN **SILTY CLAY**, TRACE COARSE TO FINE SAND, DAMP.	567.0		5 8 10	18	100	SS-5	4.5	-	-	-	-	-	-	-	-	-	A-6b (V)	
MEDIUM STIFF TO STIFF, GRAY **CLAY**, LITTLE SILT, DRY TO MOIST.	559.0		2 2 4	6	100	SS-6	3.0	0	0	0	14	86	52	23	29	33	A-7-6	
			5 6 9	15	100	SS-7	4.0	-	-	-	-	-	-	-	-	-	A-7-6 (V)	
			4 6 7	13	89	SS-8	4.25	-	-	-	-	-	-	-	-	9	A-7-6 (V)	
MEDIUM DENSE, BROWN **FINE SAND**, LITTLE COARSE SAND, TRACE SILT, DRY.	544.5		5 9 13	22	94	SS-9		-	-	-	-	-	-	-	-	-	A-3 (V)	
			5 11 9	20	89	SS-10		-	-	-	-	-	-	-	-	3	A-3 (V)	
	532.0	EOB	6 8 13	21	100	SS-11		-	-	-	-	-	-	-	-	-	A-3 (V)	

FOR INFORMATION ONLY

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

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PROJECT: HAM-75-10.10	DRILLING FIRM / OPERATOR: RII / C.M.	DRILL RIG: CME 750X	STATION / OFFSET: 530+43.78 / 133.5' RT	EXPLORATION ID B-017-0-07
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / C.M.	HAMMER: AUTOMATIC	ALIGNMENT: I-75	
PID: 76256 BR ID: N/A	DRILLING METHOD: 3.75" HSA	CALIBRATION DATE: N/A	ELEVATION: 572.10 EOB: 45.0 ft.	PAGE 1 OF 1
START: 6/10/07 END: 6/10/07	SAMPLING METHOD: SPT	ENERGY RATIO (%): N/A	COORD: N=443536.358 / E=1410962.961	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS	INST.
STIFF TO VERY STIFF, BROWN CHANGING TO MOTTLED BROWN AND GRAY **SILTY CLAY**, LITTLE FINE TO COARSE SAND, LITTLE FINE GRAVEL, DRY TO DAMP.	572.1																	
		2	3 6 7	13	0	AS-1		12	9	6	32	41	36	20	16	7	A-6b	
		4	4 6 7	13	100	SS-2	4.5	-	-	-	-	-	-	-	-	-	A-6b (V)	
		7	5 9 14	23	100	SS-3	4.5+	-	-	-	-	-	-	-	-	14	A-6b (V)	
		9	6 8 12	20	100	SS-4	4.5+	-	-	-	-	-	-	-	-	-	A-6b (V)	
	560.1																	
DENSE, GRAY **GRAVEL AND SAND**, SOME SILT, DRY.		14	19 27 21	48	100	SS-5		68	7	5	- 20 -		-	-	-	1	A-1-b	
	554.1																	
STIFF TO VERY STIFF, BROWN **SILTY CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.		19	6 10 12	22	100	SS-6	2.5	-	-	-	-	-	-	-	-	-	A-6b (V)	
		24	6 7 8	15	100	SS-7	4.5+	-	-	-	-	-	-	-	-	-	A-6b (V)	
		29	5 6 8	14	89	SS-8	3.0	-	-	-	-	-	-	-	-	16	A-6b (V)	
	541.6																	
STIFF, GRAY **CLAY**, LITTLE SILT, TRACE COARSE TO FINE SAND, MOIST.		34	3 4 8	12	94	SS-9	1.0	0	1	2	17	80	45	26	19	31	A-7-6	
		39	5 6 7	13	89	SS-10	1.5	-	-	-	-	-	-	-	-	-	A-7-6 (V)	
	531.1																	
MEDIUM DENSE, LIGHT BROWN **FINE SAND**, LITTLE COARSE SAND, TRACE SILT, DRY.		44	7 11 13	24	100	SS-11		-	-	-	-	-	-	-	-	-	A-3 (V)	
	527.1	EOB 45																

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

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1986 2017	97 105	HAM-75-7.85	STRUCTURE FOUNDATION EXPLORATION WALLS H, I, J, K, S, U, V, Y, Z

DRAWN RRM CHECKED BRT

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PROJECT: HAM-75-10.10	DRILLING FIRM / OPERATOR: RII / C.M.	DRILL RIG: CME 750X	STATION / OFFSET: 531+88.96 / 129.7' RT	EXPLORATION ID B-018-0-07
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: RII / C.M.	HAMMER: AUTOMATIC	ALIGNMENT: I-75	
PID: 76256 BR ID: N/A	DRILLING METHOD: 3.75" HSA	CALIBRATION DATE: N/A	ELEVATION: 569.80 EOB: 45.0 ft.	PAGE 1 OF 1
START: 6/14/07 END: 6/14/07	SAMPLING METHOD: SPT	ENERGY RATIO (%): N/A	COORD: N=443667.865 / E=1411029.089	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS	INST.
MEDIUM STIFF, BROWN **SILT AND CLAY**, SOME FINE GRAVEL, LITTLE FINE TO COARSE SAND, DRY.	569.8		2 3 5	8	83	SS-1		29	12	7	19	33	34	21	13	8	A-6a	
STIFF, BROWN **SILTY CLAY**, LITTLE COARSE TO FINE SAND, DAMP.	566.3		6 7 6	13	0	SS-2	4.5+	-	-	-	-	-	-	-	-	-	A-6b (V)	
MEDIUM STIFF TO STIFF, GRAY **CLAY**, SOME SILT, DAMP TO MOIST.	563.8		6 5 4	9	83	SS-3	2.0	-	-	-	-	-	-	-	-	26	A-7-6 (V)	
			3 3 4	7	89	SS-4	1.0	-	-	-	-	-	-	-	-	-	A-7-6 (V)	
			2 3 3	6	67	SS-5	1.0	0	0	0	23	77	48	27	21	30	A-7-6	
			3 5 6	11	44	SS-6	1.25	-	-	-	-	-	-	-	-	-	A-7-6 (V)	
VERY STIFF, BROWNISH GRAY **SILTY CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.	549.8		5 7 9	16	89	SS-7	2.0	-	-	-	-	-	-	-	-	28	A-6b (V)	
MEDIUM DENSE, BROWN **SILT**, SOME COARSE TO FINE SAND, MOIST TO DRY.	542.8		11 13 14	27	89	SS-8		0	81	19	- 80 -		-	-	-	18	A-4b (V)	
			9 10 12	22	94	SS-9		-	-	-	-	-	-	-	-	-	A-4b (V)	
			7 10 15	25	89	SS-10		-	-	-	-	-	-	-	-	2	A-4b (V)	
	524.8	EOB	9 9 10	19	83	SS-11		-	-	-	-	-	-	-	-	-	A-4b (V)	

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

FOR INFORMATION ONLY

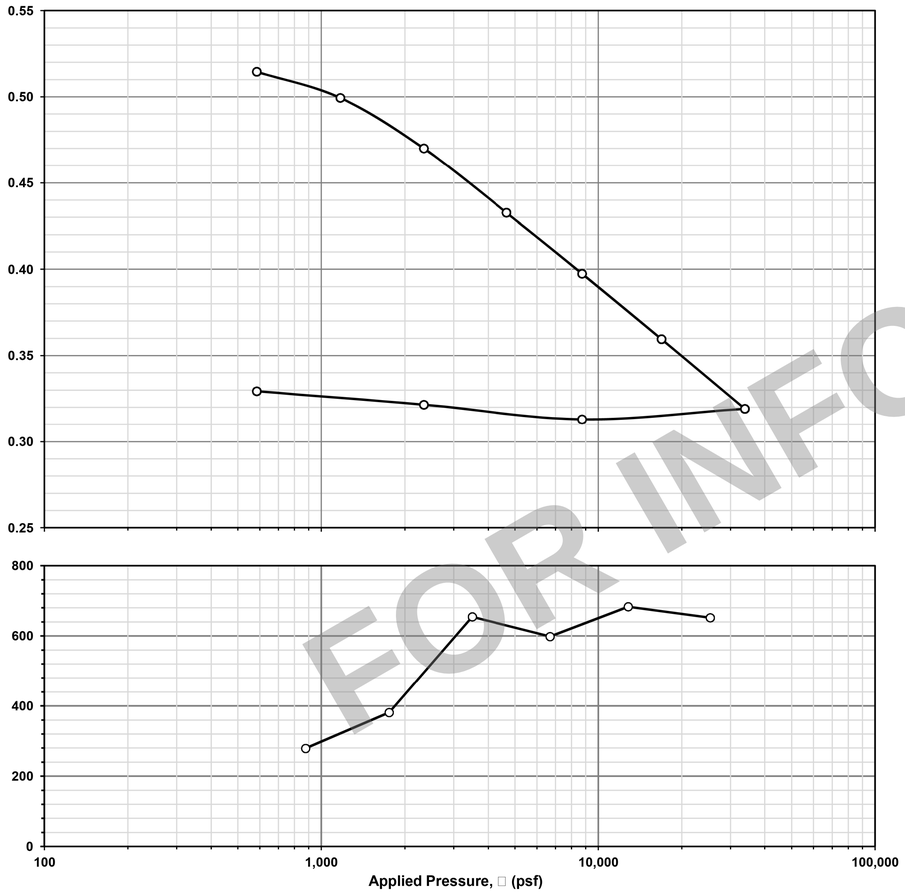
One-Dimensional Consolidation Test Report (ASTM D2435)

Project Number:	B-10-020	Boring Number:	B-015-0-11
Project Name:	HAM-75-7.85	Sample No. / Depth:	ST-8 / 20.3 ft
Project Location:	Hamilton County, Ohio	Date of Testing:	10/14/2011 to 10/28/2011
Client:	EMH&T	Technician:	JJH

Soil Description: Brownish gray SANDY SILT, little clay, trace fine gravel
Soil Classification: ODOT A-4a

Physical Characteristics	L.L.	P.L.	P.I.	Gravel%	C. Sand%	F. Sand%	Silt%	Clay%
	24	15	9	7	6	31	37	19

Natural S_o	Natural w_o	γ_d (pcf)	γ_{sat} (pcf)	σ_{vo}' (psf)	S_G	e_o	σ_p' (psf)	c_c	c_r
85.1%	15.0%	108.6	127.1	2,556	2.67	0.535	1,857	0.134	0.014



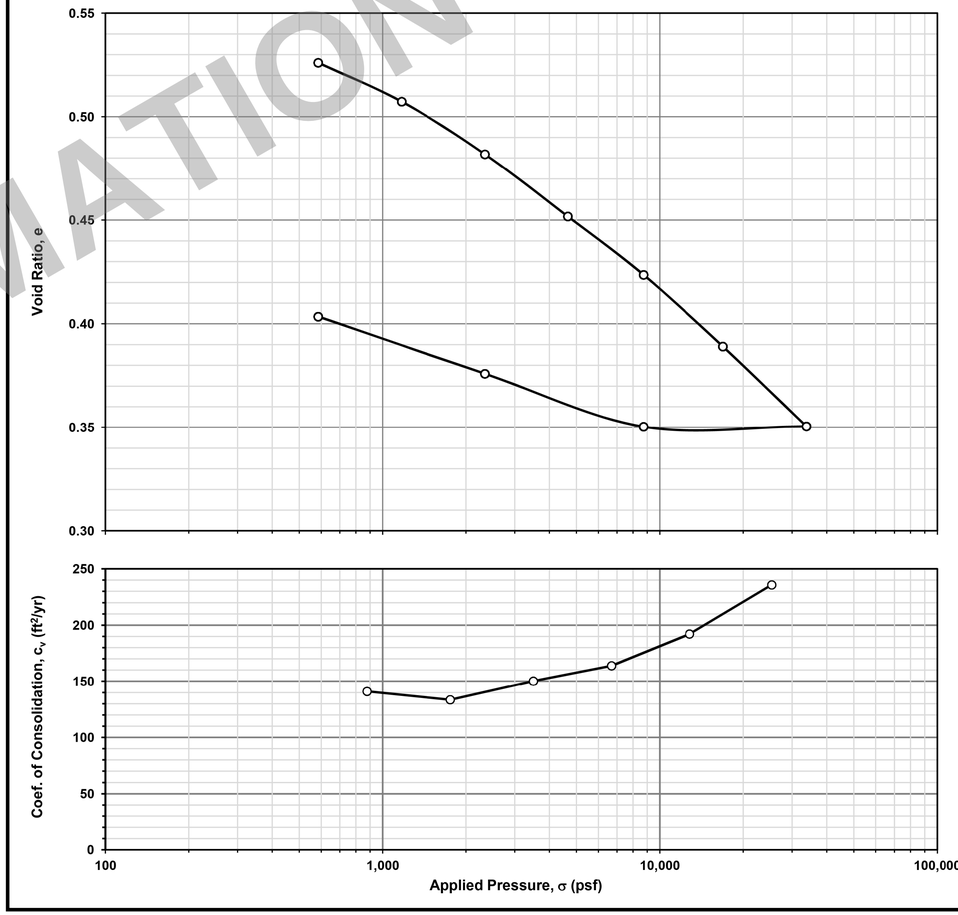
One-Dimensional Consolidation Test Report (ASTM D2435)

Project Number:	B-10-020	Boring Number:	B-016-0-11
Project Name:	HAM-75-7.85	Sample No. / Depth:	ST-4 / 9.4 ft
Project Location:	Hamilton County, Ohio	Date of Testing:	12/8/2011 to 12/21/2011
Client:	EMH&T	Technician:	JJH

Soil Description: Brown CLAY, some silt, little coarse to fine sand, trace fine gravel
Soil Classification: ODOT A-7-6

Physical Characteristics	L.L.	P.L.	P.I.	Gravel%	C. Sand%	F. Sand%	Silt%	Clay%
	44	21	23	8	7	5	34	46

Natural S_o	Natural w_o	γ_d (pcf)	γ_{sat} (pcf)	σ_{vo}' (psf)	S_G	e_o	σ_p' (psf)	c_c	c_r
99.6%	19.7%	107.1	129.3	1,128	2.67	0.556	2,736	0.152	0.045



FOR INFORMATION ONLY

DRAWN RRM | CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
LABORATORY TEST DATA

HAM-75-7.85

99/105

1988
2017

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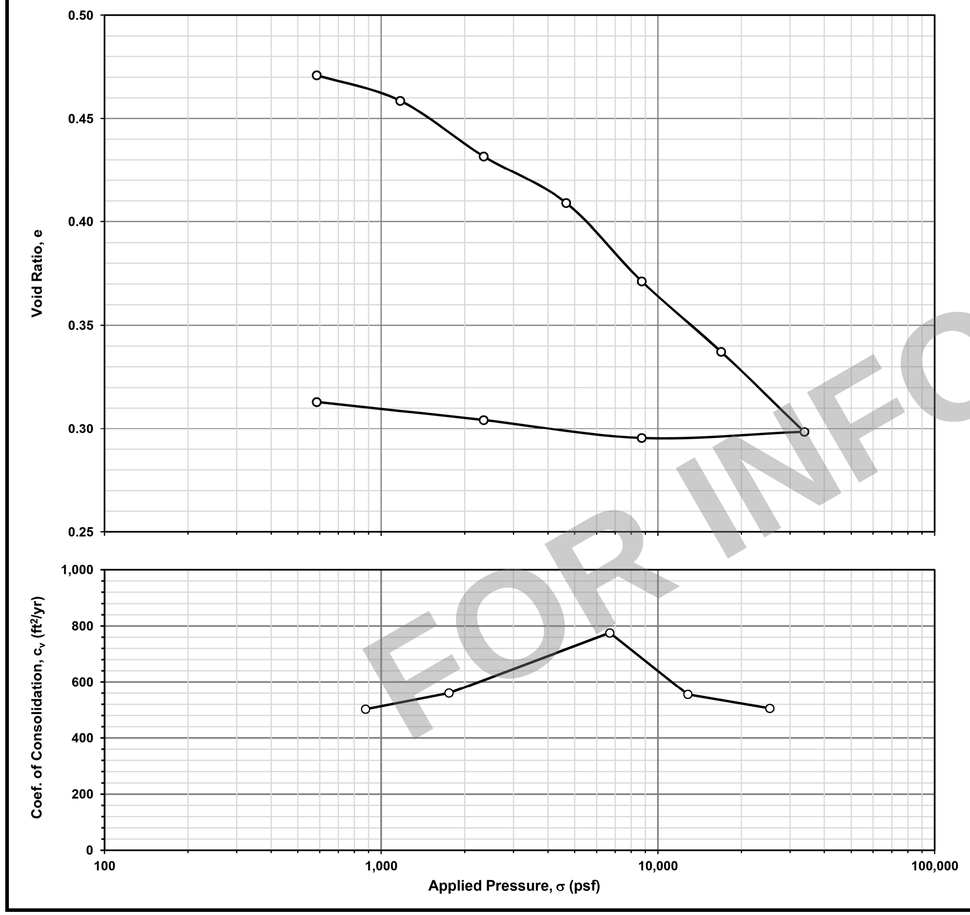
One-Dimensional Consolidation Test Report (ASTM D2435)

Project Number:	B-10-020	Boring Number:	B-017-0-11
Project Name:	HAM-75-7.85	Sample No. / Depth:	ST-4 / 10.0 ft
Project Location:	Hamilton County, Ohio	Date of Testing:	11/11/2011 to 11/28/2011
Client:	EMH&T	Technician:	JJH

Soil Description: Brown SANDY SILT, little clay, little fine gravel
Soil Classification: ODOT A-4a

Physical Characteristics	L.L.	P.L.	P.I.	Gravel%	C. Sand%	F. Sand%	Silt%	Clay%
	24	15	9	11	7	29	39	14

Natural S_o	Natural w_o	γ_d (pcf)	γ_{sat} (pcf)	σ_{vo}' (psf)	S_G	e_o	σ_p' (psf)	c_c	c_r
88.4%	14.7%	111.6	129.8	1,200	2.67	0.494	2,656	0.155	0.015



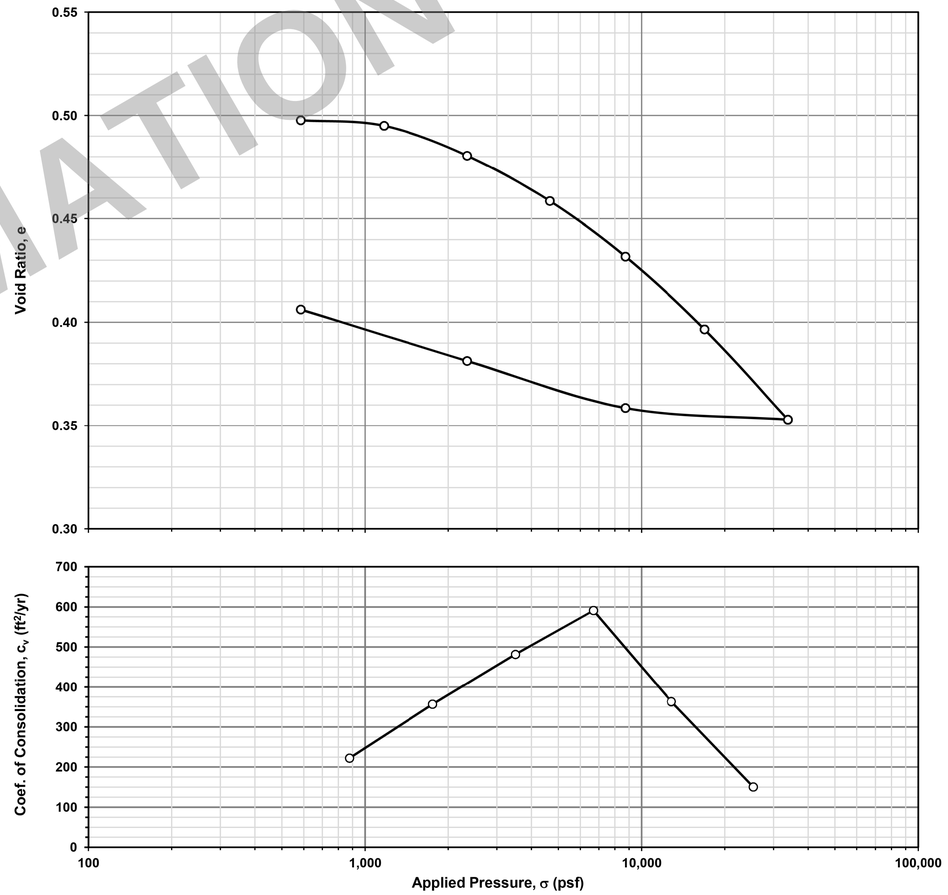
One-Dimensional Consolidation Test Report (ASTM D2435)

Project Number:	B-10-020	Boring Number:	B-053-0-11
Project Name:	HAM-75-7.85	Sample No. / Depth:	ST-4 / 8.5 ft
Project Location:	Hamilton County, Ohio	Date of Testing:	11/18/2011 to 12/2/2011
Client:	EMH&T	Technician:	JJH

Soil Description: Brown SILTY CLAY, little coarse to fine sand, trace fine gravel
Soil Classification: ODOT A-6b

Physical Characteristics	L.L.	P.L.	P.I.	Gravel%	C. Sand%	F. Sand%	Silt%	Clay%
	35	16	19	1	3	17	37	42

Natural S_o	Natural w_o	γ_d (pcf)	γ_{sat} (pcf)	σ_{vo}' (psf)	S_G	e_o	σ_p' (psf)	c_c	c_r
98.4%	19.3%	110.1	130.6	1,020	2.65	0.503	4,645	0.145	0.041



FOR INFORMATION ONLY

DRAWN RRM CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
LABORATORY TEST DATA

HAM-75-7.85

1989 2017

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CONSOLIDATED, UNDRAINED TRIAXIAL

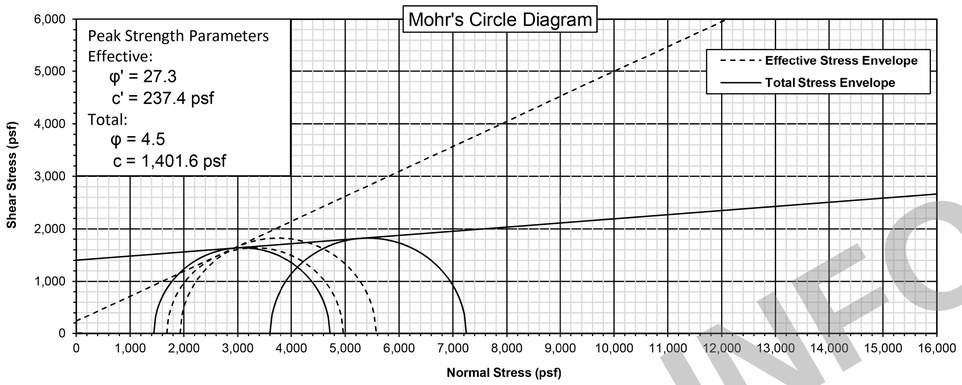
ASTM D-4767

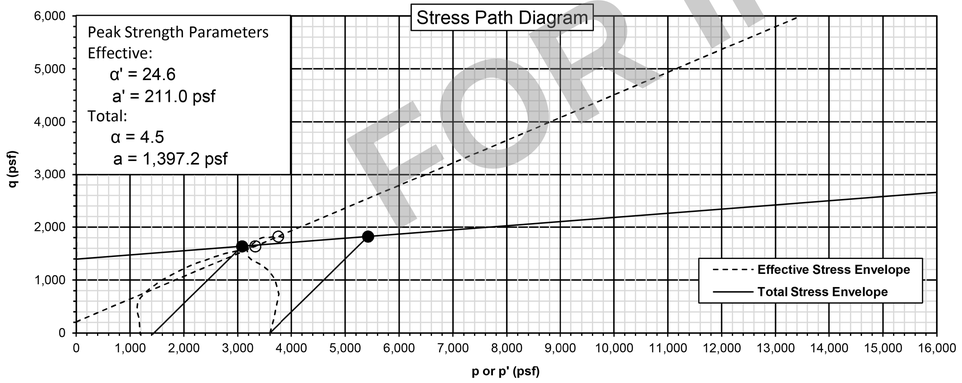
PROJECT NAME:	HAM-75-7.85
JOB NUMBER:	B-10-020
BORING NUMBER:	B-016-0-11A
SAMPLE NUMBER:	ST-3
SAMPLE DEPTH:	6.5 to 7.0 feet
DATE OF TESTING:	12/12/2011-12/28/11
TESTED BY:	Hoyt

Soil Description: Brown SILT and CLAY, and coarse to fine sand, trace fine gravel.
Soil Classification: ODOT A-6a

Physical Characteristics	L.L.	P.L.	P.I.	Gravel%	C. Sand%	F. Sand%	Silt%	Clay%
	29	14	15	7	9	32	29	23

Stage	Boring No.	Sample No.	Depth (ft)	$(\sigma_3)_f$ (psf)	$(\sigma_1)_f$ (psf)	$(\sigma_3')_f$ (psf)	$(\sigma_1')_f$ (psf)	p'_f (psf)	q_f (psf)
1	B-016-0-11A	ST-3	7.0	1,440.0	4,719.1	1,684.8	4,963.9	3,324.3	1,639.5
2	B-016-0-11A	ST-3	6.5	3,600.0	7,248.0	1,929.6	5,577.6	3,753.6	1,824.0





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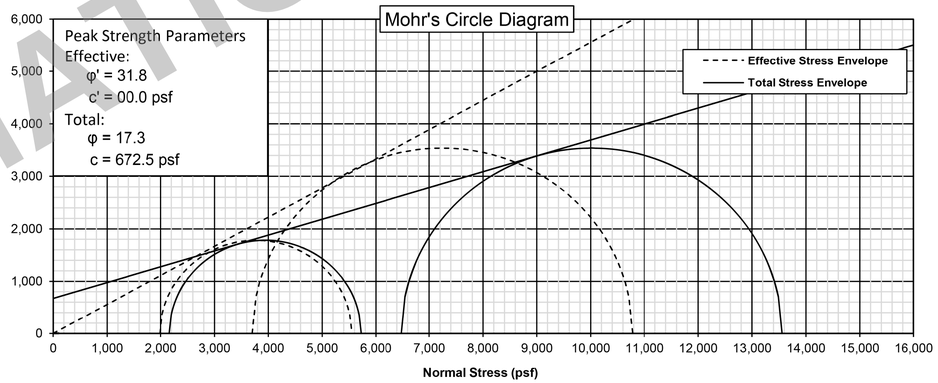
ASTM D-4767

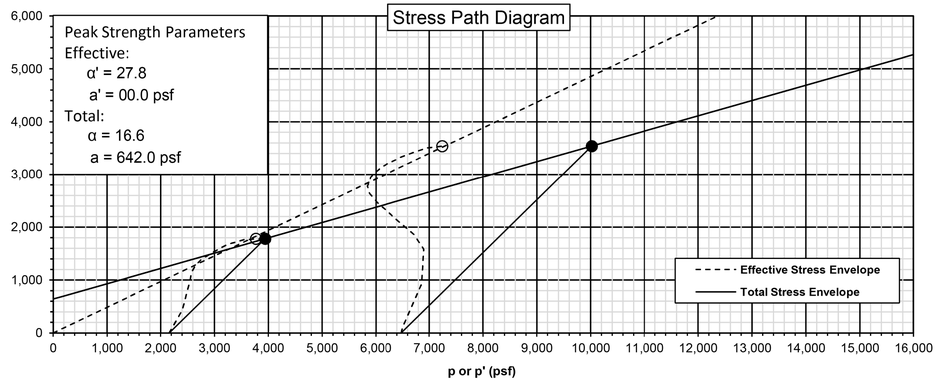
PROJECT NAME:	HAM-75-7.85
JOB NUMBER:	B-10-020
BORING NUMBER:	B-018-0-11
SAMPLE NUMBER:	ST-14
SAMPLE DEPTH:	36.8 to 38.0 ft
DATE OF TESTING:	11/24/2011 to 11/30/2011
TESTED BY:	Hoyt

Soil Description: Mottled orangish brown and reddish brown SILTY CLAY, some coarse to fine sand, trace fine gravel
Soil Classification: ODOT A-6b

Physical Characteristics	L.L.	P.L.	P.I.	Gravel%	C. Sand%	F. Sand%	Silt%	Clay%
	31	14	17	1	3	22	39	35

Stage	Boring No.	Sample No.	Depth (ft)	$(\sigma_3)_f$ (psf)	$(\sigma_1)_f$ (psf)	$(\sigma_3')_f$ (psf)	$(\sigma_1')_f$ (psf)	p'_f (psf)	q_f (psf)
1	B-018-0-11	ST-14	37.5	2,160.0	5,724.0	1,987.2	5,551.2	3,769.2	1,782.0
2	B-018-0-11	ST-14	36.8	6,480.0	13,559.0	3,700.8	10,779.8	7,240.3	3,539.5
3									





FOR INFORMATION ONLY

DRAWN RRM
CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
LABORATORY TEST DATA

HAM-75-7.85

101/105

1990
2017

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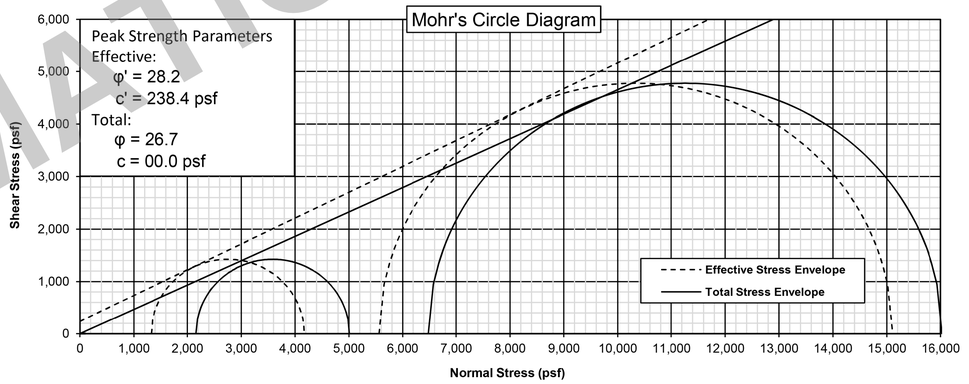
ASTM D-4767

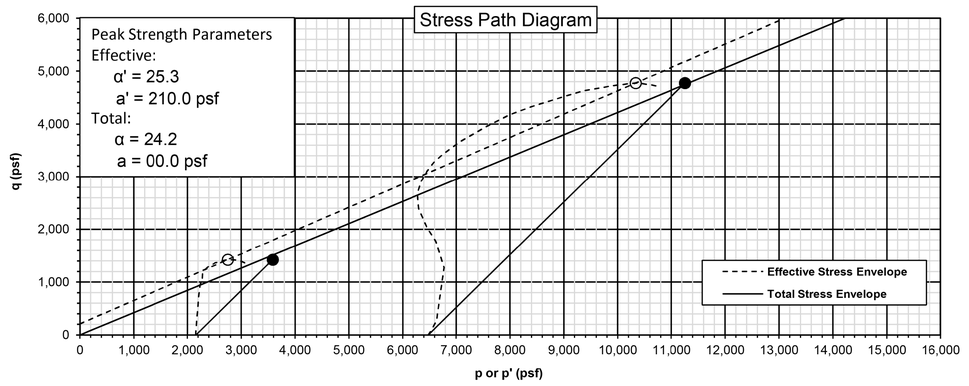
PROJECT NAME:	HAM-75-7.85
JOB NUMBER:	B-10-020
BORING NUMBER:	B-061-0-11
SAMPLE NUMBER:	ST-4
SAMPLE DEPTH:	9.5 to 10.0 ft
DATE OF TESTING:	12/13/2011-12/15/2011
TESTED BY:	Hoyt

Soil Description: Brownish gray CLAY, and silt, little coarse to fine sand, trace fine gravel.
Soil Classification: ODOT A-7-6

Physical Characteristics	L.L.	P.L.	P.I.	Gravel%	C. Sand%	F. Sand%	Silt%	Clay%
	46	20	26	6	4	10	33	47

Stage	Boring No.	Sample No.	Depth (ft)	$(\sigma_3)_f$ (psf)	$(\sigma_1)_f$ (psf)	$(\sigma_3')_f$ (psf)	$(\sigma_1')_f$ (psf)	p'_f (psf)	q_f (psf)
1	B-061-0-11	ST-4	9.5	2,160	5,009	1,325	4,174	2,749	1,425
2	B-061-0-11	ST-4	10.0	6,480	16,030	5,558	15,108	10,333	4,775
3									





FOR INFORMATION ONLY

DRAWN RRM
CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
LABORATORY TEST DATA

HAM-75-7.85

102/105

1991
2017

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UNCONFINED COMPRESSION

ASTM D -2166

PROJECT: HAM-75-7.85
JOB No.: B-10-020

BORING / SAMPLE No.: B-029-0-11 / ST-6
SAMPLE DEPTH: 14.8 feet
DATE OF TESTING: December 7, 2011
TESTED BY: J.H.

SOIL DESCRIPTION: Brown and brownish gray CLAY, and silt, little coarse to fine sand

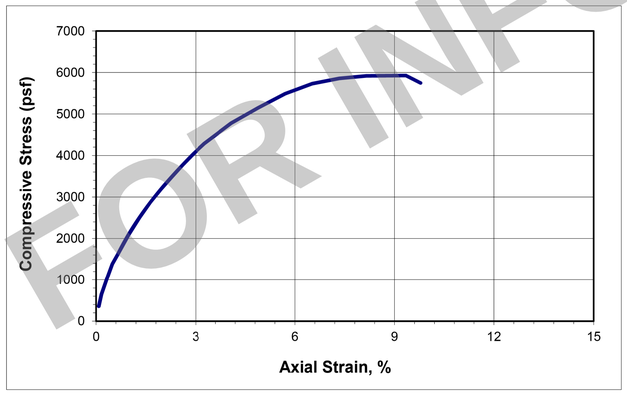
Physical Characteristics	L.L.	P.L.	P.I.	Gravel%	C. Sand%	F. Sand%	Silt%	Clay%
	53	22	31	0	3	9	37	51

DIAMETER, D_0	2.767 in	70.282 mm	STRAIN RATE	1.0	%/min
AREA, A_0	6.0132 in^2	38.795 cm^2	WET SOIL + PAN MASS	1391.1	g
HEIGHT, L_0	6.133 in	155.78 mm	PAN MASS	56.2	g
VOLUME, V_0	36.879 in^3	604.34 cm^3	DRY SOIL + PAN MASS	1175.4	g
MACH. RATE	0.613	in/min	WET DENSITY	137.89	lb/ft^3
WATER CONT.	19.27	%	DRY DENSITY	115.61	lb/ft^3
UNCONFINED COMPRESSION STRESS, q_u			**5927** psf	2.96	tsf
HAND PENETROMETER				2.75	tsf

Failure Sketch



Unconfined Compression Test



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UNCONFINED COMPRESSION

ASTM D -2166

PROJECT: HAM-75-7.85
JOB No.: B-10-020

BORING / SAMPLE No.: B-045-0-11 / ST-15
SAMPLE DEPTH: 44.9 ft
DATE OF TESTING: 12/2/2011
TESTED BY: J.H.

SOIL DESCRIPTION: Gray SILTY CLAY.
SOIL CLASSIFICATION: ODOT A-6b

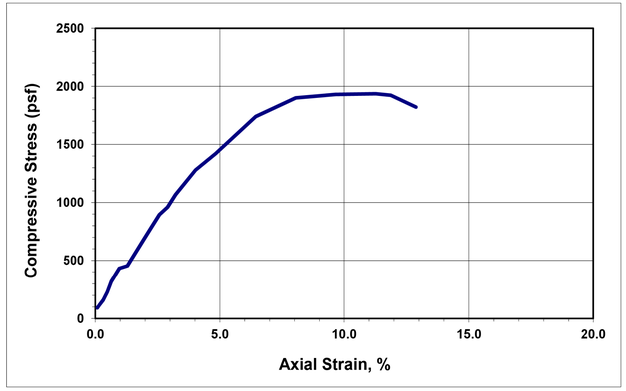
Physical Characteristics	L.L.	P.L.	P.I.	Gravel%	C. Sand%	F. Sand%	Silt%	Clay%
	35	19	16	0	0	0	48	52

DIAMETER, D_0	2.825 in	71.755 mm	STRAIN RATE	1	%/min
AREA, A_0	6.268 in^2	40.439 cm^2	WET SOIL + PAN MASS	1434.4	g
HEIGHT, L_0	6.211 in	157.76 mm	PAN MASS	127	g
VOLUME, V_0	38.93 in^3	637.96 cm^3	DRY SOIL + PAN MASS	1162.4	g
MACH. RATE	0.621	in/min	WET DENSITY	127.94	lb/ft^3
WATER CONT.	26.27	%	DRY DENSITY	101.32	lb/ft^3
UNCONFINED COMPRESSION STRESS, q_u			**1936** psf	0.97	tsf
HAND PENETROMETER				1.50	tsf

Failure Sketch



Unconfined Compression Test



FOR INFORMATION ONLY

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DRAWN RRM | CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
LABORATORY TEST DATA

HAM-75-7.85

1992
2017

RESOURCE INTERNATIONAL
Rii
6350 Presidential Gateway
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UNCONFINED COMPRESSION

ASTM D -2166

PROJECT HAM-75-7.85
JOB No. B-10-020

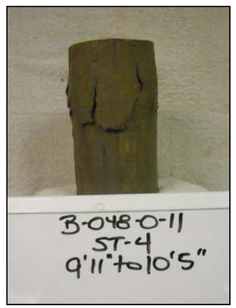
BORING / SAMPLE No. B-048-0-11 / ST-4
SAMPLE DEPTH 9.9 ft
DATE OF TESTING 11/21/2011
TESTED BY J.H.

SOIL DESCRIPTION: Mottled brown and gray SILTY CLAY, little coarse to fine sand, trace fine gavel.
SOIL CLASSIFICATION: ODOT A-6b

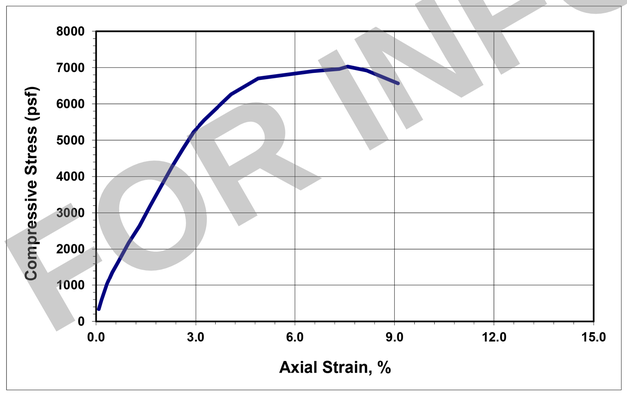
Physical Characteristics	L.L.	P.L.	P.I.	Gravel%	C. Sand%	F. Sand%	Silt%	Clay%
	34	18	16	6	5	9	25	55

DIAMETER, D_0	2.859 in	72.619 mm	STRAIN RATE	1	%/min
AREA, A_0	6.4198 in^2	41.418 cm^2	WET SOIL + PAN MASS	1512.1	g
HEIGHT, L_0	6.13 in	155.7 mm	PAN MASS	89.1	g
VOLUME, V_0	39.353 in^3	644.88 cm^3	DRY SOIL + PAN MASS	1313.6	g
MACH. RATE	0.613	in/min	WET DENSITY	137.75	lb/ft^3
WATER CONT.	16.21	%	DRY DENSITY	118.54	lb/ft^3
UNCONFINED COMPRESSION STRESS, q_u			**7027** psf	3.51	tsf
HAND PENETROMETER				4.00	tsf

Failure Sketch



Unconfined Compression Test



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UNCONFINED COMPRESSION

ASTM D -2166

PROJECT HAM-75-7.85
JOB No. B-10-020

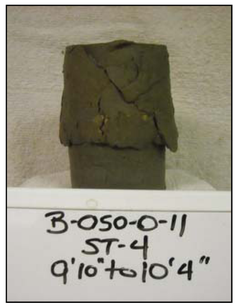
BORING / SAMPLE No. B-050-0-11 / ST-4
SAMPLE DEPTH 9.8 ft
DATE OF TESTING 11/21/2011
TESTED BY J.H.

SOIL DESCRIPTION: Brownish gray SANDY SILT, some fine gavel, some clay.
SOIL CLASSIFICATION: ODOT A-4a

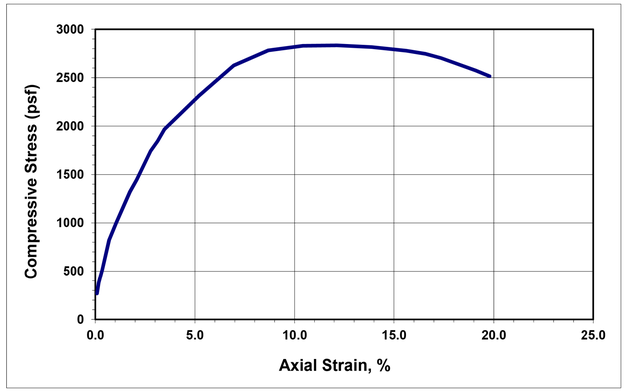
Physical Characteristics	L.L.	P.L.	P.I.	Gravel%	C. Sand%	F. Sand%	Silt%	Clay%
	20	13	7	23	12	20	25	20

DIAMETER, D_0	2.861 in	72.669 mm	STRAIN RATE	1	%/min
AREA, A_0	6.4288 in^2	41.476 cm^2	WET SOIL + PAN MASS	1366	g
HEIGHT, L_0	5.761 in	146.33 mm	PAN MASS	77.9	g
VOLUME, V_0	37.036 in^3	606.91 cm^3	DRY SOIL + PAN MASS	1149.7	g
MACH. RATE	0.635	in/min	WET DENSITY	132.49	lb/ft^3
WATER CONT.	20.18	%	DRY DENSITY	110.25	lb/ft^3
UNCONFINED COMPRESSION STRESS, q_u			**2833** psf	1.42	tsf
HAND PENETROMETER				1.50	tsf

Failure Sketch



Unconfined Compression Test



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DRAWN RRM
CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
LABORATORY TEST DATA

HAM-75-7.85

1993
2017

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UNCONFINED COMPRESSION

ASTM D -2166

PROJECT: HAM-75-7.85
JOB No.: B-10-020

BORING / SAMPLE No.: B-051-0-11 / ST-4
SAMPLE DEPTH: 9.8 ft
DATE OF TESTING: 11/21/2011
TESTED BY: J.H.

SOIL DESCRIPTION: Brown CLAY, little silt, trace fine sand.
SOIL CLASSIFICATION: ODOT A-7-6

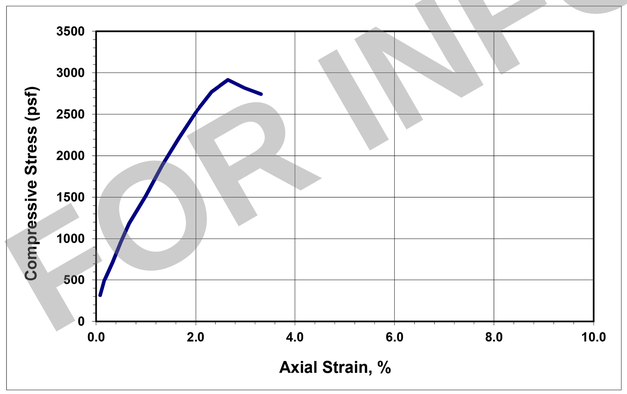
Physical Characteristics	L.L.	P.L.	P.I.	Gravel%	C. Sand%	F. Sand%	Silt%	Clay%
	52	21	31	0	0	1	10	89

DIAMETER, D_0	2.854 in	72.492 mm	STRAIN RATE	1	%/min
AREA, A_0	6.3973 in^2	41.273 cm^2	WET SOIL + PAN MASS	1303.6	g
HEIGHT, L_0	6.025 in	153.04 mm	PAN MASS	56.2	g
VOLUME, V_0	38.544 in^3	631.62 cm^3	DRY SOIL + PAN MASS	1032.8	g
MACH. RATE	0.603	in/min	WET DENSITY	123.29	lb/ft^3
WATER CONT.	27.73	%	DRY DENSITY	96.52	lb/ft^3
UNCONFINED COMPRESSION STRESS, q_u			**2914** psf	1.46	tsf
HAND PENETROMETER				4.00	tsf

Failure Sketch



Unconfined Compression Test



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UNCONFINED COMPRESSION

ASTM D -2166

PROJECT: HAM-75-7.85
JOB No.: B-10-020

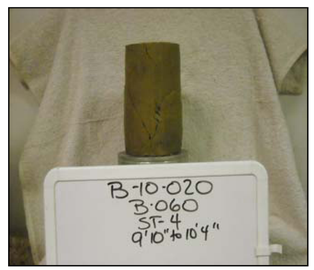
BORING / SAMPLE No.: B-060-0-11 / ST-4
SAMPLE DEPTH: 9.8 ft
DATE OF TESTING: 12/13/2011
TESTED BY: J.H.

SOIL DESCRIPTION: Mottled brown and gray CLAY, and silt, trace coarse to fine sand, trace fine gavel.
SOIL CLASSIFICATION: ODOT A-7-6

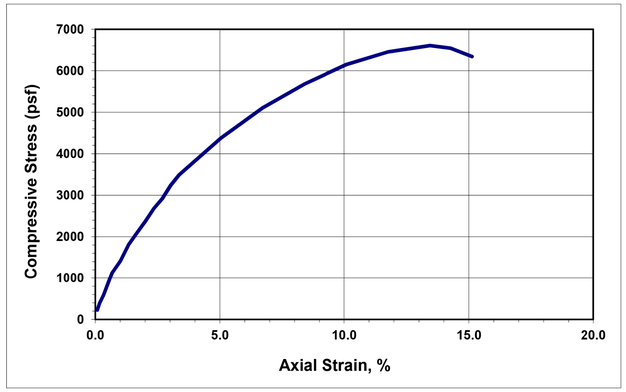
Physical Characteristics	L.L.	P.L.	P.I.	Gravel%	C. Sand%	F. Sand%	Silt%	Clay%
	43	20	23	2	2	5	39	52

DIAMETER, D_0	2.841 in	72.161 mm	STRAIN RATE	1	%/min
AREA, A_0	6.3392 in^2	40.898 cm^2	WET SOIL + PAN MASS	1386.1	g
HEIGHT, L_0	5.95 in	151.13 mm	PAN MASS	56.2	g
VOLUME, V_0	37.718 in^3	618.09 cm^3	DRY SOIL + PAN MASS	1178.3	g
MACH. RATE	0.595	in/min	WET DENSITY	134.32	lb/ft^3
WATER CONT.	18.52	%	DRY DENSITY	113.33	lb/ft^3
UNCONFINED COMPRESSION STRESS, q_u			**6606** psf	3.30	tsf
HAND PENETROMETER				2.50	tsf

Failure Sketch



Unconfined Compression Test



FOR INFORMATION ONLY

DRAWN: RRM
CHECKED: BRT

STRUCTURE FOUNDATION EXPLORATION
LABORATORY TEST DATA

HAM-75-7.85

105/105

1994
2017

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PROJECT DESCRIPTION

THE DESIGN AND CONSTRUCTION OF PROPOSED NOISE WALLS NSA 1 AND NSA 2 AS PART OF THE HAM-75-7.85 PROJECT. THE PROPOSED NOISE WALLS ARE LOCATED ON THE WEST SIDE OF I-75, STARTING ON THE NORTH SIDE LAIDLAW AVENUE AND CONTINUES TO, AND CROSSES, TOWNE STREET AND TERMINATES JUST SOUTH OF SEYMOUR AVENUE. NOISE WALL NSA 1 IS SPLIT INTO THREE SEPARATE SEGMENTS. THE FIRST SEGMENT, NSA 1A, IS LOCATED BETWEEN LAIDLAW AVENUE AND THE PROPOSED HAM-75-0834 BRIDG STRUCTURE CARRYING THE RELOCATED NORFOLK AND SOUTHERN RAILROAD OVER I-75. THE SECOND SEGMENT, NSA 1B, IS LOCATED BETWEEN THE HAM-75-0834 STRUCTURE AND THE TOWNE STREET BRIDGE. WHERE THE WALL CONVERGES WITH RETAINING WALL H, THE WALL WILL BE CONNECTED TO THE BARRIER OF THE RETAINING WALL. THE FINAL SEGMENT, NSA 1C, IS FIXED TO, AND CROSSES, THE HAM-75-0857 TOWNE STREET BRIDGE OVER I-75. NOISE WALL NSA 2 IS LOCATED ON THE NORTH SIDE OF THE HAM-75-0857 BRIDGE STRUCTURE AND CONTINUES TO THE END OF THE ALIGNMENT, JUST SOUTH OF SEYMOUR AVENUE. THE BEGINNING PORTION OF THE WALL WILL BE CONNECTED TO THE BARRIER OF RETAINING WALL I. THE TOTAL WALL LENGTH OF NSA 1 IS APPROXIMATELY 1,600 LINEAL FEET, AND THE TOTAL LENGTH OF NSA 2 IS APPROXIMATELY 2,160 LINEAL FEET.

HISTORIC RECORDS

HISTORIC BORINGS FROM THE HAM-4W-7.81 EXPLORATION ARE REFERENCED IN THIS STRUCTURE FOUNDATION EXPLORATION.

GEOLOGY

THE SITE LIES WITHIN THE ILLINOIAN TILL PLAIN OF THE TILL PLAINS SECTION. THIS AREA IS CHARACTERIZED BY ROLLING GROUND MORAINE DEPOSITS WITH MANY BURIED VALLEYS ALTERNATING BETWEEN BROAD FLOODPLAINS AND BEDROCK GORGES. THE SITE AREA CONTAINS SILTY LOAM TILL DEPOSITED AS GROUND MORAINE COVERED WITH LOESS AND DISSECTED BY THE MODERN DAY MILL CREEK. BASED ON BEDROCK GEOLOGY AND TOPOGRAPHY MAPS OF THE AREA, FROM THE OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR), THE UNDERLYING BEDROCK CONSISTS OF THE ORDOVICIAN-AGED POINT PLEASANT FORMATION. THE POINT PLEASANT FORMATION IS COMPRISED OF INTERBEDDED LIMESTONE AND SHALE, AVERAGING 60 PERCENT LIMESTONE AND 40 PERCENT SHALE, AND RANGES FROM 0 TO 80 FEET THICK. ALONG THE PROJECT ALIGNMENT, THE BEDROCK SURFACE DIRECTLY BENEATH I-75 LIES ALONG THE SLOPE OF THE BEDROCK VALLEY AND THE BEDROCK SURFACE RANGES BETWEEN APPROXIMATE ELEVATIONS OF 385 TO 425 FEET MSL. OVERALL, THE BEDROCK SURFACE ALONG THE MAJORITY OF THE PROJECT ALIGNMENT SLOPES DOWNWARD TO THE NORTHWEST. ACCORDING TO BEDROCK TOPOGRAPHY MAPPING, THE DEPTH TO TOP OF BEDROCK IN THE VICINITY OF THE PROJECT RANGES FROM APPROXIMATELY 120 TO 170 FEET BELOW THE EXISTING GROUND SURFACE.

RECONNAISSANCE

THE SITES FOR THE PROPOSED NOISE WALL STRUCTURES ARE LOCATED ALONG THE WEST SIDE OF I-75, BEGINNING ON THE NORTH SIDE OF THE HAM-75-0823 LAIDLAW AVENUE OVER I-75 BRIDGE STRUCTURE AND TERMINATES JUST OF THE HAM-561-7.01 SEYMOUR AVENUE OVER I-75 BRIDGE STRUCTURE. OVERALL, THE PROJECT IS LOCATED APPROXIMATELY 2.0 MILES SOUTH OF THE LOCKLAND SPLIT. THE PROPOSED NSA 1 BEGINS AT I-75 STA. 435+00 AND CONTINUES NORTH TO STA. 498+14, AND THE PROPOSED NSA 2 BEGINS AT I-75 STA. 435+00 AND CONTINUES NORTH TO STA. 474+05. WHERE THE NOISE WALLS ARE NOT FIXED TO THE BARRIER OF THE PROPOSED RETAINING WALLS H AND I, THE WALL ALIGNMENTS WILL ALONG THE GRASS ADJACENT TO THE ROADWAY. THE EXISTING I-75 ROADWAY THAT RUNS ADJACENT TO THE PROPOSED STRUCTURES IS CURRENTLY A SIX-LANE, ASPHALT PAVED ROADWAY. THE TERRAIN WEST OF I-75 IS ELEVATED FROM THE EXISTING ROADWAY AT THE NORTH AND SOUTH PORTIONS OF THE NOISE WALLS, AND THE EXISTING I-75 MAINLINE PROFILE IS ELEVATED APPROXIMATELY 25 TO 30 FEET ABOVE THE SURROUNDING TERRAIN IN THE VICINITY OF THE HAM-75-0857 TOWNE STREET OVER I-75 BRIDGE STRUCTURE.

SUBSURFACE EXPLORATION

BETWEEN OCTOBER 5 AND NOVEMBER 30, 2011, A TOTAL OF THIRTEEN (13) BORINGS WERE DRILLED TO DEPTHS RANGING FROM 25.0 TO 50.0 FEET BELOW THE GROUND SURFACE. BORINGS B-005-0-11 THROUGH B-007-0-11 WERE DRILLED FOR NOISE WALL NSA 1A, BORINGS B-009-0-11, B-010-0-11, B-011-0-11 AND B-013-0-11 WERE DRILLED FOR NOISE WALL NSA 1B AND BORINGS B-024-0-11, B-026-0-11, B-028-0-11, B-030-0-11 AND B-031-0-11 WERE DRILLED FOR NOISE WALL NSA 2. THE BORING LOCATIONS WERE DETERMINED AND LOCATED IN THE FIELD BY RII REPRESENTATIVES.

THE BORINGS WERE DRILLED USING AN ALL TERRAIN VEHICLE (ATV) MOUNTED ROTARY DRILLING MACHINE, UTILIZING A 4.25-INCH INSIDE DIAMETER, HOLLOW-STEM AUGER TO ADVANCE THE HOLES. RII UTILIZED A CALIBRATED AUTOMATIC DROP HAMMER TO GENERATE CONSISTENT ENERGY TRANSFER TO THE SAMPLER. THE HAMMER FOR THE ATV-MOUNTED DRILL RIG USED FOR THIS PROJECT WAS CALIBRATED ON MAY 6, 2011, AND HAS A DRILL ROD ENERGY RATIO OF 77.1 PERCENT.

EXPLORATION FINDINGS

ALL OF THE BORINGS WERE DRILLED ALONG THE EXISTING GRASS AREA ADJACENT TO THE I-75 SOUTHBOUND LANES AND ENCOUNTERED 4.0 TO 11.0 INCHES OF TOPSOIL AT THE EXISTING GROUND SURFACE, IDENTIFIED BY THE SIGNIFICANT PRESENCE OF ORGANIC MATTER AND VEGETATION.

LEGEND

DESCRIPTION	ODOT CLASS	CLASSIFIED MECH./VISUAL	
GRAVEL AND/OR STONE FRAGMENTS	*A-1-a*	*0*	*3*
GRAVEL AND/OR STONE FRAGMENTS WITH SAND	*A-1-b*	*2*	*9*
GRAVEL AND/OR STONE FRAGS. WITH SAND AND SILT	*A-2-4*	*1*	*6*
FINE SAND	*A-3*	*2*	*19*
COARSE AND FINE SAND	*A-3a*	*4*	*12*
SANDY SILT	*A-4a*	*4*	*14*
SILT	*A-4b*	*2*	*6*
SILT AND CLAY	*A-6a*	*6*	*21*
SILTY CLAY	*A-6b*	*2*	*13*
CLAY	*A-7-6*	*3*	*11*
	TOTAL	*26*	*114*

SOD AND TOPSOIL = X = APPROXIMATE THICKNESS — *VISUAL*

2007 AND 2011 BORING LOCATION - PLAN VIEW

HISTORIC BORING LOCATION - PLAN VIEW

DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.

N_{60} INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.

WC INDICATES WATER CONTENT IN PERCENT.

W— INDICATES FREE WATER ELEVATION.

▼— INDICATES STATIC WATER ELEVATION.

● INDICATES A PLASTIC MATERIAL WITH A MOISTURE CONTENT EQUAL TO OR GREATER THAN THE LIQUID LIMIT MINUS 3.

⊖ INDICATES A NON-PLASTIC MATERIAL WITH A MOISTURE CONTENT GREATER THAN 25% OR GREATER THAN 19% WITH A WET APPEARANCE.

SS INDICATES A SPLIT SPOON SAMPLE, STANDARD PENETRATION TEST.

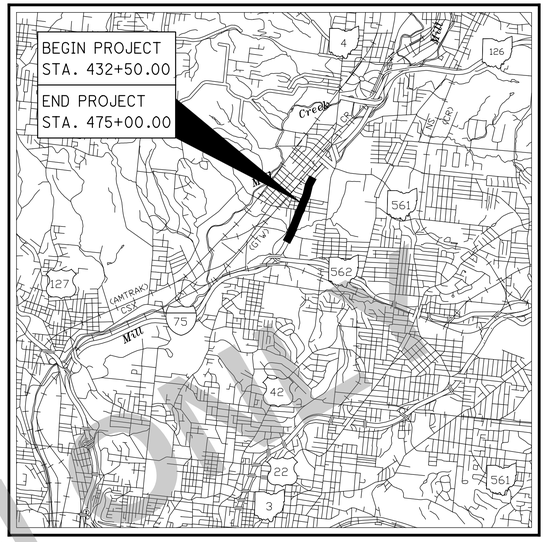
ST INDICATES A SHELBY TUBE SAMPLE.

EXPLORATION FINDINGS (CONTINUED)

BENEATH THE SURFACE MATERIAL IN BORINGS B-004-0-11, B-005-0-11, B-010-0-11, B-011-0-11, B-013-0-11 AND B-024-0-11, MATERIAL IDENTIFIED AS EXISTING FILL WAS ENCOUNTERED EXTENDING TO A DEPTHS RANGING FROM 8.0 TO 18.0 FEET BELOW THE GROUND SURFACE. THE FILL MATERIAL CONSISTED OF BROWN, DARK BROWN, DARK GRAY, BROWNISH GRAY AND BLACK GRAVEL AND SAND, GRAVEL WITH SAND AND SILT, FINE SAND, COARSE AND FINE SAND, SAND SILTY, SILT AND CLAY AND SILTY CLAY (ODOT A-1-b, A-2-4, A-3, A-3a, A-4a, A-6a, A-6b). THE MAJORITY OF THE FILL MATERIAL CONTAINED ASPHALT, CONCRETE, SLAG, COAL AND CERAMIC FRAGMENTS.

UNDERLYING THE SURFACE MATERIALS AND FILL MATERIAL WHERE PRESENT, NATURAL SOILS WERE ENCOUNTERED CONSISTING OF BOTH GRANULAR AND COHESIVE MATERIAL. THE GRANULAR SOILS WERE GENERALLY DESCRIBED AS BROWN, LIGHT BROWN AND DARK GRAY GRAVEL, GRAVEL AND SAND, GRAVEL WITH SAND AND SILT, FINE SAND, COARSE AND FINE SAND AND SANDY SILT (ODOT A-1-a, A-1-b, A-2-4, A-3, A-3a, A-4a). THE COHESIVE SOILS WERE GENERALLY DESCRIBED AS GRAY, BROWN, BROWNISH GRAY AND DARK BROWN SANDY SILT, SILT, SILT AND CLAY, SILTY CLAY AND CLAY (ODOT A-4a, A-4b, A-6a, A-6b, A-7-6) WITH LESSER PERCENTAGES OF GRAVEL AND/OR SAND.

BASED ON THE SPT BLOW COUNTS OBTAINED, THE GRANULAR SOIL ENCOUNTERED RANGED FROM VERY LOOSE (N60 < 5 BLOWS PER FOOT [BPF]) TO VERY DENSE (N60 > 50 BPF). OVERALL BLOW COUNTS RECORDED FROM THE SPT SAMPLING RANGED FROM 3 TO 67 BPF. THE COHESIVE SOIL ENCOUNTERED RANGED FROM SOFT (0.25 < HP ≤ 0.5 TSF) TO HARD (HP > 4.0 TSF). THE UNCONFINED COMPRESSIVE STRENGTH OF THE COHESIVE SOIL SAMPLES TESTED, RANGED FROM 0.5 TO OVER 4.5 TSF (LIMIT OF INSTRUMENT).



LOCATION MAP

SCALE IN MILES

0 1 2 3 4

N

PARTICLE SIZE DEFINITIONS

12"	3"	2.0 mm	0.42 mm	0.074 mm	0.005 mm
BOULDERS |	COBBLES |	GRAVEL |	COARSE SAND |	FINE SAND |	SILT | CLAY
		No. 10 SIEVE	No. 40 SIEVE	No. 200 SIEVE	

EXPLORATION FINDINGS (CONTINUED)

NATURAL MOISTURE CONTENTS OF THE SOIL SAMPLES TESTED RANGED FROM 3 TO 32 PERCENT. THE NATURAL MOISTURE CONTENT OF THE COHESIVE SOIL SAMPLES TESTED FOR PLASTICITY INDEX RANGED FROM 7 PERCENT BELOW TO 11 PERCENT ABOVE THEIR CORRESPONDING PLASTIC LIMITS. THE MOISTURE CONTENTS OF THE NATIVE SOILS ARE GENERALLY CONSIDERED TO BE MODERATELY BELOW TO SIGNIFICANTLY ABOVE OPTIMUM MOISTURE LEVELS.

BEDROCK WAS NOT ENCOUNTERED IN ANY OF THE BORINGS PERFORMED FOR THIS EXPLORATION.

GROUNDWATER WAS ENCOUNTERED INITIALLY DURING THE DRILLING PROCESS IN BORINGS B-005-0-11 AND B-006-0-11 AT A DEPTH OF 26.0 AND 24.0 FEET BELOW THE GROUND SURFACE, RESPECTIVELY. AT THE COMPLETION OF DRILLING AND PRIOR TO REMOVING THE AUGERS AT BORING B-005-0-11, GROUNDWATER ACCUMULATED IN THE AUGER STEMS TO A DEPTH OF 21.0 FEET. THE REMAINING BORINGS WERE OBSERVED TO BE DRY.

SPECIFICATIONS

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JANUARY 2011.

AVAILABLE INFORMATION

ALL AVAILABLE SOIL AND BEDROCK INFORMATION THAT CAN BE CONVENIENTLY SHOWN ON THE SOIL PROFILE SHEETS HAS BEEN SO REPORTED. ADDITIONAL SUBSURFACE EXPLORATIONS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, IF ANY, MAY BE INSPECTED IN THE DISTRICT DEPUTY DIRECTOR'S OFFICE, THE OFFICE OF GEOTECHNICAL ENGINEERING AT 1980 WEST BROAD STREET.

RECON. - RB 08/24/11 TO 08/25/11

DRILLING - TF, SM 10/05/11 TO 11/30/11

DRAWN - RRM 02/06/15

REVIEWED - BRT 02/06/15

FOR INFORMATION ONLY

DESIGN AGENCY
RESOURCE INTERNATIONAL
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231

PID NO. 77889

STRUCTURE FOUNDATION EXPLORATION
NOISE WALLS

HAM-75-7.85

1995
2017

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FOR INFORMATION ONLY

PROSSER AVE.

MURRAY RD.

WALL 1A

MATCHLINE STA. 13+50

BEGIN WALL 1A
STA. 10+00.00

B-004-0-11

B-005-0-11

B-006-0-11

℄ I-75

I-75

433 434 435 436 437 438

TOP OF WALL

548.00

570 560 550 540 530 520 510 500

B-004-0-11
℄ I-75
432+99.54
73.2' LT.
TOPSOIL = 0.3'

N_{60}	WC
39	11
67	3
63	3
6	10
6	9
3	13
8	5
32	4
31	3
32	3

19

TOP OF WALL 1A

BOTTOM OF WALL 1A

EX. GROUND

B-005-0-11
℄ I-75
436+32.89
81.0' LT.
TOPSOIL = 0.5'

N_{60}	WC
21	10
22	12
19	12
10	14
6	16
5	19
5	13
12	13
13	17
W 4	8
10	16

PROP. GROUND

B-006-0-11
℄ I-75
438+05.26
75.5' LT.
TOPSOIL = 0.5'

N_{60}	WC
6	11
9	14
10	18
13	11
15	11
4	5
3	8
5	6
9	6
W-18	14

EX. GROUND

538.15 540.38 539.91 539.95 539.57 538.91 537.27 537.77 538.10 537.46 537.27 539.32 539.12 538.90 538.86

10+00 11+00 12+00 13+00

HORIZONTAL SCALE IN FEET
0 10 20 40

DRAWN RRM
CHECKED BRT

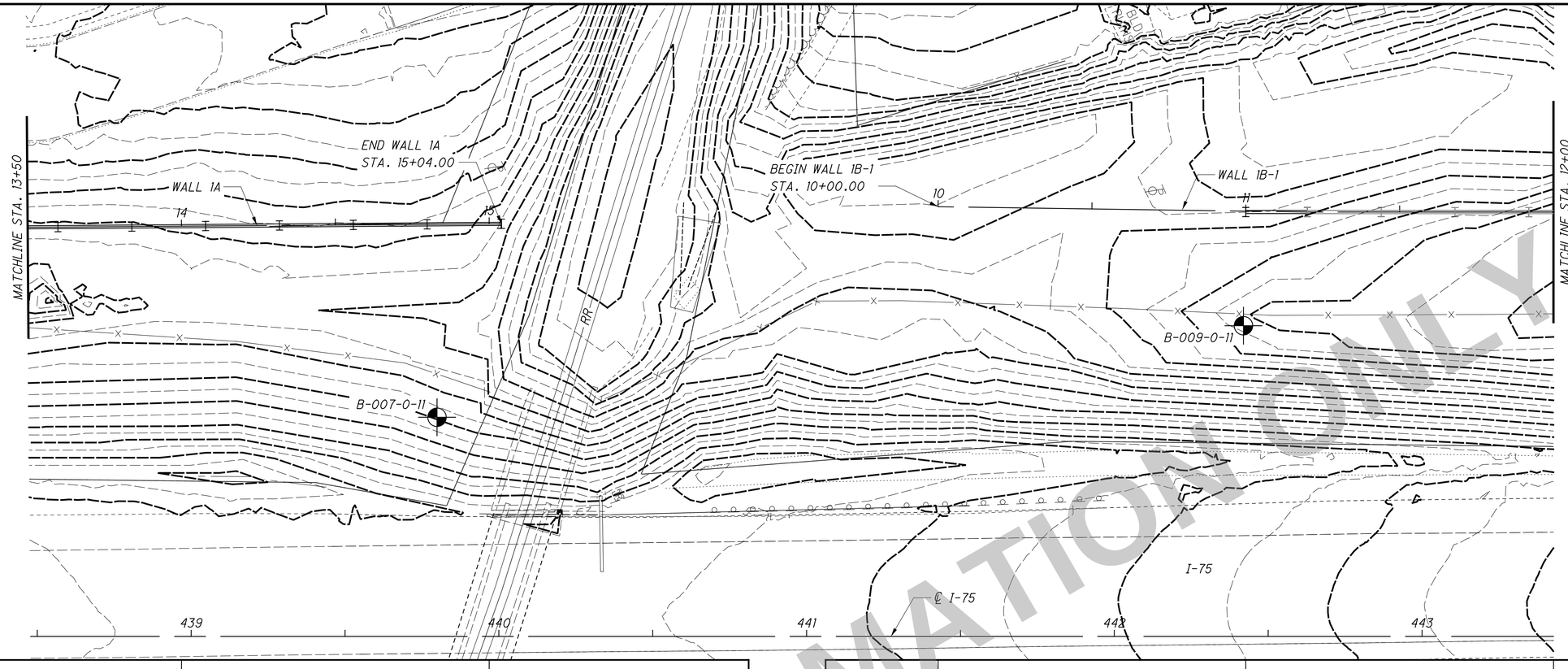
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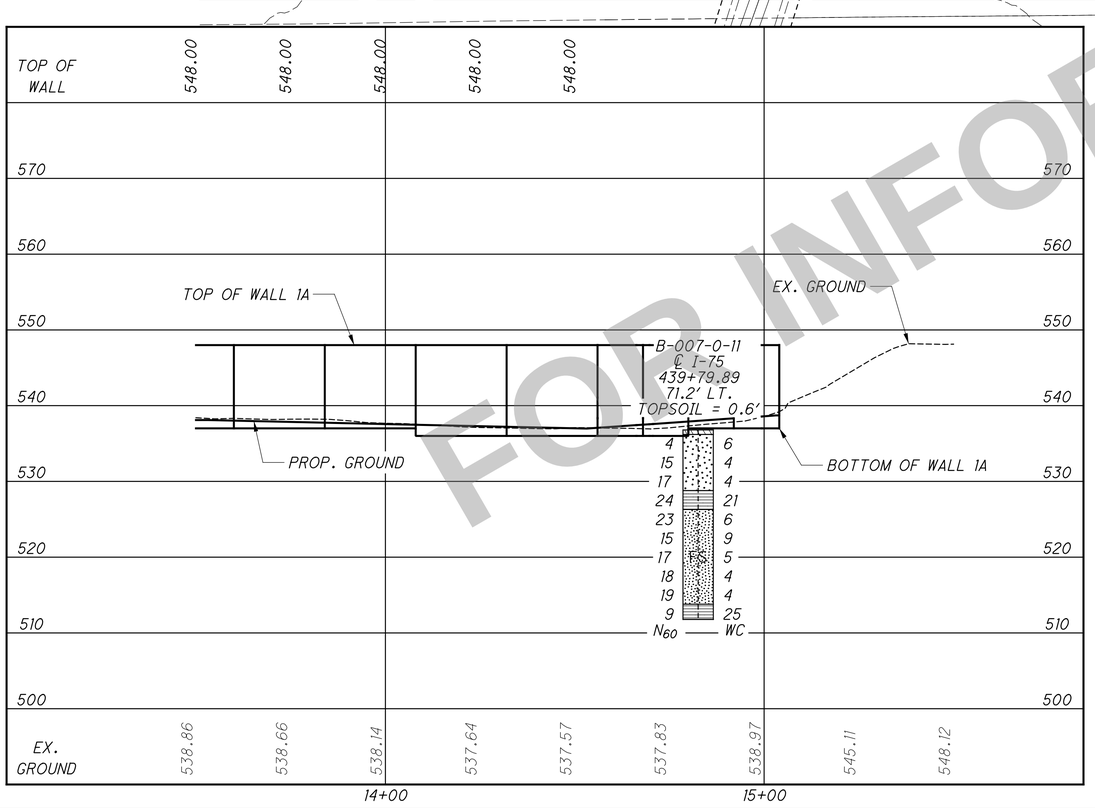
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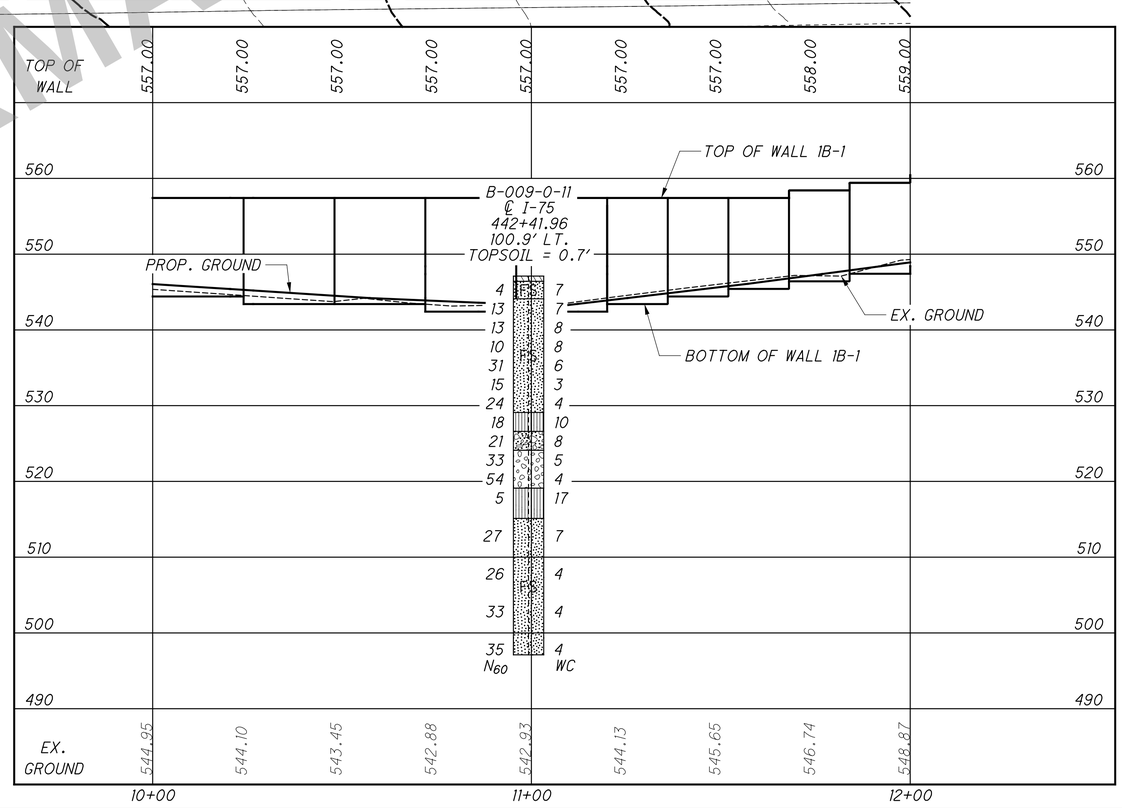
2 / 23

1996
2017

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FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET
0 10 20 40

DRAWN RRM
CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
STA. 13+50 TO STA. 15+04 WALL 1A
STA. 10+00 TO STA. 12+00 WALL 1B-1

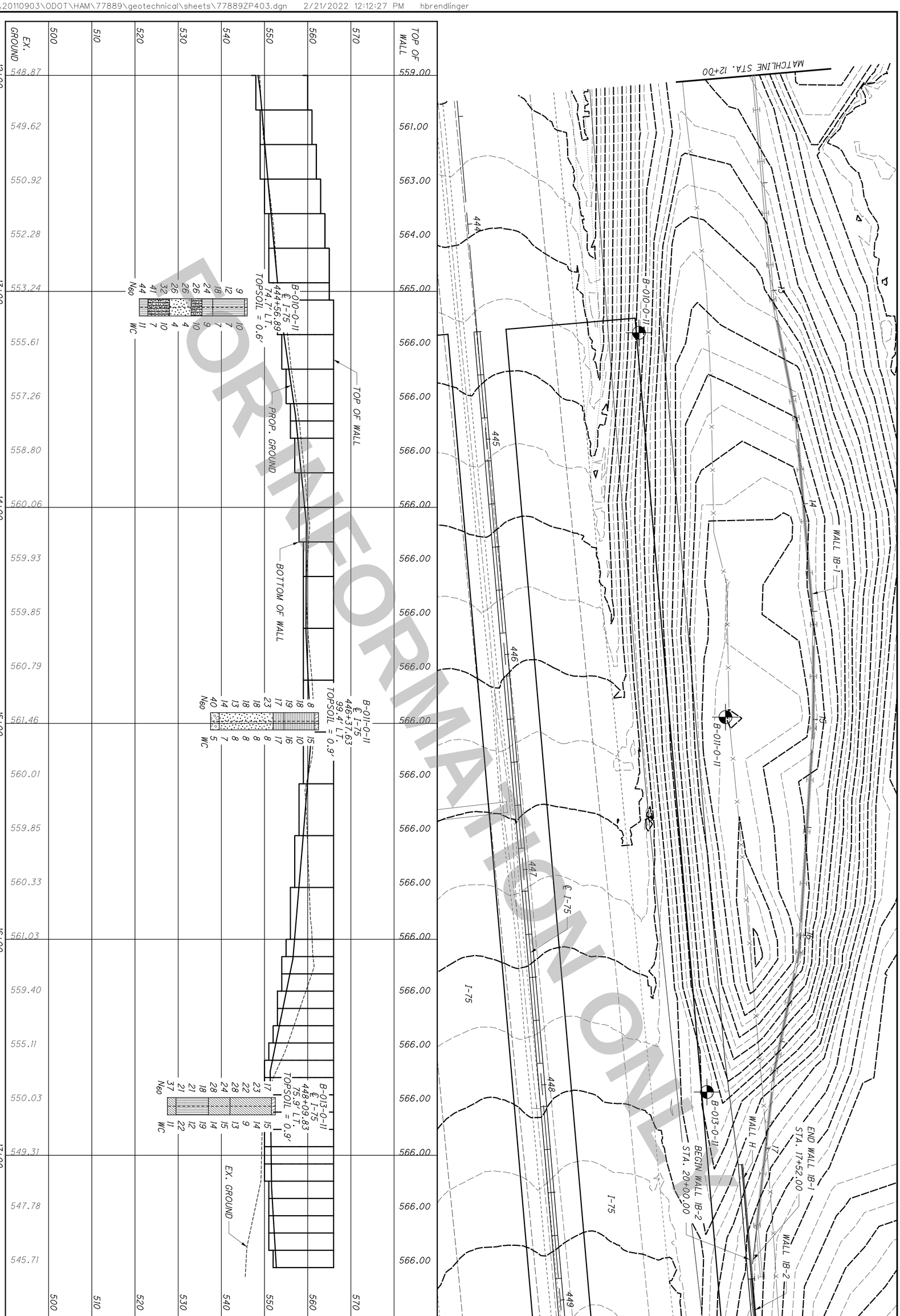
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3 / 23

1997
2017

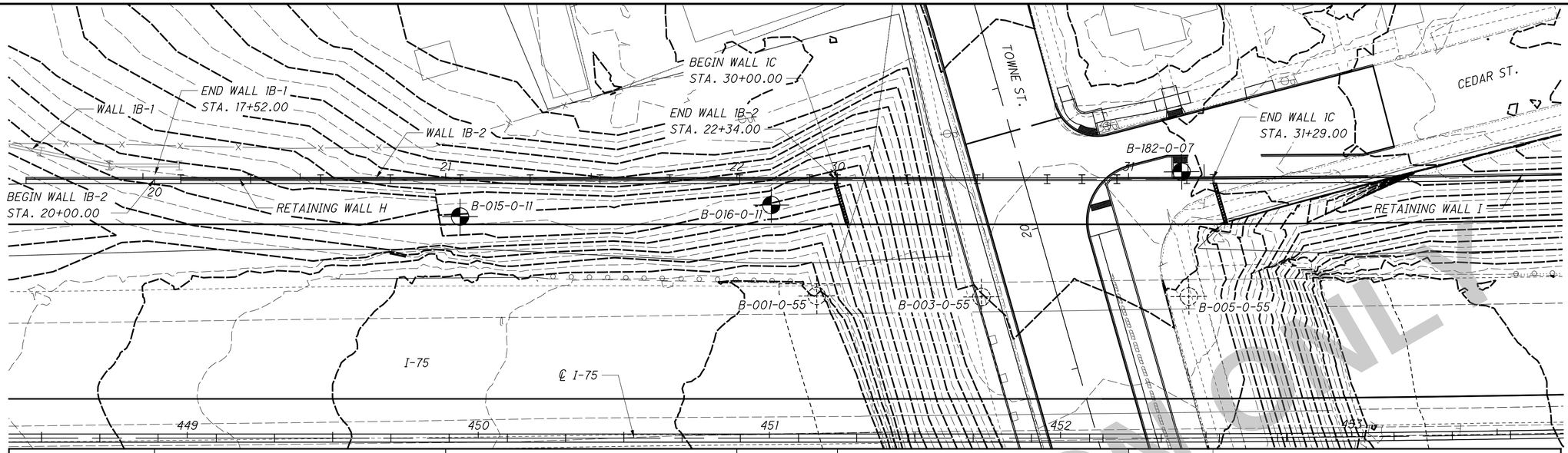
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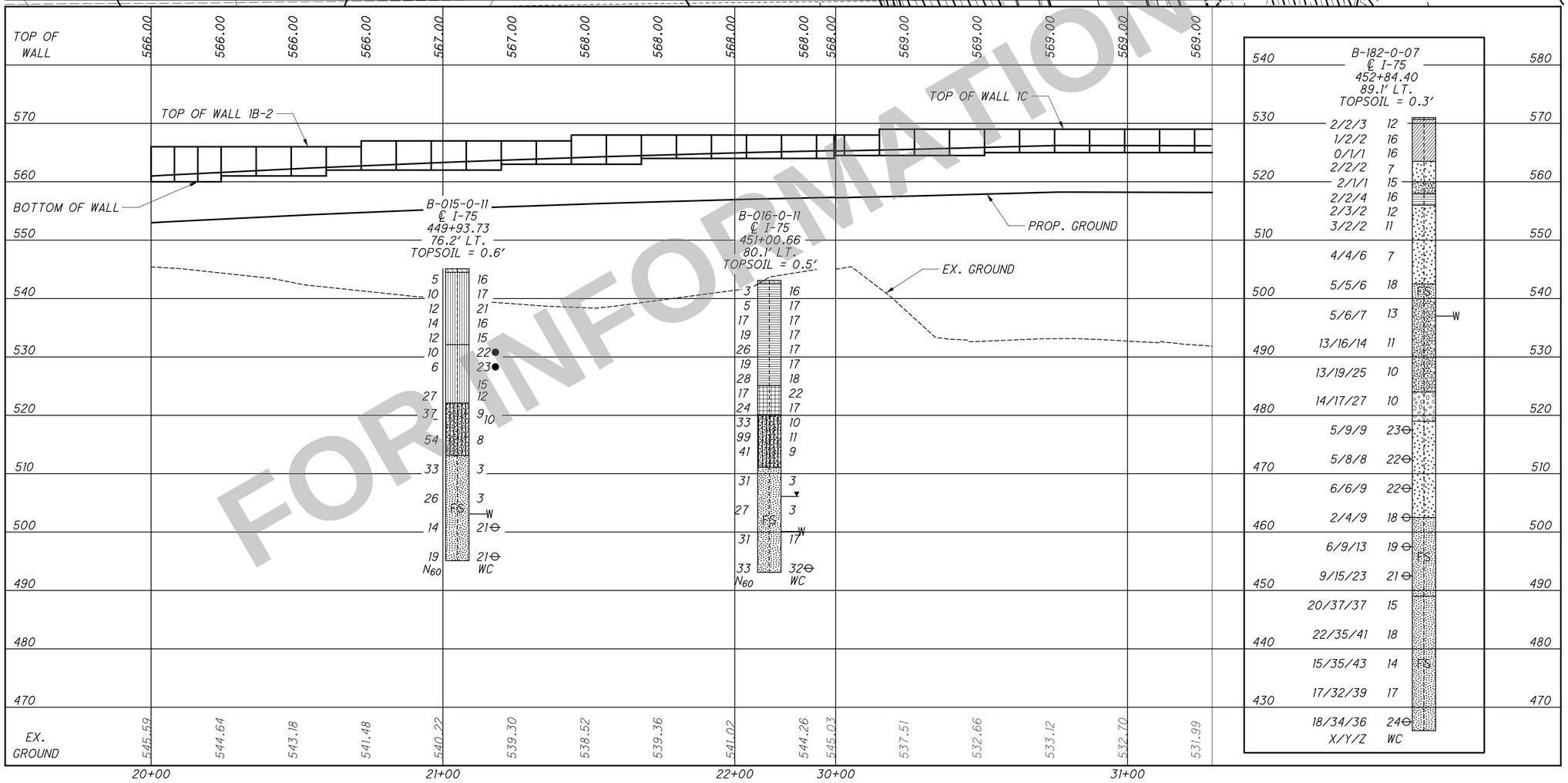
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FOR INFORMATION ONLY

1998 2017	4 / 23	HAM-75-7.85	STRUCTURE FOUNDATION EXPLORATION STA. 12+00 TO STA. 17+52 WALL 1B-1	DRAWN RRM CHECKED BRT	0 20 10 40 HORIZONTAL SCALE IN FEET





FOR INFORMATION ONLY

HORIZONTAL SCALE IN FEET

DRAWN RRM
CHECKED BRT

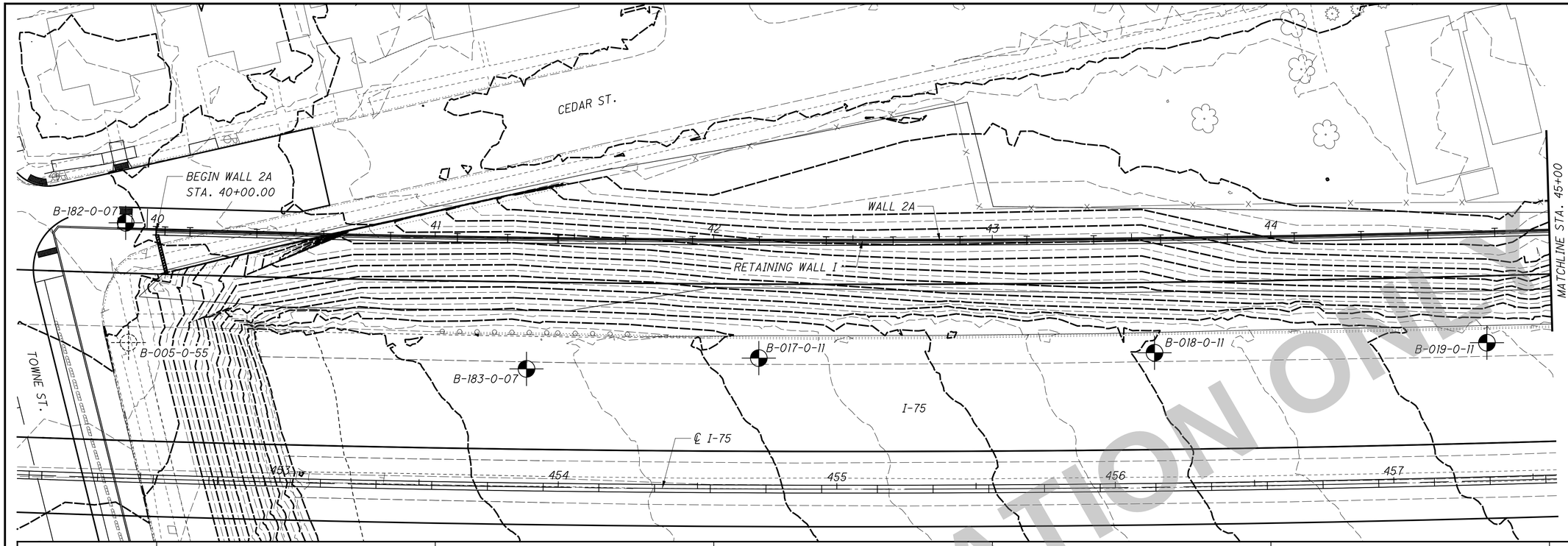
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STA. 30+00 TO STA. 31+29 WALL 1C

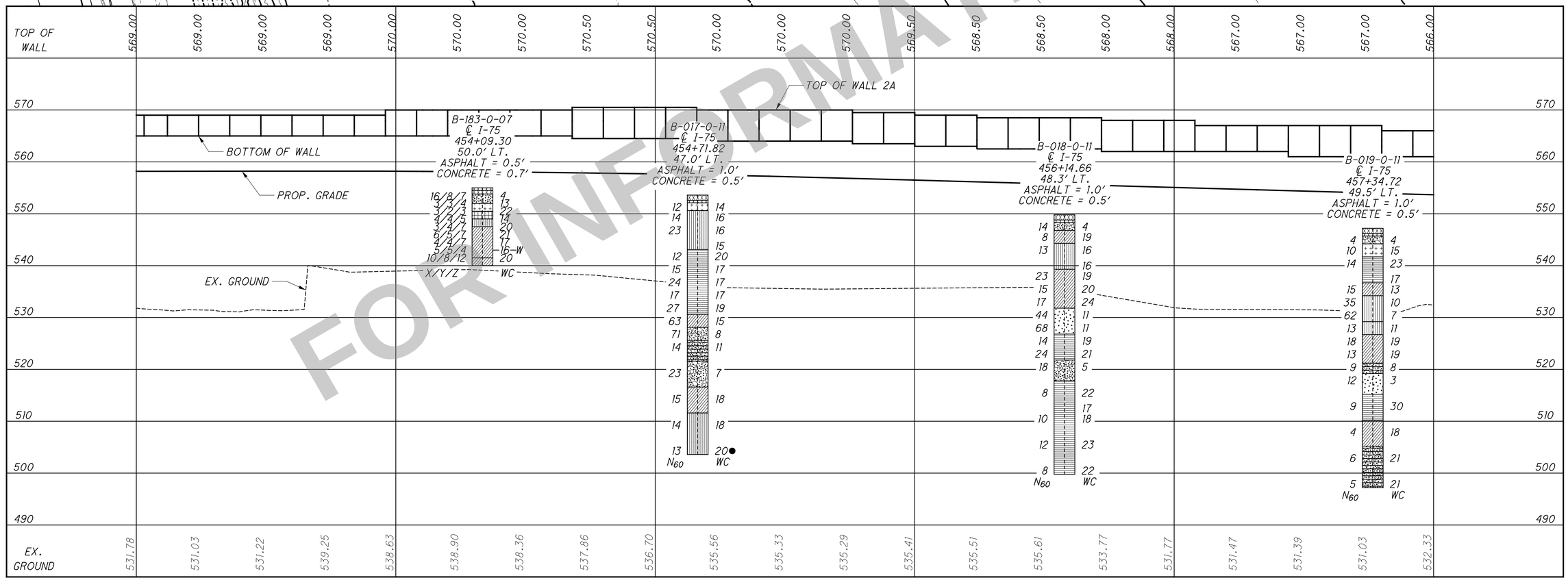
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1999
2017

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HORIZONTAL SCALE IN FEET
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DRAWN RRM
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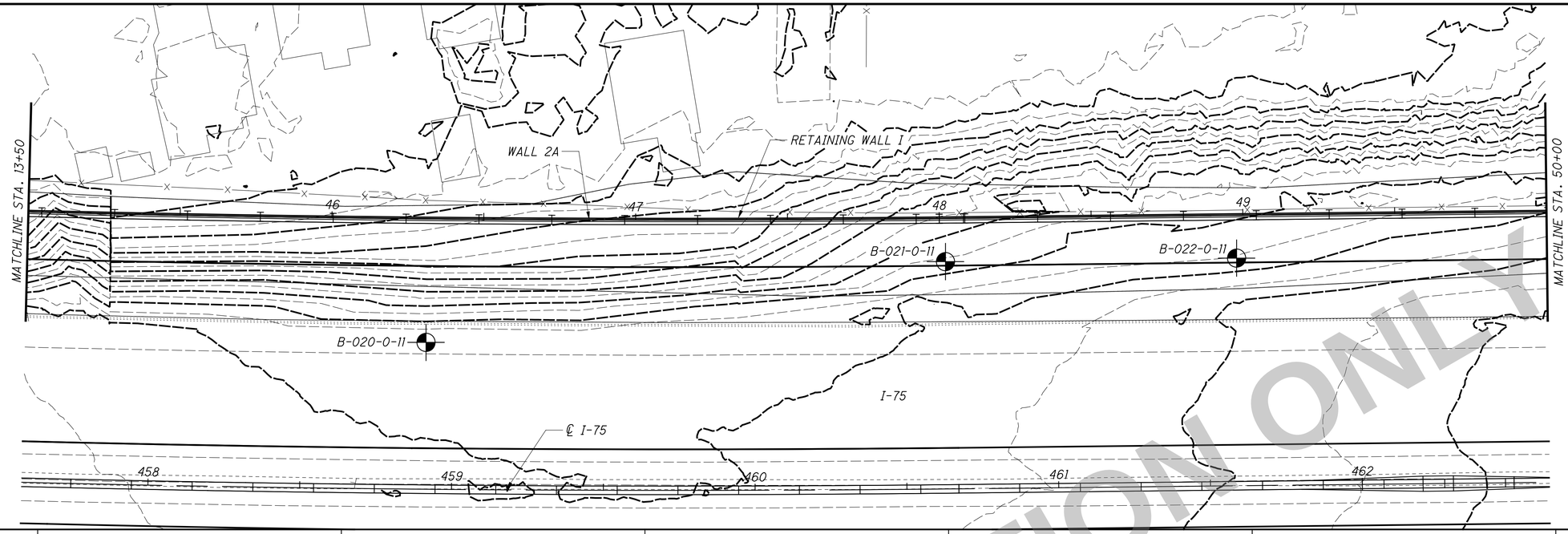
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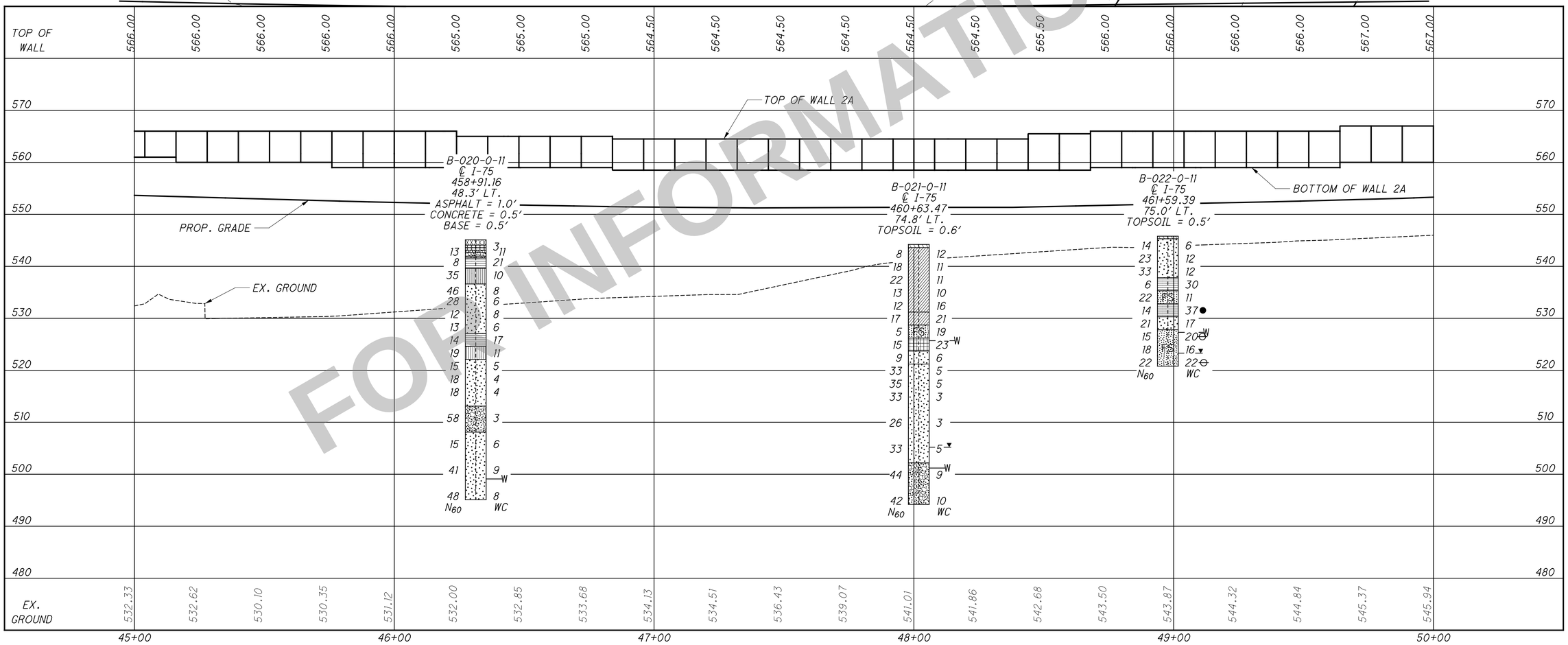
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6 / 23

2000 2017

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HORIZONTAL SCALE IN FEET
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DRAWN RRM
CHECKED BRT

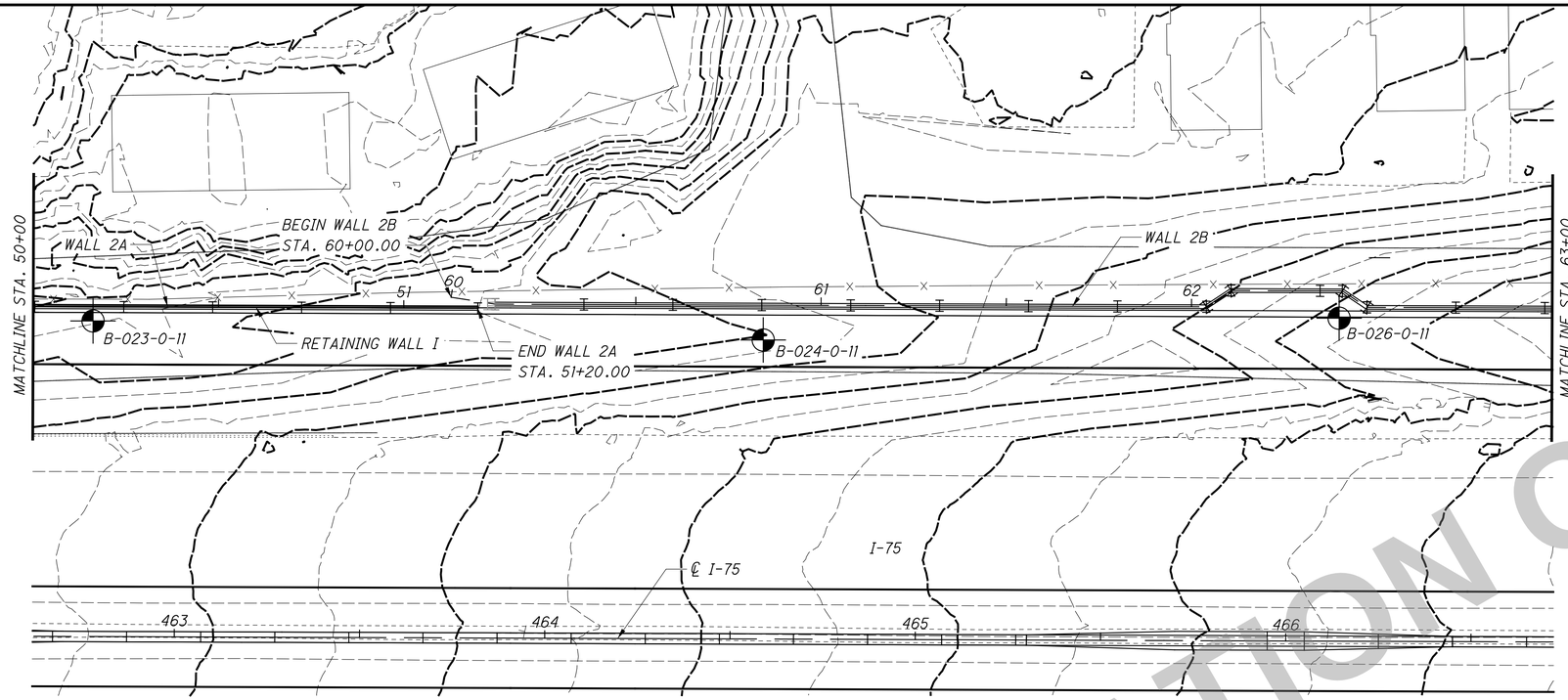
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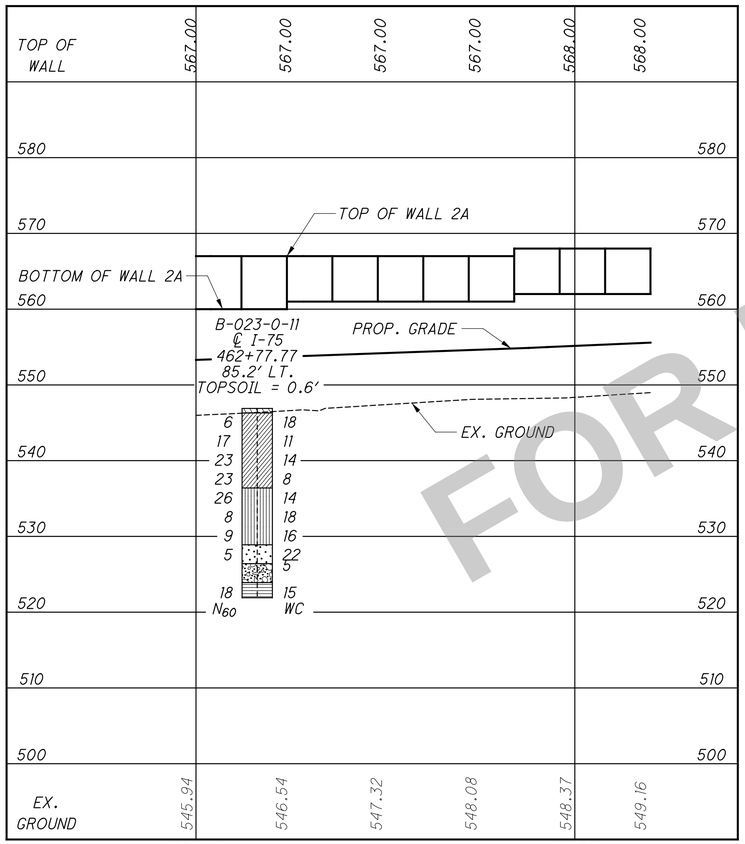
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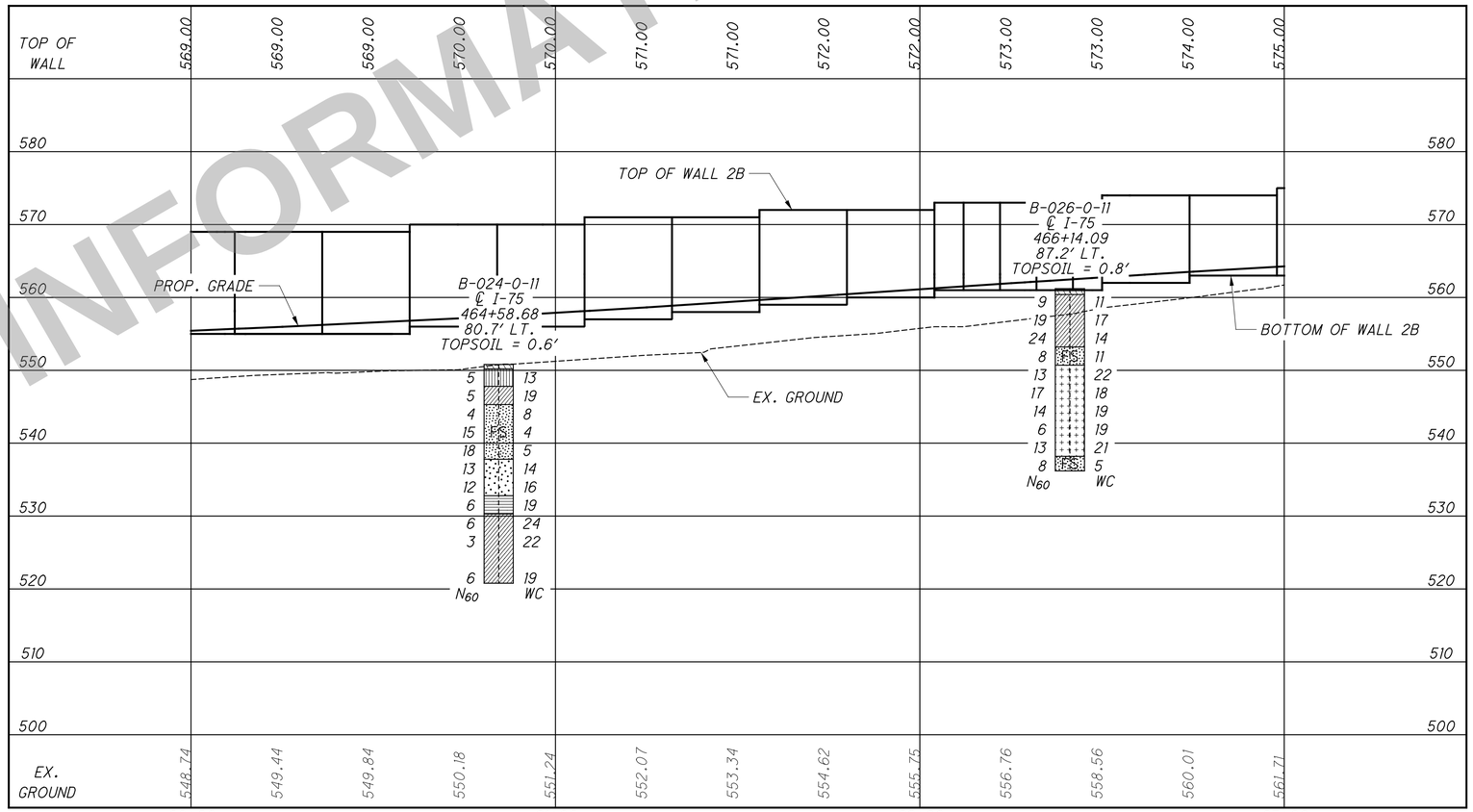
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2001 2017

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HORIZONTAL SCALE IN FEET
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DRAWN RRM
CHECKED BRT

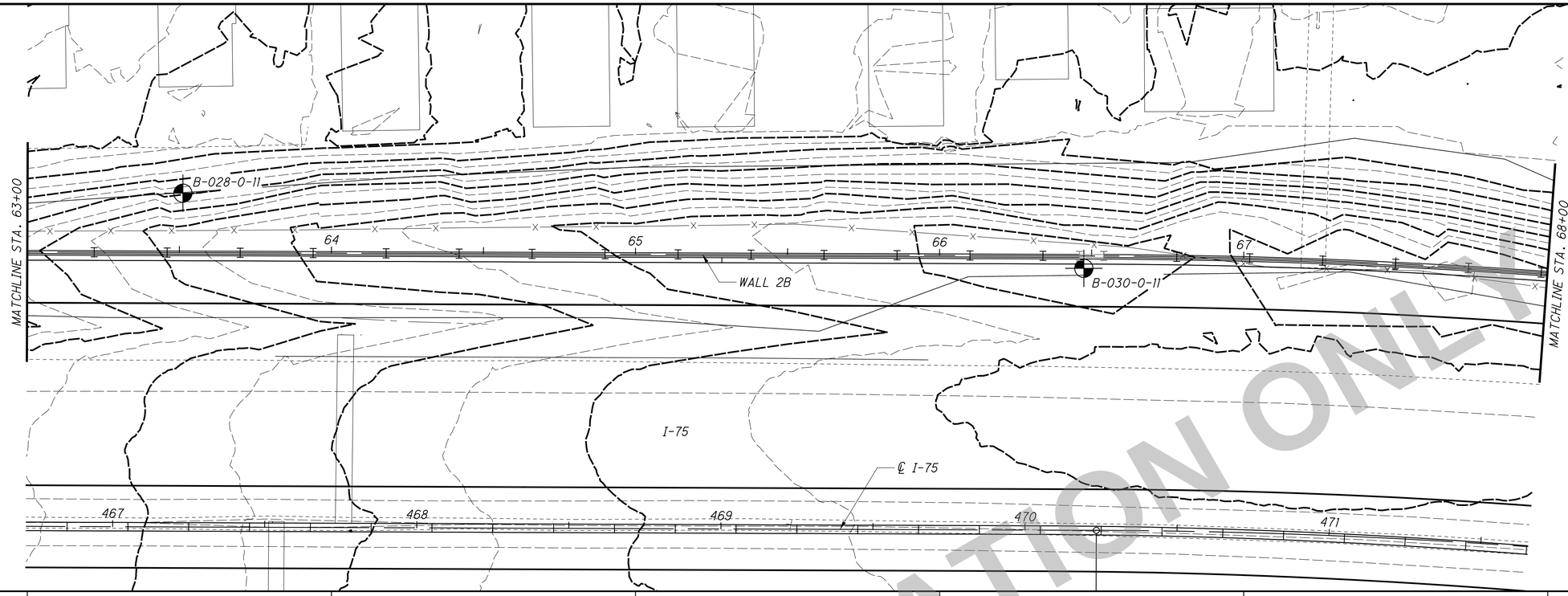
STRUCTURE FOUNDATION EXPLORATION
STA. 50+00 TO STA. 51+20 WALL 2A
STA. 60+00 TO STA. 63+00 WALL 2B

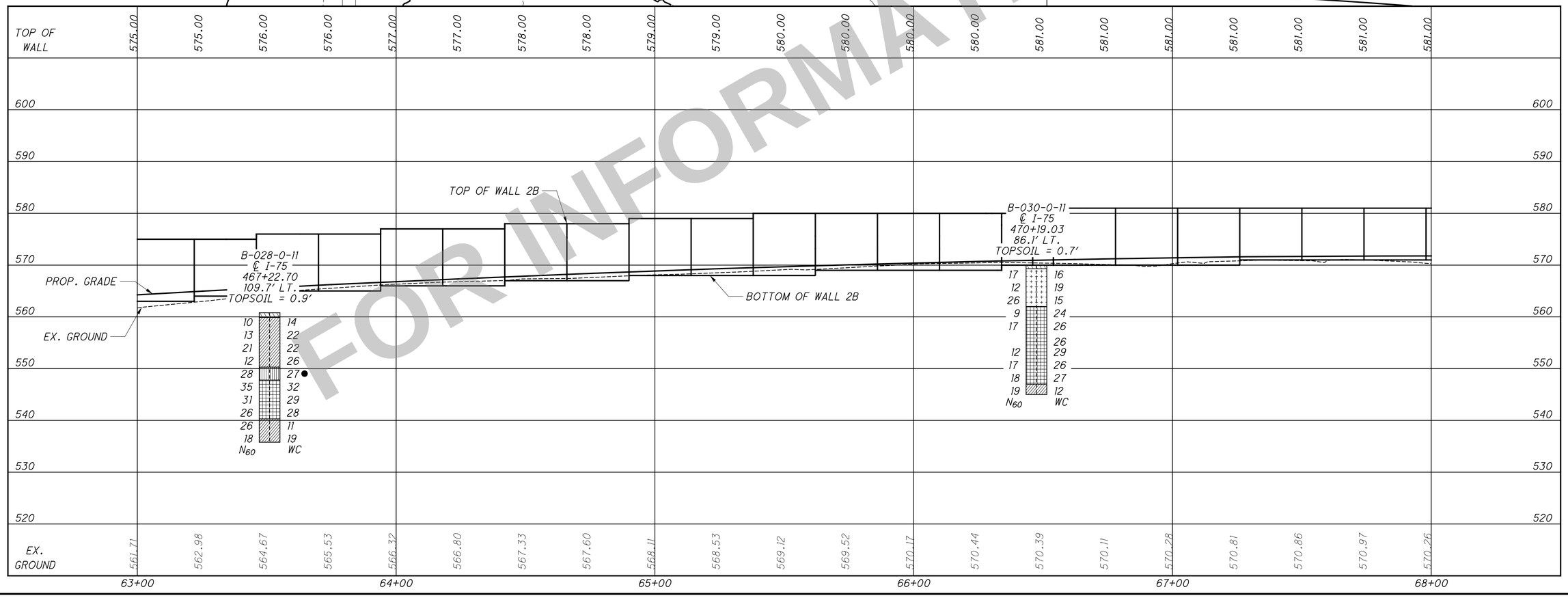
HAM-75-7.85

8 / 23

2002
2017

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HORIZONTAL SCALE IN FEET
0 10 20 40

DRAWN RRM
CHECKED BRT

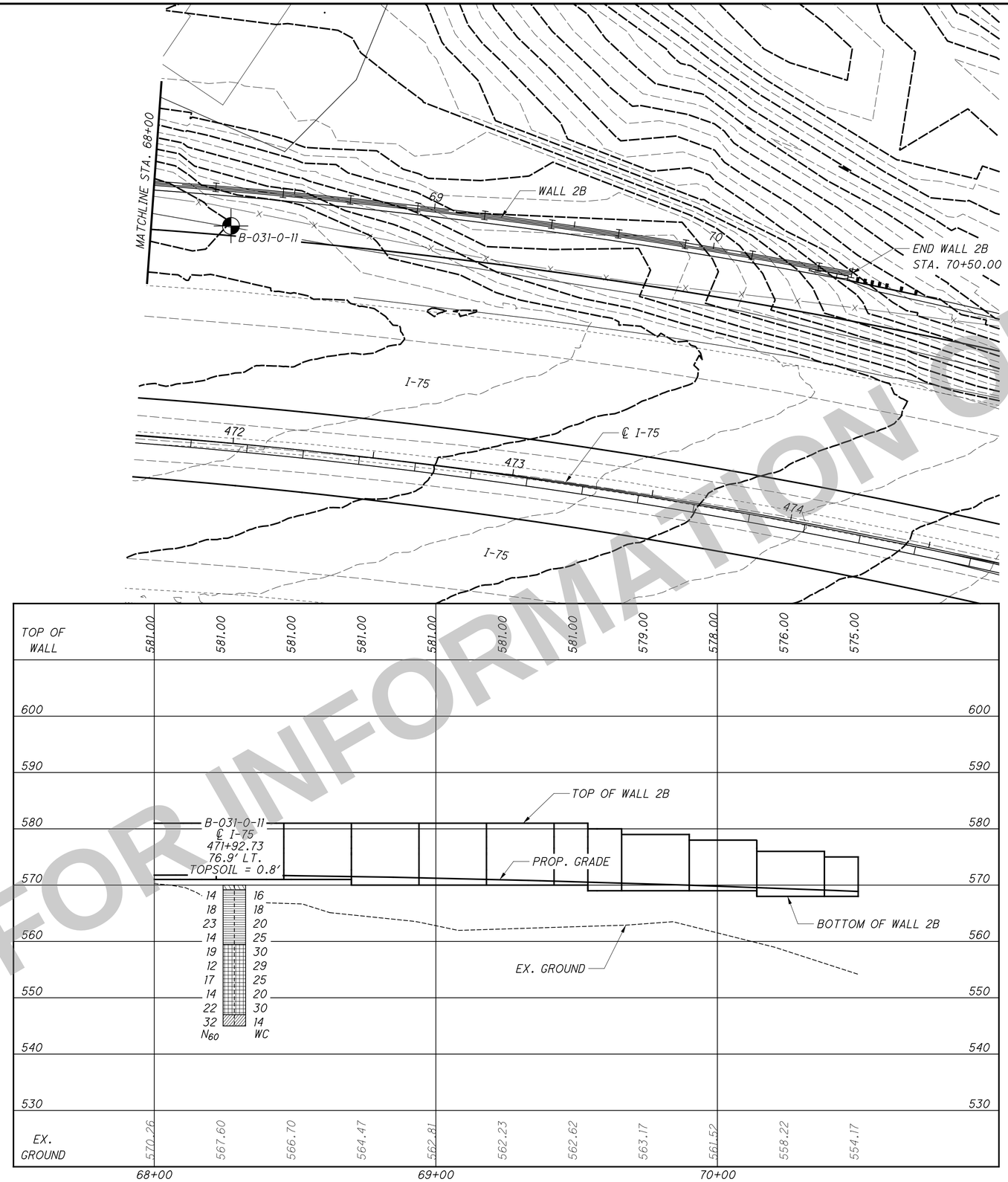
STRUCTURE FOUNDATION EXPLORATION
STA. 63+00 TO STA. 68+00 WALL 2B

HAM-75-7.85

9 / 23

2003
2017

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HORIZONTAL SCALE IN FEET
0 10 20 40

DRAWN RRM
CHECKED BRT

STRUCTURE FOUNDATION EXPLORATION
STA. 68+00 TO STA. 70+50 WALL 2B

HAM-75-7.85

10 / 23

2004
2017

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / S.M.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 432+99.54 / 73.2' LT	EXPLORATION ID B-004-0-11
TYPE: NOISE WALL	SAMPLING FIRM / LOGGER: RII / T.F.	HAMMER: CME AUTOMATIC	ALIGNMENT: PR CL I-75	
PID: 77889 SFN: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 544.0 (MSL) EOB: 25.0 ft.	PAGE 1 OF 1
START: 10/18/11 END: 10/18/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG: 39.178967186, 84.486701538	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.3' - TOPSOIL (4.0")	544.0																	
FILL: HARD, BROWN **SANDY SILT**, SOME CLAY, TRACE FINE GRAVEL, DAMP.	543.7	1	5 9 21	39	67	SS-1	4.25	-	-	-	-	-	-	-	-	11	A-4a (V)	
	541.0	2																
FILL: VERY DENSE, LIGHT BROWN **GRAVEL AND SAND**, LITTLE SILT, TRACE CLAY, DRY. -ASPHALT AND CONCRETE FRAGMENTS PRESENT IN SS-2		3																
		4	20 26 26	67	39	SS-2	-	-	-	-	-	-	-	-	-	3	A-1-b (V)	
		5																
		6																
		7	17 23 26	63	50	SS-3	-	58	15	10	11	6	NP	NP	NP	3	A-1-b (0)	
	536.0	8																
FILL: VERY LOOSE TO LOOSE, REDDISH BROWN **GRAVEL WITH SAND AND SILT**, LITTLE CLAY, DAMP TO MOIST.		9	5 2 3	6	44	SS-4	-	-	-	-	-	-	-	-	-	10	A-2-4 (V)	
		10																
		11																
		12	3 3 2	6	33	SS-5	-	-	-	-	-	-	-	-	-	9	A-2-4 (V)	
-SLAG AND COAL FRAGMENTS PRESENT IN SS-6		13																
		14	2 1 1	3	33	SS-6	-	29	21	17	22	11	28	19	9	13	A-2-4 (0)	
		15																
	528.0	16																
STIFF, BROWN **SILTY CLAY**, TRACE COARSE TO FINE SAND, MOIST.	527.5		2 3 3	8	44	SS-7	2.00	-	-	-	-	-	-	-	-	19	A-6b (V)	
LOOSE TO DENSE, BROWN **GRAVEL AND SAND**, LITTLE SILT, TRACE CLAY, DRY TO DAMP.		17					-	-	-	-	-	-	-	-	-	5	A-1-b (V)	
		18																
		19	19 13 12	32	44	SS-8	-	-	-	-	-	-	-	-	-	4	A-1-b (V)	
		20																
		21																
		22	9 11 13	31	61	SS-9	-	-	-	-	-	-	-	-	-	3	A-1-b (V)	
		23																
		24	8 11 14	32	67	SS-10	-	-	-	-	-	-	-	-	-	3	A-1-b (V)	
	519.0	25	EOB															

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 10.3'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

FOR INFORMATION ONLY

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / S.M.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 436+32.89 / 81' LT	EXPLORATION ID B-005-0-11
TYPE: NOISE WALL	SAMPLING FIRM / LOGGER: RII / T.F.	HAMMER: CME AUTOMATIC	ALIGNMENT: PR CL I-75	
PID: 77889 SFN: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 540.5 (MSL) EOB: 30.0 ft.	PAGE 1 OF 1
START: 10/18/11 END: 10/18/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG: 39.179809005, 84.486258203	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.5' - TOPSOIL (6.0")	540.5 / 540.0																	
FILL: HARD, BROWN **SANDY SILT**, LITTLE CLAY, TRACE FINE GRAVEL, DAMP. -TRACE ORGANICS IN SS-1	537.5	1–2	4 8 8	21	67	SS-1	4.25	-	-	-	-	-	-	-	-	10	A-4a (V)	
FILL: HARD, BROWN TO MOTTLED BROWN AND GRAY **SILT AND CLAY**, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP. -TRACE ROOT FIBERS PRESENT IN SS-3	532.5	3–4 5–6	4 8 9	22	39	SS-2	4.50	-	-	-	-	-	-	-	-	12	A-6a (V)	
		6–7	4 7 8	19	33	SS-3	4.50	1	4	21	44	30	28	14	14	12	A-6a (9)	
FILL: MEDIUM STIFF TO STIFF, DARK GRAY AND BLACK **SILTY CLAY**, AND COARSE TO FINE SAND, LITTLE FINE GRAVEL, DAMP TO MOIST. -ASPHALT FRAGMENTS PRESENT IN SS-4		8–9	4 4 4	10	33	SS-4	1.75	-	-	-	-	-	-	-	-	14	A-6b (V)	
-COAL AND CERAMIC FRAGMENTS PRESENT FROM 11.0' TO 18.0'	525.0	10–11 12–13	4 3 2	6	33	SS-5	1.50	-	-	-	-	-	-	-	-	16	A-6b (V)	
		13–14	3 2 2	5	39	SS-6	1.00	12	17	28	23	20	32	16	16	19	A-6b (3)	
LOOSE TO MEDIUM DENSE, DARK GRAY AND BLACK **SANDY SILT**, LITTLE FINE GRAVEL, LITTLE CLAY, MOIST. -WOOD FRAGMENT PRESENT IN SS-8 AND SS-9		15–16 17–18	2 2 2	5	50	SS-7	-	-	-	-	-	-	-	-	-	13	A-4a (V)	
		18–19	9 5 4	12	33	SS-8	-	-	-	-	-	-	-	-	-	13	A-4a (V)	
		▼ 20–21	4 4 6	13	39	SS-9	-	-	-	-	-	-	-	-	-	17	A-4a (V)	
VERY LOOSE, BROWN **COARSE AND FINE SAND**, LITTLE FINE GRAVEL, TRACE SILT, DAMP.	517.5	23–24	2 1 2	4	39	SS-10	-	-	-	-	-	-	-	-	-	8	A-3a (V)	
		W 25–26																
LOOSE, BROWNISH GRAY **SANDY SILT**, LITTLE FINE GRAVEL, MOIST.	513.5	27–28 29–30	2 4 4	10	56	SS-11	-	-	-	-	-	-	-	-	-	16	A-4a (V)	
	510.5	EOB																

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NOTES: GROUNDWATER ENCOUNTERED INITIALLY @ 26.0' AND AT COMPLETION @ 21.0'; CAVE-IN DEPTH @ 17.4'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / S.M.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 438+05.26 / 75.5' LT	EXPLORATION ID B-006-0-11
TYPE: NOISE WALL	SAMPLING FIRM / LOGGER: RII / T.F.	HAMMER: CME AUTOMATIC	ALIGNMENT: PR CL I-75	
PID: 77889 SFN: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 534.7 (MSL) EOB: 25.0 ft.	PAGE 1 OF 1
START: 10/17/11 END: 10/17/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG: 39.180237872, 84.486000382	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.5' - TOPSOIL (6.0")	534.7																	
LOOSE, BROWN **COARSE AND FINE SAND**, LITTLE FINE GRAVEL, TRACE CLAY, MOIST.	533.7	1	2 2 3	6	56	SS-1	-	-	-	-	-	-	-	-	-	11	A-3a (V)	
STIFF, BROWN **SILT AND CLAY**, AND COARSE TO FINE SAND, MOIST.	531.7	2 3																
		4	4 3 4	9	33	SS-2	2.00	0	11	29	34	26	26	14	12	14	A-6a (6)	
		5 6 7	4 4 4	10	39	SS-3	2.00	-	-	-	-	-	-	-	-	18	A-6a (V)	
MEDIUM DENSE, BROWN **COARSE AND FINE SAND**, LITTLE FINE GRAVEL, LITTLE SILT, TRACE CLAY, MOIST.	526.7	8																
		9	3 5 5	13	50	SS-4	-	-	-	-	-	-	-	-	-	11	A-3a (V)	
		10 11 12	3 5 7	15	44	SS-5	-	-	-	-	-	-	-	-	-	11	A-3a (V)	
VERY LOOSE TO LOOSE, BROWN **GRAVEL AND SAND**, LITTLE SILT, TRACE CLAY, DAMP.	521.7	13																
		14	3 1 2	4	50	SS-6	-	-	-	-	-	-	-	-	-	5	A-1-b (V)	
		15 16 17	3 1 1	3	61	SS-7	-	15	52	17	13	3	NP	NP	NP	8	A-1-b (0)	
		18 19 20	2 2 2	5	39	SS-8	-	-	-	-	-	-	-	-	-	6	A-1-b (V)	
		21 22	2 3 4	9	50	SS-9	-	-	-	-	-	-	-	-	-	6	A-1-b (V)	
MEDIUM DENSE, BROWN **GRAVEL WITH SAND AND SILT**, TRACE CLAY, MOIST.	511.7	23																
	509.7	W 24 EOB 25	2 7 7	18	56	SS-10	-	-	-	-	-	-	-	-	-	14	A-2-4 (V)	

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NOTES: GROUNDWATER INITIALY ENCOUNTERED @ 24.0'; CAVE-IN DEPTH @ 8.3'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 439+79.89 / 71.2' LT	EXPLORATION ID B-007-0-11
TYPE: NOISE WALL	SAMPLING FIRM / LOGGER: RII / S.M.	HAMMER: CME AUTOMATIC	ALIGNMENT: PR CL I-75	
PID: 77889 SFN: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 536.8 (MSL) EOB: 25.0 ft.	PAGE 1 OF 1
START: 10/11/11 END: 10/11/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG: 39.180681229, 84.485747882	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.6' - TOPSOIL (7.0")	536.2																	
VERY LOOSE TO MEDIUM DENSE, BROWN **COARSE AND FINE SAND**, LITTLE FINE GRAVEL, TRACE SILT, TRACE CLAY, DRY TO DAMP.		1	2 1 2	4	67	SS-1	-	-	-	-	-	-	-	-	-	6	A-3a (V)	
		2																
		3																
		4	7 6 6	15	67	SS-2	-	-	-	-	-	-	-	-	-	4	A-3a (V)	
-COBBLES PRESENT THROUGHOUT		5																
		6																
		7	5 7 6	17	78	SS-3	-	15	29	43	10	3	NP	NP	NP	4	A-3a (0)	
	528.8	8																
HARD, BROWN **SILTY CLAY**, TRACE COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.		9	5 8 11	24	56	SS-4	4.5+	-	-	-	-	-	-	-	-	21	A-6b (V)	
	526.3	10																
MEDIUM DENSE, BROWN **FINE SAND**, AND COARSE SAND, TRACE SILT, TRACE CLAY, DRY TO DAMP.		11																
		12	7 6 12	23	67	SS-5	-	-	-	-	-	-	-	-	-	6	A-3 (V)	
		13																
		14	7 5 7	15	78	SS-6	-	-	-	-	-	-	-	-	-	9	A-3 (V)	
-COBBLES PRESENT THROUGHOUT		15																
		16																
		17	6 6 7	17	89	SS-7	-	-	-	-	-	-	-	-	-	5	A-3 (V)	
		18																
		19	6 6 8	18	89	SS-8	-	0	44	47	7	2	NP	NP	NP	4	A-3 (0)	
		20																
		21																
		22	6 7 8	19	89	SS-9	-	-	-	-	-	-	-	-	-	4	A-3 (V)	
	513.8	23																
MEDIUM STIFF, GRAY **SILTY CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.		24	6 4 3	9	67	SS-10	0.75	-	-	-	-	-	-	-	-	25	A-6b (V)	
	511.8	EOB 25																

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NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 8.7'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 442+41.96 / 100.9' LT	EXPLORATION ID B-009-0-11
TYPE: NOISE WALL	SAMPLING FIRM / LOGGER: RII / S.M.	HAMMER: CME AUTOMATIC	ALIGNMENT: PR CL I-75	
PID: 77889 SFN: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 546.7 (MSL) EOB: 50.0 ft.	PAGE 1 OF 1
START: 11/30/11 END: 11/30/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG: 39.181374542, 84.485479455	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.7' - TOPSOIL (8.0")	546.7																	
	546.0																	
VERY LOOSE, BROWN **FINE SAND**, SOME COARSE SAND, TRACE FINE GRAVEL, TRACE SILT, TRACE CLAY, DAMP.		1	WOH 1 2	4	44	SS-1	-	-	-	-	-	-	-	-	-	7	A-3 (V)	
	543.7	2																
LOOSE TO DENSE, BROWN **FINE SAND**, SOME COARSE SAND, TRACE FINE GRAVEL, TRACE SILT, TRACE CLAY, DRY TO DAMP.		3																
		4	2 4 6	13	67	SS-2	-	-	-	-	-	-	-	-	-	7	A-3 (V)	
		5																
		6																
		7	3 4 6	13	72	SS-3	-	5	29	58	6	2	NP	NP	NP	8	A-3 (0)	
		8																
		9	2 4 4	10	78	SS-4	-	-	-	-	-	-	-	-	-	8	A-3 (V)	
		10																
		11																
		12	5 9 15	31	72	SS-5	-	-	-	-	-	-	-	-	-	6	A-3 (V)	
		13																
		14	3 5 7	15	78	SS-6	-	-	-	-	-	-	-	-	-	3	A-3 (V)	
		15																
		16																
		17	4 10 9	24	78	SS-7	-	-	-	-	-	-	-	-	-	4	A-3 (V)	
	528.7	18																
MEDIUM DENSE, BROWN **SANDY SILT**, TRACE CLAY, TRACE FINE GRAVEL, MOIST.		19																
		20	4 6 8	18	89	SS-8	-	3	15	46	29	7	NP	NP	NP	10	A-4a (0)	
	526.2	21																
MEDIUM DENSE, BROWN **GRAVEL AND SAND**, TRACE SILT, DAMP.		22	5 8 8	21	67	SS-9	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	
	523.7	23																
DENSE TO VERY DENSE, BROWN **GRAVEL**, SOME COARSE TO FINE SAND, DAMP.		24	6 12 14	33	56	SS-10	-	-	-	-	-	-	-	-	-	5	A-1-a (V)	
-COBBLES PRESENT THROUGHOUT		25																
		26																
		27	8 18 24	54	78	SS-11	-	-	-	-	-	-	-	-	-	4	A-1-a (V)	
	518.7	28																
MEDIUM STIFF, GRAY **SANDY SILT**, LITTLE CLAY, LITTLE FINE GRAVEL, MOIST.		29	1 2 2	5	44	SS-12	1.00	13	6	23	45	13	22	17	5	17	A-4a (5)	
	514.7	30																
MEDIUM DENSE TO DENSE, BROWN **FINE SAND**, TRACE SILT, TRACE FINE GRAVEL, TRACE CLAY, DRY TO DAMP.		31																
		32																
		33																
		34	6 9 12	27	72	SS-13	-	-	-	-	-	-	-	-	-	7	A-3 (V)	
		35																
		36																
		37																
		38																
		39	8 8 12	26	78	SS-14	-	-	-	-	-	-	-	-	-	4	A-3 (V)	
		40																
		41																
		42																
		43																
		44	6 12 14	33	100	SS-15	-	-	-	-	-	-	-	-	-	4	A-3 (V)	
		45																
		46																
		47																
		48																
		49	8 12 15	35	89	SS-16	-	-	-	-	-	-	-	-	-	4	A-3 (V)	
	496.7	50	EOB															

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 20.6'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 444+56.89 / 74.7' LT	EXPLORATION ID B-010-0-11
TYPE: NOISE WALL	SAMPLING FIRM / LOGGER: RII / S.M.	HAMMER: CME AUTOMATIC	ALIGNMENT: PR CL I-75	
PID: 77889 SFN: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 546.0 (MSL) EOB: 25.0 ft.	PAGE 1 OF 1
START: 10/11/11 END: 10/11/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG: 39.181888329, 84.485095341	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.6' - TOPSOIL (7.0")	546.0 / 545.4																	
FILL: VERY STIFF TO HARD, BROWN **SANDY SILT**, SOME CLAY, TRACE FINE GRAVEL, DRY TO DAMP.		1	4 3 4	9	67	SS-1	3.50	-	-	-	-	-	-	-	-	10	A-4a (V)	
		2																
		3																
		4	7 4 5	12	78	SS-2	4.50	-	-	-	-	-	-	-	-	7	A-4a (V)	
		5																
		6																
		7	5 6 8	18	44	SS-3	-	1	2	41	35	21	20	14	6	7	A-4a (4)	
	538.0	8																
VERY STIFF, BROWN **SANDY SILT**, LITTLE CLAY, TRACE FINE GRAVEL, DRY.		9	9 9 10	24	67	SS-4	3.00	-	-	-	-	-	-	-	-	9	A-4a (V)	
-TRACE ROOT FIBERS PRESENT IN SS-4	535.5	10																
MEDIUM DENSE, BROWN **GRAVEL WITH SAND AND SILT**, TRACE CLAY, DAMP.		11																
		12	9 10 10	26	78	SS-5	-	-	-	-	-	-	-	-	-	10	A-2-4 (V)	
	533.0	13																
MEDIUM DENSE TO DENSE, BROWN **COARSE AND FINE SAND**, SOME FINE GRAVEL, LITTLE SILT, TRACE CLAY, DRY.		14	6 9 11	26	78	SS-6	-	-	-	-	-	-	-	-	-	4	A-3a (V)	
-COBBLES PRESENT THROUGHOUT		15																
		16																
		17	7 8 12	26	89	SS-7	-	24	24	36	12	4	NP	NP	NP	4	A-3a (0)	
	528.0	18																
DENSE, BROWN **GRAVEL WITH SAND AND SILT**, TRACE CLAY, DAMP.		19	8 12 13	32	89	SS-8	-	-	-	-	-	-	-	-	-	10	A-2-4 (V)	
		20																
		21																
		22	9 12 20	41	67	SS-9	-	-	-	-	-	-	-	-	-	7	A-2-4 (V)	
	523.0	23																
HARD, GRAY **SANDY SILT**, TRACE CLAY, TRACE FINE GRAVEL, DAMP.		24	13 16 18	44	78	SS-10	4.50	-	-	-	-	-	-	-	-	11	A-4a (V)	
	521.0	EOB 25																

FOR INFORMATION ONLY

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 9.0'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 446+37.63 / 99.4' LT	EXPLORATION ID B-011-0-11
TYPE: NOISE WALL	SAMPLING FIRM / LOGGER: RII / S.M.	HAMMER: CME AUTOMATIC	ALIGNMENT: PR CL I-75	
PID: 77889 SFN: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 562.5 (MSL) EOB: 25.0 ft.	PAGE 1 OF 1
START: 10/10/11 END: 10/10/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG: 39.182370998, 84.484923695	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.9' - TOPSOIL (11.0")	562.5																	
	561.6																	
FILL: HARD, BROWN **SILTY CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DRY TO DAMP.		1	5 2 4	8	78	SS-1	4.50	-	-	-	-	-	-	-	-	15	A-6b (V)	
-TRACE ROOT AND WOOD FIBERS PRESENT IN SS-2		2																
		3																
		4	6 6 8	18	67	SS-2	4.50	-	-	-	-	-	-	-	-	10	A-6b (V)	
		5																
		6																
		7	6 7 8	19	78	SS-3	4.50	9	8	9	30	44	39	18	21	16	A-6b (12)	
	554.5	8																
HARD, BROWN **SILTY CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.		9	7 6 7	17	78	SS-4	4.50	-	-	-	-	-	-	-	-	17	A-6b (V)	
	552.0	10																
MEDIUM DENSE, LIGHT BROWN **COARSE AND FINE SAND**, SOME SILT, TRACE CLAY, TRACE FINE GRAVEL, DAMP.		11																
		12	22 10 8	23	89	SS-5	-	-	-	-	-	-	-	-	-	8	A-3a (V)	
		13																
		14	14 7 7	18	89	SS-6	-	-	-	-	-	-	-	-	-	8	A-3a (V)	
		15																
		16																
-COBBLES PRESENT THROUGHOUT		17	6 8 6	18	78	SS-7	-	-	-	-	-	-	-	-	-	8	A-3a (V)	
		18																
		19	12 6 4	13	89	SS-8	-	8	2	58	23	9	NP	NP	NP	8	A-3a (0)	
		20																
		21																
		22	6 4 7	14	89	SS-9	-	-	-	-	-	-	-	-	-	7	A-3a (V)	
	539.5	23																
DENSE, BROWN **GRAVEL**, SOME COARSE TO FINE SAND, TRACE SILT, DAMP.		24	18 15 16	40	89	SS-10	-	-	-	-	-	-	-	-	-	5	A-1-a (V)	
-COBBLES PRESENT IN SS-10	537.5	EOB 25																

FOR INFORMATION ONLY

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 10.0'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 448+09.83 / 75.9' LT	EXPLORATION ID B-013-0-11
TYPE: NOISE WALL	SAMPLING FIRM / LOGGER: RII / S.M.	HAMMER: CME AUTOMATIC	ALIGNMENT: PR CL I-75	
PID: 77889 SFN: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 552.5 (MSL) EOB: 25.0 ft.	PAGE 1 OF 1
START: 10/16/11 END: 10/16/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG: 39.182780027, 84.484608056	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.9' - TOPSOIL (11.0")	552.5																	
	551.6																	
FILL: VERY STIFF TO HARD, BROWN TO DARK BROWN **SILT AND CLAY**, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, DRY TO MOIST. -TRACE ROOT FIBERS PRESENT IN SS-1 AND SS-2		1	7 6 7	17	67	SS-1	4.50	-	-	-	-	-	-	-	-	15	A-6a (V)	
		2																
		3																
		4	9 8 10	23	67	SS-2	2.50	-	-	-	-	-	-	-	-	14	A-6a (V)	
		5																
		6																
		7	6 7 10	22	67	SS-3	4.50	1	3	27	41	28	27	15	12	9	A-6a (8)	
		8																
		9	6 9 13	28	44	SS-4	4.50	-	-	-	-	-	-	-	-	13	A-6a (V)	
	542.0	10																
HARD, DARK BROWN **SILT AND CLAY**, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST. -TRACE ROOT FIBERS PRESENT IN SS-5		11																
		12	7 7 12	24	67	SS-5	4.50	-	-	-	-	-	-	-	-	15	A-6a (V)	
		13																
		14	9 9 13	28	50	SS-6	4.5+	-	-	-	-	-	-	-	-	14	A-6a (V)	
	537.0	15																
MEDIUM DENSE, BROWN **SANDY SILT**, TRACE CLAY, TRACE FINE GRAVEL, MOIST TO WET.		16																
		17	6 7 7	18	67	SS-7	-	-	-	-	-	-	-	-	-	19	A-4a (V)	
		18																
		19	7 7 9	21	67	SS-8	-	2	1	49	39	9	NP	NP	NP	12	A-4a (3)	
		20																
		21																
		22	9 7 9	21	78	SS-9	-	-	-	-	-	-	-	-	-	22	A-4a (V)	
	529.5	23																
HARD, BROWN **SILT AND CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.		24	8 10 19	37	78	SS-10	4.50	-	-	-	-	-	-	-	-	11	A-6a (V)	
	527.5	EOB 25																

FOR INFORMATION ONLY

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 13.5'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 464+58.68 / 80.7' LT	EXPLORATION ID B-024-0-11
TYPE: NOISE WALL	SAMPLING FIRM / LOGGER: RII / S.M.	HAMMER: CME AUTOMATIC	ALIGNMENT: PR CL I-75	
PID: 77889 SFN: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 550.8 (MSL) EOB: 30.0 ft.	PAGE 1 OF 1
START: 10/6/11 END: 10/6/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG: 39.187003390, 84.482605252	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.6' - TOPSOIL (7.0")	550.2																	
FILL: STIFF, DARK BROWN **SANDY SILT**, LITTLE CLAY, DAMP. -TRACE ROOT FIBERS PRESENT IN SS-1	547.8	1	2 2 2	5	56	SS-1	2.00	-	-	-	-	-	-	-	-	13	A-4a (V)	
FILL: MEDIUM STIFF, BROWN **SILT AND CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST. -TRACE ROOT AND WOOD FIBERS PRESENT IN SS-2	545.3	4	2 2	5	28	SS-2	1.00	-	-	-	-	-	-	-	-	19	A-6a (V)	
POSSIBLE FILL: VERY LOOSE TO MEDIUM DENSE, BROWN **FINE SAND**, TRACE SILT, TRACE CLAY, DRY TO DAMP.	537.8	7	3 2 1	4	56	SS-3	-	-	-	-	-	-	-	-	-	8	A-3 (V)	
		9	3 6 6	15	78	SS-4	-	-	-	-	-	-	-	-	-	4	A-3 (V)	
		12	4 6 8	18	83	SS-5	-	-	-	-	-	-	-	-	-	5	A-3 (V)	
POSSIBLE FILL: MEDIUM DENSE, BROWNISH GRAY **COARSE AND FINE SAND**, SOME SILT, TRACE CLAY, TRACE FINE GRAVEL, MOIST.	532.8	14	2 4 6	13	100	SS-6	-	3	18	46	27	6	NP	NP	NP	14	A-3a (0)	
		17	5 4 5	12	89	SS-7	-	-	-	-	-	-	-	-	-	16	A-3a (V)	
STIFF, BROWN **SILTY CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST. -TRACE ROOT FIBERS PRESENT IN SS-8	530.3	19	2 2 3	6	100	SS-8	2.00	-	-	-	-	-	-	-	-	19	A-6b (V)	
SOFT TO STIFF, GRAY **SILT AND CLAY**, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST TO WET.		22	1 2 3	6	100	SS-9	1.50	-	-	-	-	-	-	-	-	24	A-6a (V)	
		24	2 1 1	3	100	SS-10	0.50	1	1	23	48	27	27	14	13	22	A-6a (9)	
	520.8	EOB 30	2 2 3	6	78	SS-11	1.50	-	-	-	-	-	-	-	-	19	A-6a (V)	

FOR INFORMATION ONLY

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 466+14.09 / 87.2' LT	EXPLORATION ID B-026-0-11
TYPE: NOISE WALL	SAMPLING FIRM / LOGGER: RII / S.M.	HAMMER: CME AUTOMATIC	ALIGNMENT: PR CL I-75	
PID: 77889 SFN: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 555.4 (MSL) EOB: 25.0 ft.	PAGE 1 OF 1
START: 10/5/11 END: 10/5/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG: 39.187408000, 84.482456999	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.8' - TOPSOIL (9.0")	555.4																	
	554.6																	
STIFF TO VERY STIFF, DARK BROWN **SILT AND CLAY**, AND COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST. -TRACE ROOT FIBERS PRESENT IN SS-1		1	2 3 4	9	67	SS-1	2.00	-	-	-	-	-	-	-	-	11	A-6a (V)	
		2																
		3																
		4	2 6 9	19	33	SS-2	3.00	3	12	43	21	21	29	14	15	17	A-6a (3)	
		5																
		6																
		7	2 7 12	24	44	SS-3	3.50	-	-	-	-	-	-	-	-	14	A-6a (V)	
	547.4	8																
LOOSE, BROWN **FINE SAND**, TRACE SILT, TRACE CLAY, MOIST.		9	2 2 4	8	28	SS-4	-	-	-	-	-	-	-	-	-	11	A-3 (V)	
F.S.	544.9	10																
MEDIUM STIFF TO VERY STIFF, BROWN **SILT**, LITTLE CLAY, TRACE COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.		11																
		12	3 6 4	13	67	SS-5	2.00	1	0	4	78	17	26	18	8	22	A-4b (8)	
		13																
		14	2 7 6	17	67	SS-6	4.00	-	-	-	-	-	-	-	-	18	A-4b (V)	
		15																
		16																
		17	4 5 6	14	78	SS-7	1.25	-	-	-	-	-	-	-	-	19	A-4b (V)	
		18																
		19	3 2 3	6	100	SS-8	1.00	-	-	-	-	-	-	-	-	19	A-4b (V)	
		20																
		21																
		22	4 4 6	13	100	SS-9	2.00	-	-	-	-	-	-	-	-	21	A-4b (V)	
	532.4	23																
LOOSE, BROWN **FINE SAND**, TRACE SILT, TRACE CLAY, DAMP.		24	2 3 3	8	100	SS-10	-	-	-	-	-	-	-	-	-	5	A-3 (V)	
F.S.	530.4	EOB 25																

FOR INFORMATION ONLY

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 9.0'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 467+22.70 / 109.7' LT	EXPLORATION ID B-028-0-11
TYPE: NOISE WALL	SAMPLING FIRM / LOGGER: RII / S.M.	HAMMER: CME AUTOMATIC	ALIGNMENT: PR CL I-75	
PID: 77889 SFN: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 560.8 (MSL) EOB: 25.0 ft.	PAGE 1 OF 1
START: 10/5/11 END: 10/5/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG: 39.187718403, 84.482421549	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.9' - TOPSOIL (11.0")	560.8																	
	559.9																	
STIFF TO VERY STIFF, BROWN TO GRAY **SILT AND CLAY**, DAMP TO MOIST.		1	2 3 5	10	67	SS-1	4.00	-	-	-	-	-	-	-	-	14	A-6a (V)	
		2																
		3																
		4	2 4 6	13	67	SS-2	2.00	-	-	-	-	-	-	-	-	22	A-6a (V)	
		5																
		6																
		7	4 8 8	21	100	SS-3	3.25	0	0	0	53	47	33	18	15	22	A-6a (10)	
		8																
		9	2 4 5	12	100	SS-4	1.50	-	-	-	-	-	-	-	-	26	A-6a (V)	
		10																
	550.3																	
VERY STIFF, BROWN **SANDY SILT**, TRACE CLAY, WET.		11	7 10 12	28	100	SS-5	2.25	-	-	-	-	-	-	-	-	27	A-4a (V)	
	547.8	12																
VERY STIFF TO HARD, BROWN TO BROWNISH GRAY **CLAY**, SOME SILT, TRACE COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.		13																
		14	5 10 17	35	100	SS-6	4.00	-	-	-	-	-	-	-	-	32	A-7-6 (V)	
		15																
		16																
		17	6 9 15	31	100	SS-7	4.50	-	-	-	-	-	-	-	-	29	A-7-6 (V)	
		18																
		19	7 8 12	26	100	SS-8	2.25	-	-	-	-	-	-	-	-	28	A-7-6 (V)	
	540.3	20																
VERY STIFF, GRAY **SILT AND CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.		21																
		22	6 10 10	26	100	SS-9	4.00	-	-	-	-	-	-	-	-	11	A-6a (V)	
		23																
		24	9 6 8	18	100	SS-10	3.00	-	-	-	-	-	-	-	-	19	A-6a (V)	
	535.8	EOB 25																

FOR INFORMATION ONLY

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 5.6'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 470+19.03 / 86.1' LT
TYPE: NOISE WALL	SAMPLING FIRM / LOGGER: RII / S.M.	HAMMER: CME AUTOMATIC	ALIGNMENT: PR CL I-75
PID: 77889 SFN: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 570.0 (MSL) EOB: 25.0 ft.
START: 10/5/11 END: 10/5/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG: 39.188474513, 84.482026813

EXPLORATION ID B-030-0-11 — PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.7' - TOPSOIL (8.0")	570.0																	
	569.3																	
STIFF TO VERY STIFF, BROWN **SILT**, LITTLE CLAY, TRACE FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.		1	2 6 7	17	56	SS-1	2.25	-	-	-	-	-	-	-	-	16	A-4b (V)	
		2																
		3																
		4	4 2 7	12	67	SS-2	1.75	1	0	4	77	18	27	19	8	19	A-4b (8)	
		5																
		6																
		7	7 9 11	26	78	SS-3	1.50	-	-	-	-	-	-	-	-	15	A-4b (V)	
	562.0																	
STIFF TO VERY STIFF, GRAY **CLAY**, SOME SILT, MOIST.		8																
		9	3 3 4	9	78	SS-4	1.50	0	0	0	35	65	43	21	22	24	A-7-6 (13)	
		10																
		11																
		12	5 6 7	17	100	SS-5	2.75	-	-	-	-	-	-	-	-	26	A-7-6 (V)	
		13																
		14			100	ST-6	2.50	0	0	0	29	71	43	19	24	26	A-7-6 (14)	
		15																
		16																
		17	4 4 5	12	100	SS-7	1.50	-	-	-	-	-	-	-	-	29	A-7-6 (V)	
		18																
		19	4 6 7	17	100	SS-8	2.25	-	-	-	-	-	-	-	-	26	A-7-6 (V)	
		20																
		21																
		22	5 8 6	18	100	SS-9	2.25	-	-	-	-	-	-	-	-	27	A-7-6 (V)	
	547.0																	
HARD, GRAY **SILT AND CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.		23																
		24	2 5 10	19	100	SS-10	4.5+	-	-	-	-	-	-	-	-	12	A-6a (V)	
	545.0	25 EOB																

FOR INFORMATION ONLY

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 5.5'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: COMPACTED WITH THE AUGER 50 LBS BENTONITE CHIPS AND SOIL CUTTINGS

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PROJECT: HAM-75-7.85	DRILLING FIRM / OPERATOR: RII / T.F.	DRILL RIG: CME-750X (SN 310218)	STATION / OFFSET: 471+92.73 / 76.9' LT	EXPLORATION ID B-031-0-11
TYPE: NOISE WALL	SAMPLING FIRM / LOGGER: RII / S.M.	HAMMER: CME AUTOMATIC	ALIGNMENT: PR CL I-75	
PID: 77889 SFN: NA	DRILLING METHOD: 4.25" HSA	CALIBRATION DATE: 5/6/11	ELEVATION: 570.0 (MSL) EOB: 25.0 ft.	PAGE 1 OF 1
START: 10/5/11 END: 10/5/11	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.1	LAT / LONG: 39.188931528, 84.481780743	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
0.8' - TOPSOIL (9.0")	570.0																	
	569.2																	
VERY STIFF TO HARD, BROWN TO BROWNISH GRAY **SILTY CLAY**, TRACE COARSE TO FINE SAND, DAMP TO MOIST.		1	2 4 7	14	33	SS-1	4.5+	-	-	-	-	-	-	-	-	16	A-6b (V)	
		2																
		3																
-COBBLES PRESENT FROM 1.0' TO 5.0'		4	4 6 8	18	67	SS-2	4.5+	-	-	-	-	-	-	-	-	18	A-6b (V)	
		5																
		6																
		7	7 9 9	23	100	SS-3	3.75	-	-	-	-	-	-	-	-	20	A-6b (V)	
		8																
		9	4 5 6	14	89	SS-4	4.5+	-	-	-	-	-	-	-	-	25	A-6b (V)	
	559.5	10																
STIFF TO VERY STIFF, GRAY **CLAY**, SOME SILT, MOIST.		11	6 8 7	19	100	SS-5	2.50	0	0	0	25	75	48	19	29	30	A-7-6 (17)	
		12																
		13																
		14	2 3 6	12	89	SS-6	2.50	-	-	-	-	-	-	-	-	29	A-7-6 (V)	
		15																
		16																
		17	5 6 7	17	100	SS-7	2.50	-	-	-	-	-	-	-	-	25	A-7-6 (V)	
		18																
		19	7 5 6	14	100	SS-8	2.00	-	-	-	-	-	-	-	-	20	A-7-6 (V)	
		20																
		21																
		22	7 8 9	22	50	SS-9	2.50	-	-	-	-	-	-	-	-	30	A-7-6 (V)	
	547.0	23																
VERY STIFF, BROWN **SILT AND CLAY**, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.		24	5 10 15	32	44	SS-10	4.00	-	-	-	-	-	-	-	-	14	A-6a (V)	
-COBBLES PRESENT IN SS-10	545.0	EOB 25																

FOR INFORMATION ONLY

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